

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: P580864

Luminaire Tested: **HC450D010-HM44560830-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580864
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-HM44560830-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3796.9 lumens
Efficiency: N/A
Efficacy: 79.1 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

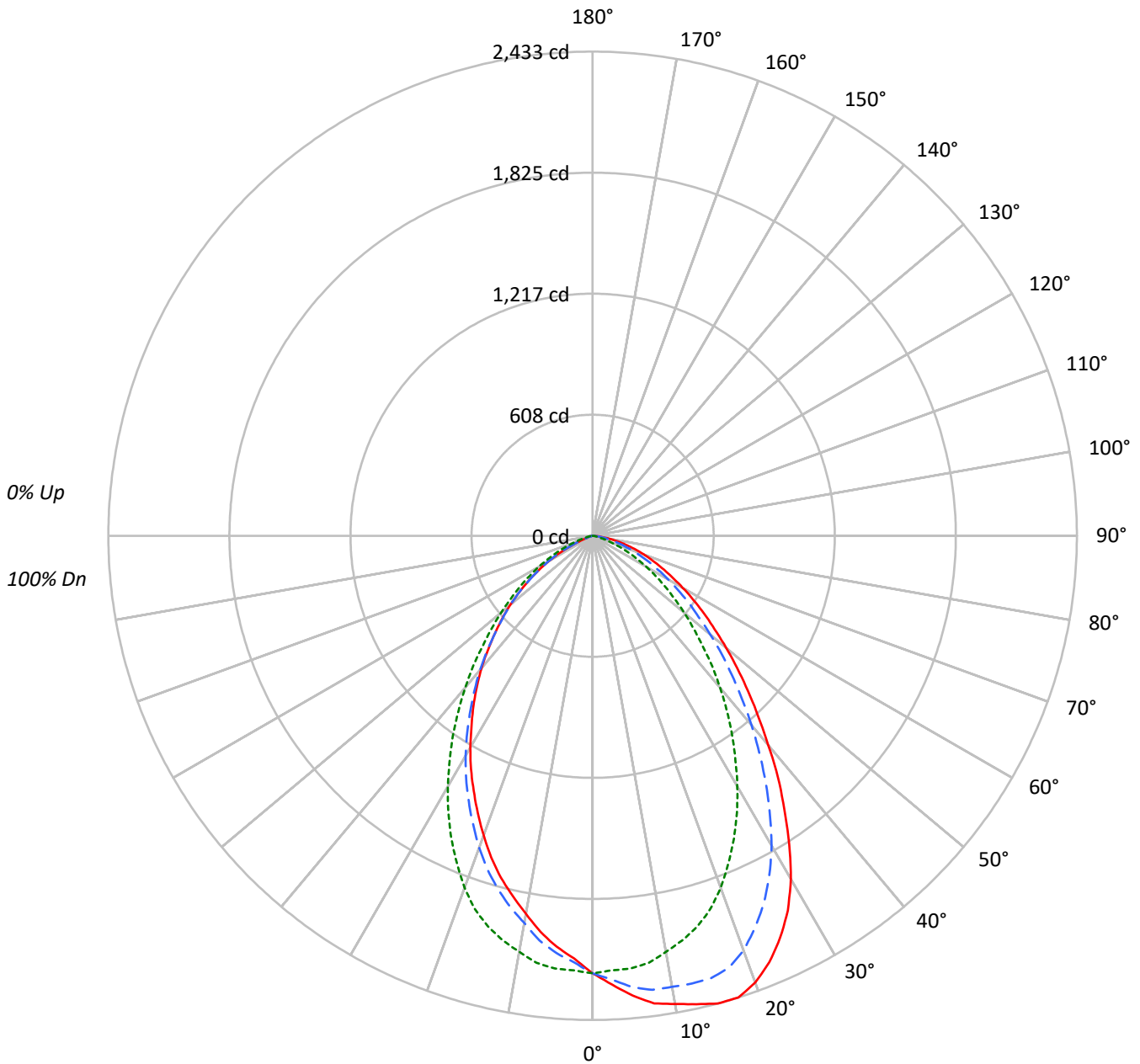
Input Watts (W): 48
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	271138	271138	271138
5°	287280	270243	256685
10°	299206	265915	241642
15°	310648	259544	227198
20°	313571	247074	210137
25°	303428	228520	192346
30°	283687	207089	175029
35°	252834	184096	157248
40°	221027	160098	139971
45°	192544	135817	121094
50°	168001	115193	103813
55°	147264	95481	84062
60°	128822	77140	61722
65°	112250	57497	34673
70°	98094	37218	11252
75°	80445	19349	2955
80°	60022	8879	2202
85°	35381	4387	4387



