



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 5-year warranty (see www.lightolier.com for details).
- 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 |

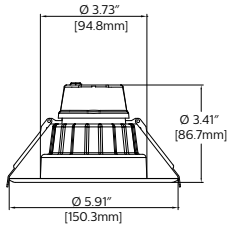


LED Commercial retrofit downlight

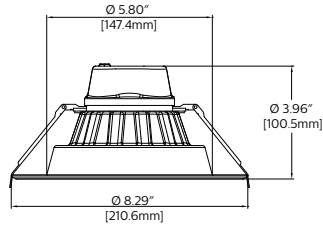
4", 6", 8" & 9.5" round aperture

Dimensions

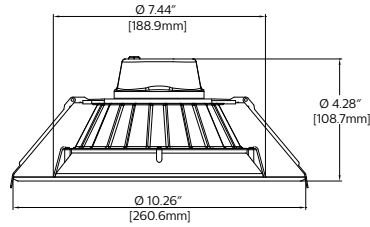
Retrofit downlight 4"



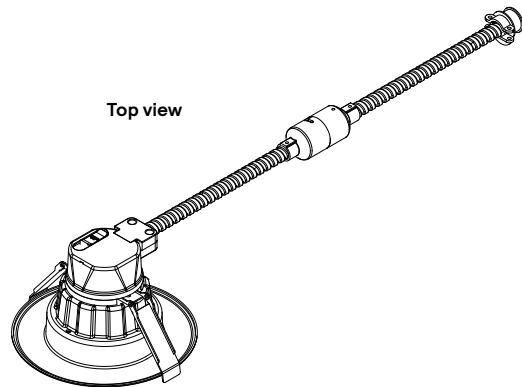
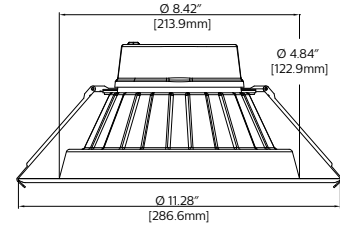
Retrofit downlight 6"



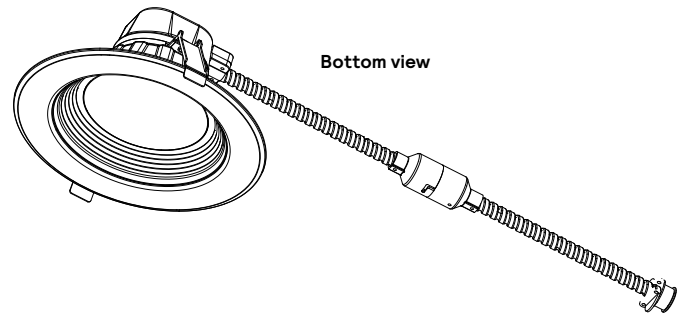
Retrofit downlight 8"



Retrofit downlight 9.5"



Top view



Bottom view

LED Commercial retrofit downlight

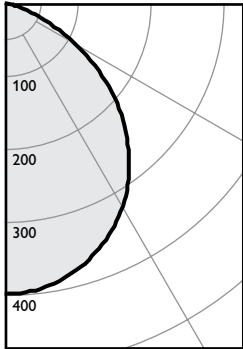
4", 6", 8" & 9.5" round aperture

Photometry

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

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

Candela Curve



| Angle | Mean CP | Lumens |
|-------|---------|--------|
| 0 | 523 | |
| 5 | 518 | 53 |
| 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 | |

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

Coefficients of utilization

| Ceiling | 80% | | | | 70% | | 50% | | 30% | | 0% | |
|-------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 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

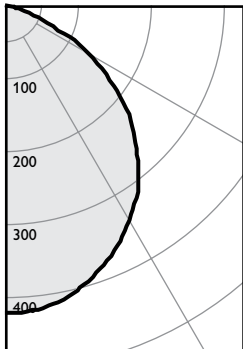
| Zone | Lumens | %Luminaire |
|------|--------|------------|
| 0-30 | 387 | 30.6% |
| 0-40 | 618 | 49.8% |
| 0-60 | 1004 | 85.5% |
| 0-90 | 1141 | 100.0% |

CR4R10930UW

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

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

Candela Curve



| Angle | Mean CP | Lumens |
|-------|---------|--------|
| 0 | 663 | |
| 5 | 659 | 63 |
| 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 | |

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% | |
|-------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 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% |

CR6R15930UW

| | | | |
|----------------------------|---------|--------------------|----------|
| Output lumens: | 1627lms | Efficacy: | 85.2lm/w |
| Spacing Criterion: | 1.2 | CCT ³ : | 3000K |
| Input Watts ² : | 19.1W | 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.

