



**Calculite LED 4" generation 3** provides excellent performance coupled with optimized installation flexibility via UniFrame. Industry leading visual comfort and uniform illumination make it an ideal choice for open office, institution, healthcare, and retail applications.

**Standard luminaire:** Complete luminaire = Frame + Engine + Trim + Accessories (optional)

**Buy American Act of 1933 (BAA)\*\* Compliant luminaire\*:** Complete luminaire = Frame-BAC + Engine-BAC + Trim-BAC

\* BAA compliance requires that BAC option be selected for each of frame, engine, and trim. Frame and engine will be ordered/shipped together; trim will be ordered/shipped separately. Accessories (optional) are not currently BAA-compliant.

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

### Frame

**standard example:** 4SN | **BAC example:** 4SN-BAC

Series	Installation	Voltage / Options
<b>4S</b>		
<b>4S</b> 4" Non-IC Square	<b>N</b> New construction	— Universal 120/277/347V <sup>1</sup> <b>3</b> 347V (for non-0-10v configurations) <sup>2</sup> <b>EM6</b> Emergency, 6W Self-Test/Self-Diagnostic <sup>3</sup> <b>LC</b> Chicago Plenum <sup>4</sup>
	<b>R</b> Remodeler	— Universal 120/277/347V <sup>1</sup> <b>3</b> 347V (for non-0-10v configurations) <sup>2</sup>
		<b>RADIO</b> Integral Interact Pro RF sensor (requires above ceiling access and enables wireless connected lighting control) <b>BAC</b> Meets the requirements of the Buy American Act of 1933 (BAA)**
		<b>BAC</b> Meets the requirements of the Buy American Act of 1933 (BAA)**

### Engine

**standard example:** C4L15835NZ10U | **BAC example:** C4L15835NZ10U-BAC

Series	Lumens	CRI	CCT	Beam <sup>6</sup>	Dimming	Voltage	Options
<b>C4L</b>							
<b>C4L</b> Calculite LED 4" gen 3	<b>05</b> 500lm	<b>8</b> 80CRI	<b>27</b> 2700K	<b>N</b> Narrow <b>M</b> Medium & Wide	<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> 120/277V <b>3</b> 347V <sup>7,8</sup> (0-10v only)	<b>RH</b> Retrofit for square <b>BAC</b> Meets the requisites of the Buy American Act of 1933 (BAA)**
	<b>10</b> 1000lm	<b>9</b> 90CRI	<b>30</b> 3000K				
	<b>15</b> 1500lm		<b>35</b> 3500K				
	<b>20</b> 2000lm		<b>40</b> 4000K				
	<b>25</b> 2500lm <sup>5</sup>						
<b>30</b> 3000lm <sup>5</sup>							
					<b>E</b> ELV (for up to 2000lm only)	<b>1</b> 120V	
					<b>P</b> Power over Ethernet (PoE)	<b>E</b> Ethernet 48V DC	Only compatible with 1000 (10) to 2500 (25) lumen configurations.

### Trim

**standard example:** C4SDLCCP | **BAC example:** C4SDLCCP-BAC

Series	Aperture	Style	Beam <sup>6</sup>	Finish	Flange	Options
<b>C4</b>	<b>S</b>	<b>DL</b>				
<b>C4</b> Calculite LED 4" gen 3	<b>S</b> Square	<b>DL</b> Downlight	<b>NM</b> Narrow & Medium <b>W</b> Wide	<b>CL</b> Specular clear	— White (matte) <b>P</b> Polished (matches aperture) <b>F</b> Flangeless (requires CA4SFT)	<b>IEM6</b> Trim mounted EM test switch <b>BAC</b> Meets the requisites of the Buy American Act of 1933 (BAA)**
				<b>CC</b> Comfort clear <b>CD</b> Comfort clear diffuse <b>WH</b> White (matte)		
					— White (matches finish) <b>F</b> Flangeless (requires CA4SFT)	

### Beam options

Trim	Nar. engine	Med. engine
<b>Narrow &amp; Medium</b>	45° (0.7 s.c.)	58° (0.9 s.c.)
<b>Wide</b>	Not recommended	69° (1.2 s.c.)

