

LIGHTOLIER

by @signify

Downlighting

Calculite LED 4" gen 3

C4SDL Square Downlight



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

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

Project: _____
Location: _____
Cat.No: _____
Type: _____
Lamps: _____ Qty: _____
Notes: _____

Frame

example: 4SNIP

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

Engine

example: C4L15835NZ10U

| Series | Lumens | CRI | CCT | Beam ³ | Dimming | Voltage |
|-----------------------------|--------------------------------|-----------------|------------------|--|---|-----------------------------------|
| C4L | | | | | | |
| C4L Calculite LED 4" | 05 500 lm (Z10 only) | 8 80 CRI | 27 2700 K | N Narrow M Medium & Wide | Z10 0-10 V 1% | U Universal 120 V/277 V |
| | 10 1000 lm | 9 90 CRI | 30 3000 K | | SOL EldoLED Solo 0-10 V 0.1% | |
| | 15 1500 lm | | 35 3500 K | | D Dali 0.1% | |
| | 20 2000 lm | | 40 4000 K | | L Lutron LDE1 EcoSystem (fade-to-black) | |
| | 25 2500 lm ² | | | | DMX Digital Multiplexing | |
| | 30 3000 lm ² | | | | E ELV (for up to 2000lm only) | 1 120 V |
| | | | | | P Power over Ethernet (PoE) Only compatible with 1000 (10) to 2500 (25) lumen configurations. | E Ethernet 48 V DC |

Trim

example: C4SDLNMCL

| Series | Aperture | Style | Beam ³ | Finish | Flange |
|----------------------------|-----------------|---------------------|--|---------------------------------|---------------------------------------|
| C4 | S | DL | | | |
| C4 Calculite LED 4" | S Square | DL Downlight | NM Narrow & Medium W Wide | CL Specular clear | — White (matte) |
| | | | | CC Comfort clear | P Polished (matches aperture) |
| | | | | CD Comfort clear diffuse | F Flangeless (requires CA4SFT) |
| | | | | WH White (matte) | — White (matte) |
| | | | | | F Flangeless (requires CA4SFT) |

Beam options

| Trim | Narrow engine | Medium engine |
|----------------------------|-------------------|-------------------|
| Narrow & Medium | 45° (0.7 s.c.) | 58° (0.9 s.c.) |
| Wide | Not recommended | 69° (1.2 s.c.) |

Accessories

| | |
|---------------|--|
| CA4SFT | Mud-in ring for use in flangeless trim installations (ordered with a flangeless trim) |
| CAEM | Field instalable EM pack (for use with new construction frame only) |
| AMS | ActiLume multi-sensor (optional accessory for PoE configurations) |
| SWZDT | SpaceWise wireless controller w/dwell time functionality (compatible with all 0-10V options, see SWZDT spec sheet) |
| SRAINT | InterAct Office Accessory (for use with Lightolier UniFrame 0-10V products) |

- Emergency (EM) frame includes emergency battery with ceiling and reflector mountable test switch (see page 2 for details and limitations).
- The 2500lm (25) and 3000lm (30) packages have marked spacing requirements (see page 3).
- See beam Options table for light engine and trim combination spacing criterion.



interact
ready.

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.

Emergency:

For reflector mounted emergency test switch add "EM" to end of catalog code (example: C4SDLCCEM). Leave blank for ceiling mounted test switch. Reflector mounted test switch requires above ceiling access.

Patented install Mounting frame:

- Pre-installed mounting bars for fast and tool-less installs into T-grid & hat channel ceilings.
- Close-cut aperture design eliminates possibility of gap between ceiling opening and reflector flange.
- Separate wiring compartment for wiring frame to building allows inspection prior to light engine install.
- Simple plug-and-play connection between frame and light engine from below ceiling.
- Easy alignment of fixtures and present locking at 0°, 45°, & 90° with 360° rotation via tool-less locking.

