

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: P581316

Luminaire Tested: **HC460D010-HM44560835-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581316  
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-HM44560835-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5181.6 lumens  
Efficiency: N/A  
Efficacy: 94.2 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

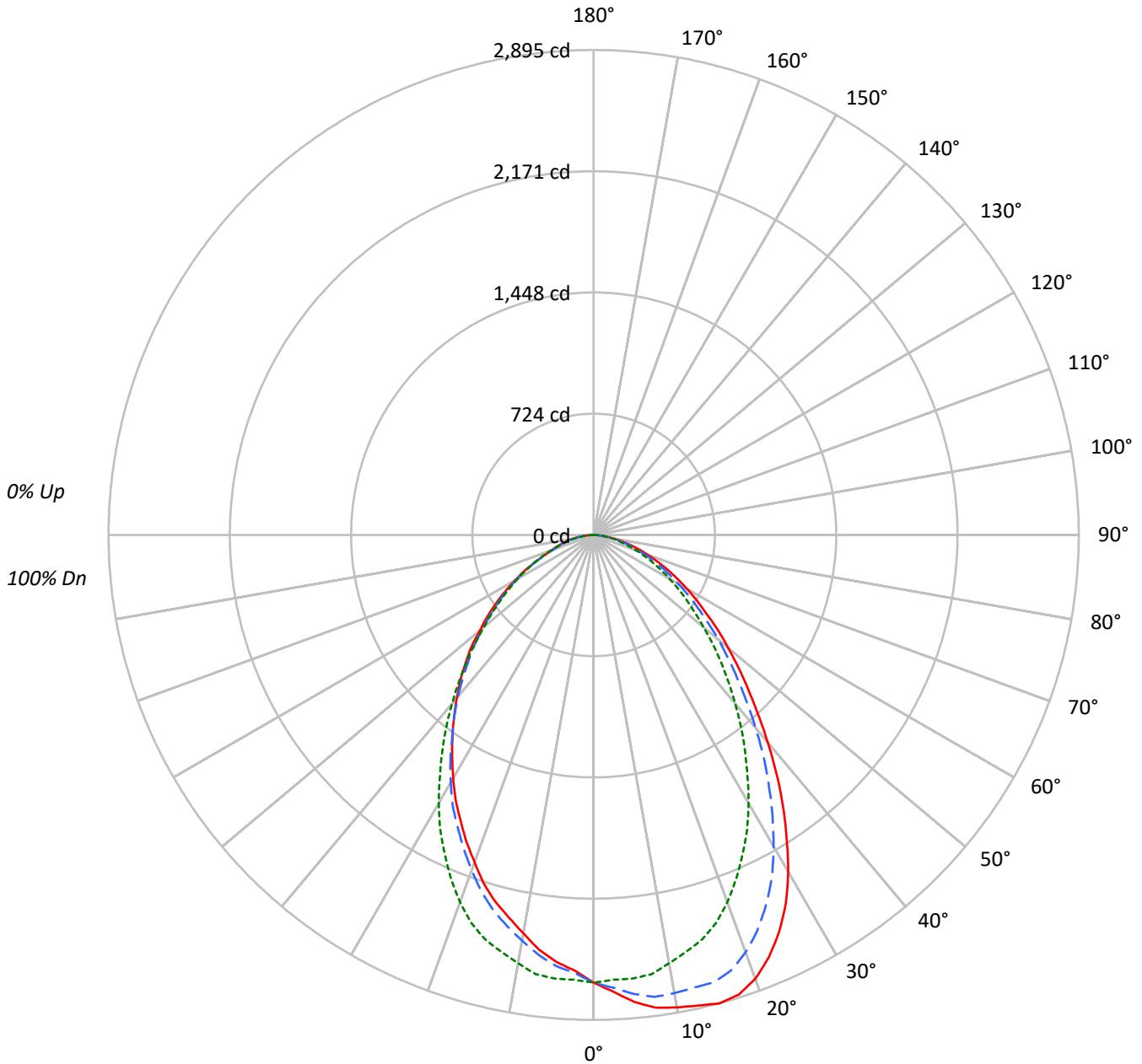
Input Watts (W): 55  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	90°	180°
0°	329555	329555	329555
5°	346526	329117	316798
10°	358699	325183	302425
15°	369657	319280	289501
20°	370066	306142	272827
25°	356165	286144	255794
30°	330716	263305	238879
35°	296441	237039	221047
40°	260106	211527	204330
45°	227344	187258	188462
50°	200738	163876	169805
55°	177005	145307	152683
60°	158228	128625	133682
65°	140151	113125	113125
70°	122437	96507	96507
75°	104607	81732	91549
80°	82823	73092	82823
85°	53354	63119	77555



