

C3RA Calculite LED 3"

Round adjustable accent

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
- CA3RAAFT** 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)

Upper reflector optics (Additional field-installable optics)	MesoOptics optical films (for field placement on trim)	MesoOptics optical films (for field placement on TIR optic, includes holder)	Hex cell louver / MesoOptics (for field placement on TIR optic, includes holder)
CA3NSSFR 15° Narrow Spot	CA3RSYM Symmetrical film	TIRCA3RSYM Symmetrical film	CL3HCL 3" holder / Symmetrical film
CA3SSFR 20° Spot	CA3RLS6010 60x10 Linear spread film	TIRCA3RLS6010 60x10 Linear spread film	CL3HCLS6010 3" holder / 60x10 Linear spread film
CA3NFSFR 23° Narrow Flood	CA3RASY21 Asymmetrical 21° bend angle film	TIRCA3RASY21 Asymmetrical 21° bend angle film	CL3HCLASY21 3" holder / Asymmetrical 21° bend angle film
CA3FLSFR 29° Flood	CA3RASY8 Asymmetrical 8° bend angle film	TIRCA3RASY8 Asymmetrical 8° bend angle film	CL3HCLASY8 3" holder / Asymmetrical 8° bend angle film

This meticulously engineered downlight is pre-adjusted to 22.5° out of the box, saving installation time. It can be vertically adjusted to 45° with three quick turns of a screwdriver and locked into place.

0-10V electrical tables

Light engine	Input volts	Input current	Drive current	Input power
C3_A05_Z10U/3	120 V	0.08 A	200 mA	9.5 W
	277 V	0.03 A		
C3_A07_Z10U/3	120 V	0.09 A	250 mA	10.9 W
	277 V	0.04 A		
C3_A079D2W_Z10U/3	120 V	0.12 A	330 mA	13.6 W
	277 V	0.05 A		
C3_A10_Z10U/3	120 V	0.13 A	360 mA	15.6 W
	277 V	0.06 A		
C3_A15_Z10U/3	120 V	0.17 A	500 mA	20.4 W
	277 V	0.07 A		
C3_A05_Z10US/3 C3_A05_Z10UR	120 V	0.08 A	220 mA	9.4 W
	277 V	0.03 A		
C3_A10_Z10US/3 C3_A10_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
C3_A05_E1	120 V	0.08 A	220 mA	8.7 W
	277 V	0.03 A		
C3_A07_E1	120 V	0.09 A	250 mA	10.2 W
	277 V	0.04 A		
C3_A079D2W_E1	120 V	0.11 A	330 mA	13.1 W
	277 V	0.05 A		
C3_A10_E1	120 V	0.11 A	350 mA	12.7 W
	277 V	0.05 A		
C3_A15_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	13.1 W
	277 V	0.05 A		

Lutron electrical tables

Light engine	Input volts	Input current	Drive current	Input power
C3_A05_LU	120 V	0.07 A	200 mA	8.4 W
	277 V	0.03 A		
C3_A07_LU	120 V	0.09 A	250 mA	10.7 W
	277 V	0.04 A		
C3_A079D2W_LU	120 V	0.12 A	330 mA	13.0 W
	277 V	0.05 A		
C3_A10_LU	120 V	0.13 A	360 mA	15.4 W
	277 V	0.06 A		
C3_A15_LU	120 V	0.17 A	500 mA	19.8 W
	277 V	0.07 A		

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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 D20 for factory-set dim-to-off function, consult factory for linear dimming curve.
- EldoLED SOLODrive (SOL) 0-10V 0.1%
- Lutron PEQ0 (L01) Hi-Lume Premier EcoSystem 0.1%
- Lutron LDE1 (L1) 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%
- 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/DMX: Square (SQR)

Optical systems

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.

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: C3RACC). Accessory ceiling mounting plate available (CAEM6TSCP) for remote mounted test switch.
- Refer to Calculite-LyteProfile-EasyLyte Emergency Battery Pack specification sheet for more details.

