

PHILIPS LIGHTOLIER

Downlighting

Calculite LED gen 3

7" round wall wash,
1000-6000lm



Calculite LED 7" 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: C7RN

Series	Aperture	Installation	Voltage/Options
C7	R	N	
C7 Calculite LED 7" aperture	R Round	N New construction ¹	— Universal 120 V/277 V (specify for Power Over Ethernet configurations) 3 347 V (not compatible with ELV dimming) ³ EM Emergency ^{1,2} LC Chicago Plenum ¹

Engine

example: C6L15835NZ10U

Series	Lumens	CRI	CCT	Beam	Dimming	Voltage
C6L				W		
C6L Calculite LED 6" & 7" aperture	10 1000 lm 15 1500 lm 20 2000 lm 25 2500 lm 35 3500 lm 48 4800 lm ⁴ 60 6000 lm ⁴	8 80 CRI 9 90 CRI	27 2700 K 30 3000 K 35 3500 K 40 4000 K	W Wide	Z10 0-10 V 1% ⁴ SOL EldoLED Solo 0-10 V 0.1% D Dali L Lutron LDE1 EcoSystem (fade-to-black) E ELV (120V dimming only) ⁵ P Power over Ethernet Only compatible with 1000 (10) to 2500 (25) lumen configurations.	U Universal 120 V/277 V/347 V 1 Universal 120 V/277 V E Ethernet 48 V DC

Trim

example: C7RLWCCP

Series	Aperture	Style	Finish	Flange
C7	R			
C7 Calculite LED 7" aperture	R Round	WW Open Wall Wash LW Lensed Wall Wash ³ CW Corner Wall Wash ⁶ DW Double Wall Wash ⁶	BK Black (matte) CL Specular clear CC Comfort clear CD Comfort clear diffuse CZ Champagne bronze WH White (matte)	— White (matte) P Polished F Flangeless ⁶ — White (matte) F Flangeless ⁶

Accessories (ordered with a flangeless trim)

CA7RFT Mud-in ring for use with flangeless installations.
CAEM Field installable EM pack.

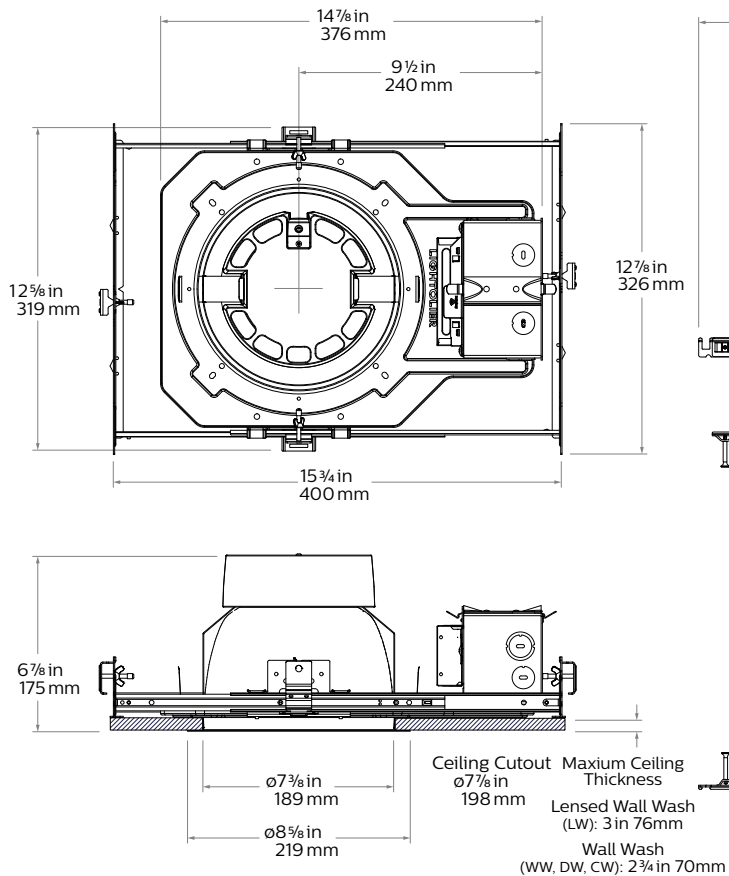
- Emergency (EM) and Chicago Plenum (LC) options are only available with New construction (N) installations.
- Emergency (EM) frame comes with emergency battery pack and ceiling mountable test switch. Reflector mounted test switch requires above ceiling access. For reflector mounted test switch, order emergency frame and add "EM" suffix to reflector (example: C7RLWCCEM).
- The 347V (3) is not compatible with lumen packages over 2000lm (20) for the Lensed Wall wash (LW) style.
- The 4800lm (48) and 6000lm (60) packages are only available with 0-10V (Z10) dimming and have marked spacing requirements (see page 3).
- ELV (E) dimming is only compatible with up to 2500lm (25) configurations.
- Corner (CW) and Double (DW) Wall Wash are not available with flangeless (F) option.



