

# LF4SL LENS

4" LED Lensed Downlight  
120V-277V • 0-10V Dimming • NSF2

LiteFrame LF4SL is a 4" specification grade LED lensed downlight that utilizes high efficiency LEDs to obtain color consistency, energy savings, and low maintenance costs. 50,000 hours minimum life up to 35°C (95°F) in open plenum applications.

## SPECIFICATIONS

**Housing:** One-piece 22 gauge non-corrosive steel platform. Pre-wired j-box with snap-on cover for easy access. Snap-in connection from driver compartment allows easy installation of light engine/trim assembly without tools above or below the ceiling and can be upgraded to accommodate technology improvements. Approved for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through wiring.

**Reflector:** High purity aluminum, Alzak, iridescence suppressed, semi-diffuse reflector. Self-trim standard.

**IP65 and VR:** IP65 and vandal-resistant (VR) options are made of 16GA cold rolled steel stampings and come standard with a clear high impact polycarbonate lens. Each option uses self tapping stainless steel screws painted to match the white trim color standard; tamper-resistant screws are used on the VR option only. The IP65 rated option is completely sealed without the use of silicone on standard non-porous ceiling surfaces.

**LED Light Engine:** The LF4SL uses the Philips Fortimo DLM LED Module. This module provides controlled color consistency (3 SDCM) from fixture to fixture. The system is designed for optimal life and lumen maintenance (>50,000 hours at 70% lumen maintenance). Both reflector and light engine assembly are mechanically retained to housing.

**LED Driver:** The LF4SL utilizes the Philips Fortimo LED Driver specifically designed to optimize efficiency of the Fortimo DLM Module. Driver is designed to match the 50,000 hours minimum life expectancy of the system. Meets UL Class 2, inherent short circuit protection, self limited, overload protected. If critical temperatures are reached on driver or LED module, integrated thermal feedback loop will gradually reduce current to protect system life. Driver is universal 120V-277V. Optional Lutron Series A driver is also available.

Catalog Number

Comments

Type

LiteFrame™



**Dimming:** Comes standard with 0-10V dimming capability. Flicker-free dimming to 10%. 0-10V control may consume up to 1mA. 0-10V, Lutron 2 wire and EcoSystem dimming available to 1% and DMX with RDM (Remote Device Management) dimming to less than 0.1%.

**Installation:** Adjustable Bar hangers included (not with CP option). Universal adjustable mounting brackets also accept 1/2" EMT conduit or 1/2" or 3/4" lathing channel (by others) or Prescolite 24" bar hangers (B24 or B6).

**Certifications:** CSA certified to US and Canadian safety standards. Suitable for wet locations. Approved for through wiring. Non-IC rated. EMR is damp rated use only. UL approved for NSF2 splash zone applications.

**Warranty:** 5 year warranty. See [www.prescolite.com](http://www.prescolite.com) for details.

## ORDERING GUIDE

Order housing, reflector, and accessories separately.

