

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: P584770

Luminaire Tested: **HC845D010-HM82555940-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584770
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-HM82555940-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4863.3 lumens
Efficiency: N/A
Efficacy: 110.5 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

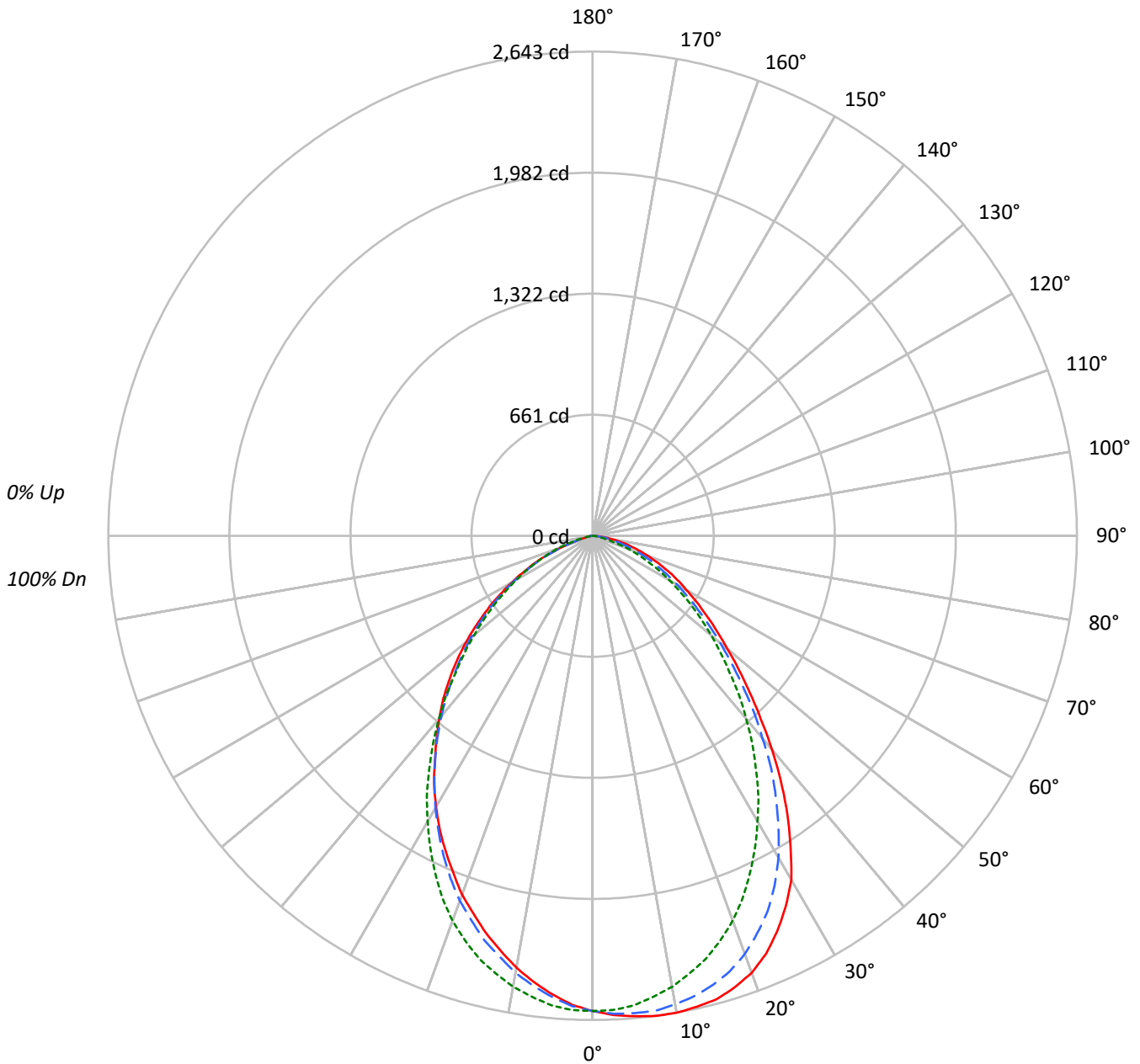
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	79996	79996	79996
5°	81496	79648	77800
10°	82770	78258	74958
15°	83603	76308	71708
20°	83282	73362	68404
25°	81090	69130	64581
30°	77227	64081	60831
35°	69736	58492	56504
40°	61271	52495	52354
45°	52889	46138	48136
50°	46035	40470	43171
55°	40821	35149	37606
60°	36418	29702	31213
65°	32834	24108	24626
70°	29158	18059	14570
75°	25127	10473	6291
80°	19356	3747	1882
85°	12454	1238	1238



