

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: P585297

Luminaire Tested: **HC880D010-HM86080935-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P585297
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-HM86080935-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6106.6 lumens
Efficiency: N/A
Efficacy: 87.2 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

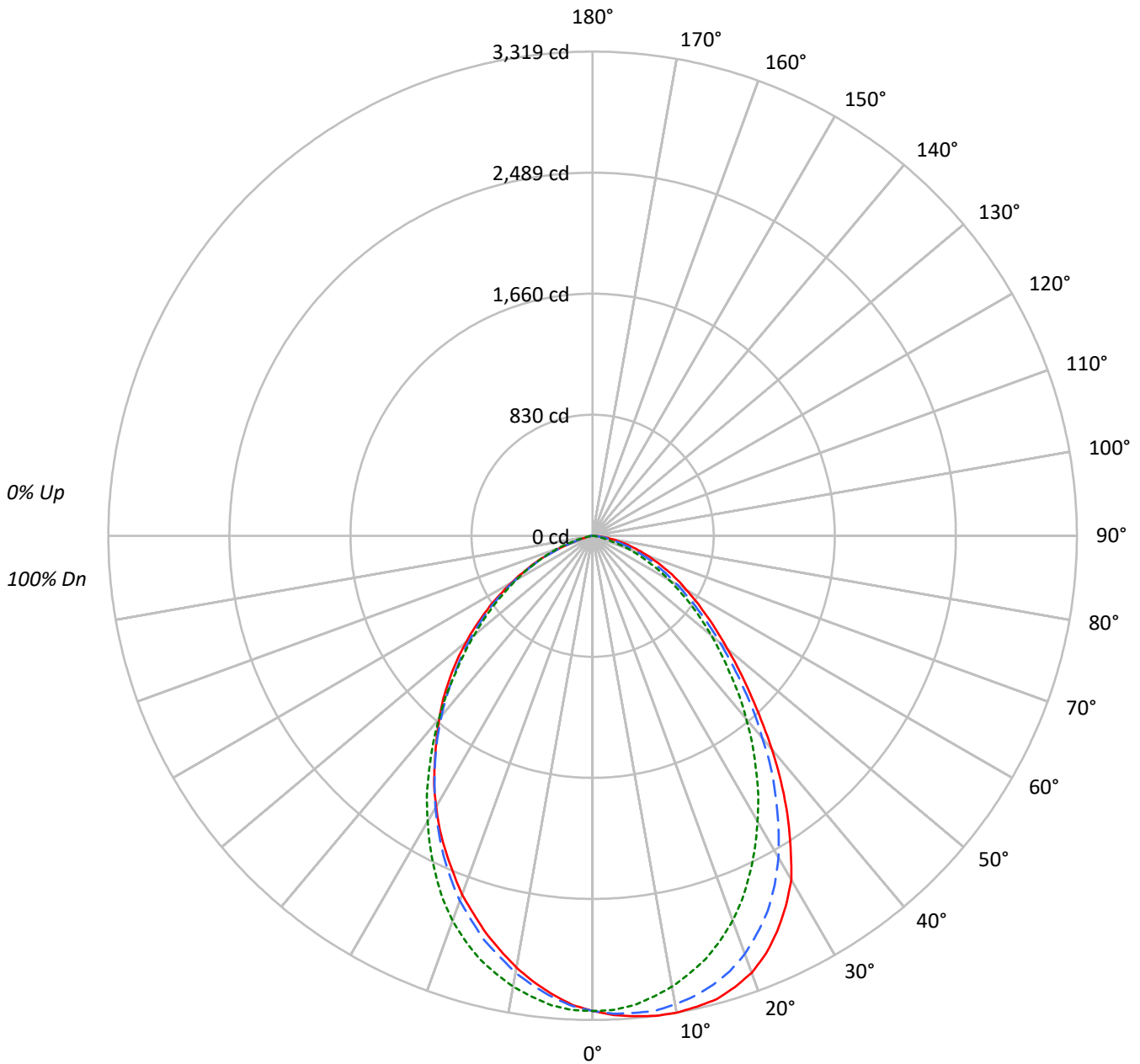
Input Watts (W): 70
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				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°	100446	100446	100446
5°	102334	100013	97691
10°	103931	98263	94118
15°	104976	95817	90039
20°	104579	92119	85894
25°	101821	86802	81096
30°	96971	80468	76384
35°	87568	73440	70948
40°	76933	65916	65739
45°	66408	57939	60438
50°	57802	50818	54204
55°	51251	44138	47219
60°	45736	37293	39199
65°	41225	30280	30923
70°	36605	22684	18311
75°	31549	13141	7887
80°	24311	4706	2344
85°	15603	1557	1557



