



Calculite LED generation 3 retrofit kits are designed to quickly convert installed Calculite compact fluorescent, incandescent and former generations of LED Downlights to the newest LED technology.

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

Complete luminaire = Engine + Trim

Engine

example: C6L15835WZ10UR

Series	Lumens	CRI	CCT	Beam	Dimming	Voltage	Voltage
C6L						<input type="checkbox"/>	R
C6L Calculite LED 6" aperture	10 1000lm	8 80CRI	27 2700K	M Medium (55°) W Wide (72°)	Z10 0-10V 1%	U Universal 120V/277V	R Retrofit
	15 1500lm		30 3000K				
	20 2000lm		35 3500K		E ELV (120V dimming only)	1 Universal 120V/277V	
	25 2500lm		40 4000K				
35 3500lm							

Trim

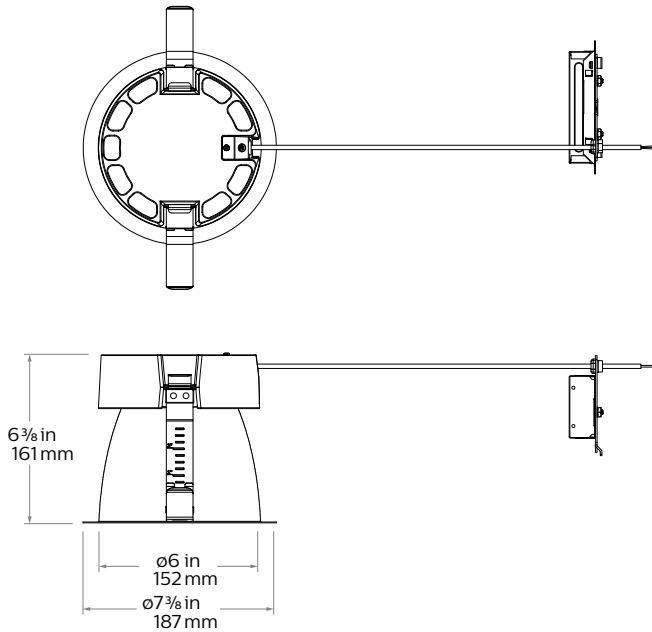
example: C6RDLCCP

Series	Aperture	Style	Finish	Flange	
C6	<input type="checkbox"/>	<input type="checkbox"/>			
C6 Calculite LED 6" aperture	R Round	DL Downlight	BK Black (matte)	CC Comfort clear	- White (matte)
			CL Specular clear	CD Comfort clear diffuse	P Polished
			WH White (matte)	CZ Champagne bronze	- White (matte)
		WW Wall wash	BK Black (matte)	CC Comfort clear	- White (matte)
			CL Specular clear	CD Comfort clear diffuse	P Polished
			WH White (matte)	CZ Champagne bronze	- White (matte)
	S Square	DLW Downlight (wide beam)	BK Black (matte)	CC Comfort clear	- White (matte)
			CL Specular clear	CD Comfort clear diffuse	P Polished
			WH White (matte)	CZ Champagne bronze	- White (matte)
		LW Wall wash	BK Black (matte)	CC Comfort clear	- White (matte)
			CL Specular clear	CD Comfort clear diffuse	P Polished
			WH White (matte)	CZ Champagne bronze	- White (matte)

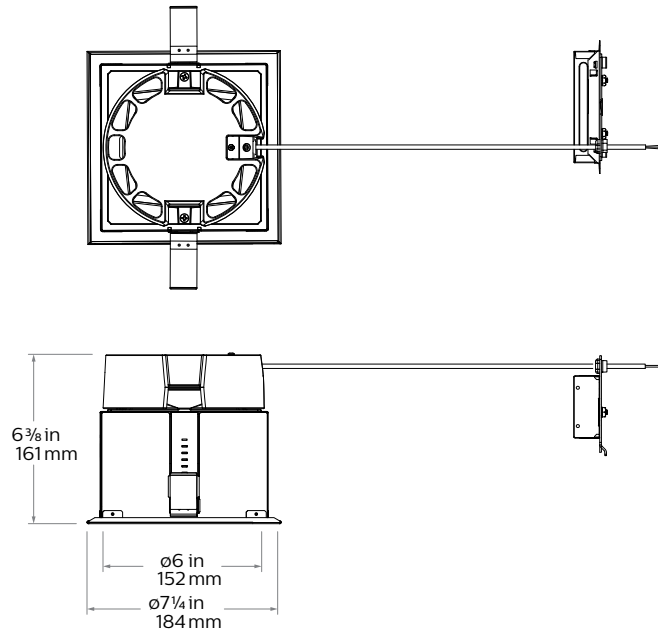
C6L Calculite LED 6" gen 3

Round/Square Retrofit

Retrofit (R) with round trim



Retrofit (R) with square trim



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.



