

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: P581330

Luminaire Tested: **HC460D010-HM44560840-41RWWC**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581330  
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-HM44560840-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6028.1 lumens  
Efficiency: N/A  
Efficacy: 109.6 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

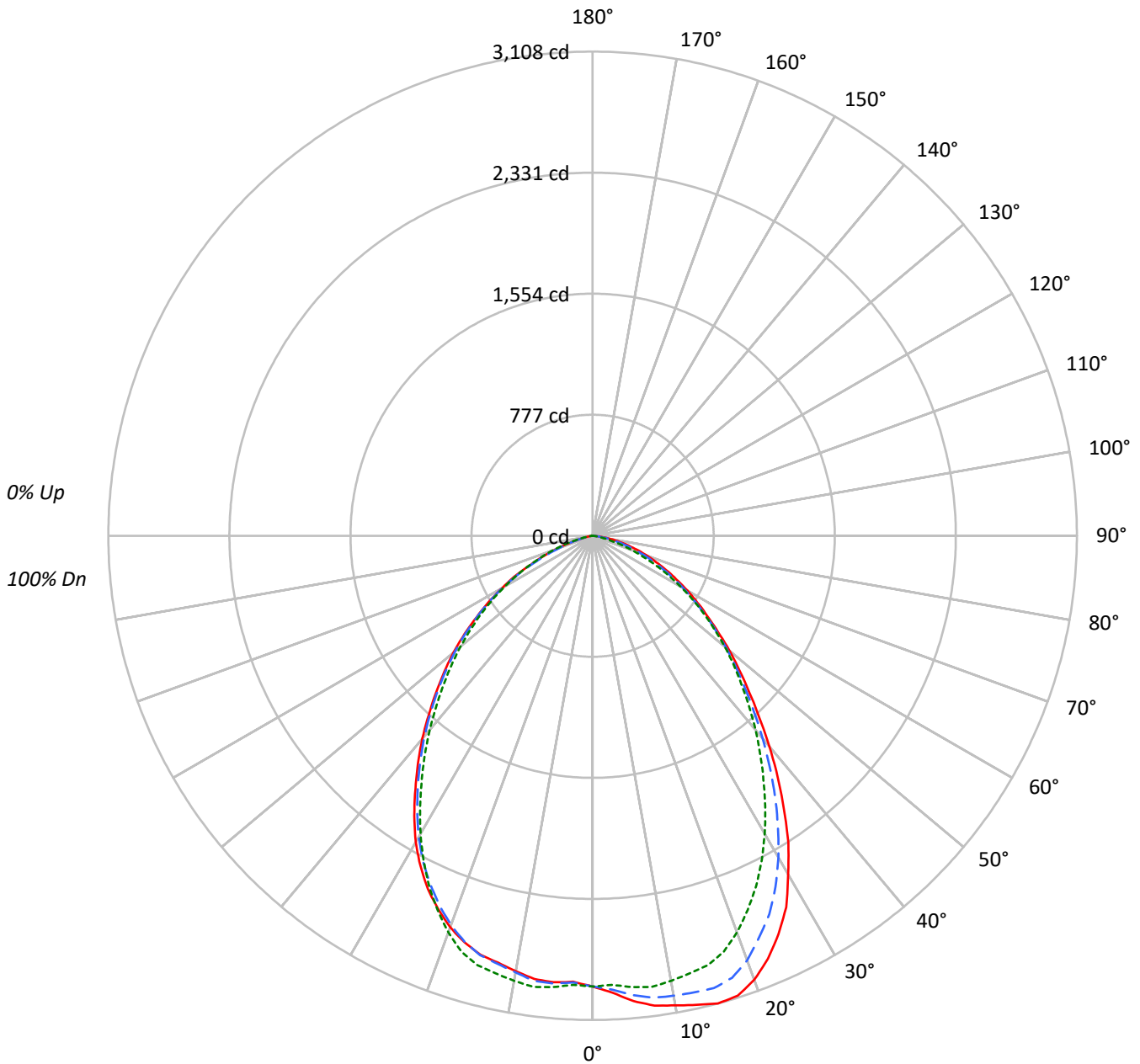
Input Watts (W): 55  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	356814	356814	356814
5°	371240	360109	356246
10°	383360	363308	355455
15°	396856	364408	355418
20°	398182	355588	350981
25°	384120	337833	340501
30°	357450	314579	323481
35°	321979	287843	298429
40°	283888	261845	273808
45°	248224	235944	247526
50°	219793	212290	223535
55°	193348	187456	195026
60°	172610	160078	164913
65°	151738	130082	127777
70°	132535	95894	87419
75°	109945	57713	46561
80°	83320	22162	13851
85°	38777	5519	5519



