

# 4" LED Open Downlight

## LF4ML

120V - 277V  
0-10V Dimming

### APPLICATIONS:

LiteFrame LF4ML is a 4" specification grade LED open 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. 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. Painted white self-trim (WT) available as option.

### LED LIGHT ENGINE:

The LF4ML 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 LF4ML 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.

### 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).

### CERTIFICATIONS:

CSA certified to US and Canadian safety standards. Suitable for wet locations. Approved for through wiring. Non-IC rated. ENERGY STAR qualified with open clear Alzak reflector. EM and EMR are damp rated use only. UL approved for NSF2 splash zone applications.

### WARRANTY:

5 year warranty. See [www.prescolite.com](http://www.prescolite.com) for details.

DATE: \_\_\_\_\_ TYPE: \_\_\_\_\_

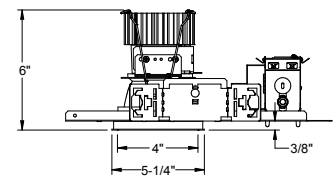
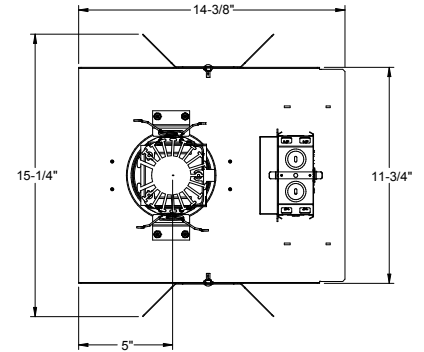
FIRM NAME: \_\_\_\_\_

PROJECT: \_\_\_\_\_

# LiteFrame®



Ceiling Cutout: 5"  
Maximum Ceiling Thickness 5/8"  
For conversion to millimeters,  
multiply inches by 25.4  
Not to Scale



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

CATALOG NUMBER: \_\_\_\_\_

EXAMPLE: LF4ML-4LFML30L40K8

Order housing, reflector, and accessories separately

HOUSING	DRIVER OPTION	VOLTAGE OPTION	HOUSING OPTIONS	TRIM APERTURE	CRI	REF. COLOR OPTIONS	REFLECTOR OPTIONS	ACCESSORIES
<input type="checkbox"/> <b>LF4ML</b> Medium Lumen 0-10V 10% dimming 120-277V	Standard 0-10V 10% Dimming <input type="checkbox"/> <b>DM1<sup>1</sup></b> 0-10V dimming at 1%, 120-277V <input type="checkbox"/> <b>EDM<sup>1,6</sup></b> Hi-Lume 1% EcoSystem LED Driver <input type="checkbox"/> <b>2DM<sup>1,6</sup></b> Hi-Lume 1% 2-wire LED Driver (120V only) <input type="checkbox"/> <b>DMX<sup>1,6</sup></b> DMX with RDM dimming to <0.1%	Standard 120V-277V <input type="checkbox"/> <b>120</b> <input type="checkbox"/> <b>277</b> <input type="checkbox"/> <b>347</b> <input type="checkbox"/> <b>347V</b>	<input type="checkbox"/> <b>CP<sup>1,3,7,10</sup></b> Chicago Plenum <input type="checkbox"/> <b>LV<sup>8</sup></b> Lutron Vive Enabled, 0-10V, 120-277V <input type="checkbox"/> <b>LVE (EDM Only)</b> Lutron Vive Enabled, EcoSystem <input type="checkbox"/> <b>NXWE<sup>7,9,10</sup></b> NX Wireless Enabled <input type="checkbox"/> <b>NXE<sup>7,9,10</sup></b> NX Enabled, Dual SmartPorts <input type="checkbox"/> <b>EM<sup>1,11</sup></b> Emergency Battery Pack with integral test switch and indicator light <input type="checkbox"/> <b>EMR<sup>1</sup></b> Emergency Battery Pack with remote test switch and indicator light	<input type="checkbox"/> <b>4LFML30L</b> Semi-Diffuse Clear Alzak Reflector with 3000 Lumen Module <div style="background-color: #cccccc; padding: 2px;">KELVIN</div> <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>8</b> 80+ CRI <input type="checkbox"/> <b>9</b> 90+ CRI <div style="background-color: #cccccc; padding: 2px;">REF. FINISH OPTIONS</div> <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	<input type="checkbox"/> <b>EM<sup>1,11</sup></b> Pre-punched reflector for integral switch <input type="checkbox"/> <b>AM<sup>2</sup></b> Antimicrobial coating on reflector <div style="background-color: #cccccc; padding: 2px;">TRIM OPTIONS</div> <input type="checkbox"/> <b>WT</b> Painted White Flange Only <input type="checkbox"/> <b>TRG</b> Trim Ring Gasket	<input type="checkbox"/> <b>B24<sup>3</sup></b> Set of two 24" bar hangers for T-bar ceilings <input type="checkbox"/> <b>B6<sup>3</sup></b> Set of two (2) bar hangers for ceiling joist up to 24" centers <input type="checkbox"/> <b>LiteGear<sup>4</sup></b> Inverter, single phase central lighting, 125VA-250VA <input type="checkbox"/> <b>LPS Series<sup>4</sup></b> LitePower micro-inverter, 20VA-55VA

