

LIGHTOLIER

by @signify

Downlighting

Calculite 3"

C3RA Round adjustable accent



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

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

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

Frame

example: 3RN

Series	Installation	Voltage/Options
3R		
3R Uniframe 3" round frame	N New construction	— Universal (120V/277V) EM Emergency (see pg 2 for details & limitations) ¹ IP Interact Pro ready (for 0-10V engine only) ²
	A AirSeal IC (1000lm max)	— Standard universal (120V/277V) ³ LC Chicago plenum 3 347V (not compatible with ELV dimming) 3IP 347V with Interact Pro (for 0-10V engine only) ²
		S Shallow universal (120V/277V) ³
Note: For remodeler installations, order light engine and trim only (no frame needed)		

Engine

example: C3R10930NSZ10US

Series	Style	Lumens	CRI	CCT	Beam	Dimming	Voltage	Plenum
C3R	A		9					
C3R Calculite 3" round light engine	A Adjustable Accent	05 500lm	9 90CRI	27 2700K	NS Narrow Spot (15°) SP Spot (20°) NF Narrow Flood (25°) FL Flood (30°)	Z10 0-10V 1% L Lutron PEQ0 (Dim to 0.1%) E ELV	U Universal (120V/277V/347V)	- Standard
		07 750lm		30 3000K				
		10 1000lm		35 3500K				
		15 1500lm		40 4000K				
		07 750lm	9 90CRI	D2W 3000K-1800K ⁴		E ELV	1 120V	
		05 500lm		27 2700K			U Universal (120V/277V/347V)	
		10 1000lm	9 90CRI	30 3000K	NS Narrow Spot (15°) SP Spot (20°) NF Narrow Flood (25°) FL Flood (30°)	Z10 0-10V 1% E ELV	1 120V	R Remodeler ⁵ S Shallow ³
				35 3500K				
				40 4000K				

Trim

example: C3RDLBTF

Series	Style	Reflector	Flange	Type
C3R				
C3R Calculite 3" round trim	A Adjustable Accent AP Adjustable Pinhole ⁶	BK Black (anodized)	- White (matte) F Flangeless ⁷ P Matching reflector	- Standard spun aluminum trim
		CL Specular clear		
		CC Comfort clear		
		CD Comfort clear diffuse	- White (matte) F Flangeless ⁷ P Matching reflector	S 1" regress cast aluminum (wide beam only)
		CZ Champagne bronze (anodized)		
		WH White (matte)		
		WT Textured white (painted)	P Matching reflector F Flangeless ⁷	
		BT Textured black (painted)		
		BZ Bronze (painted)		
		D Aluminum diffuse (painted)		

Accessories

CA3RAAFT	Mud-in ring for use in round accent flangeless installation (ordered with a flangeless trim)
SWZDT	SpaceWise wireless controller with dwell time functionality (compatible with all 0-10V options, see SWZDT spec sheet)
SRAINT	InterAct Office accessory (for use with Lightolier UniFrame 0-10V products)

- Emergency (EM) frame includes emergency battery with ceiling mounted test switch (no reflector mountable test switch). Requires above ceiling access. Ceiling mount test switch only (see page 2 for details and limitations).
- InterAct Pro requires above ceiling access.
- Must order shallow IC frame, shallow engine for complete shallow assembly. Standard depth trims are compatible with shallow frame.
- Dim to Warm (D2W) engines are for Non-IC (N) frames only.
- For remodeler installations, order light engine and trim only (no frame needed).
- Available with white flange and white or black bevel only.
- Flangeless (F) trims require CA3SFT mud-in accessory for installation.



interact
ready.

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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

- Advance 0-10V 1% dimming
- Lutron PEQO Hi-lume Premier 0.1% EcoSystem
- ELV (consult factory)

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.

