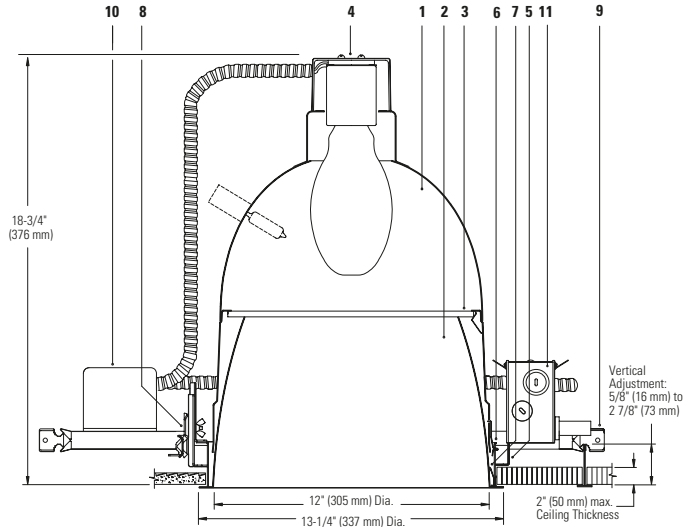
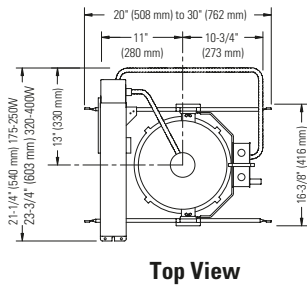


Calculite® HID Downlight C12E28VN

12" Aperture, ED28 (Enclosed) Metal Halide, Narrow Beam



Ceiling Cutout: 12 9/16" (256 mm) Dia.

Reflector Trim	Frame-In Kit	Lamp (Enclosed, Coated)
C12E28VN CLW Specular Clear, White Painted Flange.	C1217MHPU Magnetic Pulse Start, 120V/277V	175W ED28, BT28, PS MH
CLP Specular Clear, Matching Flange.	C1225MHPU Magnetic Pulse Start, 120V/277V	250W ED28, BT28, PS MH
CCDW Comfort Clear Diffuse, White Painted Flange.	C1232MHPU Magnetic Pulse Start, 120V/277V	320W ED28, BT28, PS MH
CCDP Comfort Clear Diffuse, Matching Flange.	C1240MHPU Magnetic Pulse Start, 120V/277V	400W ED28, BT28, PS MH
CCZW Champagne Bronze, White Painted Flange.	C1217MHU Magnetic, 120V/277V	175W ED28, BT28, MH
CCZP Champagne Bronze, Matching Flange.	C1225MHU Magnetic, 120V/277V	250W ED28, BT28, MH
	C1240MHU Magnetic, 120V/277V	400W ED28, BT28, MH

Features

- Upper Reflector:** Clear anodized aluminum, 0.040" (16-ga.). Provides narrow beam optics ideal for high ceilings. Also available in wide beam, see C12E28VV specification sheet.
- Aperture Cone:** Low brightness with 40° cut-off to lamp. Specular Clear or Comfort Clear™ Diffuse, or champagne bronze self-flanged in painted white or aperture-matching polished flange. Consult factory for other finishes.
- Lamp Shield:** High-temperature glass as required by code, captive during re-lamping.
- Socket Cup:** Heat dissipating, die-cast aluminum, pre-wired with mogul base porcelain socket with nickel plated screw shell. Postive locking attachment without tools to reflector assures proper optical alignment of lamp.
- Mounting Frame:** 0.048" (18-ga.) galvanized steel. Includes the pre-installed mounting bars.
- Mounting Ring:** 0.048"(18-ga.) galvanized steel. Designed for vertical adjustment from above or below for ceilings from 0" to 2" thick. Center-line notches allow consistent alignment of multiple fixtures.
- Retention Springs:** Rust resistant springs secure cone for quick, tool-less installation.
- Frame Vertical Adjustment:** Vertical adjustment mechanism accommodates mounting to virtually any ceiling system using mounting bars (provided, or 1/2" EMT tubing (by others). Single locking feature secures all adjustments. Alignment holes and markings allow fixture to be preset prior to installation.
- Mounting Bars:** 0.048" (18-ga.) pre-installed, telescoping bars extend to 30" long and lock securely into position. Built-in locking tabs provide positive attachment to common T-bar systems. Self-centering feature simplifies installation in 24" O.C. grid systems. Attaches to steel or wood joists without accessories.
- Ballast:** Pulse Start
- Junction Box:** 0.048" (18-ga.) galvanized steel. UL listed for 8 No. 12 AWG, 90°C through branch circuit conductors. Allows inspection from below.
- Thermal Protector:** Meets NEC and UL requirements. Do not install insulation above nor within 3" (76mm) of any part of the luminaire.

