# **Downlighting**

# LIGHTOLIER

# Calculite LED 4" gen 3



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





C4SLW Square Lensed Wall Wash

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:   |
| Гуре:     |
| Qty:      |
| N-+       |

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

| Step 1            | Frame: Ordered & shipped separately.                  |      |                                 |  |  |  |  |  |  |
|-------------------|---|------|---------------------------------|--|--|--|--|--|--|
|                   | Frame 4S  |      | Example: 4SN                    |  |  |  |  |  |  |
| Step 2            | Engine & Trim: Ordered & shipped as a single product. |      |                                 |  |  |  |  |  |  |
|                   | Engine C4L  | -C4S | Example: C4L15935MZ10U-C4SLWCCP |  |  |  |  |  |  |
| Step 3 (optional) | Accessories: Ordered & shipped separately.            |      |                                 |  |  |  |  |  |  |
|                   |   |      |                                 |  |  |  |  |  |  |

| Series Installation 4S |  | Volta | ge/Options |  |                            |  |  |
|------------------------|--|-------|------------|--|----------------------------|--|--|
| 48                     | 4S 4" Non-IC N New construction Square |       | —<br>ЕМ6   | Universal 120/277/347V<br>Emergency, 6W Self-Test/Self-Diagnostic <sup>1</sup> | LC<br>BAC                  | Chicago Plenum <sup>2</sup><br>Meets the requirements of the Buy American Act of 1933 (BAA) <sup>9</sup> |  |
|                        |  | Б     | Damadalan  |  | Universal 100 /077 /0 47\/ | DAO  | Mosto the provincements of the Dry American Act of 1022 (DAA)9 |

| Square                  |  |                          | EM6 Emergency, 6W Self-Test/Self-Diagnostic BAC Meets the r |                      |                      |            |   | irements of the Buy American Act of 1933 (BAA)9 |   |  |  |  |
|-------------------------|--|--------------------------|---|----------------------|----------------------|------------|---|---|---|--|--|--|
|                         | R Remodele                             | r                        | - Universal 120/277/347V                                    |                      |                      | BAC        | Meets the require                                 | ements of the Buy Am                            | nerican Act of 1933 (BAA) <sup>9</sup>          |  |  |  |
| Engine                  |  |                          |   |                      | Standard example:    | : C4L2     | 0930MZ10D20UF                                     | BAC example: (                                  | C4L20930MZ10D20U-BAC                            |  |  |  |
| Series                  | Lumens                                 | CRI/CCT                  |   | Beam                 | Dimming              |            | Options   | Voltage   | Options   |  |  |  |
| C4L                     |  |                          |   |                      |                      |            |   |   |   |  |  |  |
| C4L Calculite<br>LED 4" | <b>05</b> 500 lm<br><b>10</b> 1000 lm  | 927 90CRI/<br>930 90CRI/ | 3000K   | N Narrow<br>M Medium | <b>Z10</b> 0-10 V 1% |            | None<br>D2O Dim to Off                            | U 120/277V<br>3 347V (Z10 only)                 | F Flex install <sup>6</sup> (no frame required) |  |  |  |
| gen 3                   | 15 1500 lm<br>20 2000 lm<br>25 2500 lm | 940 90CRI/               | 90CRI/3500K<br>90CRI/4000K<br>90CRI/5000K <sup>3</sup>      |                      | m not available)     | U 120/277V | RH Retrofit for<br>tall collar frame <sup>7</sup> |   |   |  |  |  |

