

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: P585093

Luminaire Tested: **HC860D010-HM86080835-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P585093
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: HC860D010-HM86080835-81RWWH
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: 5761.6 lumens
Efficiency: N/A
Efficacy: 102.9 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

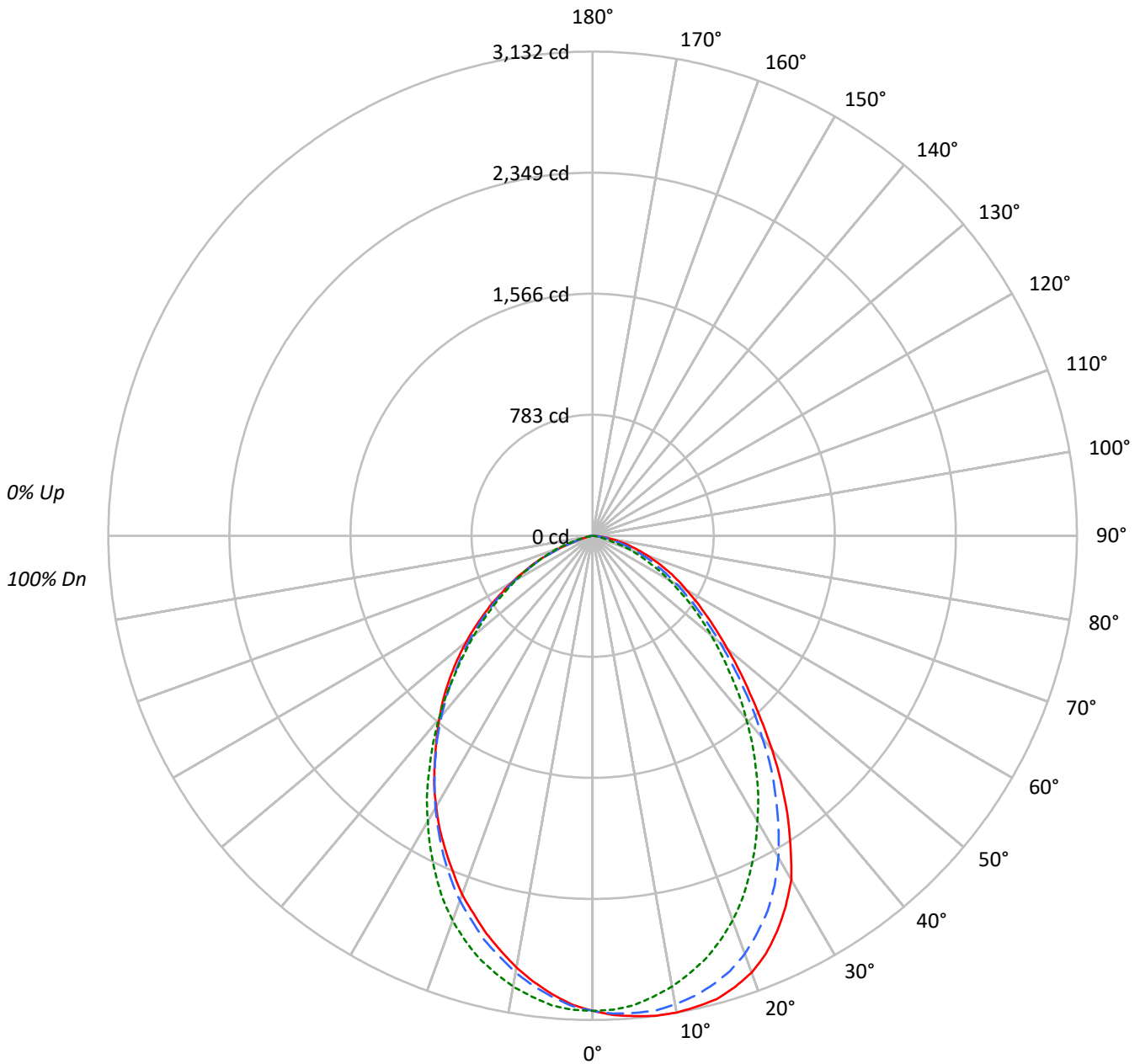
Input Watts (W): 56
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	94769	94769	94769
5°	96555	94360	92169
10°	98060	92715	88801
15°	99045	90403	84953
20°	98669	86918	81037
25°	96067	81896	76513
30°	91491	75921	72068
35°	82618	69292	66939
40°	72586	62192	62023
45°	62658	54664	57023
50°	54540	47949	51144
55°	48358	41644	44552
60°	43152	35190	36985
65°	38898	28566	29171
70°	34549	21404	17275
75°	29762	12415	7446
80°	22925	4439	2220
85°	14718	1486	1486



