

C4L10DL

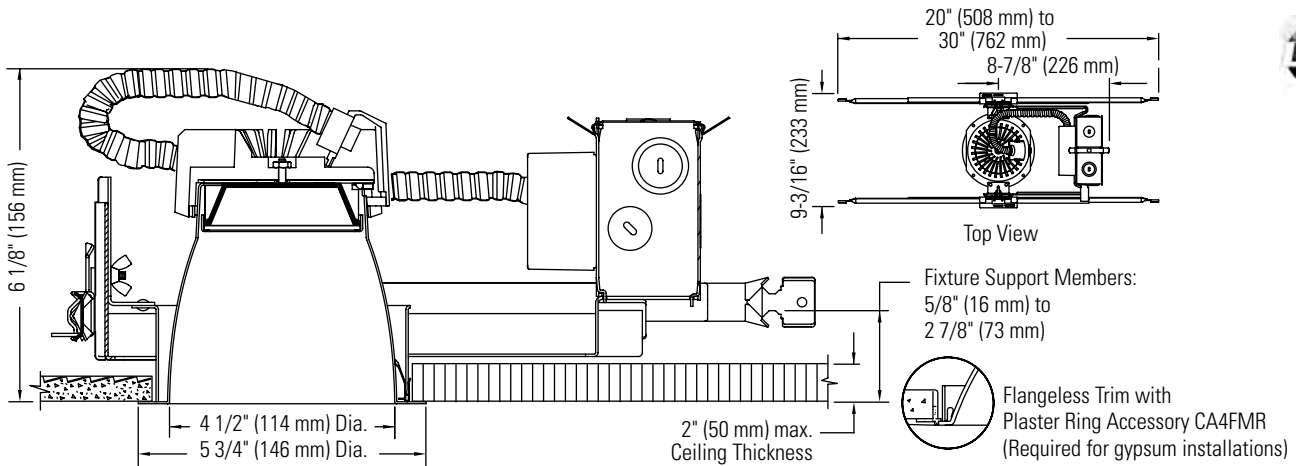
Calculite 4 1/2" LED downlight

Page 1 of 5

Catalog number:

Notes:

Type:



Ordering guide: Light engines

Light engine series	Style	Color temp	Reflector finish	Flange	Options
C4L10	DL (Downlight)	27K (2700K) 30K (3000K) 35K (3500K) 40K (4000K)	CL (Clear) CCL (Comfort clear) CCD (Comfort clear diffuse) CCZ (Champagne bronze) WH (Painted white)	W (Painted white) P (Aperture-matching/polished) FT (Flush-mount/flangeless) ¹	EM (Integral emergency test switch) ²

Example: C4L10DL35KCCLEWEM

¹Accessory CA4FMR required for gypsum applications. Reflector flange is 1/4". New construction frame-in kits only.

²See LED-EM for details and restrictions.

Ordering guide: Frame-in kits

Frame-in kit series	Installation options	Input voltage	Driver	Options
C4L10 (1000 lumen) C4L15 (1500 lumen)	N (New construction) R (Remodeler - 1000 lumen only)	1 (120V) 2 (277V)	Z10V (0-10V dimming) LD (Lutron driver - 1000 lumen only)	EM (Emergency - 1000 lumen only)
CUL10 (1000 lumen)	J (J-box mount retrofit) S (Screw-in base retrofit - 120V only)	1 (120V) 2 (277V)	Z10V (0-10V dimming) LD (Lutron driver)	

Example: C4L10N1Z10VEM

Features

Aperture: 4 1/2" (114mm) I.D., 5 3/4" (146mm) O.D.

Input wattage: 20W (1000 lumen), 30W (15 lumen)

Reflector cone: Aluminum. Provides 50° cutoff to source & source image. Self-flanged.

Depth (including frame-in kit): 6 1/8" (156mm)

Power connection: Attaches to frame-in kit via push-in connector (on frame). Removable cover provides access.

Technology

LED board: Array of high brightness royal blue LED's.

