

# LF6SQSL LENS

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

LiteFrame LF6SQSL 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 upper reflector. Self-trim standard. Painted white self-trim (WT) available as an option. Reflector is made from anodized Alanod Miro 4 aluminum.

**LED Light Engine:** The LF6SQSL 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 LF6SQSL 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.

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 1/2" or 3/4" lathing channel (by others) or Prescolite 24" bar hangers (B24 or B6). Housing provides up to 6° rotational adjustment of the square trim.

**Certifications:** CSA certified to US and Canadian safety standards. Suitable for wet locations. Approved for through wiring. Non-IC rated. EMR is damp rated and for US use only. UL approved for NSF2<sup>5</sup> non-food zone applications.

**Warranty:** 5 year warranty. See www.prescolite.com for details.

## ORDERING GUIDE

Order housing, reflector, and accessories separately.

**EXAMPLE:** LF6SQSLEMR-6SQSL11L40K8DL

HOUSING	DRIVER OPTIONS	VOLTAGE OPTION	HOUSING OPTIONS	TRIM APERTURE	KELVIN	CRI	REF. COLOR OPTIONS	TRIM OPTIONS	ACCESSORIES
<input type="checkbox"/> <b>LF6SQSL</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>DMT7,8</b> SpectraSync™ Tunable White <input type="checkbox"/> <b>DMTW<sup>9</sup></b> SpectraSync™ Tunable Dim to Warm	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>CP2,3,4,10</b> Chicago Plenum <input type="checkbox"/> <b>LV6</b> Lutron Vive Enabled, 0-10V, 120-277V <input type="checkbox"/> <b>NXWE<sup>3,11,12</sup></b> NX Wireless Enabled <input type="checkbox"/> <b>NXE<sup>3,11,12</sup></b> NX Enabled, Dual SmartPorts	<input type="checkbox"/> <b>6SQSL</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>20L<sup>10</sup></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>13</sup></b> 2200K-3000K SpectraSync™ Dim to Warm <input type="checkbox"/> <b>2750T<sup>13</sup></b> 2700K-5000K SpectraSync™ Tunable White <input type="checkbox"/> <b>2765T<sup>13</sup></b> 2700K-6500K SpectraSync™ Tunable White	<input type="checkbox"/> <b>8</b> 80+ CRI <input type="checkbox"/> <b>9</b> 90+ CRI	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	<input type="checkbox"/> <b>WT</b> Painted White Flange Only <b>LENS</b> <input type="checkbox"/> <b>CL</b> Regressed Clear Lens <input type="checkbox"/> <b>DL</b> Regressed Diffuse Lens <input type="checkbox"/> <b>PL</b> Regressed Prismatic Lens <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 EM, 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 4 6 LV requires standard dimming or DM1 7 Must select either 2750T or 2765T Kelvin with DMT driver option 8 Not available with LV or LVE 9 Must select 2230TD with DMTW driver option 10 Not compatible with DMT or DMTW 11 Not available with CP option 12 Not available with EDM, 2DM, or DMX 13 Only available in 90+ CRI	<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
Use with EDM/2DM/DMX dimming option: Match Housing to Trim Output									
<input type="checkbox"/> <b>LF6SQSL11L</b> <input type="checkbox"/> <b>LF6SQSL15L</b> <input type="checkbox"/> <b>LF6SQSL20L</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

