

PHILIPS LIGHTOLIER

Downlighting

Calculite LED gen 3

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

Engine

example: C6L15835NZ10U

Series	Lumens	CRI	CCT	Beam ⁴	Dimming	Voltage
C6L						
C6L Calculite LED 6" & 7" aperture	10 1000 lm 15 1500 lm 20 2000 lm 25 2500 lm 35 3500 lm 48 4800 lm ³ 60 6000 lm ³	8 80 CRI 9 90 CRI	27 2700 K 30 3000 K 35 3500 K 40 4000 K	N Narrow (40°) M Medium (55°) W Wide (72°)	Z10 0-10 V 1% ³ SOL EldoLED Solo 0-10 V 0.1% D Dali L Lutron LDE1 EcoSystem (fade-to-black) DMX Digital Multiplexing E ELV (120V dimming only) ⁵ P Power over Ethernet Only compatible with 1000 (10) to 2500 (25) lumen configurations.	U Universal 120/277/347 V 1 Universal 120 V/277 V E Ethernet 48 V DC

Trim

example: C7RDLNMCCP

Series	Aperture	Style	Beam ⁴	Finish	Flange
C7	R	DL			
C7 Calculite LED 7" aperture	R Round	DL Downlight	NM Narrow/ Medium W Wide	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 — White (matte) F Flangeless

Beam options

Trim	Narrow engine	Medium engine	Wide engine
Narrow/ Medium	20° (0.3 s.c.)	44° (0.7 s.c.)	59° (0.9 s.c.)
Wide	35° (0.6 s.c.)	59° (1.0 s.c.)	69° (1.2 s.c.)

Accessories

CA7RFT	Mud-in ring for use with flangeless installations (ordered with a flangeless trim)
CAEM	Field installable EM pack
AMS	ActiLume multi-sensor (optional accessory for Power Over Ethernet configurations)
SWZDT	SpaceWise wireless controller with dwell time functionality, compatible with all 0-10V configurations (for details see "SWZDT" spec sheet)

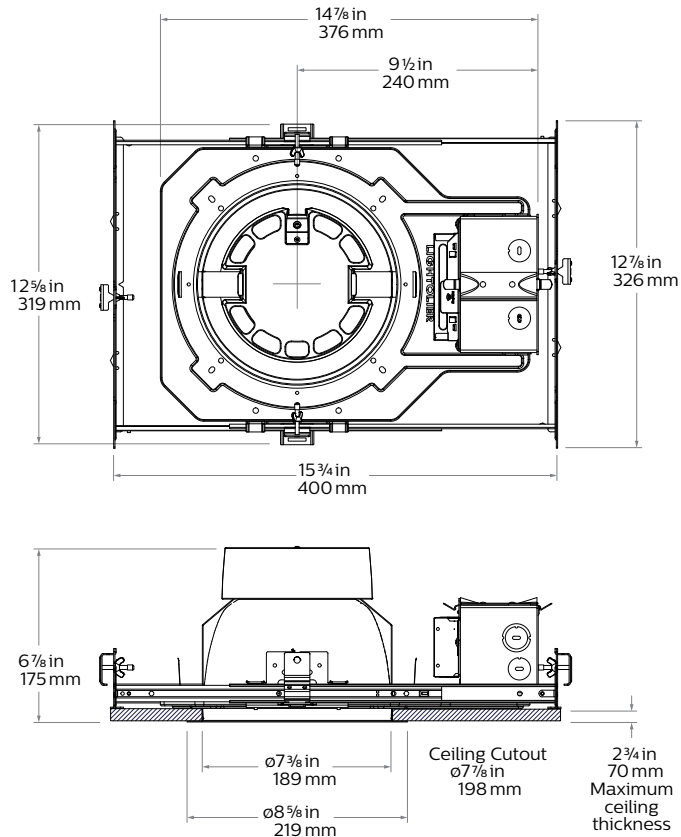
- Emergency (EM) and Chicago Plenum (LC) options are only available with New construction (N) installations.
- Emergency (EM) frame comes with emergency battery pack and ceiling mountable test switch (see pg 4).
- The 4800lm (48) and 6000lm (60) are only available with 0-10V (Z10) dimming and have marked spacing requirements (see page 3).
- See Beam Options table to the left for light engine and trim combination spacing criterion.
- ELV (E) dimming is only compatible with up to 2500lm (25) configurations.



