



6" LED Retrofit Downlight RLC6LED

120V or 277V
0-10V Dimming Option

APPLICATIONS:

Retroficient RLC6LED is a 6" commercial grade Retrofit LED downlight with available outputs between 1000-1800 lumens. The RLC6LED 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 35°C (LED5), 28°C (LED6), 25°C (LED7). Free Air Flow around fixture for optimal life performance.

HOUSING:

All components are made from quality die cast aluminum or galvanized 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 RLC6LED 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 RLC6LED utilizes a 25 watt constant current Thomas Research Products LED driver. This same driver is capable of running all three different lumen outputs, resulting in a reduction of housing skus and simplified specification. The driver is UL8750 and Class II compliant.

DIMMING:

A 0-10V dimming option is available (DM), providing flicker-free dimming down to 10%. See list of compatible dimmers on page (3). 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, (WW damp location). Approved for through branch wiring. Non-IC rated. ENERGY STAR qualified on standard downlight.

WARRANTY:

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

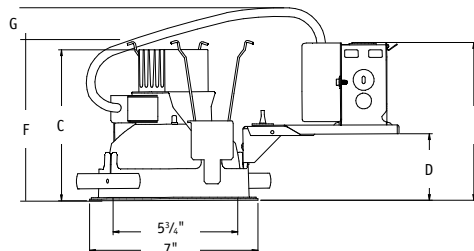
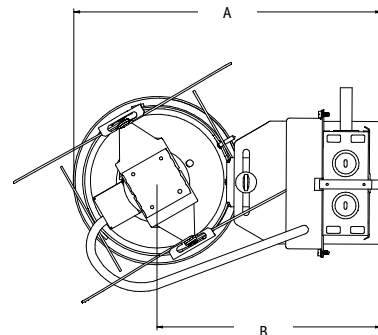
DATE: TYPE:

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	F	G
RLC6LED5/6	12-3/4"-15"	8-7/8"- 10-3/4"	4-3/4"	2-1/2"- 3-3/4"	6-1/4"- 7-1/2"	7-3/4"	7-1/2" min.
RLC6LED7	12-3/4"-15"	8-7/8"- 10-3/4"	6-1/4"	2-1/2"- 3-3/4"	6-1/4"- 7-1/2"	7-3/4"	7-1/2" min.

Order housing, reflector, and accessories separately

CATALOG NUMBER:

EXAMPLE: RLC6LED120DM-6LCLED535K8WT

HOUSING	VOLTAGE	HOUSING OPTIONS	TRIM APERTURE	OUTPUT	KELVIN	REFLECTOR FINISH	REFLECTOR OPTIONS	ACCESSORIES
☐ RLC6LED 6" LED Housing	☐ 120 120V ☐ 277 277V	☐ Blank No Dimming ☐ DM1 Sylvania 0-10V 1% Dimming ☐ DM1 0-10V dimming to 1% ☐ SD Small Diameter.	☐ 6LCLED 6" Open Reflector/ Light Engine Assembly	☐ 5 Nominal 1000 Delivered Lumens ☐ 6 Nominal 1400 Delivered Lumens ☐ 7 Nominal 1800 Delivered Lumens	☐ 27K 2700 Kelvin ☐ 30K 3000 Kelvin ☐ 35K 3500 Kelvin ☐ 40K 4000 Kelvin ☐ 50K 5000 Kelvin	☐ Blank Clear Alzak, Semi- Diffuse	☐ WT White Trim ☐ WF Wide Flange ☐ WW ⁴ Wall Wash	☐ RWD6 ² Retrofit Wide Diameter Housing Kit (6") ☐ LiteGear ³ Inverter, single phase central lighting, 125VA-250VA ☐ LPS Series ³ LitePower micro-inverter, 20VA-55VA
						REFLECTOR COLOR		
						☐ WH ¹ White Paint		
						CRI		
						☐ 8 80+ CRI		

¹ Requires WT option

² See housing compatibility guide for hole diameter compatibility on page 4.

³ See Central Inverter compatibility note and web links on page 4.

⁴ Damp location only

PHOTOMETRIC DATA

Retroficient - 6" RLC6LED Downlight

DRIVER DATA	6LCLED5xxx	6LCLED6xxx	6LCLED7xxx
Input Voltage	120, 277V	120, 277V	120, 277V
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input Current	0.142 (120v) 0.061 (277v)	0.179 (120v) 0.078 (277v)	0.217 (120v) 0.094 (277v)
Input Power	17.0W	21.5W	26.0W
Constant Current Output	700mA	700mA	700mA
Power Factor	≥0.90	≥0.90	≥0.90
THD	<25%	<20%	<20%
EMI Filtering	FCC 47CFR Part 15, Class A	FCC 47CFR Part 15, Class A	FCC 47CFR Part 15, Class A
Operating Temperature	-30°C to +35°C	-30°C to +28°C	-30°C to +25°C
Dimming	0-10V	0-10V	0-10V
Over-voltage, over-current, short-circuit protected			

