

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: P584413

Luminaire Tested: **HC835D010-HM82555835-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584413
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-HM82555835-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3825.2 lumens
Efficiency: N/A
Efficacy: 113.5 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

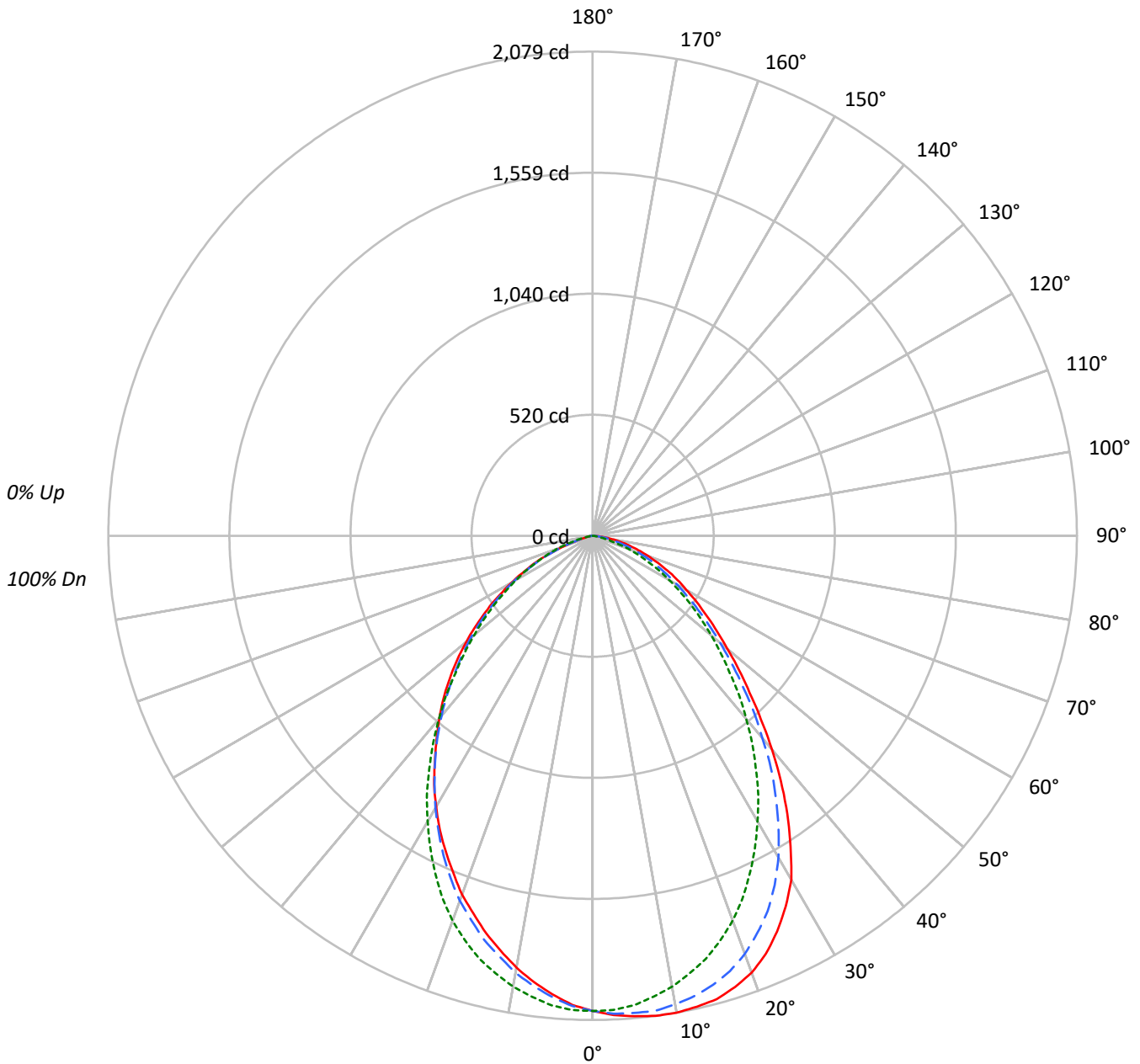
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	62918	62918	62918
5°	64103	62648	61190
10°	65101	61553	58957
15°	65757	60021	56400
20°	65506	57702	53804
25°	63782	54374	50801
30°	60745	50405	47845
35°	54851	46005	44443
40°	48192	41288	41180
45°	41594	36296	37861
50°	36215	31835	33955
55°	32106	27650	29580
60°	28647	23362	24552
65°	25822	18956	19372
70°	22928	14218	11468
75°	19766	8233	4944
80°	15219	2930	1474
85°	9800	991	991



