

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: P581280

Luminaire Tested: **HC460D010-HM44560827-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581280  
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: HC460D010-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: 4641.4 lumens  
Efficiency: N/A  
Efficacy: 84.4 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

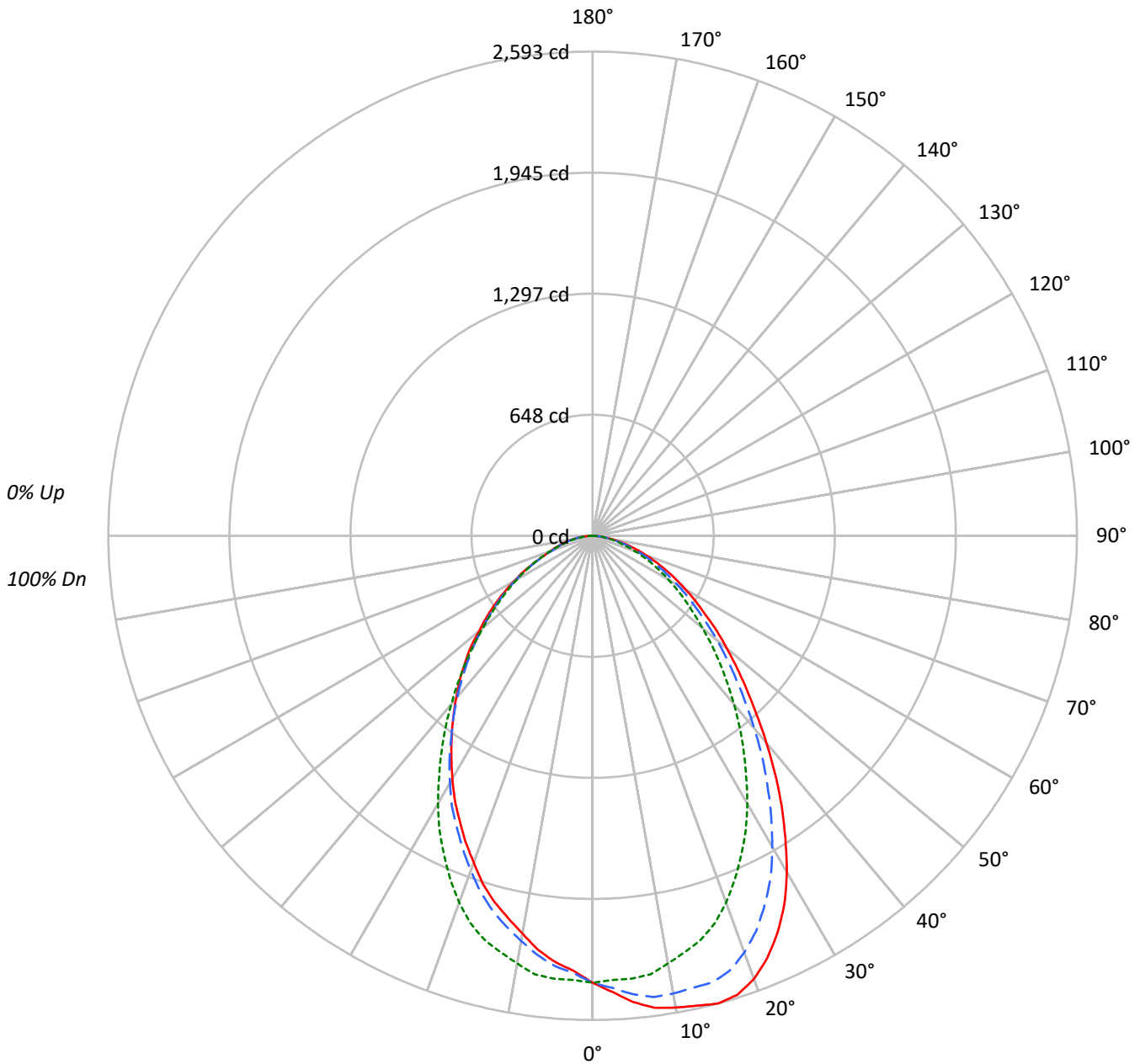
Input Watts (W): 55  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	100
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87	87	87	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75	75	75	75
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66	66	66	66
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58	58	58	58
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51	51	51	51
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46	46	46	46
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41	41	41	41
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37	37	37	37
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34	34	34	34
10	58	45	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31	31	31	31

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	295203	295203	295203
5°	310409	294808	283788
10°	321312	291290	270900
15°	331118	286015	259314
20°	331501	274232	244383
25°	319038	256311	229146
30°	296234	235860	213983
35°	265543	212344	197994
40°	232991	189468	183043
45°	203655	167739	168820
50°	179803	146797	152093
55°	158575	130168	136770
60°	141724	115205	119744
65°	125529	101334	101334
70°	109670	86409	86409
75°	93694	73201	81970
80°	74228	65491	74228
85°	47835	56468	69629



