



Calculite LED 6" generation 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: C6SN

Series	Aperture	Installation	Voltage/Options
<b>6</b>	<b>S</b>	<input type="checkbox"/>	<input type="checkbox"/>
<b>6</b> 6" Non-IC*	<b>S</b> Square	<b>N</b> New Construction <b>R</b> Remodeler	— Universal 120V/277V <b>3</b> 347V <b>EM</b> Emergency <sup>1,2</sup> <b>LC</b> Chicago Plenum <sup>1</sup>
		<b>A</b> Airseal IC	— Universal 120V/277V

### Engine

example: C6L10865MDUTW

Series	Lumens	CRI	CCT	Beam	Dimming	Voltage	Options
<b>C6L</b>							<b>TW</b>
<b>C6L</b> Calculite LED 6" aperture	<b>10</b> 1000lm <b>15</b> 1500lm <b>20</b> 2000lm <b>25</b> 2500lm	<b>8</b> 80CRI	<b>65</b> 6500-2700K	<b>M</b> Medium (56°) <sup>3</sup> <b>W</b> Wide (76°)	<b>D</b> Dali	<b>U</b> Universal 120V/277V/347V	<b>TW</b> Tunable White
	<b>15</b> 1500lm <b>20</b> 2000lm	<b>8</b> 80CRI	<b>65</b> 6500-2700K	<b>M</b> Medium (56°) <sup>3</sup> <b>W</b> Wide (76°)	<b>P</b> Power over Ethernet <sup>4</sup>	<b>E</b> Ethernet 48V DC	<b>TW</b> Tunable White

### Trim

example: C6SDLNMCCP

Series	Aperture	Style	Beam <sup>3</sup>	Finish	Flange
<b>C6</b>	<b>S</b>				
<b>C6</b> Calculite LED 6" aperture	<b>S</b> Square	<b>DL</b> Downlight <b>LW</b> Lensed Wall Wash <sup>3</sup>	<b>NM</b> Narrow & Medium <b>W</b> Wide — blank	<b>CL</b> Specular clear <b>CC</b> Comfort clear <b>CD</b> Comfort clear diffuse <b>WH</b> White (matte)	— White (matte) <b>P</b> Polished <b>F</b> Flangeless — White (matte) <b>F</b> Flangeless

### Beam options

	Med engine	Wide engine
<b>6" reflector</b>	56° (0.8 s.c.)	78° (1.2 s.c.)

### Mixing chambers

	Med engine	Wide engine
<b>6" cone</b>	0.8 s.c. (56°)	1.1 s.c. (78°)

### Accessories

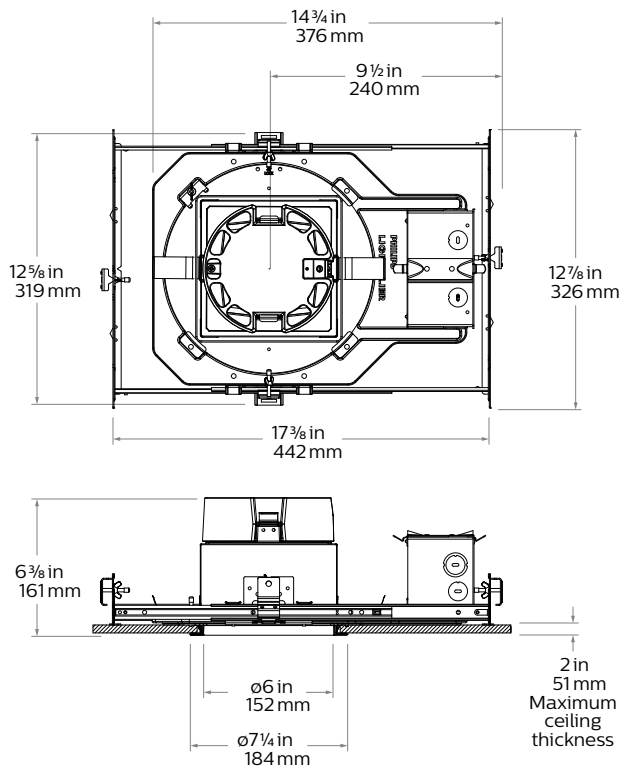
**CA4SFT** Mud-in ring for use with flangeless installations (ordered with a flangeless trim)

- Emergency (EM) and Chicago Plenum (LC) options are only available with New construction (N) installations. Not compatible with PoE light engine.
- Emergency (EM) frame comes with emergency battery pack and ceiling mountable test switch. Reflector mounted test switch requires above ceiling access and is only available with the downlight option. For reflector mounted test switch, order emergency frame and add "EM" suffix to reflector (example: C6SDLNMCCEM).
- Medium (M) beam is ideal for lensed wall washing.
- Power over Ethernet (PoE) option compatible with 6SN and 6SR frames only.

