

August 20, 2021

Four Winds Farm Fitchburg
5735 Adams Road
Oregon, WI 53575

Dear Planning/Zoning Department,

Four Winds Farm Fitchburg would like to apply for a Conditional Use Permit for Rural Event Venue. Attached is the application and 3 copies of the site plan. A pdf document of the entire submittal has been sent electronically as well.

To address some of the review questions, I've prepared the following information. Please feel free to reach out if you need additional clarification. Our intention is to be as clear and forthcoming as possible and to be a positive addition to the city.

The size of venue is 8805 square feet. A floor plan is in the pdf submittal. We utilize Pelliteri Waste Disposal services with our curbside containers located in the machine shed. We take the containers to the road on day of pick up.

We hope to host events continually throughout the year with available hours being 7 a.m. to midnight, based on the nature of the event.

While our in-house programming is focussed on agricultural and land use education and farm to table events, we would like to make the space available to members of the community who have expressed interest in the following types of gatherings: memorial/remembrance events, wedding and baby showers, weddings, corporate meetings, dairy/cheese tastings and sales, family reunions, graduation parties, health and wellness classes, art classes, square dancing and musical events. Outdoor activities may include such things as pick your own pumpkins, nature walks, pizza on the farm, bee keeping classes, and seasonal celebrations (e.g. solstice events). We will not be hosting things such as large outdoor concerts, monster truck rallies, tractor pulls, cock fights, and large fireworks displays.

Our primary occupation is regenerative and permaculture farming. We don't have an anticipated number of events per year but would like to accommodate people as time and space allow. The maximum number of guests allowed per state statute is 299, but we feel most of our events would range from 5-150 people.

We have no permanently installed amplification for music. Depending on the nature of the event, there may be a DJ or a band. A chamber music group has expressed interest in doing a concert series in the loft.

There is space to erect tents if needed on a side lawn and an overflow field by the scrape.

A landscaping plan is in the PDF submittal.

A lighting plan is in the PDF submittal.

Insurance is provided by American Family Insurance and updated yearly.

Please let me know if you require anything else and thank you for your time and consideration.

Sincerely,
Mary Ann McKenzie
Owner, Four Winds Farm Fitchburg



City of Fitchburg
 Planning/Zoning Department
 5520 Lacy Road
 Fitchburg, WI 53711
 (608) 270-4200

CONDITIONAL USE PERMIT APPLICATION RURAL EVENT VENUE

The undersigned owner, or owner's authorized agent, of property herein described hereby applies for a conditional use permit for the following described property:

1. **Location of Property:** 5735 Adams Road
Street Address: _____
Legal Description - (Metes & Bounds, or Lot No. And Plat): Lot 2 CSM 15723
CS 114 / 185 & 188-6/3/2021
DESCR AS SEC 28-6-9 PRT SE 1/4 SW 1/4, PRT NE 1/4 SW 1/4 & PRT NW 1/4 SE 1/4

***Also submit in electronic format by email to: **PLANNING@FITCHBURGWI.GOV**

2. **Current Use of Property:** Agriculture & agriculture events
 3. **Proposed Use of Property:** Agriculture & Other events
 4. **Proposed Development Schedule:** N/A; already developed
 5. **Zoning District:** A-3
 6. **Future Land Use Plan Classification:** _____

***Pursuant to Section 22-3(b) of the Fitchburg Zoning Ordinance, all Conditional Use Permits shall be consistent with the currently adopted City of Fitchburg Comprehensive Plan.

***Attach three (3) copies of a site plan which shows any proposed land divisions, plus vehicular access points and the location and size of all existing and proposed structures and parking areas. Two (2) of the three (3) copies shall be no larger than 11" x 17". Submit one (1) pdf document of the entire submittal to planning@fitchburgwi.gov.

Additional information may be requested. Monday - Sunday
Proposed Hours of Operation: Based on booking requests 7am - 12a.m. **No. Of Employees:** 2
Floor Area: 8900 sq. ft **No. Of Parking Stalls:** 55

Applicant shall provide all information as required by section 22-540(5), see page 2 for checklist

Sewer: Municipal _____ Private X **Water:** Municipal _____ Private X

Current Owner of Property: BEOMOR FARM, LLC

Address: C/O TRMCKENZIE INC 1910 Hawks Ridge Dr. VERONA WI 53593 **Phone No.:** _____

Contact Person: Mary Ann MCKENZIE

Email: Maryann@trmckenzie.com

Address: 7285 Blackstone Court, Middleton, WI 53562 **Phone No.:** 608-444-2973

Respectfully Submitted By: Mary Ann McKenzie ANN MCKENZIE

Owner's or Authorized Agent's Signature

** It is highly recommended that an applicant hold at least one neighborhood meeting prior to submitting an CUP application to identify any concerns or issues of surrounding residents.

PLEASE NOTE - Applicants shall be responsible for legal or outside consultant costs incurred by the City. Submissions shall be made at least four (4) weeks prior to desired plan commission meeting.

PLEASE NOTE: The landowner of record may be subject to a conversion fee upon implementation of the action identified in this application, per Sec. 74.485., Wisconsin Statutes. Please refer to said Statute or contact the City's Assessing Department at 608-270-4235 for further information.

For City Use Only: **Date Received:** _____ **Publish:** _____

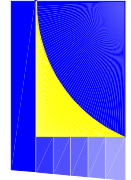
Ordinance Section No. _____ **Fee Paid:** _____

Permit Request No. _____

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Design Development
Not for Construction

Bouril Design Studio, LLC



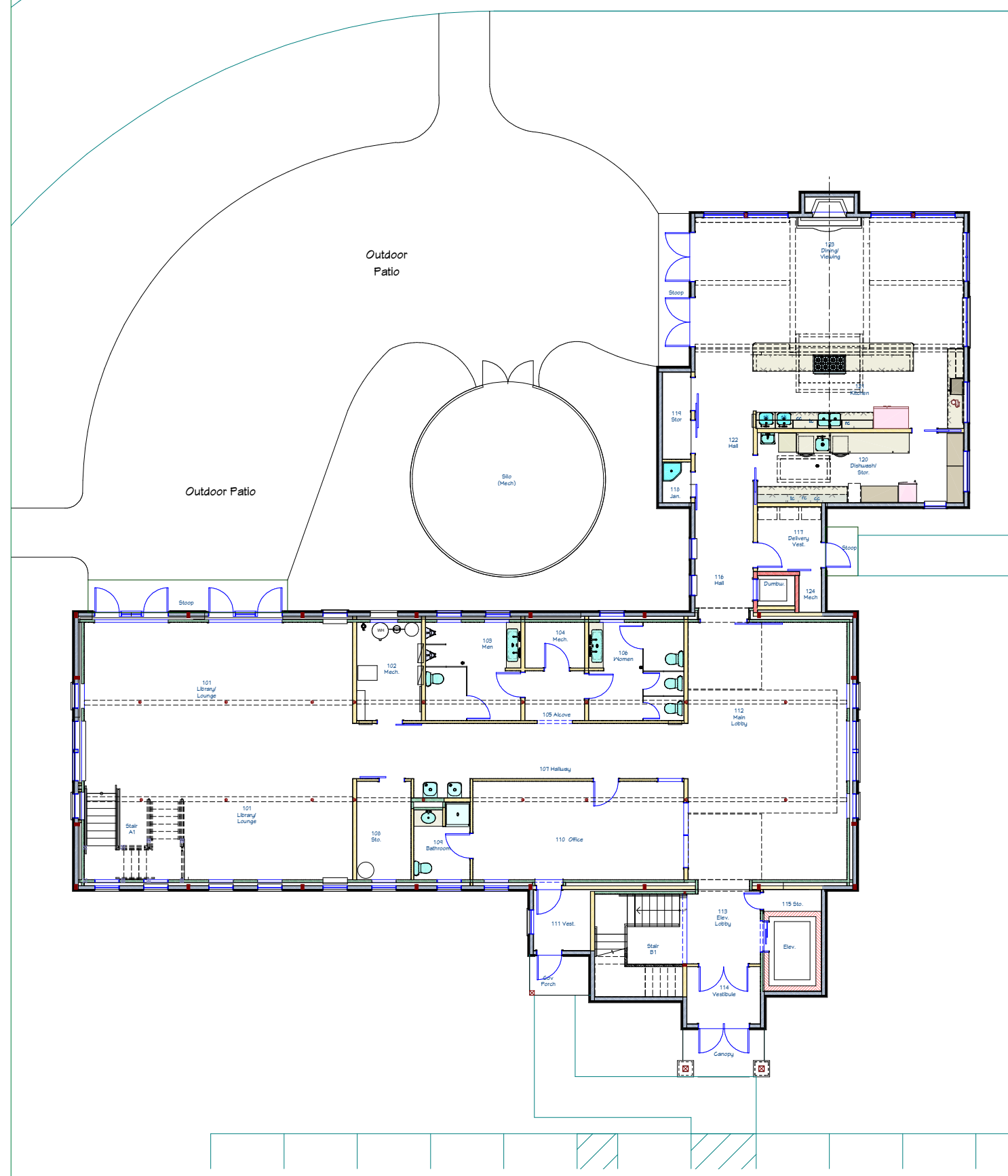
Mary Ann McKenzie - Four Winds Farm
Barn Remodel/ Addition
S. Fish Hatchery Rd. Fitchburg, Wisconsin



revision index		
#	date	reference

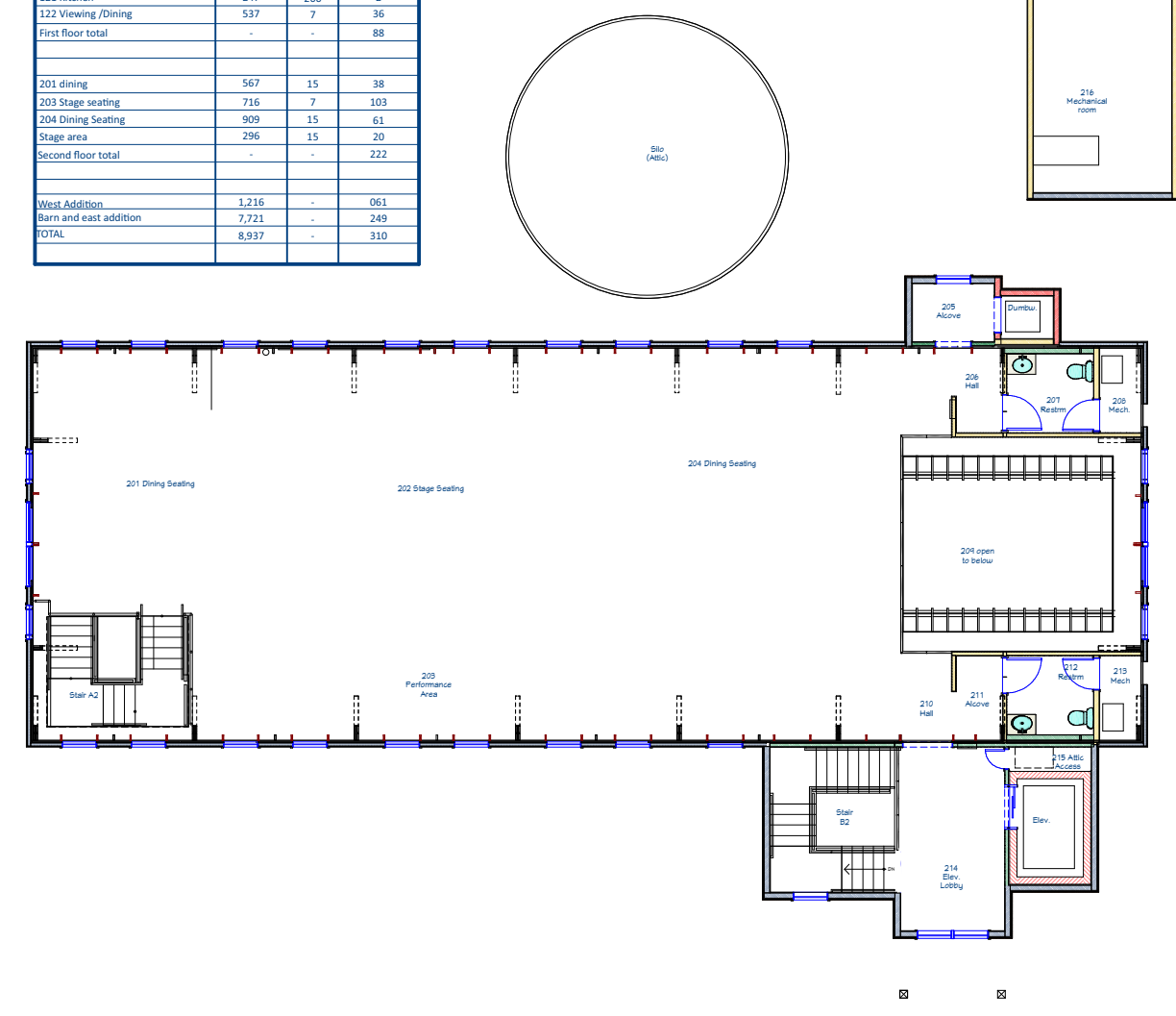
project: 19016
date: 8/24/2021
drawn by:

A100

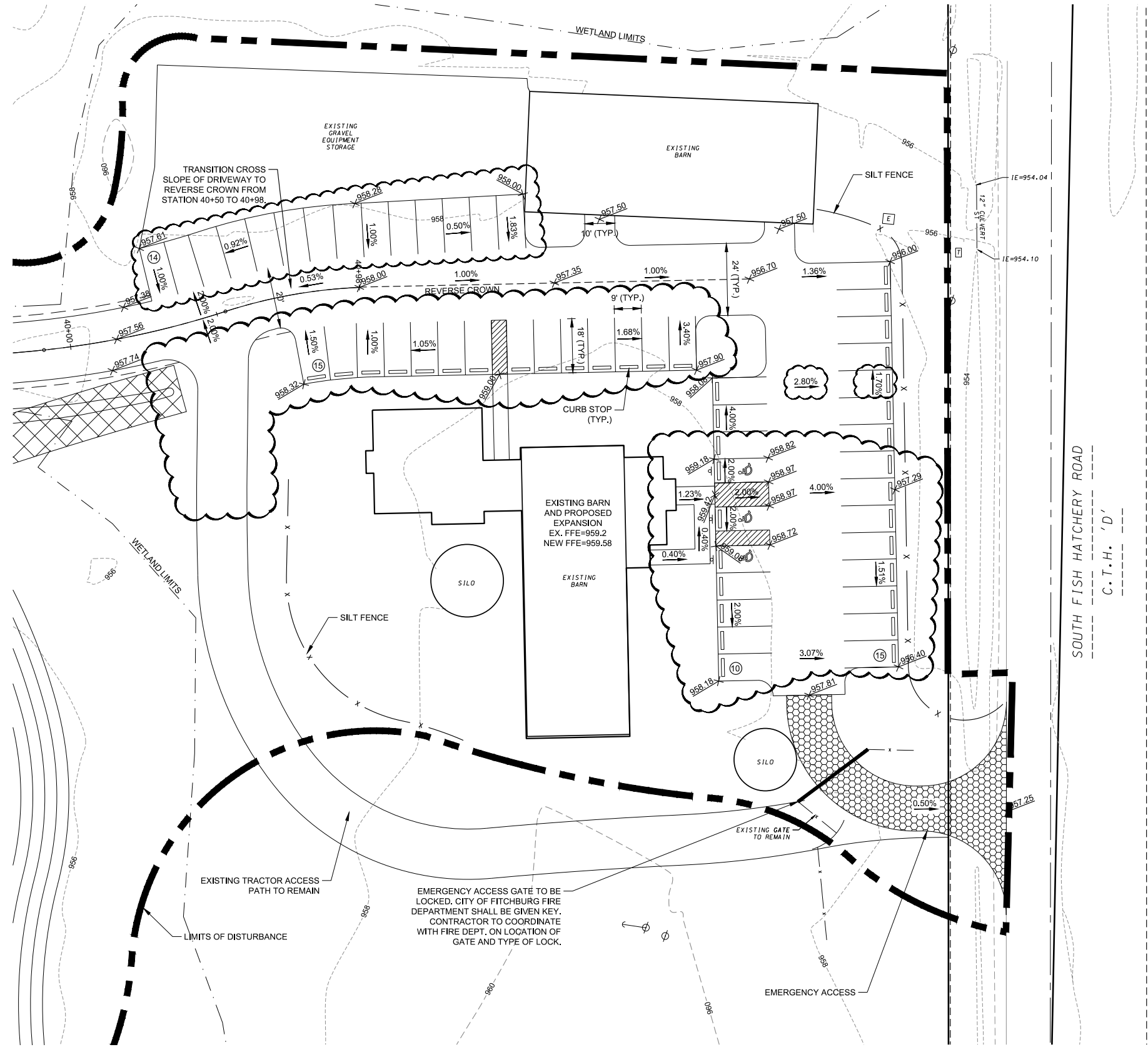


1 First Floor Plan
SCALE: 1/8" = 1'-0"

SPACE DESIGNATION:	FLOOR AREA (SQ. FT.)	SQ. FT. / OCCUPANT	NO. OF OCCUPANTS
112 Lobby (Seating)	146	15	10
112 Lobby (Display)	189	20	10
110 Office	279	100	3
104 Mech.	41	300	1
108 Storage	73	300	1
102 Mech.	96	300	1
118 Jan.	17	300	1
101 Library/ Lounge	1054	50	21
120 dishwashing	217	200	2
121 Kitchen	247	200	2
122 Viewing /Dining	537	7	36
First floor total	-	-	88
201 dining	567	15	38
203 Stage seating	716	7	103
204 Dining Seating	909	15	61
Stage area	296	15	20
Second floor total	-	-	222
West Addition	1,216	-	061
Barn and east addition	7,721	-	249
TOTAL	8,937	-	310



1 Second Floor Plan
SCALE: 1/8" = 1'-0"



D'ONOFRIG KOTTKE AND ASSOCIATES, INC.
 7300 Westwood Way, Madison, WI 53717
 Phone: 608.833.7398 • Fax: 608.833.1089
YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

BUILDING GRADING & EROSION CONTROL PLAN

FOUR WINDS FARM

ADAMS ROAD
 CITY OF FITCHBURG, WISCONSIN



SCALE: 1" = 20'
 (PAGE SIZE: 22x34)

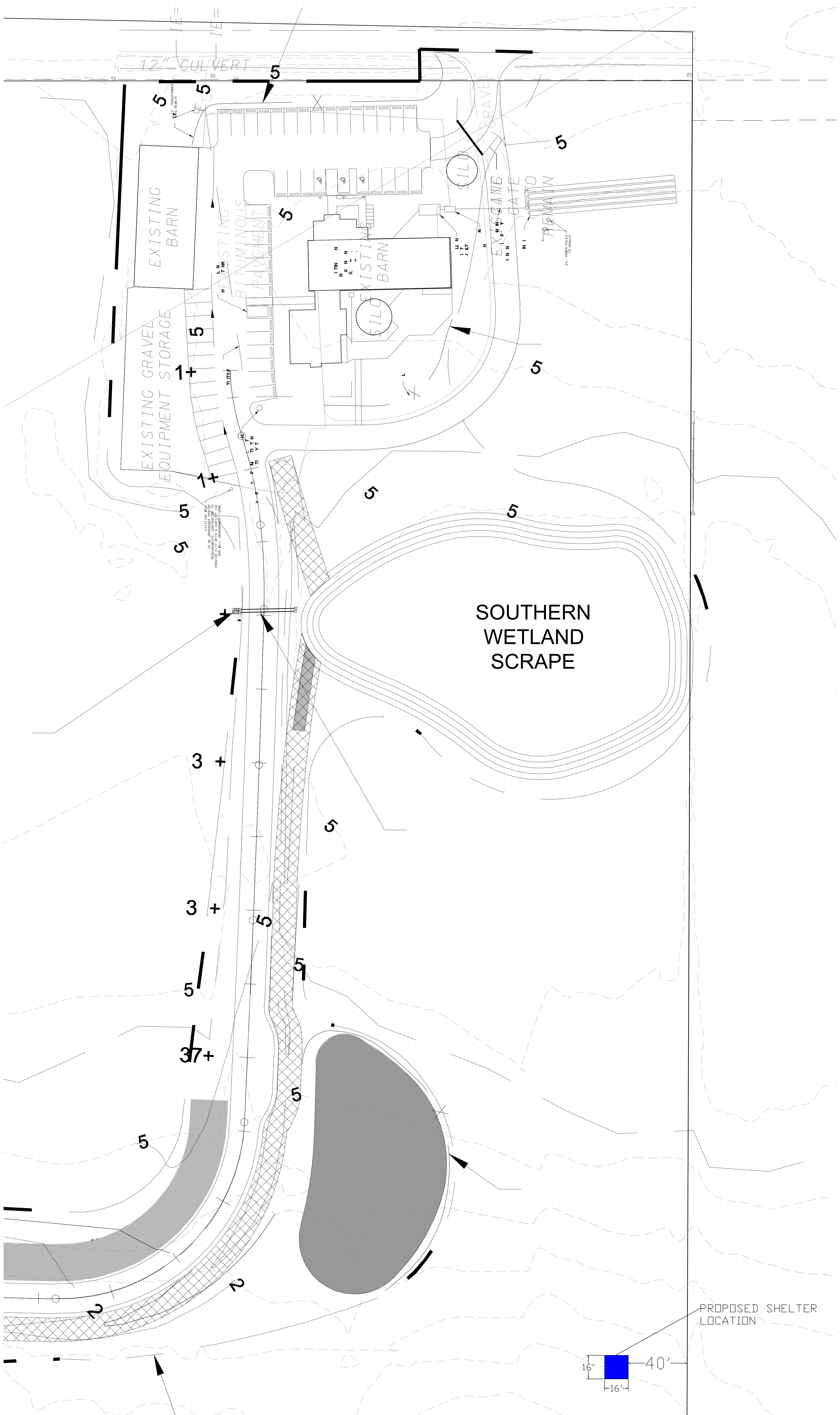
DATE: 10/01/19
 REVISED:
 ADDENDUM #1 10/18/19

DRAWN BY: NGO

FN: 18-02-103

Sheet Number:

C6



EXISTING BARN

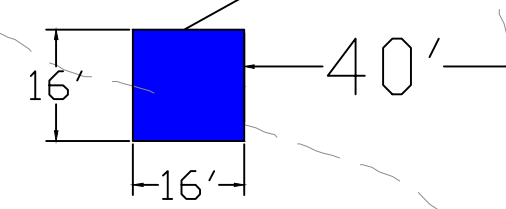
EXISTING GRAVEL STORAGE

EXISTING EQUIPMENT STORAGE

EXISTING BARN

SOUTHERN WETLAND SCRAPE

PROPOSED SHELTER LOCATION

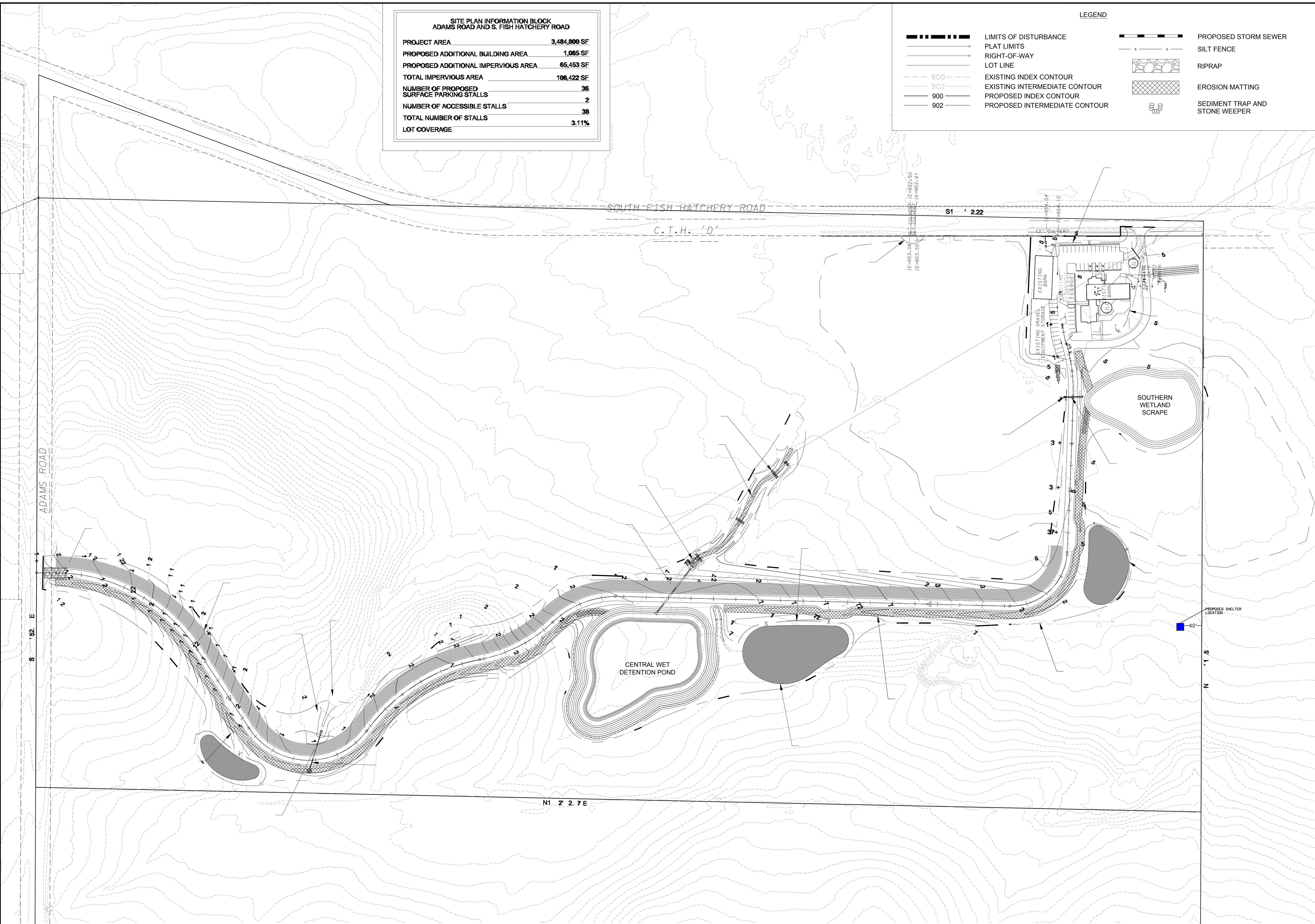


SITE PLAN INFORMATION BLOCK
ADAMS ROAD AND S. FISH HATCHERY ROAD

PROJECT AREA	3,484,800 SF
PROPOSED ADDITIONAL BUILDING AREA	1,085 SF
PROPOSED ADDITIONAL IMPERVIOUS AREA	65,453 SF
TOTAL IMPERVIOUS AREA	108,422 SF
NUMBER OF PROPOSED SURFACE PARKING STALLS	36
NUMBER OF ACCESSIBLE STALLS	2
TOTAL NUMBER OF STALLS	38
LOT COVERAGE	3.11%

LEGEND

	LIMITS OF DISTURBANCE		PROPOSED STORM SEWER
	PLAT LIMITS		SILT FENCE
	RIGHT-OF-WAY		RIPRAP
	LOT LINE		EROSION MATTING
	EXISTING INDEX CONTOUR		SEDIMENT TRAP AND STONE WEEPER
	EXISTING INTERMEDIATE CONTOUR		
	PROPOSED INDEX CONTOUR		
	PROPOSED INTERMEDIATE CONTOUR		

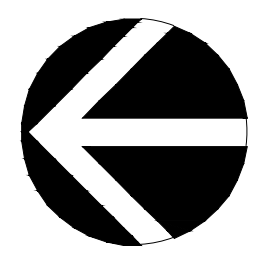


D'ONOFRIO KOTKKE AND ASSOCIATES, INC.
7530 Westward Way, Madison, WI 53717
Phone: 608.833.7530 • Fax: 608.833.1089
YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

OVERALL GRADING AND EROSION CONTROL PLAN

FOUR WINDS FARM

ADAMS ROAD
CITY OF FITCHBURG, WISCONSIN



SCALE: 1" = 100'
(PAGE SIZE: 22x34)

DATE: 10/18/19
REVISED:
10/21/19
11/12/19
03/20/20
03/27/20

DRAWN BY: NGO

FN: 18-02-103

Sheet Number:
2 OF 14



City of Fitchburg
 Planning/Zoning Department
 5520 Lacy Road
 Fitchburg, WI 53711
 (608-270-4200)

REZONING APPLICATION

The undersigned owner, or owner's authorized agent, of property herein described hereby petitions to amend the zoning district map of the Fitchburg zoning ordinance by reclassifying from the A-X district to the A-S district the following described property:

1. Location of Property/Street Address: ⁵ 6735 Adams Road, Fitchburg, WI 53575

Legal Description - (Metes & Bounds, or Lot No. And Plat):

LOT 1, PROPOSED CSM - A-S
 LOT 2, PROPOSED CSM - REMAIN IN A-X

***Also submit in electronic format (MS WORD or plain text) by email to: planning@fitchburgwi.gov

2. Proposed Use of Property - Explanation of Request:

~~Change to allow for Rural Event Venue~~
 CONTINUE TO BE USED FOR AGRICULTURAL ENTERTAINMENT

3. Proposed Development Schedule: development completed

***Pursuant to Section 22-3(b) of the Fitchburg Zoning Ordinance, all Rezoning shall be consistent with the currently adopted City of Fitchburg Comprehensive Plan.

***Attach three (3) copies of a site plan which shows any proposed land divisions, plus vehicular access points and the location and size of all existing and proposed structures and parking areas. Two (2) of the three (3) copies shall be no larger than 11" x 17". Submit one (1) electronic pdf document of the entire submittal to planning@fitchburgwi.gov. Additional information may be requested.

Type of Residential Development (If Applicable): _____

Total Dwelling Units Proposed: _____ No. Of Parking Stalls: _____

Type of Non-residential Development (If Applicable): ~~Rural Event Venue~~ AGRICULTURAL ENTERTAINMENT

Proposed Hours of Operation: 7 a.m.-11 p.m. No. Of Employees: 1 full time

Floor Area: _____ No. Of Parking Stalls: _____

Sewer: Municipal Private Water: Municipal Private

Current Owner of Property: Beomor Farm, LLC

Address: c/o TRMcKenzie, Inc., 1910 Hawks Ridge Drive, Ste. 322, Verona, WI 53593

Contact Person: Mary Ann McKenzie

Email: maryann@trmckenzie.com

Address: 4285 Blackstone Court, Middleton, WI 53562 Phone No: 608 444-2973

Respectfully Submitted By: Mary Ann McKenzie Mary Ann McKenzie
 Owner's or Authorized Agent's Signature Print Owner's or Authorized Agent's Name

PLEASE NOTE - Applicants shall be responsible for legal or outside consultant costs incurred by the City. Submissions shall be made at least four (4) weeks prior to desired plan commission meeting.

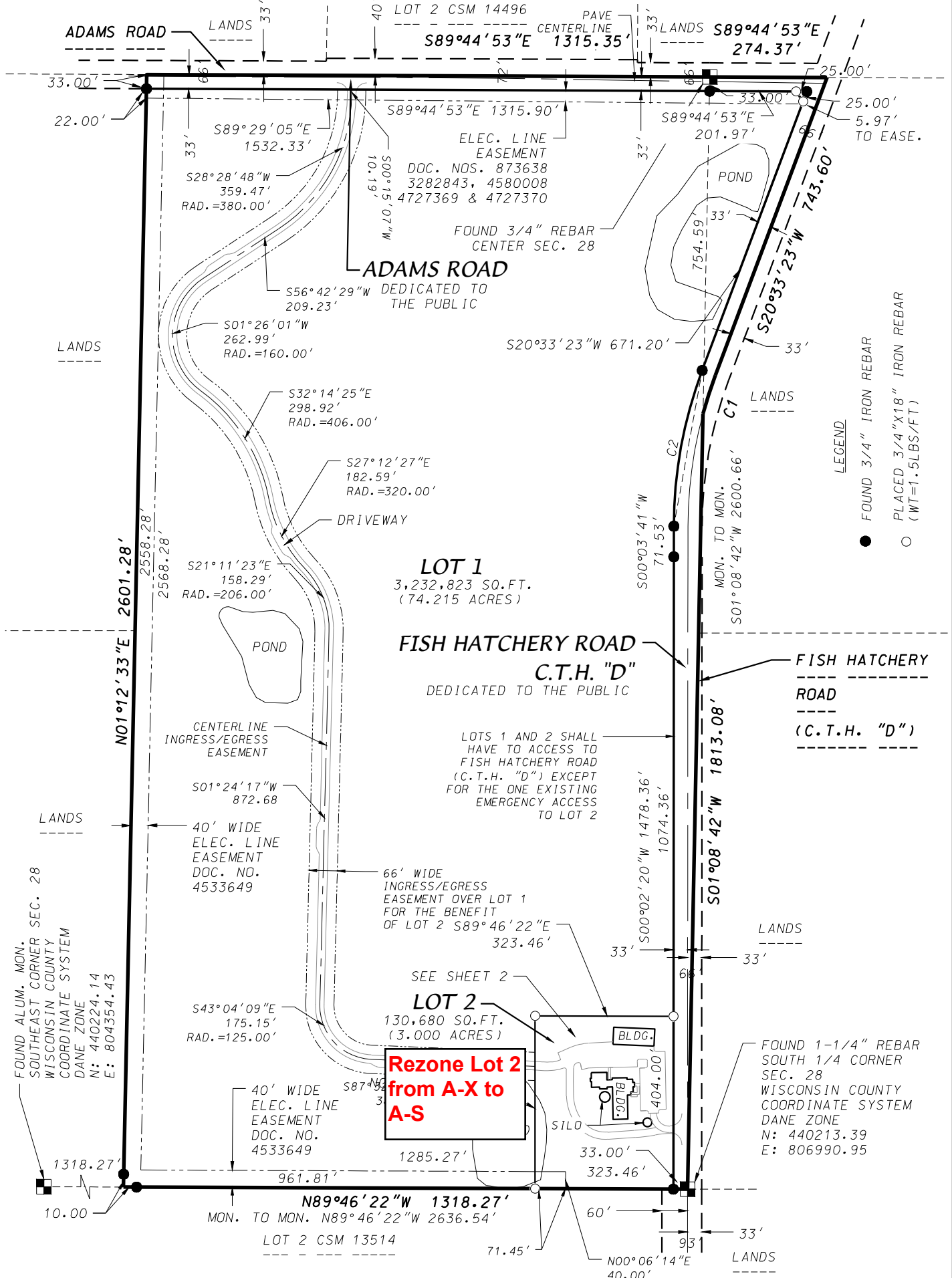
For City Use Only: Date Received: _____ Publish: _____ and _____

Ordinance Section No. _____ Fee Paid: _____

Permit Request No. _____

CERTIFIED SURVEY MAP

LOCATED IN THE SE1/4 OF THE SW1/4, NE1/4 OF THE SW1/4 AND THE NW1/4 OF THE SE1/4 SECTION 28, T6N, R9E, CITY OF FITCHBURG, DANE COUNTY, WISCONSIN



FOUND ALUM. MON. SOUTHEAST CORNER SEC. 28 WISCONSIN COUNTY COORDINATE SYSTEM DANE ZONE N: 440224.14 E: 804354.43

Rezone Lot 2 from A-X to A-S

LEGEND
 ● FOUND 3/4" IRON REBAR
 ○ PLACED 3/4"x18" IRON REBAR (WT=1.5LBS/FT)

D'ONOFRIO KOTKE AND ASSOCIATES, INC.
 7530 Westward Way, Madison, WI 53717
 Phone: 608.833.7530 • Fax: 608.833.1089
 YOUR NATURAL RESOURCE FOR LAND DEVELOPMENT

WISCONSIN COUNTY COORDINATE SYSTEM (DANE ZONE)
 THE SOUTH LINE OF THE SW1/4 OF SECTION 28, T6N, R9E,
 BEARS S86°42'03"W

 Scale 1" = 100'

DATE: April 26, 2021
 F.N.: 21-07-113
 C.S.M. NO. _____
 DOC. NO. _____
 VOL. _____ SHEET _____



325 W Front St, Mount Horeb, WI 53572

P: 608.437.2320 - F: 608.437.2319

ESTIMATE

MaryAnn Mckenzie

P.O. Number	Date	Estimate #	Project
	3/16/2021	1862	Directional Signs

Description	Qty	Rate	Total
Sign design and plan preparation for customer and municipal approval. If any changes are requested by either the customer or any municipal governing bodies this cost may increase	8.00	107.50	860.00T
GMN: D/F Monument Sign-Cedar posts with fabricated aluminum cabinet clad with wood siding. Letters to be brushed aluminum with satin black backer per final design with 5'-8" wide cabinet	1.00	11,948.50	11,948.50T
GDN: D/F Directional Sign-Cedar posts with fabricated aluminum cabinet clad with wood siding. Letters to be white PVC	1.00	5,637.50	5,637.50T
GPN: D/F Directional Sandwich Board. 3'x4' MDO wood construction with painted wood construction and one color di cut vinyl graphics	1.00	1,122.50	1,122.50T
SG: Ground Sign Installation of the above signs. Includes excavation, concrete foundations and spoil removal. Does not include landscaping repair costs if needed. Pricing based on the assumption that all sub contractor site readiness actions will be completed prior to our time of arrival, any delays cause by site not being ready may result in fees added to final invoice. Pricing is based on a single site mobilization, if additional site mobilizations are requested then additional fees will be billed to final invoice.	1.00	3,932.00	3,932.00T
Procurement of municipal permits. Does not include actual cost of municipal permits. Permit fee will be applied to final invoice. THIS FEE IS AN HOURLY RATE FOR ALL REGULATORY PERMIT PROCESSES		81.25	81.25T
50% deposit required to begin work			
TERMS AND CONDITIONS		0.00	0.00T
1. PAYMENT: 50% deposit is required to begin work unless otherwise stated. Final payment shall be due in full within 15 days of invoice date. Interest shall accrue on the unpaid balance from the due date, at the monthly interest rate of 1.5%			
2.TAXES: Buyer shall pay all taxes and other charges imposed by any governmental authority upon the production, sale, use or shipment of the products sold. Price			

Subtotal

Sales Tax (5.5%)

Total

Customer Signature	Date
--------------------	------



325 W Front St, Mount Horeb, WI 53572

P: 608.437.2320 - F: 608.437.2319

ESTIMATE

MaryAnn Mckenzie

P.O. Number	Date	Estimate #	Project
	3/16/2021	1862	Directional Signs

Description	Qty	Rate	Total
<p>quotations do not include taxes or other charges, unless specified.</p> <p>3. NOTICE OF LIEN RIGHTS: YOU ARE HEREBY NOTIFIED THAT PERSONS OR COMPANIES WHO FURNISH LABOR AND MATERIALS FOR THE CONSTRUCTION ON YOUR PROPERTY DESCRIBED ON THE REVERSE SIDE HEREOF MAY HAVE LIEN RIGHTS ON YOUR LAND AND BUILDINGS IF THEY ARE NOT PAID. THOSE ENTITLED TO LIEN RIGHTS, IN ADDITION TO SIGN ART STUDIO LLC., ARE THOSE WHO CONTRACT DIRECTLY WITH YOU OR THOSE WHO GIVE YOU IDENTIFICATION NOTICE WITHIN SIXTY (60) DAYS AFTER THEY FIRST FURNISH LABOR AND MATERIALS FOR THE CONSTRUCTION. YOU PROBABLY WILL RECEIVE NOTICES FROM THOSE WHO FURNISH LABOR AND MATERIALS FOR THE CONSTRUCTION, AND SHOULD GIVE A COPY OF EACH NOTICE RECEIVED TO THE MORTGAGE LENDER, IF ANY. SIGN ART STUDIO LLC. AGREES TO COOPERATE WITH THE OWNER AND THE OWNER'S LENDER, IF ANY, TO SEE THAT ALL POTENTIAL LIEN CLAIMANTS ARE DULY PAID.</p> <p>4. UNDERGROUND UTILITIES: If underground digging is required at the location, it is Sign Art Studio LLC.'s obligation to have any and all public underground utilities marked and located prior to digging (including water, sewer, electrical, telephone, cable, etc., public and private). Customer is liable for any and all costs or damages incurred as a result of lack of marking any private under ground utilities (in ground sprinkler systems, etc.)</p> <p>5. QUOTATIONS: Price quotations are not binding beyond 10 days unless mutually agreed. Clerical errors are subject to correction.</p> <p>6. LIMITED WARRANTY AND LIMITATION OF LIABILITY: Seller warrants the products sold and labor provided are free from defects in material and workmanship, subject to reasonable commercial variations. All products are sold and labor provided with the understanding that the customer has independently determined the suitability of the products for its purposes. Should any failure to conform to this warranty appear, and customer gives Sign Art Studio LLC. notice of the defect within 1 year of the providing of the product and materials or completion of the work hereunder, whichever last occurs, Sign Art Studio LLC. shall, upon proper notification hereunder and substantiation, at Sign Art Studio LLC.'s option, refund the purchase price or repair or replace the product sold. Any claims for which notice of defect was not given as required above, are deemed waived.</p> <p>THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, FOR THE LABOR, MATERIALS AND PRODUCTS PROVIDED UNDER THIS AGREEMENT. IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE</p>			

Subtotal
Sales Tax (5.5%)
Total

Customer Signature	Date
--------------------	------



325 W Front St, Mount Horeb, WI 53572

P: 608.437.2320 - F: 608.437.2319

ESTIMATE

MaryAnn Mckenzie

P.O. Number	Date	Estimate #	Project
	3/16/2021	1862	Directional Signs

Description	Qty	Rate	Total
<p>EXPRESSLY EXCLUDED FROM THIS WARRANTY, AND SIGN ART STUDIO LLC.'S OBLIGATION SHALL NOT EXCEED ITS OBLIGATION SET FORTH IN THIS WARRANTY.</p> <p>7. Sign Art Studio LLC. is not liable for any delays in completion caused by any cause beyond its reasonable control including accidents to machinery or transportation delays.</p> <p>8. THIRD PARTY LIABILITY: Seller shall not be liable to any third party for any claim in connection with the products sold. Buyer assumes sole responsibility for such third party liability and shall indemnify seller for all losses the third party claims, including, but not limited to, expenditures for judgments, attorney's fees, litigation and negotiation.</p> <p>9. EXPENSES OF COLLECTION: Buyer agrees to pay all expenses of seller for collection of the amounts owed here under, including reasonable attorney's fees.</p> <p>10. APPLICABLE LAW: This agreement shall be governed by the laws of the State of Wisconsin.</p> <p>11. CONFLICTING TERMS: The terms of this estimate/quotation shall prevail over any conflicting term in any order or other document from buyer.</p>			

Subtotal	\$23,581.75
Sales Tax (5.5%)	\$1,297.00
Total	\$24,878.75

Customer Signature	Date
--------------------	------

KEY NOTES:

A-D/F Monument sign Non illuminated
Cedar posts with fabricated aluminum cabinet cladded with wood siding.

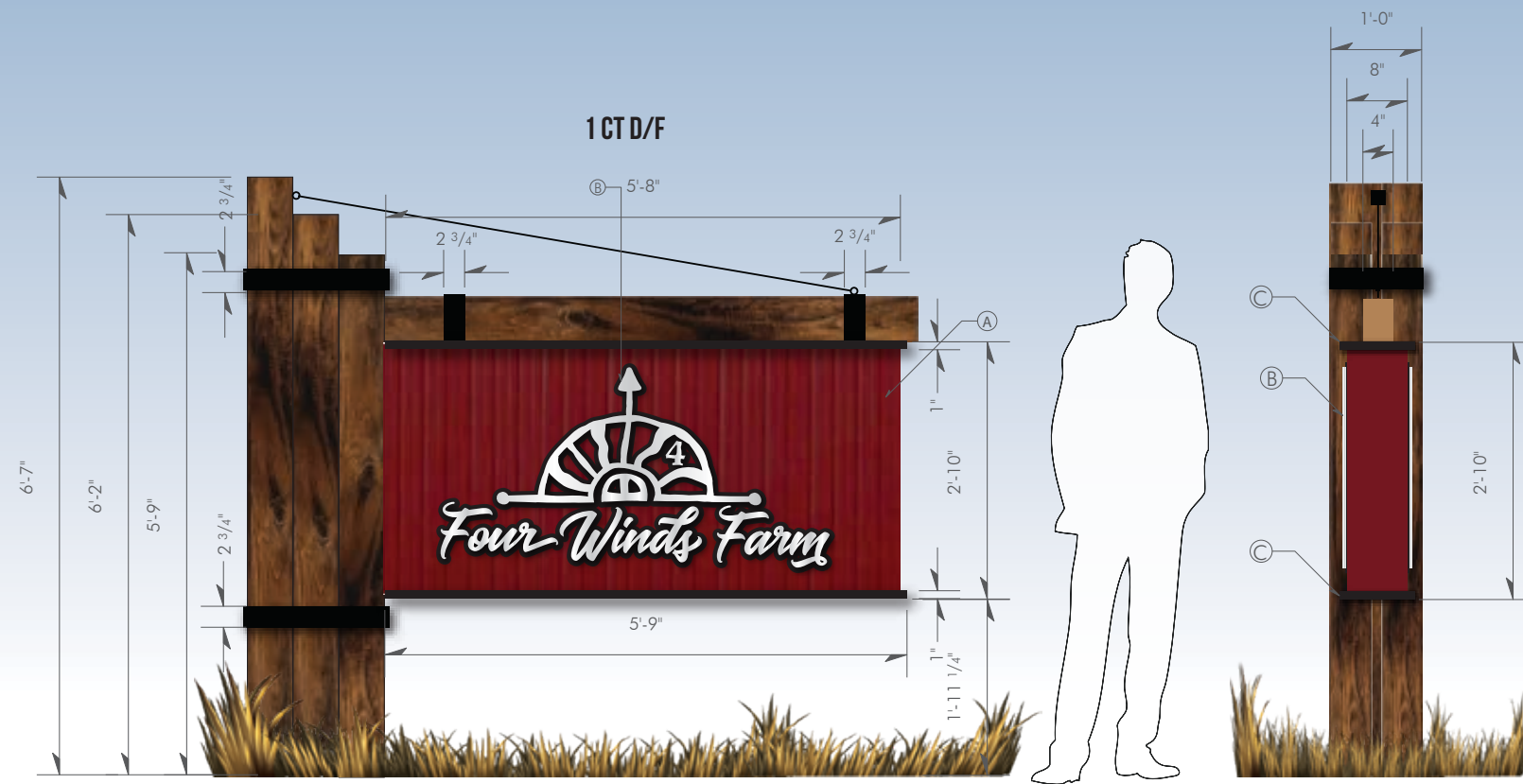
B - Letters to be brushed aluminum with backer to be painted satin black.

C - 1" aluminum accent bar / MPS Paint Satin Black

FINISHES:

- Red Barn Siding (need color match)
- Brushed Aluminum (Letters & Logo)
- Matthews Black Satin (Letter Backer & Hardware)
- Stain color TBD

CALCULATIONS:



makesignsnotwar.com

325 W Front St, Mount Horeb, WI 53572

CUSTOMER APPROVAL: _____

DATE: _____

LANDLORD APPROVAL: _____

DATE: _____

S H E E T

By signing this approval you are hereby authorizing Sign Art Studio LLC to proceed with the work as described. Any deviation from these specifications will become the customer's financial responsibility.

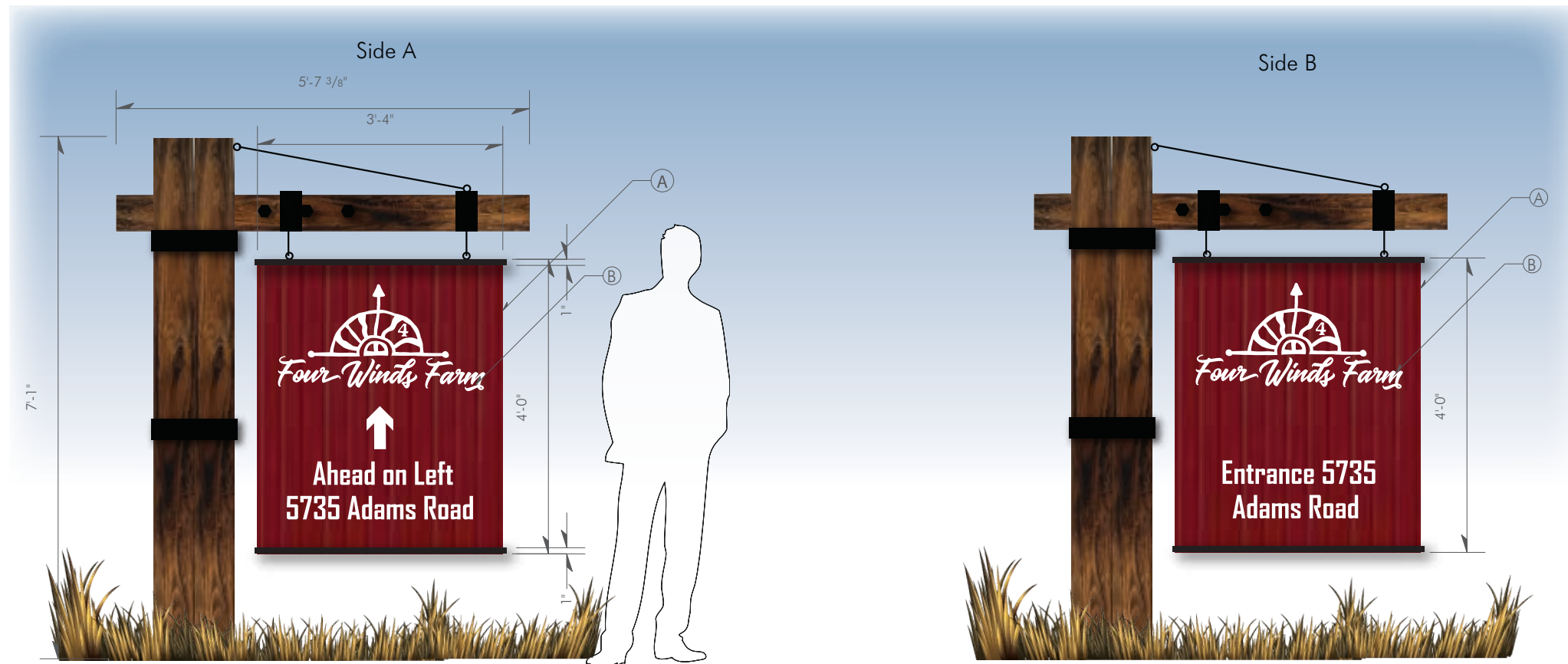
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GMN

FOUR WINDS FARM

1 CT D/F

Directional 1



KEY NOTES:

A-D/F Monument sign Non illuminated Cedar posts with fabricated aluminum cabinet clad with wood siding.