### Accessories

(Not currently BAA-compliant) learn more on page 2

<b>SBA</b>	Interact Ready System Bridge Accessory (refer to Philips System Bridge Accessory spec sheet for options/details)
<b>AMS</b>	ActiLume multi-sensor (optional accessory for PoE configurations)
<b>CA4SFT</b>	Mud-in ring for use in 4" square flangeless trim installations (ordered with a flangeless trim)
<b>CAEM6</b>	Field-installable Bodine BSL6 6W battery pack with self-test/self-diagnostic (for new construction, 120-277V)

- Specify standard Universal frame for use with 347V light engines.
- Not compatible with electronic low voltage light engine dimming option (E).
- Emergency (EM6) frame is compatible with reflector mounted test switch when light engine is ordered with IEM6 option code (not compatible with 347V or Power over Ethernet configurations).
- Chicago Plenum (LC) frame is not available for Buy American Compliant (BAC) configurations.
- The 2500lm (25) and 3000lm (30) packages have marked spacing requirements (see page 6).
- See beam Options table for light engine and trim combination spacing criterion.
- The 347V light engine voltage option available only with Z10 dimming option. For other dimming protocols order UNV (U) light engine and 347V (3) frame.
- Universal 120-347V for 0-10v (Z10) dimming only. For 347V non-Z10 dimming, order 347V (3) frame with (U) light engine.

\*\* Failure to properly select the "BAC" suffix could result in you receiving product that is not BAA compliant product with no recourse for an RMA or refund. This BAC designation hereunder does not address (i) the applicability of, or availability of a waiver under, the Trade Agreements Act, or (ii) the "Buy America" domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.



# C4SDL Calculite LED 4" gen 3

## Square 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.**

#### 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.
- Easy alignment of fixtures and present locking at 0°, 45°, & 90° with 360° rotation via tool-less locking.

### Retrofit

- Easily updates legacy Calculite downlights to the latest LED technology. Includes light engine, trim, and driver mounted on cover plate that mounts to junction box of previous Calculite generations. Order with RH option code at end of light engine catalog number (see details on page 5).

#### Compatibility:

Frames	Engines
<b>With CFL</b> S4118_series	<b>Use Retrofit configuration</b> C4R_Trim + C4L_Engine
<b>With INC</b> AS400_series	<b>Use Retrofit configuration</b> C4R_Trim + C4L_Engine
<b>With LED</b> C4L_N series C4X4L_N series P4RD_N_series	<b>Use Retrofit configuration</b> C4R_Trim + C4L_Engine C4S_Trim + C4L_Engine C4R_Trim + C4L_Engine

\* Not available for retrofitting luminaires with integral emergency battery.

### Emergency

Bodine BSL6 6W battery pack with self-test/diagnostic functionality. Factory or field mounted to frame.

- For trim with integral emergency test switch, order trim with IEM6 option (ex: C4SDLWCCIEM6).
- For remote ceiling mounted test switch, order standard trim (ex: C4SDLWCC). Optional accessory ceiling mounting plate available (CAEM6TSCP) for remote mounted test switch.
- Refer to Calculite-LyteProfile-EasyLyte Emergency Battery Pack specification sheet for more details.

### 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 Lightlier 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 SDCM 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.
- 347V light engines are 0-10v dimming only and include dedicated 347V driver for use with universal 120/277/347V (U) frames. For 347V and non-0-10v dimming, order (U) light engine and 347V (3) frame (includes step down transformer).

### Options and Accessories

**Flangeless mud-in ring:** Use **CA4SFT** for use with flangeless plaster installations.

**CAEM6TSCP:** Ceiling cover plate for remote mounted EM6 test switch. 1/2" (25mm) hole, 4 3/8" (109mm) x 2 3/4" (69mm) rectangular. Includes two mounting screws.

**Field Installed Emergency:** Refer to Calculite-LyteProfile-EasyLyte Emergency Battery Pack specification sheet for more details.

**CAEM6:** Field install EM6 kit with Bodine BSL6 6W battery pack with self-test/self-diagnostic, mounts to new construction frames. Includes remote ceiling plate for test switch. To mount test switch to trim for new construction frame, order trim with IEM6 option code (e.g. C4SDLWCCIEM6).

