

# LF6SL LENS

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

LiteFrame LF6SL is a 6" 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.

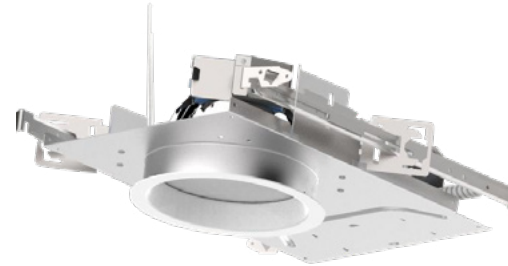
**Reflector:** High purity aluminum, Alzak, iridescence suppressed, semi-diffuse reflector. Self-trim standard.

**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 LF6SL 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 LF6SL 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



**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 - IP65 rated. 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 for details.

## ORDERING GUIDE

Order housing, reflector, and accessories separately.

EXAMPLE: LF6SLDM1-6LFSL15L35K8WT

HOUSING	DRIVER OPTION	HOUSING OPTIONS	TRIM APERTURE	KELVIN	CRI	REF. COLOR OPTIONS	TRIM OPTIONS	LENS	ACCESSORIES
<input type="checkbox"/> <b>LF6SL</b> Standard Lumen 0-10V 10% dimming 120-277V	Standard 0-10V 10% Dimming <input type="checkbox"/> <b>DM1</b> 0-10V dimming at 1% <input type="checkbox"/> <b>DMT14,15</b> SpectraSync™ Tunable White <input type="checkbox"/> <b>DMTW16</b> SpectraSync™ Tunable Dim to Warm  <b>VOLTAGE OPTION</b> Standard 120V-277V <input type="checkbox"/> <b>347</b> 347V	<input type="checkbox"/> <b>EMR<sup>2</sup></b> Emergency Battery Pack with remote test switch and indicator light <input type="checkbox"/> <b>CP2,3,4,5,15,17</b> Chicago Plenum <input type="checkbox"/> <b>LV12</b> Lutron Vive Enabled, 0-10V, 120-277V <input type="checkbox"/> <b>NXWE3,15,18,19</b> NX Wireless Enabled <input type="checkbox"/> <b>NXE3,15,18,19</b> NX Enabled, Dual SmartPorts	<input type="checkbox"/> <b>6LFSL</b> Semi-Diffuse Clear Alzak  <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>20L17</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>2230TD20</b> 2200K-3000K SpectraSync™ Dim to Warm <input type="checkbox"/> <b>2750T20</b> 2700K-5000K SpectraSync™ Tunable White <input type="checkbox"/> <b>2765T20</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 OPTION</b> <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™	Standard Clear Alzak <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 Matte White Reflector and Flange <input type="checkbox"/> <b>BC</b> Painted Black Reflector and Flange  <b>REFLECTOR OPTIONS</b> <input type="checkbox"/> <b>FLU9,10</b> Flush Mount (Brushed Aluminum Flange Standard) <input type="checkbox"/> <b>IP657,10,11</b> Flush Lens, Dust and Water Tight to IP65 <input type="checkbox"/> <b>VR7,10,11</b> Vandal Resistant	<input type="checkbox"/> <b>WT</b> Painted White Flange Only <input type="checkbox"/> <b>TRG</b> Trim Ring Gasket <input type="checkbox"/> <b>WF10</b> Wide Flange <input type="checkbox"/> <b>BNCT9,13</b> Black Non-conductive Trim <input type="checkbox"/> <b>WNCT9,13</b> White Non-conductive Trim <input type="checkbox"/> <b>BNCTB9,13</b> Black Non-conductive Trim Baffled <input type="checkbox"/> <b>WNCTB9,13</b> White Non-conductive Trim Baffled	<input type="checkbox"/> <b>CL<sup>8</sup></b> Clear Lens (Regressed Standard) <input type="checkbox"/> <b>DL<sup>8</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>LFSC6</b> 6" Reflector screw cover <input type="checkbox"/> <b>SCA6</b> Sloped ceiling adapter (see note on back page) <input type="checkbox"/> <b>LiteGear<sup>6</sup></b> Inverter, single phase central lighting, 125VA-250VA <input type="checkbox"/> <b>LPS Series<sup>6</sup></b> LitePower micro-inverter, 20VA-55VA	
Use with EDM/2DM/DMX dimming option: Match Housing to Trim Output									
<input type="checkbox"/> <b>LF6SL11L</b> <input type="checkbox"/> <b>LF6SL15L</b> <input type="checkbox"/> <b>LF6SL20L</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 *EDM, 2DM & DMX also available with EMR and WW						

