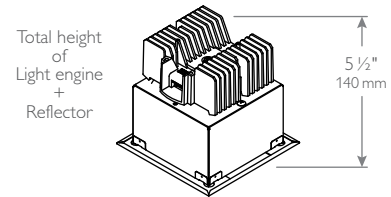


Blend performance & comfort in a downlight.

C4X4L-DL-VB CALCULITE WHITE LED 4" SQUARE DOWNLIGHT



PHILIPS LIGHTOLIER, CALCULITE, PROFESSIONAL-GRADE DOWNLIGHTING, WHITE LED 4" SQUARE APERTURE DOWNLIGHT, WIDE 500/1000/1500LM, C4X4L-DL-VB

Calculite LED 4" 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: _____
 Catalog No: _____
 Fixture Type: _____
 Mfg: _____ Lamps: _____ Qty: _____
 Notes: _____

Frame-in kit

example: C4X4L05NUVBZ10V

Series	Lumens	Installation	Input voltage	Version	Dimming	Options
C4X4L	<input type="checkbox"/>	N	<input type="checkbox"/>	VB	<input type="checkbox"/>	<input type="checkbox"/>
C4X4L Calculite 4" LED square aperture	05 500lm 10 1000lm	N New construction	U Universal (120/277V)	VB Version B	Z10V 0-10V dimming LD Lutron driver	EM Emergency ¹ LC Chicago Plenum
	15 1500lm	N New construction	1 120V 2 277V	VB Version B	Z10V 0-10V dimming LD Lutron driver	EM Emergency ¹ LC Chicago Plenum
C4L Calculite 4" LED round aperture (347v configurations)	05 500lm 10 1000lm 15 1500lm	N New construction	1 120V	VB Version B	Z10V 0-10V dimming	-347 347V ²

Trim kit

example: C4X4L10DL35KCCDPVB

Series	Lumens	Style	CCT	Reflector	Flange	Version ¹
C4X4L	<input type="checkbox"/>	DL	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VB
C4X4L Calculite 4" LED square aperture	05 500lm 10 1000lm & 1500lm	DL Downlight	27K 2700K	CL Clear	W White (painted) P Polished (matches aperture)	VB Version B
			30K 3000K	CCL Comfort clear		
			35K 3500K	CCD Comfort clear diffuse		
			40K 4000K	CCZ Champagne bronze WH White (painted)		

1. Consult LED-EM spec sheet for **EM** option details and restrictions.
 2. Consult factory for availability of other 347V fixture configurations.
NOTE: See page 3 for Energy Star® compatibility.



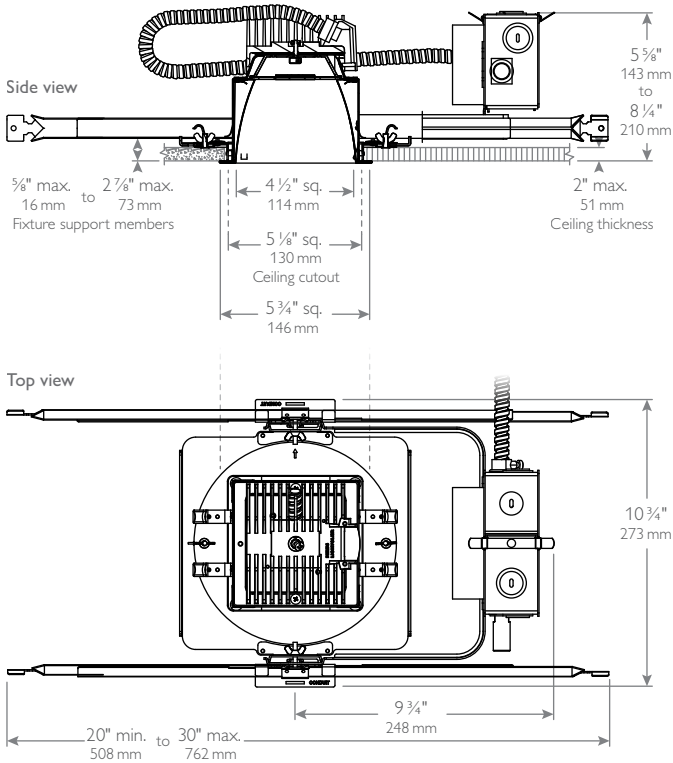
PHILIPS
LIGHTOLIER

C4X4L-DL-VB

CALCULITE

WHITE LED 4" SQUARE DOWNLIGHT

New Construction



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".

Mounting brackets: Galvanized Steel.

Adjustable through aperture. Use 3/4" or 1 1/2" lathing channel, 1/2" EMT or optional mounting bars.

Quick-ship

Philips is committed to providing customers with the products they need when they need them.

