

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: P585212

Luminaire Tested: **HC880D010-HM86080830-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P585212
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-HM86080830-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5722.2 lumens
Efficiency: N/A
Efficacy: 81.7 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

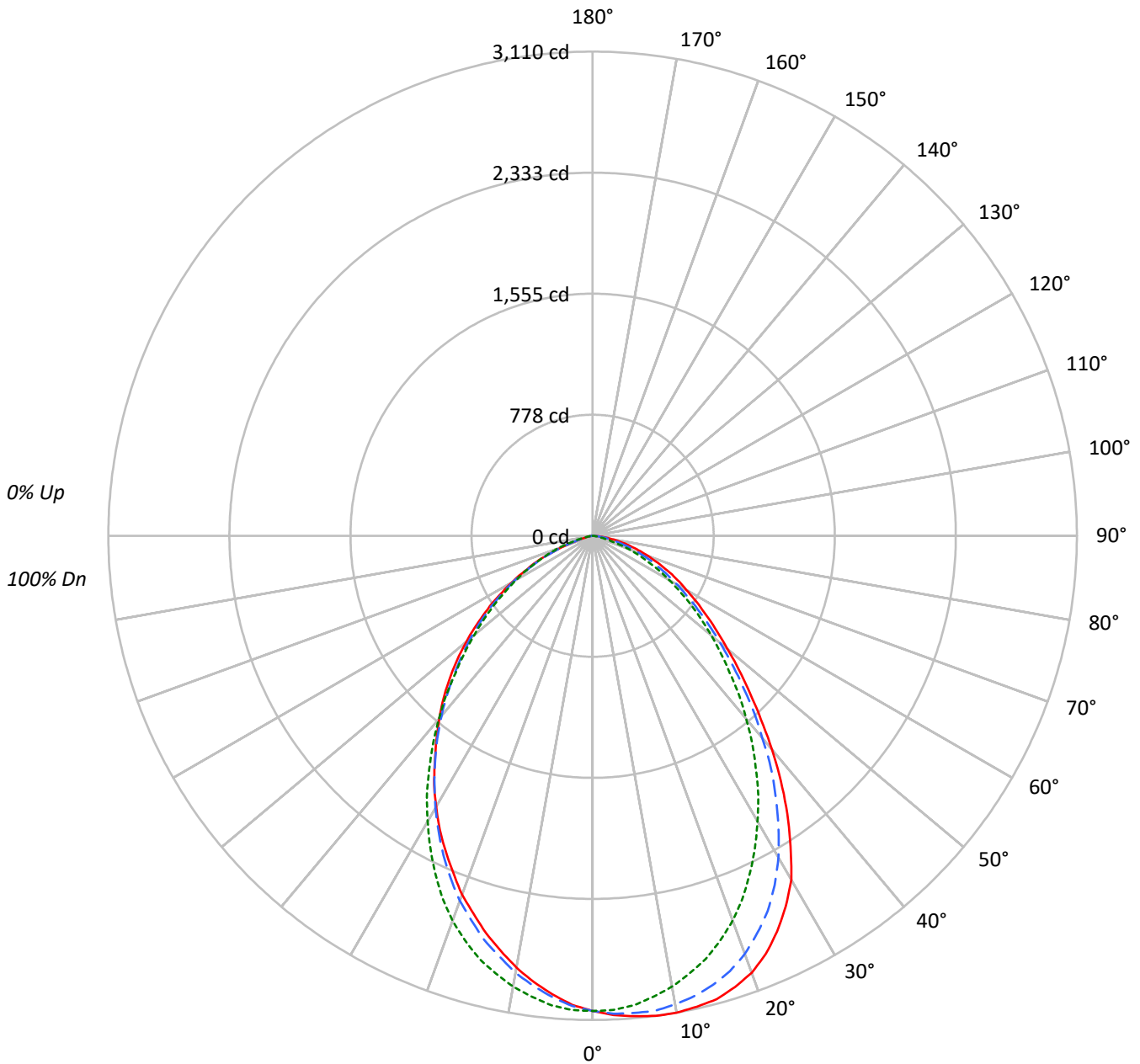
Input Watts (W): 70
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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																			
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77																			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67																			
4	88	77	70	64	86	76	69	63	74	67	63	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	62	56	67	60	55	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47																			
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	36	35																			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	94125	94125	94125
5°	95890	93717	91541
10°	97390	92076	88193
15°	98368	89787	84372
20°	97993	86317	80486
25°	95407	81338	75989
30°	90868	75401	71573
35°	82053	68817	66480
40°	72091	61766	61605
45°	62226	54289	56635
50°	54166	47618	50794
55°	48031	41359	44246
60°	42856	34950	36732
65°	38635	28369	28967
70°	34306	21260	17148
75°	29559	12319	7399
80°	22766	4422	2202
85°	14648	1486	1486