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	191.5	5.0
10°-20°	533.2	13.9
20°-30°	754.2	19.7
30°-40°	794.7	20.8
40°-50°	675.4	17.7
50°-60°	486.4	12.7
60°-70°	280.6	7.3
70°-80°	96.0	2.5
80°-90°	13.2	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°	1479.0	38.7
0°-40°	2273.7	59.4
0°-60°	3435.5	89.8
0°-90°	3825.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3825.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2040	2040	2040	2040	2040	
5°	2071	2057	2024	1988	1977	198
15°	2060	1996	1880	1797	1767	580
25°	1875	1778	1598	1515	1493	860
35°	1457	1371	1222	1178	1181	907
45°	954	910	832	838	868	741
55°	597	550	514	534	550	537
65°	354	304	260	254	266	352
75°	166	124	69	44	42	175
85°	28	16	3	3	3	37
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°	2040.4	2040.4	2040.4	2040.4	2040.4	2040.4	2040.4	2040.4	2040.4	2040.4	2040.4
2.5°	2059.8	2062.6	2059.8	2059.8	2057.1	2054.3	2051.6	2048.8	2043.2	2037.7	2037.7
5°	2070.9	2076.4	2070.9	2070.9	2062.6	2057.1	2051.6	2043.2	2032.2	2023.9	2023.9
7.5°	2079.1	2079.1	2079.1	2070.9	2065.4	2057.1	2043.2	2029.4	2015.6	2001.7	1996.2
10°	2079.1	2079.1	2076.4	2065.4	2059.8	2043.2	2029.4	2010.0	1990.7	1971.3	1965.8
12.5°	2070.9	2073.6	2068.1	2057.1	2043.2	2023.9	2004.5	1979.7	1957.5	1935.4	1924.3
15°	2059.8	2057.1	2051.6	2037.7	2021.1	1996.2	1976.8	1949.3	1918.8	1891.2	1880.1
17.5°	2032.2	2032.2	2023.9	2010.0	1988.0	1960.3	1929.9	1899.4	1866.2	1835.8	1822.0
20°	1996.2	1996.2	1985.2	1968.6	1946.5	1910.6	1877.4	1841.4	1802.6	1772.3	1758.4
22.5°	1943.8	1946.5	1932.6	1913.3	1888.4	1847.0	1813.8	1769.6	1730.8	1694.8	1683.8
25°	1874.6	1880.1	1866.2	1847.0	1813.8	1777.8	1736.4	1694.8	1650.6	1614.7	1598.1
27.5°	1794.4	1797.1	1783.3	1763.9	1730.8	1692.1	1650.6	1606.4	1564.9	1526.3	1509.6
30°	1706.0	1694.8	1689.3	1664.5	1628.6	1595.4	1548.3	1512.4	1468.1	1435.0	1415.6
32.5°	1581.5	1587.0	1570.5	1551.1	1523.5	1484.7	1446.0	1404.5	1363.1	1338.2	1324.4
35°	1457.1	1462.6	1454.4	1435.0	1404.5	1371.4	1332.7	1302.2	1266.3	1235.9	1222.1
37.5°	1327.1	1327.1	1321.6	1310.5	1288.4	1258.0	1219.3	1188.9	1158.5	1133.5	1125.3
40°	1197.2	1191.7	1188.9	1180.6	1161.2	1133.5	1108.7	1083.8	1053.4	1036.9	1025.7
42.5°	1070.1	1070.1	1064.4	1056.2	1036.9	1023.0	998.2	970.5	948.3	931.8	931.8
45°	953.8	956.6	948.3	942.8	931.8	909.6	887.5	868.2	848.8	837.8	832.3
47.5°	851.5	851.5	843.3	837.8	826.7	807.3	788.0	771.4	757.6	749.2	746.5
50°	754.9	754.9	754.9	741.0	727.2	713.3	699.5	680.1	671.8	666.3	663.6
52.5°	671.8	669.1	669.1	658.1	644.2	627.6	613.9	597.2	588.9	583.4	586.2
55°	597.2	597.2	594.4	580.7	566.8	550.2	536.3	522.6	517.1	511.5	514.3
56°	566.8	566.8	564.0	553.0	536.3	522.6	505.9	492.1	483.9	486.6	486.6