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	253.1	4.9
10°-20°	712.9	13.8
20°-30°	998.7	19.3
30°-40°	1028.9	19.9
40°-50°	876.0	16.9
50°-60°	649.1	12.5
60°-70°	407.3	7.9
70°-80°	202.4	3.9
80°-90°	53.1	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°	1964.7	37.9
0°-40°	2993.7	57.8
0°-60°	4518.7	87.2
0°-90°	5181.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5181.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2672	2672	2672	2672	2672	
5°	2799	2751	2658	2583	2559	269
15°	2895	2764	2500	2318	2267	814
25°	2617	2435	2102	1921	1880	1197
35°	1969	1821	1574	1471	1468	1228
45°	1303	1214	1074	1053	1080	1011
55°	823	758	676	689	710	744
65°	480	432	388	381	388	479
75°	220	196	172	185	192	235
85°	38	38	45	51	55	49
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°	2671.8	2671.8	2671.8	2671.8	2671.8	2671.8	2671.8	2671.8	2671.8
2.5°	2730.1	2719.8	2706.1	2682.2	2658.1	2637.5	2617.0	2606.7	2603.2
5°	2798.7	2778.2	2750.7	2706.1	2658.1	2617.0	2582.7	2565.5	2558.6
7.5°	2846.7	2826.2	2781.5	2713.0	2644.4	2582.7	2527.7	2503.7	2496.9
10°	2863.9	2839.9	2778.2	2685.5	2596.3	2520.9	2459.2	2428.2	2414.6
12.5°	2877.6	2846.7	2767.9	2658.1	2548.4	2455.8	2390.6	2349.4	2339.1
15°	2894.8	2860.5	2764.4	2630.6	2500.3	2390.6	2318.5	2280.8	2267.1
17.5°	2877.6	2839.9	2726.7	2575.8	2428.2	2308.2	2229.4	2195.1	2181.3
20°	2819.3	2778.2	2651.3	2490.1	2332.3	2208.7	2129.9	2095.6	2078.5
22.5°	2730.1	2685.5	2555.1	2383.7	2222.5	2102.5	2027.0	1992.7	1982.5
25°	2617.0	2572.4	2435.1	2260.3	2102.5	1985.8	1920.6	1889.9	1879.5
27.5°	2483.2	2438.6	2304.8	2133.4	1982.5	1872.7	1821.3	1790.4	1783.5
30°	2322.0	2277.4	2147.0	1989.2	1848.7	1745.8	1704.6	1680.6	1677.2
32.5°	2143.7	2105.9	1985.8	1841.8	1708.0	1622.3	1591.4	1574.2	1570.9
35°	1968.7	1927.5	1821.3	1690.9	1574.2	1498.8	1471.4	1468.0	1468.0
37.5°	1790.4	1749.2	1663.5	1543.4	1444.0	1375.4	1365.1	1368.5	1368.5
40°	1615.4	1577.7	1502.3	1402.8	1313.7	1262.1	1258.7	1265.6	1269.0
42.5°	1450.8	1419.9	1351.3	1265.6	1190.2	1149.0	1152.4	1166.1	1176.4
45°	1303.3	1275.9	1214.2	1138.7	1073.5	1042.6	1053.0	1070.1	1080.4
47.5°	1169.5	1145.6	1087.3	1018.7	963.8	943.2	956.9	977.5	991.2
50°	1046.1	1025.5	970.6	898.6	854.0	840.2	857.5	878.0	884.9
52.5°	936.4	915.7	857.5	795.7	761.4	754.5	771.7	788.8	799.2
55°	823.1	806.0	758.0	703.1	675.7	672.3	689.4	703.1	710.0
57.5°	730.5	713.3	668.8	620.7	596.8	593.3	610.5	620.7	624.2
60°	641.4	624.2	583.1	538.5	521.4	521.4	531.6	538.5	541.9
62.5°	559.0	541.9	504.2	466.4	452.8	452.8	452.8	456.2	466.4
65°	480.2	466.4	432.1	397.8	387.6	380.7	380.7	380.7	387.6
67.5°	408.1	394.5	366.9	336.1	325.9	315.5	312.1	319.0	319.0
70°	339.5	329.3	301.9	277.8	267.6	257.2	253.8	267.6	267.6
72.5°	277.8	267.6	250.4	226.4	216.1	212.6	219.5	226.4	229.8
75°	219.5	209.2	195.5	181.8	171.5	175.0	185.2	188.6	192.1
77.5°	164.6	161.2	147.4	137.2	137.2	140.7	147.4	154.3	157.8
80°	116.6	113.1	106.4	99.5	102.9	109.8	113.1	120.0	116.6
82.5°	72.1	72.1	68.6	68.6	72.1	78.8	82.3	85.7	89.2
85°	37.7	37.7	37.7	41.2	44.6	48.1	51.4	54.8	54.8
87.5°	10.3	13.8	13.8	17.1	20.5	20.5	24.0	24.0	24.0
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)