Dimming

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

Power over Ethernet

Powered via Lightolier PoE lighting controller:

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

Optical systems

Comfort throughout the space:

True 50° physical cutoff and 45° reflected cutoff

Quality of light:

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

Light Engine

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

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

Wired Controls Options

Interact Office Wired (PoE):

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

Interact Office Wired (PoE),

Static White and Tunable White:

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

Interact Pro (IAP)

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

Options and Accessories

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

ENERGY STAR® exceptions

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

Title 24 exceptions

- 1000lm configurations

Labels and Listings

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

Warranty



5 year limited warranty

Visit 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

Narrow

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

Medium/Wide

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

Narrow (Power over Ethernet)

| Light engine | Input | | | | |
|--------------------|--------------------|----------------------|------|---------|--------|
| | Volts 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 |

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

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 | 2500lm | 3000lm |
|------------------------|--------|--------|
| C4L_Z10U series | — | X |
| C4L_LU series | X | X |
| C4L_DU series | — | X |
| C4L_DMXX series | — | X |

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

Lifetime (TM-21) data

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

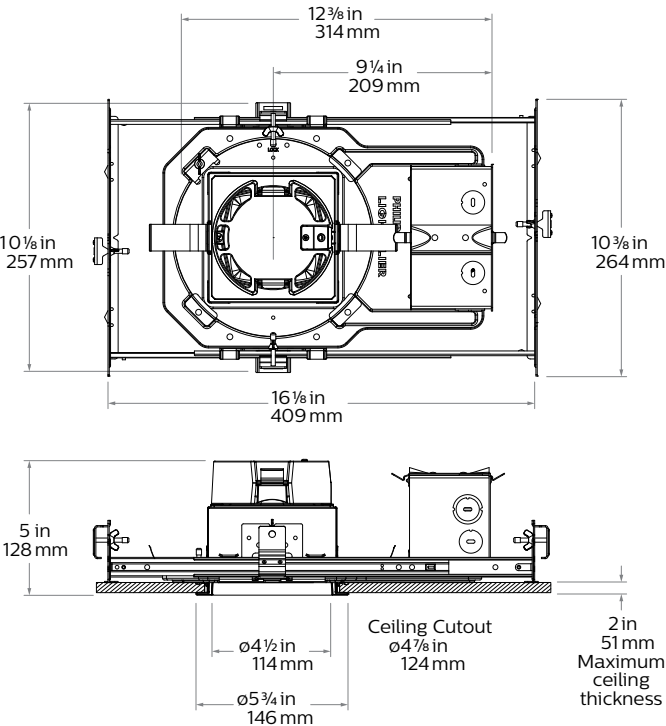
* Lutron 3000lm with Medium/Wide beam is L80 @ 60,000hrs.

