

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: P584736

Luminaire Tested: **HC845D010-HM82555930-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584736
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-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: 4376.1 lumens
Efficiency: N/A
Efficacy: 99.5 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

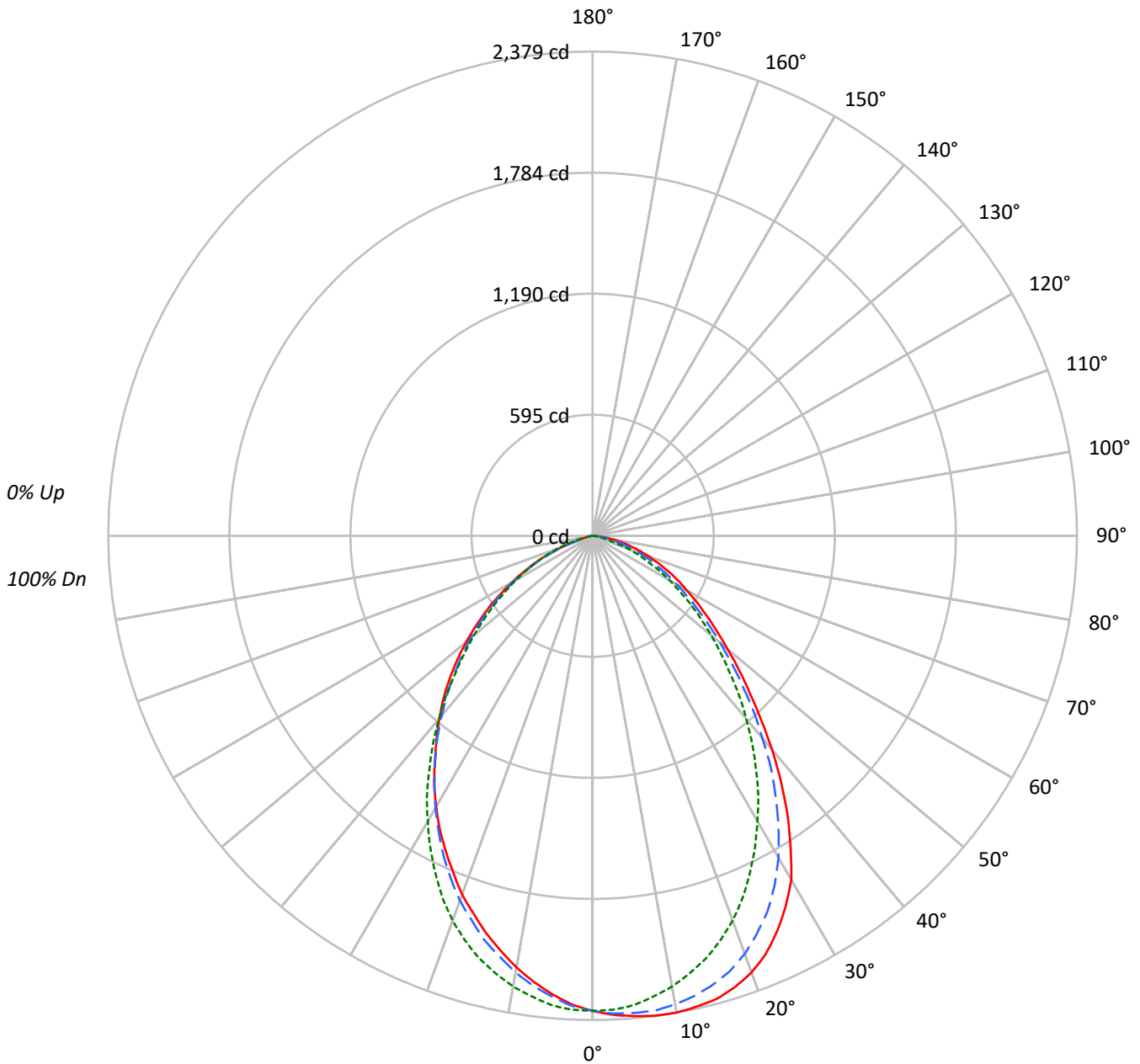
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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°	71984	71984	71984
5°	73333	71671	70003
10°	74479	70421	67449
15°	75226	68666	64525
20°	74940	66015	61552
25°	72968	62203	58113
30°	69490	57662	54735
35°	62753	52630	50842
40°	55132	47238	47109
45°	47586	41520	43313
50°	41429	36421	38844
55°	36735	31633	33837
60°	32773	26723	28092
65°	29544	21700	22159
70°	26236	16256	13118
75°	22613	9424	5647
80°	17421	3374	1687
85°	11216	1132	1132