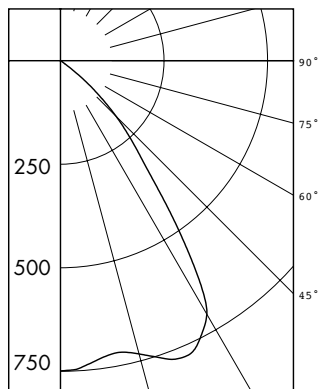
Lumen Multiplier Table

Photometrics for the LC6LED 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

RLC6LED120 6LCLED535K8

LED Light Engine: 3500K, 80+ CRI
System Wattage: 17.0W
Fixture Delivered Lumens: 1107
Fixture Efficacy: 65.1
Spacing Criteria: 1.1



CANDELA DISTRIBUTION

DEG	CANDELA
0	749
5	737
15	733
25	768
35	494
45	190
55	10
65	3
75	1
85	0
90	0

Test No. 15.000569

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

ZONAL LUMEN SUMMARY

ZONE	LUMENS
0-60	1104
0-90	1107
90-180	0
0-180	1107

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average - 0°
45°	16033
55°	1040
65°	424
75°	231
85°	0

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

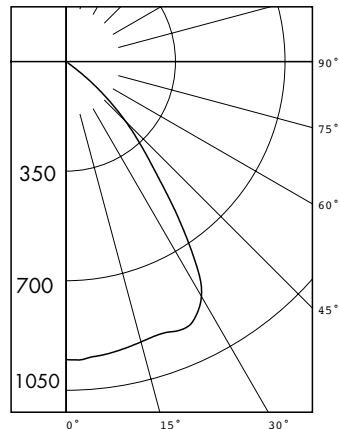
Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																	
	80%		70%		50%		30%		10%									
	20% Effective Floor Cavity Reflectance																	
	% Wall Reflectance																	
	70	50	30	10	70	50	30	10	70	50	30	10	50	30	10	50	30	10
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94	93
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86	84
3	100	93	88	83	98	92	87	83	89	85	81	87	83	80	84	81	79	76
4	94	86	80	75	93	85	79	75	83	78	74	81	76	73	79	75	72	70
5	89	80	73	68	87	79	72	68	77	71	67	75	70	67	73	69	66	64
6	84	74	67	62	82	73	67	62	71	66	62	70	65	61	68	64	61	59
7	79	68	62	57	77	68	61	57	66	61	56	65	60	56	64	59	56	54
8	74	64	57	52	73	63	57	52	62	56	52	61	56	52	60	55	52	50
9	70	59	53	48	69	59	53	48	58	52	48	57	52	48	56	51	48	46
10	66	55	49	45	65	55	49	45	54	48	44	53	48	44	53	48	44	42

RLC6LED120 6LCLED535K8

Test No. 15.000569

RLC6LED120 6LCLED635K8

LED Light Engine: 3500K, 80+ CRI
System Wattage: 21.5W
Fixture Delivered Lumens: 1424
Fixture Efficacy: 66.2
Spacing Criteria: 1.1



CANDELA DISTRIBUTION

DEG	CANDELA
0	952
5	947
15	927
25	931
35	653
45	270
55	16
65	3
75	1
85	0
90	0

Test No. 15.00570

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

ZONAL LUMEN SUMMARY

ZONE	LUMENS
0-60	1420
0-90	1424
90-180	0
0-180	1424

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average - 0°
45°	22784
55°	1664
65°	424
75°	231
85°	0

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																			
	80%				70%				50%				30%				10%			
	20% Effective Floor Cavity Reflectance																			
	% Wall Reflectance																			
	70	50	30	10	70	50	30	10	50	30	10	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	106	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86			
3	100	93	87	83	98	92	86	82	89	85	81	86	83	80	84	81	78			
4	94	86	79	75	92	84	79	74	82	77	73	80	76	72	78	75	72			
5	88	79	72	68	87	78	72	67	76	71	67	74	70	66	73	69	65			
6	83	73	66	62	82	72	66	61	71	65	61	69	64	60	68	63	60			
7	78	68	61	56	77	67	61	56	66	60	56	64	59	55	63	59	55			
8	74	63	56	52	72	62	56	52	61	55	51	60	55	51	59	54	51			
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47			
10	65	55	48	44	64	54	48	44	53	48	44	53	47	44	52	47	43			