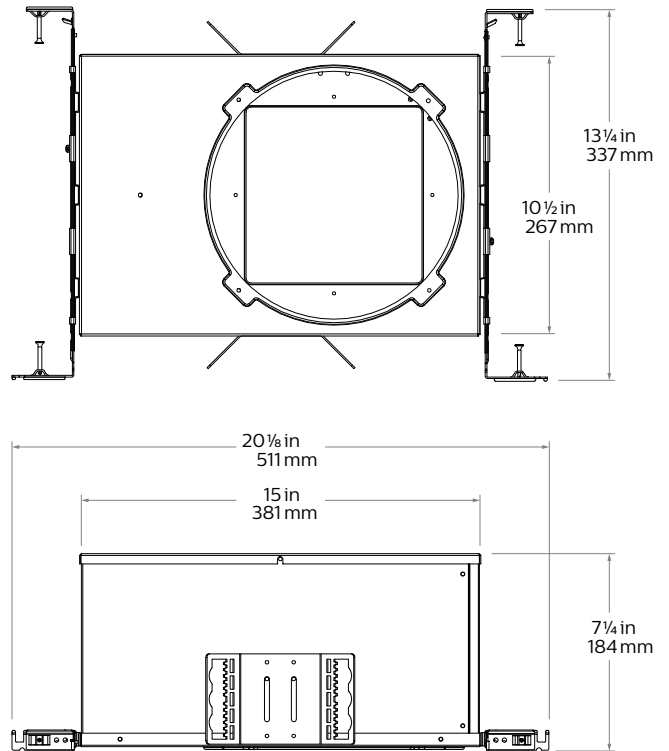
# C6STW Calculite LED 6" gen 3

## Square Tunable White

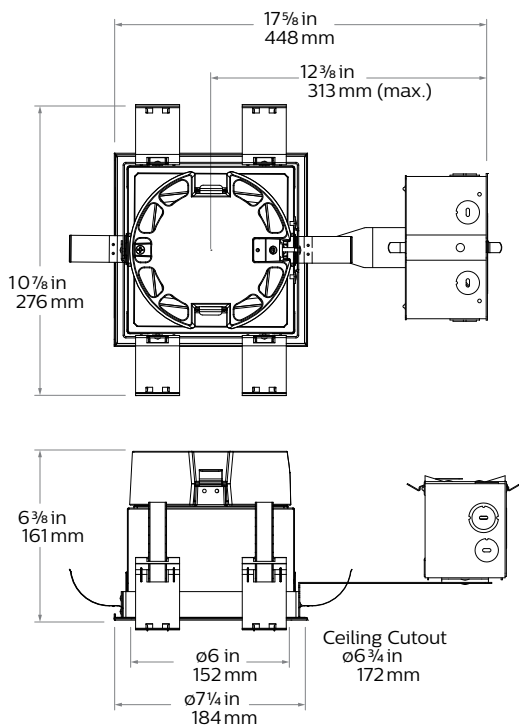
### New Construction (N)



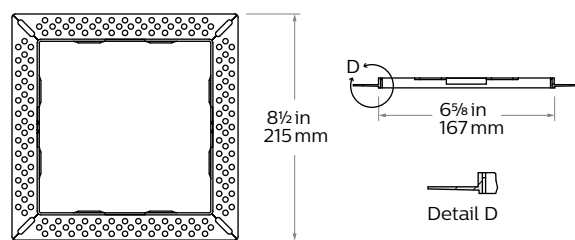
### Chicago Plenum (LC)



### Remodeler (R)



### Flangeless mud-in ring (CA6SFT) accessory



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## Square Tunable White

### Disclaimers/Recommendations

For best performance, we recommend using Lightolier Dynalite products when designing your controls system.

CCT targeting table is for guidance only. Lightolier cannot guarantee color targeting precision, accuracy, or general performance with third party controls.

Lightolier cannot provide post sales configuration or commissioning support when using control systems that are not in the Lightolier product offering. Please contact your controls manufacturer for support.

Lightolier cannot provide guidance on programming dynamic show behaviors (circadian rhythm, daylight mimicry, etc.).

Any configuration, commissioning, or support is solely owned by the sales agent/rep/specifier.

### Objective

Provide an application note to reps/agents/trade channel partners that provides information for integration of Lightolier tunable white luminaires with third party controllers.

