

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: P585195

Luminaire Tested: **HC880D010-HM86080827-81RWWH**

Issue Date: 10/21/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P585195  
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-HM86080827-81RWWH  
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5763.9 lumens  
Efficiency: N/A  
Efficacy: 82.3 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

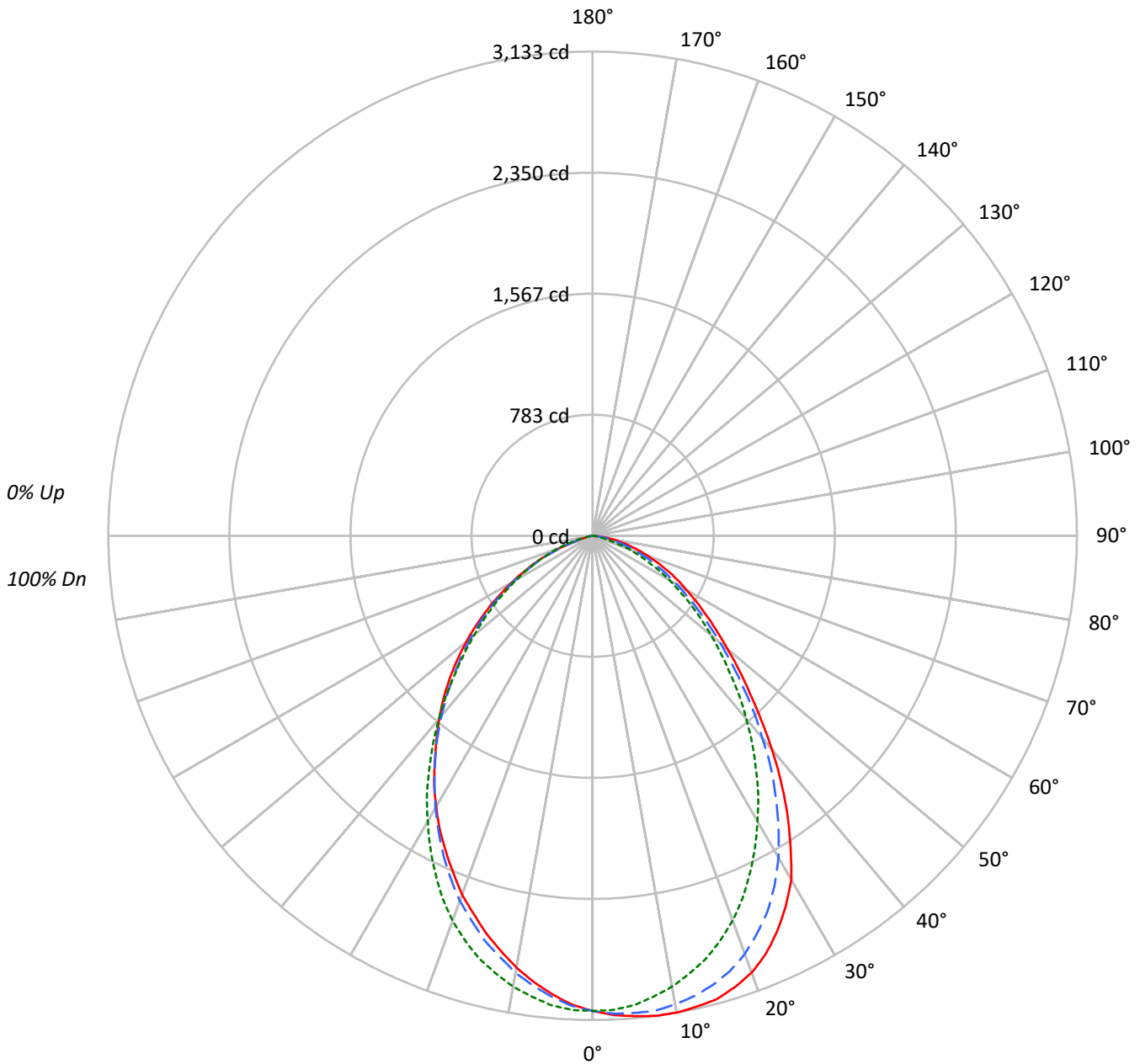
Input Watts (W): 70  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	94809	94809	94809
5°	96589	94401	92206
10°	98097	92752	88838
15°	99086	90441	84988
20°	98705	86951	81070
25°	96108	81933	76544
30°	91527	75953	72093
35°	82652	69318	66969
40°	72618	62221	62047
45°	62679	54686	57045
50°	54564	47963	51163
55°	48375	41660	44574
60°	43171	35197	37004
65°	38912	28580	29186
70°	34558	21404	17284
75°	29774	12415	7446
80°	22925	4439	2220
85°	14718	1486	1486