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.5	5.5
10°-20°	580.6	15.3
20°-30°	802.8	21.1
30°-40°	807.2	21.3
40°-50°	651.4	17.2
50°-60°	440.5	11.6
60°-70°	224.2	5.9
70°-80°	71.8	1.9
80°-90°	11.0	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°	1590.9	41.9
0°-40°	2398.2	63.2
0°-60°	3490.0	91.9
0°-90°	3796.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3796.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2198	2198	2198	2198	2198	
5°	2320	2276	2183	2104	2073	224
15°	2433	2301	2032	1839	1779	685
25°	2230	2036	1679	1473	1413	1020
35°	1679	1517	1223	1069	1044	1049
45°	1104	988	779	694	694	855
55°	685	591	444	388	391	615
65°	385	313	197	128	119	386
75°	169	119	41	9	6	182
85°	25	12	3	3	3	34
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°	2198.2	2198.2	2198.2	2198.2	2198.2	2198.2	2198.2	2198.2	2198.2
2.5°	2257.6	2245.1	2232.6	2210.7	2185.7	2160.6	2145.0	2132.5	2126.3
5°	2320.2	2304.6	2276.3	2229.5	2182.6	2138.8	2104.4	2082.5	2073.1
7.5°	2370.2	2348.3	2301.3	2235.7	2163.9	2095.0	2051.3	2019.9	2007.4
10°	2388.9	2363.9	2301.3	2213.8	2123.1	2038.8	1976.2	1944.9	1929.3
12.5°	2410.8	2382.7	2304.6	2195.1	2082.5	1982.4	1910.6	1869.8	1854.2
15°	2432.7	2395.2	2301.3	2167.0	2032.5	1916.8	1838.6	1798.0	1779.2
17.5°	2432.7	2388.9	2276.3	2120.0	1966.8	1844.8	1757.3	1710.4	1694.8
20°	2388.9	2338.9	2217.0	2045.0	1882.3	1751.1	1666.6	1619.8	1600.9
22.5°	2320.2	2263.8	2132.5	1954.3	1782.3	1654.1	1569.7	1525.9	1507.2
25°	2229.5	2173.2	2035.6	1851.1	1679.1	1550.9	1472.8	1432.1	1413.3
27.5°	2123.1	2060.6	1923.1	1738.5	1569.7	1447.7	1375.8	1338.3	1322.6
30°	1991.8	1932.4	1798.0	1616.6	1454.0	1341.5	1275.8	1241.4	1228.9
32.5°	1838.6	1788.6	1657.3	1488.4	1335.2	1232.0	1172.5	1144.4	1131.9
35°	1679.1	1632.3	1516.6	1360.2	1222.6	1125.7	1069.4	1050.7	1044.3
37.5°	1529.1	1488.4	1375.8	1232.0	1106.9	1022.5	972.5	960.0	953.7
40°	1372.7	1344.6	1241.4	1110.0	994.3	919.3	878.6	869.3	869.3
42.5°	1232.0	1200.8	1110.0	991.2	888.0	813.0	784.9	775.5	778.6
45°	1103.8	1072.6	988.1	878.6	778.6	716.0	694.2	694.2	694.2
47.5°	985.0	956.8	878.6	766.0	684.8	634.8	612.8	612.8	616.0
50°	875.5	856.8	769.3	672.3	600.3	553.5	537.8	534.7	541.0
52.5°	772.4	750.4	672.3	584.7	516.0	478.4	462.7	459.6	462.7
55°	684.8	659.8	591.0	506.6	444.0	406.5	387.8	384.6	390.9
57.5°	600.3	581.6	509.7	434.6	375.3	337.7	322.0	315.8	318.9
60°	522.2	503.5	437.7	365.9	312.7	275.2	253.3	247.0	250.2
62.5°	450.2	434.6	372.1	303.3	250.2	215.8	193.8	178.2	184.5
65°	384.6	369.0	312.7	243.9	197.0	159.5	128.2	115.7	118.8
67.5°	328.3	309.5	256.4	193.8	147.0	106.3	72.0	65.6	65.6
70°	272.0	253.3	206.3	150.1	103.2	56.2	31.2	31.2	31.2
72.5°	218.9	203.2	159.5	112.6	65.6	25.0	12.5	12.5	12.5
75°	168.8	156.3	118.8	78.2	40.6	12.5	9.4	6.2	6.2
77.5°	125.1	112.6	84.5	53.1	25.0	6.2	6.2	6.2	6.2
80°	84.5	75.1	56.2	31.2	12.5	3.1	3.1	3.1	3.1
82.5°	50.0	43.7	31.2	15.6	6.2	3.1	3.1	3.1	3.1
85°	25.0	18.7	12.5	6.2	3.1	3.1	3.1	3.1	3.1
87.5°	6.2	3.1	3.1	3.1	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)