#### Notes:

- <sup>1</sup> Not available with 347V
- <sup>2</sup> Clear Alzak standard. Consult factory for other colors
- <sup>3</sup> Bar hanger accessory should be selected with CP housing, not included as standard
- <sup>4</sup> See Central Inverter compatibility note and web links on page 3
- <sup>5</sup> For DM1, do not specify a voltage if 120 or 277
- <sup>6</sup> Voltage must be specified with EDM, 2DM, DMX and LVE.
- <sup>7</sup> Not available with DMX, LV or LVE.
- <sup>8</sup> LV requires standard dimming or DM1
- <sup>9</sup> Not available with CP option
- <sup>10</sup> Not available with EMR, EDM, 2DM or DMX
- <sup>11</sup> EM option required on both housing and trim



In a continuing effort to offer the best product possible we reserve the right to change, without notice, specifications or materials that in our opinion will not alter the function of the product.  
Web: [www.prescolite.com](http://www.prescolite.com) • Tech Support: (888) 777-4832

LFR-LED-047

# PHOTOMETRIC DATA

## LiteFrame - 4" LF4ML Downlight

DRIVER DATA	4LFML30L
Input Voltage	120V - 277V
Input Frequency	50/60 Hz
Input Current	0.273A (120V) 0.118A (277V)
Input Power	32.7W
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	
*Power consumption and photometric output may vary slightly with various driver and CRI options.	

### 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

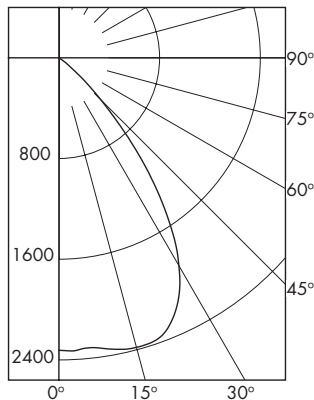
### Delivered Lumens

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
30L	80	Open	3242	32.7	99	LF4ML-4LFML30L30K8
30L	90	Open	2393	35.9	67	LF4ML-4LFML30L30K9

### LF4ML-4LFML30L30K8

LED Light Engine: 3000K, 80 CRI  
System Wattage: 32.7W  
Fixture Delivered Lumens: 3242  
Fixture Efficacy: 99  
Spacing Criteria: 1.1



### CANDELA DISTRIBUTION

DEG	CANDELA
0	2323
5	2317
15	2381
25	2203
35	1464
45	468
55	54
65	4
75	1
85	0
90	0

### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1897	58.5
0-40	2797	86.3
0-60	3236	99.8
0-90	3242	100.0
90-180	0	0.0
0-180	3242	100.0

### LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average
45°	81636
55°	11612
65°	1167
75°	477
85°	0

### 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	70	50	30	10	70	50	30	10	70	50	30	10	
1	113	110	107	105	111	108	106	103	104	102	100	100	99	97	97	95	94
2	107	102	97	94	105	100	96	92	97	93	90	94	91	89	91	89	87
3	101	94	88	84	99	92	87	83	90	86	82	87	84	81	85	82	79
4	95	87	81	76	93	86	80	76	83	79	75	81	77	74	79	76	73
5	89	80	74	69	88	79	73	69	78	72	68	76	71	68	74	70	67
6	84	75	68	63	83	74	68	63	72	67	63	71	66	62	69	65	62
7	80	69	63	58	78	69	62	58	67	62	58	66	61	57	65	60	57
8	75	65	58	54	74	64	58	53	63	57	53	62	57	53	61	56	53
9	71	60	54	50	70	60	54	49	59	53	49	58	53	49	57	52	49
10	67	57	50	46	66	56	50	46	55	50	46	54	49	46	54	49	46

