

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: P580722

Luminaire Tested: **HC445D010-HM44560830-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580722
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC445D010-HM44560830-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4473.4 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

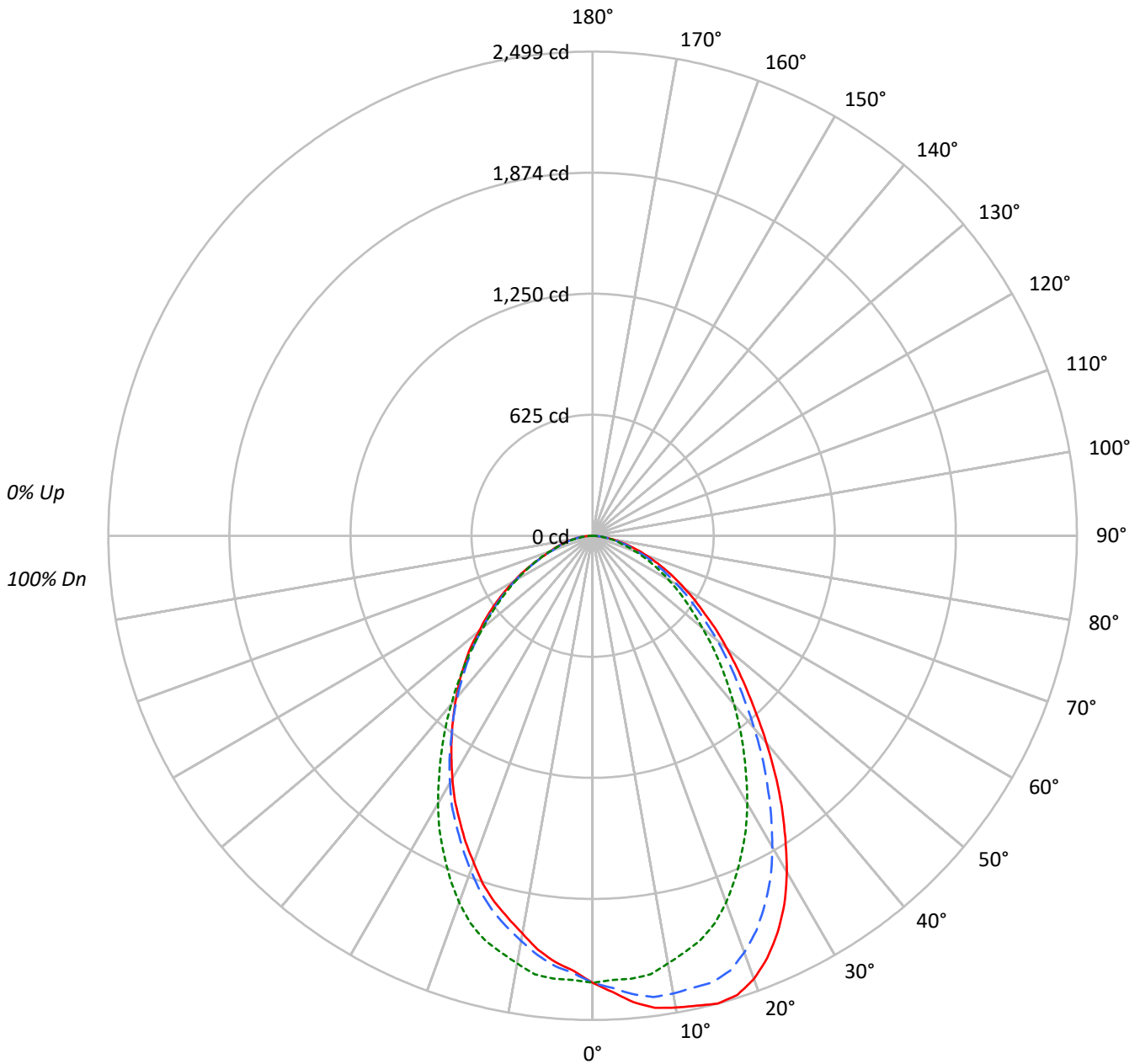
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87																			
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75																			
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66																			
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58																			
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51																			
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46																			
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41																			
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37																			
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34																			
10	58	45	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	284509	284509	284509
5°	299166	284135	273499
10°	309664	280744	261093
15°	319127	275646	249928
20°	319491	264295	235536
25°	307484	247043	220831
30°	285524	227314	206220
35°	255921	204649	190826
40°	224553	182609	176409
45°	196259	161668	162697
50°	173297	141482	146605
55°	152834	125437	131802
60°	136593	111011	115427
65°	121005	97657	97657
70°	105739	83271	83271
75°	90310	70580	79015
80°	71458	63147	71458
85°	45995	54486	66940