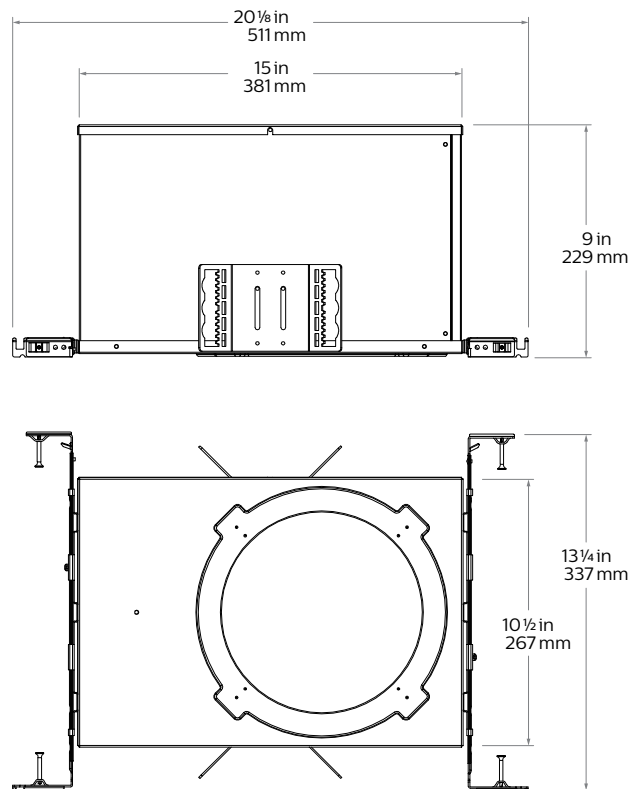
C7RWW Calculite LED generation 3

7" round wall wash

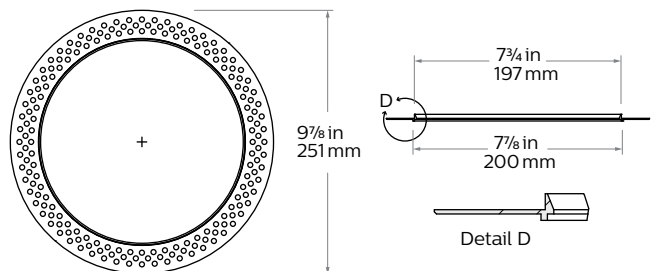
New Construction (N)



Chicago Plenum (LC)



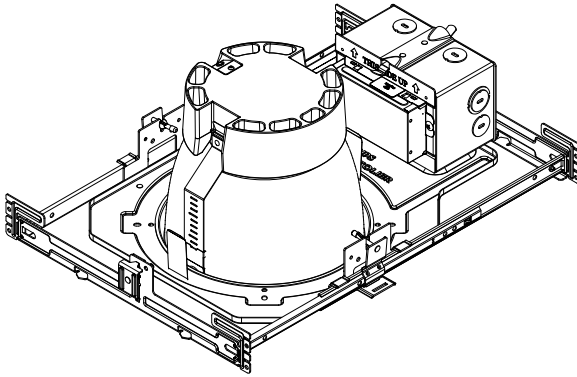
Flangeless mud-in ring (CA7RFT) accessory



Consult factory for wood installation instructions.

