

# 6" LED Downlight LF6SL LENS

120V-277V 0-10V Dimming

### **APPLICATIONS:**

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.

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. Approve for 8 (4 in/4 out) No. 12 AWG conductors rated for 90°C through

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; tamperresistant 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:**

STANDARD 0-10V DIMMING

ALTERNATIVE DIMMING TO 1% & 0.1%

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

#### 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 hour 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.

Comes standard with 0-10V dimming capability. Flickerfree dimming to 10%. 0-10V control may consume up to 1 mA. 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 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.

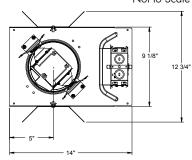
5 year warranty. See www.prescolite.com for details.

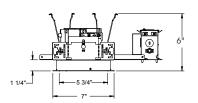
DATE: FIRM NAME

# LiteFrame

PROJECT:

Ceiling Cutout: 6-1/4" Maximum Ceiling Thickness 11/4" For conversion to millimeters, multiply inches by 25.4 Not to Scale





See page 5 for EMR, CP and

	_												NX(W)E	lin	ne art.
_	CATALOG 1	NUMBER:										EXAM	PLE: LF6SL	D٨	11-6LFSL15L35K8WT
	Order housin	g, reflector, and	acce	sories separately	,										
	HOUSING	DRIVER OPTION		DUSING _ PTIONS		TRIM APERTURE	KELVIN		. FINISH PTION	EF. COLOR OPTIONS	C	TRIM PTIONS L	ens -		ACCESSORIES
	Standard Lumen 0-10V 10% dimming 120-277V	Standard 0-10V 10% Dimming DM1 0-10V dimming at 1% SpectraSync Tunable Wh DMTW16 SpectraSync Tunable Dim to Warm VOLTAGE OPTION Standard 120V-277V 347	ite	EMR <sup>2</sup> Emergency Battery Pack with remote test switch and indicator light CP2.3.4.5,15,17 Chicago Plenum LV <sup>12</sup> Lutron Vive Enabled, 0-10V, 120-277V NXWE3.15,18,14 NX Wireless Enabled NXE3.15,18,19 NX Enabled, Dual SmartPorts		1500 Lumen Module	3000 Kelvin 35K 3500 Kelvin 40K 4000 Kelvin 50K 5000 Kelvin 2230TD <sup>20</sup> 2200K-3000K SpectraSync™ 2750T <sup>20</sup> 2700K-5000K SpectraSync™ Tunable White 2765T <sup>20</sup> 2700K-6500K	Se	andard mi-Diffuse SP Specular SS Semi- Specular MFC American Matte™ V Kurt Verser Specular VS Kurt Verser Softglow® VS Kurt Verser SoftSheen™	Gold Alzak <b>BL</b> Black Alzak		Painted White Flange Only TRG Trim Ring Gasket WF10 Wide Flange BNCT9.13 Black Non-conductive Trim	output must  Not availab  Not availab	DM matrices	
	LF6SL11L	latch Housin	g to	277V Enc Ecc	E (E nly) on able oSys	I <b>DM</b> Vive	SpectraSync™ Tunable White  CRI  8 80+ CRI  9 90+ CRI			Painted Black Reflector and Flange  REFLECTOR OPTIONS  1 FLU <sup>9,10</sup> Flush Mount Aluminum Flange	(Brush	Baffled	housing, no. 5 Not availab 6 See Central links on pay 7 IP65 and VI 8 Not availab Semi-Diffuse 10 Not availab 11 Not availab 11 Not availab	le w lnve ge 2 car le w le w finis le w	luded as standard ith DMX rter compatibility note and web 1 not be chosen together ith IP65 or VR ith color/finish options. h only. ith BNCT, WNCT, BNCTB, or WNCT ith FLU ard dimming or DM1
		□ DMX¹		also a	ıvail	able with				IP65 <sup>7,10,11</sup>			14 Must select	eithe	r 2750T or 2765T Kelvin with