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	288.5	5.0
10°-20°	803.2	13.9
20°-30°	1136.0	19.7
30°-40°	1197.0	20.8
40°-50°	1017.3	17.7
50°-60°	732.6	12.7
60°-70°	422.6	7.3
70°-80°	144.6	2.5
80°-90°	19.9	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°	2227.7	38.7
0°-40°	3424.7	59.4
0°-60°	5174.6	89.8
0°-90°	5761.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5761.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3073	3073	3073	3073	3073	
5°	3119	3098	3048	2994	2978	298
15°	3102	3007	2832	2707	2661	874
25°	2824	2678	2407	2282	2249	1295
35°	2195	2066	1841	1774	1778	1367
45°	1437	1370	1254	1262	1308	1116
55°	900	829	775	804	829	809
65°	533	458	392	383	400	530
75°	250	187	104	67	62	264
85°	42	25	4	4	4	56
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°	3073.3	3073.3	3073.3	3073.3	3073.3	3073.3	3073.3	3073.3	3073.3	3073.3	3073.3
2.5°	3102.5	3106.7	3102.5	3102.5	3098.4	3094.2	3090.1	3085.9	3077.6	3069.2	3069.2
5°	3119.3	3127.6	3119.3	3119.3	3106.7	3098.4	3090.1	3077.6	3060.9	3048.4	3048.4
7.5°	3131.7	3131.7	3131.7	3119.3	3110.8	3098.4	3077.6	3056.7	3036.0	3015.1	3006.8
10°	3131.7	3131.7	3127.6	3110.8	3102.5	3077.6	3056.7	3027.6	2998.5	2969.3	2961.0
12.5°	3119.3	3123.4	3115.1	3098.4	3077.6	3048.4	3019.3	2981.8	2948.4	2915.1	2898.5
15°	3102.5	3098.4	3090.1	3069.2	3044.3	3006.8	2977.6	2936.0	2890.2	2848.6	2831.8
17.5°	3060.9	3060.9	3048.4	3027.6	2994.2	2952.6	2906.8	2861.0	2811.1	2765.3	2744.4
20°	3006.8	3006.8	2990.1	2965.2	2931.8	2877.6	2827.7	2773.6	2715.2	2669.4	2648.7
22.5°	2927.7	2931.8	2911.0	2881.9	2844.4	2781.9	2731.9	2665.3	2607.0	2552.8	2536.2
25°	2823.5	2831.8	2811.1	2781.9	2731.9	2677.7	2615.3	2552.8	2486.2	2432.1	2407.0
27.5°	2702.8	2706.9	2686.2	2657.0	2607.0	2548.7	2486.2	2419.6	2357.1	2298.8	2273.8
30°	2569.5	2552.8	2544.5	2507.0	2452.9	2402.9	2332.2	2278.0	2211.3	2161.4	2132.2
32.5°	2382.1	2390.4	2365.4	2336.3	2294.7	2236.3	2178.1	2115.6	2053.1	2015.6	1994.8
35°	2194.7	2203.0	2190.5	2161.4	2115.6	2065.6	2007.3	1961.5	1907.4	1861.6	1840.7
