

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: P584787

Luminaire Tested: **HC850D010-HM82555827-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584787
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2109-368-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 10/21/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC850D010-HM82555827-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4800.8 lumens
Efficiency: N/A
Efficacy: 100.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.16
Luminous Opening: Circular (Dia: 0.67' x H: 0')
CIE Type: Direct

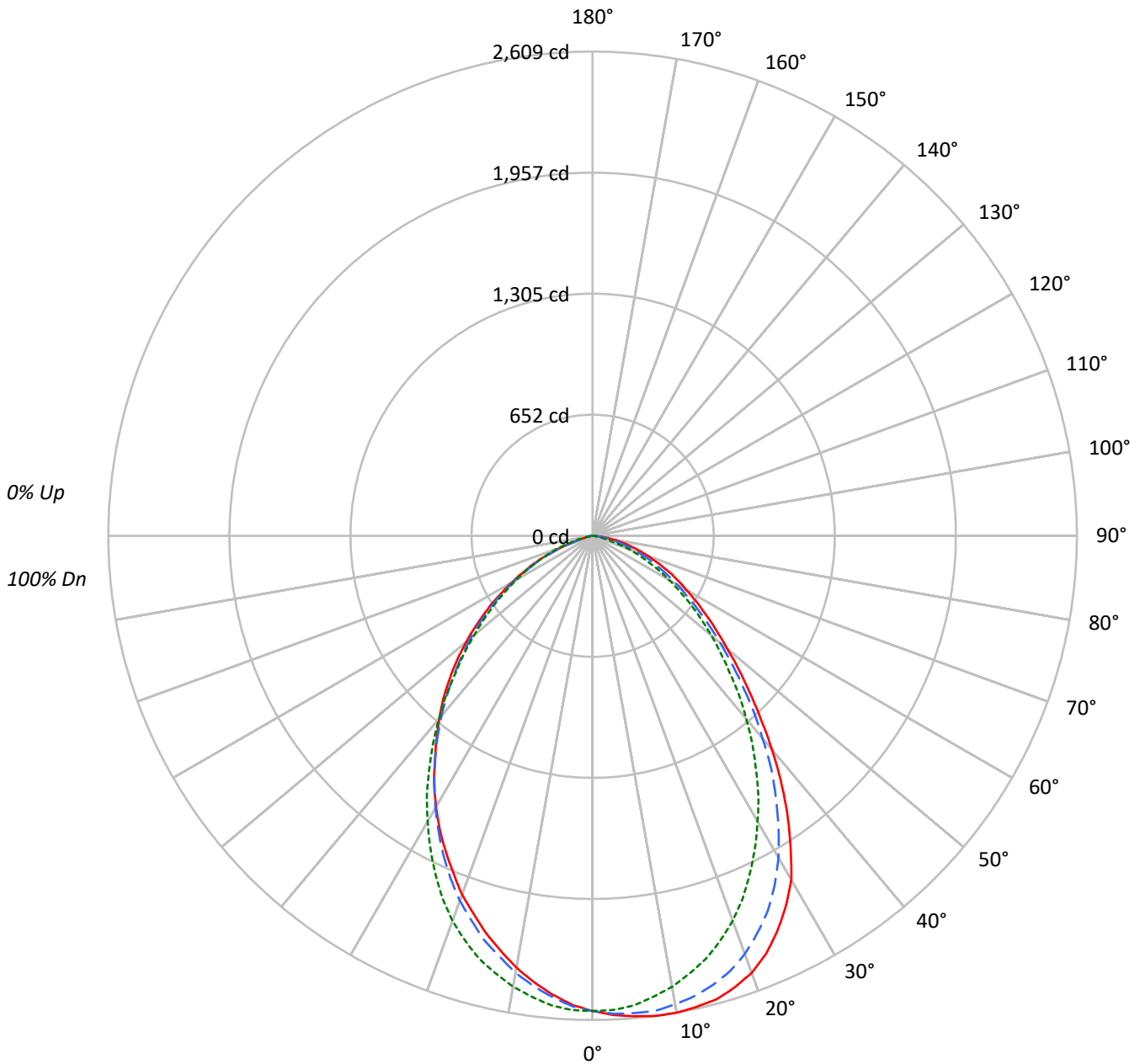
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77																			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67																			
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	62	56	67	60	55	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47																			
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	36	35																			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	78969	78969	78969
5°	80450	78623	76800
10°	81706	77253	73993
15°	82527	75328	70789
20°	82216	72423	67524
25°	80049	68242	63754
30°	76234	63259	60047
35°	68840	57735	55777
40°	60482	51823	51682
45°	52209	45550	47517
50°	45449	39952	42614
55°	40300	34698	37122
60°	35955	29319	30812
65°	32411	23801	24312
70°	28788	17834	14389
75°	24805	10330	6195
80°	19090	3694	1847
85°	12277	1238	1238



