



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

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, engine, and trim will be shipped together as a single product.
Accessories (optional) are not currently BAA-compliant.

Project: _____

Location: _____

Cat.No: _____

Type: _____

Qty: _____

Notes: _____

Follow the ordering guidelines below. Each step is a separate order line.

Step 1	Frame: Ordered & shipped separately.	
	Frame	Example: 4SN
	4S	
Step 2	Engine & Trim: Ordered & shipped as a single product.	
	Engine	Example: C4L15935MZ10U-C4SDLNMCC
	C4L - C4S	
Step 3 (optional)	Accessories: Ordered & shipped separately.	

Frame

Standard example: 4SN | BAC example: 4SN-BAC

Series	Installation	Voltage/Options
4S		
4S 4" Non-IC Square	N New construction	— Universal 120/277/347V EM6 Emergency, 6W Self-Test/Self-Diagnostic ¹
	R Remodeler	— Universal 120/277/347V
		LC Chicago Plenum ² BAC Meets the requirements of the Buy American Act of 1933 (BAA) ⁹
		BAC Meets the requirements of the Buy American Act of 1933 (BAA) ⁹

Engine

Standard example: C4L20930MZ10D20UF | BAC example: C4L20930MZ10D20U-BAC

Series	Lumens	CRI/CCT	Beam ⁵	Dimming	Options	Voltage	Options
C4L							
C4L Calculite LED 4" gen 3	05 500lm	927 90CRI/2700K	N Narrow M Medium & Wide ⁴	Z10 0–10V 1%	— None D20 Dim to Off	U 120/277V 3 347V (Z10 only)	F Flex install ⁷ (no frame required)
	10 1000lm	930 90CRI/3000K		L01 Lutron PEQ0 EcoSystem 0.1% (up to 2000lm) L1 Lutron LDE1 EcoSystem (500lm not available) RA Integral Interact RF sensor⁵(enables wireless connected lighting control)	U 120/277V	RH Retrofit for tall collar frame⁸ BAC Meets the requirements of the Buy American Act of 1933 (BAA)⁹	
	15 1500lm	935 90CRI/3500K					
	20 2000lm	940 90CRI/4000K					
	25 2500lm	950 90CRI/5000K ³					
	30 3000lm*	D2W 90CRI/3000K to 1800K ⁴ (dim-to-warm)					
* See marked spacings requirements on page 9.			D DALI 0.1% SOL EldoLED Solo 0–10V 0.1% DMX Digital Multiplexing w/RDM 0.1% E Forward & Reverse Phase (up to 2500lm)	— None LIN Linear — None LIN Linear SQR Square U 120/277V	U 120/277V		

Trim

Standard example: C4SDLCCP | BAC example: C4SDLCCP-BAC

Series	Aperture	Style	Beam ⁶	Finish	Flange	Options
C4	S	DL				
C4 Calculite LED 4" gen 3	S Square	DL Downlight	NM Narrow & Medium W Wide	CL Specular clear	- White (matte)	IEM6 Trim mounted EM test switch BAC Meets the requisites of the Buy American Act of 1933 (BAA) ⁹
				CC Comfort clear	P Polished (matches aperture)	
				CD Comfort clear diffuse	F Flangeless (requires CA4SFT)	
				BK Black (matte)		
				WH White (matte)	- White (matches finish) F Flangeless (requires CA4SFT)	

Beam options

Narrow engine	45° (0.7 s.c.) with narrow & medium trim
	Not recommended with wide trim
Medium engine	58° (0.9 s.c.) narrow & medium trim
	69° (1.2 s.c.) with wide trim

See footnotes on page 2.

C4SDL Calculite LED 4" gen 3

Square Downlight

Accessories (Not currently BAA-compliant) learn more below

SBA	Interact Ready System Bridge Accessory (refer to Philips System Bridge Accessory spec sheet for options and details)
4RNSR	4" round/square non-IC frame with Flex (F) light engine (provides mechanical support for rough-in construction only, no junction box)
LCEM6	Field installable Bodine BSL06 emergency battery pack (for Flex (F) light engine only, includes switch mounting plate)
T347-75VA	347:120V step-down transformer for non-IC (N) frame only (see page 3)
CA4SFT	Mud-in ring for use in 4" square flangeless trim installations (ordered with a flangeless trim)
CAEM6	Field-installable Bodine BSL6 6W battery pack with self-test/self-diagnostic (for new construction frames, 120-277V)
CAEM6TSCP	Must be ordered with EM6 frame for remote test switch (see page 3)

