



8" High Lumen LED Retrofit Downlight

RLC8HL

4500 & 6000 Lumens
120V-277V
0-10V Dimming

DATE: _____ TYPE: _____

FIRM NAME: _____

PROJECT: _____



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

APPLICATIONS:

Retroficient® RLC8HL is an 8" commercial grade Retrofit LED downlight with two available outputs of 4500 and 6000 lumens. The RLC8HL 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 is required for optimal life performance. Not recommended for outdoor use.

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 RLC8HL uses high power Cree LEDs, specifically mixed to provide a minimum of 80 CRI with 3 SDCM color consistency. The use of multiple high 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 RLC8HL utilizes a constant current LED driver. This same driver is capable of running all 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. For the sizing of the control circuit, the dimming circuit may require up to 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. Approved for through branch wiring. Non-IC rated. Product is marked spacing and must be installed with the following minimum spacings:

Center to Center of adjacent luminaires: 24"

Minimum Overhead Clearance: 8-1/2"

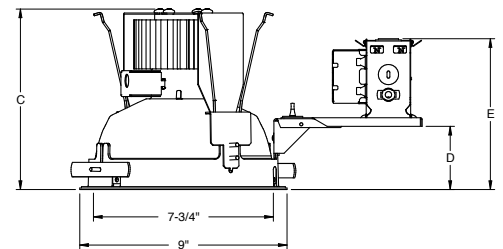
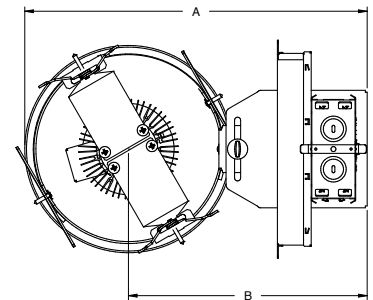
(To bottom of metal pan)

Center of Luminaire to Side of Building Member: 12"

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 for details.



	A	B	C	D	E
RLC8HL	15"-17"	9-3/4" - 11-3/4"	8"	2-1/2" - 3-3/4"	6-1/4" - 7-1/2"

Order housing, reflector, and accessories separately

CATALOG NUMBER:

EXAMPLE: RLC8HL-8LCHL45L50K8WH

HOUSING	DRIVER OPTION	HOUSING OPTION	TRIM APERTURE	OUTPUT	KELVIN	CRI	REF. FINISH/ COLOR OPTION	REFLECTOR OPTIONS	ACCESSORIES
<input type="checkbox"/> RLC8HL³ High Lumen 0-10V Dimming to 10% 120V-277V	<input type="checkbox"/> Standard 0-10V 10% Dimming <input type="checkbox"/> DM1 0-10V 1% Dimming	<input type="checkbox"/> SD Small Diameter	<input type="checkbox"/> 8LCHL High Lumen Clear Alzak Reflector	<input type="checkbox"/> 45L 4500 Lumen <input type="checkbox"/> 60L 6000 Lumen	<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	<input type="checkbox"/> 8 80+ CRI <input type="checkbox"/> 9 90+ CRI	<input type="checkbox"/> Standard Semi-Diffuse Clear Alzak <input type="checkbox"/> WH Painted Matte White Reflector and Flange	<input type="checkbox"/> WT Painted White Flange only <input type="checkbox"/> WF Wide Flange	<input type="checkbox"/> RWD8² Retrofit Wide Diameter Housing kit (8") <input type="checkbox"/> LiteGear¹ Inverter, single phase central lighting, 125VA- 250VA

¹ See Central Inverter compatibility note and web link on page 3.

² See housing compatibility guide for hole diameter compatibility

³ Not suitable for outdoor use.

PHOTOMETRIC DATA

Retroficient® - 8" RLC8HL Downlight

DRIVER DATA	8LCHL45Lxxxx	8LCHL60Lxxxx
Input Voltage	120-277V	120-277V
Input Frequency	50/60 Hz	50/60 Hz
Input Current	0.433 (120v) 0.187 (277v)	0.566 (120v) 0.245 (277v)
Input Power	52W	68W
Constant Current Output	1.826A	1.826A
Power Factor	≥0.90	≥0.90
THD	<22%	<16%
EMI Filtering	FCC Title 47 Part 15, Class A	FCC Title 47 Part 15, Class A
Operating Temperature	-30°C to 35°C	-30°C to 30°C
Dimming	0-10V	0-10V
Over-voltage, over-current, short-circuit protected		