EXAMPLE: LF4SL-4LFS11L30K8DL

HOUSING		DRIVER OPTION	HOUSING OPTIONS	TRIM APERTURE	KELVIN	REF. FINISH OPTIONS	REF. COLOR OPTIONS	REFLECTOR OPTIONS	LENS	ACCESSORIES	
<input type="checkbox"/> <b>LF4SL</b> Standard Lumen 0-10V 10% dimming 120-277V	<i>Standard Dimming</i> <input type="checkbox"/> <b>DM1</b> 0-10V dimming at 1% <input type="checkbox"/> <b>DMT13,14</b> SpectraSync™ Tunable White <input type="checkbox"/> <b>DMTW15</b> SpectraSync™ Tunable Dim to Warm		<input type="checkbox"/> <b>EMR<sup>2</sup></b> Emergency Battery Pack with integral test switch and indicator light <input type="checkbox"/> <b>CP2,3,4,16,18</b> Chicago Plenum <input type="checkbox"/> <b>LV11</b> Lutron Vive Enabled, 0-10V, 120-277V <input type="checkbox"/> <b>NXWE<sup>3,17,18</sup></b> NX Wireless Enabled <input type="checkbox"/> <b>NXE<sup>3,17,18</sup></b> NX Enabled, Dual SmartPorts	<b>OUTPUT</b> <input type="checkbox"/> <b>11L</b> 1100 Lumen Module <input type="checkbox"/> <b>15L</b> 1500 Lumen Module <input type="checkbox"/> <b>20L16</b> 2000 Lumen Module	<input type="checkbox"/> <b>27K</b> 2700 Kelvin <input type="checkbox"/> <b>30K</b> 3000 Kelvin <input type="checkbox"/> <b>35K</b> 3500 Kelvin <input type="checkbox"/> <b>40K</b> 4000 Kelvin <input type="checkbox"/> <b>50K</b> 5000 Kelvin <input type="checkbox"/> <b>2230TD<sup>19</sup></b> 2200K-3000K SpectraSync™ Dim to Warm <input type="checkbox"/> <b>2750T<sup>19</sup></b> 2700K-5000K SpectraSync™ Tunable White <input type="checkbox"/> <b>2765T<sup>19</sup></b> 2700K-6500K SpectraSync™ Tunable White	<input type="checkbox"/> <b>8</b> 80+ CRI <input type="checkbox"/> <b>9</b> 90+ CRI  <b>REF. FINISH OPTIONS</b> <i>Standard Semi-Diffuse</i> <input type="checkbox"/> <b>SP</b> Specular <input type="checkbox"/> <b>SS</b> Semi-Specular <input type="checkbox"/> <b>MFC</b> American Matte™ <input type="checkbox"/> <b>V</b> Kurt Versen Specular <input type="checkbox"/> <b>VS</b> Kurt Versen Softglow® <input type="checkbox"/> <b>VSS</b> Kurt Versen SoftSheen™	<i>Standard Clear Alzak</i> <input type="checkbox"/> <b>CG</b> Champagne Gold Alzak <input type="checkbox"/> <b>GD</b> Gold Alzak <input type="checkbox"/> <b>BL</b> Black Alzak <input type="checkbox"/> <b>WE</b> Wheat Alzak <input type="checkbox"/> <b>LW</b> Light Wheat Alzak <input type="checkbox"/> <b>PW</b> Pewter Alzak <input type="checkbox"/> <b>WH</b> Painted White <input type="checkbox"/> <b>BC</b> Painted Black Reflector and Flange <input type="checkbox"/> <b>VNCTB<sup>8,12</sup></b> White Non-conductive Trim Baffled	<input type="checkbox"/> <b>FLU<sup>8,9</sup></b> Flush Mount Lens (Brushed Aluminum Flange Standard) <input type="checkbox"/> <b>IP65<sup>6,9,10</sup></b> Flush Lens, Dust and Water tight to IP65 <input type="checkbox"/> <b>VR<sup>6,9,10</sup></b> Vandal Resistant  <b>TRIM OPTIONS</b> <input type="checkbox"/> <b>WT</b> Painted White Flange Only <input type="checkbox"/> <b>TRG</b> Trim Ring Gasket <input type="checkbox"/> <b>BNCT<sup>8,12</sup></b> Black Non-conductive Trim <input type="checkbox"/> <b>WNCT<sup>8,12</sup></b> White Non-conductive Trim <input type="checkbox"/> <b>BNCTB<sup>8,12</sup></b> Black Non-conductive Trim Baffled <input type="checkbox"/> <b>VNCTB<sup>8,12</sup></b> White Non-conductive Trim Baffled	<input type="checkbox"/> <b>CL<sup>7</sup></b> Clear Lens (Regressed Standard) <input type="checkbox"/> <b>DL<sup>7</sup></b> Diffuse Lens (Regressed Standard)  <input type="checkbox"/> <b>B24<sup>4</sup></b> Set of two 24" bar hangers for T-bar ceilings <input type="checkbox"/> <b>B6<sup>4</sup></b> Set of two (2) bar hangers for ceiling joist up to 24" centers <input type="checkbox"/> <b>LiteGear<sup>5</sup></b> Inverter, single phase central lighting, 125VA-250VA <input type="checkbox"/> <b>LPS Series<sup>5</sup></b> LitePower micro-inverter, 20VA-55VA		
<b>Notes:</b> 1 For EDM, 2DM and DMX options, housing output must match trim output 2 Not available with 347V 3 Not available with EMR, DMX, LV or LVE 4 Bar hanger accessory should be selected with CP housing, not included as standard 5 See Central Inverter compatibility note and web links on page 3 6 IP65 and VR can not be chosen together 7 Not available with IP65 or VR 8 Not available with color/finish options. Semi-Diffuse finish only. 9 Not available with BNCT, VNCT, BNCTB, or VNCTB. 10 Not available with FLU 11 LV requires standard dimming or DM1 12 Must select CL or DL 13 Must select either 2750T or 2765T Kelvin with DMT driver option 14 Not available with LV or LVE 15 Must select 2230TD with DMTW driver option 16 Not compatible with DMT or DMTW 17 Not available with CP option 18 Not available with EDM, 2DM or DMX 19 Only available in 90+ CRI											
<b>Use with EDM/2DM/DMX dimming option: Match Housing to Trim Output</b>											
<input type="checkbox"/> <b>LF4SL11L</b> <input type="checkbox"/> <b>LF4SL15L</b> <input type="checkbox"/> <b>LF4SL20L</b>	<input type="checkbox"/> <b>EDM<sup>1</sup></b> Hi-Lume 1% EcoSystem LED Driver <input type="checkbox"/> <b>2DM<sup>1</sup></b> Hi-Lume 1% 2-wire LED Driver (120V only) <input type="checkbox"/> <b>DMX<sup>1</sup></b> DMX with RDM dimming to <0.1%	<input type="checkbox"/> <b>120</b> 120V <input type="checkbox"/> <b>277</b> 277V	<input type="checkbox"/> <b>LVE (EDM Only)</b> Lutron Vive Enabled, EcoSystem  <i>*EDM, 2DM &amp; DMX also available with EMR and WW</i>								

