



The Calculite 2" family features downlight, accent adjustable, and lensed wall wash serving as a complete recessed offering to accommodate all recessed application needs. The 50° light cut off and multiple adjustable beam angles provide quality light in a miniature aperture.

Complete luminaire = Engine + Trim + Accessories (optional)
Optional frames available (see page 2)

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

Engine

example: C2RA06927SPUPZULS6010

Series ¹	Style A	Lumens	CRI 9	CCT	Beam	Dimming / Voltage	Flange	Options
C2R Calculite 2" round	A Adj. Accent	06 600lm	9 90CRI	27 2700K	NS Narrow Spot (15°) SP Spot (19°) NF Narrow Flood (30°) FL Flood (55°)	UPZU 0-10V 1% ELV 3% Triac 3% Unv (120V/277V) LU Lutron PEQ 100% - 0.1% Unv (120V/277V)	- Flanged (leave blank) F Flangeless ³	MesoOptics
C2S Calculite 2" square		09 900lm 15 1500lm ²		30 3000K 35 3500K 40 4000K				AS Asymmetrical LS6010 Linear spread 60x10 ASY21 Asymmetrical 21° bend angle ASY8 Asymmetrical 8° bend angle
								Hex Cell Louver HCL 2" hex cell louver Holder standard on light engine, order with MesoOptics film option or blank for symmetrical (ex. HCLLS6010)

Trim

example: C2RAWT

Series	Style A	Finish	Flange
C2R Calculite 2" round	A Adjustable Accent	WT Textured white	- White F Flangeless ²
C2S Calculite 2" square		WH White (matte) BK Black (painted matte) BT Textured black BZ Bronze D Aluminum diffuse CD Clear diffuse (applied finish)	- White (matte) P Matching reflector F Flangeless ³
Special painted finishes available with RAL number.			

- Standard light engine may be used as a remodeler. Optional traditional frame-in kits are available.
- The 1500lm (15) lumen option is available for non-IC only.
- Flangeless option code must be ordered for both light engine and trim. Mud-in ring is integral with the light engine.
- Requires IRT9015 IR remote & Interact Pro App for commissioning.

Accessories (order & install separately)

Field installed changeable TIR Optics

- CA2NSSFR** 15° TIR reflector
- CA2SPSFR** 19° TIR reflector
- CA2NFSFR** 30° TIR reflector
- CA2FLSFR** 55° TIR reflector

Accent accessories

- CL2HCL** 2" hex cell louver

MesoOptics accessories

- CA2RSYM** Symmetrical
- CA2RLS6010** 60x10 linear spread
- CA2RASY21** 21° bend angle
- CA2RASY8** 8° bend angle

Accessories

- SBA** Interact Ready System Bridge Accessory (refer to Philips System Bridge Accessory specification sheet for options and details)⁴
- SWZDT** SpaceWise wireless controller with dwell time functionality (order with UPZ dimming option only)

C2A Calculite 2"

Round and Square Adjustable Accent

Applications

- Ideal for use in retail, restaurants, residential, and office spaces to accentuate the space and provide tactical or ambience lighting from a minimalistic aperture
- The light engine is designed to be installed as a retrofit without need for a frame. Frames are optional to accommodate ceiling construction.
- Driver pod is tethered electrically to light engine and includes a quick disconnect. All rough-in wiring is done on the driver pod.
- All components are designed to accommodate below ceiling accessibility through the aperture without need for tools.

Dimensions

- **Max Ceiling Thickness:** 1.50"
- **Ceiling Cutout:** 3"
- **Max vertical angle:** 22° @ 1.50", 40° @ 1.00"

Frame-in-kits (optional)

- Light engines are designed to be installed as a retrofit without need for a separate frame
- Die formed steel construction with 1/2" collar for ease of cutting the hole in ceiling.
- Rough-in wiring is done on the light engine driver pod.
- Four models offered:
 - **2RN:** 2" Round New Construction, Non-IC
 - **2SN:** 2" Square New Construction, Non-IC
 - **2RA:** 2" Round New Const., IC, AirSeal, CCEA*
 - **2SA:** 2" Square New Const., IC, AirSeal, CCEA*
- * 900lm maximum for IC applications.