Adjustability

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

Interact Pro (IAP)

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

ENERGY STAR®

Calculite Adjustables compatibility*

	BK	CZ	WH	CD	CC	CL	BT	WT	BZ	D
Accent										
Pinhole										

Calculite Dim2Warm Adjustables compatibility

	BK	CZ	WH	CD	CC	CL	BT	WT	BZ	D
Accent										
Pinhole										

* 927 are excluded from 1000lm coverage.

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.

Options and accessories

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

Title 24 exceptions

- BK, CZ, BT, BZ and D finishes
- Must be installed in shallow AirSeal frame

ENERGY STAR® exceptions

- 1000lm configurations
- BK and CZ finishes
- Shallow cast trims
- 347V & Emergency voltage/options

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.

0-10V electrical tables

Light engine	Input volts	Input current	Drive current	Input power
C3_A05_Z10U	120 V	0.08 A	200 mA	9.5 W
	277 V	0.03 A		
C3_A07_Z10U	120 V	0.09 A	250 mA	10.9 W
	277 V	0.04 A		
C3_A079D2W_Z10U	120 V	0.12 A	330 mA	13.6 W
	277 V	0.05 A		
C3_A10_Z10U	120 V	0.13 A	360 mA	15.6 W
	277 V	0.06 A		
C3_A15_Z10U	120 V	0.17 A	500 mA	20.4 W
	277 V	0.07 A		
C3_A05_Z10US	120 V	0.08 A	220 mA	9.4 W
	277 V	0.03 A		
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	200 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	360 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	120 V	0.08 A	220 mA	8.7 W
	277 V	0.03 A		
C3_A10_E1R	120 V	0.11 A	330 mA	13.1 W
	277 V	0.05 A		

