



Calculite LED evolution 3" luminaires are meticulously engineered to provide consistent visual comfort, unsurpassed optical control and extraordinary mechanical precision. The portfolio also offers interchangeable optical assemblies providing flexibility in installation for commercial or residential construction.

Project: \_\_\_\_\_  
 Location: \_\_\_\_\_  
 Cat.No: \_\_\_\_\_  
 Type: \_\_\_\_\_  
 Lamps: \_\_\_\_\_ Qty: \_\_\_\_\_  
 Notes: \_\_\_\_\_

Complete product = Frame + Engine + Trim

### Frame

example: C3L085NUZ10VVB

Series	Installation	Voltage / Options	Version
<b>C3L085</b>	<b>N</b>		<b>VB</b>
<b>C3L085</b> Calculite LED 3" evolution	<b>N</b> New construction	<b>UEL</b> AirSeal IC, 120/277V with ELV dimming (120V dimming only) <sup>1</sup> <b>UZ10V</b> AirSeal IC, 120/277V with Lightolier 0-10V 1% dimming <sup>1</sup> <b>ULD</b> AirSeal IC, 120/277V with Lutron L3DA Hi-Lume 1% EcoSystem LED driver (3-wire) <sup>1</sup> <b>ULH</b> AirSeal IC, 120/277V with Lutron LDE1 Hi-Lume 1% EcoSystem LED driver (soft-on) <sup>1</sup> (Fade-to-Black dimming)	<b>VB</b> Version B

### Engine

example: C3L085DL0127K9VB

Series	Style	Technology	CCT	CRI	Version
<b>C3L085</b>	<b>DL</b>				<b>VB</b>
<b>C3L085</b> Calculite LED 3" evolution	<b>DL</b> Downlight	<b>01</b> 1000lm	<b>27K</b> 2700K <b>30K</b> 3000K <b>35K</b> 3500K <b>40K</b> 4000K <sup>1</sup>	<b>8</b> 80 CRI <b>9</b> 90 CRI <sup>2</sup>	<b>VB</b> Version B

### Trim

example: C3LDLMCLP

Series	Style	Beam	Finish	Flange
<b>C3L</b>	<b>DL</b>			
<b>C3L</b> Calculite LED 3" evolution	<b>DL</b> Downlight	<b>N</b> Narrow <b>M</b> Medium <b>W</b> Wide	<b>CL</b> Specular clear <b>CCL</b> Comfort clear <b>CCD</b> Comfort clear diffuse <b>CCZ</b> Champagne bronze <b>BK</b> Black (matte) <b>WH</b> White (matte)	<b>W</b> White (matte) <b>P</b> Polished (anodized only) <b>FT</b> Flangeless (requires CA3FMR)

### Accessories (ordered with a flangeless trim)

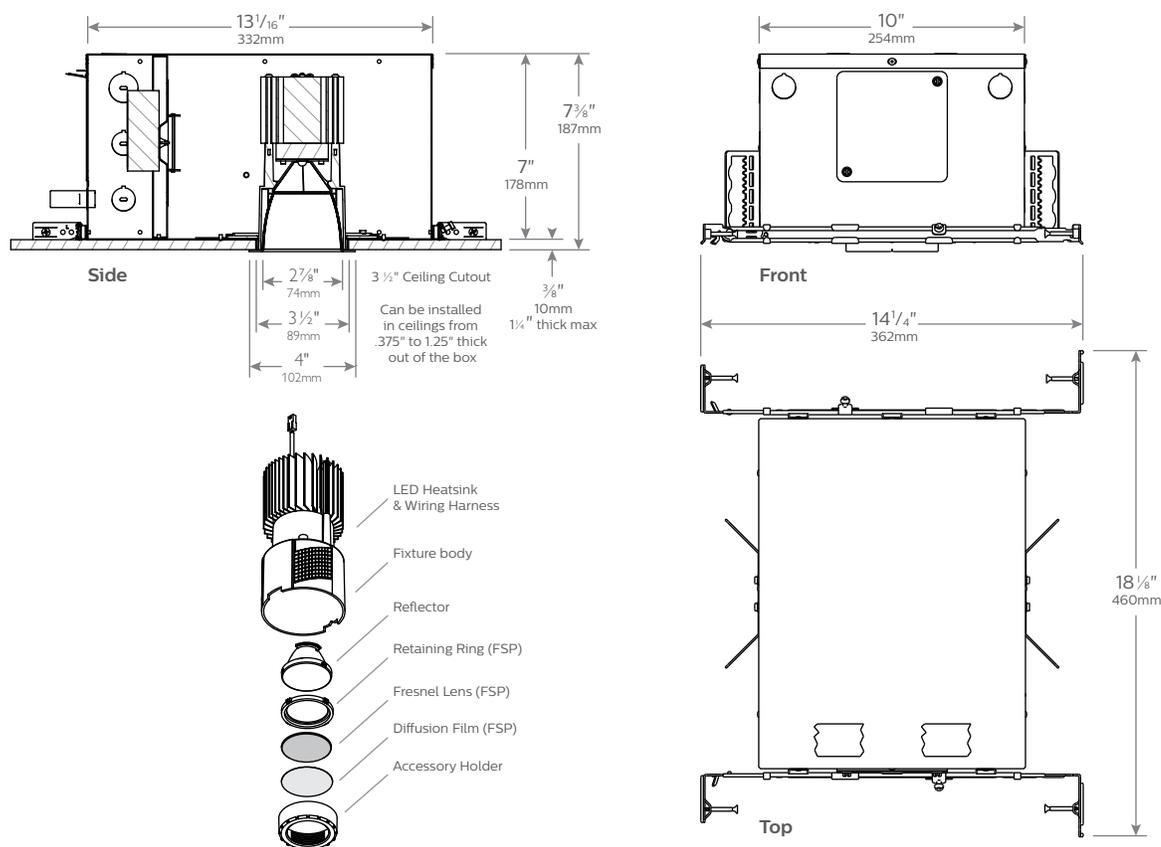
**CA3FMR** Mud-in ring for use with flangeless installations.

