

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: P580900

Luminaire Tested: **HC450D010-HM44560840-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580900
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: HC450D010-HM44560840-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4351.7 lumens
Efficiency: N/A
Efficacy: 90.7 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

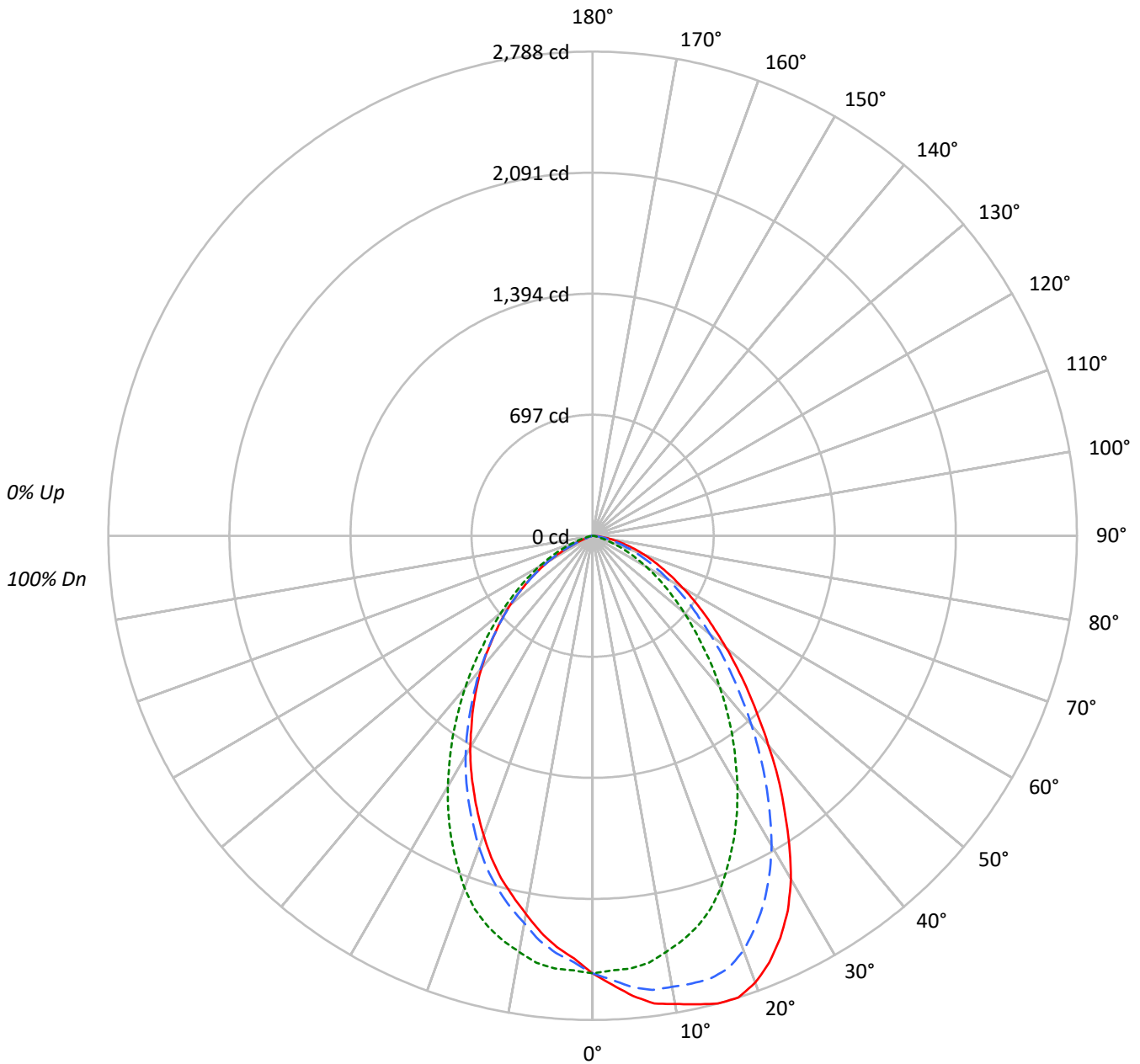
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	310745	310745	310745
5°	329241	309715	294189
10°	342918	304767	276937
15°	356031	297470	260387
20°	359381	283184	240852
25°	347755	261905	220463
30°	325147	237355	200595
35°	289771	210989	180241
40°	253327	183510	160421
45°	220680	155668	138782
50°	192544	132041	118973
55°	168790	109437	96341
60°	147620	88389	70726
65°	128652	65902	39751
70°	112411	42627	12947
75°	92216	22208	3431
80°	68759	10158	2486
85°	40617	4953	4953



