# LIGHTOLIER

# Downlighting

# Calculite LED 6" gen 3

C6RDL Round Downlight



Project:		
Location:		
Cat.No:		
Туре:		
Qty:		
Notes:		

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) Flex install luminaire: Complete luminaires = Engine (F) + 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.

#### Frame

Frame			standard example: 6RN   BAC example: 6RN-BAC	
Series	Installation	Voltage/Options		
6R				
6R 6" Non-IC Round	N New construction	Universal 120/277/347V     Emergency, 6W Self-Test/Self-Diagnostic <sup>1</sup>	LC BAC	Chicago Plenum <sup>2</sup> Meets the requirements of the Buy American Act of 1933 (BAA) <sup>10</sup>
	R Remodeler	- Universal 120/277/347V	BAC	Meets the requirements of the Buy American Act of 1933 (BAA) <sup>10</sup>

#### Engine

Series C6L	Lumens	CRI/CCT	Beam	Dimming	Options	Voltage	Options
C6L Calculite LED 6"	10 1000 lm 15 1500 lm	927 90CRI/2700K 930 90CRI/3000K	N Narrow (40°) M Medium (56°) W Wide (76°)	<b>Z10</b> 0-10V 1% <b>Z10-D2O</b> 0-10V 1% Dim to Off (up	to 3500lm)	U 120/277V 3 347V <sup>6</sup> (Z10 only)	F Flex install <sup>7</sup> (no frame required)
gen 3	gen 3         20         2000Im         935         90CRI/3500K         W         Wide (76°)           25         2500Im         940         90CRI/4000K         950         90CRI/5000K <sup>3</sup> 35         3500Im         950         90CRI/5000K <sup>3</sup> 000Im         950         90CRI/3000K         000Im           48         4800Im*         b2W         90CRI/3000K         to 1800K <sup>4</sup> 000Im         000I	500 lm         940         90CRI/4000K           000 lm         950         90CRI/5000K <sup>3</sup>		L01 Lutron PEQ0 EcoSystem 0.1% (up to 2000lm) L1 Lutron LDE1 EcoSystem (500lm not available) RA Integral Interact RF sensor <sup>5</sup> (enables wireless con		U 120/277V nected lighting control)	R Calculite legacy retrofit - select legacy luminaires <sup>8</sup>
			D DALI 0.1% 6	None LIN Linear	U 120/277V	BAC Meets the requirements of the Buy American	
		SOL EldoLED Solo 0-10V 0.1% DMX Digital Multiplexing w/RDM 0.1%	None LIN Linear SQR Square	<b>U</b> 120/277V	Act of 1933 (BAA) <sup>10</sup>		
	on page 9.	n page 9.		E Forward & Reverse Phase (up	o to 3000lm)	1 120V	1

### Trim

Trim	AC example: C6RDLCCP-BAC					
Series C6	Aperture         Style         Finish           R			Flange	Options	
C6 Calculite LED 6" gen 3	R Round	Round <b>DL</b> Downlight	BK Black (anodized) CL Specular clear	CC Comfort clear CD Comfort clear diffuse CZ Champagne bronze	<ul> <li>White (matte)</li> <li>P Polished (matches aperture)</li> <li>F Flangeless (requires CA6RFT)</li> </ul>	IEM6 Trim mounted EM test switch BAC Meets the requisites
			WH White (matte)		<ul> <li>White (matches finish)</li> <li>F Flangeless (requires CA6RFT)</li> </ul>	of the Buy American Act of 1933 (BAA) <sup>10</sup>
				WHAMF White (gloss antimicrobial)	- White (matches finish)	
		SL Shower light <sup>9</sup>	WH White (matte)	WHAMF White (gloss antimicrobial)	- (not applicable)	