B - Lettering to be 1/2" White PVC

FINISHES:

- Red Barn Siding (need color match)
- White PVC
- Matthews Black Satin
- Stain color TBD

CALCULATIONS:



makesignsnotwar.com

325 W Front St, Mount Horeb, WI 53572

CUSTOMER APPROVAL: _____

DATE: _____

LANDLORD APPROVAL: _____

DATE: _____

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S H E E T

GDN

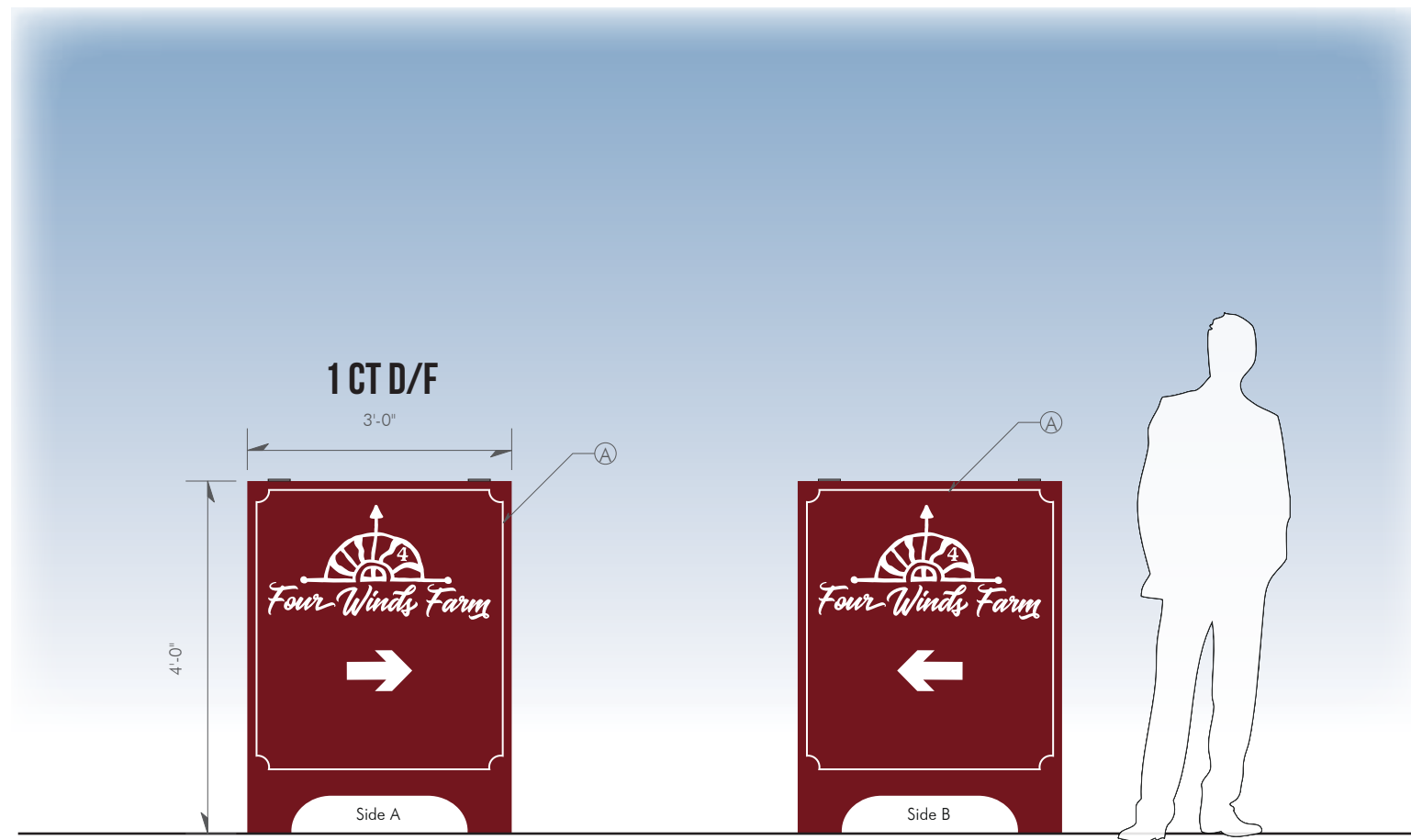
KEY NOTES:

A - MDO Sandwich board D/F with hinges at the top. Paint to Match red barn siding. with applied White vinyl graphics first surface.

FINISHES:

- Red Barn Siding (Need color match)
- White vinyl 7725-10

CALCULATIONS:



CUSTOMER APPROVAL: _____ DATE: _____ LANDLORD APPROVAL: _____ DATE: _____
By signing this approval you are hereby authorizing Sign Art Studio LLC to proceed with the work as described. Any deviation from these specifications will become the customer's financial responsibility.

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vikingelectric.com





Project EQ01219V7S Date 7/29/2020
FOUR WINDS FARM
 Submitted By
ELAN LIGHTING SYSTEMS

Catalog Number
NU4-RD-SW-2OLM-30K-80-HE50-120-DIM10-IC-WH-WH
 Notes

TYPE:
DA



Alphabet by Ledra Brands, Inc. | 15774 Gateway Circle | PH: 714.259.9959 | AlphabetLighting.com
 Tustin, CA 92780 | FAX: 714.259.9969

JOB NAME _____

CONTACT _____

ORDERING CODE _____

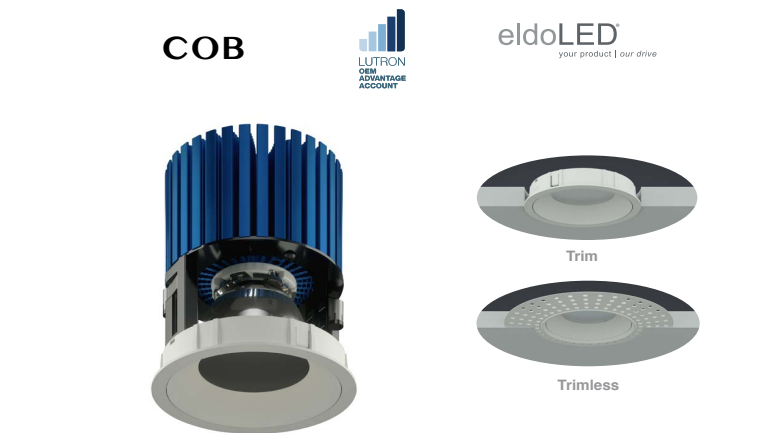


LM-79

ORDERING CODE

SERIES	NU4																																																																																		
TYPE	RD round downlight RDT round downlight trimless																																																																																		
LED	SW static white																																																																																		
DELIVERED LUMENS (3000K 80CRI WH70)	<table border="0"> <tr><td>07LM</td><td>560 lm</td></tr> <tr><td>10LM</td><td>800 lm</td></tr> <tr><td>13LM</td><td>1040 lm</td></tr> <tr><td>15LM</td><td>1200 lm</td></tr> <tr><td>20LM</td><td>1600 lm</td></tr> <tr><td>30LM</td><td>2400 lm</td></tr> <tr><td>40LM</td><td>3000 lm</td></tr> </table> <p>Calculated Delivered Lumens = [Delivered Lumen Value] x [CCT Multiplier] x [Reflector Multiplier]</p>	07LM	560 lm	10LM	800 lm	13LM	1040 lm	15LM	1200 lm	20LM	1600 lm	30LM	2400 lm	40LM	3000 lm																																																																				
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CCT	<table border="0"> <tr><td>22K</td><td>2200K</td><td>CCT</td><td>2200K</td><td>2700K</td><td>3000K</td><td>3500K</td><td>4000K</td><td>5000K</td></tr> <tr><td>27K</td><td>2700K</td><td>CRI</td><td>80+</td><td>90+</td><td>80+</td><td>90+</td><td>80+</td><td>90+</td><td>80+</td><td>90+</td><td>80+</td><td>90+</td></tr> <tr><td>30K</td><td>3000K</td><td>CCT MULTIPLIER FOR LUMEN OUTPUT</td><td>0.85</td><td>N/A</td><td>0.96</td><td>0.81</td><td>1.00</td><td>0.84</td><td>1.01</td><td>0.85</td><td>1.03</td><td>0.87</td><td>1.04</td><td>N/A</td></tr> <tr><td>35K</td><td>3500K</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>40K</td><td>4000K</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>50K</td><td>5000K</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>	22K	2200K	CCT	2200K	2700K	3000K	3500K	4000K	5000K	27K	2700K	CRI	80+	90+	80+	90+	80+	90+	80+	90+	80+	90+	30K	3000K	CCT MULTIPLIER FOR LUMEN OUTPUT	0.85	N/A	0.96	0.81	1.00	0.84	1.01	0.85	1.03	0.87	1.04	N/A	35K	3500K														40K	4000K														50K	5000K													
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ECO NU4" Round Downlight



DESCRIPTION
 The EcoNU4RD is an economical and highly efficient spec grade 4" recessed downlight with thoughtful construction and pleasing aesthetics. Standard with premium dimming using EldoLED 1% flicker free drivers in 120V, 277V, and step down transformer for 347V. Several beam angles available, plus an optional high-efficiency BrightView diffused lens for smooth light distribution and obscured LED image.

For the trim version, a minimalistic look is achieved with an ultrathin 1/16" trim that is only 5/16" wide. Color choices of both trim and bezel are offered for a customized look. For the trimless version, a perforated, mud up, regressed trim assembly provides for clean, trim free installation. Perforated mud frame's integrated lip helps guide the joint compound creating a sharp and clean opening.

HOUSING
 Electrocoated 16-gauge cold-rolled steel provides enhanced structural reinforcement and rust prevention. Superior, UL-certified, injection-molded commercial-grade Lexan™(PC) is used for the frame and regressed bezel trim. Lexan provides unmatched durability and impact resistance, and is tested for UV resistance and water exposure in outdoor applications. The thermally-advanced, anodized heat sink uses 6063 aluminum alloy. Wet location rated is offered standard. A 90-minute constant-power IOTA emergency battery backup is available.

MOUNTING
 An advanced mounting system allows for quick and secure installation with LED and driver serviceability from below the ceiling. The LED assembly uses die-cast aluminum mounting clamp grips (MCG) that swing out to tighten onto variable ceiling thicknesses. Integrated rubber feet on each MCG provide a non-slip vibration-resistant installation. The hidden MCG system is accessible from below ceiling by removing the snap-in lens/bezel assembly with either the included suction cup or a screwdriver blade. Integrated bar hangers feature integral toothed nails, T-bar mounting slots with locking holes, tabs for joist positioning. Retrofit mounting option allows for installation from below ceiling by use of compact driver box. No risk damaging LED or bezel assembly during installation, these are installed during last steps. Fixture and driver are easily removed for servicing after install without damaging drywall.

MOUNTING DIMENSIONS	CEILING THICKNESS	CEILING CUTOUT	New Construction Bar Hangers (included)	Mounting Length: 14-3/4" to 26"
Trim	1/8" to 1-5/8"	4-3/8" diameter	Extension Kit p/n: K20266 (ordered separately, 1 per fixture)	Extends a pair of Bar Hangers Total Mounting Length: 29" to 48"
Trimless	3/8" to 1-3/4"	4-1/2" diameter		

LISTINGS
 - ETLus Listed to UL1598, cETL Listed to CSA C22.2 #250.0
 - IP65 with lens - Suitable for wet locations with lens - Suitable for damp locations without lens
 - Non-conductive, Lexan dead-front construction
 - Made in the USA - meets the requirements of the Buy American provision within the ARRA

RATINGS / CERTIFICATIONS	NC	RET	IC	ICAT	CP
Type non-IC	✓	✓			
Type IC			✓	✓	✓
Chicago Plenum (CCEA)					✓
Suitable for air handling plenums				✓	✓
Reduced airflow (with lens) ASTM E283	✓	✓	✓	✓	✓

LED INFO
 - 90 CRI: SDCM = 2-step MacAdam Ellipse, Lumen Maintenance: L₇₀ > 49,500 hrs
 - 80 CRI: SDCM = 3-step MacAdam Ellipse, Lumen Maintenance: L₇₀ > 49,500 hrs

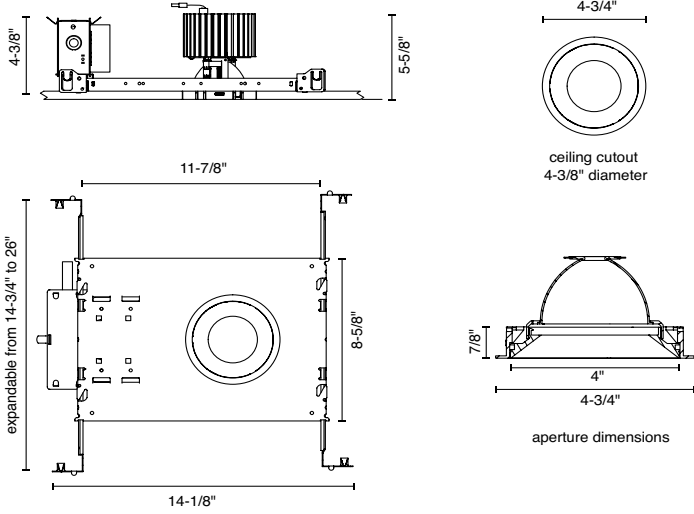
ORDERING CODE
 Follow the steps to specify your fixture, example:
NU4 - RD - SW - 13LM - 35K - 90 - D50 - 120 - DIM10 - NC - WH - WH - EM7

SW (LED)	POWER
DELIVERED LM	W (80/90 CRI)
560	6
800	9
1040	12
1200	14
1600	16
2400	24
3000	32

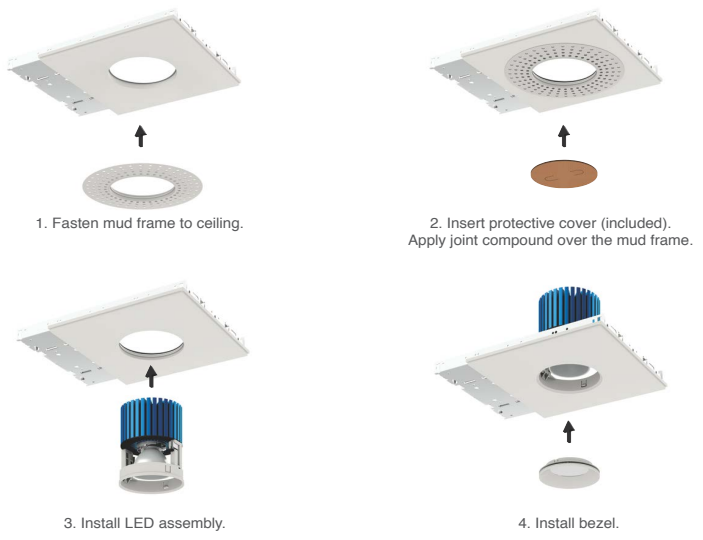
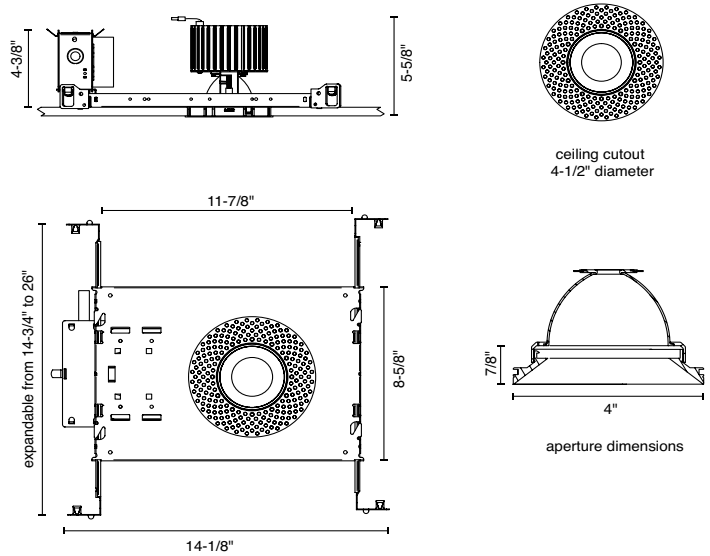
Power Factor ≥ 0.9
NOTES
 1 90 CRI not available in 2200K or 5000K.
 2 IC/ICAT/CP not available in 40LM.
 3 "No lens" option available for SS30, SS40, SS60, D40, D50, D60, or WH70 and is damp location rated.
 4 Driver uses logarithmic dimming curve as standard. For linear dimming curve add "LIN" after dimming code, i.e. DIM10LIN
 5 Triac/ELV dimming available in 120V only.
 6 For integrated test switch add "ITS" after emergency backup code, i.e. EM12ITS. Test switch is mounted in the bezel of the fixture.
 7 LUTP not available in 30LM or 40LM.
 8 10V dimming only available in 15LM and 20LM.
 9 For trimless option eliminate "Trim Color Code" from catalog string.
 Example: NU4 - RDT - SW - 13LM - 35K - 90 - D50 - 120 - DIM10 - NC - WH - EM

MOUNTING OPTIONS

NC - NEW CONSTRUCTION TRIM



NC - NEW CONSTRUCTION TRIMLESS





Project EQ01219V7S Date 7/29/2020
FOUR WINDS FARM
 Submitted By
ELAN LIGHTING SYSTEMS

Catalog Number
 NU4-RD-SW-2OLM-30K-80-HE50-120-DIM10-IC-WH-WH
Notes

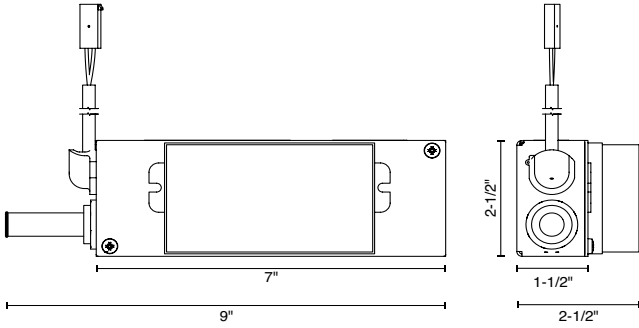
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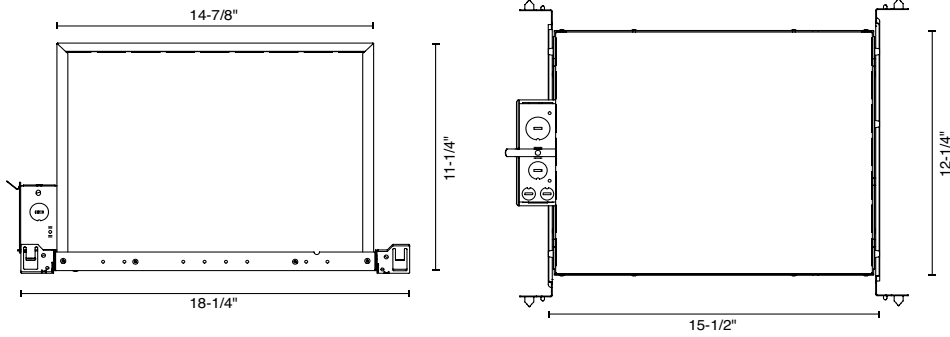
Alphabet by Ledra Brands, Inc. | 15774 Gateway Circle | PH: 714.259.9959
 Tustin, CA 92780 | FAX: 714.259.9969 | AlphabetLighting.com

MOUNTING OPTIONS (CONTINUED)

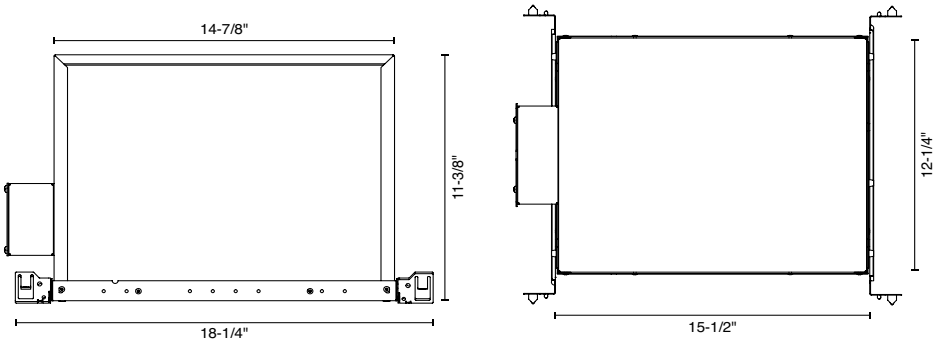
**RET - RETROFIT
 TRIM/TRIMLESS**



**IC¹ - INSULATION CONTACT HOUSING
 TRIM/TRIMLESS**



**CP - CHICAGO PLENUM
 ICAT - INSULATION CONTACT / AIR TIGHT
 TRIM/TRIMLESS**



NOTES

1 Consult factory for smaller IC Housings when selecting lower lumen packages.



Project EQ01219V7S Date 7/29/2020
FOUR WINDS FARM
 Submitted By
ELAN LIGHTING SYSTEMS

Catalog Number
NU4-RA-SW-27LM-30K-80-HE50-120-DIM10-IC-WH-WH
 Notes

TYPE:
DC



Alphabet by Ledra Brands, Inc. | 15774 Gateway Circle | PH: 714.259.9959 | AlphabetLighting.com
 Tustin, CA 92780 | FAX: 714.259.9969

JOB NAME _____
 CONTACT _____
 ORDERING CODE _____

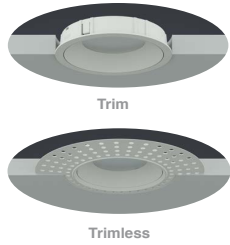


ECO NU4" Round Adjustable

COB



eldoLED[®]
 your product | our drive



DESCRIPTION

The EcoNU4RA is an economical and highly efficient spec grade 4" recessed adjustable with thoughtful construction and pleasing aesthetics. Standard with premium dimming using EldoLED 1% flicker free drivers in 120V, 277V, and step down transformer for 347V. An adjustable hot-aiming system allows tilt adjustments from 0° to 40° with 360° rotation. The aiming adjustment and locking mechanisms are accessible from below the ceiling while the reflector is installed. A complex tilting mechanism positions the tilting axis for the maximum optical performance at all angles.

For the trim version, a minimalistic look is achieved with an ultrathin 1/16" trim that is only 5/16" wide. Color choices of both trim and bezel are offered for a customized look. For the trimless version, a perforated, mud up, regressed trim assembly provides for clean, trim free installation. Perforated mud frame's integrated lip helps guide the joint compound creating a sharp and clean opening.

HOUSING

Electrocoated 16-gauge cold-rolled steel provides enhanced structural reinforcement and rust prevention. Superior, UL-certified, injection-molded commercial-grade Lexan™ (PC) is used for the frame and regressed bezel trim. Lexan provides unmatched durability and impact resistance, and is tested for UV resistance and water exposure in outdoor applications. The thermally-advanced, anodized heat sink uses 6063 aluminum alloy. A 90-minute constant-power IOTA emergency battery backup is available.

MOUNTING

An advanced mounting system allows for quick and secure installation with LED and driver serviceability from below the ceiling. The LED assembly uses die-cast aluminum mounting clamp grips (MCG) that swing out to tighten onto variable ceiling thicknesses. Integrated rubber feet on each MCG provide a non-slip vibration-resistant installation. The hidden MCG system is accessible from below ceiling by removing the snap-in lens/bezel assembly with either the included suction cup or a screwdriver blade. Integrated bar hangers feature integral toothed nails, T-bar mounting slots with locking holes, tabs for joist positioning. Retrofit mounting option allows for installation from below ceiling by use of compact driver box. No risk damaging LED or bezel assembly during installation, these are installed during last steps. Fixture and driver are easily removed for servicing after install without damaging drywall.

MOUNTING DIMENSIONS	CEILING THICKNESS	CEILING CUTOUT
Trim	1/8" to 1-1/4"	4-3/8" diameter
Trimless	3/8" to 1-3/4"	4-1/2" diameter

New Construction Bar Hangers (included)	Mounting Length: 14-3/4" to 26"
Extension Kit p/n: K20266 (ordered separately, 1 per fixture)	Extends a pair of Bar Hangers Total Mounting Length: 29" to 48"

LISTINGS

- ETLus Listed to UL1598, cETL Listed to CSA C22.2 #250.0
- IP65 with lens - Suitable for wet locations with lens - Suitable for damp locations without lens
- Non-conductive, Lexan dead-front construction
- Made in the USA - meets the requirements of the Buy American provision within the ARRA

RATINGS / CERTIFICATIONS	NC	RET	IC	ICAT	CP
Type non-IC	✓	✓			
Type IC			✓	✓	✓
Chicago Plenum (CCEA)				✓	✓
Suitable for air handling plenums				✓	✓
Reduced airflow (with lens) ASTM E283	✓	✓	✓	✓	✓

LED INFO

- 90 CRI: SDCM = 2-step MacAdam Ellipse, Lumen Maintenance: L₇₀ > 49,500 hrs
- 80 CRI: SDCM = 3-step MacAdam Ellipse, Lumen Maintenance: L₇₀ > 49,500 hrs

ORDERING CODE

SERIES	NU4
TYPE	RA round adjustable RAT round adjustable trimless
LED	SW static white
DELIVERED LUMENS (3000K 80CRI S35)	07LM 580 lm 10LM 830 lm 13LM 1080 lm 15LM 1200 lm 20LM 1660 lm 27LM 2240 lm 30LM 2500 lm 36LM 3000 lm Calculated Delivered Lumens = [Delivered Lumen Value] x [CCT Multiplier] x [Reflector Multiplier]
CCT	22K 2200K 27K 2700K 30K 3000K 35K 3500K 40K 4000K 50K 5000K CCT MULTIPLIER FOR LUMEN OUTPUT
CRI	80 80CRI 90 ¹ 90CRI
REFLECTOR & LM MULTIPLIER	S35 35° specular, no lens (1.00) D50 50° diffused, no lens (0.93) D60 60° diffused, no lens (0.85) SC35 35° specular with clear lens (0.97) DC50 50° diffused with clear lens (0.90) DC60 60° diffused with clear lens (0.82) HE40 40° high efficiency diffused lens (0.84) HE50 50° high efficiency diffused lens (0.84)
VOLTAGE	120 120V 277 277V See Electrical Options for 347V.
DIMMING	10V⁶ flicker free 0-10V dimming to 5% DIM10² standard driver with flicker free 0-10V dimming to 1% DIM10Z² flicker free 0-10V dimming to 0% DALI ³ flicker free DALI dimming to 1% DALIZ ³ flicker free DALI dimming to 0% DMXZ flicker free DMX dimming to 0% LTE Lutron Hi-lume 2-Wire (Triac) dimming to 1% LUT Lutron Hi-lume EcoSystem dimming to 1%, Soft-on & Fade-to-Black LUTP ⁵ Lutron Hi-lume Premier EcoSystem dimming to 0.1%, Soft-on & Fade-to-Black ELV ⁴ leading & trailing edge (Triac/ELV) dimming to <10% ELV1 ⁴ leading & trailing edge (Triac/ELV) dimming to 1%
MOUNTING OPTIONS	NC new construction with ceiling fitting plate IC² insulation contact housing ICAT ² insulation contact / airtight housing CP ² chicago plenum housing RET retrofit, no ceiling fitting plate
TRIM COLOR⁷	WH white MC matte chrome BK black BZ bronze WT wheat
BEZEL COLOR	WH white MC matte chrome BK black BZ bronze WT wheat
ELECTRICAL OPTIONS	EM7 emergency battery backup, 90 minutes at 7 watts to LED EM12 emergency battery backup, 90 minutes at 12 watts to LED FOR 347V OPTION order separate "347V to 277V" step down transformer p/n: P70489

ORDERING CODE _____

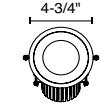
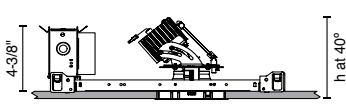
Follow the steps to specify your fixture, example:
NU4 - RA - SW - 13LM - 35K - 90 - D50 - 120 - DIM10 - NC - WH - WH - EM7

SW (LED)	POWER
DELIVERED LM	W (80/90 CRI)
580	6
830	9
1080	12
1200	14
1660	16
2240	22
2500	24
3000	30

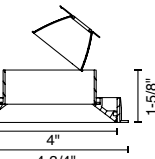
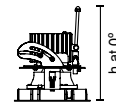
Power Factor ≥ 0.9
NOTES
 1 90 CRI not available in 2200K or 5000K.
 2 IC/ICAT/CP not available in 30LM or 36LM.
 3 Driver uses logarithmic dimming curve as standard. For linear dimming curve add "LIN" after dimming code, i.e. DIM10LIN.
 4 Triac/ELV dimming available in 120V only.
 5 LUTP not available in 27LM, 30LM or 36LM.
 6 10V dimming only available in 15LM and 20LM.
 7 For trimless option eliminate "Trim Color Code" from catalog string.
 Example: NU4 - RAT - SW - 13LM - 35K - 90 - D50 - 120 - DIM10 - NC - WH - EM

MOUNTING OPTIONS

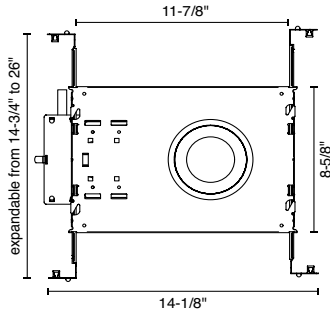
NC - NEW CONSTRUCTION TRIM



ceiling cutout
 4-3/8" diameter

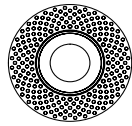
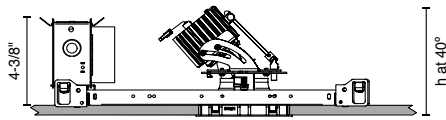


aperture dimensions

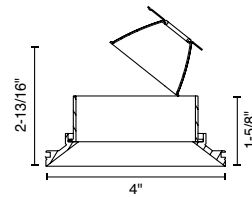
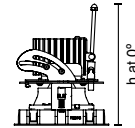


HEIGHT	0°	40°
h (for 07LM-27LM)	6-1/8"	5-1/2"
h (for 30LM and 36LM)	7-1/8"	6-1/2"

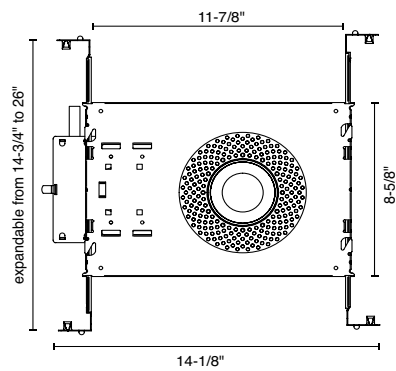
NC - NEW CONSTRUCTION TRIMLESS



ceiling cutout
 4-1/2" diameter



aperture dimensions



HEIGHT	0°	40°
h (for 07LM-27LM)	6-1/8"	5-1/2"
h (for 30LM and 36LM)	7-1/8"	6-1/2"



1. Fasten mud frame to ceiling.



2. Insert protective cover (included).
 Apply joint compound over the mud frame.



3. Install LED assembly.



4. Install bezel.



Project EQ01219V7S Date 7/29/2020
FOUR WINDS FARM
 Submitted By
ELAN LIGHTING SYSTEMS

Catalog Number
 NU4-RA-SW-27LM-30K-80-HE50-120-DIM10-IC-WH-WH
Notes

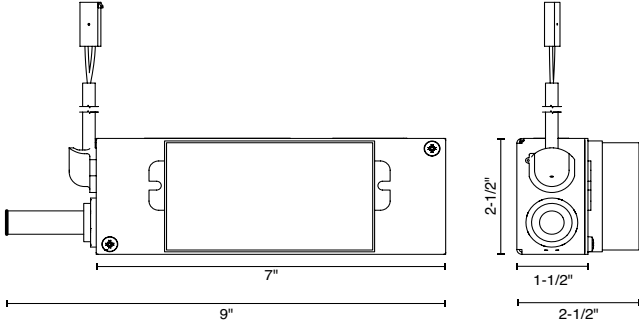
TYPE:
DC



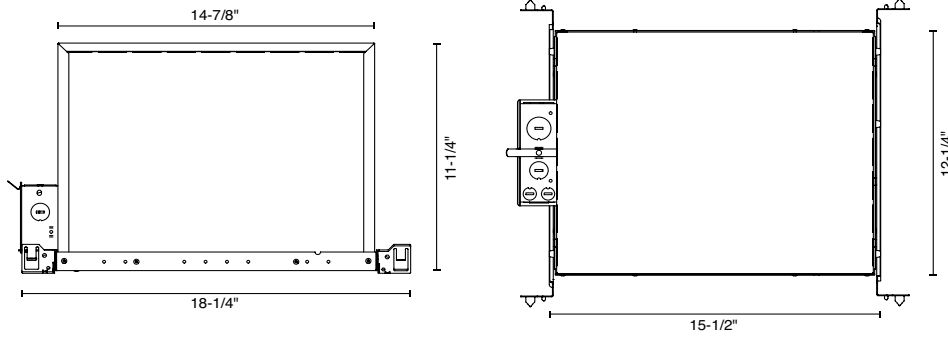
Alphabet by Ledra Brands, Inc. | 15774 Gateway Circle | PH: 714.259.9959
 Tustin, CA 92780 | FAX: 714.259.9969 | AlphabetLighting.com

MOUNTING OPTIONS (CONTINUED)

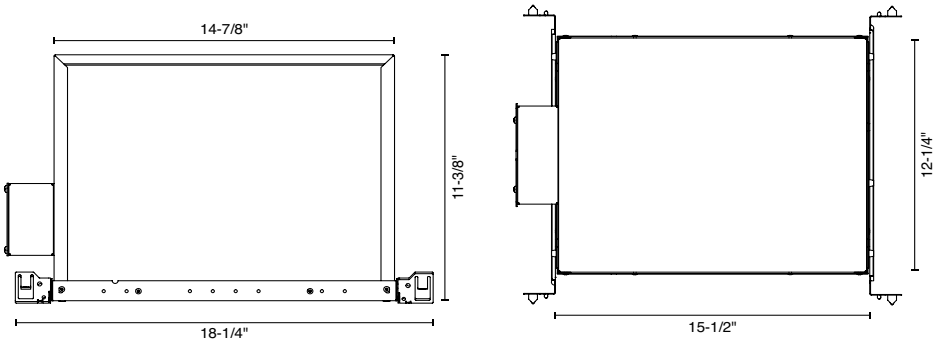
**RET - RETROFIT
 TRIM/TRIMLESS**



**IC¹ - INSULATION CONTACT HOUSING
 TRIM/TRIMLESS**



**CP - CHICAGO PLENUM
 ICAT - INSULATION CONTACT / AIR TIGHT
 TRIM/TRIMLESS**



NOTES
 1 Consult factory for smaller IC Housings when selecting lower lumen packages



Project EQ01219V7S Date 7/29/2020
FOUR WINDS FARM
 Submitted By
ELAN LIGHTING SYSTEMS

Catalog Number
BLE-G-WHS12-975-G3-975-LED11-3000K-DL
 Notes

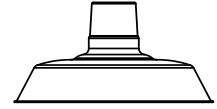
TYPE:
OA



SPS-0448 REV B

THE ORIGINAL™ INTEGRATED LED SERIES

JOB NAME: _____ FIXTURE TYPE: _____



Order Example: BLE - G - WHS16 - 600 - G22 - 980 - NA - ACR - 600 - NA - LED38 - 2700K - DL

A - MOUNTING STYLE

- C Cord Hung
- CN Chain Hung
- F Flush Mount
- G Gooseneck**
- S Stem Mount

B - SHADE SIZE

THE ORIGINAL™:

- WHS12¹⁰**
- WHS14
- WHS16
- WHS18
- WHS20¹
- WHS24^{1,2,6,10}
- WHS28^{1,2,6,10}

C - SHADE FINISH

PORCELAIN FINISHES³:

- 150 Black
- 250 White
- 350 Vintage Green
- 355 Jadite
- 455 Cherry Red
- 550 Yellow
- 650 Bronze
- 750 Cobalt Blue
- 765 Delphite Blue
- 850 Graphite
- 950 Metallic Chrome

POWDER COAT FINISHES⁴:

- 100 Black
- 105 Textured Black
- 200 White
- 300 Dark Green
- 307 Emerald Green
- 311 Jadite
- 370 Mint
- 380 Chartreuse
- 390 Teal
- 400 Barn Red
- 420 Orange
- 470 Watermelon
- 480 Blush Pink
- 490 Magenta
- 495 Sherbet Orange
- 500 Buttery Yellow
- 570 Sunflower
- 600 Bronze
- 601 Chocolate
- 605 Rust
- 615 Oil-Rubbed Bronze
- 700 Royal Blue
- 705 Navy
- 710 Cobalt Blue
- 715 Delphite Blue

C - SHADE FINISH (CONTINUED)

POWDER COAT FINISHES⁴:

- 790 Lavender
- 800 Industrial Grey
- 805 Charcoal Granite
- 810 Graphite
- 975 Galvanized**

NATURAL METALS⁵:

- 995 Raw Copper
- 996 Weathered Copper
- 997 Raw Brass
- 998 Weathered Brass
- 999 Oil-Rubbed Copper

D - MOUNTING

Please Note: If Flush Mount [F] is selected in Section A, please select NA

- NA Not Applicable

CSA LISTED CORDS:

- SBK Standard Black
- SWH Standard White
- CSB Black Cloth
- CSW White Cloth
- CMG Grey Cloth
- CSR Red Cloth
- CRZ Red Chevron Cloth
- CSBB Black & Brown Cloth
- CSRW Red & White Cloth
- CSGW Gold & White Cloth
- CSBG Black & Gold Cloth
- CSBW Black & White Cloth
- CSBP Black & Pink Cloth
- CSUW Blue & White Cloth

CHAIN MOUNT OPTIONS:

- CN36 3' of Chain¹
- CN48 4' of Chain¹
- CN60 5' of Chain¹
- CN72 6' of Chain¹

GOOSENECK OPTIONS:

- G1¹ G11¹ G26¹
- G2¹ G12¹ G32
- G3^{1,11}** G13 G34¹
- G4¹¹ G14 G35¹
- G5¹ G15 G36¹
- G6 G16¹ G64¹
- G7 G17 G65¹
- G8 G22
- G9 G24
- G10 G25

D - MOUNTING (CONTINUED)

STEM MOUNT OPTIONS:

- ST506 .5" Stem Mount, 6"¹
- ST512 .5" Stem Mount, 12"¹
- ST518 .5" Stem Mount, 18"¹
- ST524 .5" Stem Mount, 24"¹
- ST536 .5" Stem Mount, 36"¹
- ST548 .5" Stem Mount, 48"¹
- ST706 .75" Stem Mount, 6"
- ST712 .75" Stem Mount, 12"
- ST718 .75" Stem Mount, 18"
- ST724 .75" Stem Mount, 24"
- ST736 .75" Stem Mount, 36"
- ST748 .75" Stem Mount, 48"

E - MOUNTING FINISH

Please Note: See Section C for Finish Options. 980-Brushed Aluminum is also available for Gooseneck and Stem mounting styles. If a Porcelain shade finish is selected, mounting will be powder coat painted-to-match. Porcelain shade finishes are not available with a Natural Metal mounting finish
 (I) If Cord Hung [C], selection identifies canopy finish
 (II) If Chain Hung [CN] Mounting Style, selection identifies chain and canopy finish. Natural Metals are not applicable
 (III) If Stem Mount [S] Mounting Style, selection identifies stem and canopy finish
 (IV) If Flush Mount [F] Mounting Style, selection identifies hex coupler and canopy finish. Natural Metals are not applicable

- 980 Brushed Aluminum

F - CORDS⁷

- NA Not Applicable

Please Note: See Section D for all applicable CSA Listed Cord Options

G - SHADE ACCESSORIES

- NA None
- WC Wire Cage^{1,12}
- ACR Acrylic Diffuser⁵

H - SHADE ACCESSORY FINISH

Please Note: See Section C for Finish Options. Natural Metals not applicable with Acrylic Diffuser or Wire Cage. If Porcelain Finish is selected, accessory will be powder coat painted-to-match

- NA Not Applicable

I - MOUNTING ACCESSORY

Please Note: Mounting Accessories below are only applicable with select Mounting Styles. Please refer to product listings on our website for further detail.

- NA None/Not Applicable
- HSC Hang Straight Canopy¹⁹
- LDBPC LED Decorative Backing Plate Cover¹³
- LDCHX LED Decorative Backing Plate Cover & Hex Cover¹³

J - LIGHT SOURCE

- LED11 850 Lumen, 11W LED**
- LED16 1250 Lumen, 16W LED
- LED27 2000 Lumen, 27W LED
- LED38 3000 Lumen, 38W LED
- LED43 4000 Lumen, 43W LED¹⁰

K - COLOR TEMPERATURE

- 2700K 2700K, Warm White
- 3000K 3000K, Neutral White**
- 3500K 3500K, Bright White
- 4000K 4000K, Cool White

L - LED LENS

- DL Domed Lens**
- FL Flat Lens

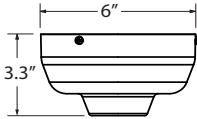
IMPORTANT: (1) Not available in Natural Metals (2) Not available in Porcelain Enamel (3) All Porcelain Enamel finished shades feature a white interior and a black outer rim (4) All Powder Coat finished shades, Galvanized excluded, feature a white interior (5) Acrylic Diffuser limits the maximum lumen selection as well as reduces lumens delivered and LPW. Selection Limits: 2000 Max for 12" and 14" shades; 3000 Max for 16" through 28" shades (6) Wire Cage not available with select size (7) Only applicable if Chain Hung Mounting Style selected in Section A, select NA if another Mounting Style is selected (8) Natural Metals have a longer estimated manufacturing time, please check the website for exact lead time. There are no returns accepted on Natural Metals (9) Only applicable if Stem Mounting Style is selected in Section A (10) Not available with Acrylic Diffuser shade accessory (11) Not compatible with 16" shade size and larger (12) Wire Cage not available for 24" & 28" shade sizes (13) Not available with G36 Gooseneck option

BARN LIGHT ELECTRIC CO.

THE ORIGINAL™ INTEGRATED LED SERIES SPS-0448 REV B

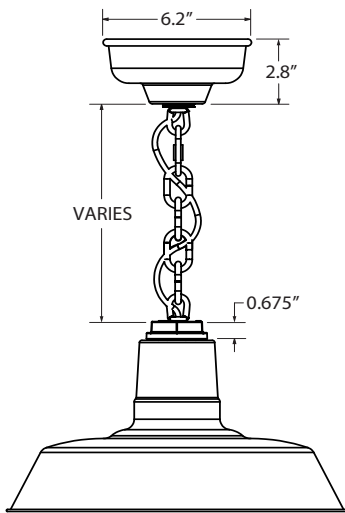
MOUNTING STYLE

HIGH LUMEN CANOPY FOR PENDANT & FLUSH MOUNT



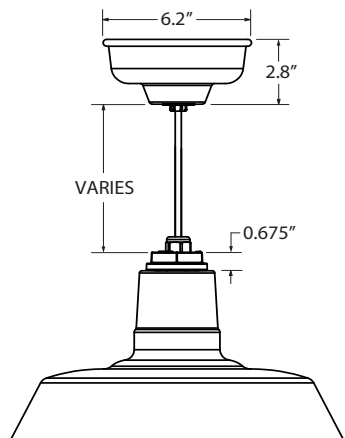
Required if LED 27, 38, 43 Light Source selected in Section J

CHAIN HUNG PENDANT (CN)



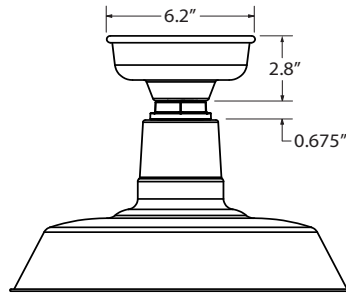
Canopy shown required if LED 11 & 16 Light Source selected in Section J

CORD HUNG PENDANT (C)



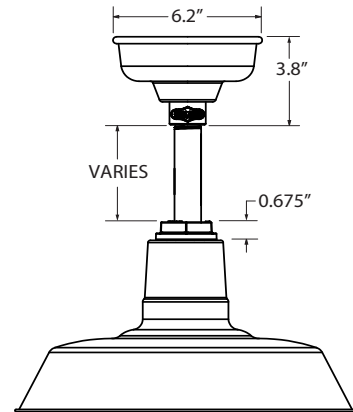
Canopy shown required if LED 11 & 16 Light Source selected in Section J

FLUSH MOUNT (F)



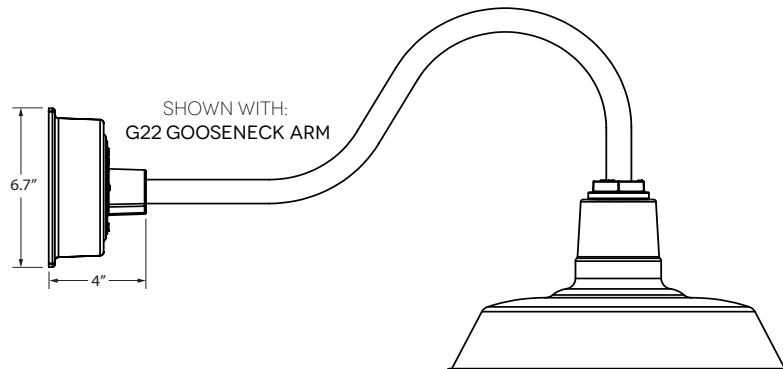
Canopy shown required if LED 11 & 16 Light Source selected in Section J

STEM MOUNT PENDANT (S)

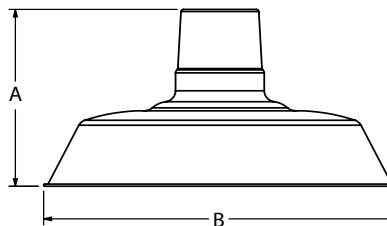


Canopy shown required if LED 11 & 16 Light Source selected in Section J

GOOSENECK (G)



LUMINAIRE DIMENSIONS



SHADE CODE	HEIGHT (A)	DIAMETER (B)
WHS12	7"	12"
WHS14	7.5"	14"
WHS16	7.75"	16"
WHS18	8.5"	18"
WHS20	9.25"	20"
WHS24	10.75"	24"
WHS28	11"	28"

BARN LIGHT ELECTRIC CO.

THE ORIGINAL™ INTEGRATED LED SERIES SPS-0448 REV B

LIGHT SOURCE

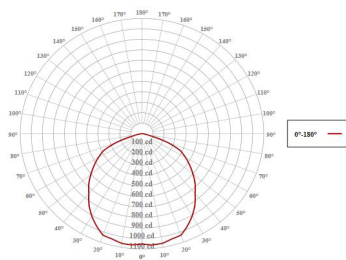
All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP accredited laboratory. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. To obtain an IES file specific to your project, please contact the factory.

	LUMENS		850		1250		2000		3000		4000	
	Wattage		11		16		27		38		43	
	Optics	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	Lumens	LPW	
WHS12	FLAT	846	74	1244	78	1997	74	2996	79	3995	93	
	DOMED	824	72	1212	76	1936	72	2904	76	3872	90	
WHS14	FLAT	845	74	1243	77	1982	73	2973	78	3964	92	
	DOMED	823	72	1210	75	1904	71	2856	75	3808	88	
WHS16	FLAT	845	74	1243	77	1982	73	2973	78	3964	92	
	DOMED	822	72	1209	75	1902	70	2854	75	3805	88	
WHS18	FLAT	843	74	1240	77	1978	73	2967	78	3956	92	
	DOMED	819	72	1204	75	1895	70	2843	75	3791	88	
WHS20	FLAT	841	74	1237	77	1973	73	2959	78	3945	91	
	DOMED	815	72	1199	75	1887	70	2830	74	3773	87	
WHS24	FLAT	838	74	1233	77	1968	73	2952	77	3936	91	
	DOMED	810	71	1191	74	1877	70	2815	74	3753	87	
WHS28	FLAT	840	74	1235	77	1974	73	2961	78	3948	92	
	DOMED	811	71	1193	74	1885	70	2828	74	3771	87	

*Acrylic Diffuser option reduces lumens delivered and LPW

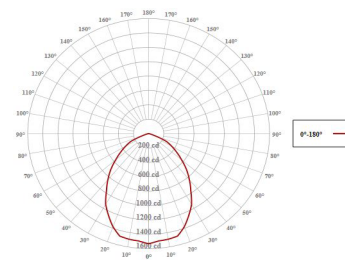
LIGHT DISTRIBUTION

DOMED LENS (DL)

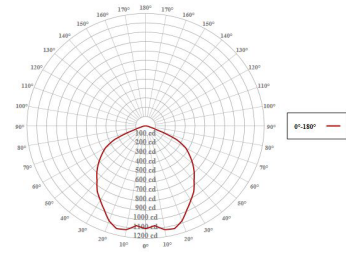


Shown above with 16" Shade (WHS16), White Interior (200-White) and 3000 Lumen (LED38)

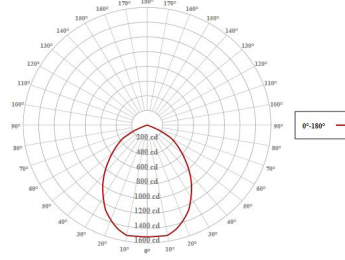
FLAT LENS (FL)



Shown above with 16" Shade (WHS16), White Interior (200-White) and 3000 Lumen (LED38)



Shown above with 20" Shade (WHS20), White Interior (200-White) and 3000 Lumen (LED38)



Shown above with 20" Shade (WHS20), White Interior (200-White) and 3000 Lumen (LED38)



Project EQ01219V7S Date 7/29/2020
FOUR WINDS FARM
 Submitted By
ELAN LIGHTING SYSTEMS

Catalog Number
 BLE-G-WHS12-975-G3-975-LED11-3000K-DL
Notes

TYPE:
OA

BARN LIGHT ELECTRIC CO.