Adjustability

- 45° vertical tilt, mechanical aiming with lock
- 360° rotation with lock
- Field changeable optics

MesoOptics optical diffusion film

- PET film containing surface relieved, microscopic light diffusing structures/elements.
- Provides a clean beam with mitigated spill at articulated angles.
- Optimizes luminaire efficacy via high optical transmission.
- Homogenizes light engine luminance providing smooth gradients of white light.
- Uniformly lit optical aperture creates a balance of beam precision coupled with smooth gradients of pure white light.
- Other distribution options available including linear spread and asymmetric.
- May be field installed with available accessories.
- Field installed accessories include options for MesoOptics on trim (CA3R) or on the upper TIR optic (TIRCA3R).

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.

Hex Cell Louver

- Hex cell louver in black finish affixed to TIR optic with snap-on holder ring.
- Factory installed option or field installed accessory.
- MesoOptics diffusion film is installed the holder.
- For field installation, discard MesoOptics film supplied with the trim.

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.

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 CA3RAAFT for use with flangeless plaster installations.

Lens Film Accessories: Trim may accept up to three (3) field installed optical films with a total overall thickness up to 0.060" (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

- Round Adjustable Accent CL, CC, CD, WH, WT only
- Must be installed in shallow AirSeal IC Frame
- Shallow luminaires must be ELV

ENERGY STAR® exceptions

- BK, CZ, BT, BZ, and D finishes
- 347V & Emergency voltage/options
- Adjustable pinhole (AP) trims
- Lutron configurations
- Dim to Warm configurations
- 1000lm configurations

Labels and listings

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

Warranty



5 year limited warranty

Visit [Signify.com/warranties](https://www.signify.com/warranties) for more information on Signify's standard 5-year limited warranty on complete luminaire systems.

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interact

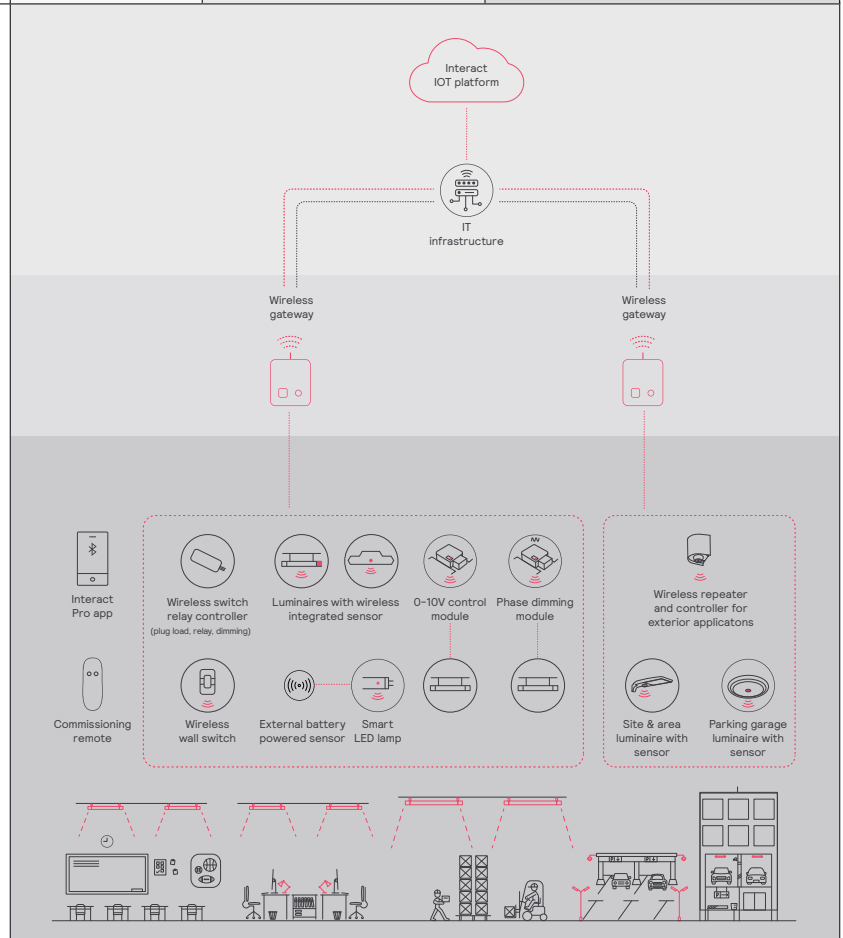
	Gateway Connected		
	Standalone	Option 1	Option 2
Dimming, grouping, and zoning	✓	✓	✓
Bluetooth and ZigBee enabled	✓	✓	✓
Motion sensing and daylight harvesting	✓	✓	✓
Integration with 0-10V and phase dimming fixtures	✓	✓	✓
Code compliance	✓	✓	✓
Granular dimming and dwell time	✓	✓	✓
Correlated color temperature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

