

PHILIPS LIGHTOLIER

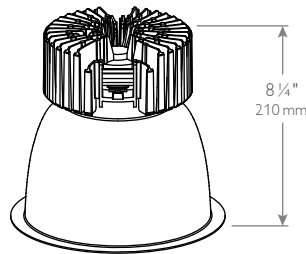
Downlighting

Calculite LED 7" Downlight

Round aperture,
Narrow, Medium & Wide beam
1500/2000/3500/6000lm



Total height of
Light engine
+
Reflector



Calculite LED 7" features an LED array of high brightness white light LEDs. The new LED boards in Calculite LED ensure a less than 2-step SDCM color variation between luminaires.

Complete product = Frame-in kit + Trim kit
Lumen package for the frame-in kit must match the trim kit.

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

Frame-in kit

example: C7L15NUVBZ10V

Series	Lumens	Installation	Input voltage	Version	Dimming	Options ⁵
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VB	<input type="checkbox"/>	<input type="checkbox"/>
C7L Calculite 7" LED round aperture	15 1500lm	N New construction R Remodeler	U Universal (120/277V)	VB Version B	Z10V 0-10V dimming LD Lutron driver	EM Emergency ¹ LC Chicago Plenum ³
	20 2000lm 35 3500lm 50 6000lm	N New construction R Remodeler ⁶	1 120V 2 277V	VB Version B	Z10V 0-10V dimming LD Lutron driver	EM Emergency ¹ LC Chicago Plenum ³
C7L Calculite 7" LED round aperture (347v configurations)	15 1500lm 20 2000lm 35 3500lm	N New construction R Remodeler	1 120V	VB Version B	Z10V 0-10V dimming	-347 347V (for Canada) ²
	50 6000lm	N New construction	2 277V	VB Version B	Z10V 0-10V dimming	-347 347V (for Canada) ²
CUL Calculite LED Universal aperture	15 1500lm	J J-box mount retrofit	U Universal (120/277V)	VB Version B	Z10V 0-10V dimming Existing wiring will determine if dimming is an option.	
	20 2000lm	J J-box mount retrofit	1 120V 2 277V	VB Version B	Z10V 0-10V dimming Existing wiring will determine if dimming is an option.	
	15 1500lm 20 2000lm	S Screw-in base retrofit	1 120V	VB Version B		Existing wiring will determine if dimming is an option.

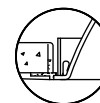
Trim kit

example: C7L1520DL35KWCCDPVB

Series	Lumens	Style	CCT	Beam	Reflector	Flange	Version ¹	Options ⁸
C7L	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VB	<input type="checkbox"/>
C7L Calculite 7" LED round aperture	1520 1500lm, 2000lm, 3500lm 50 6000lm	DL Downlight	27K 2700K 30K 3000K 35K 3500K 40K 4000K	N Narrow, 20° 0.3 s.c. ⁷ M Medium, 55° 0.8 s.c. W Wide, 70° 1.1 s.c.	CL Clear CCL Comfort clear CCD Comfort clear diffuse CCZ Champagne bronze WH White (painted)	W White (painted) P Polished (matches aperture) FT Flangeless (flush-mount) ^{4,5}	VB Version B	blank None EM Emergency

- Consult LED-EM spec sheet for Emergency (**EM**) option details and restrictions. Not available with Lutron driver (**LD**) dimming.
- Consult factory for availability of other 347V (**-347**) option configurations.
- Consult factory for availability for other Chicago Plenum (**LC**) option configurations. Not available for 6000 (**50**) lumen frame-in kits.
- Accessory **CA7FMR** required for gypsum applications and flangeless (**FT**) trims (minimal 1/4" reflector flange).
- Available for new construction (**N**) installation frame-in kits only.
- Available for 2000 (**20**) lumen frame-in kits only.
- Available for 6000 (**50**) lumen trim kits only.
- Specified only when reflector mounted EM test switch is required. For ceiling mounted switch leave blank.

Note: See page 3 for Energy Star[®] compatibility.
CalculiteLED-7in-Downlight-C7LDLVB.indd 04/16 page 1 of 9



CA7FMR

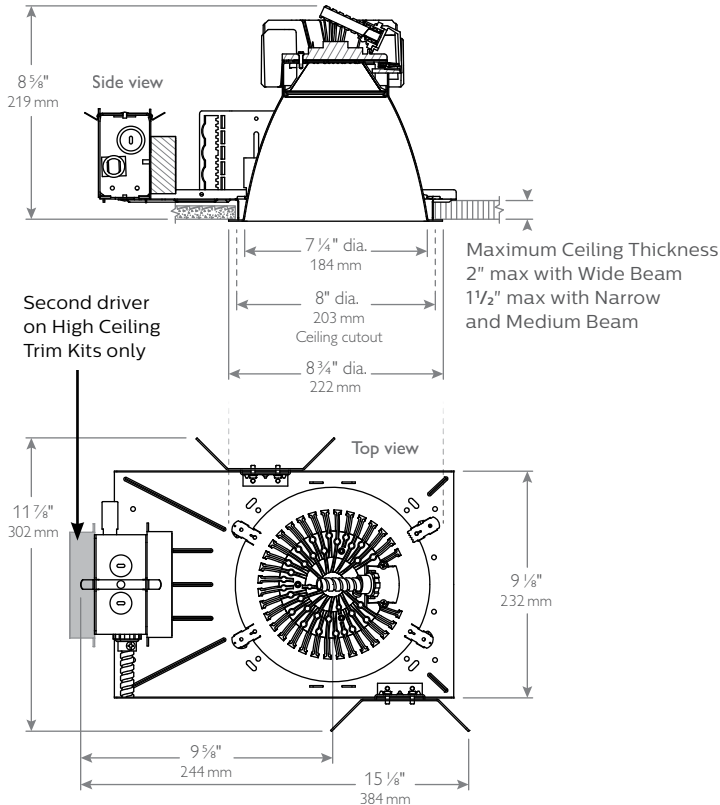
Flangeless trim with plaster ring accessory.
(Required for gypsum installations)



