

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: P584872

Luminaire Tested: **HC850D010-HM82555930-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584872
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-HM82555930-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4609.6 lumens
Efficiency: N/A
Efficacy: 96.0 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

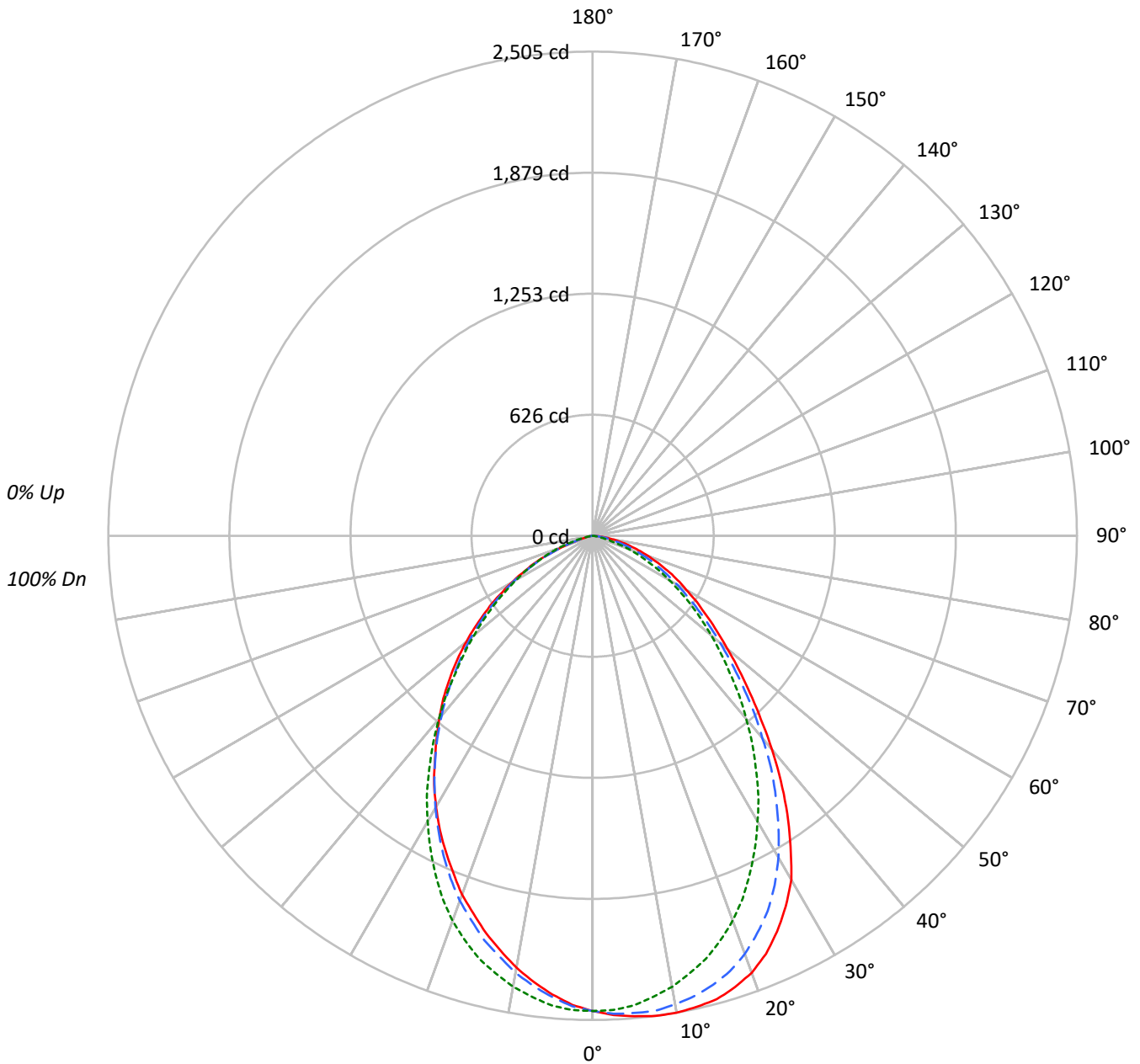
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				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	100	100
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88	88	88	88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77	77	77	77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67	67	67	67
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59	59	59	59
5	81	70	62	56	79	69	62	56	67	60	55	65	59	55	63	58	54	52	52	52	52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47	47	47	47
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42	42	42	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38	38	38	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	36	35	35	35	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32	32	32	32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	75820	75820	75820
5°	77246	75491	73739
10°	78449	74175	71044
15°	79239	72324	67966
20°	78937	69532	64833
25°	76857	65520	61213
30°	73197	60738	57654
35°	66096	55435	53556
40°	58074	49758	49621
45°	50129	43736	45620
50°	43636	38359	40916
55°	38687	33316	35649
60°	34518	28154	29591
65°	31120	22853	23334
70°	27634	17130	13821
75°	23817	9925	5957
80°	18344	3552	1794
85°	11782	1203	1203



