

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: P585280

Luminaire Tested: **HC880D010-HM86080930-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P585280
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: HC880D010-HM86080930-81RWWH
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: 5370.7 lumens
Efficiency: N/A
Efficacy: 76.7 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

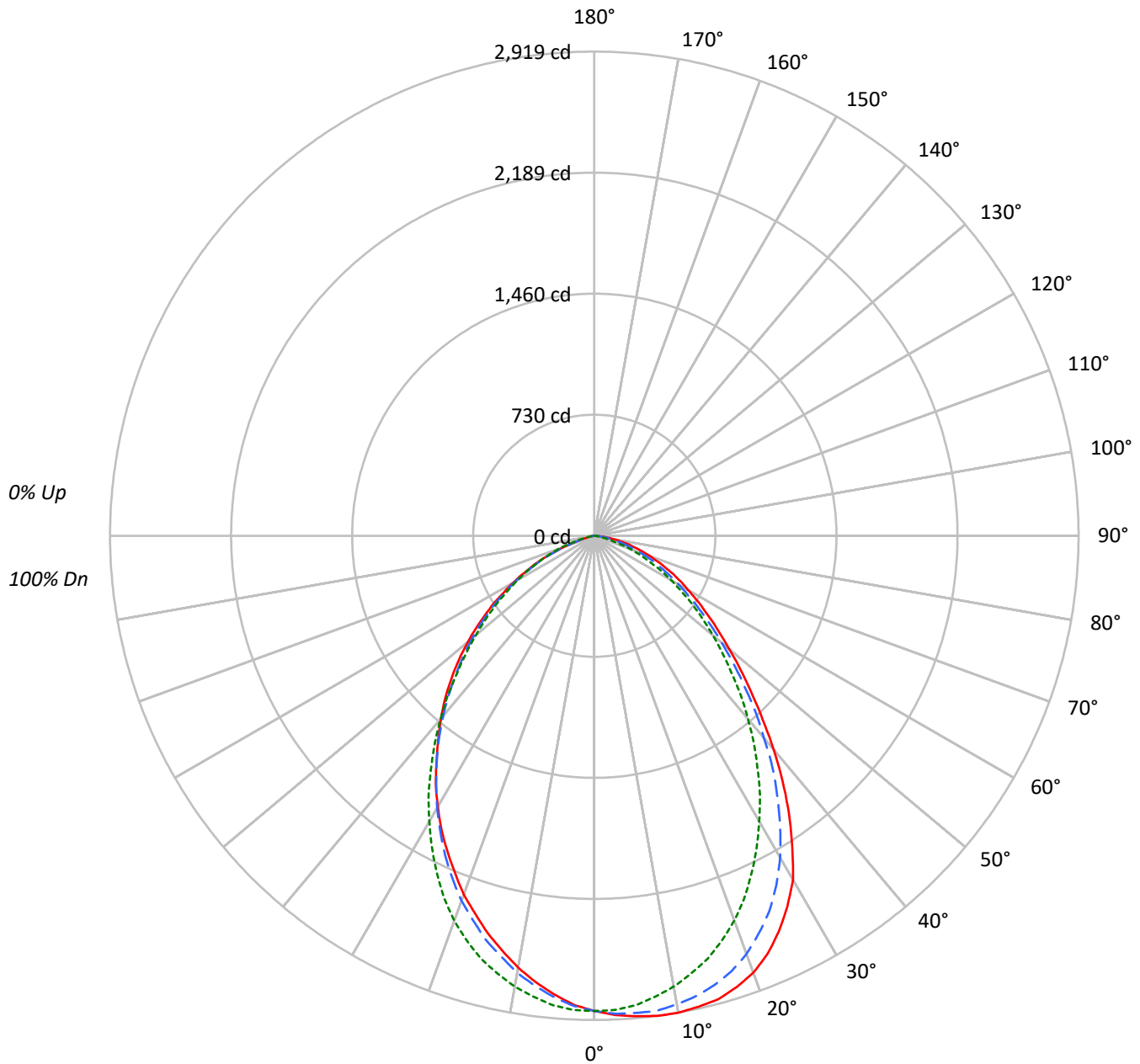
Input Watts (W): 70
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10		50	30	10			50	30	10			50
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111			106	106	106			102
1	111	107	104	100	108	105	102	99		101	98	96			97	95	93			93
2	103	96	90	85	100	94	89	84		90	86	82			87	84	80			84
3	95	86	79	73	92	84	78	73		81	76	71			79	74	70			76
4	88	77	70	64	86	76	69	63		74	67	63			71	66	62			69
5	81	70	62	56	79	69	62	56		67	60	55			65	59	55			63
6	76	64	56	50	74	63	55	50		61	54	49			60	54	49			58
7	71	58	51	45	69	58	50	45		56	49	45			55	49	44			54
8	66	54	46	41	65	53	46	41		52	45	40			51	45	40			50
9	62	50	42	37	61	49	42	37		48	41	37			47	41	37			46
10	58	46	39	34	57	46	39	34		45	38	34			44	38	34			43