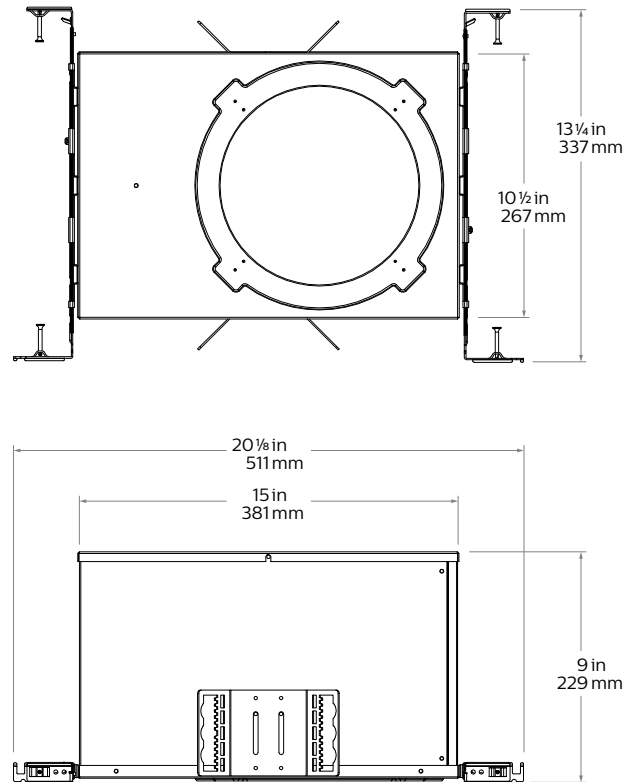
C7RDL Calculite LED generation 3

7" round downlight

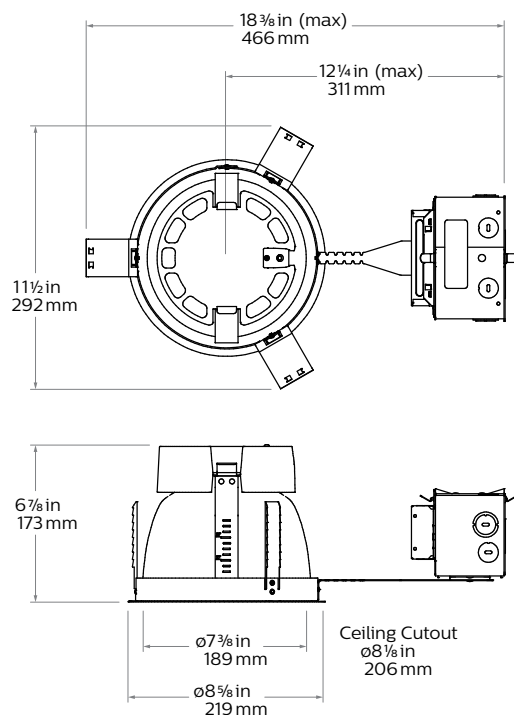
New Construction (N)



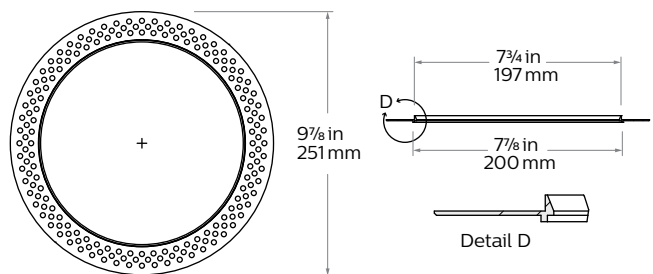
Chicago Plenum (LC)



