

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: P593733

Luminaire Tested: **HC850D010-HM82555850-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P593733
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-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: 4800.1 lumens
Efficiency: N/A
Efficacy: 117.1 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

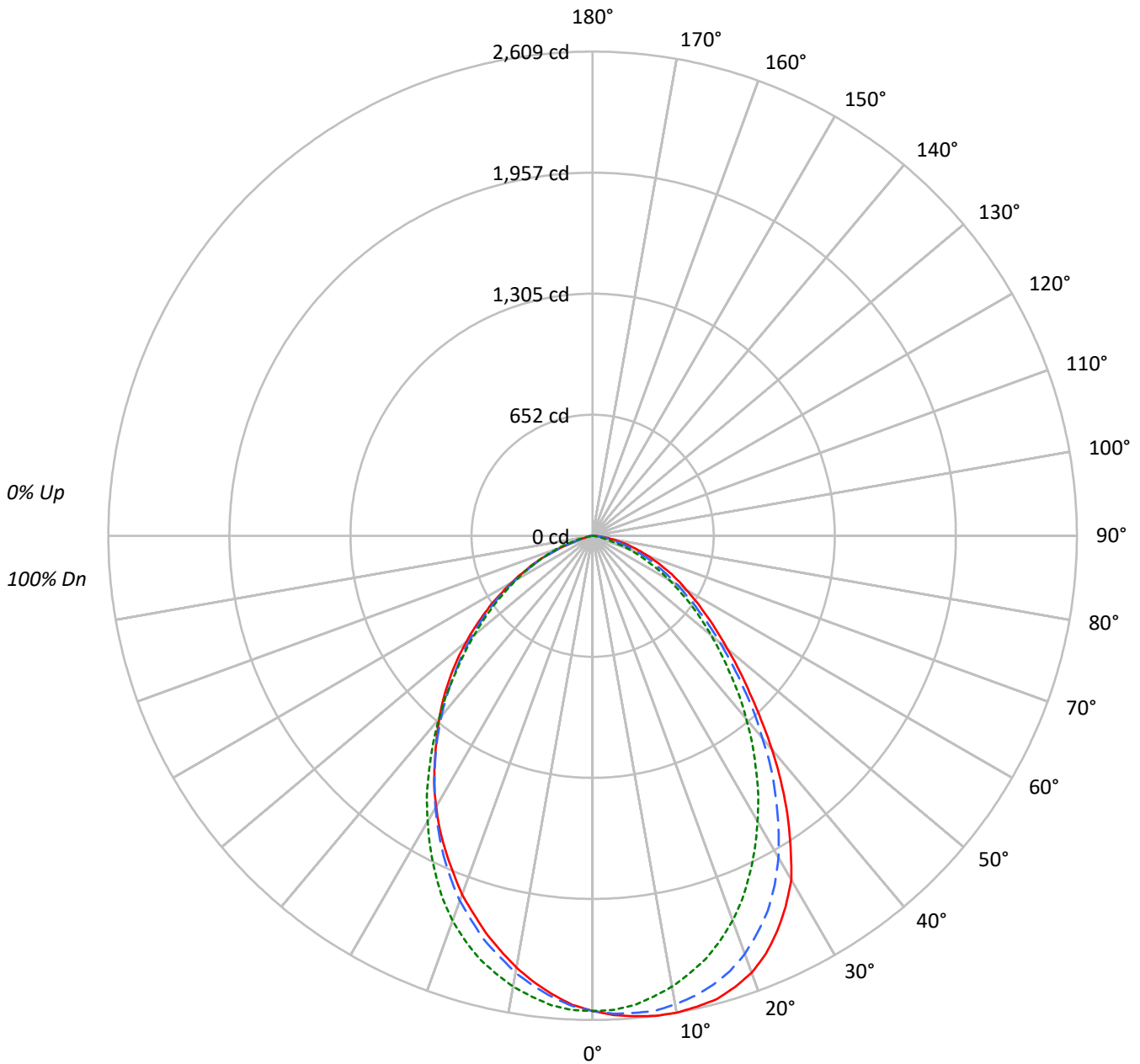
Input Watts (W): 41
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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°	78956	78956	78956
5°	80440	78614	76788
10°	81696	77244	73981
15°	82517	75319	70776
20°	82202	72410	67514
25°	80035	68232	63744
30°	76223	63252	60040
35°	68829	57731	55766
40°	60474	51815	51678
45°	52200	45541	47508
50°	45435	39942	42609
55°	40294	34692	37117
60°	35949	29313	30812
65°	32404	23801	24305
70°	28779	17834	14389
75°	24794	10342	6195
80°	19108	3694	1847
85°	12277	1238	1238



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.4	5.0
10°-20°	669.1	13.9
20°-30°	946.4	19.7
30°-40°	997.3	20.8
40°-50°	847.5	17.7
50°-60°	610.3	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°	1855.9	38.7
0°-40°	2853.2	59.4
0°-60°	4311.0	89.8
0°-90°	4800.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4800.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2560	2560	2560	2560	2560	
5°	2599	2581	2540	2495	2481	248
15°	2585	2505	2359	2255	2217	728
25°	2352	2231	2005	1901	1874	1079
35°	1828	1721	1534	1478	1481	1139
45°	1197	1141	1044	1051	1089	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	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2560.5	2560.5	2560.5	2560.5	2560.5	2560.5	2560.5	2560.5	2560.5	2560.5	2560.5
2.5°	2584.8	2588.2	2584.8	2584.8	2581.3	2577.9	2574.3	2570.9	2564.0	2557.1	2557.1
5°	2598.7	2605.6	2598.7	2598.7	2588.2	2581.3	2574.3	2564.0	2550.1	2539.7	2539.7
7.5°	2609.1	2609.1	2609.1	2598.7	2591.7	2581.3	2564.0	2546.6	2529.2	2512.0	2505.0
10°	2609.1	2609.1	2605.6	2591.7	2584.8	2564.0	2546.6	2522.3	2498.0	2473.8	2466.9
12.5°	2598.7	2602.2	2595.2	2581.3	2564.0	2539.7	2515.4	2484.1	2456.4	2428.7	2414.7