- All frame-in-kits listed above are suitable for insulated ceilings, AirSeal and CCEA required installations.
- The 90CRI is not available for 4000K.

# C3LDL Calculite LED 3" Evolution

## Downlights

### New Construction (N)



### Features

**Magnetic Trim attachment:** Trim kit attaches to appropriate Light Engine, which is keyed to ensure correct installation. Magnetic attachment ensures trim mounts flush with the ceiling (prevents gaps that can commonly occur with traditional friction spring installs). Allows for secure fit, but is much easier to remove/install when making adjustments.

**Tether:** Discrete steel cable tether fixed to the fixture body with snap in connector to reflector body which holds reflector secure while aiming unit or applying filters (prevents loss of trim).

**Aperture Cone:** 0.040" aluminum, white or anodized – clear, comfort clear, comfort clear diffused, wheat (bronze) or black; Trim flange painted white or polished. Flangeless trim used with plaster mud-in-ring accessory – see options and accessories.

**Horizontal Rotation Adjustment Mechanism:** Die-cast aluminum ring w/matte black finish. Unique design which allows for 366° horizontal rotation with positive stop for aiming accent finishing sections (tool less adjustment).

**Finishing Section Assembly:** LED finishing section is positioned to have 50° cut-off.

**Light Engine Retention:** Finishing section is attached to Frame in Kit by 3 symmetrically offset spring loaded ball and groove mating parts. This mounting system offers a smoother, near effortless initial installation of the Finishing Section and the ability to fine tune the height to match any ceiling thickness in the range mentioned above.

**Unitized optics:** ensures proper lamp orientation regardless of ceiling thickness.

**Frame Mounting:** Accommodates virtually any commercial installation with adjustable, pre-installed mounting brackets and user supplied 0.5" EMT Tubing or Lightolier purchased mounting bars. Additionally accommodates mounting to residential joist (steel or wood) construction spacing 12" to 24" On Center (O.C.) joists with supplied mounting bars (Lightening Bars). Minimum joist height of 8" required.

**LED Driver:** Serviceable and Replaceable from below ceiling. Four compatible dimming technologies are available depending on driver option: 0-10 Volt, Electric Low Voltage (ELV) and Lutron Dimming 3-wire and EcoSystem.

**Frame-In Kit:** IC AirSeal – Luminaire may be in direct contact with thermal insulation. Chicago Plenum Rated. See Frame-In Kit specification sheets for more information.

### Options and Accessories

**Downlight Trim Series Options:** C3LDLN series, C3LDLM series, C3LDLW series (each series has inherent finish options)

**Plaster Trim Ring:** CA3FMR (use with flangeless trim)

### Labels and Certifications

c.U.L.us (suitable for damp locations)  
I.B.E.W., Title 24, ENERGY STAR®

# C3LDL Calculite LED 3" Evolution

## Downlights

### Downlight – ENERGY STAR®

Model	Reflector finish	Dimming / Driver	CRI
C3L085NULHVB / C3L085DL0140K8VB / C3LDL*CL**	Clear anodized	Lutron EcoSystem	80CRI, 4000K

