



The Lightolier Commercial Retrofit downlight is an easy to install downlight with adjustable lumen output switch. It offers lumen output ranging from 500lm to 3000lm, and trim options from 4 inch to 9.5 inch. This convenient downlight is ideal for retail store, residential and office application.

Project: _____
 Location: _____
 Cat.No: _____
 Type: _____
 Notes: _____

Fixture

example: CR4R10927UW

Family	Size/Lumens	CRI	CCT	Voltage	Finish
CR		9		U	W
CR Commercial retrofit downlight	4R10 4" Round - 500lm/750lm/1000lm 6R15 6" Round - 700lm/1000lm/1500lm 8R23 8" Round - 1000lm/1500lm/2300lm 10R30 9.5" Round - 1500lm/2000lm/3000lm	9 90CRI	27 2700K 30 3000K 35 3500K 40 4000K	U 120/277V	W White

Features

- Flange:** Aluminum white painted with baffle.
- Power supply:** Integral class 1 driver. (see Electrical section for specifications)
- Lifetime:** L70 at 50,000 hours and backed with a warranty
- LED board:** Light emitted source.
- Power connection:** Trim is supplied with quick connect metal conduit with connector inside.

- 3 step switch:** Ability to switch to three different lumen package. Select the desired lumen output using the switch before installation. Lumen output can be changed after installation by un-installing the luminaire from the ceiling.

Note: The default setting from Factory is set to the highest lumen value.

Electrical

Electronic power supply: RoHS compliant. Class 1 power unit for use in a dry and damp locations.

Labels

cULus listed.
 ENERGY STAR®.

Electrical Specs	Nominal Lumens	Input Volts	Input Freq.	Input Current	Input Power	THD Factor	Power Factor	Minimum Operating Temp.	Maximum Operating Temp.	IC/ Non-IC	Efficacy @90CRI 3000K
CR4R	500lm/750lm/1000lm	120-277V	60Hz	108mA	13W	<30%	>0.9	-20°C	40°C	IC	87.8lm/W
CR6R	700lm/1000lm/1500lm	120-277V	60Hz	158mA	19W	<30%	>0.9	-20°C	40°C	IC	85.2lm/W
CR8R	1000lm/1500lm/2300lm	120-277V	60Hz	234mA	28W	<30%	>0.9	-20°C	40°C	IC	88.8lm/W
CR10R	1500lm/2000lm/3000lm	120-277V	60Hz	333mA	40W	<30%	>0.9	-20°C	40°C	Non-IC	83.8lm/W

Compatibility

Series	Frame Aperture Range		Compatible Lightolier Frames
	Minimum	Maximum	
CR4R Series	3.9" (99.06mm)	5.1" (129.54mm)	2002P1, 1002P1, 2001F13U, 2001F18U, 1001F13U, 1001F18U, 1001F26U, A400
CR6R Series	6" (152.4mm)	7.4" (187.96mm)	1102F1, 1102HF, 1101F2642U, 1102P1, 6132BU, B600, OM6LED
CR8R Series	7.6" (193.04mm)	9.4" (238.76mm)	7142BU, C700, 8242HU, OM8LED, DL7
CR10R Series	8.6" (218.44mm)	10.4" (264.16mm)	C917MHU, DL9

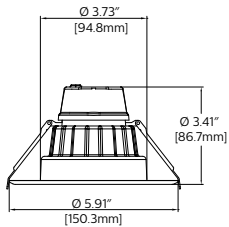


LED Commercial retrofit downlight

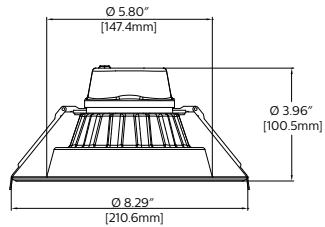
4", 6", 8" & 9.5" round aperture

Dimensions

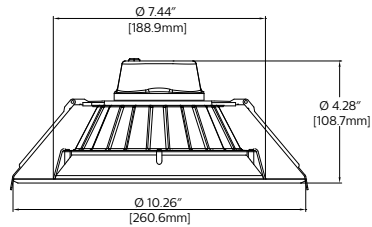
Retrofit downlight 4"



