



# Calculite White LED 4" Adjustable Accent

Professional-grade downlighting



**PHILIPS**  
**LIGHTOLIER**



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Professional-grade downlighting



## Precision. Performance.

The Philips Lightolier Calculite White LED 4" Adjustable Accent was designed for optical precision and constructed with rugged and durable materials for reliable performance in new construction applications. Our four-inch adjustable accent utilizes a Philips designed 2300lm light engine that yields a fixture lumen performance that ranges from 1500lm to 1700lm with over 32,000 candela delivered (using tight spot optics). It is available with dimming, and an assortment of finishing reflectors as well as flanges to complement architecturally demanding spaces. This fixture also provides full 366° horizontal and 40° vertical adjustment for flexibility and accuracy. With this addition to the Calculite White LED family, Calculite continues to raise the bar.

# Calculite White LED 4"

**Adjustable Accent** features

## Frame-in Kit

Designed to provide easy installation and maintenance. This durable construction ensures a lifetime of consistent, reliable performance and is available in configurations that accommodate commercial or residential construction needs.

### In the details

1. Telescoping mounting bars come pre-installed with residential and commercial frames.
2. Interior of frame-in kit housing is matte black to eliminate excessive brightness inside of the fixture.
3. Integral screws are suitable for wood or steel construction and attach to T-grid ceilings without accessories.
4. Die-cast aluminum ring provides 366° horizontal rotation and locks with finger tab (no tools required).
5. Frame-in kit offers four notches that are positioned 90° apart on bottom aperture for in-ceiling alignment.



## Innovative designs

The innovative Push-Lock retention system provides fast, tool-less attachment and accommodates a range of ceiling thickness from  $\frac{3}{8}$ " (40° tilt max) to  $1\frac{3}{4}$ " (18° tilt max). Bullet-catcher configuration, coupled with unique side-wall pattern securely locks Light Engine in place at variable heights while maintaining Precision Optics for optimal performance.

The Frame-in Kit features two mounting systems for versatility. The first system is comprised of universal mounting brackets constructed from 0.048" (18 ga.) galvanized steel that can be mounted via two methods: T-grid mounting bars, 18" (#1950) and 27" (#1951), or customer supplied 1/2" EMT conduit. The second system features pre-installed telescoping mounting bars constructed from 0.059" (16 ga.) galvanized steel.

These mounting bars pivot for easy attachment below ceiling line and extend to accommodate 16" to 24" on-center joist spacing. They can also accommodate 12" on-center joist spacing after field modification.

Exclusive **EZ-Aim** gear-driven adjustment provides hot **aiming** and **locking** with unprecedented **speed** and **accuracy**.

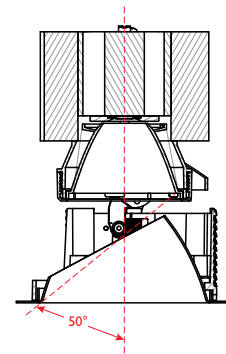
**Adjustable Accent** features

**Light Engine**

Developed with Precision Optics, that maintain proper alignment between the light source and reflector throughout the range of adjustment providing maximum light output and glare control. The entire trim assembly adjusts to compensate for installation variations and is aligned to the ceiling plane, not just the housing.



The Light Engine assembly keeps the source of brightness at a **50° cutoff** when the fixture is at nadir which maximizes **visual comfort** in the space and eliminates the view of the source of brightness.

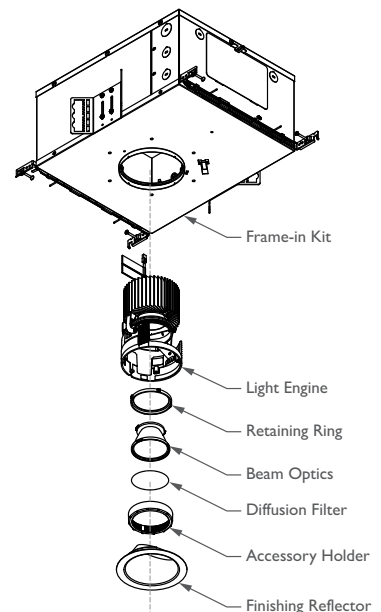


**Superior fit and finish**

The Calculite White LED 4" Adjustable Accent luminaire achieves a minimal ceiling presence with the maximum combination of visually comfortable aperture finishes, smooth flangeless ceiling integrations and exceptional Precision Optics.

Precise optical contours are developed using state-of-the-art 3D modeling and photometric simulation software combined with generations of experience. Philips Lightolier's computer-controlled manufacturing enables the achievement of tight tolerances and delivers consistent quality and superior performance.