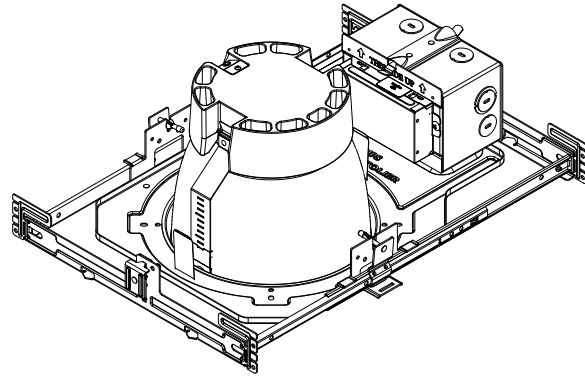
C7RWW Calculite LED generation 3

7" round wall wash



Narrow

Light engine	Input volts	Input freq	Input current	Drive current	Input power	LED power	THD power	Power factor
C6L10_NZ10U	120V	50/60Hz	0.08	230 mA	9W	8W	<15%	>0.95
	277V		0.04				<20%	>0.95
C6L15_NZ10U	120V	50/60Hz	0.11	340 mA	15W	11W	<10%	>0.95
	277V		0.05				<15%	>0.95
C6L20_NZ10U	120V	50/60Hz	0.16	460 mA	22W	16W	<10%	>0.95
	277V		0.08				<15%	>0.95
C6L25_NZ10U	120V	50/60Hz	0.20	590 mA	25W	21W	<10%	>0.95
	277V		0.10				<15%	>0.95
C6L35_NZ10U	120V	50/60Hz	0.30	900 mA	36W	30W	<10%	>0.95
	277V		0.14				<15%	>0.95
C6L48_NZ10U	120V	50/60Hz	0.42	1250 mA	51W	44W	<10%	>0.95
	277V		0.19				<15%	>0.95
C6L60_NZ10U	120V	50/60Hz	0.48	1400 mA	57W	50W	<10%	>0.95
	277V		0.21				<15%	>0.95



Medium/Wide

Light engine	Input volts	Input freq	Input current	Drive current	Input power	LED power	THD power	Power factor
C6L10_MZ10U	120V	50/60Hz	0.08	210 mA	9W	8W	<15%	>0.95
	277V		0.04				<20%	>0.95
C6L15_MZ10U	120V	50/60Hz	0.11	320 mA	15W	11W	<10%	>0.95
	277V		0.05				<15%	>0.95
C6L20_MZ10U	120V	50/60Hz	0.15	430 mA	19W	15W	<10%	>0.95
	277V		0.07				<15%	>0.95
C6L25_MZ10U	120V	50/60Hz	0.19	550 mA	23W	19W	<10%	>0.95
	277V		0.09				<15%	>0.95
C6L35_MZ10U	120V	50/60Hz	0.25	570 mA	30W	25W	<10%	>0.95
	277V		0.11				<15%	>0.95
C6L48_MZ10U	120V	50/60Hz	0.36	810 mA	40W	34W	<10%	>0.95
	277V		0.16				<15%	>0.95
C6L60_MZ10U	120V	50/60Hz	0.50	1130 mA	57W	50W	<10%	>0.95
	277V		0.22				<15%	>0.95

Narrow (Power over Ethernet)

Light engine	Input				
	Volts ¹	Voltage ²	Freq	Current	Power
C6L10___NPE	53V	51-54V	DC	160 mA	8.9 W
C6L15___NPE	53V	51-54V	DC	250 mA	13.7 W
C6L20___NPE	53V	51-54V	DC	330 mA	17.7 W
C6L25___NPE	53V	51-54V	DC	420 mA	22.8 W