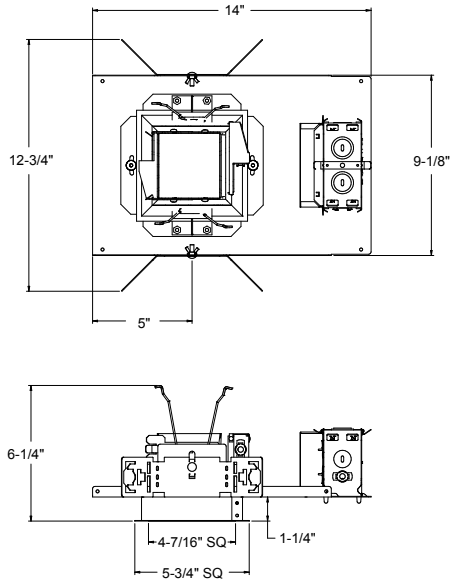
ALTERNATIVE -DIMMING TO 1% & 0.1%

# LF6SQSL LENS

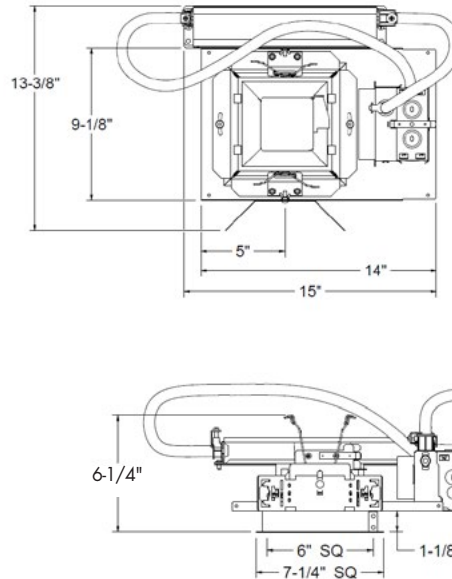
6" Square LED Lensed Downlight  
120V-277V • 0-10V Dimming • NSF2

## DIMENSIONS

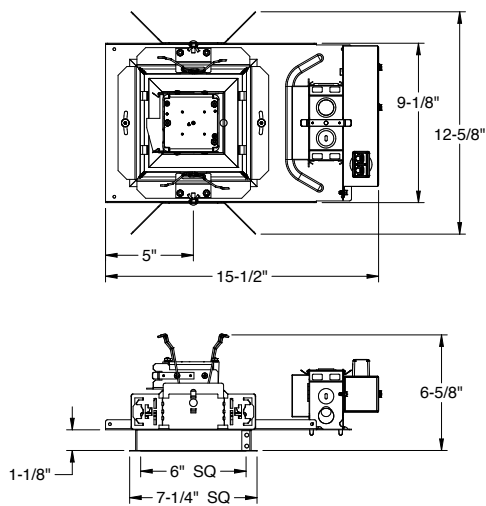
Ceiling Cutout: 6 3/4" x 6 3/4"  
Maximum Ceiling Thickness: 1/4"  
For conversion to millimeters, multiply inches by 25.4  
Not to Scale



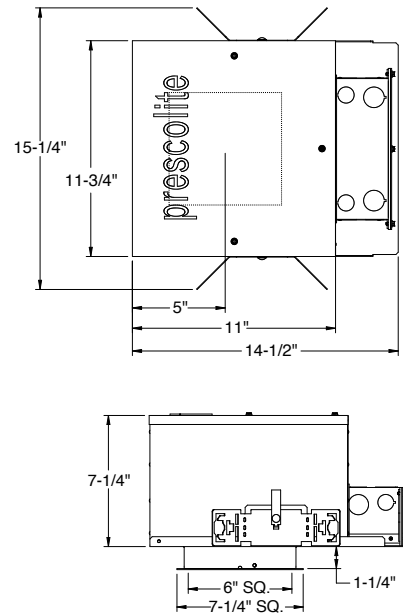
**LF6SQSL EMR**



**LF6SQSL LENS NX(W)E**



**LF6SQSL CP**



# LF6SQSL LENS

6" Square LED Lensed Downlight  
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## PHOTOMETRY

DRIVER DATA	6SQSL20L	6SQSL15L	6SQSL11L
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	21.4W	16.2W	12.6W
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

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.

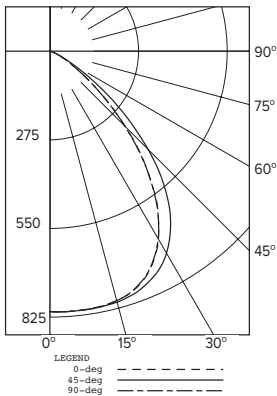
### Lumen Multiplier Table

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

LF6SQSL-6SQSL20L30KDL  
LED Light Engine: 3000K, 80 CRI  
System Wattage: 21.4W  
Fixture Delivered Lumens: 1498  
Fixture Efficacy: 70

Test No. 18.00414-02  
Tested at 25°C Ambient  
in accordance to IESNA  
LM-79-2008



### CANDELA DISTRIBUTION

DEG	0°	45°	90°
0	807	807	807
5	809	809	809
15	807	809	809
25	801	806	801
35	740	768	739
45	581	653	577
55	332	431	328
65	122	175	120
75	36	34	36
85	2	5	2
90	0	0	0

### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	650	43
0-40	1031	69
0-60	1455	97
0-90	1499	100
90-180	0	0
0-180	1499	100