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.5	5.0
10°-20°	677.9	13.9
20°-30°	958.9	19.7
30°-40°	1010.4	20.8
40°-50°	858.7	17.7
50°-60°	618.3	12.7
60°-70°	356.7	7.3
70°-80°	122.1	2.5
80°-90°	16.8	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°	1880.3	38.7
0°-40°	2890.7	59.4
0°-60°	4367.7	89.8
0°-90°	4863.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4863.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2594	2594	2594	2594	2594	
5°	2633	2615	2573	2527	2513	252
15°	2619	2538	2390	2285	2246	737
25°	2383	2260	2032	1926	1898	1093
35°	1852	1744	1554	1498	1501	1154
45°	1213	1156	1058	1065	1104	942
55°	759	700	654	678	700	683
65°	450	387	330	323	338	448
75°	211	158	88	56	53	223
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°	2594.2	2594.2	2594.2	2594.2	2594.2	2594.2	2594.2	2594.2	2594.2	2594.2	2594.2
2.5°	2618.8	2622.4	2618.8	2618.8	2615.3	2611.8	2608.3	2604.8	2597.7	2590.7	2590.7
5°	2632.8	2639.8	2632.8	2632.8	2622.4	2615.3	2608.3	2597.7	2583.6	2573.1	2573.1
7.5°	2643.4	2643.4	2643.4	2632.8	2625.9	2615.3	2597.7	2580.1	2562.5	2544.9	2537.9
10°	2643.4	2643.4	2639.8	2625.9	2618.8	2597.7	2580.1	2555.5	2530.9	2506.3	2499.3
12.5°	2632.8	2636.3	2629.3	2615.3	2597.7	2573.1	2548.5	2516.9	2488.8	2460.6	2446.5
15°	2618.8	2615.3	2608.3	2590.7	2569.6	2537.9	2513.4	2478.2	2439.5	2404.4	2390.3
17.5°	2583.6	2583.6	2573.1	2555.5	2527.3	2492.3	2453.6	2414.9	2372.7	2334.0	2316.4
20°	2537.9	2537.9	2523.8	2502.8	2474.7	2428.9	2386.8	2341.1	2291.9	2253.2	2235.6
22.5°	2471.2	2474.7	2457.1	2432.5	2400.9	2348.1	2305.9	2249.7	2200.4	2154.8	2140.7
25°	2383.3	2390.3	2372.7	2348.1	2305.9	2260.3	2207.5	2154.8	2098.5	2052.9	2031.8
27.5°	2281.4	2284.9	2267.3	2242.7	2200.4	2151.3	2098.5	2042.3	1989.5	1940.4	1919.3
30°	2168.9	2154.8	2147.8	2116.1	2070.5	2028.2	1968.5	1922.8	1866.6	1824.4	1799.7
32.5°	2010.6	2017.7	1996.6	1972.0	1936.9	1887.6	1838.4	1785.7	1733.0	1701.3	1683.7
35°	1852.5	1859.6	1849.0	1824.4	1785.7	1743.5	1694.3	1655.7	1609.9	1571.2	1553.8
37.5°	1687.2	1687.2	1680.2	1666.1	1638.1	1599.4	1550.2	1511.5	1472.8	1441.3	1430.7
40°	1522.1	1515.0	1511.5	1501.0	1476.3	1441.3	1409.6	1377.9	1339.3	1318.2	1304.1
42.5°	1360.3	1360.3	1353.3	1342.7	1318.2	1300.6	1269.0	1233.8	1205.7	1184.6	1184.6
45°	1212.8	1216.3	1205.7	1198.7	1184.6	1156.5	1128.3	1103.8	1079.2	1065.1	1058.0
47.5°	1082.7	1082.7	1072.1	1065.1	1051.0	1026.4	1001.9	980.7	963.2	952.6	949.1
50°	959.6	959.6	959.6	942.0	924.4	907.0	889.4	864.7	854.2	847.1	843.6
52.5°	854.2	850.7	850.7	836.6	819.0	798.0	780.4	759.3	748.7	741.7	745.2
55°	759.3	759.3	755.8	738.2	720.6	699.5	682.0	664.4	657.3	650.3	653.8
