



# 8" LED Retrofit Downlight

## RLC8ML

2400 & 3000 Lumens  
120V-277V  
0-10V Dimming

### APPLICATIONS:

Retroficient® RLC8ML is an 8" commercial grade Retrofit LED downlight with available outputs between 2400-3000 lumens. The RLC8ML is designed specifically to Retrofit into ceilings with existing recessed downlight fixtures without the need to remove the existing fixture. Rated for a minimum of 50,000 hours life (70% lumen maintenance) with ambient plenum temperatures up to 25°C. Free Air Flow around fixture for optimal life performance.

### HOUSING:

All components are made from quality die cast aluminum or galvaneal steel. 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 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 reflector. Self-trim standard. Painted white self-trim (WT) available as option.

### LED LIGHT ENGINE:

The RLC8ML uses mid power Nichia LEDs, specifically mixed to provide a minimum of 80 CRI with 3 SCDM color consistency. The use of multiple mid power LEDs allows for optimal thermal management by effectively spreading the heat over a larger area and eliminating hot spots on the LEDs. A diffuse, yet highly transmissive lens obscures the view of the LEDs and creates a smooth, even look from below. The light engine is available in multiple Kelvin temperatures and the system is designed to provide optimal life and lumen maintenance (50,000 hours at 70% lumen maintenance). The reflector/light engine assembly is mechanically retained to the housing.

### LED DRIVER:

The RLC8ML utilizes constant current LED driver is capable of running both lumen outputs, resulting in a reduction of housing skus and simplified specification. The driver is UL8750, Class II compliant and universal 120V-277V.

### DIMMING:

Comes standard with flicker-free 0-10V dimming to 10%. 0-10V to 1% dimming is also available. See list of compatible dimmers on page (3). For the sizing of the control circuit, the dimming circuit may require up to 1.2mA of sink current.

### INSTALLATION:

All installation can be performed from below the ceiling without removing existing fixture.

### CERTIFICATIONS:

CSA certified to US and Canadian safety standards. Suitable for wet locations. This product qualifies as a "designated country construction material" per FAR 52.225-11 Buy American-Construction. Materials under Trade Agreements effective 6/10/2020. See [Buy American Solutions](#).

### WARRANTY:

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

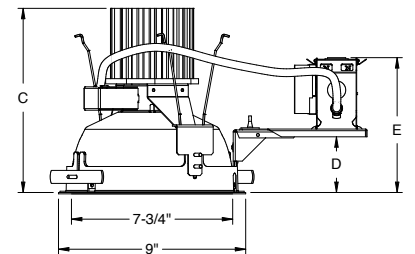
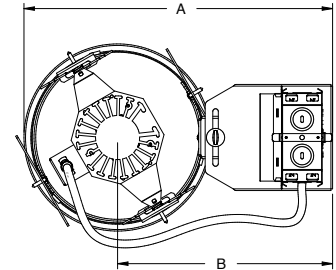
DATE: \_\_\_\_\_ TYPE: \_\_\_\_\_

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

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



Ceiling Cutout: see guide  
Maximum Ceiling Thickness 1 1/2"  
For conversion to millimeters,  
multiply inches by 25.4  
Not to Scale



	A	B	C	D	E
RLC8ML	15"-17"	10-3/4" - 12-3/4"	9"	2-1/2" - 3-3/4"	6-1/4" - 7-1/2"

Order housing, reflector, and accessories separately

CATALOG NUMBER:

EXAMPLE: RLC8ML-8LCML24L30K9WT

HOUSING	DRIVER OPTIONS	HOUSING OPTIONS	TRIM APERTURE	OUTPUT	KELVIN	CRI	REF. FINISH/ COLOR OPTION	REFLECTOR OPTIONS	ACCESSORIES
<input type="checkbox"/> <b>RLC8ML</b> Medium Lumen 0-10V Dimming to 10% 120V-277V	<input type="checkbox"/> <b>Standard 0-10V 10% Dimming</b> <input type="checkbox"/> <b>DM1</b> 0-10V 1% Dimming	<input type="checkbox"/> <b>SD<sup>2</sup></b> Small Diameter	<input type="checkbox"/> <b>8LCML</b> Medium Lumen Clear Alzak Reflector	<input type="checkbox"/> <b>24L</b> 2400 Lumen <input type="checkbox"/> <b>30L</b> 3000 Lumen	<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<sup>s</sup></b> 90+ CRI	<input type="checkbox"/> <b>Standard Semi-Diffuse Clear Alzak</b> <input type="checkbox"/> <b>WH</b> Painted Matte White Reflector and Flange	<input type="checkbox"/> <b>WT</b> Painted White Flange only <input type="checkbox"/> <b>WF</b> Wide Flange	<input type="checkbox"/> <b>RWD8<sup>2</sup></b> Retrofit Wide Diameter Housing kit (6") <input type="checkbox"/> <b>LiteGear<sup>1</sup></b> Inverter, single phase central lighting, 125VA-250VA <input type="checkbox"/> <b>LPS Series<sup>1</sup></b> LitePower micro-inverter, 20VA-55VA

<sup>1</sup> See Central Inverter compatibility note and web links on page 3.