Remote phosphor technology: Remote phosphor technology provides increased efficiency and color consistency. Phosphor lens assembly positioned in front of LED array converts blue light to white. Color shift will not exceed +/- 100K over life.

Optical mixing chamber: Lightolier-specific mixing chamber redirects back-reflected light through aperture resulting in 20% increase in efficiency.

Thermal management: Heat sink and thermal design along with clean room assembly ensures specified performance.

Technology (continued)

Rated life: Based on IESNA LM-80-2008 50,000 hrs at 70% lumen maintenance.

Photometric performance: Tested in accordance to IESNA LM-79-2008

Options

Dimming capability: See LED-DIM specification sheet.

Emergency capability (integral): Add "EM" suffix. See LED-EM spec sheet.

Emergency capability (inverter): See LED-LMI specification sheet.

Labels

UL (suitable for wet locations), cUL, I.B.E.W.

5 year warranty

PHILIPS
LIGHTOLIER

Calculite 4 1/2" LED downlight

Reflector Finish Multipliers

CL (x 1.00), **CCL** (x 0.94), **CCD** (x 0.93), **CCZ** (x 0.76), **WH** (x 0.82) — **CL & CCD** finishes are tested. **CCL, CCZ & WH** are calculated.

20W LED, 2700K, CL FINISH TRIM

Candlepower Distribution	ANGLE	MEAN CP	LUMENS
	0	529	
	5	552	56
	10	608	
	15	648	182
	20	647	
	25	622	284
	30	571	
	35	495	303
	40	379	
	45	169	132
	50	12	
	55	4	4
	60	2	
	65	1	1
	70	0	
	75	0	0
	80	0	
	85	0	0
	90	0	

Trim:
C420LEDDL27KCLW

Output lumens: 963 lm

Correlated Color Temp¹: 2700K

Input Watts²: 19.8 w

Efficacy: 48.6 lm/w

CRI⁴: 80

Spacing Criterion: 1.3

CEILING WALL	80%				70%				50%				30%				0%			
	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10
RCR Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%																				
0	119	119	119	119	116	116	111	111	106	106	100	100	106	106	100	100	106	106	100	100
1	113	110	107	105	108	103	104	100	100	97	92	88	104	100	97	92	88	85	85	85
2	107	101	97	93	100	92	96	90	93	88	85	81	96	90	87	80	87	80	77	77
3	100	93	88	83	92	83	89	81	87	80	77	73	89	81	78	73	70	70	70	70
4	94	86	80	75	85	75	83	74	81	73	68	64	87	76	71	67	64	64	64	64
5	89	80	73	68	79	68	77	67	75	67	64	61	81	70	66	61	58	58	58	58
6	84	74	67	62	73	62	71	61	70	61	59	56	71	61	58	54	54	54	54	54
7	79	68	61	57	67	57	66	56	65	56	54	51	65	56	53	50	49	49	49	49
8	74	63	57	52	63	52	62	52	60	51	50	47	56	47	46	46	46	46	46	46
9	70	59	52	48	58	48	57	48	56	47	46	44	53	44	44	44	44	44	44	44
10	66	55	49	44	55	44	54	44	53	44	42	42	53	44	42	42	42	42	42	42

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	%LUMINAIRE
0-30	521	54.1%
0-40	825	85.7%
0-60	962	99.9%
0-90	963	100.0%

Single Unit Data

Height to Lighted Plane	Initial Footcandles	Beam Diameter
5'	21	7'
6'	15	8'
7'	11	10'
8'	8	12'
9'	7	13'

Multiple Unit Data - RCR 2

Spacing	Initial Watts/On Ctr.	Initial Watts/Footcandles	Watts/Sq. Ft.
5'	43	0.88	0.88
6'	28	0.58	0.58
7'	20	0.41	0.41
8'	17	0.34	0.34
9'	14	0.27	0.27

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

CERTIFIED TEST REPORT NO. F09931³

20W LED, 2700K, CCL FINISH TRIM

Candlepower Distribution	ANGLE	MEAN CP	LUMENS
	0	526	
	5	542	54
	10	578	
	15	606	170
	20	599	
	25	568	259
	30	515	
	35	439	269
	40	329	
	45	154	123
	50	30	
	55	12	12
	60	6	
	65	3	4
	70	2	
	75	1	1
	80	0	
	85	0	0
	90	0	

