

6" LED Retrofit Downlight RLC6SL

1000/1400/1800 Lumens
120V-277V
0-10V Dimming

APPLICATIONS:

Retroficient® RLC6SL is a 6" commercial grade Retrofit LED downlight with available outputs between 1000-1800 lumens. The RLC6SL 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 RLC6SL 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 RLC6SL utilizes a constant current 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, Class II compliant and universal 120V-277V.

DIMMING:

Comes standard with flicker-free 0-10V dimming to 10%. 0-10V to 1% dimming option is also available. See list of compatible dimmers on page 4. 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.

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.

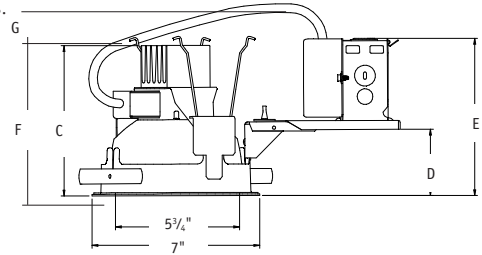
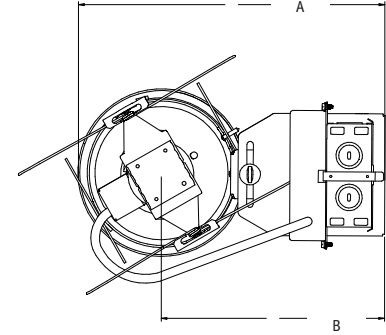
DATE: _____ TYPE: _____

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
RLC6SL 10L/14L	13"-15"	9-3/4"- 11-3/4"	4-3/4"	2-1/2"- 3-3/4"	6-1/4"- 7-1/2"	7-3/4"	7-1/2" min.
RLC6SL 18L	13"-15"	9-3/4"- 11-3/4"	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: RLC6SL-6LCSL14L35K9WT

HOUSING	DRIVER OPTIONS	HOUSING OPTIONS	TRIM APERTURE	OUTPUT	KELVIN	CRI	REF. FINISH/ COLOR OPTION	REFLECTOR OPTIONS	ACCESSORIES
<input type="checkbox"/> RLC6SL Standard Lumen 0-10V Dimming to 10% 120V-277V	Standard 0-10V 10% Dimming <input type="checkbox"/> DM1 0-10V 1% Dimming	<input type="checkbox"/> SD² Small Diameter	<input type="checkbox"/> 6LCSL Standard Lumen Clear Alzak Reflector	<input type="checkbox"/> 10L 1000 Lumen <input type="checkbox"/> 14L 1400 Lumen <input type="checkbox"/> 18L 1800 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	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"/> WW³ Wall Wash	<input type="checkbox"/> RWD6² Retrofit wide diameter housing kit 6" <input type="checkbox"/> LiteGear¹ Inverter, single phase central lighting, 125VA-250VA <input type="checkbox"/> LPS Series¹ LitePower micro-inverter, 20VA- 55VA

¹ See Central Inverter compatibility note and web links on page 4.

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

³ Damp location only



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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 • Tech Support: (888) 777-4832

RTF-022

PHOTOMETRIC DATA

Retroficient® - 6" RLC6SL Downlight

DRIVER DATA	6LCSL10Lxxx	6LCSL14Lxxx	6LCSL18Lxxx
Input Voltage	120-277V	120-277V	120-277V
Input Frequency	50/60 Hz	50/60 Hz	50/60 Hz
Input Current	0.111 (120v) 0.048 (277v)	0.148 (120v) 0.064 (277v)	0.185 (120v) 0.080 (277v)
Input Power	13.4W	17.8W	22.2W
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

When operating in EM mode, the fixture will deliver approximately 30% of the published full lumen output.