15°	2584.8	2581.3	2574.3	2557.1	2536.2	2505.0	2480.7	2446.0	2407.8	2373.1	2359.3
17.5°	2550.1	2550.1	2539.7	2522.3	2494.6	2459.8	2421.8	2383.6	2341.9	2303.7	2286.5
20°	2505.0	2505.0	2491.1	2470.3	2442.6	2397.4	2355.8	2310.7	2262.1	2224.0	2206.6
22.5°	2439.0	2442.6	2425.2	2400.9	2369.6	2317.6	2276.0	2220.5	2171.9	2126.8	2113.0
25°	2352.3	2359.3	2341.9	2317.6	2276.0	2230.9	2178.9	2126.8	2071.3	2026.2	2005.4
27.5°	2251.7	2255.2	2237.8	2213.5	2171.9	2123.3	2071.3	2015.7	1963.7	1915.2	1894.4
30°	2140.7	2126.8	2119.9	2088.7	2043.6	2001.9	1942.9	1897.8	1842.4	1800.7	1776.4
32.5°	1984.6	1991.5	1970.6	1946.4	1911.7	1863.2	1814.5	1762.5	1710.5	1679.2	1662.0
35°	1828.4	1835.3	1825.0	1800.7	1762.5	1720.9	1672.3	1634.1	1589.0	1550.9	1533.6
37.5°	1665.4	1665.4	1658.4	1644.6	1616.7	1578.7	1530.1	1491.9	1453.7	1422.5	1412.1
40°	1502.3	1495.4	1491.9	1481.4	1457.2	1422.5	1391.2	1360.1	1321.9	1301.0	1287.2
42.5°	1342.7	1342.7	1335.8	1325.3	1301.0	1283.8	1252.5	1217.8	1190.0	1169.2	1169.2
45°	1197.0	1200.5	1190.0	1183.1	1169.2	1141.4	1113.7	1089.4	1065.2	1051.2	1044.3
47.5°	1068.6	1068.6	1058.1	1051.2	1037.4	1013.0	988.8	967.9	950.7	940.2	936.8
50°	947.1	947.1	947.1	929.9	912.5	895.1	877.7	853.5	843.1	836.1	832.6
52.5°	843.1	839.7	839.7	825.7	808.4	787.5	770.3	749.5	739.0	732.1	735.5
55°	749.5	749.5	745.9	728.6	711.3	690.4	673.1	655.7	648.8	641.9	645.3
56°	711.3	711.3	707.8	693.9	673.1	655.7	634.9	617.6	607.1	610.6	610.6
57°	683.5	676.5	676.5	659.3	641.9	617.6	600.2	582.9	576.0	572.5	572.5
58°	648.8	645.3	641.9	624.5	607.1	586.3	569.1	551.7	541.2	541.2	537.8
59°	614.2	614.2	607.1	593.3	576.0	555.1	537.8	520.4	510.0	506.6	506.6
60°	582.9	586.3	576.0	562.0	548.2	523.8	503.1	489.2	478.7	475.3	475.3
61°	555.1	555.1	548.2	530.9	513.5	496.1	475.3	458.0	451.0	444.1	444.1
62°	530.9	523.8	520.4	503.1	485.8	464.9	447.6	430.2	419.8	412.9	416.4
63°	499.6	496.1	489.2	475.3	458.0	437.2	416.4	402.5	392.1	381.6	385.1
64°	475.3	471.8	461.5	447.6	430.2	409.4	388.5	374.7	367.7	357.4	353.9
65°	444.1	440.7	437.2	419.8	402.5	381.6	364.3	350.5	340.0	333.1	326.2
66°	416.4	419.8	412.9	399.0	378.2	360.8	336.5	322.6	315.7	305.4	298.3