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

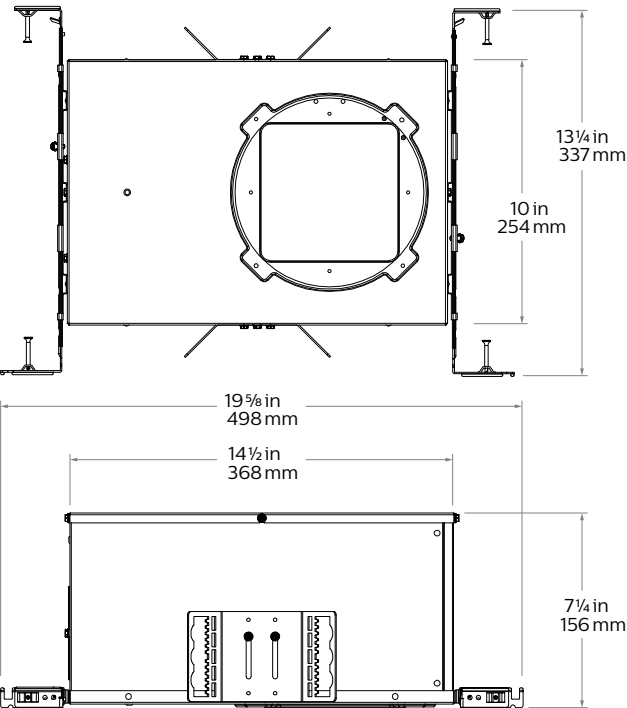
C4SDL Calculite LED 4" gen 3

Square Downlight

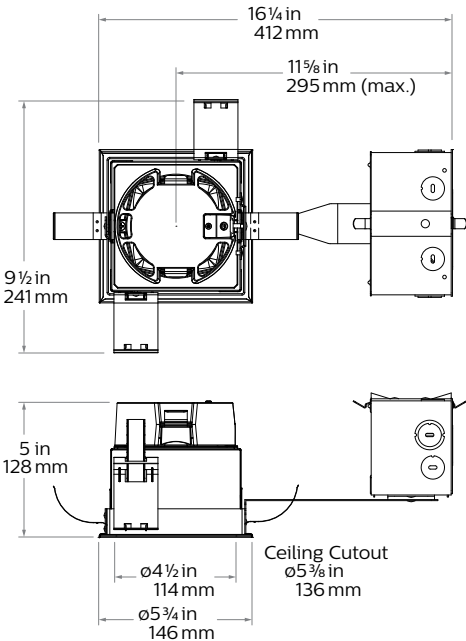
New Construction (N)



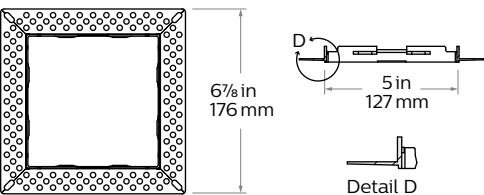
Chicago Plenum (LC)



Remodeler (R)



Flangeless mud-in ring (CA4SFT) accessory



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Reflector



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.



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

Flange



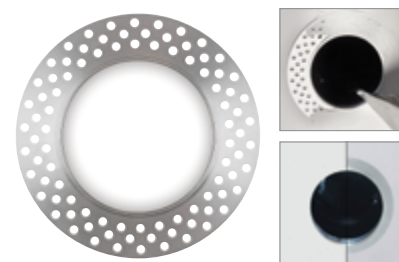
White (-): (matte) Provides the smoothest transition to ceilings when off.



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



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



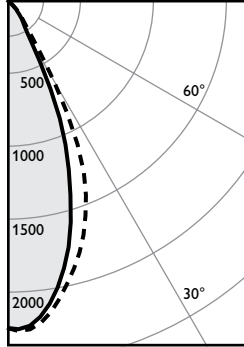
Mud-in ring (FT): Low profile, machined aluminum mud-in ring provides a raised rib to plaster up to and a 3/16" flange thickness. The ring is attached to the ceiling material as opposed to the frame-in kit to avoid conduction of heat and vibration which can cause yellowing or cracking of the plaster.

C4SDL Calculite LED 4" gen 3

Square Downlight

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

Candela Curve



Frame: **C4SN or 4SN**
Engine: **C4L15835NZ10U**
Trim: **C4SDLNMCL**

CCT¹: 3500K
Output lumens: 1369 lms
Input watts: 14.7 W (±5%)
CRI: 80 min
Spacing Crit.: 0.7
Beam Angle: 45°

Zonal summary

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

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

Single unit data

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

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

Multiple unit data - RCR 2

| Spacing on center | Initial center beam foot-candles | Watts per sq. ft. |
|-------------------|----------------------------------|-------------------|
| 5' | 63.4 | 0.65 |
| 6' | 41.6 | 0.43 |
| 7' | 29.7 | 0.31 |
| 8' | 24.8 | 0.25 |
| 9' | 19.8 | 0.20 |