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

SBA	Interact Ready System Bridge Accessory (refer to Philips System Bridge Accessory spec sheet for options and details)	7925 CA6RFT	Sloped ceiling 6" adapter for 6RN and 6RA frames Mud-in ring for use in 6" round flangeless trim installations		
6RNSR LCEM6 T347-75VA	6" round/square non-IC frame for use with Flex (F) light engine (provides mechanical support for rough-in construction only, no junction box) Field installable Bodine BSL06 emergency battery pack (for Flex (F) light engine only, includes switch mounting plate) 347:120V step-down transformer for non-IC (N) frame only	CAEM6 C6RVPWH	(ordered with a flangeless trim) Field-installable Bodine BSL6 6W battery pack with self-test/self-diagnostic (for new construction frames, 120-277V) IP65 Rated vandal proof matte white accessory mounts onto flangeless trims (C6RDL]F) and new construction frame only Must be ordered with EM6 frame for remote test switch (see page 2 for details)		
1047 7017	(see page 2 for details)	CAEM6TSCP			
with IĔM For remo	ncy (EM6) frame is compatible with reflector mounted test switch when trim is ordered 6 option, DL style trim only (not compatible with 347V or Power over Ethernet configs). ote mount switch, order standard trim and CAEM6TSCP mounting plate accessory. Plenum (LC) frame is not available for Buy American Compliant (BAC) configurations.	9. Non (mai	ofits select legacy luminaires (E & 210 dimming only see pages 2 & 7). -conductive flush mount lens with pre-installed gasket te white non-conductive flange with diffuse lens that is flush with the flange). re to properly select the "BAC" suffix could result in you receiving product that is not BAA		

ISTED

3. Consult factory for 5000K CCT (50) with narrow (N) beam

Dim-to-warm (D2W) available only with Z10 dimming up to 2500lm. Narrow (N) and medium (M) beams only.

5. Linear driver profile (see page 8).

6. DALI 4800Im and 6000Im, and all RA options require linear driver configuration (see page 8). Flex install option requires light engine & trim only. Up to 3500lm only. Accessory frames available. Not compatible with standard frames and associated options. Not available with 7. Interact (RA) dimming and IEM6 trim options.

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







# 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 toolless 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
With CFL	Use Retrofit configuration
S6132_series	C6R_ Trim + C6L_ Engine
With INC	Use Retrofit configuration
BS600_series	C6R_ Trim + C6L_ Engine
With LED	Use Retrofit configuration
C6L_N series	C6R_ Trim + C6L_ Engine
C6X6L_N series	C6S_ Trim + C6L_ Engine
P6RD N series	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: C6RDLCCIEM6).
- 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 dimto-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%
- 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 ≤3SDCM at 2700K & 3000K, and ≤5SDCM at 1800K.

# **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 stepdown transformer accessory.

### **Options and Accessories**

# Flangeless mud-in ring: Use CA6RFT

for use with flangless 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 fiinsh (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.

### Field install EM6 kit with Bodine BSL6 6W battery

pack with self-test/self-diagnostic: 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. C6RDLCCIEM6). Refer to Calculite-LyteProfile-EasyLyte Emergency Battery Pack specification sheet for more details.

**CAEM6:** For use with UniFrame frame in kits.

LCEM6: For use with Flex intall (F) light engines. SBA: Interact Ready System Bridge Accessory.

Requires IRT9015 IR remote and Interact Pro App for commissioning.

**T347-75VA:** Field installable 347:120V 75VA stepdown 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 for more information on Signify's standard 5-year limited warranty on complete luminaire systems.

**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 90 Better color rendering and low efficacy



#### AccuRender

Best color rendering, color preference and high efficacy

Achieve color balance

Best in class color consistency:

Promote aesthetic harmony

in your space with ≤ 2 SDCM

# 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<sub>a</sub> up to 94 CRI
   R<sub>f</sub> up to 92 TM-30
   R<sub>g</sub> up to 67 CRI
   R<sub>fn1</sub> up to 91 TM-30
   G<sub>a</sub> up to 99 CRI
   R<sub>g</sub> up to 100 TM-30
   C<sub>g</sub> up to 94 CRI
   R<sub>cs,m</sub> up to -5% TM-30

# **Round Downlight**

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

Lumen		Flux	Efficacy	Beam				IES TM-30-18			
Package	Beam	(Im)	(Im/W)	Angle	СВСР	CRI	R9	R <sub>f</sub>	R <sub>g</sub>	$R_{cs,h1}$	UGR
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