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	218.5	4.9
10°-20°	615.4	13.8
20°-30°	862.2	19.3
30°-40°	888.3	19.9
40°-50°	756.3	16.9
50°-60°	560.4	12.5
60°-70°	351.6	7.9
70°-80°	174.7	3.9
80°-90°	45.9	1.0
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°	1696.2	37.9
0°-40°	2584.5	57.8
0°-60°	3901.2	87.2
0°-90°	4473.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4473.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2307	2307	2307	2307	2307	
5°	2416	2375	2295	2230	2209	232
15°	2499	2387	2159	2002	1957	703
25°	2259	2102	1815	1658	1623	1033
35°	1700	1572	1359	1270	1267	1060
45°	1125	1048	927	909	933	873
55°	711	654	583	595	613	643
65°	415	373	335	329	335	414
75°	190	169	148	160	166	203
85°	32	32	38	44	47	42
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°	2306.6	2306.6	2306.6	2306.6	2306.6	2306.6	2306.6	2306.6	2306.6
2.5°	2357.0	2348.1	2336.2	2315.6	2294.8	2277.0	2259.3	2250.4	2247.5
5°	2416.2	2398.4	2374.7	2336.2	2294.8	2259.3	2229.6	2214.8	2208.9
7.5°	2457.6	2439.9	2401.4	2342.2	2282.9	2229.6	2182.3	2161.5	2155.6
10°	2472.4	2451.8	2398.4	2318.5	2241.5	2176.3	2123.0	2096.5	2084.6
12.5°	2484.3	2457.6	2389.5	2294.8	2200.0	2120.1	2063.8	2028.4	2019.4
15°	2499.1	2469.5	2386.6	2271.2	2158.6	2063.8	2001.6	1969.1	1957.2
17.5°	2484.3	2451.8	2354.1	2223.7	2096.5	1992.8	1924.7	1895.1	1883.2
20°	2434.0	2398.4	2288.9	2149.8	2013.5	1907.0	1838.8	1809.2	1794.4
22.5°	2357.0	2318.5	2206.0	2058.0	1918.7	1815.2	1750.0	1720.4	1711.5
25°	2259.3	2220.8	2102.3	1951.3	1815.2	1714.4	1658.2	1631.5	1622.6
27.5°	2143.8	2105.3	1989.9	1841.8	1711.5	1616.7	1572.3	1545.7	1539.7
30°	2004.7	1966.1	1853.7	1717.4	1596.0	1507.2	1471.6	1450.9	1447.9
32.5°	1850.6	1818.1	1714.4	1590.1	1474.6	1400.6	1373.9	1359.1	1356.2
35°	1699.6	1664.2	1572.3	1459.8	1359.1	1294.0	1270.3	1267.3	1267.3
37.5°	1545.7	1510.1	1436.0	1332.5	1246.5	1187.4	1178.4	1181.5	1181.5
40°	1394.6	1362.1	1296.9	1211.1	1134.1	1089.7	1086.7	1092.6	1095.6
42.5°	1252.5	1225.9	1166.7	1092.6	1027.5	992.0	994.9	1006.8	1015.6
45°	1125.1	1101.5	1048.2	983.1	926.8	900.2	909.0	923.9	932.7
47.5°	1009.7	988.9	938.7	879.4	832.1	814.2	826.1	843.9	855.7
50°	903.1	885.4	838.0	775.8	737.3	725.5	740.3	758.0	764.0
52.5°	808.4	790.6	740.3	687.0	657.4	651.4	666.2	681.1	689.9
55°	710.7	695.9	654.4	607.0	583.3	580.4	595.2	607.0	612.9
57.5°	630.7	615.9	577.4	536.0	515.2	512.3	527.1	536.0	538.9
60°	553.7	538.9	503.3	464.8	450.0	450.0	459.0	464.8	467.9
62.5°	482.7	467.9	435.2	402.7	390.9	390.9	390.9	393.8	402.7
65°	414.6	402.7	373.1	343.4	334.6	328.6	328.6	328.6	334.6
67.5°	352.3	340.5	316.9	290.1	281.3	272.4	269.5	275.3	275.3
70°	293.2	284.3	260.5	239.9	230.9	222.0	219.1	230.9	230.9
72.5°	239.9	230.9	216.2	195.5	186.6	183.6	189.5	195.5	198.4
75°	189.5	180.6	168.7	157.0	148.1	151.0	159.9	162.8	165.8
77.5°	142.2	139.1	127.3	118.5	118.5	121.4	127.3	133.3	136.2
80°	100.6	97.7	91.8	85.8	88.9	94.8	97.7	103.7	100.6
82.5°	62.2	62.2	59.2	59.2	62.2	68.1	71.0	74.1	77.0
85°	32.5	32.5	32.5	35.6	38.5	41.4	44.4	47.3	47.3
87.5°	8.9	11.9	11.9	14.8	17.7	17.7	20.8	20.8	20.8
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)