

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: P585008

Luminaire Tested: **HC855D010-HM82555930-81RWWH**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P585008  
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: HC855D010-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: 4825.0 lumens  
Efficiency: N/A  
Efficacy: 92.8 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

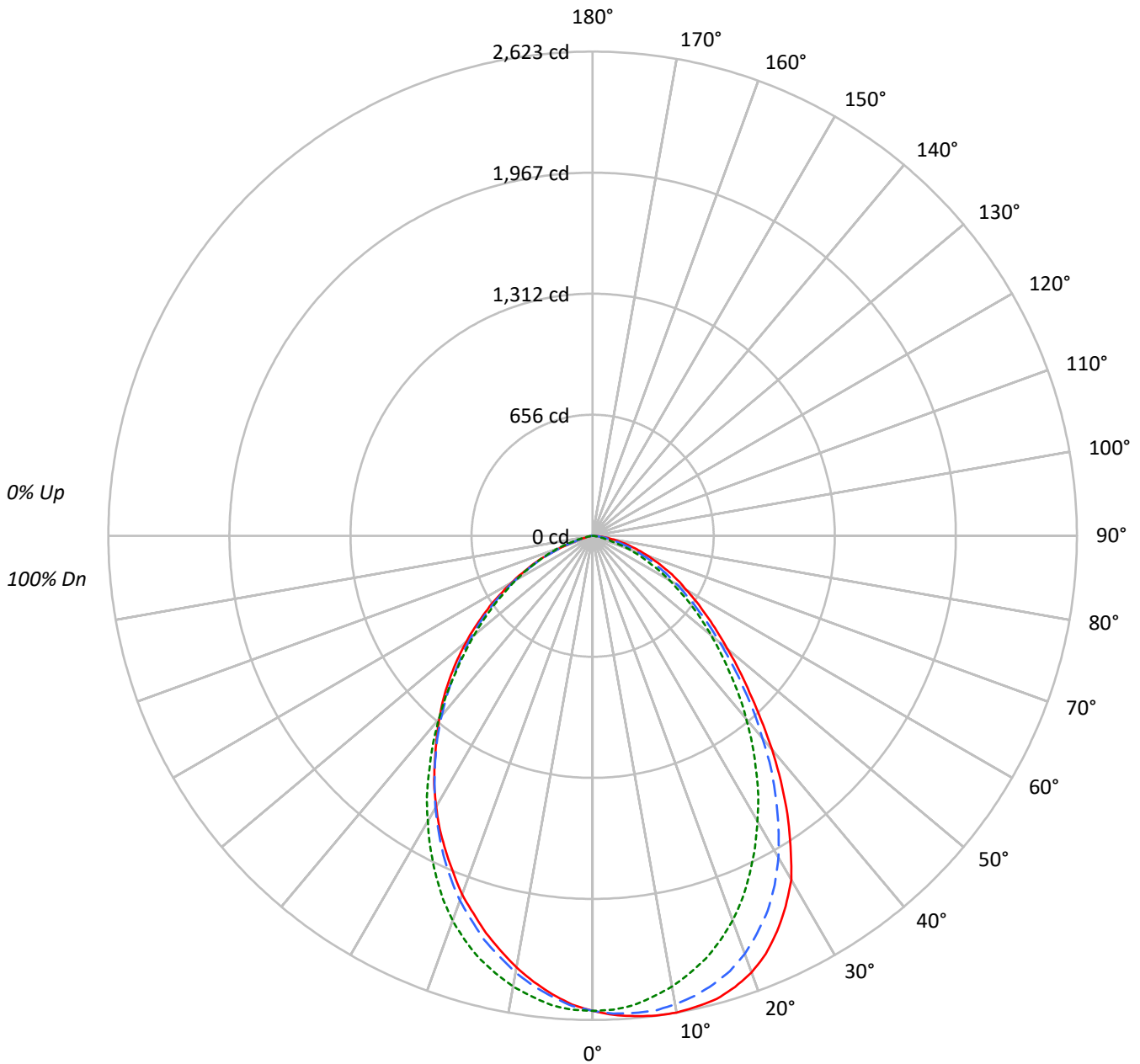
Input Watts (W): 52  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
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°	79367	79367	79367
5°	80858	79023	77184
10°	82119	77641	74363
15°	82945	75708	71146
20°	82626	72784	67865
25°	80450	68582	64078
30°	76619	63583	60350
35°	69186	58029	56056
40°	60787	52085	51944
45°	52471	45781	47756
50°	45675	40153	42830
55°	40493	34875	37316
60°	36134	29467	30972
65°	32572	23918	24429
70°	28932	17924	14462
75°	24925	10389	6231
80°	19196	3729	1847
85°	12348	1238	1238



