



Calculite features industry leading visual comfort, excellent uniform illumination over time, and patented installation flexibility. Optical cutoff of 50° coupled with exceptional 2 Step MacAdam ellipse color consistency make the Calculite 3" downlight an ideal choice for open office, retail, hospitality, healthcare, and residential applications.

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

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

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

Frame

Note: For remodeler installations, order light engine and trim only (no frame needed).

example: 3RAS

| Series | Installation | Voltage / Options |
|----------------------------|---------------------------|---|
| 3R | | |
| 3R Uniframe 3" round frame | N New Construction Non-IC | — Universal 120/277/347V LC Chicago plenum EM6 Emergency, 6W Self-Test/Self-Diagnostic ¹ |
| | A AirSeal IC (1000lm max) | — Standard Universal 120/277/347V S Shallow Universal 120/277/347V ² |

Engine

example: C3L10930NZ10US

| Series | Lumens | CRI/CCT | Beam | Dimming | Options | Voltage | Plenum |
|-------------------------------|------------------------|--|--|---|--------------------------------------|----------------------------------|---------------------------------------|
| C3L | | | | | | | |
| C3L Calculite 3" light engine | 05 500lm | 927 90 CRI / 2700K | N Narrow (33°) M Medium (55°) W Wide (62°) | Z10 0-10V 1% | --- None D20 Dim to Off | U 120V/277V 3 347V (Z10 only) | — Standard |
| | 07 750lm | 930 90 CRI / 3000K | | L01 Lutron PEQ0 EcoSystem 0.1% | | U 120V/277V | |
| | 10 1000lm | 935 90 CRI / 3500K | | L1 Lutron LDE1 EcoSystem ⁴ | | U 120V/277V | |
| | 15 1500lm ³ | 940 90 CRI / 4000K | | D DALI 0.1% | --- None LIN Linear | U 120V/277V | |
| | 18 1800lm ³ | | | SOL 0-10V 0.1% DMX Digital Multiplex w/ RDM 0.1% | --- None LIN Linear SQR Square | U 120V/277V | |
| | 10 1000lm | 9D2W 90 CRI / 3000-1800K For new const. (N) configs only | N Narrow (33°) M Medium (55°) W Wide (62°) | LTE Lutron LTE Hi-Lume Phase Cut 1% ⁴ E Forward/Reverse Phase | | 1 120V | R Remodeler ⁶ S Shallow |
| | | | | RA Integral Interact Pro RF sensor ⁵ | | U 120V/277V | |
| | 07 750lm | 927 90 CRI / 2700K | | Z10 0-10V 1% | --- None D20 Dim to Off | U 120V/277V 3 347V (Z10 only) | |
| | 10 1000lm | 930 90 CRI / 3000K 935 90 CRI / 3500K 940 90 CRI / 4000K | | E Forward/Reverse Phase | | 1 120V | |
| | | | | | | | |

Trim

example: C3RDLBTF

| Series | Style | Reflector | Flange | Flange | Options |
|-----------------------------|--------------|--|--|--|---|
| C3R | DL | | | | |
| C3R Calculite 3" round trim | DL Downlight | BK Black (anodized) CL Specular clear CC Comfort clear | CD Comfort clear diffuse CZ Champagne bronze (anodized) | — White (matte) P Matching reflector F Flangeless ⁷ | — Standard depth with 50° cutoff |
| | | WH White (matte) | | — White (matte) F Flangeless ⁷ | — Standard depth with 50° cutoff |
| | | WT Textured white (painted) | | P Matching reflector F Flangeless ⁷ | S 1" regress cast aluminum (wide beam only) |
| | | BT Textured black (painted) BZ Bronze (painted) D Aluminum diffuse (painted) | | — White (matte) P Matching reflector F Flangeless ⁷ | |
| | | | | | |

- Emergency (EM6) frame is compatible with reflector mounted test switch when trim is ordered with IEM6 option code. For remote mounted test switch, order EM6 frame and CAEM6TSCP accessory. Not compatible with 347V.
- Must order shallow IC frame (S), shallow engine (S) for complete shallow assembly. Standard depth and regress (S) trims are compatible with shallow light engines (S).
- The 1500lm (15) and 1800lm (18) options are not available with standard AirSeal IC frame (3RA-).

- Not available with 500lm (05) option.
- Linear driver profile. See page 7 for details.
- Specify only with non-IC (N) frame, not for use with LC or EM6 options.
- For remodeler installations, order light engine and trim only (no frame needed).
- Flangeless (F) trims require CA3RFT mud-in accessory for installation.

C3RDL Calculite 3"

Round downlight

Accessories (order & install separately)

| | |
|------------------|---|
| SBA | Interact Ready System Bridge (compatible with 0-10V, see SBA spec sheet) Requires IRT9015 IR remote & Interact Pro App for commissioning. |
| CAEM6 | Field installable Bodine BSL6 6W battery pack with self-test/self-diagnostic for use with new construction frames, 120-277V |
| CA3RFT | Mud-in ring for round flangeless installs (ordered with a flangeless trim) |
| CAEM6TSCP | Must be ordered with EM6 frame for remote test switch (see page 3 for details) |
| T347-75VA | 347:120V step-down transformer for non-IC (N) frame only (see page 3 for details) |