**SBA:** Interact Ready System Bridge Accessory. Requires IRT9015 IR remote and Interact Pro App for commissioning.

### ENERGY STAR® exceptions

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

### Title 24 exceptions

- 1000lm configurations

### Labels and Listings

- cULus listed for wet locations
- ENERGY STAR® certified
- RoHS certified
- CEC Title 24 JA8 certified
- CCEA (frames with \*LC suffix)

### Warranty



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

# C4SDL Calculite LED 4" gen 3

## Square Downlight

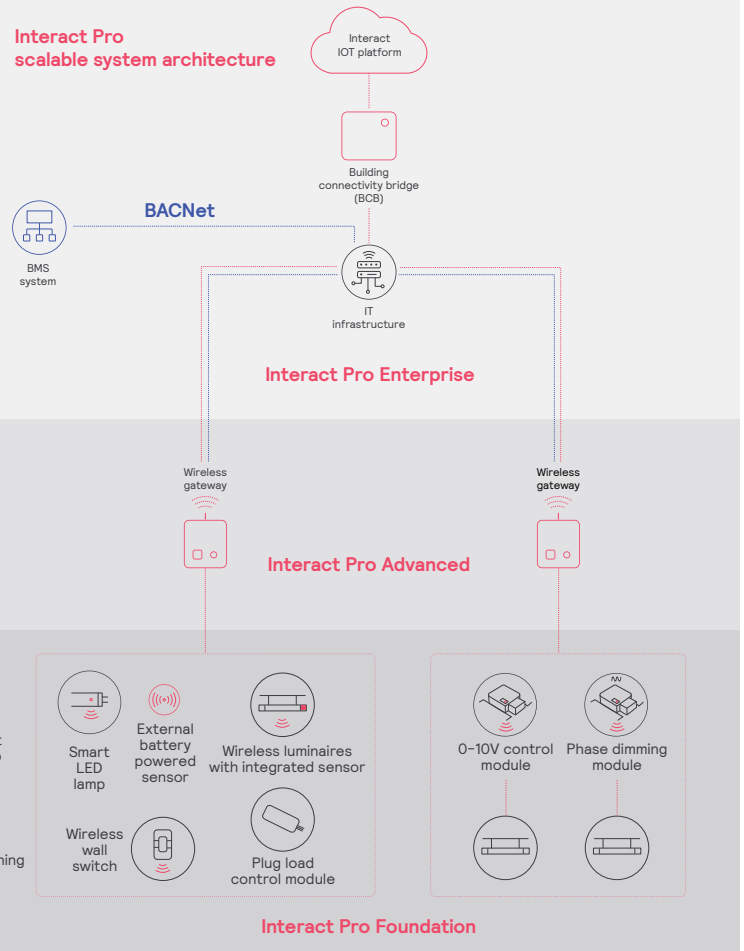
# interact

	Interact Pro scalable system		
	Foundation	Advanced	Enterprise
Dimming, grouping, and zoning	✓	✓	✓
Bluetooth and ZigBee enabled	✓	✓	✓
Motion sensing and daylight harvesting	✓	✓	✓
Integration with 0-10V and phase dimming fixtures	✓	✓	✓
Code compliance	✓	✓	✓
Granular dimming and dwell time	✓	✓	✓
Energy reporting and monitoring		✓	✓
Scheduling		✓	✓
Demand response		✓	✓
BMS integration (BACnet)			✓
Floor plan visualization			✓
IoT sensors for wellness			✓
IoT Apps for productivity			✓

### Currently supported maximum system size

To be able to design the lighting system correctly for the customer, it is important to know the prime characteristics of the system, its possibilities and limitations.

System level	
Total number of gateways	Unlimited
Total number of devices	200 per network
<ul style="list-style-type: none"> <li>• luminaires with integrated sensors</li> </ul>	150
<ul style="list-style-type: none"> <li>• smart TLEDS</li> </ul>	150
Total number of ZGP devices (sensors and switches)	50
<ul style="list-style-type: none"> <li>• sensors</li> </ul>	30
<ul style="list-style-type: none"> <li>• switches</li> </ul>	50
<ul style="list-style-type: none"> <li>• zones and groups</li> </ul>	64
Group level	
Recommended number of lights	40 (recommended 25)
Number of ZGP devices	5
Number of scenes	16



# C4SDL Calculite LED 4" gen 3

## Square Downlight

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### Wireless Controls Options