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	219.1	5.0
10°-20°	610.0	13.9
20°-30°	862.8	19.7
30°-40°	909.2	20.8
40°-50°	772.7	17.7
50°-60°	556.4	12.7
60°-70°	321.0	7.3
70°-80°	109.8	2.5
80°-90°	15.1	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°	1692.0	38.7
0°-40°	2601.2	59.4
0°-60°	3930.2	89.8
0°-90°	4376.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4376.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2334	2334	2334	2334	2334	
5°	2369	2353	2315	2274	2262	226
15°	2356	2284	2151	2056	2021	664
25°	2145	2034	1828	1733	1708	984
35°	1667	1569	1398	1347	1351	1038
45°	1091	1041	952	958	993	848
55°	683	629	588	610	629	615
65°	405	348	297	291	304	403
75°	190	142	79	51	47	200
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°	2334.4	2334.4	2334.4	2334.4	2334.4	2334.4	2334.4	2334.4	2334.4	2334.4	2334.4
2.5°	2356.4	2359.6	2356.4	2356.4	2353.3	2350.1	2347.1	2343.9	2337.6	2331.2	2331.2
5°	2369.1	2375.4	2369.1	2369.1	2359.6	2353.3	2347.1	2337.6	2324.9	2315.4	2315.4
7.5°	2378.6	2378.6	2378.6	2369.1	2362.8	2353.3	2337.6	2321.7	2305.9	2290.0	2283.7
10°	2378.6	2378.6	2375.4	2362.8	2356.4	2337.6	2321.7	2299.5	2277.4	2255.3	2249.0
12.5°	2369.1	2372.3	2365.9	2353.3	2337.6	2315.4	2293.2	2264.7	2239.5	2214.2	2201.5
15°	2356.4	2353.3	2347.1	2331.2	2312.2	2283.7	2261.5	2230.0	2195.2	2163.6	2150.9
17.5°	2324.9	2324.9	2315.4	2299.5	2274.2	2242.7	2207.8	2173.0	2135.1	2100.3	2084.4
20°	2283.7	2283.7	2271.0	2252.2	2226.8	2185.7	2147.8	2106.6	2062.4	2027.5	2011.7
22.5°	2223.7	2226.8	2211.0	2188.8	2160.4	2112.9	2074.9	2024.4	1980.0	1939.0	1926.3
25°	2144.6	2150.9	2135.1	2112.9	2074.9	2033.9	1986.4	1939.0	1888.3	1847.2	1828.2
27.5°	2052.9	2056.0	2040.2	2018.0	1980.0	1935.8	1888.3	1837.7	1790.3	1746.0	1727.0
30°	1951.6	1939.0	1932.6	1904.1	1863.1	1825.1	1771.3	1730.2	1679.6	1641.6	1619.4
32.5°	1809.2	1815.6	1796.6	1774.5	1742.8	1698.6	1654.3	1606.9	1559.4	1530.9	1515.2
35°	1667.0	1673.3	1663.8	1641.6	1606.9	1568.9	1524.5	1489.8	1448.7	1413.9	1398.1
37.5°	1518.3	1518.3	1512.0	1499.3	1474.0	1439.2	1394.9	1360.1	1325.4	1296.9	1287.4
40°	1369.6	1363.3	1360.1	1350.6	1328.5	1296.9	1268.4	1240.0	1205.1	1186.1	1173.5
42.5°	1224.1	1224.1	1217.8	1208.3	1186.1	1170.3	1141.9	1110.2	1084.9	1065.9	1065.9
45°	1091.2	1094.4	1084.9	1078.6	1065.9	1040.7	1015.3	993.2	971.0	958.5	952.1
47.5°	974.2	974.2	964.8	958.5	945.8	923.6	901.5	882.4	866.7	857.2	854.1
50°	863.6	863.6	863.6	847.7	831.9	816.1	800.2	778.2	768.7	762.3	759.2
52.5°	768.7	765.5	765.5	752.8	737.0	718.0	702.2	683.3	673.8	667.4	670.6
55°	683.3	683.3	680.1	664.3	648.4	629.4	613.6	597.9	591.5	585.2	588.4