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	237.8	5.5
10°-20°	665.5	15.3
20°-30°	920.1	21.1
30°-40°	925.2	21.3
40°-50°	746.6	17.2
50°-60°	504.8	11.6
60°-70°	256.9	5.9
70°-80°	82.3	1.9
80°-90°	12.6	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°	1823.4	41.9
0°-40°	2748.5	63.2
0°-60°	3999.9	91.9
0°-90°	4351.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4351.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2519	2519	2519	2519	2519	
5°	2659	2609	2501	2412	2376	256
15°	2788	2638	2330	2107	2039	785
25°	2555	2333	1924	1688	1620	1169
35°	1924	1738	1401	1226	1197	1202
45°	1265	1132	892	796	796	980
55°	785	677	509	444	448	705
65°	441	358	226	147	136	442
75°	194	136	47	11	7	209
85°	29	14	4	4	4	38
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°	2519.3	2519.3	2519.3	2519.3	2519.3	2519.3	2519.3	2519.3	2519.3
2.5°	2587.4	2573.1	2558.7	2533.7	2505.0	2476.4	2458.4	2444.1	2436.9
5°	2659.1	2641.2	2609.0	2555.2	2501.4	2451.2	2411.8	2386.8	2376.0
7.5°	2716.5	2691.3	2637.6	2562.4	2479.9	2401.1	2350.9	2315.1	2300.8
10°	2737.9	2709.3	2637.6	2537.2	2433.3	2336.5	2264.9	2229.1	2211.1
12.5°	2763.1	2730.7	2641.2	2515.8	2386.8	2272.1	2189.6	2143.0	2125.1
15°	2788.1	2745.1	2637.6	2483.6	2329.5	2196.8	2107.2	2060.7	2039.1
17.5°	2788.1	2737.9	2609.0	2429.8	2254.2	2114.4	2014.1	1960.3	1942.3
20°	2737.9	2680.6	2540.9	2343.7	2157.4	2006.9	1910.1	1856.3	1834.9
22.5°	2659.1	2594.6	2444.1	2239.8	2042.7	1895.7	1799.0	1748.8	1727.4
25°	2555.2	2490.6	2333.0	2121.6	1924.4	1777.5	1688.0	1641.3	1619.9
27.5°	2433.3	2361.7	2204.0	1992.5	1799.0	1659.3	1576.8	1533.9	1515.9
30°	2282.9	2214.8	2060.7	1852.8	1666.5	1537.4	1462.1	1422.7	1408.4
32.5°	2107.2	2049.8	1899.4	1705.9	1530.2	1412.0	1343.9	1311.7	1297.3
35°	1924.4	1870.7	1738.1	1558.9	1401.2	1290.1	1225.7	1204.1	1197.0
37.5°	1752.4	1705.9	1576.8	1412.0	1268.6	1171.9	1114.5	1100.2	1093.1
40°	1573.3	1540.9	1422.7	1272.2	1139.7	1053.6	1007.0	996.3	996.3
42.5°	1412.0	1376.1	1272.2	1136.0	1017.8	931.8	899.5	888.8	892.4
45°	1265.1	1229.2	1132.5	1007.0	892.4	820.6	795.6	795.6	795.6
47.5°	1128.9	1096.6	1007.0	878.0	784.9	727.5	702.4	702.4	706.0
50°	1003.4	981.9	881.6	770.5	688.1	634.3	616.4	612.8	620.0
52.5°	885.2	860.1	770.5	670.2	591.4	548.3	530.4	526.8	530.4
55°	784.9	756.2	677.4	580.5	508.9	465.9	444.3	440.8	448.0
57.5°	688.1	666.5	584.2	498.2	430.1	387.0	369.1	362.0	365.5
60°	598.4	577.0	501.7	419.3	358.3	315.4	290.3	283.1	286.7
62.5°	516.1	498.2	426.4	347.6	286.7	247.3	222.2	204.2	211.4
65°	440.8	422.9	358.3	279.5	225.8	182.8	146.9	132.6	136.2
67.5°	376.3	354.8	293.9	222.2	168.5	121.9	82.5	75.3	75.3
70°	311.7	290.3	236.6	172.0	118.2	64.5	35.9	35.9	35.9
72.5°	250.8	232.9	182.8	129.0	75.3	28.7	14.3	14.3	14.3
75°	193.5	179.2	136.2	89.6	46.6	14.3	10.7	7.2	7.2
77.5°	143.4	129.0	96.8	60.9	28.7	7.2	7.2	7.2	7.2
80°	96.8	86.0	64.5	35.9	14.3	3.5	3.5	3.5	3.5
82.5°	57.3	50.1	35.9	17.9	7.2	3.5	3.5	3.5	3.5
85°	28.7	21.5	14.3	7.2	3.5	3.5	3.5	3.5	3.5
87.5°	7.2	3.5	3.5	3.5	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)