

4" Square LED Open Downlight

LF4SQML

120V - 277V
0-10V Dimming

APPLICATIONS:

LiteFrame LF4SQML 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.

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:

Self-trim standard. Painted white self-trim (WT) available as option. Reflector is made from anodized Alnanod Miro 4 aluminum.

LED LIGHT ENGINE:

The LF4SQML uses the Philips Fortimo DLM LED Module. This module provides controlled color consistency (3 SDCM) from fixture to fixture. The system is designed for optional 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 LF4SQML 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. 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. EM and EMR are damp rated use only. ENERGY STAR qualified with open clear Alzak reflector.

WARRANTY:

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

DATE: _____ TYPE: _____

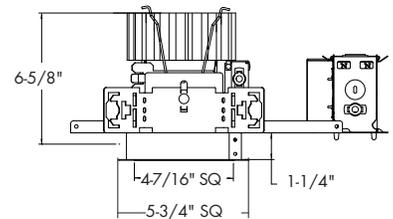
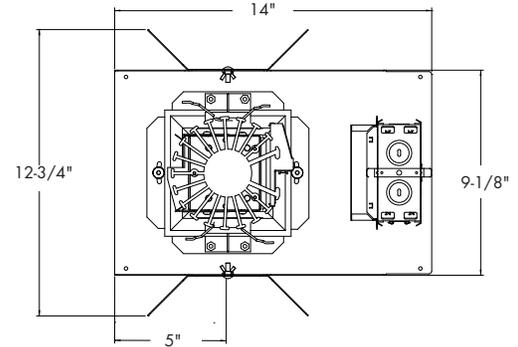
FIRM NAME: _____

PROJECT: _____

LiteFrame®



Ceiling Cutout: 5-1/4" x 5-1/4"
Maximum Ceiling Thickness 1 1/4"
For conversion to millimeters,
multiply inches by 25.4
Not to Scale



See page 3 for EM/EMR, CP and NX(W/E) line art

CATALOG NUMBER:

EXAMPLE: LF4SQML-4SQML30L40K8BL

Order housing, reflector, and accessories separately

HOUSING	DRIVER OPTIONS	VOLTAGE OPTION	HOUSING OPTIONS	TRIM APERTURE	KELVIN	REF. COLOR OPTIONS	REFLECTOR OPTIONS	ACCESSORIES
<input type="checkbox"/> LF4SQML Medium Lumen 0-10V 10% dimming 120V-277V	Standard 0-10V 10% Dimming <input type="checkbox"/> DM1 ¹ 0-10V dimming at 1% <input type="checkbox"/> EDM ^{3,4} Hi-Lume 1% EcoSystem LED Driver <input type="checkbox"/> 2DM ^{3,4} Hi-Lume 1% 2-wire LED Driver (120V only) <input type="checkbox"/> DMX ^{3,4} DMX with RDM dimming to <0.1%	Standard 120V-277V <input type="checkbox"/> 120 120V <input type="checkbox"/> 277 277V <input type="checkbox"/> 347 347V	<input type="checkbox"/> CP ^{3,5,8,9,10} Chicago Plenum <input type="checkbox"/> LV ⁶ Lutron Vive Enabled, 0-10V, 120- 277V <input type="checkbox"/> LVE (EDM Only) Lutron Vive Enabled, EcoSystem <input type="checkbox"/> NXWE ^{7,8,9,10} NX Wireless Enabled <input type="checkbox"/> NXE ^{7,8,9,10} NX Enabled, Dual SmartPorts <input type="checkbox"/> EM ^{3,11} Emergency Battery Pack with integral test switch and indicator light <input type="checkbox"/> EMR ³ Emergency Battery Pack with remote test switch and indicator light	<input type="checkbox"/> 4SQML30L Semi-Diffuse Clear Alzak Reflector with 3000 Lumen Module	<input type="checkbox"/> 27K 2700 Kelvin <input type="checkbox"/> 30K 3000 Kelvin <input type="checkbox"/> 35K 3500 Kelvin <input type="checkbox"/> 40K 4000 Kelvin <input type="checkbox"/> 50K 5000 Kelvin <div style="background-color: #cccccc; padding: 2px; text-align: center;">CRI</div> <input type="checkbox"/> 8 80+ CRI <input type="checkbox"/> 9 90+ CRI	Standard Clear Alzak <input type="checkbox"/> CG Champagne Gold Alzak <input type="checkbox"/> BL Black Alzak <input type="checkbox"/> WE Wheat Alzak <input type="checkbox"/> LW Light Wheat Alzak <input type="checkbox"/> PW Pewter Alzak <input type="checkbox"/> WH Painted Matte White Reflector and Flange <input type="checkbox"/> BC Painted Black Reflector and Flange	<input type="checkbox"/> EM ^{3,11} Pre-punched reflector for integral switch <div style="background-color: #cccccc; padding: 2px; text-align: center;">TRIM OPTIONS</div> <input type="checkbox"/> WT Painted White Flange Only	<input type="checkbox"/> B24 ⁵ Set of two 24" bar hangers for T-bar ceilings <input type="checkbox"/> B6 ⁵ Set of two (2) bar hangers for ceiling joist up to 24" centers <input type="checkbox"/> LiteGear ² Inverter, single phase central lighting, 125VA-250VA <input type="checkbox"/> LPS Series ² LitePower micro- inverter, 20VA-55VA