#### Interact Pro scalable sensor (System Bridge Accessory with -CS option):

- CS is a connected sensor with integral occupancy and daylight sensing and supports wireless mesh connectivity.
- The sensor works in the Foundation mode (similar to SpaceWise) when configured without a gateway or in an Interact Pro Advanced or Enterprise mode if a compatible gateway is used.
- Interact Pro includes an App, a portal and a broad portfolio of wireless luminaires, lamps and retrofit kits all working on the same system.
- Startup is implemented via Interact Pro App (Android or iPhone) & BlueTooth connectivity. The App provides flexibility to choose between a gateway or non gateway mode for setup.
- Setup with the gateway requires wired internet access to the gateway. It is possible to add a gateway at a later point.
- Prepare project configuration steps remotely and use IRT9015 remote onsite to identify and group devices together.
- Compatible with:
  - UID8451/10 wireless dimmer switch
  - SWS200 wireless scene switch
  - Battery powered IP42 presence sensor OCC sensor IA CM WH 10/1
  - Battery powered IP42 presence & daylight sensor OCC-DL sensor IA CM IP42 WH
  - Battery powered IP65 presence sensor OCC sensor IA CM IP65 WH
  - Battery powered IP65 presence & daylight sensor OCC-DL sensor IA CM IP65 WH
- For more information on Interact Pro visit: [www.interact-lighting.com/interactproscalablesystem](http://www.interact-lighting.com/interactproscalablesystem).

#### Interact Pro Enterprise (System Bridge Accessory with -SB option):

- 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 with UID8451/10 wireless dimmer switch, SWS200 wireless scene switch, wireless Occ sensor (OCC SENSOR IA CM IP42 WH 10/1) and wireless Day/Occ sensor (OCC MULTI SENSOR IA CM WH 10/1) and wireless Occupancy or Daylight & Occupancy sensors available.
- Use Interact software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- SB option in addition to occupancy and daylight sensing supports advanced IoT capabilities such as people estimation analysis, desk level temperature & humidity sensing, noise classification, and BLE beacon.
- Requires compatible Gateway and internet connectivity for commissioning.
- For more information, visit: [www.interact-lighting.com/office](http://www.interact-lighting.com/office) or [www.usa.lighting.philips.com/systems/system-areas/offices](http://www.usa.lighting.philips.com/systems/system-areas/offices).

#### Emergency Options (ER100) (System Bridge Accessory with -ER100 option):

- Power Sensing (Factory default) – Recommended UL924 option requires unswitched power sense line, absence of voltage on the normal circuit triggers luminaire to 100% output
- Power Interruption Detection (Field option) – Detects AC power interruption >30ms triggers 90 minute emergency mode with luminaire at 100% output

#### Radio only sensor (RADIO):

- Integral RADIO only sensor simply enables wireless mesh connectivity to the luminaire without any occupancy or daylight sensing.
- Ideal for applications where sensing functionality is managed by other Interact devices and the luminaire only needs to have wireless connectivity.

### 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/system-areas/offices](http://www.usa.lighting.philips.com/systems/system-areas/offices).

#### Interact Office Wired (PoE), Static White:

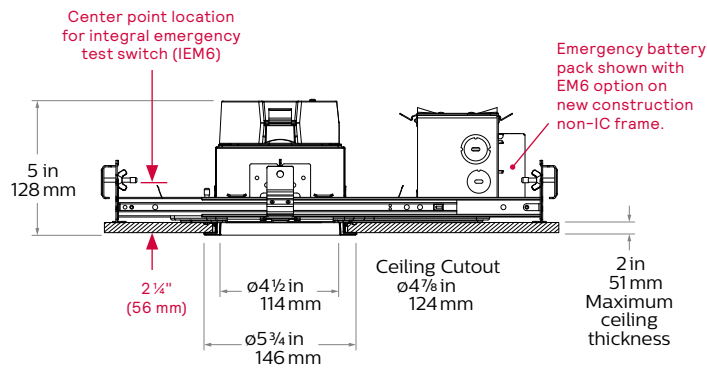
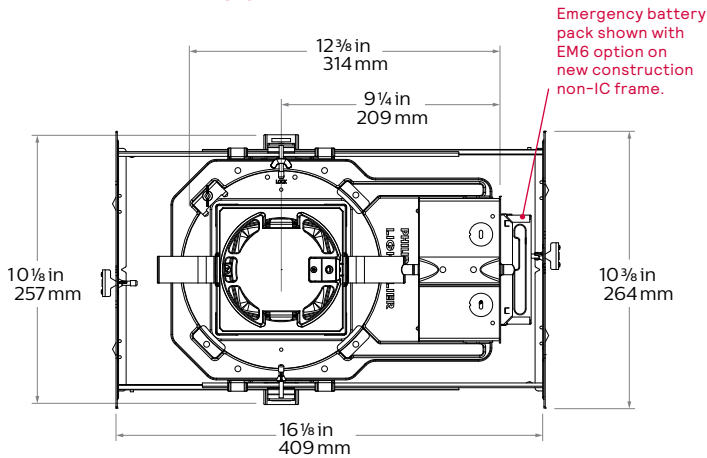
- A wireless IoT connected lighting solution for large enterprises that span across multiple floors, buildings and require multiple gateways.