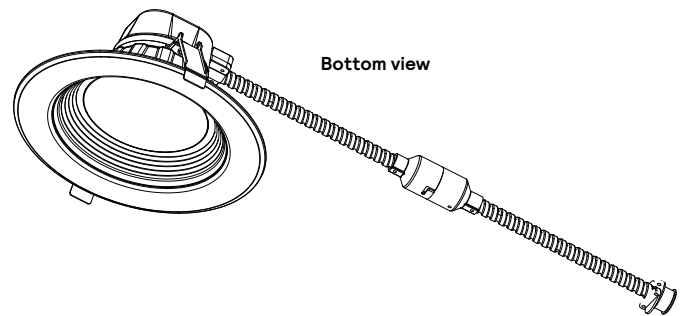
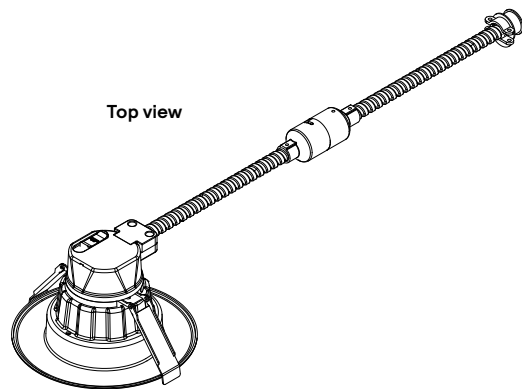
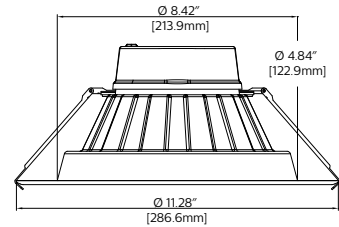
Retrofit downlight 6"



Retrofit downlight 8"



Retrofit downlight 9.5"



LED Commercial retrofit downlight

4", 6", 8" & 9.5" round aperture

Photometry

4-inch LED, 1000lm, 90CRI, 3000K

Candela Curve	Angle	Mean CP	Lumens
	0	523	
	5	518	
	10	506	
	15	489	152
	20	466	
	25	436	227
	30	405	
	35	367	270
	40	330	
	45	286	272
	50	236	
	55	186	232
	60	143	
	65	99	151
	70	59	
	75	28	49
	80	14	
	85	5	4
	90	0	

CR4R10930UW

Output lumens:	1141 lm	Efficacy:	87.8lm/w
Spacing Criterion:	1.2	CCT ³ :	3000K
Input Watts ² :	13.0 W	CRI:	90min

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	21	6.0'
6'	15	7.2'
7'	11	8.4'
8'	8	9.6'
9'	6	10.8'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	21	0.58
6'	15	0.38
7'	11	0.27
8'	8	0.23
9'	6	0.18

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

CRI	CCT	Multiplier
90	2700K	0.92
90	3000K	1.00
90	3500K	0.99
90	4000K	1.02

Coefficients of utilization

Ceiling		80%				70%		50%		30%		0%
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	110	106	103	100	104	98	100	95	96	92	87
	2	102	94	88	83	93	83	89	81	86	79	75
	3	94	84	77	71	83	70	80	69	77	68	65
	4	86	75	67	61	74	61	72	60	69	59	56
	5	80	68	60	53	67	53	65	53	63	52	50
	6	74	61	53	47	61	47	59	47	57	46	44
	7	69	56	48	42	55	41	54	42	52	41	39
	8	64	51	43	38	51	37	49	37	48	37	35
	9	60	47	39	34	47	34	46	34	45	34	32
10	56	44	36	31	43	31	42	31	41	31	29	

