

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: P593920

Luminaire Tested: **HC880D010-HM86080950-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P593920
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-HM86080950-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6298.9 lumens
Efficiency: N/A
Efficacy: 90.0 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

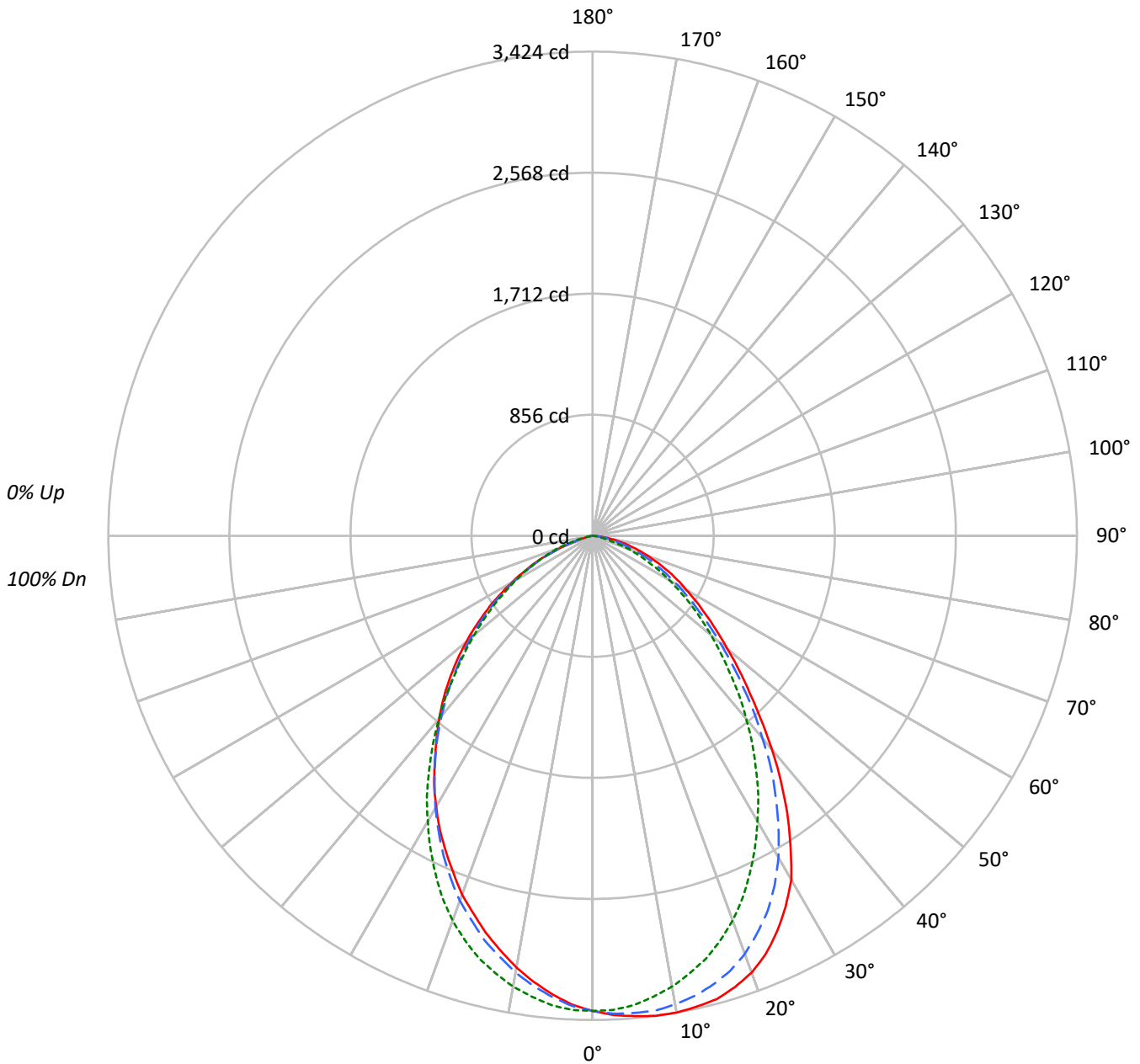
Input Watts (W): 70
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	103610	103610	103610
5°	105557	103158	100762
10°	107203	101360	97080
15°	108283	98834	92874
20°	107867	95020	88598
25°	105026	89534	83648
30°	100023	82999	78787
35°	90320	75755	73180
40°	79357	67993	67812
45°	68497	59762	62339
50°	59630	52420	55917
55°	52869	45525	48708
60°	47173	38465	40433
65°	42517	31222	31893
70°	37768	23405	18879
75°	32538	13558	8126
80°	25056	4848	2433
85°	16098	1592	1592



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	315.4	5.0
10°-20°	878.1	13.9
20°-30°	1241.9	19.7
30°-40°	1308.6	20.8
40°-50°	1112.2	17.7
50°-60°	800.9	12.7
60°-70°	462.0	7.3
70°-80°	158.1	2.5
80°-90°	21.7	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°	2435.4	38.7
0°-40°	3744.0	59.4
0°-60°	5657.1	89.8
0°-90°	6298.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6298.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3360	3360	3360	3360	3360	
5°	3410	3387	3333	3273	3255	326
15°	3392	3287	3096	2959	2909	955
25°	3087	2927	2632	2495	2458	1416
35°	2399	2258	2012	1940	1944	1494
45°	1571	1498	1370	1380	1430	1220
55°	983	906	847	879	906	885
65°	583	501	428	419	437	580
75°	273	205	114	73	68	288
85°	46	27	4	4	4	61
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°	3360.0	3360.0	3360.0	3360.0	3360.0	3360.0	3360.0	3360.0	3360.0	3360.0	3360.0
2.5°	3391.9	3396.4	3391.9	3391.9	3387.3	3382.7	3378.2	3373.7	3364.5	3355.5	3355.5
5°	3410.1	3419.2	3410.1	3410.1	3396.4	3387.3	3378.2	3364.5	3346.3	3332.6	3332.6
7.5°	3423.7	3423.7	3423.7	3410.1	3401.0	3387.3	3364.5	3341.8	3319.0	3296.3	3287.1
10°	3423.7	3423.7	3419.2	3401.0	3391.9	3364.5	3341.8	3309.9	3278.1	3246.2	3237.1
12.5°	3410.1	3414.6	3405.5	3387.3	3364.5	3332.6	3300.8	3259.9	3223.4	3187.0	3168.8
