

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: P593767

Luminaire Tested: **HC845D010-HM82555850-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P593767
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: HC845D010-HM82555850-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5109.7 lumens
Efficiency: N/A
Efficacy: 116.1 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

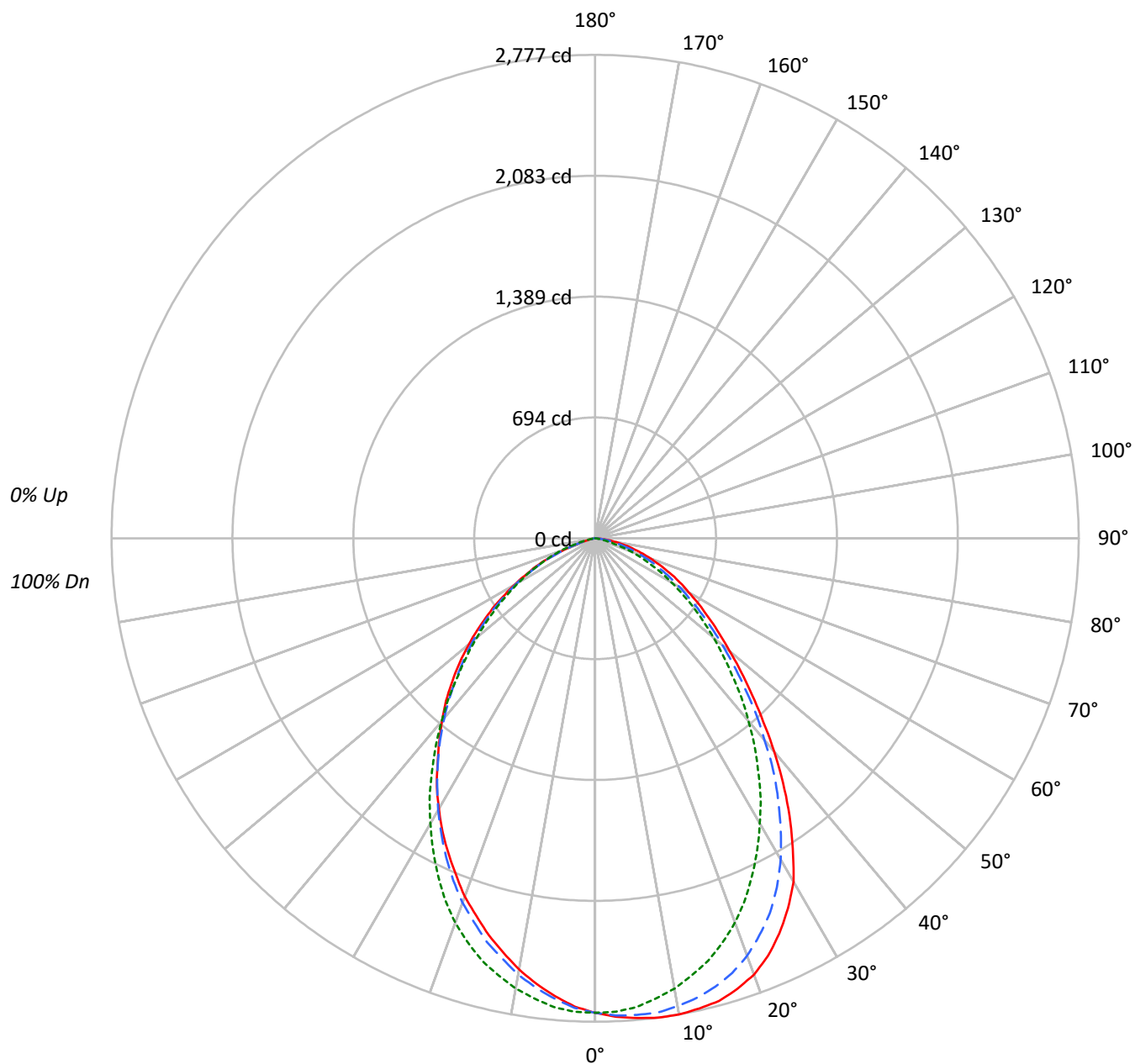
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10		50	30	10			50	30	10			50
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111			106	106	106			102
1	111	107	104	100	108	105	102	99		101	98	96			97	95	93			93
2	103	96	90	85	100	94	89	84		90	86	82			87	84	80			84
3	95	86	79	73	92	84	78	73		81	76	71			79	74	70			76
4	88	77	70	64	86	76	69	63		74	67	63			71	66	62			69
5	81	70	62	56	79	69	62	56		67	60	55			65	59	55			63
6	76	64	56	50	74	63	55	50		61	54	49			60	54	49			58
7	71	58	51	45	69	58	50	45		56	49	45			55	49	44			54
8	66	54	46	41	65	53	46	41		52	45	40			51	45	40			50
9	62	50	42	37	61	49	42	37		48	41	37			47	41	37			46
10	58	46	39	34	57	46	39	34		45	38	34			44	38	34			43