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

Efficacy: **93.0 lm/w**

Report#: T20161391

Adjustment factors

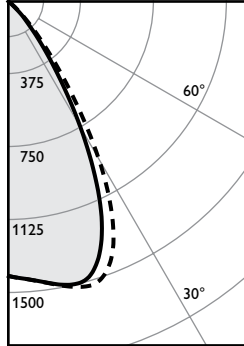
| Finish | CCT | Lumens |
|-----------|--------------------|---------------|
| CL = 100% | 80CRI 4000K = 107% | 3000lm = 200% |
| CC = 95% | 80CRI 3500K = 100% | 2500lm = 167% |
| CD = 87% | 80CRI 3000K = 99% | 2000lm = 133% |
| CZ = 63% | 80CRI 2700K = 93% | 1500lm = 100% |
| WH = 87% | 90CRI 3000K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

Coefficients of utilization

| Ceiling | 80% | | | | 70% | | 50% | | 30% | | 0% | |
|-------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 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 | 107 | 109 | 106 | 105 | 102 | 102 | 99 | 95 |
| | 2 | 109 | 105 | 101 | 98 | 103 | 97 | 100 | 95 | 97 | 93 | 89 |
| | 3 | 104 | 99 | 94 | 91 | 97 | 90 | 95 | 88 | 92 | 87 | 84 |
| | 4 | 100 | 93 | 88 | 84 | 92 | 84 | 90 | 83 | 88 | 82 | 80 |
| | 5 | 95 | 88 | 83 | 79 | 87 | 79 | 85 | 78 | 84 | 77 | 75 |
| | 6 | 91 | 83 | 78 | 74 | 83 | 74 | 81 | 73 | 80 | 73 | 71 |
| | 7 | 87 | 79 | 74 | 70 | 78 | 70 | 77 | 69 | 76 | 69 | 67 |
| | 8 | 84 | 75 | 70 | 66 | 75 | 66 | 74 | 66 | 73 | 66 | 64 |
| | 9 | 80 | 72 | 66 | 63 | 71 | 63 | 70 | 62 | 69 | 62 | 61 |
| 10 | 77 | 68 | 63 | 60 | 68 | 60 | 67 | 59 | 66 | 59 | 58 | |

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

Candela Curve



Frame: **C4SN or 4SN**
Engine: **C4L15835MZ10U**
Trim: **C4SDLNMCL**

CCT¹: 3500K
Output lumens: 1475 lms
Input watts: 14.2 W (±5%)
CRI: 80 min
Spacing Crit.: 0.9
Beam Angle: 58°

Zonal summary

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

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

Single unit data

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

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

Multiple unit data - RCR 2

| Spacing on center | Initial center beam foot-candles | Watts per sq. ft. |
|-------------------|----------------------------------|-------------------|
| 5' | 67.5 | 0.63 |
| 6' | 44.3 | 0.41 |
| 7' | 31.6 | 0.30 |
| 8' | 26.4 | 0.25 |
| 9' | 21.1 | 0.20 |

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

Efficacy: **103.8 lm/w**

Report#: T20161398

Adjustment factors

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

Coefficients of utilization

| Ceiling | 80% | | | | 70% | | 50% | | 30% | | 0% | |
|-------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 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 | 106 | 109 | 105 | 105 | 101 | 101 | 98 | 94 |
| | 2 | 108 | 103 | 99 | 96 | 102 | 95 | 98 | 93 | 96 | 91 | 87 |
| | 3 | 103 | 97 | 92 | 88 | 95 | 87 | 93 | 86 | 90 | 84 | 82 |
| | 4 | 98 | 90 | 85 | 81 | 89 | 80 | 87 | 79 | 85 | 78 | 76 |
| | 5 | 93 | 85 | 79 | 75 | 84 | 74 | 82 | 74 | 80 | 73 | 71 |
| | 6 | 88 | 79 | 74 | 69 | 79 | 69 | 77 | 69 | 76 | 68 | 66 |
| | 7 | 84 | 75 | 69 | 65 | 74 | 64 | 73 | 64 | 72 | 64 | 62 |
| | 8 | 80 | 70 | 64 | 60 | 70 | 60 | 69 | 60 | 68 | 60 | 58 |
| | 9 | 76 | 66 | 61 | 57 | 66 | 57 | 65 | 56 | 64 | 56 | 55 |
| 10 | 72 | 63 | 57 | 53 | 62 | 53 | 62 | 53 | 61 | 53 | 51 | |

