

# 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  $35^{\circ}$ C ( $95^{\circ}$ F) in open plenum applications.

#### 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. Approve 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:

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 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 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.

#### DIMMING

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

#### WARRANTY:

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

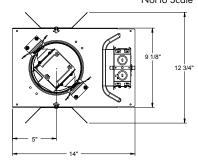
DATE: TYPE:

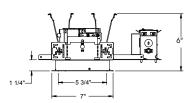
FIRM NAME:

# LiteFrame

PROJECT:

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





See page 5 for EMR, CP and NX(W)E line art.

CATALOGONIUMANEN				NX(W)E line art.
CATALOG NUMBER:				EXAMPLE: LF6SLDM1-6LFSL15L35K8WT
HOUSING	DUSING TRIM APERTURE	KELVIN	ref. finish ref. color option options	TRIM LENS - ACCESSORIES
Standard Dimming Lumen 0-10V DM1  10% dimming 120-277V DM1*  DM1*  0-10V dimming at 1%  DM1*  SpectraSync** Tunable White DMTW* SpectraSync** Tunable Dim to Warm  VOLTAGE OPTION	EMR2 GIFSL Emergency Battery Pack with remote test switch and indicator light CP2.3.4.5.15.17 Chicago III Plenum IIIO Lurron Vive Enabled, 0-10V, 120-277V NXWE3.15.18.19 NX Wireless Enabled NXE3.15.18,19  GIFSL Semi-Diffuse Clear Alzak  OUTPUT  OUTPUT  1100 Lumen Module I5L 1500 Lumen Module VIVE INXE3.15.18,19  ANDICATE OF THE SEMI-DIFFUSE  Semi-Diffuse Clear Alzak  OUTPUT  OUTPUT  OUTPUT  1100 Lumen Module I5L 1500 Lumen Module INXE3.15,18,19	2200K-3000K SpectraSync™	Standard Semi-Diffuse  SP Specular Semi-Specular Specular Specula	WT CL³ Set of two 24" bar hangers for ceiling plant to 24" bar hangers for ceiling post to 24" bar hangers for ceiling for 1-bar ceiling post to 24" bar hangers for ceiling for 1-bar ceiling post to 24" centers less of two (2) bar hangers for ceiling post to 24" centers less of two (2) bar hangers for ceiling post to 24" centers less of two (2) bar hangers for ceiling post to 24" centers less of two (2) bar hangers for ceiling post to 24" centers less of Reflector screw cover liteGear² Inverter, single phase central lighting, 125VA-250VA lePS series² litePower micro-inverter, 20VA-55VA White Non-conductive Trim
Use with EDM/2DM/DMX  Match Housing to I  LF6SL11L	Trim Output	SpectraSync™ Tunable White  2765T²0 2700K-6500K SpectraSync™ Tunable White  CRI  8	□ VSS Kurt Versen SoftSheen™ Painted Matte White Reflector and Flange □ BC Painted Black Reflector and Flange  REFLECTOR	BNCTB <sup>9,13</sup> Black Non- conductive Trim Baffled WNCTB <sup>9,13</sup> White Non- conductive Trim Baffled Trim Baffled WNCTB <sup>9,13</sup> White Non- conductive Trim Baffled 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 2 7 IP65 and VR can not be chosen tagether Not available with IP65 or VR
□ LF6SL20L EcoSystem LED Driver	120V <b>Only) 2 277</b> Lutron Vive	80+ CRI	OPTIONS	° Not available with color/finish options. Semi-Diffuse finish only.



Hi-Lume 1% 2-wire

LED Driver (120V

DMX with RDM

only)

dimming

to < 0.1%

□ DMX¹

Fnabled

EcoSystem

\*EDM, 2DM & DMX

also available with

EMR and WW

☐ 2DM¹

FLU<sup>9,10</sup>

Flange Standard)

IP65<sup>7,10,11</sup>

VR7,10,11

Tight to IP65

Vandal Resistant

Flush Mount (Brushed Aluminum

Flush Lens, Dust and Water

ONot available with BNCT, WNCT, BNCTB, or WNCTB.

11 Not available with FLU

<sup>13</sup> Must select CL or DL

DMT driver option

Not available with LV or LVE

Not available with CP option
 Not available with EDM, 2DM or DMX
 Only available in 90+ CRI

12 LV requires standard dimming or DM1

<sup>14</sup> Must select either 2750T or 2765T Kelvin with

Not compatible with DMTW driver option 17 Not compatible with DMT or DMTW

90+ CRI

DRIVER DATA	6LFSL20L	6LFSL15L	6LFSL11L	
Input Voltage	120-277V	120-277V	120-277V	
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz	1 A4
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 at
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-currer	nt, short-circuit protected	1	1	
*Power consumption and	photometric output may	vary slightly with various driv	ver and CRI options.	80 CRI1.00
When operating in EM me	ode, the fixture will delive	er approximately 30% of the	90 CRI0.91	

**Delivered Lumens** 

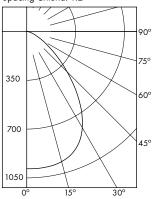
The table below shows the delivered lumens for the various lumen outputs.

