

# LIGHTOLIER

by @signify

## Downlighting

Calculite LED 6" gen 3

C6RDL Round Downlight



**Calculite LED 6" 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: 6RN | BAC example: 6RN-BAC

Series	Installation	Voltage / Options
<b>6R</b>		
6R 6" Non-IC Round	N New construction	— Universal 120/277/347V <b>EM6</b> Emergency, 6W Self-Test/Self-Diagnostic <sup>1</sup> <b>LC BAC</b> Chicago Plenum <sup>2</sup> Meets the requirements of the Buy American Act of 1933 (BAA)**
	R Remodeler	— Universal 120/277/347V <b>BAC</b> Meets the requirements of the Buy American Act of 1933 (BAA)**

### Engine

Series	Lumens	CRI/CCT	Beam	Dimming	Options	Voltage	Options
<div>C6L</div>							
C6L Calculite LED 6" gen 3	10 1000lm	927 90CRI/2700K	N Narrow (40°) M Medium (56°) W Wide (76°)	Z10 0-10V 1%	— None D20 Dim to Off	U 120/277V 3 347V <sup>7</sup> (Z10 only)	R Calculite legacy retrofit - select legacy luminaires (E & Z10 dimming only) (see pages 2 & 7)
	15 1500lm	930 90CRI/3000K		L01 Lutron PEQ0 EcoSystem 0.1% (up to 2000lm) L1 Lutron LDE1 EcoSystem (500lm not available) RA Integral Interact Pro RF sensor <sup>5</sup> (enables wireless connected lighting control)		U 120/277V	
	20 2000lm	935 90CRI/3500K					
	25 2500lm	940 90CRI/4000K					
	30 3000lm	950 90CRI/5000K <sup>3</sup>					
	35 3500lm	D2W 90CRI/3000K to 1800K <sup>4</sup> (dim-to-warm)					BAC Meets the requirements of the Buy American Act of 1933 (BAA) *
	48 4800lm*			D DALI 0.1% <sup>6</sup>	— None LIN Linear	U 120/277V	
	60 6000lm*			SOL EldoLED Solo 0-10V 0.1% DMX Digital Multiplexing w/RDM 0.1%	— None LIN Linear SQR Square	U 120/277V	
				E Forward & Reverse Phase (up to 3000lm) LTE Lutron LTE Hi-Lume Phase Cut 1% (500lm not available)	1 120V		
				P Power over Ethernet (PoE) only compatible with 1000 (10) to 2500 (25) lumen configurations	E Ethernet 48V DC		
* See marked spacings requirements on page 9.							

### Trim

standard example: C6RDLCCP | BAC example: C6RDLCCP-BAC

Series	Aperture	Style	Finish	Flange	Options
<b>C6</b>	<b>R</b>				
C6 Calculite LED 6" gen 3	R Round	DL Downlight	BK Black (anodized) CL Specular clear	CC Comfort clear CD Comfort clear diffuse CZ Champagne bronze	— White (matte) <b>P</b> Polished (matches aperture) <b>F</b> Flangeless (requires CA6RFT)
			WH White (matte)		— White (matches finish) <b>F</b> Flangeless (requires CA6RFT)
			WHAMF White (gloss antimicrobial)		— White (matches finish)
		SL Shower light <sup>8</sup>	WH White (matte) WHAMF White (gloss antimicrobial)		— (not applicable)

### 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 and details)
<b>AMS</b>	ActiLume multi-sensor (optional accessory for PoE configurations)
<b>7925</b>	Sloped ceiling 6" adapter for 6RN and 6RA frames
<b>CA6RFT</b>	Mud-in ring for use in 6" round 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 frames, 120-277V)
<b>C6RVPWH</b>	IP65 Rated vandal proof matte white accessory mounts onto flangeless trims (C6RDL*F) and new construction frame only
<b>CAEM6TSCP</b>	Must be ordered with EM6 frame for remote test switch (see page 2 for details)
<b>T347-75VA</b>	347:120V step-down transformer for non-IC (N) frame only (see page 2 for details)

- Emergency (EM6) frame is compatible with reflector mounted test switch when trim is ordered with IEM6 option code. DL style trim only (not compatible with 347V or Power over Ethernet configs). For remote mount switch, order standard trim and CAEM6TSCP mounting plate accessory.
- Chicago Plenum (LC) frame is not available for Buy American Compliant (BAC) configurations.
- Consult factory for 5000K CCT (50) with narrow (N) beam.
- Dim-to-warm (D2W) available only with Z10 dimming. Narrow (N) and medium (M) beams only.
- Linear driver profile (see page 8).
- DALI 4800lm and 6000lm, and all RA options require linear driver configuration (see page 8).
- Not available for 4800lm (48) & 6000lm (60). Order T347-75VA field installed transformer.
- Non-conductive flush mount lens with pre-installed gasket (matte white non-conductive flange with diffuse lens that is flush with the flange).



# C6RDL Calculite LED 6" 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 2.75" (70 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.

### 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 6).

#### Compatibility:

Frames	Engines
<b>With CFL</b> S6132_series	<b>Use Retrofit configuration</b> C6R_ Trim + C6L_ Engine
<b>With INC</b> BS600_series	<b>Use Retrofit configuration</b> C6R_ Trim + C6L_ Engine
<b>With LED</b> C6L_N series C6X6L_N series P6RD_N_series	<b>Use Retrofit configuration</b> C4R_ Trim + C6L_ Engine C6S_ Trim + C6L_ Engine C6R_ Trim + C6L_ 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: C6RDLCCIE6).
- For remote ceiling mounted test switch, order standard trim (ex: C6RDLCC). 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

All configurations are FCC Class A unless otherwise specified.

