

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: P584991

Luminaire Tested: **HC855D010-HM82555927-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584991
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-HM82555927-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4051.9 lumens
Efficiency: N/A
Efficacy: 77.9 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

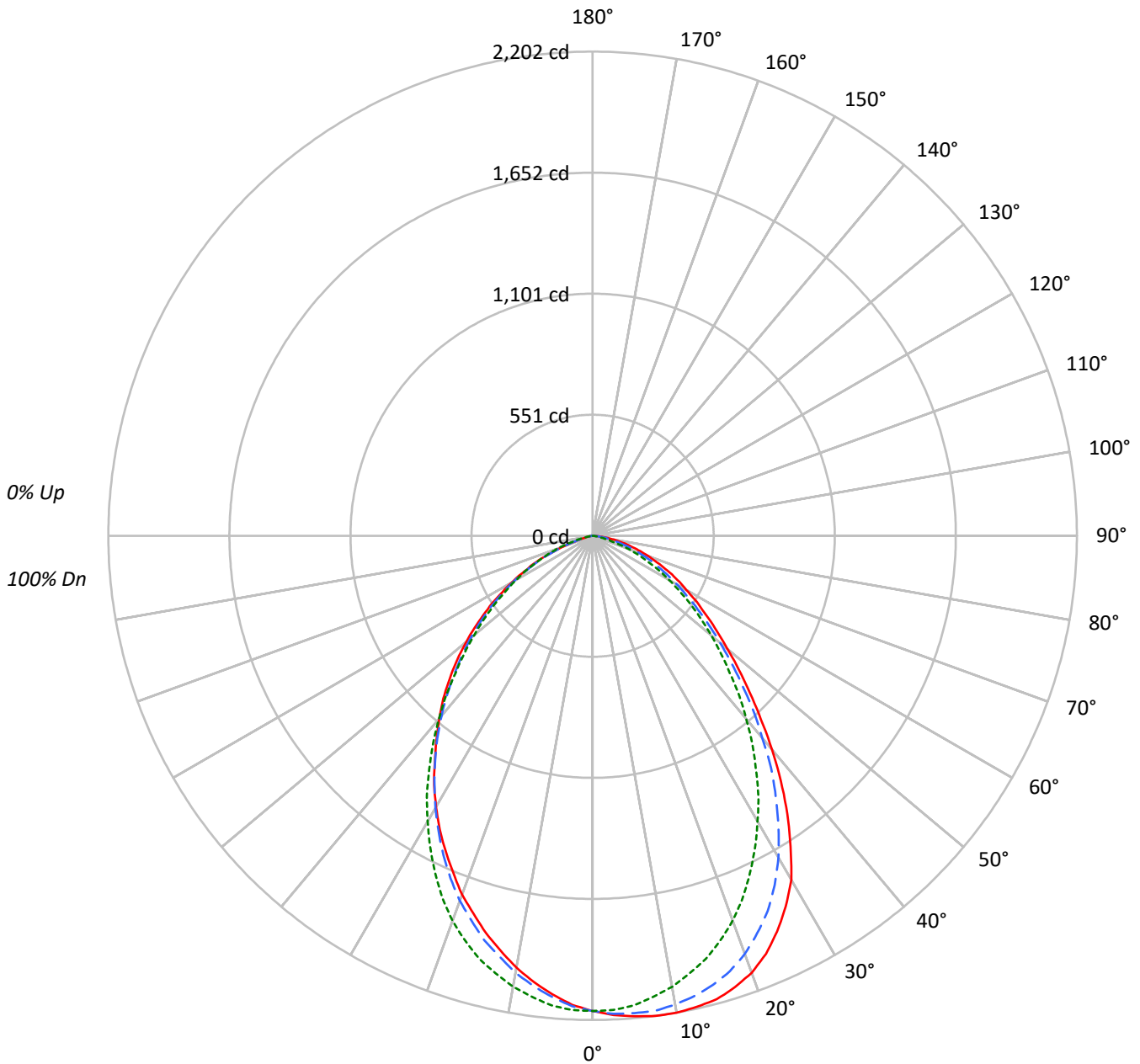
Input Watts (W): 52
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	66650	66650	66650
5°	67901	66359	64818
10°	68962	65201	62449
15°	69655	63577	59743
20°	69388	61125	56990
25°	67558	57596	53809
30°	64341	53392	50683
35°	58100	48730	47074
40°	51046	43740	43619
45°	44063	38446	40103
50°	38354	33715	35965
55°	34010	29284	31332
60°	30343	24743	26007
65°	27355	20087	20518
70°	24289	15048	12144
75°	20933	8721	5230
80°	16124	3125	1563
85°	10367	1026	1026