57°	544.7	539.1	539.1	525.3	511.5	492.1	478.4	464.5	459.0	456.2	456.2
58°	517.1	514.3	511.5	497.6	483.9	467.2	453.4	439.7	431.3	431.3	428.5
59°	489.4	489.4	483.9	472.9	459.0	442.4	428.5	414.7	406.5	403.7	403.7
60°	464.5	467.2	459.0	447.9	436.8	417.5	400.9	389.8	381.6	378.8	378.8
61°	442.4	442.4	436.8	423.0	409.2	395.3	378.8	364.9	359.4	353.9	353.9
62°	423.0	417.5	414.7	400.9	387.1	370.5	356.6	342.9	334.6	329.0	331.7
63°	398.1	395.3	389.8	378.8	364.9	348.4	331.7	320.7	312.4	304.2	306.9
64°	378.8	376.1	367.8	356.6	342.9	326.2	309.7	298.7	293.0	284.8	282.0
65°	353.9	351.1	348.4	334.6	320.7	304.2	290.3	279.3	271.0	265.5	259.8
66°	331.7	334.6	329.0	317.9	301.4	287.5	268.2	257.1	251.6	243.3	237.8
67°	312.4	312.4	306.9	295.8	279.3	265.5	251.6	237.8	229.5	221.2	218.4
67.5°	301.4	301.4	295.8	282.0	271.0	254.3	240.6	229.5	218.4	212.9	207.4
68°	290.3	290.3	287.5	276.5	262.7	246.1	232.3	218.4	207.4	199.1	196.4
69°	271.0	273.7	268.2	257.1	243.3	226.7	212.9	201.9	190.7	182.5	176.9
70°	254.3	251.6	246.1	235.0	221.2	210.1	196.4	182.5	171.4	160.4	157.7
71°	232.3	232.3	226.7	218.4	204.6	190.7	176.9	165.9	154.8	141.0	138.2
72°	215.6	215.6	210.1	199.1	188.0	174.2	160.4	146.5	138.2	124.5	118.8
72.5°	204.6	207.4	201.9	190.7	179.7	163.2	152.0	141.0	127.2	116.1	110.6
73°	199.1	196.4	193.6	182.5	168.7	157.7	143.8	132.7	118.8	107.8	102.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	124.5	124.5	121.6	110.6	99.6	88.5	77.4	66.4	55.3	44.2	38.7
80°	85.7	88.5	82.9	77.4	69.1	58.1	47.0	38.7	27.7	22.2	16.5
82.5°	55.3	55.3	52.6	47.0	41.5	33.2	27.7	19.4	13.8	11.0	8.3
85°	27.7	30.4	27.7	24.9	19.4	16.5	13.8	8.3	5.5	2.8	2.8
87.5°	11.0	11.0	11.0	8.3	8.3	5.5	2.8	2.8	2.8	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°	2040.4	2040.4	2040.4	2040.4	2040.4	2040.4	2040.4	2040.4	2040.4	2040.4
2.5°	2032.2	2032.2	2026.7	2023.9	2021.1	2018.4	2015.6	2012.8	2012.8	2015.6
5°	2015.6	2010.0	1999.0	1996.2	1988.0	1985.2	1979.7	1976.8	1979.7	1976.8
7.5°	1990.7	1979.7	1965.8	1960.3	1949.3	1943.8	1935.4	1935.4	1929.9	1932.6
10°	1957.5	1940.9	1924.3	1913.3	1904.9	1896.7	1891.2	1885.7	1882.9	1882.9
12.5°	1916.1	1896.7	1880.1	1863.5	1849.7	1844.2	1833.1	1833.1	1827.5	1824.8
15°	1869.0	1844.2	1824.8	1808.3	1797.1	1786.1	1777.8	1772.3	1766.7	1766.7
17.5°	1808.3	1786.1	1766.7	1747.4	1730.8	1722.5	1714.2	1706.0	1706.0	1700.4
20°	1741.9	1717.0	1700.4	1681.0	1667.3	1653.4	1642.3	1642.3	1636.8	1639.6
22.5°	1667.3	1636.8	1620.2	1606.4	1592.5	1581.5	1570.5	1570.5	1567.7	1564.9
25°	1584.2	1559.4	1540.0	1523.5	1515.1	1504.1	1501.3	1495.8	1493.1	1493.1
27.5°	1495.8	1476.4	1451.5	1443.2	1432.2	1426.7	1426.7	1423.9	1418.4	1421.2