Retrofit



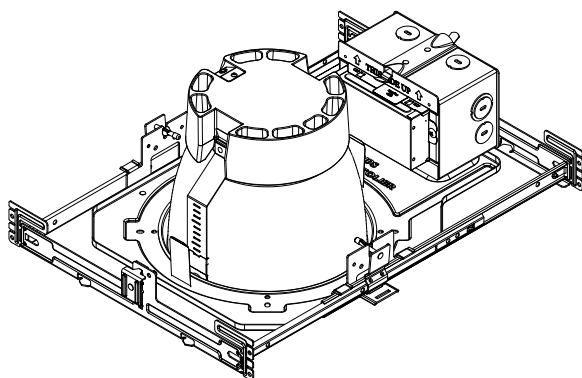
Flangeless mud-in ring (CA7RFT) accessory



Consult factory for wood installation instructions.

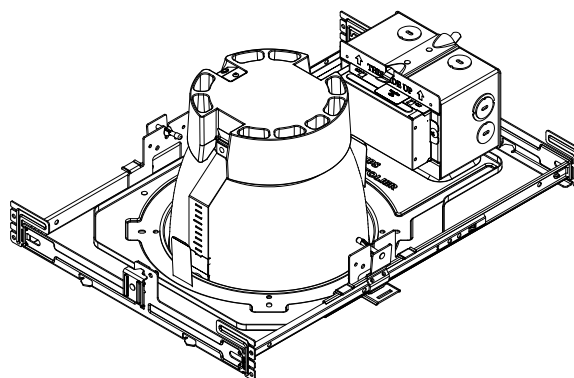
C7RDL Calculite LED generation 3

7" round downlight



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

- Nominal input volts.
- 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* 4800lm	L90 @ 60,000hrs.	L90 @ 60,000hrs.
6000lm	L90 @ 60,000hrs.	L80 @ 60,000hrs.

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

C7RDL Calculite LED generation 3

7" round downlight

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 is 2-3/4".
Minimum ceiling thickness is 1/8".

Emergency

Reflector mounted test switch requires above ceiling access. For reflector mounted test switch, order emergency frame and add "EM" suffix to reflector (example: C6SDLCCCEM).

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 for fast and tool-less installs into T-grid & hat channel ceilings.

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

- 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 and DMX 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 & Black finishes

347V and Emergency configurations

Dali & EldoLED Solo dimming

Power over Ethernet driver

Labels and Listings

cULus listed for wet location

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

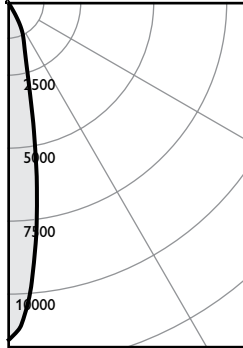


C7RDL Calculite LED generation 3

7" round downlight

Narrow beam (0.3 s.c.), 2500lm Engine, 101.0 lm/w or 105.9 lm/W at 22.8W (Power over Ethernet)

Candela Curve



Frame: **C7RN or 7RN**
Engine: **C6L25835NZ10U**
Trim: **C7RDLNMCL**

Output lumens: 2414 lms
Input watts: 23.9 W
CRI: 80 min
CCT¹: 3500K
Spacing Crit.: 0.3
Beam Angle: 20°

Zonal summary

Zone	Lumens	%Luminaire
0-30	2193	90.8%
0-40	2380	98.6%
0-60	2412	99.9%
0-90	2414	100.0%

Angle	Mean CP	Lumens
0	11585	788
5	9590	
10	5675	
15	2794	
20	1736	
25	1267	567
30	738	
35	242	
40	92	188
45	33	
50	7	
55	2	2
60	2	
65	1	
70	1	1
75	1	
80	0	
85	1	1
90	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	463	1.5'
6'	322	1.8'
7'	236	2.1'
8'	181	2.4'
9'	143	2.7'

