



Calculite LED 4" generation 3 features industry leading visual comfort, excellent uniform illumination over time, and patented installation flexibility.

Project: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Cat.No: \_\_\_\_\_  
 Type: \_\_\_\_\_  
 Lamps: \_\_\_\_\_ Qty: \_\_\_\_\_  
 Notes: \_\_\_\_\_

Complete luminaire = Frame + Engine + Trim + Accessories (optional)

### Frame

example: 4RNIP

Series	Installation	Voltage/Options
<b>4R</b>		
<b>4R</b> 4" Non-IC Round	<b>N</b> New construction	— Universal 120V/277V (specify for Power Over Ethernet) <b>LC</b> Chicago Plenum <b>EM</b> Emergency (see page 2 for details and limitations) <sup>1</sup> <b>3</b> 347V (not compatible with ELV dimming) <b>IP</b> Interact Pro ready (for 0-10V engine only) <b>3IP</b> 347V with Interact Pro (for 0-10V engine only)
	<b>R</b> Remodeler	— Universal 120V/277V (specify for Power Over Ethernet) <b>3</b> 347V (not compatible with ELV dimming)

### Engine

example: C4L15835NZ10U

Series	Lumens	CRI	CCT	Beam	Dimming	Voltage
<b>C4L</b>						
<b>C4L</b> Calculite LED 4"	<b>05</b> 500lm (Z10 only) <b>10</b> 1000lm <b>15</b> 1500lm <b>20</b> 2000lm <b>25</b> 2500lm <sup>2</sup> <b>30</b> 3000lm <sup>2</sup>	<b>8</b> 80 CRI <b>9</b> 90 CRI	<b>27</b> 2700K <b>30</b> 3000K <b>35</b> 3500K <b>40</b> 4000K	<b>N</b> Narrow (43°) <b>M</b> Medium (56°) <b>W</b> Wide (76°)	<b>Z10</b> 0-10V 1% <b>SOL</b> EldoLED Solo 0-10V 0.1% <b>D</b> Dali 0.1% <b>L</b> Lutron LDE1 EcoSystem (fade-to-black) <b>DMX</b> Digital Multiplexing	<b>U</b> Universal 120V/277V/347V
					<b>P</b> Power over Ethernet (PoE) Only compatible with 1000 (10) to 2500 (25) lumen configurations.	<b>E</b> Ethernet 48V DC

### Trim

example: C4RDLCCP

Series	Aperture	Style	Finish	Flange
<b>C4</b>	<b>R</b>	<b>DL</b>		
<b>C4</b> Calculite LED 4"	<b>R</b> Round	<b>DL</b> Downlight	<b>BK</b> Black (anodized) <b>CC</b> Comfort clear <b>CL</b> Specular clear <b>CD</b> Comfort clear diffuse <b>CZ</b> Champagne bronze	— White (matte) <b>P</b> Polished (matches aperture) <b>F</b> Flangeless (requires CA4RFT)
			<b>WH</b> White (matte)	— White (matte) <b>F</b> Flangeless (requires CA4RFT)
		<b>SL</b> Shower light (non-conductive) <sup>3</sup>	<b>WH</b> White (matte)	— Not applicable

### Accessories

- CA4RFT** Mud-in ring for use in flangeless trim installations (ordered with a flangeless trim)
- CAEM** Field instalable EM pack (for use with new construction frame only)
- C4RVPWH** IP65 Rated vandal proof matte white accessory mounts onto flangeless trims (C4RDL\*F) and new construction frame only
- AMS** ActiLume multi-sensor (optional accessory for PoE configurations)
- SWZDT** SpaceWise wireless controller with dwell time functionality (compatible with all 0-10V options, see SWZDT spec sheet)
- SRAINT** InterAct Office Accessory (for use with Lightolier UniFrame 0-10V products)

1. Emergency (EM) frame includes emergency battery with ceiling and reflector mountable test switch (see page 2 for details and limitations).  
 2. The 2500lm (25) and 3000lm (30) packages have marked spacing requirements (see page 3).  
 3. Non-conductive flush mount lens with pre-installed gasket (matte white non-conductive flange with diffuse lens that is flush with the flange).



# C4RDL Calculite LED 4" gen 3

## Round Downlight

### Frame-in-kits

#### New Construction:

Galvanized stamped steel for dry or plaster ceilings. Preinstalled telescoping mounting bars from 13" to 24". For 4' distances, use 1/2" EMT, 1-1/2" x 1/2" U or C channel.

**Max ceiling thickness is 2" (51 mm) including PoE frame 4.88" (124 mm) plenum depth for installation.**

#### Emergency:

For reflector mounted emergency test switch add "EM" to end of catalog code (example: C4RDLCCEM). Leave blank for ceiling mounted test switch. Reflector mounted test switch requires above ceiling access.

