

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: P580848

Luminaire Tested: **HC450D010-HM44560827-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580848
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: HC450D010-HM44560827-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4255.9 lumens
Efficiency: N/A
Efficacy: 88.7 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

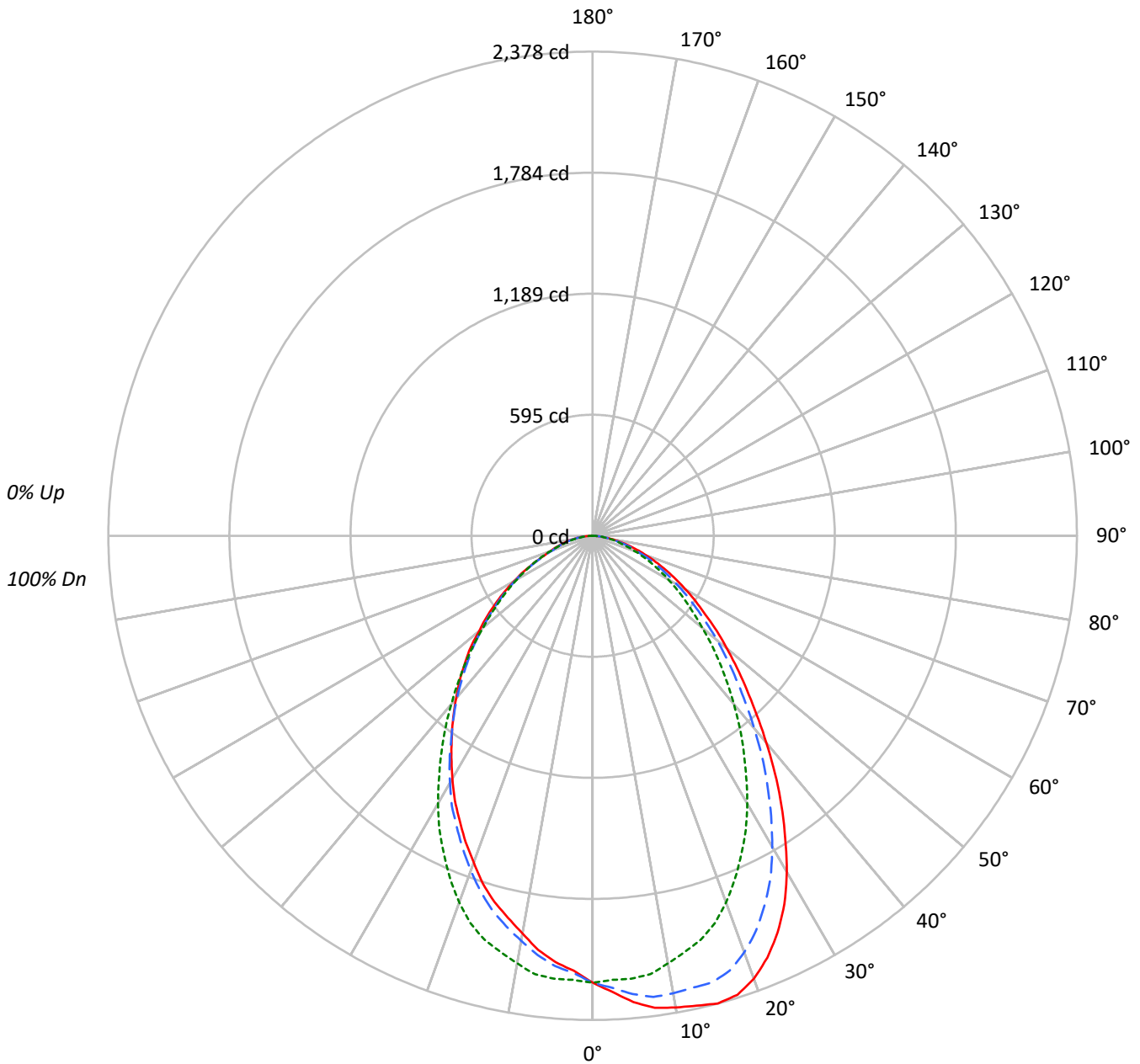
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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								
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°	270682	270682	270682
5°	284630	270317	260201
10°	294622	267092	248393
15°	303612	262251	237784
20°	303950	251458	224090
25°	292540	235026	210106
30°	271623	216276	196208
35°	243483	194711	181551
40°	213653	173737	167843
45°	186735	153801	154795
50°	164893	134612	139486
55°	145414	119329	125415
60°	129957	105633	109802
65°	115110	92928	92928
70°	100582	79232	79232
75°	85926	67101	75155
80°	68049	60022	68049
85°	43872	51798	63827



