

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: P581312

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

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581312  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC460D010-HM44560835-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5287.9 lumens  
Efficiency: N/A  
Efficacy: 96.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

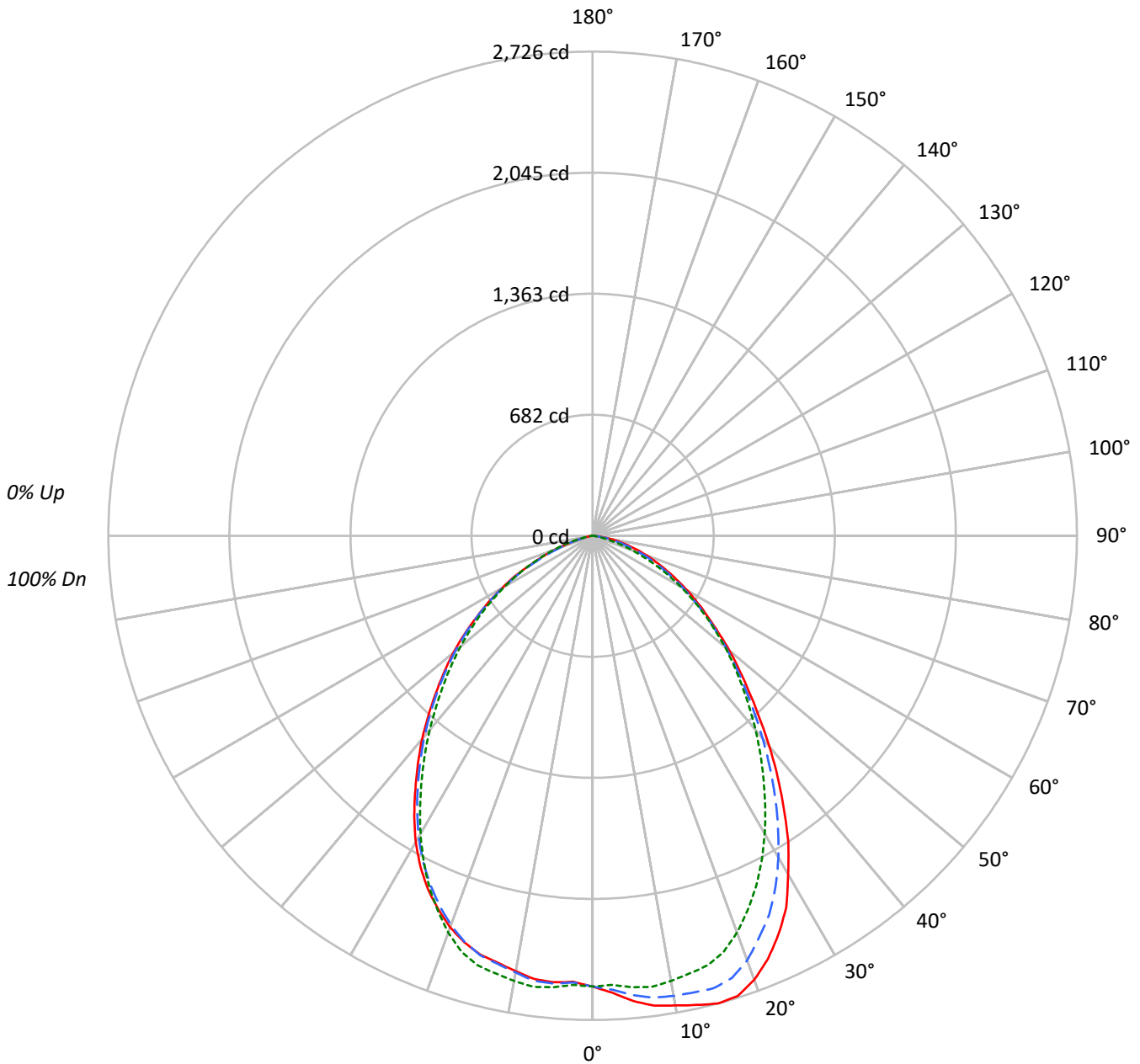
Input Watts (W): 55  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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				
1	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88				
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76				76				
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67				67				
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				58				
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52				52				
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46				46				
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41				41				
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37				37				
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34				34				
10	58	46	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°	312990	312990	312990
5°	325663	315894	312489
10°	336292	318682	311806
15°	348127	319663	311784
20°	349287	311930	307887
25°	336949	296351	298678
30°	313554	275953	283758
35°	282453	252503	261794
40°	249012	229690	240188
45°	217732	206952	217122
50°	192794	186212	196094
55°	169607	164446	171091
60°	151444	140417	144635
65°	133118	114118	112104
70°	116270	84101	76672
75°	96458	50659	40842
80°	73092	19463	12146
85°	33966	4812	4812