#### Patented install Mounting frame:

- Pre-installed mounting bars for fast and tool-less installs into T-grid & hat channel ceilings.
- Close-cut aperture design eliminates possibility of gap between ceiling opening and reflector flange.
- Separate wiring compartment for wiring frame to building allows inspection prior to light engine install.
- Simple plug-and-play connection between frame and light engine from below ceiling.

### Dimming

- Advance 0-10V 1% dimming
- Lutron Hi-lume EcoSystem H Series 1% dimming
- EldoLED ECoDrive Dali 1% dimming
- EldoLED SOLOdrive 0-10V 0.1% dimming
- EldoLED DMX POWERdrive

### Power over Ethernet

#### Powered via Lightolier PoE lighting controller:

Complies with FCC rules per Title 47 part 15 (Class A) for EMI / RFI (conducted & radiated). PoE lighting controller accessible from below ceiling.

### Optical systems

#### Comfort throughout the space:

True 50° physical cutoff and 45° reflected cutoff

#### Quality of light:

2 SDLCM ensures color consistency from fixture to fixture and over the luminaire's long lifetime.

### Light engine

Quick connect power pack allow for easy installation and replacement from below ceiling with no need for additional wiring. This allows for:

- Frame and ceiling installation to be performed while still finalizing details such as lumen packages, CCT and control type.
- Easy replacement of electronics at end of life with minimal wasted material and labor required.
- Ease and upgradability of technology.

### Wired Controls Options

#### Interact Office Wired (PoE):

- PoE based IoT connected lighting solution for large enterprises that span across multiple floors, buildings and require multiple gateways.
- Use Interact Office software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- Supports advanced IoT Apps on Personal Control, Space Management, wayfinding, room/desk reservation and offers open APIs for light control and data exchange.
- PoE lighting controller is accessible from below.
- Integral sensor option for occupancy sensing (PIR) and/or daylight harvesting available for additional energy savings.
- Optional integral emergency controller and battery pack provides 600lm nominal output.
- Test switch and indicator light mounted on side of chassis on one end.
- Emergency battery has a 3 month pre-installed shelf life, and must be stored and installed in environments of 20C to 30C (-4F to 86F) ambient, and 45-85% relative humidity.
- For more information on Interact Office Wired, visit: [www.interact-lighting.com/office](http://www.interact-lighting.com/office) or [www.usa.lighting.philips.com/systems/systemareas/offices](http://www.usa.lighting.philips.com/systems/systemareas/offices).

#### Interact Office Wired (PoE),

#### Static White and Tunable White:

- A wireless IoT connected lighting solution for large enterprises that span across multiple floors, buildings and require multiple gateways.
- View all your projects under one dashboard and easily compare insights from multiple projects in one view.
- Compatible Zigbee Green Power wall dimmer and wireless Occupancy or Daylight & Occupancy sensors available.
- Use Interact Office software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- Supports advanced IoT Apps on wayfinding, room/desk reservation and offers open APIs
- Requires compatible Interact Office Gateway and internet connectivity for commissioning.
- For more information on Interact Office Wireless, visit: [www.interact-lighting.com/office](http://www.interact-lighting.com/office) or [www.usa.lighting.philips.com/systems/systemareas/offices](http://www.usa.lighting.philips.com/systems/systemareas/offices).

### Interact Pro (IAP)

- Interact Pro brings the power of connected lighting to small and medium businesses without the complexity usually associated with connected lighting.
- Interact Pro includes an app, a portal and a broad portfolio of wireless Luminaires, lamps and retrofit kits all working on the same system.
- Commissioning via Interact Pro App (Android or iPhone).
- Prepare commissioning remotely via Interact Pro portal.
- Requires compatible Interact Pro Gateway and internet connectivity for commissioning.
- Compatible with UID8451/10 ZigBee Greenpower wireless dimmer switch.
- Compatible with wireless Occ sensor (OCC SENSOR IA CM IP42 WH 10/1) or wireless Day/Occ sensor (OCC MULTI SENSOR IA CM WH 10/1).
- For more information on Interact Pro visit: [www.interact-lighting.com/pro](http://www.interact-lighting.com/pro).
- For more information on Interact Ready visit: [www.philips.com/interact-ready](http://www.philips.com/interact-ready).

### Options and Accessories

**Flangeless mud-in ring:** Use **CA4RFT** for use with flangeless plaster installations.

**Sloped ceilings:** Compatible with sloped ceiling adapters (see **SCA** spec sheet).

**Vandal Proof:** Use **C4RVPWH** for an IP65 rated vandal proof matte white accessory. Must be ordered with flangeless trim and new construction frame.