STANDARD 0-10V DIMMING

ALTERNATIVE DIMMING TO 1% & 0.1%

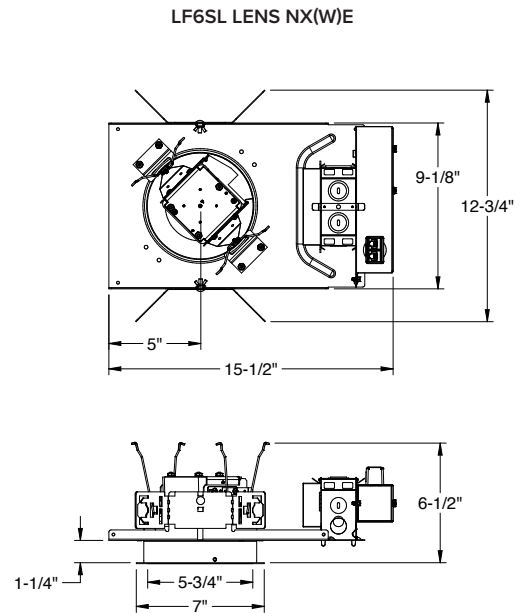
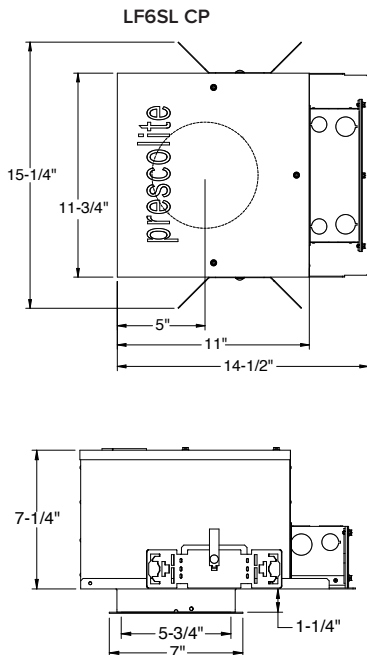
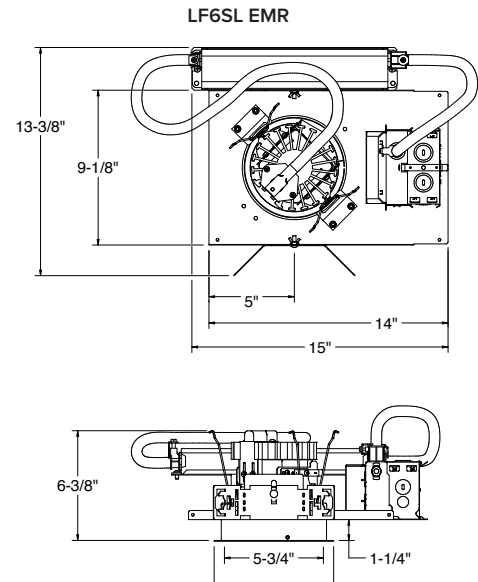
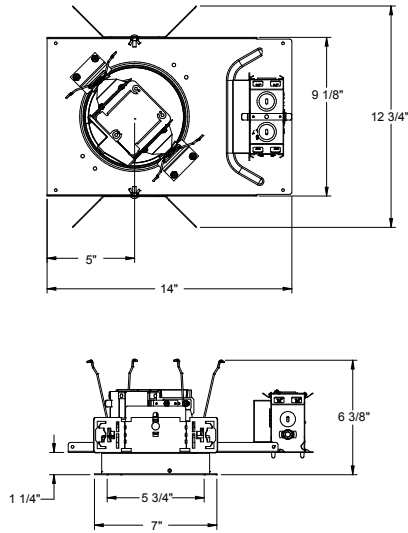
- NOTES:**
- For EDM, 2DM and DMX options, housing output must match trim output
  - Not available with 347V
  - Not available with EMR
  - Bar hanger accessory should be selected with CP housing, not included as standard
  - Not available with DMX
  - See Central Inverter compatibility note and web links on page 5
  - 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 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

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## DIMENSIONS

Ceiling Cutout: 6 1/4"  
Maximum Ceiling Thickness: 1 1/4"  
For conversion to millimeters, multiply inches by 25.4  
Not to Scale



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## PHOTOMETRY

DRIVER DATA	6LFSL20L	6LFSL15L	6LFSL11L
Input Voltage	120-277V	120-277V	120-277V
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input Current	0.184A (120V)	0.133A (120V)	0.105A (120V)
	0.08 (277V)	0.058A (277V)	0.045A (277V)
Input Power	22.1W	16.0W	12.6W
Power Factor	≥0.90	≥0.90	≥0.90
THD	<20%	<20%	<20%
EMI Filtering	FCC 47CFR	FCC 47CFR	FCC 47CFR
	Part 15, Class A	Part 15, Class A	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.