Currently supported maximum system size

To be able to design the lighting system correctly for the customer, it is important to know the prime characteristics of the system, its possibilities and limitations.

System level	
Total number of gateways	Unlimited
Total number of devices	200 per network
• Luminaires with integrated sensors	150
• Smart TLEDS	150
• Zones + groups	64
Total number of ZGP devices (sensors and switches)	50
• Sensors	30
• Switches	50

Group level	
Recommended number of lights	40 (maximum 150)
Number of ZGP devices	5
Number of scenes	16



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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 IP65WH
- LCN3120: battery powered IP65 presence & daylight sensor, OCC-DL sensor IA CM IP65 WH
- For more information on Interact visit: interact-lighting.com/interactproscalablesystem

Radio only sensor (RA or RADIO)

- Integral RA or RADIO only sensor simply enables wireless mesh connectivity to the luminaire without any occupancy or daylight sensing.
- Ideal for applications where sensing functionality is managed by other Interact devices and the luminaire only needs to have wireless connectivity.
- Interact includes an App, a portal and a broad portfolio of wireless luminaires, lamps and retrofit kits all working on the same system.
- Startup is implemented via Interact Pro App (Android or iPhone) & Bluetooth connectivity. The App provides flexibility to choose between a gateway or non-gateway mode for setup.
- Setup with the gateway requires wired internet access to the gateway. It is possible to add a gateway at a later point.
- Prepare project configuration steps remotely, identify and group devices together onsite.
- Compatible with SWS200 and UID8465 wireless scene switch, wireless Occ sensor (OCC SENSOR IA CM IP42 WH 10/1) and wireless Day/Occ sensor (OCC MULTI SENSOR IA CM WH 10/1).
- For more information on Interact visit: interact-lighting.com/interactproscalablesystem

Sensor bundle (IAOSB or SB)

- A wireless IoT connected lighting solution for large enterprises that span across multiple floors, buildings and require multiple gateways.
- View all your projects under one dashboard and easily compare insights from multiple projects in one view.
- Compatible with SWS200 wireless scene switch, wireless Occ sensor (OCC SENSOR IA CM IP42 WH 10/1) and wireless Day/Occ sensor (OCC MULTI SENSOR IA CM WH 10/1) and wireless Occupancy or Daylight & Occupancy sensors available. Use Interact software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- IAOSB or SB option in addition to occupancy and daylights sensing supports advanced IoT capabilities, such as people estimation analysis, desk level temperature & humidity sensing, noise classification, and BLE beacon.
- Requires compatible Gateway and internet connectivity for commissioning.
- For more information, visit: interact-lighting.com/interactproscalablesystem

Emergency Options (ER100)

- **Power Sensing** (factory default) – Recommended UL924 option requires unswitched power sense line, absence of voltage on the normal circuit triggers luminaire to 100% output.
- **Power Interruption Detection** (field option) – Detects AC power interruption >30ms triggers 90 minute emergency mode with luminaire at 100% output.

