

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: P584583

Luminaire Tested: **HC840D010-HM82555927-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P584583
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: HC840D010-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: 3452.2 lumens
Efficiency: N/A
Efficacy: 84.2 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

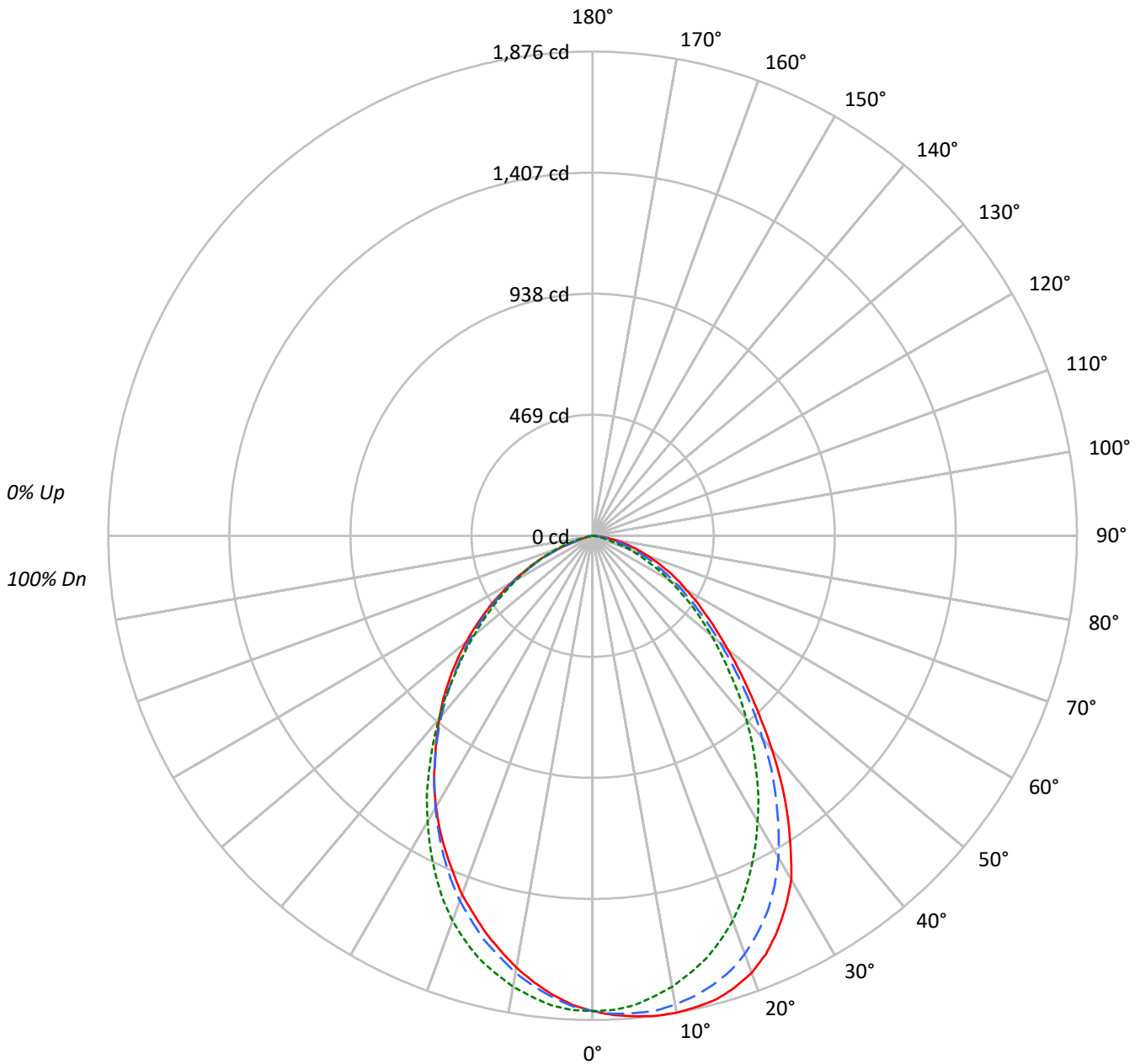
Input Watts (W): 41
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	56785	56785	56785
5°	57853	56538	55228
10°	58754	55554	53209
15°	59347	54169	50903
20°	59117	52078	48554
25°	57562	49073	45844
30°	54820	45491	43180
35°	49506	41518	40110
40°	43490	37263	37162
45°	37539	32755	34168
50°	32679	28726	30645
55°	28977	24951	26698
60°	25853	21086	22159
65°	23305	17110	17475
70°	20701	12821	10350
75°	17836	7434	4468
80°	13745	2664	1332
85°	8845	885	885