<sup>2</sup> See housing compatibility guide for hole diameter compatibility

<sup>3</sup> Not available in 40K or 50K

# PHOTOMETRIC DATA

# Retroficient® - 8" RLC8ML Downlight

DRIVER DATA	RLC8ML24Lxxx	RLC8ML30Lxxx
Input Voltage	120-277V	120-277V
Input Frequency	50/60 Hz	50/60 Hz
Input Current	0.267 (120v) 0.116 (277v)	0.337 (120v) 0.146 (277v)
Input Power	32.0W	40.4W
Constant Current Output	675mA	675mA
Power Factor	≥0.90	≥0.90
THD	<20%	<20%
EMI Filtering	FCC 47CFR Part 15, Class A	FCC 47CFR Part 15, Class A
Operating Temperature	-30°C to +35°C	-30°C to +25°C
Dimming	0-10V to 10%	0-10V to 10%
Over-voltage, over-current, short-circuit protected		

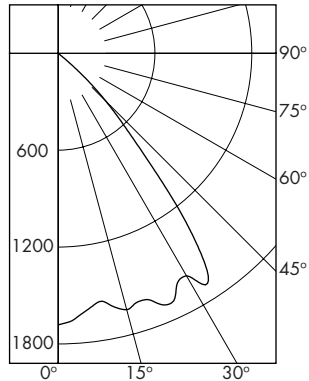
### Lumen Multiplier Table

Photometrics for the RLC8ML are published below at a nominal 3500 Kelvin temperature. This table may be used to approximate the lumen values at different Kelvin temperatures. Power consumption would stay the same.

5000 Kelvin	1.14
4000 Kelvin	1.03
3500 Kelvin	1.00
3000 Kelvin	1.00
2700 Kelvin	0.91

### RLC8ML 8LCML24L35K8

LED Light Engine: 3500K, 80+ CRI  
System Wattage: 32.0W  
Fixture Delivered Lumens: 2625  
Fixture Efficacy: 82.0  
Spacing Criteria: 1.2



CANDELA DISTRIBUTION	
DEG	CANDELA
0	1682
5	1623
15	1644
25	1693
35	1582
45	419
55	6
65	2
75	1
85	1
90	0

Test No. 15.01182

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

### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1373	52.3
0-40	2270	86.5
0-60	2621	99.8
0-90	2625	100.0
90-180	0	0.0
0-180	2625	100.0

### LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	AVERAGE
45°	18266
55°	322
65°	146
75°	119
85°	354

### COEFFICIENTS OF UTILIZATION Zonal Cavity Method

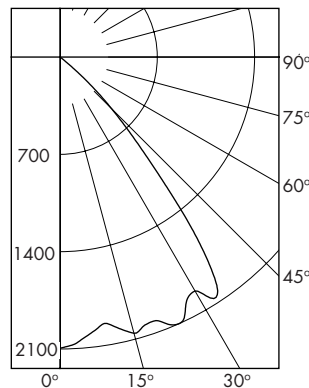
Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																
	80%		70%		50%		30%		10%								
	70	50	30	10	70	50	30	10	50	30	10						
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86
3	100	93	88	83	98	92	87	83	89	85	81	87	83	80	84	81	79
4	94	86	80	75	92	85	79	74	82	77	74	80	76	73	78	75	72
5	89	79	73	68	87	78	72	68	76	71	67	75	70	66	73	69	66
6	83	73	67	62	82	72	66	61	71	65	61	69	64	61	68	64	60
7	78	68	61	56	77	67	61	56	66	60	56	65	59	56	63	59	55
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51
9	69	59	52	47	68	58	52	47	57	51	47	56	51	47	55	50	47
10	66	55	48	44	65	54	48	44	53	48	44	52	47	43	52	47	43

RLC8ML 8LCML24L35K8

Test No. 15.01182

### RLC8ML 8LCML30L35K8

LED Light Engine: 3500K, 80+ CRI  
System Wattage: 40.4W  
Fixture Delivered Lumens: 3256  
Fixture Efficacy: 80.6  
Spacing Criteria: 1.2



CANDELA DISTRIBUTION	
DEG	CANDELA
0	2095
5	2025
15	2057
25	2093
35	1940
45	524
55	7
65	3
75	2
85	1
90	0

Test No. 15.01183

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

### ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-30	1702	52.3
0-40	2806	86.2
0-60	3250	99.8
0-90	3256	100.0
90-180	0	0
0-180	3256	100.0

### LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	AVERAGE
45°	22843
55°	376
65°	219
75°	238
85°	354

### COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																
	80%		70%		50%		30%		10%								
	70	50	30	10	70	50	30	10	50	30	10						
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86
3	100	93	88	83	98	92	87	83	89	85	81	87	83	80	84	81	79
4	94	86	80	75	92	85	79	74	82	77	74	80	76	73	78	75	72
5	89	79	73	68	87	78	72	68	76	71	67	75	70	66	73	69	66
6	83	73	67	62	82	72	66	61	71	65	61	69	64	61	68	64	60
7	78	68	61	56	77	67	61	56	66	60	56	65	59	56	63	59	55
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51
9	69	59	52	47	68	58	52	47	57	51	47	56	51	47	55	50	47
10	66	55	48	44	64	54	48	44	53	48	44	52	47	43	52	47	43

RLC8ML 8LCML30L35K8

Test No. 15.01183



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# Retroficient® - 8" RLC8ML Downlight

## Dimming Compatibility Table

Dimming Ballast	Manufacturer	Web Link
DM/DM1	Lutron DDTV	<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/1BJn2R9">http://bit.ly/1BJn2R9</a>

### 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)

HOUSING COMPATIBILITY GUIDE		
ORDERING GUIDELINES	8 INCH	
	MIN	MAX
REQUIRES SD HOUSING OPTION	7-15/16	8-1/8
ALL STANDARD HOUSINGS	8-1/8	8-3/4
REQUIRES RWD KIT ACCESSORY & WF REFLECTOR OPTION	8-3/4	9-1/8

Dimensions shown are for the diameter of the frame flange at its narrowest point

