

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: P584753

Luminaire Tested: **HC845D010-HM82555935-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584753
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-HM82555935-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4399.7 lumens
Efficiency: N/A
Efficacy: 100.0 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

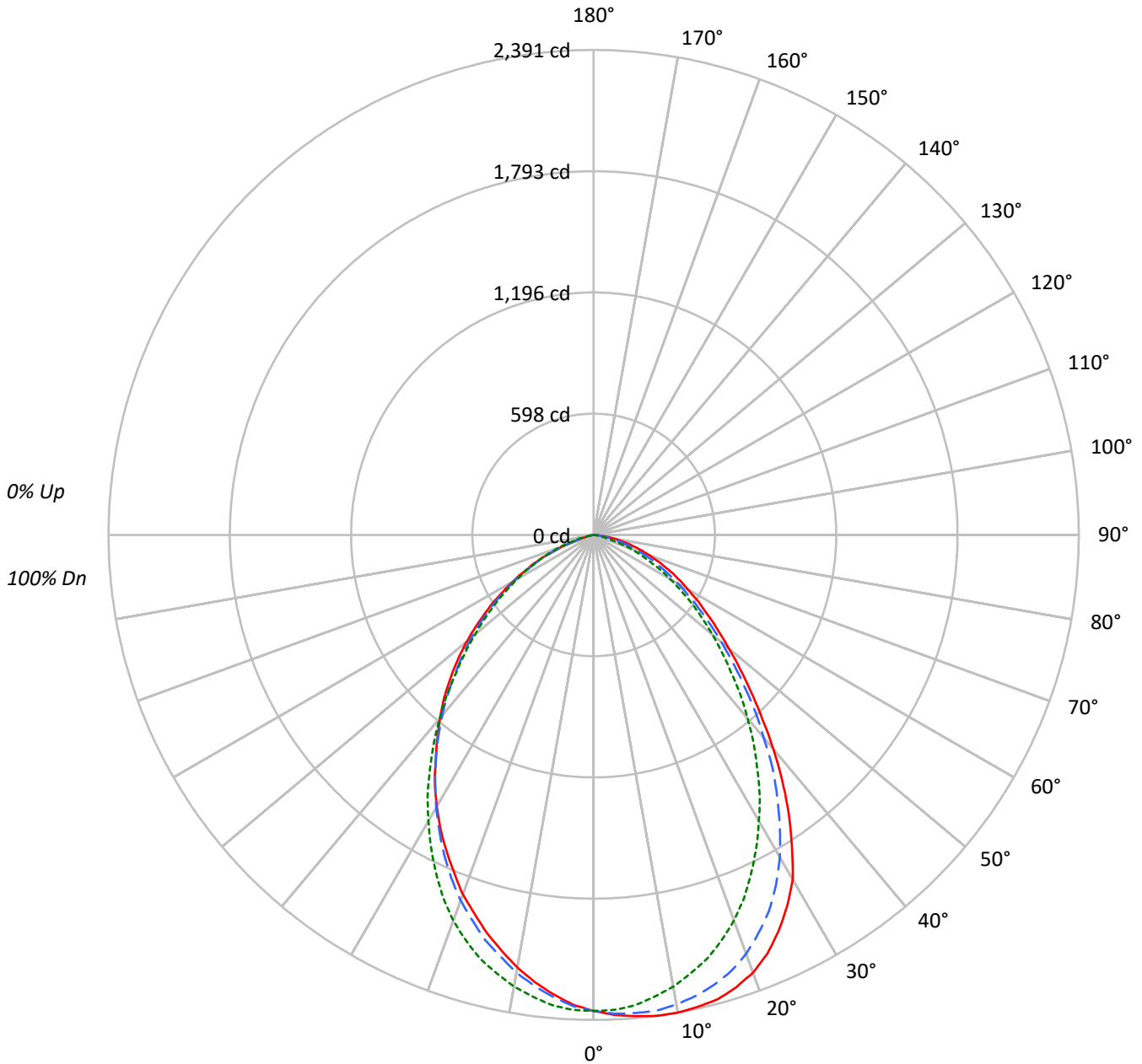
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	72370	72370	72370
5°	73730	72055	70380
10°	74880	70800	67812
15°	75635	69033	64873
20°	75344	66372	61883
25°	73359	62540	58430
30°	69864	57975	55030
35°	63088	52913	51117
40°	55430	47492	47363
45°	47844	41743	43548
50°	41645	36618	39055
55°	36929	31800	34020
60°	32952	26871	28240
65°	29697	21809	22276
70°	26372	16337	13190
75°	22732	9472	5683
80°	17492	3392	1687
85°	11251	1132	1132