* 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'	114.1	1.06
6'	74.9	0.70
7'	53.5	0.50
8'	44.6	0.41
9'	35.6	0.33

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

Efficacy: 101.0 lm/w
Report#: F37146

Adjustment factors

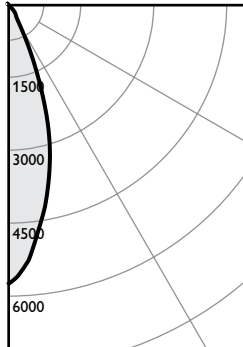
Finish	CCT	Lumens
CL = 100%	80CRI 4000K = 103%	6000lm = 202%
CC = 95%	80CRI 3500K = 100%	4800lm = 192%
CD = 87%	80CRI 3000K = 95%	3500lm = 140%
CZ = 63%	80CRI 2700K = 93%	2500lm = 100%
WH = 87%	90CRI 3000K = 83%	2000lm = 80%
BK = 57%	90CRI 2700K = 78%	1500lm = 60%
		1000lm = 40%

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%																
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	100	106	106	100	100
	1	115	113	111	109	110	107	106	104	103	101	96	92	103	101	96	92
	2	111	107	104	101	105	100	102	98	99	96	92	88	99	96	92	88
	3	107	102	98	95	100	94	98	93	96	91	89	85	96	91	89	85
	4	103	97	93	90	96	89	94	88	92	87	85	82	92	87	85	82
	5	100	93	89	86	92	85	91	85	89	84	82	80	89	84	82	80
	6	96	90	85	82	89	82	88	81	86	81	79	77	86	81	79	77
	7	93	86	82	79	86	78	85	78	84	78	76	74	83	78	76	74
	8	90	83	79	76	83	76	82	75	81	75	74	72	80	75	74	72
	9	88	80	76	73	80	73	79	73	78	72	71	70	77	72	71	70
	10	85	78	74	71	77	71	77	70	76	70	69	68	75	70	69	68

Narrow beam (0.6 s.c.), 2500lm Engine, 95.5 lm/w or 100.1 lm/W at 22.8W (Power over Ethernet)

Candela Curve



Frame: **C7RN or 7RN**
Engine: **C6L25835NZ10U**
Trim: **C7RDLWCL**

Output lumens: 2283 lms
Input watts: 23.9 W
CRI: 80 min
CCT¹: 3500K
Spacing Crit.: 0.6
Beam Angle: 35°

Zonal summary

Zone	Lumens	%Luminaire
0-30	1956	85.6%
0-40	2170	95.0%
0-60	2276	99.7%
0-90	2283	100.0%

Angle	Mean CP	Lumens
0	5763	469
5	5234	
10	4320	
15	3368	
20	2272	
25	1203	569
30	543	
35	319	
40	250	215
45	128	
50	21	
55	6	7
60	4	
65	3	
70	3	2
75	2	
80	2	
85	2	2
90	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	231	3.0'
6'	160	3.6'
7'	118	4.2'
8'	90	4.8'
9'	71	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'	106.5	1.06
6'	69.9	0.70
7'	49.9	0.50
8'	41.6	0.41
9'	33.3	0.33

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

Efficacy: 95.5 lm/w
Report#: F37147

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%
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%																
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	100	106	106	100	100
	1	114	112	110	108	110	106	106	103	102	100	95	92	103	101	96	92
	2	110	105	102	99	104	98	101	96	98	94	90	88	99	96	92	88
	3	105	100	95	92	98	91	96	90	93	88	86	84	93	88	86	84
	4	101	95	90	86	93	86	91	85	89	84	81	79	89	84	81	79
	5	97	90	85	81	89	81	87	80	86	80	78	76	86	80	78	76
	6	93	86	81	77	85	77	83	76	82	76	74	72	82	76	74	72
	7	90	82	77	73	81	73	80	73	79	72	71	70	79	72	71	70
	8	86	78	73	70	78	70	77	69	76	69	68	67	76	69	68	67
	9	83	75	70	67	75	67	74	66	73	66	65	64	73	66	65	64
	10	80	72	67	64	72	64	71	64	70	63	62	61	70	63	62	61