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	286.5	5.0
10°-20°	797.7	13.9
20°-30°	1128.2	19.7
30°-40°	1188.8	20.8
40°-50°	1010.3	17.7
50°-60°	727.5	12.7
60°-70°	419.7	7.3
70°-80°	143.6	2.5
80°-90°	19.8	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°	2212.4	38.7
0°-40°	3401.3	59.4
0°-60°	5139.1	89.8
0°-90°	5722.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5722.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3052	3052	3052	3052	3052	
5°	3098	3077	3028	2974	2957	296
15°	3081	2986	2812	2688	2643	868
25°	2804	2659	2391	2266	2233	1286
35°	2180	2052	1828	1762	1766	1357
45°	1427	1361	1245	1253	1299	1109
55°	893	823	769	798	823	804
65°	530	455	389	380	397	527
75°	248	186	103	66	62	262
85°	41	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°	3052.4	3052.4	3052.4	3052.4	3052.4	3052.4	3052.4	3052.4	3052.4	3052.4	3052.4
2.5°	3081.3	3085.5	3081.3	3081.3	3077.1	3073.1	3068.9	3064.8	3056.4	3048.2	3048.2
5°	3097.8	3106.1	3097.8	3097.8	3085.5	3077.1	3068.9	3056.4	3039.9	3027.6	3027.6
7.5°	3110.3	3110.3	3110.3	3097.8	3089.6	3077.1	3056.4	3035.8	3015.2	2994.5	2986.2
10°	3110.3	3110.3	3106.1	3089.6	3081.3	3056.4	3035.8	3006.9	2977.9	2949.0	2940.6
12.5°	3097.8	3102.0	3093.7	3077.1	3056.4	3027.6	2998.5	2961.3	2928.3	2895.2	2878.7
15°	3081.3	3077.1	3068.9	3048.2	3023.4	2986.2	2957.3	2915.9	2870.4	2829.0	2812.5
17.5°	3039.9	3039.9	3027.6	3006.9	2973.8	2932.4	2886.9	2841.5	2791.8	2746.2	2725.7
20°	2986.2	2986.2	2969.6	2944.8	2911.7	2858.0	2808.3	2754.6	2696.7	2651.1	2630.4
22.5°	2907.6	2911.7	2891.1	2862.0	2824.8	2762.9	2713.2	2647.1	2589.2	2535.3	2518.8
25°	2804.1	2812.5	2791.8	2762.9	2713.2	2659.4	2597.4	2535.3	2469.2	2415.5	2390.6
27.5°	2684.3	2688.3	2667.8	2638.7	2589.2	2531.3	2469.2	2403.0	2340.9	2283.1	2258.3
30°	2552.0	2535.3	2527.1	2489.9	2436.1	2386.4	2316.2	2262.4	2196.2	2146.6	2117.6
32.5°	2365.8	2374.1	2349.2	2320.3	2279.0	2221.1	2163.1	2101.1	2039.0	2001.8	1981.1
35°	2179.7	2187.9	2175.5	2146.6	2101.1	2051.5	1993.6	1948.1	1894.3	1848.8	1828.1
37.5°	1985.3	1985.3	1977.0	1960.4	1927.4	1881.8	1823.9	1778.5	1733.0	1695.8	1683.4
40°	1790.9	1782.5	1778.5	1766.0	1737.1	1695.8	1658.5	1621.3	1575.8	1550.9	1534.4
42.5°	1600.6	1600.6	1592.3	1579.9	1550.9	1530.4	1493.1	1451.8	1418.6	1393.9	1393.9
45°	1426.9	1431.1	1418.6	1410.4	1393.9	1360.7	1327.6	1298.7	1269.7	1253.2	1244.9
47.5°	1273.9	1273.9	1261.5	1253.2	1236.7	1207.7	1178.8	1153.9	1133.2	1120.9	1116.7
50°	1129.1	1129.1	1129.1	1108.4	1087.8	1067.1	1046.4	1017.4	1005.1	996.7	992.6
52.5°	1005.1	1000.9	1000.9	984.4	963.7	938.8	918.1	893.4	880.9	872.7	876.8
55°	893.4	893.4	889.3	868.6	847.9	823.0	802.3	781.6	773.4	765.1	769.3