Service Smart	Spec Smart
Two-day quick-ship	Two-week quick-ship
Frame-in kits	Frame-in kits
C4X4L10NUVBZ10V	C4X4L10NUVBLD C4X4L15N1VBZ10V
Trim kits	Trim kits
None available	C4X4L10DL30KCCLWVB C4X4L10DL35KCCLWVB

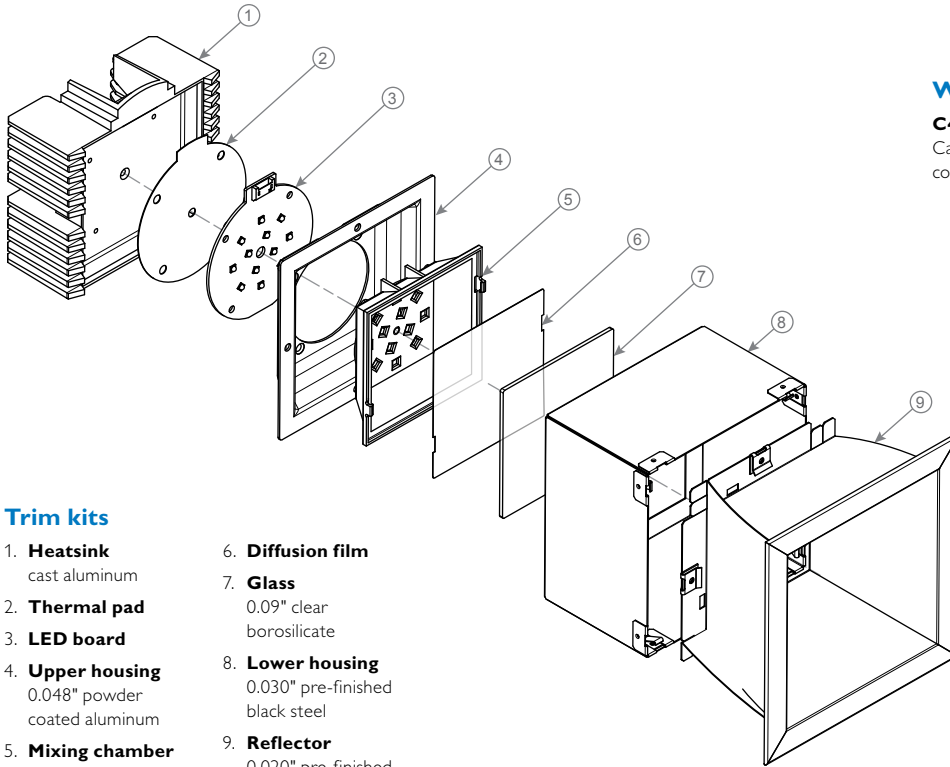
Quick-ship SKUs apply to the United States only.

C4X4L-DL-VB CALCULITE WHITE LED 4" SQUARE DOWNLIGHT

White LED 4"

C4X4L10DL35KCCDPVB

Calculite LED 4" Trim kits are backwards compatible with all Calculite LED 4" Frame-in Kits.



Trim kits

- | | |
|--|--|
| 1. Heatsink
cast aluminum | 6. Diffusion film |
| 2. Thermal pad
0.048" powder coated aluminum | 7. Glass
0.09" clear borosilicate |
| 3. LED board | 8. Lower housing
0.030" pre-finished black steel |
| 4. Upper housing
0.048" powder coated aluminum | 9. Reflector
0.020" pre-finished aluminum |
| 5. Mixing chamber
injection molded polycarbonate | |

Features

Ceiling cutout: 4" aperture; 5 1/8" (130mm) cutout.
Depth: 5 1/2" (140mm) 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.
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.

Options and accessories

Dimming capability: 0-10V or Lutron dimming. See LED-DIM specification sheet.
Emergency capability: Inverter; See LED-LMI specification sheet. Integral (4, 6, & 7 inch); See LED-EM spec sheet (add "EM" suffix).
Sloped ceilings: Compatible with slope ceiling adaptors. See specification sheet SCA.

ENERGY STAR®

All new construction (N) frame-in and trim kit configurations are certified except for the following:
 - Frame-in Kits: Universal voltage configurations used in 277V applications;
 C4X4L05NUVB..., C4X4L10NUVB...
 - Trim Kits: Champagne bronze reflector finishes;
 C4X4L05DL--KCCZ..., C4X4L10DL--KCCZ...
 - All emergency (EM) configurations.
 - All 347V configurations.

Electrical

Electronic power supply: 120 or 277V, 50/60Hz, enclosed, overload and short circuit protected, thermal regulation to protect against overheating, sound rating. "A", -20°C minimum starting temperature, 35°C maximum ambient environment.
Rated life: 60,000 hrs at 70% lumen maintenance based on 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).