Wired controls options

Interact (PoE):

- PoE based IoT connected lighting solution for large enterprises that span across multiple floors, buildings and require multiple gateways.
- Use Interact software and insights to increase building efficiency, achieve building wide integration and optimize space through occupancy analytics.
- Test switch and indicator light mounted on side of chassis on one end.
- Supports advanced IoT Apps on Personal Control, Space Management, wayfinding, room/desk reservation and offers open APIs for light control and data exchange.
- 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.
- PoE lighting controller is accessible from below.
- 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: interact-lighting.com/office or www.usa.lighting.philips.com/systems/system-areas/offices

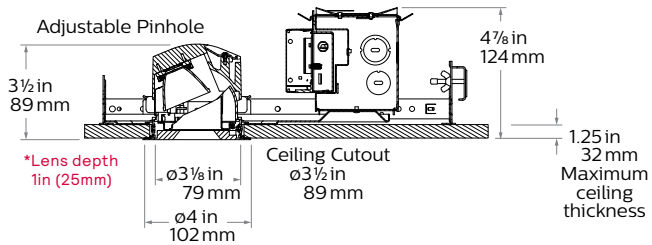
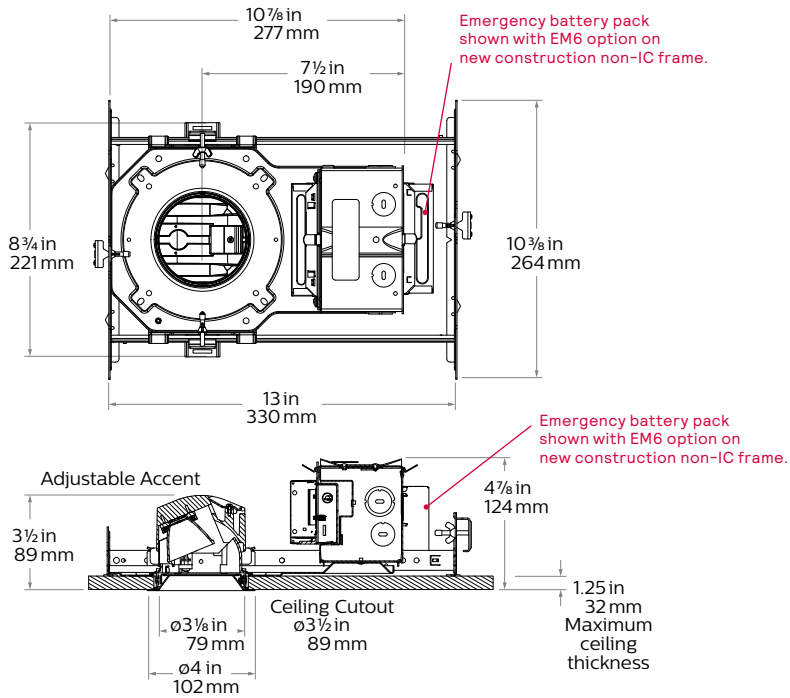
Interact supported sensor option codes across Genlyte product lines

	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	-	-

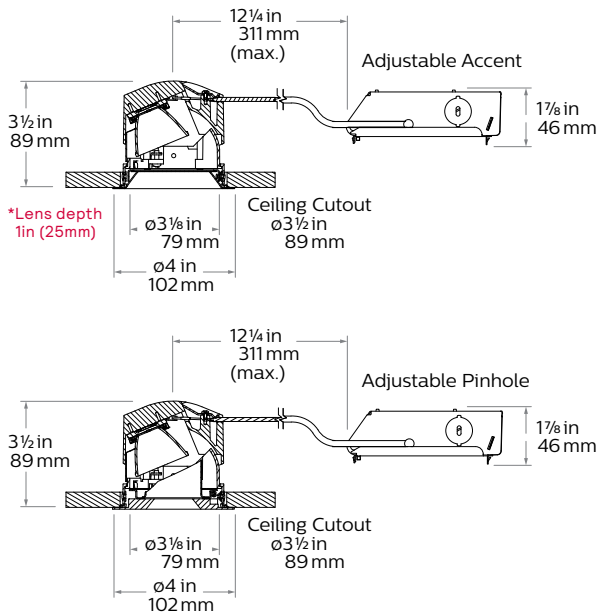
C3RA Calculite LED 3"

