PHILIPS
LIGHTOLIER

Downlighting

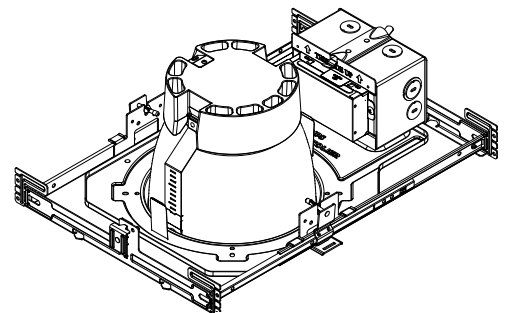### Calculite LED gen 3 7" round wall wash

1000 – 6000 lm

Calculite LED 7" generation 3 features industry leading visual comfort, excellent uniform illumination over time, and patented installation flexibility.

Complete product = Frame + Engine + Trim

Frame

example: C7RN

Series	Aperture	Installation	Voltage/Options		
C7	**R**	**N**			
C7 Calculite LED 7" aperture	R Round	N New construction	—	Universal (120/277 V)	
			3	347 V[1]	
			EM	Emergency[2]	
			LC	Chicago Plenum	

Engine

example: C6L15835NZ10U

Series	Lumens	CRI	CCT	Beam	Dimming		Voltage
C6L				**W**			
C6L Calculite LED 6" & 7" aperture	10 1000 lm	8 80 CRI	27 2700 K[4]	W Wide	Z10 0–10 V 1%		U Universal (120/277/347 V)
	15 1500 lm	9 90 CRI[4]	30 3000 K[4]		SOL EldoLED Solo 0.1%		
	20 2000 lm		35 3500 K		D Dali		
	25 2500 lm		40 4000 K		L Lutron LDE1 EcoSystem fade-to-black		
	35 3500 lm						
	48 4800 lm[3]				E ELV[5] (120V dimming only)		1 Universal (120/277/347 V)
	60 6000 lm[3]						

Trim

example: C7RLWCCP

Series	Aperture	Style	Finish	Flange
C7	**R**			
C7 Calculite LED 7" aperture	R Round	WW Open Wall Wash	CL Specular clear	— White (matte)
		LW Lensed Wall Wash[1]	CC Comfort clear	P Polished
		CW Corner Wall Wash[6]	CD Comfort clear diffuse	F Flangeless[6]
		DW Double Wall Wash[6]	CZ Champagne bronze	
			BK Black (matte)	
			WH White (matte)	— White (matte)
				F Flangeless[6]

Accessories (ordered with a flangeless trim)

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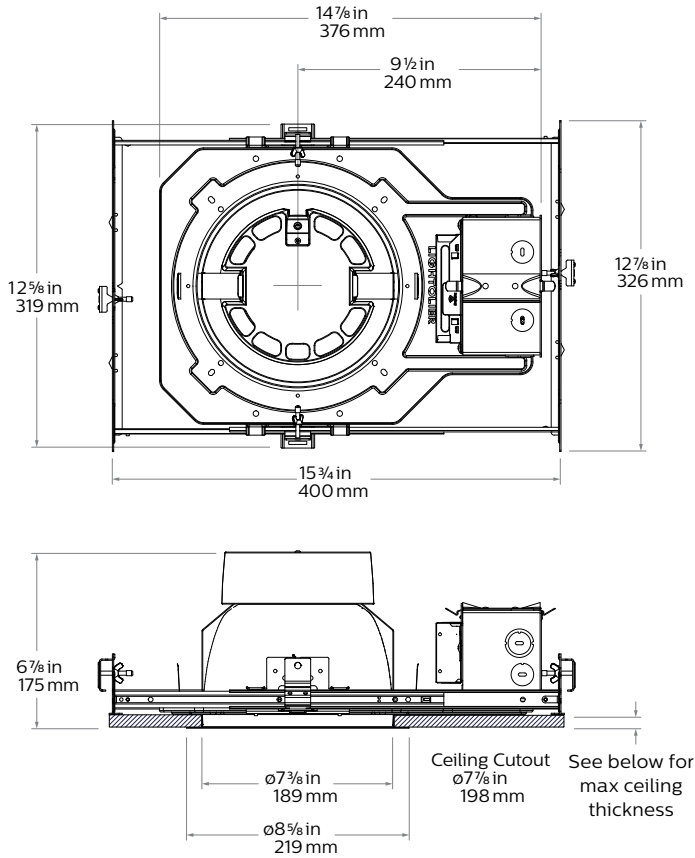**CAEM**   Field installable EM pack.