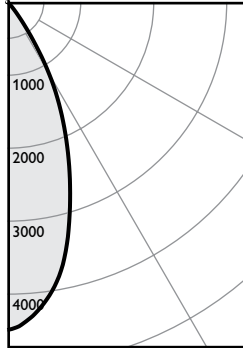
1. Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
2. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

C7RDL Calculite LED generation 3

7" round downlight

Medium beam (0.7 s.c.), 2500lm Engine, 117.6 lm/w or 117.1 lm/W at 21.4W (Power over Ethernet)

Candela Curve



Frame: **C7RN or 7RN**
Engine: **C6L25835MZ10U**
Trim: **C7RDLNMCL**

Output lumens: 2506 lms
Input watts: 21.3 W
CRI: 80 min
CCT¹: 3500K
Spacing Crit.: 0.7
Beam Angle: 44°

Zonal summary

Zone	Lumens	%Luminaire
0-30	2111	84.3%
0-40	2457	98.1%
0-60	2504	99.9%
0-90	2506	100.0%

Angle	Mean CP	Lumens
0	4494	
5	4292	
10	3893	
15	3239	893
20	2493	
25	1807	821
30	1153	
35	513	346
40	168	
45	42	44
50	7	
55	2	3
60	2	
65	1	1
70	1	
75	0	0
80	0	
85	1	0
90	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	180	3.5'
6'	125	4.2'
7'	92	4.9'
8'	70	5.6'
9'	55	6.3'

* 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'	116.3	0.94
6'	76.3	0.62
7'	54.5	0.44
8'	45.4	0.37
9'	36.3	0.30

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

Efficacy: 117.6 lm/w
Report#: F37137

Adjustment factors

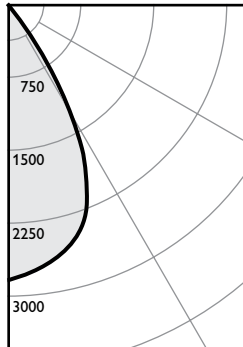
Finish	CCT	Lumens
CL = 100%	80CRI 4000K = 102%	6000lm = 240%
CC = 95%	80CRI 3500K = 100%	4800lm = 192%
CD = 87%	80CRI 3000K = 97%	3500lm = 140%
CZ = 63%	80CRI 2700K = 87%	2500lm = 100%
WH = 87%	90CRI 3000K = 77%	2000lm = 80%
BK = 57%	90CRI 2700K = 73%	1500lm = 60%
		1000lm = 40%

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%																
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	100	106	106	100	100
1	114	112	109	107	109	106	105	102	102	99	99	95	95	97	93	90	90
2	109	105	101	98	103	97	100	95	97	93	90	88	88	93	87	85	85
3	105	99	94	91	98	90	95	89	93	87	85	82	82	88	82	80	80
4	100	93	89	85	92	84	90	83	88	82	80	76	76	84	78	76	76
5	96	88	83	79	88	79	86	78	84	78	76	72	72	80	74	72	72
6	92	84	79	75	83	75	82	74	80	74	72	68	68	76	70	68	68
7	88	80	74	71	79	71	78	70	77	70	68	64	64	72	66	64	64
8	84	76	71	67	75	67	74	67	73	66	65	62	62	70	64	62	62
9	81	72	67	64	72	63	71	63	70	63	62	59	59	67	61	59	59
10	78	69	64	61	69	60	68	60	67	60	59	56	56	64	58	56	56

Medium beam (0.9 s.c.), 2500lm Engine, 110.0 lm/w or 109.4 lm/W at 21.4W (Power over Ethernet)

Candela Curve



Frame: **C7RN or 7RN**
Engine: **C6L25835WZ10U**
Trim: **C7RDLNMCL**

Output lumens: 2342 lms
Input watts: 21.3 W
CRI: 80 min
CCT¹: 3500K
Spacing Crit.: 0.9
Beam Angle: 59°