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	288.6	5.0
10°-20°	803.5	13.9
20°-30°	1136.4	19.7
30°-40°	1197.5	20.8
40°-50°	1017.7	17.7
50°-60°	732.8	12.7
60°-70°	422.8	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°	2228.6	38.7
0°-40°	3426.1	59.4
0°-60°	5176.6	89.8
0°-90°	5763.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5763.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	3075	3075	3075	3075	3075	
5°	3120	3100	3050	2995	2979	298
15°	3104	3008	2833	2708	2662	874
25°	2825	2679	2408	2283	2250	1295
35°	2196	2066	1841	1775	1779	1367
45°	1437	1371	1254	1262	1308	1117
55°	900	829	775	804	829	810
65°	533	458	392	383	400	530
75°	250	188	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°	3074.6	3074.6	3074.6	3074.6	3074.6	3074.6	3074.6	3074.6	3074.6	3074.6	3074.6
2.5°	3103.8	3107.9	3103.8	3103.8	3099.6	3095.4	3091.3	3087.1	3078.8	3070.5	3070.5
5°	3120.4	3128.7	3120.4	3120.4	3107.9	3099.6	3091.3	3078.8	3062.2	3049.7	3049.7
7.5°	3132.9	3132.9	3132.9	3120.4	3112.1	3099.6	3078.8	3058.0	3037.1	3016.3	3007.9
10°	3132.9	3132.9	3128.7	3112.1	3103.8	3078.8	3058.0	3028.7	2999.6	2970.5	2962.2
12.5°	3120.4	3124.6	3116.3	3099.6	3078.8	3049.7	3020.4	2983.0	2949.7	2916.3	2899.6
15°	3103.8	3099.6	3091.3	3070.5	3045.5	3007.9	2978.8	2937.2	2891.3	2849.7	2833.0
17.5°	3062.2	3062.2	3049.7	3028.7	2995.4	2953.8	2907.9	2862.2	2812.1	2766.3	2745.5
20°	3007.9	3007.9	2991.3	2966.3	2933.0	2878.8	2828.9	2774.7	2716.3	2670.5	2649.7
22.5°	2928.7	2933.0	2912.1	2883.0	2845.5	2783.0	2733.0	2666.3	2608.0	2553.9	2537.2
25°	2824.7	2833.0	2812.1	2783.0	2733.0	2678.8	2616.4	2553.9	2487.2	2433.1	2408.1
27.5°	2703.8	2707.9	2687.1	2658.0	2608.0	2549.7	2487.2	2420.6	2358.0	2299.8	2274.7
30°	2570.5	2553.9	2545.5	2508.1	2453.9	2403.9	2333.1	2278.8	2212.3	2162.2	2133.1
32.5°	2383.0	2391.3	2366.3	2337.2	2295.6	2237.2	2178.8	2116.4	2053.9	2016.4	1995.6
35°	2195.6	2203.9	2191.4	2162.2	2116.4	2066.4	2008.1	1962.2	1908.1	1862.2	1841.4
37.5°	1999.8	1999.8	1991.5	1974.8	1941.4	1895.6	1837.2	1791.5	1745.6	1708.1	1695.6