56°	648.4	648.4	645.3	632.6	613.6	597.9	578.9	563.0	553.5	556.7	556.7
57°	623.1	616.8	616.8	600.9	585.2	563.0	547.2	531.4	525.0	521.9	521.9
58°	591.5	588.4	585.2	569.4	553.5	534.5	518.7	503.0	493.5	493.5	490.3
59°	559.9	559.9	553.5	540.9	525.0	506.1	490.3	474.5	465.0	461.8	461.8
60°	531.4	534.5	525.0	512.4	499.8	477.6	458.6	446.0	436.5	433.3	433.3
61°	506.1	506.1	499.8	484.0	468.1	452.3	433.3	417.5	411.3	404.9	404.9
62°	484.0	477.6	474.5	458.6	442.8	423.8	408.1	392.3	382.7	376.4	379.6
63°	455.5	452.3	446.0	433.3	417.5	398.6	379.6	366.9	357.4	347.9	351.1
64°	433.3	430.1	420.6	408.1	392.3	373.2	354.2	341.6	335.2	325.7	322.6
65°	404.9	401.8	398.6	382.7	366.9	347.9	332.1	319.5	310.0	303.7	297.4
66°	379.6	382.7	376.4	363.7	344.7	328.9	306.9	294.2	287.9	278.4	272.0
67°	357.4	357.4	351.1	338.4	319.5	303.7	287.9	272.0	262.5	253.0	249.8
67.5°	344.7	344.7	338.4	322.6	310.0	291.0	275.2	262.5	249.8	243.5	237.2
68°	332.1	332.1	328.9	316.4	300.5	281.5	265.7	249.8	237.2	227.8	224.6
69°	310.0	313.2	306.9	294.2	278.4	259.4	243.5	230.8	218.3	208.8	202.5
70°	291.0	287.9	281.5	268.9	253.0	240.3	224.6	208.8	196.1	183.5	180.3
71°	265.7	265.7	259.4	249.8	234.0	218.3	202.5	189.8	177.1	161.3	158.1
72°	246.7	246.7	240.3	227.8	215.1	199.3	183.5	167.6	158.1	142.3	136.1
72.5°	234.0	237.2	230.8	218.3	205.6	186.6	174.0	161.3	145.5	132.9	126.6
73°	227.8	224.6	221.5	208.8	193.0	180.3	164.5	151.8	136.1	123.4	117.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	142.3	142.3	139.1	126.6	113.9	101.2	88.6	75.9	63.2	50.6	44.3
80°	98.1	101.2	94.9	88.6	79.1	66.4	53.7	44.3	31.7	25.3	19.0
82.5°	63.2	63.2	60.1	53.7	47.4	38.0	31.7	22.2	15.8	12.7	9.5
85°	31.7	34.8	31.7	28.5	22.2	19.0	15.8	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°	2334.4	2334.4	2334.4	2334.4	2334.4	2334.4	2334.4	2334.4	2334.4	2334.4
2.5°	2324.9	2324.9	2318.6	2315.4	2312.2	2309.1	2305.9	2302.7	2302.7	2305.9
5°	2305.9	2299.5	2286.9	2283.7	2274.2	2271.0	2264.7	2261.5	2264.7	2261.5
7.5°	2277.4	2264.7	2249.0	2242.7	2230.0	2223.7	2214.2	2214.2	2207.8	2211.0
10°	2239.5	2220.5	2201.5	2188.8	2179.3	2169.8	2163.6	2157.3	2154.1	2154.1
12.5°	2192.0	2169.8	2150.9	2131.9	2116.1	2109.8	2097.1	2097.1	2090.8	2087.6
15°	2138.3	2109.8	2087.6	2068.7	2056.0	2043.4	2033.9	2027.5	2021.2	2021.2
17.5°	2068.7	2043.4	2021.2	1999.0	1980.0	1970.6	1961.1	1951.6	1951.6	1945.3
20°	1992.7	1964.3	1945.3	1923.1	1907.3	1891.5	1878.9	1878.9	1872.6	1875.7
22.5°	1907.3	1872.6	1853.6	1837.7	1821.9	1809.2	1796.6	1796.6	1793.5	1790.3
25°	1812.4	1784.0	1761.8	1742.8	1733.3	1720.7	1717.5	1711.2	1708.0	1708.0