Square 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}	
500 lm	Narrow (N)	617	102	40°	1409	90+	50+	92	100	-5%	0
	Medium (M)	545	89	57°	769	90+	50+	91	99	-6%	0
	Wide (W)	413	67	74°	378	90+	50+	91	99	-6%	0
1000 lm	Narrow (N)	916	106	40°	2094	90+	50+	92	100	-5%	0
	Medium (M)	921	91	57°	1300	90+	50+	91	99	-6%	0
	Wide (W)	696	69	74°	638	90+	50+	91	99	-6%	0
1500 lm	Narrow (N)	1364	101	40°	3118	90+	50+	92	100	-5%	1
	Medium (M)	1317	94	57°	1859	90+	50+	91	99	-6%	1
	Wide (W)	1002	72	74°	917	90+	50+	91	99	-6%	0
2000 lm	Narrow (N)	1800	102	40°	4115	90+	50+	92	100	-5%	2
	Medium (M)	1690	92	57°	2385	90+	50+	91	99	-6%	2
	Wide (W)	1287	70	74°	1178	90+	50+	91	99	-6%	1
2500 lm	Narrow (N)	2133	99	40°	4875	90+	50+	92	100	-5%	3
	Medium (M)	2120	90	57°	2992	90+	50+	91	99	-6%	3
	Wide (W)	1615	68	74°	1479	90+	50+	91	99	-6%	2
3000 lm	Narrow (N)	2619	94	40°	5987	90+	50+	92	100	-5%	3
	Medium (M)	2609	88	57°	3682	90+	50+	91	99	-6%	3
	Wide (W)	1954	66	74°	1790	90+	50+	91	99	-6%	2



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 CRI¹
- 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 ≤ 2 SDCM

Footnotes for page 1

- Emergency (EM6) frame is compatible with reflector mounted test switch when trim is ordered with IEM6 option code (not compatible with 347V or Power over Ethernet configurations). For remote mount switch, order standard trim and CAEM6TSCP mounting plate accessory.
- Chicago plenum (LC) frame option not available with BAC nor EM6 options.
- Consult factory for 5000K CCT (50) with narrow (N) beam.
- Dim-to-warm (D2W) available only with Z10 dimming up to 2000lm. Narrow (N) and medium (M) beam engines only.
- See Beam options table for light engine and trim combination spacing criterion.
- Linear driver profile (see page 8).
- Flex install option requires light engine (F)/trim only (up to 2500lm). For use only with optional 4RNSR new construction frame accessory. Not available with Interact (RA) dimming and IEM6 trim options. See page 3 for further details.
- Retrofits select legacy luminaires (E & Z10 dimming only see pages 3 & 8).
- 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
With CFL S4118_series	Use Retrofit configuration C4R_ Trim + C4L_ Engine
With INC AS400_series	Use Retrofit configuration C4R_ Trim + C4L_ Engine
With LED C4L_N series C4X4L_N series P4RD_N_series	Use Retrofit configuration 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: C4SDLWCCIE6).
- 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

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%
- 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 step-down transformer accessory.

Flex engine (F)

- Frame-optional engine suited for new construction, remodel, and retrofit applications.
- 4RNSR new construction frame accessory available as required to support ceiling construction.
- All wiring is done on the integral j-box to the engine.

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. C4SDLWCCIE6). 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) frames. Not for use with emergency options.