37.5°	1999.0	1999.0	1990.7	1973.9	1940.7	1894.8	1836.6	1790.8	1745.0	1707.5	1694.9
40°	1803.2	1794.9	1790.8	1778.2	1749.1	1707.5	1670.0	1632.5	1586.7	1561.7	1545.0
42.5°	1611.6	1611.6	1603.3	1590.9	1561.7	1540.8	1503.3	1461.7	1428.4	1403.5	1403.5
45°	1436.8	1440.9	1428.4	1420.1	1403.5	1370.1	1336.8	1307.6	1278.5	1261.8	1253.5
47.5°	1282.7	1282.7	1270.1	1261.8	1245.2	1216.0	1186.8	1161.9	1141.1	1128.6	1124.4
50°	1136.9	1136.9	1136.9	1116.1	1095.3	1074.4	1053.6	1024.4	1012.0	1003.7	999.5
52.5°	1012.0	1007.8	1007.8	991.1	970.4	945.3	924.6	899.5	887.1	878.7	882.9
55°	899.5	899.5	895.4	874.5	853.7	828.7	808.0	787.1	778.8	770.5	774.6
56°	853.7	853.7	849.6	832.9	808.0	787.1	762.1	741.3	728.8	733.0	733.0
57°	820.4	812.1	812.1	791.2	770.5	741.3	720.4	699.7	691.3	687.2	687.2
58°	778.8	774.6	770.5	749.6	728.8	703.8	682.9	662.2	649.7	649.7	645.4
59°	737.1	737.1	728.8	712.1	691.3	666.3	645.4	624.7	612.2	608.1	608.1
60°	699.7	703.8	691.3	674.6	658.0	628.8	603.8	587.2	574.7	570.6	570.6
61°	666.3	666.3	658.0	637.1	616.4	595.5	570.6	549.7	541.4	533.1	533.1
62°	637.1	628.8	624.7	603.8	583.0	558.0	537.3	516.4	503.9	495.6	499.8
63°	599.7	595.5	587.2	570.6	549.7	524.7	499.8	483.0	470.6	458.1	462.3
64°	570.6	566.3	553.9	537.3	516.4	491.5	466.4	449.7	441.4	428.9	424.8
65°	533.1	528.9	524.7	503.9	483.0	458.1	437.3	420.6	408.1	399.8	391.5
66°	499.8	503.9	495.6	478.9	454.0	433.1	403.9	387.3	379.0	366.4	358.1
67°	470.6	470.6	462.3	445.6	420.6	399.8	379.0	358.1	345.7	333.2	328.9
67.5°	454.0	454.0	445.6	424.8	408.1	383.2	362.3	345.7	328.9	320.6	312.3
68°	437.3	437.3	433.1	416.5	395.6	370.6	349.8	328.9	312.3	299.9	295.7
69°	408.1	412.3	403.9	387.3	366.4	341.5	320.6	304.0	287.3	274.9	266.6
70°	383.2	379.0	370.6	354.0	333.2	316.5	295.7	274.9	258.2	241.5	237.4
71°	349.8	349.8	341.5	328.9	308.2	287.3	266.6	249.8	233.2	212.3	208.2
72°	324.8	324.8	316.5	299.9	283.2	262.4	241.5	220.8	208.2	187.4	179.1
72.5°	308.2	312.3	304.0	287.3	270.7	245.7	229.1	212.3	191.6	174.9	166.6
73°	299.9	295.7	291.5	274.9	254.0	237.4	216.6	199.9	179.1	162.4	154.1