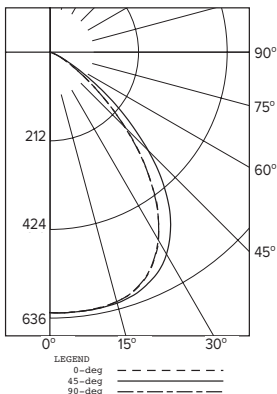
### COEFFICIENTS OF UTILIZATION ZONAL CAVITY METHOD

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																
	80				70				50				30				
	70	50	30	10	70	50	30	10	50	30	10	50	30	10			
1	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83
3	98	89	83	78	95	88	82	78	85	80	76	83	78	75	80	77	74
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66
5	85	74	67	61	83	73	66	61	71	65	61	69	64	60	68	63	59
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54
7	74	62	55	50	72	62	55	50	60	54	49	59	53	49	58	53	49
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	44	41
10	61	49	42	38	60	49	42	38	48	42	38	47	41	37	46	41	37

LF6SQSL-6SQSL20L30KDL Test No. 18.00414-02

LF6SQSL-6SQSL15L30K8DL  
LED Light Engine: 3000K, 80 CRI  
System Wattage: 16.4W  
Fixture Delivered Lumens: 1160  
Fixture Efficacy: 71

Test No. 18.00414-01  
Tested at 25°C Ambient  
in accordance to IESNA  
LM-79-2008



### CANDELA DISTRIBUTION

DEG	0°	45°	90°
0	625	625	625
5	627	627	627
15	620	624	620
25	573	595	572
35	450	506	447
45	257	334	254
55	94	136	93
65	28	27	28
75	1	4	1
85	0	0	0
90	0	0	0

### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	503	43
0-40	798	69
0-60	1126	97
0-90	1161	100
90-180	0	0
0-180	1161	100

### COEFFICIENTS OF UTILIZATION ZONAL CAVITY METHOD

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																
	80				70				50				30				
	70	50	30	10	70	50	30	10	50	30	10	50	30	10			
1	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83
3	98	89	83	78	95	88	82	78	85	80	76	83	78	75	80	77	74
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66
5	85	74	67	61	83	73	66	61	71	65	61	69	64	60	68	63	59
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54
7	74	62	55	50	72	62	55	50	60	54	49	59	53	49	58	53	49
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	44	41
10	61	49	42	38	60	49	42	38	48	42	38	47	41	37	46	41	37

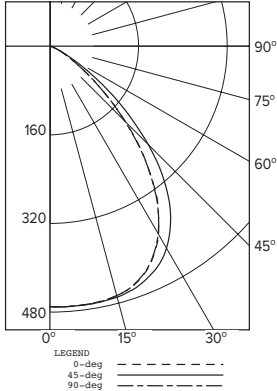
LF6SQSL-6SQSL15L30K8DL Test No. 18.00414-01

# LF6SQSL LENS

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

LF6SQSL-6SQSL1L30K8DL  
LED Light Engine: 3000K, 80 CRI  
System Wattage: 12.5W  
Fixture Delivered Lumens: 872  
Fixture Efficacy: 70

**Test No. 18.00414**  
Tested at 25°C Ambient  
in accordance to IESNA  
LM-79-2008



### CANDELA DISTRIBUTION

DEG	0°	45°	90°
0	470	470	470
5	471	471	471
15	466	469	466
25	431	447	430
35	338	380	336
45	193	251	191
55	71	102	70
65	21	20	21
75	1	3	1
85	0	0	0
90	0	0	0

### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	378	43.4
0-40	600	68.8
0-60	847	97.1
0-90	872	100
90-180	0	0
0-180	872	100

### COEFFICIENTS OF UTILIZATION ZONAL CAVITY METHOD

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																
	80				70				50				30				
	20% Effective Floor Cavity Reflectance																
													% Wall Reflectance				
													70	50	30	10	
1	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83
3	98	89	83	78	95	88	82	78	85	80	76	83	78	75	80	77	74
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66
5	85	74	67	61	83	73	68	61	71	65	61	69	64	60	68	63	59
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54
7	74	62	55	50	72	62	55	50	60	54	49	59	53	49	58	53	49
8	69	58	50	45	68	57	50	45	56	49	45	55	49	45	53	48	44
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	44	41
10	61	49	42	38	60	49	42	38	48	42	38	47	41	37	46	41	37

LF4SQSL-4SQSL1L30K8DL Test No. 18.00414

### Dimming Compatibility Table

Dimming Ballast	Manufacturer	Web Link
DM/DM1	Lutron DTVT	<a href="http://bit.ly/1jSvZg">http://bit.ly/1jSvZg</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/1vtjHAL">http://bit.ly/1vtjHAL</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](#).