- 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/system-areas/offices](http://www.usa.lighting.philips.com/systems/system-areas/offices).

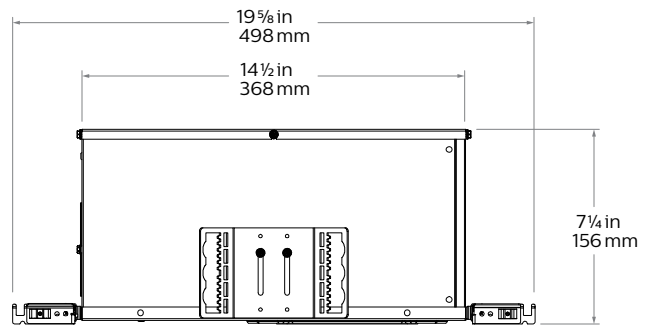
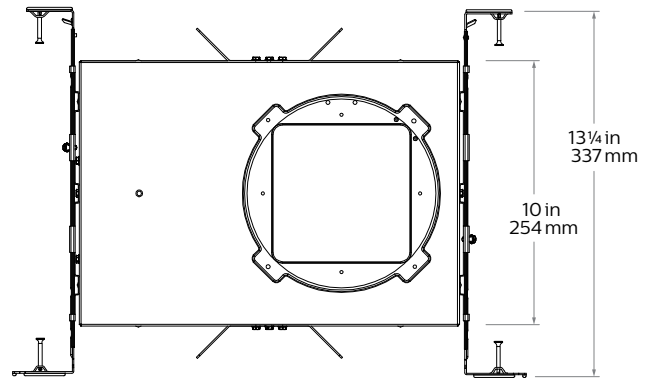
# C4SDL Calculite LED 4" gen 3

## Square Downlight

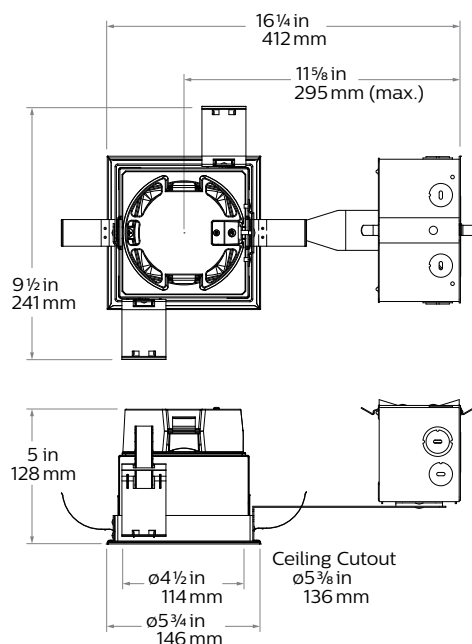
### New Construction (N)



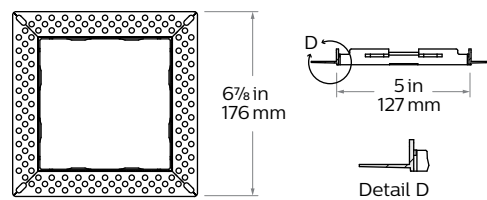
### Chicago Plenum (LC)



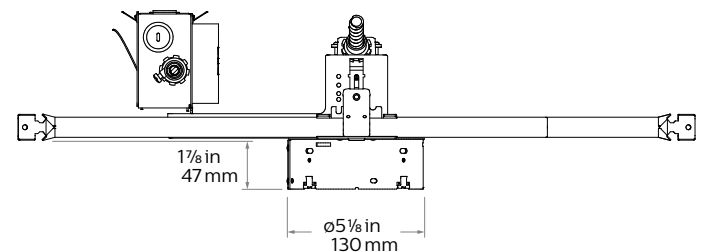
### Remodeler (R)