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	187.4	187.4	183.3	166.6	149.9	133.2	116.6	100.0	83.3	66.7	58.2
80°	129.1	133.2	124.9	116.6	104.2	87.4	70.8	58.2	41.6	33.3	25.0
82.5°	83.3	83.3	79.1	70.8	62.5	49.9	41.6	29.2	20.9	16.6	12.5
85°	41.6	45.8	41.6	37.5	29.2	25.0	20.9	12.5	8.3	4.2	4.2
87.5°	16.6	16.6	16.6	12.5	12.5	8.3	4.2	4.2	4.2	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°	3073.3	3073.3	3073.3	3073.3	3073.3	3073.3	3073.3	3073.3	3073.3	3073.3
2.5°	3060.9	3060.9	3052.6	3048.4	3044.3	3040.1	3036.0	3031.7	3031.7	3036.0
5°	3036.0	3027.6	3011.0	3006.8	2994.2	2990.1	2981.8	2977.6	2981.8	2977.6
7.5°	2998.5	2981.8	2961.0	2952.6	2936.0	2927.7	2915.1	2915.1	2906.8	2911.0
10°	2948.4	2923.5	2898.5	2881.9	2869.3	2856.9	2848.6	2840.2	2836.0	2836.0
12.5°	2886.0	2856.9	2831.8	2806.9	2786.0	2777.7	2761.1	2761.1	2752.7	2748.6
15°	2815.2	2777.7	2748.6	2723.6	2706.9	2690.3	2677.7	2669.4	2661.1	2661.1
17.5°	2723.6	2690.3	2661.1	2631.9	2607.0	2594.5	2582.0	2569.5	2569.5	2561.1
20°	2623.6	2586.2	2561.1	2532.1	2511.2	2490.4	2473.7	2473.7	2465.4	2469.5
22.5°	2511.2	2465.4	2440.4	2419.6	2398.7	2382.1	2365.4	2365.4	2361.2	2357.1
25°	2386.3	2348.8	2319.6	2294.7	2282.1	2265.5	2261.4	2253.1	2248.8	2248.8
27.5°	2253.1	2223.9	2186.4	2173.9	2157.2	2148.9	2148.9	2144.7	2136.4	2140.6
30°	2111.4	2078.1	2057.3	2048.9	2032.3	2032.3	2028.1	2019.8	2019.8	2024.0
32.5°	1973.9	1940.7	1924.0	1919.8	1903.2	1903.2	1899.0	1903.2	1903.2	1907.4
35°	1824.1	1794.9	1790.8	1778.2	1774.0	1774.0	1774.0	1782.5	1790.8	1778.2
37.5°	1682.5	1661.6	1649.1	1645.0	1649.1	1649.1	1653.3	1665.9	1661.6	1657.4
40°	1536.7	1520.1	1511.8	1511.8	1520.1	1528.4	1528.4	1540.8	1545.0	1540.8
42.5°	1391.0	1378.4	1378.4	1382.6	1391.0	1395.2	1407.6	1420.1	1424.2	1428.4
45°	1253.5	1253.5	1253.5	1257.7	1261.8	1270.1	1286.8	1299.3	1303.5	1307.6
47.5°	1120.3	1116.1	1128.6	1132.8	1145.2	1149.4	1161.9	1178.5	1182.7	1186.8
50°	995.3	1003.7	1007.8	1020.3	1028.6	1028.6	1045.3	1053.6	1066.1	1066.1
52.5°	878.7	891.2	895.4	907.8	912.0	916.1	924.6	937.0	945.3	945.3
55°	774.6	778.8	787.1	791.2	803.8	808.0	816.3	820.4	832.9	828.7
56°	728.8	737.1	741.3	749.6	757.9	762.1	770.5	774.6	782.9	787.1
57°	687.2	691.3	703.8	708.0	716.3	716.3	720.4	733.0	733.0	737.1
58°	645.4	653.9	658.0	662.2	670.5	674.6	682.9	687.2	691.3	687.2
59°	608.1	612.2	616.4	616.4	624.7	624.7	637.1	645.4	649.7	649.7
60°	570.6	570.6	574.7	578.9	587.2	591.3	591.3	599.7	599.7	599.7
61°	533.1	533.1	537.3	541.4	545.6	545.6	553.9	553.9	558.0	562.2
62°	499.8	495.6	495.6	499.8	499.8	508.1	512.2	516.4	520.5	516.4
63°	462.3	458.1	458.1	458.1	458.1	466.4	466.4	470.6	478.9	474.7
64°	420.6	420.6	420.6	420.6	424.8	424.8	433.1	437.3	441.4	445.6
65°	391.5	383.2	379.0	379.0	383.2	387.3	391.5	395.6	399.8	399.8
66°	358.1	349.8	345.7	345.7	345.7	345.7	354.0	354.0	362.3	362.3
67°	320.6	312.3	308.2	304.0	304.0	304.0	316.5	312.3	312.3	312.3
67.5°	308.2	295.7	291.5	287.3	283.2	291.5	287.3	291.5	291.5	287.3
68°	291.5	283.2	274.9	266.6	266.6	266.6	270.7	274.9	270.7	266.6
69°	258.2	254.0	241.5	233.2	229.1	233.2	229.1	233.2	229.1	233.2
70°	229.1	216.6	204.0	199.9	195.7	195.7	195.7	191.6	195.7	191.6
71°	199.9	187.4	174.9	166.6	162.4	162.4	158.2	162.4	158.2	162.4
72°	170.7	158.2	141.6	133.2	133.2	133.2	133.2	129.1	133.2	129.1
72.5°	158.2	141.6	129.1	120.8	116.6	116.6	116.6	116.6	112.5	116.6
73°	145.8	129.1	112.5	108.3	108.3	108.3	104.2	100.0	104.2	104.2



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	49.9	37.5	33.3	33.3	33.3	33.3	33.3	33.3	29.2	29.2
80°	20.9	16.6	12.5	12.5	12.5	12.5	12.5	12.5	12.5	12.5
82.5°	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.3
85°	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
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°	270.7	270.7	262.4	249.8	229.1	208.2	191.6	174.9	154.1	133.2	124.9
75°	249.8	245.7	237.4	224.9	208.2	187.4	170.7	149.9	133.2	112.5	104.2





74°	120.8	100.0	91.6	83.3	83.3	83.3	79.1	79.1	79.1	83.3
75°	95.7	79.1	70.8	62.5	66.7	62.5	66.7	62.5	62.5	62.5



(END OF REPORT)