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.9	4.9
10°-20°	585.5	13.8
20°-30°	820.3	19.3
30°-40°	845.1	19.9
40°-50°	719.5	16.9
50°-60°	533.1	12.5
60°-70°	334.6	7.9
70°-80°	166.2	3.9
80°-90°	43.6	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°	1613.8	37.9
0°-40°	2458.9	57.8
0°-60°	3711.5	87.2
0°-90°	4255.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4255.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2194	2194	2194	2194	2194	
5°	2299	2259	2183	2121	2102	221
15°	2378	2271	2054	1904	1862	669
25°	2150	2000	1727	1578	1544	983
35°	1617	1496	1293	1208	1206	1008
45°	1070	997	882	865	887	831
55°	676	623	555	566	583	611
65°	394	355	318	313	318	393
75°	180	161	141	152	158	193
85°	31	31	37	42	45	40
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°	2194.5	2194.5	2194.5	2194.5	2194.5	2194.5	2194.5	2194.5	2194.5
2.5°	2242.4	2233.9	2222.7	2202.9	2183.2	2166.4	2149.5	2141.0	2138.2
5°	2298.8	2281.9	2259.3	2222.7	2183.2	2149.5	2121.2	2107.2	2101.5
7.5°	2338.2	2321.3	2284.6	2228.3	2172.0	2121.2	2076.2	2056.5	2050.8
10°	2352.3	2332.6	2281.9	2205.8	2132.5	2070.5	2019.8	1994.5	1983.2
12.5°	2363.6	2338.2	2273.4	2183.2	2093.1	2017.1	1963.5	1929.7	1921.3
15°	2377.6	2349.5	2270.6	2160.8	2053.7	1963.5	1904.4	1873.4	1862.1
17.5°	2363.6	2332.6	2239.6	2115.7	1994.5	1896.0	1831.1	1803.0	1791.7
20°	2315.6	2281.9	2177.6	2045.2	1915.7	1814.3	1749.4	1721.3	1707.2
22.5°	2242.4	2205.8	2098.8	1957.8	1825.4	1726.9	1664.9	1636.7	1628.3
25°	2149.5	2112.8	2000.1	1856.4	1726.9	1631.1	1577.6	1552.2	1543.8
27.5°	2039.5	2003.0	1893.1	1752.3	1628.3	1538.2	1495.9	1470.5	1464.9
30°	1907.1	1870.6	1763.6	1633.9	1518.5	1433.9	1400.1	1380.4	1377.6
32.5°	1760.7	1729.7	1631.1	1512.8	1402.9	1332.5	1307.1	1293.1	1290.2
35°	1617.0	1583.2	1495.9	1388.8	1293.1	1231.1	1208.5	1205.7	1205.7
37.5°	1470.5	1436.8	1366.3	1267.7	1186.0	1129.7	1121.2	1124.0	1124.0
40°	1326.9	1295.9	1233.9	1152.2	1079.0	1036.7	1033.8	1039.5	1042.4
42.5°	1191.7	1166.3	1110.0	1039.5	977.6	943.7	946.6	957.8	966.3
45°	1070.5	1048.0	997.3	935.3	881.7	856.4	864.9	879.0	887.4
47.5°	960.7	941.0	893.0	836.7	791.6	774.7	786.0	802.9	814.2
50°	859.3	842.3	797.3	738.0	701.5	690.2	704.3	721.2	726.9
52.5°	769.0	752.2	704.3	653.6	625.3	619.8	633.9	647.9	656.3
55°	676.2	662.0	622.6	577.5	554.9	552.2	566.2	577.5	583.2
57.5°	600.0	585.9	549.3	509.9	490.2	487.4	501.5	509.9	512.8
60°	526.8	512.8	478.9	442.2	428.2	428.2	436.6	442.2	445.1
62.5°	459.2	445.1	414.1	383.1	371.8	371.8	371.8	374.7	383.1
65°	394.4	383.1	354.9	326.8	318.4	312.7	312.7	312.7	318.4
67.5°	335.2	324.0	301.4	276.1	267.7	259.1	256.4	262.0	262.0
70°	278.9	270.4	247.9	228.2	219.7	211.3	208.4	219.7	219.7
72.5°	228.2	219.7	205.7	186.0	177.5	174.7	180.3	186.0	188.7
75°	180.3	171.8	160.6	149.3	140.8	143.7	152.1	155.0	157.7
77.5°	135.3	132.4	121.1	112.7	112.7	115.5	121.1	126.8	129.6
80°	95.8	93.0	87.3	81.7	84.5	90.1	93.0	98.6	95.8
82.5°	59.1	59.1	56.3	56.3	59.1	64.8	67.6	70.4	73.3
85°	31.0	31.0	31.0	33.8	36.6	39.4	42.3	45.1	45.1
87.5°	8.4	11.3	11.3	14.1	16.9	16.9	19.7	19.7	19.7
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)