

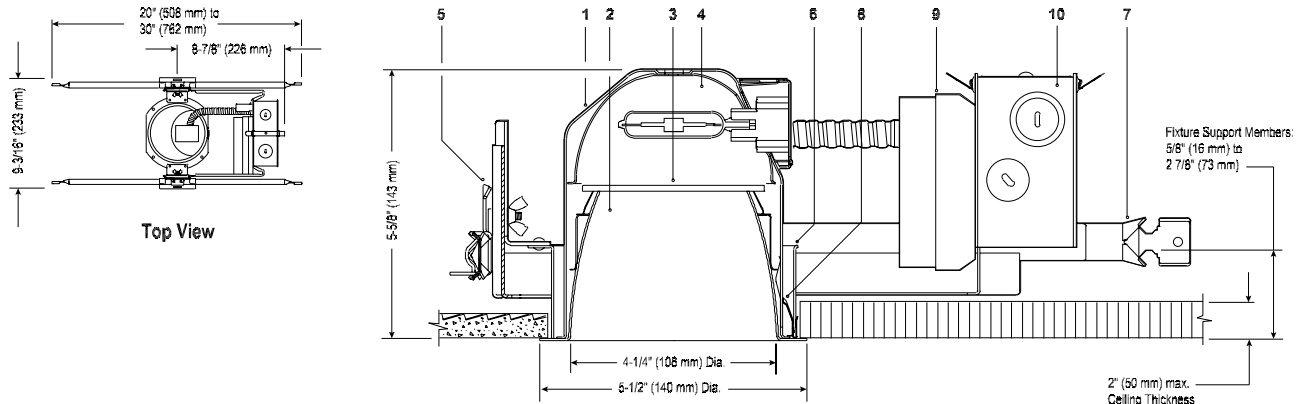
Calculite HID downlight

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Catalog number:

Notes:

Type:

**Ceiling cutout: 5 1/8" (130 mm) diameter**

Reflector trim			Frame-in kit		Lamp (ceramic metal halide)
C4T4HW	CLW	Specular clear, white painted flange	C420T4EU	Electronic 120V/277V	20W T4.5
	CLP	Specular clear, matching flange	C439T4E1	Electronic 120V	39W T4.5
	CCDW	Comfort clear diffuse, white painted flange	C439T4E2	Electronic 277V	39W T4.5
	CCDP	Comfort clear diffuse, matching flange	C470T4E1	Electronic 120V	70W T4.5
			C470T4E2	Electronic 277V	70W T4.5

Features

- Upper reflector:** Clear anodized aluminum, 0.040" (16-ga.). Provides wide beam distribution for general illumination.
- Aperture cone:** Provides 50° visual cut-off to lamp and lamp image; self-flange 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. Light diffusion provides exceptionally smooth beam.
- Socket housing:** Galvanized steel, pre-wired with G8.5 pulse rated socket. Snaps onto upper reflector for secure attachment without tools; unitized construction assures proper optical alignment of lamp to reflector.
- Mounting frame:** 0.048" (18-ga.) galvanized steel. Vertical adjustment mechanism accommodates mounting to virtually any ceiling system using pre-installed mounting bars, 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 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.
- 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.
- Trim retention springs:** Rust resistant springs simplify reflector removal for accessibility, inspection and maintenance of ballast/junction box assembly.
- Ballast:** Electronic 120V or 277V. Accessible from below for installation, inspection and/or replacement without tools.
- 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:** (Not shown) Meets NEC and UL requirements. Do not install insulation above nor within 3" (76mm) of any part of the luminaire.

Electrical

Electronic ballast: 120 or 277V, 50/60 Hz., encased, high power factor, T.H.D. <15%, thermally and transient protected, RMI/RFI complies with FCC Part 18 non-consumer limits, shut-down circuit at end of lamp life, sound rating "A", -5°F minimum starting temperature, Type 1 Outdoor rating.

Ballast	ANSI Code	Voltage	Max. amps	Input watts
20W MH	M156	120/277	0.21/0.10	23
39W MH	M130	120/277	0.39/0.17	44
70W MH	M139	120/277	0.67/0.29	78

Options and accessories

Slope ceiling adapters: see specification sheet SCA.

Chicago Plenum: consult factory.

Labels

UL (Suitable for Damp Locations), CSA, I.B.E.W.