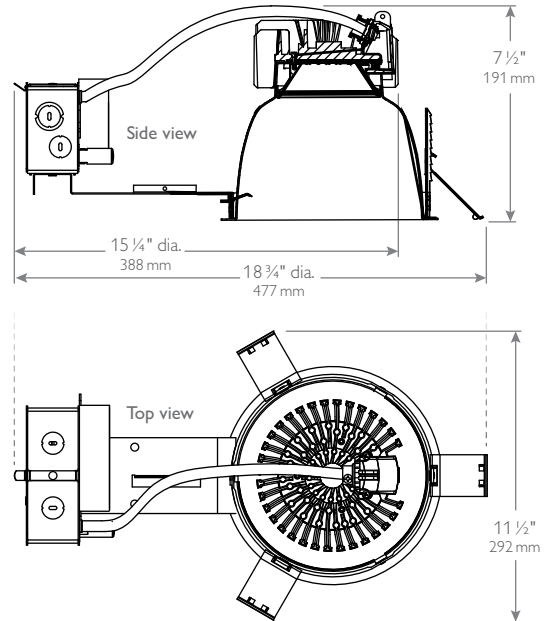
C7L-DL-VB Calculite LED

7" Round Aperture, Downlight, Narrow Medium & Wide Beam 1500/2000/3500/6000lm

New Construction



Remodeler



Frame-in kits

New construction

Mounting frame: Galvanized stamped steel for dry or plaster ceilings.

Vertical adjustment: Light engine adjusts in frame below ceilings up to 1 1/8" max.

Mounting brackets: Galvanized Steel. Adjustable through aperture. Use 3/4" or 1 1/2" lathing channel, 1/2" EMT or optional mounting bars (see Options and Accessories for optional mounting bars).

Remodeler

Compatibility: Flanged downlight only.

Power pack: Swivel junction box for tight plenum spaces. Snap-off covers permits wiring from top.

Spring holder: Galvanized steel. Accepts up to 2 1/2" (64mm) ceiling thickness.

Retrofit

Compatibility: Downlight only.

Capability: Converts 6" (153mm) or 7" (178mm) Lightolier incandescent frame-in kit without additional wiring using existing Calculite E26 base.

Socket cup support: Spun steel. Holds Calculite incandescent socket cup.

Socket extender: Phenolic E26 base. Connect to existing lamp holder.

CalculiteLED-7in-Downlight-C7LDLVB.indd 04

Quick-ship

Philips is committed to providing customers with the products they need when they need them. For Service Smart (2 day) and Spec Smart (2 week) availability please reference the Philips Luminaire Smart Service Guide or contact your Philips Lighting representative. Quick-ship SKUs apply to the United States only.

Options and accessories

Dimming capability:

0-10V or Lutron dimming (see LED-DIM spec sheet).

Emergency capability:

Inverter (see CP-60150 spec sheet - ZI series). Integral (see LED-EM spec sheet - add "EM" suffix).

Sloped ceilings:

Compatible with slope ceiling adapters (see SCA spec sheet).

Mounting bars:

1950 18" long (set of 2)

1951 27" long (set of 2)

7994 Wood joist telescoping mounting bars (minimum 13 1/4" and maximum 24 1/2")

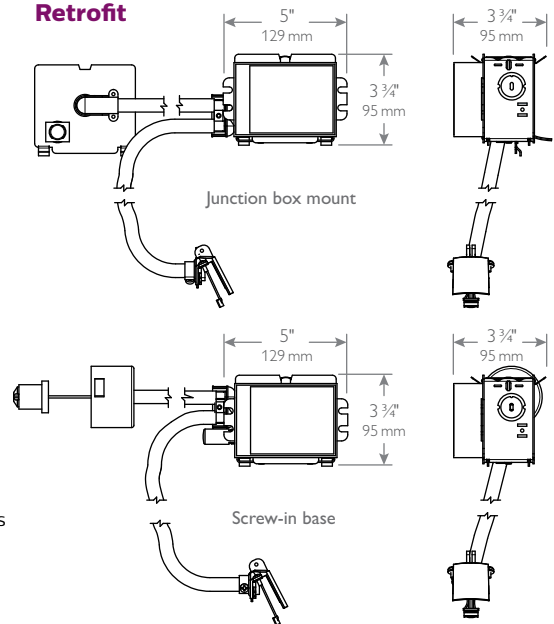
T-Bar anchor clips:

1956 For 18"/27" mounting bars (set of 4)

Decorative elements:

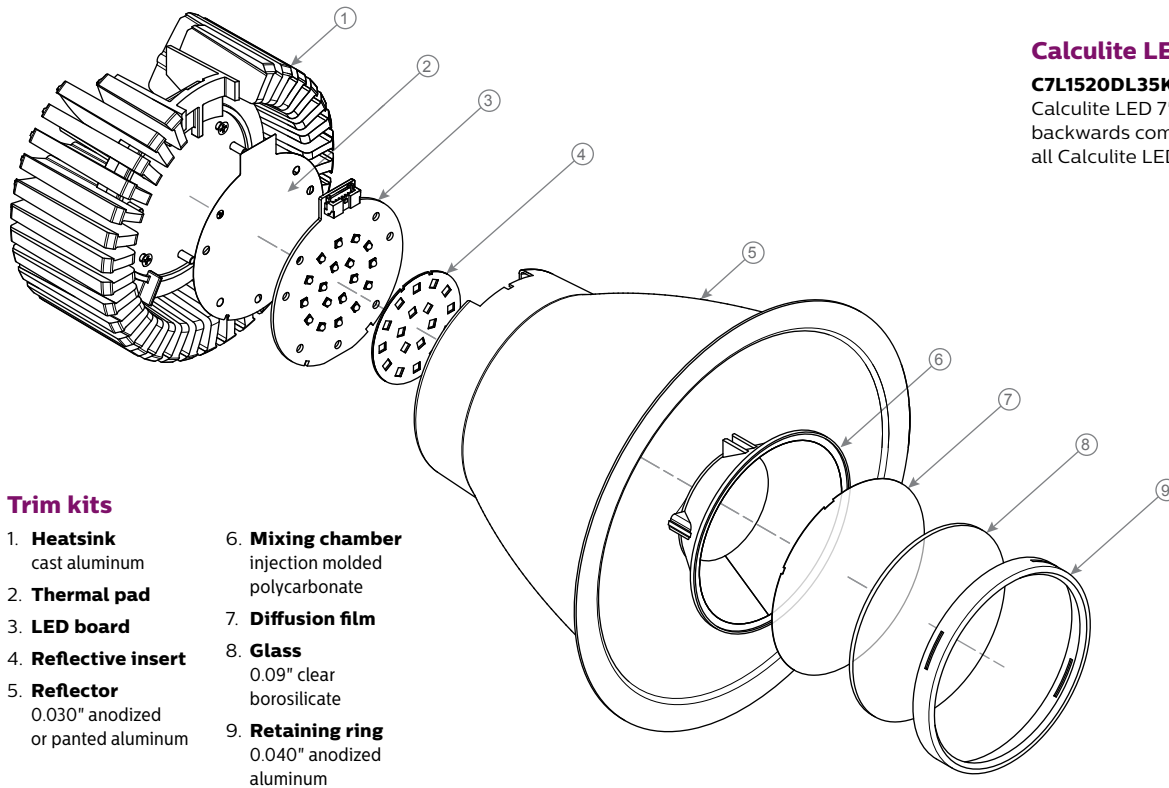
D7A Consult 7in Vetro spec sheet

Retrofit



C7L-DL-VB Calculite LED

7" Round Aperture, Downlight, Narrow Medium & Wide Beam 1500/2000/3500/6000lm



Calculite LED 7"

C7L1520DL35KWCCDPVB

Calculite LED 7" Trim kits are backwards compatible with all Calculite LED 7" Frame-in Kits.

Trim kits

1. **Heatsink**
cast aluminum
2. **Thermal pad**
3. **LED board**
4. **Reflective insert**
5. **Reflector**
0.030" anodized or painted aluminum
6. **Mixing chamber**
injection molded polycarbonate
7. **Diffusion film**
8. **Glass**
0.09" clear borosilicate
9. **Retaining ring**
0.040" anodized aluminum

Features

- Ceiling cutout:** 7" aperture; 8" (203mm).
- Depth:** 8⁵/₈" (219mm) including light engine.
- Power connection:** Attaches to light engine via push-in connector (on frame). Removable cover provides access.
- Junction box:** Allows inspection from below. UL listed for 8 No. 12 AWG, 90°C through branch circuit connectors.
- Thermal protector:** Meets NEC & UL requirements. Do not install insulation above or within 3" of luminaire.
- Thermal Management:** Heat sink and thermal design along with the clean room assembly process ensures specified performance levels are maintained.

ENERGY STAR®

- All new construction (**N**) frame-in and trim kit configurations are ENERGY STAR® certified except for the following:
- **Trim Kits:** Champagne bronze (**CCZ**) reflector finishes.
 - All 3500 lumen (**35**) optics configurations.
 - All 6000 lumen (**50**) optics configurations.
 - All emergency (**EM**) configurations.
 - All 347V configurations.

Electrical

- Electronic power supply:** 120 or 277V, 50/60Hz, encased, overload and short circuit protected, thermal regulation to protect against overheating, sound rating: "A", -20°C minimum starting temperature.
- Rated life:** Offers 60,000 hour rated life (3500lm offer 40,000 hour rated life) at 70% lumen maintenance (L70). Tested in accordance with IES LM-80-08 and TM-21-11.

Labels

- cULus, I.B.E.W.
- Suitable for wet locations.
- 5 year warranty.
- ENERGY STAR® certified (see exclusions to the left).

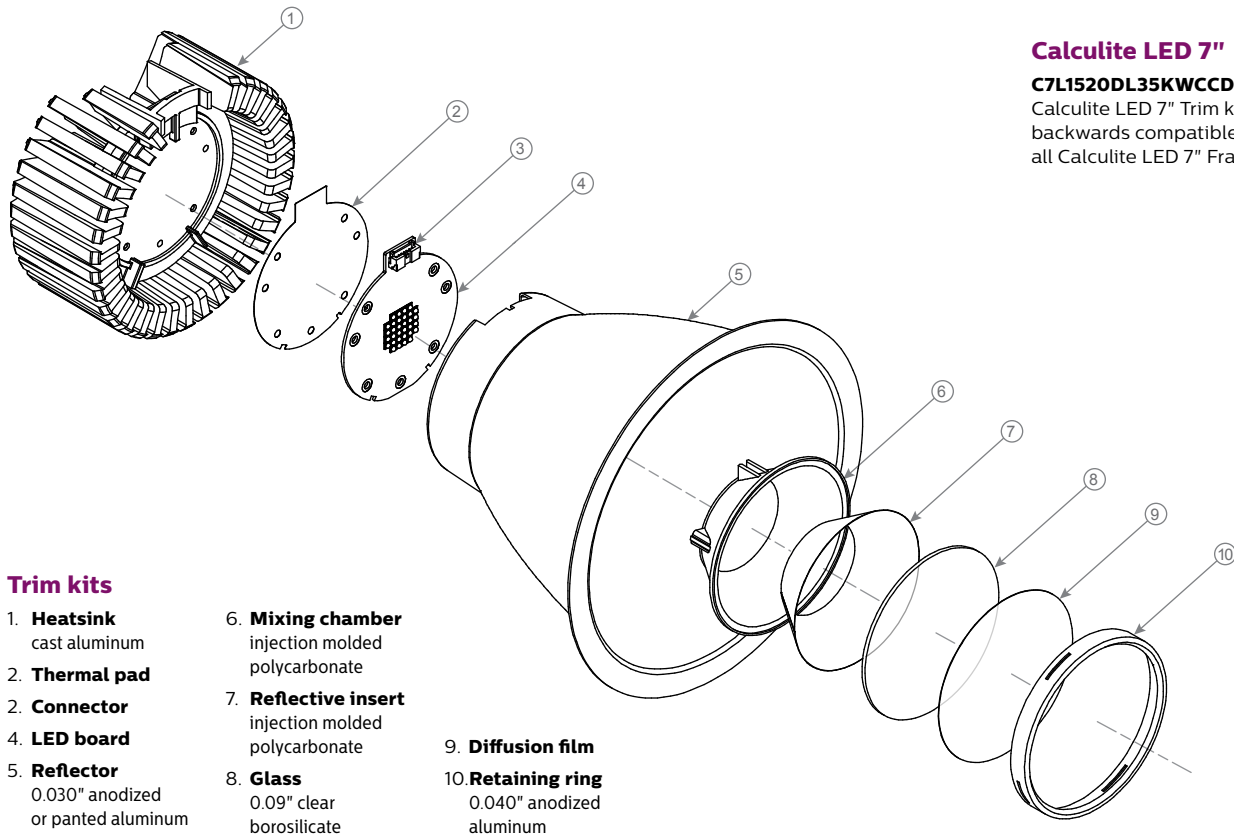
Frame-In kit Electrical specifications	Input volts	Input freq.	Input current	LED drive current	Input power*	LED power	THD factor	Power factor
C7L15 □ _VBZ10V 1500lm w/0-10V dimming	120V	50/60Hz	0.16A	300mA	18W	15W	<15%	>0.90
	277V	50/60Hz	0.08A	300mA	18W	15W	<20%	>0.90
C7L20 □ _VBZ10V 2000lm w/0-10V dimming	120V	50/60Hz	0.20A	400mA	25W	20W	<15%	>0.90
	277V	50/60Hz	0.09A	400mA	25W	20W	<15%	>0.90
C7L35N _VBZ10V 3500lm w/0-10V dimming	120V	50/60Hz	0.35A	700mA	41W	35W	<10%	>0.95
	277V	50/60Hz	0.16A	700mA	41W	35W	<15%	>0.90