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	387	30.6%
0-40	618	49.8%
0-60	1004	85.5%
0-90	1141	100.0%

6-inch LED, 1500lm, 90CRI, 3000K

Candela Curve	Angle	Mean CP	Lumens
	0	663	
	5	659	
	10	648	
	15	627	177
	20	600	
	25	570	262
	30	531	
	35	501	311
	40	457	
	45	412	316
	50	358	
	55	295	265
	60	234	
	65	171	169
	70	106	
	75	51	57
	80	17	
	85	8	9
	90	0	

CR6R15930UW

Output lumens:	1627lms	Efficacy:	85.2lm/w
Spacing Criterion:	1.2	CCT ³ :	3000K
Input Watts ² :	19.1W	CRI:	90min

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	27	6.0'
6'	18	7.2'
7'	14	8.4'
8'	10	9.6'
9'	8	10.8'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	27	0.85
6'	18	0.56
7'	14	0.40
8'	10	0.33
9'	8	0.26

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	110	106	102	99	104	97	99	94	96	91	86
	2	101	93	87	82	91	81	88	79	85	77	74
	3	92	83	75	69	81	68	78	67	75	66	63
	4	85	74	65	59	72	59	70	58	68	57	54
	5	78	66	57	51	65	51	63	50	61	50	47
	6	72	60	51	45	59	45	57	44	55	44	41
	7	67	54	46	40	53	40	52	39	50	39	37
	8	63	49	41	36	49	35	47	35	46	35	33
	9	58	45	37	32	45	32	44	32	43	32	30
10	55	42	34	29	41	29	40	29	40	29	27	

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	501	33.9%
0-40	812	54.1%
0-60	1393	87.9%
0-90	1627	100.0%

1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
2. Wattage: controlled to within 5%
3. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

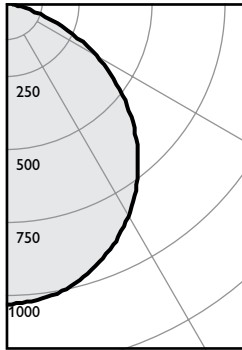
LED Commercial retrofit downlight

4", 6", 8" & 9.5" round aperture

Photometry - continued

8-inch LED, 2300lm, 90CRI, 3000K

Candela Curve



Angle	Mean CP	Lumens
0	934	
5	927	88
10	909	
15	882	248
20	840	
25	794	366
30	739	
35	681	429
40	632	
45	569	435
50	490	
55	413	368
60	329	
65	248	244
70	165	
75	82	93
80	24	
85	9	11
90	1	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	37	6.0'
6'	26	7.2'
7'	19	8.4'
8'	15	9.6'
9'	12	10.8'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	37	1.14
6'	26	0.75
7'	19	0.53
8'	15	0.44
9'	12	0.36

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%																
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	100	100	100	100	100
1	110	106	102	98	103	97	99	94	95	91	86	86	86	86	86	86	86
2	101	93	87	82	91	81	88	79	85	77	73	73	73	73	73	73	73
3	92	82	75	69	81	68	78	67	75	66	62	62	62	62	62	62	62
4	85	73	65	59	72	58	70	57	67	57	54	54	54	54	54	54	54
5	78	66	57	51	65	50	63	50	61	49	47	47	47	47	47	47	47
6	72	59	51	45	58	44	57	44	55	44	41	41	41	41	41	41	41
7	67	54	45	39	53	39	52	39	50	39	37	37	37	37	37	37	37
8	62	49	41	35	49	35	47	35	46	35	33	33	33	33	33	33	33
9	58	45	37	32	45	32	44	32	42	31	30	30	30	30	30	30	30
10	55	42	34	29	41	29	40	29	39	29	27	27	27	27	27	27	27

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	701	30.6%
0-40	1130	49.8%
0-60	1934	85.5%
0-90	2281	100.0%