ENERGY STAR® exceptions

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

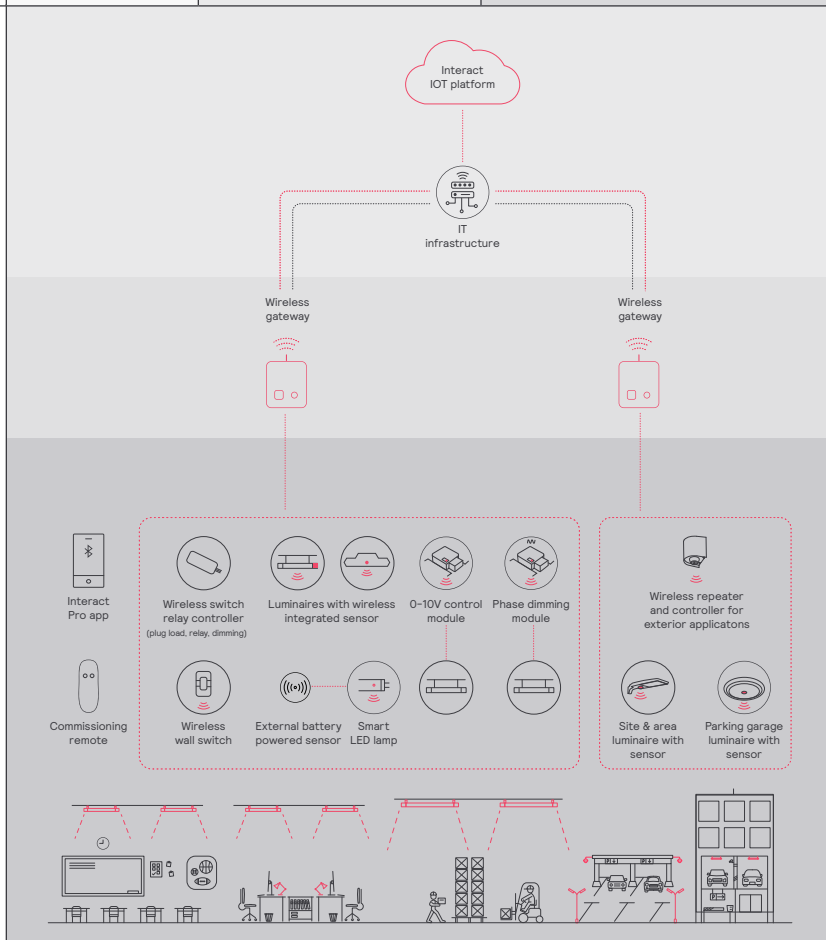
interact

				
		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



C4SDL Calculite LED 4" gen 3

Square 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 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

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	-	-

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



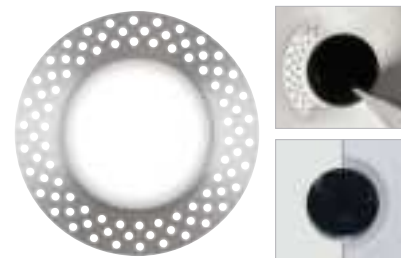
White (-): (matte) Provides the smoothest transition to ceilings when off.



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.

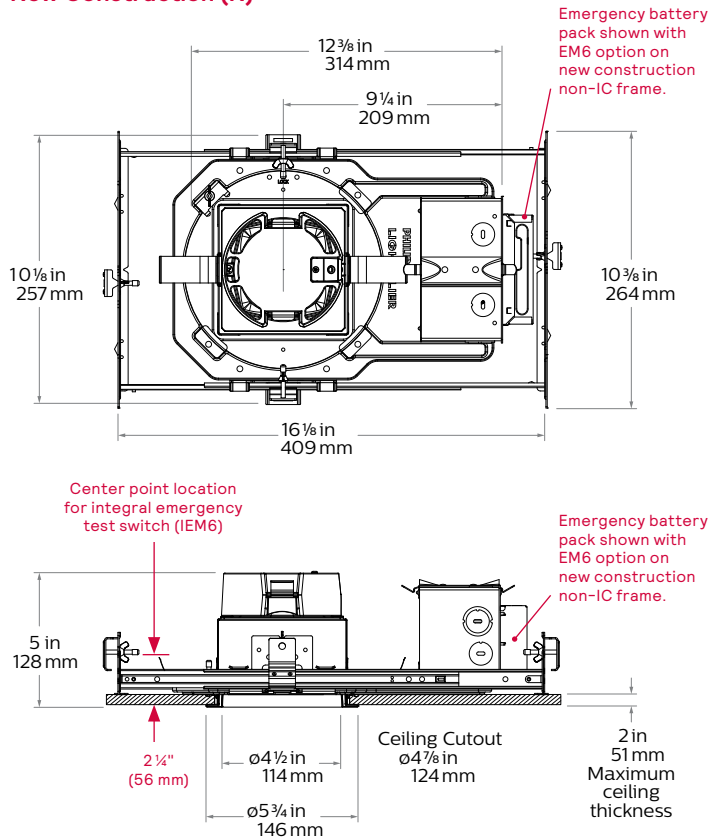


Mud-in ring (FT): Low profile, machined aluminum mud-in ring provides a raised rib to plaster up to and a 3/16" flange thickness. The ring is attached to the ceiling material as opposed to the frame-in kit to avoid conduction of heat and vibration which can cause yellowing or cracking of the plaster.