THE ORIGINAL™ INTEGRATED LED SERIES SPS-0448 REV B

SPECIFICATIONS

LED 11, 16, 27, 38, 43 LIGHT SOURCE

LED TYPE: CREE LMH2 MODULE
 INITIAL LUMENS DELIVERED: UP TO 4000 LUMENS
 L90(6K) > 36,300 HOURS
 AVAILABLE CCT: 2700K, 3000K, 3500K, 4000K
Custom Temperatures Available upon Request
 90+ CRI
 2 STEP MACADAMS ELLIPSE
 EFFICACY: UP TO 93 LPW
High Efficacy Available upon Request, Consult Factory for Additional Information

DIMMING

LED 11 & 16
 Triac Dimming at 100-120VAC, Able to Dim down to 5%.
 Dependent on Specific Dimmer.
 0-10V & ELV Dimming Available upon Request.
 LED 27, 38 & 43
 0-10V Dimming, Able to Dim down to 10%.
 Dependent on Specific Dimmer.
 Triac & ELV Dimming Available upon Request.
 TRIAC & ELV DIMMING AT 230 VAC
 Available by Request
 COMPATIBLE DIMMERS
 Consult Factory for Additional Information on Dimming

LED 27, 38, 43 ELECTRICAL/LED DRIVER

DRIVER TYPE: LMD400 DRIVE CURRENT: 940mA
 POWER FACTOR > 0.95 EFFICIENCY: UP TO 81% TYPICAL
 INPUT VOLTAGE: 120-277 VAC (SEE DIMMING SECTION)
 CLASS 2 POWER SUPPLY
 LED DRIVER LIFETIME: > 50,000 HOURS (@ 25 DEG C AMBIENT)
 CONDUCTED AND RADIATED EMI
 Compliant with FCC CFR Title 47 Part 15 Class B (120 VAC), Class A (277 VAC) and EN55015 (CISPR 15) at 230 VAC

CERTIFICATIONS, LISTINGS & WARRANTY

MADE IN THE USA
 Manufactured and Hand-Crafted in Our 60,000 Square Foot Facility
 Located in Titusville, FL
 CSA LISTED FOR WET LOCATIONS
 Includes All Gooseneck, Stem and Flush Mounting Styles
 CSA LISTED FOR DAMP LOCATIONS
 Includes All Chain and Select Cord Hung Mounting Styles
LIMITED WARRANTY
For Additional Information on Our Limited Warranty, Please See Our Terms & Conditions
 OPERATING TEMPERATURE
 -30°C to 40°C

LED 11, 16 ELECTRICAL/LED DRIVER

DRIVER TYPE: LMD125
 DRIVE CURRENT: 440mA
 POWER FACTOR > 0.9
 EFFICIENCY: UP TO 81% TYPICAL
 INPUT VOLTAGE: 100-120 VAC (SEE DIMMING SECTION)
 CLASS 2 POWER SUPPLY
 LED DRIVER LIFETIME: > 50,000 HOURS (@ 25 DEG C AMBIENT)
 CONDUCTED AND RADIATED EMI
 Compliant with FCC CFR Title 47 Part 15 Class B (120 VAC), Class A (277 VAC) and EN55015 (CISPR 15) at 230 VAC

SHADE & FINISHES

POWDER COAT SHADE
 Hand-Spun from High Purity 0.050" Thick 3003-O Temper Aluminum
 PORCELAIN SHADE
 Hand-Spun from 20 Gauge Sheet Metal
 POWDER COAT FINISHES
 Polyester Powder Coat Finishes Are Electro-Statically Applied and Thermocured
 PORCELAIN FINISHES
 Applied by Hand and Fired in a High Temperature Oven
 COPPER
 Hand-Spun from High Purity .032 Thick C11000-O60 ETP Copper
 BRASS
 Hand-Spun from High Purity .050" Thick C2600-O60 Brass

MOUNTING

STEM
 1/2" Nominal (0.84" Actual) or 3/4" Nominal (1.05" Actual) Sch 40, 6063 Aluminum Mounting Stem. Custom Lengths Available upon Request.
 GOOSENECK
 1/2" Nominal (0.84" Actual) or 3/4" Nominal (1.05" Actual) Sch 40, 6063 Aluminum Gooseneck
 CORD
 Cord-Hung Pendants Include 7' of Standard Cord or 5' of Cloth Cord, +/- For Socket Orientation
 CHAIN
 4-Gauge Chain Complete with Quick Link for On-Site Adjustments to Chain's Length
 MAX FIXTURE WEIGHT
 10 lbs



Project EQ01219V7S Date 7/29/2020
FOUR WINDS FARM
 Submitted By
ELAN LIGHTING SYSTEMS

Catalog Number
BLE-F-BSL-LED
 Notes

TYPE:



REV 01.22.19
BULLET FLUSH MOUNT LED SIGN LIGHT
 BARN LIGHT LED BULLET COLLECTION
 Max Weight: 10.0 lbs

PROJECT NAME _____
 PROJECT TYPE _____

SPS-0107

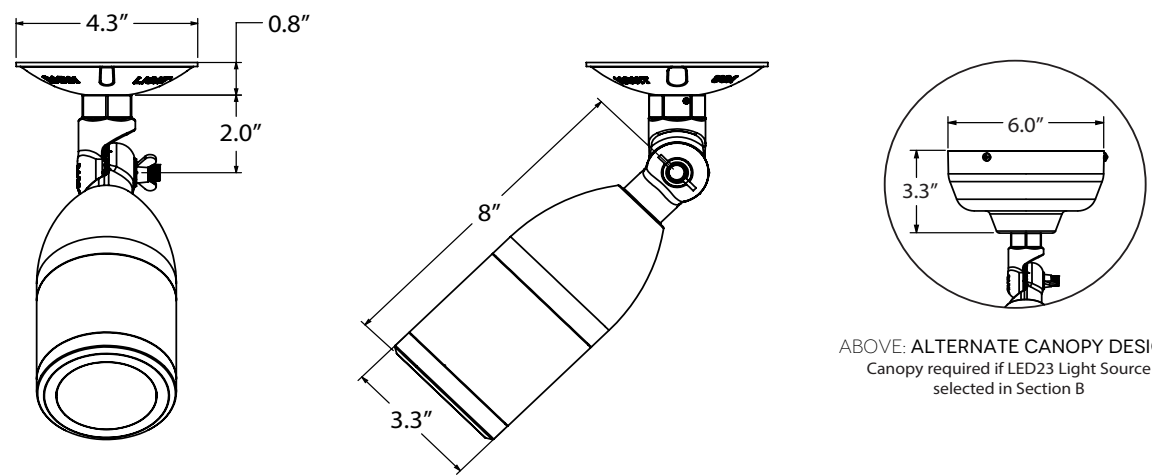
BLE - F - BSL - _____
 A B C D E F

Order Example: BLE - F - BSL - 601 - LED8 - 3000K - NAR - CLR - 120

A - FINISHES	B - LUMENS	C - COLOR TEMPERATURE	E - LENS
POWDER COAT FINISHES: 100 Black 105 Textured Black 200 White 300 Dark Green 311 Jadite 307 Emerald Green 370 Mint 380 Chartreuse 390 Teal 400 Barn Red 420 Orange 470 Watermelon 480 Blush Pink 490 Magenta 500 Buttery Yellow 570 Sunflower 600 Bronze 601 Chocolate 605 Rust 615 Oil-Rubbed Bronze 700 Royal Blue 705 Navy 710 Cobalt Blue 715 Delphite Blue 800 Industrial Grey 805 Charcoal Granite 810 Graphite 975 Galvanized	LED8 Up to 800 Lumens, 8W LED LED12 Up to 1200 Lumens, 12W LED LED16 Up to 1600 Lumens, 16W LED LED23 Up to 2000 Lumens, 23W LED ¹ <i>Please reference table on Page 2 for lumen values of all light source options</i>	2700K 2700K, Warm White 3000K 3000K, Neutral White 3500K 3500K, Bright White 4000K 4000K, Cool White 5000K 5000K, Daylight	CLR Clear FST Frosted F - INPUT VOLTAGE/DIMMING 120 120 VAC / TRIAC and ELV Dimming 277 120-277 VAC / 0-10 V Dimming
		D - OPTICS	
		NA No Optics, 90 Degree FWHM NAR 50 Degree FWHM MED 60 Degree FWHM WID 75 Degree FWHM	

IMPORTANT: (1) Requires alternate canopy design

DIMENSIONAL DRAWING



ABOVE: ALTERNATE CANOPY DESIGN
 Canopy required if LED23 Light Source selected in Section B

BARN LIGHT U.S.A

REV 01.22.19 BULLET FLUSH MOUNT LED SIGN LIGHT BARN LIGHT LED BULLET COLLECTION

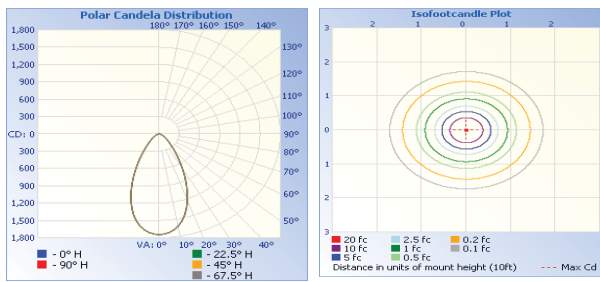
LUMENS

All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP accredited laboratory. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. To obtain an IES file specific to your project, please contact the factory. Please Note: Other CRI available upon request, please contact factory for additional information.

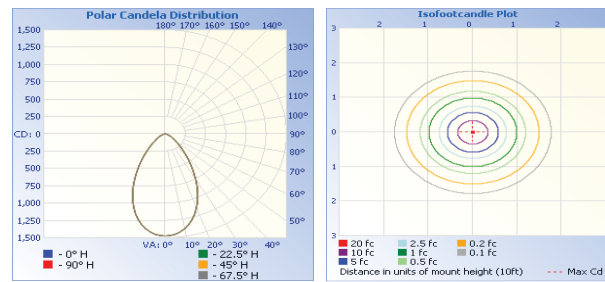
LED	Drive Current	System Watts	Optics	CRI	2700K		3000K		3500K		4000K		5000K	
					90CRI	LPW	90CRI	LPW	90CRI	LPW	90CRI	LPW	90CRI	LPW
LED8	200mA	8	NAR	5Hx5V	681	87	733	93	785	100	785	100	785	100
			MED	6Hx6V	702	89	756	96	809	103	809	103	809	103
			WID	6Hx6V	661	84	711	91	762	97	762	97	762	97
			NA	7Hx7V	620	79	667	85	714	91	714	91	714	91
LED12	300mA	12	NAR	5Hx5V	1001	86	1078	93	1154	99	1154	99	1154	99
			MED	6Hx6V	1032	89	1110	95	1189	102	1189	102	1189	102
			WID	6Hx6V	972	83	1046	90	1120	96	1120	96	1120	96
			NA	7Hx7V	911	78	980	84	1050	90	1050	90	1050	90
LED16	450mA	16	NAR	5Hx5V	1430	80	1539	86	1648	92	1648	92	1648	92
			MED	6Hx6V	1473	82	1586	89	1698	95	1698	95	1698	95
			WID	6Hx6V	1388	78	1493	84	1599	89	1599	89	1599	89
			NA	7Hx7V	1301	73	1400	78	1499	84	1499	84	1499	84
LED23	550mA	23	NAR	5Hx5V	1696	74	1825	80	1955	85	1955	85	1955	85
			MED	6Hx6V	1748	76	1881	82	2014	88	2014	88	2014	88
			WID	6Hx6V	1646	72	1771	77	1897	83	1897	83	1897	83
			NA	7Hx7V	1543	67	1660	73	1778	78	1778	78	1778	78

OPTICS

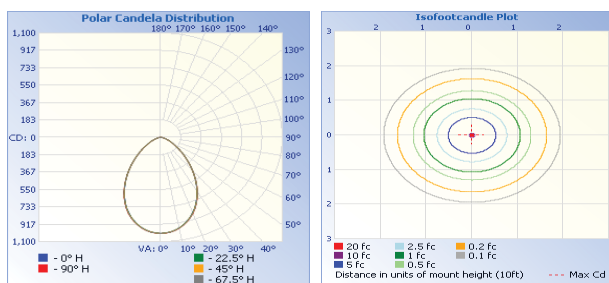
NARROW (NAR)



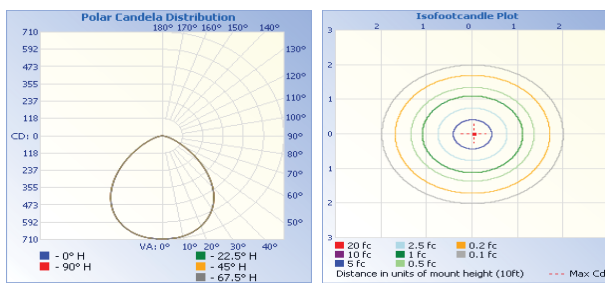
MEDIUM (MED)



WIDE (WID)



NO OPTICS (NA)





Project EQ01219V7S Date 7/29/2020

FOUR WINDS FARM

Submitted By
ELAN LIGHTING SYSTEMS

Catalog Number

BLE-F-BSL-LED

Notes

TYPE:

BARN LIGHT U.S.A

REV 01.22.19 **BULLET FLUSH MOUNT LED SIGN LIGHT** BARN LIGHT LED BULLET COLLECTION

SPECIFICATIONS

CERTIFICATIONS

CSA LISTED (US AND CANADA)
SUITABLE FOR INDOOR OR OUTDOOR USE
SUITABLE FOR WET LOCATIONS
SUITABLE FOR MOUNTING WITHIN 4FT OF THE GROUND
IP65 RATED
MADE IN THE USA
Manufactured and hand-crafted in our 60,000 square foot facility located in Titusville, FL.

CONSTRUCTION/FINISH

COPPER-FREE ALUMINUM HOUSING
Machined from Solid Billet (Type 6061-T6)
HIGH TEMPERATURE, SILICONE O-RINGS
Provide water-tight seal
STAINLESS STEEL HARDWARE
HEAT TREATED ALUMINUM 6061-TG HOUSING
Complete with Clear Chromate Conversaion prior to Powder Coat

ELECTRICAL/LED DRIVER

POWER FACTOR > 0.9
EFFICIENCY: UP TO 87% TYPICAL
INPUT VOLTAGE: 120-277 VAC (SEE DIMMING SECTION)
CLASS 2 POWER SUPPLY
LED DRIVER LIFETIME: > 100,000 HOURS (@ 25 DEG C AMBIENT)
IP64 MINIMUM RATING CASE WITH SILICONE-BASED POTTING PROTECTIONS
Output Open Load, Over-Current and Short-Circuit (hiccup), and Over-Temperature with Auto Recovery
CONDUCTED AND RADIATED EMI
Compliant with FCC CFR Title 47 Part 15 Class B (120 Vac), Class A (277 Vac) and EN55015 (CISPR 15) at 220, 230 and 240 Vac
COMPLIANT WITH
Complies with Energy Star® DLR (DesignLight Consortium®) and CA Title 24 Technical Requirements

WARRANTY INFORMATION

LIMITED WARRANTY
For additional information on our limited warranty, please see our Terms & Conditions.

OPTICS

MULTIPLE OPTIC DISTRIBUTIONS AVAILABLE
Consult factory for additional distributions
OPTICAL GRADE PMMA
Primary Optics and Lens Cover are Optical grade PMMA with High UV and Temperative Resistance
OPTIONAL DIFFUSED/FROSTED LENS COVER
Lens Cover available in Diffused/Frosted option to reduce glare
PHOTOMETRIC FILES
Available upon request

LIGHT SOURCE

INITIAL LUMENS DELIVERED: UP TO 2000 LUMENS
L90(11K) > 61,000 HOURS
INTEGRATED LED COB
AVAILABLE CCT: 2700K, 3000K, 3500K, 4000K & 5000K
90+ CRI (R9 TYPICAL 60)
80+ CRI and 95+ CRI (R9 Typical 85) available upon request
3 STEP MACADAMS ELLIPSE
EFFICACY: UP TO 103 LPW
High efficacy available upon request, consult factory for additional information

DIMMING

TRI-MODE DIMMING™
Compatible with TRIAC (forward-phase or leading-edge), ELV (reverse-phase or trailing-edge) and 0-10 V Dimmers
DIMMING RANGE 1-100%
The dimming range is dependent on each specific dimmer. May not be able to achieve 1% dimming with some dimmers
TRIAC AND ELV DIMMING ONLY AT 120 VAC
ELV DIMMING AT 230 VAC
Available by request
COMPATIBLE DIMMERS
Consult factory for additional information on dimming



Project EQ01219V7S Date 7/29/2020
FOUR WINDS FARM
 Submitted By
ELAN LIGHTING SYSTEMS

Catalog Number
 BLE-PMSD-WHS16-975-975-LED43-3000-FL
 Notes

TYPE:



REV 07.09.19
THE SKY CHIEF POST MOUNT COLLECTION
 BARN LIGHT OUTDOOR LIGHTING COLLECTION
 Max Weight: 10.0 lbs

PROJECT NAME _____
 PROJECT TYPE _____

SPS-O269



Order Example: BLE - PMDD - WHS14 - 850 - 100 - CCG - FST - 110 - PMDBS12 - 100 - GU24 - NA - NA

A - POST MOUNT MODEL

- PMS Single Post
- PMSD Single Decorative Post**
- PMD Double Post
- PMDD Double Decorative Post
- PMTD Triple Decorative Post

B - SHADE SIZE

- SKY CHIEF:
- WHS14 14" Shade
 - WHS16 16" Shade**

C - SHADE FINISH

- POWDER COAT FINISHES¹:**
- 100 Black
 - 105 Textured Black
 - 200 White
 - 300 Dark Green
 - 307 Emerald Green
 - 311 Jadite
 - 370 Mint
 - 380 Chartreuse
 - 390 Teal
 - 400 Barn Red
 - 420 Orange
 - 470 Watermelon
 - 480 Blush Pink
 - 490 Magenta
 - 500 Buttery Yellow
 - 570 Sunflower
 - 600 Bronze
 - 601 Chocolate
 - 605 Rust
 - 615 Oil-Rubbed Bronze
 - 700 Royal Blue
 - 705 Navy
 - 710 Cobalt Blue
 - 715 Delphite Blue
 - 800 Industrial Grey
 - 805 Charcoal Granite
 - 810 Graphite
 - 975 Galvanized**

- PORCELAIN FINISHES²:**
- 150 Black
 - 250 White
 - 350 Vintage Green

C - SHADE FINISH (CONTINUED)

- PORCELAIN FINISHES²:**
- 355 Jadite
 - 455 Cherry Red
 - 550 Yellow
 - 650 Bronze
 - 750 Cobalt Blue
 - 765 Delphite Blue
 - 850 Graphite
 - 950 Metallic Chrome

- NATURAL FINISHES³:**
- 995 Raw Copper
 - 996 Weathered Copper
 - 997 Raw Brass
 - 998 Weathered Brass
 - 999 Oil-Rubbed Copper

D - POST MOUNT FINISH

- 100 Black
- 200 White⁴
- 975 Galvanized

E - OPTIONAL POST MOUNT ACCESSORY

- NA None
- WC Wire Cage
- TGG Heavy Duty Guard⁵
- CGG Cast Guard⁵
- WGG Wire Guard⁵

F - GLASS OPTION

- NA Not Applicable
- CLR Clear Glass^{4,5}
- FST Frosted Glass^{4,5}
- RIB Ribbed Glass^{4,5}
- CCR Clear Crackle Glass^{4,5}
- SMK Smoke Crackle Glass^{4,5}
- HCR Honey Crackle Glass^{4,5}

G - OPTIONAL POST MOUNT ACCESSORY FINISH

Please Note: See **Section C** for all optional post mount accessory finish options.
 (I) If a porcelain finish is selected, accessory will be powder coat painted-to-match.
 (II) Accessories not available in Natural Finishes
 (III) If no accessory is selected in Section E, select NA.
 NA Not Applicable

H - DIRECT BURIAL POLE

- NA None
- PMDBSP8 8' Smooth Pole
- PMDBFP8 8' Fluted Pole
- PMDBS10 10' Smooth Pole
- PMDBF10 10' Fluted Pole
- PMDBS12 12' Smooth Pole
- PMDBF12 12' Fluted Pole

I - BURIAL POLE FINISH

- NA Not Applicable
- 100 Black
- 200 White¹
- 975 Galvanized

J - LIGHT SOURCE

- E26 200 Watt Max⁵
- GU24 24 Bi-Pin, 23W Max^{5,6}
- LED11 11W LED, 850 Lumen⁷
- LED16 16W LED, 1250 Lumen⁷
- LED16.8 16W LED, 1600 Lumen⁵
- LED27 27W LED, 2000 Lumen⁷
- LED38 38W LED, 3000 Lumen⁷
- LED43 43W LED, 4000 Lumen⁷**

K - COLOR TEMPERATURE⁸

- NA Not Applicable
- 2700 2700K, Warm White
- 3000 3000K, Neutral White**
- 3500 3500K, Bright White
- 4000 4000K, Cool White

L - LED LENS⁷

- NA Not Applicable
- DL Domed Lens
- FL Flat Lens**

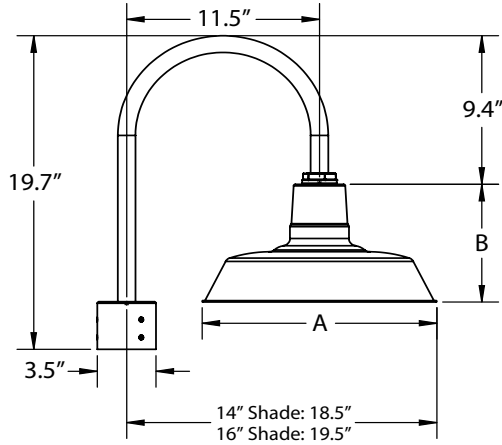
IMPORTANT: (1) All Powder Coat finished shades, with the exception of Galvanized, feature a white interior (2) All Porcelain Enamel finished shades feature a white interior and a black outer rim (3) Natural Finishes have a longer estimated lead time, please check the website for exact manufacturing time. There are no returns accepted on Natural Finishes. (4) Option not applicable if a Natural Finish is selected in Section C (5) Guard and Glass accessory reduces incandescent wattage to 100W Max, GU24 Bi-Pin to 18W Max and LED Max to 1600 Lumens (6) Fixtures configured with a GU24 socket are non-returnable (7) Select Light Source options not available with Guard and Glass Accessory (8) Option only applicable if LED11, LED16, LED16.8, LED27, LED38 or LED43 Light Source selected in Section J, select NA if E26 or GU24 Light Source selected

BARN LIGHT U.S.A

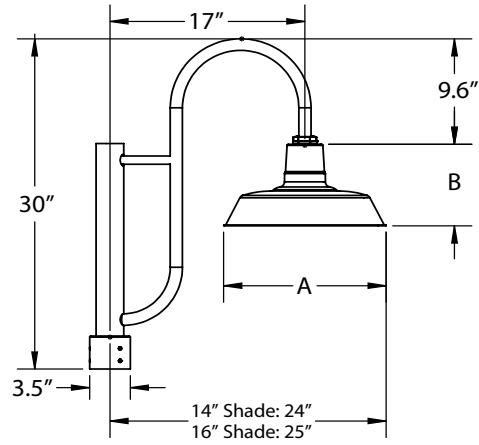
REV.07.09.19 THE SKY CHIEF POST MOUNT COLLECTION BARN LIGHT OUTDOOR LIGHTING COLLECTION

DIMENSIONAL DRAWINGS

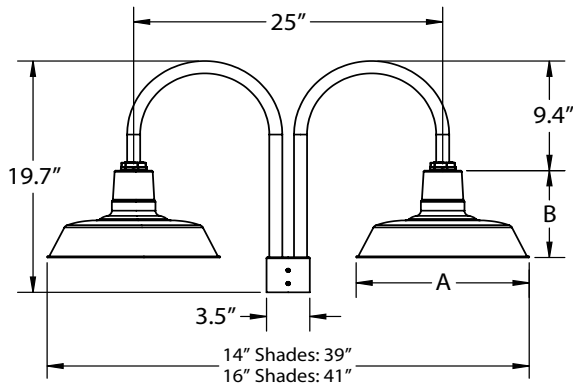
SINGLE POST (PMS)



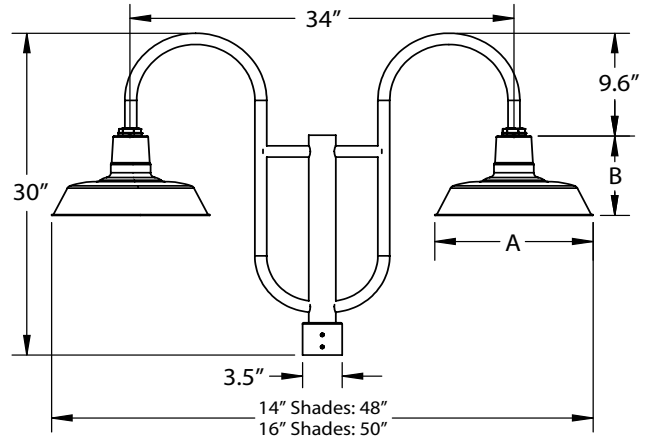
SINGLE DECORATIVE POST (PMSD)



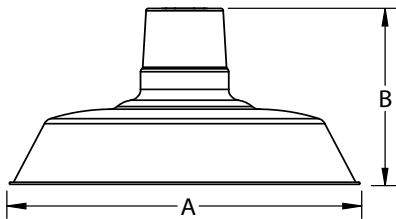
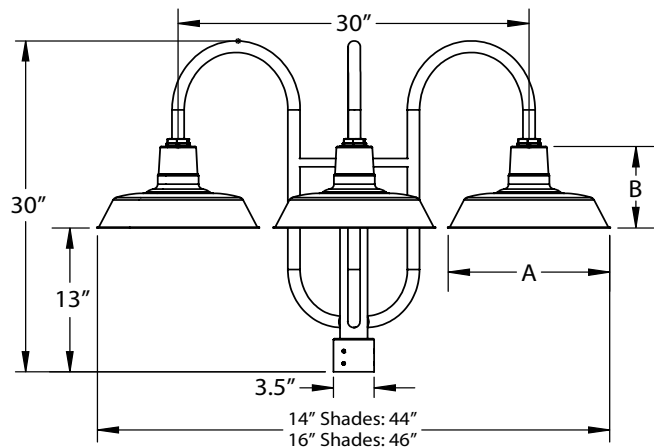
DOUBLE POST (PMD)



DOUBLE DECORATIVE POST (PMDD)



TRIPLE DECORATIVE POST (PMTD)



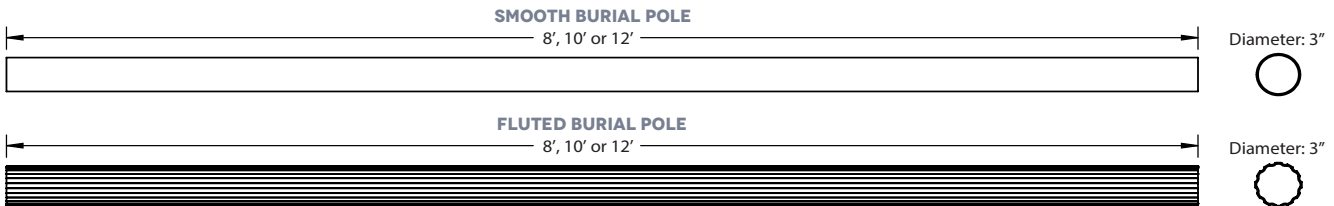
SHADE CODE	DIAMETER (A)	HEIGHT (B)
WHS14	14"	7.5"
WHS16	16"	7.75"

BARN LIGHT U.S.A

REV 07.09.19 THE SKY CHIEF POST MOUNT COLLECTION BARN LIGHT OUTDOOR LIGHTING COLLECTION

DIRECT BURIAL POLE

The optional Direct Burial Pole allows our Post Mounts to spread their unique style across an entire residential or commercial property. Two pole styles — smooth and fluted — are available.



LIGHT SOURCE

All published luminaire photometric testing performed to IESNA LM-79-08 standards by a NVLAP accredited laboratory. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. To obtain an IES file specific to your project, please contact the factory.

OPTION	WATTAGE	LUMENS <small>*Avg. value, actual value dependent on bulb used</small>	CRI	VOLTAGE	DIMMING
LEDS					
LED11	11W	850	>90	120 VAC	TRIAC
LED16	16W	1250	>90	120 VAC	TRIAC
LED16.8	16W	1600	>90	120 VAC	TRIAC
LED27	27W	2000	>90	120-277 VAC	0-10V
LED38	38W	3000	>90	120-277 VAC	0-10V
LED43	43W	4000	>90	120-277 VAC	0-10V
INCANDESCENT (MED E26)					
E26	200W Max	*3000	*100	120 VAC	Bulb Dependant
COMPACT FLOURESCENT (GU24 CFL)					
GU24	23W Max	*1600	*75	120 VAC	Bulb Dependant

SPECIFICATIONS

CONSTRUCTION

DIRECT BURIAL POLE
 Optional Smooth Pole (12 Gauge Galvanized Steel) or Fluted Pole (Schedule 40 Aluminum)

CERTIFICATIONS, LISTINGS & WARRANTY

MADE IN THE USA
 Manufactured and Hand-Crafted in our 60,000 Square Foot Facility Located in Titusville, FL

CSA LISTED FOR WET LOCATIONS

LIMITED WARRANTY
 For Additional Information on our Limited Warranty, Please See Our Terms & Conditions

SHADE & FINISH

ORIGINAL SHADE
 Hand-Spun from High Purity 0.050" Thick 3003-O Temper Aluminum

SKY CHIEF PORCELAIN SHADE
 Hand-Spun from 20 Gauge Sheet Metal

POWDER COAT FINISHES
 Polyester Powder Coat Finishes are Electro-Statically Applied and Thermocured

PORCELAIN FINISHES
 Applied by Hand and Fired in a High Temperature Oven



Project EQ01219V7S Date 7/29/2020

FOUR WINDS FARM

Submitted By
ELAN LIGHTING SYSTEMS

Catalog Number
BLE-PMSD-WHS16-975-975-LED43-3000-FL

Notes

TYPE:

BARN LIGHT U.S.A

REV.07.09.19 THE SKY CHIEF POST MOUNT COLLECTION BARN LIGHT OUTDOOR LIGHTING COLLECTION

SPECIFICATIONS (CONTINUED)

LED SPECIFICATIONS

LUMEN MAINTENANCE

L90(6K) > 36,300 Hours, LED16.8 Source is L90(11K) > 61,000 Hours.

COLOR TEMPERATURES

Standard Color Temperatures Available Include 2700K, 3000K, 3500K and 4000K. Custom Temperatures Available upon Request.

CRI

Minimum 90 CRI. Consult Factory for Other CRI Options

EFFICACY

Up to 100 LPW Based on Wattage/Lumens in the Table

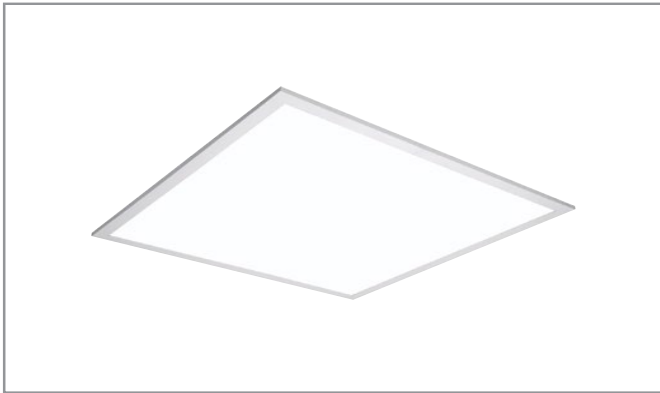
DRIVER & DIMMING OPTION

850 and 1250 Lumen, Reliant on Triac Dimming 12W / 120V Mounted in Canopy, Dimming down to 5%.

2000, 3000 & 4000 Lumen Reliant on 0-10v Dimmer, Dimming down to 10%.

Requires Compatible Dimming Switch

Project		Catalog #		Type	
Prepared by		Notes		Date	



Metalux

22FP LED

2' x 2' General LED Panel
 Recessed in Insulated Ceilings or
 Suspended/Surface Mount

Typical Applications

- Commercial Office Spaces • Schools • Healthcare
- Retail Merchandising Areas

Interactive Menu

- Order Information [page 2](#)
- Photometric Data [page 3](#)
- Control Systems [page 3](#)
- Product Warranty

Product Certification



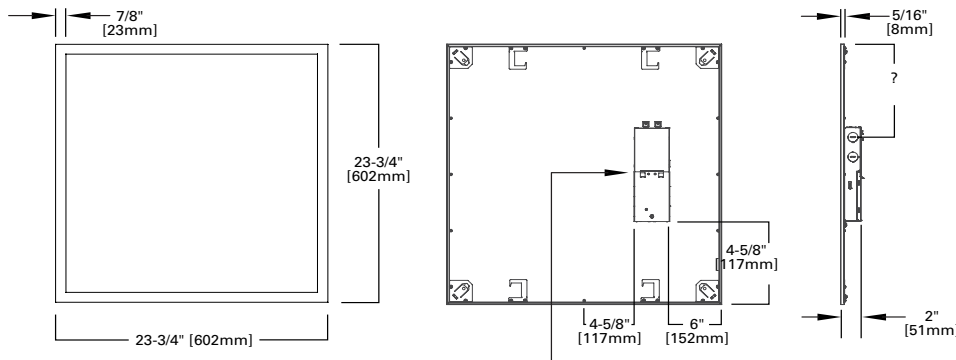
Product Features



Top Product Features

- Ultra thin less than 2" height fits shallow plenums with room to spare
- Models from less than 20W and High Lumen models up to 7000 lumens
- HE models at 136 lumens per watt deliver up to 60% energy savings
- Stock CCT in 80 CRI @ 3000K, 3500K, 4000K, 5000K and 90 CRI 3000K
- Easy to install - wire and wire nuts included

Dimensional and Mounting Details



Access plate with top side KO is available upon request.
 Please contact factory if needed for use with MWS or otherwise.

Metalux

22FP LED

Ordering Information/Performance

Standard Options

Catalog	UPC	CCT	CRI (Min)	Delivered Nominal Lumens	Watts	Efficacy (lm/W)	Input Current (A)	
							120V	277V
22FP4235C	080083833580	3500K	80	4572	38.3	119	.32	.14
22FP4240C	080083833603	4000K	80	4465	38.3	117		
22FP4250C	080083833627	5000K	80	4659	41.4	113	.24	.11
22FP3235C	080083833528	3500K	80	3333	29.2	114		
22FP3240C	080083833542	4000K	80	3333	29.2	114	.25	
22FP3250C	080083833566	5000K	80	3331	30.0	111		
22FP3830C9 (1)	080083833801	3000K	90	3654	39.1	93	.34	.15
22FP2830C9 (1)	080083833788	3000K	90	2734	29.5	93	.26	.11
22FP2535HE	080083824090	3500K	80	2610	20.1	130	.17	.07
22FP2540HE	080083824113	4000K	80	2551	19.6	130		
22FP2130C	080083823994	3000K	80	2318	20.7	112	.18	.08
22FP2135C	080083824014	3500K	80	2205	20.7	107		
22FP2140C	080083824038	4000K	80	2494	20.7	121		

Notes : (1) May have extended lead times.

347V Options

Catalog	UPC	CCT	CRI (Min)	Delivered Nominal Lumens	Watts	Efficacy (lm/W)	Input Current (A)	
							347V	
22FP4235C-347V	80083885480	3500K	80	4330	37.3	116	.111	
22FP4240C-347V	80083876723	4000K	80	4465	37.3	120		
22FP4250C-347V	80083885565	5000K	80	4572	37.3	123		

Options/Ordering Information

ATW-SW4 =Chicago Rated and IP5X ingress protection ⁽³⁾ Example catalog number =ATW-SW4-22FP3240C
EL14W =EBPLED14W battery installed ⁽²⁾ EL7W =EBPLED7W battery installed ⁽²⁾ Example catalog number =22FP3240C-EL14W
A3/8-5D/18G =6' 3/8" flex with dimming leads installed Example catalog number =22FP3240C-A3/8-5D/18G
Notes : (2) Indicator/test switch to be installed separately. For approximate delivered lumens multiply the lumens per watt of the desired fixture by the wattage of the emergency battery pack (100 lm/W x 7=700 lumens). (3) May not be used with EL7W, EL14W or Flex options.

Load Data (Stock Product)

Thd	14%
Power Factor	0.96
Weight	9.4 lbs
Low Temp. Start	-20°C

Shipping Data

Fixture Size	Wt.	Pallet Size	Units per Pallet
2' x 2'	12 lbs.	53" x 30"	44

Accessories/Ordering Information

Catalog	UPC
FPSURF22	080083802722

Notes : (3) May not be used with EL7W or EL14W options.

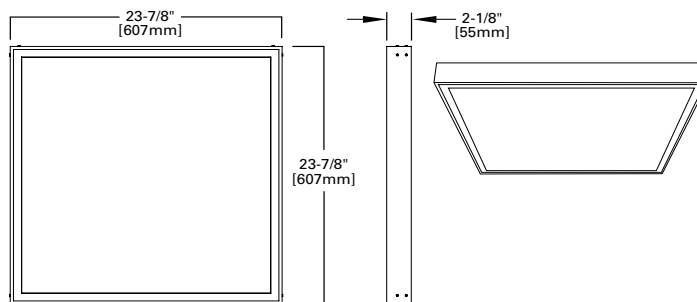
Drywall Frame Kit

Catalog	UPC
DF-22W-U	662401232963

Ceiling Retention

Catalog	UPC
FPEQ	080083802685

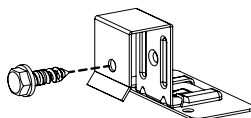
Required by some local codes. Order one set for each fixture (Four clips per kit)



Suspension Kit

Catalog	UPC
FPSUS2	080083802784

Mounting height from ceiling
Min.=7-1/4" [184mm]
Max.=27" [286mm]



Metalux

22FP LED

Product Specifications

Construction

- Narrow aluminum bezel is tightly held to code gauge steel back plate
- Seamless corners to maximize the light emitting surface with a refined finish

Mounting

- Integral grid locking clips and separate suspension clips provided for installation flexibility when additional retention is required
- Junction box constructed of code gauge galvanized steel with an easy access hinged door
- Multiple Trade size KO provided and JBox is suitable for up to 12AWG wiring
- Stock luminaire is less than 2" for use in shallow plenum or low ceiling spaces
- Surface or suspension mounting kits available
- ATW-SW4 option is available for CCEA compliance and provides full IP5X rating
- Factory installed flexible cable with dimming leads options available

Controls

- Standard UNV 120 - 277V driver with 0-10V dimming to 10% standard
- Compatible with field installed wireless controls available for either Wavelinx or LumaWatt Pro

Electrical

- Standard and High Efficacy models available
- LED's available in 3000K, 3500K, 4000K, and 5000K with a minimum of 80 CRI
- 90 CRI available with 3000K
- Projected lumen maintenance based on TM21 testing standards is L73 > 60,000 hours
- Emergency battery pack options available in 7w and 14w options
- Battery pack options available as factory installed or field installed for remote mounting

Optical Shielding

- Acrylic light guide with specialized features to optimize light extraction
- White frost lens with smooth pattern for uniform illumination
- Scratch and impact resistant

Compliance

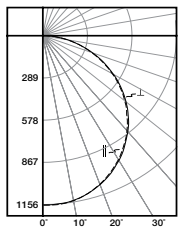
- Indoor luminaires are cULus listed for 25C ambient environments
- IC rated for direct insulation contact
- RoHS compliant
- Damp location listed
- IESNA LM-79 and LM-80 standards compliant
- DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.
- Can be used for State of California Title 24 high efficacy luminaire

Warranty

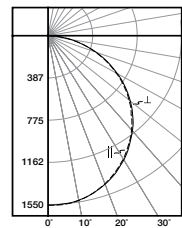
- Five year warranty.

Photometric Data

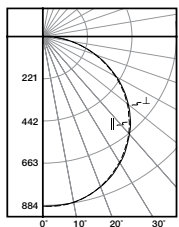
[View IES files](#)



22FP3240C
 Electronic Driver
 Linear LED 4000K
 Spacing criterion: (H) 1.25 x mounting height,
 (L) 1.26 x mounting height
 Lumens: 3333
 Input Watts: 29.2W
 Efficacy: 114.1 LPW
 Test Report: 22FP3240C.IES



22FP4240C
 Electronic Driver
 Linear LED 4000K
 Spacing criterion: (H) 1.25 x mounting height,
 (L) 1.26 x mounting height
 Lumens: 4465
 Input Watts: 38.3W
 Efficacy: 116.6 LPW
 Test Report: 22FP4240C.IES



22FP2540HE
 Electronic Driver
 Linear LED 4000K
 Spacing criterion: (H) 1.25 x mounting height,
 (L) 1.26 x mounting height
 Lumens: 2551
 Input Watts: 19.6W
 Efficacy: 130.2 LPW
 Test Report: 22FP2540HE.IES

Control Systems

- WaveLinx
- DLVP
- LumaWatt Pro
- iLumin Plus
- VividTune



Connected Systems
[CLICK HERE](#)

Metalux

DESCRIPTION

FPanel LED panel series provide premium performance and pleasing aesthetics. It is optimized for shallow plenum grid ceilings or surface mounting. Developed with Eaton's latest generation of solid state components and electronic driver technologies, these panels are ideal for new construction and to replace fluorescent troffers. Its refined visual optics and integrated grid retention clips provide the features needed for speed and installation flexibility. LED FPanels are an excellent lighting solution for commercial office spaces, schools, healthcare and retail merchandising areas.

SPECIFICATION FEATURES

Construction/Mounting

Narrow aluminum bezel is tightly held to code gauge steel back plate to protect the LEDs and optical area. Corners are seamless with a narrow flange to provide a refined finish and maximize the light emitting surface. Integral grid locking clips and separate suspension clips are included on the panel to ensure installation flexibility in ceiling systems and to meet code when additional retention is required. Junction box is constructed of code gage galvanized steel with an easy access hinged door for high voltage and low voltage wiring access and includes trade size knockouts. The luminaire is less than 2 inches in depth making it an ideal choice for shallow plenums and low ceilings. May also be surface mounted using the optional kit.

Controls

The FPanel is standard with a 0-10V continuous dimming driver which dims to 10% and works with most standard 0-10V control/dimmers. Combine with energy-saving products like wall dimmers, Room Controller, occupancy and daylight sensors, and lighting relay panels. Or, go wireless with optional field installed controls for either WaveLinX or LumaWatt Pro.

Electrical

Long-Life LED system coupled with electrical driver to deliver optimal performance. LED's available in 3500K, 4000K and 5000K with a minimum of 80 CRI and a 90 CRI option that is 3000K. Projected lumen maintenance based on TM21 is L73 > 60,000 hours. Electronic drivers are cULus recognized and available for 120-277V. Emergency battery pack options are available in 7 watts and 14 watts. These emergency battery packs meet critical life-safety lighting requirements and are sold

separately for field installation and remote mounting.

Optical Shielding

Light guide is constructed of acrylic with specialized features to optimize light extraction providing excellent efficiency. White frost lens with smooth pattern provides uniform illumination as well as scratch and impact resistance.

Compliance

Constructed of UL recognized components these indoor luminaires are cULus listed for 25°C ambient environments, IC rated for direct insulation contact, RoHS compliant, damp location listed, and comply with IESNA LM-79 and LM-80 standards. NEMA 410 Compliant. DesignLights Consortium® Qualified and classified for DLC Standard, refer to www.designlights.org for details.

Warranty

Five year warranty.

Catalog #		Type	
Project		Date	
Comments			
Prepared by			



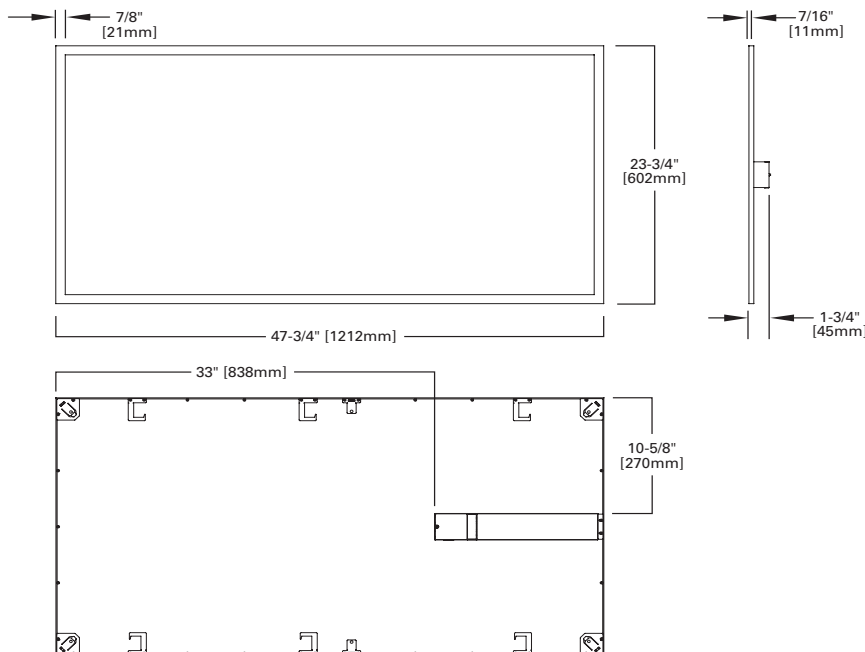
24FP LED

2' X 4' LED PANEL

General LED Panel.
 Recessed in Insulated
 Ceilings or Surface Mount



DIMENSIONS

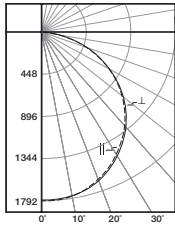


LOAD DATA

Thd	13%
Power Factor	0.96
Weight	18.5
Low Temp. Start	-20°C

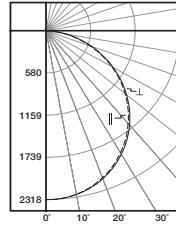
24FP LED

PHOTOMETRICS



24FP4735C
 Electronic Driver
 Linear LED 3500K
 Spacing criterion:
 (II) 1.24 x mounting
 height, (⊥) 1.26 x
 mounting height
 Lumens: 5073
 Input Watts: 40W
 Efficacy: 126 lm/W
 Test Report:
 24FP4735C.IES

Candlepower			
Angle	Along II	45°	Across ⊥
0	1785	1785	1785
5	1786	1774	1785
10	1761	1751	1764
15	1718	1711	1726
20	1657	1655	1670
25	1582	1582	1598
30	1495	1497	1516
35	1396	1400	1418
40	1284	1290	1311
45	1167	1173	1191
50	1040	1046	1060
55	906	912	926
60	768	772	784
65	626	628	637
70	481	483	491
75	340	340	348
80	206	206	212
85	92	90	94
90	0	0	0



24FP6440C
 Electronic Driver
 Linear LED 4000K
 Spacing criterion:
 (II) 1.25 x mounting
 height, (⊥) 1.26 x
 mounting height
 Lumens: 6611.3
 Input Watts: 59.4W
 Efficacy: 111.3 lm/W
 Test Report:
 24FP6440C.IES

Candlepower			
Angle	Along II	45°	Across ⊥
0	2316	2316	2316
5	2312	2309	2308
10	2279	2279	2282
15	2225	2229	2233
20	2150	2156	2163
25	2056	2062	2072
30	1939	1951	1963
35	1814	1824	1838
40	1668	1683	1698
45	1516	1530	1544
50	1351	1364	1376
55	1182	1191	1202
60	998	1007	1014
65	812	820	827
70	622	629	642
75	438	445	456
80	266	274	282
85	116	121	126
90	0	0	0

Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance 20%																				
	80%				70%				50%				30%				10%				0%
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	102	100	100	
1	109	104	99	96	106	101	98	94	97	94	91	88	90	88	86	83	83	83	83	83	
2	99	90	83	78	96	88	82	77	85	80	75	72	77	73	79	75	72	69	69	69	
3	90	79	71	64	87	78	70	64	75	68	63	62	66	62	69	65	61	58	58	58	
4	82	70	61	55	80	69	61	54	66	59	53	53	64	58	62	56	52	50	50	50	
5	76	63	54	47	74	62	53	47	59	52	46	46	57	51	46	50	45	43	43	43	
6	70	56	47	41	68	55	47	41	54	46	40	40	52	45	40	50	44	40	38	38	
7	65	51	42	36	63	50	42	36	49	41	36	36	47	41	35	46	40	35	33	33	
8	60	47	38	32	59	46	38	32	45	37	32	32	43	37	32	42	36	31	30	30	
9	56	43	35	29	55	42	34	29	41	34	29	29	40	33	29	39	33	28	27	27	
10	53	39	32	26	51	39	31	26	38	31	26	26	37	31	26	36	30	26	24	24	

Coefficients of Utilization

rc rw RCR	Effective floor cavity reflectance 20%																				
	80%				70%				50%				30%				10%				0%
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
0	119	119	119	119	116	116	116	116	111	111	111	111	106	106	106	102	102	102	100	100	
1	109	104	99	95	106	101	97	94	97	94	91	88	90	88	86	83	83	83	83	83	
2	99	90	83	78	96	88	82	77	85	79	75	72	77	73	78	75	71	69	69	69	
3	90	79	71	64	87	78	70	64	75	68	63	62	66	62	69	65	60	58	58	58	
4	82	70	61	54	80	69	60	54	66	59	53	53	64	58	62	56	52	50	50	50	
5	76	63	54	47	74	62	53	47	59	52	46	46	57	51	46	50	45	43	43	43	
6	70	56	47	41	68	55	47	41	54	46	40	40	52	45	40	50	44	40	37	37	
7	65	51	42	36	63	50	42	36	49	41	36	36	47	41	35	46	40	35	33	33	
8	60	47	38	32	59	46	38	32	45	37	32	32	43	37	32	42	36	31	30	30	
9	56	43	35	29	55	42	34	29	41	34	29	29	40	33	29	39	33	28	27	27	
10	53	39	32	26	51	39	31	26	38	31	26	26	37	30	26	36	30	26	24	24	

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1384	27.3
0-40	2261	44.6
0-60	3983	78.5
0-90	5073	100.0
0-180	5073	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2221	2232	2266
55	2125	2139	2172
65	1993	1999	2028
75	1768	1768	1809
85	1420	1389	1451

Zonal Lumen Summary

Zone	Lumens	% Fixture
0-30	1798.9	27.2
0-40	2940.9	44.5
0-60	5186.4	78.4
0-90	6611.3	100.0
0-180	6611.3	100.0

Luminance Data

Angle in Deg	Average 0-Deg cd/sm	Average 45-Deg cd/sm	Average 90-Deg cd/sm
45	2885	2911	2938
55	2773	2794	2820
65	2585	2611	2633
75	2277	2313	2371
85	1791	1868	1945

24FP LED

ORDERING INFORMATION/PERFORMANCE

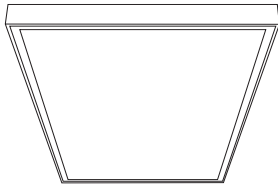
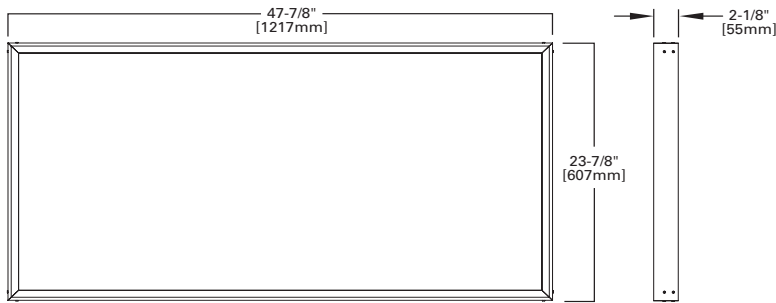
Catalog	UPC	CCT	CRI (Min)	Delivered Nominal Lumens	Watts	Efficacy (lm/W)	Input Current (A)	
							120V	277V
24FP4735C	080083801466	3500K	80	4990	40.4	124	.36	.15
24FP4740C	080083801480	4000K	80	4858	40.3	121		
24FP4750C	080083801503	5000K	80	5005	40.3	124		
24FP6435C	080083801527	3500K	80	6602	58.8	112	.51	.22
24FP6440C	080083801541	4000K	80	6611	59.4	111		
24FP6450C**	080083800704	5000K	80	6746	59.4	114		
24FP3830C9*	080083801909	3000K	90	3886	40.3	96	.36	.15
24FP5830C9*	080083801923	3000K	90	5282	58.2	91	.51	.22

*May have extended lead-times.
 **Stock available October/November 2017. Check FLASH for availability.