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.4	5.0
10°-20°	669.2	13.9
20°-30°	946.5	19.7
30°-40°	997.4	20.8
40°-50°	847.7	17.7
50°-60°	610.4	12.7
60°-70°	352.1	7.3
70°-80°	120.5	2.5
80°-90°	16.6	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°	1856.2	38.7
0°-40°	2853.6	59.4
0°-60°	4311.7	89.8
0°-90°	4800.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4800.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2561	2561	2561	2561	2561	
5°	2599	2582	2540	2495	2481	248
15°	2585	2505	2360	2256	2217	728
25°	2353	2231	2006	1902	1874	1079
35°	1829	1721	1534	1478	1482	1139
45°	1197	1142	1044	1051	1090	930
55°	750	690	645	670	690	674
65°	444	382	326	319	333	442
75°	208	156	87	56	52	220
85°	35	21	4	4	4	47
90°	0	0	0	0	0	



TEST NUMBER: P584787

CATALOG NUMBER: HC850D010-HM82555827-81RWWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2560.9	2560.9	2560.9	2560.9	2560.9	2560.9	2560.9	2560.9	2560.9	2560.9	2560.9
2.5°	2585.1	2588.6	2585.1	2585.1	2581.7	2578.2	2574.7	2571.3	2564.3	2557.4	2557.4
5°	2599.0	2605.9	2599.0	2599.0	2588.6	2581.7	2574.7	2564.3	2550.4	2540.0	2540.0
7.5°	2609.4	2609.4	2609.4	2599.0	2592.1	2581.7	2564.3	2547.0	2529.6	2512.3	2505.4
10°	2609.4	2609.4	2605.9	2592.1	2585.1	2564.3	2547.0	2522.7	2498.4	2474.1	2467.2
12.5°	2599.0	2602.5	2595.5	2581.7	2564.3	2540.0	2515.8	2484.6	2456.8	2429.1	2415.2
15°	2585.1	2581.7	2574.7	2557.4	2536.6	2505.4	2481.1	2446.4	2408.1	2373.5	2359.6
17.5°	2550.4	2550.4	2540.0	2522.7	2495.0	2460.3	2422.1	2383.9	2342.2	2304.1	2286.8
20°	2505.4	2505.4	2491.5	2470.7	2442.9	2397.7	2356.1	2311.0	2262.5	2224.3	2207.0
22.5°	2439.5	2442.9	2425.6	2401.2	2370.0	2318.0	2276.3	2220.9	2172.2	2127.1	2113.2
25°	2352.7	2359.6	2342.2	2318.0	2276.3	2231.3	2179.1	2127.1	2071.6	2026.5	2005.7
27.5°	2252.1	2255.5	2238.2	2213.9	2172.2	2123.6	2071.6	2016.1	1964.0	1915.4	1894.6
30°	2141.0	2127.1	2120.2	2089.0	2043.9	2002.1	1943.2	1898.1	1842.6	1801.0	1776.6
32.5°	1984.8	1991.7	1970.9	1946.7	1912.0	1863.4	1814.9	1762.7	1710.7	1679.5	1662.1
35°	1828.7	1835.7	1825.3	1801.0	1762.7	1721.1	1672.6	1634.4	1589.3	1551.1	1533.7
37.5°	1665.6	1665.6	1658.7	1644.8	1617.1	1578.9	1530.2	1492.1	1453.9	1422.7	1412.3
40°	1502.5	1495.6	1492.1	1481.7	1457.4	1422.7	1391.5	1360.2	1322.0	1301.2	1287.4
42.5°	1342.9	1342.9	1335.9	1325.5	1301.2	1283.9	1252.7	1218.0	1190.2	1169.4	1169.4
45°	1197.2	1200.7	1190.2	1183.3	1169.4	1141.6	1113.8	1089.6	1065.3	1051.4	1044.5
47.5°	1068.8	1068.8	1058.4	1051.4	1037.5	1013.3	989.0	968.2	950.7	940.3	937.0
50°	947.4	947.4	947.4	929.9	912.6	895.2	877.9	853.6	843.2	836.3	832.8
52.5°	843.2	839.7	839.7	825.9	808.5	787.7	770.4	749.6	739.2	732.1	735.7
55°	749.6	749.6	746.1	728.8	711.3	690.5	673.2	655.8	648.9	641.9	645.4
56°	711.3	711.3	707.8	694.0	673.2	655.8	635.0	617.7	607.3	610.7	610.7
