

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: P584719

Luminaire Tested: **HC845D010-HM82555927-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584719
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-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: 3674.9 lumens
Efficiency: N/A
Efficacy: 83.5 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

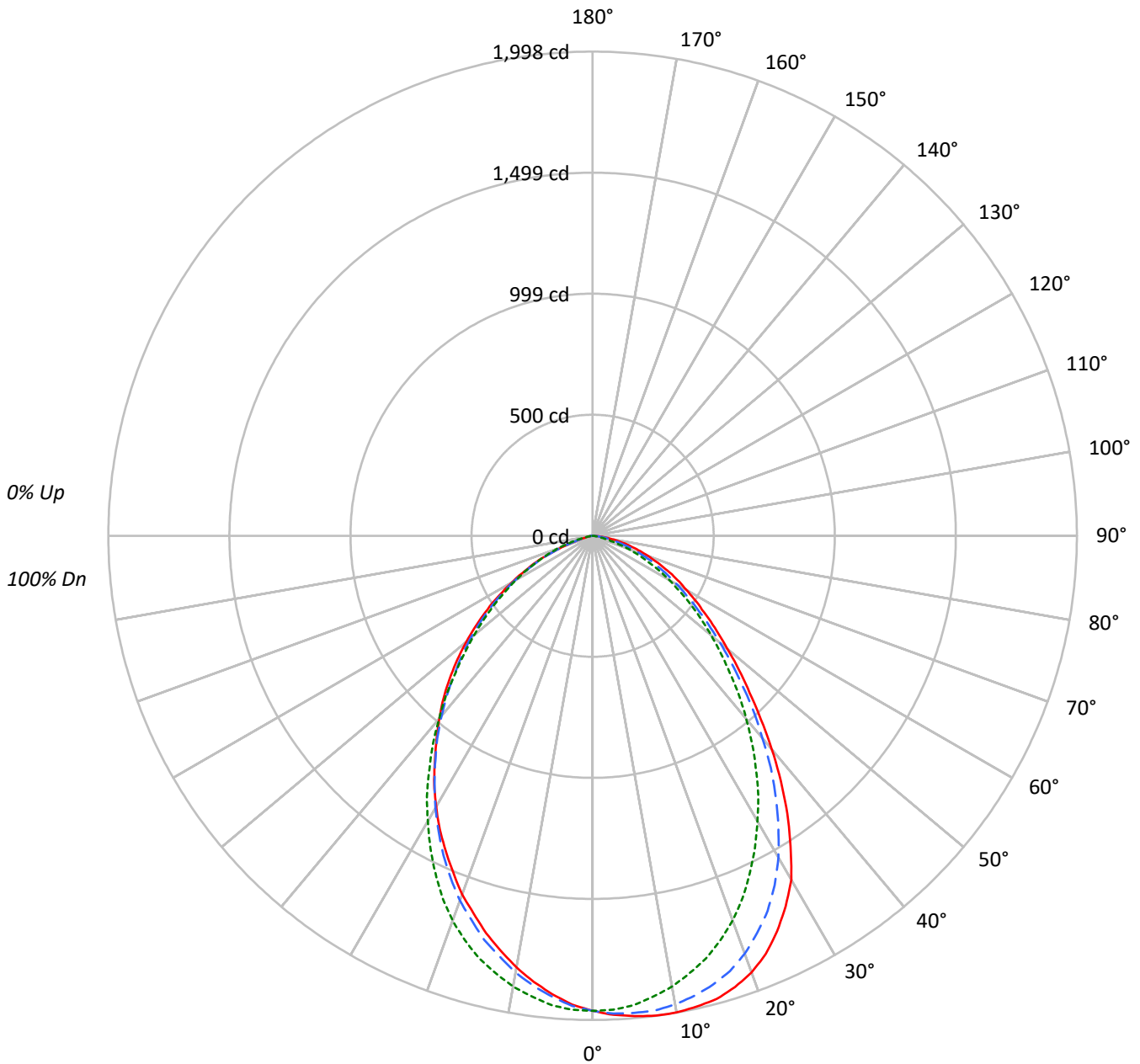
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	60448	60448	60448
5°	61583	60187	58788
10°	62546	59133	56640
15°	63175	57665	54185
20°	62937	55438	51687
25°	61274	52237	48801
30°	58356	48425	45965
35°	52698	44198	42696
40°	46296	39666	39566
45°	39959	34866	36370
50°	34785	30583	32621
55°	30843	26564	28418
60°	27518	22443	23590
65°	24815	18219	18606
70°	22026	13650	11017
75°	18991	7911	4754
80°	14615	2841	1421
85°	9376	955	955