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	202.9	5.0
10°-20°	564.8	13.9
20°-30°	798.9	19.7
30°-40°	841.8	20.8
40°-50°	715.4	17.7
50°-60°	515.2	12.7
60°-70°	297.2	7.3
70°-80°	101.7	2.5
80°-90°	14.0	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°	1566.6	38.7
0°-40°	2408.4	59.4
0°-60°	3639.0	89.8
0°-90°	4051.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4051.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2161	2161	2161	2161	2161	
5°	2194	2179	2144	2106	2094	210
15°	2182	2114	1992	1904	1871	614
25°	1986	1883	1693	1605	1582	911
35°	1543	1453	1294	1248	1250	961
45°	1010	964	882	887	920	785
55°	633	583	545	565	583	569
65°	375	322	275	269	281	373
75°	176	132	73	47	44	185
85°	29	18	3	3	3	39
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°	2161.4	2161.4	2161.4	2161.4	2161.4	2161.4	2161.4	2161.4	2161.4	2161.4	2161.4
2.5°	2181.9	2184.8	2181.9	2181.9	2179.0	2176.1	2173.1	2170.2	2164.3	2158.5	2158.5
5°	2193.6	2199.5	2193.6	2193.6	2184.8	2179.0	2173.1	2164.3	2152.6	2143.8	2143.8
7.5°	2202.4	2202.4	2202.4	2193.6	2187.8	2179.0	2164.3	2149.7	2135.0	2120.4	2114.5
10°	2202.4	2202.4	2199.5	2187.8	2181.9	2164.3	2149.7	2129.2	2108.7	2088.2	2082.3
12.5°	2193.6	2196.6	2190.7	2179.0	2164.3	2143.8	2123.3	2096.9	2073.5	2050.1	2038.3
15°	2181.9	2179.0	2173.1	2158.5	2140.9	2114.5	2094.0	2064.7	2032.5	2003.2	1991.5
17.5°	2152.6	2152.6	2143.8	2129.2	2105.7	2076.4	2044.2	2012.0	1976.8	1944.7	1930.0
20°	2114.5	2114.5	2102.8	2085.2	2061.8	2023.7	1988.5	1950.6	1909.5	1877.3	1862.7
22.5°	2058.9	2061.8	2047.1	2026.6	2000.3	1956.4	1921.3	1874.4	1833.4	1795.3	1783.5
25°	1985.6	1991.5	1976.8	1956.4	1921.3	1883.2	1839.2	1795.3	1748.4	1710.3	1692.8
27.5°	1900.7	1903.7	1889.0	1868.5	1833.4	1792.3	1748.4	1701.5	1657.7	1616.7	1599.1
30°	1807.0	1795.3	1789.4	1763.0	1724.9	1689.9	1640.1	1602.0	1555.1	1520.0	1499.5
32.5°	1675.3	1681.1	1663.5	1643.0	1613.7	1572.7	1531.7	1487.7	1443.8	1417.5	1402.9
35°	1543.4	1549.3	1540.5	1520.0	1487.7	1452.6	1411.7	1379.4	1341.4	1309.1	1294.5
37.5°	1405.8	1405.8	1400.0	1388.2	1364.8	1332.6	1291.5	1259.3	1227.1	1200.7	1191.9
40°	1268.1	1262.2	1259.3	1250.5	1230.0	1200.7	1174.5	1148.1	1115.9	1098.3	1086.6
42.5°	1133.4	1133.4	1127.6	1118.8	1098.3	1083.6	1057.3	1028.0	1004.5	986.9	986.9
45°	1010.4	1013.3	1004.5	998.7	986.9	963.5	940.1	919.6	899.2	887.4	881.6
47.5°	902.1	902.1	893.3	887.4	875.7	855.2	834.7	817.1	802.5	793.7	790.7
50°	799.5	799.5	799.5	784.9	770.2	755.6	740.9	720.4	711.6	705.8	702.8
52.5°	711.6	708.7	708.7	697.0	682.3	664.8	650.2	632.6	623.9	618.0	620.9
55°	632.6	632.6	629.7	615.1	600.4	582.8	568.2	553.5	547.7	541.8	544.7
56°	600.4	600.4	597.5	585.8	568.2	553.5	536.0	521.3	512.5	515.4	515.4