Trim:
C420LEDDL27KCLLW

Output lumens: 893 lm

Correlated Color Temp¹: 2700K

Input Watts²: 19.8 w

Efficacy: 45.1 lm/w

CRI⁴: 80

Spacing Criterion: 1.3

CEILING WALL	80%				70%				50%				30%				0%			
	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10
RCR Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%																				
0	119	119	119	119	116	116	111	111	106	106	100	100	106	106	100	100	106	106	100	100
1	113	110	107	105	108	103	104	100	100	97	92	88	104	100	97	92	88	84	84	84
2	106	101	97	93	99	92	96	90	93	88	85	81	96	90	87	80	87	80	77	77
3	100	93	88	83	92	82	89	81	86	80	77	73	89	81	78	73	70	70	70	70
4	94	86	80	75	85	74	82	73	80	73	68	64	87	76	71	67	64	64	64	64
5	89	79	73	68	78	68	76	67	75	66	64	61	81	70	66	61	58	58	58	58
6	83	73	67	62	72	62	71	61	69	61	59	56	71	61	58	54	54	54	54	54
7	78	68	61	56	67	56	66	56	65	56	54	51	65	56	53	50	49	49	49	49
8	74	63	56	52	63	52	61	51	60	51	49	47	56	47	46	46	46	46	46	46
9	70	59	52	48	58	48	57	48	56	47	46	44	53	44	44	44	44	44	44	44
10	66	55	48	44	54	44	54	44	53	44	42	42	53	44	42	42	42	42	42	42

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	%LUMINAIRE
0-30	483	54.1%
0-40	783	87.7%
0-60	888	99.5%
0-90	893	100.0%

Single Unit Data

Height to Lighted Plane	Initial Footcandles	Beam Diameter
5'	21	7'
6'	15	8'
7'	11	10'
8'	8	12'
9'	6	13'

Multiple Unit Data - RCR 2

Spacing	Initial Watts/On Ctr.	Initial Watts/Footcandles	Watts/Sq. Ft.
5'	40	0.88	0.88
6'	26	0.58	0.58
7'	19	0.41	0.41
8'	16	0.34	0.34
9'	13	0.27	0.27

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

CERTIFIED TEST REPORT NO. F09932³

20W LED, 2700K, CCD FINISH TRIM

Candlepower Distribution	ANGLE	MEAN CP	LUMENS
	0	543	
	5	553	55
	10	580	
	15	599	168
	20	593	
	25	546	249
	30	487	
	35	407	249
	40	299	
	45	159	126
	50	61	
	55	30	29
	60	17	
	65	10	10
	70	6	
	75	3	4
	80	2	
	85	1	1
	90	0	

Trim:
C420LEDDL27KCCDW

Output lumens: 891 lm

Correlated Color Temp¹: 2700K

Input Watts²: 19.8 w

Efficacy: 45.0 lm/w

CRI⁴: 80

Spacing Criterion: 1.2

CEILING WALL	80%				70%				50%				30%				0%			
	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10
RCR Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%																				
0	119	119	119	119	116	116	111	111	106	106	100	100	106	106	100	100	106	106	100	100
1	113	110	107	104	107	103	103	99	99	96	92	88	103	99	96	92	87	83	83	83
2	106	100	96	92	99	91	95	89	92	87	83	79	96	90	86	79	75	75	75	75
3	100	92	86	82	91	81	88	80	86	79	75	71	88	80	75	71	69	69	69	69
4	93	85	78	74	84	73	81	72	79	71	69	65	81	72	67	63	63	63	63	63
5	88	78	71	66	77	66	75	66	74	65	63	59	74	65	63	60	60	60	60	60
6	82	72	65	60	71	60	70	60	68	59	57	53	68	59	57	54	54	54	54	54
7	78	67	60	55	66	55	65	55	64	54	52	49	64	54	52	50	50	50	50	50
8	73	62	55	51	62	50	60	50	59	50	48	45	59	50	48	46	46	46	46	46
9	69	58	51	47	57	47	56	46	55	46	44	42	55	46	44	44	44	44	44	44
10	65	54	47	43	54	43	53	43	52	43	41	41	52	43	41	41	41	41	41	41