0-10V electrical tables

| Light engine | Input volts | Input current | Drive current | Input power |
|------------------------------|-------------|---------------|---------------|-------------|
| C3L05_Z10U/3 | 120 V | 0.06 A | 150 mA | 7.0 W |
| | 277 V | 0.02 A | | |
| C3L07_Z10U/3 | 120 V | 0.08 A | 220 mA | 9.5 W |
| | 277 V | 0.03 A | | |
| C3L10_Z10U/3 | 120 V | 0.12 A | 330 mA | 13.6 W |
| | 277 V | 0.05 A | | |
| C3L15_Z10U/3 | 120 V | 0.16 A | 450 mA | 18.6 W |
| | 277 V | 0.07 A | | |
| C3L18_Z10U/3 | 120 V | 0.17 A | 500 mA | 20.4 W |
| | 277 V | 0.07 A | | |
| C3L07_Z10US/3 C3L07_Z10UR | 120 V | 0.08 A | 220 mA | 9.4 W |
| | 277 V | 0.03 A | | |
| C3L10_Z10US/3 C3L10_Z10UR | 120 V | 0.12 A | 330 mA | 14.1 W |
| | 277 V | 0.05 A | | |

ELV electrical tables

| Light engine | Input volts | Input current | Drive current | Input power |
|--------------------------|-------------|---------------|---------------|-------------|
| C3L05_E1 | 120 V | 0.05 A | 150 mA | 5.4 W |
| | 277 V | 0.02 A | | |
| C3L07_E1 | 120 V | 0.08 A | 220 mA | 8.7 W |
| | 277 V | 0.03 A | | |
| C3L10_E1 | 120 V | 0.11 A | 330 mA | 13.2 W |
| | 277 V | 0.05 A | | |
| C3L15_E1 | 120 V | 0.15 A | 450 mA | 17.4 W |
| | 277 V | 0.06 A | | |
| C3L18_E1 | 120 V | 0.17 A | 500 mA | 19.7 W |
| | 277 V | 0.07 A | | |
| C3_A05_E1S C3_A05_E1R | 120 V | 0.08 A | 220 mA | 8.7 W |
| | 277 V | 0.03 A | | |
| C3_A10_E1R C3_A10_E1S | 120 V | 0.11 A | 330 mA | 13.2 W |
| | 277 V | 0.05 A | | |

Lutron electrical tables

| Light engine | Input volts | Input current | Drive current | Input power |
|--------------|-------------|---------------|---------------|-------------|
| C3L05_LU | 120 V | 0.06 A | 150 mA | 6.2 W |
| | 277 V | 0.02 A | | |
| C3L07_LU | 120 V | 0.08 A | 220 mA | 8.8 W |
| | 277 V | 0.03 A | | |
| C3L10_LU | 120 V | 0.12 A | 330 mA | 13.0 W |
| | 277 V | 0.05 A | | |
| C3L15_LU | 120 V | 0.15 A | 450 mA | 17.7 W |
| | 277 V | 0.06 A | | |
| C3L18_LU | 120 V | 0.17 A | 500 mA | 19.8 W |
| | 277 V | 0.07 A | | |

C3RDL Calculite 3"

Round downlight

Frame-in-kits

New construction:

Galvanized stamped steel for dry or plaster ceilings. Preinstalled telescoping mounting bars from 13" to 24". For 4' distances, use 1/2" EMT, 1-1/2" x 1/2" U or C channel.

Max ceiling thickness is 1.25" (32mm)

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.

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.
- EdoLED SOLODrive (SOL) 0-10V 0.1%
- Lutron PEQ0 (L01) Hi-Lume Premier EcoSystem 0.1%
- Lutron LDE1 (L1) EcoSystem 1%
- Lutron LTE (LTE) Hi-Lume 2-wire phase cut 1%
- Electronic low voltage (E) - forward or reverse phase dimming, remodel and AirSeal IC Shallow are FCC Class B
- DALI (D) - DT6 DALI 0.1%
- DMX (DMX) - Digital multiplexing with RDM 0.1%
- Dim to Warm (D2W) - option changes CCT from 3000 - 1800K gradually as it dims, dimming agnostic

Dimming options:

- The following are factory-set for the SOL, D, and DMX driver options (ex. DMXLIN):
- SOL/D/DMX: Logarithmic (-) standard
- SOL/D/DMX: Linear (LIN)
- SOL/D/DMX: Square (SQR)

Optical systems

MesoOptics PET optical diffusion film: Provides a smooth beam shape and mitigates color over angle with optimized luminaire efficiency.

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

Construction: Precision spun high grade aluminum reflectors with options for anodized or painted finishes. Shallow die cast downlight trims available to aesthetically match adjustable accent in painted finish.

Comfort throughout the space: True 50° physical cutoff and 45° reflected cutoff.

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: C3RDLCCIE6).
- For remote ceiling mounted test switch, order standard trim (ex: C3RDLCC) and CAEM6TSCP mounting plate accessory.
- Refer to Calculite-LyteProfile-EasyLyte Emergency Battery Pack specification sheet for more details.

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.
- Predicted 70% lumen maintenance to 57,000 hrs.
- Max operating ambient temperature of 30°C.
- 347V light engines are Z10 dimming only and include dedicated 347V driver. For 347V non-Z10 dimming, order T347-75VA field-installed step-down transformer accessory.

Options and accessories

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. C3RDLCCIE6).

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.

Flangeless mud-in ring: Use CA3RFT for use with flangeless plaster installations.

Lens Film Accessories: Trim may accept up to one (1) field installed optical films with a total overall thickness up to 0.020" (1.5mm).

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

Title 24 exceptions

- BK and CZ finishes
- Must be installed in shallow AirSeal IC Frame
- Must be ELV and 750lm or 1000lm only

ENERGY STAR® exceptions

- BZ and CZ finishes
- 347V & Emergency voltage/options
- Lutron configurations
- Dim to Warm 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.