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.0	5.0
10°-20°	512.3	13.9
20°-30°	724.6	19.7
30°-40°	763.5	20.8
40°-50°	648.9	17.7
50°-60°	467.2	12.7
60°-70°	269.5	7.3
70°-80°	92.2	2.5
80°-90°	12.7	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°	1420.9	38.7
0°-40°	2184.4	59.4
0°-60°	3300.5	89.8
0°-90°	3674.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3674.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1960	1960	1960	1960	1960	
5°	1990	1976	1944	1910	1899	190
15°	1979	1918	1806	1726	1697	557
25°	1801	1708	1535	1456	1434	826
35°	1400	1318	1174	1132	1134	872
45°	916	874	800	805	834	712
55°	574	529	494	513	529	516
65°	340	292	250	244	255	338
75°	159	120	66	42	40	168
85°	26	16	3	3	3	36
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°	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3
2.5°	1978.9	1981.5	1978.9	1978.9	1976.3	1973.6	1970.9	1968.3	1963.0	1957.6	1957.6
5°	1989.5	1994.8	1989.5	1989.5	1981.5	1976.3	1970.9	1963.0	1952.3	1944.4	1944.4
7.5°	1997.5	1997.5	1997.5	1989.5	1984.2	1976.3	1963.0	1949.6	1931.1	1912.5	1893.9
10°	1997.5	1997.5	1994.8	1984.2	1978.9	1963.0	1949.6	1931.1	1912.5	1893.9	1888.5
12.5°	1989.5	1992.2	1986.8	1976.3	1963.0	1944.4	1925.8	1901.9	1880.7	1859.3	1848.8
15°	1978.9	1976.3	1970.9	1957.6	1941.7	1917.9	1899.2	1872.7	1843.5	1816.9	1806.3
17.5°	1952.3	1952.3	1944.4	1931.1	1909.9	1883.3	1854.0	1824.8	1792.9	1763.7	1750.5
20°	1917.9	1917.9	1907.2	1891.2	1870.0	1835.5	1803.6	1769.0	1731.8	1702.6	1689.4
22.5°	1867.3	1870.0	1856.7	1838.1	1814.2	1774.4	1742.5	1700.0	1662.8	1628.2	1617.7
25°	1800.9	1806.3	1792.9	1774.4	1742.5	1708.0	1668.1	1628.2	1585.8	1551.3	1535.3
27.5°	1724.0	1726.5	1713.3	1694.6	1662.8	1625.7	1585.8	1543.3	1503.4	1466.2	1450.3
30°	1638.9	1628.2	1623.0	1599.0	1564.5	1532.6	1487.5	1453.0	1410.4	1378.6	1360.0
32.5°	1519.4	1524.7	1508.7	1490.2	1463.6	1426.4	1389.2	1349.4	1309.5	1285.6	1272.4
35°	1399.9	1405.1	1397.2	1378.6	1349.4	1317.5	1280.3	1251.1	1216.5	1187.3	1174.1
37.5°	1275.1	1275.1	1269.7	1259.1	1237.9	1208.5	1171.4	1142.2	1112.9	1089.0	1081.0
40°	1150.1	1144.8	1142.2	1134.2	1115.6	1089.0	1065.2	1041.3	1012.1	996.1	985.4
42.5°	1028.0	1028.0	1022.6	1014.6	996.1	982.9	958.9	932.3	911.1	895.1	895.1
45°	916.3	919.0	911.1	905.8	895.1	873.9	852.7	834.0	815.5	804.8	799.5
47.5°	818.2	818.2	810.2	804.8	794.2	775.6	757.1	741.1	727.8	719.9	717.2
50°	725.1	725.1	725.1	711.9	698.6	685.3	672.0	653.5	645.5	640.1	637.5
52.5°	645.5	642.8	642.8	632.1	618.9	602.9	589.7	573.7	565.7	560.5	563.2
55°	573.7	573.7	571.1	557.8	544.5	528.6	515.3	502.0	496.8	491.4	494.1
56°	544.5	544.5	541.9	531.3	515.3	502.0	486.1	472.8	464.9	467.4	467.4