57°	577.0	571.1	571.1	556.5	541.8	521.3	506.7	492.0	486.1	483.2	483.2
58°	547.7	544.7	541.8	527.2	512.5	494.9	480.3	465.6	456.8	456.8	453.9
59°	518.4	518.4	512.5	500.8	486.1	468.6	453.9	439.3	430.5	427.5	427.5
60°	492.0	494.9	486.1	474.4	462.7	442.2	424.6	412.9	404.1	401.2	401.2
61°	468.6	468.6	462.7	448.1	433.4	418.8	401.2	386.6	380.8	374.9	374.9
62°	448.1	442.2	439.3	424.6	410.0	392.5	377.9	363.2	354.4	348.6	351.5
63°	421.7	418.8	412.9	401.2	386.6	369.1	351.5	339.8	331.0	322.2	325.1
64°	401.2	398.2	389.6	377.9	363.2	345.6	328.0	316.3	310.5	301.7	298.7
65°	374.9	372.0	369.1	354.4	339.8	322.2	307.5	295.8	287.0	281.2	275.3
66°	351.5	354.4	348.6	336.8	319.3	304.6	284.1	272.4	266.5	257.7	251.9
67°	331.0	331.0	325.1	313.4	295.8	281.2	266.5	251.9	243.1	234.3	231.4
67.5°	319.3	319.3	313.4	298.7	287.0	269.4	254.8	243.1	231.4	225.5	219.6
68°	307.5	307.5	304.6	292.9	278.2	260.7	246.0	231.4	219.6	210.8	207.9
69°	287.0	290.0	284.1	272.4	257.7	240.1	225.5	213.8	202.1	193.3	187.4
70°	269.4	266.5	260.7	248.9	234.3	222.6	207.9	193.3	181.5	169.8	166.9
71°	246.0	246.0	240.1	231.4	216.7	202.1	187.4	175.7	164.0	149.3	146.4
72°	228.4	228.4	222.6	210.8	199.1	184.5	169.8	155.2	146.4	131.7	126.0
72.5°	216.7	219.6	213.8	202.1	190.3	172.8	161.0	149.3	134.7	123.1	117.2
73°	210.8	207.9	205.0	193.3	178.6	166.9	152.2	140.5	126.0	114.3	108.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	131.7	131.7	128.9	117.2	105.5	93.8	82.0	70.3	58.6	46.9	41.0
80°	90.8	93.8	87.9	82.0	73.2	61.5	49.8	41.0	29.3	23.4	17.6
82.5°	58.6	58.6	55.7	49.8	43.9	35.2	29.3	20.5	14.6	11.7	8.8
85°	29.3	32.2	29.3	26.4	20.5	17.6	14.6	8.8	5.9	2.9	2.9
87.5°	11.7	11.7	11.7	8.8	8.8	5.9	2.9	2.9	2.9	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°	2161.4	2161.4	2161.4	2161.4	2161.4	2161.4	2161.4	2161.4	2161.4	2161.4
2.5°	2152.6	2152.6	2146.8	2143.8	2140.9	2138.0	2135.0	2132.1	2132.1	2135.0
5°	2135.0	2129.2	2117.5	2114.5	2105.7	2102.8	2096.9	2094.0	2096.9	2094.0
7.5°	2108.7	2096.9	2082.3	2076.4	2064.7	2058.9	2050.1	2050.1	2044.2	2047.1
10°	2073.5	2055.9	2038.3	2026.6	2017.8	2009.0	2003.2	1997.3	1994.4	1994.4
12.5°	2029.6	2009.0	1991.5	1973.9	1959.3	1953.5	1941.8	1941.8	1935.9	1933.0
15°	1979.7	1953.5	1933.0	1915.4	1903.7	1892.0	1883.2	1877.3	1871.4	1871.4
17.5°	1915.4	1892.0	1871.4	1850.9	1833.4	1824.6	1815.8	1807.0	1807.0	1801.1
20°	1845.1	1818.7	1801.1	1780.6	1766.0	1751.3	1739.6	1739.6	1733.7	1736.7
22.5°	1766.0	1733.7	1716.2	1701.5	1687.0	1675.3	1663.5	1663.5	1660.6	1657.7
25°	1678.2	1651.8	1631.3	1613.7	1604.9	1593.2	1590.3	1584.4	1581.5	1581.5
27.5°	1584.4	1563.9	1537.5	1528.8	1517.0	1511.2	1511.2	1508.2	1502.4	1505.3