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	88343	88343	88343
5°	90002	87959	85916
10°	91406	86421	82776
15°	92325	84270	79188
20°	91971	81014	75538
25°	89551	76343	71321
30°	85282	70768	67176
35°	77012	64590	62399
40°	67663	57974	57817
45°	58406	50953	53160
50°	50842	44696	47675
55°	45079	38821	41531
60°	40223	32798	34469
65°	36256	26625	27187
70°	32205	19952	16102
75°	27748	11557	6946
80°	21363	4138	2078
85°	13728	1380	1380



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	268.9	5.0
10°-20°	748.7	13.9
20°-30°	1058.9	19.7
30°-40°	1115.8	20.8
40°-50°	948.3	17.7
50°-60°	682.9	12.7
60°-70°	393.9	7.3
70°-80°	134.8	2.5
80°-90°	18.5	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°	2076.5	38.7
0°-40°	3192.3	59.4
0°-60°	4823.4	89.8
0°-90°	5370.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5370.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2865	2865	2865	2865	2865	
5°	2908	2888	2842	2791	2776	278
15°	2892	2803	2640	2523	2480	814
25°	2632	2496	2244	2127	2096	1207
35°	2046	1926	1716	1654	1658	1274
45°	1339	1277	1168	1176	1219	1040
55°	838	772	722	749	772	755
65°	497	427	365	357	373	494
75°	233	175	97	62	58	246
85°	39	23	4	4	4	52
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°	2864.9	2864.9	2864.9	2864.9	2864.9	2864.9	2864.9	2864.9	2864.9	2864.9	2864.9
2.5°	2892.0	2895.9	2892.0	2892.0	2888.1	2884.3	2880.4	2876.4	2868.7	2861.0	2861.0
5°	2907.6	2915.3	2907.6	2907.6	2895.9	2888.1	2880.4	2868.7	2853.2	2841.6	2841.6
7.5°	2919.2	2919.2	2919.2	2907.6	2899.7	2888.1	2868.7	2849.3	2829.9	2810.4	2802.7
10°	2919.2	2919.2	2915.3	2899.7	2892.0	2868.7	2849.3	2822.1	2795.0	2767.8	2760.0
12.5°	2907.6	2911.4	2903.7	2888.1	2868.7	2841.6	2814.4	2779.4	2748.4	2717.3	2701.8
15°	2892.0	2888.1	2880.4	2861.0	2837.7	2802.7	2775.6	2736.7	2694.0	2655.3	2639.7
17.5°	2853.2	2853.2	2841.6	2822.1	2791.1	2752.3	2709.6	2666.8	2620.3	2577.6	2558.1
20°	2802.7	2802.7	2787.3	2763.9	2732.8	2682.4	2635.8	2585.4	2531.0	2488.3	2468.8
22.5°	2729.0	2732.8	2713.4	2686.3	2651.4	2593.1	2546.5	2484.4	2430.1	2379.5	2364.1
25°	2632.0	2639.7	2620.3	2593.1	2546.5	2496.1	2437.8	2379.5	2317.5	2267.1	2243.8
27.5°	2519.4	2523.2	2503.8	2476.7	2430.1	2375.7	2317.5	2255.4	2197.2	2142.8	2119.5