C3RDL Calculite 3"

Round downlight

interact

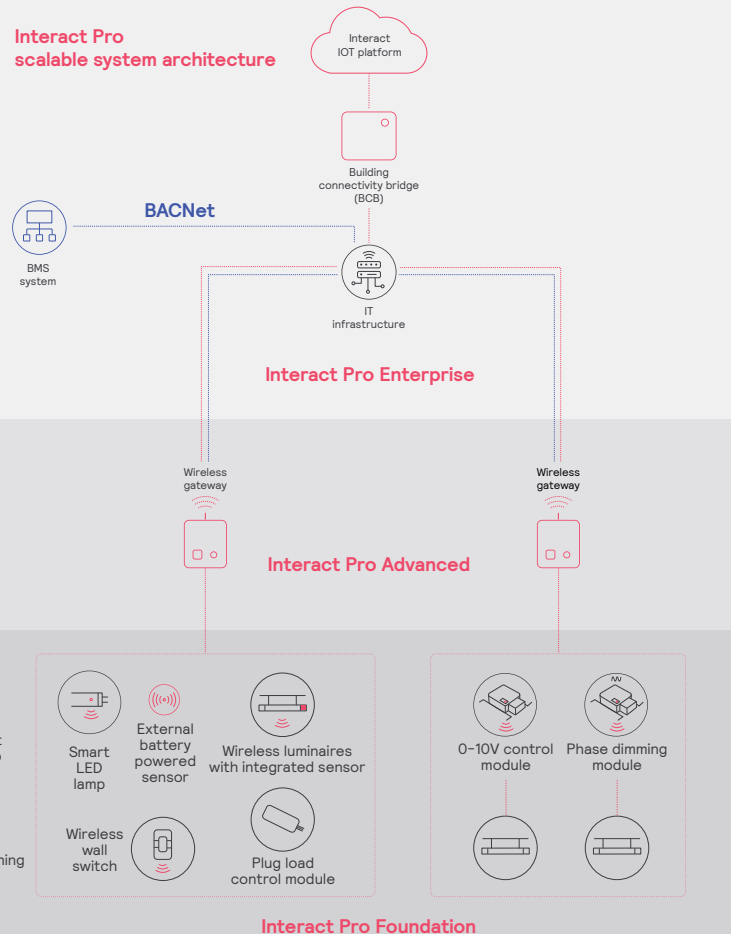
| | Interact Pro scalable system | | |
|---|------------------------------|----------|------------|
| | Foundation | Advanced | Enterprise |
| Dimming, grouping, and zoning | ✓ | ✓ | ✓ |
| Bluetooth and ZigBee enabled | ✓ | ✓ | ✓ |
| Motion sensing and daylight harvesting | ✓ | ✓ | ✓ |
| Integration with 0-10V and phase dimming fixtures | ✓ | ✓ | ✓ |
| Code compliance | ✓ | ✓ | ✓ |
| Granular dimming and dwell time | ✓ | ✓ | ✓ |
| 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 |
| <ul style="list-style-type: none"> luminaires with integrated sensors | 150 |
| <ul style="list-style-type: none"> smart TLEDs | 150 |
| Total number of ZGP devices (sensors and switches) | 50 |
| <ul style="list-style-type: none"> sensors | 30 |
| <ul style="list-style-type: none"> switches | 50 |
| <ul style="list-style-type: none"> zones and groups | 64 |
| Group level | |
| Recommended number of lights | 40 (recommended 25) |
| Number of ZGP devices | 5 |
| Number of scenes | 16 |

Interact Pro scalable system architecture



C3RDL Calculite 3"

Round downlight

Wireless Controls Options

Interact Pro scalable sensor

(System Bridge Accessory with -CS option):

- CS is a connected sensor with integral occupancy and daylight sensing and supports wireless mesh connectivity.
- The sensor works in the Foundation mode (similar to SpaceWise) when configured without a gateway or in an Interact Pro Advanced or Enterprise mode if a compatible gateway is used.
- Interact Pro 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 onsite to identify and group devices together.
- Compatible with:
 - SWS200 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
 - Battery powered IP65 presence sensor OCC sensor IA CM IP65 WH
 - Battery powered IP65 presence & daylight sensor OCC-DL sensor IA CM IP65 WH
- For more information on Interact Pro visit:
www.interact-lighting.com/interactproscalablesystem.

Interact Pro Enterprise

(System Bridge Accessory with -SB option):

- 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.
- SB option in addition to occupancy and daylight 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:
www.interact-lighting.com/office or
www.usa.lighting.philips.com/systems/system-areas/offices.

Emergency Options (ER100)

(System Bridge Accessory with -ER100 option):

- 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

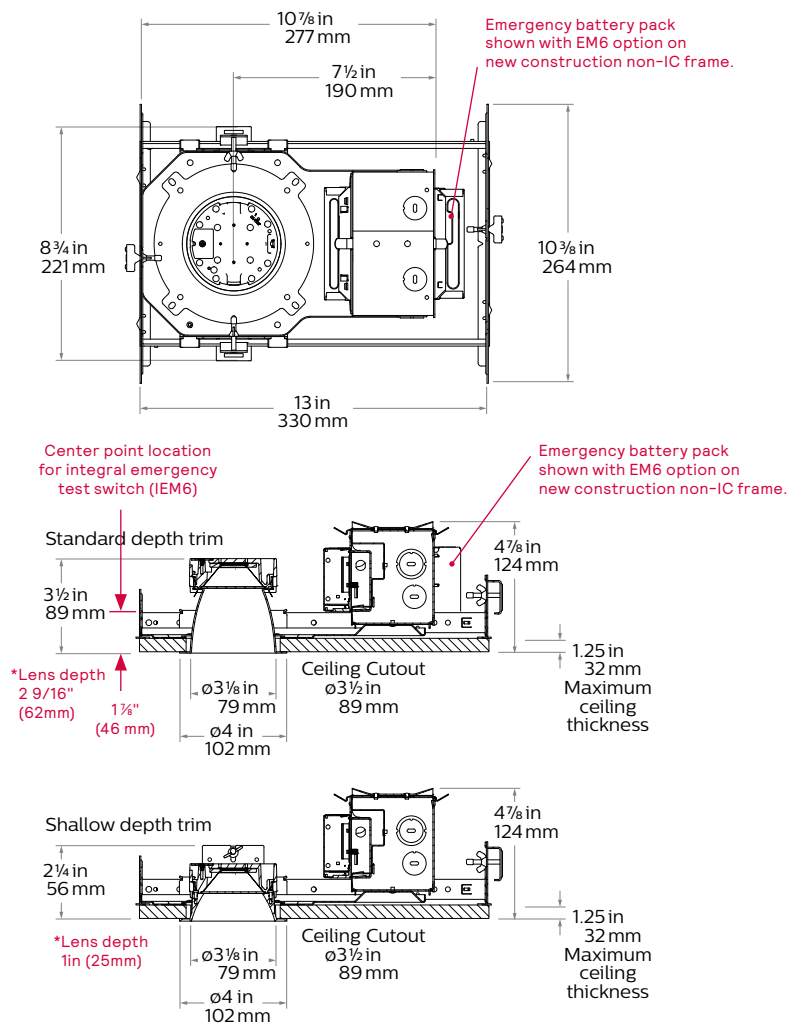
Radio only sensor (RA):