30°	1484.8	1461.4	1446.7	1440.9	1429.3	1429.3	1426.3	1420.5	1420.5	1423.4
32.5°	1388.2	1364.8	1353.1	1350.1	1338.4	1338.4	1335.5	1338.4	1338.4	1341.4
35°	1282.8	1262.2	1259.3	1250.5	1247.6	1247.6	1247.6	1253.5	1259.3	1250.5
37.5°	1183.1	1168.6	1159.8	1156.9	1159.8	1159.8	1162.7	1171.5	1168.6	1165.7
40°	1080.7	1069.0	1063.1	1063.1	1069.0	1074.8	1074.8	1083.6	1086.6	1083.6
42.5°	978.2	969.4	969.4	972.3	978.2	981.1	989.9	998.7	1001.6	1004.5
45°	881.6	881.6	881.6	884.5	887.4	893.3	905.0	913.8	916.6	919.6
47.5°	787.8	784.9	793.7	796.6	805.4	808.3	817.1	828.8	831.8	834.7
50°	699.9	705.8	708.7	717.5	723.4	723.4	735.1	740.9	749.7	749.7
52.5°	618.0	626.8	629.7	638.5	641.4	644.4	650.2	658.9	664.8	664.8
55°	544.7	547.7	553.5	556.5	565.3	568.2	574.0	577.0	585.8	582.8
56°	512.5	518.4	521.3	527.2	533.0	536.0	541.8	544.7	550.6	553.5
57°	483.2	486.1	494.9	497.9	503.7	503.7	506.7	515.4	515.4	518.4
58°	453.9	459.8	462.7	465.6	471.5	474.4	480.3	483.2	486.1	483.2
59°	427.5	430.5	433.4	433.4	439.3	439.3	448.1	453.9	456.8	456.8
60°	401.2	401.2	404.1	407.0	412.9	415.8	415.8	421.7	421.7	421.7
61°	374.9	374.9	377.9	380.8	383.7	383.7	389.6	389.6	392.5	395.3
62°	351.5	348.6	348.6	351.5	351.5	357.3	360.3	363.2	366.1	363.2
63°	325.1	322.2	322.2	322.2	322.2	328.0	328.0	331.0	336.8	333.9
64°	295.8	295.8	295.8	295.8	298.7	298.7	304.6	307.5	310.5	313.4
65°	275.3	269.4	266.5	266.5	269.4	272.4	275.3	278.2	281.2	281.2
66°	251.9	246.0	243.1	243.1	243.1	243.1	248.9	248.9	254.8	254.8
67°	225.5	219.6	216.7	213.8	213.8	213.8	222.6	219.6	219.6	219.6
67.5°	216.7	207.9	205.0	202.1	199.1	205.0	202.1	205.0	205.0	202.1
68°	205.0	199.1	193.3	187.4	187.4	187.4	190.3	193.3	190.3	187.4
69°	181.5	178.6	169.8	164.0	161.0	164.0	161.0	164.0	161.0	164.0
70°	161.0	152.2	143.5	140.5	137.6	137.6	137.6	134.7	137.6	134.7
71°	140.5	131.7	123.1	117.2	114.3	114.3	111.3	114.3	111.3	114.3
72°	120.1	111.3	99.6	93.8	93.8	93.8	93.8	90.8	93.8	90.8
72.5°	111.3	99.6	90.8	85.0	82.0	82.0	82.0	82.0	79.1	82.0
73°	102.6	90.8	79.1	76.2	76.2	76.2	73.2	70.3	73.2	73.2



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	35.2	26.4	23.4	23.4	23.4	23.4	23.4	23.4	20.5	20.5
80°	14.6	11.7	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
82.5°	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
85°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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°	190.3	190.3	184.5	175.7	161.0	146.4	134.7	123.1	108.4	93.8	87.9
75°	175.7	172.8	166.9	158.1	146.4	131.7	120.1	105.5	93.8	79.1	73.2





74°	85.0	70.3	64.5	58.6	58.6	58.6	55.7	55.7	55.7	58.6
75°	67.4	55.7	49.8	43.9	46.9	43.9	46.9	43.9	43.9	43.9



(END OF REPORT)