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	241.6	5.0
10°-20°	672.6	13.9
20°-30°	951.3	19.7
30°-40°	1002.4	20.8
40°-50°	851.9	17.7
50°-60°	613.5	12.7
60°-70°	353.9	7.3
70°-80°	121.1	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°	1865.5	38.7
0°-40°	2868.0	59.4
0°-60°	4333.4	89.8
0°-90°	4825.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4825.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2574	2574	2574	2574	2574	
5°	2612	2595	2553	2508	2494	250
15°	2598	2518	2372	2267	2229	732
25°	2364	2242	2016	1911	1883	1084
35°	1838	1730	1542	1486	1489	1145
45°	1203	1147	1050	1057	1095	935
55°	753	694	649	673	694	678
65°	446	384	328	321	335	444
75°	209	157	87	56	52	221
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°	2573.8	2573.8	2573.8	2573.8	2573.8	2573.8	2573.8	2573.8	2573.8	2573.8	2573.8
2.5°	2598.2	2601.7	2598.2	2598.2	2594.7	2591.2	2587.8	2584.3	2577.2	2570.3	2570.3
5°	2612.2	2619.1	2612.2	2612.2	2601.7	2594.7	2587.8	2577.2	2563.3	2552.9	2552.9
7.5°	2622.6	2622.6	2622.6	2612.2	2605.1	2594.7	2577.2	2559.9	2542.4	2525.0	2517.9
10°	2622.6	2622.6	2619.1	2605.1	2598.2	2577.2	2559.9	2535.4	2511.0	2486.6	2479.6
12.5°	2612.2	2615.7	2608.6	2594.7	2577.2	2552.9	2528.5	2497.1	2469.2	2441.3	2427.3
15°	2598.2	2594.7	2587.8	2570.3	2549.3	2517.9	2493.5	2458.7	2420.3	2385.5	2371.5
17.5°	2563.3	2563.3	2552.9	2535.4	2507.5	2472.7	2434.2	2395.9	2354.1	2315.8	2298.3
20°	2517.9	2517.9	2504.0	2483.1	2455.2	2409.9	2368.0	2322.7	2273.8	2235.5	2218.0
22.5°	2451.7	2455.2	2437.8	2413.4	2382.0	2329.7	2287.7	2232.0	2183.2	2137.8	2123.9
25°	2364.5	2371.5	2354.1	2329.7	2287.7	2242.5	2190.1	2137.8	2082.1	2036.7	2015.7
27.5°	2263.4	2266.9	2249.4	2225.0	2183.2	2134.3	2082.1	2026.3	1973.9	1925.1	1904.1
30°	2151.8	2137.8	2130.8	2099.5	2054.2	2012.3	1953.0	1907.7	1851.9	1810.0	1785.7
32.5°	1994.9	2001.8	1980.9	1956.5	1921.6	1872.7	1824.0	1771.6	1719.3	1687.9	1670.6
35°	1837.9	1844.8	1834.4	1810.0	1771.6	1729.8	1681.0	1642.6	1597.3	1558.9	1541.5