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	226.8	4.9
10°-20°	638.6	13.8
20°-30°	894.6	19.3
30°-40°	921.7	19.9
40°-50°	784.7	16.9
50°-60°	581.4	12.5
60°-70°	364.9	7.9
70°-80°	181.3	3.9
80°-90°	47.6	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°	1759.9	37.9
0°-40°	2681.6	57.8
0°-60°	4047.7	87.2
0°-90°	4641.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4641.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2393	2393	2393	2393	2393	
5°	2507	2464	2381	2313	2292	241
15°	2593	2476	2240	2077	2031	729
25°	2344	2181	1883	1720	1684	1072
35°	1764	1631	1410	1318	1315	1100
45°	1168	1088	962	943	968	906
55°	737	679	605	618	636	667
65°	430	387	347	341	347	429
75°	197	175	154	166	172	210
85°	34	34	40	46	49	43
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°	2393.3	2393.3	2393.3	2393.3	2393.3	2393.3	2393.3	2393.3	2393.3
2.5°	2445.5	2436.4	2424.1	2402.5	2381.0	2362.6	2344.2	2335.0	2331.9
5°	2507.0	2488.6	2464.0	2424.1	2381.0	2344.2	2313.4	2298.1	2292.0
7.5°	2550.0	2531.6	2491.6	2430.2	2368.7	2313.4	2264.2	2242.8	2236.6
10°	2565.4	2543.9	2488.6	2405.6	2325.7	2258.1	2202.9	2175.2	2162.9
12.5°	2577.7	2550.0	2479.3	2381.0	2282.7	2199.7	2141.4	2104.5	2095.3
15°	2593.0	2562.3	2476.3	2356.5	2239.8	2141.4	2076.9	2043.0	2030.7
17.5°	2577.7	2543.9	2442.5	2307.3	2175.2	2067.6	1997.0	1966.2	1954.0
20°	2525.5	2488.6	2374.9	2230.5	2089.2	1978.5	1907.9	1877.2	1861.8
22.5°	2445.5	2405.6	2288.8	2135.2	1990.8	1883.3	1815.7	1784.9	1775.8
25°	2344.2	2304.2	2181.3	2024.6	1883.3	1778.9	1720.5	1692.8	1683.7
27.5°	2224.3	2184.4	2064.6	1910.9	1775.8	1677.4	1631.4	1603.8	1597.6
30°	2079.9	2040.0	1923.2	1781.9	1656.0	1563.7	1527.0	1505.4	1502.4
32.5°	1920.2	1886.4	1778.9	1649.8	1530.0	1453.2	1425.6	1410.2	1407.1
35°	1763.5	1726.6	1631.4	1514.7	1410.2	1342.5	1318.1	1314.9	1314.9
37.5°	1603.8	1566.9	1490.1	1382.5	1293.5	1232.0	1222.8	1225.8	1225.8
40°	1447.0	1413.3	1345.7	1256.6	1176.7	1130.6	1127.5	1133.6	1136.8
42.5°	1299.6	1271.9	1210.5	1133.6	1066.1	1029.2	1032.3	1044.5	1053.8
45°	1167.5	1142.9	1087.6	1020.1	961.6	934.0	943.2	958.6	967.8
47.5°	1047.7	1026.1	973.9	912.4	863.3	844.9	857.2	875.6	887.8
50°	937.0	918.6	869.5	804.9	765.0	752.7	768.1	786.6	792.6
52.5°	838.8	820.3	768.1	712.8	682.1	675.9	691.2	706.6	715.8
55°	737.4	722.0	678.9	629.9	605.3	602.1	617.6	629.9	636.0
57.5°	654.4	639.0	599.1	556.1	534.6	531.5	546.9	556.1	559.1
60°	574.5	559.1	522.3	482.3	467.0	467.0	476.2	482.3	485.4
62.5°	500.8	485.4	451.7	417.8	405.5	405.5	405.5	408.6	417.8
65°	430.1	417.8	387.1	356.3	347.2	341.0	341.0	341.0	347.2
67.5°	365.6	353.3	328.7	301.1	291.8	282.7	279.6	285.7	285.7
70°	304.1	295.0	270.4	248.8	239.6	230.5	227.4	239.6	239.6
72.5°	248.8	239.6	224.2	202.8	193.6	190.5	196.6	202.8	205.9
75°	196.6	187.4	175.1	162.9	153.6	156.7	165.9	169.0	172.0
77.5°	147.4	144.4	132.1	122.8	122.8	126.0	132.1	138.3	141.3
80°	104.5	101.4	95.2	89.1	92.2	98.4	101.4	107.5	104.5
82.5°	64.5	64.5	61.5	61.5	64.5	70.6	73.8	76.8	79.9
85°	33.8	33.8	33.8	36.9	39.9	43.0	46.1	49.2	49.2
87.5°	9.2	12.3	12.3	15.3	18.4	18.4	21.5	21.5	21.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P







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







(END OF REPORT)