

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: P592815

Luminaire Tested: **HC440D010-HM43040850-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P592815  
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: HC440D010-HM43040850-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3462.6 lumens  
Efficiency: N/A  
Efficacy: 84.5 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

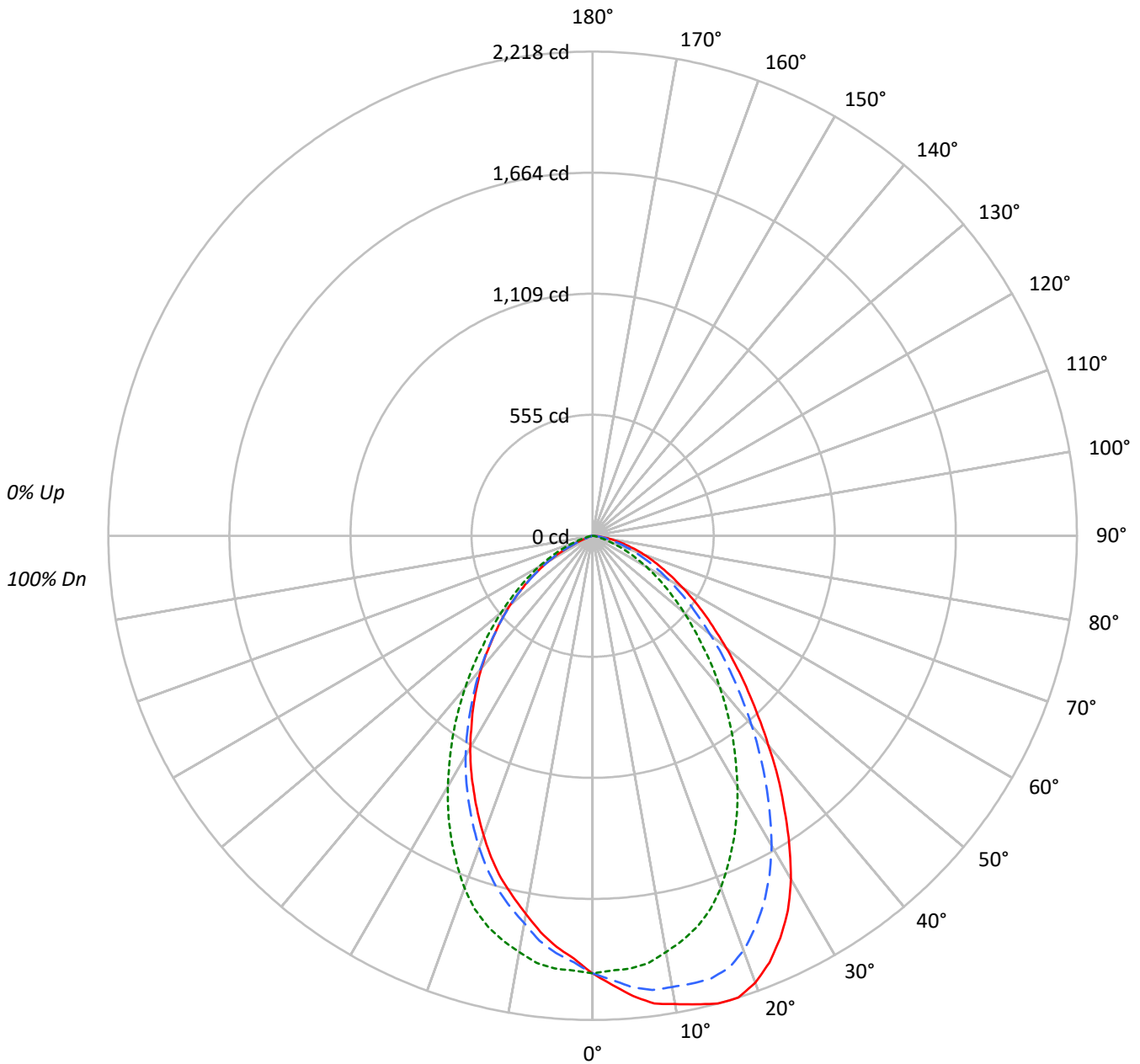
Input Watts (W): 41  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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°	247259	247259	247259
5°	261972	246433	234088
10°	272866	242506	220362
15°	283295	236686	207188
20°	285967	225324	191642
25°	276712	208405	175415
30°	258705	188844	159618
35°	230579	167879	143410
40°	201560	146010	127654
45°	175571	123850	110419
50°	153206	105061	94679
55°	134297	87072	76664
60°	117474	70356	56270
65°	102385	52447	31638
70°	89474	33936	10278
75°	73392	17681	2716
80°	54695	8098	1989
85°	32267	3963	3963