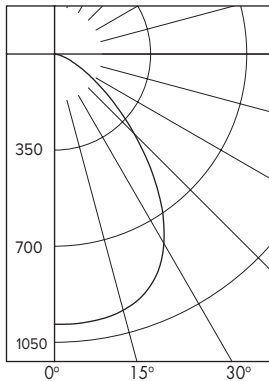
LF6SL-6LFSL20L30K8DL  
LED Light Engine: 3000K, 80CRI  
System Wattage: 22.1W  
Fixture Delivered Lumens: 1806  
Fixture Efficacy: 82  
Spacing Criteria: 1.2

Test No. 17.01419  
Tested at 25°C Ambient  
in accordance to IESNA  
LM-79-2008

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%LUMINAIRE
0-30	770	42.6
0-40	1192	66.0
0-60	1691	93.6
0-90	1806	100.0

### LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average
45°	34610
55°	20605
65°	11440
75°	6227
85°	0



### CANDELA DISTRIBUTION

DEG	CANDELA
0	984
5	985
15	966
25	883
35	681
45	410
55	198
65	81
75	27
85	0
90	0

### COEFFICIENTS OF UTILIZATION ZONAL CAVITY METHOD

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																
	80		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	94	93	91
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81
3	96	88	81	76	94	87	80	76	84	79	74	81	77	73	79	75	72
4	90	80	73	67	88	79	72	67	76	70	66	74	69	65	72	68	64
5	84	73	65	60	82	72	65	59	70	63	59	68	62	58	66	61	58
6	78	67	59	53	76	66	58	53	64	58	53	62	57	52	61	56	52
7	73	61	54	48	71	60	53	48	59	52	48	58	52	47	56	51	47
8	68	56	49	44	67	56	49	44	54	48	43	53	47	43	52	47	43
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	43	39
10	60	49	41	37	59	48	41	37	47	41	36	46	40	36	45	40	36

LF6SL-6LFSL20L30K8DL Test No. 18.00419

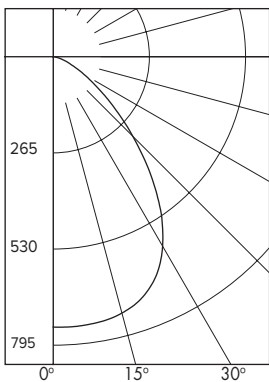
LF6ML-6LFSL15L30K8DL  
LED Light Engine: 3000K, 80CRI  
System Wattage: 16.0W  
Fixture Delivered Lumens: 1360  
Fixture Efficacy: 85  
Spacing Criteria: 1.2

Test No. 17.01419-02  
Tested at 25°C Ambient  
in accordance to IESNA  
LM-79-2008

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%LUMINAIRE
0-30	580	42.6
0-40	898	66.0
0-60	1273	93.6
0-90	1360	100.0

### LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average
45°	26037
55°	15501
65°	8606
75°	4684
85°	0



### CANDELA DISTRIBUTION

DEG	CANDELA
0	741
5	742
15	727
25	665
35	513
45	309
55	149
65	61
75	20
85	0
90	0

### COEFFICIENTS OF UTILIZATION ZONAL CAVITY METHOD

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																
	80		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	94	93	91
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81
3	96	88	81	76	94	87	80	76	84	79	74	81	77	73	79	75	72
4	90	80	73	67	88	79	72	67	76	70	66	74	69	65	72	68	64
5	84	73	65	60	82	72	65	59	70	63	59	68	62	58	66	61	58
6	78	67	59	53	76	66	58	53	64	58	53	62	57	52	61	56	52
7	73	61	54	48	71	60	53	48	59	52	48	58	52	47	56	51	47
8	68	56	49	44	67	56	49	44	54	48	43	53	47	43	52	47	43
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	43	39
10	60	49	41	37	59	48	41	37	47	41	36	46	40	36	45	40	36

LF6ML-6LFSL15L30K8DL Test No. 18.00419-02

# LF6SL LENS

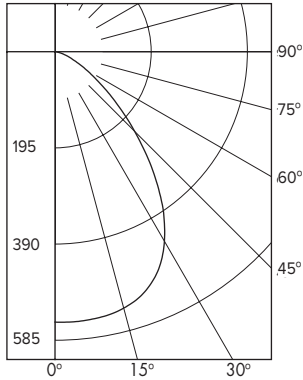
6" LED Lensed Downlight  
120V-277V • 0-10V Dimming • NSF2