- Integral radio (RA) 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.
- Integral RF device affixed to the driver box (see page 7 for details).
- RA option available on light engines only.

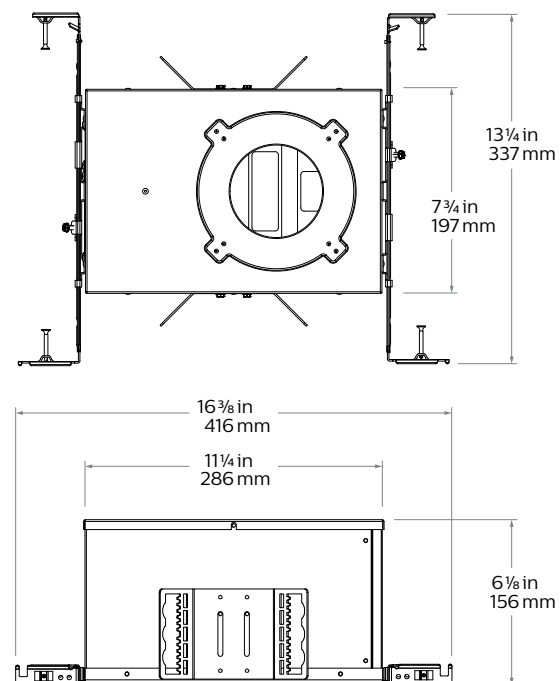
C3RDL Calculite 3"

Round downlight

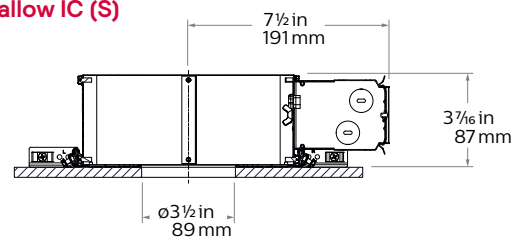
New construction (N)



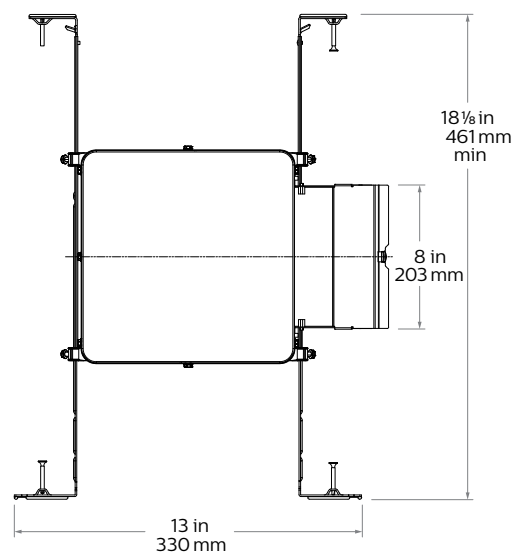
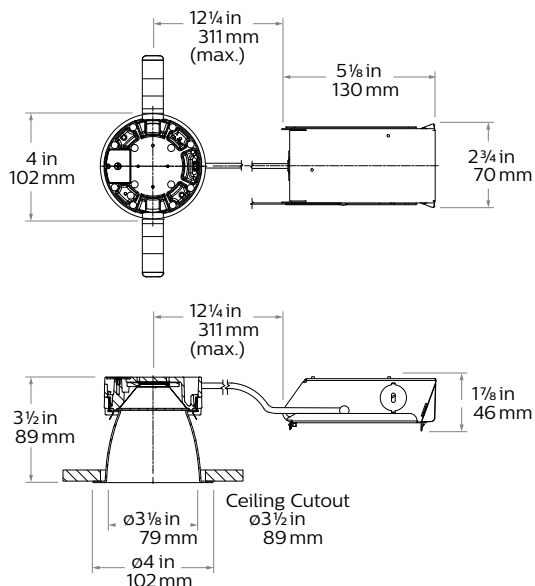
Standard IC (A) and Chicago plenum (LC)



Shallow IC (S)