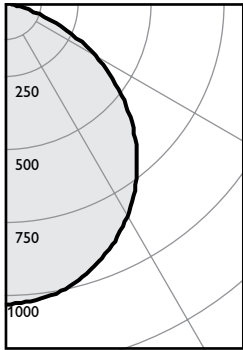
LED Commercial retrofit downlight

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% | |
|-------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 70 | 50 | 30 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 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 | 98 | 103 | 97 | 99 | 94 | 95 | 91 | 86 |
| | 2 | 101 | 93 | 87 | 82 | 91 | 81 | 88 | 79 | 85 | 77 | 73 |
| | 3 | 92 | 82 | 75 | 69 | 81 | 68 | 78 | 67 | 75 | 66 | 62 |
| | 4 | 85 | 73 | 65 | 59 | 72 | 58 | 70 | 57 | 67 | 57 | 54 |
| | 5 | 78 | 66 | 57 | 51 | 65 | 50 | 63 | 50 | 61 | 49 | 47 |
| | 6 | 72 | 59 | 51 | 45 | 58 | 44 | 57 | 44 | 55 | 44 | 41 |
| | 7 | 67 | 54 | 45 | 39 | 53 | 39 | 52 | 39 | 50 | 39 | 37 |
| | 8 | 62 | 49 | 41 | 35 | 49 | 35 | 47 | 35 | 46 | 35 | 33 |
| | 9 | 58 | 45 | 37 | 32 | 45 | 32 | 44 | 32 | 42 | 31 | 30 |
| 10 | 55 | 42 | 34 | 29 | 41 | 29 | 40 | 29 | 39 | 29 | 27 | |

Zonal lumens & percentages

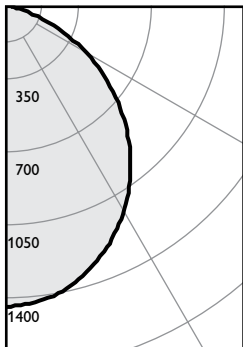
| Zone | Lumens | %Luminaire |
|------|--------|------------|
| 0-30 | 701 | 30.6% |
| 0-40 | 1130 | 49.8% |
| 0-60 | 1934 | 85.5% |
| 0-90 | 2281 | 100.0% |

CR8R23930UW

| | | | |
|----------------------------|---------|--------------------|----------|
| Output lumens: | 2281 lm | Efficacy: | 88.8lm/w |
| Spacing Criterion: | 1.2 | CCT ³ : | 3000K |
| Input Watts ² : | 25.7 W | CRI: | 90 min |

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% | |
|-------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| | 70 | 50 | 30 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 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 | 98 | 103 | 97 | 99 | 94 | 95 | 91 | 86 |
| | 2 | 101 | 93 | 87 | 81 | 91 | 80 | 88 | 78 | 84 | 77 | 73 |
| | 3 | 92 | 82 | 74 | 68 | 81 | 68 | 78 | 66 | 75 | 65 | 62 |
| | 4 | 85 | 73 | 65 | 58 | 72 | 58 | 69 | 57 | 67 | 56 | 54 |
| | 5 | 78 | 66 | 57 | 51 | 64 | 50 | 62 | 50 | 60 | 49 | 47 |
| | 6 | 72 | 59 | 51 | 44 | 58 | 44 | 56 | 44 | 55 | 43 | 41 |
| | 7 | 67 | 54 | 45 | 39 | 53 | 39 | 51 | 39 | 50 | 39 | 36 |
| | 8 | 62 | 49 | 41 | 35 | 49 | 35 | 47 | 35 | 46 | 35 | 33 |
| | 9 | 58 | 45 | 37 | 32 | 45 | 32 | 44 | 32 | 42 | 31 | 29 |
| 10 | 55 | 42 | 34 | 29 | 41 | 29 | 40 | 29 | 39 | 29 | 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 | Efficacy: | 83.8lm/w |
| Spacing Criterion: | 1.2 | CCT ³ : | 3000K |
| Input Watts ² : | 35.8 W | CRI: | 90 min |

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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