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	305.8	5.0
10°-20°	851.3	13.9
20°-30°	1204.0	19.7
30°-40°	1268.7	20.8
40°-50°	1078.2	17.7
50°-60°	776.4	12.7
60°-70°	447.9	7.3
70°-80°	153.2	2.5
80°-90°	21.0	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°	2361.1	38.7
0°-40°	3629.8	59.4
0°-60°	5484.4	89.8
0°-90°	6106.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6106.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3257	3257	3257	3257	3257	
5°	3306	3284	3231	3174	3156	316
15°	3288	3187	3001	2869	2820	926
25°	2993	2838	2551	2419	2384	1372
35°	2326	2189	1951	1880	1885	1449
45°	1523	1452	1329	1337	1386	1183
55°	953	878	821	852	878	858
65°	565	486	415	406	424	562
75°	265	199	110	71	66	279
85°	44	26	4	4	4	59
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°	3257.4	3257.4	3257.4	3257.4	3257.4	3257.4	3257.4	3257.4	3257.4	3257.4	3257.4
2.5°	3288.3	3292.7	3288.3	3288.3	3283.9	3279.5	3275.1	3270.7	3261.9	3253.0	3253.0
5°	3306.0	3314.8	3306.0	3306.0	3292.7	3283.9	3275.1	3261.9	3244.2	3231.0	3231.0
7.5°	3319.2	3319.2	3319.2	3306.0	3297.2	3283.9	3261.9	3239.8	3217.7	3195.7	3186.9
10°	3319.2	3319.2	3314.8	3297.2	3288.3	3261.9	3239.8	3208.9	3178.0	3147.0	3138.2
12.5°	3306.0	3310.4	3301.6	3283.9	3261.9	3231.0	3200.1	3160.4	3125.0	3089.7	3072.0
15°	3288.3	3283.9	3275.1	3253.0	3226.6	3186.9	3156.0	3111.7	3063.2	3019.1	3001.4
17.5°	3244.2	3244.2	3231.0	3208.9	3173.6	3129.4	3080.9	3032.3	2979.4	2930.8	2908.8
20°	3186.9	3186.9	3169.2	3142.6	3107.3	3050.0	2997.0	2939.7	2877.9	2829.3	2807.2
22.5°	3102.9	3107.3	3085.3	3054.4	3014.7	2948.5	2895.5	2824.8	2763.1	2705.7	2688.1
25°	2992.6	3001.4	2979.4	2948.5	2895.5	2838.1	2771.9	2705.7	2635.1	2577.8	2551.2
27.5°	2864.7	2869.1	2846.9	2816.0	2763.1	2701.3	2635.1	2564.4	2498.2	2436.5	2410.0
30°	2723.4	2705.7	2696.9	2657.2	2599.7	2546.8	2471.8	2414.4	2343.8	2290.8	2259.9
32.5°	2524.7	2533.5	2507.1	2476.2	2432.1	2370.3	2308.4	2242.2	2176.0	2136.3	2114.3
35°	2326.2	2335.0	2321.6	2290.8	2242.2	2189.3	2127.5	2079.0	2021.5	1973.0	1950.9