| C4L | Calculite<br>LED 4" | <b>05</b> 500 lm<br><b>10</b> 1000 lm  | 927<br>930                              | 90CRI/2700K<br>90CRI/3000K                                  | N<br>M                | Narrow<br>Medium                            | Z10 | 0-10 V 1%                      | <br>D2O | None<br>Dim to Off   | U<br>3   | 120/277V<br>347V (Z10 only) | F Flex install <sup>6</sup> (no frame required)                       |   |          |
|-----|---------------------|--|---|---|-----------------------|---|-----|--------------------------------|---------|--|--|-----------------------------|---|---|----------|
|     | 20                  | 15 1500 lm 935<br>20 2000 lm 940<br>25 2500 lm 950<br>30 3000 lm*<br>* See marked spacings requirements on page 9. | 20 2000 Im<br>25 2500 Im<br>30 3000 Im* | <b>40</b> 90CRI/4000K<br><b>50</b> 90CRI/5000K <sup>3</sup> | L01<br>L1<br>RA       | Lutron LDE1 EcoSystem (500lm not available) |     | U 120/277V                     |         | RH Retrofit for<br>tall collar frame <sup>7</sup><br>BAC Meets the |  |                             |   |   |          |
|     |                     |  |   | to 1800K <sup>4</sup> marked (dim-to-warm)                  | to 1800K <sup>4</sup> |   | D   |                                |         | None<br>LIN Linear   |  | U 120/277V                  | requirements of<br>the Buy American<br>Act of 1933 (BAA) <sup>9</sup> |   |          |
|     |                     |  | requirements                            | requirements  | requirements          |   |     |                                |         | SOL<br>DMX   | EldoLED Solo 0-10 V 0.1%<br>Digital Multiplexing<br>w/RDM 0.1% | LIN<br>SQR                  | None<br>Linear<br>Square  | U | 120/277V |
|     |                     |  |   |   |                       |   | E   | Forward & Reverse Phase (up to | to 2500 | lm)  | 1  | 120V                        |   |   |          |

| Trim                            | standard example: C4SLWCCP   BAC example: C4SLWCCP-BAG |                                  |  |  |  |  |  |  |  |  |  |
|---------------------------------|--|----------------------------------|--|--|--|--|--|--|--|--|--|
| Series                          | Aperture   | Style LW                         | Finish   | Flange   | Options  |  |  |  |  |  |  |
| C4 Calculite<br>LED 4"<br>gen 3 | S Square   | LW Lensed Wall Wash <sup>8</sup> | CL Specular clear CC Comfort clear CD Comfort clear diffuse BK Black (matte) | White (matte)     P Polished (matches aperture)     F Flangeless (requires CA4SFT) | BAC Meets the requisites of the<br>Buy American Act of 1933 (BAA) <sup>9</sup> |  |  |  |  |  |  |
|                                 |  |                                  | WH White (matte)   | - White (matches finish) F Flangeless (requires CA4SFT)                            |  |  |  |  |  |  |  |

See footnotes on page 2.

**Frame** 













# Square Lensed Wall Wash

#### 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

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 Wall Wash

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

| Lumen   |             | Flux | Efficacy | Beam  |      |     |     | IES            | TM-30 | )-18               |     |
|---------|-------------|------|----------|-------|------|-----|-----|----------------|-------|--------------------|-----|
| Package | Beam        | (lm) | (lm/W)   | Angle | СВСР | CRI | R9  | R <sub>f</sub> | $R_g$ | R <sub>cs,h1</sub> | UGR |
| 500 lm  | Lensed (LW) | 493  | 81       | _     | _    | 90+ | 50+ | 91             | 99    | -6%                | 16  |
| 1000 lm | Lensed (LW) | 832  | 83       | _     | _    | 90+ | 50+ | 91             | 99    | -6%                | 18  |
| 1500 lm | Lensed (LW) | 1197 | 85       | _     | -    | 90+ | 50+ | 91             | 99    | -6%                | 19  |
| 2000 lm | Lensed (LW) | 1538 | 84       | _     | _    | 90+ | 50+ | 91             | 99    | -6%                | 20  |
| 2500 lm | Lensed (LW) | 1931 | 96       | _     | _    | 90+ | 50+ | 91             | 99    | -6%                | 21  |
| 3000 lm | Lensed (LW) | 2336 | 69       | _     | _    | 90+ | 50+ | 91             | 99    | -6%                | 21  |



# 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<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>th1</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,h1</sub> 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 requires remote mounted test switch. Order CAEM6TSCP mounting plate accessory (not compatible with 347V configurations).
- 2. Chicago plenum (LC) frame option not available with BAC nor EM6 options.
- 3. Consult factory for 5000K CCT (50)with narrow (N) beam
- Dim-to-warm (D2W) available only with Z10 dimming to 2000lm.
   Narrow (N) and medium (M) beam engines only.
- 5. Linear driver profile (see page 6).
- Flex install option requires light engine (F)/trim only (up to 2500lm).
   For use only with optional 4RNSR new construction frame accessory available.
   Not available with Interact (RA) dimming and IEM6 trim options. See page 3 for further details.
- 7. Retrofits select legacy luminaires (E & Z10 dimming only see pages 3 & 8).
- 8. Medium (M) beam is ideal for Lensed Wall Wash (LW) applications.
- 9. 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.