Optical systems

- **TIR** optics precisely control the beam pattern. Optics are field changeable.
- **PET** film provides a clean beam with mitigated spill and precise color mixing. Film is held in place via a holder integral to the engine that fits precisely TIR optic and LED socket.
- **COB** (chip on board) provides long useful life with precise color control over time.
- Finishing section trims are durable die cast aluminum with precision painted finish. May be easily repainted in the field to match desired aesthetic appeal.
- 50° cutoff angle.

Dimming

- UPZ option is universal 0-10v (1%), electronic low voltage (3%), and triac (3%) in a single driver
- Lutron PEQ (L) dimming to 0.1%

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.
- Other distribution options available including linear spread and asymmetric.
- May be field installed with available accessories.
- Holder is standard on light engines.

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 UID8451/10 wireless dimmer switch, 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

SpaceWiseDT (SWZDT)

- Remote mounted and centralized SWZDT module accessory controls multiple luminaires.
- Compatible with any 0-10v driver
- 120-347V mains input voltage
- Up to 730VA load at 120V

Hex Cell Louver

- Available as factory installed option or field installed accessory.
- Light engine includes holder attached to primary TIR optic.
- Holder supports one MesoOptics film and one louver.

Light engine

- Die cast heat sinks provide optimized passive thermal management to maximize LED lumen maintenance.
- Precision spun lower collar mechanically attaches to heat sink assembly tool-free via springs. Integral leaf springs for flanged configurations allow easy installation into the ceiling or on optional frame-in kits.
- May be adjusted up to 40° vertically, and 362° horizontally. Vertical axis includes indicator marks, and both axes include locking via 1/16" allen wrench (included).
- For flangeless applications, mesh mud-in ring is integral to the lower collar eliminating the need to handle/order an accessory. Must specify flangeless light engine and trim.
- Predicted 70% lumen maintenance to >65,000 hours.
- 32°-86°F ambient operating range (0°-30°C).

Labels and listings

- cULus listed for damp locations
- CEC Title 24 JA8 certified
- CCEA listing on 2RA/2SA frames

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/ELV/Triac Electrical Tables

Light Engine	Input volts	Input current	Drive current	Input power
C2_06_UPZU	120V	0.08A	250mA	9.8W
	277V	0.04A	—	—
C2_09_UPZU	120V	0.11A	350mA	13.4W
	277V	0.05A	—	—
C2_15_UPZU	120V	0.19A	600mA	23.3W
	277V	0.08A	—	—

Lutron Electrical Tables

Light Engine	Input volts	Input current	Drive current	Input power
C2_06_LU	120V	0.08A	250mA	9.7W
	277V	0.04A	—	—
C2_09_LU	120V	0.11A	350mA	13.6W
	277V	0.05A	—	—
C2_15_LU	120V	0.19A	600mA	23.3W
	277V	0.08A	—	—

C2A Calculite 2"