Notes:

- For DM1, do not specify a voltage if 120 or 277
- See Central Inverter compatibility note and web links on page 3
- Not available with 347V
- Voltage must be specified with EDM, 2DM, or DMX
- Accessories should be selected with CP if required
- LV requires standard dimming or DM1
- Not available with CP option
- Not available with EDM, 2DM, or DMX
- Not available with LV or LVE
- Not available with EM or EMR
- EM option required on both housing and trim

PHOTOMETRIC DATA

LiteFrame - 4" LF4SQML Downlight

DRIVER DATA	4SQML30L
Input Voltage	120V-277V
Input Frequency	50/60 Hz
Input Current	0.105A (120V) 0.045A (277V)
Input Power	22.3W
Power Factor	≥0.90
THD	<20%
EMI Filtering	FCC 47CFR Part 15, Class A
Operating Temperature	-20°C to 35°C
Dimming	0-10V
Over-voltage, over-current, short-circuit protected	

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

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

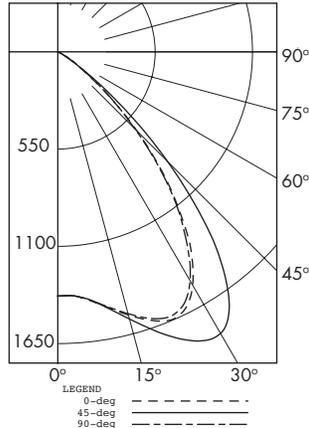
Delivered Lumens

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

Output	Beam	Lens	Delivered Lumens	Input Watts	Lumens Per Watt	Full Catalog String
30L	80	Open	3047	32.3	94	LF4ML-4SQML30L30K8
30L	90	Open	2376	35.8	66	LF4ML-4SQML30L30K9

LF4SQML-4LFSQML30L30K8

LED Light Engine: 3000K, 80 CRI
System Wattage: 32.3W
Fixture Delivered Lumens: 3047
Fixture Efficacy: 94
Spacing Criteria: 1.4



CANDELA DISTRIBUTION

DEG	0°	45°	90°
0	1381	1381	1381
5	1392	1391	1392
15	1541	1564	1533
25	1638	1803	1645
35	1287	1683	1248
45	632	877	617
55	146	156	156
65	17	18	17
75	3	5	3
85	1	1	1
90	0	0	0

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1362	44.7
0-40	2265	74.3
0-60	3018	99.1
0-90	3047	100.0
90-180	0	0.0
0-180	3047	100.0

COEFFICIENTS OF UTILIZATION ZONAL CAVITY METHOD

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																
	80					70											
	70	50	30	10	70	50	30	10	50	30	10						
1	112	109	106	104	110	107	104	102	103	101	99	99	97	96	96	94	93
2	105	99	95	91	103	98	93	90	94	91	88	91	88	86	88	86	84
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75
4	92	83	76	71	90	82	75	70	79	74	70	77	72	69	75	71	68
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61
6	80	69	62	57	78	68	62	57	67	61	56	65	60	56	64	59	55
7	75	64	56	51	73	63	56	51	62	55	51	60	55	51	59	54	50
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46
9	66	54	47	42	65	54	47	42	53	47	42	52	46	42	51	46	42
10	62	50	43	39	61	50	43	39	49	43	39	48	42	38	47	42	38

LF4SQML-4LFSQML30L30K8

Test No. 18.00341

Test No. 18.00341

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



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Dimming Compatibility Table

Dimming Ballast	Manufacturer	Web Link
DM/DM1	Lutron DTVV	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: <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 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

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](#).

