

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: P584396

Luminaire Tested: **HC835D010-HM82555830-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584396
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: HC835D010-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: 3608.6 lumens
Efficiency: N/A
Efficacy: 107.1 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

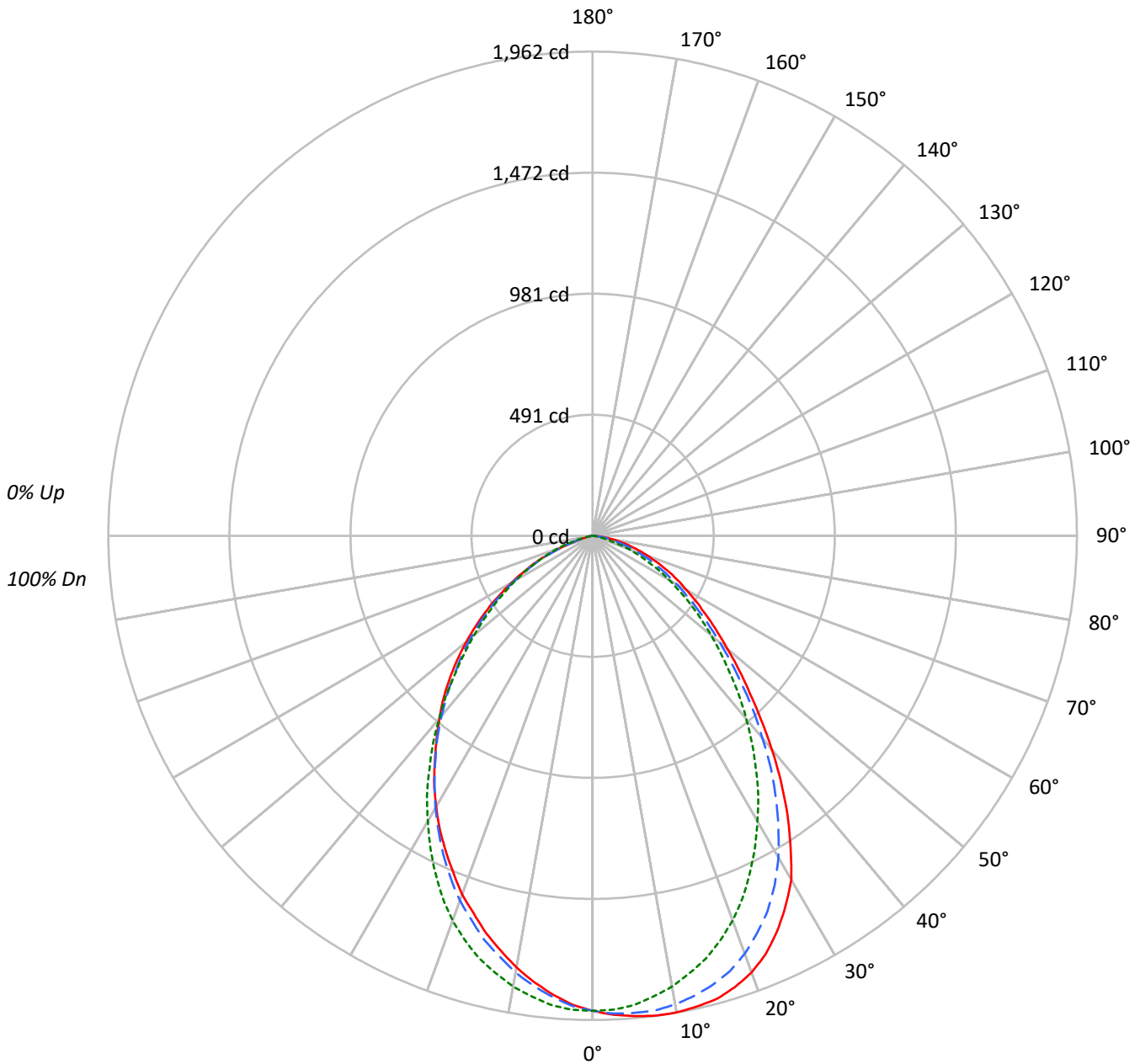
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				
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°	59357	59357	59357
5°	60472	59101	57726
10°	61419	58068	55620
15°	62035	56621	53208
20°	61801	54437	50755
25°	60172	51295	47923
30°	57302	47549	45135
35°	51746	43396	41928
40°	45463	38950	38849
45°	39239	34233	35716
50°	34161	30031	32036
55°	30289	26085	27908
60°	27025	22042	23164
65°	24363	17891	18270
70°	21638	13407	10819
75°	18646	7768	4670
80°	14366	2788	1385
85°	9234	920	920