30°	2395.1	2379.5	2371.8	2336.9	2286.4	2239.8	2173.8	2123.4	2061.3	2014.8	1987.5
32.5°	2220.5	2228.2	2204.9	2177.8	2138.9	2084.6	2030.2	1972.0	1913.8	1878.9	1859.5
35°	2045.8	2053.5	2041.9	2014.8	1972.0	1925.5	1871.1	1828.3	1777.9	1735.2	1715.8
37.5°	1863.3	1863.3	1855.6	1840.0	1808.9	1766.3	1711.9	1669.2	1626.6	1591.6	1579.9
40°	1680.9	1673.0	1669.2	1657.6	1630.4	1591.6	1556.6	1521.7	1479.0	1455.7	1440.2
42.5°	1502.3	1502.3	1494.6	1482.9	1455.7	1436.3	1401.4	1362.6	1331.4	1308.3	1308.3
45°	1339.3	1343.1	1331.4	1323.7	1308.3	1277.1	1246.1	1219.0	1191.7	1176.2	1168.4
47.5°	1195.7	1195.7	1184.0	1176.2	1160.7	1133.5	1106.4	1083.1	1063.7	1052.0	1048.1
50°	1059.8	1059.8	1059.8	1040.4	1021.0	1001.5	982.1	955.0	943.4	935.5	931.7
52.5°	943.4	939.4	939.4	923.9	904.5	881.2	861.8	838.5	826.8	819.1	822.9
55°	838.5	838.5	834.6	815.2	795.8	772.5	753.1	733.7	725.9	718.2	722.1
56°	795.8	795.8	791.9	776.4	753.1	733.7	710.4	690.9	679.3	683.2	683.2
57°	764.8	756.9	756.9	737.5	718.2	690.9	671.5	652.2	644.4	640.5	640.5
58°	725.9	722.1	718.2	698.8	679.3	656.1	636.6	617.2	605.6	605.6	601.8
59°	687.1	687.1	679.3	663.8	644.4	621.1	601.8	582.3	570.6	566.8	566.8
60°	652.2	656.1	644.4	628.9	613.3	586.2	562.9	547.3	535.6	531.8	531.8
61°	621.1	621.1	613.3	593.9	574.5	555.1	531.8	512.5	504.6	496.9	496.9
62°	593.9	586.2	582.3	562.9	543.5	520.2	500.8	481.3	469.7	461.9	465.9
63°	558.9	555.1	547.3	531.8	512.5	489.2	465.9	450.3	438.6	427.0	430.9
64°	531.8	527.9	516.3	500.8	481.3	458.1	434.8	419.2	411.5	399.9	395.9
65°	496.9	493.0	489.2	469.7	450.3	427.0	407.6	392.0	380.5	372.6	364.9
66°	465.9	469.7	461.9	446.5	423.2	403.7	376.6	361.0	353.3	341.6	333.9
67°	438.6	438.6	430.9	415.3	392.0	372.6	353.3	333.9	322.2	310.6	306.6
67.5°	423.2	423.2	415.3	395.9	380.5	357.2	337.7	322.2	306.6	298.9	291.2
68°	407.6	407.6	403.7	388.2	368.8	345.5	326.0	306.6	291.2	279.5	275.6
69°	380.5	384.3	376.6	361.0	341.6	318.3	298.9	283.3	267.9	256.2	248.4
70°	357.2	353.3	345.5	329.9	310.6	295.0	275.6	256.2	240.7	225.2	221.3
71°	326.0	326.0	318.3	306.6	287.3	267.9	248.4	232.9	217.3	198.0	194.0
72°	302.8	302.8	295.0	279.5	264.0	244.6	225.2	205.7	194.0	174.7	166.9
72.5°	287.3	291.2	283.3	267.9	252.3	229.0	213.5	198.0	178.6	163.0	155.3
73°	279.5	275.6	271.7	256.2	236.8	221.3	201.9	186.3	166.9	151.4	143.6