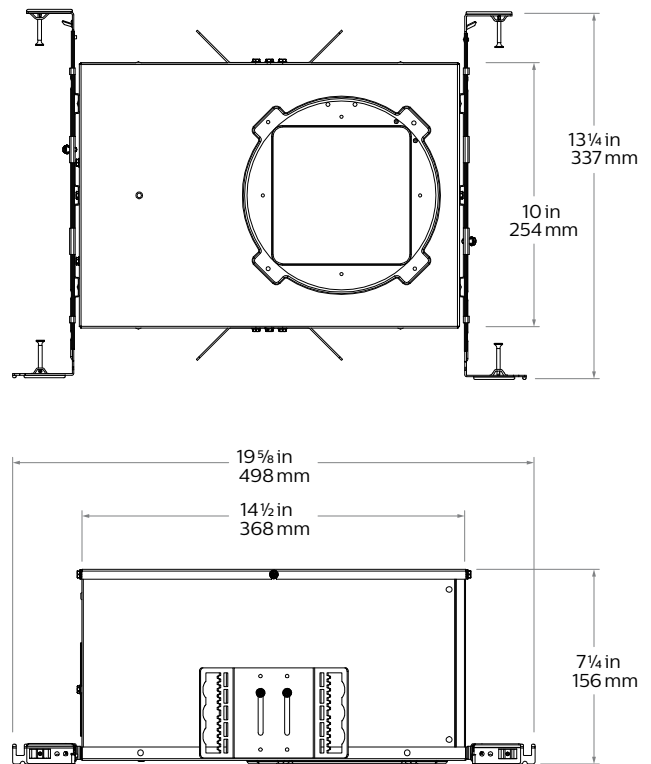
C4SDL Calculite LED 4" gen 3

Square Downlight

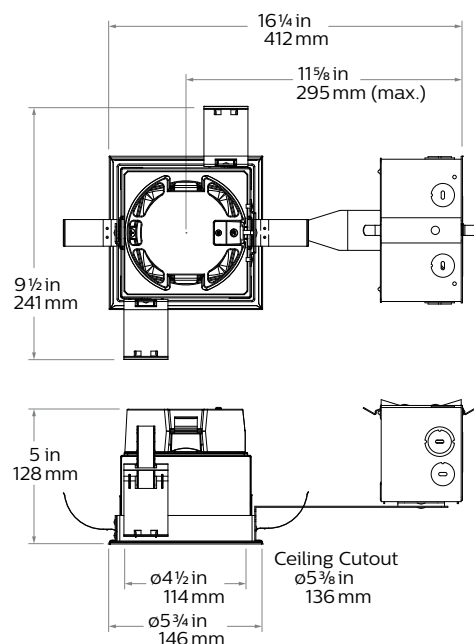
New Construction (N)



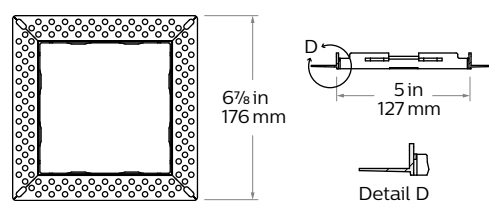
Chicago Plenum (LC)



Remodeler (R)



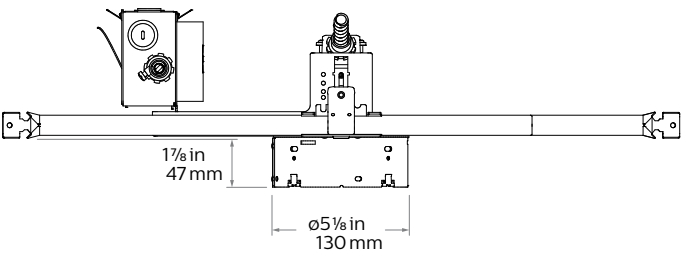
Flangeless mud-in ring (CA4SFT) accessory



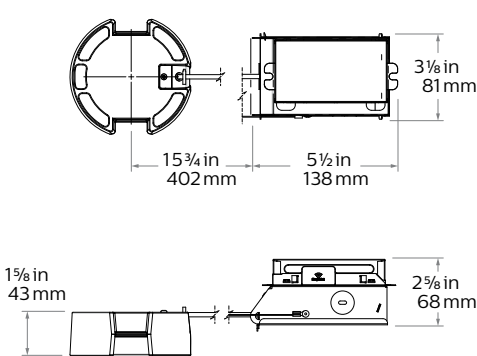
C4SDL Calculite LED 4" gen 3

Square Downlight

Round tall collar frame (RH type light engine required)