* +/- 5%

- = Applies to both New Construction (**N**) and Remodeler (**R**) Installations.
- _ = Applies to both 120V (**1**) and 277V (**2**) Input voltages.

C7L-DL-VB Calculite LED

7" Round Aperture, Downlight, Narrow Medium & Wide Beam 1500/2000/3500/6000lm



Calculite LED 7"

C7L1520DL35KWCCDPVB

Calculite LED 7" Trim kits are backwards compatible with all Calculite LED 7" Frame-in Kits.

Trim kits

- | | | |
|--|--|---|
| <p>1. Heatsink
cast aluminum</p> <p>2. Thermal pad</p> <p>3. Connector</p> <p>4. LED board</p> <p>5. Reflector
0.030" anodized or panted aluminum</p> | <p>6. Mixing chamber
injection molded polycarbonate</p> <p>7. Reflective insert
injection molded polycarbonate</p> <p>8. Glass
0.09" clear borosilicate</p> | <p>9. Diffusion film</p> <p>10. Retaining ring
0.040" anodized aluminum</p> |
|--|--|---|

Features

Ceiling cutout: 7" aperture; 8" (203mm).
Depth: 8 1/4" (210 mm) including light engine.
Power connection: Attaches to light engine via push-in connector (on frame). Removable cover provides access.
Junction box: Allows inspection from below. UL listed for 8 No. 12 AWG, 90°C through branch circuit connectors.
Thermal protector: Meets NEC & UL requirements. Do not install insulation above or within 3" of luminaire.
Thermal Management: Heat sink and thermal design along with the clean room assembly process ensures specified performance levels are maintained.

Electrical

Electronic power supply: 120 or 277V, 50/60Hz, encased, overload and short circuit protected, thermal regulation to protect against overheating, sound rating, "A", -20°C minimum starting temperature.
Rated life: Offers 60,000 hour rated life at 70% lumen maintenance (L70). Tested in accordance with IES LM-80-08 and TM-21-11.

Labels

cULus, I.B.E.W.
 Suitable for wet locations.
 5 year warranty.

Frame-In kit	Input volts	Input freq.	Input current	LED drive current	Input power*	LED power	THD factor	Power factor
C7L50N_VBZ10V 6000lm w/0-10V dimming	120V	50/60Hz	0.58A	650mA	70W	57W	<20%	>0.90
	277V	50/60Hz	0.27A	650mA	70W	57W	<20%	>0.90

* +/- .5%

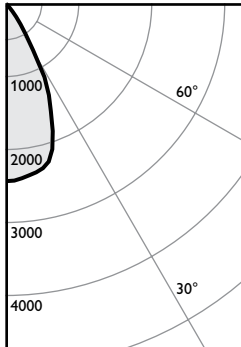
— = Applies to both 120V (1) and 277V (2) Input voltages.

C7L-DL-VB Calculite LED

7" Round Aperture, Downlight, Narrow Medium & Wide Beam 1500/2000/3500/6000lm

18W LED, 3500K, 55° Medium 1500 lumen

Candela Curve



Frame: C7L15NUVBZ10V
Trim: C7L1520DL35KMCLWVB

CCT¹: 3500K
Output lumens: 1716 lms
Input watts²: 18.3 W
Efficacy: 93.7 lm/w
CRI: 80 min
Spacing Crit.: 0.8
Beam Spread: 55°
Report no³: 701GFR

Zonal summary

Zone	Lumens	%Luminaire
0-30	1459	85.1%
0-40	1683	98.1%
0-60	1714	99.9%
0-90	1716	100.0%

Angle	Mean CP	Lumens
0	2450	
5	2419	229
10	2363	
15	2255	617
20	1869	
25	1386	613
30	734	
35	335	224
40	124	
45	25	29
50	4	
55	2	0
60	1	
65	1	1
70	1	
75	0	0
80	0	
85	0	0
90	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	98	4.0'
6'	68	4.8'
7'	50	5.6'
8'	38	6.4'
9'	30	7.2'

* 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'	79.5	0.81
6'	52.2	0.53
7'	37.3	0.38
8'	31.0	0.32
9'	24.8	0.25