Electrical

Magnetic Ballast: 120/277V dual voltage, 60 Hz., encased and potted, CWA or Super CWA (pulse start) circuit type, high power factor, sound rating "B" (175W and 250W PS)/sound rating "C" (others), -20°F minimum starting Temperature, Type 1 Outdoor rating.

Electrical (cont.)

Ballast	ANSI Code	Voltage	Max. Amps	Input Watts
175W PS MH	M137	120/277	2.20/0.90	205
250W PS MH	M138	120/277	2.80/1.20	290
320W PS MH	M132	120/277	3.40/1.50	370
400W PS MH	M135	120/277	4.10/1.80	465
175W MH	M57	120/277	2.00/0.90	205
250W MH	M58	120/277	2.60/1.10	290
400W MH	M59	120/277	3.90/1.70	460

Options and Accessories

- Auxiliary:** Add suffix **A** to Frame-In Kit and Reflector Trim. See Spec.Sheet "A".
- Emergency:** Add suffix **E** to Reflector Trim and Frame-In Kit. See Spec. Sheet "E".
- Slope Ceiling Adapters:** See Specification Sheet SCA.
- Fuse** (magnetic ballast): Add suffix **F1** or **F2** to Frame in Kit (F1=120V, F2=277V).
- Chicago Plenum:** Consult Factory.

Labels

UL (Suitable for Damp Locations), CSA, I.B.E.W.
 For 320W/400W, install fixtures with minimum spacing: 4 feet from center-to-center of adjacent luminaires; 3 inch from top of luminaire to overhead building member; 2 feet from luminaire center to side building member.

Job Information

Type:

Job Name:
 Cat. No.:
 Lamp(s):
 Notes:

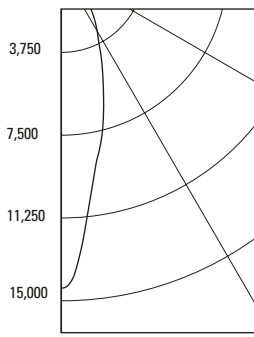


Calculite® HID Downlight C12E28VN

Page 2 of 2

12" Aperture, ED28 (Enclosed) Metal Halide, Narrow Beam

175W ED28 G.E. MH COATED LAMP, LUMEN RATING = 12900 LMS, ADVANCE MAGNETIC BALLAST, CL FINISH TRIM



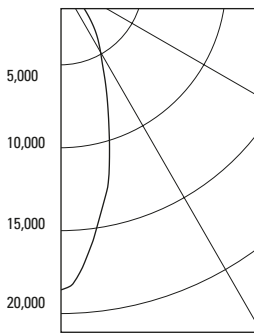
ANGLE	MEAN CP	LUMENS	LUMINANCE SUMMARY - CD. / SQ. M.
			ANGLE MEAN CD/SQ M
0	14426		45 35340
5	11935	1128	55 1009
10	8964		65 0
15	7250	2054	75 0
20	5519		85 0
25	4199	1985	
30	3234		
35	2478	1550	
40	1679		
45	1022	797	
50	394		
55	24	99	
60	0		
65	0	0	
70	0		
75	0	0	
80	0		
85	0	0	
90	0		