Zonal summary

Zone	Lumens	%Luminaire
0-30	1830	78.1%
0-40	2259	96.4%
0-60	2340	99.9%
0-90	2342	100.0%

Angle	Mean CP	Lumens
0	2826	
5	2766	
10	2678	
15	2545	711
20	2318	
25	1924	858
30	1309	
35	647	428
40	270	
45	81	78
50	11	
55	3	4
60	2	
65	1	1
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'	113	4.5'
6'	79	5.4'
7'	58	6.3'
8'	44	7.2'
9'	35	8.1'

* 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'	107.7	0.94
6'	70.7	0.62
7'	50.5	0.44
8'	42.1	0.37
9'	33.6	0.30

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

Efficacy: 115.2 lm/w
Report#: F37143

Adjustment factors

Finish	CCT	Lumens
CL = 100%	80CRI 4000K = 107%	6000lm = 240%
CC = 95%	80CRI 3500K = 100%	4800lm = 192%
CD = 87%	80CRI 3000K = 99%	3500lm = 140%
CZ = 63%	80CRI 2700K = 93%	2500lm = 100%
WH = 87%	90CRI 3000K = 87%	2000lm = 80%
BK = 57%	90CRI 2700K = 81%	1500lm = 60%
		1000lm = 40%

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%																
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	100	106	106	100	100
1	114	111	109	107	109	105	105	102	102	99	99	94	94	96	92	88	88
2	109	104	100	97	102	96	99	94	96	92	88	85	85	93	87	83	83
3	103	97	93	89	96	88	93	87	91	85	83	80	80	88	82	80	80
4	98	91	86	82	90	82	88	81	86	80	77	74	74	82	76	74	74
5	94	86	80	76	85	76	83	75	82	75	73	70	70	78	72	70	70
6	89	81	75	71	80	71	79	70	77	70	68	64	64	72	66	64	64
7	85	76	71	67	76	66	74	66	73	66	64	60	60	68	62	60	60
8	81	72	66	63	72	62	71	62	70	62	60	57	57	65	59	57	57
9	78	68	63	59	68	59	67	59	66	58	57	54	54	62	56	54	54
10	74	65	59	56	64	55	64	55	63	55	54	51	51	59	53	51	51

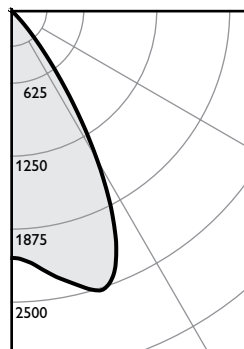
1. Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
2. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

C7RDL Calculite LED generation 3

7" round downlight

Wide beam (1.0 s.c.), 2500lm Engine, 117.1 lm/w or 116.6 lm/W at 21.4W (Power over Ethernet)

Candela Curve



Frame: **C7RN or 7RN**
Engine: **C6L25835MZ10U**
Trim: **C7RDLWCL**

Output lumens: 2495 lms
Input watts: 21.3 W
CRI: 80 min
CCT¹: 3500K
Spacing Crit.: 1.0
Beam Angle: 59°

Zonal summary

Zone	Lumens	%Luminaire
0-30	1855	74.4%
0-40	2383	95.5%
0-60	2491	99.8%
0-90	2495	100.0%

Angle	Mean CP	Lumens
0	2123	
5	2180	213
10	2325	
15	2461	696
20	2486	
25	2128	947
30	1490	
35	823	527
40	354	
45	112	104
50	15	
55	4	5
60	3	
65	2	2
70	2	
75	1	1
80	1	
85	1	1
90	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	85	5.0'
6'	59	6.0'
7'	43	7.0'
8'	33	8.0'
9'	26	9.0'

* 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'	114.1	0.94
6'	74.8	0.62
7'	53.5	0.44
8'	44.6	0.37
9'	35.6	0.30