Advanced mechanical and optical engineering unite to create precision accent lighting instruments delivering unprecedented performance and accuracy. Adjustments are set while the Light Engine is powered, reducing the time required to aim the fixture by up to 50% compared to conventional designs.



# Calculite White LED 4"

**Adjustable Accent** features

## Precision Optics

Created with interchangeable optics for beam pattern precision, offering the creative license to design with light. The optical system plays a central role in ensuring the quality and efficiency of the chosen lighting solution.



### In the details

1. Keyed components ensure correct installation of Finishing Reflector.
2. Magnetic trim receptacles on Light Engine assembly simplify installation as well as aim and focus activities.
3. Tether for Finishing Reflector helps to organize and simplify work in and around aperture.
4. Hot aiming screw controls vertical tilt from 0° to 40°.
5. Optional soft focus filter accessory allows for beam diffusion.
6. Four beam spread options offering field replaceable lighting customization.

## Tailored applications

Additional optical reflectors can be ordered to modify beam angles and are field replaceable. Coupled with a diffusion filter for a soft focus beam spread, Calculite White LED 4" Adjustable Accent's optical accessories offer designers tool-less lighting customization. These modifications can be performed quickly and easily as the lighting output needs change for a given application. Additional optical reflectors can be ordered separately (see ordering guide for more). Consult factory for additional compatible accessories.



Design **precision**  
and beam **performance**  
go hand and hand.

**Adjustable Accent** features



## Finishing Reflector

The innovative reflector design 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.

**In the details**

- 1. Five reflector finish options are available (see below).
- 2. Three reflector flange options are available (see below).

The **revolutionary** design of this **4 inch** aperture product defines the **state-of-the-art** in both mechanical **precision** and lighting **performance**.

### Finishes



**CL** Clear  
Most specular and therefore most efficient finish, delivers maximum photometric performance but can produce a mirror image effect of the interior space.



**CCZ** Bronze  
Semi-specular finish that softens the light at the source of the reflector while providing a warmer reflector appearance (light output is slightly warmer).



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



**CCL** Comfort Clear  
Slightly diffuse clear finish, which eliminates iridescence and reduces the mirror image effect inherent with specular finishes.



**CCD** Comfort Clear Diffuse  
Semi-specular finish that softens the light at the source of the reflector and creates a subtle, even luminance from the reflector cone.

### Flanges

In today's demanding environments, a fixture must not only be functional, but aesthetically pleasing. Calculite offers high quality flange options for the most discerning of tastes.



**W** White  
Provides the smoothest transition to ceilings when off (matte).



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



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

# Calculite White LED 4"

**Adjustable Accent** features

Meticulously designed for ultimate control in architectural spaces where the demand is for more than the common accent.



Actual size



**Adjustable Accent** features



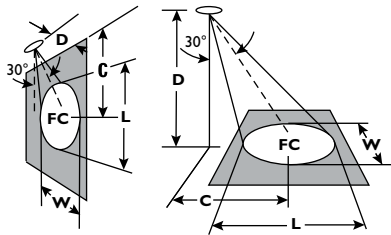
Continuing to exceed expectations.

# Calculite White LED 4"

## Adjustable Accent photometry

### 30° Aiming Angles

Vertical Surface      Horizontal Surface



**FC** is initial footcandles at center of beam. Beam length **L** and beam width **W** are to where the candlepower is reduced to 50% of the center beam candlepower. **C** is the distance to the center of the beam.

**CCT Adjust. factors**      **CRI Adjust. factors**

4000K = 102%	80CRI = 100%
3500K = 100%	90CRI = 82%
3000K = 96%	
2700K = 89%	

**Example: Tight Spot, 2700K, 90CRI**

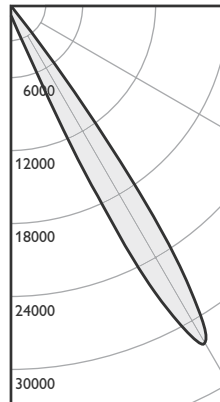
Housing	Trim	Reflector
C4LA15NULD	C4L15A 27K 9 TSP	C4LACLW
31,939 cd CBCP	89% @ 2700K CCT	82% @ 90 CRI
		= 23,309 cd CBCP

Photometric testing conducted with fixture at 30° aiming angle.

All testing conducted with **C4LA15NULD** housing and **C4LACLW** reflector.