Coefficients of Utilization											
CEILING	80%				70%		50%		30%		0
	70	50	30	10	50	10	50	10	50	10	
WALL	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%										
0	.70	.70	.70	.70	.69	.69	.66	.66	.63	.63	.59
1	.67	.66	.65	.64	.65	.63	.62	.61	.60	.59	.56
2	.65	.62	.60	.59	.61	.58	.59	.57	.58	.56	.53
3	.62	.59	.56	.54	.58	.54	.57	.53	.55	.52	.51
4	.60	.56	.53	.51	.55	.51	.54	.50	.53	.50	.48
5	.57	.53	.50	.48	.52	.48	.51	.47	.50	.47	.46
6	.55	.50	.47	.45	.50	.45	.49	.45	.48	.44	.43
7	.52	.47	.44	.42	.47	.42	.46	.42	.46	.42	.41
8	.50	.45	.42	.40	.44	.40	.44	.40	.43	.39	.38
9	.48	.43	.40	.37	.42	.37	.42	.37	.41	.37	.36
10	.45	.40	.37	.35	.40	.35	.40	.35	.39	.35	.34

** EFFICIENCY = 59.0% **
SC = 5

CERTIFIED TEST REPORT NO. 2506FR, DATE: MAR 14, 2004
COMPUTED BY LSI PROGRAM **TEST-LITE**

250W ED28 PHILIPS MH COATED LAMP, LUMEN RATING = 19475 LMS, UNIVERSAL MAGNETIC BALLAST, CL FINISH TRIM



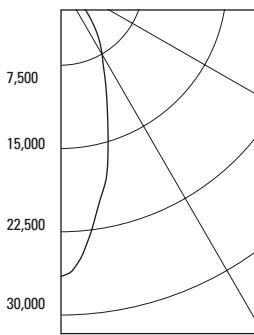
ANGLE	MEAN CP	LUMENS	LUMINANCE SUMMARY - CD. / SQ. M.
			ANGLE MEAN CD/SQ M
0	18579		45 54956
5	16967	1591	55 2036
10	14138		65 0
15	11451	3226	75 0
20	8486		85 0
25	6337	3011	
30	4864		
35	3775	2358	
40	2602		
45	1589	1239	
50	619		
55	48	160	
60	0		
65	0	0	
70	0		
75	0	0	
80	0		
85	0	0	
90	0		

Coefficients of Utilization											
CEILING	80%				70%		50%		30%		0
	70	50	30	10	50	10	50	10	50	10	
WALL	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%										
0	.71	.71	.71	.71	.69	.69	.66	.66	.63	.63	.59
1	.68	.67	.65	.64	.65	.63	.63	.61	.61	.59	.57
2	.65	.63	.61	.59	.62	.58	.60	.57	.58	.56	.54
3	.62	.59	.57	.55	.58	.54	.57	.54	.56	.53	.51
4	.60	.56	.53	.51	.56	.51	.54	.50	.53	.50	.48
5	.57	.53	.50	.48	.53	.48	.52	.47	.51	.47	.46
6	.55	.51	.47	.45	.50	.45	.49	.45	.48	.44	.43
7	.52	.48	.45	.42	.47	.42	.47	.42	.46	.42	.41
8	.50	.45	.42	.40	.45	.40	.44	.40	.44	.39	.39
9	.48	.43	.40	.37	.42	.37	.42	.37	.41	.37	.36
10	.46	.40	.37	.35	.40	.35	.40	.35	.39	.35	.34

** EFFICIENCY = 59.5% **
SC = 6

CERTIFIED TEST REPORT NO. 2507FR, DATE: MAR 14, 2004
COMPUTED BY LSI PROGRAM **TEST-LITE**

320W ED28 PHILIPS MH COATED LAMP, LUMEN RATING = 30100 LMS, ADVANCE BALLAST PULSE START MAGNETIC, CL FINISH TRIM



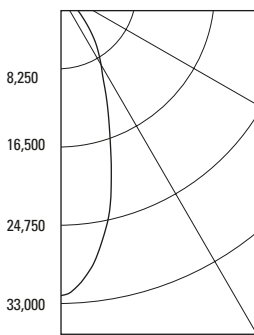
ANGLE	MEAN CP	LUMENS	LUMINANCE SUMMARY - CD. / SQ. M.
			ANGLE MEAN CD/SQ M
0	26533		45 49970
5	24377	2279	55 2444
10	20213		65 0
15	16572	4662	75 0
20	12433		85 0
25	9545	4521	
30	7548		
35	5923	3697	
40	4147		
45	2568	1994	
50	1016		
55	102	274	
60	2		
65	0	1	
70	0		
75	0	0	
80	0		
85	0	0	
90	0		