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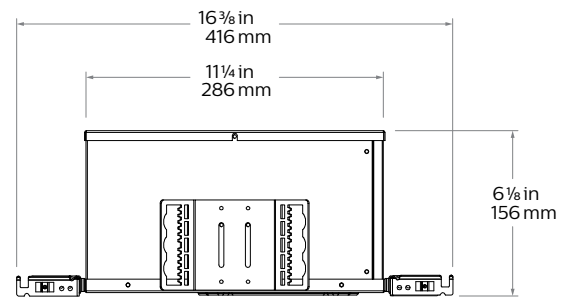
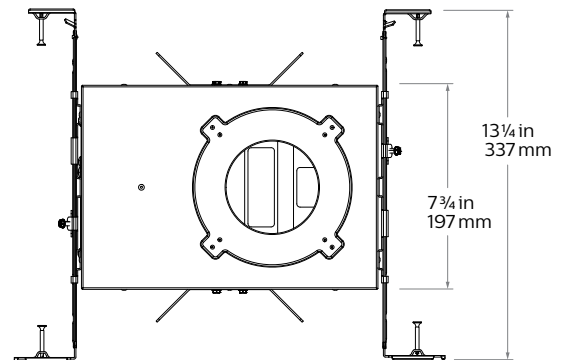
New construction (N)



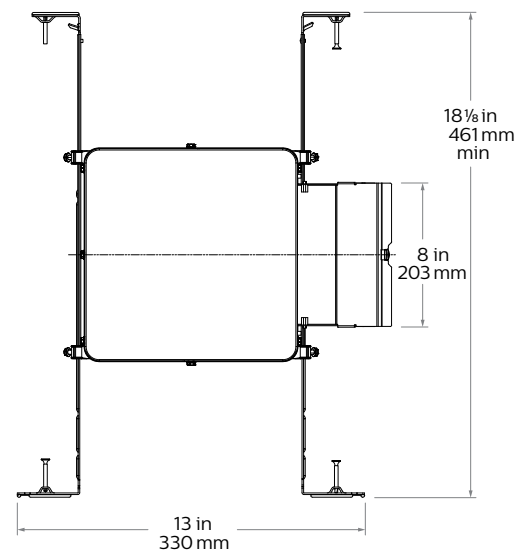
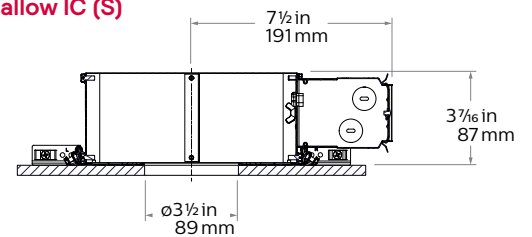
Remodeler (R)



Standard IC (A) and Chicago plenum (LC)