### Notes:

- For EDM, 2DM and DMX options, housing output must match trim output
- Not available with 347V
- Not available with EMR, DMX, LV or LVE
- Bar hanger accessory should be selected with CP housing, not included as standard
- See Central Inverter compatibility note and web links on page 3
- IP65 and VR can not be chosen together
- Not available with IP65 or VR
- Not available with color/finish options. Semi-Diffuse finish only.
- Not available with BNCT, WNCT, BNCTB, or WNCTB.
- Not available with FLU
- LV requires standard dimming or DM1
- Must select CL or DL
- Must select either 2750T or 2765T Kelvin with DMT driver option
- Not available with LV or LVE
- Must select 2230TD with DMTW driver option
- Not compatible with DMT or DMTW
- Not available with CP option
- Not available with EDM, 2DM or DMX
- Only available in 90+ CRI

# LF4SL LENS

4" LED Lensed Downlight  
120V-277V • 0-10V Dimming • NSF2

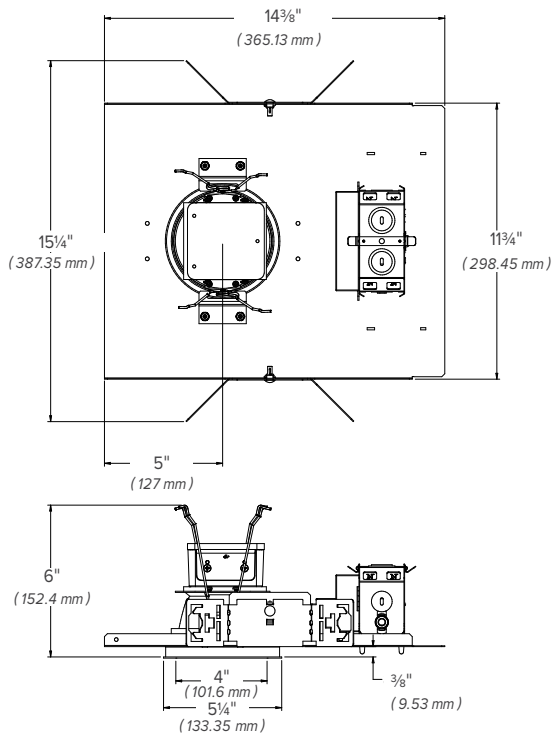
## DIMENSIONS

Ceiling Cutout: 5"