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.3	5.0
10°-20°	613.3	13.9
20°-30°	867.5	19.7
30°-40°	914.1	20.8
40°-50°	776.8	17.7
50°-60°	559.4	12.7
60°-70°	322.7	7.3
70°-80°	110.4	2.5
80°-90°	15.2	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°	1701.1	38.7
0°-40°	2615.2	59.4
0°-60°	3951.4	89.8
0°-90°	4399.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4399.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2347	2347	2347	2347	2347	
5°	2382	2366	2328	2286	2274	228
15°	2369	2296	2162	2067	2032	667
25°	2156	2045	1838	1743	1717	989
35°	1676	1577	1406	1355	1358	1044
45°	1097	1046	957	964	999	852
55°	687	633	592	614	633	618
65°	407	350	299	292	305	405
75°	191	143	80	51	48	201
85°	32	19	3	3	3	43
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°	2346.9	2346.9	2346.9	2346.9	2346.9	2346.9	2346.9	2346.9	2346.9	2346.9	2346.9
2.5°	2369.2	2372.4	2369.2	2369.2	2366.1	2362.8	2359.6	2356.4	2350.1	2343.8	2343.8
5°	2381.9	2388.2	2381.9	2381.9	2372.4	2366.1	2359.6	2350.1	2337.4	2327.8	2327.8
7.5°	2391.4	2391.4	2391.4	2381.9	2375.6	2366.1	2350.1	2334.2	2318.3	2302.4	2296.0
10°	2391.4	2391.4	2388.2	2375.6	2369.2	2350.1	2334.2	2312.0	2289.7	2267.4	2261.1
12.5°	2381.9	2385.1	2378.7	2366.1	2350.1	2327.8	2305.5	2276.9	2251.6	2226.1	2213.3
15°	2369.2	2366.1	2359.6	2343.8	2324.7	2296.0	2273.7	2242.0	2207.0	2175.2	2162.4
17.5°	2337.4	2337.4	2327.8	2312.0	2286.5	2254.7	2219.7	2184.7	2146.6	2111.6	2095.7
20°	2296.0	2296.0	2283.4	2264.2	2238.8	2197.5	2159.3	2118.0	2073.4	2038.4	2022.6
22.5°	2235.6	2238.8	2223.0	2200.7	2172.0	2124.3	2086.2	2035.3	1990.7	1949.4	1936.7
25°	2156.1	2162.4	2146.6	2124.3	2086.2	2044.8	1997.1	1949.4	1898.5	1857.2	1838.1
27.5°	2063.9	2067.1	2051.2	2028.9	1990.7	1946.2	1898.5	1847.6	1800.0	1755.4	1736.4
30°	1962.1	1949.4	1943.1	1914.5	1873.0	1834.9	1780.8	1739.6	1688.7	1650.5	1628.2
32.5°	1819.0	1825.4	1806.3	1784.0	1752.2	1707.8	1663.2	1615.5	1567.8	1539.2	1523.3
35°	1675.9	1682.3	1672.7	1650.5	1615.5	1577.3	1532.8	1497.8	1456.5	1421.6	1405.6