27.5°	1711.2	1689.1	1660.6	1651.1	1638.4	1632.1	1632.1	1628.9	1622.6	1625.8
30°	1603.7	1578.4	1562.6	1556.2	1543.6	1543.6	1540.4	1534.0	1534.0	1537.2
32.5°	1499.3	1474.0	1461.3	1458.2	1445.5	1445.5	1442.3	1445.5	1445.5	1448.7
35°	1385.4	1363.3	1360.1	1350.6	1347.4	1347.4	1347.4	1353.8	1360.1	1350.6
37.5°	1277.9	1262.0	1252.5	1249.4	1252.5	1252.5	1255.7	1265.2	1262.0	1258.9
40°	1167.1	1154.5	1148.2	1148.2	1154.5	1160.8	1160.8	1170.3	1173.5	1170.3
42.5°	1056.5	1047.0	1047.0	1050.2	1056.5	1059.6	1069.1	1078.6	1081.7	1084.9
45°	952.1	952.1	952.1	955.3	958.5	964.8	977.3	986.8	990.0	993.2
47.5°	850.9	847.7	857.2	860.4	869.9	873.1	882.4	895.1	898.3	901.5
50°	756.0	762.3	765.5	775.0	781.3	781.3	793.9	800.2	809.7	809.7
52.5°	667.4	676.9	680.1	689.6	692.7	695.8	702.2	711.7	718.0	718.0
55°	588.4	591.5	597.9	600.9	610.4	613.6	619.9	623.1	632.6	629.4
56°	553.5	559.9	563.0	569.4	575.7	578.9	585.2	588.4	594.7	597.9
57°	521.9	525.0	534.5	537.7	544.0	544.0	547.2	556.7	556.7	559.9
58°	490.3	496.6	499.8	503.0	509.2	512.4	518.7	521.9	525.0	521.9
59°	461.8	465.0	468.1	468.1	474.5	474.5	484.0	490.3	493.5	493.5
60°	433.3	433.3	436.5	439.6	446.0	449.1	449.1	455.5	455.5	455.5
61°	404.9	404.9	408.1	411.3	414.4	414.4	420.6	420.6	423.8	427.0
62°	379.6	376.4	376.4	379.6	379.6	385.9	389.1	392.3	395.4	392.3
63°	351.1	347.9	347.9	347.9	347.9	354.2	354.2	357.4	363.7	360.6
64°	319.5	319.5	319.5	319.5	322.6	322.6	328.9	332.1	335.2	338.4
65°	297.4	291.0	287.9	287.9	291.0	294.2	297.4	300.5	303.7	303.7
66°	272.0	265.7	262.5	262.5	262.5	262.5	268.9	268.9	275.2	275.2
67°	243.5	237.2	234.0	230.8	230.8	230.8	240.3	237.2	237.2	237.2
67.5°	234.0	224.6	221.5	218.3	215.1	221.5	218.3	221.5	221.5	218.3
68°	221.5	215.1	208.8	202.5	202.5	202.5	205.6	208.8	205.6	202.5
69°	196.1	193.0	183.5	177.1	174.0	177.1	174.0	177.1	174.0	177.1
70°	174.0	164.5	155.0	151.8	148.6	148.6	148.6	145.5	148.6	145.5
71°	151.8	142.3	132.9	126.6	123.4	123.4	120.2	123.4	120.2	123.4
72°	129.7	120.2	107.6	101.2	101.2	101.2	101.2	98.1	101.2	98.1
72.5°	120.2	107.6	98.1	91.7	88.6	88.6	88.6	88.6	85.4	88.6
73°	110.7	98.1	85.4	82.2	82.2	82.2	79.1	75.9	79.1	79.1



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	38.0	28.5	25.3	25.3	25.3	25.3	25.3	25.3	22.2	22.2
80°	15.8	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°	205.6	205.6	199.3	189.8	174.0	158.1	145.5	132.9	117.1	101.2	94.9
75°	189.8	186.6	180.3	170.8	158.1	142.3	129.7	113.9	101.2	85.4	79.1





74°	91.7	75.9	69.6	63.2	63.2	63.2	60.1	60.1	60.1	63.2
75°	72.7	60.1	53.7	47.4	50.6	47.4	50.6	47.4	47.4	47.4



(END OF REPORT)