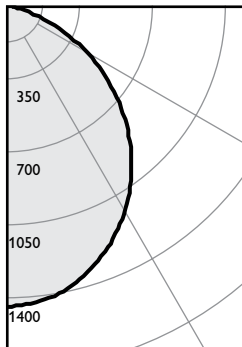
CR8R23930UW

Output lumens: 2281 lm
Spacing Criterion: 1.2
Input Watts²: 25.7 W

Efficacy: 88.8lm/w
CCT³: 3000K
CRI: 90min

9.5-inch LED, 3000lm, 90CRI, 3000K

Candela Curve



Angle	Mean CP	Lumens
0	1234	
5	1227	116
10	1204	
15	1165	328
20	1113	
25	1049	483
30	976	
35	895	560
40	810	
45	721	556
50	631	
55	535	476
60	432	
65	330	327
70	229	
75	132	141
80	44	
85	9	13
90	0	

Single unit data

Height to Lighted Plane	Initial center beam foot-candles	Beam dia. (ft)*
5'	49	6.0'
6'	34	7.2'
7'	25	8.4'
8'	19	9.6'
9'	15	10.8'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq.ft.
5'	53	1.59
6'	37	1.04
7'	27	0.74
8'	21	0.62
9'	16	0.50

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%																
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	100	100	100	100	100
1	110	106	102	98	103	97	99	94	95	91	86	86	86	86	86	86	86
2	101	93	87	81	91	80	88	78	84	77	73	73	73	73	73	73	73
3	92	82	74	68	81	68	78	66	75	65	62	62	62	62	62	62	62
4	85	73	65	58	72	58	69	57	67	56	54	54	54	54	54	54	54
5	78	66	57	51	64	50	62	50	60	49	47	47	47	47	47	47	47
6	72	59	51	44	58	44	56	44	55	43	41	41	41	41	41	41	41
7	67	54	45	39	53	39	51	39	50	39	36	36	36	36	36	36	36
8	62	49	41	35	49	35	47	35	46	35	33	33	33	33	33	33	33
9	58	45	37	32	45	32	44	32	42	31	29	29	29	29	29	29	29
10	55	42	34	29	41	29	40	29	39	29	27	27	27	27	27	27	27

Zonal lumens & percentages

Zone	Lumens	%Luminaire
0-30	928	30.9%
0-40	1488	49.6%
0-60	2520	84.0%
0-90	3000	100.0%

CR10R30930UW

Output lumens: 3000 lm
Spacing Criterion: 1.2
Input Watts²: 35.8 W

Efficacy: 83.8lm/w
CCT³: 3000K
CRI: 90min

1. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.
2. Wattage: controlled to within 5%
3. Correlated Color Temperature: within specs as defined in ANSI_NEMA_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.



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ENERGY STAR CERTIFIED Light Fixtures

Lightolier - Commercial retrofit downlight : CR10R309##UW

Specifications

ENERGY STAR Unique ID:	2334282
ENERGY STAR Partner:	Signify
Brand Name:	Lightolier
Model Name:	Commercial retrofit downlight
Model Number:	CR10R309##UW
Indoor/Outdoor:	Indoor
Fixture Type:	Downlight Solid State Retrofit
Technology:	LED
Total Light Output (lumens):	3064
Appearance/Correlated Color Temperature (K):	2700K
Total Input Power (Watts):	37.91
Color Quality (CRI):	93
Energy Efficiency - Measured Outside the Fixture (lumens/Watt):	80.8
Power Factor:	0.98
Light Sources Per Fixture:	1
Light Source Life (hrs):	54000
Special Features:	Non-Dimmable
Light Source Connection/Base Type:	N/A
Date Available On Market:	1551675600000
Date Certified:	1551934800000
Markets:	United States, Canada
ENERGY STAR Certified:	Yes

Captured On:
04/16/2024