37.5°	2118.7	2118.7	2109.9	2092.2	2056.9	2008.3	1946.5	1898.0	1849.4	1809.7	1796.5
40°	1911.2	1902.4	1898.0	1884.7	1853.8	1809.7	1769.9	1730.2	1681.7	1655.2	1637.5
42.5°	1708.1	1708.1	1699.3	1686.1	1655.2	1633.1	1593.4	1549.3	1514.0	1487.4	1487.4
45°	1522.8	1527.2	1514.0	1505.2	1487.4	1452.1	1416.8	1385.9	1355.1	1337.4	1328.6
47.5°	1359.5	1359.5	1346.2	1337.4	1319.8	1288.9	1258.0	1231.4	1209.5	1196.1	1191.7
50°	1204.9	1204.9	1204.9	1182.9	1160.8	1138.8	1116.7	1085.8	1072.6	1063.8	1059.3
52.5°	1072.6	1068.2	1068.2	1050.5	1028.5	1002.0	979.9	953.3	940.1	931.3	935.7
55°	953.3	953.3	948.9	926.9	904.8	878.3	856.3	834.2	825.4	816.6	821.0
56°	904.8	904.8	900.4	882.8	856.3	834.2	807.7	785.7	772.4	776.9	776.9
57°	869.5	860.7	860.7	838.6	816.6	785.7	763.6	741.6	732.7	728.3	728.3
58°	825.4	821.0	816.6	794.5	772.4	746.0	723.9	701.7	688.5	688.5	684.2
59°	781.3	781.3	772.4	754.8	732.7	706.3	684.2	662.0	648.8	644.4	644.4
60°	741.6	746.0	732.7	715.1	697.3	666.6	640.0	622.3	609.1	604.7	604.7
61°	706.3	706.3	697.3	675.4	653.2	631.2	604.7	582.6	573.8	565.0	565.0
62°	675.4	666.6	662.0	640.0	617.9	591.4	569.4	547.3	534.1	525.3	529.7
63°	635.6	631.2	622.3	604.7	582.6	556.1	529.7	512.0	498.8	485.5	490.0
64°	604.7	600.3	587.0	569.4	547.3	520.8	494.4	476.7	467.9	454.7	450.3
65°	565.0	560.6	556.1	534.1	512.0	485.5	463.5	445.8	432.6	423.8	415.0
66°	529.7	534.1	525.3	507.6	481.1	459.1	428.2	410.4	401.6	388.4	379.6
67°	498.8	498.8	490.0	472.3	445.8	423.8	401.6	379.6	366.3	353.1	348.7
67.5°	481.1	481.1	472.3	450.3	432.6	406.0	384.0	366.3	348.7	339.8	331.0
68°	463.5	463.5	459.1	441.4	419.4	392.8	370.7	348.7	331.0	317.8	313.4
69°	432.6	437.0	428.2	410.4	388.4	361.9	339.8	322.2	304.5	291.3	282.5
70°	406.0	401.6	392.8	375.1	353.1	335.4	313.4	291.3	273.7	256.0	251.6
71°	370.7	370.7	361.9	348.7	326.6	304.5	282.5	264.8	247.2	225.1	220.7
72°	344.3	344.3	335.4	317.8	300.1	278.1	256.0	233.9	220.7	198.7	189.8
72.5°	326.6	331.0	322.2	304.5	286.9	260.4	242.8	225.1	203.1	185.4	176.6
73°	317.8	313.4	309.0	291.3	269.2	251.6	229.5	211.9	189.8	172.2	163.4