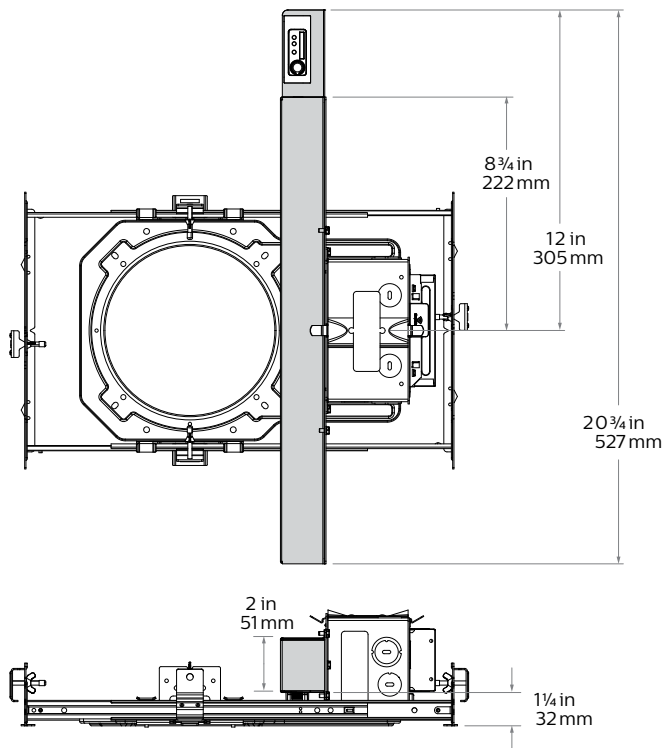
Remodeler (R)



C3RDL Calculite 3"

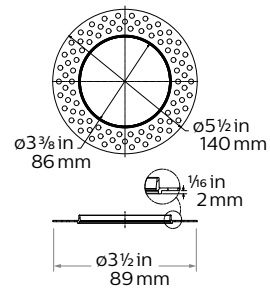
Round downlight

Linear driver (RA)



Requires either top accessory or 19" plenum space without sensor, and 22" with sensor.

Flangeless mud-in ring (CA3RFT) accessory



C3RDL Calculite 3"

Round 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.



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



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



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

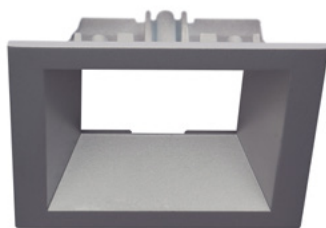


Comfort clear diffuse (CD): Slightly diffuse clear finish, that eliminates iridescence and reduces the mirror image effect inherent with specular finishes.



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

Textured Reflectors Shown as square reflectors but represent the finish of Calculite round reflectors.



Aluminum diffuse (D):
Matte painted finish.



Textured white (WT):
Matte painted finish.



Bronze (BZ):
Matte painted finish.



Textured black (BT):
Matte painted finish.

Flanges



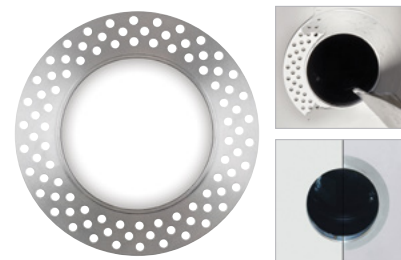
White (-): (matte) Provides the smoothest transition to ceilings when off.



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.



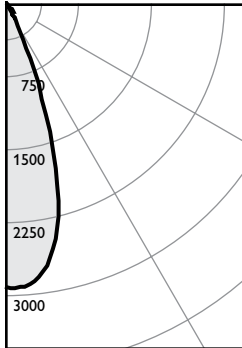
Mud-in ring (FT): Low profile, machined aluminum mud-in ring provides a raised rib to plaster up to and a 3/16" flange thickness. The ring is attached to the ceiling material as opposed to the frame-in kit to avoid conduction of heat and vibration which can cause yellowing or cracking of the plaster.

C3RDL Calculite 3"

Round downlight

Narrow beam (standard), 1000lm engine, 87.3 lm/W at 14W

Candela Curve



Frame: 3RN
Engine: C3L10935N210U
Trim: C3RDLCC

Output lumens: 1222 lms
Input watts: 14 W
CRI: 90 min
CCT¹: 3500K
Spacing Crit.: 0.64

Zonal summary

| Zone | Lumens | %Luminaire |
|------|--------|------------|
| 0-30 | 1074 | 87.9% |
| 0-40 | 1152 | 94.3% |
| 0-60 | 1220 | 99.8% |
| 0-90 | 1222 | 100.0% |

| Angle | Mean CP | Lumens |
|-------|---------|--------|
| 0 | 2906 | |
| 5 | 2891 | 293 |
| 10 | 2618 | |
| 15 | 2078 | 586 |
| 20 | 1161 | |
| 25 | 495 | 229 |
| 30 | 171 | |
| 35 | 116 | 73 |
| 40 | 117 | |
| 45 | 85 | 66 |
| 50 | 10 | |
| 55 | 5 | 4 |
| 60 | 13 | |
| 65 | 2 | 1 |
| 70 | 1 | |
| 75 | 0 | 1 |
| 80 | 0 | |
| 85 | 0 | 0 |
| 90 | 0 | |

Single unit data

| Height to lighted plane | Initial center beam foot-candles | Beam diameter (ft)* |
|-------------------------|----------------------------------|---------------------|
| 5' | 116 | 3.2' |
| 6' | 81 | 3.8' |
| 7' | 59 | 4.5' |
| 8' | 45 | 5.1' |
| 9' | 36 | 5.8' |

* 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' | 57.2 | 0.62 |
| 6' | 37.6 | 0.41 |
| 7' | 26.8 | 0.29 |
| 8' | 22.4 | 0.24 |
| 9' | 17.9 | 0.19 |