- Advance 0-10V 1% (Z10), logarithmic curve is standard. Specify D2O for factory-set dim-to-off function, consult factory for linear dimming curve.
- EldoLED SOLODrive (SOL) 0-10v 0.1%
- Lutron PEQ0 (L) Hi-Lume Premier 0.1% EcoSystem
- Lutron LDE1 (L01) EcoSystem 1%
- Lutron LTE (LTE) Hi-Lume 2-wire phase cut 1%
- Electronic low voltage (E) - forward or reverse phase dimming. Remodel and AirSeal IC Shallow are FCC Class B
- DALI (D) - DT6 DALI 0.1%
- DMX (DMX) - Digital Multiplexing with RDM 0.1%

#### Dimming Options

The following are factory-set options for the SOL, D, and DMX driver options (ex. DMXLIN):

- SOL/D/DMX: Logarithmic (-) standard
- SOL/D/DMX: Linear (LIN)
- SOL/DMX: Square (SQR)
- Dim to Warm (D2W): option changes CCT from 3000-1800K gradually as it dims. Use with Z10 dimming only. Fixture-to-fixture consistency of  $\leq 3\text{SDCM}$  at 2700K & 3000K, and  $\leq 5\text{SDCM}$  at 1800K.

### 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 SDCM ensures color consistency from fixture to fixture and over the luminaire's long lifetime.

#### MesoOptics PET optical diffusion film:

Provides a smooth beam shape and mitigates color over angle with optimized luminaire efficiency.

### 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 Z10 dimming only and include dedicated 347V driver. For 347V non-Z10 dimming, order T347-75VA field-installed step-down transformer accessory.

### Options and Accessories

#### Flangeless mud-in ring: Use CA6RFT

for use with flangeless plaster installations.

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

**C6RVPWH:** includes machined aluminum ring painted white, gasketed for IP65 protection, and impact resistant polycarbonate lens (IK10). Locks in place with discrete setscrew (key included). Available also with antimicrobial finish (C6RVPWHAMF).

**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.

**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. C6RDLCCIE6). Refer to Calculite-LyteProfile-EasyLyte Emergency Battery Pack specification sheet for more details.

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

**T347-75VA:** Field installable 347:120V 75VA step-down transformer, attaches to knock out on frame junction box, for use with non-IC (N) or remodel (R) frames.

### ENERGY STAR® exceptions

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

# C6RDL Calculite LED 6" gen 3

## Round Downlight



### AccuRender Technology (CRI 90+)

The right light brings colors to life. Our new AccuRender technology helps ensure colors are rendered more accurately and consistently, while doing so as efficiently as CRI 80 products.



#### Standard CRI 80

Good color rendering and high efficacy



#### Standard CRI 90

Better color rendering and low efficacy



#### AccuRender

Best color rendering, color preference and high efficacy

### Enjoy design flexibility

#### Full range of products and options:

- Available soon in across Lightolier portfolio for application flexibility
- Multiple color temperatures (CCTs) and lumen packages offered

### Promote savings

#### High efficacy, with no penalty:

- Energy efficacy compares well to conventional 80 CRI
- Up to 25% more energy savings vs competitor 90 CRI<sup>1</sup>
- Helps meet Title 24 requirements

### Show your true colors

#### High color rendering:

- True to life colors that help energize your environment and render better flesh tones critical for healthcare hospitality and retail applications.
- $R_a$  up to 94 CRI    •  $R_f$  up to 92 TM-30  
 $R_g$  up to 67 CRI    •  $R_{f,h1}$  up to 91 TM-30  
 $G_a$  up to 99 CRI    •  $R_g$  up to 100 TM-30  
 $C_g$  up to 94 CRI    •  $R_{cs,h1}$  up to -5% TM-30

### Achieve color balance

#### Best in class color consistency:

- Promote aesthetic harmony in your space with  $\leq 2$  SDCM

## Round Downlight

### Photometric – Downlights with CRI of 90+ & R9 of 50+

Lumen Package	Beam	Flux (lm)	Efficacy (lm/W)	Beam Angle	CBCP	CRI	R9	IES TM-30-18			UGR
								$R_f$	$R_g$	$R_{cs,h1}$	
1000 lm	Narrow (N)	989	115	36°	2510	90+	50+	91	100	-5%	0
	Medium (M)	1011	116	57°	1183	90+	50+	91	100	-5%	0
	Wide (W)	942	108	76°	641	90+	50+	91	100	-5%	0
1500 lm	Narrow (N)	1522	119	36°	3863	90+	50+	91	100	-5%	1
	Medium (M)	1530	117	57°	1790	90+	50+	91	100	-5%	1
	Wide (W)	1420	109	76°	965	90+	50+	91	100	-5%	1
2000 lm	Narrow (N)	2075	119	36°	5265	90+	50+	91	100	-5%	2
	Medium (M)	2070	116	57°	2422	90+	50+	91	100	-5%	2
	Wide (W)	1918	107	76°	1304	90+	50+	91	100	-5%	2
2500 lm	Narrow (N)	2511	115	36°	6372	90+	50+	91	100	-5%	3
	Medium (M)	2526	119	57°	2954	90+	50+	91	100	-5%	3
	Wide (W)	2377	112	76°	1616	90+	50+	91	100	-5%	3
3000 lm	Narrow (N)	2927	115	36°	7428	90+	50+	91	100	-5%	4
	Medium (M)	3051	116	57°	3568	90+	50+	91	100	-5%	4
	Wide (W)	2834	107	76°	1926	90+	50+	91	100	-5%	4
3500 lm	Narrow (N)	3333	117	36°	8457	90+	50+	91	100	-5%	4
	Medium (M)	3414	116	57°	3993	90+	50+	91	100	-5%	4
	Wide (W)	3145	107	76°	2138	90+	50+	91	100	-5%	4
4800 lm	Narrow (N)	4491	111	36°	11397	90+	50+	91	100	-5%	5
	Medium (M)	4874	116	57°	5701	90+	50+	91	100	-5%	6
	Wide (W)	4500	107	76°	3059	90+	50+	91	100	-5%	5
6000 lm	Narrow (N)	5529	104	36°	14031	90+	50+	91	100	-5%	6
	Medium (M)	6090	112	57°	7123	90+	50+	91	100	-5%	6
	Wide (W)	5628	103	76°	3825	90+	50+	91	100	-5%	6