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	174.7	174.7	170.9	155.3	139.7	124.3	108.7	93.2	77.6	62.1	54.3
80°	120.3	124.3	116.4	108.7	97.0	81.6	66.0	54.3	38.8	31.0	23.3
82.5°	77.6	77.6	73.7	66.0	58.3	46.6	38.8	27.2	19.4	15.6	11.7
85°	38.8	42.7	38.8	35.0	27.2	23.3	19.4	11.7	7.7	3.9	3.9
87.5°	15.6	15.6	15.6	11.7	11.7	7.7	3.9	3.9	3.9	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°	2864.9	2864.9	2864.9	2864.9	2864.9	2864.9	2864.9	2864.9	2864.9	2864.9
2.5°	2853.2	2853.2	2845.4	2841.6	2837.7	2833.7	2829.9	2826.0	2826.0	2829.9
5°	2829.9	2822.1	2806.6	2802.7	2791.1	2787.3	2779.4	2775.6	2779.4	2775.6
7.5°	2795.0	2779.4	2760.0	2752.3	2736.7	2729.0	2717.3	2717.3	2709.6	2713.4
10°	2748.4	2725.1	2701.8	2686.3	2674.7	2663.0	2655.3	2647.4	2643.6	2643.6
12.5°	2690.1	2663.0	2639.7	2616.4	2597.0	2589.2	2573.7	2573.7	2566.0	2562.1
15°	2624.1	2589.2	2562.1	2538.8	2523.2	2507.7	2496.1	2488.3	2480.5	2480.5
17.5°	2538.8	2507.7	2480.5	2453.4	2430.1	2418.4	2406.8	2395.1	2395.1	2387.4
20°	2445.5	2410.7	2387.4	2360.2	2340.8	2321.4	2305.8	2305.8	2298.1	2301.9
22.5°	2340.8	2298.1	2274.8	2255.4	2235.9	2220.5	2204.9	2204.9	2201.1	2197.2
25°	2224.4	2189.4	2162.2	2138.9	2127.2	2111.8	2107.9	2100.1	2096.2	2096.2
27.5°	2100.1	2072.9	2037.9	2026.3	2010.8	2003.1	2003.1	1999.2	1991.5	1995.3
30°	1968.2	1937.1	1917.6	1909.9	1894.3	1894.3	1890.5	1882.7	1882.7	1886.6
32.5°	1840.0	1808.9	1793.5	1789.6	1774.0	1774.0	1770.2	1774.0	1774.0	1777.9
35°	1700.3	1673.0	1669.2	1657.6	1653.7	1653.7	1653.7	1661.5	1669.2	1657.6
37.5°	1568.3	1548.9	1537.3	1533.3	1537.3	1537.3	1541.1	1552.7	1548.9	1545.0
40°	1432.4	1416.9	1409.1	1409.1	1416.9	1424.7	1424.7	1436.3	1440.2	1436.3
42.5°	1296.6	1285.0	1285.0	1288.8	1296.6	1300.4	1312.1	1323.7	1327.6	1331.4
45°	1168.4	1168.4	1168.4	1172.4	1176.2	1184.0	1199.5	1211.1	1215.0	1219.0
47.5°	1044.2	1040.4	1052.0	1055.8	1067.5	1071.4	1083.1	1098.5	1102.4	1106.4
50°	927.8	935.5	939.4	951.1	958.8	958.8	974.4	982.1	993.8	993.8
52.5°	819.1	830.8	834.6	846.2	850.1	854.1	861.8	873.4	881.2	881.2
55°	722.1	725.9	733.7	737.5	749.2	753.1	760.8	764.8	776.4	772.5
56°	679.3	687.1	690.9	698.8	706.5	710.4	718.2	722.1	729.8	733.7
57°	640.5	644.4	656.1	659.9	667.7	667.7	671.5	683.2	683.2	687.1
58°	601.8	609.5	613.3	617.2	624.9	628.9	636.6	640.5	644.4	640.5
59°	566.8	570.6	574.5	574.5	582.3	582.3	593.9	601.8	605.6	605.6
60°	531.8	531.8	535.6	539.6	547.3	551.2	551.2	558.9	558.9	558.9
61°	496.9	496.9	500.8	504.6	508.5	508.5	516.3	516.3	520.2	524.1
62°	465.9	461.9	461.9	465.9	465.9	473.6	477.5	481.3	485.2	481.3
63°	430.9	427.0	427.0	427.0	427.0	434.8	434.8	438.6	446.5	442.5
64°	392.0	392.0	392.0	392.0	395.9	395.9	403.7	407.6	411.5	415.3
65°	364.9	357.2	353.3	353.3	357.2	361.0	364.9	368.8	372.6	372.6
66°	333.9	326.0	322.2	322.2	322.2	322.2	329.9	329.9	337.7	337.7
67°	298.9	291.2	287.3	283.3	283.3	283.3	295.0	291.2	291.2	291.2
67.5°	287.3	275.6	271.7	267.9	264.0	271.7	267.9	271.7	271.7	267.9
68°	271.7	264.0	256.2	248.4	248.4	248.4	252.3	256.2	252.3	248.4
69°	240.7	236.8	225.2	217.3	213.5	217.3	213.5	217.3	213.5	217.3
70°	213.5	201.9	190.2	186.3	182.4	182.4	182.4	178.6	182.4	178.6
71°	186.3	174.7	163.0	155.3	151.4	151.4	147.6	151.4	147.6	151.4
72°	159.2	147.6	132.0	124.3	124.3	124.3	124.3	120.3	124.3	120.3
72.5°	147.6	132.0	120.3	112.6	108.7	108.7	108.7	108.7	104.9	108.7
73°	135.9	120.3	104.9	100.9	100.9	100.9	97.0	93.2	97.0	97.0



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	46.6	35.0	31.0	31.0	31.0	31.0	31.0	31.0	27.2	27.2
80°	19.4	15.6	11.7	11.7	11.7	11.7	11.7	11.7	11.7	11.7
82.5°	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
85°	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
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°	252.3	252.3	244.6	232.9	213.5	194.0	178.6	163.0	143.6	124.3	116.4
75°	232.9	229.0	221.3	209.6	194.0	174.7	159.2	139.7	124.3	104.9	97.0





74°	112.6	93.2	85.4	77.6	77.6	77.6	73.7	73.7	73.7	77.6
75°	89.3	73.7	66.0	58.3	62.1	58.3	62.1	58.3	58.3	58.3



(END OF REPORT)