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

Efficacy: 87.3lm/w
Report²: 1763GFR

Adjustment factors

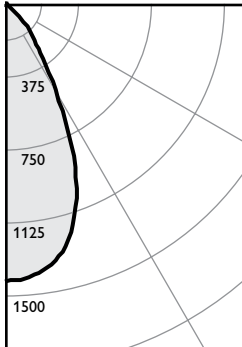
| Standard | CCT | Lumens |
|-----------|--------------------|---------------|
| CL = 105% | 90CRI 4000K = 104% | 1800lm = 142% |
| CC = 100% | 90CRI 3500K = 100% | 1500lm = 130% |
| CD = 80% | 90CRI 3000K = 96% | 1000lm = 100% |
| WH = 80% | 90CRI 2700K = 90% | 750lm = 70% |
| CZ = 78% | | 500lm = 50% |
| BK = 40% | | |

Coefficients of utilization

| Ceiling | 80% | | | | 70% | | | | 50% | | | | 30% | | | | 0% |
|-------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|----|----|----|----|
| Wall | 70 | 50 | 30 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 0 |
| RCR | Zonal cavity method - Effective floor reflectance = 20% | | | | | | | | | | | | | | | | |
| Room Cavity Ratio | 0 | 119 | 119 | 119 | 119 | 116 | 111 | 111 | 106 | 106 | 100 | | | | | | |
| | 1 | 114 | 112 | 110 | 108 | 110 | 106 | 106 | 103 | 102 | 100 | 95 | | | | | |
| | 2 | 110 | 106 | 102 | 100 | 104 | 98 | 101 | 96 | 98 | 94 | 91 | | | | | |
| | 3 | 106 | 100 | 96 | 93 | 99 | 92 | 96 | 91 | 94 | 89 | 87 | | | | | |
| | 4 | 102 | 95 | 91 | 87 | 94 | 87 | 92 | 86 | 90 | 85 | 83 | | | | | |
| | 5 | 98 | 91 | 86 | 83 | 90 | 82 | 88 | 82 | 87 | 81 | 79 | | | | | |
| | 6 | 94 | 87 | 82 | 78 | 86 | 78 | 85 | 78 | 83 | 77 | 76 | | | | | |
| | 7 | 91 | 83 | 78 | 75 | 83 | 75 | 81 | 74 | 80 | 74 | 72 | | | | | |
| | 8 | 88 | 80 | 75 | 72 | 79 | 71 | 78 | 71 | 77 | 71 | 70 | | | | | |
| | 9 | 85 | 77 | 72 | 69 | 76 | 69 | 75 | 68 | 75 | 68 | 67 | | | | | |
| 10 | 82 | 74 | 69 | 66 | 73 | 66 | 73 | 66 | 72 | 66 | 64 | | | | | | |

Medium beam (standard), 1000lm engine, 80.6 lm/W at 14W

Candela Curve



Frame: 3RN
Engine: C3L10935M210U
Trim: C3RDLCC

Output lumens: 1128 lms
Input watts: 14 W
CRI: 90 min
CCT¹: 3500K
Spacing Crit.: 0.86

Zonal summary

| Zone | Lumens | %Luminaire |
|------|--------|------------|
| 0-30 | 836 | 74.1% |
| 0-40 | 1039 | 92.1% |
| 0-60 | 1126 | 99.8% |
| 0-90 | 1128 | 100.0% |

| Angle | Mean CP | Lumens |
|-------|---------|--------|
| 0 | 1418 | |
| 5 | 1408 | 143 |
| 10 | 1365 | |
| 15 | 1268 | 359 |
| 20 | 1075 | |
| 25 | 814 | 377 |
| 30 | 527 | |
| 35 | 324 | 203 |
| 40 | 213 | |
| 45 | 104 | 81 |
| 50 | 16 | |
| 55 | 6 | 6 |
| 60 | 3 | |
| 65 | 2 | 2 |
| 70 | 1 | |
| 75 | 0 | 1 |
| 80 | 0 | |
| 85 | 0 | 0 |
| 90 | 0 | |

Single unit data

| Height to lighted plane | Initial center beam foot-candles | Beam diameter (ft)* |
|-------------------------|----------------------------------|---------------------|
| 5' | 57 | 4.3' |
| 6' | 39 | 5.2' |
| 7' | 29 | 6.0' |
| 8' | 22 | 6.9' |
| 9' | 18 | 7.7' |

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

Multiple unit data - RCR 2

| Spacing on center | Initial center beam foot-candles | Watts per sq. ft. |
|-------------------|----------------------------------|-------------------|
| 5' | 51.7 | 0.62 |
| 6' | 33.9 | 0.41 |
| 7' | 24.2 | 0.29 |
| 8' | 20.2 | 0.24 |
| 9' | 16.1 | 0.19 |

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

Efficacy: 80.6lm/w
Report²: 1758GFR

Adjustment factors

| Standard | CCT | Lumens |
|-----------|--------------------|---------------|
| CL = 105% | 90CRI 4000K = 104% | 1800lm = 142% |
| CC = 100% | 90CRI 3500K = 100% | 1500lm = 130% |
| CD = 80% | 90CRI 3000K = 96% | 1000lm = 100% |
| WH = 80% | 90CRI 2700K = 90% | 750lm = 70% |
| CZ = 78% | | 500lm = 50% |
| BK = 40% | | |