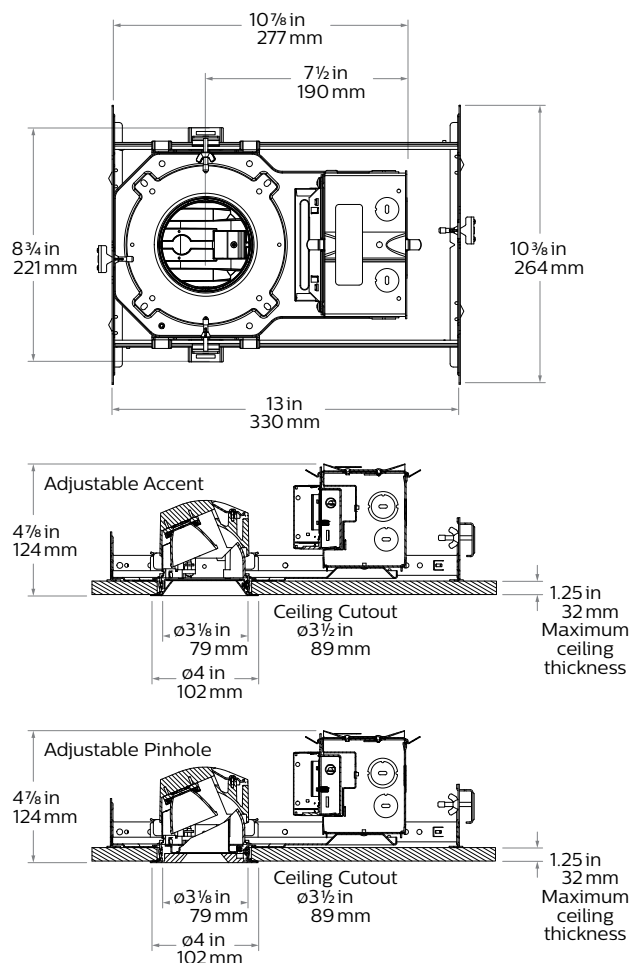
Lutron electrical tables

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		

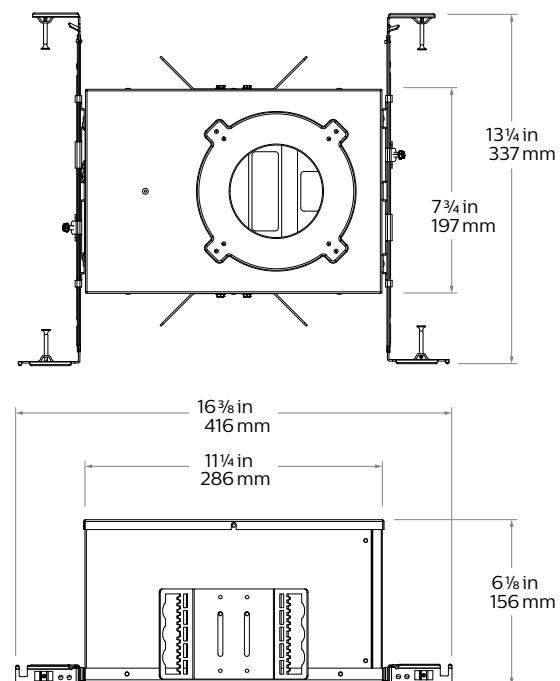
C3RA Calculite 3"

Round adjustable accent

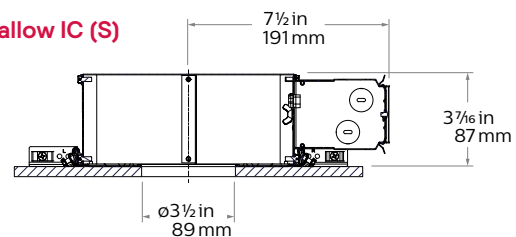
New construction (N)



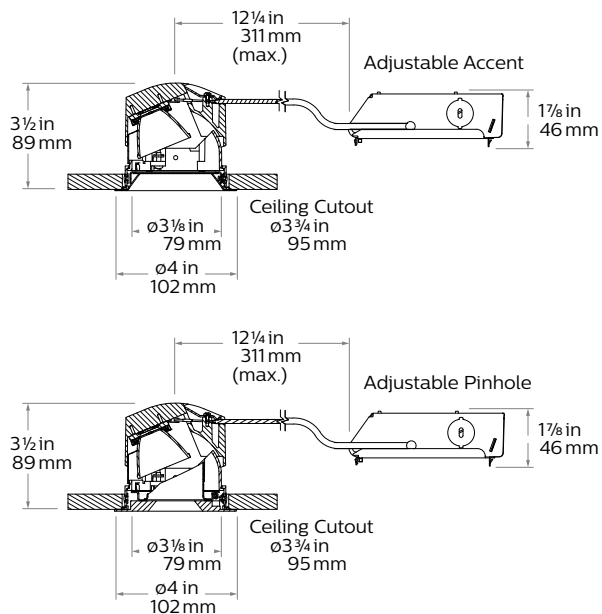
Standard IC (A) and Chicago plenum (LC)



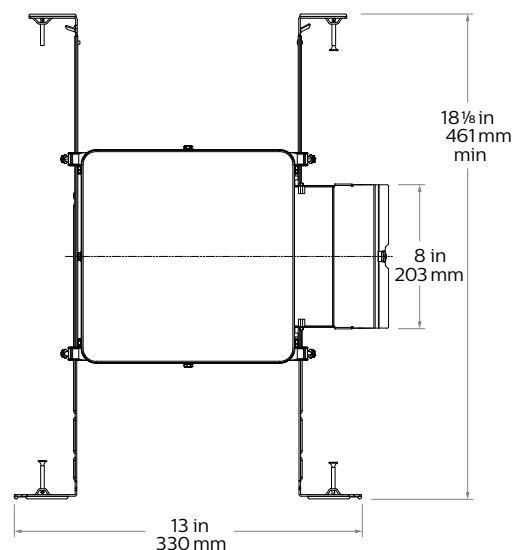
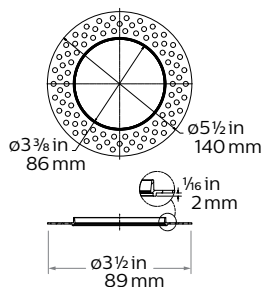
Shallow IC (S)



Remodeler (R)



Flangeless mud-in ring (CA3RFT) accessory



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Reflector



Specular clear (CL): Most specular and most efficient finish, delivers maximum photometric performance but can produce a mirror image effect of the interior space.



