

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: P584668

Luminaire Tested: **HC845D010-HM82555830-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584668
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-HM82555830-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4450.8 lumens
Efficiency: N/A
Efficacy: 101.2 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

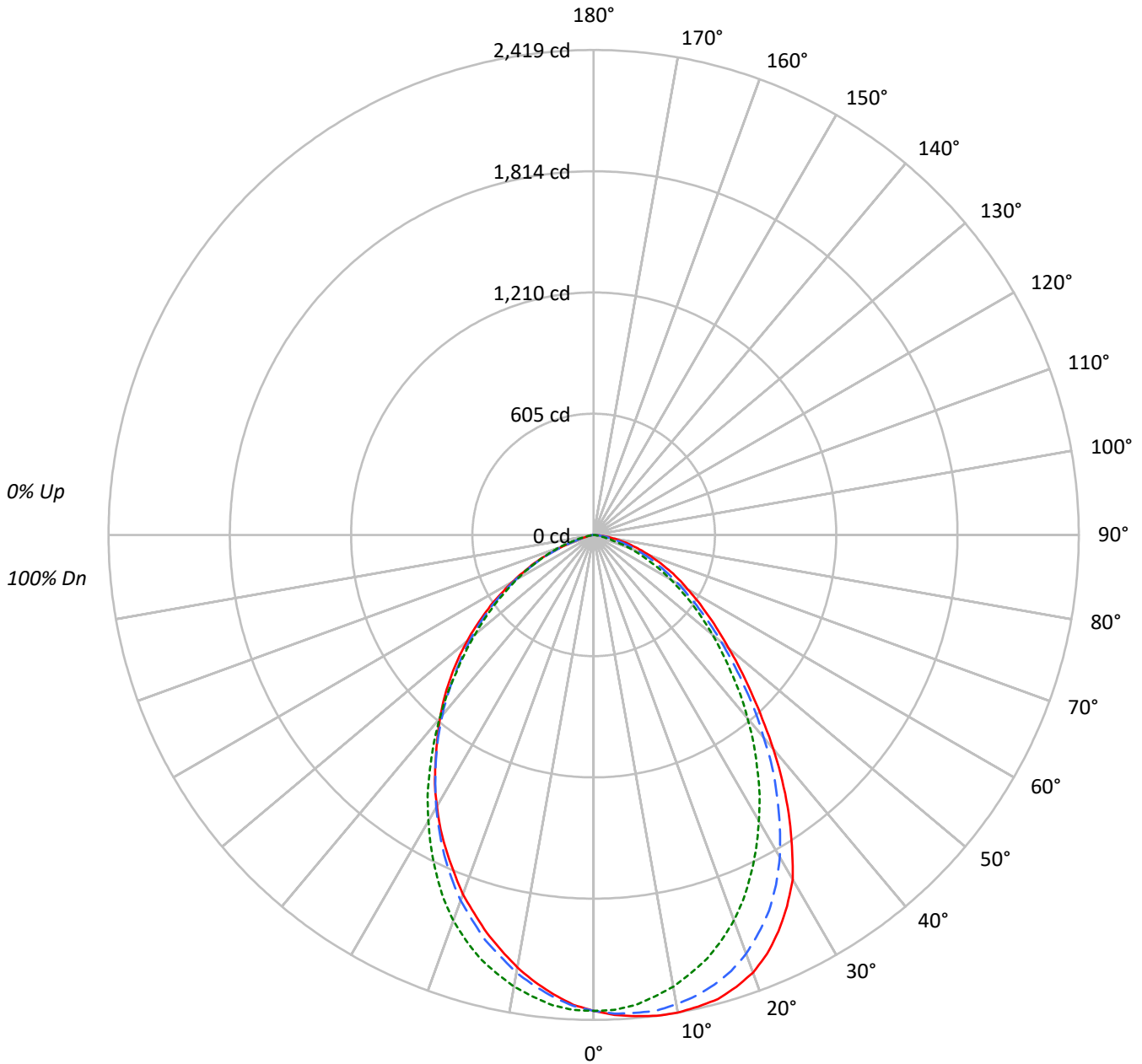
Input Watts (W): 44
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	73212	73212	73212
5°	74587	72894	71198
10°	75750	71623	68598
15°	76512	69834	65626
20°	76220	67143	62599
25°	74213	63264	59107
30°	70679	58648	55671
35°	63818	53526	51712
40°	56070	48043	47910
45°	48402	42227	44054
50°	42130	37040	39510
55°	37359	32165	34418
60°	33328	27179	28567
65°	30040	22065	22539
70°	26678	16526	13344
75°	23006	9591	5743
80°	17705	3445	1705
85°	11357	1132	1132