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	189.2	5.5
10°-20°	529.5	15.3
20°-30°	732.1	21.1
30°-40°	736.1	21.3
40°-50°	594.0	17.2
50°-60°	401.7	11.6
60°-70°	204.4	5.9
70°-80°	65.4	1.9
80°-90°	10.0	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°	1450.8	41.9
0°-40°	2187.0	63.2
0°-60°	3182.7	91.9
0°-90°	3462.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3462.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2005	2005	2005	2005	2005	
5°	2116	2076	1990	1919	1891	204
15°	2218	2099	1854	1677	1622	625
25°	2033	1856	1531	1343	1289	930
35°	1531	1383	1115	975	952	957
45°	1006	901	710	633	633	780
55°	624	539	405	354	356	561
65°	351	285	180	117	108	352
75°	154	108	37	8	6	166
85°	23	11	3	3	3	31
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°	2004.6	2004.6	2004.6	2004.6	2004.6	2004.6	2004.6	2004.6	2004.6
2.5°	2058.8	2047.4	2036.0	2016.0	1993.3	1970.4	1956.1	1944.7	1939.0
5°	2115.8	2101.5	2075.9	2033.2	1990.3	1950.4	1919.0	1899.1	1890.6
7.5°	2161.4	2141.4	2098.7	2038.9	1973.2	1910.5	1870.6	1842.0	1830.7
10°	2178.6	2155.7	2098.7	2018.8	1936.2	1859.2	1802.1	1773.6	1759.4
12.5°	2198.5	2172.8	2101.5	2001.8	1899.1	1807.8	1742.3	1705.2	1690.9
15°	2218.5	2184.3	2098.7	1976.1	1853.5	1748.0	1676.7	1639.6	1622.5
17.5°	2218.5	2178.6	2075.9	1933.3	1793.6	1682.4	1602.6	1559.8	1545.5
20°	2178.6	2132.9	2021.7	1864.9	1716.6	1596.9	1519.9	1477.0	1460.0
22.5°	2115.8	2064.4	1944.7	1782.2	1625.3	1508.4	1431.4	1391.5	1374.5
25°	2033.2	1981.8	1856.4	1688.1	1531.3	1414.4	1343.1	1306.0	1288.9
27.5°	1936.2	1879.1	1753.7	1585.4	1431.4	1320.2	1254.6	1220.4	1206.2
30°	1816.4	1762.2	1639.6	1474.2	1325.9	1223.3	1163.4	1132.1	1120.7
32.5°	1676.7	1631.1	1511.3	1357.3	1217.6	1123.5	1069.3	1043.7	1032.2
35°	1531.3	1488.5	1383.0	1240.4	1114.9	1026.5	975.2	958.1	952.4
37.5°	1394.4	1357.3	1254.6	1123.5	1009.5	932.4	886.8	875.4	869.7
40°	1251.8	1226.1	1132.1	1012.3	906.8	838.3	801.3	792.8	792.8
42.5°	1123.5	1095.0	1012.3	904.0	809.8	741.4	715.8	707.1	710.0
45°	1006.5	978.1	901.1	801.3	710.0	653.0	633.0	633.0	633.0
47.5°	898.3	872.6	801.3	698.6	624.5	578.9	558.9	558.9	561.7
50°	798.4	781.3	701.5	613.1	547.5	504.7	490.4	487.6	493.4
52.5°	704.3	684.4	613.1	533.3	470.5	436.3	422.1	419.1	422.1
55°	624.5	601.6	539.0	462.0	404.9	370.7	353.6	350.8	356.5
57.5°	547.5	530.3	464.8	396.4	342.1	307.9	293.7	288.0	290.9
60°	476.2	459.0	399.2	333.6	285.2	250.9	230.9	225.3	228.1
62.5°	410.6	396.4	339.3	276.6	228.1	196.7	176.8	162.5	168.3
65°	350.8	336.5	285.2	222.4	179.7	145.4	116.9	105.5	108.4
67.5°	299.4	282.3	233.8	176.8	134.1	97.0	65.6	59.9	59.9
70°	248.1	230.9	188.2	136.9	94.1	51.3	28.5	28.5	28.5
72.5°	199.7	185.3	145.4	102.7	59.9	22.8	11.4	11.4	11.4
75°	154.0	142.6	108.4	71.3	37.1	11.4	8.5	5.7	5.7
77.5°	114.0	102.7	77.0	48.4	22.8	5.7	5.7	5.7	5.7
80°	77.0	68.4	51.3	28.5	11.4	2.8	2.8	2.8	2.8
82.5°	45.6	39.9	28.5	14.2	5.7	2.8	2.8	2.8	2.8
85°	22.8	17.2	11.4	5.7	2.8	2.8	2.8	2.8	2.8
87.5°	5.7	2.8	2.8	2.8	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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Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report







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







(END OF REPORT)