# Square Lensed Wall Wash

#### 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) 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.
- Easy alignment of fixtures and present locking at 0°, 45°, & 90° with 360° rotation via toolless 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<br>S4118_series                            | Use Retrofit configuration<br>C4R_ Trim + C4L_ Engine   |
| With INC<br>AS400_series                            | Use Retrofit configuration C4R_ Trim + C4L_ Engine  |
| With LED C4L_N series C4X4L_N series P4RD_N_ series | Use Retrofit configuration<br>C4R_ Trim + C4L_ Engine<br>C4S_ Trim + C4L_ Engine<br>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 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 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 (LO1) 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 fieldinstalled 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 flangless 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. 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 stepdown 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 for more information on Signify's standard 5-year limited warranty on complete luminaire systems.

# Square Lensed Wall Wash

# interact

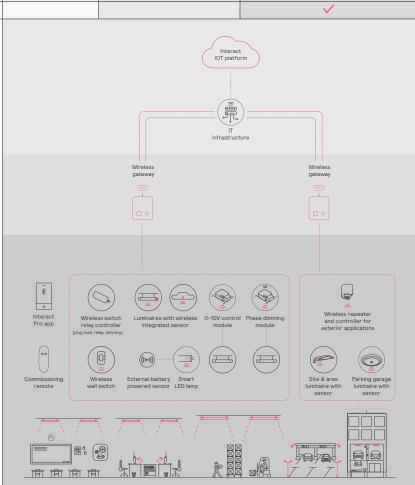
| Tireract  |     | In the second se |          |               |
|---|-----|--|----------|---------------|
|   |     |  | Gatev    | vay Connected |
|   |     | Standalone   | Option 1 | Option 2      |
| Dimming, grouping, and zoning                       |     | <b>✓</b>   | <b>✓</b> | <b>✓</b>      |
| Bluetooth and ZigBee enabled                        |     | <b>~</b>   | <b>✓</b> | <b>~</b>      |
| Motion sensing and daylight harvesting              |     | <b>✓</b>   | <b>✓</b> | <b>~</b>      |
| Integration with 0-10V and phase dimming fixtures   | ĺ   | <b>✓</b>   | <b>✓</b> | <b>✓</b>      |
| Code compliance                                     | ĺ   | <b>✓</b>   | <b>✓</b> | <b>✓</b>      |
| Granular dimming and dwell time                     |     | <b>✓</b>   | <b>✓</b> | <b>✓</b>      |
| Correlated color temperature (CCT) tuning by switch | New | <b>✓</b>   | <b>✓</b> | <b>✓</b>      |
| Support for sensor-based Tunable White luminaires   | New | <b>✓</b>   | <b>✓</b> | <b>✓</b>      |
| Energy reporting and monitoring                     |     |  | <b>✓</b> | <b>✓</b>      |
| Scheduling  | ĺ   |  | <b>✓</b> | <b>✓</b>      |
| Demand response                                     |     |  | <b>✓</b> | <b>✓</b>      |
| BMS integration (BACnet)                            |     |  |          | <b>✓</b>      |
| Floor plan visualization                            |     |  |          | <b>✓</b>      |
| IoT sensors for wellness                            |     |  |          | <b>✓</b>      |
| IoT Apps for productivity                           |     |  |          | <b>~</b>      |