# C6RDL Calculite LED 6" gen 3

## Round Downlight

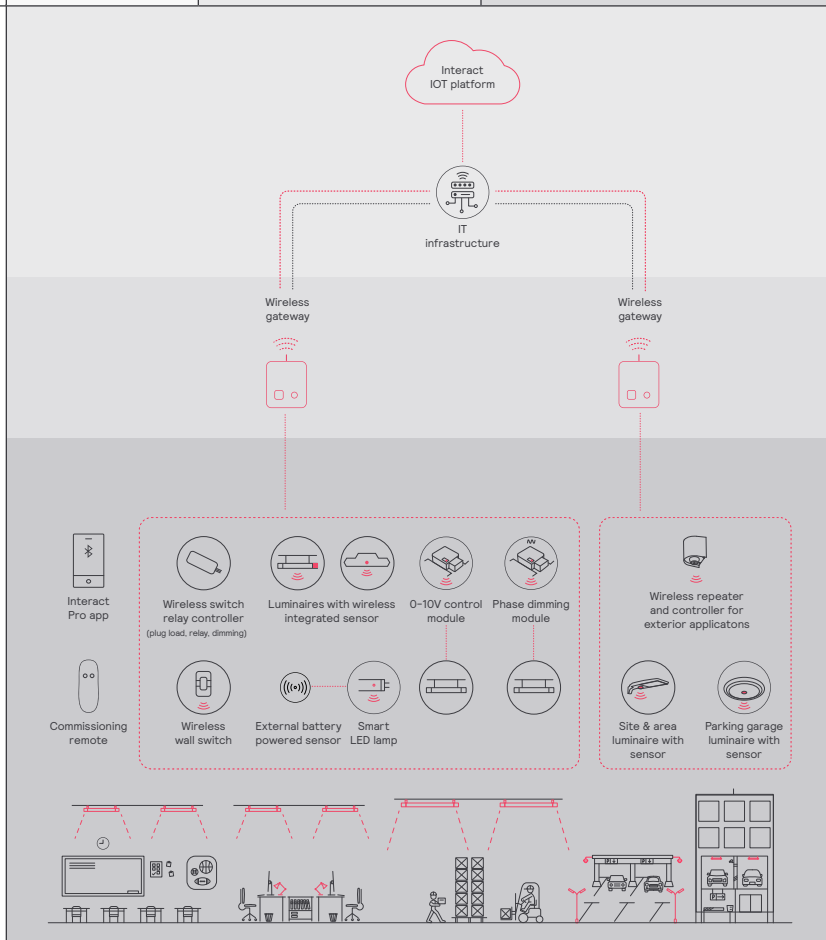
# interact

	Gateway Connected		
	Standalone	Option 1	Option 2
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	✓	✓	✓
Correlated color temperature (CCT) tuning by switch	New	✓	✓
Support for sensor-based Tunable White luminaires	New	✓	✓
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
• Luminaires with integrated sensors	150
• Smart TLEDs	150
• Zones + groups	64
Total number of ZGP devices (sensors and switches)	50
• Sensors	30
• Switches	50
Group level	
Recommended number of lights	40 (maximum 150)
Number of ZGP devices	5
Number of scenes	16



# C6RDL Calculite LED 6" gen 3

## Round Downlight

### Wireless controls options

#### Interact

- SWZCS is a connected sensor with integral occupancy and daylight sensing and supports wireless mesh connectivity.
- The sensor works in the standalone mode (similar to SpaceWise) when configured without a gateway or in a cloud connected mode if a compatible gateway is used.
- Interact 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 on-site to identify and group devices together.

#### Compatible with:

- SWS200 & UID8465 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
- LCN3110: battery powered IP65 presence sensor, OCC sensor IA CM IP65W
- LCN3120: battery powered IP65 presence & daylight sensor, OCC-DL sensor IA CM IP65 WH
- For more information on Interact visit: [interact-lighting.com/interactproscalablesystem](http://interact-lighting.com/interactproscalablesystem)

#### Radio only sensor (RA or RADIO)

- Integral RA or 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.
- Interact 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, identify and group devices together onsite.
- Compatible with SWS200 and UID8465 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).
- For more information on Interact visit: [interact-lighting.com/interactproscalablesystem](http://interact-lighting.com/interactproscalablesystem)

#### Sensor bundle (IAOSB or SB)

- 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 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.
- IAOSB or SB option in addition to occupancy and daylights 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: [interact-lighting.com/interactproscalablesystem](http://interact-lighting.com/interactproscalablesystem)

#### Emergency Options (ER100)

- **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.

