

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO COMMERCIAL

Report Number: P592851

Luminaire Tested: **HC445D010-HM44560850-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592851
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC445D010-HM44560850-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4119.2 lumens
Efficiency: N/A
Efficacy: 93.6 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

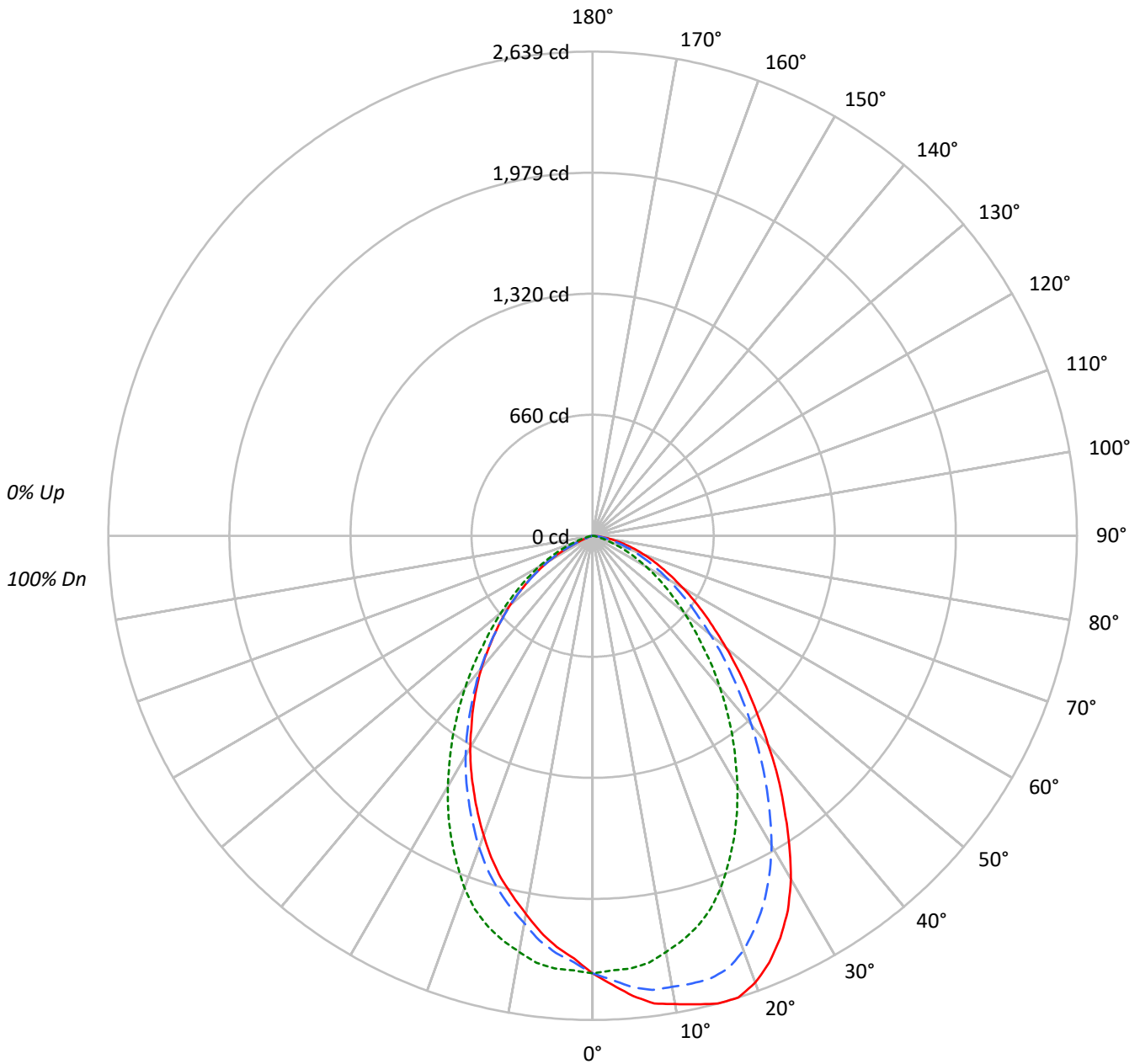
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	111	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89																			
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	85	83	80	78																			
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	69																			
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61																			
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55																			
6	77	66	58	52	75	65	57	52	63	57	52	61	56	51	60	55	51	49																			
7	72	60	53	47	71	59	52	47	58	51	47	57	51	46	55	50	46	44																			
8	68	56	48	43	66	55	48	43	54	47	42	53	47	42	51	46	42	40																			
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	43	39	37																			
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	36	34																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	294142	294142	294142
5°	311659	293173	278464
10°	324606	288497	262145
15°	337017	281571	246480
20°	340191	268063	227988
25°	329177	247928	208677
30°	307771	224665	189884
35°	274306	199711	170604
40°	239785	173688	151838
45°	208888	147330	131369
50°	182259	124979	112602
55°	159758	103588	91180
60°	139751	83678	66952
65°	121793	62371	37621
70°	106424	40392	12226
75°	87308	21017	3193
80°	65065	9660	2415
85°	38494	4812	4812