**All Lightolier tunable white luminaires leave the factory with the following settings:**

**Cool white CCT:** 6500K

**Warm white CCT:** 2700K

**When either channel is at 100% brightness**

Warm white = Cool white  
lumen output = lumen output

**Communication protocol:**

DALI 2.0 (Device Type 6)

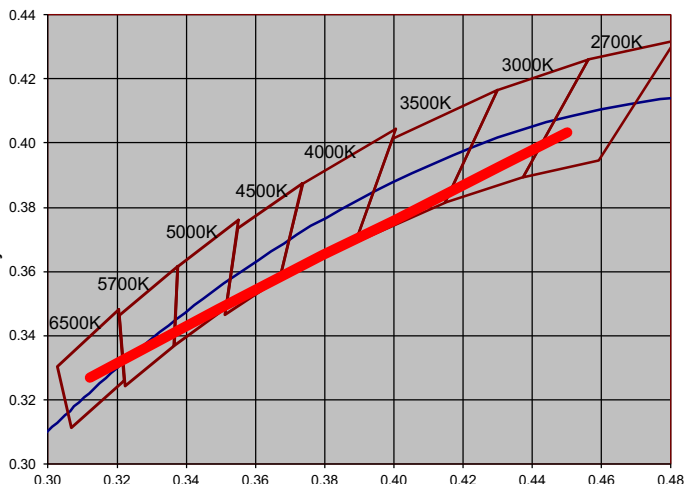
Power over Ethernet 48V

### CCT targeting guidance

Target CCT	WW%	CW%
2700K	100	0
3000K	82	18
3500K	66	34
4000K	49	51
5000K	24	76
6500K	0	100

### Color information (Dali)

6" 2000lm	2700K	3000K	3500K	4000K	5000K	6500K
Flux (lms)	1927	1856	1863	1937	1848	1790
Power (W)	19.21	18.12	17.62	17.93	17.14	16.84
Efficacy (lm/W)	100.3	102.4	105.7	108.0	107.8	106.3
CCT	2785	3008	3499	3936	4818	6549
CRI	86	87	88	89	88	84
R9	20	26	33	36	33	15
x	0.4501	0.4311	0.3999	0.3794	0.3495	0.3122
y	0.4033	0.393	0.376	0.3649	0.3484	0.3269
Duv	-0.0018	-0.0037	-0.0054	-0.0054	-0.0034	0.0024



### Lifetime (TM-21) data

Lumens	Narrow beam	Medium/Wide beam*
500lm	L90 @ 60,000hrs.	L90 @ 60,000hrs.
1000lm		
1500lm	L90 @ 60,000hrs.	L85 @ 60,000hrs.
2000lm		
2500lm		

### Color information (PoE)

Flux (lm)	1300	1275	1284	1279	1266	1248	1221	1223
Power (W)	11.62	11.55	11.16	11	10.92	10.9	10.98	10.85
Efficacy (lm/W)	111.9	110.4	115.1	116.2	115.9	114.5	111.2	112.7
CCT	2729	2987	3508	4019	4536	5076	5869	6480
CRI	85	86	88	88	87	86	85	83
Color Rendering Index (R9)	16.5	23.1	31	33.9	33	28.6	22.3	14.1
x	0.4564	0.4336	0.3998	0.3762	0.3579	0.3425	0.3245	0.3132
y	0.4084	0.396	0.3773	0.3639	0.3535	0.3446	0.3342	0.3276
Duv	-0.0005	-0.0028	-0.0048	-0.0049	-0.0040	-0.0025	0.0001	0.0023
TM30 Rf	86	86	87	87	86	85	84	84
TM30 Rg	98	100	100	100	100	100	99	98

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## Square Tunable White

### 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.



**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.



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



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

### 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.

### Frame-in-kits

#### New Construction

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

**Max ceiling thickness is 2".**

#### AirSeal

Black painted steel housing for dry or plaster ceilings. Pre-installed telescoping mounting bars from 13" to 24".

#### Patented install Mounting frame

With no driver attached, this versatile frame is independent of driver accommodating a wide range of lumen packages, driver types and CCTs, including 120V and 277V inputs.

Close-cut aperture design eliminates possibility of gap between ceiling opening & 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 eliminates need for wiring between frame and LED driver, and also saves time during installation and future replacements/upgrades. Plug-and-play receptacle accommodates technology upgrade of light engines and replacements for the life of the building.

#### Drivers

- EldoLED ECOdrive Dali 1% Dimming

#### Rated life

60,0000 hrs at 70% lumen maintenance based on IES LM-80-08 and TM-21-11.

### Power over Ethernet

#### Powered via Lightolier PoE lighting controller:

Complies with FCC rules per Title 47 part 15 (Class A) for EMI / RFI (conducted & radiated). PoE lighting controller accessible from below ceiling.

#### Rated life

60,0000 hrs at 70% lumen maintenance based on IES LM-80-08 and TM-21-11.

### Optical systems

#### Comfort throughout the space:

Patented optical system combines primary and secondary optics to provide a true 50° physical cutoff and 45° reflected cutoff virtually eliminating the view of the light source and bright spots in the reflector. A new reflector curve reduces reflector brightness by up to 50% compared to existing products, allowing for the use of higher lumen packages in smaller apertures without creating bright spots in the ceiling.

### Light Engine

Quick connect power pack comprised of light source and driver 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 CA6SFT for use with flangeless installations.

**Sloped ceilings:** Compatible with sloped ceiling adapters (see SCA spec sheet).

### Labels and Listings

- cULus listed for wet locations
- RoHS certified

### Warranty



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