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	230.8	5.0
10°-20°	642.6	13.9
20°-30°	908.8	19.7
30°-40°	957.7	20.8
40°-50°	813.9	17.7
50°-60°	586.1	12.7
60°-70°	338.1	7.3
70°-80°	115.7	2.5
80°-90°	15.9	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°	1782.2	38.7
0°-40°	2739.8	59.4
0°-60°	4139.8	89.8
0°-90°	4609.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4609.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2459	2459	2459	2459	2459	
5°	2496	2479	2439	2396	2382	239
15°	2482	2406	2266	2166	2129	699
25°	2259	2142	1926	1826	1799	1036
35°	1756	1652	1473	1419	1423	1093
45°	1150	1096	1003	1010	1046	893
55°	720	663	620	643	663	648
65°	426	366	313	306	320	424
75°	200	150	83	53	50	211
85°	33	20	3	3	3	45
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°	2458.8	2458.8	2458.8	2458.8	2458.8	2458.8	2458.8	2458.8	2458.8	2458.8	2458.8
2.5°	2482.1	2485.4	2482.1	2482.1	2478.7	2475.5	2472.1	2468.8	2462.1	2455.5	2455.5
5°	2495.5	2502.1	2495.5	2495.5	2485.4	2478.7	2472.1	2462.1	2448.8	2438.8	2438.8
7.5°	2505.4	2505.4	2505.4	2495.5	2488.8	2478.7	2462.1	2445.4	2428.8	2412.1	2405.5
10°	2505.4	2505.4	2502.1	2488.8	2482.1	2462.1	2445.4	2422.2	2398.8	2375.5	2368.9
12.5°	2495.5	2498.7	2492.1	2478.7	2462.1	2438.8	2415.5	2385.5	2358.8	2332.2	2318.8
15°	2482.1	2478.7	2472.1	2455.5	2435.5	2405.5	2382.2	2348.9	2312.2	2278.8	2265.5
17.5°	2448.8	2448.8	2438.8	2422.2	2395.5	2362.2	2325.5	2288.9	2248.9	2212.2	2195.6
20°	2405.5	2405.5	2392.1	2372.1	2345.5	2302.2	2262.2	2218.9	2172.2	2135.6	2118.9
22.5°	2342.2	2345.5	2328.9	2305.5	2275.6	2225.5	2185.6	2132.3	2085.6	2042.4	2029.0
25°	2258.9	2265.5	2248.9	2225.5	2185.6	2142.3	2092.3	2042.4	1989.1	1945.7	1925.7
27.5°	2162.3	2165.6	2149.0	2125.6	2085.6	2039.0	1989.1	1935.7	1885.7	1839.1	1819.1
30°	2055.7	2042.4	2035.7	2005.7	1962.4	1922.4	1865.7	1822.5	1769.2	1729.2	1705.8
32.5°	1905.7	1912.4	1892.4	1869.1	1835.8	1789.2	1742.5	1692.5	1642.6	1612.5	1595.9
35°	1755.8	1762.5	1752.4	1729.2	1692.5	1652.5	1605.9	1569.3	1525.9	1489.3	1472.6
37.5°	1599.2	1599.2	1592.5	1579.2	1552.5	1516.0	1469.3	1432.6	1396.0	1366.0	1356.0
40°	1442.7	1436.0	1432.6	1422.7	1399.3	1366.0	1336.1	1306.0	1269.4	1249.4	1236.1
42.5°	1289.4	1289.4	1282.7	1272.7	1249.4	1232.7	1202.8	1169.5	1142.8	1122.8	1122.8
45°	1149.5	1152.8	1142.8	1136.2	1122.8	1096.2	1069.5	1046.1	1022.9	1009.5	1002.9
47.5°	1026.1	1026.1	1016.2	1009.5	996.2	972.8	949.6	929.6	912.9	902.9	899.5
50°	909.6	909.6	909.6	892.9	876.3	859.6	843.0	819.6	809.6	803.0	799.6
52.5°	809.6	806.3	806.3	792.9	776.3	756.3	739.6	719.6	709.7	703.0	706.3
55°	719.6	719.6	716.4	699.6	683.0	663.1	646.3	629.7	623.1	616.4	619.7