Round and Square Adjustable Accent

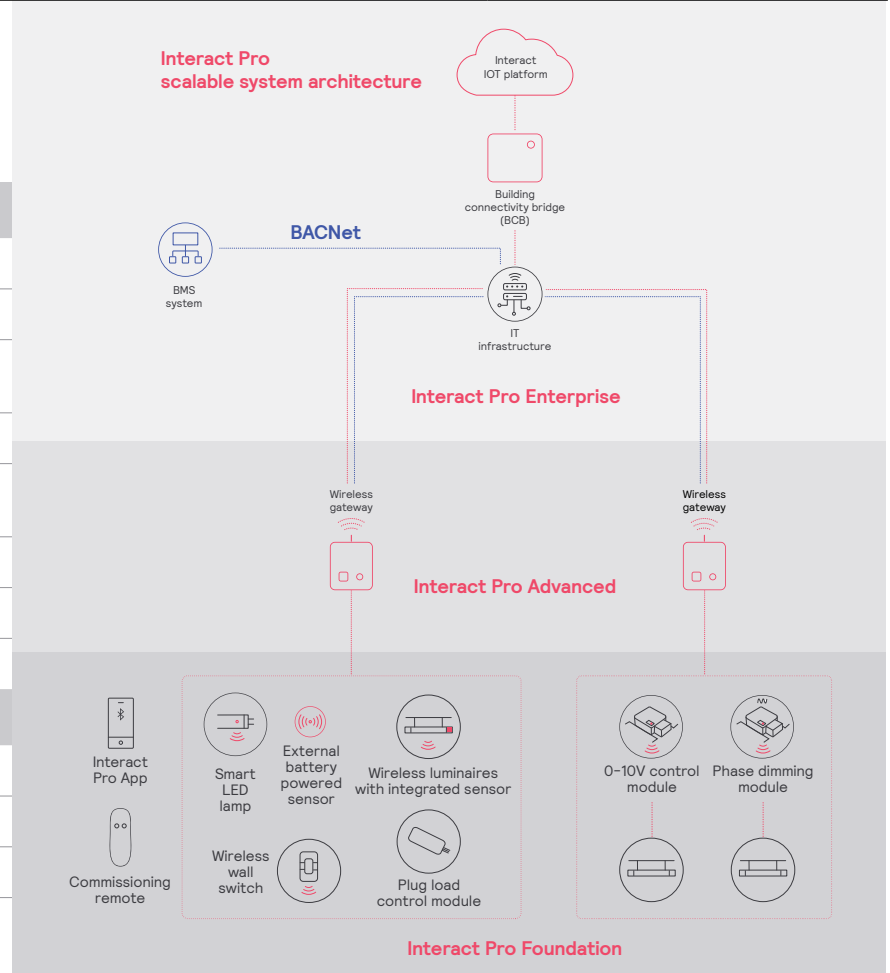
interact

	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.

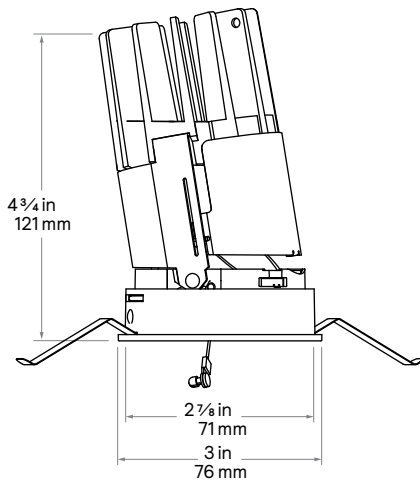
System level	
Total number of gateways	Unlimited
Total number of devices	200 per network
<ul style="list-style-type: none"> • luminaires with integrated sensors 	150
<ul style="list-style-type: none"> • smart TLEDS 	150
Total number of ZGP devices (sensors and switches)	50
<ul style="list-style-type: 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



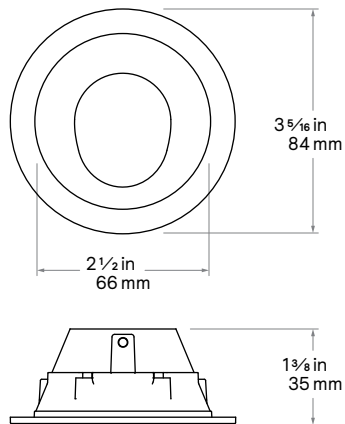
C2A Calculite 2"

Round and Square Adjustable Accent

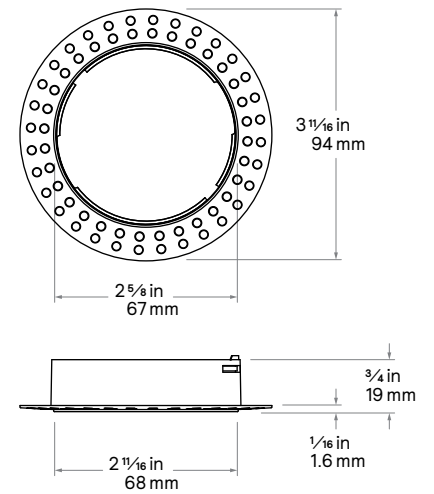
Round Engine (flanged)