Lumen Multiplier Table

Photometrics for the RLC6SL 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	1.09
4000 Kelvin	1.00
3500 Kelvin	1.00
3000 Kelvin	0.99
2700 Kelvin	0.96

RLC6SL 6LCSL18L35K8

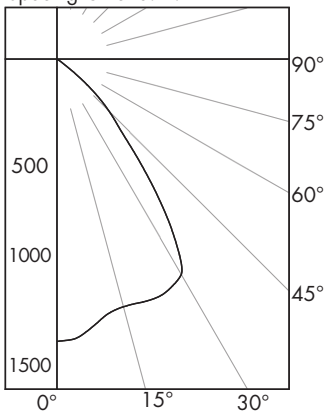
LED Light Engine: 3500K, 80+ CRI

System Wattage: 22.3W

Fixture Delivered Lumens: 1941

Fixture Efficacy: 87.0

Spacing Criteria: 1.1



CANDELA DISTRIBUTION

DEG	CANDELA
0	1368
5	1345
15	1243
25	1247
35	923
45	357
55	27
65	5
75	1
85	0
90	0

Test No. 16.03263

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

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-60	1935	99.7
0-90	1941	100.0
90-180	0	0.0
0-180	1941	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average
45°	27667
55°	2580
65°	648
75°	212
85°	0

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	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	89	79	73	68	87	78	72	67	76	71	67	74	70	66	73	69	66
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	48	57	51	47	56	51	47	55	51	47
10	66	55	48	44	65	54	48	44	54	48	44	53	47	44	52	47	44

RLC6SL 6LCSL18L35K8

Test No. 16.03263

RLC6SL 6LCSL14L35K8

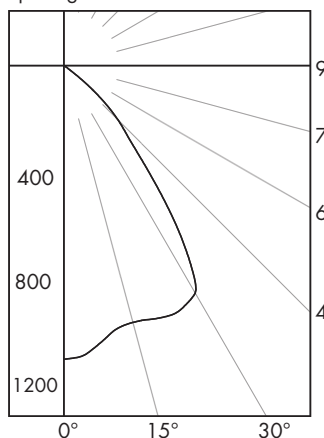
LED Light Engine: 3500K, 80+ CRI

System Wattage: 17.9W

Fixture Delivered Lumens: 1520

Fixture Efficacy: 84.9

Spacing Criteria: 1.1



CANDELA DISTRIBUTION

DEG	CANDELA
0	1072
5	1050
15	971
25	990
35	721
45	277
55	20
65	4
75	1
85	0
90	0

Test No. 16.03265

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

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-60	1515	99.7
0-90	1520	100.0
90-180	0	0.0
0-180	1520	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average
45°	21467
55°	1911
65°	519
75°	212
85°	0

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	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	80	75	92	85	79	74	82	77	73	80	76	73	78	75	72
5	89	79	73	68	87	78	72	67	76	71	67	74	70	66	73	69	66
6	83	73	66	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	52	61	55	51	60	55	51	59	54	51
9	70	59	52	48	68	58	52	48	57	51	47	56	51	47	55	51	47
10	66	55	48	44	65	54	48	44	54	48	44	53	47	44	52	47	44

RLC6SL 6LCSL14L35K8

Test No. 16.03265

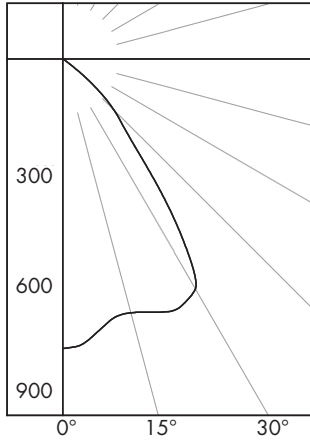


PHOTOMETRIC DATA

Retroficient® - 6" RLC6SL Downlight

RLC6SL 6LCSL10L35K8

LED Light Engine: 3500K, 80+ CRI
 System Wattage: 13.5W
 Fixture Delivered Lumens: 1106
 Fixture Efficacy: 81.9
 Spacing Criteria: 1.1