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	%LUMINAIRE
0-30	471	52.8%
0-40	721	80.9%
0-60	877	98.3%
0-90	891	100.0%

Single Unit Data

Height to Lighted Plane	Initial Footcandles	Beam Diameter
5'	22	7'
6'	15	8'
7'	11	10'
8'	8	11'
9'	7	12'

Multiple Unit Data - RCR 2

Spacing	Initial Watts/On Ctr.	Initial Watts/Footcandles	Watts/Sq. Ft.
5'	40	0.88	0.88
6'	26	0.58	0.58
7'	19	0.41	0.41
8'	16	0.34	0.34
9'	12	0.27	0.27

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

CERTIFIED TEST REPORT NO. F09933³

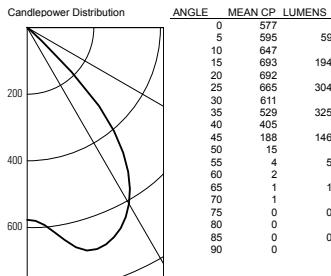
- Correlated Color Temperature within specs as defined in ANSI_NEMA_ANSI C78.377-2008: Specifications for the Chromaticity of Solid State Lighting Products.
- Wattage controlled to within 5%.
- Tested using absolute photometry as specified in LM79: IESNA Approved Method for the Electrical and Photometric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

Calculite 4 1/2" LED downlight

Reflector Finish Multipliers

CL (x 1.00), **CCL** (x 0.94), **CCD** (x 0.93), **CCZ** (x 0.76), **WH** (x 0.82) — **CL & CCD** finishes are tested. **CCL, CCZ & WH** are calculated.

20W LED, 3000K, CL FINISH TRIM



Trim: C420LEDDL30KCLW

Output lumens: 1034 lm

Correlated Color Temp: 3000K

Input Watts: 19.8 w

Efficacy: 52.2 lm/w

CRI: 79

Spacing Criterion: 1.3

CEILING WALL	80%				70%				50%				30%				0%			
	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%																			
0	119	119	119	119	116	116	111	111	106	106	100	100	100	100	100	100	100	100	100	100
1	113	110	107	105	108	103	104	100	100	97	92	85	85	85	85	85	85	85	85	85
2	107	101	97	93	100	92	96	90	93	88	85	85	85	85	85	85	85	85	85	85
3	100	93	88	83	92	83	89	81	87	80	77	70	70	70	70	70	70	70	70	70
4	94	86	80	75	85	75	83	74	81	73	67	64	64	64	64	64	64	64	64	64
5	89	79	73	68	78	68	77	67	75	67	61	59	59	59	59	59	59	59	59	59
6	83	73	67	62	73	62	71	61	70	61	56	54	54	54	54	54	54	54	54	54
7	79	68	61	57	67	56	66	56	65	56	51	50	50	50	50	50	50	50	50	50
8	74	63	56	52	63	52	61	52	60	51	47	46	46	46	46	46	46	46	46	46
9	70	59	52	48	58	48	57	48	56	47	44	44	44	44	44	44	44	44	44	44
10	66	55	48	44	54	44	54	44	53	44	42	42	42	42	42	42	42	42	42	42

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	%LUMINAIRE
0-30	557	53.9%
0-40	882	85.3%
0-60	1033	99.9%
0-90	1034	100.0%

Single Unit Data

Height to Lighted Plane	Initial Footcandles	Beam Diameter
5'	23	7'
6'	16	9'
7'	12	10'
8'	9	12'
9'	7	13'