56°	847.9	847.9	843.7	827.2	802.3	781.6	756.9	736.2	723.7	727.9	727.9
57°	814.8	806.5	806.5	785.8	765.1	736.2	715.5	694.9	686.5	682.5	682.5
58°	773.4	769.3	765.1	744.4	723.7	699.0	678.3	657.6	645.3	645.3	641.1
59°	732.1	732.1	723.7	707.2	686.5	661.8	641.1	620.4	607.9	603.9	603.9
60°	694.9	699.0	686.5	670.0	653.5	624.6	599.7	583.2	570.7	566.7	566.7
61°	661.8	661.8	653.5	632.8	612.1	591.4	566.7	546.0	537.7	529.5	529.5
62°	632.8	624.6	620.4	599.7	579.0	554.2	533.5	512.8	500.5	492.1	496.3
63°	595.6	591.4	583.2	566.7	546.0	521.1	496.3	479.8	467.4	454.9	459.1
64°	566.7	562.5	550.0	533.5	512.8	488.1	463.2	446.7	438.4	426.0	421.9
65°	529.5	525.3	521.1	500.5	479.8	454.9	434.2	417.7	405.3	397.0	388.8
66°	496.3	500.5	492.1	475.6	450.9	430.2	401.2	384.6	376.3	364.0	355.7
67°	467.4	467.4	459.1	442.5	417.7	397.0	376.3	355.7	343.3	330.9	326.7
67.5°	450.9	450.9	442.5	421.9	405.3	380.5	359.8	343.3	326.7	318.4	310.2
68°	434.2	434.2	430.2	413.7	393.0	368.1	347.4	326.7	310.2	297.8	293.7
69°	405.3	409.5	401.2	384.6	364.0	339.1	318.4	301.9	285.4	273.0	264.7
70°	380.5	376.3	368.1	351.6	330.9	314.4	293.7	273.0	256.5	239.9	235.8
71°	347.4	347.4	339.1	326.7	306.0	285.4	264.7	248.1	231.6	210.9	206.8
72°	322.6	322.6	314.4	297.8	281.2	260.5	239.9	219.3	206.8	186.1	177.9
72.5°	306.0	310.2	301.9	285.4	268.8	244.0	227.5	210.9	190.2	173.7	165.4
73°	297.8	293.7	289.5	273.0	252.3	235.8	215.1	198.6	177.9	161.3	153.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	<i>186.1</i>	186.1	182.0	165.4	148.9	132.3	115.8	99.3	82.8	66.2	57.9
80°	<i>128.2</i>	132.3	124.1	115.8	103.4	86.8	70.3	57.9	41.4	33.1	24.9
82.5°	<i>82.8</i>	82.8	78.6	70.3	62.1	49.6	41.4	28.9	20.7	16.5	12.4
85°	<i>41.4</i>	45.5	41.4	37.2	28.9	24.9	20.7	12.4	8.3	4.2	4.2
87.5°	<i>16.5</i>	16.5	16.5	12.4	12.4	8.3	4.2	4.2	4.2	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°	3052.4	3052.4	3052.4	3052.4	3052.4	3052.4	3052.4	3052.4	3052.4	3052.4
2.5°	3039.9	3039.9	3031.7	3027.6	3023.4	3019.2	3015.2	3011.0	3011.0	3015.2
5°	3015.2	3006.9	2990.3	2986.2	2973.8	2969.6	2961.3	2957.3	2961.3	2957.3
7.5°	2977.9	2961.3	2940.6	2932.4	2915.9	2907.6	2895.2	2895.2	2886.9	2891.1
10°	2928.3	2903.4	2878.7	2862.0	2849.7	2837.3	2829.0	2820.8	2816.6	2816.6
12.5°	2866.2	2837.3	2812.5	2787.6	2766.9	2758.7	2742.2	2742.2	2733.9	2729.7
15°	2795.9	2758.7	2729.7	2705.0	2688.3	2671.8	2659.4	2651.1	2642.9	2642.9
17.5°	2705.0	2671.8	2642.9	2613.9	2589.2	2576.7	2564.3	2552.0	2552.0	2543.6
20°	2605.7	2568.5	2543.6	2514.6	2494.0	2473.4	2456.7	2456.7	2448.5	2452.7
22.5°	2494.0	2448.5	2423.7	2403.0	2382.3	2365.8	2349.2	2349.2	2345.1	2340.9
25°	2369.9	2332.7	2303.7	2279.0	2266.5	2249.9	2245.8	2237.6	2233.4	2233.4
