

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: P584464

Luminaire Tested: **HC835D010-HM82555930-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584464
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-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: 3548.1 lumens
Efficiency: N/A
Efficacy: 105.3 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

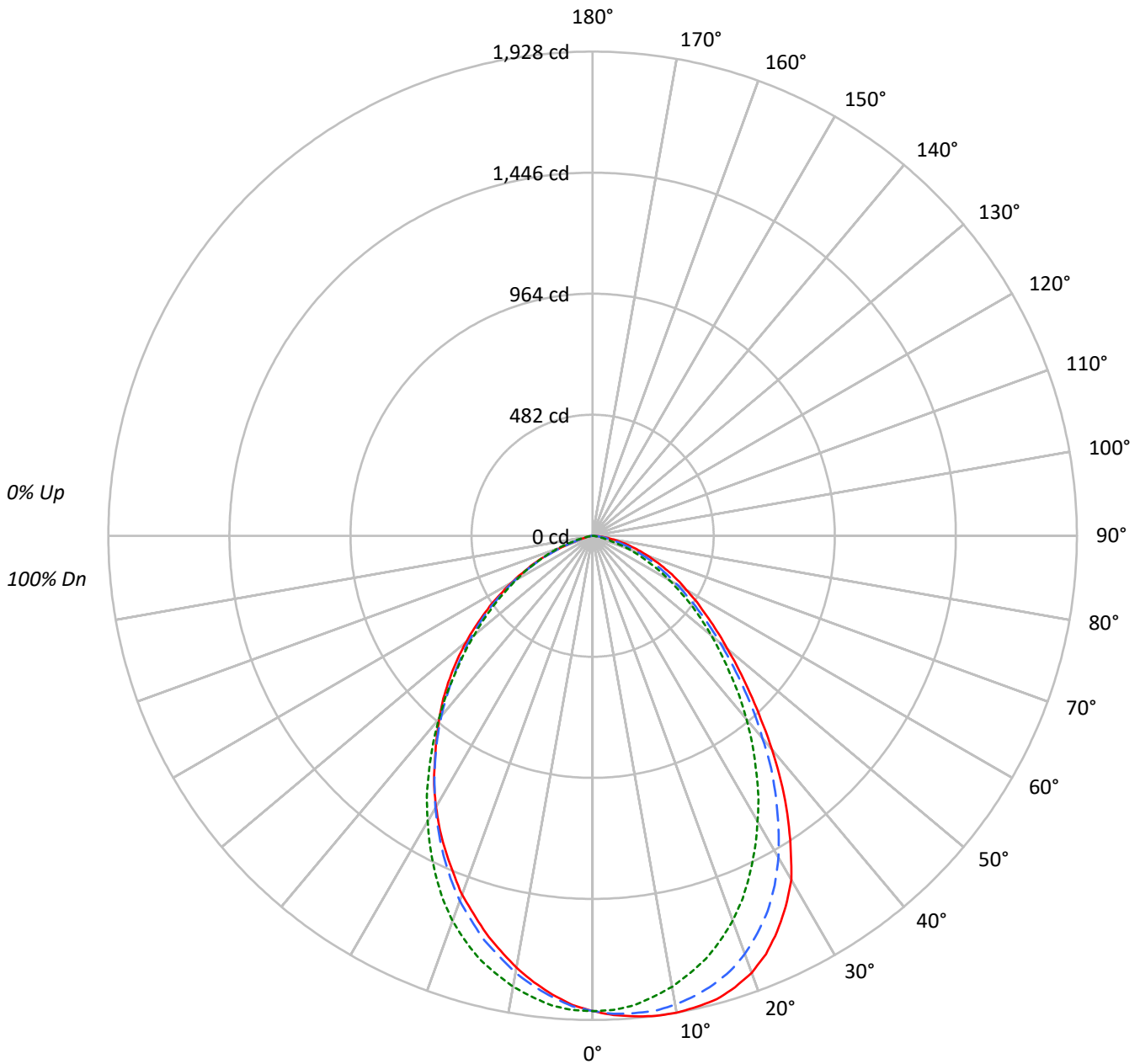
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	58361	58361	58361
5°	59460	58110	56761
10°	60385	57094	54683
15°	60994	55672	52314
20°	60761	53525	49902
25°	59161	50434	47120
30°	56340	46752	44380
35°	50880	42670	41224
40°	44698	38302	38197
45°	38581	33666	35118
50°	33586	29527	31494
55°	29784	25644	27434
60°	26569	21672	22776
65°	23954	17585	17964
70°	21269	13181	10639
75°	18324	7637	4587
80°	14118	2717	1367
85°	9057	885	885