40°	1804.0	1795.6	1791.5	1779.0	1749.7	1708.1	1670.7	1633.1	1587.3	1562.3	1545.7
42.5°	1612.3	1612.3	1604.0	1591.5	1562.3	1541.4	1504.0	1462.4	1428.9	1404.0	1404.0
45°	1437.3	1441.5	1428.9	1420.6	1404.0	1370.7	1337.4	1308.1	1279.0	1262.4	1254.0
47.5°	1283.2	1283.2	1270.7	1262.4	1245.7	1216.5	1187.3	1162.4	1141.6	1129.1	1124.9
50°	1137.4	1137.4	1137.4	1116.5	1095.7	1074.9	1054.0	1024.9	1012.3	1004.0	999.8
52.5°	1012.3	1008.2	1008.2	991.5	970.7	945.7	924.9	899.8	887.4	879.0	883.2
55°	899.8	899.8	895.7	874.9	854.1	829.1	808.3	787.4	779.0	770.7	774.9
56°	854.1	854.1	849.9	833.3	808.3	787.4	762.4	741.6	729.1	733.3	733.3
57°	820.8	812.4	812.4	791.5	770.7	741.6	720.8	700.0	691.5	687.4	687.4
58°	779.0	774.9	770.7	749.9	729.1	704.1	683.2	662.4	649.9	649.9	645.7
59°	737.4	737.4	729.1	712.4	691.5	666.6	645.7	624.9	612.5	608.3	608.3
60°	700.0	704.1	691.5	674.9	658.2	629.1	604.1	587.5	574.9	570.7	570.7
61°	666.6	666.6	658.2	637.4	616.6	595.8	570.7	549.9	541.6	533.3	533.3
62°	637.4	629.1	624.9	604.1	583.2	558.2	537.4	516.6	504.1	495.8	500.0
63°	600.0	595.8	587.5	570.7	549.9	524.9	500.0	483.3	470.7	458.2	462.4
64°	570.7	566.6	554.1	537.4	516.6	491.7	466.6	449.9	441.6	429.1	424.9
65°	533.3	529.1	524.9	504.1	483.3	458.2	437.4	420.8	408.3	400.0	391.7
66°	500.0	504.1	495.8	479.0	454.1	433.3	404.1	387.5	379.2	366.6	358.2
67°	470.7	470.7	462.4	445.8	420.8	400.0	379.2	358.2	345.8	333.3	329.1
67.5°	454.1	454.1	445.8	424.9	408.3	383.3	362.4	345.8	329.1	320.8	312.5
68°	437.4	437.4	433.3	416.6	395.8	370.7	349.9	329.1	312.5	300.0	295.8
69°	408.3	412.5	404.1	387.5	366.6	341.6	320.8	304.1	287.5	275.0	266.7
70°	383.3	379.2	370.7	354.1	333.3	316.6	295.8	275.0	258.3	241.6	237.4
71°	349.9	349.9	341.6	329.1	308.3	287.5	266.7	249.9	233.3	212.5	208.3
72°	325.0	325.0	316.6	300.0	283.3	262.4	241.6	220.8	208.3	187.5	179.2
72.5°	308.3	312.5	304.1	287.5	270.9	245.8	229.1	212.5	191.7	175.0	166.7
73°	300.0	295.8	291.7	275.0	254.1	237.4	216.6	200.0	179.2	162.5	154.1