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.



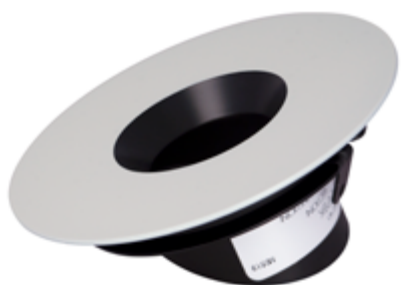
White (WH): (matte) Brightest illuminated aperture and provides the smoothest transition to most ceilings when off (white is only available with a white flange).



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.



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

Flange



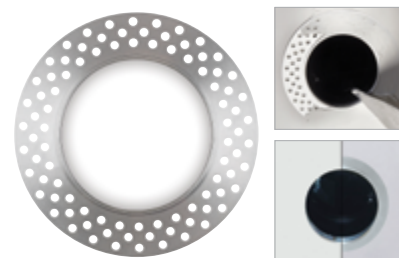
White (-): (matte) Provides the smoothest transition to ceilings when off.



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



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



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

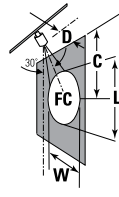
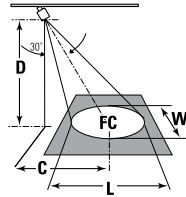
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Aiming angles

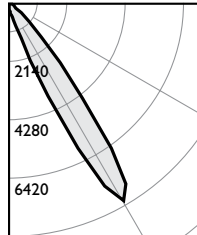
L and W are the outer points where the candle power drops to 50% of the maximum. FC are the initial footcandles at the center of the beam. Data shown is for 3000K, use the table on the right for CRI/CCT adjustment factors.

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



Adjustment factors

Tall cone	Shallow cone	CCT (90CRI)	Lumens
CL = 105%	WT = 112%	4000K = 107%	1500lm = 130%
CC = 100%	D = 100%	3500K = 100%	1000lm = 100%
CD = 80%	BZ = 77%	3000K = 93%	750lm = 70%
WH = 80%	BT = 74%	2700K = 87%	500lm = 50%
CZ = 78%			
BK = 40%			



Frame: 3RN
Engine: C3RA10935NSZ10U
Trim: C3RACC

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

Efficacy: 81.2lm/w
Report²: F041197

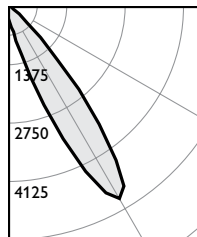
Narrow Spot, 1000lm engine, 81 lm/W at 16W

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: 90 min
CCT¹: 3500K
CBCP: 5235cd
Beam Angle: 20°

Efficacy: 60.8lm/w
Report²: F041200

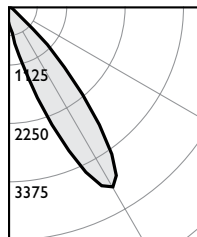
Spot, 1000lm engine, 61 lm/W at 16W

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: 90 min
CCT¹: 3500K
CBCP: 4005cd
Beam Angle: 23°

Efficacy: 59.2lm/w
Report²: F041203

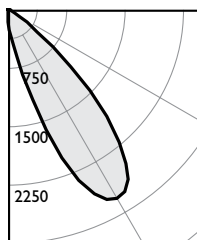
Narrow Flood, 1000lm engine, 59 lm/W at 16W

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: 90 min
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_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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