Coefficients of utilization

| Ceiling | 80% | | | | 70% | | | | 50% | | | | 30% | | | | 0% |
|-------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|
| Wall | 70 | 50 | 30 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 0 |
| RCR | Zonal cavity method - Effective floor reflectance = 20% | | | | | | | | | | | | | | | | |
| Room Cavity Ratio | 0 | 119 | 119 | 119 | 119 | 116 | 116 | 111 | 111 | 106 | 106 | 100 | | | | | |
| | 1 | 114 | 111 | 109 | 106 | 109 | 105 | 105 | 101 | 101 | 98 | 94 | | | | | |
| | 2 | 108 | 103 | 100 | 96 | 102 | 95 | 99 | 93 | 96 | 91 | 88 | | | | | |
| | 3 | 103 | 97 | 92 | 88 | 95 | 87 | 93 | 86 | 90 | 85 | 82 | | | | | |
| | 4 | 98 | 91 | 85 | 81 | 89 | 81 | 87 | 80 | 85 | 79 | 76 | | | | | |
| | 5 | 93 | 85 | 79 | 75 | 84 | 75 | 82 | 74 | 81 | 74 | 71 | | | | | |
| | 6 | 89 | 80 | 74 | 70 | 79 | 70 | 78 | 69 | 76 | 69 | 67 | | | | | |
| | 7 | 84 | 75 | 70 | 65 | 75 | 65 | 73 | 65 | 72 | 65 | 63 | | | | | |
| | 8 | 80 | 71 | 65 | 61 | 71 | 61 | 70 | 61 | 69 | 61 | 59 | | | | | |
| | 9 | 77 | 67 | 62 | 58 | 67 | 58 | 66 | 57 | 65 | 57 | 56 | | | | | |
| 10 | 73 | 64 | 58 | 54 | 63 | 54 | 63 | 54 | 62 | 54 | 53 | | | | | | |

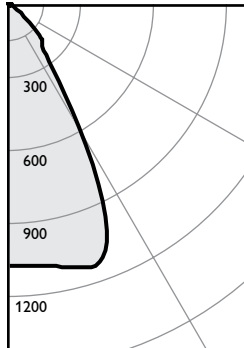
1. Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
2. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State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

C3RDL Calculite 3"

Round downlight

Wide beam (standard), 1000lm engine, 77.1 lm/W at 14W

Candela Curve



Frame: 3RN
Engine: C3L10935WZ10U
Trim: C3RDLCC

Output lumens: 1079 lms
Input watts: 14 W
CRI: 90 min
CCT: 3500K
Spacing Crit.: 1.02

Zonal summary

| Zone | Lumens | %Luminaire |
|------|--------|------------|
| 0-30 | 807 | 74.8% |
| 0-40 | 985 | 91.3% |
| 0-60 | 1076 | 99.7% |
| 0-90 | 1079 | 100.0% |

| Angle | Mean CP | Lumens |
|-------|---------|--------|
| 0 | 1073 | |
| 5 | 1080 | 109 |
| 10 | 1096 | |
| 15 | 1121 | 318 |
| 20 | 1106 | |
| 25 | 903 | 418 |
| 30 | 512 | |
| 35 | 260 | 163 |
| 40 | 196 | |
| 45 | 113 | 88 |
| 50 | 17 | |
| 55 | 7 | 6 |
| 60 | 3 | |
| 65 | 2 | 2 |
| 70 | 1 | |
| 75 | 0 | 1 |
| 80 | 0 | |
| 85 | 0 | 0 |
| 90 | 0 | |

Single unit data

| Height to lighted plane | Initial center beam foot-candles | Beam diameter (ft)* |
|-------------------------|----------------------------------|---------------------|
| 5' | 43 | 5.1' |
| 6' | 30 | 6.1' |
| 7' | 22 | 7.1' |
| 8' | 17 | 8.2' |
| 9' | 13 | 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' | 49.3 | 0.62 |
| 6' | 32.4 | 0.41 |
| 7' | 23.1 | 0.29 |
| 8' | 19.3 | 0.24 |
| 9' | 15.4 | 0.19 |

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

Efficacy: 77.1lm/w
Report: 1770GFR

Adjustment factors

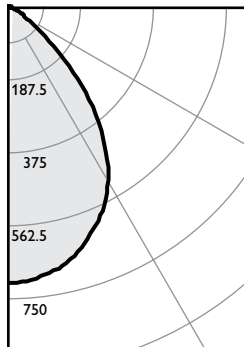
| Standard | CCT | Lumens |
|-----------|--------------------|---------------|
| CL = 105% | 90CRI 4000K = 104% | 1800lm = 142% |
| CC = 100% | 90CRI 3500K = 100% | 1500lm = 130% |
| CD = 80% | 90CRI 3000K = 96% | 1000lm = 100% |
| WH = 80% | 90CRI 2700K = 90% | 750lm = 70% |
| CZ = 78% | | 500lm = 50% |
| BK = 40% | | |

Coefficients of utilization

| Ceiling | 80% | | | | 70% | | | | 50% | | | | 30% | | | | 0% |
|-------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Wall | 70 | 50 | 30 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 0 |
| RCR | Zonal cavity method - Effective floor reflectance = 20% | | | | | | | | | | | | | | | | |
| Room Cavity Ratio | 0 | 119 | 119 | 119 | 119 | 116 | 116 | 111 | 111 | 106 | 106 | 100 | 100 | 100 | 100 | 100 | 100 |
| 1 | 114 | 111 | 109 | 106 | 109 | 105 | 105 | 105 | 101 | 101 | 98 | 94 | 94 | 94 | 94 | 94 | 94 |
| 2 | 108 | 103 | 100 | 96 | 102 | 95 | 95 | 98 | 93 | 93 | 95 | 91 | 87 | 87 | 87 | 87 | 87 |
| 3 | 103 | 97 | 92 | 87 | 95 | 87 | 87 | 92 | 85 | 85 | 90 | 84 | 81 | 81 | 81 | 81 | 81 |
| 4 | 98 | 91 | 85 | 80 | 89 | 80 | 80 | 87 | 79 | 79 | 85 | 78 | 76 | 76 | 76 | 76 | 76 |
| 5 | 93 | 85 | 79 | 74 | 83 | 74 | 74 | 82 | 73 | 73 | 81 | 73 | 71 | 71 | 71 | 71 | 71 |
| 6 | 89 | 80 | 74 | 69 | 78 | 69 | 69 | 77 | 68 | 68 | 76 | 68 | 66 | 66 | 66 | 66 | 66 |
| 7 | 84 | 75 | 70 | 64 | 74 | 64 | 64 | 73 | 64 | 64 | 71 | 64 | 62 | 62 | 62 | 62 | 62 |
| 8 | 80 | 71 | 65 | 60 | 70 | 60 | 60 | 69 | 60 | 60 | 68 | 60 | 58 | 58 | 58 | 58 | 58 |
| 9 | 77 | 67 | 62 | 56 | 66 | 56 | 56 | 65 | 56 | 56 | 64 | 56 | 54 | 54 | 54 | 54 | 54 |
| 10 | 73 | 64 | 58 | 53 | 62 | 53 | 53 | 61 | 53 | 53 | 61 | 53 | 51 | 51 | 51 | 51 | 51 |