### Wired controls options

#### Interact (PoE):

- PoE based IoT connected lighting solution for large enterprises that span across multiple floors, buildings and require multiple gateways.
- Use Interact software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- Test switch and indicator light mounted on side of chassis on one end.
- Supports advanced IoT Apps on Personal Control, Space Management, wayfinding, room/desk reservation and offers open APIs for light control and data exchange.
- 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.
- PoE lighting controller is accessible from below.
- 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: [interact-lighting.com/office](http://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 supported sensor option codes across Genlyte product lines

	Evokit	Day-Brite	Ledalite	Lightolier
ZigBee + Bluetooth + Sensing	SWZCS	SWZCS	CS	SBA accessory (external)
ZigBee + Bluetooth	RADIO	RADIO	RA	RA
ZigBee + Bluetooth + Sensing + Environmental data	IAOSB	IAOSB	SB	SB
ZigBee + Highbay + Sensing	-	SWZCSH	-	-

# C6RDL Calculite LED 6" gen 3

## Round Downlight

### Polished 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.



**Champagne bronze (CZ):** Semi-specular finish that softens light at the source of the reflector while providing a warmer reflector appearance (slightly warmer).



**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.



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



**Black (BK):** (anodized) Specular finish that provides the lowest aperture brightness possible and significantly reduces source identification in a ceiling.



**Vandal proof (VP):** Provides an elegant solution for vandal resistant needs. One piece machined aluminum ring with impact resistant clear lens. Flangeless (F) flange must be ordered. Provides the luminaire with an IK10 impact and IP65 rating.



**Shower light (SL):** Wet location rated shower light with clear acrylic lens applicable in any installation requiring dead front trims, interior or exterior non-corrosive applications, or where a diffused lens at the ceiling is required (non-conductive).

### Flanges



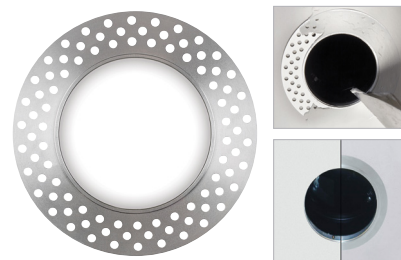
**White (-):** (matte) Provides the smoothest transition to ceilings when off.



**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.

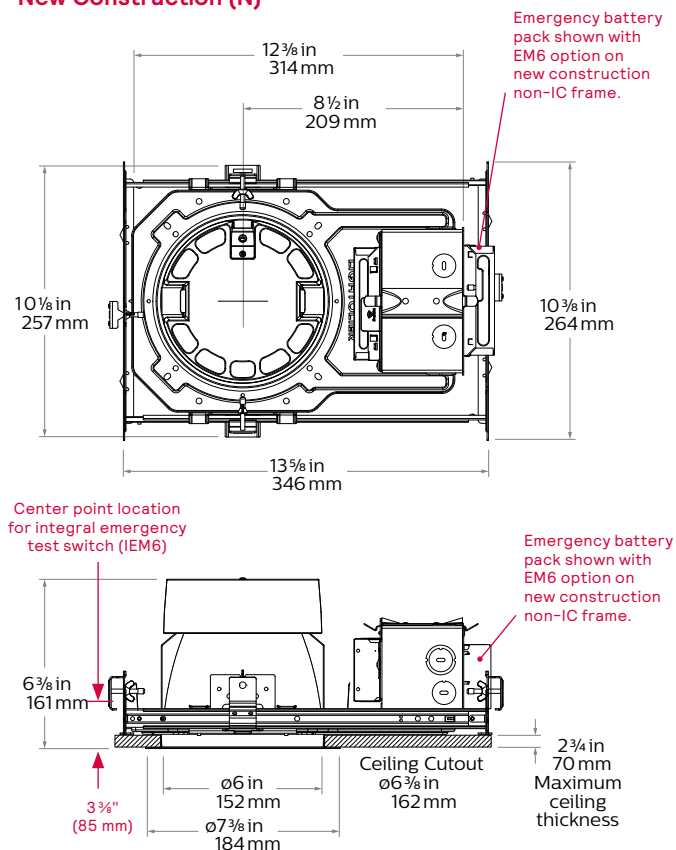


**Mud-in ring (FT):** Low profile, machined aluminum mud-in ring provides a raised rib to plaster up to and a 3/16" flange thickness. The ring is attached to the ceiling material as opposed to the frame-in kit to avoid conduction of heat and vibration which can cause yellowing or cracking of the plaster.