37.5°	1526.4	1526.4	1520.1	1507.4	1482.0	1446.9	1402.4	1367.5	1332.4	1303.8	1294.3
40°	1377.0	1370.7	1367.5	1357.9	1335.7	1303.8	1275.2	1246.5	1211.6	1192.6	1179.8
42.5°	1230.7	1230.7	1224.4	1214.8	1192.6	1176.6	1148.0	1116.2	1090.8	1071.7	1071.7
45°	1097.1	1100.3	1090.8	1084.4	1071.7	1046.2	1020.9	998.6	976.3	963.6	957.2
47.5°	979.5	979.5	970.0	963.6	950.8	928.5	906.4	887.3	871.3	861.8	858.6
50°	868.1	868.1	868.1	852.3	836.3	820.5	804.6	782.3	772.8	766.4	763.3
52.5°	772.8	769.6	769.6	756.8	741.0	721.9	706.0	686.9	677.4	671.0	674.2
55°	686.9	686.9	683.7	667.8	652.0	632.8	617.0	601.0	594.7	588.4	591.5
56°	652.0	652.0	648.8	636.0	617.0	601.0	581.9	566.1	556.5	559.8	559.8
57°	626.5	620.2	620.2	604.2	588.4	566.1	550.1	534.3	527.8	524.7	524.7
58°	594.7	591.5	588.4	572.4	556.5	537.5	521.5	505.7	496.1	496.1	492.9
59°	562.9	562.9	556.5	543.8	527.8	508.8	492.9	477.1	467.4	464.3	464.3
60°	534.3	537.5	527.8	515.2	502.5	480.2	461.1	448.4	438.8	435.7	435.7
61°	508.8	508.8	502.5	486.6	470.6	454.8	435.7	419.8	413.4	407.0	407.0
62°	486.6	480.2	477.1	461.1	445.3	426.2	410.2	394.4	384.7	378.4	381.6
63°	457.9	454.8	448.4	435.7	419.8	400.7	381.6	368.9	359.4	349.8	353.0
64°	435.7	432.5	423.0	410.2	394.4	375.2	356.1	343.5	337.1	327.5	324.3
65°	407.0	403.9	400.7	384.7	368.9	349.8	334.0	321.2	311.7	305.3	298.9
66°	381.6	384.7	378.4	365.7	346.6	330.8	308.5	295.7	289.4	279.9	273.5
67°	359.4	359.4	353.0	340.3	321.2	305.3	289.4	273.5	263.9	254.4	251.3
67.5°	346.6	346.6	340.3	324.3	311.7	292.5	276.7	263.9	251.3	244.9	238.5
68°	334.0	334.0	330.8	318.0	302.2	283.0	267.1	251.3	238.5	229.0	225.8
69°	311.7	314.8	308.5	295.7	279.9	260.8	244.9	232.1	219.5	209.8	203.5
70°	292.5	289.4	283.0	270.3	254.4	241.6	225.8	209.8	197.2	184.4	181.2
71°	267.1	267.1	260.8	251.3	235.3	219.5	203.5	190.8	178.1	162.2	159.1
72°	248.1	248.1	241.6	229.0	216.3	200.3	184.4	168.6	159.1	143.1	136.8
72.5°	235.3	238.5	232.1	219.5	206.7	187.7	174.9	162.2	146.3	133.6	127.2
73°	229.0	225.8	222.6	209.8	194.0	181.2	165.4	152.6	136.8	124.0	117.7