Wide beam (shallow), 1000lm engine, 79.0 lm/W at 13.6W

Candela Curve



Frame: 3RN
Engine: C3L10935WZ10U
Trim: C3RDLDS

Output lumens: 1074 lms
Input watts: 13.6 W
CRI: 90 min
CCT: 3500K
Spacing Crit.: 1.12

Zonal summary

| Zone | Lumens | %Luminaire |
|------|--------|------------|
| 0-30 | 515 | 48.0% |
| 0-40 | 783 | 72.9% |
| 0-60 | 1037 | 96.6% |
| 0-90 | 1074 | 100.0% |

| Angle | Mean CP | Lumens |
|-------|---------|--------|
| 0 | 707 | |
| 5 | 701 | 71 |
| 10 | 686 | |
| 15 | 659 | 185 |
| 20 | 620 | |
| 25 | 576 | 263 |
| 30 | 514 | |
| 35 | 433 | 269 |
| 40 | 337 | |
| 45 | 239 | 184 |
| 50 | 140 | |
| 55 | 74 | 67 |
| 60 | 47 | |
| 65 | 26 | 26 |
| 70 | 12 | |
| 75 | 7 | 7 |
| 80 | 4 | |
| 85 | 2 | 1 |
| 90 | 0 | |

Single unit data

| Height to lighted plane | Initial center beam foot-candles | Beam diameter (ft)* |
|-------------------------|----------------------------------|---------------------|
| 5' | 28 | 5.6' |
| 6' | 20 | 6.7' |
| 7' | 14 | 7.8' |
| 8' | 11 | 9.0' |
| 9' | 9 | 10.1' |

* 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' | 47.0 | 0.60 |
| 6' | 31.0 | 0.40 |
| 7' | 22.0 | 0.28 |
| 8' | 18.0 | 0.24 |
| 9' | 15.0 | 0.19 |

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

Efficacy: 79.0lm/w
Report: 1810GFR

Adjustment factors

| Shallow | CCT | Lumens |
|-----------|--------------------|---------------|
| WT = 112% | 90CRI 4000K = 104% | 1800lm = 142% |
| WH = 110% | 90CRI 3500K = 100% | 1500lm = 130% |
| D = 100% | 90CRI 3000K = 96% | 1000lm = 100% |
| BZ = 77% | 90CRI 2700K = 90% | 750lm = 70% |
| BK = 75% | | 500lm = 50% |
| BT = 74% | | |

Coefficients of utilization

| Ceiling | 80% | | | | 70% | | | | 50% | | | | 30% | | | | 0% |
|-------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Wall | 70 | 50 | 30 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 50 | 10 | 0 |
| RCR | Zonal cavity method - Effective floor reflectance = 20% | | | | | | | | | | | | | | | | |
| Room Cavity Ratio | 0 | 119 | 119 | 119 | 119 | 116 | 116 | 111 | 111 | 106 | 106 | 100 | 100 | 100 | 100 | 100 | 100 |
| 1 | 112 | 109 | 106 | 103 | 107 | 102 | 102 | 103 | 98 | 99 | 95 | 91 | 91 | 91 | 91 | 91 | 91 |
| 2 | 105 | 99 | 94 | 90 | 97 | 89 | 89 | 94 | 87 | 87 | 91 | 85 | 82 | 82 | 82 | 82 | 82 |
| 3 | 98 | 90 | 84 | 79 | 89 | 79 | 79 | 86 | 77 | 77 | 84 | 76 | 73 | 73 | 73 | 73 | 73 |
| 4 | 92 | 83 | 76 | 71 | 81 | 70 | 70 | 79 | 69 | 69 | 77 | 69 | 66 | 66 | 66 | 66 | 66 |
| 5 | 86 | 76 | 69 | 63 | 75 | 63 | 63 | 73 | 63 | 63 | 71 | 62 | 60 | 60 | 60 | 60 | 60 |
| 6 | 80 | 70 | 62 | 57 | 69 | 57 | 57 | 67 | 57 | 57 | 66 | 56 | 54 | 54 | 54 | 54 | 54 |
| 7 | 75 | 64 | 57 | 52 | 64 | 52 | 52 | 62 | 52 | 52 | 61 | 51 | 49 | 49 | 49 | 49 | 49 |
| 8 | 71 | 60 | 52 | 48 | 59 | 47 | 47 | 58 | 47 | 47 | 57 | 47 | 45 | 45 | 45 | 45 | 45 |
| 9 | 67 | 55 | 48 | 44 | 55 | 44 | 44 | 54 | 43 | 43 | 53 | 43 | 42 | 42 | 42 | 42 | 42 |
| 10 | 63 | 52 | 45 | 40 | 51 | 40 | 40 | 50 | 40 | 40 | 49 | 40 | 38 | 38 | 38 | 38 | 38 |

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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