ACCESSORIES/ORDERING INFORMATION

SURFACE MOUNT KIT**

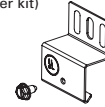
Catalog	UPC
FPSURF24	080083802746



CEILING RETENTION**

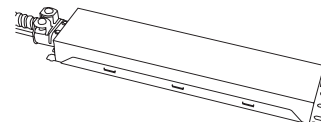
Catalog	UPC
FPEQ	080083802685

Required by some local codes
 Order one set for each fixture
 (Four clips per kit)



EMERGENCY BATTERY

Catalog	UPC	Watts
EBPLED7W	080083832265	7
EBPLED14W	080083832272	14



DRYWALL FRAME KIT

Catalog	UPC
DF-24W-U	662401232970

SHIPPING DATA

Size	Wt.	Pallet (30" x 56")
2' x 4'	22 lbs.	17

Project		Catalog #		Type	
Prepared by		Notes		Date	



HALO

HLB4

4" LED Lens Downlight with Remote Driver / Junction Box

Typical Applications

Residential

Interactive Menu

- Order Information page 2
- Photometric Data page 2
- Control Solutions
- Connected Systems
- Product Warranty

Top Product Features

- Direct mount (does not require recessed housing or junction box)
- Delivers up to 750 lumens; Achieves L70 at 50,000 hours in IC and non-IC applications
- 2700K, 3000K, 3500K, 4000K and 5000K field selectable CCT; 3000K and 4000K fixed CCT
- 90 CRI (min), R9 50 and color accuracy within 4 SDCM
- Wet location listed for showers and protected ceilings; Available in 120V or 120-277V

Product Certification

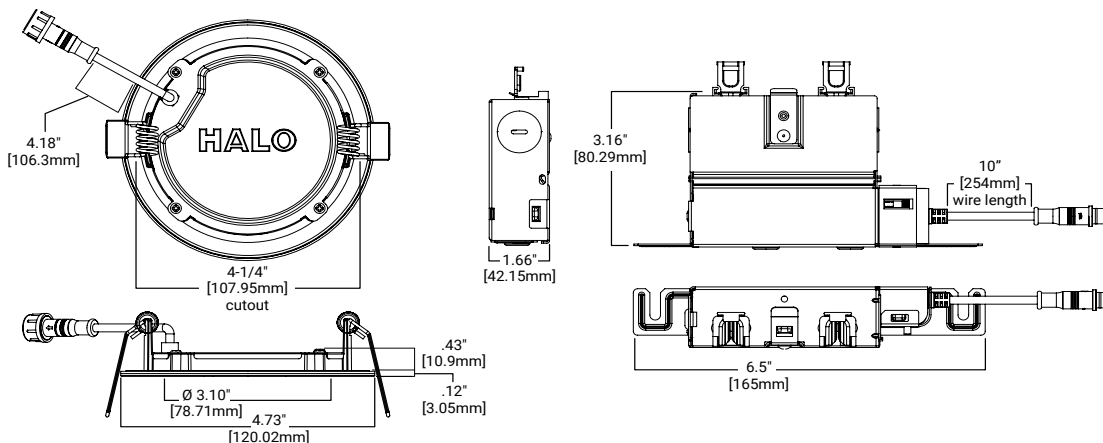


Refer to ENERGY STAR® Certified Products List.
 Can be used to comply with California Title 24 High Efficacy requirements.
 Certified to California Appliance Efficiency Database under JAS.

Product Features



Dimensional and Mounting Details



HALO

HLB4 Series

Order Information

SAMPLE ORDER NUMBER: **HLB4069FS1EMWR**

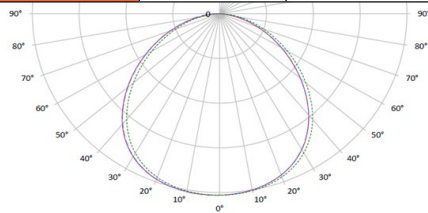
Models	Lumens	CRI / CCT	Driver	Finish	Packaging
HLB4 = 4-Inch LED lens downlight with remote driver / junction box	06 = 600 lumens (nominal)	930 = 90 CRI minimum, 3000K CCT 940 = 90 CRI minimum, 4000K CCT 9FS = 90 CRI minimum, field selectable 2700K, 3000K, 3500K, 4000K or 5000K CCT	1E = 120V 60Hz, LE & TE phase cut 5% dimming E010 = 120-277V, 0-10V 5% dimming (1)	MW = matte white flange	R = recyclable 4-color unit carton suitable for point of purchase merchandising display
Notes	Notes	Notes	Notes (1) E010 driver is only available in FS color temperature.	Notes	Notes

Accessories

Accessories	
HL4RSMF = 4" round and square mounting frame HLB4ROTMW = 4" round oversized trim, matte white Designer Trims HLB4RTRMMW = 4" round decorative overlay, matte white HLB4RTRMSN = 4" round decorative overlay, satin nickel HLB4RTRMTBZ = 4" round decorative overlay, tuscan bronze	Extension Cable Dedicated Driver/Jbox HLB06EC = 6 ft. extension cable HLB12EC = 12 ft. extension cable HLB20EC = 20 ft. extension cable Extension Cable selectable Driver/Jbox HLB06FSEC = 6 ft. extension cable HLB12FSEC = 12 ft. extension cable HLB20FSEC = 20 ft. extension cable

Photometric Data

HLB4069FS1EMW-3000K		
Luminaire lumens	723	
Input watts	12	
LER (LPW)	60.3	
Spacing Criteria	0-180	1.28
	90-270	1.28
	Diagonal	1.39
Beam angle (degrees)	110.2	
Field angle (degrees)	160	
Zonal lumen	Lumens	% Lumens
0-30	203	28.1
0-40	335	46.3
0-60	581	80.4
0-90	723	100



* Tested in accordance with IES LM63. Field results may vary.

Color Metric Summary - 3000K

TM-30-15	Rf = 90.9
	Rg = 100.7
CRI/CIE	Ra = 94.1
	R9 = 68.5

CCT - Range of 2700K- 5000K



Product Specifications

PRODUCT SPECIFICATIONS

Lumens	723
Watts	10.7
Lumens Per Watt (Efficacy)	67.6
Color Accuracy (CRI)	92
Light Color (CCT) <small>Correlated Color Temperature (CCT)</small>	3000K

HLB4 4-inch	CCT	Lumens	Power (W)	LPW
Fixed CCT	3000K	734.6	10.2	72.7
	4000K	773.2	10.2	76.2
Field Selectable CCT	2700K	720.0	12.0	60.0
	3000K	723.0	12.0	60.3
	3500K	735.2	12.0	61.3
	4000K	746.1	12.0	62.2
	5000K	751.9	12.0	62.7

HALO

HLB4 Series

Energy Data

Lumens	600 Series
Input Voltage	120V
Input Current	100 (mA)
Input Power	12.0 (W)
Efficiency	60 (LPW)
Inrush (A)	2.2 A @ 42mS
THD	≤ 20%
PF	≥ 0.90
T Ambient	-30° - +40°C
Sound Rating	≤ 22 dba

Product Specifications

Housing

- Die-cast aluminum mounting frame with integral flange provides passive thermal cooling
- Achieves L70 at 50,000 hours in IC and non-IC applications
- High impact diffuse lens provides shielding to the light guide minimizing pixilation

Gasket

- Closed cell gasket achieves restrictive airflow and wet location listing without additional gaskets or caulking

Optics

- Precision acrylic light guide organizes source flux into wide distribution with 1.4 spacing criteria, useful for general area illumination

LED Array

- Plurality of mid power LED's provides a uniform source with high efficiency and long life
- 90 color rendering index (CRI) minimum; R9 greater than 50 provides high color rendering
- Fixed 3000K and 4000K correlated color temperatures (CCT); color accuracy within 3 SDCM
- Optional field selectable color temperature, select 2700K, 3000K, 3500K, 4000K or 5000K CCT; color accuracy within 4 SDCM
- Meets ENERGY STAR® color angular uniformity requirements; Deviation is less than 0.006 u' v'

Remote Driver/Junction Box

- Pre-galvanized steel driver/junction box with captive hinged junction box cover
- Listed for six #12 AWG 90° C splice conductors: two in, two out plus two ground
- Two 1/2" conduit pry-outs
- Two Slide-N-Side™ non-metallic (NM) wire traps allows wiring outside the box
- Accepts NM cable types: 14-2, 14-3, 12-2, 12-3 (U.S.) and 14-2, 14-3, 12-2 (Canadian)
- Three 4-port push wire nuts with clear caps for quick and reliable mains voltage connections
- Integral mounting holes facilitate direct mounting to building structure or mounting frame

Driver

- Available in 120V or 120-277V, providing noise free operation
- Continuous flicker-free dimming down to 5% with select dimmers
- Plenum rated inline electrical quick connect provides low voltage connection to fixture fitting, CMP/FT6 rated

Installation

- Can be installed in 1/2" to 1-1/4" thick ceilings
- Cutout utilizes standard round hole saw sizes; cutout template provided
- Heat treated springs hold fixture fitting securely in the ceiling eliminating light leak
- Housing is less than 1/2" thick and can span a 2" nominal framing member
- Can be removed from below the ceiling for service or replacement

Optical Mounting Frame

- Pre-galvanized steel mounting frame locates fixture fittings during electrical rough-in and provides cutout guidance for drywall contractor
- Provides attachment of remote driver/junction box

Compliance

- cULus Certified type IC suitable for direct contact with air permeable insulation
- Not recommended for use in direct contact with spray foam insulation (reference NEMA LSD57-2013)
- Wet location listed and IP44 ingress protection
- Airtight per ASTM-E283-04
- Suitable for use in clothes closets when installed in accordance with the NEC 410.16 spacing requirements
- EMI/RFI emissions per FCC 47CFR Part 15 consumer limits
- Contains no mercury or lead and RoHS compliant
- Photometric testing in accordance with IES LM-79-08
- Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11
- State of California Title 24 high efficacy
- LED compliance under JA8, reference Modernized Appliance Efficiency Database System (MAEDBS) for 2016 JA8 High Efficacy Lighting
- ENERGY STAR® certified (reference "Certified Light Fixtures" database)

Warranty

- Five-year limited warranty

Project		Catalog #		Type	
Prepared by		Notes		Date	



HALO

HLB4

4" LED Lens Downlight with Remote Driver / Junction Box

Typical Applications

Residential

Interactive Menu

- Order Information page 2
- Photometric Data page 2
- Control Solutions
- Connected Systems
- Product Warranty

Top Product Features

- Direct mount (does not require recessed housing or junction box)
- Delivers up to 750 lumens; Achieves L70 at 50,000 hours in IC and non-IC applications
- 2700K, 3000K, 3500K, 4000K and 5000K field selectable CCT; 3000K and 4000K fixed CCT
- 90 CRI (min), R9 50 and color accuracy within 4 SDCM
- Wet location listed for showers and protected ceilings; Available in 120V or 120-277V

Product Certification

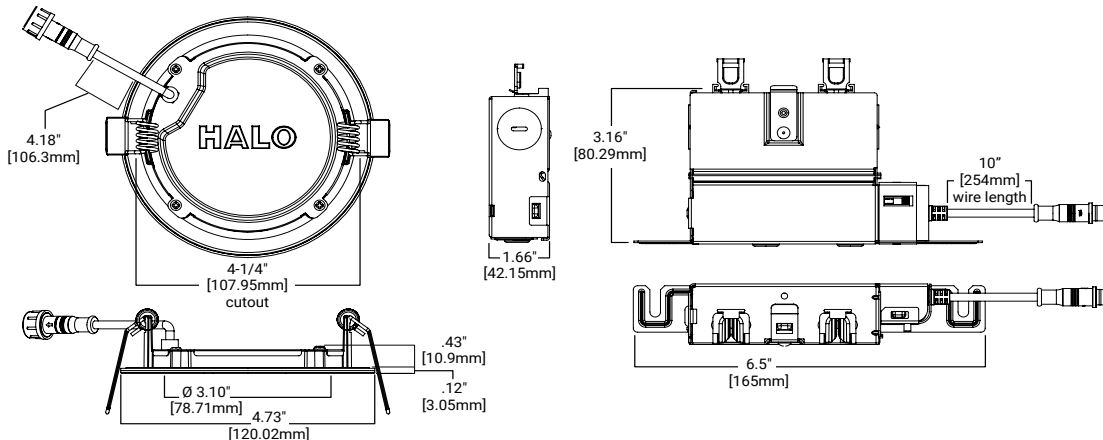


Refer to ENERGY STAR® Certified Products List.
 Can be used to comply with California Title 24 High Efficacy requirements.
 Certified to California Appliance Efficiency Database under JAS.

Product Features



Dimensional and Mounting Details



HALO

HLB4 Series

Order Information

SAMPLE ORDER NUMBER: **HLB4069FS1EMWR**

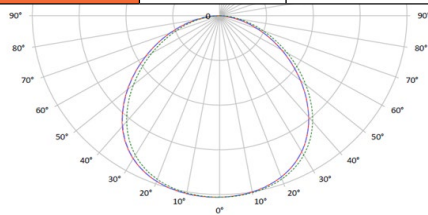
Models	Lumens	CRI / CCT	Driver	Finish	Packaging
HLB4 = 4-Inch LED lens downlight with remote driver / junction box	06 = 600 lumens (nominal)	930 = 90 CRI minimum, 3000K CCT 940 = 90 CRI minimum, 4000K CCT 9FS = 90 CRI minimum, field selectable 2700K, 3000K, 3500K, 4000K or 5000K CCT	1E = 120V 60Hz, LE & TE phase cut 5% dimming E010 = 120-277V, 0-10V 5% dimming ⁽¹⁾	MW = matte white flange	R = recyclable 4-color unit carton suitable for point of purchase merchandising display
Notes	Notes	Notes	Notes	Notes	Notes
			(1) E010 driver is only available in FS color temperature.		

Accessories

Accessories	
HL4RSMF = 4" round and square mounting frame HLB4ROTMMW = 4" round oversized trim, matte white Designer Trims HLB4RTRMMW = 4" round decorative overlay, matte white HLB4RTRMSN = 4" round decorative overlay, satin nickel HLB4RTRMTBZ = 4" round decorative overlay, tuscan bronze	Extension Cable Dedicated Driver/Jbox HLB06EC = 6 ft. extension cable HLB12EC = 12 ft. extension cable HLB20EC = 20 ft. extension cable Extension Cable seleCCTable Driver/Jbox HLB06FSEC = 6 ft. extension cable HLB12FSEC = 12 ft. extension cable HLB20FSEC = 20 ft. extension cable

Photometric Data

HLB4069FS1EMW-3000K		
Luminaire lumens	723	
Input watts	12	
LER (LPW)	60.3	
Spacing Criteria	0-180	1.28
	90-270	1.28
	Diagonal	1.39
Beam angle (degrees)	110.2	
Field angle (degrees)	160	
Zonal lumen	Lumens	% Lumens
0-30	203	28.1
0-40	335	46.3
0-60	581	80.4
0-90	723	100



* Tested in accordance with IES LM63. Field results may vary.

Color Metric Summary - 3000K

TM-30-15	Rf = 90.9
	Rg = 100.7
CRI/CIE	Ra = 94.1
	R9 = 68.5

CCT - Range of 2700K- 5000K



← warm → cool

Product Specifications

PRODUCT SPECIFICATIONS	
Lumens	723
Watts	10.7
Lumens Per Watt (Efficacy)	67.6
Color Accuracy (CRI)	92
Light Color (CCT)	3000K
Correlated Color Temperature (CCT)	

HLB4 4-inch	CCT	Lumens	Power (W)	LPW
Fixed CCT	3000K	734.6	10.2	72.7
	4000K	773.2	10.2	76.2
Field Selectable CCT	2700K	720.0	12.0	60.0
	3000K	723.0	12.0	60.3
	3500K	735.2	12.0	61.3
	4000K	746.1	12.0	62.2
	5000K	751.9	12.0	62.7

HALO

HLB4 Series

Energy Data

Lumens	600 Series
Input Voltage	120V
Input Current	100 (mA)
Input Power	12.0 (W)
Efficiency	60 (LPW)
Inrush (A)	2.2 A @ 42mS
THD	≤ 20%
PF	≥ 0.90
T Ambient	-30° - +40°C
Sound Rating	≤ 22 dba

Product Specifications

Housing

- Die-cast aluminum mounting frame with integral flange provides passive thermal cooling
- Achieves L70 at 50,000 hours in IC and non-IC applications
- High impact diffuse lens provides shielding to the light guide minimizing pixilation

Gasket

- Closed cell gasket achieves restrictive airflow and wet location listing without additional gaskets or caulking

Optics

- Precision acrylic light guide organizes source flux into wide distribution with 1.4 spacing criteria, useful for general area illumination

LED Array

- Plurality of mid power LED's provides a uniform source with high efficiency and long life
- 90 color rendering index (CRI) minimum; R9 greater than 50 provides high color rendering
- Fixed 3000K and 4000K correlated color temperatures (CCT); color accuracy within 3 SDCM
- Optional field selectable color temperature, select 2700K, 3000K, 3500K, 4000K or 5000K CCT; color accuracy within 4 SDCM
- Meets ENERGY STAR® color angular uniformity requirements; Deviation is less than 0.006 u' v'

Remote Driver/Junction Box

- Pre-galvanized steel driver/junction box with captive hinged junction box cover
- Listed for six #12 AWG 90° C splice conductors: two in, two out plus two ground
- Two 1/2" conduit pry-outs
- Two Slide-N-Side™ non-metallic (NM) wire traps allows wiring outside the box
- Accepts NM cable types: 14-2, 14-3, 12-2, 12-3 (U.S.) and 14-2, 14-3, 12-2 (Canadian)
- Three 4-port push wire nuts with clear caps for quick and reliable mains voltage connections
- Integral mounting holes facilitate direct mounting to building structure or mounting frame

Driver

- Available in 120V or 120-277V, providing noise free operation
- Continuous flicker-free dimming down to 5% with select dimmers
- Plenum rated inline electrical quick connect provides low voltage connection to fixture fitting, CMP/FT6 rated

Installation

- Can be installed in 1/2" to 1-1/4" thick ceilings
- Cutout utilizes standard round hole saw sizes; cutout template provided
- Heat treated springs hold fixture fitting securely in the ceiling eliminating light leak
- Housing is less than 1/2" thick and can span a 2" nominal framing member
- Can be removed from below the ceiling for service or replacement

Optical Mounting Frame

- Pre-galvanized steel mounting frame locates fixture fittings during electrical rough-in and provides cutout guidance for drywall contractor
- Provides attachment of remote driver/junction box

Compliance

- cULus Certified type IC suitable for direct contact with air permeable insulation
- Not recommended for use in direct contact with spray foam insulation (reference NEMA LSD57-2013)
- Wet location listed and IP44 ingress protection
- Airtight per ASTM-E283-04
- Suitable for use in clothes closets when installed in accordance with the NEC 410.16 spacing requirements
- EMI/RFI emissions per FCC 47CFR Part 15 consumer limits
- Contains no mercury or lead and RoHS compliant
- Photometric testing in accordance with IES LM-79-08
- Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11
- State of California Title 24 high efficacy
- LED compliance under JA8, reference Modernized Appliance Efficiency Database System (MAEDBS) for 2016 JA8 High Efficacy Lighting
- ENERGY STAR® certified (reference "Certified Light Fixtures" database)

Warranty

- Five-year limited warranty

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RISE™

OVERVIEW • SPECIFICATIONS • ORDERING

INTERIOR + EXTERIOR | **F080 SINGLE**

DATE	PROJECT	FIRM	TYPE
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RISE IS A SYSTEM OF BEAUTIFULLY DESIGNED OUTDOOR RATED LUMINAIRES THAT PROVIDE EFFICIENT AND POWERFUL LIGHT USING THE LATEST IN LED TECHNOLOGY. RISE F080 SINGLE IS A POWERFUL AND COMPACT LED LIGHT FIXTURE, DELIVERING UP TO 1170 LUMENS, THAT CAN BE USED IN SPOT, ACCENT, LANDSCAPE AND FLOODLIGHT APPLICATIONS. ITS UNIQUE MACRO™ LOCK FEATURE ALLOWS FOR FULL 180 DEGREE TILT AND 360 DEGREE PAN AIMABILITY USING ONLY ONE TWIST.

FEATURES :

- POWERFUL CBCP
- EXTREMELY COMPACT
- POWERFUL OUTPUT UP TO 1170 LUMENS
- MACRO™ LOCK - 180° TILT AND 360° PAN
- 12 UNIQUE BEAM ANGLES
- MULTIVOLT (110V-277V)
- 8 CCTS: 2200K THROUGH 6500K
- 80+ AND 90+ CRI
- DIMMABLE TO 5%
- IP66 RATED



FIXTURE MODEL	FIXTURE CONFIG.	POWER/ LUMEN OUTPUT*	CCT/ COLOR	CRI	BEAM ANGLE	FINISHES	ACCESSORIES	WIRING AND MOUNTING
F080	1S - Single Head	LO - Low Output MO - Medium Output HO - High Output	22 - 2200K 25 - 2500K 27 - 2700K 30 - 3000K 35 - 3500K 40 - 4000K 50 - 5000K 65 - 6500K RD - Red GR - Green BL - Blue AM - Amber *2200K and 2500K not available in 40°, 60°, 70° and 90°	8 - 80 9 - 90* X - For RD, GR, BL, AM *90 CRI not available in 2500K, 5000K, and 6500K	05 - Laser Spot (5°) 10 - Very Narrow Spot (10°) 15 - Narrow Spot (15°) 20 - Spot (20°) 40 - Flood (40°) 60 - Medium Flood (60°) 70 - Wide Flood (70°) 90 - Very Wide Flood (90°) E1 - Elliptical 1 (15°x60°) E2 - Elliptical 2 (30°x60°) E3 - Elliptical 3 (60°x15°) E4 - Elliptical 4 (60°x30°)	K - Black Z - Bronze S - Silver W - White C - Custom* *Provide RAL #	X - No Accessory H - Half Snoot F - Full Snoot Will ship as X if not specified	A - 19" Flying Leads - Internal Cable IC; Bottom Exit; 1/2" NPT; UL/CE Listed B* - 10' External Cable Side Exit; Surface Mount; UL Listed C* - 10' External Cable Bottom Exit; Surface Mount - 1/2" NPT; UL Listed D* - 10' External Cable Side Exit; Surface Mount; CE Listed E* - 10' External Cable Bottom Exit; Surface Mount - 1/2" NPT; CE Listed *Will ship as A if not specified

EXAMPLE: F080-1S-LO-22-8-05-S-X-A

*SEE PHOTOMETARY CHART FOR LUMEN DATA

PERFORMANCE	WATTS	POWER	LUMEN OUTPUT		EFFICACY		CBCP	
			5°	40°	5°	40°	5°	40°
	4	Low Output	309	429	76	107	21,991	705
	7.5	Medium Output	531	761	71	101	37,824	1,251
	11.5	High Output	744	1,120	65	99	53,048	1,874

ALL LUMEN DATA IS FROM 4000K 80CRI FIXTURES. PLEASE SEE PHOTOMETRY SPEC SHEET FOR ADDITIONAL LUMEN DATA.


COLOR RENDERING INDEX
COLOR CONSISTENCY
LUMEN DEPRECIATION

80+, 90+
 3-STEP MACADAM ELLIPSE

	WATTS	L70 @ 25C	L70 @ 50C	L90 @ 25C	L90 @ 50C
LOW		>60,500*	>60,500*	>60,500*	>60,500*
		>(109,000)**	>(109,000)**	>(109,000)**	>(109,000)**
MEDIUM		>60,500*	>60,500*	>60,500*	>60,500*
		>(109,000)**	>(109,000)**	>(109,000)**	>(109,000)**
HIGH		>60,500*	>36,300*	>60,500*	>33,200*
		>(181,000)**		>(69,800)**	

* ENERGY STAR REPORTED TESTING HOURS TO DATE. CALCULATIONS FOR LED FIXTURES ARE BASED ON MEASUREMENTS THAT COMPLY WITH IES LM-80 TESTING PROCEDURES AND IES TM-21 CALCULATOR
 ** ESTIMATED HOURS

NOTE: Information on this Spec Sheet is subject to change, please visit ecosenselighting.com/downloads/rise for the most updated information.

	Project EQ01219V7S Date 7/29/2020 FOUR WINDS FARM Submitted By ELAN LIGHTING SYSTEMS	Catalog Number F080-1S-HO-30-8-40-K-X-A Notes	TYPE: FA
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DATE	PROJECT	FIRM	TYPE
ELECTRICAL	WATTAGE POWER FACTOR THD OPERATING VOLTAGE DRIVER STARTUP TEMPERATURE OPERATING TEMPERATURE STORAGE TEMPERATURE	LOW OUTPUT = 4W; MEDIUM OUTPUT = 7.5W; HIGH OUTPUT = 11.5W >0.9 for 120V (HO, MO, LO), 230V (HO, MO), 277V (HO) <0.2 for 120V (HO, MO, LO), 230V (HO, MO), 277V (HO) MULTIVOLT: 110-277VAC, 50/60 Hz INTEGRAL TO FIXTURE; DE-RATED POWER AND SYNCHRONOUS START-UP AT FULL BRIGHTNESS -40°F TO 122°F (-40°C TO 50°C) -40°F TO 122°F (-40°C TO 50°C) -40°F TO 176°F (-40°C TO 80°C)	
CONTROL	DIMMING	110-277VAC, ELV TYPE, REVERSE PHASE, TRAILING EDGE	
PHYSICAL	DIMENSIONS HOUSING/LENS WEIGHT ENVIRONMENT MOUNTING OPTIONS WIRING TOOLS WIND LOAD (EPA) CORROSION RESISTANT	W 2.49" x H 8.13" x L 6.97" ; (63.33mm x 206.45mm x 177.05mm) EXTRUDED ALUMINUM; UV STABILIZED POLYCARBONATE; STAINLESS STEEL FASTENERS 1.25LBS / 0.56KG OUTDOOR • UL CERTIFIED FOR WET LOCATIONS IP66 IMPACT RATED TO IK10 MEETS 3G ANSI C136.31 VIBRATION STANDARD FOR BRIDGE APPLICATIONS A - FLYING LEADS - INTERNAL CABLE IC; BOTTOM EXIT; 1/2" NPT ; UL / CE RATED B - EXTERNAL CABLE SIDE EXIT; SURFACE MOUNT ; UL LISTED SURFACE MOUNT PLATE INCLUDED C - EXTERNAL CABLE BOTTOM EXIT; 1/2" NPT ; UL LISTED SURFACE MOUNT PLATE INCLUDED D - EXTERNAL CABLE SIDE EXIT; SURFACE MOUNT ; CE LISTED SURFACE MOUNT PLATE INCLUDED E - EXTERNAL CABLE BOTTOM EXIT; SURFACE MOUNT ; CE LISTED SURFACE MOUNT PLATE INCLUDED LENGTH OF FLYING LEADS 19" (482.6mm) LENGTH OF EXTERNAL CABLE 10' (3.05m) 2.5mm HEX KEY AND PHILLIPS #0 SCREWDRIVER FOR INTERCHANGEABLE LENS + SNOOTS 4mm HEX KEY FOR AIMING 5mm HEX KEY FOR MAIN TILT ARM EFFECTIVE PROJECTED AREA 0.14ft² RISE HAS A HIGH-PERFORMING, CORROSION-RESISTANT FINISH THAT USES HIGH DURABILITY TRIGLYCIDYL ISOCYANURATE (TGIC) POWDER COATINGS SPECIFICALLY DESIGNED FOR NATATORIUMS AND EXTERIOR WEATHER EXPOSURE. THIS FINISH HAS BEEN TESTED AND APPROVED TO MARINE GRADE CORROSION RESISTANCE STANDARD IN UL1598A, ASTM B117 SALT FOG TEST FOR 200 HOURS.	

FIXTURE RATING & CERTIFICATIONS CE, UL CERTIFIED
RoHS COMPLIANT, IK10




LIMITED WARRANTY 5 YEARS

0-10V CONTROL OPTIONS
100-120VAC / 277VAC Linear Dimming Control Module 0-10V - Plenum Rated LDCM-PL-120-277-010V-GR
All products come standard with ELV dimming capabilities. 0-10V Control options required for operation at 0-10V.

OPTIONAL ACCESSORIES
Snoots
Half Snoot, Color Finish (K=Black, Z=Bronze, S=Silver, W=White, C=Custom) F080-H-(K,Z,S,W,C)
Full Snoot, Color Finish (K=Black, Z=Bronze, S=Silver, W=White, C=Custom) F080-F-(K,Z,S,W,C)

Interchangeable Lens
If inner optic = 5°,
Desired angle **Order the following spread lens**
5 Degree F080-LENS-05
10 Degree F080-LENS-10
15 Degree F080-LENS-15
20 Degree F080-LENS-20
40 Degree F080-LENS-40
60 Degree F080-LENS-60
80 Degree F080-LENS-80
15x60 or 60x15 Degree F080-LENS-E1E3
30x60 or 60x30 Degree F080-LENS-E2E4
Full Set of Beam Angle Lens Degree (5, 10, 15, 20, 40, 60, 80, 15X60 or 60X15, 30X60 or 60X30) F080-LENS-FULLSET

NOTE: Information on this Spec Sheet is subject to change, please visit ecosenselighting.com/downloads/raise for the most updated information.

	Project EQ01219V7S Date 7/29/2020 FOUR WINDS FARM Submitted By ELAN LIGHTING SYSTEMS	Catalog Number F080-1S-HO-30-8-40-K-X-A Notes	TYPE: FA
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INTERIOR + EXTERIOR | **F080 SINGLE**

DATE	PROJECT	FIRM	TYPE
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If inner optic = 40°,

Desired angle	Order the following spread lens
5 Degree	NOT SUPPORTED
10 Degree	NOT SUPPORTED
15 Degree	NOT SUPPORTED
20 Degree	NOT SUPPORTED
40 Degree	F080-LENS-10
60 Degree	F080-LENS-40
70 Degree	F080-LENS-60
90 Degree	F080-LENS-80
15x60 or 60x15 Degree	NOT SUPPORTED
30x60 or 60x30 Degree	NOT SUPPORTED
Full Set of Beam Angle Lens Degree (5, 10, 15, 20, 40, 60, 80, 15X60 or 60X15, 30X60 or 60X30)	F080-LENS-FULLSET

Honeycomb Louver

Honeycomb Louver F080..... F080-LV-HComb

Canopy Plate (Not for use with wire Option B - External Cable Side Exit)

RISE Canopy Plate (K=Black, Z=Bronze, S=Silver, W=White, C=Custom) RISE-CANOPY-04-(K,Z,S,W,C)

Color Filters

Red	F080-FILTER-RED
Blue	F080-FILTER-BLUE
Green	F080-FILTER-GREEN
Amber	F080-FILTER-AMBER

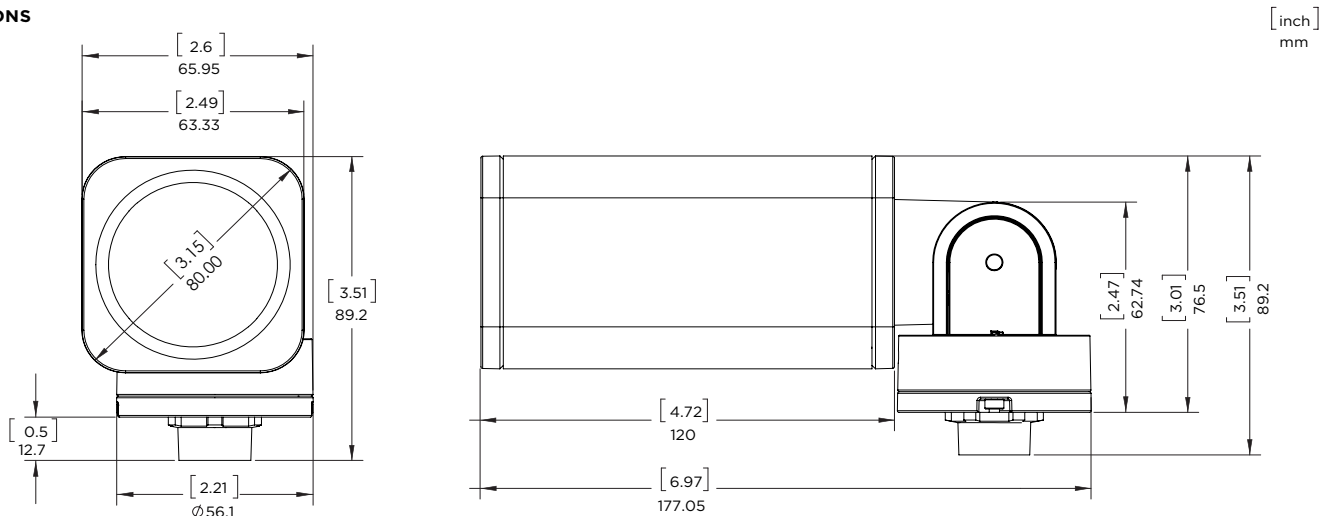
F080 Wall Mount Arm (for use only with Wiring Option C - External Cable Bottom Exit and not for use with multi-up fixtures)

Wall Mount Arm, 6 inch, Color Finish (K=Black, Z=Bronze, S=Silver, W=White, C=Custom)	F080-WMA-06-(K,Z,S,W,C)
Wall Mount Arm, 12 inch, Color Finish (K=Black, Z=Bronze, S=Silver, W=White, C=Custom)	F080-WMA-12-(K,Z,S,W,C)
Wall Mount Arm, 18 inch, Color Finish (K=Black, Z=Bronze, S=Silver, W=White, C=Custom)	F080-WMA-18-(K,Z,S,W,C)
Wall Mount Arm, 24 inch, Color Finish (K=Black, Z=Bronze, S=Silver, W=White, C=Custom)	F080-WMA-24-(K,Z,S,W,C)

Ground Stake (for use only with Wiring Option C - External Cable Bottom Exit and not for use with multi-up fixtures)

Landscape Stake, 12in (for use with F080 Single Head only, not for use with multi-fixture units) F080-LS-1S-STK-12

DIMENSIONS



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 RISE™, SLIM COVE™, FREEDOM TO CREATE™, MACRO™, FLIP-TO-FLAT™ ARE TRADEMARKS OF ECOSENSE LIGHTING INC.

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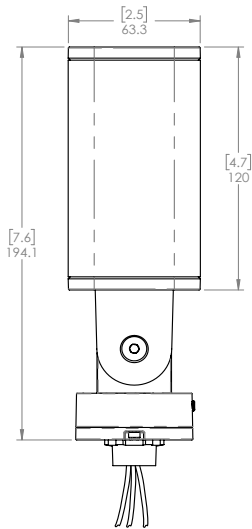
INTERIOR + EXTERIOR | **F080 SINGLE**

DATE	PROJECT	FIRM	TYPE
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WIRING GUIDE

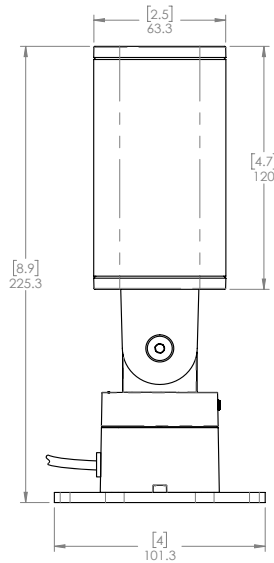
RISE is an interior and exterior rated (IP66) fixture that is available in three different wiring options:

Flying Leads - Internal Cable (UL Listed or CE Listed)



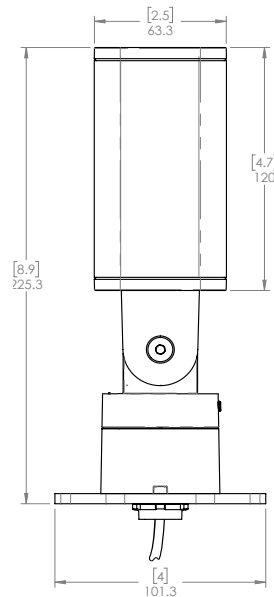
- For use with standard junction boxes
- 1/2" NPT Taper, Cable Length is 19"
- Compatible with EcoSense Canopy junction Box Cover
- 18 AWG Stranded Copper Cable - 3 Conductors

External Cable Side Exit (UL Listed or CE Listed)



- For use when external, exterior rated cable is required to run to remote junction box or mains
- Cable exits the side of the base
- Comes with a Surface Mount Plate, for mounting direct to surface
- Cable Length is 10' (3.05m)

External Cable Bottom Exit (UL Listed or CE Listed)



- For use when external, exterior rated cable is required to run to remote junction box or mains
- Cable exits the bottom for use with various accessories such as Wall Mount Arm and Ground Stake
- 1/2" NPT taper for mounting
- Comes with a Surface Mount Plate, for mounting direct to surface
- Cable Length is 10' (3.05m)

NOTE: Information on this Spec Sheet is subject to change, please visit ecosenselighting.com/rise for the most updated information.

TRÖV®

OVERVIEW • SPECIFICATIONS • ORDERING

INTERIOR + EXTERIOR | L50 WASH

DATE	PROJECT	FIRM	TYPE
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THE L50 INCLUDES PATENTED OPTICAL DESIGN THAT DELIVERS THE WIDEST RANGE OF BEAM ANGLE OPTIONS FOR PRECISE COVE, WALL GRAZING, WALL WASHING OR LINE OF LIGHT APPLICATIONS. EXCLUSIVE FLIP TO FLAT™ HINGE DESIGN PROVIDES FLEXIBILITY WHEN MANAGING SMALL COVE DETAILS. TROV OFFERS SMOOTH, FLICKER FREE DIMMING DOWN TO 0%.

FEATURES :

- DIM TO 0%, ELV REVERSE PHASE
- 24 BEAM ANGLES
- MULTI-VOLT
- FLIP TO FLAT™
- 6 CCT OPTIONS
- 80+ AND 90+ CRI OPTIONS
- IP54 INTERIOR AND IP66 EXTERIOR OPTIONS



MODEL/ SIZE	INTERIOR/ EXTERIOR	LENGTH	POWER	CCT	CRI	VOLTAGE	OPTICS
L50	I E	12" 48"	02 04 06 08 10 12	WHITE CCT 22 27 30 35 40 50	MONO COLOR GR**** BL AM RD***	80 90* Blank For Color	MULT (120-277V) GRAZING 9 x 9 9 x 17 9 x 29 9 x 59 15 x 15 15 x 23 15 x 35 15 x 65 COVE 120** Asym LINE OF LIGHT LOL WASHING 25 x 25 25 x 35 25 x 45 25 x 75 39 x 9 55 x 25 40 x 40 40 x 48 40 x 60 40 x 90 45 x 15 70 x 40 70 x 70

EXAMPLE: L50-I-48-10-27-90-MULT-15x65 *90 CRI not available in 2200K or 5000K **120 is only available with Exterior option. See L35 spec sheet for interior cove options. ***Red is not available in 12W or 10W. ****Green is not available in 12W.

PERFORMANCE	WATTS	OPTIC	LUMEN OUTPUT	EFFICACY
	2W	40°x 60°	110 lm/LF (361 lm/m)	55 lm/W
	4W	40°x 60°	302 lm/LF (1037 lm/m)	76 lm/W
	6W	40°x 60°	482 lm/LF (1614 lm/m)	80 lm/W
	8W	40°x 60°	675 lm/LF (2224 lm/m)	84 lm/W
	10W	40°x 60°	785 lm/LF (2644 lm/m)	79 lm/W
	12W	40°x 60°	923 lm/LF (3201 lm/m)	77 lm/W

ALL LUMEN DATA IS FROM 4000K 80CRI FIXTURES. PLEASE SEE PHOTOMETRY SPEC SHEET FOR ADDITIONAL LUMEN DATA.

COLOR RENDERING INDEX	80+, 90+
COLOR CONSISTENCY	2-STEP MACADAM ELLIPSE
LUMEN DEPRECIATION / RATED LIFE	WATTS L70 @ 25C L70 @ 50C L90 @ 25C L90 @ 50C
	2W-12W >150,000 >70,000 >50,000 >25,000

*CALCULATIONS FOR LED FIXTURES ARE BASED ON MEASUREMENTS THAT COMPLY WITH IES LM-80 TESTING PROCEDURES AND IES TM-21 CALCULATOR

ELECTRICAL	POWER CONSUMPTION	2W*/LF (6.6W/M) ; 4W/LF (13.2W/M) ; 6W/LF (19.8W/M) ; 8W/LF (26.4W/M) ; 10W/LF (33W/M) ; 12W/LF (39.6W/M) * 3W/LF (9.9W/M) at 220V -277V
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MAX FIXTURE RUN LENGTH	2W/LF		4W/LF		6W/LF		8W/LF		10W/LF		12W/LF	
	Volts	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'	
	120	214	214	186	186	152	152	114	114	91	91	76
	220	374	392	340	340	277	277	209	209	95	167	95
	277	374	494	374	428	349	349	263	263	95	190	95

POWER FACTOR	4W, 6W, 8W, 10W, 12W >0.9, 2W<0.9
OPERATING VOLTAGE	MULTIVOLT: 110-277VAC, 50/60 Hz
DRIVER	INTEGRAL TO FIXTURE; DE-RATED POWER AND SYNCHRONOUS START-UP AT FULL BRIGHTNESS
STARTUP TEMPERATURE	-40°F TO 122°F (-40°C TO 50°C)
OPERATING TEMPERATURE	-40°F TO 122°F (-40°C TO 50°C)
STORAGE TEMPERATURE	-40°F TO 176°F (-40°C TO 80°C)

NOTE: Information on this Spec Sheet is subject to change, please visit ecosenselighting.com/downloads/rise for the most updated information.



Project EQ01219V7S Date 7/29/2020
FOUR WINDS FARM
 Submitted By
ELAN LIGHTING SYSTEMS

Catalog Number
L50-I-48-12-30-80-MULT-25X75
 Notes

TYPE:
WA

TRÖV®

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INTERIOR + EXTERIOR | L50 WASH

DATE	PROJECT	FIRM	TYPE
CONTROL	DIMMING	110-277VAC, ELV TYPE 0.07%-100%, REVERSE PHASE, TRAILING EDGE ETC control systems require 0-10V control using EcoSense LDCM. TRÖV will not work with ETC phase dimmers.	
PHYSICAL	DIMENSIONS HOUSING /LENS WEIGHT CONNECTORS ENVIRONMENT BEAM ANGLE MOUNTING OPTIONS	W 1.6" x H 2" x L 12"/48" ; (41.6mm x 50.5mm x 304.7mm/1201mm) EXTRUDED ALUMINUM; UV STABILIZED POLYCARBONATE; STAINLESS STEEL FASTENERS; PLASTIC ENDCAPS RUBBER OVERMOLD FOR CABLE ASSEMBLY 1.52LBS / 0.69KG (1FT) ; 4.95LBS / 2.25KG (4FT) INTEGRAL MALE/ FEMALE CONNECTORS INDOOR • ETL CERTIFIED FOR DRY/DAMP LOCATIONS IP54 OUTDOOR • ETL CERTIFIED FOR WET LOCATIONS IP66 IMPACT RATED TO IK10 Not intended to be used in water features such as waterfalls, fountains, etc. GRAZING, WASHING, COVE, ASYMMETRIC, LINE OF LIGHT INTEGRAL MOUNTING AND ADJUSTABLE AIMING FROM 0°-180° IN 15° INCREMENTS	
FIXTURE RATING & CERTIFICATIONS	CE, ETL CERTIFIED ROHS COMPLIANT ENERGY STAR COMPLIANT RCM CERTIFIED		Title 24 JA8-2016 *90 CRI models only

LIMITED WARRANTY 5 YEARS

WIRING OPTIONS (MVOLT): 110-277VAC

- Power Cable Assembly, TRÖV, Leader/Jumper, 10 foot.....CBL-3P-L-UNV-10*
- Power Cable Assembly, TRÖV, Leader/Jumper, 50 foot.....CBL-3P-L-UNV-50*
- Power Cable Assembly, TRÖV, Jumper, 5 foot.....CBL-3P-L-UNV-05**
- Power Cable Assembly, TRÖV, Jumper, 1 footCBL-3P-L-UNV-01**
- Power Cable Assembly, TRÖV, Male and Female terminator caps.....CBL-3P-L-UNV-CAPS

*Two (2) terminators are included with the 10' and 50' power cable. One Leader need per circuit/fixture run. Cables are not plenum rated.
 ** If using the 5' or 1' power cable assembly as a leader to power a run one set of CBL-3P-L-UNV-CAPS will also be need per cable.

0-10V CONTROL OPTIONS

- 100-120VAC / 277VAC Linear Dimming Control Module 0-10V - Plenum Rated LDCM-PL-120-277-010V-GR
- All products come standard with ELV dimming capabilities. 0-10V Control options required for operation at 0-10V.

OPTIONAL ACCESSORIES

Mounting

- Mounting Track and Clips Set, 48 Inch Track, 8 Clips MNT-L-TRKCLIP-4848" track and clips set will work with one 48" fixture or four 12" fixtures.
- Mounting Track and Clips Set, 12 Inch Track, 2 Clips.....MNT-L-TRKCLIP-1212" track will not work with 48" fixtures.
- Mounting Track Clip, TRÖV, Set of 2.....MNT-L-CLIPClips needed = 12" fixtures need 1 set of 2 and 48" fixture needs 2 sets of 2.
- 90 Degree L bracket, TRÖV, Set of 2.....MNT-L-LBKTL-Brackets needed = 12" fixtures need 1 set of 2 and 48" fixture needs 1 set of 2.
- Angle Locking Clip, TRÖV, Pack of 10..... MNT-L-ANGLOCKAngle Locks needed = 12" fixtures need 1 and 48" fixtures need 2.
(Must order separately)
- Mounting, Fine Adjustment Bracket, TRÖV MNT-L-FAB Fine Adjustment Brackets needed = 12" fixtures need 1 and 48" fixtures need 2.
*Fine Adjustment Bracket is highly recommended for Grazing Optics.
- Mounting, Fine Adjustment L-Bracket, TRÖVMNT-L-LFAB Fine Adjustment L-Brackets needed = 12" fixtures need 1 and 48" fixtures need 2.
*Fine Adjustment L-Bracket is recommended for Asymmetric Optics when aiming is needed.

Snap-on Lenses

- Snap-on Lens, Frosted, 12 inch, L50 LENS-L50-FROST-12
 - Snap-on Lens, Frosted, 48 inch, L50.....LENS-L50-FROST-48
 - Snap-on Lens, Clear, 12 inch, L50.....LENS-L50-CLEAR-12
 - Snap-on Lens, Clear, 48 inch, L50 LENS-L50-CLEAR-48
- Snap-on Lenses need = One 12" lens is needed per 12" fixture and one 48" lens is needed per 48" fixture. Snap on Lenses will not work with the asymmetric fixture. Clear lenses can be used to hold colored filters to customize the output color of any TRÖV fixture, except the ASYM. Color filters supplied by others.

Wall Mount Arm

- Wall Mount Arm, 6 inch, TRÖV WMA-L-CA-06
 - Wall Mount Arm, 12 inch, TRÖV WMA-L-CA-12
 - Wall Mount Arm, 18 inch, TRÖV WMA-L-CA-18
 - Wall Mount Arm, 24 inch, TRÖV..... WMA-L-CA-24
 - Wall Mount Arm End Plate Set, TRÖV, Includes Left and Right..... WMA-L-END
 - Wall Mount Arm Joiner Plate, TRÖV WMA-L-JNR
- Wall Mount Arms needed = For individual fixture installations two arms and one end set will be needed per fixture. For continuous run installation one endset will be needed per run. Each end set contains one left and one right end plate. One joining set will be needed per joint. One arm per fixture will be need plus one extra arm to complete the run. For example: A 10ft run made with two 4ft and two 1ft fixtures will contain; 1x WMA-L-END, 3x WMA-L-JNR, and 5 x WMA-L-CA-12. Leader cables are not included with wall mount arms, end sets, or joiners sets.

Louvers

- Louver, Asymmetric, 12 inch, L50 LV-L50-ASYM-12
 - Louver, Asymmetric, 48 inch, L50 LV-L50-ASYM-48
 - Louver, Symmetric, 12 inch, L50 LV-L50-SYM-12
 - Louver, Symmetric, 48 inch, L50 LV-L50-SYM-48
 - Louver, Honeycomb, 12 inch, L50 LV-L50-HCOMB-12
 - Louver, Honeycomb, 48 inch, L50 LV-L50-HCOMB-48
- Louvers Needed = One 12" louver is needed per 12" fixture and one 48" louver is needed per 48" fixture. 48" louver is made up of four 12" louvers. Louvers cannot be used with the asymmetric fixture



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TROV®

OVERVIEW • SPECIFICATIONS • ORDERING

INTERIOR + EXTERIOR | **L50 WASH**

DATE	PROJECT	FIRM	TYPE
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OPTIONAL ACCESSORIES

Masking Plates

Masking Plate, 3 inch high, 12 inch, L50 & L35 MP-L50-3H-12
 Masking Plate, 3 inch high, 48 inch, L50 & L35 MP-L50-3H-48

Masking Plates needed = One 12" plates is needed per 12" fixture and one 48" plates is needed per 48" fixture.