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	143.1	143.1	139.9	127.2	114.5	101.8	89.0	76.4	63.6	50.9	44.6
80°	98.5	101.8	95.4	89.0	79.5	66.7	54.1	44.6	31.8	25.5	19.1
82.5°	63.6	63.6	60.4	54.1	47.7	38.1	31.8	22.3	16.0	12.7	9.5
85°	31.8	35.0	31.8	28.6	22.3	19.1	16.0	9.5	6.3	3.2	3.2
87.5°	12.7	12.7	12.7	9.5	9.5	6.3	3.2	3.2	3.2	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°	2346.9	2346.9	2346.9	2346.9	2346.9	2346.9	2346.9	2346.9	2346.9	2346.9
2.5°	2337.4	2337.4	2331.0	2327.8	2324.7	2321.5	2318.3	2315.2	2315.2	2318.3
5°	2318.3	2312.0	2299.2	2296.0	2286.5	2283.4	2276.9	2273.7	2276.9	2273.7
7.5°	2289.7	2276.9	2261.1	2254.7	2242.0	2235.6	2226.1	2226.1	2219.7	2223.0
10°	2251.6	2232.5	2213.3	2200.7	2191.0	2181.5	2175.2	2168.9	2165.7	2165.7
12.5°	2203.8	2181.5	2162.4	2143.4	2127.5	2121.1	2108.5	2108.5	2102.0	2098.8
15°	2149.8	2121.1	2098.8	2079.8	2067.1	2054.4	2044.8	2038.4	2032.1	2032.1
17.5°	2079.8	2054.4	2032.1	2009.8	1990.7	1981.2	1971.7	1962.1	1962.1	1955.7
20°	2003.5	1974.9	1955.7	1933.5	1917.6	1901.7	1889.0	1889.0	1882.7	1885.8
22.5°	1917.6	1882.7	1863.5	1847.6	1831.8	1819.0	1806.3	1806.3	1803.1	1800.0
25°	1822.3	1793.6	1771.3	1752.2	1742.7	1729.9	1726.8	1720.4	1717.3	1717.3
27.5°	1720.4	1698.2	1669.5	1660.0	1647.2	1640.9	1640.9	1637.7	1631.4	1634.6
30°	1612.3	1586.8	1571.0	1564.7	1551.9	1551.9	1548.7	1542.4	1542.4	1545.5
32.5°	1507.4	1482.0	1469.2	1466.0	1453.3	1453.3	1450.2	1453.3	1453.3	1456.5
35°	1392.9	1370.7	1367.5	1357.9	1354.7	1354.7	1354.7	1361.0	1367.5	1357.9
37.5°	1284.8	1268.8	1259.3	1256.2	1259.3	1259.3	1262.5	1272.0	1268.8	1265.7
40°	1173.5	1160.7	1154.3	1154.3	1160.7	1167.1	1167.1	1176.6	1179.8	1176.6
42.5°	1062.2	1052.7	1052.7	1055.8	1062.2	1065.3	1074.8	1084.4	1087.6	1090.8
45°	957.2	957.2	957.2	960.3	963.6	970.0	982.6	992.2	995.4	998.6
47.5°	855.5	852.3	861.8	865.0	874.5	877.8	887.3	899.9	903.1	906.4
50°	760.1	766.4	769.6	779.1	785.4	785.4	798.2	804.6	814.1	814.1
52.5°	671.0	680.6	683.7	693.2	696.4	699.6	706.0	715.5	721.9	721.9
55°	591.5	594.7	601.0	604.2	613.7	617.0	623.3	626.5	636.0	632.8
56°	556.5	562.9	566.1	572.4	578.8	581.9	588.4	591.5	597.9	601.0
57°	524.7	527.8	537.5	540.6	547.0	547.0	550.1	559.8	559.8	562.9
58°	492.9	499.2	502.5	505.7	512.0	515.2	521.5	524.7	527.8	524.7
59°	464.3	467.4	470.6	470.6	477.1	477.1	486.6	492.9	496.1	496.1
60°	435.7	435.7	438.8	442.0	448.4	451.6	451.6	457.9	457.9	457.9
61°	407.0	407.0	410.2	413.4	416.6	416.6	423.0	423.0	426.2	429.3
62°	381.6	378.4	378.4	381.6	381.6	388.0	391.2	394.4	397.5	394.4
63°	353.0	349.8	349.8	349.8	349.8	356.1	356.1	359.4	365.7	362.6
64°	321.2	321.2	321.2	321.2	324.3	324.3	330.8	334.0	337.1	340.3
65°	298.9	292.5	289.4	289.4	292.5	295.7	298.9	302.2	305.3	305.3
66°	273.5	267.1	263.9	263.9	263.9	263.9	270.3	270.3	276.7	276.7
67°	244.9	238.5	235.3	232.1	232.1	232.1	241.6	238.5	238.5	238.5
67.5°	235.3	225.8	222.6	219.5	216.3	222.6	219.5	222.6	222.6	219.5
68°	222.6	216.3	209.8	203.5	203.5	203.5	206.7	209.8	206.7	203.5
69°	197.2	194.0	184.4	178.1	174.9	178.1	174.9	178.1	174.9	178.1
70°	174.9	165.4	155.8	152.6	149.4	149.4	149.4	146.3	149.4	146.3
71°	152.6	143.1	133.6	127.2	124.0	124.0	120.8	124.0	120.8	124.0
72°	130.4	120.8	108.2	101.8	101.8	101.8	101.8	98.5	101.8	98.5
72.5°	120.8	108.2	98.5	92.2	89.0	89.0	89.0	89.0	85.9	89.0
73°	111.3	98.5	85.9	82.7	82.7	82.7	79.5	76.4	79.5	79.5



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	38.1	28.6	25.5	25.5	25.5	25.5	25.5	25.5	22.3	22.3
80°	16.0	12.7	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
82.5°	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
85°	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
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°	206.7	206.7	200.3	190.8	174.9	159.1	146.3	133.6	117.7	101.8	95.4
75°	190.8	187.7	181.2	171.7	159.1	143.1	130.4	114.5	101.8	85.9	79.5





74°	92.2	76.4	69.9	63.6	63.6	63.6	60.4	60.4	60.4	63.6
75°	73.2	60.4	54.1	47.7	50.9	47.7	50.9	47.7	47.7	47.7



(END OF REPORT)