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Finish Adjust. factors

CL = 100%	4000K = 103%
CCL = 95%	3500K = 100%
CCD = 87%	3000K = 97%
CCZ = 63%	2700K = 87%
WH = 87%	

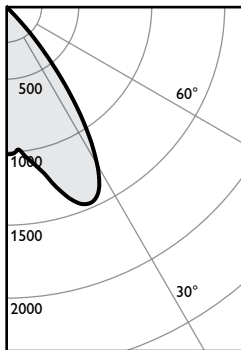
CCT Adjust. factors

Coefficients of utilization

Ceiling	80%					70%					50%					30%					0%
	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10	0		
Wall	Zonal cavity method - Effective floor reflectance = 20%																				
RCR	Zonal cavity method - Effective floor reflectance = 20%																				
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	100	100	106	106	100	100	100		
1	114	111	109	107	109	105	105	102	102	99	99	95	95	97	93	89	88	82	80		
2	109	105	101	98	103	97	100	95	97	93	89	88	82	80	80	77	75	71	67		
3	104	99	94	91	97	90	95	88	92	87	84	80	77	75	71	67	63	61	57		
4	100	93	88	84	92	84	90	83	88	82	80	77	75	71	67	63	61	57	53		
5	95	88	83	79	87	78	85	78	84	77	75	71	67	63	61	57	53	50	46		
6	91	83	78	74	83	74	81	73	80	73	71	67	63	61	57	53	50	46	42		
7	87	79	74	70	78	70	77	69	76	69	67	63	61	57	53	50	46	42	38		
8	84	75	70	66	75	66	74	66	73	65	64	61	57	53	50	46	42	38	34		
9	80	71	66	63	71	62	70	62	69	62	61	57	53	50	46	42	38	34	30		
10	77	68	63	59	68	59	67	59	66	59	58	54	50	46	42	38	34	30	26		

18W LED, 3500K, 70° Wide 1500 lumen

Candela Curve



Frame: C7L15NUVBZ10V
Trim: C7L1520DL35KWCLWVB

CCT¹: 3500K
Output lumens: 1733 lms
Input watts²: 18.3 W
Efficacy: 94.7 lm/w
CRI: 80 min
Spacing Crit.: 1.1
Beam Spread: 70°
Report no³: 702GFR

Zonal summary

Zone	Lumens	%Luminaire
0-30	1118	64.5%
0-40	1635	94.4%
0-60	1730	99.8%
0-90	1733	100.0%

Angle	Mean CP	Lumens
0	1016	
5	991	99
10	1104	
15	1274	366
20	1441	
25	1458	653
30	1249	
35	850	518
40	402	
45	52	90
50	7	
55	5	4
60	3	
65	2	2
70	1	
75	1	1
80	0	
85	0	0
90	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	41	5.5'
6'	28	6.6'
7'	21	7.7'
8'	16	8.8'
9'	13	9.9'

* 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'	78.4	0.81
6'	51.5	0.53
7'	36.8	0.38
8'	30.6	0.32
9'	24.5	0.25

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Finish Adjust. factors

CL = 100%	4000K = 103%
CCL = 95%	3500K = 100%
CCD = 87%	3000K = 97%
CCZ = 63%	2700K = 87%
WH = 87%	

CCT Adjust. factors

Coefficients of utilization

Ceiling	80%					70%					50%					30%					0%
	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10	0		
Wall	Zonal cavity method - Effective floor reflectance = 20%																				
RCR	Zonal cavity method - Effective floor reflectance = 20%																				
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	100	100	106	106	100	100	100		
1	113	110	108	105	108	104	104	101	101	99	99	95	95	97	93	89	88	82	80		
2	107	102	98	95	101	93	97	91	94	89	86	82	80	80	77	75	71	67	63		
3	102	95	90	85	93	85	91	83	88	82	79	75	73	71	67	63	61	57	53		
4	96	88	82	78	87	77	85	76	83	75	73	71	67	63	61	57	53	50	46		
5	91	82	76	71	81	71	79	70	77	69	67	63	61	57	53	50	46	42	38		
6	86	76	70	65	75	65	74	65	72	64	62	61	57	53	50	46	42	38	34		
7	81	71	65	60	70	60	69	60	68	59	57	54	50	46	42	38	34	30	26		
8	76	66	60	56	66	55	65	55	63	55	53	50	46	42	38	34	30	26	22		
9	72	62	56	51	61	51	61	51	60	51	49	46	42	38	34	30	26	22	18		
10	68	58	52	48	58	48	57	48	56	47	46	42	38	34	30	26	22	18	14		

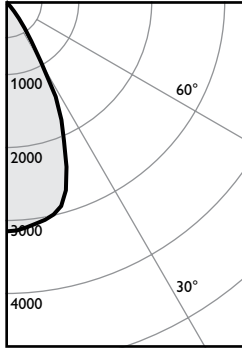
1. Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
2. Wattage controlled to within +/- 5%.
3. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

C7L-DL-VB Calculite LED

7" Round Aperture, Downlight, Narrow Medium & Wide Beam 1500/2000/3500/6000lm

25W LED, 3500K, 55° Medium 2000 lumen

Candela Curve



Frame: **C7L20N1VBZ10V**
Trim: **C7L1520DL35KMCLWVB**

CCT¹: 3500K
Output lumens: 2209 lms
Input watts²: 25.2 W
Efficacy: **87.7 lm/w**
CRI: 80 min
Spacing Crit.: 0.8
Beam Spread: 55°
Report no³: 705GFR

Zonal summary

Zone	Lumens	%Luminaire
0-30	1879	85.1%
0-40	2167	98.1%
0-60	2207	99.9%
0-90	2209	100.0%

Angle	Mean CP	Lumens
0	3153	
5	3110	295
10	3040	
15	2903	794
20	2410	
25	1785	790
30	943	
35	432	288
40	160	
45	32	38
50	5	
55	3	3
60	2	
65	1	1
70	1	
75	0	0
80	0	
85	0	0
90	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	126	4.0'
6'	88	4.8'
7'	64	5.6'
8'	49	6.4'
9'	39	7.2'