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.9	5.0
10°-20°	481.2	13.9
20°-30°	680.7	19.7
30°-40°	717.2	20.8
40°-50°	609.6	17.7
50°-60°	438.9	12.7
60°-70°	253.2	7.3
70°-80°	86.6	2.5
80°-90°	11.9	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°	1334.8	38.7
0°-40°	2052.0	59.4
0°-60°	3100.5	89.8
0°-90°	3452.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3452.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1842	1842	1842	1842	1842	
5°	1869	1856	1826	1794	1784	179
15°	1859	1802	1697	1622	1594	523
25°	1692	1604	1442	1367	1347	776
35°	1315	1238	1103	1063	1066	819
45°	861	821	751	756	784	669
55°	539	497	464	482	497	485
65°	319	274	234	230	240	318
75°	150	112	62	40	38	158
85°	25	15	2	2	2	34
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°	1841.5	1841.5	1841.5	1841.5	1841.5	1841.5	1841.5	1841.5	1841.5	1841.5	1841.5
2.5°	1859.0	1861.5	1859.0	1859.0	1856.5	1854.0	1851.5	1849.0	1844.0	1839.0	1839.0
5°	1869.0	1873.9	1869.0	1869.0	1861.5	1856.5	1851.5	1844.0	1834.0	1826.5	1826.5
7.5°	1876.4	1876.4	1876.4	1869.0	1864.0	1856.5	1844.0	1831.5	1819.0	1806.5	1801.5
10°	1876.4	1876.4	1873.9	1864.0	1859.0	1844.0	1831.5	1814.0	1796.5	1779.2	1774.2
12.5°	1869.0	1871.5	1866.5	1856.5	1844.0	1826.5	1809.0	1786.7	1766.7	1746.7	1736.7
15°	1859.0	1856.5	1851.5	1839.0	1824.0	1801.5	1784.2	1759.2	1731.7	1706.8	1696.8
17.5°	1834.0	1834.0	1826.5	1814.0	1794.0	1769.2	1741.7	1714.2	1684.3	1656.8	1644.3
20°	1801.5	1801.5	1791.7	1776.7	1756.7	1724.2	1694.3	1661.8	1627.0	1599.5	1587.0
22.5°	1754.2	1756.7	1744.2	1726.7	1704.3	1666.8	1636.8	1597.0	1562.0	1529.6	1519.6
25°	1691.8	1696.8	1684.3	1666.8	1636.8	1604.5	1567.0	1529.6	1489.6	1457.3	1442.3
27.5°	1619.5	1622.0	1609.5	1592.0	1562.0	1527.1	1489.6	1449.8	1412.3	1377.4	1362.4
30°	1539.6	1529.6	1524.6	1502.1	1469.8	1439.8	1397.3	1364.9	1324.9	1295.1	1277.6
32.5°	1427.3	1432.3	1417.3	1399.8	1374.9	1339.9	1305.1	1267.6	1230.2	1207.7	1195.2
35°	1315.1	1319.9	1312.6	1295.1	1267.6	1237.6	1202.7	1175.2	1142.9	1115.4	1102.9