Round Trim

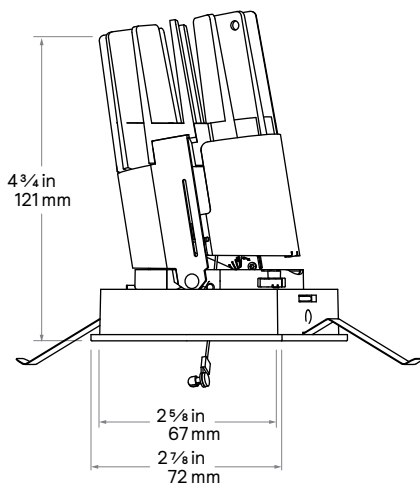


Round Mud-in ring*

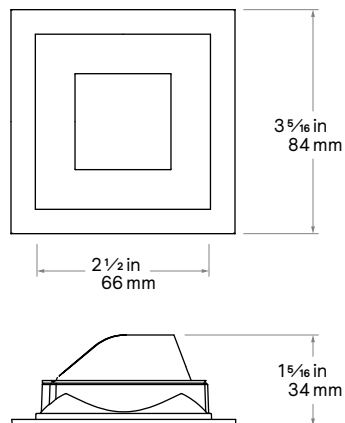


* Mud-in rings are integral to the light engine. Must order flangeless light engine and trim with (F) option code.

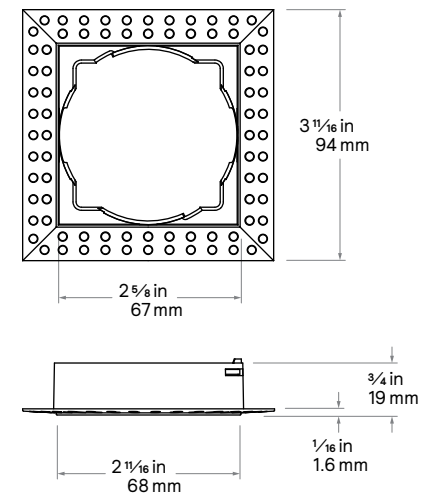
Square Engine (flanged)



Square Trim



Square Mud-in ring*



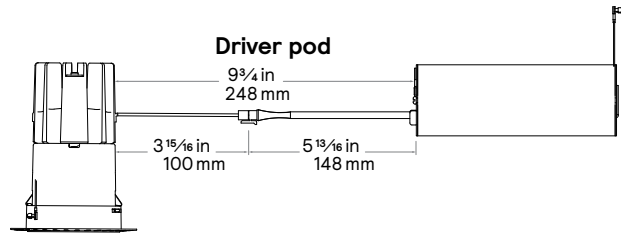
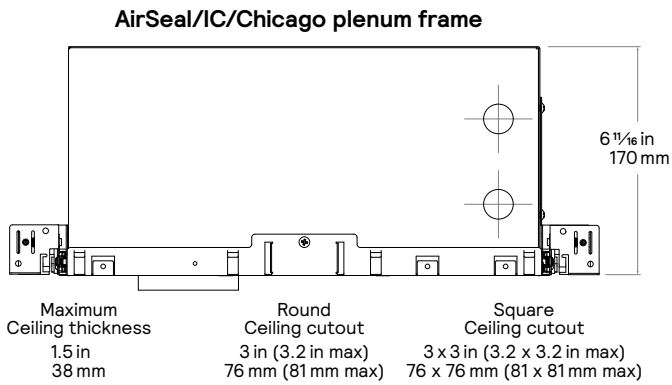
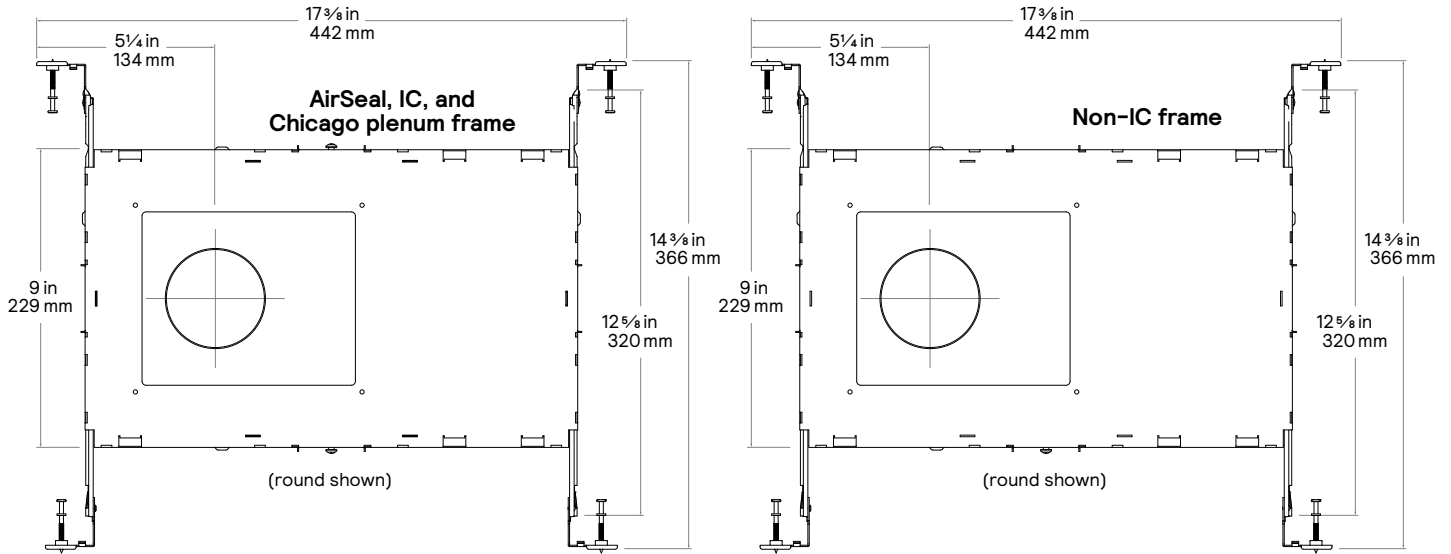
* Mud-in rings are integral to the light engine. Must order flangeless light engine and trim with (F) option code.