* 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'	102.3	1.12
6'	67.2	0.73
7'	48.0	0.52
8'	40.0	0.44
9'	32.0	0.35

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Finish Adjust. factors

CL = 100%	4000K = 103%
CCL = 95%	3500K = 100%
CCD = 87%	3000K = 97%
CCZ = 63%	2700K = 87%
WH = 87%	

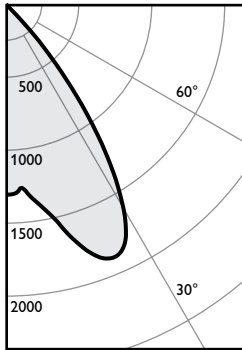
CCT Adjust. factors

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
	70	50	30	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	106	106	100		
1	114	112	109	107	109	106	105	102	102	99	99	97	93	89	89		
2	109	105	101	98	103	97	100	95	97	93	87	84	80	80	80		
3	104	99	94	91	97	90	95	88	92	87	84	77	75	75	75		
4	100	93	88	84	92	84	90	83	88	82	76	69	67	67	67		
5	95	88	83	79	87	79	85	78	84	77	71	64	62	62	62		
6	91	83	78	74	83	74	81	73	80	73	66	59	57	57	57		
7	87	79	74	70	78	70	77	69	76	69	62	55	53	53	53		
8	84	75	70	66	75	66	74	66	73	65	58	51	49	49	49		
9	80	71	66	63	71	62	70	62	69	62	55	48	46	46	46		
10	77	68	63	59	68	59	67	59	66	59	52	45	43	43	43		

25W LED, 3500K, 70° Wide 2000 lumen

Candela Curve



Frame: **C7L20N1VBZ10V**
Trim: **C7L1520DL35KWCLWVB**

CCT¹: 3500K
Output lumens: 2224 lms
Input watts²: 25.2 W
Efficacy: **88.3 lm/w**
CRI: 80 min
Spacing Crit.: 1.1
Beam Spread: 70°
Report no³: 706GFR

Zonal summary

Zone	Lumens	%Luminaire
0-30	1432	64.4%
0-40	2098	94.3%
0-60	2220	99.8%
0-90	2224	100.0%

Angle	Mean CP	Lumens
0	1304	
5	1267	127
10	1413	
15	1631	468
20	1844	
25	1870	837
30	1604	
35	1095	666
40	519	
45	66	116
50	9	
55	6	6
60	4	
65	3	3
70	2	
75	1	1
80	1	
85	0	0
90	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	52	5.5'
6'	36	6.6'
7'	27	7.7'
8'	20	8.8'
9'	16	9.9'

* 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'	100.7	1.12
6'	66.1	0.73
7'	47.2	0.52
8'	39.3	0.44
9'	31.5	0.35

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Finish Adjust. factors

CL = 100%	4000K = 103%
CCL = 95%	3500K = 100%
CCD = 87%	3000K = 97%
CCZ = 63%	2700K = 87%
WH = 87%	

CCT Adjust. factors

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
	70	50	30	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	106	106	100		
1	113	110	108	106	108	104	104	101	97	91	94	89	86	86	86		
2	107	102	98	95	101	93	97	91	94	89	84	79	77	77	77		
3	102	95	90	85	93	85	91	83	88	82	79	73	71	71	71		
4	96	88	82	78	87	77	85	76	83	75	73	67	65	65	65		
5	91	82	76	71	81	71	79	70	77	69	67	62	60	60	60		
6	86	76	70	65	75	65	74	65	72	64	62	57	55	55	55		
7	81	71	65	60	70	60	69	60	68	59	57	52	50	50	50		
8	76	66	60	56	66	55	65	55	63	55	53	48	46	46	46		
9	72	62	56	51	61	51	60	51	60	51	49	44	42	42	42		
10	68	58	52	48	58	48	57	48	56	47	45	40	38	38	38		

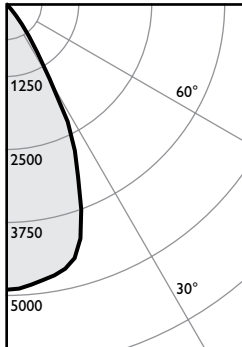
1. Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSLG C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
2. Wattage controlled to within +/- 5%.
3. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

C7L-DL-VB Calculite LED

7" Round Aperture, Downlight, Narrow Medium & Wide Beam 1500/2000/3500/6000lm

41W LED, 3500K, 55° Medium 3500 lumen

Candela Curve



Frame: C7L35N1VBZ10V
Trim: C7L1520DL35KMCLWVB

CCT¹: 3500K
Output lumens: 3434 lms
Input watts²: 40.5 W
Efficacy: 84.8 lm/w
CRI: 80 min
Spacing Crit.: 0.8
Beam Spread: 55°
Report no³: 709GFR

Zonal summary

Zone	Lumens	%Luminaire
0-30	2920	85.0%
0-40	3370	98.1%
0-60	3432	99.9%
0-90	3434	100.0%

Angle	Mean CP	Lumens
0	4899	
5	4832	458
10	4724	
15	4511	1234
20	3746	
25	2772	1228
30	1475	
35	674	449
40	249	
45	50	58
50	7	
55	4	4
60	3	
65	2	2
70	1	
75	1	1
80	0	
85	0	0
90	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	196	4.0'
6'	136	4.8'
7'	100	5.6'
8'	77	6.4'
9'	60	7.2'

* 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'	159.1	1.80
6'	104.4	1.18
7'	74.6	0.84
8'	62.2	0.70
9'	49.7	0.56

