

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: P584651

Luminaire Tested: **HC845D010-HM82555827-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584651
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-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: 4557.8 lumens
Efficiency: N/A
Efficacy: 103.6 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

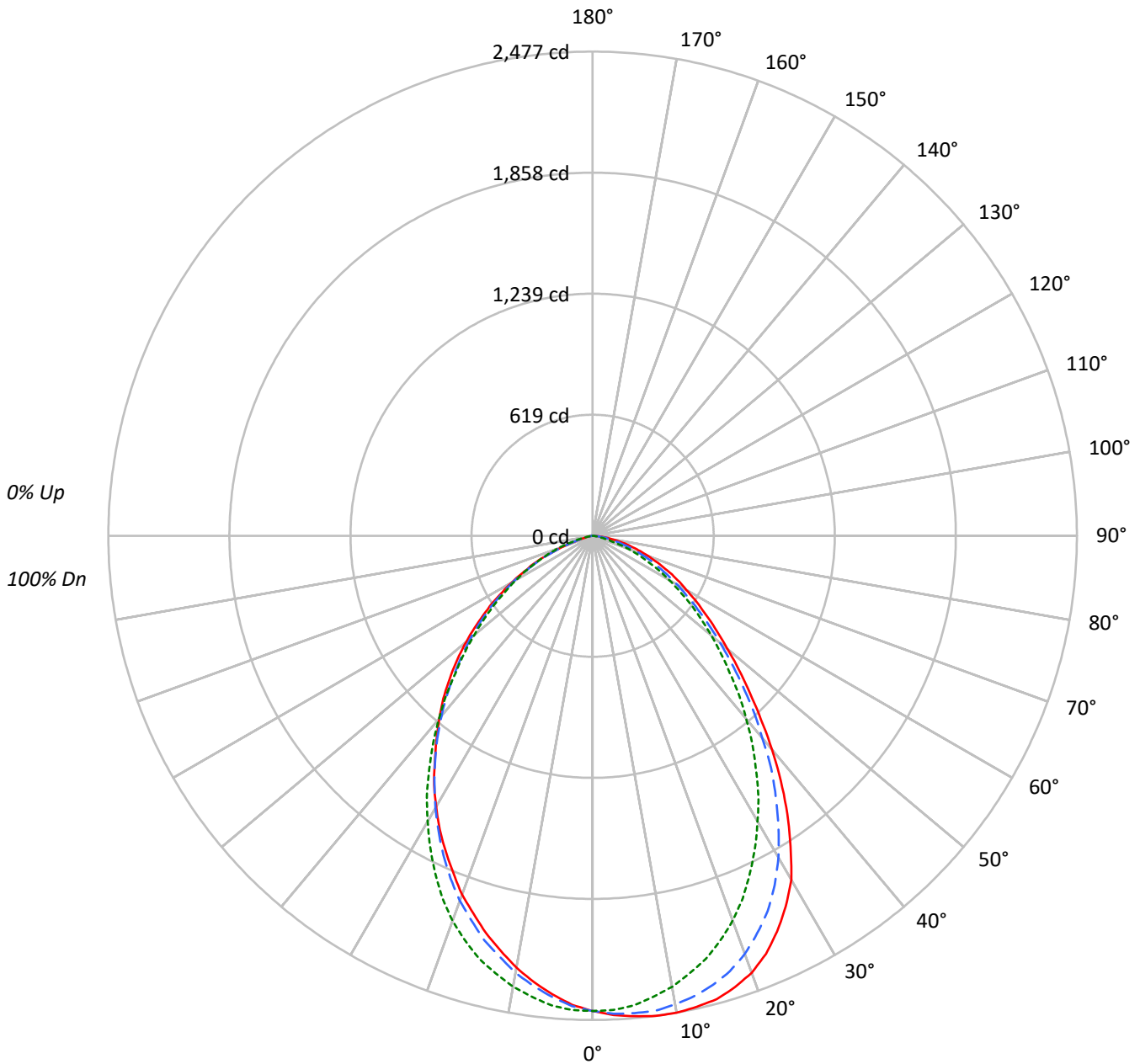
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				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	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77				77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67				67
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59				59
5	81	70	62	56	79	69	62	56	67	60	55	65	59	55	63	58	54	52				52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47				47
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	36	35				35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32				32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	74972	74972	74972
5°	76379	74646	72912
10°	77572	73345	70249
15°	78351	71516	67203
20°	78055	68755	64108
25°	75996	64785	60529
30°	72378	60061	57006
35°	65358	54817	52954
40°	57422	49202	49070
45°	49562	43247	45114
50°	43142	37927	40460
55°	38251	32945	35246
60°	34130	27839	29257
65°	30769	22597	23072
70°	27327	16932	13668
75°	23554	9805	5886
80°	18149	3516	1758
85°	11676	1168	1168