37.5°	1674.0	1674.0	1667.1	1653.1	1625.2	1586.8	1538.0	1499.6	1461.2	1429.8	1419.4
40°	1510.1	1503.1	1499.6	1489.1	1464.8	1429.8	1398.4	1367.1	1328.7	1307.8	1293.9
42.5°	1349.7	1349.7	1342.6	1332.2	1307.8	1290.4	1259.0	1224.2	1196.3	1175.3	1175.3
45°	1203.2	1206.7	1196.3	1189.2	1175.3	1147.4	1119.5	1095.1	1070.6	1056.7	1049.8
47.5°	1074.1	1074.1	1063.7	1056.7	1042.7	1018.4	994.0	973.0	955.5	945.1	941.6
50°	952.1	952.1	952.1	934.7	917.2	899.7	882.3	857.9	847.5	840.4	837.0
52.5°	847.5	844.0	844.0	830.0	812.5	791.7	774.2	753.2	742.8	735.9	739.3
55°	753.2	753.2	749.8	732.4	714.9	694.1	676.6	659.1	652.2	645.2	648.7
56°	714.9	714.9	711.4	697.5	676.6	659.1	638.3	620.8	610.3	613.8	613.8
57°	687.0	680.1	680.1	662.6	645.2	620.8	603.3	585.9	579.0	575.5	575.5
58°	652.2	648.7	645.2	627.7	610.3	589.4	571.9	554.5	544.0	544.0	540.5
59°	617.3	617.3	610.3	596.3	579.0	558.0	540.5	523.2	512.6	509.2	509.2
60°	585.9	589.4	579.0	565.0	551.1	526.6	505.7	491.8	481.2	477.8	477.8
61°	558.0	558.0	551.1	533.6	516.1	498.7	477.8	460.4	453.3	446.4	446.4
62°	533.6	526.6	523.2	505.7	488.3	467.3	449.9	432.5	422.0	415.0	418.5
63°	502.2	498.7	491.8	477.8	460.4	439.4	418.5	404.6	394.1	383.6	387.1
64°	477.8	474.3	463.9	449.9	432.5	411.5	390.6	376.7	369.6	359.2	355.7
65°	446.4	442.9	439.4	422.0	404.6	383.6	366.1	352.2	341.8	334.8	327.8
66°	418.5	422.0	415.0	401.1	380.1	362.7	338.2	324.3	317.4	306.9	299.9
67°	394.1	394.1	387.1	373.2	352.2	334.8	317.4	299.9	289.5	279.1	275.5
67.5°	380.1	380.1	373.2	355.7	341.8	320.9	303.4	289.5	275.5	268.5	261.6
68°	366.1	366.1	362.7	348.8	331.3	310.3	293.0	275.5	261.6	251.0	247.6
69°	341.8	345.3	338.2	324.3	306.9	286.0	268.5	254.6	240.6	230.2	223.1
70°	320.9	317.4	310.3	296.4	279.1	265.1	247.6	230.2	216.2	202.3	198.8
71°	293.0	293.0	286.0	275.5	258.1	240.6	223.1	209.2	195.3	177.9	174.4
72°	272.0	272.0	265.1	251.0	237.1	219.8	202.3	184.8	174.4	156.9	150.0
72.5°	258.1	261.6	254.6	240.6	226.7	205.8	191.9	177.9	160.4	146.5	139.5
73°	251.0	247.6	244.1	230.2	212.7	198.8	181.3	167.4	150.0	136.1	129.0