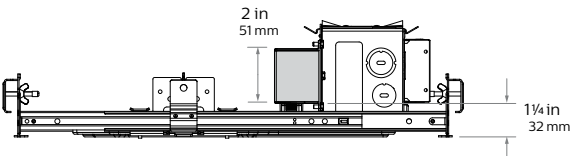
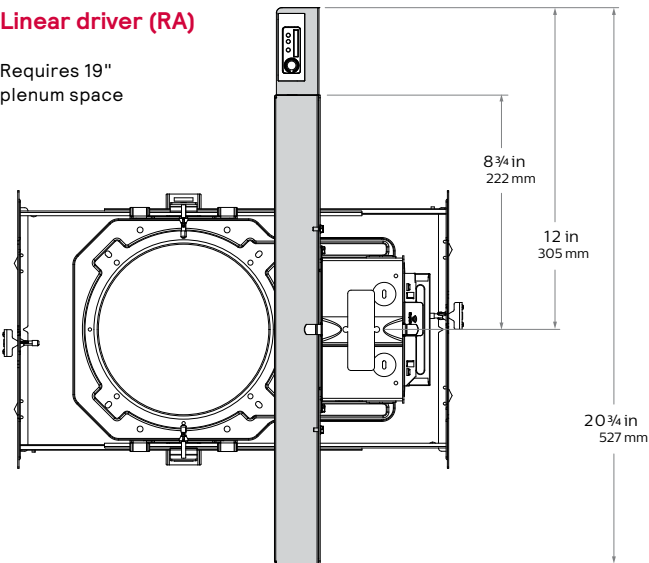


Flex Install (F)



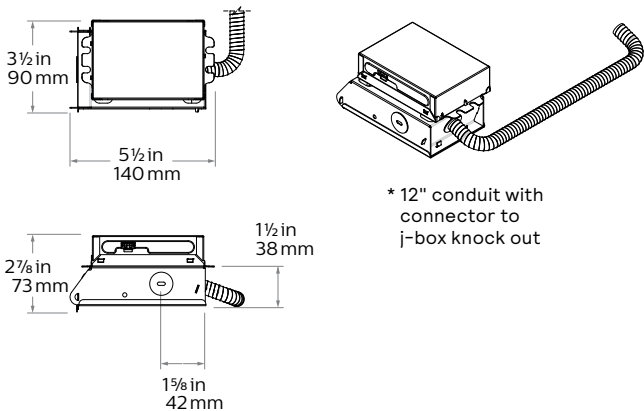
Linear driver (RA)

Requires 19" plenum space

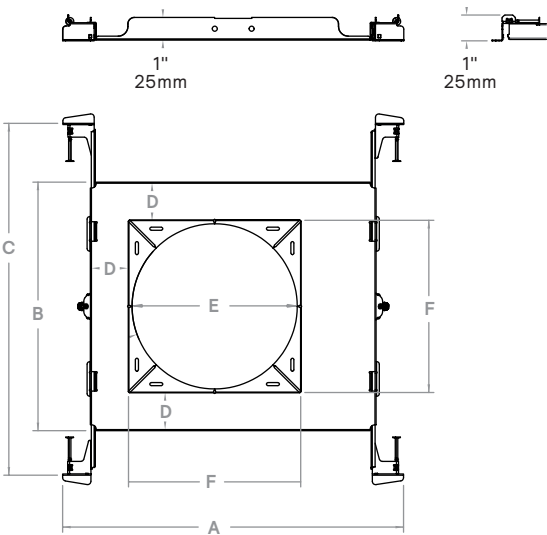


Sensor shown for RA light engine only.