LF4ML-4LFML30L30K8

Test No. 18.00452

Test No. 18.00452

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



## Dimming Compatibility Table

Dimming Ballast	Manufacturer	Web Link
DM/DM1	Lutron DTV	<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/1BIn2R9">http://bit.ly/1BIn2R9</a>
EDM	Lutron	<a href="http://bit.ly/1vtjHA1">http://bit.ly/1vtjHA1</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)

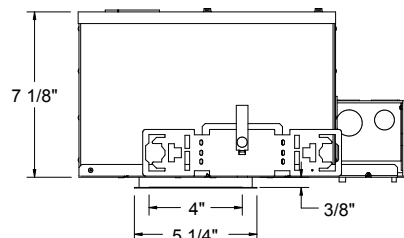
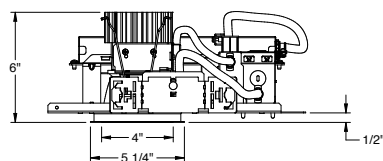
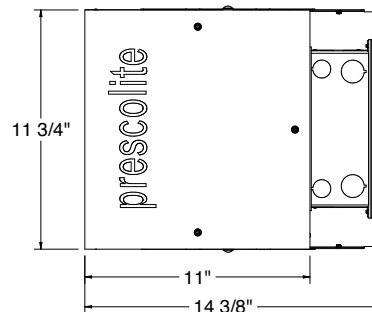
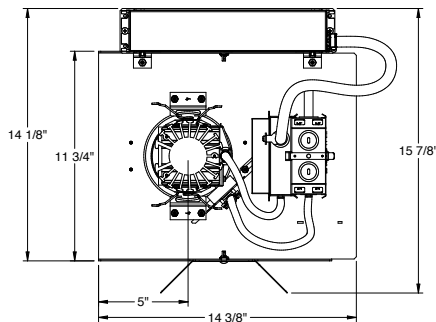
**LPS Series:** [www.dual-lite.com/products/lps](http://www.dual-lite.com/products/lps)

### 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.

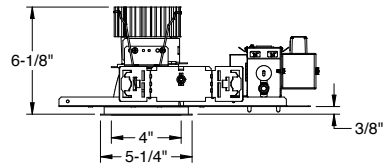
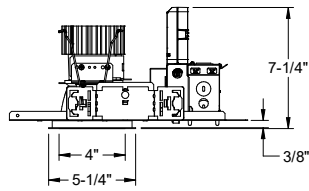
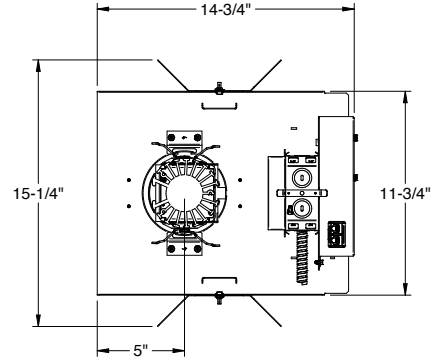
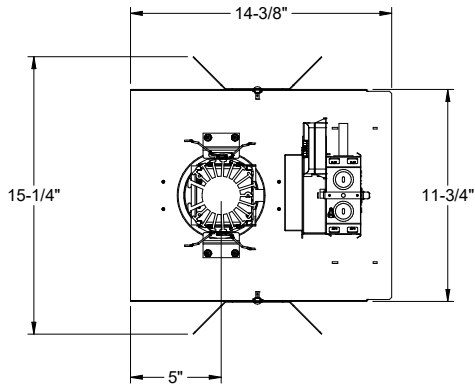
See Hubbell Controls Solution [NX Brochure](#).



LF4ML EM/EMR

LF4ML CP





**LF4ML LV(E)**

**LF4ML NX(W)E**