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	198.7	198.7	194.2	176.6	158.9	141.3	123.5	105.9	88.2	70.6	61.8
80°	136.9	141.3	132.5	123.5	110.3	92.7	75.0	61.8	44.1	35.3	26.5
82.5°	88.2	88.2	83.8	75.0	66.2	52.9	44.1	30.9	22.1	17.6	13.2
85°	44.1	48.5	44.1	39.7	30.9	26.5	22.1	13.2	8.8	4.4	4.4
87.5°	17.6	17.6	17.6	13.2	13.2	8.8	4.4	4.4	4.4	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°	3257.4	3257.4	3257.4	3257.4	3257.4	3257.4	3257.4	3257.4	3257.4	3257.4
2.5°	3244.2	3244.2	3235.4	3231.0	3226.6	3222.2	3217.7	3213.3	3213.3	3217.7
5°	3217.7	3208.9	3191.3	3186.9	3173.6	3169.2	3160.4	3156.0	3160.4	3156.0
7.5°	3178.0	3160.4	3138.2	3129.4	3111.7	3102.9	3089.7	3089.7	3080.9	3085.3
10°	3125.0	3098.5	3072.0	3054.4	3041.1	3027.9	3019.1	3010.3	3005.8	3005.8
12.5°	3058.8	3027.9	3001.4	2975.0	2952.9	2944.1	2926.4	2926.4	2917.6	2913.2
15°	2983.8	2944.1	2913.2	2886.7	2869.1	2851.3	2838.1	2829.3	2820.4	2820.4
17.5°	2886.7	2851.3	2820.4	2789.5	2763.1	2749.8	2736.6	2723.4	2723.4	2714.5
20°	2780.7	2741.0	2714.5	2683.7	2661.6	2639.5	2621.9	2621.9	2613.1	2617.5
22.5°	2661.6	2613.1	2586.6	2564.4	2542.4	2524.7	2507.1	2507.1	2502.7	2498.2
25°	2529.1	2489.4	2458.5	2432.1	2418.8	2401.2	2396.8	2387.9	2383.5	2383.5
27.5°	2387.9	2357.0	2317.2	2304.0	2286.4	2277.5	2277.5	2273.1	2264.3	2268.7
30°	2237.8	2202.5	2180.5	2171.6	2154.0	2154.0	2149.6	2140.7	2140.7	2145.2
32.5°	2092.2	2056.9	2039.3	2034.9	2017.1	2017.1	2012.7	2017.1	2017.1	2021.5
35°	1933.3	1902.4	1898.0	1884.7	1880.3	1880.3	1880.3	1889.1	1898.0	1884.7
37.5°	1783.3	1761.1	1747.9	1743.4	1747.9	1747.9	1752.3	1765.5	1761.1	1756.7
40°	1628.7	1611.1	1602.3	1602.3	1611.1	1619.9	1619.9	1633.1	1637.5	1633.1
42.5°	1474.2	1461.0	1461.0	1465.4	1474.2	1478.6	1491.8	1505.2	1509.6	1514.0
45°	1328.6	1328.6	1328.6	1333.0	1337.4	1346.2	1363.9	1377.1	1381.5	1385.9
47.5°	1187.3	1182.9	1196.1	1200.5	1213.9	1218.2	1231.4	1249.2	1253.6	1258.0
50°	1054.9	1063.8	1068.2	1081.4	1090.2	1090.2	1107.9	1116.7	1129.9	1129.9
52.5°	931.3	944.5	948.9	962.3	966.7	971.1	979.9	993.2	1002.0	1002.0
55°	821.0	825.4	834.2	838.6	851.9	856.3	865.1	869.5	882.8	878.3
56°	772.4	781.3	785.7	794.5	803.3	807.7	816.6	821.0	829.8	834.2
57°	728.3	732.7	746.0	750.4	759.2	759.2	763.6	776.9	776.9	781.3
58°	684.2	692.9	697.3	701.7	710.7	715.1	723.9	728.3	732.7	728.3
59°	644.4	648.8	653.2	653.2	662.0	662.0	675.4	684.2	688.5	688.5
60°	604.7	604.7	609.1	613.5	622.3	626.7	626.7	635.6	635.6	635.6
61°	565.0	565.0	569.4	573.8	578.2	578.2	587.0	587.0	591.4	595.9
62°	529.7	525.3	525.3	529.7	529.7	538.5	542.9	547.3	551.7	547.3
63°	490.0	485.5	485.5	485.5	485.5	494.4	494.4	498.8	507.6	503.2
64°	445.8	445.8	445.8	445.8	450.3	450.3	459.1	463.5	467.9	472.3
65°	415.0	406.0	401.6	401.6	406.0	410.4	415.0	419.4	423.8	423.8
66°	379.6	370.7	366.3	366.3	366.3	366.3	375.1	375.1	384.0	384.0
67°	339.8	331.0	326.6	322.2	322.2	322.2	335.4	331.0	331.0	331.0
67.5°	326.6	313.4	309.0	304.5	300.1	309.0	304.5	309.0	309.0	304.5
68°	309.0	300.1	291.3	282.5	282.5	282.5	286.9	291.3	286.9	282.5
69°	273.7	269.2	256.0	247.2	242.8	247.2	242.8	247.2	242.8	247.2
70°	242.8	229.5	216.3	211.9	207.5	207.5	207.5	203.1	207.5	203.1
71°	211.9	198.7	185.4	176.6	172.2	172.2	167.8	172.2	167.8	172.2
72°	181.0	167.8	150.1	141.3	141.3	141.3	141.3	136.9	141.3	136.9
72.5°	167.8	150.1	136.9	128.1	123.5	123.5	123.5	123.5	119.1	123.5
73°	154.5	136.9	119.1	114.7	114.7	114.7	110.3	105.9	110.3	110.3



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	52.9	39.7	35.3	35.3	35.3	35.3	35.3	35.3	30.9	30.9
80°	22.1	17.6	13.2	13.2	13.2	13.2	13.2	13.2	13.2	13.2
82.5°	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8	8.8
85°	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
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°	286.9	286.9	278.1	264.8	242.8	220.7	203.1	185.4	163.4	141.3	132.5
75°	264.8	260.4	251.6	238.4	220.7	198.7	181.0	158.9	141.3	119.1	110.3





74°	128.1	105.9	97.1	88.2	88.2	88.2	83.8	83.8	83.8	88.2
75°	101.5	83.8	75.0	66.2	70.6	66.2	70.6	66.2	66.2	66.2



(END OF REPORT)