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

Efficacy: 117.1 lm/w
Report#: F37136

Adjustment factors

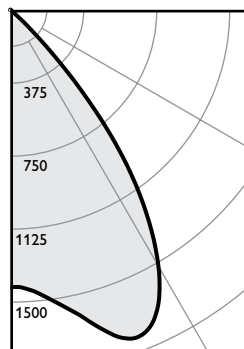
Finish	CCT	Lumens
CL = 100%	80CRI 4000K = 102%	6000lm = 240%
CC = 95%	80CRI 3500K = 100%	4800lm = 192%
CD = 87%	80CRI 3000K = 97%	3500lm = 140%
CZ = 63%	80CRI 2700K = 87%	2500lm = 100%
WH = 87%	90CRI 3000K = 77%	2000lm = 80%
BK = 57%	90CRI 2700K = 73%	1500lm = 60%
		1000lm = 40%

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%																
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	100	106	106	100	
1	114	111	108	106	109	105	105	101	101	98	98	94	94	98	98	94	
2	108	103	99	96	102	95	95	93	93	91	91	87	87	93	93	87	
3	103	96	92	88	95	87	87	86	86	84	84	81	81	88	88	81	
4	98	90	85	81	89	80	80	79	79	78	78	76	76	85	85	76	
5	93	84	79	74	83	74	74	73	73	72	72	70	70	79	79	71	
6	88	79	73	69	78	69	69	68	68	67	67	66	66	76	76	66	
7	84	74	68	64	74	64	64	63	63	62	62	61	61	71	71	62	
8	80	70	64	60	69	60	60	59	59	58	58	57	57	67	67	58	
9	76	66	60	56	66	56	56	55	55	54	54	53	53	64	64	54	
10	72	62	57	53	62	53	53	52	52	51	51	50	50	60	60	51	

Wide beam (1.2 s.c.), 2500lm Engine, 109.7 lm/w or 109.2 lm/W at 21.4W (Power over Ethernet)

Candela Curve



Frame: **C6RN or 7RN**
Engine: **C6L25835MZ10U**
Trim: **C6RDLCL**

Output lumens: 2336 lms
Input watts: 21.3 W
CRI: 80 min
CCT¹: 3500K
Spacing Crit.: 1.2
Beam Angle: 69°

Zonal summary

Zone	Lumens	%Luminaire
0-30	1411	60.4%
0-40	2117	90.6%
0-60	2332	99.8%
0-90	2336	100.0%

Angle	Mean CP	Lumens
0	1426	
5	1454	142
10	1544	
15	1676	479
20	1798	
25	1751	791
30	1522	
35	1160	706
40	690	
45	224	207
50	25	
55	6	8
60	4	
65	3	3
70	2	
75	1	1
80	1	
85	1	0
90	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	57	6.0'
6'	40	7.2'
7'	29	8.4'
8'	22	9.6'
9'	18	10.8'

* 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'	105.4	0.94
6'	69.1	0.62
7'	49.4	0.44
8'	41.2	0.37
9'	32.9	0.30

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

Efficacy: 109.7 lm/w
Report#: F37144

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%

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	0
RCR	Zonal cavity method - Effective floor reflectance = 20%																
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	100	106	106	100	
1	113	110	108	105	108	104	104	104	100	97	97	94	94	98	98	94	
2	107	102	98	94	100	93	93	91	91	89	89	87	87	93	93	87	
3	101	94	89	85	93	84	84	83	83	82	82	81	81	88	88	81	
4	95	87	81	77	86	76	76	75	75	74	74	73	73	82	82	73	
5	90	81	75	70	80	70	70	69	69	68	68	67	67	76	76	68	
6	85	75	69	64	74	64	64	63	63	62	62	61	61	71	71	62	
7	80	70	63	59	69	59	59	58	58	57	57	56	56	66	66	57	
8	76	65	59	54	65	54	54	53	53	52	52	51	51	62	62	52	
9	71	61	55	50	60	50	50	49	49	48	48	47	47	58	58	48	
10	68	57	51	47	57	47	47	46	46	45	45	44	44	55	55	45	

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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