C2A Calculite 2"

Round and Square Adjustable Accent

Frames

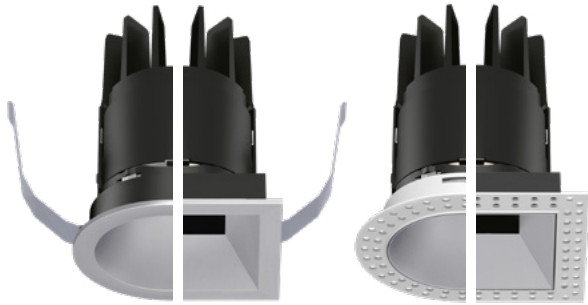
The standard C2R/C2S light engines may be installed non-IC as a remodeler with no additional frame-in kit required. Optional frames below are available to facilitate ceiling construction



C2A Calculite 2"

Round and Square Adjustable Accent

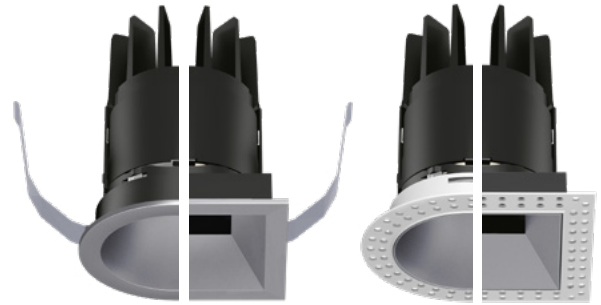
Finishes Shown as round reflectors but represent the finish of Calculite square reflectors.



Matched Reflector

Flangeless

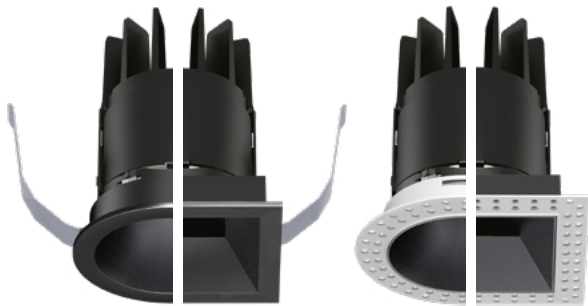
Clear diffuse (CD): Diffused painted finish with a hint of sparkle where a refined finish is desired.



Matched Reflector

Flangeless

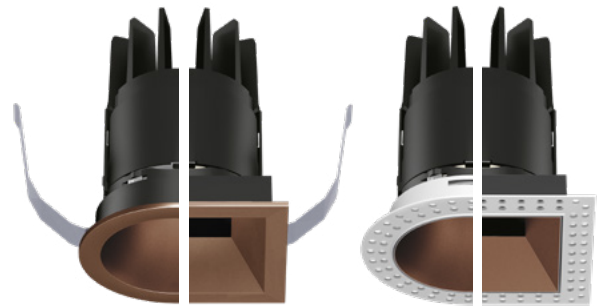
Aluminum diffuse (D): Semi-specular finish that softens the light at the source of the reflector and creates a subtle, even luminance from the reflector cone.