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	225.1	5.5
10°-20°	629.9	15.3
20°-30°	871.0	21.1
30°-40°	875.7	21.3
40°-50°	706.7	17.2
50°-60°	477.8	11.6
60°-70°	243.2	5.9
70°-80°	77.9	1.9
80°-90°	11.9	0.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1725.9	41.9
0°-40°	2601.7	63.2
0°-60°	3786.2	91.9
0°-90°	4119.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4119.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2385	2385	2385	2385	2385	
5°	2517	2470	2368	2283	2249	243
15°	2639	2497	2205	1995	1930	743
25°	2419	2208	1822	1598	1533	1107
35°	1822	1645	1326	1160	1133	1138
45°	1198	1072	845	753	753	928
55°	743	641	482	421	424	667
65°	417	339	214	139	129	418
75°	183	129	44	10	7	197
85°	27	14	3	3	3	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	2384.7	2384.7	2384.7	2384.7	2384.7	2384.7	2384.7	2384.7	2384.7
2.5°	2449.2	2435.6	2422.1	2398.3	2371.1	2344.1	2327.0	2313.5	2306.7
5°	2517.1	2500.0	2469.5	2418.7	2367.8	2320.3	2282.9	2259.3	2249.0
7.5°	2571.3	2547.6	2496.7	2425.4	2347.4	2272.8	2225.3	2191.4	2177.8
10°	2591.7	2564.6	2496.7	2401.8	2303.4	2211.7	2143.9	2109.9	2093.0
12.5°	2615.4	2584.9	2500.0	2381.3	2259.3	2150.6	2072.7	2028.6	2011.6
15°	2639.2	2598.4	2496.7	2350.8	2205.0	2079.4	1994.7	1950.5	1930.2
17.5°	2639.2	2591.7	2469.5	2300.0	2133.7	2001.4	1906.4	1855.6	1838.6
20°	2591.7	2537.4	2405.1	2218.5	2042.2	1899.7	1808.1	1757.2	1736.9
22.5°	2517.1	2455.9	2313.5	2120.1	1933.5	1794.5	1702.9	1655.4	1635.1
25°	2418.7	2357.7	2208.3	2008.2	1821.7	1682.6	1597.7	1553.6	1533.3
27.5°	2303.4	2235.5	2086.2	1886.1	1702.9	1570.6	1492.6	1451.9	1434.9
30°	2160.9	2096.5	1950.5	1753.8	1577.4	1455.2	1384.0	1346.7	1333.2
32.5°	1994.7	1940.4	1797.9	1614.7	1448.5	1336.5	1272.1	1241.6	1228.0
35°	1821.7	1770.7	1645.2	1475.7	1326.3	1221.2	1160.1	1139.8	1133.0
37.5°	1658.8	1614.7	1492.6	1336.5	1200.9	1109.2	1055.0	1041.4	1034.6
40°	1489.2	1458.7	1346.7	1204.2	1078.7	997.3	953.3	943.0	943.0
42.5°	1336.5	1302.6	1204.2	1075.3	963.3	882.0	851.5	841.3	844.6
45°	1197.5	1163.5	1072.0	953.3	844.6	776.9	753.1	753.1	753.1
47.5°	1068.6	1038.1	953.3	831.1	742.9	688.6	664.9	664.9	668.3
50°	949.8	929.5	834.5	729.3	651.3	600.4	583.4	580.1	586.8
52.5°	837.9	814.1	729.3	634.4	559.8	519.0	502.1	498.6	502.1
55°	742.9	715.7	641.1	549.6	481.7	440.9	420.6	417.3	424.0
57.5°	651.3	630.9	552.9	471.6	407.1	366.3	349.4	342.7	346.0
60°	566.5	546.2	474.9	396.9	339.2	298.6	274.8	267.9	271.4
62.5°	488.5	471.6	403.7	329.1	271.4	234.0	210.3	193.3	200.2
65°	417.3	400.3	339.2	264.6	213.7	173.0	139.1	125.6	128.9
67.5°	356.2	335.8	278.1	210.3	159.4	115.3	78.0	71.2	71.2
70°	295.1	274.8	223.8	162.8	112.0	61.0	33.9	33.9	33.9
72.5°	237.4	220.5	173.0	122.1	71.2	27.2	13.6	13.6	13.6
75°	183.2	169.6	128.9	84.8	44.1	13.6	10.2	6.7	6.7
77.5°	135.6	122.1	91.6	57.7	27.2	6.7	6.7	6.7	6.7
80°	91.6	81.5	61.0	33.9	13.6	3.4	3.4	3.4	3.4
82.5°	54.3	47.5	33.9	16.9	6.7	3.4	3.4	3.4	3.4
85°	27.2	20.3	13.6	6.7	3.4	3.4	3.4	3.4	3.4
87.5°	6.7	3.4	3.4	3.4	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)