# 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               |



dilato

# Square Lensed Wall Wash

## 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    | -        | -                        |

# Square Lensed Wall Wash

## 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.



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



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



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

## **Flanges**



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



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

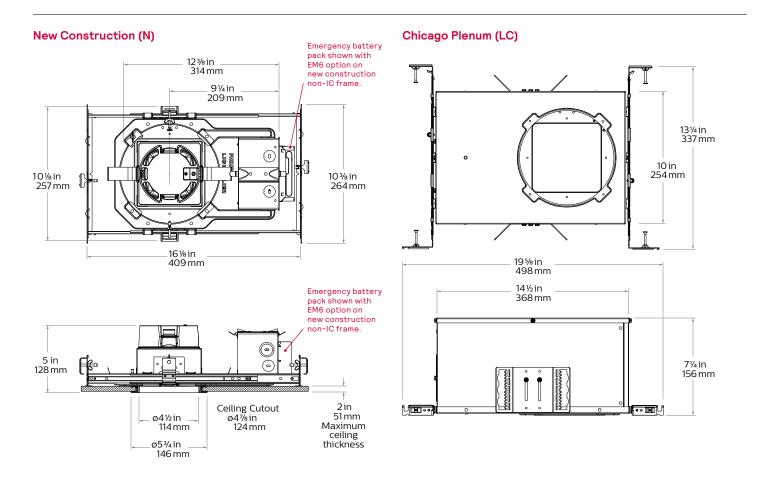


Flangeless (F): (flush-mount)Creates a flush, virtually seamless transition from aperture to ceiling.

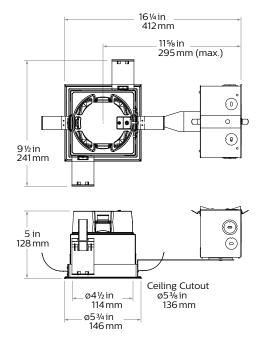


Mud-in ring (FT): Low profile, machined aluminum mud-in ring provides a raised rib to plaster up to and a 3/16" flange thickness. The ring is attached to the ceiling material as opposed to the frame-in kit to avoid conduction of heat and vibration which can cause yellowing or cracking of the plaster.

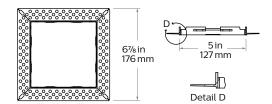
# Square Lensed Wall Wash



# Remodeler (R)

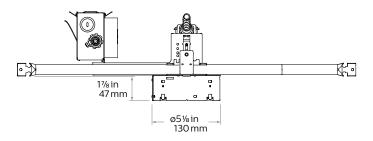


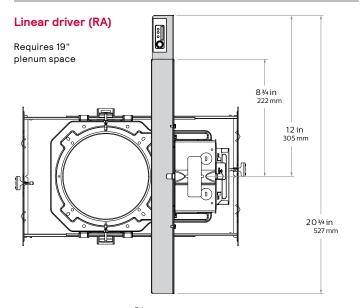
# Flangeless mud-in ring (CA4SFT) accessory

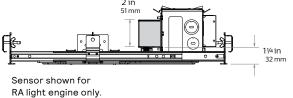


# Square Lensed Wall Wash

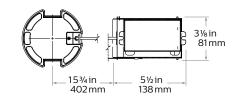
# Round tall collar frame (RH type light engine required)

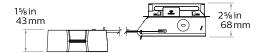




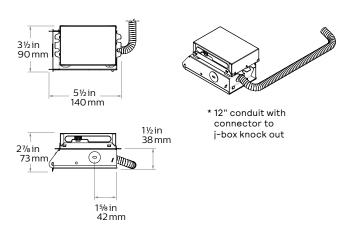


# Flex Install (F)

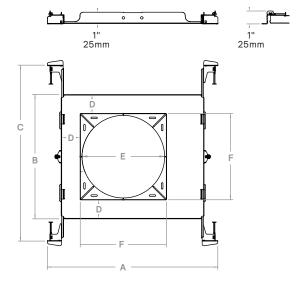




LCEM6 Flex install (F) engine only



4RNSR Flex install non-IC frame



| Α     | В     | С     | D    | E     | F     |
|-------|-------|-------|------|-------|-------|
| 10 ¾" | 7¼"   | 13 %" | 1"   | 4%"   | 5¼"   |
| 276mm | 184mm | 345mm | 25mm | 124mm | 132mm |