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	244.7	4.6
10°-20°	714.3	13.5
20°-30°	1034.4	19.6
30°-40°	1091.3	20.6
40°-50°	944.5	17.9
50°-60°	699.7	13.2
60°-70°	403.3	7.6
70°-80°	140.8	2.7
80°-90°	14.8	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°	1993.4	37.7
0°-40°	3084.7	58.3
0°-60°	4728.9	89.4
0°-90°	5287.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5287.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2538	2538	2538	2538	2538	
5°	2630	2596	2551	2531	2524	253
15°	2726	2637	2503	2445	2442	767
25°	2476	2352	2178	2164	2195	1133
35°	1876	1790	1677	1715	1739	1172
45°	1248	1214	1186	1231	1245	969
55°	789	772	765	792	796	711
65°	456	429	391	370	384	456
75°	202	172	106	86	86	218
85°	24	14	3	3	3	37
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°	2537.5	2537.5	2537.5	2537.5	2537.5	2537.5	2537.5	2537.5	2537.5
2.5°	2575.2	2568.5	2558.1	2544.4	2530.7	2520.4	2517.0	2513.5	2513.5
5°	2630.2	2616.4	2595.9	2568.5	2551.3	2540.9	2530.7	2523.8	2523.8
7.5°	2667.8	2654.2	2623.3	2585.6	2561.6	2540.9	2527.3	2517.0	2517.0
10°	2685.0	2667.8	2630.2	2582.1	2544.4	2517.0	2496.4	2489.5	2489.5
12.5°	2705.6	2685.0	2633.5	2571.8	2523.8	2489.5	2469.0	2462.1	2462.1
15°	2726.2	2702.1	2637.0	2565.0	2503.3	2462.1	2444.9	2441.6	2441.6
17.5°	2715.9	2685.0	2609.5	2523.8	2455.2	2414.1	2397.0	2397.0	2400.4
20°	2661.0	2630.2	2544.4	2448.4	2376.4	2345.6	2331.8	2338.7	2345.6
22.5°	2578.7	2540.9	2448.4	2355.8	2280.4	2253.0	2253.0	2263.2	2273.5
25°	2475.8	2441.6	2352.3	2249.5	2177.5	2157.0	2163.7	2180.9	2194.6
27.5°	2359.2	2321.5	2228.9	2132.9	2060.9	2050.6	2067.7	2091.8	2098.6
30°	2201.5	2170.6	2091.8	1999.2	1937.5	1934.1	1958.0	1975.1	1992.3
32.5°	2050.6	2016.3	1940.8	1851.7	1807.2	1810.6	1838.0	1858.6	1868.9
35°	1875.8	1844.8	1790.0	1717.9	1676.9	1683.7	1714.6	1735.1	1738.6
37.5°	1711.2	1690.5	1635.7	1580.8	1550.0	1563.6	1591.2	1615.1	1615.1
40°	1546.5	1529.3	1488.3	1443.6	1426.5	1443.6	1471.1	1491.7	1491.7
42.5°	1388.8	1378.5	1344.2	1313.3	1303.1	1327.1	1351.1	1368.3	1364.8
45°	1248.2	1237.9	1214.0	1189.9	1186.4	1210.5	1231.1	1241.4	1244.7
47.5°	1121.3	1114.5	1093.9	1076.8	1076.8	1100.7	1117.8	1128.2	1131.6
50°	1004.7	997.8	980.7	967.0	970.4	994.4	1008.2	1018.5	1021.9
52.5°	888.2	884.7	871.0	853.9	864.2	881.3	898.5	905.3	908.7
55°	788.7	788.7	771.6	757.8	764.7	781.8	792.1	795.6	795.6
57.5°	699.6	696.1	675.6	661.8	665.3	682.4	689.2	692.7	692.7
60°	613.9	610.4	589.8	569.2	569.2	579.6	583.0	586.3	586.3
62.5°	531.5	528.1	504.1	487.0	480.1	476.7	476.7	483.5	497.2
65°	456.1	452.7	428.6	401.2	391.0	380.6	370.3	377.2	384.1
67.5°	387.5	380.6	356.7	332.6	308.6	291.5	274.3	284.6	298.4
70°	322.4	315.5	288.1	260.6	233.2	205.7	192.0	205.7	212.6
72.5°	260.6	253.8	226.3	198.9	164.6	137.2	133.8	137.2	140.5
75°	202.4	198.9	171.5	140.5	106.3	85.7	85.7	85.7	85.7
77.5°	150.9	144.0	116.6	89.1	61.7	48.1	44.6	44.6	44.6
80°	102.9	96.0	72.0	51.4	27.4	20.5	20.5	17.1	17.1
82.5°	58.3	54.8	37.7	20.5	10.3	6.9	6.9	6.9	6.9
85°	24.0	20.5	13.8	6.9	3.4	3.4	3.4	3.4	3.4
87.5°	3.4	3.4	3.4	0.0	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



Report Generated By 670245859 / DESKTOP-HRDQ47P







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







(END OF REPORT)