### Flangeless mud-in ring (CA4SFT) accessory



### Round tall collar frame (RH type light engine required)



# C4SDL Calculite LED 4" gen 3

## Square Downlight

### Narrow

Light engine	Input volts	Input freq	Input current	Drive current	Input power	THD power	Power factor
C4L05_NZ10U/3	120V	50/60Hz	0.05	110 mA	6W	<20%	>0.95
	277V		0.03			<20%	>0.90
C4L10_NZ10U/3	120V	50/60Hz	0.08	230 mA	11W	<15%	>0.95
	277V		0.04			<20%	>0.95
C4L15_NZ10U/3	120V	50/60Hz	0.12	360 mA	16W	<10%	>0.95
	277V		0.06			<15%	>0.95
C4L20_NZ10U/3	120V	50/60Hz	0.17	490 mA	21W	<10%	>0.95
	277V		0.08			<15%	>0.95
C4L25_NZ10U/3	120V	50/60Hz	0.22	640 mA	27W	<10%	>0.95
	277V		0.10			<15%	>0.95
C4L30_NZ10U/3	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/3	120V	50/60Hz	0.05	110 mA	6W	<20%	>0.95
	277V		0.03			<20%	>0.90
C4L10_MZ10U/3	120V	50/60Hz	0.08	230 mA	11W	<15%	>0.95
	277V		0.04			<20%	>0.95
C4L15_MZ10U/3	120V	50/60Hz	0.12	350 mA	16W	<10%	>0.95
	277V		0.06			<15%	>0.95
C4L20_MZ10U/3	120V	50/60Hz	0.16	470 mA	21W	<10%	>0.95
	277V		0.08			<15%	>0.95
C4L25_MZ10U/3	120V	50/60Hz	0.21	610 mA	25W	<10%	>0.95
	277V		0.09			<15%	>0.95
C4L30_MZ10U/3	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_Z10 series	—	X
C4L_L series	X	X
C4L_D series	—	X
C4L_DMx 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 @ 60,000 hrs.	L90 @ 60,000 hrs.
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.

# C4SDL Calculite LED 4" gen 3

## Square Downlight

**Polished Reflectors** Shown as round reflectors but represent the finish of Calculite square reflectors.



**Specular clear (CL):** Most specular and most efficient finish, delivers maximum photometric performance but can produce a mirror image effect of the interior space.



**White (WH):** (matte) Brightest illuminated aperture and provides the smoothest transition to most ceilings when off (white is only available with a white flange).



**Comfort clear (CC):** Semi-specular finish that softens the light at the source of the reflector and creates a subtle, even luminance from the reflector cone.



**Comfort clear diffuse (CD):** Slightly diffuse clear finish, that eliminates iridescence and reduces the mirror image effect inherent with specular finishes.

### Flanges



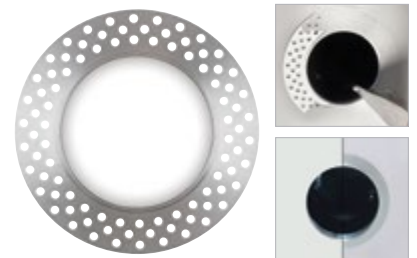
**White (-):** (matte) Provides the smoothest transition to ceilings when off.



**Polished (P):** (matches aperture) Produces a continuous look throughout the reflector (aperture matching).



**Flangeless (F):** (flush-mount) Creates a flush, virtually seamless transition from aperture to ceiling.



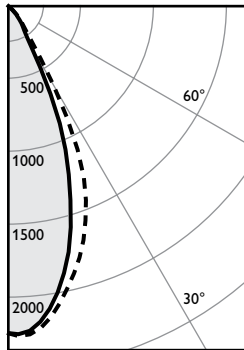
**Mud-in ring (FT):** Low profile, machined aluminum mud-in ring provides a raised rib to plaster up to and a 3/16" flange thickness. The ring is attached to the ceiling material as opposed to the frame-in kit to avoid conduction of heat and vibration which can cause yellowing or cracking of the plaster.

# C4SDL Calculite LED 4" gen 3

## Square Downlight

Narrow beam, 1500lm Engine, 93.0 lm/w at 14.7W or 100.6 lm/W at 13.6W (Power over Ethernet)

### Candela Curve



Frame: **C4SN or 4SN**  
 Engine: **C4L15835N210U**  
 Trim: **C4SDLNMCL**

CCT<sup>1</sup>: 3500K  
 Output lumens: 1369 lms  
 Input watts: 14.7 W (±5%)  
 CRI: 80 min  
 Spacing Crit.: 0.7  
 Beam Angle: 45°

### Zonal summary

Zone	Lumens	%Luminaire
0-30	1142	83.4%
0-40	1311	95.7%
0-60	1369	100.0%
0-90	1369	100.0%