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	177.7	5.0
10°-20°	494.6	13.9
20°-30°	699.6	19.7
30°-40°	737.1	20.8
40°-50°	626.5	17.7
50°-60°	451.1	12.7
60°-70°	260.2	7.3
70°-80°	89.0	2.5
80°-90°	12.2	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°	1371.8	38.7
0°-40°	2109.0	59.4
0°-60°	3186.6	89.8
0°-90°	3548.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3548.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1893	1893	1893	1893	1893	
5°	1921	1908	1877	1844	1834	184
15°	1911	1852	1744	1667	1639	538
25°	1739	1649	1482	1405	1385	797
35°	1352	1272	1134	1092	1095	842
45°	885	844	772	777	805	687
55°	554	510	477	495	510	498
65°	328	282	241	236	246	327
75°	154	115	64	41	38	162
85°	26	15	2	2	2	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°	1892.6	1892.6	1892.6	1892.6	1892.6	1892.6	1892.6	1892.6	1892.6	1892.6	1892.6
2.5°	1910.6	1913.2	1910.6	1910.6	1908.1	1905.4	1902.9	1900.4	1895.2	1890.1	1890.1
5°	1920.9	1926.0	1920.9	1920.9	1913.2	1908.1	1902.9	1895.2	1884.9	1877.3	1877.3
7.5°	1928.5	1928.5	1928.5	1920.9	1915.7	1908.1	1895.2	1882.4	1869.6	1856.8	1851.6
10°	1928.5	1928.5	1926.0	1915.7	1910.6	1895.2	1882.4	1864.4	1846.5	1828.5	1823.4
12.5°	1920.9	1923.4	1918.4	1908.1	1895.2	1877.3	1859.3	1836.2	1815.7	1795.2	1784.9
15°	1910.6	1908.1	1902.9	1890.1	1874.8	1851.6	1833.7	1808.0	1779.9	1754.1	1743.9
17.5°	1884.9	1884.9	1877.3	1864.4	1844.0	1818.3	1790.1	1761.9	1731.1	1702.8	1690.0
20°	1851.6	1851.6	1841.3	1826.0	1805.5	1772.1	1741.3	1708.0	1672.0	1643.9	1631.1
22.5°	1802.9	1805.5	1792.7	1774.7	1751.6	1713.1	1682.4	1641.4	1605.4	1572.1	1561.8
25°	1738.8	1743.9	1731.1	1713.1	1682.4	1649.0	1610.6	1572.1	1531.0	1497.7	1482.3
27.5°	1664.4	1667.0	1654.2	1636.2	1605.4	1569.5	1531.0	1490.1	1451.5	1415.7	1400.2
30°	1582.3	1572.1	1567.0	1543.9	1510.6	1479.8	1436.2	1402.9	1361.8	1331.0	1313.0
32.5°	1467.0	1472.1	1456.6	1438.7	1413.0	1377.2	1341.3	1302.8	1264.4	1241.2	1228.4
35°	1351.6	1356.6	1348.9	1331.0	1302.8	1272.0	1236.1	1207.9	1174.5	1146.4	1133.5