Matched Reflector

Flangeless

Black Textured (BT): Textured Matte finish that provides the lowest aperture brightness possible and significantly reduces source identification in a ceiling.



Matched Reflector

Flangeless

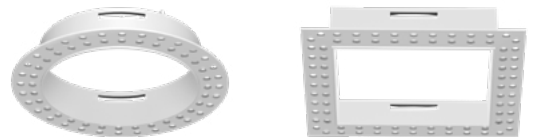
Bronze (BZ): Matte finish that provides the lowest aperture brightness possible and significantly reduces source identification in a ceiling.



Matched Reflector

Flangeless

White Textured (WT): Textured finish that provides the brightest illuminated aperture and provides the smoothest transition to most ceilings when off (white is only available with a white flange).



Mud-in ring (WH): 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 directly via flat head screws (contractor supplied).

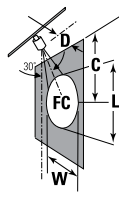
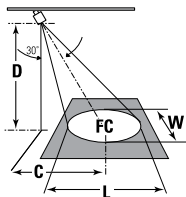
C2A Calculite 2"

Round and Square Adjustable Accent

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.

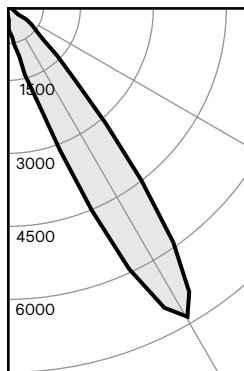
- FC Footcandles
- L Beam length
- W Beam Width
- D Distance
- A Aiming Angle
- C Distance to center beam
- CBCP Center Beam Candlepower



Adjustment Factors

Finish	CCT (90CRI)	Lumens
WT = 100%	4000K = 107%	1500lm = 167%
BT = 97%	3500K = 100%	900lm = 100%
BZ = 97%	3000K = 93%	600lm = 66%
D = 101%	2700K = 93%	
CD = 102%		

Candela Curve



Engine: C2RA09935SPUPZU
Trim: C2RAWT

Output lumens: 914 lms
Input watts: 13.7W
CRI: 90 min
CCT¹: 3500K
CBCP: 5840 cd
Beam Angle: 18°

Efficacy: 66.7lm/w
Report²: STMR-3199

Round, Spot, 900lm engine, 66.7lm/W at 13.7W

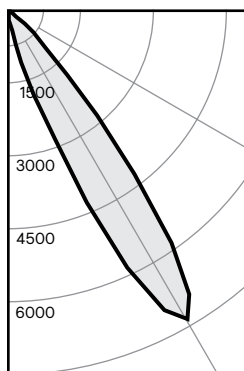
30° Horizontal Aiming

Distance	Beam				
	D	C	F.C.	L	W
6	3.5	105	2.6	2.2	
8	4.6	59	3.4	2.9	
10	5.8	38	4.3	3.7	
12	6.9	26	5.1	4.4	

30° Vertical Aiming

Distance	Beam				
	D	C	F.C.	L	W
2	3.5	183	2.7	1.3	
3	5.2	81	4.1	1.9	
4	6.9	46	5.5	2.5	
5	8.7	29	6.9	3.2	

Candela Curve



Engine: C2SA09935SPUPZU
Trim: C2SAWT

Output lumens: 693 lms
Input watts: 13.7W
CRI: 90 min
CCT¹: 3500K
CBCP: 5837 cd
Beam Angle: 17°

Efficacy: 50.6lm/w
Report²: STMR-3200

Square, Spot, 900lm engine, 50.6lm/W at 13.7W

30° Horizontal Aiming

Distance	Beam				
	D	C	F.C.	L	W
6	3.5	105	2.4	2.1	
8	4.6	59	3.2	2.8	
10	5.8	38	4.0	3.5	
12	6.9	26	4.8	4.1	

30° Vertical Aiming

Distance	Beam				
	D	C	F.C.	L	W
2	3.5	182	2.6	1.2	
3	5.2	81	3.8	1.8	
4	6.9	46	5.1	2.4	
5	8.7	29	6.4	3.0	

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.