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	222.9	5.0
10°-20°	620.4	13.9
20°-30°	877.5	19.7
30°-40°	924.7	20.8
40°-50°	785.9	17.7
50°-60°	565.9	12.7
60°-70°	326.4	7.3
70°-80°	111.7	2.5
80°-90°	15.4	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°	1720.8	38.7
0°-40°	2645.5	59.4
0°-60°	3997.3	89.8
0°-90°	4450.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4450.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2374	2374	2374	2374	2374	
5°	2410	2394	2355	2313	2300	230
15°	2397	2323	2188	2091	2056	675
25°	2181	2069	1859	1763	1737	1000
35°	1695	1596	1422	1370	1374	1056
45°	1110	1058	968	975	1010	862
55°	695	640	598	621	640	625
65°	412	354	302	296	309	410
75°	193	145	80	52	48	204
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°	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2
2.5°	2396.7	2399.8	2396.7	2396.7	2393.5	2390.2	2387.1	2383.8	2377.3	2371.0	2371.0
5°	2409.6	2416.0	2409.6	2409.6	2399.8	2393.5	2387.1	2377.3	2364.5	2354.9	2354.9
7.5°	2419.2	2419.2	2419.2	2409.6	2403.1	2393.5	2377.3	2361.2	2345.2	2329.1	2322.7
10°	2419.2	2419.2	2416.0	2403.1	2396.7	2377.3	2361.2	2338.7	2316.2	2293.7	2287.4
12.5°	2409.6	2412.7	2406.3	2393.5	2377.3	2354.9	2332.4	2303.4	2277.6	2251.9	2239.0
15°	2396.7	2393.5	2387.1	2371.0	2351.6	2322.7	2300.1	2268.0	2232.6	2200.4	2187.5
17.5°	2364.5	2364.5	2354.9	2338.7	2313.0	2280.9	2245.5	2210.0	2171.5	2136.2	2120.0
20°	2322.7	2322.7	2309.9	2290.5	2264.8	2223.0	2184.4	2142.5	2097.4	2062.1	2046.1
22.5°	2261.5	2264.8	2248.6	2226.1	2197.3	2148.9	2110.3	2058.8	2013.8	1972.0	1959.1
25°	2181.2	2187.5	2171.5	2148.9	2110.3	2068.6	2020.3	1972.0	1920.6	1878.8	1859.4
27.5°	2087.8	2091.1	2074.9	2052.5	2013.8	1968.8	1920.6	1869.1	1820.8	1775.8	1756.5
30°	1985.0	1972.0	1965.6	1936.6	1894.9	1856.3	1801.5	1759.7	1708.2	1669.6	1647.1
32.5°	1840.1	1846.5	1827.3	1804.8	1772.5	1727.6	1682.6	1634.2	1586.0	1557.0	1541.0
35°	1695.3	1701.8	1692.2	1669.6	1634.2	1595.6	1550.6	1515.2	1473.4	1438.0	1421.9
37.5°	1544.1	1544.1	1537.7	1524.9	1499.1	1463.8	1418.7	1383.3	1347.9	1318.9	1309.3
40°	1392.9	1386.5	1383.3	1373.7	1351.2	1318.9	1290.1	1261.1	1225.7	1206.4	1193.5
42.5°	1245.0	1245.0	1238.6	1229.0	1206.4	1190.2	1161.4	1129.1	1103.4	1084.1	1084.1
45°	1109.9	1113.1	1103.4	1097.0	1084.1	1058.4	1032.7	1010.2	987.7	974.8	968.3
47.5°	990.8	990.8	981.2	974.8	961.9	939.3	916.8	897.6	881.5	871.8	868.6
50°	878.2	878.2	878.2	862.2	846.1	830.0	813.9	791.4	781.7	775.4	772.1
52.5°	781.7	778.5	778.5	765.6	749.5	730.3	714.1	694.9	685.3	678.8	682.0
55°	694.9	694.9	691.6	675.5	659.5	640.2	624.2	608.0	601.6	595.2	598.3
56°	659.5	659.5	656.3	643.4	624.2	608.0	588.7	572.7	562.9	566.2	566.2