LC6M6 Flex install (F) engine only



4RNSR Flex install non-IC frame



A	B	C	D	E	F
10 7/8"	7 1/4"	13 5/8"	1"	4 7/8"	5 1/4"
276mm	184mm	345mm	25mm	124mm	132mm

C4SDL Calculite LED 4" gen 3

Square Downlight

Electrical - Narrow

Light engine	Input Volts	Input Freq.	Input Current	Drive Current	Input Power	LED Power	THD Factor	Power Factor
							@ Max Load	
500lm	120V	50/60Hz	0.050A	0.15A	6.0W	4.8W	<10%	>0.9
	277V	50/60Hz	0.023A	0.15A	6.3W	4.8W	<30%	>0.9
	347V	50/60Hz	0.020A	0.15A	7.0W	4.8W	N/A	>0.9
1000lm	120V	50/60Hz	0.072A	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	10.1W	7.1W	<30%	>0.9
1500lm	120V	50/60Hz	0.108A	0.33A	12.9W	10.8W	<10%	>0.9
	277V	50/60Hz	0.047A	0.33A	13.0W	10.8W	<10%	>0.9
	347V	50/60Hz	0.043A	0.33A	14.8W	10.8W	<25%	>0.9
2000lm	120V	50/60Hz	0.147A	0.45A	17.6W	14.9W	<10%	>0.9
	277V	50/60Hz	0.064A	0.45A	17.7W	14.9W	<10%	>0.9
	347V	50/60Hz	0.056A	0.45A	19.6W	14.9W	<20%	>0.9
2500lm	120V	50/60Hz	0.180A	0.55A	21.6W	18.3W	<10%	>0.9
	277V	50/60Hz	0.078A	0.55A	21.7W	18.3W	<10%	>0.9
	347V	50/60Hz	0.066A	0.55A	22.9W	18.3W	<20%	>0.9
3000lm	120V	50/60Hz	0.231A	0.70A	27.7W	23.7W	<10%	>0.9
	277V	50/60Hz	0.100A	0.70A	27.6W	23.7W	<10%	>0.9
	347V	50/60Hz	0.083A	0.70A	28.9W	23.7W	<15%	>0.9

Lifetime (TM-21) data

Lumens	Narrow beam	Medium/Wide beam
500lm	L85 @ 55,000hrs.	L90 @ 60,000hrs.
1000lm		
1500lm		
2000lm	L85 @ 55,000hrs.	L80 @ 60,000hrs.

- Nominal input volts.
- Preferred volt range.

Lifetime (TM-21) data

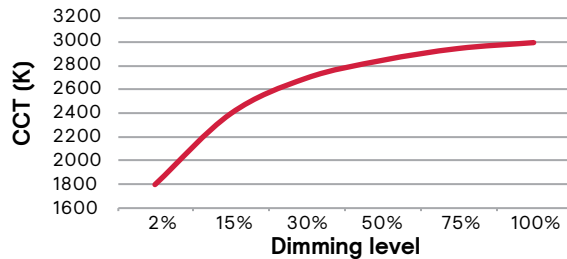
Lumens	Narrow beam	Medium/Wide beam*
500lm	L90 @ 60,000hrs.	L90 @ 60,000hrs.
1000lm		
1500lm		
2000lm	L90 @ 60,000hrs.	L85 @ 60,000hrs.
2500lm		
3000lm*		

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

Electrical - Medium & Wide Downlights

Light engine	Input Volts	Input Freq.	Input Current	Drive Current	Input Power	LED Power	THD Factor	Power Factor
							@ Max Load	
500lm	120V	50/60Hz	0.051A	0.15A	6.1W	4.8W	<10%	>0.9
	277V	50/60Hz	0.023A	0.15A	6.4W	4.8W	<30%	>0.9
	347V	50/60Hz	0.020A	0.15A	7.1W	4.8W	N/A	>0.9
1000lm	120V	50/60Hz	0.084A	0.25A	10.1W	8.3W	<10%	>0.9
	277V	50/60Hz	0.037A	0.25A	10.3W	8.3W	<10%	>0.9
	347V	50/60Hz	0.034A	0.25A	11.7W	8.3W	<30%	>0.9
1500lm	120V	50/60Hz	0.117A	0.36A	14.0W	11.8W	<10%	>0.9
	277V	50/60Hz	0.051A	0.36A	14.1W	11.8W	<10%	>0.9
	347V	50/60Hz	0.046A	0.36A	16.0W	11.8W	<25%	>0.9
2000lm	120V	50/60Hz	0.153A	0.47A	18.4W	15.5W	<10%	>0.9
	277V	50/60Hz	0.067A	0.47A	18.5W	15.5W	<10%	>0.9
	347V	50/60Hz	0.059A	0.47A	20.3W	15.5W	<20%	>0.9
2500lm	120V	50/60Hz	0.197A	0.60A	23.6W	20.1W	<10%	>0.9
	277V	50/60Hz	0.085A	0.60A	23.6W	20.1W	<10%	>0.9
	347V	50/60Hz	0.072A	0.60A	24.9W	20.1W	<20%	>0.9
3000lm	120V	50/60Hz	0.247A	0.75A	29.7W	25.5W	<10%	>0.9
	277V	50/60Hz	0.107A	0.75A	29.7W	25.5W	<10%	>0.9
	347V	50/60Hz	0.087A	0.75A	30.4W	25.5W	<15%	>0.9