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	84051	84051	84051
5°	85628	83684	81744
10°	86966	82225	78753
15°	87839	80177	75344
20°	87505	77080	71869
25°	85200	72631	67861
30°	81141	67332	63910
35°	73271	61454	59369
40°	64378	55156	55007
45°	55567	48480	50574
50°	48371	42523	45353
55°	42891	36929	39515
60°	38268	31206	32798
65°	34491	25333	25873
70°	30636	18988	15318
75°	26402	10997	6600
80°	20333	3942	1953
85°	13055	1274	1274



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	255.9	5.0
10°-20°	712.3	13.9
20°-30°	1007.5	19.7
30°-40°	1061.6	20.8
40°-50°	902.2	17.7
50°-60°	649.7	12.7
60°-70°	374.8	7.3
70°-80°	128.2	2.5
80°-90°	17.6	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°	1975.6	38.7
0°-40°	3037.2	59.4
0°-60°	4589.1	89.8
0°-90°	5109.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5109.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2726	2726	2726	2726	2726	
5°	2766	2748	2704	2656	2641	264
15°	2752	2667	2512	2401	2360	775
25°	2504	2375	2135	2024	1994	1148
35°	1946	1832	1632	1573	1577	1212
45°	1274	1215	1112	1119	1160	990
55°	798	735	687	713	735	718
65°	473	406	347	340	355	470
75°	222	166	92	59	55	234
85°	37	22	4	4	4	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2725.7	2725.7	2725.7	2725.7	2725.7	2725.7	2725.7	2725.7	2725.7	2725.7	2725.7
2.5°	2751.5	2755.3	2751.5	2751.5	2747.9	2744.1	2740.5	2736.7	2729.3	2721.9	2721.9
5°	2766.3	2773.7	2766.3	2766.3	2755.3	2747.9	2740.5	2729.3	2714.6	2703.5	2703.5
7.5°	2777.4	2777.4	2777.4	2766.3	2758.9	2747.9	2729.3	2710.9	2692.4	2674.0	2666.6
10°	2777.4	2777.4	2773.7	2758.9	2751.5	2729.3	2710.9	2685.0	2659.2	2633.4	2626.0
12.5°	2766.3	2770.0	2762.6	2747.9	2729.3	2703.5	2677.6	2644.4	2614.9	2585.3	2570.5
15°	2751.5	2747.9	2740.5	2721.9	2699.8	2666.6	2640.8	2603.8	2563.1	2526.3	2511.5
17.5°	2714.6	2714.6	2703.5	2685.0	2655.6	2618.6	2577.9	2537.3	2493.0	2452.4	2433.9
20°	2666.6	2666.6	2651.8	2629.6	2600.1	2552.1	2507.8	2459.8	2408.1	2367.5	2348.9
22.5°	2596.4	2600.1	2581.7	2555.7	2522.5	2467.2	2422.8	2363.7	2312.0	2264.0	2249.2
25°	2504.1	2511.5	2493.0	2467.2	2422.8	2374.9	2319.4	2264.0	2204.9	2156.9	2134.7
27.5°	2397.0	2400.7	2382.2	2356.3	2312.0	2260.4	2204.9	2145.8	2090.4	2038.7	2016.5
30°	2278.8	2264.0	2256.6	2223.4	2175.3	2131.1	2068.2	2020.3	1961.1	1916.8	1891.0
32.5°	2112.6	2120.0	2097.8	2072.0	2035.0	1983.3	1931.6	1876.2	1820.8	1787.5	1769.1
35°	1946.4	1953.7	1942.7	1916.8	1876.2	1831.9	1780.1	1739.6	1691.6	1650.9	1632.5
37.5°	1772.8	1772.8	1765.4	1750.6	1721.1	1680.4	1628.7	1588.1	1547.5	1514.2	1503.2
40°	1599.3	1591.9	1588.1	1577.1	1551.2	1514.2	1481.0	1447.8	1407.1	1385.0	1370.2
42.5°	1429.3	1429.3	1421.9	1410.9	1385.0	1366.5	1333.3	1296.4	1266.8	1244.7	1244.7
45°	1274.2	1277.9	1266.8	1259.5	1244.7	1215.1	1185.6	1159.7	1133.8	1119.0	1111.7
47.5°	1137.6	1137.6	1126.4	1119.0	1104.3	1078.5	1052.7	1030.5	1011.9	1000.9	997.2