56°	683.0	683.0	679.7	666.3	646.3	629.7	609.8	593.0	583.1	586.4	586.4
57°	656.4	649.7	649.7	633.0	616.4	593.0	576.4	559.7	553.1	549.8	549.8
58°	623.1	619.7	616.4	599.7	583.1	563.1	546.4	529.8	519.7	519.7	516.5
59°	589.8	589.8	583.1	569.8	553.1	533.1	516.5	499.7	489.8	486.4	486.4
60°	559.7	563.1	553.1	539.7	526.4	503.1	483.1	469.8	459.8	456.5	456.5
61°	533.1	533.1	526.4	509.8	493.1	476.5	456.5	439.8	433.1	426.5	426.5
62°	509.8	503.1	499.7	483.1	466.4	446.4	429.8	413.1	403.2	396.5	399.8
63°	479.8	476.5	469.8	456.5	439.8	419.8	399.8	386.5	376.5	366.5	369.9
64°	456.5	453.1	443.2	429.8	413.1	393.1	373.1	359.8	353.2	343.2	339.8
65°	426.5	423.2	419.8	403.2	386.5	366.5	349.9	336.6	326.5	319.8	313.2
66°	399.8	403.2	396.5	383.2	363.2	346.5	323.2	309.9	303.2	293.2	286.5
67°	376.5	376.5	369.9	356.5	336.6	319.8	303.2	286.5	276.6	266.5	263.3
67.5°	363.2	363.2	356.5	339.8	326.5	306.5	289.9	276.6	263.3	256.6	249.9
68°	349.9	349.9	346.5	333.2	316.6	296.6	279.9	263.3	249.9	239.9	236.6
69°	326.5	329.9	323.2	309.9	293.2	273.2	256.6	243.3	229.9	219.9	213.2
70°	306.5	303.2	296.6	283.2	266.5	253.2	236.6	219.9	206.6	193.2	190.0
71°	279.9	279.9	273.2	263.3	246.5	229.9	213.2	199.9	186.6	170.0	166.6
72°	259.9	259.9	253.2	239.9	226.6	210.0	193.2	176.6	166.6	150.0	143.3
72.5°	246.5	249.9	243.3	229.9	216.6	196.6	183.3	170.0	153.3	139.9	133.3
73°	239.9	236.6	233.2	219.9	203.3	190.0	173.2	159.9	143.3	130.0	123.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	150.0	150.0	146.6	133.3	119.9	106.6	93.3	80.0	66.6	53.3	46.6
80°	103.3	106.6	99.9	93.3	83.3	70.0	56.7	46.6	33.3	26.7	20.0
82.5°	66.6	66.6	63.4	56.7	50.0	40.0	33.3	23.4	16.7	13.3	10.1
85°	33.3	36.7	33.3	30.0	23.4	20.0	16.7	10.1	6.7	3.4	3.4
87.5°	13.3	13.3	13.3	10.1	10.1	6.7	3.4	3.4	3.4	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°	2458.8	2458.8	2458.8	2458.8	2458.8	2458.8	2458.8	2458.8	2458.8	2458.8
2.5°	2448.8	2448.8	2442.2	2438.8	2435.5	2432.1	2428.8	2425.4	2425.4	2428.8
5°	2428.8	2422.2	2408.8	2405.5	2395.5	2392.1	2385.5	2382.2	2385.5	2382.2
7.5°	2398.8	2385.5	2368.9	2362.2	2348.9	2342.2	2332.2	2332.2	2325.5	2328.9
10°	2358.8	2338.8	2318.8	2305.5	2295.6	2285.5	2278.8	2272.2	2268.9	2268.9
12.5°	2308.9	2285.5	2265.5	2245.5	2228.9	2222.3	2208.9	2208.9	2202.3	2198.9
15°	2252.2	2222.3	2198.9	2178.9	2165.6	2152.2	2142.3	2135.6	2129.0	2129.0
17.5°	2178.9	2152.2	2129.0	2105.6	2085.6	2075.7	2065.6	2055.7	2055.7	2049.0
20°	2098.9	2069.0	2049.0	2025.6	2009.0	1992.3	1979.0	1979.0	1972.3	1975.7
22.5°	2009.0	1972.3	1952.3	1935.7	1919.0	1905.7	1892.4	1892.4	1889.1	1885.7
25°	1909.1	1879.1	1855.8	1835.8	1825.7	1812.4	1809.1	1802.5	1799.1	1799.1
27.5°	1802.5	1779.1	1749.2	1739.1	1725.8	1719.1	1719.1	1715.9	1709.2	1712.5