For 70W, install fixtures with minimum spacing between:

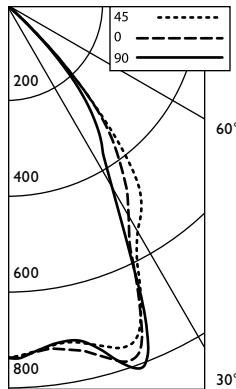
- Center-to center of adjacent luminaires:** 2 feet.
- Top of luminaire to overhead building member:** 1/2 inch.
- Luminaire center to side building member:** 1 foot.

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20W T4.5 G.E. MH lamp, lumen rating = 1700 LMS, Electronic Aromat Ballast, CL finish trim

Candlepower distribution



Efficiency = 55.9%
 SC(0°) = 1.1, SC(90°) = 1.0

Angle	0°	45°	90°
0	737	737	737
5	725	727	725
10	716	731	713
15	736	759	743
20	755	784	808
25	661	643	655
30	547	509	440
35	488	419	342
40	331	310	247
45	128	128	106
50	8	9	7
55	0	0	0
60	0	0	0
65	0	0	0
70	0	0	0
75	0	0	0
80	0	0	0
85	0	0	0
90	0	0	0

LUMINANCE SUMMARY - CD. / SQ. M.			
M.	45°	90°	ANGLE
0°	45	22327	22499
45	22327	22499	18491
55	0	0	0
65	0	0	0
75	0	0	0
85	0	0	0

Zonal lumens and percentages			
Zone	Lumens	% Lamp	%Luminaire
0-30	582	34.27	61.25
0-40	842	49.53	88.54
0-60	951	55.94	100
0-90	951	55.94	100
40-90	108	6.41	11.46
60-90	0	0	0
90-180	0	0	0
0-180	951	55.94	100

Certified test report no. 2342FR, date: Nov 03, 2003
 Computed by LSI Program **Test-Lite**

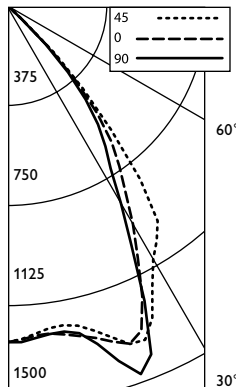
Coefficients of utilization

Ceiling	80%				70%				50%				30%			
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10
RCR	Zonal cavity method - Effective floor cavity reflectance = 20%															
0	.67	.67	.67	.67	.65	.65	.62	.62	.60	.60	.56					
1	.64	.62	.61	.60	.61	.59	.59	.57	.57	.56	.53	.54	.52	.50		
2	.61	.59	.57	.55	.58	.54	.56	.53	.54	.52	.49	.47				
3	.58	.55	.53	.51	.54	.50	.53	.49	.52	.49	.47					
4	.56	.52	.49	.47	.51	.47	.50	.46	.49	.46	.44					
5	.53	.49	.46	.43	.48	.43	.47	.43	.46	.43	.41					
6	.51	.46	.43	.41	.45	.40	.45	.40	.44	.40	.39					
7	.48	.43	.40	.38	.43	.37	.42	.37	.41	.37	.36					
8	.45	.40	.37	.35	.40	.35	.39	.35	.39	.34	.34					
9	.43	.38	.34	.32	.37	.32	.37	.32	.36	.32	.31					
10	.40	.35	.32	.30	.35	.30	.34	.30	.34	.29	.29					

Luminaire input watts = 23

39W T4 Philips MH lamp, lumen rating = 3300 LMS, Electronic Aromat Ballast, CL finish trim

Candlepower distribution



Efficiency = 52.4%
 SC(0°) = 1.3, SC(90°) = 1.1

Angle	0°	45°	90°
0	1262	1262	1262
5	1235	1242	1251
10	1217	1252	1241
15	1261	1290	1313
20	1350	1349	1470
25	1291	1202	1222
30	1098	946	856
35	986	736	645
40	609	527	460
45	259	230	207
50	26	25	25
55	7	6	6
60	2	2	3
65	1	0	0
70	0	0	0
75	0	0	0
80	0	0	0
85	0	0	0
90	0	0	0

Lumiance summary - CD. / SQ. M.			
Angle	0°	45°	90°
45	45196	40293	36329
55	1435	1371	1195
65	237	95	95
75	0	0	0
85	0	0	0

Zonal lumens and percentages			
Zone	Lumens	% Lamp	%Luminaire
0-30	1042	31.59	60.34
0-40	1520	46.08	88.01
0-60	1726	52.33	99.96
0-90	1727	52.35	100
40-90	207	6.28	11.99
60-90	0	0.02	0.04
90-180	0	0	0
0-180	1727	52.35	100

Certified test report no. 2341FR, date: Feb 10, 2004
 Computed by LSI Program **Test-Lite**