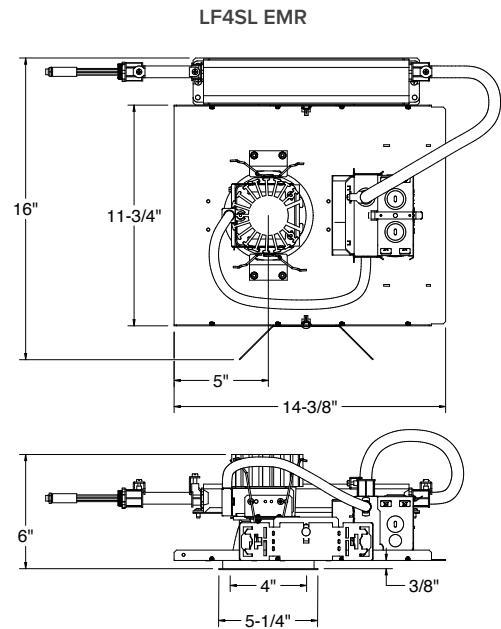
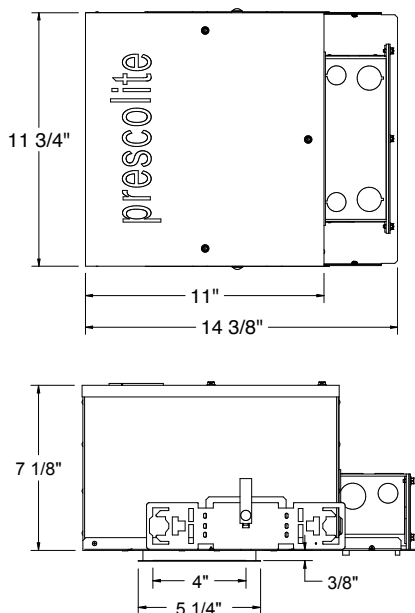
Maximum Ceiling Thickness:  $\frac{5}{8}$ "

For conversion to millimeters, multiply inches by 25.4

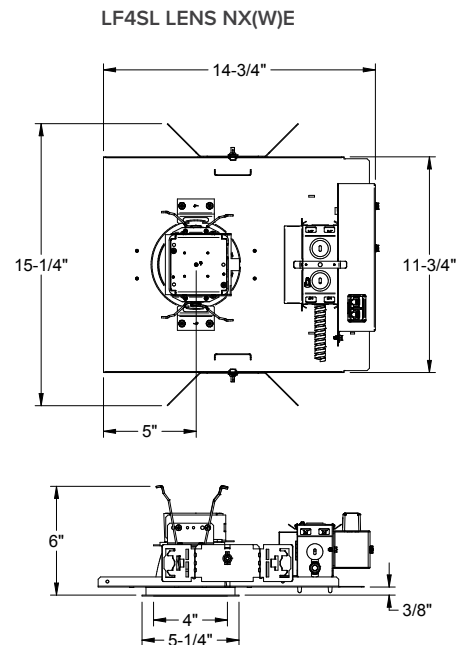
Not to Scale



LF4SL CP



LF4SL EMR



LF4SL LENS NX(W)E

# LF4SL LENS

4" LED Lensed Downlight  
120V-277V • 0-10V Dimming • NSF2

## PHOTOMETRY

DRIVER DATA	4LFSL20L	4LFSL15L	4LFSL11L
Input Voltage	120-277V	120-277V	120-277V
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input Current	0.105A (120V) 0.045A (277V)	0.133A (120V) 0.058A (277V)	0.184A (120V) 0.08A (277V)
Input Power	22.1W	16.2W	12.7W
Power Factor	≥0.90	≥0.90	≥0.90
THD	<20%	<20%	<20%
EMI Filtering	FCC 47CFR Part 15, Class A	FCC 47CFR Part 15, Class A	FCC 47CFR Part 15, Class A
Operating Temperature	-20°C to 35°C	-20°C to 35°C	-20°C to 35°C
Dimming	0-10V	0-10V	0-10V

### Lumen Multiplier Table

Photometrics published below are for the 3000K, 80 CRI.  
This table may be used to approximate the lumen values at different Kelvin temperatures and CRI.