15°	3391.9	3387.3	3378.2	3355.5	3328.1	3287.1	3255.2	3209.7	3159.6	3114.1	3095.9
17.5°	3346.3	3346.3	3332.6	3309.9	3273.4	3227.9	3177.8	3127.8	3073.2	3023.0	3000.3
20°	3287.1	3287.1	3268.9	3241.6	3205.2	3146.0	3091.4	3032.2	2968.5	2918.4	2895.6
22.5°	3200.7	3205.2	3182.5	3150.6	3109.6	3041.3	2986.6	2913.8	2850.0	2790.9	2772.6
25°	3086.8	3095.9	3073.2	3041.3	2986.6	2927.4	2859.2	2790.9	2718.1	2658.8	2631.5
27.5°	2954.8	2959.3	2936.6	2904.7	2850.0	2786.3	2718.1	2645.2	2576.9	2513.2	2485.8
30°	2809.1	2790.9	2781.8	2740.8	2681.7	2627.0	2549.6	2490.4	2417.6	2362.9	2331.0
32.5°	2604.3	2613.3	2586.0	2554.1	2508.6	2444.8	2381.1	2312.8	2244.6	2203.6	2180.9
35°	2399.3	2408.4	2394.8	2362.9	2312.8	2258.1	2194.4	2144.4	2085.1	2035.1	2012.4
37.5°	2185.4	2185.4	2176.2	2158.0	2121.7	2071.6	2007.7	1957.7	1907.6	1866.6	1853.1
40°	1971.4	1962.3	1957.7	1944.0	1912.1	1866.6	1825.7	1784.7	1734.6	1707.3	1689.1
42.5°	1762.0	1762.0	1752.8	1739.2	1707.3	1684.6	1643.6	1598.0	1561.6	1534.3	1534.3
45°	1570.7	1575.3	1561.6	1552.5	1534.3	1497.9	1461.4	1429.5	1397.7	1379.5	1370.4
47.5°	1402.3	1402.3	1388.6	1379.5	1361.3	1329.4	1297.6	1270.2	1247.5	1233.8	1229.3
50°	1243.0	1243.0	1243.0	1220.2	1197.4	1174.6	1151.9	1120.0	1106.4	1097.2	1092.7
52.5°	1106.4	1101.7	1101.7	1083.5	1060.8	1033.5	1010.8	983.4	969.7	960.6	965.2
55°	983.4	983.4	978.9	956.1	933.4	906.0	883.3	860.5	851.3	842.3	846.8
56°	933.4	933.4	928.7	910.5	883.3	860.5	833.1	810.4	796.7	801.3	801.3
57°	896.9	887.8	887.8	865.0	842.3	810.4	787.6	764.9	755.7	751.2	751.2
58°	851.3	846.8	842.3	819.5	796.7	769.4	746.7	723.9	710.2	710.2	705.7
59°	805.9	805.9	796.7	778.6	755.7	728.5	705.7	683.0	669.3	664.8	664.8
60°	764.9	769.4	755.7	737.5	719.3	687.5	660.1	641.9	628.3	623.7	623.7
61°	728.5	728.5	719.3	696.6	673.8	651.1	623.7	600.9	591.9	582.7	582.7
62°	696.6	687.5	683.0	660.1	637.4	610.1	587.4	564.5	550.9	541.8	546.3
63°	655.6	651.1	641.9	623.7	600.9	573.7	546.3	528.2	514.5	500.8	505.3
64°	623.7	619.2	605.6	587.4	564.5	537.2	510.0	491.7	482.6	468.9	464.4
65°	582.7	578.2	573.7	550.9	528.2	500.8	478.1	459.8	446.2	437.1	427.9
66°	546.3	550.9	541.8	523.5	496.3	473.5	441.6	423.4	414.4	400.7	391.5
67°	514.5	514.5	505.3	487.1	459.8	437.1	414.4	391.5	377.9	364.2	359.7