Model	Reflector finish	Dimming / Driver	CRI
C3L085NUZ10VVB / C3L085DL0135K8VB / C3LDL*CCL**	Comfort clear	0-10V	80CRI, 3500K
C3L085NUZ10VVB / C3L085DL0140K8VB / C3LDL*CCL**	Comfort clear	0-10V	80CRI, 4000K
C3L085NUZ10VVB / C3L085DL0130K8VB / C3LDL*CL**	Clear anodized	0-10V	80CRI, 3000K
C3L085NUZ10VVB / C3L085DL0135K8VB / C3LDL*CL**	Clear anodized	0-10V	80CRI, 3500K
C3L085NUZ10VVB / C3L085DL0140K8VB / C3LDL*CL**	Clear anodized	0-10V	80CRI, 4000K

Model	Reflector finish	Dimming / Driver	CRI
C3L085NUELVB / C3L085DL0130K8VB / C3LDL*CCL**	Comfort clear	ELV	80CRI, 3000K
C3L085NUELVB / C3L085DL0135K8VB / C3LDL*CCL**	Comfort clear	ELV	80CRI, 3500K
C3L085NUELVB / C3L085DL0140K8VB / C3LDL*CCL**	Comfort clear	ELV	80CRI, 4000K
C3L085NUELVB / C3L085DL0127K8VB / C3LDL*CL**	Clear anodized	ELV	80CRI, 2700K
C3L085NUELVB / C3L085DL0130K8VB / C3LDL*CL**	Clear anodized	ELV	80CRI, 3000K
C3L085NUELVB / C3L085DL0135K8VB / C3LDL*CL**	Clear anodized	ELV	80CRI, 3500K
C3L085NUELVB / C3L085DL0140K8VB / C3LDL*CL**	Clear anodized	ELV	80CRI, 4000K

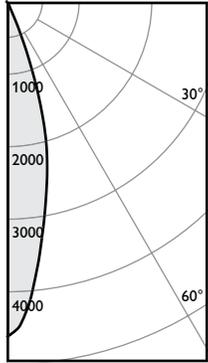
### Downlight – Title 24

Model	Reflector finish	Dimming / Driver	CRI & CCT
C3L085NUELVB/C3L085DL01**K9VB/C3LDL*CCL**	Comfort clear	ELV	90CRI, 2700/3000/3500/4000K
C3L085NUELVB/C3L085DL01**K9VB/C3LDL*CL**	Clear anodized	ELV	90CRI, 2700/3000/3500/4000K

# C3LDL Calculite LED 3" Evolution

## Downlights

### Narrow beam, 1000lm Engine, 67.5 lm/W



Frame: **C3L085NUZ10VVB**  
 Engine: **C3L085DL0135K8VB**  
 Trim: **C3LDLNLCLW**

Output lumens: 884 lms  
 Input watts: 13.1 W (± 5%)  
 CRI: 80 min  
 CCT<sup>1</sup>: 3500K  
 Spacing Crit.: 0.5  
 Beam Angle: 28°

Zonal summary		
Zone	Lumens	%Luminaire
0-30	830	93.9%
0-40	863	97.6%
0-60	883	99.9%
0-90	884	100.0%

Angle	Mean CP	Lumens
0	3469	
5	3024	264
10	2257	
15	1610	427
20	829	
25	241	139
30	76	
35	49	32
40	40	
45	29	19
50	4	
55	1	1
60	1	
65	1	1
70	0	
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'	139	2.5'
6'	96	3.0'
7'	71	3.5'
8'	54	4.0'
9'	43	4.5'

\* 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'	41.9	0.58
6'	27.5	0.38
7'	19.7	0.27
8'	16.4	0.23
9'	13.1	0.18

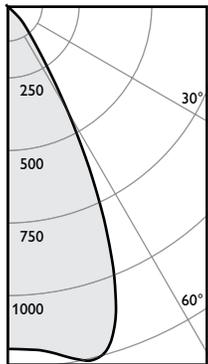
38' x 38' x 10' Room, Workplane 2.5' above floor, 80/50/20% Reflectances

**Efficacy: 67.5 lm/w**  
 Report<sup>2</sup>: 1135GFR

Adjustment factors		
Finish	CCT	CRI
CL = 100%	4000K = 101%	80CRI = 100%
CCL = 95%	3500K = 100%	90CRI = 82%
CCD = 88%	3000K = 98%	
WH = 84%	2700K = 93%	

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

### Medium beam, 1000lm Engine, 61.0 lm/W



Frame: **C3L085NUZ10VVB**  
 Engine: **C3L085DL0135K8VB**  
 Trim: **C3LDLMCLW**

Output lumens: 799 lms  
 Input watts: 13.1 W (± 5%)  
 CRI: 80 min  
 CCT<sup>1</sup>: 3500K  
 Spacing Crit.: 0.8  
 Beam Angle: 51°