57°	523.3	518.0	518.0	504.7	491.4	472.8	459.6	446.2	440.9	438.2	438.2
58°	496.8	494.1	491.4	478.1	464.9	448.9	435.7	422.4	414.4	414.4	411.7
59°	470.1	470.1	464.9	454.2	440.9	425.0	411.7	398.5	390.5	387.8	387.8
60°	446.2	448.9	440.9	430.3	419.7	401.0	385.2	374.5	366.6	363.9	363.9
61°	425.0	425.0	419.7	406.4	393.1	379.8	363.9	350.6	345.3	340.1	340.1
62°	406.4	401.0	398.5	385.2	371.8	355.9	342.6	329.4	321.4	316.1	318.7
63°	382.5	379.8	374.5	363.9	350.6	334.7	318.7	308.1	300.2	292.2	294.9
64°	363.9	361.3	353.3	342.6	329.4	313.4	297.5	286.9	281.5	273.5	271.0
65°	340.1	337.4	334.7	321.4	308.1	292.2	278.9	268.3	260.3	255.0	249.7
66°	318.7	321.4	316.1	305.4	289.5	276.2	257.7	247.0	241.8	233.8	228.4
67°	300.2	300.2	294.9	284.2	268.3	255.0	241.8	228.4	220.5	212.5	209.8
67.5°	289.5	289.5	284.2	271.0	260.3	244.3	231.1	220.5	209.8	204.6	199.2
68°	278.9	278.9	276.2	265.6	252.3	236.4	223.1	209.8	199.2	191.2	188.6
69°	260.3	263.0	257.7	247.0	233.8	217.8	204.6	193.9	183.2	175.4	170.0
70°	244.3	241.8	236.4	225.8	212.5	201.9	188.6	175.4	164.7	154.0	151.4
71°	223.1	223.1	217.8	209.8	196.6	183.2	170.0	159.4	148.7	135.5	132.8
72°	207.2	207.2	201.9	191.2	180.6	167.4	154.0	140.8	132.8	119.5	114.3
72.5°	196.6	199.2	193.9	183.2	172.7	156.7	146.0	135.5	122.2	111.6	106.3
73°	191.2	188.6	185.9	175.4	162.0	151.4	138.2	127.5	114.3	103.6	98.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	<i>119.5</i>	119.5	116.8	106.3	95.6	85.0	74.4	63.7	53.1	42.5	37.2
80°	<i>82.3</i>	85.0	79.6	74.4	66.4	55.8	45.2	37.2	26.5	21.2	16.0
82.5°	<i>53.1</i>	53.1	50.4	45.2	39.9	31.9	26.5	18.7	13.3	10.7	8.0
85°	<i>26.5</i>	29.2	26.5	23.9	18.7	16.0	13.3	8.0	5.3	2.7	2.7
87.5°	<i>10.7</i>	10.7	10.7	8.0	8.0	5.3	2.7	2.7	2.7	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°	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3	1960.3
2.5°	1952.3	1952.3	1947.1	1944.4	1941.7	1939.1	1936.4	1933.7	1933.7	1936.4
5°	1936.4	1931.1	1920.4	1917.9	1909.9	1907.2	1901.9	1899.2	1901.9	1899.2
7.5°	1912.5	1901.9	1888.5	1883.3	1872.7	1867.3	1859.3	1859.3	1854.0	1856.7
10°	1880.7	1864.7	1848.8	1838.1	1830.1	1822.1	1816.9	1811.6	1808.9	1808.9
12.5°	1840.8	1822.1	1806.3	1790.3	1777.0	1771.7	1761.1	1761.1	1755.7	1753.2
15°	1795.6	1771.7	1753.2	1737.2	1726.5	1716.0	1708.0	1702.6	1697.3	1697.3
17.5°	1737.2	1716.0	1697.3	1678.8	1662.8	1654.9	1646.9	1638.9	1638.9	1633.6
20°	1673.4	1649.5	1633.6	1615.0	1601.7	1588.5	1577.8	1577.8	1572.5	1575.1
22.5°	1601.7	1572.5	1556.6	1543.3	1529.9	1519.4	1508.7	1508.7	1506.1	1503.4
25°	1522.1	1498.2	1479.5	1463.6	1455.6	1445.0	1442.3	1437.0	1434.3	1434.3
27.5°	1437.0	1418.4	1394.6	1386.6	1375.9	1370.7	1370.7	1368.0	1362.7	1365.3
