

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: HALO COMMERCIAL

Report Number: P31416

Luminaire Tested: **PD8H142E-82HC_42TTT**

Issue Date: 03/03/2020



Test Information

Test Method: LM-79-08
Report Number: P31416
Test Lab: INNOVATION CENTER-P3
Issue Date: 03/03/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: PD8H142E-82HC_42TTT
Description: HALO 8-INCH APERTURE OPEN DOWNLIGHT, HORIZONTAL LAMP,
SPECULAR CLEAR TRIM.
Light Source: (1) SYLVANIA GX24Q-4 SINGLE END FOUR PIN BASE TTT CFL LAMP
3500K
CF42DT/E/IN/835 42 WATTS
Ballast/Driver: (1) SYLVANIA ELECTRONIC BALLAST
SYLVANIA QTP2x26CF/UNV DM

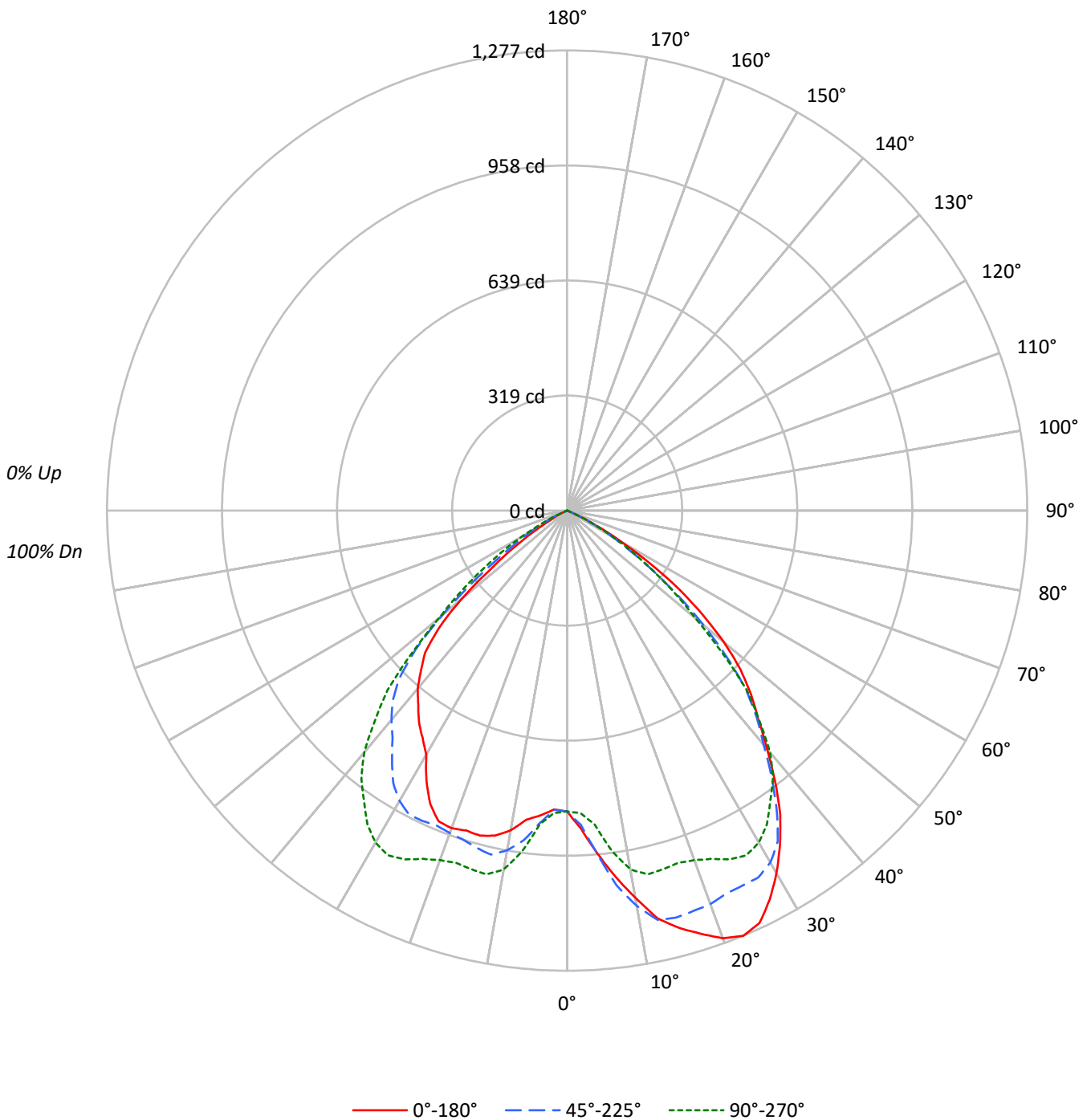
Summary

Lumens per Lamp: 3200 (1 lamp)
Luminaire Lumens: 2266.9 lumens
Efficiency: 70.8%
Efficacy: 49.8 lumens/watt
Spacing Criteria (0/90/45): 1.51 / 1.63 / 1.48
Luminous Opening: Vertical Cylinder (Dia: 0.7' x H: 0.1')
CIE Type: Direct