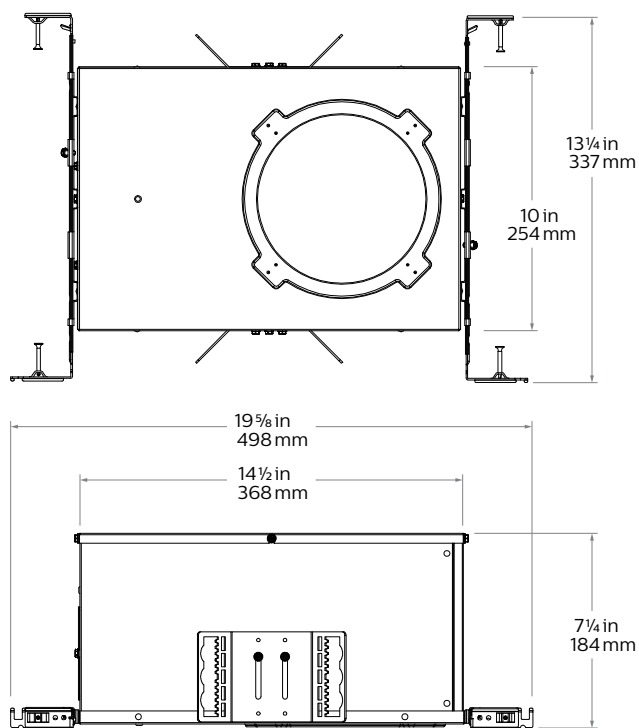
# C6RDL Calculite LED 6" gen 3

## Round Downlight

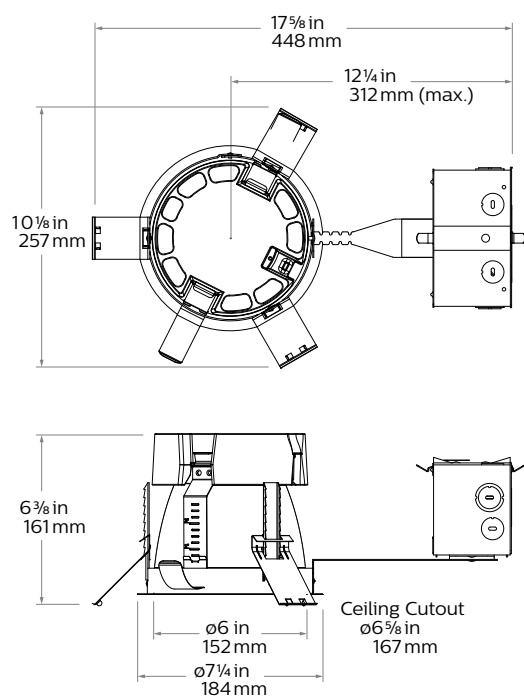
### New Construction (N)



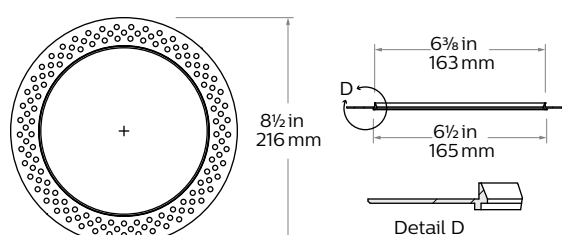
### Chicago Plenum (LC)



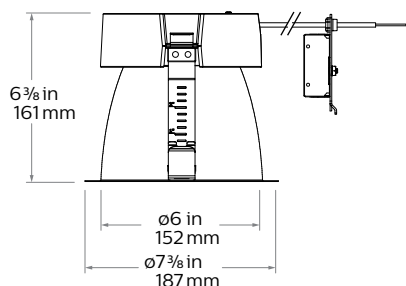
### Remodeler (R)



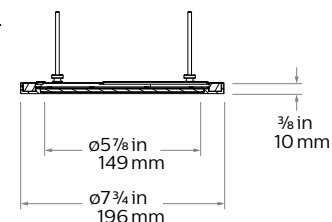
### Flangeless mud-in ring (CA6RFT) accessory



### Retrofit (R) with round trim



### Vandal Proof (VP) accessory

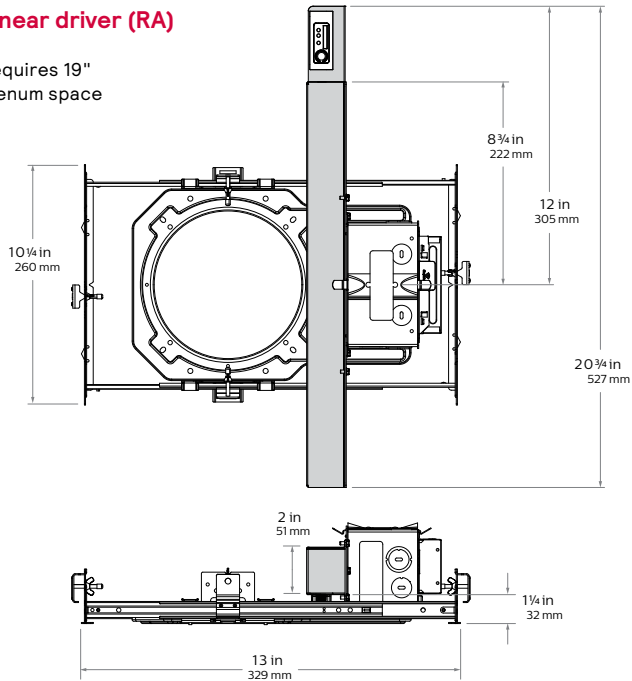


# C6RDL Calculite LED 6" gen 3

## Round Downlight

### Linear driver (RA)

Requires 19"  
plenum space



Dimensions for DALI 4800lm  
and 6000lm, and RA light  
engines. Sensor shown for  
RA light engine only.