67°	392.1	392.1	385.1	371.3	350.5	333.1	315.7	298.3	288.0	277.5	274.1
67.5°	378.2	378.2	371.3	353.9	340.0	319.2	301.9	288.0	274.1	267.2	260.3
68°	364.3	364.3	360.8	347.0	329.6	308.8	291.4	274.1	260.3	249.8	246.3
69°	340.0	343.4	336.5	322.6	305.4	284.5	267.2	253.2	239.4	229.0	222.1
70°	319.2	315.7	308.8	294.9	277.5	263.7	246.3	229.0	215.2	201.2	197.8
71°	291.4	291.4	284.5	274.1	256.8	239.4	222.1	208.1	194.3	177.0	173.5
72°	270.6	270.6	263.7	249.8	236.0	218.6	201.2	183.9	173.5	156.1	149.2
72.5°	256.8	260.3	253.2	239.4	225.5	204.7	190.9	177.0	159.6	145.8	138.8
73°	249.8	246.3	242.9	229.0	211.6	197.8	180.4	166.5	149.2	135.3	128.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	156.1	156.1	152.7	138.8	125.0	111.0	97.1	83.3	69.4	55.5	48.6
80°	107.6	111.0	104.1	97.1	86.8	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	17.4	13.9	10.4
85°	34.7	38.2	34.7	31.2	24.3	20.8	17.4	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°	2560.5	2560.5	2560.5	2560.5	2560.5	2560.5	2560.5	2560.5	2560.5	2560.5
2.5°	2550.1	2550.1	2543.1	2539.7	2536.2	2532.8	2529.2	2525.8	2525.8	2529.2
5°	2529.2	2522.3	2508.4	2505.0	2494.6	2491.1	2484.1	2480.7	2484.1	2480.7
7.5°	2498.0	2484.1	2466.9	2459.8	2446.0	2439.0	2428.7	2428.7	2421.8	2425.2
10°	2456.4	2435.6	2414.7	2400.9	2390.5	2380.1	2373.1	2366.2	2362.7	2362.7
12.5°	2404.4	2380.1	2359.3	2338.5	2321.1	2314.2	2300.3	2300.3	2293.4	2289.9
15°	2345.4	2314.2	2289.9	2269.1	2255.2	2241.2	2230.9	2224.0	2217.0	2217.0
17.5°	2269.1	2241.2	2217.0	2192.7	2171.9	2161.5	2151.0	2140.7	2140.7	2133.8
20°	2185.8	2154.6	2133.8	2109.5	2092.1	2074.8	2060.8	2060.8	2053.9	2057.4
22.5°	2092.1	2053.9	2033.1	2015.7	1998.5	1984.6	1970.6	1970.6	1967.2	1963.7
25°	1988.0	1956.8	1932.6	1911.7	1901.3	1887.5	1883.9	1877.0	1873.5	1873.5
27.5°	1877.0	1852.7	1821.5	1811.1	1797.3	1790.2	1790.2	1786.8	1779.9	1783.3
30°	1759.1	1731.3	1714.0	1707.1	1693.1	1693.1	1689.7	1682.7	1682.7	1686.2
32.5°	1644.6	1616.7	1602.9	1599.5	1585.6	1585.6	1582.1	1585.6	1585.6	1589.0
35°	1519.6	1495.4	1491.9	1481.4	1478.0	1478.0	1478.0	1485.0	1491.9	1481.4
37.5°	1401.7	1384.3	1374.0	1370.4	1374.0	1374.0	1377.4	1387.8	1384.3	1380.9