30°	1689.2	1662.6	1645.8	1639.2	1625.8	1625.8	1622.6	1615.9	1615.9	1619.2
32.5°	1579.2	1552.5	1539.2	1535.9	1522.6	1522.6	1519.2	1522.6	1522.6	1525.9
35°	1459.3	1436.0	1432.6	1422.7	1419.3	1419.3	1419.3	1425.9	1432.6	1422.7
37.5°	1346.0	1329.4	1319.3	1316.1	1319.3	1319.3	1322.7	1332.7	1329.4	1326.0
40°	1229.4	1216.1	1209.4	1209.4	1216.1	1222.8	1222.8	1232.7	1236.1	1232.7
42.5°	1112.8	1102.8	1102.8	1106.1	1112.8	1116.2	1126.1	1136.2	1139.4	1142.8
45°	1002.9	1002.9	1002.9	1006.2	1009.5	1016.2	1029.5	1039.5	1042.9	1046.1
47.5°	896.3	892.9	902.9	906.2	916.3	919.5	929.6	942.9	946.2	949.6
50°	796.3	803.0	806.3	816.3	823.0	823.0	836.3	843.0	852.9	852.9
52.5°	703.0	713.0	716.4	726.3	729.7	733.0	739.6	749.7	756.3	756.3
55°	619.7	623.1	629.7	633.0	643.1	646.3	653.0	656.4	666.3	663.1
56°	583.1	589.8	593.0	599.7	606.4	609.8	616.4	619.7	626.4	629.7
57°	549.8	553.1	563.1	566.4	573.0	573.0	576.4	586.4	586.4	589.8
58°	516.5	523.1	526.4	529.8	536.5	539.7	546.4	549.8	553.1	549.8
59°	486.4	489.8	493.1	493.1	499.7	499.7	509.8	516.5	519.7	519.7
60°	456.5	456.5	459.8	463.2	469.8	473.1	473.1	479.8	479.8	479.8
61°	426.5	426.5	429.8	433.1	436.5	436.5	443.2	443.2	446.4	449.8
62°	399.8	396.5	396.5	399.8	399.8	406.5	409.9	413.1	416.5	413.1
63°	369.9	366.5	366.5	366.5	366.5	373.1	373.1	376.5	383.2	379.8
64°	336.6	336.6	336.6	336.6	339.8	339.8	346.5	349.9	353.2	356.5
65°	313.2	306.5	303.2	303.2	306.5	309.9	313.2	316.6	319.8	319.8
66°	286.5	279.9	276.6	276.6	276.6	276.6	283.2	283.2	289.9	289.9
67°	256.6	249.9	246.5	243.3	243.3	243.3	253.2	249.9	249.9	249.9
67.5°	246.5	236.6	233.2	229.9	226.6	233.2	229.9	233.2	233.2	229.9
68°	233.2	226.6	219.9	213.2	213.2	213.2	216.6	219.9	216.6	213.2
69°	206.6	203.3	193.2	186.6	183.3	186.6	183.3	186.6	183.3	186.6
70°	183.3	173.2	163.3	159.9	156.6	156.6	156.6	153.3	156.6	153.3
71°	159.9	150.0	139.9	133.3	130.0	130.0	126.6	130.0	126.6	130.0
72°	136.7	126.6	113.3	106.6	106.6	106.6	106.6	103.3	106.6	103.3
72.5°	126.6	113.3	103.3	96.7	93.3	93.3	93.3	93.3	90.0	93.3
73°	116.7	103.3	90.0	86.6	86.6	86.6	83.3	80.0	83.3	83.3



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	40.0	30.0	26.7	26.7	26.7	26.7	26.7	26.7	23.4	23.4
80°	16.7	13.3	10.1	10.1	10.1	10.1	10.1	10.1	10.1	10.1
82.5°	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7
85°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
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°	216.6	216.6	210.0	199.9	183.3	166.6	153.3	139.9	123.3	106.6	99.9
75°	199.9	196.6	190.0	179.9	166.6	150.0	136.7	119.9	106.6	90.0	83.3





74°	96.7	80.0	73.3	66.6	66.6	66.6	63.4	63.4	63.4	66.6
75°	76.7	63.4	56.7	50.0	53.3	50.0	53.3	50.0	50.0	50.0



(END OF REPORT)