Medium (Power over Ethernet)

Light engine	Input				
	Volts ¹	Voltage ²	Freq	Current	Power
C6L10___MPE	53V	51-54V	DC	160 mA	8.4 W
C6L15___MPE	53V	51-54V	DC	230 mA	12.5 W
C6L20___MPE	53V	51-54V	DC	310 mA	16.7 W
C6L25___MPE	53V	51-54V	DC	390 mA	21.4 W

Wide (Power over Ethernet)

Light engine	Input				
	Volts ¹	Voltage ²	Freq	Current	Power
C6L10___WPE	53V	51-54V	DC	160 mA	8.4 W
C6L15___WPE	53V	51-54V	DC	230 mA	12.5 W
C6L20___WPE	53V	51-54V	DC	310 mA	16.7 W
C6L25___WPE	53V	51-54V	DC	390 mA	21.4 W

1. Nominal input volts.
2. Preferred volt range.

Marked spacing applications

Light engine	4800lm	6000lm
C6L_Z10U series	X	X
C6L_LU series	—	—
C6L_DU series	—	—

Modules marked with an X require marked spacing:
- Center-to-center of adjacent luminaires: 24" (610mm)
- Luminaire center to side building member: 12" (305mm)

Lifetime (TM-21) data

Lumens	Narrow beam	Medium/Wide beam*
1000lm 1500lm 2000lm 2500lm 3500lm*	L90 @ 60,000hrs.	L90 @ 60,000hrs.
4800lm		
6000lm		
	L90 @ 60,000hrs.	L80 @ 60,000hrs.

* Lutron 3500lm with Medium/Wide beam is L85 @ 60,000hrs.

C7RWW Calculite LED generation 3

7" round wall wash

Frame-in-kits

New Construction

Galvanized stamped steel for dry or plaster ceilings. Preinstalled telescoping mounting bars from 15-3/4" to 24". For 4' distances, use 1/2" EMT, 1-1/2" x 1/2" U or C channel.

Max ceiling thickness for Lensed Wall Wash (LW) is 3" and for Open, Corner, Double Wall Wash (WW, CW, DW) is 2-3/4".

Minimum ceiling thickness is 1/8".

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.

Pre-installed mounting bars allow for fast and tool-less installation into T-grid and hat channel ceilings.

Close-cut aperture design eliminates the possibility of undesired gap between ceiling opening and reflector flange.

Separate wiring compartment for wiring frame to building allows inspection prior to light engine installation.

Simple plug-and-play connection between the frame and light engine from below the ceiling eliminates the 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

- Advance 0-10V 1% dimming
- Lutron Hi-lume EcoSystem H series 1% dimming
- EldoLED ECOdrive Dali 1% dimming
- EldoLED SOLOdrive 0-10V 0.1% dimming
- ELV dimming

Power over Ethernet

Powered via Philips 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: 60,000 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.

Quality of light: 2 SDCM ensures color consistency from fixture to fixture and over the luminaire's long lifetime. Proprietary optical grade silicone lens with patterned surface provides soft, even beam diffusion without hotspots or dark rings.

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 CA7RFT for use with flangeless installations.

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

ENERGY STAR® exceptions

90 CRI configurations

Champagne Bronze and Black finishes

347V and Emergency configurations

Dali & EldoLED Solo dimming

Power over Ethernet driver

Labels and Listings

cULus listed for wet location (lensed wall washers)

ENERGY STAR®

CCEA (frames with *LC suffix)

IBEW Union made (light engines & reflectors)

RoHS compliant

Warranty

5 year warranty on complete system.