Coefficients of utilization

Ceiling	80%				70%				50%				30%			
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10
RCR	Zonal cavity method - Effective floor cavity reflectance = 20%															
0	.62	.62	.62	.62	.61	.61	.58	.58	.56	.56	.52					
1	.60	.58	.57	.56	.57	.55	.55	.53	.53	.52	.49					
2	.57	.55	.53	.51	.54	.51	.52	.50	.51	.49	.47					
3	.54	.51	.49	.47	.51	.47	.49	.46	.48	.45	.44					
4	.52	.48	.46	.44	.48	.43	.47	.43	.46	.42	.41					
5	.49	.45	.42	.40	.45	.40	.44	.40	.43	.40	.38					
6	.47	.43	.40	.38	.42	.37	.41	.37	.41	.37	.36					
7	.44	.40	.37	.35	.40	.35	.39	.35	.38	.34	.33					
8	.42	.37	.34	.32	.37	.32	.36	.32	.36	.32	.31					
9	.40	.35	.32	.30	.34	.30	.34	.29	.34	.29	.29					
10	.38	.32	.29	.27	.32	.27	.32	.27	.31	.27	.26					

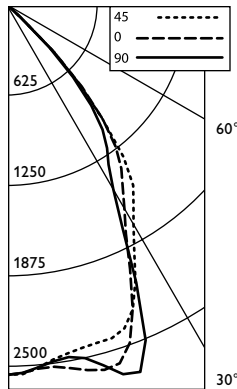
Luminaire input watts = 44

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70W T4 Philips MH lamp, lumen rating = 6400 LMS, Electronic Aromat Ballast, CL finish trim

Candlepower distribution



**Efficiency = 49.9% **
 SC(0°) = 1.1, SC(90°) = 1.0

Angle	0°	45°	90°
0	2574	2574	2574
5	2532	2540	2531
10	2461	2567	2488
15	2434	2629	2595
20	2395	2503	2717
25	2120	2034	2134
30	1768	1642	1489
35	1539	1396	1224
40	1043	1048	924
45	479	484	430
50	46	51	49
55	10	13	13
60	5	7	7
65	1	3	2
70	0	0	0
75	0	0	0
80	0	0	0
85	0	0	0
90	0	0	0

Luminance summary - CD. / SQ. M.

Angle	0°	45°	90°
45	83613	84756	75366
55	2124	2843	2843
65	274	964	689
75	0	0	0
85	0	0	0

Zonal lumens and percentages

Zone	Lumens	% Lamp	%Luminaire
0-30	1930	30.16	60.41
0-40	2785	43.53	87.19
0-60	3192	49.88	99.92
0-90	3195	49.92	100
40-90	409	6.4	12.81
60-90	2	0.04	0.08
90-180	0	0	0
0-180	3195	49.92	100

Certified test report no. 2315FR, date: Sep 23, 2003
 Computed by LSI Program **Test-Lite**

Coefficients of utilization

Ceiling	80%				70%				50%				30%			
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10
RCR	Zonal cavity method - Effective floor cavity reflectance = 20%															
0	.59	.59	.59	.59	.58	.58	.55	.55	.53	.53	.50	.50	.47	.47	.44	.44
1	.57	.56	.54	.53	.55	.53	.53	.51	.51	.49	.47	.47	.46	.46	.43	.43
2	.54	.52	.50	.49	.51	.48	.50	.47	.48	.46	.45	.44	.43	.42	.41	.40
3	.52	.49	.47	.45	.48	.45	.47	.44	.46	.43	.42	.41	.40	.39	.38	.37
4	.50	.46	.44	.42	.46	.41	.45	.41	.44	.41	.39	.38	.37	.36	.35	.34
5	.47	.43	.41	.39	.43	.38	.42	.38	.41	.38	.37	.36	.35	.34	.33	.32
6	.45	.41	.38	.36	.40	.36	.40	.36	.39	.35	.34	.33	.32	.31	.30	.29
7	.42	.38	.35	.33	.38	.33	.37	.33	.36	.32	.31	.30	.29	.28	.27	.26
8	.40	.36	.33	.31	.35	.31	.35	.31	.34	.30	.29	.28	.27	.26	.25	.24
9	.38	.33	.30	.28	.33	.28	.33	.28	.32	.28	.27	.26	.25	.24	.23	.22
10	.36	.31	.28	.26	.31	.26	.30	.26	.30	.26	.25	.24	.23	.22	.21	.20

Luminaire input watts = 78



Philips Lightolier
 e: lol.webmaster@philips.com
 t: (508) 679-8131
 w: www.lightolier.com

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