Landscape Stake

Landscape Stake, 6 inch, TROV, Set of 2 LS-L-STK-06
 Landscape Stake, 12 inch, TROV, Set of 2 LS-L-STK-12
 Landscape Stake, 18 inch, TROV, Set of 2 LS-L-STK-18

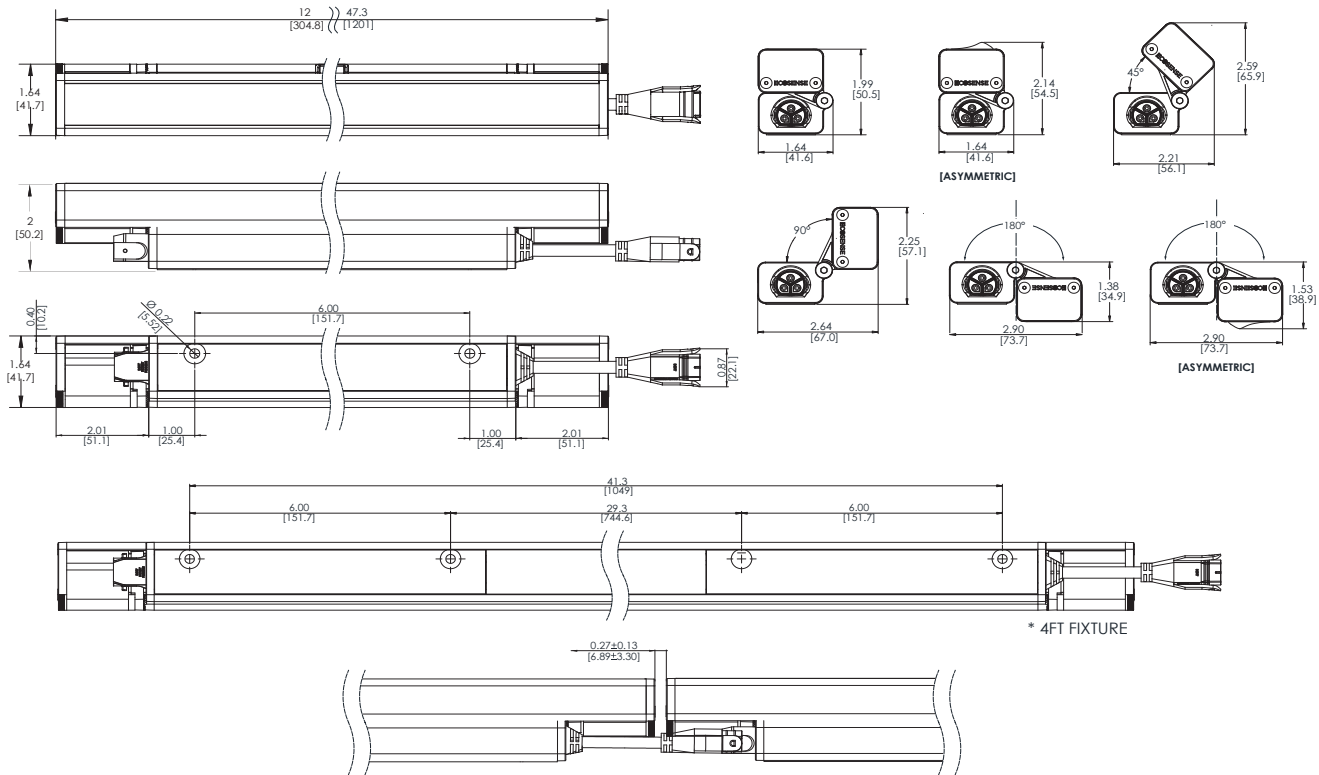
Landscape Stakes needed = 12" and 48" fixtures both need one set of 2.

Wire Box

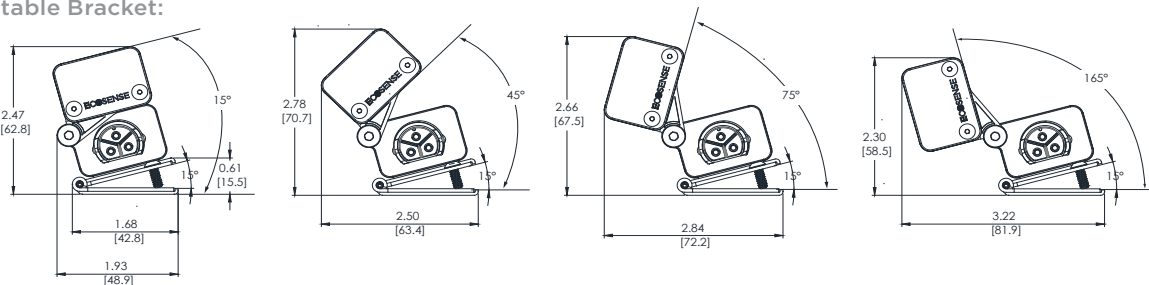
Conduit Connection, Wire Box, TROV, Interior Only, L50CC-L-WIREBOX

Wire box can be used instead of a leader cable to start a run. 1/2" conduit fitting can attach directly to the box on one end and the fixture to the other.

DIMENSIONS + MOUNTING



Fine Adjustable Bracket:



ECOSENSE®

TRÖV®

OVERVIEW • SPECIFICATIONS • ORDERING

EXTERIOR | L50 COVE

DATE	PROJECT	FIRM	TYPE
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THE L50 INCLUDES PATENTED OPTICAL DESIGN THAT DELIVERS THE WIDEST RANGE OF BEAM ANGLE OPTIONS FOR PRECISE COVE, WALL GRAZING, WALL WASHING OR LINE OF LIGHT APPLICATIONS. EXCLUSIVE FLIP TO FLAT™ HINGE DESIGN PROVIDES FLEXIBILITY WHEN MANAGING SMALL COVE DETAILS. TROV OFFERS SMOOTH, FLICKER FREE DIMMING DOWN TO 0%.

FEATURES :

- DIM TO 0%, ELV REVERSE PHASE
- 24 BEAM ANGLES
- MULTI-VOLT
- FLIP TO FLAT™
- 6 CCT OPTIONS
- 80+ AND 90+ CRI OPTIONS
- IP66 EXTERIOR OPTIONS



MODEL/ SIZE	INTERIOR/ EXTERIOR	LENGTH	POWER	CCT	CRI	VOLTAGE	OPTICS
L50	E	12" 48"	02 04 06 08 10 12	WHITE CCT 22 27 30 35 40 50	MONO COLOR GR**** BL AM RD***	80 90* Blank For Color	MULT (120-277V) GRAZING 9 x 9 9 x 17 9 x 29 9 x 59 15 x 15 15 x 23 15 x 35 15 x 65 COVE 120* Asym LINE OF LIGHT LOL WASHING 25 x 25 25 x 33 25 x 45 25 x 75 39 x 9 55 x 25 40 x 40 40 x 48 40 x 60 40 x 90 45 x 15 70 x 40 70 x 70

EXAMPLE: L50-E-48-10-27-90-MULT-15x65 *90 CRI not available in 2200K or 5000K **120 is only available with Exterior option. See L35 spec sheet for interior cove options. ***Red is not available in 12W or 10W. ****Green is not available in 12W.

PERFORMANCE	WATTS	OPTIC	LUMEN OUTPUT	EFFICACY
	2W	120°	95 lm/LF (311 lm/m)	48 lm/W
	4W	120°	273 lm/LF (895 lm/m)	68 lm/W
	6W	120°	426 lm/LF (1397 lm/m)	71 lm/W
	8W	120°	586 lm/LF (1922 lm/m)	73 lm/W
	10W	120°	697 lm/LF (2286 lm/m)	70 lm/W
	12W	120°	807 lm/LF (2647 lm/m)	67 lm/W

ALL LUMEN DATA IS FROM 4000K 80CRI FIXTURES. PLEASE SEE PHOTOMETRY SPEC SHEET FOR ADDITIONAL LUMEN DATA.

COLOR RENDERING INDEX	80+, 90+
COLOR CONSISTENCY	2-STEP MACADAM ELLIPSE
LUMEN DEPRECIATION / RATED LIFE	WATTS L70 @ 25C L70 @ 50C L90 @ 25C L90 @ 50C
	2W-12W >150,000 >70,000 >50,000 >25,000

* CALCULATIONS FOR LED FIXTURES ARE BASED ON MEASUREMENTS THAT COMPLY WITH IES LM-80 TESTING PROCEDURES AND IES TM-21 CALCULATOR

ELECTRICAL	POWER CONSUMPTION	2W*/LF (6.6W/M); 4W/LF (13.2W/M); 6W/LF (19.8W/M); 8W/LF (26.4W/M); 10W/LF (33W/M); 12W/FL (39.6W/M) * 3W/LF (9.9W/M) at 220V -277V
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MAX FIXTURE RUN LENGTH	2W/LF		4W/LF		6W/LF		8W/LF		10W/LF		12W/LF		
	Volts	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'		
	120	214	214	186	186	152	152	114	114	91	91	76	76
	220	374	392	340	340	277	277	209	209	95	167	95	139
	277	374	494	374	428	349	349	263	263	95	190	95	175

POWER FACTOR	4W, 6W, 8W, 10W, 12W >0.9, 2W<0.9
OPERATING VOLTAGE	MULTIVOLT: 110-277VAC, 50/60 Hz
DRIVER	INTEGRAL TO FIXTURE; DE-RATED POWER AND SYNCHRONOUS START-UP AT FULL BRIGHTNESS
STARTUP TEMPERATURE	-40°F TO 122°F (-40°C TO 50°C)
OPERATING TEMPERATURE	-40°F TO 122°F (-40°C TO 50°C)
STORAGE TEMPERATURE	-40°F TO 176°F (-40°C TO 80°C)



Project EQ01219V7S Date 7/29/2020
FOUR WINDS FARM
 Submitted By
ELAN LIGHTING SYSTEMS

Catalog Number
CBL-3P-L-UNV-10
 Notes






TYPE:
WA

ECOSENSE®

TROV®

OVERVIEW • SPECIFICATIONS • ORDERING

EXTERIOR | L50 COVE

DATE	PROJECT	FIRM	TYPE
CONTROL	DIMMING	110-277VAC, ELV TYPE 0.07%-100%, REVERSE PHASE, TRAILING EDGE ETC control systems require 0-10V control using EcoSense LDCM. TROV will not work with ETC phase dimmers.	
PHYSICAL	DIMENSIONS	W 1.6" x H 2" x L 12"/48" ; (41.6mm x 50.5mm x 304.7mm/1201mm)	
	HOUSING /LENS	EXTRUDED ALUMINUM; UV STABILIZED POLYCARBONATE; STAINLESS STEEL FASTENERS; PLASTIC ENDCAPS RUBBER OVERMOLD FOR CABLE ASSEMBLY	
	WEIGHT	1.52LBS / 0.69KG (1FT) ; 4.95LBS / 2.25KG (4FT)	
	CONNECTORS	INTEGRAL MALE/ FEMALE CONNECTORS	
	ENVIRONMENT	INDOOR • ETL CERTIFIED FOR DRY/DAMP LOCATIONS IP54 OUTDOOR • ETL CERTIFIED FOR WET LOCATIONS IP66 IMPACT RATED TO IK10 Not intended to be used in water features such as waterfalls, fountains, etc.	
	BEAM ANGLE	GRAZING, WASHING, COVE, ASYMMETRIC, LINE OF LIGHT	
	MOUNTING OPTIONS	INTEGRAL MOUNTING AND ADJUSTABLE AIMING FROM 0°-180° IN 15° INCREMENTS	
FIXTURE RATING & CERTIFICATIONS	CE, ETL CERTIFIED RoHS COMPLIANT ENERGY STAR COMPLIANT RCM CERTIFIED	    	

LIMITED WARRANTY 5 YEARS

WIRING OPTIONS (MVOLT): 110-277VAC

Power Cable Assembly, TROV, Leader/Jumper, 10 foot.....	CBL-3P-L-UNV-10*
Power Cable Assembly, TROV, Leader/Jumper, 50 foot.....	CBL-3P-L-UNV-50*
Power Cable Assembly, TROV, Jumper, 5 foot.....	CBL-3P-L-UNV-05**
Power Cable Assembly, TROV, Jumper, 1 foot.....	CBL-3P-L-UNV-01**
Power Cable Assembly, TROV, Adjustable Jumper, 0" to 7".....	CBL-3P-L-UNV-ADJ
Power Cable Assembly, TROV, Male and Female terminator caps.....	CBL-3P-L-UNV-CAPS

*Two (2) terminators are included with the 10' and 50' power cable. One Leader need per circuit/fixture run. Cables are not plenum rated.
 ** If using the 5' or 1' power cable assembly as a leader to power a run one set of CBL-3P-L-UNV-CAPS will also be need per cable.

0-10V CONTROL OPTIONS

100-120VAC / 277VAC Linear Dimming Control Module 0-10V - Plenum Rated **LDCM-PL-120-277-010V-GR**
 All products come standard with ELV dimming capabilities. 0-10V Control options required for operation at 0-10V.

OPTIONAL ACCESSORIES

Mounting

Mounting Track and Clips Set, 48 Inch Track, 8 Clips..... **MNT-L-TRKCLIP-48** 48" track and clips set will work with one 48" fixture or four 12" fixtures.
 Mounting Track and Clips Set, 12 Inch Track, 2 Clips..... **MNT-L-TRKCLIP-12** 12" track will not work with 48" fixtures.
 Mounting Track Clip, TROV, Set of 2..... **MNT-L-CLIP**Clips needed = 12" fixtures need 1 set of 2 and 48" fixture needs 2 sets of 2.
 90 Degree L bracket, TROV, Set of 2..... **MNT-L-LBKT**L-Brackets needed = 12" fixtures need 1 set of 2 and 48" fixture needs 1 set of 2.
 Angle Locking Clip, TROV, Pack of 10..... **MNT-L-ANGLOCK** Angle Locks needed = 12" fixtures need 1 and 48" fixtures need 2.
 (Must order separately)
 Mounting, Fine Adjustment Bracket, TROV..... **MNT-L-FAB** Fine Adjustment Brackets needed = 12" fixtures need 1 and 48" fixtures need 2.
 *Fine Adjustment Bracket is highly recommended for Grazing Optics.
 Mounting, Fine Adjustment L-Bracket, TROV..... **MNT-L-LFAB** Fine Adjustment L-Brackets needed = 12" fixtures need 1 and 48" fixtures need 2.
 *Fine Adjustment L-Bracket is recommended for Asymmetric Optics when aiming is needed.

Snap-on Lenses

Snap-on Lens, Frosted, 12 inch, L50.....	LENS-L50-FROST-12	Snap-on Lenses need = One 12" lens is needed per 12" fixture and one 48" lens is needed per 48" fixture. Snap on Lenses will not work with the asymmetric fixture. Clear lenses can be used to hold colored filters to customize the output color of any TROV fixture, except the ASYM. Color filters supplied by others.
Snap-on Lens, Frosted, 48 inch, L50.....	LENS-L50-FROST-48	
Snap-on Lens, Clear, 12 inch, L50.....	LENS-L50-CLEAR-12	
Snap-on Lens, Clear, 48 inch, L50.....	LENS-L50-CLEAR-48	

Wall Mount Arm

Wall Mount Arm, 6 inch, TROV.....	WMA-L-CA-06	Wall Mount Arms needed = For individual fixture installations two arms and one end set will be needed per fixture. For continuous run installation one endset will be needed per run. Each end set contains one left and one right end plate. One joining set will be needed per joint. One arm per fixture will be need plus one extra arm to complete the run. For example: A 10ft run made with two 4ft and two 1ft fixtures will contain; 1 x WMA-L-END, 3 x WMA-L-JNR, and 5 x WMA-L-CA-12. Leader cables are not included with wall mount arms, end sets, or joiners sets.
Wall Mount Arm, 12 inch, TROV.....	WMA-L-CA-12	
Wall Mount Arm, 18 inch, TROV.....	WMA-L-CA-18	
Wall Mount Arm, 24 inch, TROV.....	WMA-L-CA-24	
Wall Mount Arm End Plate Set, TROV, Includes Left and Right.....	WMA-L-END	
Wall Mount Arm Joiner Plate, TROV.....	WMA-L-JNR	

Louvers

Louver, Asymmetric, 12 inch, L50.....	LV-L50-ASYM-12	Louvers Needed = One 12" louver is needed per 12" fixture and one 48" louver is needed per 48" fixture. 48" louver is made up of four 12" louvers. Louvers cannot be used with the asymmetric fixture
Louver, Asymmetric, 48 inch, L50.....	LV-L50-ASYM-48	
Louver, Symmetric, 12 inch, L50.....	LV-L50-SYM-12	
Louver, Symmetric, 48 inch, L50.....	LV-L50-SYM-48	
Louver, Honeycomb, 12 inch, L50.....	LV-L50-HCOMB-12	
Louver, Honeycomb, 48 inch, L50.....	LV-L50-HCOMB-48	

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ECOSENSE®

TRÖV®

OVERVIEW • SPECIFICATIONS • ORDERING

EXTERIOR | L50 COVE

DATE	PROJECT	FIRM	TYPE
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OPTIONAL ACCESSORIES

Masking Plates

- Masking Plate, 3 inch high, 12 inch, L50 & L35 MP-L50-3H-12
- Masking Plate, 3 inch high, 48 inch, L50 & L35 MP-L50-3H-48

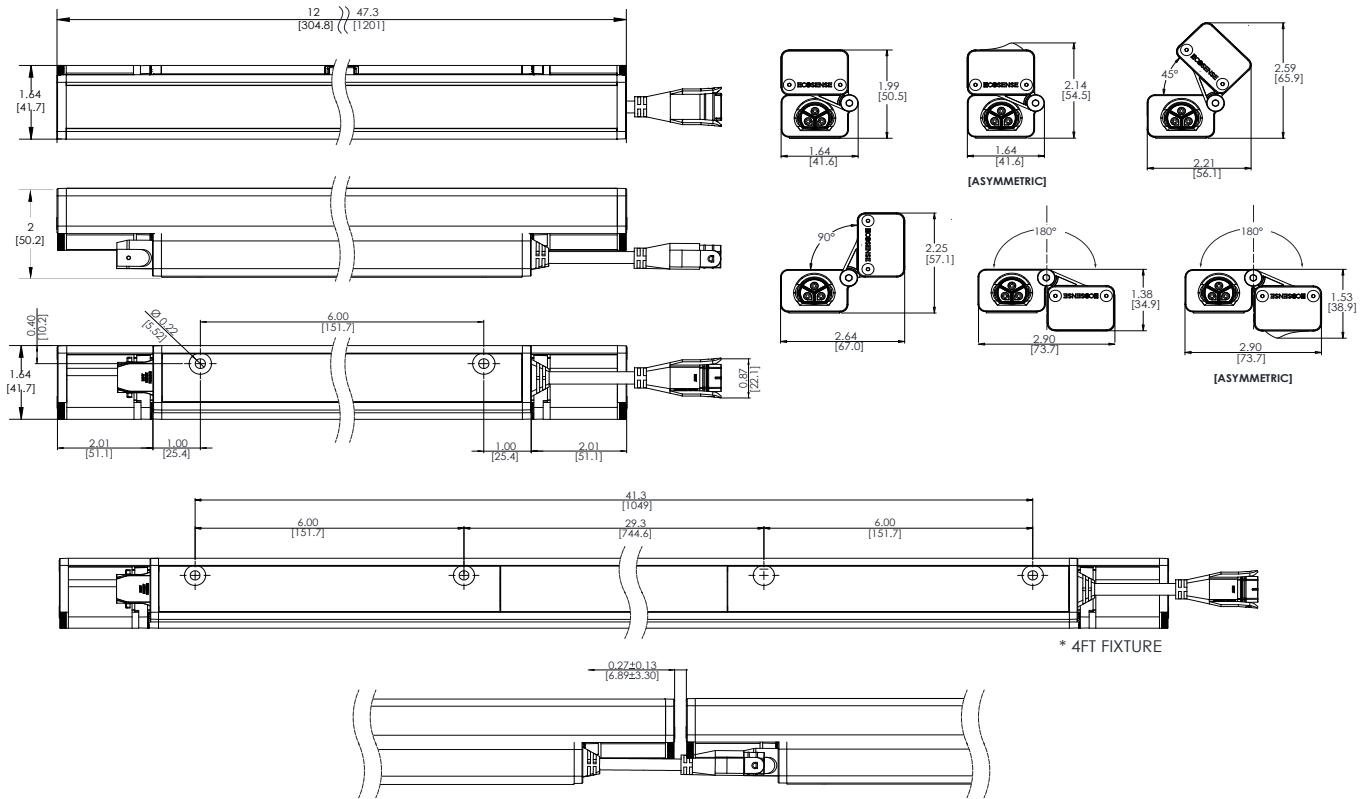
Masking Plates needed = One 12" plate is needed per 12" fixture and one 48" plate is needed per 48" fixture.

Landscape Stake

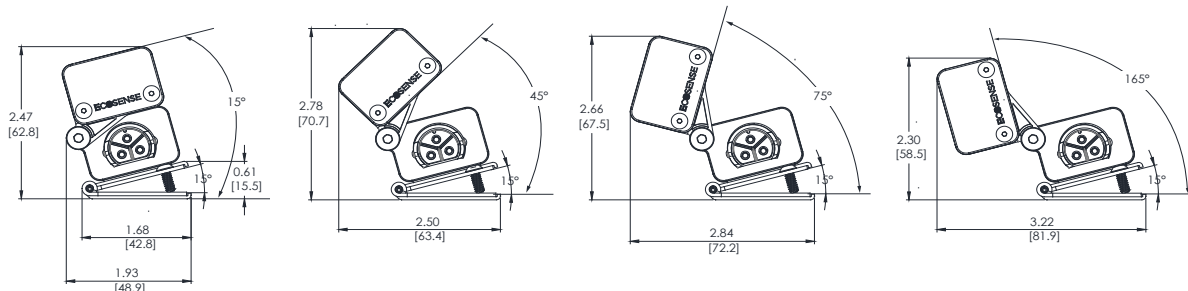
- Landscape Stake, 6 inch, TROV, Set of 2 LS-L-STK-06
- Landscape Stake, 12 inch, TROV, Set of 2 LS-L-STK-12
- Landscape Stake, 18 inch, TROV, Set of 2 LS-L-STK-18

Landscape Stakes needed = 12" and 48" fixtures both need one set of 2.

DIMENSIONS + MOUNTING



Fine Adjustable Bracket:



ECOSENSE®

TRÖV®

OVERVIEW • SPECIFICATIONS • ORDERING

EXTERIOR | L50 COVE

DATE	PROJECT	FIRM	TYPE
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THE L50 INCLUDES PATENTED OPTICAL DESIGN THAT DELIVERS THE WIDEST RANGE OF BEAM ANGLE OPTIONS FOR PRECISE COVE, WALL GRAZING, WALL WASHING OR LINE OF LIGHT APPLICATIONS. EXCLUSIVE FLIP TO FLAT™ HINGE DESIGN PROVIDES FLEXIBILITY WHEN MANAGING SMALL COVE DETAILS. TROV OFFERS SMOOTH, FLICKER FREE DIMMING DOWN TO 0%.

FEATURES :

- DIM TO 0%, ELV REVERSE PHASE
- 24 BEAM ANGLES
- MULTI-VOLT
- FLIP TO FLAT™
- 6 CCT OPTIONS
- 80+ AND 90+ CRI OPTIONS
- IP66 EXTERIOR OPTIONS



MODEL/ SIZE	INTERIOR/ EXTERIOR	LENGTH	POWER	CCT	CRI	VOLTAGE	OPTICS
L50	E	12" 48"	02 04 06 08 10 12	WHITE CCT 22 27 30 35 40 50	MONO COLOR GR**** BL AM RD***	80 90* Blank For Color	MULT (120-277V) GRAZING 9 x 9 9 x 17 9 x 29 9 x 59 15 x 15 15 x 23 15 x 35 15 x 65 COVE 120* Asym LINE OF LIGHT LOL WASHING 25 x 25 25 x 33 25 x 45 25 x 75 39 x 9 55 x 25 40 x 40 40 x 48 40 x 60 40 x 90 45 x 15 70 x 40 70 x 70

EXAMPLE: L50-E-48-10-27-90-MULT-15x65 *90 CRI not available in 2200K or 5000K **120 is only available with Exterior option. See L35 spec sheet for interior cove options. ***Red is not available in 12W or 10W. ****Green is not available in 12W.

PERFORMANCE	WATTS	OPTIC	LUMEN OUTPUT	EFFICACY
	2W	120°	95 lm/LF (311 lm/m)	48 lm/W
	4W	120°	273 lm/LF (895 lm/m)	68 lm/W
	6W	120°	426 lm/LF (1397 lm/m)	71 lm/W
	8W	120°	586 lm/LF (1922 lm/m)	73 lm/W
	10W	120°	697 lm/LF (2286 lm/m)	70 lm/W
	12W	120°	807 lm/LF (2647 lm/m)	67 lm/W

ALL LUMEN DATA IS FROM 4000K 80CRI FIXTURES. PLEASE SEE PHOTOMETRY SPEC SHEET FOR ADDITIONAL LUMEN DATA.

COLOR RENDERING INDEX	80+, 90+				
COLOR CONSISTENCY	2-STEP MACADAM ELLIPSE				
LUMEN DEPRECIATION / RATED LIFE	WATTS	L70 @ 25C	L70 @ 50C	L90 @ 25C	L90 @ 50C
	2W-12W	>150,000	>70,000	>50,000	>25,000

* CALCULATIONS FOR LED FIXTURES ARE BASED ON MEASUREMENTS THAT COMPLY WITH IES LM-80 TESTING PROCEDURES AND IES TM-21 CALCULATOR

ELECTRICAL	POWER CONSUMPTION	2W*/LF (6.6W/M) ; 4W/LF (13.2W/M) ; 6W/LF (19.8W/M) ; 8W/LF (26.4W/M) ; 10W/LF (33W/M) ; 12W/LF (39.6W/M) * 3W/LF (9.9W/M) at 220V -277V
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MAX FIXTURE RUN LENGTH	2W/LF		4W/LF		6W/LF		8W/LF		10W/LF		12W/LF		
	Volts	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'	Max Run all 1'	Max Run all 4'		
	120	214	214	186	186	152	152	114	114	91	91	76	76
	220	374	392	340	340	277	277	209	209	95	167	95	139
	277	374	494	374	428	349	349	263	263	95	190	95	175

POWER FACTOR
 OPERATING VOLTAGE
 DRIVER
 STARTUP TEMPERATURE
 OPERATING TEMPERATURE
 STORAGE TEMPERATURE

4W, 6W, 8W, 10W, 12W >0.9, 2W<0.9
 MULTIVOLT: 110-277VAC, 50/60 Hz
 INTEGRAL TO FIXTURE; DE-RATED POWER AND SYNCHRONOUS START-UP AT FULL BRIGHTNESS
 -40°F TO 122°F (-40°C TO 50°C)
 -40°F TO 122°F (-40°C TO 50°C)
 -40°F TO 176°F (-40°C TO 80°C)



Project EQ01219V7S Date 7/29/2020
FOUR WINDS FARM
 Submitted By
ELAN LIGHTING SYSTEMS

Catalog Number
CBL-3P-L-UNV-CAPS
 Notes






TYPE:
WA

ECOSENSE

TRÖV

OVERVIEW • SPECIFICATIONS • ORDERING

EXTERIOR | L50 COVE

DATE	PROJECT	FIRM	TYPE
CONTROL	DIMMING	110-277VAC, ELV TYPE 0.07%-100%, REVERSE PHASE, TRAILING EDGE ETC control systems require 0-10V control using EcoSense LDCM. TRÖV will not work with ETC phase dimmers.	
PHYSICAL	DIMENSIONS	W 1.6" x H 2" x L 12"/48" ; (41.6mm x 50.5mm x 304.7mm/1201mm)	
	HOUSING /LENS	EXTRUDED ALUMINUM; UV STABILIZED POLYCARBONATE; STAINLESS STEEL FASTENERS; PLASTIC ENDCAPS RUBBER OVERMOLD FOR CABLE ASSEMBLY	
	WEIGHT	1.52LBS / 0.69KG (1FT) ; 4.95LBS / 2.25KG (4FT)	
	CONNECTORS	INTEGRAL MALE/ FEMALE CONNECTORS	
	ENVIRONMENT	INDOOR • ETL CERTIFIED FOR DRY/DAMP LOCATIONS IP54 OUTDOOR • ETL CERTIFIED FOR WET LOCATIONS IP66 IMPACT RATED TO IK10 Not intended to be used in water features such as waterfalls, fountains, etc.	
	BEAM ANGLE	GRAZING, WASHING, COVE, ASYMMETRIC, LINE OF LIGHT	
	MOUNTING OPTIONS	INTEGRAL MOUNTING AND ADJUSTABLE AIMING FROM 0°-180° IN 15° INCREMENTS	
FIXTURE RATING & CERTIFICATIONS	CE, ETL CERTIFIED RoHS COMPLIANT ENERGY STAR COMPLIANT RCM CERTIFIED	    	

LIMITED WARRANTY 5 YEARS

WIRING OPTIONS (MVOLT): 110-277VAC

Power Cable Assembly, TRÖV, Leader/Jumper, 10 foot.....	CBL-3P-L-UNV-10*
Power Cable Assembly, TRÖV, Leader/Jumper, 50 foot.....	CBL-3P-L-UNV-50*
Power Cable Assembly, TRÖV, Jumper, 5 foot.....	CBL-3P-L-UNV-05**
Power Cable Assembly, TRÖV, Jumper, 1 foot.....	CBL-3P-L-UNV-01**
Power Cable Assembly, TRÖV, Adjustable Jumper, 0" to 7"	CBL-3P-L-UNV-ADJ
Power Cable Assembly, TRÖV, Male and Female terminator caps.....	CBL-3P-L-UNV-CAPS

*Two (2) terminators are included with the 10' and 50' power cable. One Leader need per circuit/fixture run. Cables are not plenum rated.
 ** If using the 5' or 1' power cable assembly as a leader to power a run one set of CBL-3P-L-UNV-CAPS will also be need per cable.

0-10V CONTROL OPTIONS

100-120VAC / 277VAC Linear Dimming Control Module 0-10V - Plenum Rated LDCM-PL-120-277-010V-GR
 All products come standard with ELV dimming capabilities. 0-10V Control options required for operation at 0-10V.

OPTIONAL ACCESSORIES

Mounting

Mounting Track and Clips Set, 48 Inch Track, 8 Clips..... MNT-L-TRKCLIP-48 48" track and clips set will work with one 48" fixture or four 12" fixtures.
 Mounting Track and Clips Set, 12 Inch Track, 2 Clips.....MNT-L-TRKCLIP-12 12" track will not work with 48" fixtures.
 Mounting Track Clip, TRÖV, Set of 2..... MNT-L-CLIPClips needed = 12" fixtures need 1 set of 2 and 48" fixture needs 2 sets of 2.
 90 Degree L bracket, TRÖV, Set of 2.....MNT-L-LBKTL-Brackets needed = 12" fixtures need 1 set of 2 and 48" fixture needs 1 set of 2.
 Angle Locking Clip, TRÖV, Pack of 10..... MNT-L-ANGLOCK Angle Locks needed = 12" fixtures need 1 and 48" fixtures need 2.
 (Must order separately)
 Mounting, Fine Adjustment Bracket, TRÖV MNT-L-FAB Fine Adjustment Brackets needed = 12" fixtures need 1 and 48" fixtures need 2.
 *Fine Adjustment Bracket is highly recommended for Grazing Optics.
 Mounting, Fine Adjustment L-Bracket, TRÖVMNT-L-LFAB Fine Adjustment L-Brackets needed = 12" fixtures need 1 and 48" fixtures need 2.
 *Fine Adjustment L-Bracket is recommended for Asymmetric Optics when aiming is needed.

Snap-on Lenses

Snap-on Lens, Frosted, 12 inch, L50	LENS-L50-FROST-12	Snap-on Lenses need = One 12" lens is needed per 12" fixture and one 48" lens is needed per 48" fixture. Snap on Lenses will not work with the asymmetric fixture. Clear lenses can be used to hold colored filters to customize the output color of any TRÖV fixture, except the ASYM. Color filters supplied by others.
Snap-on Lens, Frosted, 48 inch, L50.....	LENS-L50-FROST-48	
Snap-on Lens, Clear, 12 inch, L50.....	LENS-L50-CLEAR-12	
Snap-on Lens, Clear, 48 inch, L50	LENS-L50-CLEAR-48	

Wall Mount Arm

Wall Mount Arm, 6 inch, TRÖV	WMA-L-CA-06	Wall Mount Arms needed = For individual fixture installations two arms and one end set will be needed per fixture. For continuous run installation one endset will be needed per run. Each end set contains one left and one right end plate. One joining set will be needed per joint. One arm per fixture will be need plus one extra arm to complete the run. For example: A 10ft run made with two 4ft and two 1ft fixtures will contain; 1 x WMA-L-END, 3 x WMA-L-JNR, and 5 x WMA-L-CA-12. Leader cables are not included with wall mount arms, end sets, or joiners sets.
Wall Mount Arm, 12 inch, TRÖV.....	WMA-L-CA-12	
Wall Mount Arm, 18 inch, TRÖV.....	WMA-L-CA-18	
Wall Mount Arm, 24 inch, TRÖV.....	WMA-L-CA-24	
Wall Mount Arm End Plate Set, TRÖV, Includes Left and Right.....	WMA-L-END	
Wall Mount Arm Joiner Plate, TRÖV	WMA-L-JNR	

Louvers

Louver, Asymmetric, 12 inch, L50	LV-L50-ASYM-12	Louvers Needed = One 12" louver is needed per 12" fixture and one 48" louver is needed per 48" fixture. 48" louver is made up of four 12" louvers. Louvers cannot be used with the asymmetric fixture
Louver, Asymmetric, 48 inch, L50	LV-L50-ASYM-48	
Louver, Symmetric, 12 inch, L50	LV-L50-SYM-12	
Louver, Symmetric, 48 inch, L50	LV-L50-SYM-48	
Louver, Honeycomb, 12 inch, L50	LV-L50-HCOMB-12	
Louver, Honeycomb, 48 inch, L50	LV-L50-HCOMB-48	

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TRÖV®

OVERVIEW • SPECIFICATIONS • ORDERING

EXTERIOR | L50 COVE

DATE	PROJECT	FIRM	TYPE
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OPTIONAL ACCESSORIES

Masking Plates

- Masking Plate, 3 inch high, 12 inch, L50 & L35 MP-L50-3H-12
- Masking Plate, 3 inch high, 48 inch, L50 & L35 MP-L50-3H-48

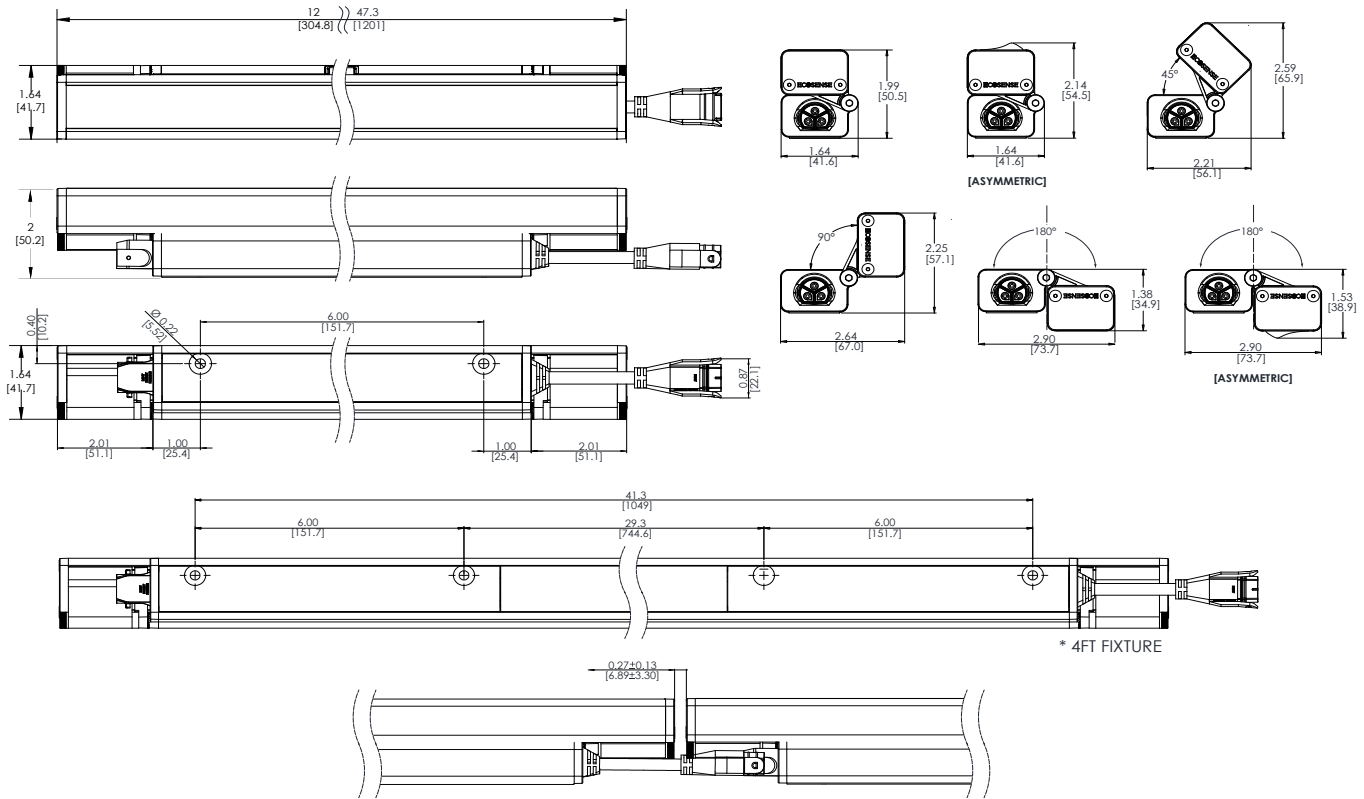
Masking Plates needed = One 12" plate is needed per 12" fixture and one 48" plate is needed per 48" fixture.

Landscape Stake

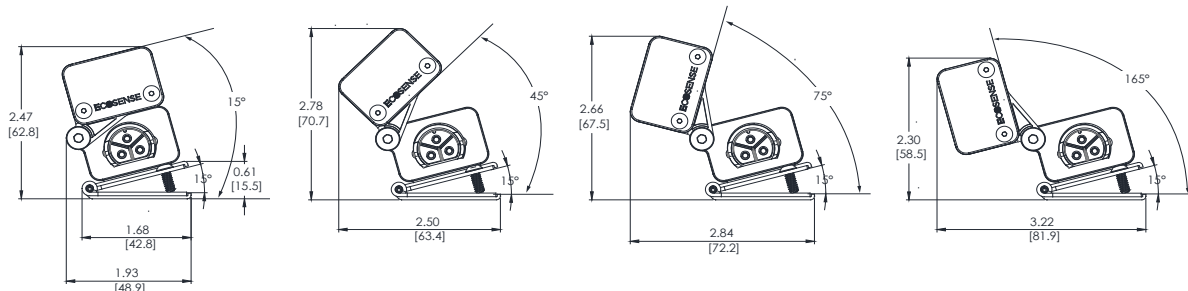
- Landscape Stake, 6 inch, TROV, Set of 2 LS-L-STK-06
- Landscape Stake, 12 inch, TROV, Set of 2 LS-L-STK-12
- Landscape Stake, 18 inch, TROV, Set of 2 LS-L-STK-18

Landscape Stakes needed = 12" and 48" fixtures both need one set of 2.

DIMENSIONS + MOUNTING



Fine Adjustable Bracket:



MASTER INTERFACE



FEATURES-

- Master Interfaces provide coordinated control for all of the system connected devices and act as a “gateway” to an Ethernet network.
- Up to (100) directly connected devices can be controlled by one Master Interface.
- Touché’s® Master Interface provides a modular and scalable solution to building system management. Master Interfaces permit the following solutions:
 - Small Applications: Directly connect devices (relays, sensors, and switches) to a stand-alone Master Interface.
 - Medium Applications: Use a stand-alone Master Interface with a combination of directly connected devices and devices connected through Multi-Function Interfaces.
 - Large Applications: Use a collection of interconnected Master Interfaces each with devices connected through one of the two above referenced methods. Large applications are actually a collection of small and medium applications.
- Have a built-in astronomical time-clock with an unlimited number of configurable schedules. Dusk/dawn calculator provides dynamic time control eliminating the need of photo-cells.
- Auto-addressing of all connected devices is coordinated by the Master Interface.
- Both static and dynamic IP addressing is permitted for simple and adaptable setup when Ethernet communication is required.
- The Master Interface monitors the status of all connected devices and displays that information locally on its touchscreen display.
- The Master interface self-monitors the power source for voltage, ampacity, and temperature.
- Class 2 wiring (Cat 5) provides simple and safe field wiring of the system originating at the Master Interface.
- The Master Interface uses an auto-sensing power supply capable of accepting sources voltages of 120VAC or 277VAC.
- Complete event logging of all normal, warning, and error conditions are stored locally on an SD card.
- The enclosure is a rugged powder coated steel housing for long life durability.

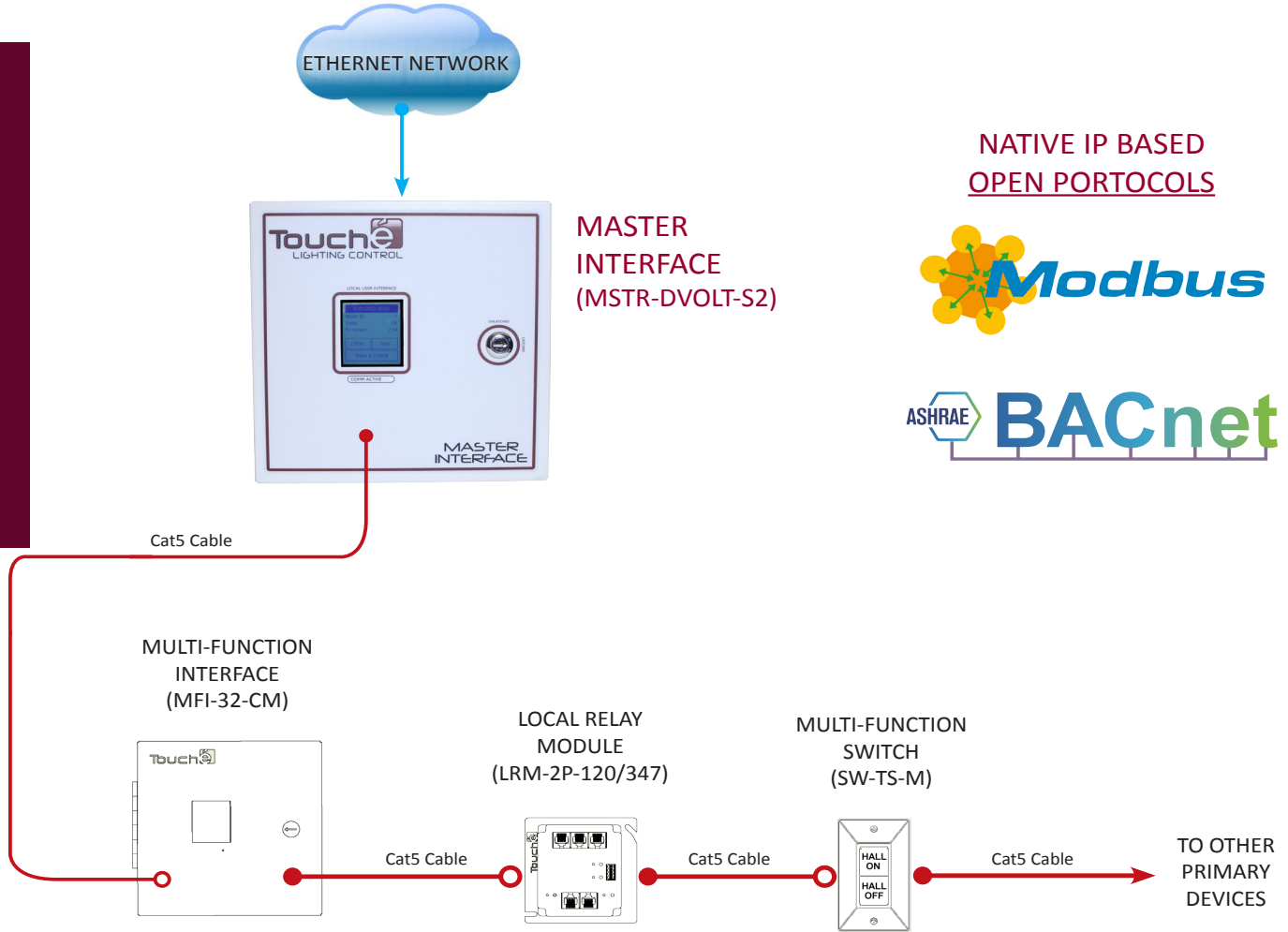
MSTR-DVOLT-S2

SPECIFICATIONS

Enclosure Dimensions:	12"w x 12"h x 6"d
Enclosure Construction:	Nema 1, Powder Coated Steel with Simple Twist Latch
Power Supply Voltage:	120/277VAC (Auto-Sensing)
Listings:	UL 916 and cUL 916
Ambient Temperature:	40° C (104° F)
Maximum Humidity:	10—90% Non-Condensing
Backup Battery:	(2) 12V, SLA Batteries Connected in Series

MASTER INTERFACE

MSTR-DVOLT-S2



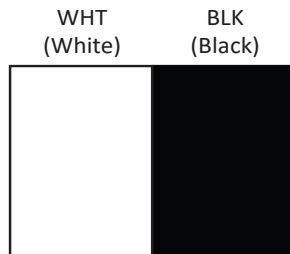
PART NUMBER

	MSTR	DVOLT	S2
MSTR:	Master Interface		
DVOLT:		Auto-Sensing Dual Voltage (120/277 VAC)	
S2:			Series 2

COLOR TOUCHSCREEN WALL-STATION



SHOWN WITH WHITE HOUSING



HOUSING COLORS

FEATURES-

- Configurable wall station with color touchscreen display. The wall station utilizes a high resolution backlit display for easy to read button information.
- Each wall station is configurable with multiple buttons per page and multiple pages per wall station.
- Default pages include: scenes page, zones page, and special function page. Unused pages, or pages that include functionality that is not desired, can be hidden.
- Switch lockout feature requires a 4-digit pass code for access to the switch's functions, when enabled.
- Multiple button and label "types" are available including scene buttons, momentary buttons, and toggle buttons, fixed labels with user definable labels.
- Display is a 4.3" color TFT display, 272x480, premium brightness, 16.7M colors.
- Capacitive multi-touch interface with page swipe gesture control.
- Dimmable backlight.
- Sleep mode capable.
- Able to display custom graphics and logos.
- Wall stations are fully integrated with other components of the system to properly display the current state of the lighting in the controlled area. Coordinated control between the wall station and other switches or devices in a room is automatically generated through the easy-to-use Windows[®] based system configuration software.
- All power and communication is done through a low voltage Cat5 daisy-chained cable. No additional cabling or sources of power are required.
- Switches fit into standard 1-G electrical junction boxes (4" Sq. Box with plaster ring or masonry box).
- Graphics can be selected from pre-determined configurations or be completely custom.

WS-TS-C

SPECIFICATIONS

Mounting Considerations:

1-1/2" Deep 4" Sq. Box with 1-G Ring or 1-G Masonry Box

Power Supply Voltage:

Sourced from Primary or Secondary Branch Cat5 Cable
(no external power supply required)

Listings:

UL 916 and cUL 916

Ambient Temperature:

60° C (140° F)

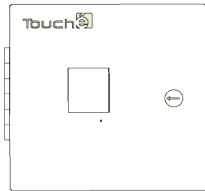
Maximum Humidity:

10—90% Non-Condensing

COLOR TOUCHSCREEN WALL-STATION

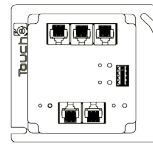
WS-TS-C

MASTER INTERFACE (MSTR-DVOLT-S2)



Cat5 Cable

LOCAL RELAY MODULE (LRM)



Cat5 Cable

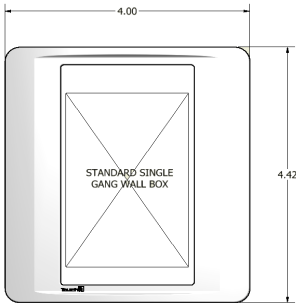
COLOR TOUCHSCREEN WALL-STATION (WS-TS-C)



Cat5 Cable

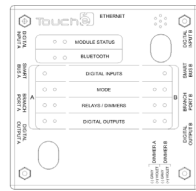
TO OTHER PRIMARY DEVICES

SHOWN CONNECTED TO A MASTER INTERFACE MANAGED SOLUTION



FRONT DIMENSIONS

ROOM MANAGER (RM)



Cat5 Cable

COLOR TOUCHSCREEN WALL-STATION (WS-TS-C)

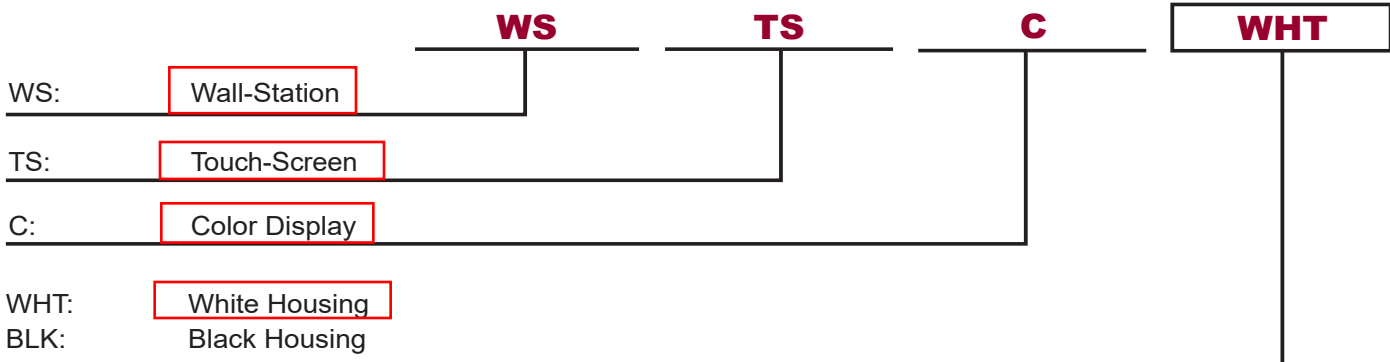


Cat5 Cable

TO OTHER PRIMARY DEVICES

SHOWN CONNECTED TO A ROOM MANAGER SOLUTION

PART NUMBER



PRODUCT DATA SHEET

TOUCHÉ CONTROLS



SMART SWITCH - TWO BUTTON



DESCRIPTION

Smart switches communicate on Touché's *Smart Bus* network. The 2-button Smart Switch provides simple user interfacing for either scene or zone control of a room. On/off and raise/lower commands are available by utilizing two simple buttons. Integral to the device is an LED bar graph indicator that represents the room's current light level intensity. The tactile, metallic buttons are attractive yet durable.

FEATURES

- Simple two-button interface provides on/off and raise/lower control.
- LED bar-graph indicator provides visual indication of the controlled area's light level.
- Device is part of Touché's auto-addressing network of devices, requiring no dip-switch set-up.
- Smart Bus device that connects to the network via simple Cat5 cable. Power to the device is via the same Cat5 cable.
- Each switch is software configurable and can be configured in the programming application or wirelessly in the smart phone application.
- Daisy-chaining devices provides three and four-way switching functions in a room or area without software configuration.
- Switches fit into standard 1-gang electrical junction box configurations (4" square box with plaster ring or masonry box). Ganging of multiple switches can be done without any special rough-in considerations.
- The required faceplate (not included) is a standard Decora^(R) wall-plate.
- Available in three standard colors: White, Ivory, and Gray.
- Out-of-the-box configured as a scene wall station with raise/lower capability.