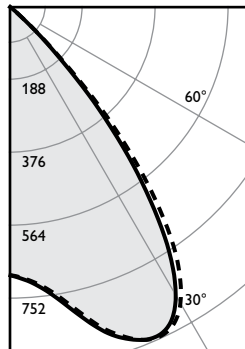
1. Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
2. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State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

C4SDL Calculite LED 4" gen 3

Square Downlight

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

Candela Curve



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

CCT¹: 3500K
Output lumens: 1288 lms
Input watts: 14.2 W (±5%)
CRI: 80 min
Spacing Crit.: 1.2
Beam Angle: 69°

Zonal summary

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

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

Single unit data

| Height to lighted plane | Initial center beam foot-candles | Beam diameter (ft)* |
|-------------------------|----------------------------------|---------------------|
| 5' | 28 | 6.0' |
| 6' | 19 | 7.2' |
| 7' | 14 | 8.4' |
| 8' | 11 | 9.6' |
| 9' | 8 | 10.8' |

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

Multiple unit data - RCR 2

| Spacing on center | Initial center beam foot-candles | Watts per sq. ft. |
|-------------------|----------------------------------|-------------------|
| 5' | 57.9 | 0.63 |
| 6' | 38.0 | 0.41 |
| 7' | 27.1 | 0.29 |
| 8' | 22.6 | 0.25 |
| 9' | 18.1 | 0.20 |

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

Efficacy: 90.8 lm/w
Report#: T20161399

Adjustment factors

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

Coefficients of utilization

| Celling | 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 | |
| 1 | 113 | 110 | 107 | 105 | 108 | 103 | 104 | 100 | 100 | 97 | 93 | 93 | 94 | 88 | 85 | 85 | |
| 2 | 107 | 102 | 97 | 93 | 100 | 92 | 97 | 90 | 94 | 88 | 85 | 85 | 87 | 81 | 78 | 78 | |
| 3 | 101 | 94 | 88 | 84 | 92 | 83 | 90 | 82 | 87 | 81 | 78 | 78 | 81 | 74 | 71 | 71 | |
| 4 | 95 | 87 | 80 | 76 | 85 | 75 | 83 | 74 | 81 | 74 | 71 | 71 | 75 | 67 | 65 | 65 | |
| 5 | 89 | 80 | 74 | 69 | 79 | 69 | 77 | 68 | 75 | 67 | 65 | 65 | 70 | 62 | 60 | 60 | |
| 6 | 84 | 74 | 67 | 63 | 73 | 63 | 72 | 62 | 70 | 62 | 60 | 60 | 65 | 57 | 55 | 55 | |
| 7 | 79 | 69 | 62 | 57 | 68 | 57 | 67 | 57 | 65 | 57 | 55 | 55 | 61 | 52 | 50 | 50 | |
| 8 | 74 | 64 | 57 | 53 | 63 | 53 | 62 | 52 | 61 | 52 | 50 | 50 | 57 | 48 | 46 | 46 | |
| 9 | 70 | 59 | 53 | 49 | 59 | 48 | 58 | 48 | 57 | 48 | 46 | 46 | 53 | 44 | 43 | 43 | |
| 10 | 66 | 56 | 49 | 45 | 55 | 45 | 54 | 45 | 53 | 44 | 43 | 43 | | | | | |

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.

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