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	180.7	5.0
10°-20°	503.0	13.9
20°-30°	711.5	19.7
30°-40°	749.7	20.8
40°-50°	637.2	17.7
50°-60°	458.8	12.7
60°-70°	264.7	7.3
70°-80°	90.6	2.5
80°-90°	12.5	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°	1395.2	38.7
0°-40°	2145.0	59.4
0°-60°	3241.0	89.8
0°-90°	3608.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3608.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1925	1925	1925	1925	1925	
5°	1954	1941	1909	1875	1865	187
15°	1943	1883	1774	1695	1667	547
25°	1768	1677	1508	1429	1408	811
35°	1375	1294	1153	1111	1114	856
45°	900	858	785	790	819	699
55°	563	519	485	503	519	507
65°	334	287	245	240	250	332
75°	156	117	65	42	39	165
85°	26	16	3	3	3	35
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°	1924.9	1924.9	1924.9	1924.9	1924.9	1924.9	1924.9	1924.9	1924.9	1924.9	1924.9
2.5°	1943.2	1945.8	1943.2	1943.2	1940.6	1938.0	1935.4	1932.7	1927.6	1922.3	1922.3
5°	1953.6	1958.8	1953.6	1953.6	1945.8	1940.6	1935.4	1927.6	1917.2	1909.3	1909.3
7.5°	1961.5	1961.5	1961.5	1953.6	1948.4	1940.6	1927.6	1914.5	1901.5	1888.4	1883.3
10°	1961.5	1961.5	1958.8	1948.4	1943.2	1927.6	1914.5	1896.2	1878.0	1859.8	1854.5
12.5°	1953.6	1956.2	1951.1	1940.6	1927.6	1909.3	1891.0	1867.6	1846.7	1825.9	1815.3
15°	1943.2	1940.6	1935.4	1922.3	1906.7	1883.3	1864.9	1838.8	1810.2	1784.1	1773.6
17.5°	1917.2	1917.2	1909.3	1896.2	1875.3	1849.4	1820.6	1792.0	1760.6	1731.9	1718.9
20°	1883.3	1883.3	1872.7	1857.1	1836.3	1802.4	1771.0	1737.1	1700.6	1671.9	1658.9
22.5°	1833.7	1836.3	1823.2	1804.9	1781.4	1742.4	1711.1	1669.3	1632.8	1598.9	1588.4
25°	1768.5	1773.6	1760.6	1742.4	1711.1	1677.2	1638.0	1598.9	1557.2	1523.3	1507.6
27.5°	1692.8	1695.4	1682.4	1664.1	1632.8	1596.3	1557.2	1515.5	1476.3	1439.8	1424.2
30°	1609.3	1598.9	1593.7	1570.2	1536.3	1505.0	1460.6	1426.7	1385.0	1353.7	1335.4
32.5°	1492.0	1497.1	1481.6	1463.2	1437.1	1400.7	1364.2	1325.0	1285.9	1262.5	1249.4
35°	1374.6	1379.9	1371.9	1353.7	1325.0	1293.7	1257.2	1228.5	1194.6	1165.9	1152.8
37.5°	1252.0	1252.0	1246.8	1236.3	1215.5	1186.7	1150.3	1121.6	1092.9	1069.5	1061.5
40°	1129.4	1124.2	1121.6	1113.8	1095.5	1069.5	1046.0	1022.5	993.7	978.2	967.6
42.5°	1009.4	1009.4	1004.2	996.4	978.2	965.1	941.6	915.5	894.7	879.0	879.0
45°	899.8	902.5	894.7	889.4	879.0	858.1	837.3	819.0	800.7	790.3	785.0
47.5°	803.4	803.4	795.6	790.3	779.9	761.6	743.4	727.7	714.7	706.8	704.3
50°	712.1	712.1	712.1	699.0	686.0	672.9	659.9	641.6	633.9	628.6	626.0
52.5°	633.9	631.2	631.2	620.8	607.7	592.1	579.0	563.4	555.5	550.4	553.0
55°	563.4	563.4	560.8	547.7	534.7	519.1	506.0	493.0	487.7	482.6	485.2
56°	534.7	534.7	532.2	521.6	506.0	493.0	477.3	464.2	456.4	459.1	459.1