Output	CRI	Lens	Delivered Lumens	Input Watts	Lumens Per Watt	Full Catalog String
11 L	80	DL	1013	12.6	80	LF6SL-6LFSL11L30K8DL
11 L	80	FLUDL	985	12.6	78	LF6SL-6LFSL11L30K8FLUDL
15L	80	DL	1360	16.0	85	LF6SL-6LFSL15L30K8DL
15L	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
11 L	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
<i>7</i> 5	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	<i>77</i> 0	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						

COE	FFI	FFICIENTS OF UTILIZATION ZONAL CAVITY METHOD															
₹		% Effective Ceiling Cavity Reflectance															
Room Cavity Ratio		8	10			7	0			50			30		10		
m Ca Ratio					20	0% E	ffecti	ve Fk	oor C	avity	Refle	ectan	се				
ğ "							%	Wall	Refl	ectar	108						
č	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
F6SL-	6LF	SL20	DL3C	K8[	)L									Test	No.	18.0	0419

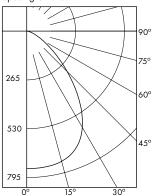




## LF6SL-6LFSL15L30K8DL

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	<i>7</i> 41
5	742
15	727
25	665
35	513
45	309
55	149
65	61
<i>7</i> 5	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									

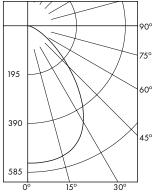
LUMINANCE DATA IN CANDELA/SQ. METER										
Angle in Vertical	Average									
45°	26037									
55°	15501									
65°	8606									
75°	4684									
85°	0									

₽					9	6 Effe	ctive	Celli	ng C	avity	Reflectance							
Cavity tio		8	10			7	0			50			30	,			10	
m Ca Ratio					20	0% E	ffecti	ve Fk	oor C	avity	Refle	ectan	се					
Room							%	Wall	Refl	ectar	ice							
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																	

# LF6SL-6LFSL11L30K8DL

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

Fixture Efficacy: 80 Spacing Criteria: 1.2



DISTRIBUTION
CANDELA
552
553
542
495
382
230
111
45
15
0
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	7/1.5									

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

₽	% Effective Ceiling Cavity Reflectance																
Cavity	80				70				50			30			10		
A Ca		20% Effective Floor Cavity Reflectance															
Room	% Wall Reflectance									108	20						
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
F6SL-							-21	51	-51		50	-70		t No.			

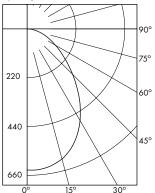




#### LF6SL-6LFSL15L30K8FLUDL

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

Fixture Efficacy: 83 Spacing Criteria: 1.1



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

Test No. 18.00420

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

ZONAL LUMEN SUMMARY									
ZONE LUMENS %LUMINAI									
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°	17598								
75°	14872								
85°	0								

COE	FF	FFICIENTS OF UTILIZATION ZONAL CAVITY METHO																
								Ceili	ling Cavity Reflectance									
Cavity	80				70				50			30			10			
m Ca Ratio	20% Effective Floor						oor C	or Cavity Reflectance										
Room Ra		% Wall Reflectan								ice								
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	
.F6SL	-6LF	SL13	5L30	)K8I	LUE	)L								Test	No.	18.0	042	

# **Dimming Compatibility Table**

Dimming Ballast	Manufacturer	Web Link
DM/DM1	Lutron DVTV	http://bit.ly/11 jSvZg
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

# 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<sup>TM</sup> 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<sup>TM</sup> color tuning technology.

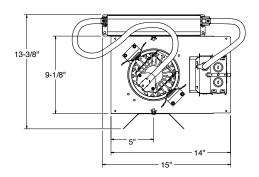
See separate NX™ Solutions Guide for additional details.

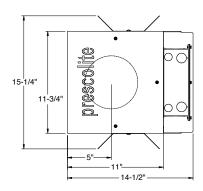
See Hubbell Controls Solution NX Brochure.

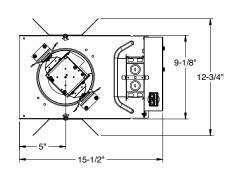


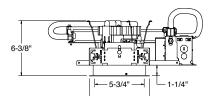


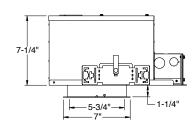
# LiteFrame - 6" LF6SL Lens

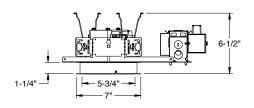












LF6SL CP LF6SL LENS NX(W)E