Project EQ01219V7S Date 7/29/2020

FOUR WINDS FARM

Submitted By
ELAN LIGHTING SYSTEMS

Catalog Number
SS-2B-WHT

Notes

TYPE:

SPECIFICATIONS

VOLTAGE	24VDC - SOURCED FROM SMART BUS (NO EXTERNAL POWER SUPPLY REQUIRED)
CONNECTIVITY	CAT5 (MINIMUM)
LISTINGS	UL916, cUL916
AMBIENT TEMPERATURE	60C (140F)
MAXIMUM HUMIDITY	10 - 90%, NON-CONDENSING

CATALOGUE NUMBER

DEVICE TYPE	BUTTON QTY	COLOR
SS Smart Switch	2B 2-Button	WHT White
		GRY Gray
		IV Ivory

MODES

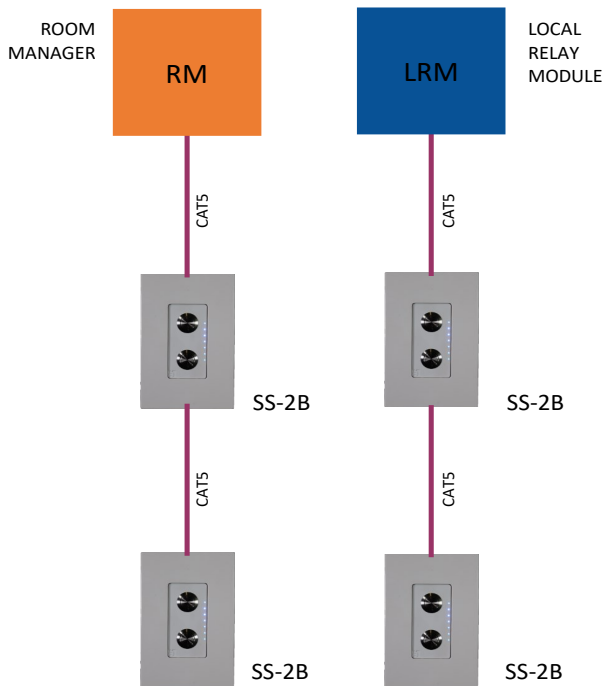
Scene Mode

- Top button: press and release to turn on
- Top button: press and hold to raise scene level
- Bottom button: press and hold to lower scene level
- Bottom button: press and release to turn off
- User can choose which preset the top button activates

Zone Mode

- User can select which zone each wall station controls
- Top button: press and release turns zone on
- Top button: press and hold to raise zone level
- Bottom button: press and hold to lower zone level
- Bottom button: press and release to turn off
- User can set the level the zone goes to when top button pressed

CONNECTIVITY



Touché Controls (a Product of ESI Ventures)

A: 2085 Humphrey Street, Fort Wayne, IN 46803

T: 888.841.4356

W: ToucheControls.com

RELAY DIMMER PANEL

FEATURES-



- Relay Dimmer Panels allow interchangeable modules to be installed in any one of (32) locations within the panel. Module types include:
 - Single Pole Relay Modules
 - Two Pole Relay Modules
 - Latching (Mechanically Held) Relay Modules
 - 0-10V, 2-Channel Dimming Modules
 - Line Voltage/3-Wire Dimming Modules
- Four touch-screen LCD displays provide local interaction and present status information for each connected module. The displays present each connected module's zone description, current state, type of module installed, communication status, and much more.
- Users are able to locally control all connected Relay and Dimming Modules through the LCD Touch-Screen Displays.
- Communication status and power supply status is provided for easy trouble shooting and commissioning.
- The enclosure is designed to be dimensionally compatible with typical commercial circuit breaker panels (20" wide x 5.75" deep). This allows for a more coordinated overall electrical installation.
- Local LCD displays are powered from the Primary Branch Communication Cable (Cat5) so status information can be obtained even when local power is disconnected for modifications to the panel (i.e. modules installed or removed).
- A local power supply powers all relays and dimmers, removing the drain on the Primary Branch Communication Cable (Cat5). Power supply is 120VAC or 277VAC and is auto-sensing.
- The back panel and covers are all rugged powder coated steel for long life durability.
- No special tools are required for module installation. A simple straight blade or phillips screw driver is used for all module installations.

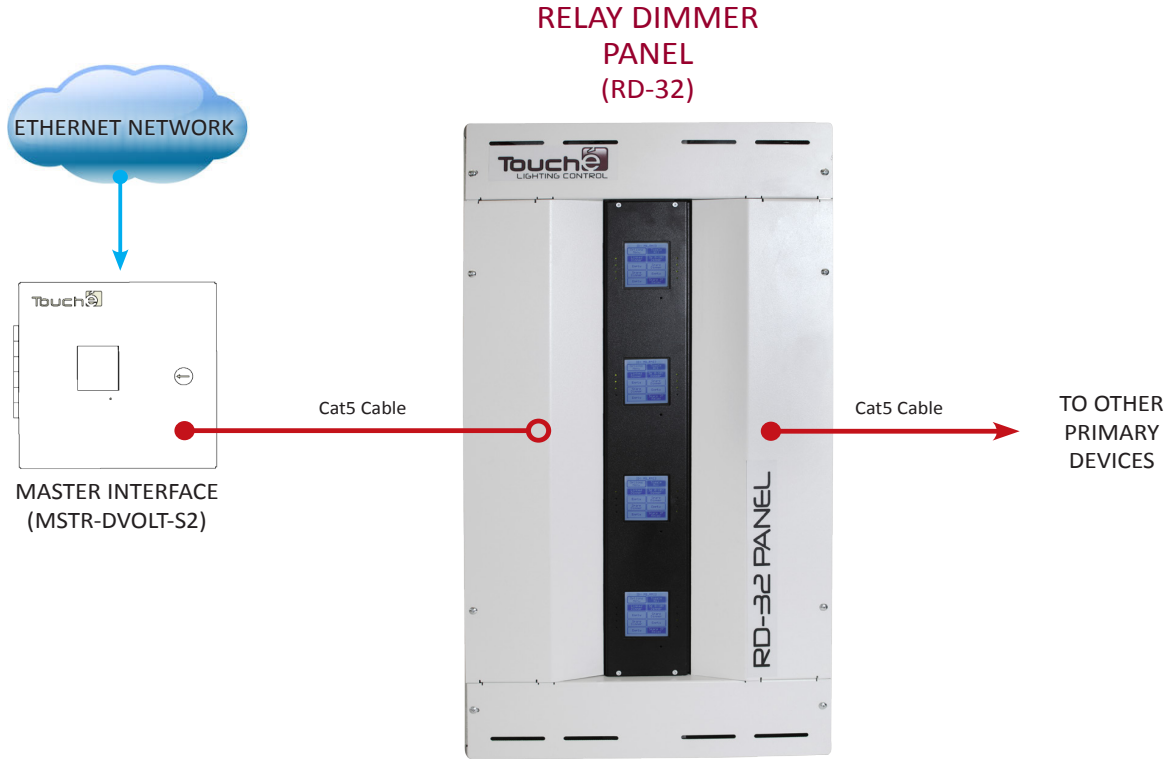
RD-32

SPECIFICATIONS

Enclosure Dimensions:	20"w x 38"h x 6"d	
Enclosure Construction:	Front & Interior:	Nema 1, Powder Coated Steel
	Back Box:	Galvanized Steel
Power Supply Voltage:	120/277VAC (Auto-Sensing)	
Listings:	UL 916 and cUL 916	
Ambient Temperature:	40° C (104° F)	
Maximum Humidity:	5—85% Non-Condensing	
Options:	Factory Installed Modules	

RELAY DIMMER PANEL

RD-32



PART NUMBER

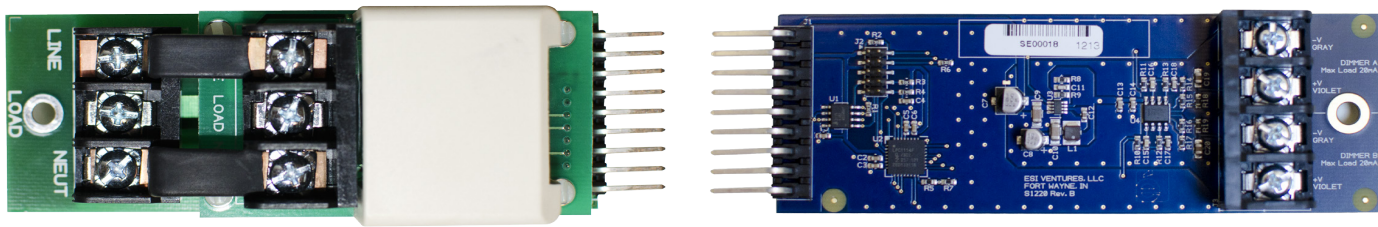


0-10V DIMMING MODULE (2 CHANNELS)

FEATURES-

- 0-10V Dimming Modules (DIM-0/10-2CH) provide two channels of 0-10V dimming for up to (40) ballasts per channel (80 total).
- These modules combine a two-pole line voltage switching module and a two channel 0-10V dimming module. This completely disconnects the line voltage load from the source automatically when the dimmer is set to 0%.
- Dimming Modules communicate with the Master Interface to report:
 - The dimmer's current dimming level (0-100%)
 - The line source state (available or off)
 - The communication status (active / not available)
 - The module's "health" (if the module is defective)
- 0-10V Dimming Modules are interchangeable with all other RD style relay and dimming modules, providing a higher level of flexibility than currently available in the market¹.

DIM-0/10-2CH



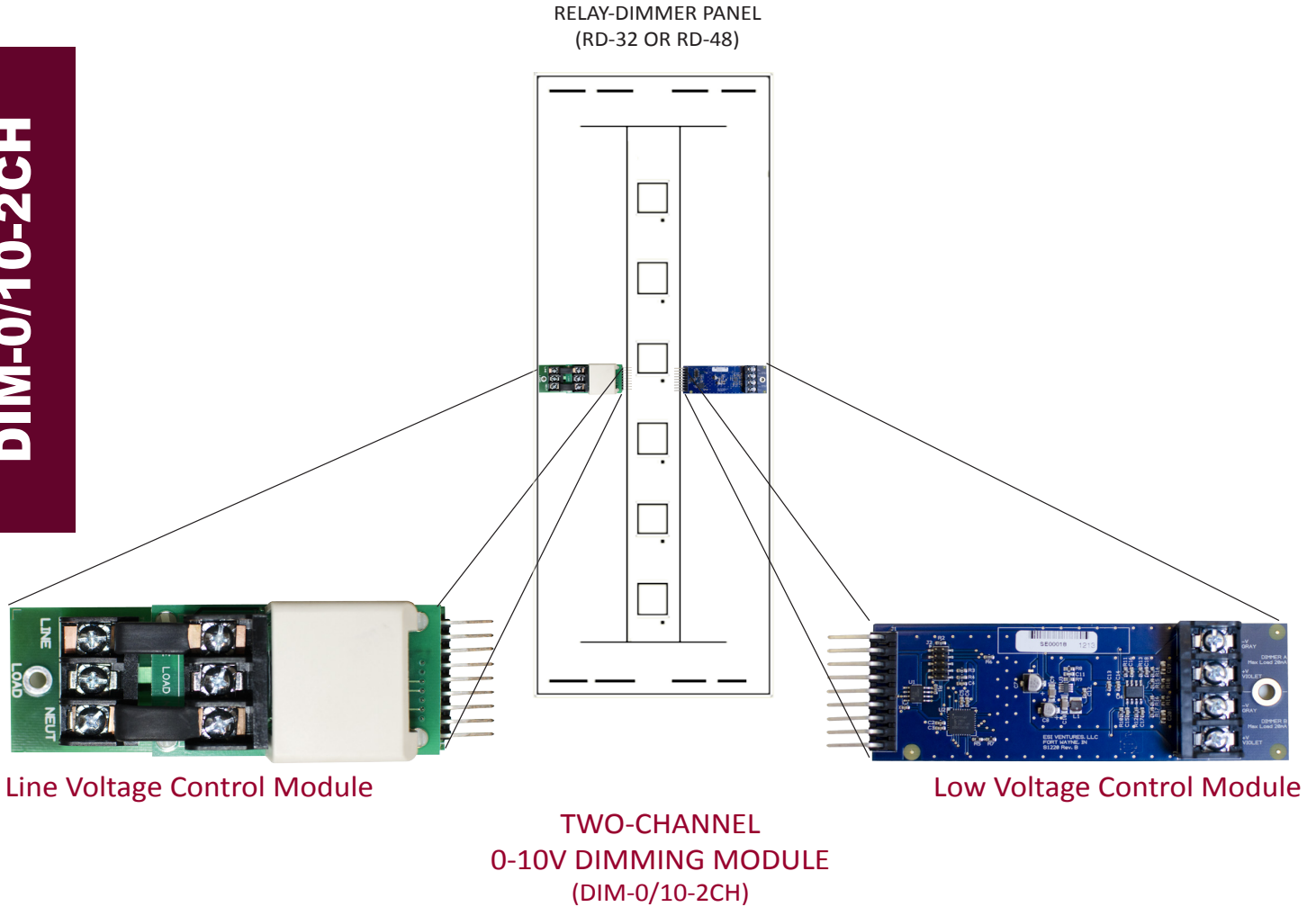
¹ Proper isolation of the 0-10V (class II) wiring from the line voltage (class I) wiring is required. Factory will configure panel layout for proper isolation.

SPECIFICATIONS

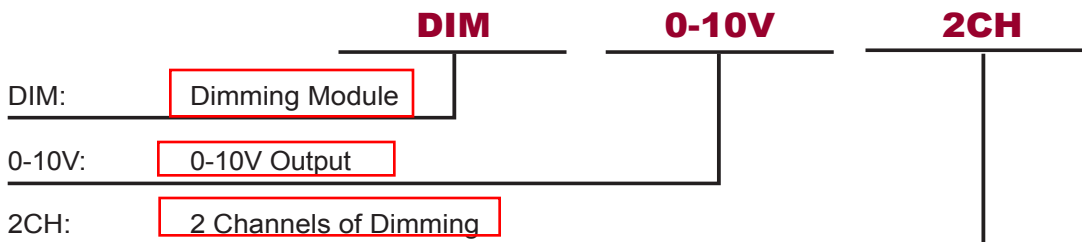
Number of Isolated Channels:	2
Maximum Load:	20mA per channels - 40 ballast per channel - 80 ballasts total
Terminal Rating:	#10 AWG
Step Percentage:	1% (or as limited by the dimming ballast)

0-10V DIMMING MODULE (2 CHANNELS)

DIM-0/10-2CH



PART NUMBER

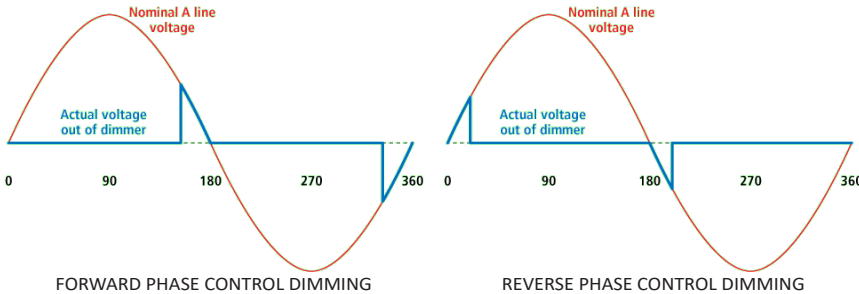


LINE VOLTAGE & 3-WIRE DIMMING MODULE

FEATURES-

- Line Voltage/3-Wire Dimming Modules (DIM-2W/3W-120/277) are software configurable for either forward or reverse phase control. This provides the ultimate in flexibility for specification and installation.
- These dimmers utilize a relay ahead of the dimmer for complete disconnection from the source voltage when the dimmer is off.
- Dimming Modules are completely compatible with 3-wire fluorescent dimming ballasts (Hot, Dimmed Hot and Neutral).
- Dimming Modules allow for a fine granular control down to 1% (or as limited by the dimming ballast specifications when utilized in a 3-wire dimming application).
- Dimming Modules are compatible with and auto-sensing for line voltages of either 120 VAC or 277 VAC.
- Dimming Modules communicate with the Building Management Server to report:
 - The dimmer's current dimming level (0-100% on)
 - The line source state (available or off)
 - The communication status (active / not available)
 - The module's "health" (if the module is defective)
- Dimming Modules are interchangeable with all other RD style relay and dimming modules, providing a higher level of flexibility than currently available in the market.
- These modules are not suitable for magnetic loads. Use DIM1M for magnetic loads.

DIM1



CONFIGURATION OF REVERSE OR FORWARD
PHASE CONTROL IS SOFTWARE CONFIGURABLE

SPECIFICATIONS

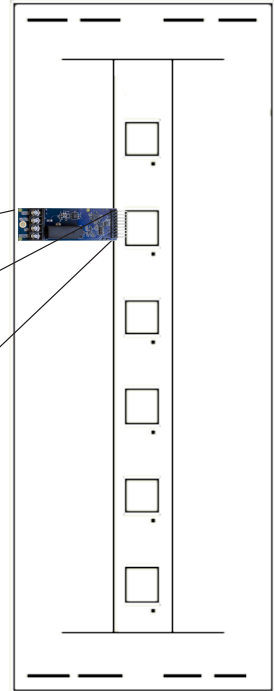
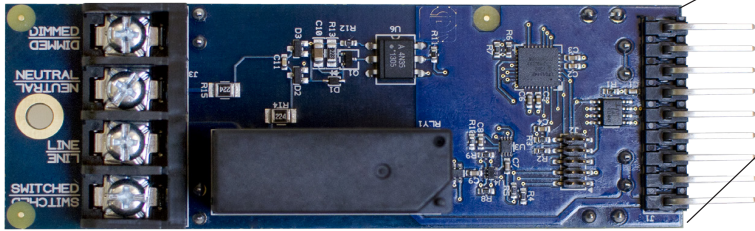
Max Voltage:	277VAC
Max Amperage:	8.3 FLA (1000W @ 120VAC, 2300W @ 277VAC)
Rated For:	2-Wire Line Voltage Dimming (Incand, ELV) 3-Wire Fluorescent Dimming Ballast
Terminal Rating:	#10 AWG
Step Percentage:	1%

LINE VOLTAGE & 3-WIRE DIMMING MODULE

DIM1

All modules utilize the same footprint and are interchangeable. Module type, module slot location, line status, and module state (on, off, or level) are automatically communicated with the system upon power-up. The local RD touchscreen displays provide local interfacing including module status and control.

RELAY-DIMMER PANEL
 (RD-32 OR RD-48)



**LINE VOLTAGE &
 3-WIRE DIMMING MODULE**
 (DIM-2W/3W-120/277)

PART NUMBER

DIM1

2W/3W

120/277

DIM: Dimming Module¹

2W/3W: Supports 2-Wire and 3-Wire Dimming

120/277: 120/277 VAC Rated

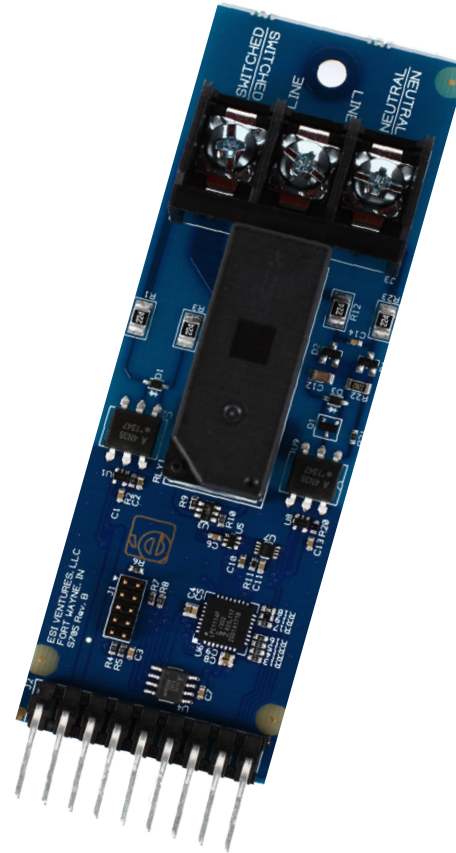
¹ Supports a maximum of 8.3A at either 120VAC (1000W) or 277VAC (2300W).

LATCHING SINGLE POLE RELAY MODULE

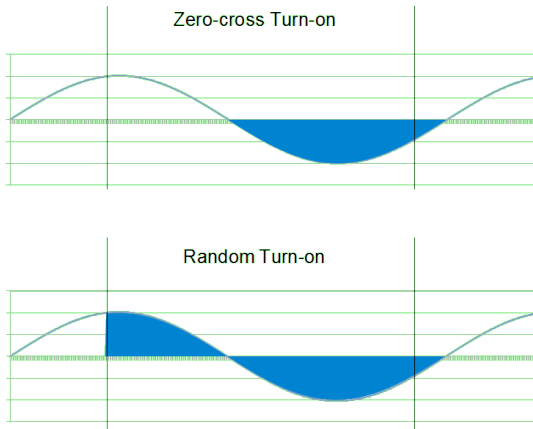
FEATURES-

- Latching Single Pole Relay Modules (RL-1P-120/347) utilize a 50A relay de-rated to 16A (NEC Required 80% of a 20A circuit).
- Each module incorporates the latest in “zero-cross” switching technology to greatly extended relay switching life.
- Relay Modules communicate with the Master Interface to report:
 - The relay’s current state (on/off)
 - The line source state (available or off)
 - The communication status (active / not available)
 - The relay’s “health” (if the relay is defective)
- Relay Modules are interchangeable with all other RD style relay and dimming modules, providing a higher level of flexibility than currently available in the market.

RL-1P-120/347



Comparison of Zero-Cross Switching vs. Traditional Switching



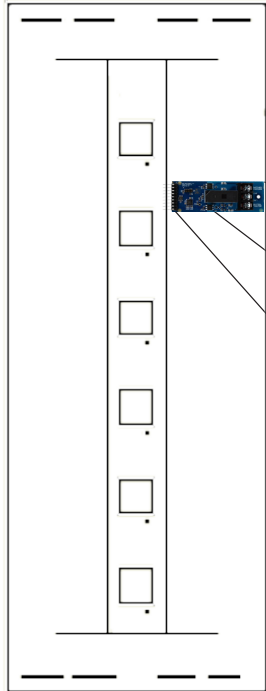
SPECIFICATIONS

Contacts:	Normally Open
Max Voltage:	347VAC
Amperage:	16 FLA (80% of 20A Circuit)
Rated For:	Tungsten/Ballast/HID
Terminal Rating:	#10 AWG
Notes:	Neutral Required for “Zero-Cross” Switching

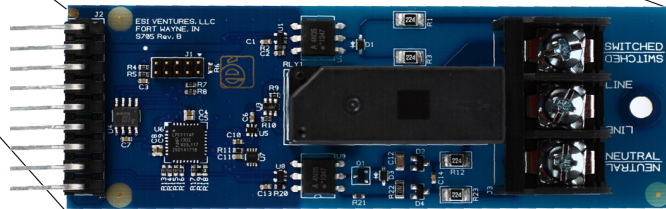
LATCHING SINGLE POLE RELAY MODULE

RL-1P-120/347

RELAY-DIMMER PANEL
 (RD-32 OR RD-48)

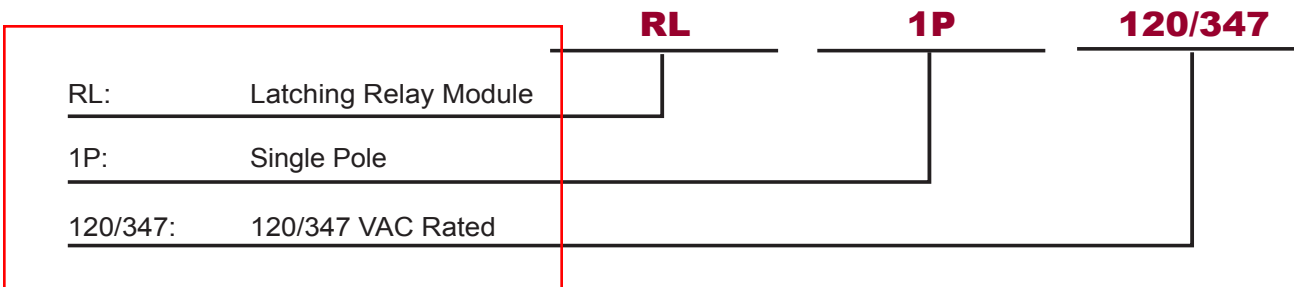


All modules utilize the same footprint and are interchangeable. Module type, module slot location, line status, and module state (on, off, or level) are automatically communicated with the system upon power-up. The local RD touchscreen displays provide local interfacing including module status and control.

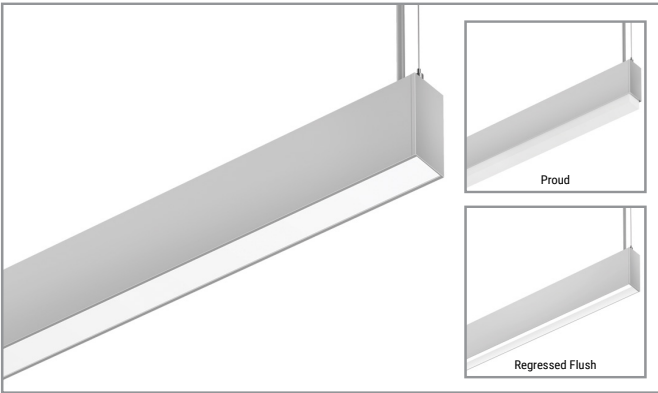


LATCHING SINGLE
 POLE RELAY MODULE
 (RL-1P-120/347)

PART NUMBER



Project		Catalog #		Type	
Prepared by		Notes		Date	



Neo-Ray

Define 2

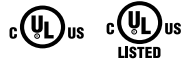
2" LED
 Suspended Pendant
 Direct/Indirect

Typical Applications
 Office • Education • Healthcare • Hospitality • Retail

Interactive Menu

- Order Information page 2
- Product Specification page 3
- Photometric Data page 4
- Performance Data page 5
- VividTune page 6

Product Certification



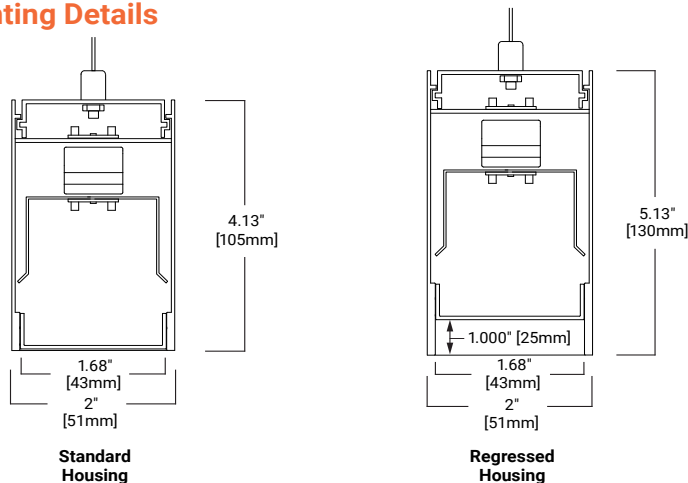
Product Features



Top Product Features

- Suspended Slot family in 2", 3", 4" and 5" housing sizes
- Specifiable to the nearest foot
- Satin, Asymmetric and Drop Direct Lensing available
- Independently specifiable Direct / Indirect lumen packages
- 0-10V dimming standard; DALI dimming available
- 2700K, 3000K, 3500K, 4000K, and 5000K correlated color temperatures available

Dimensional and Mounting Details



[additional product diagrams](#)



Project EQ01219V7S Date 7/29/2020
FOUR WINDS FARM
 Submitted By
ELAN LIGHTING SYSTEMS

Catalog Number
S122DIP-C485D330U830-C4JBB-4F0-2-UDD-F1-B
 Notes

TYPE:
4 FT ALT

Neo-Ray 2" LED Suspended Pendant Direct/Indirect

Order Information

Icon Key: ∅ Consult factory for availability

SAMPLE ORDER NUMBER: **S122DIP-C675D330U835-C4JB4F0-1T-UDD-F1-W-SWPD1**

Series	Light Engine	Lumen Package Down (Lms/ft)	Lumen Package Up (Lms/ft)	CRI	LED CCT	Suspension Type	Ceiling Type	Mounting HW Color
S122DIP =Define 2 Direct/Indirect Pendant S122RDIP =Define 2 Regressed Direct/Indirect Pendant	-C =Core -H =High Performance -V =VividTune ∅ -D =Custom Lms/ft ∅	290D =290 Lms/ft (2.9W/ft) 485D =485 Lms/ft (4.8W/ft) 675D =675 Lms/ft (6.7W/ft) 865D =865 Lms/ft (8.8W/ft) 1005D =1005 Lms/ft (10.6W) -D =Custom Lms/ft ∅	330U =330 Lms/ft (2.2W/ft) 530U =530 Lms/ft (3.6W/ft) 725U =725 Lms/ft (5.0W/ft) 925U =925 Lms/ft (6.6W/ft) 1080U =1080 Lms/ft (7.9W) -U =Custom Lms/ft ∅	8 =80 9 =90	27 =2700K 30 =3000K 35 =3500K 40 =4000K 50 =5000K 2765 =2700K- 6500K 3050 =3000K- 5000K	-C4 =4ft Aircraft Cable -C10 =10ft Aircraft Cable -C20 =20ft Aircraft Cable -S4 =4ft Stem Mount -S8 =8ft Stem Mount	JB =Gypsum Board, Junction Box, Structure T1 =15/16" T-Grid (ETG) T9 =9/16" T-Grid (FTG) TS =9/16" Slot (STG), Tegular (FTT), Interlude (ITG)	(blank) =White B =Black
Notes RDIP regress of 1" will add an additional 1" to fixture depth.	Notes See performance table for add'l details. Light engine must be consistent across run length. V option requires lumen package of 675 lms/ft or greater and fixture length of 3 ft+.	Notes 3500K/80CRI/DIP/F Lens. Please refer to scaling data for other variables. For custom lumen output, please refer to additional information on page 3.	Notes 3500K/80CRI/No Lens. Please refer to scaling data for other variables. For custom lumen output, please refer to additional information on page 3. 1080 Lms/ft not valid with DALI or Lutron Drivers. 330 Lms/ft available on fixture length 4ft+.	Notes Additional lead-time and cost may apply for 927, 930, 935 and 940 configurations. 2765/3050 VividTune configurations require V light engine and W2A driver.		Notes	Notes	Notes White mounting hardware standard

Luminaire Length (Ft)	Max section length	Circuiting	Additional Section Wiring	Voltage	Driver Type	Shielding Down
4_F0 =Nominal Length	(blank) =12ft (std) 78=8ft	-1 =Single Circuit -2 =Dual Circuit -S =Secondary Circuit	E =Emergency Circuit B3 =iota Slimline SW, 120V-277V Integral (ILB-SL-CP5) T =UL924 EPC Emergency Bypass Relay	-U =Universal (120V-277V) -1 =120V -2 =277V -3 =347V	DD =Standard 0-10V Dimming (1%-100%) SL =Fitted Light DALI (5%-100%) L5 =Lutron 5 Series (LDE5) 5%-100% EcoSys LH =Lutron HiLume (LDE1) 1%-100% EcoSys W2A =White Tuning, 0-10V Dimming (VividTune only)	-F =Satin White Diffuser -D =Satin Drop diffuser -A =Asymmetric Diffuser
Notes Minimum fixture length is 3ft. Specify to nearest foot in length.	Notes Individual fixtures configured as 12ft max by default. Continuous runs configured as 8ft max (12ft not available).	Notes Dual circuit will provide separate Up/Down control. Secondary circuit similar to A/B switching. Price adder applies for "S" configuration.	Notes Battery available on fixture ≥ 4ft in length. B3 and T options not compatible with 347V. Standard battery 4ft battery section located in the beginning of the fixture, but can be relocated using the linear product configurator. When configured with dual or secondary circuit, battery test switch will be located in a plate on the direct side of the fixture.	Notes Native 347V only available with DD driver option.	Notes DD driver is standard. For non-dimming applications, the driver will default to full brightness if no connection is made to the capped dimming wires in the field.	Notes All lensing options are snap-in lenses.

Shielding Up	Options	Finish	Integrated Sensor
(blank) =No Lens or N/A 1 =Satin White Lay-in Diffuser	-R =GLR Fuse (Fast) -F =GMF Fuse (Slow)	-W =White -S =Silver -B =Black -C =Custom Match -R =RAL Custom	-SWPD1 =WaveLinx Wireless -LWIPD1 =Lumawatt Pro Wireless -SVPD1 =Standalone (blank) =None
Notes No lens up standard, use satin white diffuser when dust cover desired of top of the fixture is viewable during normal use.	Notes Additional lead-time may apply	Notes Contact factory for C and R options. W/S/B are standard.	Notes DD driver must be selected. Please refer to page 5 for additional detail required to specify integrated sensors. Integral option not available with regressed or drop lensing. Battery not compatible with integrated sensor in 4ft DIP fixture.

Neo-Ray

2" LED Suspended Pendant Direct/Indirect

Product Specifications

Construction

- Available in Flush and Regressed Housing
- Precision cut housing extruded from 6063 aluminum
- Precision cut & welded end-caps ensure a robust and clean construction
- Nominal 2' -12' illuminated sections used in individual fixtures and 2'-8' illuminated sections used in continuous runs

Finish

- Electrostatically applied polyester powder coat paint

LED Module

- Modular LED tray assembly comprising reflector and light engine with quick disconnect wire-harness for ease of installation and maintenance over the life of the luminaire

Light Engine

- Offered with two next generation Neo-Ray light engines delivering industry leading efficacy and long-life
- LED's are available in 2700K, 3000K, 3500K, 4000K or 5000K
- CRI options of either ≥80CRI or ≥90CRI (Lumen output will be affected - please refer to the lumen adjustment factor table)

LED Drivers

- LED system coupled with electrical driver
- Traditional electronic drivers are available for 120-277V and 347V applications

Controls and Integrated Sensors

- Equipped standard with a 0-10V continuous dimming driver. Compatible with most standard dimming devices
- Additional control types are available (DALI & Lutron) at an additional cost
- WaveLinx and LumaWatt Pro wireless sensors as well as stand-alone sensors available

Mounting

- Suspended

Lengths

- Available in any length (2ft min) with a resolution of 1 foot. Max section length of 12ft (8ft max used on continuous runs and available for individual fixtures)
- Additional fixture lengths are available please consult factory. All lengths are nominal and do not include end caps.

Corners and Transition Pieces

- Corners and other transition pieces are fully luminous
- Constructed using precision mitered housing and lens components
- Extrusions are welded to ensure a precise and robust assembly
- Standard 90° horizontal corners as well as custom corners are available
- Consult online linear configurator or the factory for precise corner locations and for ordering
- Alternative transition pieces such as T's, Y's, X's, etc. are also available Ø

Direct Snap-In lensing Options

- Satin Flush - Flush, high diffusion glare-free lens
- Satin Drop - 1" Drop, high diffusion glare-free lens
- Asymmetric - Flush, low-glare Asymmetric lens
- Flush options ship with our patent-pending underlens solution, the proud lens ships with an injection molded end cap to eliminate light leak

Indirect Snap-In lensing Options

- Satin Flush - Flush, high diffusion glare-free lens
- No Lens - No lens option provides the lowest cost solution with the highest efficacy

Reflectors

- Precision formed cold-rolled steel reflectors with high reflectivity
- Ultra high reflectivity used with High Performance light engine

Lumen Maintenance

- 90% (L90) of initial light output at 61,000+ hrs
- 70% (L70) of initial light output at 237,000+ hrs
- Derived from TM-21 standard @25°C for worst case operating conditions

Custom Lumen Output

- Custom lumen output expressed option in Lumens per foot (e.g. -725D for 725 Lms/ft down). Refer to additional detail on page 4.

Electrical

- Dimming provided as standard
- Dimming wires capped with wire-nuts for non-dimming applications
- Optional battery backup options provided
- Default battery location is internal to fixture
- Default emergency section is 4ft in length and located at the beginning of the fixture unless designated elsewhere
- Estimated lumen output = battery wattage * min efficacy (see performance table)
- The EPC option will bypass local controls and dimming upon loss of normal power. This option is required when the fixture has both integrated sensors and emergency circuiting

Integrated Sensors

- Please reference page 5 for details

Weight

- 3.1 lbs per foot

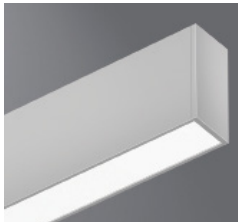
Approvals

- cULus - listed for damp locations
- Meets NYC requirements
- Meets CCEC requirements
- Tested to IESNA LM-79 and LM-80
- Can be used for State of California Title 24 high efficacy luminaire

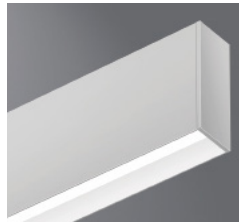
Warranty

- Five year warranty standard.

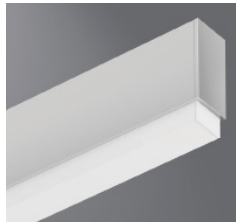
Shielding Options



Standard Flush Lens



Regressed Flush Lens



Standard Proud Lens



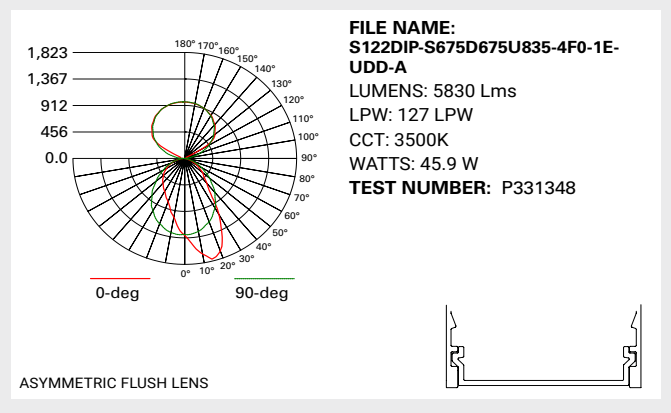
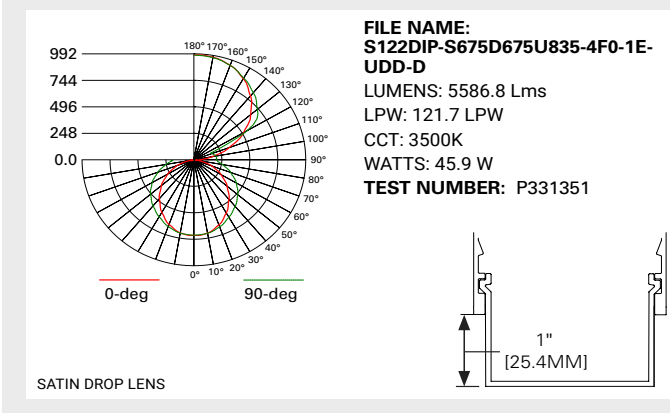
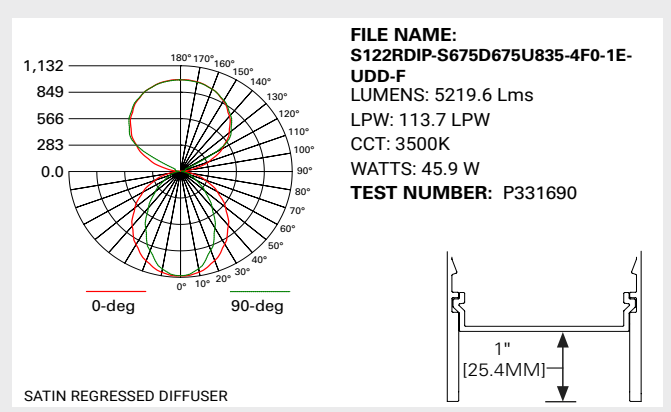
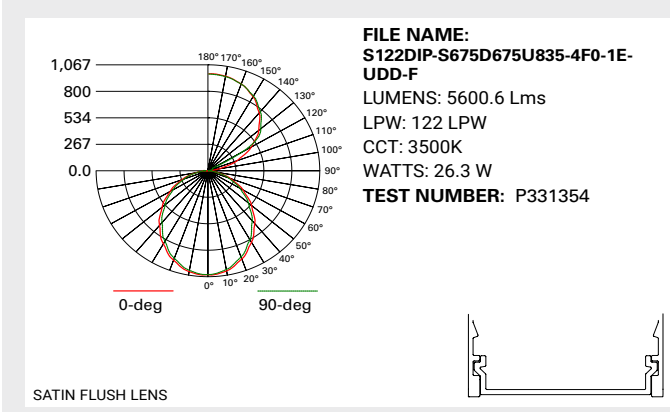
Asymmetric Lens

Neo-Ray

2" LED Suspended Pendant Direct/Indirect

Photometric Data

View IES files



Photometric Overview and Performance Data

Direct Performance Per Linear Foot at 3500K/80CRI

Nominal Output	Standard		High Performance		VividTune	
	W/ft	lm/W	W/ft	lm/W	W/ft	lm/W
290	2.9	105	2.9	108	3	102
485	4.8	106	4.4	111	4.9	103
675	6.7	104	6.1	111	6.7	102
865	8.8	102	8.1	109	8.9	99
1005	10.6	98	9.7	105	10.7	96

Indirect Performance Per Linear Foot at 3500K/80CRI

Nominal Output	Standard		High Performance		VividTune	
	W/ft	lm/W	W/ft	lm/W	W/ft	lm/W
330	2.2	151	2.5	157	2.6	150
530	3.6	151	3.9	163	4.3	148
725	5.0	148	5.3	164	5.9	145
925	6.6	144	7.1	155	7.8	141
1080	7.9	141	8.5	152	9.4	137

LUMEN ADJUSTMENT CALCULATIONS

Example 1 - Adjusted Lumen Output

Nominal Lumen Output selected = 1025 lms/ft (based on standard of 3500K/80CRI)
 Lumen Adjustment Factor = 0.801 (2700K/90CRI desired)

Adjusted Lumen Output = Nominal Lumen Output x Lumen Adjustment Factor
 Adjusted Lumen Output = 1025 lms/ft x 0.801 = 821 lms/ft

Example 2 - Custom Lumen Output based on Required Lumens Per Foot

Total light output (4ft) requirement of 2800 lms, desired CCT and CRI of 4000K/80CRI

Total required lumens per foot @ 4000K= 2800 lms / 4 ft = 700 lms/ft
 Lumen Adjustment Factor = 1.018 (Requirement based on 4000K / 80CRI)

Total required lumens per foot @ 3500K / 80CRI = 700 lms/ft ÷ 1.018 = 688 lms/ft

Estimated efficacy = 121 LPW (find nearest value using table above)
 Estimated power consumption = 688 lms/ft ÷ 121 lm/W = 5.69 W/ft

Custom Lumen Output

Total Light Output Range (lms/ft)

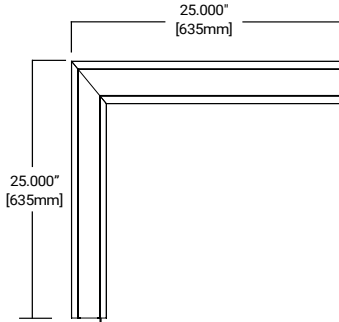
CCT	Lumen Adj Factors		Direct Output Range		Indirect Output Range	
	80CRI	90CRI	80CRI	90CRI	80CRI	90CRI
2700K	N/A	0.792	N/A	230-796	N/A	261-855
3000K	0.943	0.815	273-948	236-819	311-1018	269-880
3500K	1.000	0.861	290-1005	250-865	330-1080	284-930
4000K	1.010	0.892	293-1015	259-896	333-1091	294-963
5000K	1.010	0.892	293-1015	259-896	333-1091	294-963

If your requirement is expressed in power consumption (W/ft) rather than light output, you can use the power to lumen output curves to convert power consumption to light output for specification. Efficacy for custom lumen outputs can be estimated using lumen output curves or with the use of our online custom lumen output tool.

Neo-Ray

2" LED Suspended Pendant Direct/Indirect

Corner Transitions



Integrated Sensor Details and Placement

Sensor Type	Wireless	Sensor Integration	Sensor Mounting	Ordering Code
WaveLinX	Yes	Integral to Fixture	Mounted in solid cover	SWPD1
LumaWatt Pro (enlighted)	Yes	Integral to Fixture	Mounted in illuminated lens	LWIPD1
Stand-Alone SVPD1	No	Integral to Fixture	Mounted in solid cover	SVPD1

Optional standalone and wireless connected integrated sensors require use of the DD (0-10V) driver. WaveLinX and LumaWatt Pro sensors require additional system hardware (not provided) for full functionality.

Standard sensor layout is shown below. Please refer to sensor coverage pattern diagrams to ensure proper coverage for the application. Standard configurations are available in both individual fixtures and in continuous runs. Default spacing is based on the maximum fixture length of 12ft and can be changed to 8ft sensor spacing for additional coverage by selecting the 8ft max fixture length option when ordering.

For additional information integrated sensors and connected lighting, please visit [Eaton's Connected Lighting Website](#).

- Standard Sensor with Luminaire Control
- Auxiliary Sensor used for Sensor Coverage (wireless systems only)

INTEGRAL SENSOR

≤8ft Individual

>8ft Individual

Note: When 8ft max section length is used on individual fixtures > 8ft, sensor placement follows logic for continuous run.

Beginning of Run (BOR)

Intermediate Section (INT)

End of Run (EOR) > 4ft

End of Run (EOR) ≤ 4ft

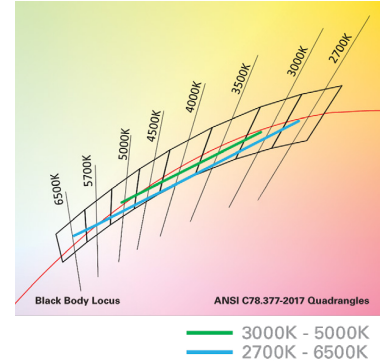
Neo-Ray

2" LED Suspended Pendant Direct/Indirect



Define 2 Pendant LED with VividTune Tunable White

VividTune tunable white luminaires deliver high-quality light in a broad range of continuously variable color temperatures and intensities. Create a dynamic environment by adjusting the ambient light warmer or cooler to influence mood, support the task at hand, or create a dramatic ambience. The ability to control correlated color temperature and intensity separately using simple controls is the next evolution of LED lighting for the commercial, educational, healthcare and hospitality space. The unparalleled flexibility and number of available lighting environments enable users to find the right light with tunable white.



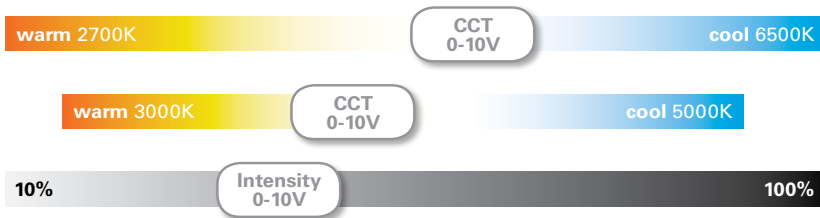
Performance Data*

CCT	Tunable White - Lumen Adjustment Factors			
	3000K-5000K		2700K-6500K	
	80 CRI	90 CRI	80 CRI	90 CRI
2700K	-	-	0.868	0.741
3000K	0.894	0.736	0.893	0.771
3500K	0.946	0.804	0.924	0.809
4000K	0.993	0.868	0.944	0.835
4500K	1.002	0.883	0.961	0.857
5000K	1.002	0.883	0.974	0.874
6500K	-	-	0.988	0.897

CCT Setting	Example of Approximate Lumen Calculation		
	Standard Catalog #	VividTune 80 CRI Catalog #	VividTune 90 CRI Catalog #
	S122DIP-C865D925U835-X-UDD-F-W	S122DIP-V865D925U83050-X-UW2A-F-W	S122DIP-V865D925U93050-X-UW2A-F-W
3000K	-	6401	5270
3500K	7160	6773	5757
4000K	-	7110	6215
4500K	-	7174	6322
5000K	-	7174	6322

Controlling VividTune Tunable White

VividTune luminaires make tunable white more accessible by using simple and familiar controls. From wall dimmers to wireless controls, VividTune tunable white luminaires are compatible with industry standard 0-10V dimming controls. A single 0-10V dimming input is used to control intensity (brightness) while a second 0-10V dimming input is used to adjust CCT. For suggested control configurations, go to www.eaton.com/lighting for tunable white application guides.



Example of Lumen Adjustment Calculation

S122DIP-V865D925U83050-X-UW2A-F-W
 at 80 CRI tuned to 3500K

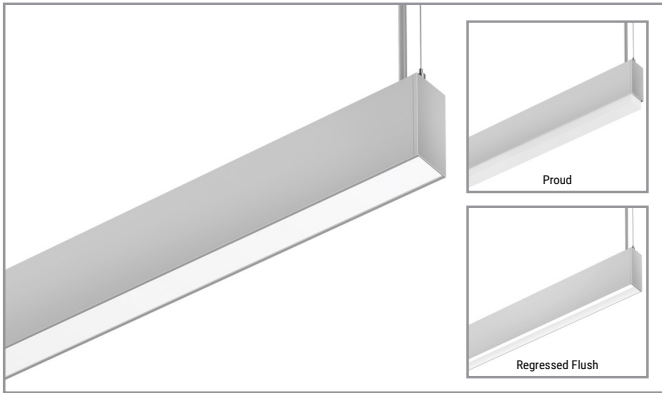
Adjusted Lumen =
 published lm x adjusted lm factor

Adjusted Lumen = 7160 x 0.946

Adjusted Lumen = 6773 lm

* Lumen adjustment factors are for reference and may be different for each product selected. Refer to IES files for actual performance data on each.