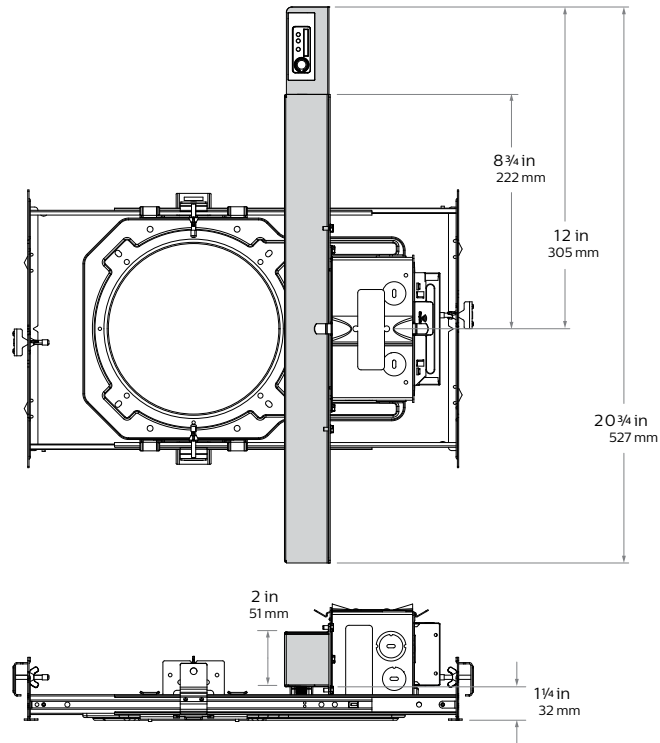
Shallow IC (S)



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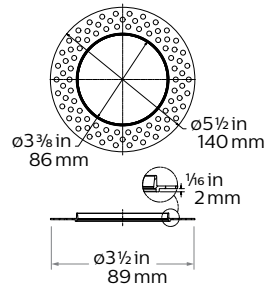
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Linear driver (RA)



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

Flangeless mud-in ring (CA3RAAFT) accessory



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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).

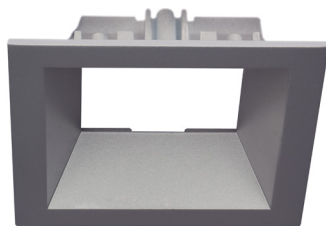


Comfort clear diffuse (CD): Slightly diffuse clear finish, that eliminates iridescence and reduces the mirror image effect inherent with specular finishes.



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



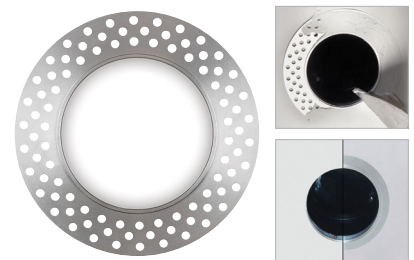
White (-): (matte) Provides the smoothest transition to ceilings when off.



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.



Adjustable Accent (A): Augments precision of the optical design to produce a unique accent luminaire. Finishing Reflector provides discrete, low luminance appearance while allowing maximum lighting efficacy.

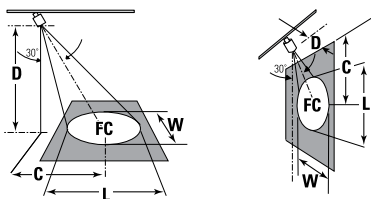
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Aiming angles

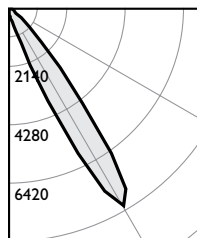
L and W are the outer points where the candle power drops to 50% of the maximum. FC are the initial footcandles at the center of the beam. Data shown is for 3000K, use the table on the right for CRI/CCT adjustment factors.

FC Footcandles
L Beam length
W Beam Width
D Distance
A Aiming Angle
C Distance to center beam
CBCP Center Beam Candlepower



Adjustment Factors

Standard	Shallow 1" Regress	CCT (90CRI)	Lumens
CL = 105%	WT = 112%	4000K = 104%	1500lm = 130%
CC = 100%	D = 100%	3500K = 100%	1000lm = 100%
CD = 80%	BZ = 77%	3000K = 96%	750lm = 70%
WH = 80%	BT = 74%	2700K = 90%	500lm = 50%
CZ = 78%			
BK = 40%			



Frame: **3RN**
 Engine: **C3RA10935NSZ10U**
 Trim: **C3RACC**

Output lumens: 1267lms
 Input watts: 15.6W
 CRI: 90min
 CCT¹: 3500K
 CBCP: 8449cd
 Beam Angle: 15°