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	156.9	156.9	153.4	139.5	125.5	111.6	97.6	83.7	69.7	55.8	48.9
80°	108.1	111.6	104.7	97.6	87.2	73.2	59.3	48.9	34.9	27.9	21.0
82.5°	69.7	69.7	66.2	59.3	52.3	41.8	34.9	24.4	17.5	13.9	10.4
85°	34.9	38.3	34.9	31.4	24.4	21.0	17.5	10.4	7.0	3.5	3.5
87.5°	13.9	13.9	13.9	10.4	10.4	7.0	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°	2573.8	2573.8	2573.8	2573.8	2573.8	2573.8	2573.8	2573.8	2573.8	2573.8
2.5°	2563.3	2563.3	2556.4	2552.9	2549.3	2545.9	2542.4	2538.9	2538.9	2542.4
5°	2542.4	2535.4	2521.4	2517.9	2507.5	2504.0	2497.1	2493.5	2497.1	2493.5
7.5°	2511.0	2497.1	2479.6	2472.7	2458.7	2451.7	2441.3	2441.3	2434.2	2437.8
10°	2469.2	2448.2	2427.3	2413.4	2402.8	2392.4	2385.5	2378.5	2374.9	2374.9
12.5°	2416.8	2392.4	2371.5	2350.6	2333.1	2326.2	2312.2	2312.2	2305.2	2301.8
15°	2357.6	2326.2	2301.8	2280.8	2266.9	2252.9	2242.5	2235.5	2228.6	2228.6
17.5°	2280.8	2252.9	2228.6	2204.1	2183.2	2172.8	2162.2	2151.8	2151.8	2144.8
20°	2197.1	2165.7	2144.8	2120.4	2102.9	2085.6	2071.6	2071.6	2064.6	2068.1
22.5°	2102.9	2064.6	2043.7	2026.3	2008.8	1994.9	1980.9	1980.9	1977.4	1973.9
25°	1998.4	1967.0	1942.6	1921.6	1911.2	1897.2	1893.7	1886.7	1883.3	1883.3
27.5°	1886.7	1862.3	1830.9	1820.5	1806.5	1799.6	1799.6	1796.1	1789.1	1792.6
30°	1768.2	1740.3	1722.8	1715.8	1701.9	1701.9	1698.5	1691.4	1691.4	1694.9
32.5°	1653.1	1625.2	1611.3	1607.7	1593.8	1593.8	1590.3	1593.8	1593.8	1597.3
35°	1527.6	1503.1	1499.6	1489.1	1485.6	1485.6	1485.6	1492.7	1499.6	1489.1
37.5°	1409.0	1391.5	1381.1	1377.6	1381.1	1381.1	1384.5	1395.0	1391.5	1388.0
40°	1286.9	1272.9	1266.0	1266.0	1272.9	1279.9	1279.9	1290.4	1293.9	1290.4
42.5°	1164.9	1154.4	1154.4	1157.8	1164.9	1168.4	1178.8	1189.2	1192.7	1196.3
45°	1049.8	1049.8	1049.8	1053.3	1056.7	1063.7	1077.7	1088.1	1091.6	1095.1
47.5°	938.2	934.7	945.1	948.6	959.0	962.6	973.0	986.9	990.5	994.0
50°	833.5	840.4	844.0	854.4	861.4	861.4	875.4	882.3	892.8	892.8
52.5°	735.9	746.3	749.8	760.3	763.8	767.3	774.2	784.7	791.7	791.7
55°	648.7	652.2	659.1	662.6	673.1	676.6	683.5	687.0	697.5	694.1
56°	610.3	617.3	620.8	627.7	634.8	638.3	645.2	648.7	655.6	659.1
57°	575.5	579.0	589.4	592.9	599.8	599.8	603.3	613.8	613.8	617.3
58°	540.5	547.6	551.1	554.5	561.5	565.0	571.9	575.5	579.0	575.5
59°	509.2	512.6	516.1	516.1	523.2	523.2	533.6	540.5	544.0	544.0
60°	477.8	477.8	481.2	484.7	491.8	495.2	495.2	502.2	502.2	502.2
61°	446.4	446.4	449.9	453.3	456.8	456.8	463.9	463.9	467.3	470.8
62°	418.5	415.0	415.0	418.5	418.5	425.4	429.0	432.5	436.0	432.5
63°	387.1	383.6	383.6	383.6	383.6	390.6	390.6	394.1	401.1	397.5
64°	352.2	352.2	352.2	352.2	355.7	355.7	362.7	366.1	369.6	373.2
65°	327.8	320.9	317.4	317.4	320.9	324.3	327.8	331.3	334.8	334.8
66°	299.9	293.0	289.5	289.5	289.5	289.5	296.4	296.4	303.4	303.4
67°	268.5	261.6	258.1	254.6	254.6	254.6	265.1	261.6	261.6	261.6
67.5°	258.1	247.6	244.1	240.6	237.1	244.1	240.6	244.1	244.1	240.6
68°	244.1	237.1	230.2	223.1	223.1	223.1	226.7	230.2	226.7	223.1
69°	216.2	212.7	202.3	195.3	191.9	195.3	191.9	195.3	191.9	195.3
70°	191.9	181.3	170.9	167.4	164.0	164.0	164.0	160.4	164.0	160.4
71°	167.4	156.9	146.5	139.5	136.1	136.1	132.6	136.1	132.6	136.1
72°	143.0	132.6	118.6	111.6	111.6	111.6	111.6	108.1	111.6	108.1
72.5°	132.6	118.6	108.1	101.1	97.6	97.6	97.6	97.6	94.1	97.6
73°	122.0	108.1	94.1	90.7	90.7	90.7	87.2	83.7	87.2	87.2





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**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	41.8	31.4	27.9	27.9	27.9	27.9	27.9	27.9	24.4	24.4
80°	17.5	13.9	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.4
82.5°	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0
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°	226.7	226.7	219.8	209.2	191.9	174.4	160.4	146.5	129.0	111.6	104.7
75°	209.2	205.8	198.8	188.3	174.4	156.9	143.0	125.5	111.6	94.1	87.2







74°	101.1	83.7	76.8	69.7	69.7	69.7	66.2	66.2	66.2	69.7
75°	80.2	66.2	59.3	52.3	55.8	52.3	55.8	52.3	52.3	52.3



(END OF REPORT)