Input Watts (W): 45.5
Input Voltage (V): 120.04
Input Current (Ain): 0.37935
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	84	84	84	84	82	82	82	82	79	79	79	75	75	75	72	72	72	71
1	79	77	75	73	77	75	73	72	72	71	69	70	68	67	67	66	65	64
2	74	69	66	63	72	68	65	62	66	63	61	64	61	59	62	60	58	57
3	69	63	58	55	67	62	57	54	60	56	53	58	55	52	56	54	51	50
4	64	57	52	48	62	56	51	47	54	50	47	53	49	46	51	48	46	44
5	59	51	46	42	58	51	46	42	49	45	42	48	44	41	47	43	41	39
6	55	47	41	38	54	46	41	37	45	40	37	44	40	37	43	39	37	35
7	51	43	37	34	50	42	37	33	41	37	33	40	36	33	39	36	33	32
8	48	39	34	30	47	39	34	30	38	33	30	37	33	30	36	33	30	28
9	45	36	31	27	44	36	31	27	35	30	27	34	30	27	34	30	27	26
10	42	33	28	25	41	33	28	25	32	28	25	32	28	25	31	27	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	23494	23494	23494
5°	26522	24298	23603
10°	30199	27985	24940
15°	33298	28605	25939
20°	35463	28977	26337
25°	36136	30557	25722
30°	34155	31275	22986
35°	31402	29940	21838
40°	27458	27904	20546
45°	24263	23725	18744
50°	20387	16647	13843
55°	14632	11286	7394
60°	7440	6286	2608
65°	1914	1962	766
70°	164	164	164
75°	65	65	65
80°	0	80	0
85°	0	0	0



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	90.1	4.0	2.8	0°	835	835	835	835	835	
10°-20°	299.6	13.2	9.4	5°	954	955	874	870	849	95
20°-30°	489.1	21.6	15.3	15°	1199	1169	1030	969	934	340
30°-40°	580.5	25.6	18.1	25°	1263	1149	1068	950	899	574
40°-50°	508.2	22.4	15.9	35°	1031	1014	983	847	717	639
50°-60°	252.7	11.1	7.9	45°	721	701	705	659	557	553
60°-70°	45.2	2.0	1.4	55°	376	291	290	240	190	331
70°-80°	1.5	0.1	0.0	65°	40	40	41	37	16	57
80°-90°	0.0	0.0	0.0	75°	1	1	1	1	1	1
90°-100°	0.0	0.0	0.0	85°	0	0	0	0	0	0
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	
110°-120°	0.0	0.0	0.0							
120°-130°	0.0	0.0	0.0							
130°-140°	0.0	0.0	0.0							
140°-150°	0.0	0.0	0.0							
150°-160°	0.0	0.0	0.0							
160°-170°	0.0	0.0	0.0							
170°-180°	0.0	0.0	0.0							
0°-30°	878.8	38.8	27.5							
0°-40°	1459.3	64.4	45.6							
0°-60°	2220.3	97.9	69.4							
0°-90°	2266.9	100.0	70.8							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	2266.9	100.0	70.8							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	835	835	835	835	835	835	835	835	835
2.5°	883	882	873	855	840	833	831	830	830
5°	954	964	955	931	874	876	870	857	849
7.5°	1024	1031	1049	1016	953	941	923	884	865
10°	1091	1103	1114	1069	1011	983	957	917	901
12.5°	1159	1174	1164	1098	1034	1004	978	947	924
15°	1199	1218	1169	1092	1030	998	969	956	934
17.5°	1231	1247	1165	1078	1025	993	958	950	931
20°	1263	1257	1162	1078	1032	999	952	937	938
22.5°	1277	1255	1151	1079	1046	1007	946	922	933
25°	1263	1250	1149	1089	1068	1015	950	908	899
27.5°	1217	1225	1148	1112	1078	1030	951	877	846
30°	1162	1172	1128	1100	1064	1018	930	832	782
32.5°	1099	1120	1088	1064	1032	982	898	799	747
35°	1031	1040	1014	1006	983	930	847	756	717
37.5°	948	961	932	939	938	886	796	719	679
40°	862	877	848	884	876	842	758	678	645
42.5°	785	789	778	806	789	766	717	640	600
45°	721	707	701	703	705	686	659	588	557
47.5°	652	634	599	590	582	580	570	519	483
50°	567	534	493	477	463	470	454	400	385
52.5°	472	439	387	373	377	358	339	295	269
55°	376	337	291	280	290	277	240	206	190
57.5°	272	255	203	207	217	204	167	129	112
60°	174	162	141	141	147	134	113	80	61
62.5°	101	91	84	87	88	85	69	47	36
65°	40	35	40	40	41	38	37	26	16
67.5°	6	7	5	6	8	7	6	5	5
70°	3	3	3	3	3	3	3	3	3
72.5°	2	2	2	2	2	2	2	2	2
75°	1	1	1	1	1	1	1	1	1
77.5°	1	1	1	1	1	1	1	1	1
80°	0	0	0	0	1	0	0	0	0
82.5°	0	0	0	0	0	0	0	0	0
85°	0	0	0	0	0	0	0	0	0
87.5°	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0

(END OF REPORT)