### Tight Spot

**C4L15A35K8TSP**



#### 30° Horizontal Aiming

Dist. (D)	Dist. (C)	F.C. (FC)	Beam Length (L)	Beam Width (W)
6	3.5	576	1.5	1.3
8	4.6	324	2.1	1.8
10	5.8	207	2.6	2.2
12	6.9	144	3.1	2.7

#### 30° Vertical Aiming

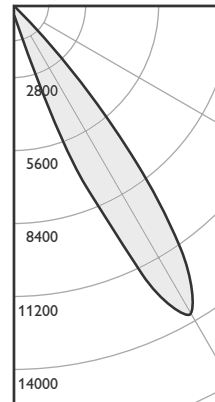
Dist. (D)	Dist. (C)	F.C. (FC)	Beam Length (L)	Beam Width (W)
2	3.5	998	1.6	0.8
3	5.2	444	2.4	1.2
4	6.9	250	3.2	1.5
5	8.7	160	4.0	1.9

Report no<sup>3</sup>: 258GFR  
63.5 lm/w efficacy

80 min CRI      3500K CCT<sup>2</sup>  
27.2 input watts<sup>1</sup>      31,939 c.d. center beam  
1727 lms output      11° beam Angle

### Spot

**C4L15A35K8SP**



#### 30° Horizontal Aiming

Dist. (D)	Dist. (C)	F.C. (FC)	Beam Length (L)	Beam Width (W)
6	3.5	246	2.4	2.1
8	4.6	139	3.2	2.8
10	5.8	89	4.0	3.5
12	6.9	62	4.8	4.1

#### 30° Vertical Aiming

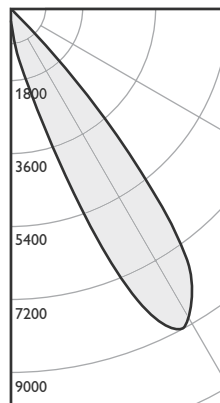
Dist. (D)	Dist. (C)	F.C. (FC)	Beam Length (L)	Beam Width (W)
2	3.5	427	2.6	1.2
3	5.2	190	3.8	1.8
4	6.9	107	5.1	2.4
5	8.7	68	6.4	3.0

Report no<sup>3</sup>: 259GFR  
56.7 lm/w efficacy

80 min CRI      3500K CCT<sup>2</sup>  
27.2 input watts<sup>1</sup>      13,659 c.d. center beam  
1543 lms output      17° beam Angle

### Narrow Flood

**C4L15A35K8NF**



#### 30° Horizontal Aiming

Dist. (D)	Dist. (C)	F.C. (FC)	Beam Length (L)	Beam Width (W)
6	3.5	164	3.1	2.7
8	4.6	92	4.2	3.6
10	5.8	59	5.2	4.5
12	6.9	41	6.3	5.4

#### 30° Vertical Aiming

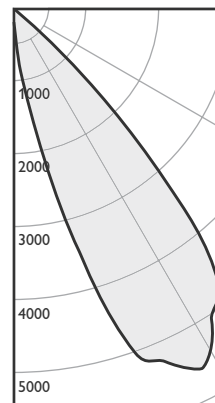
Dist. (D)	Dist. (C)	F.C. (FC)	Beam Length (L)	Beam Width (W)
2	3.5	284	3.5	1.6
3	5.2	126	5.3	2.3
4	6.9	71	7.0	3.1
5	8.7	46	8.8	3.9

Report no<sup>3</sup>: 260GFR  
53.0 lm/w efficacy

80 min CRI      3500K CCT<sup>2</sup>  
27.2 input watts<sup>1</sup>      9,103 c.d. center beam  
1442 lms output      22° beam Angle

### Flood

**C4L15A35K8FL**



#### 30° Horizontal Aiming

Dist. (D)	Dist. (C)	F.C. (FC)	Beam Length (L)	Beam Width (W)
6	3.5	102	4.2	3.6
8	4.6	57	5.6	4.8
10	5.8	37	7.1	6.0
12	6.9	25	8.5	7.2

#### 30° Vertical Aiming

Dist. (D)	Dist. (C)	F.C. (FC)	Beam Length (L)	Beam Width (W)
2	3.5	177	5.2	2.1
3	5.2	78	7.8	3.1
4	6.9	44	10.4	4.1
5	8.7	28	12.9	5.2

Report no<sup>3</sup>: 261GFR  
54.2 lm/w efficacy

80 min CRI      3500K CCT<sup>2</sup>  
27.2 input watts<sup>1</sup>      5,648 c.d. center beam  
1474 lms output      29° beam Angle

1. Wattage controlled to within 5%.

2. Correlated Color Temperature within specs as defined in ANSI\_NEMA\_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.

3. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

# Ordering guide and specifications

A + B + C + D (optional) = complete unit.