Project		Catalog #		Type	
Prepared by		Notes		Date	



Neo-Ray

Define 2

2" LED
 Suspended Pendant
 Direct/Indirect

Typical Applications

Office • Education • Healthcare • Hospitality • Retail

Interactive Menu

- Order Information page 2
- Product Specification page 3
- Photometric Data page 4
- Performance Data page 5
- VividTune page 6

Product Certification



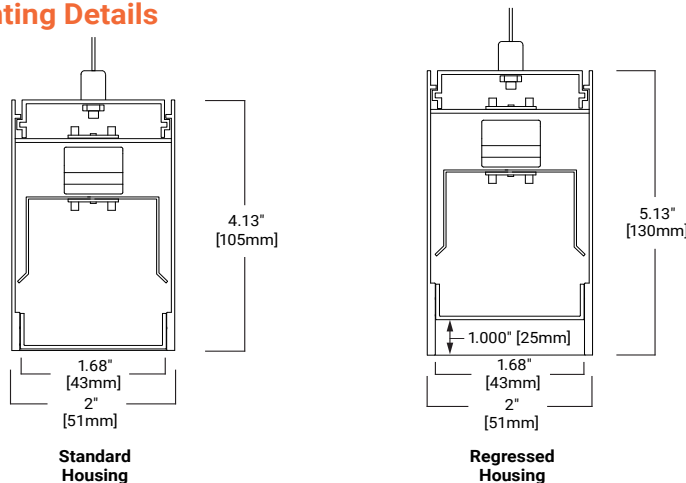
Product Features



Top Product Features

- Suspended Slot family in 2", 3", 4" and 5" housing sizes
- Specifiable to the nearest foot
- Satin, Asymmetric and Drop Direct Lensing available
- Independently specifiable Direct / Indirect lumen packages
- 0-10V dimming standard; DALI dimming available
- 2700K, 3000K, 3500K, 4000K, and 5000K correlated color temperatures available

Dimensional and Mounting Details



additional product diagrams



Project EQ01219V7S Date 7/29/2020
FOUR WINDS FARM
 Submitted By
ELAN LIGHTING SYSTEMS

Catalog Number
S122DIP-C485D330U830-C4JBB-8F0-2-UDD-F1-B
 Notes

TYPE:
8 FT ALT

Neo-Ray 2" LED Suspended Pendant Direct/Indirect

Order Information

Icon Key: ∅ Consult factory for availability

SAMPLE ORDER NUMBER: **S122DIP-C675D330U835-C4JB4F0-1T-UDD-F1-W-SWPD1**

Series	Light Engine	Lumen Package Down (Lms/ft)	Lumen Package Up (Lms/ft)	CRI	LED CCT	Suspension Type	Ceiling Type	Mounting HW Color
S122DIP =Define 2 Direct/Indirect Pendant S122RDIP =Define 2 Regressed Direct/Indirect Pendant	-C =Core -H =High Performance -V =VividTune ∅ -D =Custom Lms/ft ∅	290D =290 Lms/ft (2.9W/ft) 485D =485 Lms/ft (4.8W/ft) 675D =675 Lms/ft (6.7W/ft) 865D =865 Lms/ft (8.8W/ft) 1005D =1005 Lms/ft (10.6W) -D =Custom Lms/ft ∅	330U =330 Lms/ft (2.2W/ft) 530U =530 Lms/ft (3.6W/ft) 725U =725 Lms/ft (5.0W/ft) 925U =925 Lms/ft (6.6W/ft) 1080U =1080 Lms/ft (7.9W) -U =Custom Lms/ft ∅	8 =80 9 =90	27 =2700K 30 =3000K 35 =3500K 40 =4000K 50 =5000K 2765 =2700K- 6500K 3050 =3000K- 5000K	-C4 =4ft Aircraft Cable -C10 =10ft Aircraft Cable -C20 =20ft Aircraft Cable -S4 =4ft Stem Mount -S8 =8ft Stem Mount	JB =Gypsum Board, Junction Box, Structure T1 =15/16" T-Grid (FTG) T9 =9/16" T-Grid (FTG) TS =9/16" Slot (STG), Tegular (FTT), Interlude (ITG)	(blank) =White B =Black
Notes RDIP regress of 1" will add an additional 1" to fixture depth.	Notes See performance table for add'l details. Light engine must be consistent across run length. V option requires lumen package of 675 lms/ft or greater and fixture length of 3 ft+.	Notes 3500K/80CRI/DIP/F Lens. Please refer to scaling data for other variables. For custom lumen output, please refer to additional information on page 3.	Notes 3500K/80CRI/No Lens. Please refer to scaling data for other variables. For custom lumen output, please refer to additional information on page 3. 1080 Lms/ft not valid with DALI or Lutron Drivers. 330 Lms/ft available on fixture length 4ft+.	Notes Additional lead-time and cost may apply for 927, 930, 935 and 940 configurations. 2765/3050 VividTune configurations require V light engine and W2A driver.		Notes	Notes	Notes White mounting hardware standard

Luminaire Length (Ft)	Max section length	Circuiting	Additional Section Wiring	Voltage	Driver Type	Shielding Down
8 F0 =Nominal Length	(blank) =12ft (std) 78=8ft	-1 =Single Circuit -2 =Dual Circuit -S =Secondary Circuit	E =Emergency Circuit B3 =iota Slimline SW, 120V-277V Integral (ILB-SL-CP5) T =UL924 EPC Emergency Bypass Relay	-U =Universal (120V-277V) -1 =120V -2 =277V -3 =347V	DD =Standard 0-10V Dimming (1%-100%) 5L =Fifth Light DALI (5%-100%) L5 =Lutron 5 Series (LDE5) 5%-100% EcoSys LH =Lutron HiLume (LDE1) 1%-100% EcoSys W2A =White Tuning, 0-10V Dimming (VividTune only)	-F =Satin White Diffuser -D =Satin Drop diffuser -A =Asymmetric Diffuser
Notes Minimum fixture length is 3ft. Specify to nearest foot in length.	Notes Individual fixtures configured as 12ft max by default. Continuous runs configured as 8ft max (12ft not available).	Notes Dual circuit will provide separate Up/Down control. Secondary circuit similar to A/B switching. Price adder applies for "S" configuration.	Notes Battery available on fixture ≥ 4ft in length. B3 and T options not compatible with 347V. Standard battery 4ft battery section located in the beginning of the fixture, but can be relocated using the linear product configurator. When configured with dual or secondary circuit, battery test switch will be located in a plate on the direct side of the fixture.	Notes Native 347V only available with DD driver option.	Notes DD driver is standard. For non-dimming applications, the driver will default to full brightness if no connection is made to the capped dimming wires in the field.	Notes All lensing options are snap-in lenses.

Shielding Up	Options	Finish	Integrated Sensor
(blank) =No Lens or N/A 1 =Satin White Lay-in Diffuser	-R =GLR Fuse (Fast) -F =GMF Fuse (Slow)	-W =White -S =Silver -B =Black -C =Custom Match -R =RAL Custom	-SWPD1 =WaveLinX Wireless -LWIPD1 =Lumawatt Pro Wireless -SVPD1 =Standalone (blank) =None
Notes No lens up standard, use satin white diffuser when dust cover desired of top of the fixture is viewable during normal use.	Notes Additional lead-time may apply	Notes Contact factory for C and R options. W/S/B are standard.	Notes DD driver must be selected. Please refer to page 5 for additional detail required to specify integrated sensors. Integral option not available with regressed or drop lensing. Battery not compatible with integrated sensor in 4ft DIP fixture.

Neo-Ray

2" LED Suspended Pendant Direct/Indirect

Product Specifications

Construction

- Available in Flush and Regressed Housing
- Precision cut housing extruded from 6063 aluminum
- Precision cut & welded end-caps ensure a robust and clean construction
- Nominal 2' -12' illuminated sections used in individual fixtures and 2'-8' illuminated sections used in continuous runs

Finish

- Electrostatically applied polyester powder coat paint

LED Module

- Modular LED tray assembly comprising reflector and light engine with quick disconnect wire-harness for ease of installation and maintenance over the life of the luminaire

Light Engine

- Offered with two next generation Neo-Ray light engines delivering industry leading efficacy and long-life
- LED's are available in 2700K, 3000K, 3500K, 4000K or 5000K
- CRI options of either ≥ 80 CRI or ≥ 90 CRI (Lumen output will be affected - please refer to the lumen adjustment factor table)

LED Drivers

- LED system coupled with electrical driver
- Traditional electronic drivers are available for 120-277V and 347V applications

Controls and Integrated Sensors

- Equipped standard with a 0-10V continuous dimming driver. Compatible with most standard dimming devices
- Additional control types are available (DALI & Lutron) at an additional cost
- WaveLinx and LumaWatt Pro wireless sensors as well as stand-alone sensors available

Mounting

- Suspended

Lengths

- Available in any length (2ft min) with a resolution of 1 foot. Max section length of 12ft (8ft max used on continuous runs and available for individual fixtures)
- Additional fixture lengths are available please consult factory. All lengths are nominal and do not include end caps.

Corners and Transition Pieces

- Corners and other transition pieces are fully luminous
- Constructed using precision mitered housing and lens components
- Extrusions are welded to ensure a precise and robust assembly
- Standard 90° horizontal corners as well as custom corners are available
- Consult online linear configurator or the factory for precise corner locations and for ordering
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Direct Snap-In lensing Options

- Satin Flush - Flush, high diffusion glare-free lens
- Satin Drop - 1" Drop, high diffusion glare-free lens
- Asymmetric - Flush, low-glare Asymmetric lens
- Flush options ship with our patent-pending underlens solution, the proud lens ships with an injection molded end cap to eliminate light leak

Indirect Snap-In lensing Options

- Satin Flush - Flush, high diffusion glare-free lens
- No Lens - No lens option provides the lowest cost solution with the highest efficacy

Reflectors

- Precision formed cold-rolled steel reflectors with high reflectivity
- Ultra high reflectivity used with High Performance light engine

Lumen Maintenance

- 90% (L90) of initial light output at 61,000+ hrs
- 70% (L70) of initial light output at 237,000+ hrs
- Derived from TM-21 standard @25°C for worst case operating conditions

Custom Lumen Output

- Custom lumen output expressed option in Lumens per foot (e.g. -725D for 725 Lms/ft down). Refer to additional detail on page 4.

Electrical

- Dimming provided as standard
- Dimming wires capped with wire-nuts for non-dimming applications
- Optional battery backup options provided
- Default battery location is internal to fixture
- Default emergency section is 4ft in length and located at the beginning of the fixture unless designated elsewhere
- Estimated lumen output = battery wattage * min efficacy (see performance table)
- The EPC option will bypass local controls and dimming upon loss of normal power. This option is required when the fixture has both integrated sensors and emergency circuiting

Integrated Sensors

- Please reference page 5 for details

Weight

- 3.1 lbs per foot

Approvals

- cULus - listed for damp locations
- Meets NYC requirements
- Meets CCEC requirements
- Tested to IESNA LM-79 and LM-80
- Can be used for State of California Title 24 high efficacy luminaire

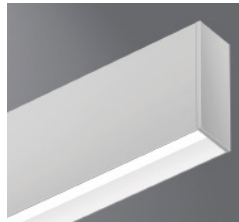
Warranty

- Five year warranty standard.

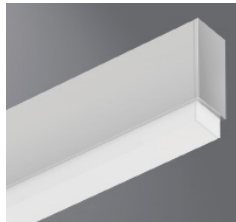
Shielding Options



Standard Flush Lens



Regressed Flush Lens



Standard Proud Lens



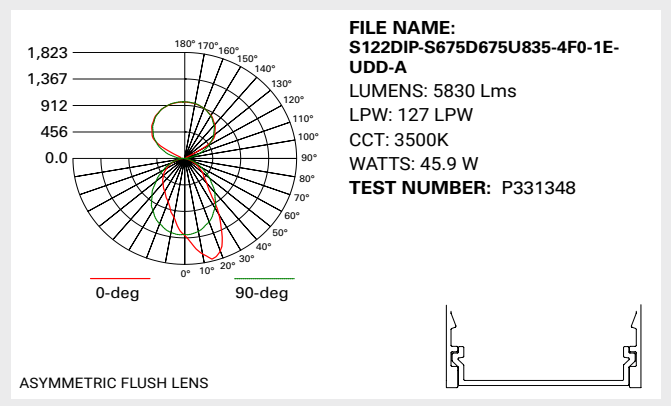
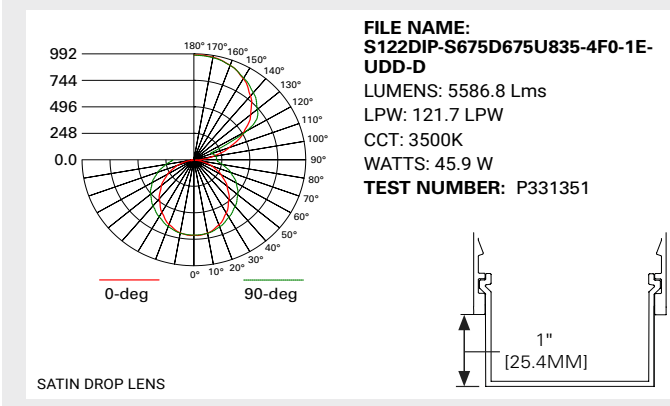
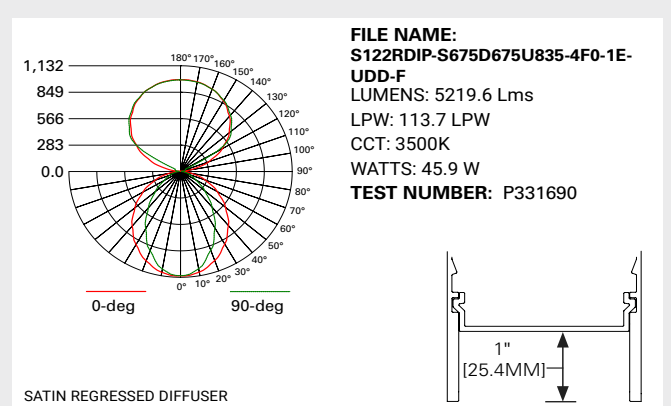
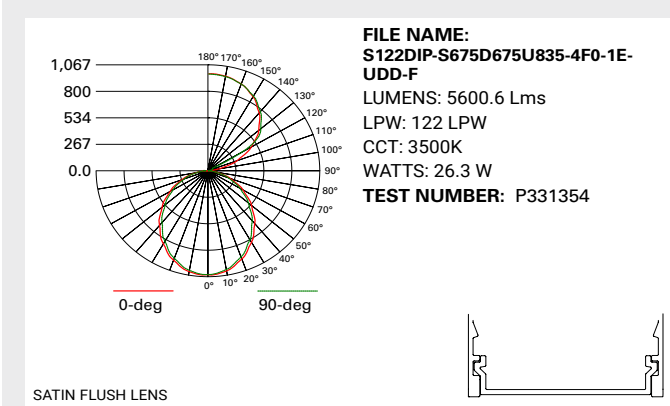
Asymmetric Lens

Neo-Ray

2" LED Suspended Pendant Direct/Indirect

Photometric Data

View IES files



Photometric Overview and Performance Data

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Nominal Output	Standard		High Performance		VividTune	
	W/ft	lm/W	W/ft	lm/W	W/ft	lm/W
290	2.9	105	2.9	108	3	102
485	4.8	106	4.4	111	4.9	103
675	6.7	104	6.1	111	6.7	102
865	8.8	102	8.1	109	8.9	99
1005	10.6	98	9.7	105	10.7	96

Indirect Performance Per Linear Foot at 3500K/80CRI

Nominal Output	Standard		High Performance		VividTune	
	W/ft	lm/W	W/ft	lm/W	W/ft	lm/W
330	2.2	151	2.5	157	2.6	150
530	3.6	151	3.9	163	4.3	148
725	5.0	148	5.3	164	5.9	145
925	6.6	144	7.1	155	7.8	141
1080	7.9	141	8.5	152	9.4	137

LUMEN ADJUSTMENT CALCULATIONS

Example 1 - Adjusted Lumen Output

Nominal Lumen Output selected = 1025 lms/ft (based on standard of 3500K/80CRI)
 Lumen Adjustment Factor = 0.801 (2700K/90CRI desired)

Adjusted Lumen Output = Nominal Lumen Output x Lumen Adjustment Factor
 Adjusted Lumen Output = 1025 lms/ft x 0.801 = 821 lms/ft

Example 2 - Custom Lumen Output based on Required Lumens Per Foot

Total light output (4ft) requirement of 2800 lms, desired CCT and CRI of 4000K/80CRI

Total required lumens per foot @ 4000K= 2800 lms / 4 ft = 700 lms/ft
 Lumen Adjustment Factor = 1.018 (Requirement based on 4000K / 80CRI)

Total required lumens per foot @ 3500K / 80CRI = 700 lms/ft ÷ 1.018 = 688 lms/ft

Estimated efficacy = 121 LPW (find nearest value using table above)
 Estimated power consumption = 688 lms/ft ÷ 121 lm/W = 5.69 W/ft

Custom Lumen Output

Total Light Output Range (lms/ft)

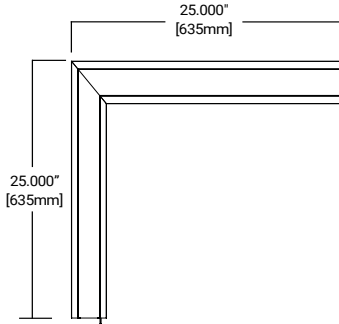
CCT	Lumen Adj Factors		Direct Output Range		Indirect Output Range	
	80CRI	90CRI	80CRI	90CRI	80CRI	90CRI
2700K	N/A	0.792	N/A	230-796	N/A	261-855
3000K	0.943	0.815	273-948	236-819	311-1018	269-880
3500K	1.000	0.861	290-1005	250-865	330-1080	284-930
4000K	1.010	0.892	293-1015	259-896	333-1091	294-963
5000K	1.010	0.892	293-1015	259-896	333-1091	294-963

If your requirement is expressed in power consumption (W/ft) rather than light output, you can use the power to lumen output curves to convert power consumption to light output for specification. Efficacy for custom lumen outputs can be estimated using lumen output curves or with the use of our online custom lumen output tool.

Neo-Ray

2" LED Suspended Pendant Direct/Indirect

Corner Transitions



Integrated Sensor Details and Placement

Sensor Type	Wireless	Sensor Integration	Sensor Mounting	Ordering Code
WaveLinX	Yes	Integral to Fixture	Mounted in solid cover	SWPD1
LumaWatt Pro (enlighted)	Yes	Integral to Fixture	Mounted in illuminated lens	LWIPD1
Stand-Alone SVPD1	No	Integral to Fixture	Mounted in solid cover	SVPD1

Optional standalone and wireless connected integrated sensors require use of the DD (0-10V) driver. WaveLinX and LumaWatt Pro sensors require additional system hardware (not provided) for full functionality.

Standard sensor layout is shown below. Please refer to sensor coverage pattern diagrams to ensure proper coverage for the application. Standard configurations are available in both individual fixtures and in continuous runs. Default spacing is based on the maximum fixture length of 12ft and can be changed to 8ft sensor spacing for additional coverage by selecting the 8ft max fixture length option when ordering.

For additional information integrated sensors and connected lighting, please visit [Eaton's Connected Lighting Website](#).

- Standard Sensor with Luminaire Control
- Auxiliary Sensor used for Sensor Coverage (wireless systems only)

INTEGRAL SENSOR

≤8ft Individual

>8ft Individual

Note: When 8ft max section length is used on individual fixtures > 8ft, sensor placement follows logic for continuous run.

Beginning of Run (BOR)

Intermediate Section (INT)

End of Run (EOR) > 4ft

End of Run (EOR) ≤ 4ft

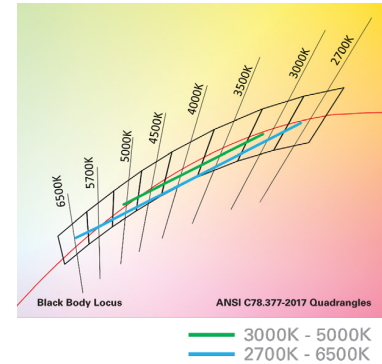
Neo-Ray

2" LED Suspended Pendant Direct/Indirect



Define 2 Pendant LED with VividTune Tunable White

VividTune tunable white luminaires deliver high-quality light in a broad range of continuously variable color temperatures and intensities. Create a dynamic environment by adjusting the ambient light warmer or cooler to influence mood, support the task at hand, or create a dramatic ambience. The ability to control correlated color temperature and intensity separately using simple controls is the next evolution of LED lighting for the commercial, educational, healthcare and hospitality space. The unparalleled flexibility and number of available lighting environments enable users to find the right light with tunable white.



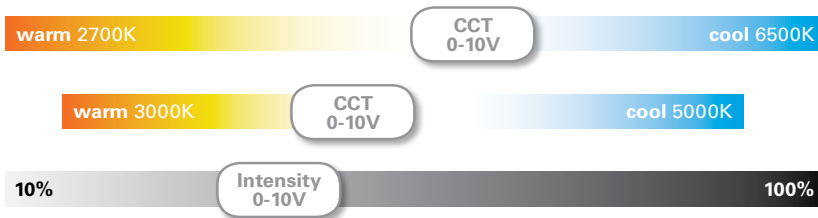
Performance Data*

CCT	Tunable White - Lumen Adjustment Factors			
	3000K-5000K		2700K-6500K	
	80 CRI	90 CRI	80 CRI	90 CRI
2700K	-	-	0.868	0.741
3000K	0.894	0.736	0.893	0.771
3500K	0.946	0.804	0.924	0.809
4000K	0.993	0.868	0.944	0.835
4500K	1.002	0.883	0.961	0.857
5000K	1.002	0.883	0.974	0.874
6500K	-	-	0.988	0.897

CCT Setting	Example of Approximate Lumen Calculation		
	Standard Catalog #	VividTune 80 CRI Catalog #	VividTune 90 CRI Catalog #
	S122DIP-C865D925U835-X-UDD-F-W	S122DIP-V865D925U83050-X-UW2A-F-W	S122DIP-V865D925U93050-X-UW2A-F-W
3000K	-	6401	5270
3500K	7160	6773	5757
4000K	-	7110	6215
4500K	-	7174	6322
5000K	-	7174	6322

Controlling VividTune Tunable White

VividTune luminaires make tunable white more accessible by using simple and familiar controls. From wall dimmers to wireless controls, VividTune tunable white luminaires are compatible with industry standard 0-10V dimming controls. A single 0-10V dimming input is used to control intensity (brightness) while a second 0-10V dimming input is used to adjust CCT. For suggested control configurations, go to www.eaton.com/lighting for tunable white application guides.



Example of Lumen Adjustment Calculation

S122DIP-V865D925U83050-X-UW2A-F-W
 at 80 CRI tuned to 3500K

Adjusted Lumen =
 published lm x adjusted lm factor

Adjusted Lumen = 7160 x 0.946

Adjusted Lumen = 6773 lm

* Lumen adjustment factors are for reference and may be different for each product selected. Refer to IES files for actual performance data on each.

SYLVANIA Luminaires

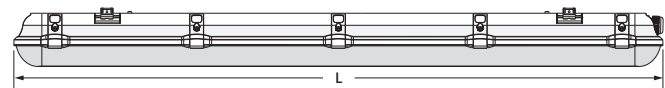
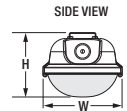
Vapor Tight



Catalog #	Type
Project	
Notes	
Date	
Prepared by	

Dimensions

	L	W	H
2 ft 25W	24.9" (632mm)	4.0" (102mm)	3.3" (85mm)
4 ft 20W	48.5" (1232mm)	3.4" (85mm)	3.3" (85mm)
4 ft 40/50W	48.1" (1232mm)	4.0" (102mm)	3.3" (85mm)
4 ft IP67	49.1" (1247mm)	4.8" (120mm)	3.3" (85mm)
8 ft 65W	96" (2438mm)	4.0" (102mm)	3.3" (85mm)



Product Features

- Corrosion resistant housing with captive stainless steel mounting accessories and included waterproof compression fitting
- IP65 or IP67 rated, ETL sanitation listed for NSF splash zones, and a wide operating temperature of -40°C to 50°C
- Optional integrated microwave (daylight/motion) sensor for additional energy savings

Wattage Comparison Chart

Vapor Tight

Traditional Source	Traditional System Wattage	LED System Wattage	Energy Savings
2 F17 T8	33	20/25	39%/24%
1 F32 T8	27	20/25	26%/7%
35W HPS	45	20/25	56%/44%
50W HPS	62	20/25	68%/60%
70W HPS	92	25	73%
2 F28 T8	50	40/50	20%/0%
2 F32 T8	54	40/50	26%/7%
1 F96 T12	86	40/50	53%/42%
70 W HPS	91	40/50	56%/45%
4 F32 T8	108	65	39%
S F96 T12	172	65	62%
150W HPS	170	65	61%
150W MH	188	65	65%
175W MH	210	65	69%
250W HPS	295	65	78%
250W MH	290	65	77%

Specifications

Weight: 2 ft: 2.5 lbs (1.2 kg) 4 ft: 5.8 lbs (2.6 kg) 8 ft: 12.5 lbs (5.7 kg)

Construction: One-piece polycarbonate housing with one-piece polycarbonate lens and stainless steel clips. The standard color is gray.

LED System: LED system with a life rating of ≥84,000 hours (HUV) L₇₀ @25°C. Luminaire efficacy up to 140 LPW.

Electrical: Offered in 20, 25, 40, 50 and 65 Watts, the luminaire is designed to operate through the 120V-277V_{AC} universal voltage and 347-480V_{AC} high universal voltage range. The LED driver has a 2.5kV inherent surge suppression and is a constant current device, meeting UL1310 and UL48 Class 2 with built-in over temperature protection. The power factor is ≥90% and THD is ≤20%.

Dimming: The driver is 0-10V dimmable (down to 6%). Please reference the dimmer compatibility document (LEDLUM012).

Color Characteristics: CRI>80; CCT of 4000K or 5000K.

Optics: Type V distribution with a clear etched polycarbonate lens or optional diffuse lens (sold separately).

Installation: Luminaire mounts to recessed outlet box or can be surface or chain mounted (chain not included). Connector available for tandem wiring. External controls can be added through existing knockouts.

Operating Temperature: -40°F to +122°F (-40°C to +50°C);
EM: +14°F to +122°F (-10°C to +50°C).

Listings: cULus listed to UL1598 standards for wet locations, IP65 or IP67 rated, and ETL Sanitation listed for NSF splash zones. IP67 units are NEMA 4X rated.

Warranty: Standard 5-year luminaire warranty (LEDLUM001).

Note: Specifications subject to change without notice. IES files available online.



*Please see page 3 for DLC listings.

Ordering Guide

Item Number:

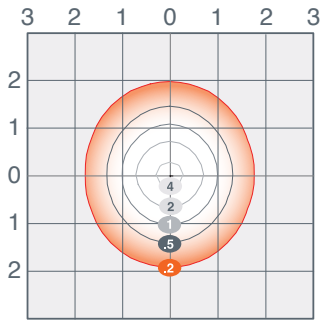
VAPOR	XX	/	XXX	XXX	D	8	XX	/	XX	XX	/	GR	/	XX
Product Name	Generation		Wattage	Voltage	Dimming	CRI	Color Temp		Size	Optics		Color/Finish		Options
VAPOR	1A		020 = 20 Watts	UNV = 120-277V	D = 0-10V	8 ≥ 80	(CCT)		24 = 24" long	EC = Etched Lens		GR = Gray		Blank = No Option
	1B		025 = 25 Watts	HUV = 347-480V*			40 = 4000K		48 = 48" long	Type V Distribution				D = Motion/Daylighting Sensor
	2B		040 = 40 Watts				50 = 5000K		96 = 96" long	D5 = Diffused Lens				E = Emergency
			050 = 50 Watts							Type V Distribution				
			065 = 65 Watts											

*HUV version available in 50 and 65 watts only

Photometric Data

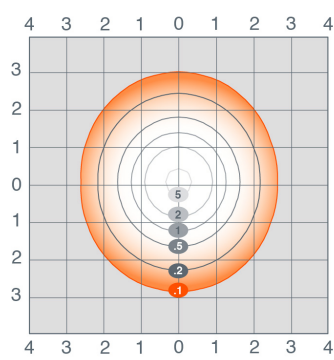
2 ft VAPOR1A/025UNVD840

Isofootcandle Lines at 15' Mounting Height



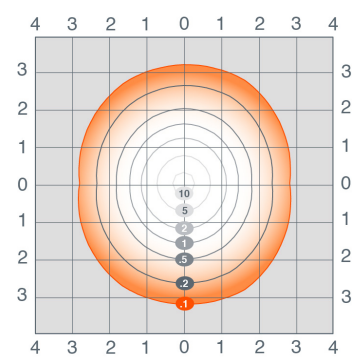
4 ft VAPOR1B/040UNVD840

Isofootcandle Lines at 12' Mounting Height



8 ft VAPOR1B/040UNVD840

Isofootcandle Lines at 12' Mounting Height



For other mounting heights apply the following multipliers:

Mounting Height	10'	12'	15'	18'	20'
Multiplier	2.25	1.56	1.00	0.44	0.36

For other mounting heights apply the following multipliers:

Mounting Height	8'	10'	12'	15'	16'	18'
Multiplier	2.25	1.44	1.00	0.73	0.56	0.44

*For 20W use 0.5 multiplier

Fixture Spacing Chart

	VAPOR1A/025UNVD840/24EC/GR			VAPOR1B/040UNVD840/48EC/GR		
	On Center Fixture Spacing			On Center Fixture Spacing		
	8'x10'	10'x10'	10'x12'	8'x10'	10'x10'	10'x12'
8'	39	29	23.2	65.6	51.2	40.2
10'	37.9	28.1	22.5	63.6	49.9	39.2
12'	35.2	27.3	21.9	63.4	48.3	38.1
14'	34.2	26.6	21.3	61.7	47.3	37.2
16'	33.2	25.6	20.7	55.5	46.3	36.2
18'	32.3	24.9	20.1	53.9	44.7	35.3

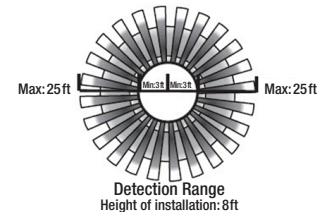
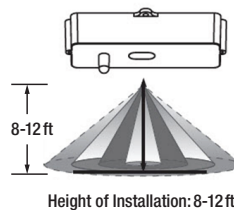
Average Illuminance (fc) at 0° AFF.
80/50/20 reflectances.

Options Information

Sensor: Motion and Daylight sensors are both available.

Motion Sensor (Default Setting):

Motion	100% lumen output
≥5min with no motion	30% lumen output
≥60min with no motion	Off



Daylight (Default Setting): 5fc/24H

For customized settings: Purchase remote control separately and refer to the Vapor Tight Remote document LEDLUM015 for further instructions.

Emergency Battery Backup:

Activates when normal power supply to the fixture fails, providing a minimum of 500 lumens for at least 90 minutes.

Ordering Information (Clear Lens)

Item Number	Ordering Abbreviation	Ingress Protection	Power (W)	Input Voltage	Color Temp (CCT)	Total Fixture Lumens		LPW*		DLC**		Options
						Clear Lens	Diffuse Lens	Clear Lens	Diffuse Lens	Clear Lens	Diffuse Lens	
2ft Vapor Tight												
74530	VAPOR1A/025UNVD840/24EC/GR	IP65	25	120-277	4000K	3100	2800	135	121	Prm	Std	--
74531	VAPOR1A/025UNVD850/24EC/GR	IP65	25	120-277	5000K	3100	2800	137	123	Prm	Std	--
74532	VAPOR1B/025UNVD840/24EC/GR/D	IP65	25	120-277	4000K	3100	2800	135	121	Prm	--	Sensor
74533	VAPOR1B/025UNVD850/24EC/GR/D	IP65	25	120-277	5000K	3100	2800	137	123	Prm	--	Sensor
60074	VAPOR1B/025UNVD840/24EC/GR/E	IP65	25	120-277	4000K	3100	2800	135	121	Prm	--	Emergency
60075	VAPOR1B/025UNVD850/24EC/GR/E	IP65	25	120-277	5000K	3100	2800	137	123	Prm	--	Emergency
4ft Vapor Tight												
74534	VAPOR1B/020UNVD840/48EC/GR	IP65	20	120-277	4000K	2600	2300	127	114	Prm	--	--
74535	VAPOR1B/020UNVD850/48EC/GR	IP65	20	120-277	5000K	2600	2300	128	115	Prm	--	--
74536	VAPOR1B/020UNVD840/48EC/GR/D	IP65	20	120-277	4000K	2600	2300	127	114	Prm	--	Sensor
74537	VAPOR1B/020UNVD850/48EC/GR/D	IP65	20	120-277	5000K	2600	2300	128	115	Std	--	Sensor
60043	VAPOR1B/020UNVD840/48EC/GR/E	IP65	20	120-277	4000K	2500	2300	130	114	Prm	--	Emergency
60044	VAPOR1B/020UNVD850/48EC/GR/E	IP65	20	120-277	5000K	2500	2300	130	115	Prm	--	Emergency
60045	VAPOR1B/020UNVD840/48EC/GR/DE	IP65	20	120-277	4000K	2500	2300	130	114	Prm	--	Sensor, Emergency
60046	VAPOR1B/020UNVD850/48EC/GR/DE	IP65	20	120-277	5000K	2500	2300	130	115	Prm	--	Sensor, Emergency
74376	VAPOR1B/040UNVD840/48EC/GR	IP65	40	120-277	4000K	5300	4600	139	120	Prm	Std	--
74377	VAPOR1B/040UNVD850/48EC/GR	IP65	40	120-277	5000K	5300	4700	137	122	Prm	Std	--
74378	VAPOR1B/040UNVD840/48EC/GR/D	IP65	40	120-277	4000K	5400	4500	140	116	Prm	Std	Sensor
74379	VAPOR1B/040UNVD850/48EC/GR/D	IP65	40	120-277	5000K	5400	4600	137	119	Prm	Std	Sensor
74554	VAPOR1B/040UNVD840/48EC/GR/E	IP65	40	120-277	4000K	5300	4600	139	120	Prm	Std	Emergency
74555	VAPOR1B/040UNVD850/48EC/GR/E	IP65	40	120-277	5000K	5300	4700	137	122	Prm	Std	Emergency
74556	VAPOR1B/040UNVD840/48EC/GR/DE	IP65	40	120-277	4000K	5400	4500	140	116	Prm	Std	Sensor, Emergency
74557	VAPOR1B/040UNVD850/48EC/GR/DE	IP65	40	120-277	5000K	5400	4600	137	119	Prm	Std	Sensor, Emergency
74552	VAPOR1A/050HUV840/48EC/GR	IP65	50	347-480	4000K	5700	--	111	--	Std	--	--
74553	VAPOR1A/050HUV850/48EC/GR	IP65	50	347-480	5000K	5700	--	111	--	Std	--	--
60376	VAPOR1B/050HUV840/48EC/GR/D	IP65	50	347-480	4000K	5700	--	111	--	Std	--	Sensor
60377	VAPOR1B/050HUV850/48EC/GR/D	IP65	50	347-480	5000K	5700	--	111	--	Std	--	Sensor
60047	VAPOR2B/040UNVD840/48EC/GR	IP67	40	120-277	4000K	5300	4600	139	120	Prm	--	--
60048	VAPOR2B/040UNVD850/48EC/GR	IP67	40	120-277	5000K	5300	4700	137	122	Prm	--	--
60049	VAPOR2B/040UNVD840/48EC/GR/D	IP67	40	120-277	4000K	5300	4600	139	120	Prm	--	Sensor
60050	VAPOR2B/040UNVD850/48EC/GR/D	IP67	40	120-277	5000K	5300	4700	137	122	Prm	--	Sensor
8ft Vapor Tight												
60355	VAPOR1B/065UNVD840/96EC/GR	IP65	65	120-277	4000K	8750	--	135	--	Prm	--	--
60356	VAPOR1B/065UNVD850/96EC/GR	IP65	65	120-277	5000K	8750	--	135	--	Prm	--	--
60357	VAPOR1B/065UNVD840/96EC/GR/D	IP65	65	120-277	4000K	8750	--	135	--	Prm	--	Sensor
60358	VAPOR1B/065UNVD850/96EC/GR/D	IP65	65	120-277	5000K	8750	--	135	--	Prm	--	Sensor
60359	VAPOR1B/065UNVD840/96EC/GR/E	IP65	65	120-277	4000K	8750	--	135	--	Prm	--	Emergency
60360	VAPOR1B/065UNVD850/96EC/GR/E	IP65	65	120-277	5000K	8750	--	135	--	Prm	--	Emergency
60361	VAPOR1B/065UNVD840/96EC/GR/DE	IP65	65	120-277	4000K	8750	--	135	--	Prm	--	Sensor, Emergency
60362	VAPOR1B/065UNVD850/96EC/GR/DE	IP65	65	120-277	5000K	8750	--	135	--	Prm	--	Sensor, Emergency
60363	VAPOR1B/065HUV840/96EC/GR	IP65	65	347-480	4000K	8750	--	135	--	Prm	--	--
60364	VAPOR1B/065HUV850/96EC/GR	IP65	65	347-480	5000K	8750	--	135	--	Prm	--	--
60365	VAPOR1B/065HUV840/96EC/GR/D	IP65	65	347-480	4000K	8750	--	135	--	Prm	--	Sensor
60366	VAPOR1B/065HUV850/96EC/GR/D	IP65	65	347-480	5000K	8750	--	135	--	Prm	--	Sensor

*LPW per LM79 Report

**Std for DLC Standard, Prm for DLC Premium

Ordering Information (Diffuse Lens)

Item Number	Ordering Abbreviation	Ingress Protection	Power (W)	Input Voltage	Color Temp (CCT)	Total Fixture Lumens		LPW*		DLC**		Options
						Clear Lens	Diffuse Lens	Clear Lens	Diffuse Lens	Clear Lens	Diffuse Lens	
4ft Vapor Tight												
60242	VAPOR1B/040UNVD840/48D5/GR	IP65	40	120-277	4000K	5300	4600	139	120	Prm	Std	--
60243	VAPOR1B/040UNVD850/48D5/GR	IP65	40	120-277	5000K	5300	4700	137	122	Prm	Std	--
60244	VAPOR1B/040UNVD840/48D5/GR/D	IP65	40	120-277	4000K	5400	4500	140	116	Prm	Std	Sensor
60245	VAPOR1B/040UNVD850/48D5/GR/D	IP65	40	120-277	5000K	5400	4600	137	119	Prm	Std	Sensor
60246	VAPOR1B/040UNVD840/48D5/GR/E	IP65	40	120-277	4000K	5300	4600	139	120	Prm	Std	Emergency
60247	VAPOR1B/040UNVD850/48D5/GR/E	IP65	40	120-277	5000K	5300	4700	137	122	Prm	Std	Emergency
60248	VAPOR1B/040UNVD840/48D5/GR/DE	IP65	40	120-277	4000K	5400	4500	140	116	Prm	Std	Sensor, Emergency
60249	VAPOR1B/040UNVD850/48D5/GR/DE	IP65	40	120-277	5000K	5400	4600	137	119	Prm	Std	Sensor, Emergency

*LPW per LM79 Report

**Std for DLC Standard, Prm for DLC Premium

Accessories and Replacement Parts*

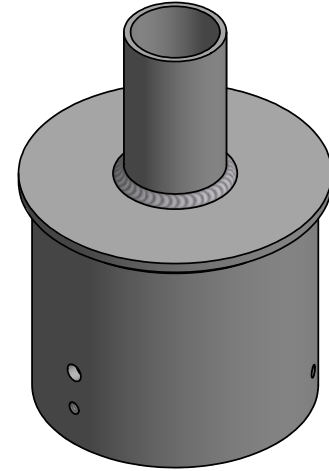
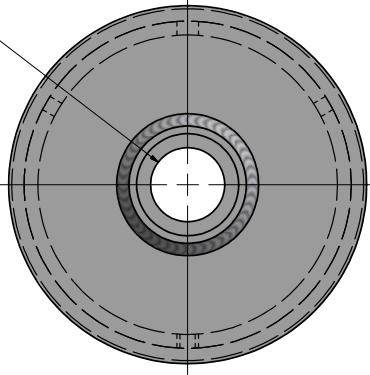
Item Number	Ordering Abbreviation	Item Description
74541	VAPOR1B/REMOTE	Vapor Tight Sensor Remote compatible with VAPOR1B and VAPOR2B
61458	VAPOR2B/LENS/24D5	2ft IP67 Diffuse Lens compatible with VAPOR2B
61459	VAPOR1X/LENS/24EC	2ft IP65 Etched Lens replacement compatible with VAPOR1A and VAPOR1B
74744	VAPOR1X/LENS/24D5	2ft IP65 Diffuse Lens compatible with VAPOR1A and VAPOR1B
61462	VAPOR1X/SMLENS/48EC	4ft IP65 Etched Lens replacement compatible with VAPOR1B (20W only)
61463	VAPOR1X/SMLENS/48D5	4ft IP65 Diffuse Lens compatible with VAPOR1B (20W only)
61464	VAPOR2B/LENS/48EC	4ft IP67 Etched Lens replacement compatible with VAPOR2B
61457	VAPOR2B/LENS/48D5	4ft IP67 Diffuse Lens compatible with VAPOR2B
74538	VAPOR1X/LENS/48D5	4ft IP65 Diffuse Lens compatible with VAPOR1A and VAPOR1B
74448	VAPOR1A/LENS/48EC	4ft IP65 Etched Lens replacement compatible with VAPOR1A and VAPOR1B
61461	VAPOR1X/LENS/96D5	8ft IP65 Diffuse Lens compatible with VAPOR1B
61460	VAPOR1X/LENS/96EC	8ft IP65 Etched Lens replacement compatible with VAPOR1B
74920	VAPOR1A/CONN/BL	Tandem Wiring Connector

*Etched lens is the standard lens shipped with fixture.

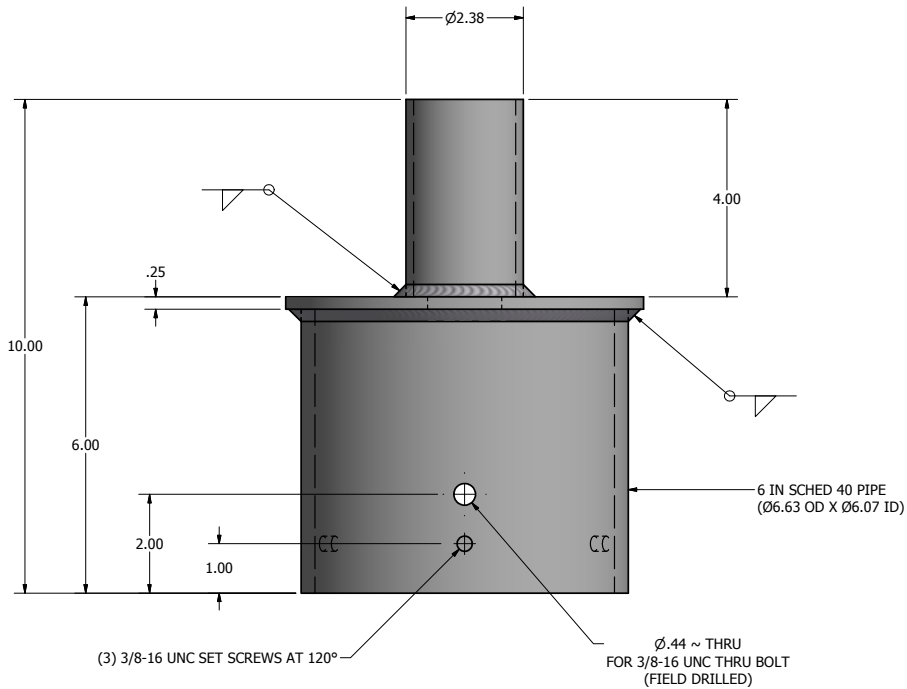
DLC Listing

Item Number	Ordering Abbreviation	Linear Ambient Diffuse Lens	Clear Lens	Stairwell/Passageway Clear Lens	Stairwell/Passageway Diffuse Lens	Low-Bay Diffuse Lens	Low-Bay Clear Lens	Outdoor Canopy Clear Lens	Outdoor Canopy Diffuse Lens
2ft Vapor Tight									
74530	VAPOR1A/025UNVD840/24EC/GR	PQSP91E8	PSN1FP79					PLDGUGHA5AWM	
74531	VAPOR1A/025UNVD850/24EC/GR	P9UFMJ1	PPUEJ3FK					PLJLIB34EZ50	
74532	VAPOR1B/025UNVD840/24EC/GR/D		PLBOXGMOBHHJ	PLZSC43CSRQF				PLVNDNZSG930	
74533	VAPOR1B/025UNVD850/24EC/GR/D		PL8DCUJUY1VL	PLWHK8GPPC0R					
60074	VAPOR1B/025UNVD840/24EC/GR/E		PLBOXGMOBHHJ						
60075	VAPOR1B/025UNVD850/24EC/GR/E		PL8DCUJUY1VL						
4ft Vapor Tight									
74534	VAPOR1B/020UNVD840/48EC/GR		PL5DXDVCKDJH					PLAWIZZKGIXW	
74535	VAPOR1B/020UNVD850/48EC/GR		PLYZ34VCFSSD					PLW55HD51UAZ	
74536	VAPOR1B/020UNVD840/48EC/GR/D		PL5DXDVCKDJH	PL5HDWS27PWW				PLAWIZZKGIXW	
74537	VAPOR1B/020UNVD850/48EC/GR/D		PLYZ34VCFSSD	PLZ8CGRK3SA9				PLW55HD51UAZ	
60043	VAPOR1B/020UNVD840/48EC/GR/E		PL5DXDVCKDJH					PLAWIZZKGIXW	
60044	VAPOR1B/020UNVD850/48EC/GR/E		PLYZ34VCFSSD					PLW55HD51UAZ	
60045	VAPOR1B/020UNVD840/48EC/GR/DE		PL5DXDVCKDJH	PL5HDWS27PWW				PLAWIZZKGIXW	
60046	VAPOR1B/020UNVD850/48EC/GR/DE		PLYZ34VCFSSD	PLZ8CGRK3SA9				PLW55HD51UAZ	
74376	VAPOR1B/040UNVD840/48EC/GR	PTNPGMPP	PVYCF6UR			PL265J2ZG4BX		PLUJOITUOZDA	PLQUX9HY0K09
74377	VAPOR1B/040UNVD850/48EC/GR	P39VVY2Z	PC3PTT8W			PLGM90DHZ8X		PLRVP8AZWEQU	PLGD1M97VEV7
74378	VAPOR1B/040UNVD840/48EC/GR/D	PTNPGMPP	PVYCF6UR	PL400DXSACY		PLQA58KMPQMB		PLUJOITUOZDA	PLQUX9HY0K09
74379	VAPOR1B/040UNVD850/48EC/GR/D	P39VVY2Z	PC3PTT8W	PLULT610E924		PLIBALW4B8ZL		PLRVP8AZWEQU	PLGD1M97VEV7
74554	VAPOR1B/040UNVD840/48EC/GR/E	PTNPGMPP	PVYCF6UR			PLV9L811KFZM		PLUJOITUOZDA	PLQUX9HY0K09
74555	VAPOR1B/040UNVD850/48EC/GR/E	P39VVY2Z	PC3PTT8W			PLRJST3769ZE		PLB03WXXVIGP0	PLGD1M97VEV7
74556	VAPOR1B/040UNVD840/48EC/GR/DE	PTNPGMPP	PVYCF6UR	PL400DXSACY		PLFBW1QOW8DP		PLUJOITUOZDA	PLQUX9HY0K09
74557	VAPOR1B/040UNVD850/48EC/GR/DE	P39VVY2Z	PC3PTT8W	PLULT610E924		PLTOKXPJYIUU		PLB03WXXVIGP0	PLGD1M97VEV7
74552	VAPOR1A/050HUV840/48EC/GR	PLAXUJH00ID5	PBA4FDDB			PL66NIXPNXPR		PLKHOK1NBLT1	
74553	VAPOR1A/050HUV850/48EC/GR	P39VVY2Z	PQGF9FAQ			PLL90W53U54E		PL9Z939ZLR5S	
60376	VAPOR1B/050HUV840/48EC/GR/D	PL769BDXR5NI	PL08D3SGIYYB	PLOWI6CR773E	PL10TV5DPLQ6	PL0CMVIFJ360		PLZV3VG7B8GP	
60377	VAPOR1B/050HUV850/48EC/GR/D	PL6ZZE5CNQYK	PL08D3SGIYYB	PL3XA5JZCPWU	PLXFXS2MRKRY	PLPROZOK30RT		PL7UEQ0RH2VK	
60047	VAPOR2B/040UNVD840/48EC/GR		PLM0UBQC36H			PLGY7W2TNJYI		PLXB95KFUVQE	
60048	VAPOR2B/040UNVD850/48EC/GR		PLUL4LZX42N			PLZDL7D8MYI8		PLRVP8AZWEQU	
60049	VAPOR2B/040UNVD840/48EC/GR/D		PLM0UBQC36H	PL4PJB186SR2		PLYGHMU3R7OF		PLXB95KFUVQE	
60050	VAPOR2B/040UNVD850/48EC/GR/D		PLUL4LZX42N	PL11BBN5V4JD		PLUTO70LBDID		PLRVP8AZWEQU	
8ft Vapor Tight									
60355	VAPOR1B/065UNVD840/96EC/GR		PLIIQO3MOQOU			PLTWGDIYINC43		PLIMQKG9HAGW	
60356	VAPOR1B/065UNVD850/96EC/GR		PLKH42XGYH09			PLNE5XKMGINL		PLACBBDYXPWQ	
60357	VAPOR1B/065UNVD840/96EC/GR/D		PLIIQO3MOQOU			PLSFVSIHFP2Y		PLF48CINN83Z	
60358	VAPOR1B/065UNVD850/96EC/GR/D		PLKH42XGYH09			PL5HXTXNZC3J		PLP1CI3MRN25	
60359	VAPOR1B/065UNVD840/96EC/GR/E		PLIIQO3MOQOU			PLI8NK7911JT		PLTVOKS3WXP6	
60360	VAPOR1B/065UNVD850/96EC/GR/E		PLKH42XGYH09			PLCLW12XNS2E		PLLXZJKONCM0	
60361	VAPOR1B/065UNVD840/96EC/GR/DE		PLIIQO3MOQOU			PL3K67AA60L2		PLYNQRFYR7J7	
60362	VAPOR1B/065UNVD850/96EC/GR/DE		PLKH42XGYH09			PL909IRZ96ND		PLZ15FSXNHWA	
60363	VAPOR1B/065HUV840/96EC/GR		PL166QIBJRA6			PL769BDXR5NI		PLN0PAEPUY8X	PLG4EC4T5LAB
60364	VAPOR1B/065HUV850/96EC/GR	PLRWNMEP2K6U	PLGL811QF6HR			PL9GS6IJ9DKG		PLIDCV1P205T	PLKZMBA7COTJ
60365	VAPOR1B/065HUV840/96EC/GR/D		PL57Q2PBPJ9			PLX4ANUU85Q0		PL6QHRFY7RTO	PLRD01Q1LYKN
60366	VAPOR1B/065HUV850/96EC/GR/D	PLSH8WE685V2	PLOP5ZIULB03			PLJ90U17APJ3		PLEN10K5D18	PLPBWJ9S8KOE

WIRE ACCESS HOLE



PTR-6RD-T2-STD



- TENON OPTIONS**
- T2- $\varnothing 2.38$ OD X 4.00 LG
 - T3- $\varnothing 3.00$ OD X 5.00 LG**
 - T4- $\varnothing 4.00$ OD X 6.00 LG

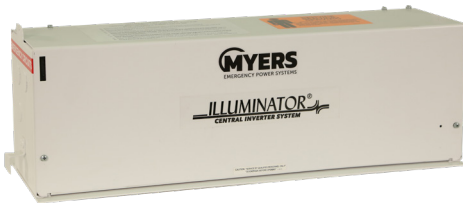
NOTE: OTHER TENON SIZES AVAILABLE UPON REQUEST, CONTACT FACTORY FOR ADDITIONAL SIZES.

FINISH: BRACKET SHALL HAVE A POLYESTER POWDER COAT FINISH IN A STANDARD COLOR.