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.2	5.0
10°-20°	635.4	13.9
20°-30°	898.6	19.7
30°-40°	946.9	20.8
40°-50°	804.8	17.7
50°-60°	579.5	12.7
60°-70°	334.3	7.3
70°-80°	114.4	2.5
80°-90°	15.7	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°	1762.2	38.7
0°-40°	2709.2	59.4
0°-60°	4093.4	89.8
0°-90°	4557.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4557.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2431	2431	2431	2431	2431	
5°	2468	2451	2412	2369	2356	236
15°	2454	2379	2240	2141	2105	691
25°	2234	2118	1904	1805	1779	1024
35°	1736	1634	1456	1403	1407	1081
45°	1136	1084	992	998	1034	883
55°	712	656	613	636	656	640
65°	422	362	310	303	316	419
75°	198	148	82	53	49	209
85°	33	20	3	3	3	44
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°	2431.3	2431.3	2431.3	2431.3	2431.3	2431.3	2431.3	2431.3	2431.3	2431.3	2431.3
2.5°	2454.3	2457.7	2454.3	2454.3	2451.0	2447.7	2444.4	2441.1	2434.6	2428.0	2428.0
5°	2467.5	2474.1	2467.5	2467.5	2457.7	2451.0	2444.4	2434.6	2421.4	2411.5	2411.5
7.5°	2477.4	2477.4	2477.4	2467.5	2461.0	2451.0	2434.6	2418.1	2401.6	2385.2	2378.6
10°	2477.4	2477.4	2474.1	2461.0	2454.3	2434.6	2418.1	2395.0	2371.9	2348.9	2342.4
12.5°	2467.5	2470.8	2464.2	2451.0	2434.6	2411.5	2388.5	2358.8	2332.4	2306.1	2292.9
15°	2454.3	2451.0	2444.4	2428.0	2408.2	2378.6	2355.5	2322.5	2286.3	2253.3	2240.2
17.5°	2421.4	2421.4	2411.5	2395.0	2368.6	2335.7	2299.4	2263.3	2223.8	2187.5	2171.0
20°	2378.6	2378.6	2365.4	2345.6	2319.3	2276.4	2236.9	2194.1	2148.0	2111.8	2095.2
22.5°	2316.0	2319.3	2302.8	2279.7	2250.0	2200.7	2161.1	2108.5	2062.3	2019.4	2006.3
25°	2233.6	2240.2	2223.8	2200.7	2161.1	2118.3	2068.8	2019.4	1966.8	1924.0	1904.1
27.5°	2138.0	2141.3	2124.9	2101.8	2062.3	2016.2	1966.8	1914.0	1864.6	1818.5	1798.8
30°	2032.7	2019.4	2012.9	1983.2	1940.4	1900.8	1844.9	1802.1	1749.3	1709.8	1686.8
32.5°	1884.4	1891.0	1871.2	1848.2	1815.2	1769.1	1723.0	1673.5	1624.1	1594.5	1578.0
35°	1736.2	1742.7	1732.9	1709.8	1673.5	1634.0	1587.9	1551.6	1508.8	1472.6	1456.2
37.5°	1581.3	1581.3	1574.8	1561.5	1535.2	1499.0	1452.9	1416.6	1380.4	1350.7	1340.9
40°	1426.5	1419.9	1416.6	1406.7	1383.7	1350.7	1321.0	1291.4	1255.1	1235.4	1222.3
42.5°	1274.9	1274.9	1268.4	1258.5	1235.4	1219.0	1189.3	1156.3	1130.0	1110.2	1110.2
45°	1136.5	1139.8	1130.0	1123.4	1110.2	1083.9	1057.5	1034.5	1011.4	998.2	991.7
47.5°	1014.6	1014.6	1004.8	998.2	985.0	962.0	938.9	919.2	902.6	892.8	889.5
50°	899.3	899.3	899.3	882.9	866.4	850.0	833.5	810.4	800.6	794.0	790.6
52.5°	800.6	797.3	797.3	784.0	767.6	747.8	731.4	711.5	701.7	695.1	698.4
55°	711.5	711.5	708.3	691.8	675.3	655.6	639.2	622.6	616.1	609.5	612.8
56°	675.3	675.3	672.0	658.9	639.2	622.6	602.9	586.4	576.5	579.8	579.8