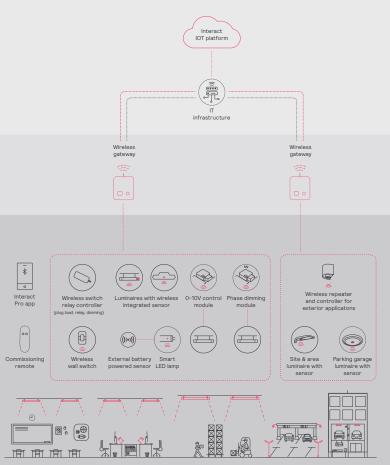
Round Downlight

interact			
	Standalone	Option 1	vay Connected Option 2
Dimming, grouping, and zoning	✓	✓	✓
Bluetooth and ZigBee enabled	$\checkmark$	<ul> <li>✓</li> </ul>	
Motion sensing and daylight harvesting	>	<ul> <li></li> </ul>	<ul> <li>✓</li> </ul>
Integration with 0-10V and phase dimming fixtures	<ul> <li></li> </ul>	$\checkmark$	<ul> <li>✓</li> </ul>
Code compliance	$\checkmark$	$\checkmark$	<ul> <li>✓</li> </ul>
Granular dimming and dwell time	$\checkmark$	$\checkmark$	<ul> <li>✓</li> </ul>
Correlated color temperature (CCT) tuning by switch New	$\checkmark$	$\checkmark$	<ul> <li>✓</li> </ul>
Support for sensor-based Tunable White luminaires New	$\checkmark$	$\checkmark$	<ul> <li>✓</li> </ul>
Energy reporting and monitoring		$\checkmark$	$\checkmark$
Scheduling		$\checkmark$	$\checkmark$
Demand response		$\checkmark$	$\checkmark$
BMS integration (BACnet)			✓
Floor plan visualization			$\checkmark$
IoT sensors for wellness			✓
loT 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.

Unlimited		
200 per network		
150		
150		
64		
50		
30		
50		
40 (maximum 150)		
5		
16		



# 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

## 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

### 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 SENSORIA 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

# **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.

# 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	-	-

# 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.



**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.



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.



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



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



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



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



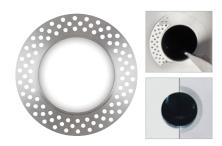
White (-): (matte) Provides the smoothest transition to ceilings when off.



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

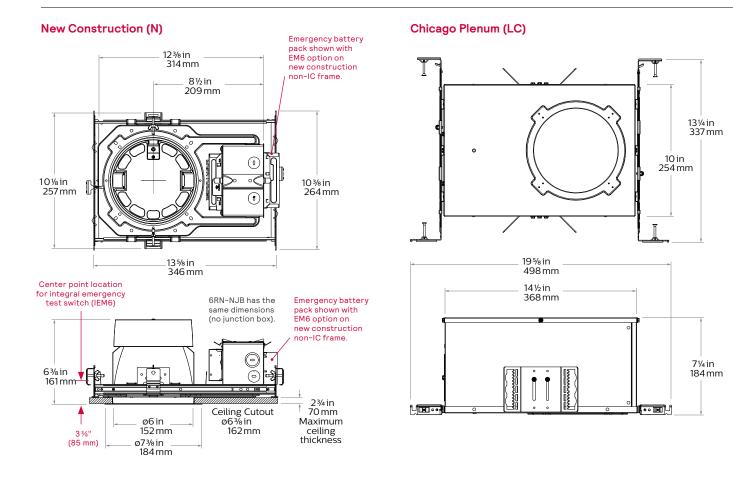


Flangeless (F): (flush-mount)Creates a flush, virtually seamless transition from aperture to ceiling.

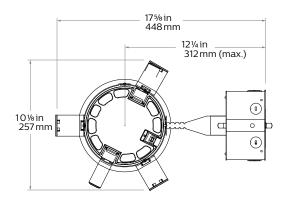


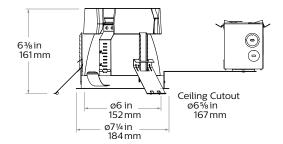
Mud-in ring (FT): Low profile, machined aluminum mud-in ring provides a raised rib to plaster up to and a 3/16" flange thickness. The ring is attached to the ceiling material as opposed to the frame-in kit to avoid conduction of heat and vibration which can cause yellowing or cracking of the plaster.