56°	720.6	720.6	717.1	703.0	682.0	664.4	643.3	625.7	615.1	618.6	618.6
57°	692.5	685.5	685.5	667.9	650.3	625.7	608.1	590.5	583.6	580.0	580.0
58°	657.3	653.8	650.3	632.7	615.1	594.0	576.5	558.9	548.4	548.4	544.9
59°	622.2	622.2	615.1	601.0	583.6	562.5	544.9	527.3	516.7	513.2	513.2
60°	590.5	594.0	583.6	569.5	555.4	530.8	509.7	495.6	485.0	481.6	481.6
61°	562.5	562.5	555.4	537.8	520.2	502.6	481.6	464.0	457.0	450.0	450.0
62°	537.8	530.8	527.3	509.7	492.1	471.1	453.5	435.9	425.3	418.3	421.8
63°	506.1	502.6	495.6	481.6	464.0	442.9	421.8	407.7	397.2	386.6	390.1
64°	481.6	478.1	467.6	453.5	435.9	414.8	393.7	379.6	372.7	362.1	358.6
65°	450.0	446.4	442.9	425.3	407.7	386.6	369.1	355.1	344.5	337.5	330.4
66°	421.8	425.3	418.3	404.2	383.1	365.6	341.0	326.9	319.9	309.3	302.3
67°	397.2	397.2	390.1	376.1	355.1	337.5	319.9	302.3	291.7	281.2	277.6
67.5°	383.1	383.1	376.1	358.6	344.5	323.4	305.8	291.7	277.6	270.6	263.7
68°	369.1	369.1	365.6	351.5	334.0	312.8	295.2	277.6	263.7	253.1	249.6
69°	344.5	348.0	341.0	326.9	309.3	288.2	270.6	256.7	242.6	232.0	225.0
70°	323.4	319.9	312.8	298.8	281.2	267.2	249.6	232.0	217.9	203.9	200.3
71°	295.2	295.2	288.2	277.6	260.2	242.6	225.0	210.9	196.8	179.2	175.7
72°	274.1	274.1	267.2	253.1	239.1	221.5	203.9	186.3	175.7	158.2	151.2
72.5°	260.2	263.7	256.7	242.6	228.5	207.4	193.3	179.2	161.6	147.7	140.6
73°	253.1	249.6	246.1	232.0	214.4	200.3	182.8	168.7	151.2	137.1	130.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	158.2	158.2	154.7	140.6	126.6	112.5	98.4	84.3	70.3	56.2	49.3
80°	109.0	112.5	105.5	98.4	87.9	73.8	59.7	49.3	35.2	28.2	21.1
82.5°	70.3	70.3	66.7	59.7	52.8	42.2	35.2	24.6	17.6	14.1	10.6
85°	35.2	38.7	35.2	31.7	24.6	21.1	17.6	10.6	7.0	3.5	3.5
87.5°	14.1	14.1	14.1	10.6	10.6	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°	2594.2	2594.2	2594.2	2594.2	2594.2	2594.2	2594.2	2594.2	2594.2	2594.2
2.5°	2583.6	2583.6	2576.6	2573.1	2569.6	2566.1	2562.5	2559.0	2559.0	2562.5
5°	2562.5	2555.5	2541.4	2537.9	2527.3	2523.8	2516.9	2513.4	2516.9	2513.4
7.5°	2530.9	2516.9	2499.3	2492.3	2478.2	2471.2	2460.6	2460.6	2453.6	2457.1
10°	2488.8	2467.6	2446.5	2432.5	2421.9	2411.5	2404.4	2397.4	2393.9	2393.9
12.5°	2436.0	2411.5	2390.3	2369.2	2351.6	2344.6	2330.5	2330.5	2323.5	2320.0
15°	2376.3	2344.6	2320.0	2299.0	2284.9	2270.8	2260.3	2253.2	2246.2	2246.2
17.5°	2299.0	2270.8	2246.2	2221.5	2200.4	2190.0	2179.4	2168.9	2168.9	2161.8
20°	2214.5	2183.0	2161.8	2137.2	2119.6	2102.0	2088.1	2088.1	2081.0	2084.5
22.5°	2119.6	2081.0	2059.9	2042.3	2024.7	2010.6	1996.6	1996.6	1993.0	1989.5
25°	2014.2	1982.6	1958.0	1936.9	1926.3	1912.2	1908.7	1901.7	1898.1	1898.1