DMX with RDM

EMR and WW

dimming

Flush Lens, Dust and Water Tight to IP65 VR7,10,11

Vandal Resistant

Must select 2230TD with DMTW driver option Not compatible with DMT or DMTW

19 Not available with EDM, 2DM or DMX 20 Only available in 90+ CRI

DMT driver option
15 Not available with LV or LVE

<sup>18</sup> Not available with CP option

# PHOTOMETRIC DATA

# LiteFrame - 6" LF6SL Lens

DRIVER DATA	6LFSL20L	6LFSL15L	6LFSL11L						
Input Voltage	120-277V	120-277V	120-277V						
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz	Laman Markinkan Talala					
Input Current	0.184A (120V)	0.133A (120V)	0.105A (120V)	Lumen Multiplier Table					
	0.08 (277V)	0.058A (277V)	0.045A (277V)	Photometrics published below are for the 3000K, 80 CRI.					
Input Power	22.1W	16.0W	12.6W	This table may be used to approximate the lumen values of					
Power Factor	≥0.90	≥0.90	≥0.90	different Kelvin temperatures and CRI.					
THD	<20%	<20%	<20%						
EMI Filtering	FCC 47CFR	FCC 47CFR	FCC 47CFR	4000 Kelvin 1.07					
·	Part 15, Class A	Part 15, Class A	Part 15, Class A	3500 Kelvin 1.00					
Operating Temperature	-20°C to 35°C	-20°C to 35°C	-20°C to 35°C	3000 Kelvin 1.00					
Dimming	0-10V	0-10V	0-10V	2700 Kelvin 0.95					
Over-voltage, over-curre	nt, short-circuit protec	ted							
*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.									

**Delivered Lumens** 

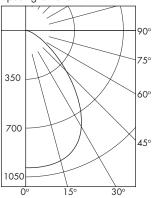
The table below shows the delivered lumens for the various lumen outputs.

Output	CRI	Lens	Delivered Lumens	Input Watts	Lumens Per Watt	Full Catalog String
11L	80	DL	1013	12.6	80	LF6SL-6LFSL11L30K8DL
11L	80	FLUDL	985	12.6	78	LF6SL-6LFSL11L30K8FLUDL
1 <i>5</i> L	80	DL	1360	16.0	85	LF6SL-6LFSL1 <i>5</i> L30K8DL
1 <i>5</i> L	80	FLUDL	1322	16.0	83	LF6SL-6LFSL15L30K8FLUDL
20L	80	DL	1806	22.1	82	LF6SL-6LFSL20L30K8DL
20L	80	FLUDL	1756	22.1	79	LF6SL-6LFSL20L30K8FLUDL
11L	90	DL	879	13.9	63	LF6SL-6LFSL11L30K9DL
15L	90	DL	1319	19.1	69	LF6SL-6LFSL15L30K9DL
20L	90	DL	1504	25.1	60	LF6SL-6LFSL20L30K9DL

# LF6SL-6LFSL20L30K8DL

LED Light Engine: 3000K, 80 CRI System Wattage: 22.1W Fixture Delivered Lumens: 1806

Fixture Efficacy: 82 Spacing Criteria: 1.2



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

Test No. 18.00419
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							
90-180	0	0.0							
0-180	1806	100.0							

LUMINANCE DATA IN CANDELA/ SQ. METER								
Angle in Vertical	Average							
45°	34610							
55°	20605							
65°	11440							
75°	6227							
85°	0							

≥		% Effective Ceiling Cavity Reflectance															
Cavity		8	0		70				50			30			10		
m Ca Ratio		20% Effective Floor Cavity Reflectance % Wall Reflectance															
Room																	
ĕ	70	50	30	10	70	50	30	10	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	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

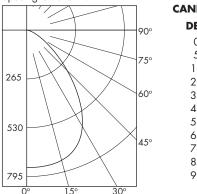




# LF6SL-6LFSL15L30K8DL

LED Light Engine: 3000K, 80 CRI System Wattage: 16.0W Fixture Delivered Lumens: 1360

Fixture Efficacy: 85 Spacing Criteria: 1.2



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

Test No. 18.00419-02

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								
90-180	0	0.0								
0.180	1360	100.0								

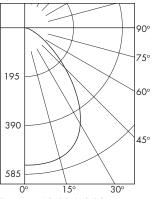
LUMINANCE DATA IN CANDELA/ SQ. METER							
Angle in Vertical	Average						
45°	26037						
55°	15501						
65°	8606						
75°	4684						
85°	0						

≥		% Effective Ceiling Cavity Reflectance															
Cavity		8	10		70				50			30			10		
		20% Effective Floor Cavity Reflectance															
Room		% Wall Reflectance															
ĕ	70	50	30	10	70	50	30	10	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	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-6LFSL11L30K8DL