# Round Downlight

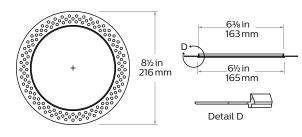


# Remodeler (R)

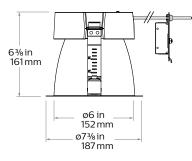




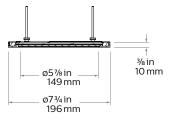
# Flangeless mud-in ring (CA6RFT) accessory



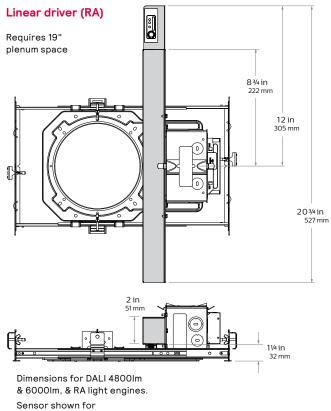
# Retrofit (R) with round trim



# Vandal Proof (VP) accessory



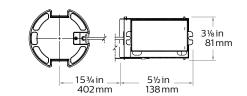
# Round Downlight

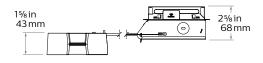


RA light engine only.

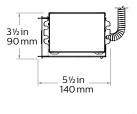
RA light engine only.

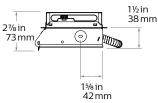
Flex Install (F)

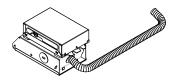




LCEM6 Flex install (F) engine only

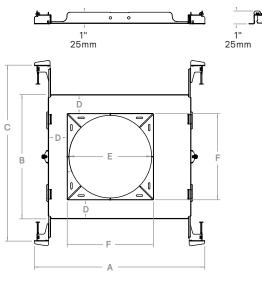






\* 12" conduit with connector to j-box knock out

6RNSR Flex install non-IC frame



Α	В	с	D	E	F
13 ¼"	9⁵⁄₃"	13 %"	1½"	6¾"	5%"
334mm	244mm	345mm	37mm	162mm	169mm

# **Round Downlight**

## **Electrical - Narrow**

Light	Input	Input	Input	Drive	Input	LED	THD Factor	Power Factor
engine	Volts	Freq.		Current		Power	@ Max	Load
	120V	50/60Hz	0.072A	0.22A	8.6W	7.0W	<10%	>0.9
1000lm	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
	120V	50/60Hz	0.107A	0.33A	12.8W	10.7W	<10%	>0.9
1500lm	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
	120V	50/60Hz	0.145A	0.45A	17.4W	14.7W	<10%	>0.9
2000lm	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
	120V	50/60Hz	0.178A	0.55A	21.4W	18.2W	<10%	>0.9
2500lm	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
	120V	50/60Hz	0.212A	0.65A	25.5W	21.7W	<10%	>0.9
3000lm	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
	120V	50/60Hz	0.237A	0.75A	28.4W	24.4W	<10%	>0.9
3500 lm	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
	120V	50/60Hz	0.338A	1.05A	40.5W	34.9W	<10%	>0.9
4800lm	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
	120V	50/60Hz	0.442A	1.35A	53.0W	45.6W	<10%	>0.9
6000lm	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

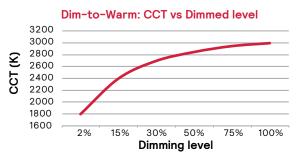
# Lifetime (TM-21) data

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

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

# Electrical - Medium & Wide

							THD	Power
Light	Input	Input	Input	Drive	Input	LED	Factor	Factor
engine Volts		Freq.	Current	Current	Power	Power	@ Max	Load
	120V	50/60Hz	0.073A	0.22A	8.7W	7.1W	<10%	>0.9
1000lm	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
	120V	50/60Hz	0.109A	0.33A	13.0W	10.9W	<10%	>0.9
1500lm	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
	120V	50/60Hz	0.149A	0.45A	17.8W	15.1W	<10%	>0.9
2000lm	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
	120V	50/60Hz	0.179A	0.55A	21.4W	18.2W	<10%	>0.9
2500lm	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
	120V	50/60Hz	0.220A	0.67A	26.4W	22.4W	<10%	>0.9
3000lm	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
	120V	50/60Hz	0.245A	0.75A	29.4W	25.3W	<10%	>0.9
3500 lm	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
	120V	50/60Hz	0.350A	1.08A	42.0W	36.1W	<10%	>0.9
4800lm	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
	120V	50/60Hz	0.454A	1.38A	54.5W	46.8W	<10%	>0.9
6000lm	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