Dim-to-Warm: CCT vs Dimmed level



Narrow (Power over Ethernet)

Light engine	Input				
	Volts ¹	Voltage ²	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 ¹	Voltage ²	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 ¹	Voltage ²	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

Marked spacing applications

Light engine	3000lm
C4L_Z10 series	X
C4L_L01 series	X
C4L_L1 series	X
C4L_LD series	X
C4L_LTE series	X
C4L_D series	X
C4L_DMx series	X
C4L_RA 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)

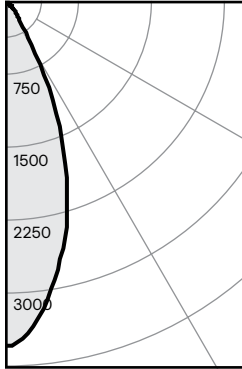
In accordance with CAN ICES-005-A/ NEB-005-A and FCC Part 15-A.

C4SDL Calculite LED 4" gen 3

Square Downlight

Narrow beam, 1500lm Engine, 101lm/W at 14W

Candela Curve



4SN / C4L15935N / C4SDLNMCL

Output lumens: 1365 lms
Input watts: 13.5 W
CRI: 90 min
CCT: 3500K
Spacing Crit.: 0.66
Beam Angle: 40°

Zonal summary

Zone	Lumens	%Luminaire
0-30	1170	85.7%
0-40	1309	95.9%
0-60	1363	99.9%
0-90	1365	100.0%

Angle	Mean CP	Lumens
0	2819	
5	2660	
10	2310	242
15	1911	
20	1421	523
25	901	
30	427	405
35	204	
40	118	139
45	63	
50	18	49
55	3	
60	2	5
65	1	
70	1	1
75	0	
80	0	1
85	0	
90	0	0

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	102	4.8'
6'	80	5.4'
7'	65	6.0'
8'	45	6.6'
9'	14	9.2'

* 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'	64.0	0.60
6'	41.0	0.39
7'	30.0	0.28
8'	25.0	0.23
9'	38.0	0.19

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

Efficacy: 101.1lm/W
Report: STMR-2431

Adjustment factors

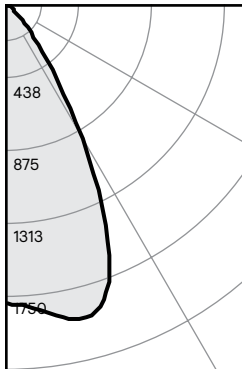
Finish	CCT	Lumens
CL = 100%	90CRI, 4000K = 102%	3000lm = 200%
CC = 95%	90CRI, 3500K = 100%	2500lm = 167%
CD = 87%	90CRI, 3000K = 96%	2000lm = 133%
CZ = 63%	90CRI, 2700K = 92%	1500lm = 100%
WH = 87%		1000lm = 67%
BK = 57%		500lm = 33%

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	114	112	109	108	110	106	106	103	102	100	95
	2	109	105	102	99	103	97	100	95	97	93	90
	3	105	99	95	91	98	91	95	89	93	88	85
	4	100	94	89	85	93	85	91	84	89	83	81
	5	96	89	84	80	88	80	86	79	85	79	77
	6	92	85	80	76	84	76	83	75	81	75	73
	7	89	81	75	72	80	72	79	71	78	71	69
	8	85	77	72	68	76	68	75	68	74	68	66
	9	82	74	69	65	73	65	72	65	71	65	63
10	79	70	65	62	70	62	69	62	69	62	60	

Medium beam, 1500lm Engine, 94lm/W at 14W

Candela Curve



4SN / C4L15935M / C4SDLNMCL

Output lumens: 1317 lms
Input watts: 14.0 W
CRI: 90 min
CCT: 3500K
Spacing Crit.: 0.98
Beam Angle: 57°