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Finish Adjust. factors

CL = 100%	4000K = 103%
CCL = 95%	3500K = 100%
CCD = 87%	3000K = 97%
CCZ = 63%	2700K = 87%
WH = 87%	

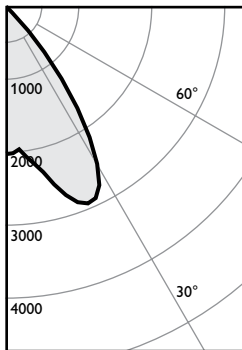
CCT Adjust. factors

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
	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	106	106	100		
	1	114	112	109	107	109	106	105	102	102	99	97	93	89			
	2	109	105	101	98	103	97	100	95	97	93	92	87	84			
	3	104	99	94	91	97	90	95	88	92	87	84	82	80			
	4	100	93	88	84	92	84	90	83	88	82	80	78	75			
	5	95	88	83	79	87	79	85	78	84	77	75	73	71			
	6	91	83	78	74	83	74	81	73	80	73	71	69	67			
	7	87	79	74	70	78	70	77	69	76	69	67	65	64			
	8	84	75	70	66	75	66	74	66	73	65	64	62	61			
	9	80	71	66	63	71	62	70	62	69	62	61	59	58			
	10	77	68	63	59	68	59	67	59	66	59	58	56	55			

41W LED, 3500K, 70° Wide 3500 lumen

Candela Curve



Frame: C7L35N1VBZ10V
Trim: C7L1520DL35KWCLWVB

CCT¹: 3500K
Output lumens: 3446 lms
Input watts²: 40.5 W
Efficacy: 85.1 lm/w
CRI: 80 min
Spacing Crit.: 1.1
Beam Spread: 70°
Report no³: 710GFR

Zonal summary

Zone	Lumens	%Luminaire
0-30	2217	64.3%
0-40	3249	94.3%
0-60	3439	99.8%
0-90	3446	100.0%

Angle	Mean CP	Lumens
0	2019	
5	1962	197
10	2186	
15	2523	724
20	2853	
25	2896	1297
30	2488	
35	1694	1032
40	804	
45	107	181
50	14	
55	10	9
60	7	
65	4	4
70	3	
75	2	2
80	1	
85	0	0
90	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	81	5.5'
6'	56	6.6'
7'	41	7.7'
8'	32	8.8'
9'	25	9.9'

* 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'	155.9	1.80
6'	102.3	1.18
7'	73.1	0.84
8'	60.9	0.70
9'	48.7	0.56

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Finish Adjust. factors

CL = 100%	4000K = 103%
CCL = 95%	3500K = 100%
CCD = 87%	3000K = 97%
CCZ = 63%	2700K = 87%
WH = 87%	

CCT Adjust. factors

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
	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	106	106	100		
	1	113	110	108	105	108	104	104	101	100	98	93	94	89	86		
	2	107	102	98	94	100	93	97	91	94	89	86	88	82	79		
	3	102	95	90	85	93	85	91	83	88	82	79	84	78	75		
	4	96	88	82	78	87	77	85	76	83	75	73	77	69	67		
	5	91	82	76	71	81	71	79	70	77	69	67	65	64			
	6	86	76	70	65	75	65	74	65	72	64	62	68	59	57		
	7	81	71	65	60	70	60	69	60	68	59	57	55	53			
	8	76	66	60	55	66	55	65	55	63	55	53	51	49			
	9	72	62	56	51	61	51	60	51	60	51	49	47	46			
	10	68	58	52	48	58	48	57	47	56	47	46	44	43			

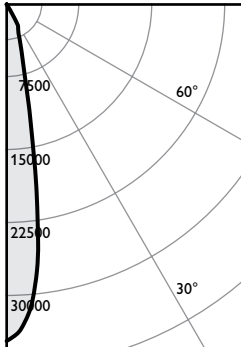
1. Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
2. Wattage controlled to within +/- 5%.
3. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

C7L-DL-VB Calculite LED

7" Round Aperture, Downlight, Narrow Medium & Wide Beam 1500/2000/3500/6000lm

69W LED, 3500K, 20° Narrow 6000 lumen

Candela Curve



Frame: C7L50N1VBZ10V
Trim: C7L50DL35KNCLWVB

CCT¹: 3500K
 Output lumens: 6174 lms
 Input watts²: 69.4 W
Efficacy: 89.0 lm/w
 CRI: 80 min
 Spacing Crit.: 0.3
 Beam Spread: 20°
 Report no³: 327GFR

Zonal summary

Zone	Lumens	%Luminaire
0-30	5902	95.6%
0-40	6133	99.3%
0-60	6169	99.9%
0-90	6174	100.0%

Angle	Mean CP	Lumens
0	34747	
5	30669	2475
10	16592	
15	6860	2151
20	4015	
25	2810	1276
30	1411	
35	146	231
40	100	
45	39	33
50	5	
55	2	3
60	3	
65	2	2
70	3	
75	1	2
80	0	
85	1	1
90	1	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	1390	1.5'
6'	965	1.8'
7'	709	2.1'
8'	543	2.4'
9'	429	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'	294	3.08
6'	193	2.02
7'	138	1.44
8'	115	1.20
9'	92	0.96

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Finish Adjust. factors

CL = 100%	4000K = 103%
CCL = 95%	3500K = 100%
CCD = 87%	3000K = 97%
CCZ = 63%	2700K = 87%
WH = 87%	

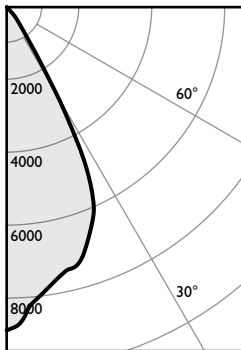
CCT Adjust. factors

Coefficients of utilization

Ceiling	80%					70%					50%					30%					0%
	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10	0		
Wall	Zonal cavity method - Effective floor reflectance = 20%																				
RCR	Zonal cavity method - Effective floor reflectance = 20%																				
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	106	106	100	97	97	97	97		
1	115	113	111	109	111	108	107	104	103	101	103	101	103	101	97	94	94	94	94		
2	111	108	105	102	106	101	103	99	100	97	93	91	94	90	88	88	87	87	88		
3	108	103	100	97	102	96	100	95	97	93	91	88	87	87	85	85	85	85	85		
4	105	99	95	92	98	92	96	91	94	90	88	87	87	85	84	83	83	83	83		
5	102	96	92	89	95	88	93	88	92	87	85	84	84	83	82	82	82	82	82		
6	99	93	88	85	92	85	91	85	89	84	83	83	83	82	82	82	82	82	82		
7	96	90	86	83	89	82	88	82	88	82	82	82	82	82	82	82	82	82	82		
8	93	87	83	80	86	80	86	80	86	80	85	85	85	85	85	85	85	85	85		
9	91	84	80	78	84	78	83	77	83	77	83	77	83	77	83	77	83	77	83		
10	89	82	78	76	82	76	81	75	81	75	81	75	81	75	81	75	81	75	81		