# Square Lensed Wall Wash

#### **Electrical - Narrow**

| Light  | Input | Input   | Input  | Drive   | Input | LED   | THD<br>Factor | Power<br>Factor |
|--------|-------|---------|--------|---------|-------|-------|---------------|-----------------|
| engine | Volts | Freq.   |        | Current |       | Power | @ Max         | Load            |
|        | 120V  | 50/60Hz | 0.050A | 0.15A   | 6.0W  | 4.8W  | <10%          | >0.9            |
| 500lm  | 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            |
|        | 120V  | 50/60Hz | 0.072A | 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   | 10.1W | 7.1W  | <30%          | >0.9            |
|        | 120V  | 50/60Hz | 0.108A | 0.33A   | 12.9W | 10.8W | <10%          | >0.9            |
| 1500lm | 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            |
|        | 120V  | 50/60Hz | 0.147A | 0.45A   | 17.6W | 14.9W | <10%          | >0.9            |
| 2000lm | 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            |
|        | 120V  | 50/60Hz | 0.180A | 0.55A   | 21.6W | 18.3W | <10%          | >0.9            |
| 2500lm | 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            |
|        | 120V  | 50/60Hz | 0.231A | 0.70A   | 27.7W | 23.7W | <10%          | >0.9            |
| 3000lm | 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            |

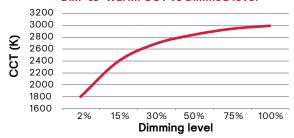
### Lifetime (TM-21) data

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

#### **Electrical - Medium & Wide**

| Light  | Input | Input   | Input   | Drive   | Input | LED   | THD<br>Factor | Power<br>Factor |
|--------|-------|---------|---------|---------|-------|-------|---------------|-----------------|
| engine | Volts | Freq.   | Current | Current | Power | Power | @ Max         | Load            |
|        | 120V  | 50/60Hz | 0.051A  | 0.15A   | 6.1W  | 4.8W  | <10%          | >0.9            |
| 500lm  | 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            |
|        | 120V  | 50/60Hz | 0.084A  | 0.25A   | 10.1W | 8.3W  | <10%          | >0.9            |
| 1000lm | 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            |
|        | 120V  | 50/60Hz | 0.117A  | 0.36A   | 14.0W | 11.8W | <10%          | >0.9            |
| 1500lm | 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            |
|        | 120V  | 50/60Hz | 0.153A  | 0.47A   | 18.4W | 15.5W | <10%          | >0.9            |
| 2000lm | 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            |
|        | 120V  | 50/60Hz | 0.197A  | 0.60A   | 23.6W | 20.1W | <10%          | >0.9            |
| 2500lm | 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            |
|        | 120V  | 50/60Hz | 0.247A  | 0.75A   | 29.7W | 25.5W | <10%          | >0.9            |
| 3000lm | 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)

|              |                    | Input                |      |         |        |  |  |
|--------------|--------------------|----------------------|------|---------|--------|--|--|
| Light engine | Volts <sup>1</sup> | Voltage <sup>2</sup> | Freq | Current | Power  |  |  |
| C4L10NPE     | 53V                | 51-54V               | DC   | 160 mA  | 8.9 W  |  |  |
| C4L15NPE     | 53V                | 51-54V               | DC   | 250 mA  | 13.6 W |  |  |
| C4L20NPE     | 53V                | 51-54V               | DC   | 340 mA  | 18.5 W |  |  |
| C4L25NPE     | 53V                | 51-54V               | DC   | 460 mA  | 24.6 W |  |  |

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

# Medium (Power over Ethernet)

|              | Input              |                      |      |         |        |
|--------------|--------------------|----------------------|------|---------|--------|
| Light engine | Volts <sup>1</sup> | Voltage <sup>2</sup> | Freq | Current | Power  |
| C4L10MPE     | 53V                | 51-54V               | DC   | 160 mA  | 8.8 W  |
| C4L15MPE     | 53V                | 51-54V               | DC   | 250 mA  | 13.4 W |
| C4L20MPE     | 53V                | 51-54V               | DC   | 320 mA  | 17.6 W |
| C4L25MPE     | 53V                | 51-54V               | DC   | 430 mA  | 23.2 W |

# Wide (Power over Ethernet)

|              | Input              |                      |      |         |        |
|--------------|--------------------|----------------------|------|---------|--------|
| Light engine | Volts <sup>1</sup> | Voltage <sup>2</sup> | Freq | Current | Power  |
| C4L10WPE     | 53V                | 51-54V               | DC   | 160 mA  | 8.8 W  |
| C4L15WPE     | 53V                | 51-54V               | DC   | 250 mA  | 13.4 W |
| C4L20WPE     | 53V                | 51-54V               | DC   | 320 mA  | 17.6 W |
| C4L25WPE     | 53V                | 51-54V               | DC   | 430 mA  | 23.2 W |