Angle	0°	45°	Lms
0	2242	2242	
5	2206	2238	207
10	1995	2072	
15	1661	1845	488
20	1234	1568	
25	783	1196	447
30	334	637	
35	197	264	168
40	132	156	
45	73	87	58
50	0	0	
55	0	0	0
60	0	0	
65	0	0	0
70	0	0	
75	0	0	0
80	0	0	
85	0	0	0
90	0	0	

### Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	90	3.5'
6'	62	4.2'
7'	46	4.9'
8'	35	5.6'
9'	28	6.3'

\* 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'	63.4	0.65
6'	41.6	0.43
7'	29.7	0.31
8'	24.8	0.25
9'	19.8	0.20

38' x 38' x 10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

**Efficacy: 93.0 lm/w**  
 Report#: T20161391

### Adjustment factors

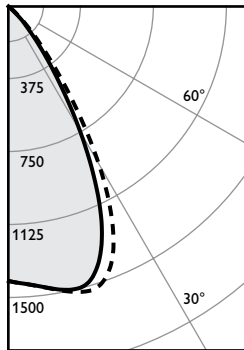
Finish	CCT	Lumens
CL = 100%	80CRI 4000K = 107%	3000lm = 200%
CC = 95%	80CRI 3500K = 100%	2500lm = 167%
CD = 87%	80CRI 3000K = 99%	2000lm = 133%
CZ = 63%	80CRI 2700K = 93%	1500lm = 100%
WH = 87%	90CRI 3000K = 87%	1000lm = 67%
BK = 57%	90CRI 2700K = 81%	500lm = 33%

### Coefficients of utilization

Ceiling	80%		70%		50%		30%		0%			
	70	50	30	10	50	10	50	10	50	10		
Wall	70	50	30	10	50	10	50	10	50	10		
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
1	114	112	109	107	109	106	105	102	102	99	95	95
2	109	105	101	98	103	97	100	95	97	93	89	89
3	104	99	94	91	97	90	95	88	92	87	84	84
4	100	93	88	84	92	84	90	83	88	82	80	80
5	95	88	83	79	87	79	85	78	84	77	75	75
6	91	83	78	74	83	74	81	73	80	73	71	71
7	87	79	74	70	78	70	77	69	76	69	67	67
8	84	75	70	66	75	66	74	66	73	66	64	64
9	80	72	66	63	71	63	70	62	69	62	61	61
10	77	68	63	60	68	60	67	59	66	59	58	58

Medium beam, 1500lm Engine, 103.8 lm/w at 14.2W or 110.1 lm/W at 13.4W (Power over Ethernet)

### Candela Curve



Frame: **C4SN or 4SN**  
 Engine: **C4L15835M210U**  
 Trim: **C4SDLNMCL**

CCT<sup>1</sup>: 3500K  
 Output lumens: 1475 lms  
 Input watts: 14.2 W (±5%)  
 CRI: 80 min  
 Spacing Crit.: 0.9  
 Beam Angle: 58°

### Zonal summary

Zone	Lumens	%Luminaire
0-30	1092	74.0%
0-40	1393	94.5%
0-60	1475	100.0%
0-90	1475	100.0%

Angle	0°	45°	Lms
0	1414	1414	
5	1442	1442	139
10	1481	1484	
15	1494	1522	422
20	1387	1485	
25	1119	1287	531
30	755	943	
35	430	561	301
40	217	285	
45	100	129	82
50	0	0	
55	0	0	0
60	0	0	
65	0	0	0
70	0	0	
75	0	0	0
80	0	0	
85	0	0	0
90	0	0	

### Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	57	4.5'
6'	39	5.4'
7'	29	6.3'
8'	22	7.2'
9'	17	8.1'

\* 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'	67.5	0.63
6'	44.3	0.41
7'	31.6	0.30
8'	26.4	0.25
9'	21.1	0.20

38' x 38' x 10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

**Efficacy: 103.8 lm/w**  
 Report#: T20161398

### Adjustment factors

Finish	CCT	Lumens
CL = 100%	80CRI 4000K = 102%	3000lm = 200%
CC = 95%	80CRI 3500K = 100%	2500lm = 167%
CD = 87%	80CRI 3000K = 97%	2000lm = 133%
CZ = 63%	80CRI 2700K = 87%	1500lm = 100%
WH = 87%	90CRI 3000K = 77%	1000lm = 67%
BK = 57%	90CRI 2700K = 73%	500lm = 33%