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	187.5	187.5	183.3	166.7	149.9	133.3	116.6	100.0	83.3	66.7	58.4
80°	129.1	133.3	125.0	116.6	104.2	87.5	70.9	58.4	41.6	33.3	25.0
82.5°	83.3	83.3	79.2	70.9	62.5	49.9	41.6	29.1	20.8	16.6	12.5
85°	41.6	45.8	41.6	37.5	29.1	25.0	20.8	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°	3074.6	3074.6	3074.6	3074.6	3074.6	3074.6	3074.6	3074.6	3074.6	3074.6
2.5°	3062.2	3062.2	3053.8	3049.7	3045.5	3041.3	3037.1	3032.9	3032.9	3037.1
5°	3037.1	3028.7	3012.1	3007.9	2995.4	2991.3	2983.0	2978.8	2983.0	2978.8
7.5°	2999.6	2983.0	2962.2	2953.8	2937.2	2928.7	2916.3	2916.3	2907.9	2912.1
10°	2949.7	2924.6	2899.6	2883.0	2870.5	2858.0	2849.7	2841.4	2837.2	2837.2
12.5°	2887.1	2858.0	2833.0	2807.9	2787.1	2778.8	2762.2	2762.2	2753.8	2749.7
15°	2816.3	2778.8	2749.7	2724.7	2707.9	2691.3	2678.8	2670.5	2662.2	2662.2
17.5°	2724.7	2691.3	2662.2	2633.0	2608.0	2595.5	2583.0	2570.5	2570.5	2562.2
20°	2624.7	2587.1	2562.2	2533.0	2512.2	2491.3	2474.7	2474.7	2466.3	2470.5
22.5°	2512.2	2466.3	2441.4	2420.6	2399.8	2383.0	2366.3	2366.3	2362.2	2358.0
25°	2387.2	2349.7	2320.6	2295.6	2283.0	2266.4	2262.2	2253.9	2249.7	2249.7
27.5°	2253.9	2224.7	2187.3	2174.7	2158.0	2149.7	2149.7	2145.6	2137.2	2141.4
30°	2112.3	2079.0	2058.0	2049.7	2033.1	2033.1	2028.9	2020.6	2020.6	2024.7
32.5°	1974.8	1941.4	1924.8	1920.6	1903.9	1903.9	1899.8	1903.9	1903.9	1908.1
35°	1824.8	1795.6	1791.5	1779.0	1774.8	1774.8	1774.8	1783.1	1791.5	1779.0
37.5°	1683.1	1662.3	1649.7	1645.6	1649.7	1649.7	1654.0	1666.5	1662.3	1658.2
40°	1537.3	1520.6	1512.3	1512.3	1520.6	1528.9	1528.9	1541.4	1545.7	1541.4
42.5°	1391.5	1379.0	1379.0	1383.2	1391.5	1395.6	1408.1	1420.6	1424.8	1428.9
45°	1254.0	1254.0	1254.0	1258.2	1262.4	1270.7	1287.3	1299.8	1304.0	1308.1
47.5°	1120.8	1116.5	1129.1	1133.2	1145.7	1149.9	1162.4	1179.0	1183.2	1187.3
50°	995.7	1004.0	1008.2	1020.8	1029.1	1029.1	1045.7	1054.0	1066.5	1066.5
52.5°	879.0	891.5	895.7	908.3	912.4	916.6	924.9	937.4	945.7	945.7
55°	774.9	779.0	787.4	791.5	804.1	808.3	816.6	820.8	833.3	829.1
56°	729.1	737.4	741.6	749.9	758.2	762.4	770.7	774.9	783.2	787.4
57°	687.4	691.5	704.1	708.3	716.6	716.6	720.8	733.3	733.3	737.4
58°	645.7	654.1	658.2	662.4	670.7	674.9	683.2	687.4	691.5	687.4
59°	608.3	612.5	616.6	616.6	624.9	624.9	637.4	645.7	649.9	649.9
60°	570.7	570.7	574.9	579.0	587.5	591.6	591.6	600.0	600.0	600.0
61°	533.3	533.3	537.4	541.6	545.8	545.8	554.1	554.1	558.2	562.4
62°	500.0	495.8	495.8	500.0	500.0	508.3	512.5	516.6	520.8	516.6
63°	462.4	458.2	458.2	458.2	458.2	466.6	466.6	470.7	479.0	474.9
64°	420.8	420.8	420.8	420.8	424.9	424.9	433.3	437.4	441.6	445.8
65°	391.7	383.3	379.2	379.2	383.3	387.5	391.7	395.8	400.0	400.0
66°	358.2	349.9	345.8	345.8	345.8	345.8	354.1	354.1	362.4	362.4
67°	320.8	312.5	308.3	304.1	304.1	304.1	316.6	312.5	312.5	312.5
67.5°	308.3	295.8	291.7	287.5	283.3	291.7	287.5	291.7	291.7	287.5
68°	291.7	283.3	275.0	266.7	266.7	266.7	270.9	275.0	270.9	266.7
69°	258.3	254.1	241.6	233.3	229.1	233.3	229.1	233.3	229.1	233.3
70°	229.1	216.6	204.2	200.0	195.8	195.8	195.8	191.7	195.8	191.7
71°	200.0	187.5	175.0	166.7	162.5	162.5	158.3	162.5	158.3	162.5
72°	170.9	158.3	141.6	133.3	133.3	133.3	133.3	129.1	133.3	129.1
72.5°	158.3	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	29.1	29.1
80°	20.8	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°	270.9	270.9	262.4	249.9	229.1	208.3	191.7	175.0	154.1	133.3	125.0
75°	249.9	245.8	237.4	225.0	208.3	187.5	170.9	149.9	133.3	112.5	104.2







74°	120.8	100.0	91.7	83.3	83.3	83.3	79.2	79.2	79.2	83.3
75°	95.8	79.2	70.9	62.5	66.7	62.5	66.7	62.5	62.5	62.5



(END OF REPORT)