37.5°	1230.9	1230.9	1225.9	1215.6	1195.1	1166.9	1131.0	1102.8	1074.6	1051.5	1043.8
40°	1110.4	1105.3	1102.8	1095.1	1077.1	1051.5	1028.4	1005.4	977.1	961.8	951.5
42.5°	992.5	992.5	987.4	979.7	961.8	948.9	925.8	900.2	879.7	864.2	864.2
45°	884.7	887.4	879.7	874.5	864.2	843.8	823.3	805.3	787.3	777.0	772.0
47.5°	789.8	789.8	782.2	777.0	766.8	748.9	730.9	715.6	702.7	695.0	692.4
50°	700.1	700.1	700.1	687.3	674.5	661.7	648.8	630.9	623.2	618.0	615.5
52.5°	623.2	620.7	620.7	610.4	597.6	582.1	569.3	554.0	546.3	541.1	543.7
55°	554.0	554.0	551.4	538.5	525.7	510.3	497.5	484.7	479.6	474.4	477.0
56°	525.7	525.7	523.2	512.9	497.5	484.7	469.4	456.4	448.8	451.4	451.4
57°	505.2	500.0	500.0	487.2	474.4	456.4	443.6	430.8	425.8	423.1	423.1
58°	479.6	477.0	474.4	461.6	448.8	433.4	420.6	407.8	400.1	400.1	397.5
59°	453.9	453.9	448.8	438.6	425.8	410.3	397.5	384.7	377.0	374.4	374.4
60°	430.8	433.4	425.8	415.5	405.2	387.2	371.9	361.6	353.9	351.4	351.4
61°	410.3	410.3	405.2	392.3	379.5	366.7	351.4	338.6	333.4	328.3	328.3
62°	392.3	387.2	384.7	371.9	359.0	343.7	330.9	317.9	310.3	305.1	307.8
63°	369.3	366.7	361.6	351.4	338.6	323.1	307.8	297.5	289.8	282.1	284.6
64°	351.4	348.7	341.1	330.9	317.9	302.6	287.3	277.0	271.8	264.2	261.6
65°	328.3	325.7	323.1	310.3	297.5	282.1	269.3	259.0	251.3	246.2	241.0
66°	307.8	310.3	305.1	294.9	279.5	266.7	248.7	238.5	233.4	225.7	220.6
67°	289.8	289.8	284.6	274.5	259.0	246.2	233.4	220.6	212.9	205.2	202.6
67.5°	279.5	279.5	274.5	261.6	251.3	235.9	223.1	212.9	202.6	197.4	192.4
68°	269.3	269.3	266.7	256.5	243.7	228.2	215.4	202.6	192.4	184.6	182.1
69°	251.3	253.9	248.7	238.5	225.7	210.2	197.4	187.2	176.9	169.3	164.1
70°	235.9	233.4	228.2	218.0	205.2	194.9	182.1	169.3	159.0	148.8	146.2
71°	215.4	215.4	210.2	202.6	189.8	176.9	164.1	153.8	143.6	130.8	128.2
72°	200.1	200.1	194.9	184.6	174.4	161.6	148.8	136.0	128.2	115.4	110.3
72.5°	189.8	192.4	187.2	176.9	166.6	151.3	141.0	130.8	118.0	107.7	102.5
73°	184.6	182.1	179.5	169.3	156.5	146.2	133.3	123.2	110.3	100.0	94.9