57°	633.8	627.3	627.3	611.3	595.2	572.7	556.6	540.4	534.1	530.8	530.8
58°	601.6	598.3	595.2	579.1	562.9	543.7	527.6	511.5	501.8	501.8	498.6
59°	569.4	569.4	562.9	550.1	534.1	514.7	498.6	482.6	473.0	469.7	469.7
60°	540.4	543.7	534.1	521.2	508.3	485.7	466.5	453.6	444.0	440.7	440.7
61°	514.7	514.7	508.3	492.2	476.1	460.1	440.7	424.6	418.2	411.7	411.7
62°	492.2	485.7	482.6	466.5	450.4	431.1	415.0	398.9	389.2	382.9	386.0
63°	463.2	460.1	453.6	440.7	424.6	405.4	386.0	373.1	363.5	353.9	357.1
64°	440.7	437.5	427.9	415.0	398.9	379.6	360.3	347.4	341.0	331.4	328.1
65°	411.7	408.6	405.4	389.2	373.1	353.9	337.8	324.9	315.3	308.9	302.4
66°	386.0	389.2	382.9	370.0	350.6	334.5	312.0	299.2	292.8	283.0	276.7
67°	363.5	363.5	357.1	344.3	324.9	308.9	292.8	276.7	267.0	257.4	254.2
67.5°	350.6	350.6	344.3	328.1	315.3	295.9	279.9	267.0	254.2	247.7	241.3
68°	337.8	337.8	334.5	321.8	305.6	286.3	270.3	254.2	241.3	231.7	228.4
69°	315.3	318.5	312.0	299.2	283.0	263.8	247.7	234.8	221.9	212.3	205.9
70°	295.9	292.8	286.3	273.4	257.4	244.5	228.4	212.3	199.4	186.6	183.3
71°	270.3	270.3	263.8	254.2	238.0	221.9	205.9	193.1	180.2	164.1	160.8
72°	250.9	250.9	244.5	231.7	218.8	202.7	186.6	170.6	160.8	144.7	138.3
72.5°	238.0	241.3	234.8	221.9	209.1	189.8	176.9	164.1	148.0	135.1	128.7
73°	231.7	228.4	225.2	212.3	196.2	183.3	167.3	154.4	138.3	125.5	119.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	144.7	144.7	141.6	128.7	115.8	103.0	90.1	77.2	64.4	51.5	45.0
80°	99.7	103.0	96.5	90.1	80.5	67.6	54.7	45.0	32.1	25.7	19.4
82.5°	64.4	64.4	61.1	54.7	48.2	38.6	32.1	22.5	16.1	12.9	9.6
85°	32.1	35.4	32.1	29.0	22.5	19.4	16.1	9.6	6.5	3.2	3.2
87.5°	12.9	12.9	12.9	9.6	9.6	6.5	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°	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2	2374.2
2.5°	2364.5	2364.5	2358.1	2354.9	2351.6	2348.5	2345.2	2342.0	2342.0	2345.2
5°	2345.2	2338.7	2325.9	2322.7	2313.0	2309.9	2303.4	2300.1	2303.4	2300.1
7.5°	2316.2	2303.4	2287.4	2280.9	2268.0	2261.5	2251.9	2251.9	2245.5	2248.6
10°	2277.6	2258.4	2239.0	2226.1	2216.5	2206.9	2200.4	2194.0	2190.8	2190.8
12.5°	2229.4	2206.9	2187.5	2168.3	2152.2	2145.8	2132.9	2132.9	2126.4	2123.2
15°	2174.7	2145.8	2123.2	2103.9	2091.1	2078.2	2068.6	2062.1	2055.7	2055.7
17.5°	2103.9	2078.2	2055.7	2033.2	2013.8	2004.2	1994.6	1985.0	1985.0	1978.5
20°	2026.7	1997.7	1978.5	1956.0	1939.9	1923.7	1910.9	1910.9	1904.5	1907.6
22.5°	1939.9	1904.5	1885.1	1869.1	1853.0	1840.1	1827.3	1827.3	1824.0	1820.8
25°	1843.4	1814.4	1791.9	1772.5	1762.9	1750.1	1746.8	1740.4	1737.2	1737.2
27.5°	1740.4	1717.9	1688.9	1679.3	1666.4	1660.0	1660.0	1656.7	1650.3	1653.6