# Lifetime (TM-21 data)

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

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

# Marked spacing applications

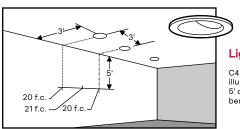
| Light engine   | 3000lm |
|----------------|--------|
| C4L_Z10 series | Х      |
| C4L_L01 series | Х      |
| C4L_L1 series  | Х      |
| C4L_LD series  | Х      |
| C4L_LTE series | Х      |
| C4L_D series   | Х      |
| C4L_DMX series | Х      |
| C4L_RA series  | Х      |

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.

# Square Lensed Wall Wash



# **Lighting Data - Example**

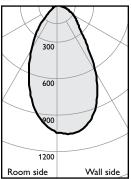
C4RWWCL / C4L15935W illumination on the wall 5' down from the ceiling is 20 f.c. beneath and 21 f.c. between fixtures.

#### Adjustment factors

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

#### Lensed Wall Wash, 1500lm Engine, 86 lm/W at 14W

#### Candela Curve



#### 4SN / C4L15935M / C4SLWCL

Output lumens: 1198 lms Input watts: 14.0 W CRI: 90 min CCT 1: 3500K

Efficacy: 85.6 lm/w Report<sup>2</sup>: STMR-1858

#### Multiple unit data

Footcandles on wall

|  |   | 2' from wall |           |    |  |  |  |
|--|---|--------------|-----------|----|--|--|--|
|  |   | 6            | 2' on ctr |    |  |  |  |
| <sub>1</sub> 1   |   | 43           | 46        | 43 |  |  |  |
| 0 2  |   | 63           | 67        | 63 |  |  |  |
| <u>-</u> 3   |   | 60           | 65        | 60 |  |  |  |
| _<br>10 4  |   | 52           | 56        | 52 |  |  |  |
| Distance from ceiling in feet 51 0 6 8 2 9 5 7 6 7 7 8 9 5 7 8 9 5 7 7 8 9 5 7 8 9 7 8 9 7 8 9 7 8 9 7 8 9 9 9 9 9 9 |   | 40           | 43        | 40 |  |  |  |
| <u>ة</u> 6   |   | 30           | 32        | 30 |  |  |  |
| 5 7  |   | 22           | 23        | 22 |  |  |  |
| ± 8  |   | 17           | 17        | 17 |  |  |  |
| <u>و</u> 9   |   | 13           | 13        | 13 |  |  |  |
| # 10   | ) | 10           | 11        | 10 |  |  |  |
| ă 12   | 2 | 8            | 9         | 8  |  |  |  |
| 14   | . | 7            | 7         | 7  |  |  |  |
|  |   |              |           |    |  |  |  |

### Multiple unit data

Footcandles on wall

|  |   | 3' from wall |           |    |  |  |
|--|---|--------------|-----------|----|--|--|
|  |   | 6            | 3' on ctr |    |  |  |
| <br>1 ر  |   | 9            | 9         | 9  |  |  |
| 9 2  |   | 16           | 16        | 16 |  |  |
| _ 3  |   | 18           | 18        | 18 |  |  |
| _<br>ව 4   |   | 18           | 17        | 18 |  |  |
| <u></u> 5  |   | 17           | 17        | 17 |  |  |
| Distance from ceiling in feet<br>31 01 6 8 2 9 2 7 8 5 7 . |   | 15           | 15        | 15 |  |  |
| 5 7  |   | 13           | 13        | 13 |  |  |
| <u></u> 8  |   | 11           | 11        | 11 |  |  |
| ပို့ ၅   |   | 9            | 10        | 9  |  |  |
| # 10   | ) | 8            | 8         | 8  |  |  |
| ് 12   |   | 7            | 8<br>7    | 7  |  |  |
| 14   | . | 6            | 6         | 6  |  |  |
|  |   |              |           |    |  |  |

<sup>1.</sup> Correlated Color Temperature within specs as defined in ANSI\_NEMA\_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

<sup>2.</sup> Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.