LF6SL-6LFSL1L30K8DL  
LED Light Engine: 3000K, 80CRI  
System Wattage: 12.6W  
Fixture Delivered Lumens: 1013  
Fixture Efficacy: 80  
Spacing Criteria: 1.2

Test No. 18.00419-03  
Tested at 25°C Ambient  
in accordance to IESNA  
LM-79-2008

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%LUMINAIRE
0-30	432	31.8
0-40	669	49.2
0-60	948	69.7
0-90	1013	74.5

LUMINANCE DATA IN CANDELA/SQ. METER	
Angle in Vertical	Average
45°	19397
55°	11548
65°	6412
75°	3490
85°	0



CANDELA DISTRIBUTION	
DEG	CANDELA
0	552
5	553
15	542
25	495
35	382
45	230
55	111
65	45
75	15
85	0
90	0

Room Cavity Ratio		ZONAL CAVITY METHOD															
		% Effective Ceiling Cavity Reflectance					% Wall Reflectance										
		20% Effective Floor Cavity Reflectance															
		% Wall Reflectance															
		80		70		50		30		10							
Room Cavity Ratio	Ratio	70	50	30	10	70	50	30	10	50	30	10	50	30	10		
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81
3	96	88	81	76	94	87	80	76	84	79	74	81	77	73	79	75	72
4	90	80	73	67	88	79	72	67	76	70	66	74	69	65	72	68	64
5	84	73	65	60	82	72	65	59	70	63	59	68	62	58	66	61	58
6	78	67	59	53	76	66	58	53	64	58	53	62	57	52	61	56	52
7	73	61	54	48	71	60	53	48	59	52	46	58	52	47	56	51	47
8	68	56	49	44	67	56	49	44	54	48	43	53	47	43	52	47	43
9	64	52	45	40	63	52	45	40	51	44	40	50	44	40	49	43	39
10	60	49	41	37	59	48	41	37	47	41	36	46	40	36	45	40	36

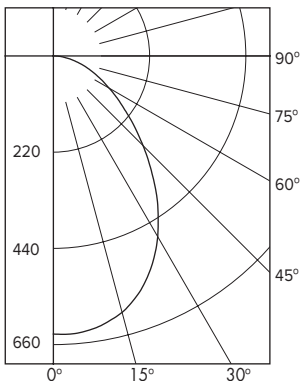
LF6SL-6LFSL1L30K8DL Test No. 18.00419-03

LF6SL-6LFSL15L30K8FLUDL  
LED Light Engine: 3000K, 80CRI  
System Wattage: 12.6W  
Fixture Delivered Lumens: 1013  
Fixture Efficacy: 80  
Spacing Criteria: 1.2

Test No. 18.00420  
Tested at 25°C Ambient  
in accordance to IESNA  
LM-79-2008

ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%LUMINAIRE
0-30	474	35.9
0-40	734	55.5
0-60	1126	85.2
0-90	1322	100.0

LUMINANCE DATA IN CANDELA/SQ. METER	
Angle in Vertical	Average
45°	26757
55°	21270
65°	17598
75°	14872
85°	0



CANDELA DISTRIBUTION	
DEG	CANDELA
0	636
5	636
15	607
25	531
35	416
45	290
55	187
65	114
75	59
85	18
90	0

Room Cavity Ratio		ZONAL CAVITY METHOD															
		% Effective Ceiling Cavity Reflectance					% Wall Reflectance										
		20% Effective Floor Cavity Reflectance															
		% Wall Reflectance															
		80		70		50		30		10							
Room Cavity Ratio	Ratio	70	50	30	10	70	50	30	10	50	30	10	50	30	10		
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88
2	101	94	87	82	99	92	86	81	88	84	79	85	81	78	82	79	76
3	93	83	76	70	91	82	75	70	79	73	68	76	71	67	74	70	66
4	86	75	67	61	84	74	66	60	71	65	60	69	63	59	67	62	58
5	80	68	59	53	78	67	59	53	65	58	52	63	57	52	61	56	51
6	74	62	53	47	72	61	53	47	59	52	47	57	51	46	56	50	46
7	69	56	48	42	67	56	48	42	54	47	42	53	46	42	51	46	41
8	64	52	44	38	63	51	43	38	50	43	38	49	42	38	47	42	38
9	60	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	35	31

LF6SL-6LFSL15L30K8FLUDL Test No. 18.00420

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**Dimming Compatibility Table**

Dimming Ballast	Manufacturer	Web Link
DM/DM1	Lutron DDTV	<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:**

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:**

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](#).