LED Light Engine: 3000K, 80 CRI System Wattage: 12.6W Fixture Delivered Lumens: 1013

Fixture Efficacy: 80 Spacing Criteria: 1.2



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

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								
90-180	0	0.0								
0-180	1013	74.5								

SQ. METER										
Average										
19397										
11548										
6412										
3490										
0										

₽		96 Effective Ceiling Cavity Reflectance															
Cavity		8	0			7	0			50			30		1	10	
m Car Ratio		20% Effective Floor Cavity Reflectance															
Room		% Wall Reflectance															
ĕ	70	50	30	10	70	50	30	10	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	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

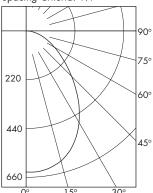




### LF6SL-6LFSL15L30K8FLUDL

LED Light Engine: 3000K, 80 CRI System Wattage: 16.0W Fixture Delivered Lumens: 1322

Fixture Efficacy: 83 Spacing Criteria: 1.1



CANDELA	DISTRIBUTION
DEG	CANDELA
0	636
5	636
15	607
25	531
35	416
45	290
55	18 <i>7</i>
65	114
<i>75</i>	59
85	18
90	0

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							
90-180	0	0.0							
0-180	1322	100.0							

LUMINANCE DATA IN CANDELA/ SQ. METER								
Angle in Vertical	Average							
45°	26757							
55°	21270							
65°	1 <i>7</i> 598							
75°	14872							
85°	0							

\$	% Effective Ceiling Cavity Ret										Refle	lectance						
6 0	80 70						50				30		10					
m Ca Ratio					20	096 E	6 Effective Floor Cavity Reflec					ectar	tance					
Room Cavity Ratio							%	% Wall Reflectance										
č	70	50	30	10	70	50	30	10	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	

### Test No. 18.00420

Tested at 25°C Ambient in accordance to IESNA LM-79-2008

## **Dimming Compatibility Table**

Dimming Ballast	Manufacturer	Web Link				
DM/DM1	Lutron DVTV	http://bit.ly/11jSvZg				
DM/DM1	Leviton AWRMG-7xx, AWSMG-7xx, AWSMT-7xx	http://bit.ly/1BJn2R9				
EDM	Lutron	http://bit.ly/1vtjHAl				
2DM	Lutron	http://bit.ly/1S4WjXK				

## **DMX**

See instruction sheet on www.prescolite.com for connection & installation information. Other useful links: <a href="http://www.eldoled.com/led-drivers/powerdrive/50-watt/ac-561s/">http://www.eldoled.com/led-drivers/powerdrive/50-watt/ac-561s/</a>

# **Central Inverters**

For full fixture output in back-up mode, we recommend you visit 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

LPS Series: www.dual-lite.com/products/lps

# <u>SpectraSync™ Color Tuning Technology:</u> SpectraSyn©

Control your space based on the needs of the application, specific activities throughout the day and preferences of the occupants with two distinct SpectraSync $^{TM}$  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<sup>TM</sup> Tech Sheet for additional details.

# NX Distrubuted 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.

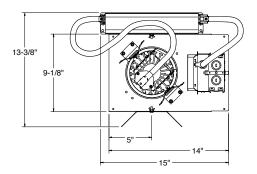
See separate NX™ Solutions Guide for additional details.

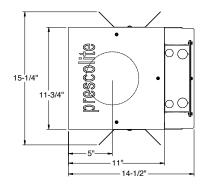
See Hubbell Controls Solution NX Brochure.

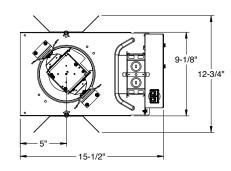


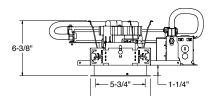


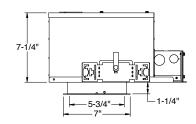
# LiteFrame - 6" LF6SL Lens

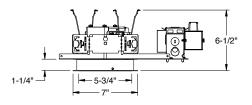












**LF6SL EMR** 

**LF6SL CP** 

LF6SL LENS NX(W)E

## **NOTES:**

When ordering a sloped ceiling adapter, specify the degree of slope in 5° increments, max. of 35°. For a more precise degree or wet ceiling applications, please contact factory. Sloped ceiling adapter and housing must be installed at the same time.