- Champagne bronze (CZ):** Semi-specular finish that softens light at the source of the reflector while providing a warmer reflector appearance (slightly warmer).
- White (WH):** (matte) Brightest illuminated aperture and provides the smoothest transition to most ceilings when off (white is only available with a white flange).
- Black (BK):** (matte) Specular finish that provides the lowest aperture brightness possible and significantly reduces source identification in a ceiling.

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.

C6L Calculite LED 6" gen 3

Round/Square Retrofit

Compatibility

Frames

With CFL:
S6132_series

With INC:
BS600

With LED:
C6L_N series
C6X6L_N series
P6RD_N_series

Engines

Use Retrofit configuration:
C6R_Trim + C6L_Engine

Use Retrofit configuration:
C6R_Trim + C6L_Engine

Use Retrofit configuration:
C6R_Trim + C6L_Engine
C6S_Trim + C6L_Engine
C6R_Trim + C6L_Engine

* Not available for retrofitting luminaires with integral emergency battery.

Drivers

- Advance 0-10V 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.

ENERGY STAR® exceptions

- Champagne Bronze and Black finishes

Labels and Listings

- cULus listed for wet locations
- ENERGY STAR® certified
- IBEW Union made (light engines & reflectors)

Warranty

5 year warranty on complete system.



Complete warranty available at: http://images.philips.com/is/content/PhilipsConsumer/PDFDownloads/United%20States/ODL20150930_003-UPD-en_US-Philips-warranty-indoor-PLS-us.pdf

Medium/Wide

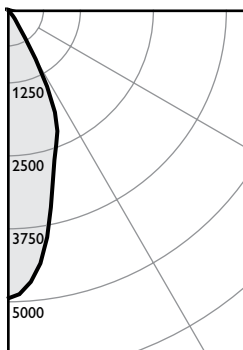
Light engine	Input volts	Input freq	Input current	Drive current	Input power	LED power	THD power	Power factor
C6L10_MZ10U	120V	50/60Hz	0.08	210 mA	9W	8W	<15%	>0.95
	277V		0.04				<20%	>0.95
C6L15_MZ10U	120V	50/60Hz	0.11	320 mA	15W	11W	<10%	>0.95
	277V		0.05				<15%	>0.95
C6L20_MZ10U	120V	50/60Hz	0.15	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

Lifetime (TM-21) data

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

Narrow beam, 2500lm Engine, 103.0 lm/W or 108.0 lm/W at 22.8W (Power over Ethernet)

Candela Curve



Frame: **C6RN**
Engine: **C6L25835NZ10U**
Trim: **C6RDLCL**

Output lumens: 2462 lms
Input watts: 23.9 W
CRI: 80 min
CCT¹: 3500K
Spacing Crit.: 0.6
Beam Angle: 40°

Zonal summary

Zone	Lumens	%Luminaire
0-30	2113	85.8%
0-40	2383	96.8%
0-60	2459	99.9%
0-90	2462	100.0%

Angle	Mean CP	Lumens
0	4938	
5	4667	423
10	3948	
15	3027	856
20	2456	
25	1936	834
30	977	
35	352	270
40	205	
45	87	72
50	13	
55	4	4
60	3	
65	2	2
70	1	
75	1	1
80	0	
85	1	0
90	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	198	3.0'
6'	137	3.6'
7'	101	4.2'
8'	77	4.8'
9'	61	5.4'

* Beam diameter is where foot-candles drop to 50% of maximum.

Multiple unit data - RCR 2

Spacing on center	Initial center beam foot-candles	Watts per sq. ft.
5'	114.3	1.06
6'	75.0	0.70
7'	53.6	0.50
8'	44.7	0.41
9'	35.7	0.33

38' x 38' x 10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Efficacy: 103.0 lm/W
Report#: F37145

Adjustment factors

Finish	CCT	Lumens
CL = 100%	80CRI 4000K = 103%	6000lm = 202%
CC = 95%	80CRI 3500K = 100%	4800lm = 192%
CD = 87%	80CRI 3000K = 95%	3500lm = 140%
CZ = 63%	80CRI 2700K = 93%	2500lm = 100%
WH = 87%	90CRI 3000K = 83%	2000lm = 80%
BK = 57%	90CRI 2700K = 78%	1500lm = 60%
		1000lm = 40%

Coefficients of utilization

Ceiling	80%		70%		50%		30%		0%		
	70	50	30	10	50	10	50	10	0		
RCR	Zonal cavity method - Effective floor reflectance = 20%										
Room Cavity Ratio	0	119	119	119	116	116	111	111	106	106	100
1	114	112	109	107	110	106	105	102	102	99	95
2	109	105	101	98	103	97	100	95	97	93	90
3	105	99	95	91	98	90	95	89	93	88	85
4	100	94	89	85	93	85	90	84	88	83	80
5	96	89	84	80	88	79	86	79	84	78	76
6	92	84	79	75	83	75	82	74	81	74	72
7	88	80	75	71	79	71	78	71	77	70	69
8	85	76	71	67	76	67	75	67	74	67	65
9	81	73	68	64	72	64	72	64	71	64	62
10	78	70	65	61	69	61	68	61	68	61	59