30°	1346.7	1325.5	1312.2	1306.8	1296.3	1296.3	1293.6	1288.3	1288.3	1290.9
32.5°	1259.1	1237.9	1227.2	1224.5	1213.9	1213.9	1211.2	1213.9	1213.9	1216.5
35°	1163.4	1144.8	1142.2	1134.2	1131.6	1131.6	1131.6	1136.9	1142.2	1134.2
37.5°	1073.2	1059.8	1051.8	1049.2	1051.8	1051.8	1054.5	1062.5	1059.8	1057.2
40°	980.2	969.5	964.2	964.2	969.5	974.9	974.9	982.9	985.4	982.9
42.5°	887.1	879.2	879.2	881.9	887.1	889.8	897.8	905.8	908.5	911.1
45°	799.5	799.5	799.5	802.2	804.8	810.2	820.7	828.7	831.4	834.0
47.5°	714.5	711.9	719.9	722.5	730.4	733.1	741.1	751.7	754.4	757.1
50°	634.8	640.1	642.8	650.8	656.1	656.1	666.7	672.0	680.0	680.0
52.5°	560.5	568.4	571.1	579.1	581.7	584.4	589.7	597.6	602.9	602.9
55°	494.1	496.8	502.0	504.7	512.6	515.3	520.6	523.3	531.3	528.6
56°	464.9	470.1	472.8	478.1	483.4	486.1	491.4	494.1	499.3	502.0
57°	438.2	440.9	448.9	451.6	456.9	456.9	459.6	467.4	467.4	470.1
58°	411.7	417.0	419.7	422.4	427.7	430.3	435.7	438.2	440.9	438.2
59°	387.8	390.5	393.1	393.1	398.5	398.5	406.4	411.7	414.4	414.4
60°	363.9	363.9	366.6	369.3	374.5	377.2	377.2	382.5	382.5	382.5
61°	340.1	340.1	342.6	345.3	347.9	347.9	353.3	353.3	355.9	358.6
62°	318.7	316.1	316.1	318.7	318.7	324.1	326.7	329.4	332.1	329.4
63°	294.9	292.2	292.2	292.2	292.2	297.5	297.5	300.2	305.4	302.9
64°	268.3	268.3	268.3	268.3	271.0	271.0	276.2	278.9	281.5	284.2
65°	249.7	244.3	241.8	241.8	244.3	247.0	249.7	252.3	255.0	255.0
66°	228.4	223.1	220.5	220.5	220.5	220.5	225.8	225.8	231.1	231.1
67°	204.6	199.2	196.6	193.9	193.9	193.9	201.9	199.2	199.2	199.2
67.5°	196.6	188.6	185.9	183.2	180.6	185.9	183.2	185.9	185.9	183.2
68°	185.9	180.6	175.4	170.0	170.0	170.0	172.7	175.4	172.7	170.0
69°	164.7	162.0	154.0	148.7	146.0	148.7	146.0	148.7	146.0	148.7
70°	146.0	138.2	130.2	127.5	124.8	124.8	124.8	122.2	124.8	122.2
71°	127.5	119.5	111.6	106.3	103.6	103.6	101.0	103.6	101.0	103.6
72°	108.9	101.0	90.3	85.0	85.0	85.0	85.0	82.3	85.0	82.3
72.5°	101.0	90.3	82.3	77.1	74.4	74.4	74.4	74.4	71.7	74.4
73°	93.0	82.3	71.7	69.1	69.1	69.1	66.4	63.7	66.4	66.4



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	31.9	23.9	21.2	21.2	21.2	21.2	21.2	21.2	18.7	18.7
80°	13.3	10.7	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
82.5°	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
85°	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
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°	172.7	172.7	167.4	159.4	146.0	132.8	122.2	111.6	98.3	85.0	79.6
75°	159.4	156.7	151.4	143.5	132.8	119.5	108.9	95.6	85.0	71.7	66.4





74°	77.1	63.7	58.4	53.1	53.1	53.1	50.4	50.4	50.4	53.1
75°	61.1	50.4	45.2	39.9	42.5	39.9	42.5	39.9	39.9	39.9



(END OF REPORT)