Zonal summary		
Zone	Lumens	%Luminaire
0-30	643	80.5%
0-40	757	94.6%
0-60	798	99.9%
0-90	799	100.0%

Angle	Mean CP	Lumens
0	946	
5	952	92
10	984	
15	1000	275
20	881	
25	617	277
30	338	
35	166	113
40	94	
45	57	39
50	7	
55	2	2
60	1	
65	1	1
70	0	
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'	38	4.0'
6'	26	4.8'
7'	19	5.6'
8'	15	6.4'
9'	12	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'	36.8	0.58
6'	24.2	0.38
7'	17.3	0.27
8'	14.4	0.23
9'	11.5	0.18

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

**Efficacy: 61.0 lm/w**  
 Report<sup>2</sup>: 1136GFR

Adjustment factors		
Finish	CCT	CRI
CL = 100%	4000K = 101%	80CRI = 100%
CCL = 95%	3500K = 100%	90CRI = 82%
CCD = 88%	3000K = 98%	
WH = 84%	2700K = 93%	

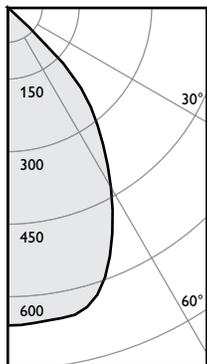
Coefficients of utilization											
Room Cavity Ratio	Zonal cavity method - Effective floor reflectance = 20%										
	80%		70%		50%		30%		0%		
RCR	70	50	30	10	50	10	50	10	50	10	0
0	119	119	119	119	116	116	111	111	106	106	100
1	114	111	109	107	109	105	105	102	101	99	94
2	109	104	100	97	102	96	99	94	96	92	88
3	104	98	93	89	96	89	94	87	91	86	83
4	99	92	87	83	91	82	89	81	87	80	78
5	94	86	81	77	86	77	84	76	82	75	73
6	90	82	76	72	81	72	79	71	78	71	69
7	86	77	72	68	76	67	75	67	74	67	65
8	82	73	67	64	73	63	71	63	70	63	61
9	78	69	64	60	69	60	68	60	67	60	58
10	75	66	60	57	65	57	65	57	64	56	55

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.

# C3LDL Calculite LED 3" Evolution

## Downlights

### Wide beam, 1000lm Engine, 62.1 lm/W



Frame: **C3L085N1Z10V**  
 Engine: **C3L085DL0130K8VB**  
 Trim: **C3LDLWCLW**

Output lumens: 813 lms  
 Input watts: 13.1 W (± 5%)  
 CRI: 80 min  
 CCT<sup>1</sup>: 3500K  
 Spacing Crit.: 1.1  
 Beam Angle: 72°

#### Zonal summary

Zone	Lumens	%Luminaire
0-30	478	58.8%
0-40	695	85.5%
0-60	812	99.8%
0-90	813	100.0%

Angle	Mean CP	Lumens
0	658	
5	656	62
10	653	
15	642	179
20	695	
25	516	236
30	431	
35	347	217
40	271	
45	165	113
50	13	
55	3	4
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'	26	5.5'
6'	18	6.6'
7'	13	7.7'
8'	10	8.8'
9'	8	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'	36.6	0.58
6'	24.0	0.38
7'	17.2	0.27
8'	14.3	0.23
9'	11.4	0.18

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

**Efficacy: 62.1 lm/w**  
 Report<sup>2</sup>: 1137GFR

#### Adjustment factors

Finish	CCT	CRI
CL = 100%	4000K = 101%	80CRI = 100%
CCL = 95%	3500K = 100%	90CRI = 82%
CCD = 88%	3000K = 98%	
WH = 84%	2700K = 93%	

#### Coefficients of utilization

Ceiling	80%		70%		50%		30%		0%		
	70	50	30	10	50	10	50	10	50	10	0
Wall	70	50	30	10	50	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	113	110	108	105	108	104	104	100	100	97	93
2	107	102	97	94	100	93	97	91	94	89	85
3	101	94	89	85	93	84	90	82	88	81	78
4	95	87	81	77	86	76	84	75	82	74	72
5	90	81	75	70	80	70	78	69	76	68	66
6	85	75	69	64	74	64	73	63	71	63	61
7	80	70	63	59	69	59	68	58	67	58	56
8	76	65	59	54	65	54	64	54	62	54	52
9	72	61	55	50	61	50	60	50	59	50	48
10	68	57	51	47	57	47	56	47	55	46	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.
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