37.5°	1197.7	1197.7	1192.7	1182.7	1162.7	1135.4	1100.4	1073.0	1045.5	1023.0	1015.5
40°	1080.4	1075.5	1073.0	1065.5	1048.0	1023.0	1000.6	978.2	950.7	935.7	925.7
42.5°	965.7	965.7	960.7	953.2	935.7	923.2	900.8	875.8	855.8	840.9	840.9
45°	860.8	863.3	855.8	850.8	840.9	821.0	801.0	783.5	766.0	756.1	751.1
47.5°	768.5	768.5	761.0	756.1	746.1	728.6	711.1	696.2	683.7	676.3	673.8
50°	681.2	681.2	681.2	668.8	656.3	643.8	631.3	613.8	606.3	601.3	598.8
52.5°	606.3	603.8	603.8	593.9	581.4	566.4	553.9	539.0	531.5	526.5	529.0
55°	539.0	539.0	536.5	524.0	511.6	496.6	484.1	471.6	466.6	461.6	464.1
56°	511.6	511.6	509.1	499.1	484.1	471.6	456.6	444.1	436.7	439.1	439.1
57°	491.6	486.6	486.6	474.1	461.6	444.1	431.7	419.2	414.2	411.7	411.7
58°	466.6	464.1	461.6	449.1	436.7	421.7	409.2	396.7	389.2	389.2	386.8
59°	441.6	441.6	436.7	426.7	414.2	399.2	386.8	374.3	366.8	364.3	364.3
60°	419.2	421.7	414.2	404.2	394.2	376.8	361.8	351.9	344.4	341.9	341.9
61°	399.2	399.2	394.2	381.8	369.3	356.9	341.9	329.4	324.4	319.4	319.4
62°	381.8	376.8	374.3	361.8	349.4	334.4	321.9	309.4	301.9	296.9	299.4
63°	359.3	356.9	351.9	341.9	329.4	314.4	299.4	289.4	281.9	274.5	277.0
64°	341.9	339.4	331.9	321.9	309.4	294.4	279.4	269.5	264.5	257.0	254.5
65°	319.4	316.9	314.4	301.9	289.4	274.5	262.0	252.0	244.5	239.5	234.5
66°	299.4	301.9	296.9	286.9	272.0	259.5	242.0	232.0	227.1	219.6	214.6
67°	281.9	281.9	277.0	267.0	252.0	239.5	227.1	214.6	207.1	199.6	197.2
67.5°	272.0	272.0	267.0	254.5	244.5	229.6	217.1	207.1	197.2	192.2	187.2
68°	262.0	262.0	259.5	249.5	237.0	222.1	209.6	197.2	187.2	179.7	177.2
69°	244.5	247.0	242.0	232.0	219.6	204.6	192.2	182.2	172.2	164.7	159.7
70°	229.6	227.1	222.1	212.1	199.6	189.7	177.2	164.7	154.7	144.7	142.2
71°	209.6	209.6	204.6	197.2	184.7	172.2	159.7	149.7	139.7	127.2	124.7
72°	194.7	194.7	189.7	179.7	169.7	157.2	144.7	132.2	124.7	112.3	107.3
72.5°	184.7	187.2	182.2	172.2	162.2	147.2	137.2	127.2	114.8	104.8	99.8
73°	179.7	177.2	174.7	164.7	152.2	142.2	129.7	119.7	107.3	97.3	92.3