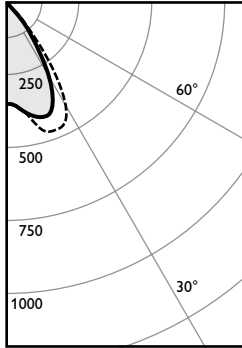
Frame-In kit Electrical specifications	Input volts	Input freq.	Input current	LED drive current	Input power*	LED power	THD factor	Power factor
C4L05_VBZ10V 500lm w/0-10V dimming	120V	50/60Hz	0.07A	350mA	8W	6W	<20%	>0.9
	277V	50/60Hz	0.04A	350mA	8W	6W	<20%	>0.7
C4L10_VBZ10V 1000lm w/0-10V dimming	120V	50/60Hz	0.12A	350mA	14W	11W	<20%	>0.9
	277V	50/60Hz	0.62A	350mA	14W	11W	<20%	>0.8
C4L15_VBZ10V 1500lm w/0-10V dimming	120V	50/60Hz	0.18A	520mA	23W	17W	<20%	>0.9
	277V	50/60Hz	0.09A	520mA	24W	17W	<20%	>0.9

* +/- 5%

C4X4L-DL-VB CALCULITE WHITE LED 4" SQUARE DOWNLIGHT

8W LED, 3500K, 500 lumen

Candela Curve



Frame: **C4X4L05NUVBZ10V**
Trim: **C4X4L05DL35KCLWVB**

CCT¹: 3500K
Output lumens: 545.2 lms
Input watts²: 8.4 W
Efficacy: 64.9 lm/w
CRI: 80 min
Spacing Crit.: 1.1
Report no³: 140GFR

Zonal summary

Zone	Lumens	%Luminaire
0-30	352	64.6%
0-40	502	92.0%
0-60	544	99.8%
0-90	545	100.0%

Angle

Angle	0°	45°	Lumens
0	355	355	
5	364	363	36
10	390	393	
15	416	447	122
20	423	477	
25	389	474	195
30	301	413	
35	201	290	149
40	102	150	
45	28	62	40
50	4	15	
55	2	3	3
60	1	1	
65	1	1	1
70	0	0	
75	0	0	0
80	0	0	
85	0	0	0
90	0	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	14	5.5'
6'	10	6.6'
7'	7	7.7'
8'	6	8.8'
9'	4	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'	24.7	0.37
6'	16.2	0.24
7'	11.6	0.17
8'	9.6	0.15
9'	7.7	0.12

38'x38'x10' Room, Workplane 2 1/2' above floor, 80/50/20% Reflectances

Finish Adjust. factors

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

CCT Adjust. factors

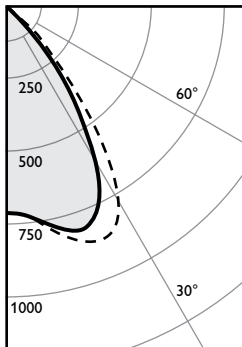
4000K = 103%
3500K = 100%
3000K = 97%
2700K = 87%

Coefficients of utilization

Ceiling	80%				70%				50%				30%				0%
	70	50	30	10	50	10	50	10	50	10	50	10	50	10	0		
Wall	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	100	100	100		
	1	113	110	108	106	108	104	104	101	100	98	93	88	82	79		
	2	107	102	98	95	101	93	97	91	94	89	86	81	77	73		
	3	102	95	90	85	93	85	91	83	88	82	79	74	70	67		
	4	96	88	82	78	87	77	85	76	83	76	73	68	64	62		
	5	91	82	76	71	81	71	79	70	77	70	67	62	58	55		
	6	86	76	70	65	75	65	74	65	72	64	62	57	53	50		
	7	81	71	65	60	70	60	69	60	68	60	58	53	49	46		
	8	77	67	60	56	66	56	65	55	64	55	54	49	45	42		
	9	73	62	56	52	62	52	61	52	60	51	50	45	41	38		
	10	69	58	52	48	58	48	57	48	56	48	46	41	37	34		

15W LED, 3500K, 1000 lumen

Candela Curve



Frame: **C4X4L10NUVBZ10V**
Trim: **C4X4L10DL35KCLWVB**

CCT¹: 3500K
Output lumens: 1032 lms
Input watts²: 14.6 W
Efficacy: 70.7 lm/w
CRI: 80 min
Spacing Crit.: 1.1
Report no³: 141GFR

Zonal summary

Zone	Lumens	%Luminaire
0-30	662	64.1%
0-40	948	91.9%
0-60	1031	99.9%
0-90	1032	100.0%