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	<i>115.4</i>	115.4	112.9	102.5	92.4	82.1	71.8	61.6	51.3	41.1	35.9
80°	<i>79.5</i>	82.1	76.9	71.8	64.1	53.9	43.6	35.9	25.6	20.5	15.3
82.5°	<i>51.3</i>	51.3	48.8	43.6	38.5	30.8	25.6	18.0	12.8	10.3	7.7
85°	<i>25.6</i>	28.2	25.6	23.1	18.0	15.3	12.8	7.7	5.2	2.5	2.5
87.5°	<i>10.3</i>	10.3	10.3	7.7	7.7	5.2	2.5	2.5	2.5	0.0	0.0
90°	<i>0.0</i>	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°	1892.6	1892.6	1892.6	1892.6	1892.6	1892.6	1892.6	1892.6	1892.6	1892.6
2.5°	1884.9	1884.9	1879.8	1877.3	1874.8	1872.1	1869.6	1867.0	1867.0	1869.6
5°	1869.6	1864.4	1854.1	1851.6	1844.0	1841.3	1836.2	1833.7	1836.2	1833.7
7.5°	1846.5	1836.2	1823.4	1818.3	1808.0	1802.9	1795.2	1795.2	1790.1	1792.7
10°	1815.7	1800.4	1784.9	1774.7	1767.0	1759.3	1754.1	1749.1	1746.4	1746.4
12.5°	1777.2	1759.3	1743.9	1728.5	1715.7	1710.6	1700.3	1700.3	1695.2	1692.7
15°	1733.6	1710.6	1692.7	1677.2	1667.0	1656.7	1649.0	1643.9	1638.7	1638.7
17.5°	1677.2	1656.7	1638.7	1620.8	1605.4	1597.8	1590.0	1582.3	1582.3	1577.2
20°	1615.6	1592.6	1577.2	1559.3	1546.4	1533.6	1523.4	1523.4	1518.2	1520.7
22.5°	1546.4	1518.2	1502.9	1490.1	1477.3	1467.0	1456.6	1456.6	1454.1	1451.5
25°	1469.5	1446.5	1428.5	1413.0	1405.4	1395.1	1392.6	1387.4	1384.9	1384.9
27.5°	1387.4	1369.4	1346.4	1338.8	1328.5	1323.3	1323.3	1320.8	1315.6	1318.2
30°	1300.2	1279.7	1266.9	1261.7	1251.6	1251.6	1248.9	1243.8	1243.8	1246.4
32.5°	1215.6	1195.1	1184.8	1182.3	1172.0	1172.0	1169.5	1172.0	1172.0	1174.5
35°	1123.2	1105.3	1102.8	1095.1	1092.5	1092.5	1092.5	1097.6	1102.8	1095.1
37.5°	1036.0	1023.2	1015.5	1013.0	1015.5	1015.5	1018.2	1025.8	1023.2	1020.7
40°	946.3	936.1	931.0	931.0	936.1	941.1	941.1	948.9	951.5	948.9
42.5°	856.6	848.9	848.9	851.4	856.6	859.1	866.9	874.5	877.1	879.7
45°	772.0	772.0	772.0	774.5	777.0	782.2	792.5	800.1	802.7	805.3
47.5°	689.9	687.3	695.0	697.6	705.3	707.8	715.6	725.7	728.4	730.9
50°	612.9	618.0	620.7	628.4	633.5	633.5	643.7	648.8	656.5	656.5
52.5°	541.1	548.8	551.4	559.1	561.6	564.3	569.3	577.1	582.1	582.1
55°	477.0	479.6	484.7	487.2	495.0	497.5	502.7	505.2	512.9	510.3
56°	448.8	453.9	456.4	461.6	466.7	469.4	474.4	477.0	482.2	484.7
57°	423.1	425.8	433.4	436.0	441.1	441.1	443.6	451.4	451.4	453.9
58°	397.5	402.6	405.2	407.8	413.0	415.5	420.6	423.1	425.8	423.1
59°	374.4	377.0	379.5	379.5	384.7	384.7	392.3	397.5	400.1	400.1
60°	351.4	351.4	353.9	356.5	361.6	364.2	364.2	369.3	369.3	369.3
61°	328.3	328.3	330.9	333.4	335.9	335.9	341.1	341.1	343.7	346.2
62°	307.8	305.1	305.1	307.8	307.8	312.9	315.4	317.9	320.6	317.9
63°	284.6	282.1	282.1	282.1	282.1	287.3	287.3	289.8	294.9	292.3
64°	259.0	259.0	259.0	259.0	261.6	261.6	266.7	269.3	271.8	274.5
65°	241.0	235.9	233.4	233.4	235.9	238.5	241.0	243.7	246.2	246.2
66°	220.6	215.4	212.9	212.9	212.9	212.9	218.0	218.0	223.1	223.1
67°	197.4	192.4	189.8	187.2	187.2	187.2	194.9	192.4	192.4	192.4
67.5°	189.8	182.1	179.5	176.9	174.4	179.5	176.9	179.5	179.5	176.9
68°	179.5	174.4	169.3	164.1	164.1	164.1	166.6	169.3	166.6	164.1
69°	159.0	156.5	148.8	143.6	141.0	143.6	141.0	143.6	141.0	143.6
70°	141.0	133.3	125.7	123.2	120.5	120.5	120.5	118.0	120.5	118.0
71°	123.2	115.4	107.7	102.5	100.0	100.0	97.4	100.0	97.4	100.0
72°	105.2	97.4	87.2	82.1	82.1	82.1	82.1	79.5	82.1	79.5
72.5°	97.4	87.2	79.5	74.4	71.8	71.8	71.8	71.8	69.2	71.8
73°	89.7	79.5	69.2	66.7	66.7	66.7	64.1	61.6	64.1	64.1



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	30.8	23.1	20.5	20.5	20.5	20.5	20.5	20.5	18.0	18.0
80°	12.8	10.3	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
82.5°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2
85°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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°	166.6	166.6	161.6	153.8	141.0	128.2	118.0	107.7	94.9	82.1	76.9
75°	153.8	151.3	146.2	138.5	128.2	115.4	105.2	92.4	82.1	69.2	64.1





74°	74.4	61.6	56.4	51.3	51.3	51.3	48.8	48.8	48.8	51.3
75°	58.9	48.8	43.6	38.5	41.1	38.5	41.1	38.5	38.5	38.5



(END OF REPORT)