Complete warranty available at: http://images.philips.com/is/content/PhilipsConsumer/PDFDownloads/United%20States/ODLI20150930_003-UPD-en_US-Philips-warranty-indoor-PLS-us.pdf



C7RWW Calculite LED generation 3

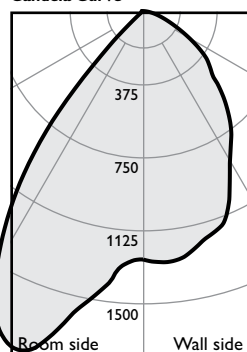
7" round wall wash

Adjustment factors

Finish	CCT	Lumens
CL = 100%	80CRI 4000K = 102%	6000lm = 240%
CC = 95%	80CRI 3500K = 100%	4800lm = 192%
CD = 87%	80CRI 3000K = 97%	3500lm = 140%
CZ = 63%	80CRI 2700K = 87%	2500lm = 100%
WH = 87%	90CRI 3000K = 77%	2000lm = 80%
BK = 57%	90CRI 2700K = 73%	1500lm = 60%
		1000lm = 40%

Wall Wash, 2500lm Engine, 107.8 lm/w

Candela Curve



Frame: **C7RN**
Engine: **C6L25835WZ10U**
Trim: **C7RWWCL**

Output lumens: 2297 lms
Input watts: 21.3 W
CRI: 80 min
CCT¹: 3500K

Efficacy: 107.8 lm/w
Report²: F37166

Multiple unit data

Footcandles on wall

	2' from wall		
	3' on ctr.		
Distance from ceiling in feet	1	2	3
1	44	31	44
2	60	47	60
3	48	54	48
4	41	45	41
5	35	35	35
6	28	28	28
7	23	23	23
8	20	19	20
9	17	17	17
10	15	15	15
12	12	12	12
14	11	11	11

Multiple unit data

Footcandles on wall

	3' from wall		
	3' on ctr.		
Distance from ceiling in feet	1	2	3
1	17	18	17
2	34	35	34
3	37	37	37
4	35	38	35
5	33	33	33
6	29	30	29
7	26	27	26
8	23	23	23
9	20	20	20
10	18	18	18
12	15	15	15
14	13	13	13

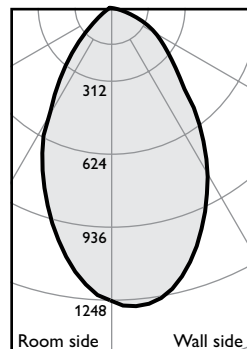
Multiple unit data

Footcandles on wall (shown above)

	3' from wall		
	4' on ctr.		
Distance from ceiling in feet	1	2	3
1	15	13	15
2	29	24	29
3	30	27	30
4	27	29	27
5	24	27	24
6	22	23	22
7	20	21	20
8	18	18	18
9	16	16	16
10	14	14	14
12	12	12	12
14	10	10	10

Lensed Wall Wash, 2500lm Engine, 72.3 lm/w

Candela Curve



Frame: **C7RN**
Engine: **C6L25835WZ10U**
Trim: **C7RLWCL**

Output lumens: 1541 lms
Input watts: 21.3 W
CRI: 80 min
CCT¹: 3500K

Efficacy: 72.3 lm/w
Report²: F37165

Multiple unit data

Footcandles on wall

	2' from wall		
	3' on ctr.		
Distance from ceiling in feet	1	2	3
1	41	29	41
2	49	42	49
3	45	42	45
4	36	35	36
5	27	28	27
6	22	22	22
7	17	17	17
8	14	14	14
9	12	12	12
10	11	11	11
12	9	8	9
14	8	7	8

Multiple unit data

Footcandles on wall

	3' from wall		
	3' on ctr.		
Distance from ceiling in feet	1	2	3
1	15	15	15
2	29	28	29
3	31	31	31
4	31	31	31
5	28	28	28
6	24	24	24
7	21	21	21
8	18	18	18
9	15	15	15
10	13	13	13
12	11	11	11
14	9	9	9

Multiple unit data

Footcandles on wall (shown above)

	3' from wall		
	4' on ctr.		
Distance from ceiling in feet	1	2	3
1	13	10	13
2	23	20	23
3	24	22	24
4	24	23	24
5	21	21	21
6	18	19	18
7	16	16	16
8	14	14	14
9	12	12	12
10	10	10	10
12	8	8	8
14	7	7	7

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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