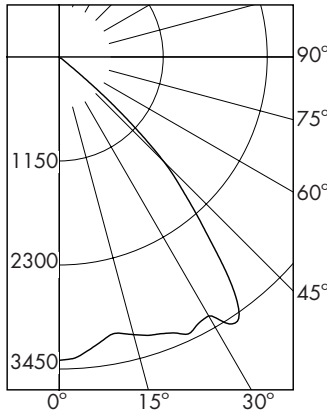
Lumen Multiplier Table

Photometrics for the RLC8HL are published below at a nominal 3000 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	.91
90 CRI	.83

RLC8HL 8LCHL60L30K8

LED Light Engine: 3000K, 80 CRI
System Wattage: 68.6W
Fixture Delivered Lumens: 6026
Fixture Efficacy: 87.8
Spacing Criteria: 1.3



Test No. 16.00490

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

ZONAL LUMEN SUMMARY

ZONE	LUMENS	% LUMINAIRE
0-60	6012	99.8
0-90	6026	100.0
90-180	0	0.0
0-180	6026	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average
45°	75994
55°	1203
65°	622
75°	508
85°	377

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

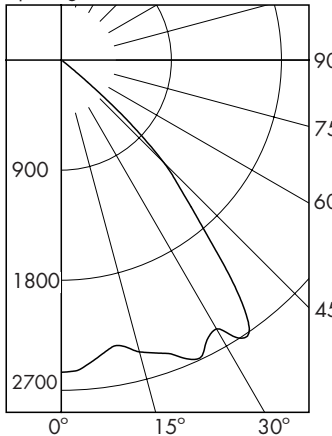
Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																
	80%		70%		50%		30%		10%								
	70	50	30	10	70	50	30	10	50	30	10	50	30	10			
1	113	110	107	104	110	107	105	103	103	101	99	99	98	96	96	95	94
2	106	100	96	92	104	99	94	91	95	92	89	92	89	87	89	87	85
3	99	92	86	81	97	90	85	81	88	83	79	85	81	78	83	80	77
4	93	84	78	73	91	83	77	72	81	76	71	79	74	71	77	73	70
5	87	77	70	65	85	76	70	65	74	69	64	73	68	64	71	67	63
6	82	71	64	59	80	70	64	59	69	63	58	67	62	58	66	61	57
7	76	65	58	53	75	65	58	53	63	57	53	62	57	53	61	56	52
8	72	60	53	49	70	60	53	48	59	53	48	57	52	48	56	51	48
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	44
10	63	52	45	41	62	51	45	41	51	45	40	50	44	40	49	44	40

RLC8HL 8LCHL60L30K8

Test No. 16.00490

RLC8HL 8LCHL45L30K8

LED Light Engine: 3000K, 80+ CRI
System Wattage: 52.3 W
Fixture Delivered Lumens: 4599
Fixture Efficacy: 87.9
Spacing Criteria: 1.3



Test No. 16.00489

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

ZONAL LUMEN SUMMARY

ZONE	LUMENS	% LUMINAIRE
0-60	4587	99.7
0-90	4599	100.0
90-180	0	0.0
0-180	4599	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average
45°	51789
55°	967
65°	511
75°	357
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	50	30	10			
1	113	110	107	104	110	107	105	103	103	101	99	100	98	96	96	95	94
2	106	100	96	92	104	99	94	91	95	92	89	92	89	87	89	87	85
3	99	92	86	82	97	91	85	81	88	83	80	85	82	78	83	80	77
4	93	84	78	73	91	83	77	73	81	76	72	79	74	71	77	73	70
5	87	77	71	66	85	76	70	65	75	69	65	73	68	64	71	67	64
6	82	71	64	59	80	70	64	59	69	63	59	67	62	58	66	61	58
7	77	66	59	54	75	65	58	54	64	58	53	62	57	53	61	56	53
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48
9	67	56	49	45	66	56	49	45	55	49	44	54	48	44	53	48	44
10	63	52	45	41	62	52	45	41	51	45	41	50	45	41	49	44	40

RLC8HL 8LCHL45L30K8

Test No. 16.00489



Dimming Compatibility Table

Dimming Ballast	Manufacturer	Web Link
DM/DM1	Lutron DDTV	http://bit.ly/11jSvZg
DM/DM1	Leviton AWRMG-7xx, AWSMG-7xx, AWSMT-7xx	http://bit.ly/1Bjn2R9

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 it's narrowest point



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