### Marked spacing applications

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

Light engine	4800lm	6000lm		
C6L_LTE series	Х	Х		
C6L_D series	Х	Х		
C6L_DMX series	Х	Х		
C6L_RA series	Х	Х		

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.

# **Round Downlight**

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

Zonal summary

6372

6006

4997

3915

2643

1335

514

286

222

1

0 0

0

540

0

5

10

15 20

25 30 35

40 45

50 55

85

90

Zonal summary

0-30

0-40

0-60

0-90

0

5 10 15

20 25 30

35 40

45

50

55 60

65 70 75

80

85

90

Zone Lumens %Luminaire 1994

2410

2524

2527

Angle Mean CP Lumens

2954

2968

2965

2929

2620

2022

1240

628 322

137

15

4 2 1

1

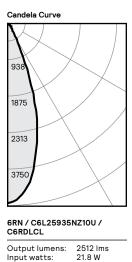
78.9%

95.4%

99.9%

283

100.0%



90 min

3500K

0.6

36°

CRI:

CCT 1.

Spacing Crit.:

Beam Angle:

zonai summary			Single unit data				
Zone	Lumens	%Luminaire	Height to	Initial center beam	Beam		
0-30	2231	88.8%	lighted plane	foot-candles	diameter (ft)*		
0-40	2423	96.5%	8'	100	4.8'		
0-60	2510	99.9%	9'	79	5.4'		
0-90	2512	100.0%	10' 64		6.0'		
			12'	44	6.6'		
	1	1	14'	33	8.4'		
Angle	Mean C	P Lumens	* Beam diameter is where foot-candles				

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

#### Multiple unit data - RCR 2

1066	Multiple unit c	Multiple unit data - RCR 2									
625	Spacing on center	Initial center beam foot-candles	Watts per sq. ft.								
192	5' 6'	118.0 77.0	0.97 0.63								
83	7'	55.0	0.45								
4	8' 9'	46.0 37.0	0.38 0.30								
1		Room, Workplane 2.5' 0/50/20% Reflectanc	es								
0		0,00,20,0 1010000									
0		<b>.2Im/W</b> MR-1590.2									

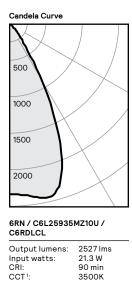
#### Adjustment factors

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

# Coefficients of utilization

	1				(		(		(		
Ceiling	Ceiling 80%		70%		50%		30%		0%		
Wall	70	50	30	10	50	10	50	10	50	10	0
RCR Zonal cavity method - Effective				e floo	r refl	ectar	nce =	20%			
0	119	119	119	119	116	116	111	111	106	106	100
0 1	114	112	110	108	110	106	106	103	102	100	95
2 gt	110	106	102	100	104	99	101	96	98	94	91
ഷ് 3	106	100	96	93	99	92	96	91	94	89	87
<u>}</u> 4	102	95	91	87	94	87	92	86	90	85	83
°a 5	98	91	86	83	90	82	88	82	87	81	79
0 6	94	87	82	78	86	78	85	78	83	77	75
57	91	83	78	75	82	75	81	74	80	74	72
Room Cavity Ratio & 2 0 G 7 C -	87	80	75	71	79	71	78	71	77	71	69
9	84	76	72	68	76	68	75	68	74	68	67
10	81	74	69	66	73	66	72	65	72	65	64

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



0.96

56°

Spacing Crit.:

Beam Angle:

#### 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

811	Multiple unit data - KCK 2									
900	Spacing on center	Initial center beam foot-candles	Watts per sq. ft.							
416	5' 6'	116.0 76.0	0.94 0.62							
110	7'	7' 54.0								
4	8' 9'	45.0 36.0	0.37 0.30							
1	38' x 38' x 10' l	Room, Workplane 2.5'								
0	above floor, 8	0/50/20% Reflectand	ces							
0	Efficacy: 118 Report <sup>2</sup> : ST	. <b>6lm/W</b> MR-2437								

#### Adjustment factors

Finish	ССТ	Lumens
$\begin{array}{rcl} CL &= 100\% \\ CC &= 95\% \\ CD &= 87\% \\ CZ &= 63\% \\ WH &= 87\% \\ BK &= 57\% \end{array}$	90CRI, 4000K = 102% 90CRI, 3500K = 100% 90CRI, 3000K = 96% 90CRI, 2700K = 92%	6000lm         = 240%           4800lm         = 192%           3500lm         = 140%           3000lm         = 120%           2500lm         = 100%           2000lm         = 80%           1500lm         = 60%           1000lm         = 40%

#### **Coefficients of utilization**

Cei	ling		80	)%		70	1%	50	)%	30	)%	0%
Wal	I	70	50	30	10	50	10	50	10	50	10	0
RCR Zonal cavity method - Effec				ectiv	e floo	r refl	ectar	nce =	20%			
	0	119	119	119	119	116	116	111	111	106	106	100
0	1	114	111	109	107	109	105	105	102	101	99	94
fi	2	109	104	100	97	102	96	99	94	96	92	88
Å	3	103	97	93	89	96	88	93	87	91	85	83
Ę	4	99	91	86	82	90	82	88	81	86	80	77
av	5	94	86	81	76	85	76	83	75	82	75	73
Room Cavity Ratio	6	90	81	75	71	80	71	79	71	77	70	68
То	7	85	77	71	67	76	67	75	66	73	66	64
å	8	81	72	67	63	72	63	71	62	70	62	61
	9	78	69	63	59	68	59	67	59	66	59	57
	10	74	65	60	56	65	56	64	56	63	56	54

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.

# **Round Downlight**

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

Zonal summary

0-30

0-40

0-60

0-90

Angle

0

5

10

15

20

25 30 35

40 45

50 55

60 65

70 75 80

85 90

Zone Lumens %Luminaire

59.7%

89.6%

99.9%

100.0%

Lumens

159

1420

2131

2376

2378

Mean CP

1616

1642

1705

1780

1762

1665

1478

1160

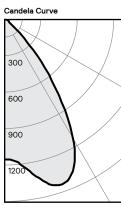
758 277

25 7

3 2 1

1 0

0



#### 6RN / C6L25935WZ10U / C6RDLCL

2378 lms
21.3 W
90 min
3500K
1.3
76°

# 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

501	Marciple and data Non 2						
760	Spacing on center	Initial center beam foot-candles	Watts per sq. ft.				
711	5'	107.0	0.94				
711	6'	70.0	0.62				
238	7'	50.0	0.44				
7	8'	42.0	0.37				
	9'	34.0	0.30				
2	38' x 38' x 10' Room, Workplane 2.5' above floor. 80/50/20% Reflectances						
1							
	Efficacy: 111	.6lm/W					
0	Report <sup>2</sup> : ST	MR-2438					

#### Adjustment factors

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

#### **Coefficients of utilization**

Cei	ling	80%		70%		50%		30%		0%		
Wal	I	70	50	30	10	50	10	50	10	50	10	0
RCR Zonal cavity method - Effective floor re						r refl	ectar	ice =	20%			
	0	119	119	119	119	116	116	111	111	106	106	100
0	1	113	110	108	105	108	104	104	100	100	97	93
atio	2	107	102	98	94	100	93	97	91	94	89	85
Ř	3	101	94	89	85	93	84	90	83	88	81	78
Room Cavity Ratio	4	95	87	81	77	86	76	84	75	82	75	72
av	5	90	81	75	70	80	70	78	69	76	69	66
õ	6	85	75	69	64	74	64	73	64	71	63	61
Бо	7	80	70	64	59	69	59	68	59	67	58	56
В	8	76	65	59	54	65	54	64	54	63	54	52
	9	72	61	55	50	61	50	60	50	59	50	48
	10	68	57	51	47	57	47	56	47	55	46	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.

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