57°	683.6	676.6	676.6	659.3	641.9	617.7	600.3	583.0	576.0	572.6	572.6
58°	648.9	645.4	641.9	624.6	607.3	586.5	569.1	551.8	541.4	541.4	537.9
59°	614.2	614.2	607.3	593.4	576.0	555.2	537.9	520.6	510.0	506.6	506.6
60°	583.0	586.5	576.0	562.2	548.3	523.9	503.1	489.2	478.8	475.4	475.4
61°	555.2	555.2	548.3	531.0	513.5	496.2	475.4	458.0	451.1	444.2	444.2
62°	531.0	523.9	520.6	503.1	485.8	465.0	447.6	430.3	419.9	412.9	416.4
63°	499.6	496.2	489.2	475.4	458.0	437.2	416.4	402.5	392.1	381.7	385.2
64°	475.4	471.9	461.5	447.6	430.3	409.5	388.7	374.8	367.8	357.4	354.0
65°	444.2	440.7	437.2	419.9	402.5	381.7	364.4	350.5	340.1	333.2	326.2
66°	416.4	419.9	412.9	399.1	378.3	360.9	336.6	322.8	315.7	305.3	298.4
67°	392.1	392.1	385.2	371.3	350.5	333.2	315.7	298.4	288.0	277.6	274.1
67.5°	378.3	378.3	371.3	354.0	340.1	319.3	301.8	288.0	274.1	267.2	260.2
68°	364.4	364.4	360.9	347.0	329.7	308.8	291.4	274.1	260.2	249.8	246.4
69°	340.1	343.6	336.6	322.8	305.3	284.5	267.2	253.3	239.4	229.0	222.1
70°	319.3	315.7	308.8	294.9	277.6	263.7	246.4	229.0	215.1	201.3	197.8
71°	291.4	291.4	284.5	274.1	256.8	239.4	222.1	208.2	194.3	177.0	173.5
72°	270.6	270.6	263.7	249.8	235.9	218.6	201.3	183.9	173.5	156.2	149.2
72.5°	256.8	260.2	253.3	239.4	225.5	204.7	190.9	177.0	159.6	145.8	138.8
73°	249.8	246.4	242.9	229.0	211.7	197.8	180.5	166.6	149.2	135.4	128.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	156.2	156.2	152.7	138.8	125.0	111.1	97.1	83.2	69.4	55.5	48.6
80°	107.5	111.1	104.2	97.1	86.7	72.8	59.0	48.6	34.7	27.7	20.8
82.5°	69.4	69.4	65.9	59.0	52.0	41.6	34.7	24.3	17.3	13.9	10.4
85°	34.7	38.2	34.7	31.2	24.3	20.8	17.3	10.4	6.9	3.5	3.5
87.5°	13.9	13.9	13.9	10.4	10.4	6.9	3.5	3.5	3.5	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2560.9	2560.9	2560.9	2560.9	2560.9	2560.9	2560.9	2560.9	2560.9	2560.9
2.5°	2550.4	2550.4	2543.5	2540.0	2536.6	2533.1	2529.6	2526.2	2526.2	2529.6
5°	2529.6	2522.7	2508.8	2505.4	2495.0	2491.5	2484.6	2481.1	2484.6	2481.1
7.5°	2498.4	2484.6	2467.2	2460.3	2446.4	2439.5	2429.1	2429.1	2422.1	2425.6
10°	2456.8	2436.0	2415.2	2401.2	2390.8	2380.4	2373.5	2366.5	2363.1	2363.1
12.5°	2404.7	2380.4	2359.6	2338.8	2321.4	2314.5	2300.6	2300.6	2293.7	2290.2
15°	2345.7	2314.5	2290.2	2269.4	2255.5	2241.7	2231.3	2224.3	2217.4	2217.4
17.5°	2269.4	2241.7	2217.4	2193.0	2172.2	2161.8	2151.4	2141.0	2141.0	2134.0
20°	2186.1	2154.9	2134.0	2109.8	2092.4	2075.1	2061.2	2061.2	2054.3	2057.7
22.5°	2092.4	2054.3	2033.5	2016.1	1998.8	1984.8	1970.9	1970.9	1967.5	1964.0
25°	1988.4	1957.1	1932.8	1912.0	1901.6	1887.7	1884.2	1877.3	1873.8	1873.8
27.5°	1877.3	1853.0	1821.8	1811.4	1797.5	1790.6	1790.6	1787.1	1780.2	1783.5
30°	1759.3	1731.5	1714.2	1707.2	1693.4	1693.4	1689.9	1683.0	1683.0	1686.4