Zonal summary

Zone	Lumens	%Luminaire
0-30	1045	79.3%
0-40	1261	95.7%
0-60	1316	99.9%
0-90	1317	100.0%

Angle	Mean CP	Lumens
0	1426	
5	1453	
10	1511	141
15	1534	
20	1404	426
25	1071	
30	656	478
35	328	
40	150	216
45	60	
50	16	51
55	3	
60	1	4
65	1	
70	0	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'	57	4.9'
6'	40	5.9'
7'	29	6.9'
8'	22	7.8'
9'	18	8.8'

* 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'	61.0	0.62
6'	40.0	0.41
7'	28.0	0.29
8'	24.0	0.24
9'	19.0	0.19

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

Efficacy: 94.1lm/W
Report: STMR-1857

Adjustment factors

Finish	CCT	Lumens
CL = 100%	90CRI, 4000K = 102%	3000lm = 200%
CC = 95%	90CRI, 3500K = 100%	2500lm = 167%
CD = 87%	90CRI, 3000K = 96%	2000lm = 133%
CZ = 63%	90CRI, 2700K = 92%	1500lm = 100%
WH = 87%		1000lm = 67%
BK = 57%		500lm = 33%

Coefficients of utilization

Ceiling	80%				70%		50%		30%		0%	
Wall	70	50	30	10	50	10	50	10	50	10	0	
RCR	Zonal cavity method - Effective floor reflectance = 20%											
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100
	1	114	111	109	107	109	105	105	102	101	99	94
	2	109	104	100	97	102	96	99	94	96	92	88
	3	103	97	93	89	96	88	93	87	91	85	83
	4	99	91	86	82	90	82	88	81	86	80	77
	5	94	86	80	76	85	76	83	75	82	75	73
	6	90	81	75	71	80	71	79	71	77	70	68
	7	85	77	71	67	76	67	75	66	73	66	64
	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	55	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.

C4SDL Calculite LED 4" gen 3

Square Downlight

Wide beam, 1500lm Engine, 72lm/W at 14W

Candela Curve



4SN / C4L15935M / C4SDLWCCL

Output lumens: 1002 lms
Input watts: 14.0 W
CRI: 90 min
CCT¹: 3500K
Spacing Crit.: 1.44
Beam Angle: 74°

Zonal summary

Zone	Lumens	%Luminaire
0-30	548	54.7%
0-40	870	86.8%
0-60	1000	99.8%
0-90	1002	100.0%

Angle	Mean CP	Lumens
0	544	
5	555	
10	586	54
15	633	
20	675	181
25	687	
30	645	313
35	531	
40	347	322
45	148	
50	32	122
55	5	
60	2	8
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'	22	7.2'
6'	15	8.6'
7'	11	10.1'
8'	9	11.5'
9'	7	13.0'

* 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'	45.0	0.62
6'	30.0	0.41
7'	21.0	0.29
8'	18.0	0.24
9'	14.0	0.19

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

Efficacy: 71.6lm/W
Report²: STMR-1821

Adjustment factors

Finish	CCT	Lumens
CL = 100%	90CRI, 4000K = 102%	3000lm = 200%
CC = 95%	90CRI, 3500K = 100%	2500lm = 167%
CD = 87%	90CRI, 3000K = 96%	2000lm = 133%
CZ = 63%	90CRI, 2700K = 92%	1500lm = 100%
WH = 87%		1000lm = 67%
BK = 57%		500lm = 33%

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%																
0	119	119	119	119	116	116	111	111	106	106	100	100	106	106	100	100	100
1	113	110	107	105	108	103	104	100	100	97	92	92	96	90	93	88	84
2	107	101	97	93	99	92	96	90	93	88	84	84	94	86	80	75	70
3	100	93	88	83	92	83	89	81	87	80	77	77	89	79	73	68	64
4	94	86	80	75	85	75	83	74	81	73	70	70	83	74	68	64	64
5	89	79	73	68	78	68	77	67	75	67	64	64	77	68	61	57	54
6	83	74	67	62	73	62	71	61	70	61	59	59	70	61	55	51	50
7	79	68	61	57	67	57	66	56	65	56	54	54	66	57	50	46	46
8	74	63	57	52	63	52	61	52	60	51	50	50	61	52	46	42	42
9	70	59	52	48	58	48	57	48	56	47	46	46	57	48	42	42	42
10	66	55	48	44	54	44	54	44	53	44	42	42	53	44	42	42	42

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.