57°	649.0	642.5	642.5	625.9	609.5	586.4	570.0	553.4	546.9	543.6	543.6
58°	616.1	612.8	609.5	593.0	576.5	556.7	540.3	523.9	513.9	513.9	510.6
59°	583.1	583.1	576.5	563.4	546.9	527.1	510.6	494.2	484.3	480.9	480.9
60°	553.4	556.7	546.9	533.7	520.5	497.5	477.6	464.5	454.7	451.4	451.4
61°	527.1	527.1	520.5	504.0	487.6	471.1	451.4	434.8	428.3	421.7	421.7
62°	504.0	497.5	494.2	477.6	461.2	441.4	425.0	408.6	398.6	392.0	395.3
63°	474.4	471.1	464.5	451.4	434.8	415.1	395.3	382.2	372.3	362.3	365.6
64°	451.4	448.1	438.1	425.0	408.6	388.7	369.0	355.8	349.2	339.3	336.1
65°	421.7	418.4	415.1	398.6	382.2	362.3	345.9	332.8	322.8	316.2	309.7
66°	395.3	398.6	392.0	378.9	359.1	342.6	319.5	306.4	299.8	289.8	283.3
67°	372.3	372.3	365.6	352.5	332.8	316.2	299.8	283.3	273.4	263.6	260.3
67.5°	359.1	359.1	352.5	336.1	322.8	303.1	286.6	273.4	260.3	253.7	247.0
68°	345.9	345.9	342.6	329.5	313.0	293.2	276.7	260.3	247.0	237.2	233.9
69°	322.8	326.1	319.5	306.4	289.8	270.1	253.7	240.5	227.3	217.5	210.8
70°	303.1	299.8	293.2	280.0	263.6	250.3	233.9	217.5	204.2	191.1	187.8
71°	276.7	276.7	270.1	260.3	243.7	227.3	210.8	197.7	184.5	168.0	164.7
72°	257.0	257.0	250.3	237.2	224.0	207.5	191.1	174.7	164.7	148.3	141.7
72.5°	243.7	247.0	240.5	227.3	214.2	194.4	181.2	168.0	151.6	138.4	131.7
73°	237.2	233.9	230.6	217.5	200.9	187.8	171.3	158.1	141.7	128.4	121.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	148.3	148.3	145.0	131.7	118.6	105.5	92.2	79.1	65.9	52.7	46.1
80°	102.2	105.5	98.9	92.2	82.3	69.2	56.0	46.1	33.0	26.4	19.8
82.5°	65.9	65.9	62.6	56.0	49.4	39.5	33.0	23.1	16.4	13.1	9.9
85°	33.0	36.2	33.0	29.7	23.1	19.8	16.4	9.9	6.6	3.3	3.3
87.5°	13.1	13.1	13.1	9.9	9.9	6.6	3.3	3.3	3.3	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°	2431.3	2431.3	2431.3	2431.3	2431.3	2431.3	2431.3	2431.3	2431.3	2431.3
2.5°	2421.4	2421.4	2414.7	2411.5	2408.2	2404.9	2401.6	2398.3	2398.3	2401.6
5°	2401.6	2395.0	2381.9	2378.6	2368.6	2365.4	2358.8	2355.5	2358.8	2355.5
7.5°	2371.9	2358.8	2342.4	2335.7	2322.5	2316.0	2306.1	2306.1	2299.4	2302.8
10°	2332.4	2312.7	2292.9	2279.7	2269.9	2259.9	2253.3	2246.8	2243.5	2243.5
12.5°	2283.0	2259.9	2240.2	2220.4	2203.9	2197.4	2184.1	2184.1	2177.6	2174.3
15°	2227.1	2197.4	2174.3	2154.6	2141.3	2128.2	2118.3	2111.8	2105.1	2105.1
17.5°	2154.6	2128.2	2105.1	2082.1	2062.3	2052.4	2042.5	2032.7	2032.7	2026.0
20°	2075.5	2045.8	2026.0	2003.0	1986.5	1970.1	1956.9	1956.9	1950.2	1953.6
22.5°	1986.5	1950.2	1930.5	1914.0	1897.6	1884.4	1871.2	1871.2	1867.9	1864.6
25°	1887.7	1858.0	1834.9	1815.2	1805.4	1792.1	1788.8	1782.3	1779.0	1779.0
27.5°	1782.3	1759.1	1729.6	1719.6	1706.5	1699.9	1699.9	1696.6	1690.1	1693.3