50°	1008.3	1008.3	1008.3	989.8	971.4	952.8	934.4	908.6	897.5	890.1	886.4
52.5°	897.5	893.8	893.8	879.0	860.5	838.3	819.9	797.8	786.7	779.3	783.0
55°	797.8	797.8	794.1	775.6	757.2	735.0	716.5	698.1	690.7	683.3	686.9
56°	757.2	757.2	753.4	738.6	716.5	698.1	675.9	657.5	646.3	650.1	650.1
57°	727.6	720.2	720.2	701.7	683.3	657.5	638.9	620.5	613.1	609.4	609.4
58°	690.7	686.9	683.3	664.9	646.3	624.2	605.7	587.2	576.2	576.2	572.4
59°	653.7	653.7	646.3	631.5	613.1	591.0	572.4	554.0	542.9	539.2	539.2
60°	620.5	624.2	613.1	598.3	583.6	557.6	535.5	520.8	509.7	506.0	506.0
61°	591.0	591.0	583.6	565.0	546.6	528.2	506.0	487.5	480.1	472.7	472.7
62°	565.0	557.6	554.0	535.5	517.1	494.9	476.5	457.9	446.9	439.5	443.2
63°	531.8	528.2	520.8	506.0	487.5	465.3	443.2	428.4	417.4	406.2	410.0
64°	506.0	502.3	491.3	476.5	457.9	435.8	413.6	398.9	391.5	380.4	376.8
65°	472.7	469.1	465.3	446.9	428.4	406.2	387.8	373.0	362.0	354.6	347.2
66°	443.2	446.9	439.5	424.7	402.6	384.2	358.2	343.5	336.1	325.0	317.6
67°	417.4	417.4	410.0	395.2	373.0	354.6	336.1	317.6	306.5	295.5	291.7
67.5°	402.6	402.6	395.2	376.8	362.0	339.8	321.3	306.5	291.7	284.3	276.9
68°	387.8	387.8	384.2	369.4	350.8	328.7	310.3	291.7	276.9	265.9	262.3
69°	362.0	365.6	358.2	343.5	325.0	302.9	284.3	269.6	254.9	243.7	236.4
70°	339.8	336.1	328.7	313.9	295.5	280.7	262.3	243.7	229.0	214.2	210.6
71°	310.3	310.3	302.9	291.7	273.3	254.9	236.4	221.6	206.8	188.4	184.6
72°	288.1	288.1	280.7	265.9	251.1	232.7	214.2	195.8	184.6	166.2	158.8
72.5°	273.3	276.9	269.6	254.9	240.1	217.9	203.2	188.4	169.9	155.1	147.7
73°	265.9	262.3	258.5	243.7	225.3	210.6	192.0	177.2	158.8	144.0	136.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	166.2	166.2	162.5	147.7	133.0	118.2	103.5	88.7	73.9	59.1	51.7
80°	114.5	118.2	110.8	103.5	92.3	77.5	62.8	51.7	36.9	29.6	22.2
82.5°	73.9	73.9	70.1	62.8	55.4	44.3	36.9	25.8	18.4	14.8	11.0
85°	36.9	40.6	36.9	33.2	25.8	22.2	18.4	11.0	7.4	3.6	3.6
87.5°	14.8	14.8	14.8	11.0	11.0	7.4	3.6	3.6	3.6	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°	2725.7	2725.7	2725.7	2725.7	2725.7	2725.7	2725.7	2725.7	2725.7	2725.7
2.5°	2714.6	2714.6	2707.2	2703.5	2699.8	2696.1	2692.4	2688.8	2688.8	2692.4
5°	2692.4	2685.0	2670.2	2666.6	2655.6	2651.8	2644.4	2640.8	2644.4	2640.8
7.5°	2659.2	2644.4	2626.0	2618.6	2603.8	2596.4	2585.3	2585.3	2577.9	2581.7
10°	2614.9	2592.7	2570.5	2555.7	2544.7	2533.7	2526.3	2518.9	2515.1	2515.1
12.5°	2559.5	2533.7	2511.5	2489.3	2470.8	2463.4	2448.6	2448.6	2441.2	2437.6
15°	2496.7	2463.4	2437.6	2415.4	2400.7	2385.9	2374.9	2367.5	2360.1	2360.1
17.5°	2415.4	2385.9	2360.1	2334.2	2312.0	2301.0	2289.8	2278.8	2278.8	2271.4
20°	2326.8	2293.6	2271.4	2245.6	2227.1	2208.6	2193.9	2193.9	2186.5	2190.1
22.5°	2227.1	2186.5	2164.3	2145.8	2127.4	2112.6	2097.8	2097.8	2094.2	2090.4