# C6RDL Calculite LED 6" gen 3

## Round Downlight

### Electrical - Narrow

Light engine	Input Volts	Input Freq.	Input Current	Drive Current	Input Power	LED Power	THD Factor @ Max Load	Power Factor
1000lm	120V	50/60Hz	0.072A	0.22A	8.6W	7.0W	<10%	>0.9
	277V	50/60Hz	0.032A	0.22A	8.8W	7.0W	<20%	>0.9
	347V	50/60Hz	0.029A	0.22A	10.0W	7.0W	<30%	>0.9
1500lm	120V	50/60Hz	0.107A	0.33A	12.8W	10.7W	<10%	>0.9
	277V	50/60Hz	0.046A	0.33A	12.9W	10.7W	<10%	>0.9
	347V	50/60Hz	0.042A	0.33A	14.6W	10.7W	<25%	>0.9
2000lm	120V	50/60Hz	0.145A	0.45A	17.4W	14.7W	<10%	>0.9
	277V	50/60Hz	0.063A	0.45A	17.5W	14.7W	<10%	>0.9
	347V	50/60Hz	0.056A	0.45A	19.4W	14.7W	<20%	>0.9
2500lm	120V	50/60Hz	0.178A	0.55A	21.4W	18.2W	<10%	>0.9
	277V	50/60Hz	0.078A	0.55A	21.5W	18.2W	<10%	>0.9
	347V	50/60Hz	0.065A	0.55A	22.7W	18.2W	<20%	>0.9
3000lm	120V	50/60Hz	0.212A	0.65A	25.5W	21.7W	<10%	>0.9
	277V	50/60Hz	0.091A	0.65A	25.3W	21.7W	<10%	>0.9
	347V	50/60Hz	0.077A	0.65A	26.7W	21.7W	<15%	>0.9
3500lm	120V	50/60Hz	0.237A	0.75A	28.4W	24.4W	<10%	>0.9
	277V	50/60Hz	0.103A	0.75A	28.4W	24.4W	<10%	>0.9
	347V	50/60Hz	0.084A	0.75A	29.1W	24.4W	<15%	>0.9
4800lm	120V	50/60Hz	0.338A	1.05A	40.5W	34.9W	<10%	>0.9
	277V	50/60Hz	0.145A	1.05A	40.3W	34.9W	<10%	>0.9
	347V	50/60Hz	0.118A	1.05A	41.0W	34.9W	<10%	>0.9
6000lm	120V	50/60Hz	0.442A	1.35A	53.0W	45.6W	<10%	>0.9
	277V	50/60Hz	0.188A	1.35A	52.1W	45.6W	<10%	>0.9
	347V	50/60Hz	0.153A	1.35A	53.0W	45.6W	<10%	>0.9

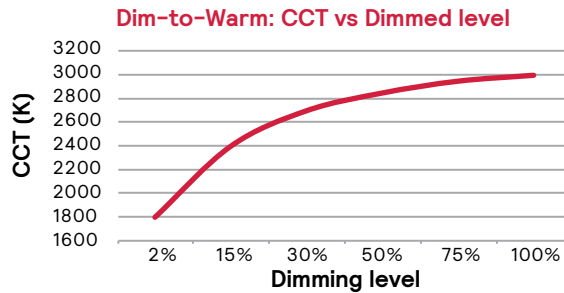
### Electrical - Medium & Wide

Light engine	Input Volts	Input Freq.	Input Current	Drive Current	Input Power	LED Power	THD Factor @ Max Load	Power Factor
1000lm	120V	50/60Hz	0.073A	0.22A	8.7W	7.1W	<10%	>0.9
	277V	50/60Hz	0.032A	0.22A	8.9W	7.1W	<20%	>0.9
	347V	50/60Hz	0.029A	0.22A	10.2W	7.1W	<30%	>0.9
1500lm	120V	50/60Hz	0.109A	0.33A	13.0W	10.9W	<10%	>0.9
	277V	50/60Hz	0.047A	0.33A	13.1W	10.9W	<10%	>0.9
	347V	50/60Hz	0.043A	0.33A	14.9W	10.9W	<25%	>0.9
2000lm	120V	50/60Hz	0.149A	0.45A	17.8W	15.1W	<10%	>0.9
	277V	50/60Hz	0.065A	0.45A	18.0W	15.1W	<10%	>0.9
	347V	50/60Hz	0.057A	0.45A	19.8W	15.1W	<20%	>0.9
2500lm	120V	50/60Hz	0.179A	0.55A	21.4W	18.2W	<10%	>0.9
	277V	50/60Hz	0.078A	0.55A	21.6W	18.2W	<10%	>0.9
	347V	50/60Hz	0.066A	0.55A	22.8W	18.2W	<20%	>0.9
3000lm	120V	50/60Hz	0.220A	0.67A	26.4W	22.4W	<10%	>0.9
	277V	50/60Hz	0.095A	0.67A	26.2W	22.4W	<10%	>0.9
	347V	50/60Hz	0.079A	0.67A	27.5W	22.4W	<15%	>0.9
3500lm	120V	50/60Hz	0.245A	0.75A	29.4W	25.3W	<10%	>0.9
	277V	50/60Hz	0.106A	0.75A	29.4W	25.3W	<10%	>0.9
	347V	50/60Hz	0.087A	0.75A	30.1W	25.3W	<15%	>0.9
4800lm	120V	50/60Hz	0.350A	1.08A	42.0W	36.1W	<10%	>0.9
	277V	50/60Hz	0.150A	1.08A	41.5W	36.1W	<10%	>0.9
	347V	50/60Hz	0.122A	1.08A	42.5W	36.1W	<10%	>0.9
6000lm	120V	50/60Hz	0.454A	1.38A	54.5W	46.8W	<10%	>0.9
	277V	50/60Hz	0.193A	1.38A	53.5W	46.8W	<10%	>0.9
	347V	50/60Hz	0.157A	1.38A	54.5W	46.8W	<10%	>0.9

### Lifetime (TM-21) data

Lumens	Narrow beam	Medium/Wide beam
1000lm	L90 @ 60,000hrs.	L90 @ 60,000hrs.
1500lm		
2000lm		
2500lm		
3500lm*		
4800lm		
6000lm	L90 @ 60,000hrs.	L80 @ 60,000hrs.

\* Lutron 3500lm with Medium/Wide beam is L85 @ 60,000hrs.