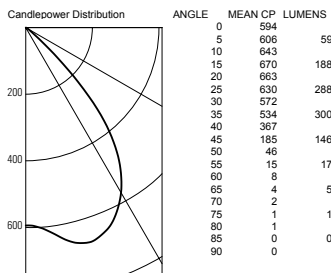
Multiple Unit Data - RCR 2

Spacing On Ctr.	Initial Footcandles	Watts/Sq. Ft.
5'	48	0.88
6'	30	0.58
7'	22	0.41
8'	18	0.34
9'	15	0.27

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

CERTIFIED TEST REPORT NO. 15735*

20W LED, 3000K, CCL FINISH TRIM



Trim: C420LEDDL30KCLW

Output lumens: 1004 lm

Correlated Color Temp: 3000K

Input Watts: 19.8 w

Efficacy: 50.7 lm/w

CRI: 79

Spacing Criterion: 1.2

CEILING WALL	80%				70%				50%				30%				0%			
	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%																			
0	119	119	119	119	116	116	111	111	107	107	100	100	100	100	100	100	100	100	100	100
1	113	110	107	105	108	103	104	100	100	97	92	84	84	84	84	84	84	84	84	84
2	106	101	96	93	99	92	96	90	93	88	85	85	85	85	85	85	85	85	85	85
3	100	93	87	83	91	82	89	81	86	80	77	70	70	70	70	70	70	70	70	70
4	94	86	79	75	84	74	82	73	80	72	67	64	64	64	64	64	64	64	64	64
5	88	76	72	67	78	67	76	67	74	66	61	59	59	59	59	59	59	59	59	59
6	83	73	66	61	72	61	71	61	69	60	56	54	54	54	54	54	54	54	54	54
7	78	68	61	56	67	56	66	56	64	55	53	53	53	53	53	53	53	53	53	53
8	74	63	56	51	62	51	61	51	60	51	48	48	48	48	48	48	48	48	48	48
9	69	58	52	47	58	47	57	47	56	47	44	44	44	44	44	44	44	44	44	44
10	65	54	48	44	54	44	53	44	53	43	42	42	42	42	42	42	42	42	42	42

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	%LUMINAIRE
0-30	536	53.3%
0-40	836	83.2%
0-60	998	99.4%
0-90	1004	100.0%

Single Unit Data

Height to Lighted Plane	Initial Footcandles	Beam Diameter
5'	24	7'
6'	17	8'
7'	12	10'
8'	9	11'
9'	7	12'

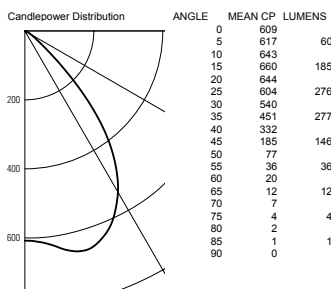
Multiple Unit Data - RCR 2

Spacing On Ctr.	Initial Footcandles	Watts/Sq. Ft.
5'	45	0.88
6'	30	0.58
7'	21	0.41
8'	18	0.34
9'	14	0.27

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

CERTIFIED TEST REPORT NO. F09303*

20W LED, 3000K, CCD FINISH TRIM



Trim: C420LEDDL30KCCDW

Output lumens: 997 lm

Correlated Color Temp: 3000K

Input Watts: 19.8 w

Efficacy: 50.4 lm/w

CRI: 79

Spacing Criterion: 1.2

CEILING WALL	80%				70%				50%				30%				0%			
	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%																			
0	119	119	119	119	116	116	111	111	107	107	100	100	100	100	100	100	100	100	100	100
1	113	110	107	104	107	103	103	99	100	96	92	83	83	83	83	83	83	83	83	83
2	106	100	96	92	99	91	95	89	92	87	83	83	83	83	83	83	83	83	83	83
3	100	92	86	82	91	81	88	80	85	79	75	75	75	75	75	75	75	75	75	75
4	93	85	78	73	83	73	81	72	79	71	69	69	69	69	69	69	69	69	69	69
5	88	78	71	66	77	66	75	65	73	65	62	62	62	62	62	62	62	62	62	62
6	82	72	65	60	71	60	70	59	68	59	57	57	57	57	57	57	57	57	57	57
7	77	67	60	55	66	55	65	54	63	54	52	52	52	52	52	52	52	52	52	52
8	73	62	55	50	61	50	60	50	59	50	48	48	48	48	48	48	48	48	48	48
9	69	58	51	46	57	46	56	46	55	46	44	44	44	44	44	44	44	44	44	44
10	65	54	47	43	53	43	52	43	52	42	42	42	42	42	42	42	42	42	42	42