67.5°	496.3	496.3	487.1	464.4	446.2	418.9	396.1	377.9	359.7	350.5	341.5
68°	478.1	478.1	473.5	455.3	432.6	405.2	382.4	359.7	341.5	327.8	323.3
69°	446.2	450.7	441.6	423.4	400.7	373.3	350.5	332.3	314.1	300.5	291.4
70°	418.9	414.4	405.2	387.0	364.2	346.0	323.3	300.5	282.3	264.1	259.6
71°	382.4	382.4	373.3	359.7	337.0	314.1	291.4	273.1	254.9	232.2	227.7
72°	355.2	355.2	346.0	327.8	309.6	286.8	264.1	241.2	227.7	204.9	195.8
72.5°	337.0	341.5	332.3	314.1	295.9	268.6	250.4	232.2	209.4	191.2	182.2
73°	327.8	323.3	318.7	300.5	277.8	259.6	236.7	218.5	195.8	177.5	168.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	204.9	204.9	200.3	182.2	163.8	145.7	127.5	109.3	91.1	72.9	63.7
80°	141.1	145.7	136.6	127.5	113.8	95.6	77.4	63.7	45.5	36.4	27.3
82.5°	91.1	91.1	86.6	77.4	68.2	54.6	45.5	31.9	22.7	18.2	13.7
85°	45.5	50.1	45.5	41.0	31.9	27.3	22.7	13.7	9.2	4.5	4.5
87.5°	18.2	18.2	18.2	13.7	13.7	9.2	4.5	4.5	4.5	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°	3360.0	3360.0	3360.0	3360.0	3360.0	3360.0	3360.0	3360.0	3360.0	3360.0
2.5°	3346.3	3346.3	3337.2	3332.6	3328.1	3323.6	3319.0	3314.5	3314.5	3319.0
5°	3319.0	3309.9	3291.7	3287.1	3273.4	3268.9	3259.9	3255.2	3259.9	3255.2
7.5°	3278.1	3259.9	3237.1	3227.9	3209.7	3200.7	3187.0	3187.0	3177.8	3182.5
10°	3223.4	3196.0	3168.8	3150.6	3136.9	3123.3	3114.1	3105.1	3100.4	3100.4
12.5°	3155.1	3123.3	3095.9	3068.6	3045.9	3036.7	3018.5	3018.5	3009.5	3004.8
15°	3077.7	3036.7	3004.8	2977.5	2959.3	2941.1	2927.4	2918.4	2909.2	2909.2
17.5°	2977.5	2941.1	2909.2	2877.4	2850.0	2836.4	2822.8	2809.1	2809.1	2800.0
20°	2868.2	2827.3	2800.0	2768.1	2745.4	2722.6	2704.4	2704.4	2695.2	2699.9
22.5°	2745.4	2695.2	2668.0	2645.2	2622.5	2604.3	2586.0	2586.0	2581.4	2576.9
25°	2608.8	2567.8	2535.9	2508.6	2495.0	2476.7	2472.2	2463.1	2458.5	2458.5
27.5°	2463.1	2431.3	2390.2	2376.6	2358.4	2349.2	2349.2	2344.7	2335.6	2340.2
30°	2308.3	2271.8	2249.1	2240.0	2221.8	2221.8	2217.2	2208.1	2208.1	2212.7
32.5°	2158.0	2121.7	2103.5	2098.8	2080.6	2080.6	2076.1	2080.6	2080.6	2085.1
35°	1994.2	1962.3	1957.7	1944.0	1939.5	1939.5	1939.5	1948.7	1957.7	1944.0
37.5°	1839.4	1816.6	1802.9	1798.4	1802.9	1802.9	1807.5	1821.1	1816.6	1812.0