Calculate White LED 4" adjustable accent complete fixture is comprised of a frame-in kit with light engine and finishing reflector (optional accessories are available). Refer to footnotes at the bottom of the page for configuration details and restrictions.

## A Frame-in Kit

Series	Style	Lumens	Installation	Voltage	Dimming
<b>C4L</b>	<b>A</b>	<b>15</b>	<b>N</b>	<b>U</b>	
<b>C4L</b> Calculate 4" LED round	<b>A</b> Adjustable Accent	<b>15</b> 1500lm	<b>N</b> New construction	<b>U</b> Universal	<b>Z10V</b> Non-IC with 0-10V dimming <b>Z10VAIC</b> AirSeal-IC with 0-10V dimming <b>LD</b> Non-IC with Lutron dimming <b>LDAIC</b> AirSeal-IC with Lutron dimming

## B Light Engine

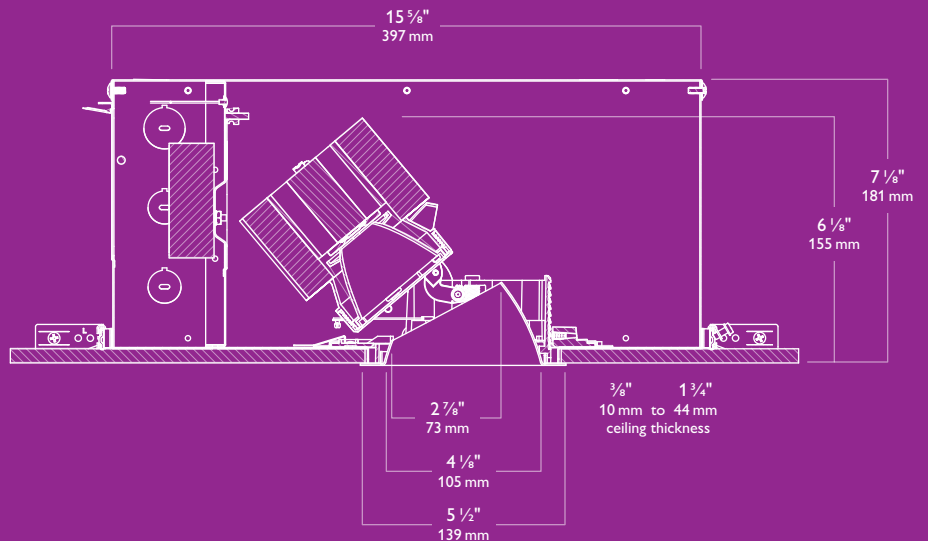
Series	Lumens	Style	CCT	CRI	Optics <sup>3</sup>
<b>C4L</b>	<b>15</b>	<b>A</b>			
<b>C4L</b> Calculate 4" LED round	<b>15</b> 1500lm	<b>A</b> Adjustable Accent	<b>27K</b> 2700K <b>30K</b> 3000K <b>35K</b> 3500K <sup>1</sup> <b>40K</b> 4000K <sup>1</sup>	<b>8</b> 80 CRI <b>9</b> 90 CRI <sup>1</sup>	<b>TSP</b> 11° Tight Spot <b>SP</b> 17° Spot <b>NF</b> 22° Narrow Flood <b>FL</b> 29° Flood

## C Finishing Reflector

Series	Style	Finish	Flange
<b>C4L</b>	<b>A</b>		
<b>C4L</b> Calculate 4" LED round	<b>A</b> Adjustable Accent	<b>CL</b> Clear <b>CCL</b> Comfort clear <b>CCD</b> Comfort clear diffuse <b>CCZ</b> Champagne bronze <b>WH</b> White (painted)	<b>W</b> White (painted) <b>P</b> Polished (matches aperture) <b>FT</b> Flangeless (flush-mount) <sup>2</sup>

## D Accessories

Optical Reflectors <sup>4</sup>	
<b>C4ATSP</b>	11° Tight Spot
<b>C4ASP</b>	17° Spot
<b>C4ANF</b>	22° Narrow Flood
<b>C4AFL</b>	29° Flood
Diffusion Filter	
<b>CA4DF5</b>	3 1/8" dia. filter for soft focus beam spreads
Flangeless Installations	
<b>CA4FMR</b>	Mud-in Ring for flangeless installations



1. Configurations using 90 CRI (9) are not compatible with 3500K (35K) and 4000K (40K) CCTs.  
 2. Accessory CA4FMR required for gypsum applications (minimal 1/4" reflector flange).  
 3. Precision Optics are available as accessories that can be ordered separately.  
 4. Accessories are sold separately and are field replaceable (consult factory for additional compatible accessories).



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