40°	1280.2	1266.4	1259.4	1259.4	1266.4	1273.3	1273.3	1283.8	1287.2	1283.8
42.5°	1158.8	1148.4	1148.4	1151.9	1158.8	1162.3	1172.7	1183.1	1186.5	1190.0
45°	1044.3	1044.3	1044.3	1047.8	1051.2	1058.1	1072.1	1082.5	1086.0	1089.4
47.5°	933.3	929.9	940.2	943.7	954.1	957.6	967.9	981.9	985.3	988.8
50°	829.2	836.1	839.7	850.0	856.9	856.9	870.8	877.7	888.2	888.2
52.5°	732.1	742.4	745.9	756.4	759.8	763.3	770.3	780.6	787.5	787.5
55°	645.3	648.8	655.7	659.3	669.6	673.1	680.0	683.5	693.9	690.4
56°	607.1	614.2	617.6	624.5	631.4	634.9	641.9	645.3	652.2	655.7
57°	572.5	576.0	586.3	589.8	596.8	596.8	600.2	610.6	610.6	614.2
58°	537.8	544.7	548.2	551.7	558.6	562.0	569.1	572.5	576.0	572.5
59°	506.6	510.0	513.5	513.5	520.4	520.4	530.9	537.8	541.2	541.2
60°	475.3	475.3	478.7	482.3	489.2	492.7	492.7	499.6	499.6	499.6
61°	444.1	444.1	447.6	451.0	454.5	454.5	461.5	461.5	464.9	468.4
62°	416.4	412.9	412.9	416.4	416.4	423.3	426.7	430.2	433.6	430.2
63°	385.1	381.6	381.6	381.6	381.6	388.5	388.5	392.1	399.0	395.6
64°	350.5	350.5	350.5	350.5	353.9	353.9	360.8	364.3	367.7	371.3
65°	326.2	319.2	315.7	315.7	319.2	322.6	326.2	329.6	333.1	333.1
66°	298.3	291.4	288.0	288.0	288.0	288.0	294.9	294.9	301.9	301.9
67°	267.2	260.3	256.8	253.2	253.2	253.2	263.7	260.3	260.3	260.3
67.5°	256.8	246.3	242.9	239.4	236.0	242.9	239.4	242.9	242.9	239.4
68°	242.9	236.0	229.0	222.1	222.1	222.1	225.5	229.0	225.5	222.1
69°	215.2	211.6	201.2	194.3	190.9	194.3	190.9	194.3	190.9	194.3
70°	190.9	180.4	170.1	166.5	163.0	163.0	163.0	159.6	163.0	159.6
71°	166.5	156.1	145.8	138.8	135.3	135.3	131.9	135.3	131.9	135.3
72°	142.2	131.9	117.9	111.0	111.0	111.0	111.0	107.6	111.0	107.6
72.5°	131.9	117.9	107.6	100.7	97.1	97.1	97.1	97.1	93.7	97.1
73°	121.4	107.6	93.7	90.2	90.2	90.2	86.8	83.3	86.8	86.8



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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°	17.4	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	208.1	190.9	173.5	159.6	145.8	128.4	111.0	104.1
75°	208.1	204.7	197.8	187.3	173.5	156.1	142.2	125.0	111.0	93.7	86.8





74°	100.7	83.3	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)