57°	513.8	508.7	508.7	495.6	482.6	464.2	451.3	438.2	433.0	430.3	430.3
58°	487.7	485.2	482.6	469.5	456.4	440.9	427.8	414.7	406.8	406.8	404.3
59°	461.7	461.7	456.4	446.0	433.0	417.4	404.3	391.3	383.5	380.8	380.8
60°	438.2	440.9	433.0	422.5	412.1	393.9	378.2	367.8	360.0	357.4	357.4
61°	417.4	417.4	412.1	399.1	386.0	372.9	357.4	344.3	339.0	333.9	333.9
62°	399.1	393.9	391.3	378.2	365.2	349.5	336.5	323.5	315.6	310.4	313.0
63°	375.6	372.9	367.8	357.4	344.3	328.6	313.0	302.6	294.7	286.9	289.6
64°	357.4	354.7	346.9	336.5	323.5	307.8	292.1	281.6	276.5	268.7	266.1
65°	333.9	331.2	328.6	315.6	302.6	286.9	273.9	263.4	255.7	250.4	245.2
66°	313.0	315.6	310.4	300.0	284.3	271.2	253.0	242.6	237.3	229.5	224.3
67°	294.7	294.7	289.6	279.1	263.4	250.4	237.3	224.3	216.5	208.7	206.1
67.5°	284.3	284.3	279.1	266.1	255.7	240.0	226.9	216.5	206.1	200.8	195.6
68°	273.9	273.9	271.2	260.8	247.7	232.2	219.1	206.1	195.6	187.8	185.2
69°	255.7	258.2	253.0	242.6	229.5	213.8	200.8	190.4	179.9	172.2	166.9
70°	240.0	237.3	232.2	221.7	208.7	198.3	185.2	172.2	161.7	151.3	148.7
71°	219.1	219.1	213.8	206.1	193.0	179.9	166.9	156.5	146.0	133.0	130.5
72°	203.4	203.4	198.3	187.8	177.4	164.4	151.3	138.2	130.5	117.4	112.1
72.5°	193.0	195.6	190.4	179.9	169.5	153.9	143.4	133.0	120.0	109.5	104.3
73°	187.8	185.2	182.6	172.2	159.1	148.7	135.6	125.2	112.1	101.7	96.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	117.4	117.4	114.8	104.3	93.9	83.5	73.1	62.7	52.1	41.7	36.5
80°	80.9	83.5	78.2	73.1	65.2	54.7	44.3	36.5	26.1	20.8	15.7
82.5°	52.1	52.1	49.6	44.3	39.2	31.3	26.1	18.2	13.1	10.4	7.8
85°	26.1	28.6	26.1	23.5	18.2	15.7	13.1	7.8	5.3	2.6	2.6
87.5°	10.4	10.4	10.4	7.8	7.8	5.3	2.6	2.6	2.6	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°	1924.9	1924.9	1924.9	1924.9	1924.9	1924.9	1924.9	1924.9	1924.9	1924.9
2.5°	1917.2	1917.2	1911.9	1909.3	1906.7	1904.1	1901.5	1898.8	1898.8	1901.5
5°	1901.5	1896.2	1885.8	1883.3	1875.3	1872.7	1867.6	1864.9	1867.6	1864.9
7.5°	1878.0	1867.6	1854.5	1849.4	1838.8	1833.7	1825.9	1825.9	1820.6	1823.2
10°	1846.7	1831.0	1815.3	1804.9	1797.1	1789.3	1784.1	1778.9	1776.3	1776.3
12.5°	1807.5	1789.3	1773.6	1757.9	1745.0	1739.7	1729.3	1729.3	1724.0	1721.5
15°	1763.2	1739.7	1721.5	1705.8	1695.4	1685.0	1677.2	1671.9	1666.7	1666.7
17.5°	1705.8	1685.0	1666.7	1648.4	1632.8	1625.0	1617.2	1609.3	1609.3	1604.1
20°	1643.3	1619.8	1604.1	1585.9	1572.9	1559.8	1549.4	1549.4	1544.1	1546.7
22.5°	1572.9	1544.1	1528.5	1515.5	1502.4	1492.0	1481.6	1481.6	1478.9	1476.3
25°	1494.5	1471.1	1452.8	1437.1	1429.3	1418.9	1416.3	1411.1	1408.5	1408.5
27.5°	1411.1	1392.8	1369.3	1361.5	1351.1	1345.8	1345.8	1343.3	1338.0	1340.7