### Coefficients of utilization

Ceiling	80%		70%		50%		30%		0%		
	70	50	30	10	50	10	50	10	50	10	
Wall	70	50	30	10	50	10	50	10	50	10	
RCR	Zonal cavity method - Effective floor reflectance = 20%										
Room Cavity Ratio	0	119	119	119	116	116	111	111	106	106	100
1	114	111	109	106	109	105	105	101	101	98	94
2	108	103	99	96	102	95	98	93	96	91	87
3	103	97	92	88	95	87	93	86	90	84	82
4	98	90	85	81	89	80	87	79	85	78	76
5	93	85	79	75	84	74	82	74	80	73	71
6	88	79	74	69	79	69	77	69	76	68	66
7	84	75	69	65	74	64	73	64	72	64	62
8	80	70	64	60	70	60	69	60	68	60	58
9	76	66	61	57	66	57	65	56	64	56	55
10	72	63	57	53	62	53	62	53	61	53	51

1. Correlated Color Temperature within specs as defined in ANSI\_NEMA\_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.  
 2. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

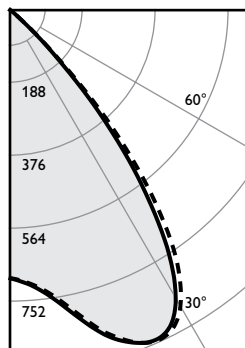


# C4SDL **Calculite LED 4" gen 3**

## Square Downlight

Wide beam, 1500lm Engine, 90.8 lm/w at 14.2W or 96.1 lm/W at 13.4W (Power over Ethernet)

### Candela Curve



Frame: **C4SN or 4SN**  
 Engine: **C4L15835MZ10U**  
 Trim: **C4SDLWCL**

CCT <sup>1</sup> :	3500K
Output lumens:	1288 lms
Input watts:	14.2 W (± 5%)
CRI:	80 min
Spacing Crit.:	1.2
Beam Angle:	69°

### Zonal summary

Zone	Lumens	%Luminaire
0-30	725	56.3%
0-40	1141	88.6%
0-60	1288	100.0%
0-90	1288	100.0%

Angle	0°	45°	Lms
0	688	688	
5	713	709	69
10	766	757	
15	846	837	237
20	907	904	
25	923	928	419
30	854	878	
35	666	720	416
40	410	466	
45	163	181	146
50	28	27	
55	0	0	1
60	0	0	
65	0	0	0
70	0	0	
75	0	0	0
80	0	0	
85	0	0	0
90	0	0	

### Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	28	6.0'
6'	19	7.2'
7'	14	8.4'
8'	11	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'	57.9	0.63
6'	38.0	0.41
7'	27.1	0.29
8'	22.6	0.25
9'	18.1	0.20

38' x 38' x 10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

**Efficacy: 90.8 lm/w**  
 Report#: T20161399

### Adjustment factors

Finish	CCT	Lumens
CL = 100%	80CRI 4000K = 102%	3000lm = 200%
CC = 95%	80CRI 3500K = 100%	2500lm = 167%
CD = 87%	80CRI 3000K = 97%	2000lm = 133%
CZ = 63%	80CRI 2700K = 87%	1500lm = 100%
WH = 87%	90CRI 3000K = 77%	1000lm = 67%
BK = 57%	90CRI 2700K = 73%	500lm = 33%

### Coefficients of utilization

Ceiling	80%					70%			50%		30%		0%
	70	50	30	10	50	10	50	10	50	10	50	10	0
Wall	Zonal cavity method - Effective floor reflectance = 20%												
RCR	Zonal cavity method - Effective floor reflectance = 20%												
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	93
1	113	110	107	105	108	103	104	100	100	97	97	93	85
2	107	102	97	93	100	92	97	90	94	88	85	81	78
3	101	94	88	84	92	83	90	82	87	81	78	74	71
4	95	87	80	76	85	75	83	74	81	74	71	67	65
5	89	80	74	69	79	69	77	68	75	67	65	62	60
6	84	74	67	63	73	63	72	62	70	62	60	57	55
7	79	69	62	57	68	57	67	57	65	57	55	52	50
8	74	64	57	53	63	53	62	52	61	52	50	48	46
9	70	59	53	49	59	48	58	48	57	48	46	44	43
10	66	56	49	45	55	45	54	45	53	44	43		

1. Correlated Color Temperature within specs as defined in ANSI\_NEMA\_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
2. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.



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