30°	1670.2	1644.0	1627.4	1620.9	1607.7	1607.7	1604.3	1597.7	1597.7	1601.0
32.5°	1561.5	1535.2	1522.0	1518.7	1505.5	1505.5	1502.3	1505.5	1505.5	1508.8
35°	1442.9	1419.9	1416.6	1406.7	1403.4	1403.4	1403.4	1409.9	1416.6	1406.7
37.5°	1330.9	1314.5	1304.6	1301.3	1304.6	1304.6	1307.9	1317.7	1314.5	1311.2
40°	1215.6	1202.4	1195.9	1195.9	1202.4	1209.0	1209.0	1219.0	1222.3	1219.0
42.5°	1100.3	1090.4	1090.4	1093.7	1100.3	1103.7	1113.5	1123.4	1126.7	1130.0
45°	991.7	991.7	991.7	994.9	998.2	1004.8	1017.9	1027.9	1031.2	1034.5
47.5°	886.2	882.9	892.8	896.1	905.9	909.3	919.2	932.3	935.6	938.9
50°	787.3	794.0	797.3	807.1	813.7	813.7	826.8	833.5	843.4	843.4
52.5°	695.1	705.0	708.3	718.2	721.5	724.8	731.4	741.2	747.8	747.8
55°	612.8	616.1	622.6	625.9	635.8	639.2	645.7	649.0	658.9	655.6
56°	576.5	583.1	586.4	593.0	599.6	602.9	609.5	612.8	619.3	622.6
57°	543.6	546.9	556.7	560.0	566.7	566.7	570.0	579.8	579.8	583.1
58°	510.6	517.2	520.5	523.9	530.4	533.7	540.3	543.6	546.9	543.6
59°	480.9	484.3	487.6	487.6	494.2	494.2	504.0	510.6	513.9	513.9
60°	451.4	451.4	454.7	457.9	464.5	467.8	467.8	474.4	474.4	474.4
61°	421.7	421.7	425.0	428.3	431.5	431.5	438.1	438.1	441.4	444.8
62°	395.3	392.0	392.0	395.3	395.3	401.9	405.2	408.6	411.8	408.6
63°	365.6	362.3	362.3	362.3	362.3	369.0	369.0	372.3	378.9	375.6
64°	332.8	332.8	332.8	332.8	336.1	336.1	342.6	345.9	349.2	352.5
65°	309.7	303.1	299.8	299.8	303.1	306.4	309.7	313.0	316.2	316.2
66°	283.3	276.7	273.4	273.4	273.4	273.4	280.0	280.0	286.6	286.6
67°	253.7	247.0	243.7	240.5	240.5	240.5	250.3	247.0	247.0	247.0
67.5°	243.7	233.9	230.6	227.3	224.0	230.6	227.3	230.6	230.6	227.3
68°	230.6	224.0	217.5	210.8	210.8	210.8	214.2	217.5	214.2	210.8
69°	204.2	200.9	191.1	184.5	181.2	184.5	181.2	184.5	181.2	184.5
70°	181.2	171.3	161.4	158.1	154.8	154.8	154.8	151.6	154.8	151.6
71°	158.1	148.3	138.4	131.7	128.4	128.4	125.2	128.4	125.2	128.4
72°	135.0	125.2	112.0	105.5	105.5	105.5	105.5	102.2	105.5	102.2
72.5°	125.2	112.0	102.2	95.5	92.2	92.2	92.2	92.2	88.9	92.2
73°	115.3	102.2	88.9	85.6	85.6	85.6	82.3	79.1	82.3	82.3



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	39.5	29.7	26.4	26.4	26.4	26.4	26.4	26.4	23.1	23.1
80°	16.4	13.1	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
82.5°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
85°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
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°	214.2	214.2	207.5	197.7	181.2	164.7	151.6	138.4	121.9	105.5	98.9
75°	197.7	194.4	187.8	177.9	164.7	148.3	135.0	118.6	105.5	88.9	82.3





74°	95.5	79.1	72.5	65.9	65.9	65.9	62.6	62.6	62.6	65.9
75°	75.8	62.6	56.0	49.4	52.7	49.4	52.7	49.4	49.4	49.4



(END OF REPORT)