### ENERGY STAR® exceptions

- 500lm & 90 CRI configurations
- Champagne Bronze & Black finishes
- 347V & Emergency voltage/options
- Dali, EldoLED Solo & PoE drivers

### Title 24 exceptions

- 1000lm configurations
- Champagne Bronze & Black finishes

### Labels and Listings

- cULus listed for wet locations
- ENERGY STAR® certified
- CEC Title 24 JA8 certified
- CCEA (frames with \*LC suffix)
- IP65 rated with vandal proof accessory

### Warranty



5 year limited warranty

Visit [Signify.com/warranties](http://Signify.com/warranties) for more information on Signify's standard 5-year limited warranty on complete luminaire systems.

# C4RDL Calculite LED 4" gen 3

## Round Downlight

### Narrow

Light engine	Input volts	Input freq	Input current	Drive current	Input power	THD power	Power factor
C4L05_NZ10U	120V	50/60Hz	0.05	110 mA	6W	<20%	>0.95
	277V		0.03			<20%	>0.90
C4L10_NZ10U	120V	50/60Hz	0.08	230 mA	11W	<15%	>0.95
	277V		0.04			<20%	>0.95
C4L15_NZ10U	120V	50/60Hz	0.12	360 mA	16W	<10%	>0.95
	277V		0.06			<15%	>0.95
C4L20_NZ10U	120V	50/60Hz	0.17	490 mA	21W	<10%	>0.95
	277V		0.08			<15%	>0.95
C4L25_NZ10U	120V	50/60Hz	0.22	640 mA	27W	<10%	>0.95
	277V		0.10			<15%	>0.95
C4L30_NZ10U	120V	50/60Hz	0.27	790 mA	33W	<10%	>0.95
	277V		0.13			<15%	>0.95

### Medium/Wide

Light engine	Input volts	Input freq	Input current	Drive current	Input power	THD power	Power factor
C4L05_MZ10U	120V	50/60Hz	0.05	110 mA	6W	<20%	>0.95
	277V		0.03			<20%	>0.90
C4L10_MZ10U	120V	50/60Hz	0.08	230 mA	11W	<15%	>0.95
	277V		0.04			<20%	>0.95
C4L15_MZ10U	120V	50/60Hz	0.12	350 mA	16W	<10%	>0.95
	277V		0.06			<15%	>0.95
C4L20_MZ10U	120V	50/60Hz	0.16	470 mA	21W	<10%	>0.95
	277V		0.08			<15%	>0.95
C4L25_MZ10U	120V	50/60Hz	0.21	610 mA	25W	<10%	>0.95
	277V		0.09			<15%	>0.95
C4L30_MZ10U	120V	50/60Hz	0.26	770 mA	31W	<10%	>0.95
	277V		0.12			<15%	>0.95

### Narrow (Power over Ethernet)

Light engine	Input				
	Volts <sup>1</sup>	Voltage <sup>2</sup>	Freq	Current	Power
C4L10__NPE	53V	51-54V	DC	160 mA	8.9 W
C4L15__NPE	53V	51-54V	DC	250 mA	13.6 W
C4L20__NPE	53V	51-54V	DC	340 mA	18.5 W
C4L25__NPE	53V	51-54V	DC	460 mA	24.6 W

### Medium (Power over Ethernet)

Light engine	Input				
	Volts <sup>1</sup>	Voltage <sup>2</sup>	Freq	Current	Power
C4L10__MPE	53V	51-54V	DC	160 mA	8.8 W
C4L15__MPE	53V	51-54V	DC	250 mA	13.4 W
C4L20__MPE	53V	51-54V	DC	320 mA	17.6 W
C4L25__MPE	53V	51-54V	DC	430 mA	23.2 W

### Wide (Power over Ethernet)

Light engine	Input				
	Volts <sup>1</sup>	Voltage <sup>2</sup>	Freq	Current	Power
C4L10__WPE	53V	51-54V	DC	160 mA	8.8 W
C4L15__WPE	53V	51-54V	DC	250 mA	13.4 W
C4L20__WPE	53V	51-54V	DC	320 mA	17.6 W
C4L25__WPE	53V	51-54V	DC	430 mA	23.2 W

- Nominal input volts.
- Preferred volt range.

### Marked spacing applications

Light engine	2500lm	3000lm
C4L_Z10U series	—	X
C4L_LU series	X	X
C4L_DU series	—	X
C4L_DMXX series	—	X

Modules marked with an X require marked spacing:  
 - Center-to-center of adjacent luminaires: 24" (610mm)  
 - Luminaire center to side building member: 12" (305mm)

### Lifetime (TM-21) data

Lumens	Narrow beam	Medium/Wide beam*
500lm 1000lm 1500lm	L90 @ 60,000hrs.	L90 @ 60,000hrs.
2000lm 2500lm 3000lm*	L90 @ 60,000hrs.	L85 @ 60,000hrs.

\* Lutron 3000lm with Medium/Wide beam is L80 @ 60,000hrs.

In accordance with CAN ICES-005-A/ NEB-005-A and FCC Part 15-A.