32.5°	1644.8	1617.1	1603.2	1599.7	1585.7	1585.7	1582.4	1585.7	1585.7	1589.3
35°	1519.8	1495.6	1492.1	1481.7	1478.2	1478.2	1478.2	1485.2	1492.1	1481.7
37.5°	1401.9	1384.6	1374.2	1370.7	1374.2	1374.2	1377.5	1388.0	1384.6	1381.1
40°	1280.4	1266.6	1259.6	1259.6	1266.6	1273.5	1273.5	1283.9	1287.4	1283.9
42.5°	1158.9	1148.5	1148.5	1152.0	1158.9	1162.5	1172.9	1183.3	1186.8	1190.2
45°	1044.5	1044.5	1044.5	1047.9	1051.4	1058.4	1072.2	1082.6	1086.1	1089.6
47.5°	933.4	929.9	940.3	943.9	954.3	957.8	968.2	982.0	985.5	989.0
50°	829.3	836.3	839.7	850.1	857.1	857.1	871.0	877.9	888.3	888.3
52.5°	732.1	742.5	746.1	756.5	760.0	763.4	770.4	780.8	787.7	787.7
55°	645.4	648.9	655.8	659.3	669.7	673.2	680.1	683.6	694.0	690.5
56°	607.3	614.2	617.7	624.6	631.5	635.0	641.9	645.4	652.4	655.8
57°	572.6	576.0	586.5	589.9	596.9	596.9	600.3	610.7	610.7	614.2
58°	537.9	544.8	548.3	551.8	558.7	562.2	569.1	572.6	576.0	572.6
59°	506.6	510.0	513.5	513.5	520.6	520.6	531.0	537.9	541.4	541.4
60°	475.4	475.4	478.8	482.3	489.2	492.7	492.7	499.6	499.6	499.6
61°	444.2	444.2	447.6	451.1	454.6	454.6	461.5	461.5	465.0	468.4
62°	416.4	412.9	412.9	416.4	416.4	423.3	426.8	430.3	433.7	430.3
63°	385.2	381.7	381.7	381.7	381.7	388.7	388.7	392.1	399.1	395.6
64°	350.5	350.5	350.5	350.5	354.0	354.0	360.9	364.4	367.8	371.3
65°	326.2	319.3	315.7	315.7	319.3	322.8	326.2	329.7	333.2	333.2
66°	298.4	291.4	288.0	288.0	288.0	288.0	294.9	294.9	301.8	301.8
67°	267.2	260.2	256.8	253.3	253.3	253.3	263.7	260.2	260.2	260.2
67.5°	256.8	246.4	242.9	239.4	235.9	242.9	239.4	242.9	242.9	239.4
68°	242.9	235.9	229.0	222.1	222.1	222.1	225.5	229.0	225.5	222.1
69°	215.1	211.7	201.3	194.3	190.9	194.3	190.9	194.3	190.9	194.3
70°	190.9	180.5	170.0	166.6	163.1	163.1	163.1	159.6	163.1	159.6
71°	166.6	156.2	145.8	138.8	135.4	135.4	131.9	135.4	131.9	135.4
72°	142.3	131.9	118.0	111.1	111.1	111.1	111.1	107.5	111.1	107.5
72.5°	131.9	118.0	107.5	100.7	97.1	97.1	97.1	97.1	93.6	97.1
73°	121.5	107.5	93.6	90.2	90.2	90.2	86.7	83.2	86.7	86.7



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	41.6	31.2	27.7	27.7	27.7	27.7	27.7	27.7	24.3	24.3
80°	17.3	13.9	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
82.5°	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9	6.9
85°	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
87.5°	0.0	0.0	0.0	0.0	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	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P





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







74°	225.5	225.5	218.6	208.2	190.9	173.5	159.6	145.8	128.4	111.1	104.2
75°	208.2	204.7	197.8	187.4	173.5	156.2	142.3	125.0	111.1	93.6	86.7





74°	100.7	83.2	76.3	69.4	69.4	69.4	65.9	65.9	65.9	69.4
75°	79.8	65.9	59.0	52.0	55.5	52.0	55.5	52.0	52.0	52.0



(END OF REPORT)