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	%LUMINAIRE
0-30	521	52.2%
0-40	798	80.0%
0-60	980	98.3%
0-90	997	100.0%

Single Unit Data

Height to Lighted Plane	Initial Footcandles	Beam Diameter
5'	24	6'
6'	17	8'
7'	12	9'
8'	10	10'
9'	8	12'

Multiple Unit Data - RCR 2

Spacing On Ctr.	Initial Footcandles	Watts/Sq. Ft.
5'	44	0.88
6'	29	0.58
7'	21	0.41
8'	17	0.34
9'	14	0.27

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

CERTIFIED TEST REPORT NO. F09304*

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

C4L10DL

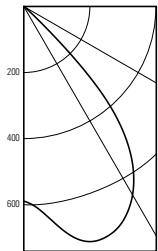
Calculite 4 1/2" LED downlight

Reflector Finish Multipliers

CL (x 1.00), **CCL** (x 0.94), **CCD** (x 0.93), **CCZ** (x 0.76), **WH** (x 0.82) — **CL & CCD** finishes are tested. **CCL, CCZ & WH** are calculated.

20W LED, 3500K, CL FINISH TRIM

Candlepower Distribution



ANGLE	MEAN CP	LUMENS
0	589	
5	622	63
10	690	
15	739	207
20	741	
25	716	327
30	661	
35	575	352
40	443	
45	207	158
50	16	
55	5	5
60	2	
65	1	1
70	0	
75	0	0
80	0	
85	0	0
90	0	

Trim: C420LEDDL35KCLW

Output lumens: 1116 lm
Correlated Color Temp¹: 3500K
Input Watts²: 19.8 w
Efficacy: 56.4 lm/w
CRI⁴: 76
Spacing Criterion: 1.2

CEILING WALL	80%				70%				50%				30%				0%			
	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10
	RCR Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%																			
0	119	119	119	119	116	116	111	111	106	106	100	100	106	106	100	100	106	106	100	100
1	113	110	107	105	108	103	104	100	100	97	92	100	97	92	88	84	106	106	100	97
2	106	101	97	93	99	92	96	90	93	88	84	88	84	80	77	88	84	80	77	77
3	100	93	88	83	92	83	89	81	87	80	77	80	77	77	77	77	80	77	77	77
4	94	86	80	75	85	75	83	74	80	73	70	80	73	70	70	70	80	73	70	70
5	89	79	73	68	78	68	76	67	75	66	64	75	66	64	64	64	75	66	64	64
6	83	73	67	62	73	62	71	61	69	61	59	69	61	59	59	59	69	61	59	59
7	78	68	61	56	67	56	66	56	65	56	54	65	56	54	54	54	65	56	54	54
8	74	63	56	52	62	52	61	51	60	51	49	60	51	49	49	49	60	51	49	49
9	70	59	52	48	58	47	57	47	56	47	45	56	47	45	45	45	56	47	45	45
10	66	55	48	44	54	44	53	44	53	44	42	53	44	42	42	42	53	44	42	42

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	597	53.5%
0-40	950	85.1%
0-60	1115	99.9%
0-90	1116	100.0%

Single Unit Data

Height to Lighted Plane	Initial Footcandles	Beam Diameter
5'	24	6'
6'	16	8'
7'	12	9'
8'	9	10'
9'	7	12'

Multiple Unit Data - RCR 2

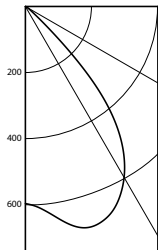
Spacing On Ctr.	Initial Footcandles	Watts/ Sq. Ft.
5'	47	0.88
6'	33	0.58
7'	23	0.41
8'	20	0.34
9'	16	0.27