4000 Kelvin	1.07
3500 Kelvin	1.00
3000 Kelvin	1.00
2700 Kelvin	0.95
80 CRI.....	1.00
90 CRI.....	0.91

Over-voltage, over-current, short-circuit protected

\*Power consumption and photometric output may vary slightly with various driver and CRI options.

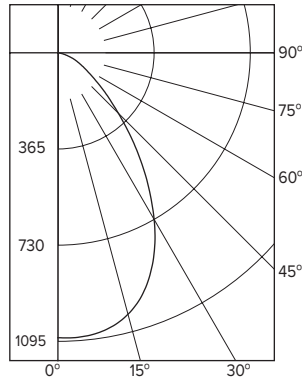
When operating in EM mode, the fixture will deliver approximately 30% of the published full lumen output.

LF4SL-4LFSL20L30KDL  
LED Light Engine: 3000K, 80CRI  
System Wattage: 21.6W  
Fixture Delivered Lumens: 1681  
Fixture Efficacy: 78  
Spacing Criteria: 1.1

Test No. 18.00441-02  
Tested at 25°C Ambient  
in accordance to IESNA  
LM-79-2008

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%LUMINAIRE
0-30	788	47
0-40	1156	69
0-60	1562	93
0-90	1681	100

LUMINANCE DATA IN CANDELA/SQ. METER	
Angle in Vertical	Average
45°	57006
55°	35326
65°	24483
75°	14159
85°	0



### CANDELA DISTRIBUTION

DEG	CANDELA
0	1088
5	1088
15	1034
25	864
35	591
45	327
55	164
65	84
75	30
85	0
90	0

COEFFICIENTS OF UTILIZATION		ZONAL CAVITY METHOD															
Room Cavity Ratio		% Effective Ceiling Cavity Reflectance															
		20% Effective Floor Cavity Reflectance															
		% Wall Reflectance															
		80	70	50	30	10	80	70	50	30	10	80	70	50	30	10	10
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92
2	104	98	93	88	102	96	91	87	90	85	80	86	83	87	84	82	81
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65
5	84	74	67	61	83	73	66	61	71	65	60	69	64	60	67	63	59
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41
10	62	50	43	39	61	50	43	39	49	43	39	48	42	38	47	42	38

LF4SL-4LFSL20L30K8DL

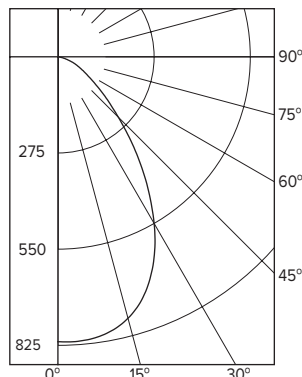
Test No. 18.00441-02

LF4SL-4LFSL15L30KDL  
LED Light Engine: 3000K, 80CRI  
System Wattage: 16.2W  
Fixture Delivered Lumens: 1266  
Fixture Efficacy: 78  
Spacing Criteria: 1.1

Test No. 18.00441-01  
Tested at 25°C Ambient  
in accordance to IESNA  
LM-79-2008

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%LUMINAIRE
0-30	593	47
0-40	871	69
0-60	1176	93
0-90	1266	100

LUMINANCE DATA IN CANDELA/SQ. METER	
Angle in Vertical	Average
45°	42932
55°	26605
65°	18438
75°	10663
85°	0



### CANDELA DISTRIBUTION

DEG	CANDELA
0	819
5	819
15	779
25	651
35	445
45	246
55	124
65	63
75	22
85	0
90	0

COEFFICIENTS OF UTILIZATION		ZONAL CAVITY METHOD															
Room Cavity Ratio		% Effective Ceiling Cavity Reflectance															
		20% Effective Floor Cavity Reflectance															
		% Wall Reflectance															
		80	70	50	30	10	80	70	50	30	10	80	70	50	30	10	10
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92
2	104	98	93	88	102	96	91	87	90	85	80	86	83	87	84	82	81
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65
5	84	74	67	61	83	73	66	61	71	65	60	69	64	60	67	63	59
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41
10	62	50	43	39	61	50	43	39	49	43	39	48	42	38	47	42	38