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	112.3	112.3	109.8	99.8	89.8	79.8	69.9	59.9	49.9	39.9	35.0
80°	77.4	79.8	74.9	69.9	62.4	52.4	42.4	35.0	25.0	20.0	15.0
82.5°	49.9	49.9	47.4	42.4	37.5	30.0	25.0	17.5	12.5	10.0	7.5
85°	25.0	27.5	25.0	22.5	17.5	15.0	12.5	7.5	5.0	2.5	2.5
87.5°	10.0	10.0	10.0	7.5	7.5	5.0	2.5	2.5	2.5	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°	1841.5	1841.5	1841.5	1841.5	1841.5	1841.5	1841.5	1841.5	1841.5	1841.5
2.5°	1834.0	1834.0	1829.0	1826.5	1824.0	1821.5	1819.0	1816.5	1816.5	1819.0
5°	1819.0	1814.0	1804.0	1801.5	1794.0	1791.7	1786.7	1784.2	1786.7	1784.2
7.5°	1796.5	1786.7	1774.2	1769.2	1759.2	1754.2	1746.7	1746.7	1741.7	1744.2
10°	1766.7	1751.7	1736.7	1726.7	1719.2	1711.8	1706.8	1701.8	1699.3	1699.3
12.5°	1729.2	1711.8	1696.8	1681.8	1669.3	1664.3	1654.3	1654.3	1649.3	1646.8
15°	1686.8	1664.3	1646.8	1632.0	1622.0	1612.0	1604.5	1599.5	1594.5	1594.5
17.5°	1632.0	1612.0	1594.5	1577.0	1562.0	1554.5	1547.1	1539.6	1539.6	1534.6
20°	1572.0	1549.6	1534.6	1517.1	1504.6	1492.1	1482.1	1482.1	1477.1	1479.6
22.5°	1504.6	1477.1	1462.3	1449.8	1437.3	1427.3	1417.3	1417.3	1414.8	1412.3
25°	1429.8	1407.3	1389.9	1374.9	1367.4	1357.4	1354.9	1349.9	1347.4	1347.4
27.5°	1349.9	1332.4	1310.1	1302.6	1292.6	1287.6	1287.6	1285.1	1280.1	1282.6
30°	1265.1	1245.1	1232.7	1227.7	1217.7	1217.7	1215.2	1210.2	1210.2	1212.7
32.5°	1182.7	1162.7	1152.9	1150.4	1140.4	1140.4	1137.9	1140.4	1140.4	1142.9
35°	1092.9	1075.5	1073.0	1065.5	1063.0	1063.0	1063.0	1068.0	1073.0	1065.5
37.5°	1008.0	995.7	988.2	985.7	988.2	988.2	990.7	998.1	995.7	993.2
40°	920.7	910.8	905.8	905.8	910.8	915.8	915.8	923.2	925.7	923.2
42.5°	833.5	826.0	826.0	828.5	833.5	836.0	843.4	850.8	853.3	855.8
45°	751.1	751.1	751.1	753.6	756.1	761.0	771.0	778.5	781.0	783.5
47.5°	671.3	668.8	676.3	678.7	686.2	688.7	696.2	706.1	708.6	711.1
50°	596.4	601.3	603.8	611.3	616.3	616.3	626.3	631.3	638.8	638.8
52.5°	526.5	534.0	536.5	543.9	546.4	548.9	553.9	561.4	566.4	566.4
55°	464.1	466.6	471.6	474.1	481.6	484.1	489.1	491.6	499.1	496.6
56°	436.7	441.6	444.1	449.1	454.1	456.6	461.6	464.1	469.1	471.6
57°	411.7	414.2	421.7	424.2	429.2	429.2	431.7	439.1	439.1	441.6
58°	386.8	391.7	394.2	396.7	401.7	404.2	409.2	411.7	414.2	411.7
59°	364.3	366.8	369.3	369.3	374.3	374.3	381.8	386.8	389.2	389.2
60°	341.9	341.9	344.4	346.9	351.9	354.4	354.4	359.3	359.3	359.3
61°	319.4	319.4	321.9	324.4	326.9	326.9	331.9	331.9	334.4	336.9
62°	299.4	296.9	296.9	299.4	299.4	304.4	306.9	309.4	311.9	309.4
63°	277.0	274.5	274.5	274.5	274.5	279.4	279.4	281.9	286.9	284.4
64°	252.0	252.0	252.0	252.0	254.5	254.5	259.5	262.0	264.5	267.0
65°	234.5	229.6	227.1	227.1	229.6	232.0	234.5	237.0	239.5	239.5
66°	214.6	209.6	207.1	207.1	207.1	207.1	212.1	212.1	217.1	217.1
67°	192.2	187.2	184.7	182.2	182.2	182.2	189.7	187.2	187.2	187.2
67.5°	184.7	177.2	174.7	172.2	169.7	174.7	172.2	174.7	174.7	172.2
68°	174.7	169.7	164.7	159.7	159.7	159.7	162.2	164.7	162.2	159.7
69°	154.7	152.2	144.7	139.7	137.2	139.7	137.2	139.7	137.2	139.7
70°	137.2	129.7	122.2	119.7	117.3	117.3	117.3	114.8	117.3	114.8
71°	119.7	112.3	104.8	99.8	97.3	97.3	94.8	97.3	94.8	97.3
72°	102.3	94.8	84.8	79.8	79.8	79.8	79.8	77.4	79.8	77.4
72.5°	94.8	84.8	77.4	72.4	69.9	69.9	69.9	69.9	67.4	69.9
73°	87.3	77.4	67.4	64.9	64.9	64.9	62.4	59.9	62.4	62.4



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	30.0	22.5	20.0	20.0	20.0	20.0	20.0	20.0	17.5	17.5
80°	12.5	10.0	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
82.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
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°	162.2	162.2	157.2	149.7	137.2	124.7	114.8	104.8	92.3	79.8	74.9
75°	149.7	147.2	142.2	134.7	124.7	112.3	102.3	89.8	79.8	67.4	62.4





74°	72.4	59.9	54.9	49.9	49.9	49.9	47.4	47.4	47.4	49.9
75°	57.4	47.4	42.4	37.5	39.9	37.5	39.9	37.5	37.5	37.5



(END OF REPORT)