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

CERTIFIED TEST REPORT NO. F09948E³

20W LED, 3500K, CCL FINISH TRIM

Candlepower Distribution



ANGLE	MEAN CP	LUMENS
0	597	
5	617	61
10	661	
15	696	195
20	691	
25	659	301
30	600	
35	514	315
40	387	
45	186	147
50	38	
55	14	15
60	8	
65	4	4
70	2	
75	1	1
80	0	
85	0	0
90	0	

Trim: C420LEDDL35KCCLW

Output lumens: 1041 lm
Correlated Color Temp¹: 3500K
Input Watts²: 19.8 w
Efficacy: 52.6 lm/w
CRI⁴: 76
Spacing Criterion: 1.2

CEILING WALL	80%				70%				50%				30%				0%			
	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10
	RCR Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%																			
0	119	119	119	119	116	116	111	111	106	106	100	100	106	106	100	100	106	106	100	100
1	113	110	107	105	108	103	104	100	100	97	92	100	97	92	88	84	106	106	100	97
2	106	101	97	93	99	92	96	90	93	88	84	88	84	80	77	88	84	80	77	77
3	100	93	87	83	91	82	89	81	86	80	77	80	77	77	77	77	80	77	77	77
4	94	86	79	75	84	74	82	73	80	72	70	80	73	70	70	70	80	73	70	70
5	88	79	72	68	78	67	76	67	74	66	64	74	66	64	64	64	74	66	64	64
6	83	73	66	61	72	61	71	61	69	61	59	69	61	59	59	59	69	61	59	59
7	78	68	61	56	67	56	66	56	64	55	53	64	55	53	53	53	64	55	53	53
8	74	63	56	51	62	51	61	51	60	51	49	60	51	49	49	49	60	51	49	49
9	69	59	52	47	58	47	57	47	56	47	45	56	47	45	45	45	56	47	45	45
10	66	55	48	44	54	44	53	44	52	43	42	52	43	42	42	42	52	43	42	42

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	557	53.5%
0-40	873	83.8%
0-60	1036	99.4%
0-90	1041	100.0%

Single Unit Data

Height to Lighted Plane	Initial Footcandles	Beam Diameter
5'	24	6'
6'	17	8'
7'	12	9'
8'	9	10'
9'	7	12'

Multiple Unit Data - RCR 2

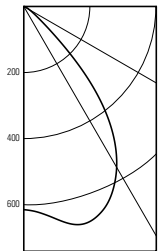
Spacing On Ctr.	Initial Footcandles	Watts/ Sq. Ft.
5'	47	0.88
6'	31	0.58
7'	22	0.41
8'	18	0.34
9'	15	0.27

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

CERTIFIED TEST REPORT NO. F09949³

20W LED, 3500K, CCD FINISH TRIM

Candlepower Distribution



ANGLE	MEAN CP	LUMENS
0	615	
5	629	62
10	661	
15	684	192
20	670	
25	630	287
30	564	
35	474	290
40	350	
45	190	150
50	75	
55	36	35
60	20	
65	12	12
70	7	
75	4	5
80	2	
85	1	1
90	0	

Trim: C420LEDDL35KCCDW

Output lumens: 1036 lm
Correlated Color Temp¹: 3500K
Input Watts²: 19.8 w
Efficacy: 52.3 lm/w
CRI⁴: 76
Spacing Criterion: 1.3

CEILING WALL	80%				70%				50%				30%				0%			
	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10	50	10
	RCR Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%																			
0	119	119	119	119	116	116	111	111	106	106	100	100	106	106	100	100	106	106	100	100
1	113	109	107	104	107	102	103	99	99	96	92	100	96	92	87	83	106	106	100	96
2	106	100	96	92	99	91	95	89	92	87	83	88	84	80	77	88	84	80	77	77
3	99	92	86	82	91	81	88	80	85	78	75	80	77	77	77	77	80	77	77	77
4	93	85	78	73	83	73	81	72	79	71	69	80	73	70	70	70	80	73	70	70
5	88	78	71	66	77	66	75	65	73	65	62	73	65	62	62	62	73	65	62	62
6	82	72	65	60	71	60	70	59	68	59	57	68	59	57	57	57	68	59	57	57
7	77	67	60	55	66	55	65	54	63	54	52	63	54	52	52	52	63	54	52	52
8	73	62	55	50	61	50	60	50	59	50	48	59	50	48	48	48	59	50	48	48
9	69	58	51	46	57	46	56	46	55	46	44	55	46	44	44	44	55	46	44	44
10	65	54	47	43	53	43	52	43	52	42	41	52	43	41	41	41	52	43	41	41