LF4SL-4LFSL15L30K8DL

Test No. 18.00441-01

# LF4SL LENS

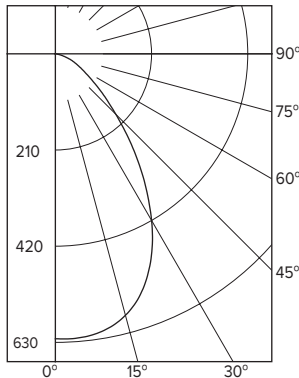
4" LED Lensed Downlight  
120V-277V • 0-10V Dimming • NSF2

LF4SL-4LFL1L30KDL  
LED Light Engine: 3000K, 80CRI  
System Wattage: 12.5W  
Fixture Delivered Lumens: 961  
Fixture Efficacy: 77  
Spacing Criteria: 1:1

Test No. 18.00441  
Tested at 25°C Ambient  
in accordance to IESNA  
LM-79-2008

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%LUMINAIRE
0-30	450	46.9
0-40	661	68.8
0-60	893	92.9
0-90	961	100.0

LUMINANCE DATA IN CANDELA/SQ. METER	
Angle in Vertical	Average
45°	32620
55°	20214
65°	14009
75°	8102
85°	0



## CANDELA DISTRIBUTION

DEG	CANDELA
0	622
5	622
15	591
25	494
35	338
45	187
55	94
65	48
75	17
85	0
90	0

## COEFFICIENTS OF UTILIZATION ZONAL CAVITY METHOD

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																
	80			70			50			30			10				
	20% Effective Floor Cavity Reflectance																
	% Wall Reflectance																
	70	50	30	10	70	50	30	10	70	50	30	10	50	30	10		
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82
3	97	89	82	77	95	87	81	76	84	79	75	82	78	74	79	76	73
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65
5	84	74	67	61	83	73	66	61	71	65	60	69	64	60	67	63	59
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41
10	62	50	43	39	61	50	43	39	49	43	39	48	42	38	47	42	38

LF4SL-4LFL1L30K8DL

Test No. 18.00441

## Dimming Compatibility Table

Dimming Ballast	Manufacturer	Web Link
DM/DM1	Lutron DTVT	<a href="http://bit.ly/11jSvZg">http://bit.ly/11jSvZg</a>
DM/DM1	Leviton AWRMG-7xx, AWSMG-7xx, AWSMT-7xx	<a href="http://bit.ly/1BJn2R9">http://bit.ly/1BJn2R9</a>
EDM	Lutron	<a href="http://bit.ly/1vtjHAI">http://bit.ly/1vtjHAI</a>
2DM	Lutron	<a href="http://bit.ly/1S4WjXK">http://bit.ly/1S4WjXK</a>

## DMX

See instruction sheet on [www.prescolite.com](http://www.prescolite.com) for connection & installation information.

Other useful links: <http://www.eldoled.com/led-drivers/powerdrive/50-watt/ac-561s/>

## Central Inverters

For full fixture output in back-up mode, we recommend you visit [www.dual-lite.com](http://www.dual-lite.com) for your Central Lighting Inverter options. Please contact your local Hubbell representative for any assistance with proper sizing and loading of your inverter selection. Central lighting inverters must be ordered separately.

LiteGear: [www.dual-lite.com/products/litegear\\_lg\\_series](http://www.dual-lite.com/products/litegear_lg_series)

LPS Series: [www.dual-lite.com/products/lps](http://www.dual-lite.com/products/lps)

## SpectraSync™ Color Tuning Technology: SpectraSync™

Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with two distinct SpectraSync™ Color Tuning Technology.

**Dim to Warm:** Dim to Warm mimics the familiar warming effect that occurs with traditional incandescent sources as they are dimmed.  
(Available with 2200K-3000K).

**Tunable White:** Tunable White offers users the ability to tailor CCT to their personal preference, enhancing task visibility, material and colors or the aesthetics of the space. (Available with 2700K-5000K or 2700K-6500K).

See separate [SpectraSync™ Tech Sheet](#) for additional details.

## NX Distributed Intelligence: NX DISTRIBUTED INTELLIGENCE

Supports indoor and outdoor applications, wired, wireless and hybrid networked NX lighting control deployments and enables emerging applications such as Hubbell Lighting's SpectraSync™ color tuning technology.

See separate [NX™ Solutions Guide](#) for additional details.

See Hubbell Controls Solution [NX Brochure](#).