69W LED, 3500K, 55° Medium 6000 lumen

Candela Curve



Frame: C7L50N1VBZ10V
Trim: C7L50DL35KMCLWVB

CCT¹: 3500K
 Output lumens: 5963 lms
 Input watts²: 69.2 W
Efficacy: 86.2 lm/w
 CRI: 80 min
 Spacing Crit.: 0.8
 Beam Spread: 55°
 Report no³: 329GFR

Zonal summary

Zone	Lumens	%Luminaire
0-30	5171	86.7%
0-40	5833	97.8%
0-60	5954	99.8%
0-90	5963	100.0%

Angle	Mean CP	Lumens
0	8911	
5	8195	770
10	7673	
15	7395	2052
20	6676	
25	5541	2348
30	2654	
35	839	662
40	421	
45	80	113
50	13	
55	10	8
60	7	
65	7	5
70	4	
75	3	4
80	1	
85	0	1
90	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	356	4.0'
6'	248	4.8'
7'	182	5.6'
8'	139	6.4'
9'	110	7.2'

* 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'	276	3.07
6'	181	2.01
7'	129	1.44
8'	108	1.20
9'	86	0.96

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Finish Adjust. factors

CL = 100%	4000K = 103%
CCL = 95%	3500K = 100%
CCD = 87%	3000K = 97%
CCZ = 63%	2700K = 87%
WH = 87%	

CCT Adjust. factors

Coefficients of utilization

Ceiling	80%					70%					50%					30%					0%
	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10	0		
Wall	Zonal cavity method - Effective floor reflectance = 20%																				
RCR	Zonal cavity method - Effective floor reflectance = 20%																				
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	106	106	100	95	95	95	95		
1	109	105	101	98	103	97	100	95	97	93	89	97	93	89	89	89	89	89	89		
2	104	98	94	90	97	90	95	88	92	87	84	92	87	84	84	84	84	84	84		
3	100	93	88	84	92	84	90	83	88	82	79	88	82	79	79	79	79	79	79		
4	95	88	83	79	87	78	85	78	84	77	75	84	77	75	75	75	75	75	75		
5	91	83	78	74	82	74	81	73	80	73	71	80	73	71	71	71	71	71	71		
6	87	79	73	70	78	69	77	69	76	69	67	76	69	67	67	67	67	67	67		
7	83	75	69	66	74	66	73	65	72	65	64	72	65	64	64	64	64	64	64		
8	80	71	66	62	71	62	70	62	69	62	60	69	62	60	60	60	60	60	60		
9	77	68	63	59	67	59	67	59	66	59	57	66	59	57	57	57	57	57	57		
10																					

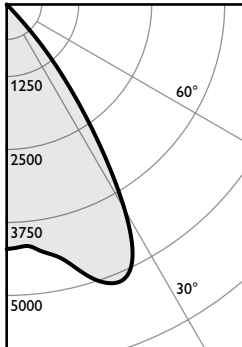
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 2. Wattage controlled to within +/- 5%.
 3. Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products.

C7L-DL-VB Calculite LED

7" Round Aperture, Downlight, Narrow Medium & Wide Beam 1500/2000/3500/6000lm

69W LED, 3500K, 70° Wide 6000 lumen

Candela Curve



Frame: C7L50N1VBZ10V
Trim: C7L50DL35KWCLWVB

CCT¹: 3500K
Output lumens: 5889 lms
Input watts²: 69.2 W
Efficacy: 85.1 lm/w
CRI: 80 min
Spacing Crit.: 1.1
Beam Spread: 70°
Report no³: 328GFR

Zonal summary

Zone	Lumens	%Luminaire
0-30	4013	68.1%
0-40	5608	95.2%
0-60	5881	99.9%
0-90	5889	100.0%

Angle	Mean CP	Lumens
0	4197	
5	4120	404
10	4350	
15	4705	1348
20	5106	
25	5077	2261
30	4159	
35	2538	1595
40	1197	
45	150	265
50	11	
55	10	8
60	7	
65	4	5
70	3	
75	2	2
80	1	
85	0	0
90	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	168	5.5'
6'	117	6.6'
7'	86	7.7'
8'	66	8.8'
9'	52	9.9'

* 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'	268	3.07
6'	176	2.01
7'	125	1.44
8'	105	1.20
9'	84	0.96

38'x38'x10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

Finish Adjust. factors

CL = 100%
CCL = 95%
CCD = 87%
CCZ = 63%
WH = 87%

CCT Adjust. factors

4000K = 103%
3500K = 100%
3000K = 97%
2700K = 87%

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	106	106	100	93	
1	113	111	108	106	108	104	104	101	101	98	98	95	90	90	86	86	
2	108	103	99	95	101	94	98	92	95	90	86	89	83	80	80	80	
3	102	95	90	86	94	86	91	84	89	83	74	83	76	74	74	74	
4	97	89	83	79	88	78	85	77	83	76	69	78	71	69	69	69	
5	91	83	77	72	82	72	80	71	78	71	64	74	66	64	64	64	
6	86	77	71	67	76	66	75	66	74	66	61	69	61	59	59	59	
7	82	72	66	62	72	61	70	61	69	61	55	65	57	55	55	55	
8	78	68	61	57	67	57	66	57	65	57	51	61	53	51	51	51	
9	74	63	57	53	63	53	62	53	61	53	48	58	49	48	48	48	
10	70	60	54	50	59	50	58	49	58	49	44	54	44	44	44	44	

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. Wattage controlled to within +/- 5%.
3. 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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