27.5°	2237.6	2208.6	2171.4	2159.0	2142.5	2134.1	2134.1	2130.0	2121.8	2125.9
30°	2096.9	2063.9	2043.2	2034.9	2018.3	2018.3	2014.2	2006.0	2006.0	2010.1
32.5°	1960.4	1927.4	1910.8	1906.7	1890.2	1890.2	1886.0	1890.2	1890.2	1894.3
35°	1811.6	1782.5	1778.5	1766.0	1762.0	1762.0	1762.0	1770.2	1778.5	1766.0
37.5°	1670.9	1650.2	1637.8	1633.7	1637.8	1637.8	1642.0	1654.4	1650.2	1646.2
40°	1526.2	1509.7	1501.4	1501.4	1509.7	1517.9	1517.9	1530.4	1534.4	1530.4
42.5°	1381.4	1369.0	1369.0	1373.2	1381.4	1385.5	1397.9	1410.4	1414.6	1418.6
45°	1244.9	1244.9	1244.9	1249.0	1253.2	1261.5	1278.1	1290.4	1294.6	1298.7
47.5°	1112.5	1108.4	1120.9	1125.0	1137.4	1141.6	1153.9	1170.5	1174.6	1178.8
50°	988.5	996.7	1000.9	1013.3	1021.6	1021.6	1038.1	1046.4	1058.8	1058.8
52.5°	872.7	885.1	889.3	901.6	905.8	909.9	918.1	930.6	938.8	938.8
55°	769.3	773.4	781.6	785.8	798.3	802.3	810.7	814.8	827.2	823.0
56°	723.7	732.1	736.2	744.4	752.8	756.9	765.1	769.3	777.6	781.6
57°	682.5	686.5	699.0	703.2	711.4	711.4	715.5	727.9	727.9	732.1
58°	641.1	649.3	653.5	657.6	665.8	670.0	678.3	682.5	686.5	682.5
59°	603.9	607.9	612.1	612.1	620.4	620.4	632.8	641.1	645.3	645.3
60°	566.7	566.7	570.7	574.9	583.2	587.4	587.4	595.6	595.6	595.6
61°	529.5	529.5	533.5	537.7	541.8	541.8	550.0	550.0	554.2	558.4
62°	496.3	492.1	492.1	496.3	496.3	504.6	508.8	512.8	517.0	512.8
63°	459.1	454.9	454.9	454.9	454.9	463.2	463.2	467.4	475.6	471.6
64°	417.7	417.7	417.7	417.7	421.9	421.9	430.2	434.2	438.4	442.5
65°	388.8	380.5	376.3	376.3	380.5	384.6	388.8	393.0	397.0	397.0
66°	355.7	347.4	343.3	343.3	343.3	343.3	351.6	351.6	359.8	359.8
67°	318.4	310.2	306.0	301.9	301.9	301.9	314.4	310.2	310.2	310.2
67.5°	306.0	293.7	289.5	285.4	281.2	289.5	285.4	289.5	289.5	285.4
68°	289.5	281.2	273.0	264.7	264.7	264.7	268.8	273.0	268.8	264.7
69°	256.5	252.3	239.9	231.6	227.5	231.6	227.5	231.6	227.5	231.6
70°	227.5	215.1	202.6	198.6	194.4	194.4	194.4	190.2	194.4	190.2
71°	198.6	186.1	173.7	165.4	161.3	161.3	157.2	161.3	157.2	161.3
72°	169.6	157.2	140.7	132.3	132.3	132.3	132.3	128.2	132.3	128.2
72.5°	157.2	140.7	128.2	120.0	115.8	115.8	115.8	115.8	111.6	115.8
73°	144.7	128.2	111.6	107.5	107.5	107.5	103.4	99.3	103.4	103.4



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	49.6	37.2	33.1	33.1	33.1	33.1	33.1	33.1	28.9	28.9
80°	20.7	16.5	12.4	12.4	12.4	12.4	12.4	12.4	12.4	12.4
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°	268.8	268.8	260.5	248.1	227.5	206.8	190.2	173.7	153.0	132.3	124.1
75°	248.1	244.0	235.8	223.3	206.8	186.1	169.6	148.9	132.3	111.6	103.4





74°	120.0	99.3	91.0	82.8	82.8	82.8	78.6	78.6	78.6	82.8
75°	95.1	78.6	70.3	62.1	66.2	62.1	66.2	62.1	62.1	62.1



(END OF REPORT)