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	279.0	4.6
10°-20°	814.3	13.5
20°-30°	1179.2	19.6
30°-40°	1244.1	20.6
40°-50°	1076.7	17.9
50°-60°	797.6	13.2
60°-70°	459.8	7.6
70°-80°	160.6	2.7
80°-90°	16.9	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°	2272.5	37.7
0°-40°	3516.6	58.3
0°-60°	5390.9	89.4
0°-90°	6028.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6028.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2893	2893	2893	2893	2893	
5°	2998	2959	2908	2885	2877	288
15°	3108	3006	2854	2787	2783	874
25°	2822	2682	2482	2467	2502	1292
35°	2138	2041	1912	1955	1982	1336
45°	1423	1384	1353	1403	1419	1105
55°	899	880	872	903	907	811
65°	520	489	446	422	438	519
75°	231	196	121	98	98	248
85°	27	16	4	4	4	42
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°	2892.8	2892.8	2892.8	2892.8	2892.8	2892.8	2892.8	2892.8	2892.8
2.5°	2935.7	2927.9	2916.2	2900.7	2885.0	2873.2	2869.3	2865.5	2865.5
5°	2998.3	2982.7	2959.2	2927.9	2908.4	2896.7	2885.0	2877.2	2877.2
7.5°	3041.3	3025.7	2990.6	2947.5	2920.2	2896.7	2881.0	2869.3	2869.3
10°	3060.8	3041.3	2998.3	2943.6	2900.7	2869.3	2845.8	2838.0	2838.0
12.5°	3084.3	3060.8	3002.3	2931.9	2877.2	2838.0	2814.6	2806.8	2806.8
15°	3107.8	3080.5	3006.1	2924.1	2853.7	2806.8	2787.3	2783.3	2783.3
17.5°	3096.0	3060.8	2974.9	2877.2	2799.0	2752.1	2732.5	2732.5	2736.4
20°	3033.5	2998.3	2900.7	2791.1	2709.0	2673.9	2658.2	2666.0	2673.9
22.5°	2939.7	2896.7	2791.1	2685.7	2599.6	2568.3	2568.3	2580.1	2591.8
25°	2822.4	2783.3	2681.7	2564.4	2482.3	2458.8	2466.7	2486.2	2501.9
27.5°	2689.5	2646.5	2540.9	2431.5	2349.4	2337.7	2357.2	2384.6	2392.4
30°	2509.7	2474.5	2384.6	2279.0	2208.7	2204.8	2232.1	2251.7	2271.2
32.5°	2337.7	2298.6	2212.6	2110.9	2060.2	2064.0	2095.3	2118.7	2130.5
35°	2138.3	2103.2	2040.6	1958.5	1911.6	1919.4	1954.6	1978.1	1981.9
37.5°	1950.7	1927.2	1864.7	1802.1	1766.9	1782.6	1813.8	1841.2	1841.2
40°	1763.1	1743.4	1696.6	1645.8	1626.2	1645.8	1677.0	1700.5	1700.5
42.5°	1583.3	1571.5	1532.4	1497.2	1485.5	1512.9	1540.2	1559.8	1555.9
45°	1423.0	1411.2	1383.8	1356.5	1352.6	1379.9	1403.3	1415.1	1419.0
47.5°	1278.2	1270.5	1247.0	1227.5	1227.5	1254.9	1274.4	1286.1	1290.0
50°	1145.4	1137.6	1118.1	1102.4	1106.3	1133.6	1149.3	1161.1	1164.9
52.5°	1012.5	1008.5	993.0	973.4	985.1	1004.7	1024.2	1032.0	1036.0
55°	899.1	899.1	879.6	863.9	871.7	891.3	903.0	906.9	906.9
57.5°	797.5	793.5	770.1	754.5	758.4	777.9	785.8	789.6	789.6
60°	699.7	695.9	672.4	648.9	648.9	660.7	664.5	668.5	668.5
62.5°	606.0	602.0	574.6	555.1	547.3	543.4	543.4	551.1	566.8
65°	519.9	516.1	488.6	457.4	445.7	433.9	422.2	430.0	437.8
67.5°	441.7	433.9	406.5	379.2	351.8	332.3	312.7	324.4	340.1
70°	367.5	359.6	328.4	297.1	265.9	234.5	218.9	234.5	242.4
72.5°	297.1	289.3	258.0	226.7	187.6	156.3	152.5	156.3	160.3
75°	230.7	226.7	195.5	160.3	121.1	97.7	97.7	97.7	97.7
77.5°	172.0	164.2	132.9	101.6	70.4	54.7	50.9	50.9	50.9
80°	117.3	109.4	82.1	58.7	31.2	23.5	23.5	19.5	19.5
82.5°	66.4	62.5	43.0	23.5	11.7	7.8	7.8	7.8	7.8
85°	27.4	23.5	15.7	7.8	3.9	3.9	3.9	3.9	3.9
87.5°	3.9	3.9	3.9	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)