ZONAL LUMENS AND PERCENTAGES

ZONE	LUMENS	% LUMINAIRE
0-30	541	52.2%
0-40	832	80.3%
0-60	1018	98.3%
0-90	1036	100.0%

Single Unit Data

Height to Lighted Plane	Initial Footcandles	Beam Diameter
5'	25	7'
6'	17	9'
7'	13	10'
8'	10	12'
9'	8	13'

Multiple Unit Data - RCR 2

Spacing On Ctr.	Initial Footcandles	Watts/ Sq. Ft.
5'	46	0.88
6'	30	0.58
7'	22	0.41
8'	18	0.34
9'	14	0.27

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

CERTIFIED TEST REPORT NO. F09950³

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

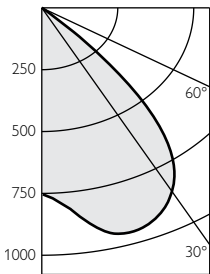
C4L10DL

Calculite 4 1/2" LED downlight

Reflector Finish Multipliers

CL (x 1.00), **CCL** (x 0.94), **CCD** (x 0.93), **CCZ** (x 0.76), **WH** (x 0.82) — **CL** & **CCD** finishes are tested. **CCL**, **CCZ** & **WH** are calculated.

1500 LM, 3000K, CL FINISH TRIM



Angle	MeanCP	Lumens
0	750	
5	788	79
10	872	
15	935	263
20	947	
25	921	422
30	864	
35	768	472
40	615	
45	334	242
50	32	
55	5	7
60	2	
65	1	1
70	1	
75	0	0
80	0	
85	0	0
90	0	

Trim: C4L10DL30KCLW
Frame: C4L15N1
Output lumens: 1487 lm
CCT¹: 3000K

Input Watts²: 30.4W
Efficacy: 48.9 lm/w
CRI³: 79
Spacing Criterion: 1.3
Certified Test Report No: F11232³

Single Unit Data		
Height to	Initial	Beam
Lighted Plane	Footcandles	Diameter
5'	30	7'
6'	21	8'
7'	15	9'
8'	12	10'
9'	9	12'

Multiple Unit Data - RCR 2		
Spacing	Initial	Watts/
On Ctr.	Footcandles	Sq. Ft.
5'	67	1.35
6'	44	0.88
7'	31	0.63
8'	26	0.53
9'	21	0.42

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

Zonal Lumens & Percentages		
Zone	Lumens	%Luminaire
0-30	764	51.4%
0-40	1236	83.1%
0-60	1485	99.9%
0-90	1487	100.0%

Ceiling	80%			70%		50%		30%		0%	
	70	50	30	10	50	10	50	10	50	10	0
Wall	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%										
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%										
0	119	119	119	119	116	116	111	111	106	106	100
1	113	110	107	105	108	103	104	100	100	97	92
2	106	101	96	93	99	92	96	90	93	88	84
3	100	93	87	83	91	82	89	81	86	79	76
4	94	85	79	74	84	74	82	73	80	72	70
5	88	79	72	67	78	67	76	66	74	66	63
6	83	73	66	61	72	61	70	60	69	60	58
7	78	67	60	56	66	55	65	55	64	55	53
8	73	62	55	51	62	51	60	50	59	50	48
9	69	58	51	47	57	46	56	46	55	46	44
10	65	54	47	43	53	43	52	43	52	43	41

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.
4. Color Rendering Index within +/- 2%.



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C4L10DL September 26, 2012

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