27.5°	1901.7	1877.0	1845.5	1834.9	1820.8	1813.8	1813.8	1810.3	1803.3	1806.8
30°	1782.1	1754.1	1736.5	1729.5	1715.4	1715.4	1711.9	1704.8	1704.8	1708.4
32.5°	1666.1	1638.1	1624.0	1620.5	1606.4	1606.4	1602.9	1606.4	1606.4	1609.9
35°	1539.7	1515.0	1511.5	1501.0	1497.5	1497.5	1497.5	1504.5	1511.5	1501.0
37.5°	1420.2	1402.6	1392.0	1388.5	1392.0	1392.0	1395.5	1406.1	1402.6	1399.0
40°	1297.1	1283.0	1276.0	1276.0	1283.0	1290.1	1290.1	1300.6	1304.1	1300.6
42.5°	1174.1	1163.5	1163.5	1167.0	1174.1	1177.6	1188.1	1198.7	1202.2	1205.7
45°	1058.0	1058.0	1058.0	1061.6	1065.1	1072.1	1086.2	1096.8	1100.3	1103.8
47.5°	945.6	942.0	952.6	956.1	966.7	970.2	980.7	994.8	998.3	1001.9
50°	840.1	847.1	850.7	861.2	868.3	868.3	882.3	889.4	899.9	899.9
52.5°	741.7	752.2	755.8	766.3	769.8	773.4	780.4	791.0	798.0	798.0
55°	653.8	657.3	664.4	667.9	678.5	682.0	689.0	692.5	703.0	699.5
56°	615.1	622.2	625.7	632.7	639.8	643.3	650.3	653.8	660.9	664.4
57°	580.0	583.6	594.0	597.5	604.6	604.6	608.1	618.6	618.6	622.2
58°	544.9	551.9	555.4	558.9	566.0	569.5	576.5	580.0	583.6	580.0
59°	513.2	516.7	520.2	520.2	527.3	527.3	537.8	544.9	548.4	548.4
60°	481.6	481.6	485.0	488.6	495.6	499.1	499.1	506.1	506.1	506.1
61°	450.0	450.0	453.5	457.0	460.5	460.5	467.6	467.6	471.1	474.6
62°	421.8	418.3	418.3	421.8	421.8	428.8	432.4	435.9	439.4	435.9
63°	390.1	386.6	386.6	386.6	386.6	393.7	393.7	397.2	404.2	400.7
64°	355.1	355.1	355.1	355.1	358.6	358.6	365.6	369.1	372.7	376.1
65°	330.4	323.4	319.9	319.9	323.4	326.9	330.4	334.0	337.5	337.5
66°	302.3	295.2	291.7	291.7	291.7	291.7	298.8	298.8	305.8	305.8
67°	270.6	263.7	260.2	256.7	256.7	256.7	267.2	263.7	263.7	263.7
67.5°	260.2	249.6	246.1	242.6	239.1	246.1	242.6	246.1	246.1	242.6
68°	246.1	239.1	232.0	225.0	225.0	225.0	228.5	232.0	228.5	225.0
69°	217.9	214.4	203.9	196.8	193.3	196.8	193.3	196.8	193.3	196.8
70°	193.3	182.8	172.2	168.7	165.2	165.2	165.2	161.6	165.2	161.6
71°	168.7	158.2	147.7	140.6	137.1	137.1	133.6	137.1	133.6	137.1
72°	144.2	133.6	119.5	112.5	112.5	112.5	112.5	109.0	112.5	109.0
72.5°	133.6	119.5	109.0	101.9	98.4	98.4	98.4	98.4	94.9	98.4
73°	123.0	109.0	94.9	91.4	91.4	91.4	87.9	84.3	87.9	87.9



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	42.2	31.7	28.2	28.2	28.2	28.2	28.2	28.2	24.6	24.6
80°	17.6	14.1	10.6	10.6	10.6	10.6	10.6	10.6	10.6	10.6
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°	228.5	228.5	221.5	210.9	193.3	175.7	161.6	147.7	130.1	112.5	105.5
75°	210.9	207.4	200.3	189.8	175.7	158.2	144.2	126.6	112.5	94.9	87.9





74°	101.9	84.3	77.3	70.3	70.3	70.3	66.7	66.7	66.7	70.3
75°	80.8	66.7	59.7	52.8	56.2	52.8	56.2	52.8	52.8	52.8



(END OF REPORT)