30°	1631.1	1605.3	1589.2	1582.7	1569.9	1569.9	1566.7	1560.2	1560.2	1563.5
32.5°	1524.9	1499.1	1486.3	1483.0	1470.1	1470.1	1467.0	1470.1	1470.1	1473.4
35°	1409.0	1386.5	1383.3	1373.7	1370.4	1370.4	1370.4	1376.9	1383.3	1373.7
37.5°	1299.7	1283.6	1274.0	1270.7	1274.0	1274.0	1277.2	1286.8	1283.6	1280.3
40°	1187.1	1174.2	1167.7	1167.7	1174.2	1180.6	1180.6	1190.2	1193.5	1190.2
42.5°	1074.5	1064.8	1064.8	1068.0	1074.5	1077.8	1087.4	1097.0	1100.3	1103.4
45°	968.3	968.3	968.3	971.6	974.8	981.2	994.1	1003.7	1006.9	1010.2
47.5°	865.3	862.2	871.8	875.1	884.7	887.8	897.6	910.4	913.6	916.8
50°	768.9	775.4	778.5	788.1	794.6	794.6	807.5	813.9	823.6	823.6
52.5°	678.8	688.4	691.6	701.3	704.5	707.8	714.1	723.9	730.3	730.3
55°	598.3	601.6	608.0	611.3	620.9	624.2	630.5	633.8	643.4	640.2
56°	562.9	569.4	572.7	579.1	585.4	588.7	595.2	598.3	604.8	608.0
57°	530.8	534.1	543.7	546.9	553.3	553.3	556.6	566.2	566.2	569.4
58°	498.6	505.1	508.3	511.5	518.0	521.2	527.6	530.8	534.1	530.8
59°	469.7	473.0	476.1	476.1	482.6	482.6	492.2	498.6	501.8	501.8
60°	440.7	440.7	444.0	447.1	453.6	456.8	456.8	463.2	463.2	463.2
61°	411.7	411.7	415.0	418.2	421.5	421.5	427.9	427.9	431.1	434.2
62°	386.0	382.9	382.9	386.0	386.0	392.5	395.7	398.9	402.1	398.9
63°	357.1	353.9	353.9	353.9	353.9	360.3	360.3	363.5	370.0	366.8
64°	324.9	324.9	324.9	324.9	328.1	328.1	334.5	337.8	341.0	344.3
65°	302.4	295.9	292.8	292.8	295.9	299.2	302.4	305.6	308.9	308.9
66°	276.7	270.3	267.0	267.0	267.0	267.0	273.4	273.4	279.9	279.9
67°	247.7	241.3	238.0	234.8	234.8	234.8	244.5	241.3	241.3	241.3
67.5°	238.0	228.4	225.2	221.9	218.8	225.2	221.9	225.2	225.2	221.9
68°	225.2	218.8	212.3	205.9	205.9	205.9	209.1	212.3	209.1	205.9
69°	199.4	196.2	186.6	180.2	176.9	180.2	176.9	180.2	176.9	180.2
70°	176.9	167.3	157.7	154.4	151.2	151.2	151.2	148.0	151.2	148.0
71°	154.4	144.7	135.1	128.7	125.5	125.5	122.2	125.5	122.2	125.5
72°	131.8	122.2	109.3	103.0	103.0	103.0	103.0	99.7	103.0	99.7
72.5°	122.2	109.3	99.7	93.3	90.1	90.1	90.1	90.1	86.8	90.1
73°	112.6	99.7	86.8	83.6	83.6	83.6	80.5	77.2	80.5	80.5



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	38.6	29.0	25.7	25.7	25.7	25.7	25.7	25.7	22.5	22.5
80°	16.1	12.9	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6
82.5°	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
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°	209.1	209.1	202.7	193.1	176.9	160.8	148.0	135.1	119.1	103.0	96.5
75°	193.1	189.8	183.3	173.7	160.8	144.7	131.8	115.8	103.0	86.8	80.5





74°	93.3	77.2	70.7	64.4	64.4	64.4	61.1	61.1	61.1	64.4
75°	74.0	61.1	54.7	48.2	51.5	48.2	51.5	48.2	48.2	48.2



(END OF REPORT)