30°	1322.5	1301.5	1288.4	1283.3	1272.9	1272.9	1270.2	1265.1	1265.1	1267.6
32.5°	1236.3	1215.5	1205.1	1202.4	1192.0	1192.0	1189.4	1192.0	1192.0	1194.6
35°	1142.4	1124.2	1121.6	1113.8	1111.1	1111.1	1111.1	1116.4	1121.6	1113.8
37.5°	1053.8	1040.7	1032.9	1030.3	1032.9	1032.9	1035.6	1043.3	1040.7	1038.1
40°	962.5	952.1	946.8	946.8	952.1	957.2	957.2	965.1	967.6	965.1
42.5°	871.2	863.4	863.4	865.9	871.2	873.8	881.6	889.4	892.0	894.7
45°	785.0	785.0	785.0	787.7	790.3	795.6	806.0	813.8	816.4	819.0
47.5°	701.7	699.0	706.8	709.5	717.2	719.9	727.7	738.2	740.7	743.4
50°	623.4	628.6	631.2	639.0	644.3	644.3	654.7	659.9	667.8	667.8
52.5°	550.4	558.1	560.8	568.6	571.2	573.8	579.0	586.9	592.1	592.1
55°	485.2	487.7	493.0	495.6	503.4	506.0	511.2	513.8	521.6	519.1
56°	456.4	461.7	464.2	469.5	474.8	477.3	482.6	485.2	490.3	493.0
57°	430.3	433.0	440.9	443.4	448.7	448.7	451.3	459.1	459.1	461.7
58°	404.3	409.5	412.1	414.7	419.9	422.5	427.8	430.3	433.0	430.3
59°	380.8	383.5	386.0	386.0	391.3	391.3	399.1	404.3	406.8	406.8
60°	357.4	357.4	360.0	362.5	367.8	370.4	370.4	375.6	375.6	375.6
61°	333.9	333.9	336.5	339.0	341.7	341.7	346.9	346.9	349.5	352.1
62°	313.0	310.4	310.4	313.0	313.0	318.2	320.8	323.5	326.1	323.5
63°	289.6	286.9	286.9	286.9	286.9	292.1	292.1	294.7	300.0	297.3
64°	263.4	263.4	263.4	263.4	266.1	266.1	271.2	273.9	276.5	279.1
65°	245.2	240.0	237.3	237.3	240.0	242.6	245.2	247.7	250.4	250.4
66°	224.3	219.1	216.5	216.5	216.5	216.5	221.7	221.7	226.9	226.9
67°	200.8	195.6	193.0	190.4	190.4	190.4	198.3	195.6	195.6	195.6
67.5°	193.0	185.2	182.6	179.9	177.4	182.6	179.9	182.6	182.6	179.9
68°	182.6	177.4	172.2	166.9	166.9	166.9	169.5	172.2	169.5	166.9
69°	161.7	159.1	151.3	146.0	143.4	146.0	143.4	146.0	143.4	146.0
70°	143.4	135.6	127.8	125.2	122.6	122.6	122.6	120.0	122.6	120.0
71°	125.2	117.4	109.5	104.3	101.7	101.7	99.1	101.7	99.1	101.7
72°	107.0	99.1	88.7	83.5	83.5	83.5	83.5	80.9	83.5	80.9
72.5°	99.1	88.7	80.9	75.6	73.1	73.1	73.1	73.1	70.4	73.1
73°	91.3	80.9	70.4	67.8	67.8	67.8	65.2	62.7	65.2	65.2



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	31.3	23.5	20.8	20.8	20.8	20.8	20.8	20.8	18.2	18.2
80°	13.1	10.4	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8
82.5°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
85°	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
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°	169.5	169.5	164.4	156.5	143.4	130.5	120.0	109.5	96.6	83.5	78.2
75°	156.5	153.9	148.7	140.9	130.5	117.4	107.0	93.9	83.5	70.4	65.2





74°	75.6	62.7	57.4	52.1	52.1	52.1	49.6	49.6	49.6	52.1
75°	60.0	49.6	44.3	39.2	41.7	39.2	41.7	39.2	39.2	39.2



(END OF REPORT)