30°	1401.8	1379.6	1365.8	1360.3	1349.3	1349.3	1346.4	1340.9	1340.9	1343.7
32.5°	1310.5	1288.4	1277.3	1274.6	1263.5	1263.5	1260.8	1263.5	1263.5	1266.3
35°	1211.1	1191.7	1188.9	1180.6	1177.9	1177.9	1177.9	1183.4	1188.9	1180.6
37.5°	1117.0	1103.2	1094.9	1092.1	1094.9	1094.9	1097.6	1106.0	1103.2	1100.4
40°	1020.2	1009.2	1003.7	1003.7	1009.2	1014.7	1014.7	1023.0	1025.7	1023.0
42.5°	923.4	915.2	915.2	917.9	923.4	926.2	934.6	942.8	945.6	948.3
45°	832.3	832.3	832.3	835.0	837.8	843.3	854.3	862.7	865.4	868.2
47.5°	743.7	741.0	749.2	752.0	760.4	763.1	771.4	782.4	785.2	788.0
50°	660.8	666.3	669.1	677.3	683.0	683.0	694.0	699.5	707.8	707.8
52.5°	583.4	591.7	594.4	602.7	605.5	608.2	613.9	622.1	627.6	627.6
55°	514.3	517.1	522.6	525.3	533.6	536.3	541.9	544.7	553.0	550.2
56°	483.9	489.4	492.1	497.6	503.2	505.9	511.5	514.3	519.8	522.6
57°	456.2	459.0	467.2	470.0	475.6	475.6	478.4	486.6	486.6	489.4
58°	428.5	434.0	436.8	439.7	445.2	447.9	453.4	456.2	459.0	456.2
59°	403.7	406.5	409.2	409.2	414.7	414.7	423.0	428.5	431.3	431.3
60°	378.8	378.8	381.6	384.3	389.8	392.6	392.6	398.1	398.1	398.1
61°	353.9	353.9	356.6	359.4	362.2	362.2	367.8	367.8	370.5	373.3
62°	331.7	329.0	329.0	331.7	331.7	337.4	340.1	342.9	345.6	342.9
63°	306.9	304.2	304.2	304.2	304.2	309.7	309.7	312.4	317.9	315.2
64°	279.3	279.3	279.3	279.3	282.0	282.0	287.5	290.3	293.0	295.8
65°	259.8	254.3	251.6	251.6	254.3	257.1	259.8	262.7	265.5	265.5
66°	237.8	232.3	229.5	229.5	229.5	229.5	235.0	235.0	240.6	240.6
67°	212.9	207.4	204.6	201.9	201.9	201.9	210.1	207.4	207.4	207.4
67.5°	204.6	196.4	193.6	190.7	188.0	193.6	190.7	193.6	193.6	190.7
68°	193.6	188.0	182.5	176.9	176.9	176.9	179.7	182.5	179.7	176.9
69°	171.4	168.7	160.4	154.8	152.0	154.8	152.0	154.8	152.0	154.8
70°	152.0	143.8	135.5	132.7	130.0	130.0	130.0	127.2	130.0	127.2
71°	132.7	124.5	116.1	110.6	107.8	107.8	105.1	107.8	105.1	107.8
72°	113.3	105.1	94.0	88.5	88.5	88.5	88.5	85.7	88.5	85.7
72.5°	105.1	94.0	85.7	80.1	77.4	77.4	77.4	77.4	74.6	77.4
73°	96.8	85.7	74.6	71.9	71.9	71.9	69.1	66.4	69.1	69.1



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	33.2	24.9	22.2	22.2	22.2	22.2	22.2	22.2	19.4	19.4
80°	13.8	11.0	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
82.5°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
85°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
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°	179.7	179.7	174.2	165.9	152.0	138.2	127.2	116.1	102.3	88.5	82.9
75°	165.9	163.2	157.7	149.3	138.2	124.5	113.3	99.6	88.5	74.6	69.1





74°	80.1	66.4	60.9	55.3	55.3	55.3	52.6	52.6	52.6	55.3
75°	63.6	52.6	47.0	41.5	44.2	41.5	44.2	41.5	41.5	41.5



(END OF REPORT)