Efficacy: 81.2lm/w
 Report²: F041197

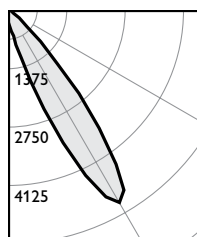
Narrow Spot, 1000lm engine, 81 lm/W at 16W

30° Horizontal Aiming

Distance			Beam		
D	C	F.C.	L	W	
6	3.5	152	2.1	1.8	
8	4.6	86	2.8	2.4	
10	5.8	55	3.5	3.0	
12	6.9	38	4.2	3.6	

30° Vertical Aiming

Distance			Beam		
D	C	F.C.	L	W	
2	3.5	264	2.2	1.1	
3	5.2	117	3.3	1.6	
4	6.9	66	4.4	2.1	
5	8.7	42	5.6	2.6	



Frame: **3RN**
 Engine: **C3RA10935SPZ10U**
 Trim: **C3RACC**

Output lumens: 948lms
 Input watts: 15.6W
 CRI: 90min
 CCT¹: 3500K
 CBCP: 5235cd
 Beam Angle: 20°

Efficacy: 60.8lm/w
 Report²: F041200

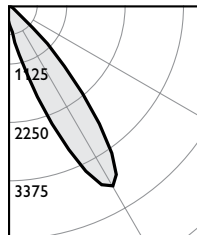
Spot, 1000lm engine, 61 lm/W at 16W

30° Horizontal Aiming

Distance			Beam		
D	C	F.C.	L	W	
6	3.5	94	2.9	2.4	
8	4.6	53	3.8	3.3	
10	5.8	34	4.8	4.1	
12	6.9	24	5.7	4.9	

30° Vertical Aiming

Distance			Beam		
D	C	F.C.	L	W	
2	3.5	164	3.1	1.4	
3	5.2	73	4.7	2.1	
4	6.9	41	6.2	2.8	
5	8.7	26	7.8	3.5	



Frame: **3RN**
 Engine: **C3RA10935NFZ10U**
 Trim: **C3RACC**

Output lumens: 923lms
 Input watts: 15.6W
 CRI: 90min
 CCT¹: 3500K
 CBCP: 4005cd
 Beam Angle: 23°

Efficacy: 59.2lm/w
 Report²: F041203

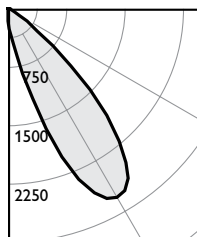
Narrow Flood, 1000lm engine, 59 lm/W at 16W

30° Horizontal Aiming

Distance			Beam		
D	C	F.C.	L	W	
6	3.5	72	3.3	2.8	
8	4.6	41	4.4	3.8	
10	5.8	26	5.5	4.7	
12	6.9	18	6.6	5.6	

30° Vertical Aiming

Distance			Beam		
D	C	F.C.	L	W	
2	3.5	125	3.7	1.6	
3	5.2	56	5.6	2.4	
4	6.9	31	7.4	3.3	
5	8.7	20	9.3	4.1	



Frame: **3RN**
 Engine: **C3RA10935NSZ10U**
 Trim: **C3RACC**

Output lumens: 942lms
 Input watts: 15.6W
 CRI: 90min
 CCT¹: 3500K
 CBCP: 2796cd
 Beam Angle: 29°

Efficacy: 60.4lm/w
 Report²: F041206

Flood, 1000lm engine, 55 lm/W at 16W

30° Horizontal Aiming

Distance			Beam		
D	C	F.C.	L	W	
6	3.5	50	4.2	3.6	
8	4.6	28	5.6	4.8	
10	5.8	18	7.1	6.0	
12	6.9	13	8.5	7.2	

30° Vertical Aiming

Distance			Beam		
D	C	F.C.	L	W	
2	3.5	87	5.2	2.1	
3	5.2	39	7.8	3.1	
4	6.9	22	10.4	4.1	
5	8.7	14	12.9	5.2	

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.