RLC6LED120 6LCLED635K8

Test No. 15.00570



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PHOTOMETRIC DATA

Retroficient - RLC6LED Downlight

RLC6LED120 6LCLED735K8

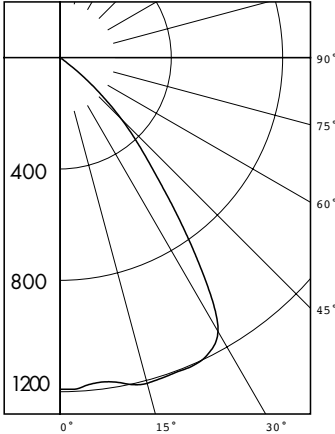
LED Light Engine: 3500K, 80+ CRI
System Wattage: 26.0W
Fixture Delivered Lumens: 1797
Fixture Efficacy: 69.1
Spacing Criteria: 1.1

ZONAL LUMEN SUMMARY

ZONE	LUMENS
0-60	1791
0-90	1797
90-180	0
0-180	1797

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average - 0°
45°	26412
55°	2081
65°	565
75°	231
85°	0



CANDELA DISTRIBUTION

DEG	CANDELA
0	1191
5	1179
15	1211
25	1201
35	823
45	313
55	20
65	4
75	1
85	0
90	0

COEFFICIENTS OF UTILIZATION Zonal Cavity Method

Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																			
	80%				70%				50%				30%				10%			
	20% Effective Floor Cavity Reflectance																			
	% Wall Reflectance																			
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10			
1	113	110	107	105	110	108	105	103	104	102	100	98	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	93	85	79	75	83	78	74	81	76	73	79	75	72			
5	89	79	73	68	87	78	72	68	77	71	67	75	70	67	73	69	66			
6	84	74	67	62	82	73	66	62	71	66	61	70	65	61	68	64	61			
7	79	68	62	57	77	68	61	57	66	60	56	65	60	56	64	59	56			
8	74	63	57	52	73	63	57	52	62	56	52	61	55	52	60	55	51			
9	70	59	53	48	69	59	52	48	58	52	48	57	51	48	56	51	48			
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	48	44			

RLC6LED120 6LCLED735K8

Test No. 15.00571

Test No. 15.00571

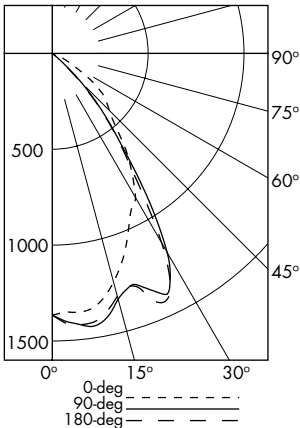
Tested at 25°C Ambient in accordance to IESNA LM-79-2008

RLC6LED1206LCLED735K8 WW

LED Light Engine: 3500K, 80+ CRI
System Wattage: 26.1W
Fixture Delivered Lumens: 1830
Fixture Efficacy: 70.1

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	0 DEG	90 DEG	180 DEG
45°	32550	16662	14337
55°	23885	764	669
65°	8039	389	389
75°	1694	423	423
85°	0	0	0



CANDELA DISTRIBUTION

DEG	0.0	90.0	180.0
0	1365	1365	1365
5	1356	1415	1420
15	1235	1327	1312
25	955	1388	1417
35	709	763	697
45	420	215	185
55	250	8	7
65	62	3	3
75	8	2	2
85	0	0	0
90	0	0	0

MULTIPLE UNITS			
1'	2'	3'	4'
UNITS ON 3' CENTER	UNITS ON 4' CENTER		

3' DISTANCE FIXTURE MOUNTED OUT FROM WALLS FOOTCANDLE DISTRIBUTION ON WALL SURFACE

DISTANCE FROM CEILING IN FEET	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	5	4	2	1	1					8	8	8	3	1	3					
2	10	8	4	2	1					16	16	16	14	6	14					
3	14	11	7	4	2					23	23	23	18	15	18					
4	15	13	9	5	3					28	28	28	18	17	18					
5	13	12	9	6	3					28	28	28	18	19	18					
6	10	10	9	6	4					27	27	27	15	18	15					
7	8	8	7	6	4					25	25	25	14	15	14					
8	6	6	6	5	4					22	22	22	13	12	13					
9	5	5	5	5	4					19	19	19	11	10	11					

RLC6LED1206LCLED735K8

Test No. 15.00572

Test No. 15.00572

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

Dimming Compatibility Table

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



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PHOTOMETRIC DATA

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

HOUSING COMPATIBILITY GUIDE		
ORDERING GUIDELINES	6 INCH	
	MIN	MAX
REQUIRES SD HOUSING OPTION	5-15/16	6-1/8
ALL STANDARD HOUSINGS	6-1/8	6-1/2
REQUIRES RWD KIT ACCESSORY & WF REFLECTOR OPTION	6-1/2	6-7/8

Dimensions shown are for the diameter of the frame flange at it's narrowest point