25°	2116.3	2083.0	2057.2	2035.0	2023.9	2009.1	2005.5	1998.1	1994.5	1994.5
27.5°	1998.1	1972.3	1939.0	1927.9	1913.2	1905.8	1905.8	1902.0	1894.6	1898.4
30°	1872.5	1843.0	1824.5	1817.1	1802.3	1802.3	1798.7	1791.3	1791.3	1794.9
32.5°	1750.6	1721.1	1706.4	1702.6	1687.8	1687.8	1684.2	1687.8	1687.8	1691.6
35°	1617.7	1591.9	1588.1	1577.1	1573.3	1573.3	1573.3	1580.7	1588.1	1577.1
37.5°	1492.1	1473.6	1462.6	1458.9	1462.6	1462.6	1466.2	1477.3	1473.6	1469.9
40°	1362.8	1348.0	1340.6	1340.6	1348.0	1355.4	1355.4	1366.5	1370.2	1366.5
42.5°	1233.5	1222.5	1222.5	1226.1	1233.5	1237.3	1248.3	1259.5	1263.1	1266.8
45°	1111.7	1111.7	1111.7	1115.4	1119.0	1126.4	1141.2	1152.4	1156.0	1159.7
47.5°	993.5	989.8	1000.9	1004.6	1015.7	1019.3	1030.5	1045.3	1048.9	1052.7
50°	882.7	890.1	893.8	904.9	912.2	912.2	927.0	934.4	945.4	945.4
52.5°	779.3	790.4	794.1	805.1	808.8	812.5	819.9	831.0	838.3	838.3
55°	686.9	690.7	698.1	701.7	712.8	716.5	723.9	727.6	738.6	735.0
56°	646.3	653.7	657.5	664.9	672.1	675.9	683.3	686.9	694.3	698.1
57°	609.4	613.1	624.2	627.9	635.3	635.3	638.9	650.1	650.1	653.7
58°	572.4	579.8	583.6	587.2	594.6	598.3	605.7	609.4	613.1	609.4
59°	539.2	542.9	546.6	546.6	554.0	554.0	565.0	572.4	576.2	576.2
60°	506.0	506.0	509.7	513.4	520.8	524.4	524.4	531.8	531.8	531.8
61°	472.7	472.7	476.5	480.1	483.9	483.9	491.3	491.3	494.9	498.6
62°	443.2	439.5	439.5	443.2	443.2	450.5	454.3	457.9	461.7	457.9
63°	410.0	406.2	406.2	406.2	406.2	413.6	413.6	417.4	424.7	421.0
64°	373.0	373.0	373.0	373.0	376.8	376.8	384.2	387.8	391.5	395.2
65°	347.2	339.8	336.1	336.1	339.8	343.5	347.2	350.8	354.6	354.6
66°	317.6	310.3	306.5	306.5	306.5	306.5	313.9	313.9	321.3	321.3
67°	284.3	276.9	273.3	269.6	269.6	269.6	280.7	276.9	276.9	276.9
67.5°	273.3	262.3	258.5	254.9	251.1	258.5	254.9	258.5	258.5	254.9
68°	258.5	251.1	243.7	236.4	236.4	236.4	240.1	243.7	240.1	236.4
69°	229.0	225.3	214.2	206.8	203.2	206.8	203.2	206.8	203.2	206.8
70°	203.2	192.0	181.0	177.2	173.6	173.6	173.6	169.9	173.6	169.9
71°	177.2	166.2	155.1	147.7	144.0	144.0	140.3	144.0	140.3	144.0
72°	151.4	140.3	125.6	118.2	118.2	118.2	118.2	114.5	118.2	114.5
72.5°	140.3	125.6	114.5	107.1	103.5	103.5	103.5	103.5	99.7	103.5
73°	129.3	114.5	99.7	96.1	96.1	96.1	92.3	88.7	92.3	92.3



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	44.3	33.2	29.6	29.6	29.6	29.6	29.6	29.6	25.8	25.8
80°	18.4	14.8	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
82.5°	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
85°	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6
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°	240.1	240.1	232.7	221.6	203.2	184.6	169.9	155.1	136.7	118.2	110.8
75°	221.6	217.9	210.6	199.4	184.6	166.2	151.4	133.0	118.2	99.7	92.3





74°	107.1	88.7	81.3	73.9	73.9	73.9	70.1	70.1	70.1	73.9
75°	84.9	70.1	62.8	55.4	59.1	55.4	59.1	55.4	55.4	55.4



(END OF REPORT)