CANDELA DISTRIBUTION

DEG	CANDELA
0	780
5	762
15	708
25	740
35	518
45	196
55	15
65	3
75	1
85	0
90	0

Test No. 16.03264

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

ZONAL LUMEN SUMMARY

ZONE	LUMENS	%LUMINAIRE
0-60	1103	99.7
0-90	1106	100.0
90-180	0	0.0
0-180	1106	100.0

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	Average
45°	15190
55°	1433
65°	389
75°	212
85°	0

COEFFICIENTS OF UTILIZATION

Zonal Cavity Method

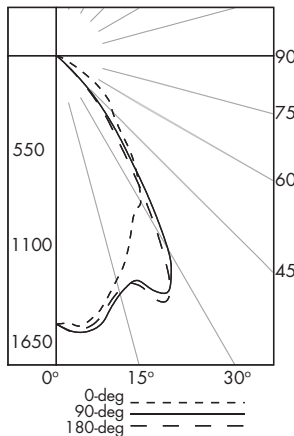
Room Cavity Ratio	% Effective Ceiling Cavity Reflectance																
	80%			70%			50%			30%			10%				
	70	50	30	10	70	50	30	10	50	30	10	50	30	10			
1	113	110	107	105	110	108	105	103	104	102	100	100	98	97	96	95	94
2	107	101	97	93	104	99	95	92	96	93	90	93	90	88	90	88	86
3	100	93	88	83	98	92	87	82	89	85	81	86	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	73	66	62	71	65	61	69	65	61	68	64	60
7	78	68	61	57	77	67	61	56	66	60	56	65	60	56	64	59	55
8	74	63	57	52	73	63	56	52	61	56	52	60	55	51	59	55	51
9	70	59	52	48	69	58	52	48	57	52	48	57	51	47	56	51	47
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44

RLC6SL 6LCSL10L35K8

Test No. 16.03264

RLC6SL 6LCSL18L35K8 WW

LED Light Engine: 3500K, 80+ CRI
 System Wattage: 22.2W
 Fixture Delivered Lumens: 1938
 Fixture Efficacy: 87.3



CANDELA DISTRIBUTION

DEG	0	90	180
0	1527	1527	1527
5	1545	1581	1565
15	1324	1404	1383
25	1030	1489	1517
35	792	780	670
45	454	219	189
55	273	8	8
65	64	2	2
75	9	1	1
85	0	0	0
90	0	0	0

Test No. 16.03521

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

LUMINANCE DATA IN CANDELA/SQ. METER

Angle in Vertical	0 DEG	90 DEG	180 DEG
45°	38311	18480	15949
55°	28400	832	832
65°	9036	282	282
75°	2075	231	231
85°	0	0	0

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

2' DISTANCE FIXTURE MOUNTED OUT FROM WALLS FOOTCANDLE DISTRIBUTION ON WALL SURFACE (DIRECT ONLY)

DISTANCE FROM CEILING IN FEET	1'				2'				3'				4'			
	15	11	6	2	1	15	5	15	15	1	15	1	15	1	15	1
1	15	11	6	2	1	15	5	15	15	1	15	1	15	1	15	
2	40	36	26	13	5	41	27	41	40	10	40	40	10	40	40	
3	36	35	28	18	11	41	36	41	36	22	36	36	22	36	36	
4	22	22	22	19	13	33	39	33	25	27	25	25	27	25	25	
5	14	14	14	14	13	27	30	27	20	25	20	20	25	20	20	
6	10	10	9	9	9	24	22	24	16	19	16	16	19	16	16	
7	7	7	6	6	6	19	18	19	14	14	14	14	14	14	14	
8	5	5	5	4	4	15	15	15	12	11	12	12	11	12	12	
9	4	4	3	3	3	12	13	12	10	9	10	10	9	10	10	

RLC6SL 6LCSL18L35K8 WW

Test No. 16.03521



PHOTOMETRIC DATA

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

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