Angle

Angle	0°	45°	Lumens
0	711	711	
5	725	727	71
10	763	770	
15	796	830	230
20	806	865	
25	738	852	361
30	595	754	
35	386	543	287
40	215	307	
45	49	124	78
50	7	32	
55	2	6	5
60	1	1	
65	1	1	1
70	0	1	
75	0	0	0
80	0	0	
85	0	0	0
90	0	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	28	5.5'
6'	20	6.6'
7'	15	7.7'
8'	11	8.8'
9'	9	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'	46.7	0.65
6'	30.7	0.42
7'	21.9	0.30
8'	18.3	0.25
9'	14.6	0.20

38'x38'x10' Room, Workplane 2 1/2' 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

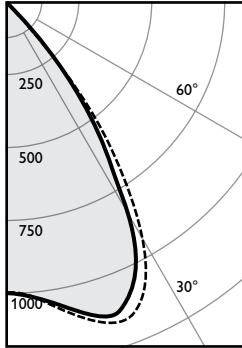
Ceiling	80%				70%				50%				30%				0%
	70	50	30	10	50	10	50	10	50	10	50	10	50	10	0		
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	0		
RCR	Zonal cavity method - Effective floor reflectance = 20%																
Room Cavity Ratio	0	119	119	119	119	116	116	111	111	106	106	100	100	100	100		
	1	113	110	108	106	108	104	104	101	100	98	93	88	82	79		
	2	107	102	98	95	101	94	97	91	94	89	86	81	77	73		
	3	102	95	90	86	93	85	91	83	88	82	79	74	70	67		
	4	96	88	82	78	87	77	85	76	83	76	73	68	64	62		
	5	91	82	76	71	81	71	79	70	77	70	67	62	58	55		
	6	86	76	70	65	76	65	74	65	73	64	62	57	53	50		
	7	81	71	65	60	71	60	69	60	68	60	58	53	49	46		
	8	77	67	60	56	66	56	65	55	64	55	54	49	45	42		
	9	73	62	56	52	62	52	61	52	60	51	50	45	41	38		
	10	69	59	52	48	58	48	57	48	56	48	46	41	37	34		

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.

C4X4L-DL-VB CALCULITE WHITE LED 4" SQUARE DOWNLIGHT

23W LED, 3500K, 1500 lumen

Candela Curve



Frame: **C4X4L10NUVBZ10V**
Trim: **C4X4L10DL35KCLWVB**

CCT¹: 3500K
Output lumens: 1389 lms
Input watts²: 22.6 W
Efficacy: 61.5 lm/w
CRI: 80 min
Spacing Crit.: 1.1
Report no³: 164GFR

Zonal summary

Zone	Lumens	%Luminaire
0-30	903	65.0%
0-40	1279	92.1%
0-60	1381	99.4%
0-90	1389	100.0%

Angle

Angle	0°	45°	Lumens
0	994	994	
5	1009	1015	99
10	1052	1065	
15	1107	1129	318
20	1136	1173	
25	1043	1109	487
30	848	944	
35	560	659	376
40	311	372	
45	71	128	95
50	14	33	
55	2	6	7
60	6	5	
65	4	1	3
70	1	0	
75	5	2	3
80	6	7	
85	0	1	2
90	9	0	

Single unit data

Height to lighted plane	Initial center beam foot-candles	Beam diameter (ft)*
5'	40	5.5
6'	28	6.6
7'	20	7.7
8'	16	8.8
9'	12	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'	62.9	1.00
6'	41.3	0.66
7'	29.5	0.47
8'	24.6	0.39
9'	19.6	0.31

38'x38'x10' Room, Workplane 2 1/2' 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%			
	70	50	30	10	50	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	98	93	100
	1	113	110	108	105	108	104	104	101	100	98	94	94	94	89	86	88	82	79	86
	2	107	102	98	94	100	93	97	91	94	89	86	86	82	79	86	82	79	86	86
	3	102	95	90	85	93	85	91	83	88	82	79	86	82	79	86	82	79	86	86
	4	96	88	82	78	87	77	85	76	83	76	73	73	76	73	73	76	73	73	73
	5	91	82	76	71	81	71	79	70	78	70	68	68	70	68	68	70	68	68	68
	6	86	76	70	66	76	65	74	65	73	65	63	63	65	63	63	65	63	63	63
	7	81	71	65	61	71	60	69	60	68	60	58	58	60	58	58	60	58	58	58
	8	77	67	61	56	66	56	65	56	64	56	54	54	56	54	54	56	54	54	54
	9	73	63	56	52	62	52	61	52	60	52	50	50	52	50	50	52	50	50	50
	10	69	59	53	49	58	49	58	48	57	48	47	47	48	47	47	48	47	47	47

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.



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C4X4L-DL-VB 10/14 page 5 of 5

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