### Narrow (Power over Ethernet)

Light engine	Input				
	Volts <sup>1</sup>	Voltage <sup>2</sup>	Freq	Current	Power
C6L10___NPE	53V	51-54V	DC	160 mA	8.9 W
C6L15___NPE	53V	51-54V	DC	250 mA	13.7 W
C6L20___NPE	53V	51-54V	DC	330 mA	17.7 W
C6L25___NPE	53V	51-54V	DC	420 mA	22.8 W

1. Nominal input volts. 2. Preferred volt range.

### Medium (Power over Ethernet)

Light engine	Input				
	Volts <sup>1</sup>	Voltage <sup>2</sup>	Freq	Current	Power
C6L10___MPE	53V	51-54V	DC	160 mA	8.4 W
C6L15___MPE	53V	51-54V	DC	230 mA	12.5 W
C6L20___MPE	53V	51-54V	DC	310 mA	16.7 W
C6L25___MPE	53V	51-54V	DC	390 mA	21.4 W

### Wide (Power over Ethernet)

Light engine	Input				
	Volts <sup>1</sup>	Voltage <sup>2</sup>	Freq	Current	Power
C6L10___WPE	53V	51-54V	DC	160 mA	8.4 W
C6L15___WPE	53V	51-54V	DC	230 mA	12.5 W
C6L20___WPE	53V	51-54V	DC	3120 mA	16.7 W
C6L25___WPE	53V	51-54V	DC	390 mA	21.4 W

### Marked spacing applications

Light engine	4800lm	6000lm
C6L_Z10 series	X	X
C6L_L01 series	X	X
C6L_L1 series	X	X
C6L_LD series	X	X

Light engine	4800lm	6000lm
C6L_LTE series	X	X
C6L_D series	X	X
C6L_DMx series	X	X
C6L_RA series	X	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)

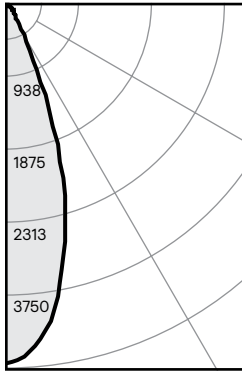
In accordance with CAN ICES-005-A/ NEB-005-A and FCC Part 15-A.

# C6RDL Calculite LED 6" gen 3

## Round Downlight

### Narrow beam, 2500lm Engine, 115lm/W at 22W

#### Candela Curve



6RN / C6L25935NZ10U /  
C6RDLCL

Output lumens: 2512 lms  
Input watts: 21.8 W  
CRI: 90 min  
CCT<sup>1</sup>: 3500K  
Spacing Crit.: 0.6  
Beam Angle: 36°

#### Zonal summary

Zone	Lumens	%Luminaire
0-30	2231	88.8%
0-40	2423	96.5%
0-60	2510	99.9%
0-90	2512	100.0%

Angle	Mean CP	Lumens
0	6372	
5	6006	
10	4997	540
15	3915	
20	2643	1066
25	1335	
30	514	625
35	286	
40	222	192
45	107	
50	12	83
55	4	
60	2	4
65	1	
70	1	1
75	1	
80	0	0
85	0	
90	0	0

#### Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
8'	100	4.8'
9'	79	5.4'
10'	64	6.0'
12'	44	6.6'
14'	33	8.4'

\* 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'	118.0	0.97
6'	77.0	0.63
7'	55.0	0.45
8'	46.0	0.38
9'	37.0	0.30

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

Efficacy: 115.2lm/W  
Report<sup>2</sup>: STMR-1590.2

#### Adjustment factors

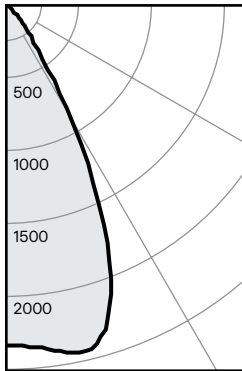
Finish	CCT	Lumens
CL = 100%	90CRI, 4000K = 102%	6000lm = 240%
CC = 95%	90CRI, 3500K = 100%	4800lm = 192%
CD = 87%	90CRI, 3000K = 96%	3500lm = 140%
CZ = 63%	90CRI, 2700K = 92%	3000lm = 120%
WH = 87%		2500lm = 100%
BK = 57%		2000lm = 80%
		1500lm = 60%
		1000lm = 40%

#### 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	106	106	100	95	100
1	114	112	110	108	110	106	106	106	103	102	100	95	101	96	98	94	91
2	110	106	102	100	104	99	101	96	98	94	89	87	92	86	90	85	83
3	106	100	96	93	99	92	96	91	94	89	87	83	88	82	87	81	79
4	102	95	91	87	94	87	92	86	90	85	83	79	84	78	83	77	75
5	98	91	86	83	90	82	88	82	87	81	79	75	80	74	80	74	72
6	94	87	82	78	86	78	85	78	83	77	75	71	76	70	76	70	69
7	91	83	78	75	82	75	81	74	80	74	72	69	74	68	74	68	67
8	87	80	75	71	79	71	78	71	77	71	69	67	72	66	72	66	64
9	84	76	72	68	76	68	75	68	74	68	67	65	70	64	70	64	63
10	81	74	69	66	73	66	72	65	72	65	64	63	68	62	68	62	61

### Medium beam, 2500lm Engine, 119lm/W at 21W

#### Candela Curve



6RN / C6L25935MZ10U /  
C6RDLCL

Output lumens: 2527 lms  
Input watts: 21.3 W  
CRI: 90 min  
CCT<sup>1</sup>: 3500K  
Spacing Crit.: 0.96  
Beam Angle: 56°

#### Zonal summary

Zone	Lumens	%Luminaire
0-30	1994	78.9%
0-40	2410	95.4%
0-60	2524	99.9%
0-90	2527	100.0%

Angle	Mean CP	Lumens
0	2954	
5	2968	
10	2965	283
15	2929	
20	2620	811
25	2022	
30	1240	900
35	628	
40	322	416
45	137	
50	15	110
55	4	
60	2	4
65	1	
70	1	1
75	0	
80	0	0
85	0	
90	0	0

#### Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	118	4.8'
6'	82	5.8'
7'	60	6.7'
8'	46	7.7'
9'	36	8.6'

\* 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'	116.0	0.94
6'	76.0	0.62
7'	54.0	0.44
8'	45.0	0.37
9'	36.0	0.30

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

Efficacy: 118.6lm/W  
Report<sup>2</sup>: STMR-2437

#### Adjustment factors

Finish	CCT	Lumens
CL = 100%	90CRI, 4000K = 102%	6000lm = 240%
CC = 95%	90CRI, 3500K = 100%	4800lm = 192%
CD = 87%	90CRI, 3000K = 96%	3500lm = 140%
CZ = 63%	90CRI, 2700K = 92%	3000lm = 120%
WH = 87%		2500lm = 100%
BK = 57%		2000lm = 80%
		1500lm = 60%
		1000lm = 40%

#### 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	106	106	100	94	100
1	114	111	109	107	109	105	105	105	102	101	99	94	101	96	98	92	88
2	109	104	100	97	102	96	99	94	96	92	88	83	96	90	94	87	84
3	103	97	93	89	96	88	93	87	91	85	83	79	90	84	88	81	78
4	99	91	86	82	90	82	88	81	86	80	77	73	84	78	82	75	73
5	94	86	81	76	85	76	83	75	82	75	73	71	80	74	78	71	70
6	90	81	75	71	80	71	79	71	77	70	68	66	76	70	74	67	66
7	85	77	71	67	76	67	75	66	73	66	64	63	72	66	70	63	62
8	81	72	67	63	72	63	71	62	70	62	61	60	69	63	67	61	60
9	78	69	63	59	68	59	67	59	66	59	57	56	65	59	63	57	56
10	74	65	60	56	65	56	64	56	63	56	55	54	62	55	59	53	52

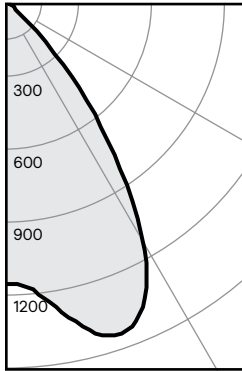
1. Correlated Color Temperature within specs as defined in ANSI\_NEMA\_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.  
2. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State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

# C6RDL Calculite LED 6" gen 3

## Round Downlight

Wide beam, 2500lm Engine, 112lm/W at 21W

Candela Curve



6RN / C6L25935WZ10U /  
C6RDLCL

Output lumens: 2378 lms  
Input watts: 21.3 W  
CRI: 90 min  
CCT<sup>1</sup>: 3500K  
Spacing Crit.: 1.3  
Beam Angle: 76°

Zonal summary

Zone	Lumens	%Luminaire
0-30	1420	59.7%
0-40	2131	89.6%
0-60	2376	99.9%
0-90	2378	100.0%

Angle	Mean CP	Lumens
0	1616	
5	1642	
10	1705	159
15	1780	
20	1762	501
25	1665	
30	1478	760
35	1160	
40	758	711
45	277	
50	25	238
55	7	
60	3	7
65	2	
70	1	2
75	1	
80	0	1
85	0	
90	0	0

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	65	6.5'
6'	45	7.8'
7'	33	9.1'
8'	25	10.4'
9'	20	11.7'

\* 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'	107.0	0.94
6'	70.0	0.62
7'	50.0	0.44
8'	42.0	0.37
9'	34.0	0.30

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

Efficacy: 111.6lm/W  
Report<sup>2</sup>: STMR-2438

Adjustment factors

Finish	CCT	Lumens
CL = 100%	90CRI, 4000K = 102%	6000lm = 240%
CC = 95%	90CRI, 3500K = 100%	4800lm = 192%
CD = 87%	90CRI, 3000K = 96%	3500lm = 140%
CZ = 63%	90CRI, 2700K = 92%	3000lm = 120%
WH = 87%		2500lm = 100%
BK = 57%		2000lm = 80%
		1500lm = 60%
		1000lm = 40%

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	106	106	100	
1	113	110	108	105	108	104	104	100	100	97	91	94	89	85	85	85	
2	107	102	98	94	100	93	97	91	94	89	85	85	85	85	85	85	
3	101	94	89	85	93	84	90	83	88	81	78	78	76	69	66	66	
4	95	87	81	77	86	76	84	75	82	75	72	72	72	72	72	72	
5	90	81	75	70	80	70	78	69	76	69	66	66	66	66	66	66	
6	85	75	69	64	74	64	73	64	71	63	61	61	61	61	61	61	
7	80	70	64	59	69	59	68	59	67	58	56	56	56	56	56	56	
8	76	65	59	54	65	54	64	54	63	54	52	52	52	52	52	52	
9	72	61	55	50	61	50	60	50	59	50	48	48	48	48	48	48	
10	68	57	51	47	57	47	56	47	55	46	45	45	45	45	45	45	

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.



© 2023 Signify Holding. All rights reserved. The information provided herein is subject to change, without notice. Signify does not give any representation or warranty as to the accuracy or completeness of the information included herein and shall not be liable for any action in reliance thereon. The information presented in this document is not intended as any commercial offer and does not form part of any quotation or contract, unless otherwise agreed by Signify.

Signify North America Corporation  
400 Crossing Blvd, Suite 600  
Bridgewater, NJ 08807  
Telephone: 800-555-0050

Signify Canada Ltd.  
281 Hillmount Road,  
Markham, ON, Canada L6C 2S3  
Telephone: 800-668-9008

All trademarks are owned by Signify Holding or their respective owners.