Coefficients of Utilization											
CEILING	80%				70%		50%		30%		0
	70	50	30	10	50	10	50	10	50	10	
WALL	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%										
0	.69	.69	.69	.69	.67	.67	.64	.64	.62	.62	.58
1	.66	.65	.63	.62	.64	.61	.61	.59	.59	.58	.55
2	.63	.61	.59	.57	.60	.57	.58	.55	.56	.54	.52
3	.61	.57	.55	.53	.57	.53	.55	.52	.54	.51	.49
4	.58	.54	.52	.50	.54	.49	.53	.49	.51	.48	.47
5	.56	.51	.48	.46	.51	.46	.50	.46	.49	.45	.44
6	.53	.49	.46	.44	.48	.43	.47	.43	.47	.43	.42
7	.51	.46	.43	.41	.46	.40	.45	.40	.44	.40	.39
8	.48	.43	.40	.38	.43	.38	.42	.38	.42	.38	.37
9	.46	.41	.38	.36	.41	.36	.40	.35	.40	.35	.34
10	.44	.39	.36	.33	.38	.33	.38	.33	.38	.33	.32

** EFFICIENCY = 57.9% **
SC = 6

CERTIFIED TEST REPORT NO. 2364FR, DATE: FEB 10, 2004
COMPUTED BY LSI PROGRAM **TEST-LITE**

400W ED28 G.E. MH COATED LAMP, LUMEN RATING = 35000 LMS, ADVANCE MAGNETIC BALLAST, CL FINISH TRIM



ANGLE	MEAN CP	LUMENS	LUMINANCE SUMMARY - CD. / SQ. M.
			ANGLE MEAN CD/SQ M
0	32201		45 100565
5	30567	2866	55 982
10	26772		65 0
15	21592	6084	75 0
20	15893		85 0
25	11829	5625	
30	9060		
35	7031	4394	
40	4857		
45	2908	2264	
50	1021		
55	23	239	
60	0		
65	0	0	
70	0		
75	0	0	
80	0		
85	0	0	
90	0		

Coefficients of Utilization											
CEILING	80%				70%		50%		30%		0
	70	50	30	10	50	10	50	10	50	10	
WALL	70	50	30	10	50	10	50	10	50	10	0
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%										
0	.73	.73	.73	.73	.71	.71	.68	.68	.65	.65	.61
1	.70	.69	.67	.66	.67	.65	.65	.63	.63	.61	.58
2	.67	.65	.63	.61	.64	.60	.62	.59	.60	.58	.56
3	.64	.61	.59	.57	.60	.56	.59	.55	.57	.54	.53
4	.62	.58	.55	.53	.57	.53	.56	.52	.55	.52	.50
5	.59	.55	.52	.50	.54	.49	.53	.49	.52	.48	.47
6	.57	.52	.49	.47	.52	.47	.51	.46	.50	.46	.45
7	.54	.49	.46	.44	.49	.44	.48	.44	.47	.43	.42
8	.52	.47	.43	.41	.46	.41	.46	.41	.45	.41	.40
9	.49	.44	.41	.39	.44	.39	.43	.38	.43	.38	.37
10	.47	.42	.39	.36	.42	.36	.41	.36	.41	.36	.35

** EFFICIENCY = 61.4% **
SC = 6

CERTIFIED TEST REPORT NO. 2522FR, DATE: MAR 14, 2004
COMPUTED BY LSI PROGRAM **TEST-LITE**

Job Information Type:

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