1. The 347V is not compatible with lumen packages over 2000lm for the Lensed Wall wash.
2. Emergency (EM) frame comes with emergency battery pack and ceiling mountable test switch.
3. The 4800lm and 6000lm packages are only available with 0-10V (Z10) dimming and have marked spacing requirements (see page 2 for spacing).
4. The 90 (9) CRI option is only available with 2700K (27) and 3000K (30) CCT.
5. ELV dimming is only compatible with up to 2500lm.
6. Corner (CW) and Double (DW) Wall Wash are not available with flangeless (F) option.
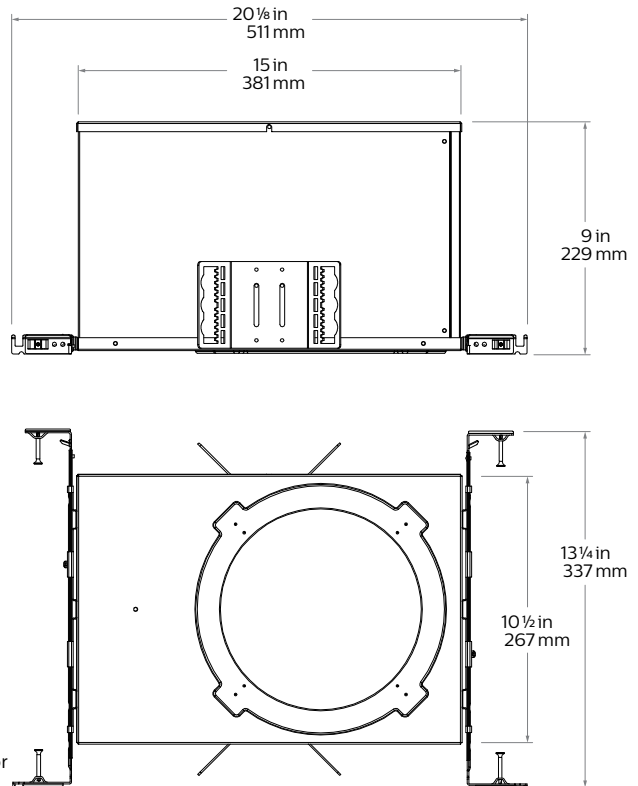
C7RWW   Calculite LED generation 3
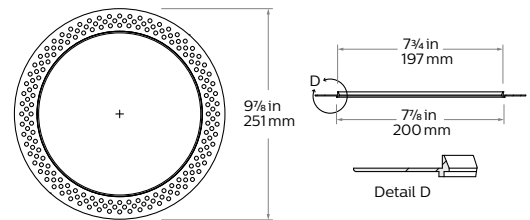
7" round wall wash

New Construction (N)

14 7/8 in
376 mm

9 1/2 in
240 mm

12 5/8 in
319 mm

12 7/8 in
326 mm

15 3/4 in
400 mm

6 7/8 in
175 mm

ø7 3/8 in
189 mm

ø8 5/8 in
219 mm

Ceiling Cutout
ø7 7/8 in
198 mm

See below for
max ceiling
thickness

Chicago Plenum (LC)

20 1/8 in
511 mm

15 in
381 mm

9 in
229 mm

13 1/4 in
337 mm

10 1/2 in
267 mm

Flangeless mud-in ring (CA7RFT)

9 7/8 in
251 mm

7 3/4 in
197 mm

7 7/8 in
200 mm

Detail D

Consult factory for wood installation instructions.

Marked spacing applications

Light engine	4800 lm	6000 lm
C6L_Z10U series	X	X
C6L_LU series	N/A	N/A
C6L_DU series	N/A	N/A

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

Maxium Ceiling Thickness

Lensed Wall Wash (LW): 3"
Wall Wasl (WW, CW, DW): 2–3/4"

Lifetime (TM-21) data

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

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

1. Dali configurations
2. 90 CRI configurations
3. Champagne Bronze and Black finishes
4. 347V and Emergency configurations
5. ELV & EldoLED SOLO dimming

Labels and Listings

cULus listed for wet location (lensed wall washers)

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

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Narrow

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

Medium/Wide

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

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

375, 750, 1125, 1500
Room side | Wall side

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

Output lumens:	2297 lms
Input watts:	21.3 W
CRI:	80 min
CCT[1]:	3500K

Efficacy: 107.8 lm/w
Report[2]: F37166

Multiple unit data
Footcandles on wall

Distance from ceiling in feet	2' from wall 3' on ctr.		
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

Distance from ceiling in feet	3' from wall 3' on ctr.		
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)

Distance from ceiling in feet	3' from wall 4' on ctr.		
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

312, 624, 936, 1248
Room side | Wall side
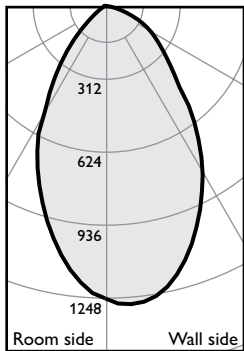
Frame: **C7RN**
Engine: **C6L25835WZ10U**
Trim: **C7RLWCL**

Output lumens:	1541 lms
Input watts:	21.3 W
CRI:	80 min
CCT[1]:	3500K

Efficacy: 72.3 lm/w
Report[2]: F37165

Multiple unit data
Footcandles on wall

Distance from ceiling in feet	2' from wall 3' on ctr.		
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

Distance from ceiling in feet	3' from wall 3' on ctr.		
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)

Distance from ceiling in feet	3' from wall 4' on ctr.		
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_ANSLG 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.