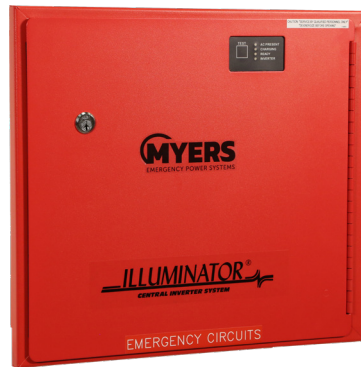
ILLUMINATOR LVM

Emergency Lighting Inverter System

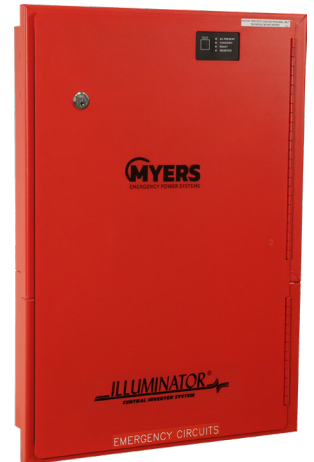
Single Phase Systems 110VA/W and 225VA/W
Ships Within 5 Days



110VA or 225VA
Grid Mount (Plenum Rated)



110VA
Wall or Recess Mount



225VA
Wall or Recess Mount

STANDARD FEATURES

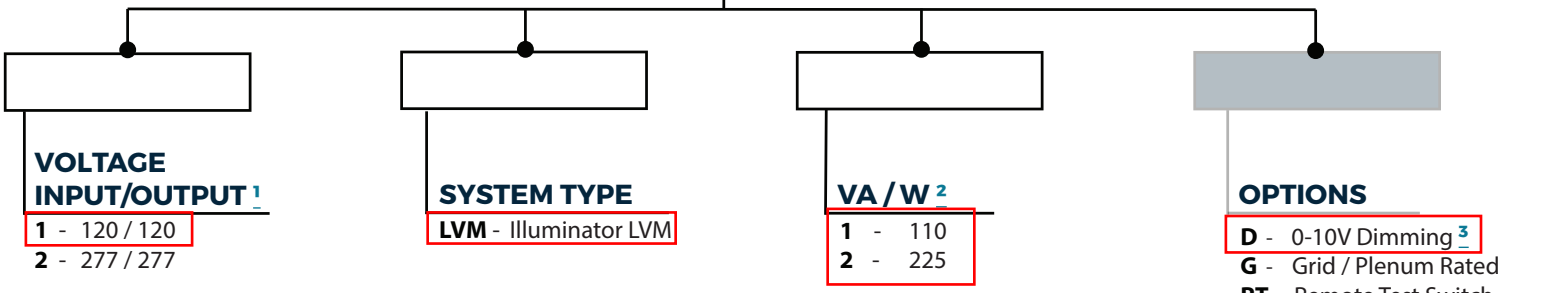
- 120V or 277V Models Available
- UL 924 Listed
- High Efficiency System
- 90 Minute Run Time
- Compatible with Incandescent, Fluorescent, LED & Quartz
- Typical Transfer Time 4ms
- Red Cabinets for Wall & Recess Units
- White Cabinets for Grid Mount Units
- Convection Cooled; No Fans Required
- VRLA Sealed Batteries
- Indicator Lights & Test Switch
- Summary Fault Form C Dry Contacts
- Normally On and Switched or Normally Off Output
- UL 924 Self-Testing & Self-Diagnostics
- High Crest Factor and Inrush Capabilities
- Pure Sine Wave

SPECIFICATIONS

- Input Voltage: 120VAC or 277VAC; 1-Phase, 2-Wire Plus Ground +10% to -15%
- Output Voltage: 1 Phase, 2-Wire Plus Ground (Will Match Input Feed)
- Load Power Factor 0.5 Lagging to 0.5 Leading
- Output Voltage Distortion Less than 10% for Resistive Loads
- 3.5 Crest Factor
- Compatible with Generators (10x Inverter Size Minimum)
- Microprocessor-controlled, 3-Stage Battery Charger
- 10kAIC at 120VAC; 1.5kAIC at 277VAC
- Inverter Operating Temperature 32°F to 104°F (0°C to 40°C)
- Battery Operating Temperature 68°F to 86°F (20°C to 30°C) per UL 924 Specifications
- Warranty Information:
 - Electronics: 3-Year Replacement Warranty
 - Batteries: 1-Year Full / 9-Years Prorata Warranty

ORDERING GUIDE

Example Model Number:
1-LVM-1-D

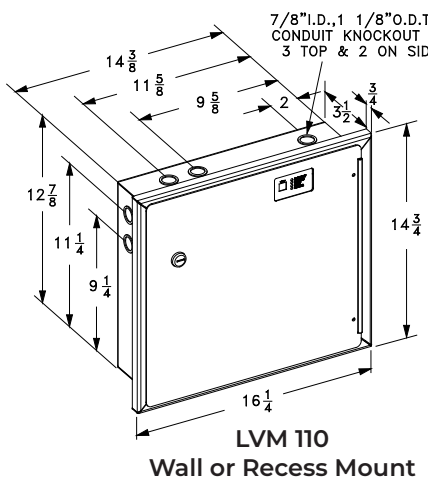


1. Only single phase voltages available.
2. VA = W
3. Not available with grid mount option.

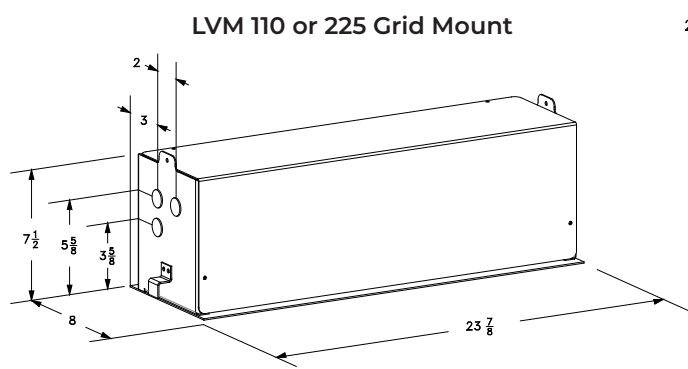
= Required feature for model number.
 = Optional feature. Not required for model number.

DIMENSIONS

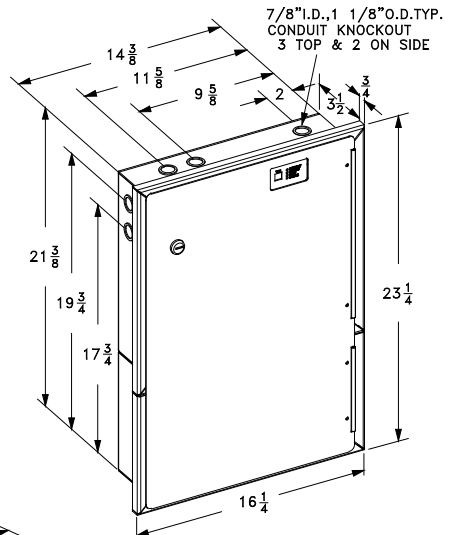
Electronics Module						Batteries 90 Minutes @ Full Load		
Model	Power Rating (VA / W)	Cabinet Dimensions				90 Minutes Batteries (lbs / kg)	Number of Batteries	Total System Weight (lbs / kg)
		Width (in / cm)	Height (in / cm)	Depth (in / cm)	Weight (lbs / kg)			
LVM-1	110	16.25 / 41.275	14.75 / 37.465	3.5 / 8.89	20 / 9.1	17 / 7.7	1	37 / 16.8
LVM-1-G	110	23.84 / 60.56	7.5 / 19.05	8 / 20.32	20 / 9.1	17 / 7.7	1	37 / 16.8
LVM-2	225	16.25 / 41.275	23.25 / 59.055	3.5 / 8.89	26 / 11.8	34 / 15.4	2	60 / 27.2
LVM-2-G	225	23.84 / 60.56	7.5 / 19.05	8 / 20.32	23 / 10.4	34 / 15.4	2	57 / 25.8



LVM 110
Wall or Recess Mount



LVM 110 or 225 Grid Mount



LVM 225
Wall or Recess Mount



COOPER LIGHTING - SURE-LITES®

DESCRIPTION

The All Pro Series is the most economical LED combo (including LED emergency light heads) for general purpose applications. The durable, injection molded, thermoplastic material resists discoloration due to UV radiation and the energy efficient, low maintenance LEDs provide bright illumination. All AP series combos offer universal configurations (single and double face) and have universal mounting capability (ceiling, wall, end).

SPECIFICATION FEATURES

Electrical

- Dual Voltage Input 120/277 VAC, 60Hz
- Line-latching
- Solid-State Voltage Limited Charger
- Solid-State Switching
- Brownout Protection
- Low Voltage Disconnect
- Overload/Short Circuit Protection
- Test Switch / Power Indicator Light
- High Power Combo available capable of running two additional LED remote heads
- 3.6V, .78W DC long Lasting LED Heads

Housing Construction

- All components are injection molded, color stable, high impact thermoplastic material
- Designer white textured finish standard
- Components are of snap-fit construction to facilitate under 5-minute installation
- Reinforcing ribs throughout

to provide maximum strength

- Molded-in wireways facilitate internal wire routing and connections
- All components including battery and electronics are located inside the exit housing
- Snap-out or snap-in chevron directional indicators have full 3/4" stroke
- Universal exits can be field configured as single face or double face
- Snap-fit canopy with captive mounting screws included with all exits
- Exit can be ceiling, wall, or end mounted
- Universal J-box mounting pattern
- Operating temperature range 10C to 40C

Battery

- Sealed Nickel Cadmium
- Maintenance Free, Long Life
- Standard Recharge Time: 24 hrs (max.)

Catalog #	APC7R/APCH7R	Type
Project		
Comments		Date
Prepared by		

Code Compliance

- UL 924 Listed
- UL Damp Location Listed
- Life Safety NFPA 101
- NEC/OSHA
- Most State and Local Codes

Lamp Data

- AC LED: Long life LED lamps provide uniform diffused illumination
- DC: LED DC lamps (Brighter in emergency mode)
- Heads DC: 3.6V, .78W Long Life LED Heads Light Output Equivalent to 5.4W Incandescent

Warranty

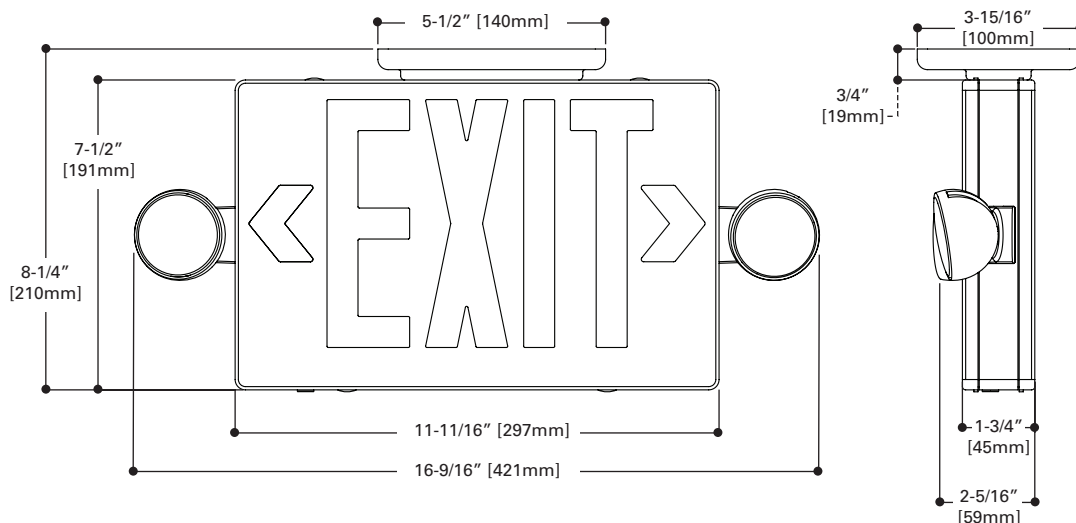
- Five-year warranty



APC / APCH SERIES EXITS WITH LED HEADS COMBO

THERMOPLASTIC
SELF POWERED
EXIT / EMERGENCY WITH
DOUBLE HEADS
LED LAMPS

TOTALLY PREDICTABLE
RELIABILITY



ENERGY DATA

Maximum power consumption under all charge conditions:

Combo LED Exits - Red

Input Power:
120V = 1.31W
277V = 1.68W
Input Current (Max.):
120V = .09A
277V = .09A
Power Factor:
120V = >.12
277V = >.07

Combo High Power LED Exits - Red

Input Power:
120V = 2.34W
277V = 1.62W
Input Current (Max.):
120V = .14A
277V = .10A
Power Factor:
120V = >.14
277V = >.06

Combo LED Exits - Green

Input Power:
120V = 1.55W
277V = 1.45W
Input Current (Max.):
120V = .09A
277V = .09A
Power Factor:
120V = >.14
277V = >.06

Combo High Power LED Exits - Green

Input Power:
120V = 2.8W
277V = 2.1W
Input Current (Max.):
120V = .10A
277V = .10A
Power Factor:
120V = >.20
277V = >.07

ORDERING INFORMATION

SAMPLE NUMBER: APC7R

Family APC7 = Self-Powered with LED All Pro Exit/Emergency with LED Heads APCH7 = Self-Powered with LED All Pro Exit/Emergency with LED Heads, High Power with remote capability	Face Options _ = Universal	Letter Colors R = Red G = Green

TECHNICAL DATA

Lamps

The AP Series Exits with Heads use energy efficient, long life LED's to provide uniform diffuse illumination of the exit face. The low operating costs and zero maintenance requirement makes LED lamps the wisest choice for exit signs today. Emergency exit illumination is provided by LED lamps and the heads employ 3.6V, .78W DC Long Lasting LED Heads.

Housing Construction

Rugged, durable, injection molded thermoplastic materials are used throughout the AP Series Exits with Heads. All structural components are designed with reinforcing ribs to add additional rigidity and to maximize structural integrity. These materials are impact and scratch resistant, and they have been UV stabilized to resist discoloration due to age and ultraviolet radiation. All components are designed to be of snap-fit construction - no mechanical fasteners - to facilitate installation in under 5-minutes. Any components required for installation (wirenuts, wire leads, universal metal J-box bracket, etc.) are all included with each exit. The universal design of the AP Series Exits with Heads enables universal exits to be configured as single face or double face in the field. The AP Series Exits with Heads can be wall, ceiling, or end mounted; a rugged, snap-fit, low profile canopy with captive screws is included with every exit for ceiling and end mounting applications.

Lens

Lenses for the AP Series Exits with Heads are made from durable impact resistant thermoplastic. All exit faces are designed with full 3/4" stroke snap-out or snap-in chevron directional indicators to insure maximum visibility and compliance with the latest codes.

Line-Latched

All Pro's line-latched electronic circuitry makes installation easy and economical. A labor efficient AC activated load switch prevents

the lamps from turning on during installation to a non-energized AC circuit. Line-latching eliminates the need for a contractor's return to a job site to connect the batteries when the building's main power is turned on.

Solid-State Charger

Supplied with a 120/277 VAC, voltage regulated solid-state charger. Immediately upon restoration of AC current after a power failure, the charger provides a high charge rate. The charge circuit reacts to the condition of the battery and regulates the charging process in order to maintain peak battery capacity and maximize battery life. Solid-state construction recharges the battery following a power failure in accordance with UL 924.

Brownout Circuit

The brownout circuit on All Pro's exits monitors the flow of AC current to the exit and activates the emergency lighting system when a predetermined reduction of AC power occurs. This dip in voltage will cause most ballasted fixtures to extinguish causing loss of normal lighting even though a total power failure has not occurred.

Solid-State Transfer

The AP Series Exits with Heads incorporates solid-state switching which eliminates corroded and pitted contacts or mechanical failures associated with relays. The switching circuit is designed to detect a loss of AC voltage and automatically energizes the lamps using DC power. Upon restoration of AC power, the DC power will be disconnected and the charger will automatically recharge the battery.

Low Voltage Disconnect

When the battery's terminal voltage falls, the low voltage circuitry disconnects the lighting load. The disconnect remains in effect until normal utility power is restored, preventing deep battery discharge.

Test Switch/Power Indicator Light

A test switch located on the bottom of the exit permits the activation of the emergency circuit for a complete operational systems check. The Power Indicator Light provides visual assurance that the AC power is on.

Overload and Short Circuit Protection

The solid-state overload monitoring device in the DC circuit disconnects the lamp load from the battery should excessive wattage demands be made and automatically resets when the overload or short circuit is removed. This overload current protective feature eliminates the need for fuses or circuit breakers for the DC load.

Sealed Nickel Cadmium Battery

All Pro Emergency sealed nickel cadmium batteries are maintenance-free with a life expectancy of 15 years. The sealed rechargeable nickel cadmium battery offers high discharge rates and stable performance over a wide range of temperatures. The specially designed resealable vent automatically controls cell pressure, assuring safety and reliability. This battery is best suited for harsh ambient temperatures because the electrolyte is not active in the electrochemical process.

Warranty

All Pro products are backed by a five-year warranty.

DESCRIPTION

The LED APX series is UL924 code compliant solution for indoor exit requirements. It is available as AC only (APX6) or self-powered (APX7) with a maintenance free nickel cadmium battery. The self-powered version will operate for a minimum of 90 minutes during a power outage. All models feature an LED source available in red or green, are field configurable for single or double face and are universal mount (ceiling, wall or end). The polycarbonate housing is available in white or black.

Catalog #	APX7R/APX7RBK	Type	
Project		Date	
Comments			
Prepared by			

SPECIFICATION FEATURES

Electrical

- Dual voltage input 120/277 VAC, 60Hz
- Solid-State voltage limited charger (APX7)
- Brownout circuit (APX7)
- Test switch / Power indicator light (APX7)

Housing Construction

- All components are injection molded, color stable, high impact thermoplastic material
- Available in a white or black finish
- Components are of snap-fit construction to facilitate under 5-minute installation
- Reinforcing ribs throughout to provide maximum strength connections
- All components including battery and electronics are located inside the exit housing

- Snap-out or snap-in chevron directional indicators have full 3/4" stroke
- Universal exits can be field configured as single face or double face
- Snap-fit canopy with mounting screws included with all exits
- Exit can be ceiling, wall, or end mounted
- Universal J-box mounting pattern
- Operating temperature range 10 °C to 40 °C

Battery

- Sealed nickel cadmium
- Maintenance free, long life
- Full recharge time: 24 hrs (max.)

Code Compliance

- UL 924 Listed
- UL Damp Location Listed
- Life Safety NFPA 101
- NEC/OSHA
- Most State and Local Codes
- operating temperature range 10 °C to 40 °C
- California Energy Code compliant

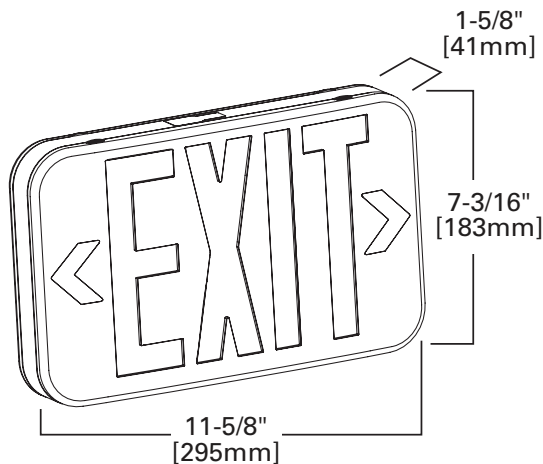
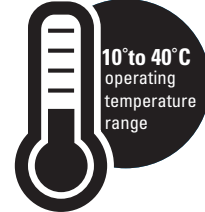
Lamp Data

- AC LED: Long life LED lamps provide uniform diffused illumination
- DC: LED DC lamps (Brighter in emergency mode, APX7)

Warranty

- Five-year warranty
- Seven-year prorated battery warranty

T20 Certified to California Title 20 Appliance Database



APX SERIES

THERMOPLASTIC EXIT
AC ONLY SELF POWERED
EMERGENCY
LED LAMPS
EXIT LIGHTING

ENERGY DATA

Maximum power consumption under all charge conditions:

Sealed Nickel Cadmium Battery LED Exits - Red

Input Power:
120V = .99W
277V = 1.14W
Input Current (Max.):
120V = .07A
277V = .07A
Power Factor:
120V = >.12
277V = >.06

Energy Data AC Only LED Exits - Red

Input Power:
120V = 1.31W
277V = 1.74W
Input Current (Max.):
120V = .07A
277V = .08A
Power Factor:
120V = >.17
277V = >.08

LED Exits - Green

Input Power:
120V = .93W
277V = 1.05W
Input Current (Max.):
120V = .07A
277V = .07A
Power Factor:
120V = >.11
277V = >.05

LED Exits - Green

Input Power:
120V = 1.33W
277V = 1.76W
Input Current (Max.):
120V = .07A
277V = .07A
Power Factor:
120V = >.11
277V = >.03

ORDERING INFORMATION

SAMPLE NUMBER: APX7RBK

Series	Battery	Face Options	Letter Colors	Housing Color	Remote Heads Powered
APX	6 = no battery (AC only) 7 = nickel cadmium battery	_ = Universal	R = Red G = Green	_ = White BK = Black	APX6R, APX6G, APX6RBK, APX6GBK APX7R, APX7G, APX7RBK, APX7GBK

TECHNICAL DATA**Lamps**

Self-Powered LED versions of the All Pro Emergency Series Exits use energy efficient, long life LEDs to provide uniform diffuse illumination of the exit face. Both the red and green LEDs require no maintenance and consume a total of 2.0 watts. The low operating costs and zero maintenance requirement makes LED lamps the wisest choice for exit signs today. Emergency illumination is provided by LED lamps,

Housing Construction

Rugged, durable, injection molded thermoplastic materials are used throughout the All Pro Emergency Series Exits. All structural components are designed with reinforcing ribs to add additional rigidity and to maximize structural integrity. These materials are impact and scratch resistant, and they have been UV stabilized to resist discoloration due to age and ultraviolet radiation. All components are designed to be of snap-fit construction - no mechanical fasteners - to facilitate installation in under 5-minutes. Any components required for installation (wirenuts, wire leads, universal metal J-box bracket, etc.) are all included with each exit. The universal design of the All Pro Series Exits enables universal exits to be configured as single face or double face in the field. All Self-Powered All Pro Series Exits can be wall, ceiling, or end mounted; a rugged, snap-fit, low profile canopy with captive screws is included with every exit for ceiling and end mounting applications. The housings are available with a white or black finish.

Lens

Lenses are made from durable impact resistant thermoplastic. All exit faces are designed with full 3/4" stroke snap-out or snap-in chevron directional indicators to insure maximum visibility and compliance with the latest codes.

Solid-State Charger (APX7)

Supplied with a 120/277 VAC, voltage regulated solid-state charger. Immediately upon restoration of AC current after a power failure, the charger provides a high charge rate. The charge circuit reacts to the condition of the battery and regulates the charging process in order to maintain peak battery capacity and maximize battery life. Solid-state construction recharges the battery following a power failure in accordance with UL 924.

Brownout Circuit (APX7)

The brownout circuit on All Pro exits monitors the flow of AC current to the exit and activates the emergency lighting system when a predetermined reduction of AC power occurs. This dip in voltage will cause most ballasted fixtures to extinguish causing loss of normal lighting even though a total power failure has not occurred.

Test Switch/Power Indicator Light (APX7)

A test switch located on the bottom of the exit permits the activation of the emergency circuit for a complete operational systems check. The Power Indicator Light provides visual assurance that the AC power is on.

Sealed Nickel Cadmium Battery

All Pro Emergency sealed nickel cadmium batteries are maintenance free with a life expectancy of 10 years. The sealed rechargeable nickel cadmium battery offers high discharge rates and stable performance over a wide range of temperatures. The specially designed resealable vent automatically controls cell pressure, assuring safety and reliability. This battery is best suited for harsh ambient temperatures because the electrolyte is not active in the electrochemical process.

Warranty

The All Pro Series exit signs are backed by a five-year warranty.

DESCRIPTION

The Sure-Lites emergency series (SEL) is a UL 924 code compliant LED solution that provides from 25 feet to 60 feet of emergency egress coverage for a minimum of 90 minutes during a power outage. Key features include a polycarbonate housing, long life LED source, a no maintenance nickel cadmium battery, proprietary adjustable accuLED optics, and a labor savings self-diagnostic option that automatically performs required NFPA testing. Remote capable options providing from 4 watts to 10 watts are available which can power the SRP/SRM/ SRPA remotes providing maximum design flexibility for both indoor and outdoor applications. The Patented external battery disconnect and easy hang features reduce installation time and cost.

SPECIFICATION FEATURES

ELECTRICAL

- Dual Voltage Input 120/277 VAC, 60Hz
- External Battery Disconnect
- Brownout circuit
- Low-voltage disconnect
- Overload / Short Circuit protection
- 4.8V Battery back-up
- Self-diagnostic option
- Laser test capability (self-diagnostic option)

HOUSING CONSTRUCTION

- Components injection molded, color stable, high impact polycarbonate
- White or black textured finish
- Black only available with self-diagnostic
- EZ Hang feature facilitates fast installation
- Suitable for ceiling, pendant or wall mount applications
- Universal J-box mounting pattern
- Keyhole mounting slots
- Aesthetically designed with thin profile
- Heads available in circular or square shape for SEL25 and SEL50

BATTERY

- Sealed Nickel Cadmium
- Full Recharge Time, 24 hours (max.)
- 0° to 40 °C (32 °F to 104 °F)

WARRANTY

- Five-year warranty
- Prorated five-year battery warranty

CODE COMPLIANCE

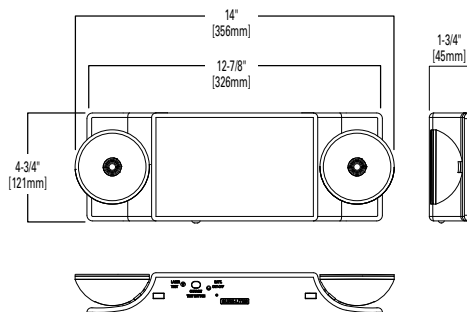
- UL924 Listed
- Damp Location
- Life Safety NFPA 101
- NEC/OSHA
- Most State & Local Codes
- California Energy Code

HOW TO SPECIFY

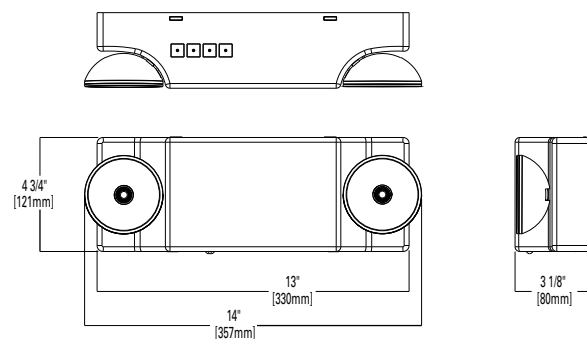
Sure-lites LED emergency light with nickel cadmium battery, external battery disconnect, and adjustable optics.

DIMENSIONS

SEL25/SEL25SD/SEL50/SEL50SD



SEL25R10/SEL50R7/SEL60R4



Catalog #	SEL50BKSD	Type	
Project		Date	
Comments			
Prepared by			



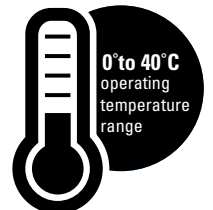
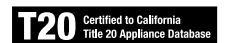
SEL25/SEL50/SEL60

SEL Emergency Light

LED Emergency Light
Adjustable Optic
Self-Diagnostics

SEL

Remote Capacity



LUMEN OUTPUT

Model	Lumens / Head
SEL25	109
SEL50	219
SEL60	309

CATALOG LOGIC FOR NON-REMOTE CAPABLE VERSIONS

SAMPLE NUMBER: SEL25, SEL50

Series	Coverage	Battery	Color	Self-Diagnostic	Head Shape	Full Catalog Options
SEL = LED Emergency Light	25 = 25 feet 50 = 50 feet	__ = NiCad	__ = White	__ = No Self-Diagnostic SD = Self-Diagnostic	__ = Circular SQ = Square	SEL25, SEL25SQ, SEL25SD, SEL25SDSQ, SEL50, SEL50SQ, SEL50SD, SEL50SDSQ
SEL = LED Emergency Light	25 = 25 feet	__ = NiCad	BK = Black	SD = Self-Diagnostic (standard)	__ = Circular SQ = Square	SEL25BKSD, SEL25BKSDSQ
SEL = LED Emergency Light	50 = 50 feet	__ = NiCad	BK = Black	SD = Self-Diagnostic (standard)	__ = Circular	SEL50BKSD

CATALOG LOGIC FOR REMOTE CAPABLE VERSIONS

SAMPLE NUMBER: SEL25R10, SEL50R7, SEL60R4

Series	Spacing	Battery	Remote Capacity	Color	Self-Diagnostic	Full Catalog Options
SEL = LED Emergency Light	25 = 25 feet	__ = NiCad	R10 = 10 watts	__ = White BK = Black	SD = Self-Diagnostic (standard)	SEL25R10SD SEL25R10BKSD
SEL = LED Emergency Light	50 = 50 feet	__ = NiCad	R7 = 7 watts	__ = White BK = Black	SD = Self-Diagnostic (standard)	SEL50R7SD SEL50R7BKSD
SEL = LED Emergency Light	60 = 60 feet	__ = NiCad	R4 = 4 watts	__ = White	__ = No SD SD = Self-Diagnostic	SEL60R4 SEL60R4SD
SEL = LED Emergency Light	60 = 60 feet	__ = NiCad	R4 = 4 watts	BK = Black	SD = Self-Diagnostic (standard)	SEL60R4BKSD

Emergency Egress Coverage; fixture spacing

Catalog Number	Output Lumens	0.1fc minimum		1fc minimum	
		7.5 foot height	20 foot height	7.5 foot height	20 foot height
SEL25	108	25 feet	12 feet	14 feet	12 feet
SEL50	218	50 feet	30 feet	21 feet	20 feet
SEL60	309	60 feet	52 feet	24 feet	30 feet

ELECTRICAL CHARACTERISTICS DURING CHARGING MODE

SEL25 / SEL50 / SEL60

Model	120 volt			277 volt		
	Power (W)	Current (A)	PF	Power (W)	Current (A)	PF
SEL25	0.6	0.07	0.06	0.64	0.07	0.03
SEL25SD	0.6	0.07	0.07	0.67	0.07	
SEL50	1.0	0.15	0.05	1.02	0.14	
SEL50SD	1.2	0.15	0.06	1.19	0.14	
SEL60R4	1.7	0.25	0.06	1.62	0.21	
SEL60R4SD	2	0.3	0.07	1.8	0.2	
SEL25R10SD	2	0.3	0.07	1.8	0.2	
SEL50R7SD	2	0.3	0.07	1.8	0.2	

REMOTE SYSTEM DESIGN GUIDELINES

SEL25/SEL50/SEL60

SEL Series Remote								
		Single Head Remotes				Double Head Remotes		
SRPA		SRP13/SRM13	SRP25/SRM25	SRP30/SRM30	SRP25D/SRM25D	SRP50D/SRM50D	SRP60D/SRM60D	
Watts Consumed		3.5	1.25	2.5	4.1	2.5	5	8.2
Catalog Number	Remote Watts Available	# of SRPA Remotes Fixture Will Power	# of SRP/SRM13 Remotes Fixture Will Power	# of SRP/SRM25 Remotes Fixture Will Power	# of SRP/SRM30 Remotes Fixture Will Power	# of SRP25D/SRM25D Remotes Fixture Will Power	# of SRP50D/SRM50D Remotes Fixture Will Power	# of SRP60D/SRM60D Remotes Fixture Will Power
SEL60R4	4	1	3	1	NA	1	NA	NA
SEL60R4SD	4	1	3	1	NA	1	NA	NA
SEL60R4BKSD	4	1	3	1	NA	1	NA	NA
SEL60R4BK	4	1	3	1	NA	1	NA	NA
SEL25R10	10	2	8	4	2	4	2	1
SEL25R10BK	10	2	8	4	2	4	2	1
SEL50R7SD	7	2	5	2	1	2	1	NA
SEL50R7BKSD	7	2	5	2	1	2	1	NA
SEL50R7	7	2	5	2	1	2	1	NA
SEL50R7BK	7	2	5	2	1	2	1	NA
SEL25R10SD	10	2	8	4	2	4	2	1
SEL25R10BKSD	10	2	8	4	2	4	2	1



SRP



SRPD



SRM



SRMD



SRPA WHITE



SRPA BLACK



SRPA BRONZE



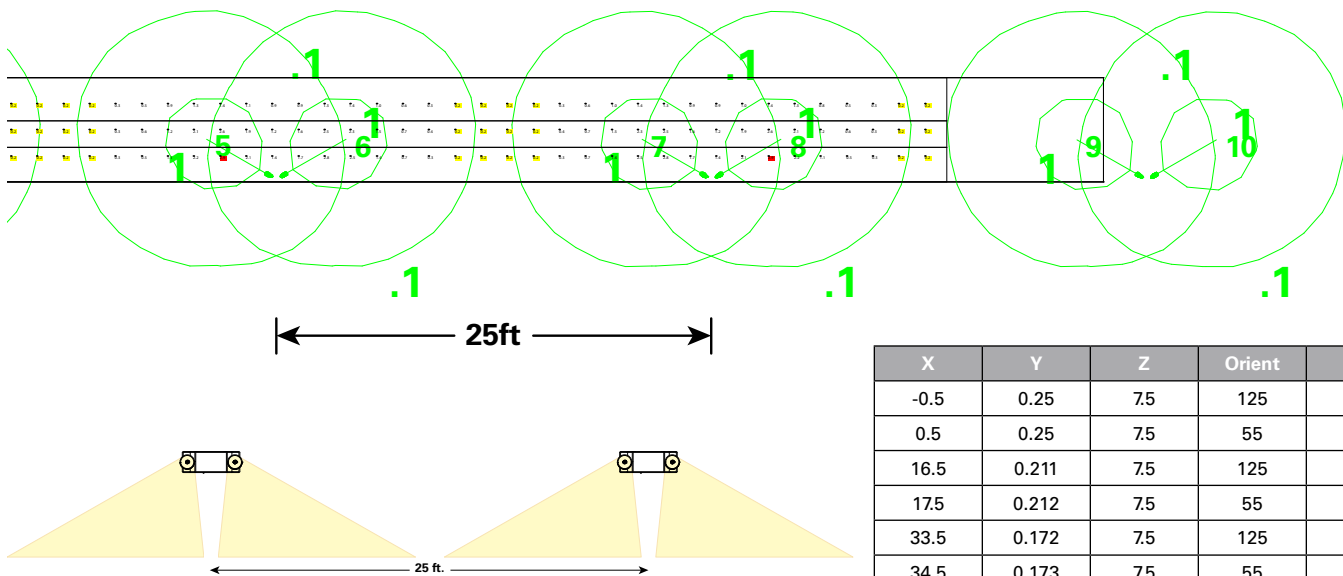
SRPA SILVER

REMOTE SYSTEM DESIGN GUIDELINES

LEM Series Remote Wattage Consumption					
		Single Head Remotes		Double Head Remotes	
Catalog Number		LEMR1	LEMWR1	LEMR2	LEMWR2
Watts Consumed		1.4	1.4	2.8	2.8
LEM Series Remote Capacity					
Catalog Number	Remote Watts Available	# of LEMR1 Remotes Fixture Will Power	# of LEMWR1 Remotes Fixture Will Power	# of LEMR2 Remotes Fixture Will Power	# of LEMWR2 Remotes Fixture Will Power
SEL25R10SD	10	7	7	3	3
SEL25R10BKSD	10	7	7	3	3
SEL50R7SD	7	5	5	2	2
SEL50R7BKSD	7	5	5	2	2
SEL60R4	4	2	2	1	1
SEL60R4SD	4	2	2	1	1
SEL60R4BKSD	4	2	2	1	1

PHOTOMETRY

SEL25

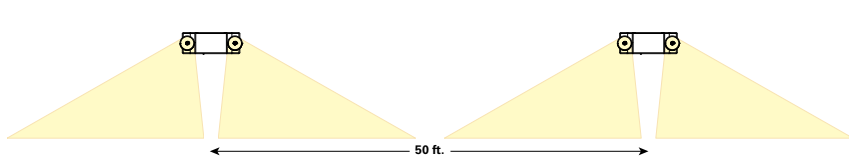
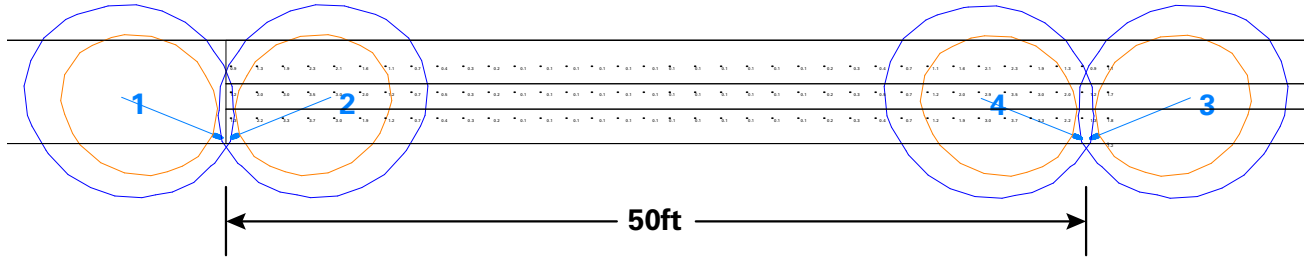


X	Y	Z	Orient	Tilt
-0.5	0.25	7.5	125	27
0.5	0.25	7.5	55	27
16.5	0.211	7.5	125	27
17.5	0.212	7.5	55	27
33.5	0.172	7.5	125	27
34.5	0.173	7.5	55	27
50.5	0.132	7.5	125	27
51.5	0.135	7.5	55	27
67.5	0.093	7.5	125	27
68.5	0.096	7.5	55	27
84.5	0.054	7.5	125	27
85.5	0.058	7.5	55	27
101.5	0.015	7.5	125	27
102.5	0.019	7.5	55	27

***The "Rule of Thumb" spacing guidelines are designed to achieve 1 foot-candle average and 0.1 foot-candle minimum with a 40:1 maximum/minimum ratio. The corridor used is 100 feet long, 9 foot ceiling with a 6 foot wide walkway and 3 foot path of egress. The reflectances are 80% ceiling, 50% walls and 20% floors. The fixture mounting height is 7.5 feet. Eaton assumes no responsibility for local requirements or specific project variables. This is a guideline to be used as a design aid, not as guarantee of any code compliance.

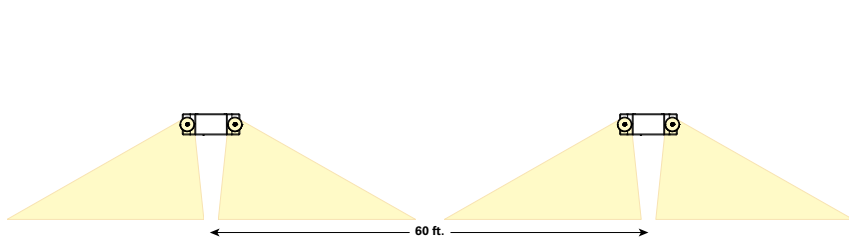
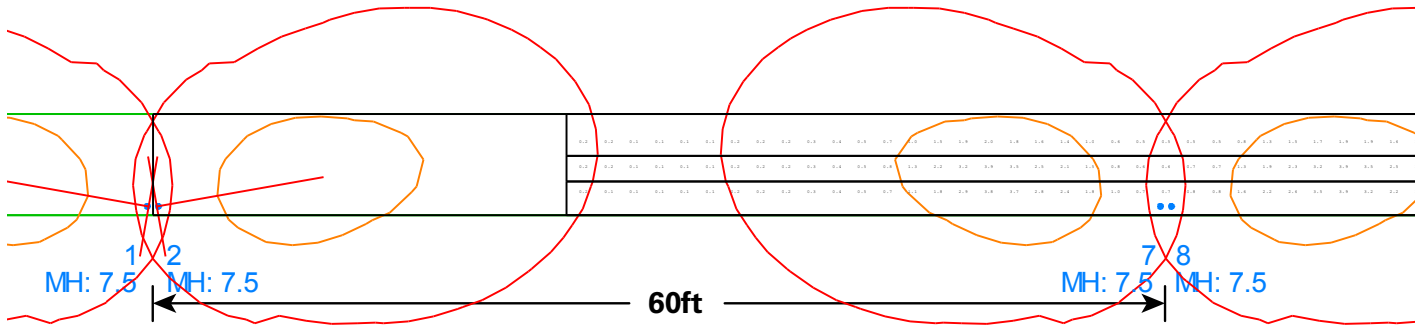
PHOTOMETRY

SEL50



X	Y	Z	Orient	Tilt
24.25	0.33	7.5	158	40
24.75	0.33	7.5	22	40
74.75	0.3	7.5	22	40
74.25	0.292	7.5	158	40

SEL60



X	Y	Z	Orient	Tilt
-0.25	0.5	7.5	170	57
0.25	0.5	7.5	10	57
120.25	0.5	7.5	10	57
119.75	0.5	7.5	170	57
59.75	0.5	7.5	170	57
60.25	0.5	7.5	10	57
180.25	0.5	7.5	10	57
179.75	0.5	7.5	170	57

***The "Rule of Thumb" spacing guidelines are designed to achieve 1 foot-candle average and 0.1 foot-candle minimum with a 40:1 maximum/minimum ratio. The corridor used is 100 feet long, 9 foot ceiling with a 6 foot wide walkway and 3 foot path of egress. The reflectances are 80% ceiling, 50% walls and 20% floors. The fixture mounting height is 7.5 feet. Eaton assumes no responsibility for local requirements or specific project variables. This is a guideline to be used as a design aid, not as guarantee of any code compliance.

TECHNICAL DATA

Mechanical Housing

All components are injection molded with a color stable, high impact thermoplastic resin. The surface is textured to improve aesthetic appearance. The housing construction is designed with snap-fit components and reinforcement ribs to provide maximum strength at minimum installation effort. The mounting hole pattern is universal to junction box requirements and is suitable for both wall and ceiling mount applications.

EZ Key – External Power Disconnect

Prevents the battery from cycling during the construction phase and ensures battery is not drained from power cycling.

EZ Hang – Mounting Feature

The hands-free EZ Hang feature allows the installer to hang the emergency light face from the back plate in order to easily and efficiently make the power connections.

Self-Diagnostics

The self-diagnostic software will automatically perform all tests required by UL924, and NFPA101 and will systematically calibrate itself in the field; thus reducing installation labor and eliminating manual calibration errors. The system indicates the status of the emergency light at all times using the LED indicator. A 90 minute battery power (emergency mode) simulation test will occur once every 12 months. A 30 second battery power simulation test will occur every 30 days.

The Solid-State microprocessor based system has the ability to accurately detect and warn of system failures, plus it incorporates all of the standard electronic features that sets Sure-Lites apart from its competition.

Low-Voltage Disconnect

The low-voltage circuitry disconnects the lighting load to protect the battery after run times in excess of the 90 minute UL limit. The disconnect remains in effect until normal utility power is restored preventing deep battery discharge.

Brownout Circuit

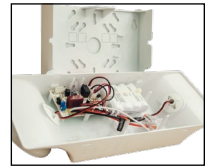
The brownout circuit on the SEL emergency light monitors the flow of AC current to the unit and activates the emergency light heads when a predetermined reduction of AC power occurs.

Warranty

SEL units are backed by a five-year warranty on the fixtures.



EZ Key



EZ Hang

SELF-DIAGNOSTIC TESTING OPERATIONS

The Sure-Lites Self-Diagnostics is continuously monitoring your emergency fixture, and will signal any failure through the 3 color indicator LED.

Initial Operation:

When the unit is first powered up it will go into a 24 hour fast charge and the indicator LED will pulse green. Once the unit has fully charged it will perform a self calibration. After self calibration, the LED will change to steady green indicating the unit is fully charged and float charging the battery to maintain readiness.

Automatic Testing:

The unit will perform a battery capacity, lamp/LED, and charge circuit test every 30 days for 30 seconds. During this time, the indicator LED will change to a steady yellow. It will perform a full battery capacity (90 minute) test once per year. During this time, the indicator LED will change to a blinking yellow.

Manual Testing:

- 10 Second "Installation" test – Press and release the test button once during fast charge (blinking green) to initiate a 10 second quick test. The sign will switch to emergency mode for 10 seconds allowing the installer to verify proper installation of the unit, and the LED indicator will turn solid yellow.
- 30 Second Test - Press and release the test button once during float charge (steady green). The indicator LED will turn steady yellow to indicate the unit is performing a 30 second test of the batteries and lamps/LEDs.
- 90 Minute Test - Press and release the test button a second time during a 30 second test (steady yellow) to change to a 90 minute test. During this test, the LED indicator will change to blinking yellow, and the circuit will perform a full battery capacity, charge circuit, and LED test.
- Canceling Test – Press and release the test button during the 90 minute test (flashing yellow) to return the fixture to its original state (fast charge or float charge)

Laser Test:

The SEL SD products are equipped with a Laser Test function that allows the unit to be manually tested without the need to physically press the test button. Shining a laser pointer in the hole marked "LASER TEST" on the bottom of the unit has the same effect as a press and release of the test button.

Clearing Failure Codes:

- A battery failure (LED two blink red) can be cleared by replacing the battery. Disconnecting the battery and AC power, or performing a full 90 minute discharge will reset the error code, however, it will return if the battery is faulty
- Charge Circuit (LED three blink red) and lamp/LED failure (LED four blink red) will clear when the unit successfully passes a manual or automatic 30 second test.









SELF-DIAGNOSTIC TESTING OPERATIONS

Indicators:

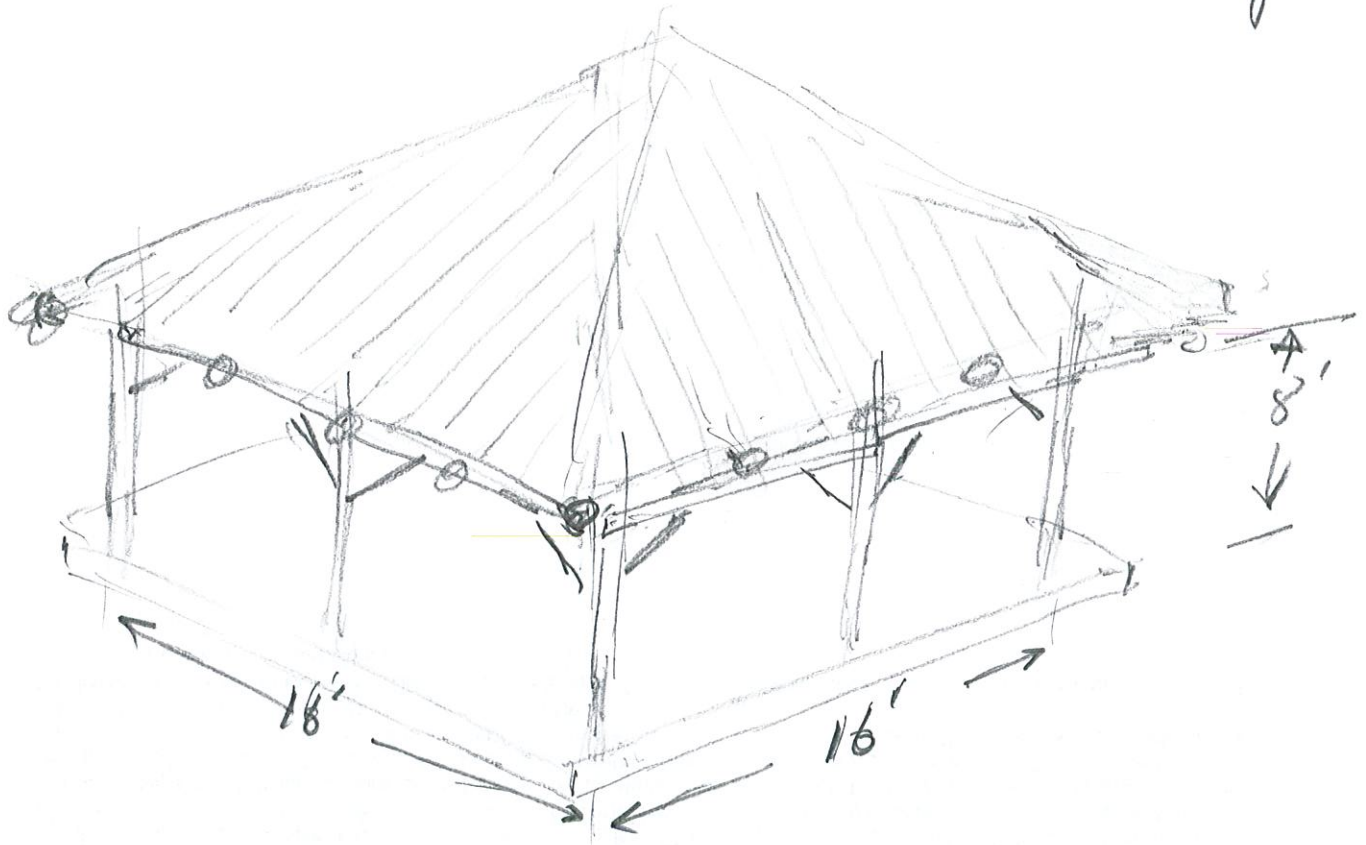
- LED Off - No power to unit, emergency mode.
- LED Steady Green - Unit is fully charged and is float charging the battery to maintain readiness.
- LED Green Pulse - Unit is in a 24 hour fast charge of the battery.
- LED Two Blink Red - Battery has failed a capacity test, or the battery is disconnected. See "Clearing Failure Codes" above.
- LED Three Blink Red - Battery charge circuit has failed. See "Clearing Failure Codes" above.
- LED Four Blink Red - Lamps have burned out, or on an EXIT/Combo, 50% or more of the LEDs have failed. See "Clearing Failure Codes" above.
- LED Steady Yellow - 30 second test or 10 second quick test (Fast Charge only).
- LED Blinking Yellow - 90 minute test.

Maintenance:

None required. Replace the batteries as needed according to ambient conditions. However, we recommend that the equipment be tested regularly in accordance with local codes.

SURE-LITES SELF DIAGNOSTICS EAT•N	 OFF - EMERGENCY MODE / POWER OFF	 STEADY BLINK YELLOW - 90 MINUTE TEST
	 STEADY BLINK GREEN - FAST CHARGE	 2 BLINK RED - BATTERY FAILURE
	 STEADY GREEN - FULL / FLOAT CHARGE	 3 BLINK RED - CHARGE CIRCUIT FAILURE
	 STEADY YELLOW - QUICK TEST	 4 BLINK RED - LAMP / LED FAILURE

4/12
pitch



6" Thicker Edge SLAB.

RE Purposed MATERIALS.

METAL ROOF

HOPS FIELD BREAK
BEO MOR, LLC SHELTER
FOUR WINDS FARM
1913 S. FISH HATCHERY RD.
6-24-20 OCB RD.