40°	1679.9	1661.7	1652.7	1652.7	1661.7	1670.9	1670.9	1684.6	1689.1	1684.6
42.5°	1520.6	1506.9	1506.9	1511.6	1520.6	1525.2	1538.8	1552.5	1557.1	1561.6
45°	1370.4	1370.4	1370.4	1375.0	1379.5	1388.6	1406.8	1420.5	1425.0	1429.5
47.5°	1224.7	1220.2	1233.8	1238.3	1252.0	1256.5	1270.2	1288.4	1293.0	1297.6
50°	1088.2	1097.2	1101.7	1115.4	1124.6	1124.6	1142.7	1151.9	1165.6	1165.6
52.5°	960.6	974.3	978.9	992.5	997.1	1001.6	1010.8	1024.4	1033.5	1033.5
55°	846.8	851.3	860.5	865.0	878.7	883.3	892.3	896.9	910.5	906.0
56°	796.7	805.9	810.4	819.5	828.6	833.1	842.3	846.8	856.0	860.5
57°	751.2	755.7	769.4	774.0	783.1	783.1	787.6	801.3	801.3	805.9
58°	705.7	714.8	719.3	723.9	733.0	737.5	746.7	751.2	755.7	751.2
59°	664.8	669.3	673.8	673.8	683.0	683.0	696.6	705.7	710.2	710.2
60°	623.7	623.7	628.3	632.8	641.9	646.5	646.5	655.6	655.6	655.6
61°	582.7	582.7	587.4	591.9	596.4	596.4	605.6	605.6	610.1	614.6
62°	546.3	541.8	541.8	546.3	546.3	555.5	560.0	564.5	569.1	564.5
63°	505.3	500.8	500.8	500.8	500.8	510.0	510.0	514.5	523.5	519.0
64°	459.8	459.8	459.8	459.8	464.4	464.4	473.5	478.1	482.6	487.1
65°	427.9	418.9	414.4	414.4	418.9	423.4	427.9	432.6	437.1	437.1
66°	391.5	382.4	377.9	377.9	377.9	377.9	387.0	387.0	396.1	396.1
67°	350.5	341.5	337.0	332.3	332.3	332.3	346.0	341.5	341.5	341.5
67.5°	337.0	323.3	318.7	314.1	309.6	318.7	314.1	318.7	318.7	314.1
68°	318.7	309.6	300.5	291.4	291.4	291.4	295.9	300.5	295.9	291.4
69°	282.3	277.8	264.1	254.9	250.4	254.9	250.4	254.9	250.4	254.9
70°	250.4	236.7	223.1	218.5	214.0	214.0	214.0	209.4	214.0	209.4
71°	218.5	204.9	191.2	182.2	177.5	177.5	173.0	177.5	173.0	177.5
72°	186.7	173.0	154.8	145.7	145.7	145.7	145.7	141.1	145.7	141.1
72.5°	173.0	154.8	141.1	132.0	127.5	127.5	127.5	127.5	122.9	127.5
73°	159.3	141.1	122.9	118.4	118.4	118.4	113.8	109.3	113.8	113.8



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	54.6	41.0	36.4	36.4	36.4	36.4	36.4	36.4	31.9	31.9
80°	22.7	18.2	13.7	13.7	13.7	13.7	13.7	13.7	13.7	13.7
82.5°	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.2
85°	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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°	295.9	295.9	286.8	273.1	250.4	227.7	209.4	191.2	168.5	145.7	136.6
75°	273.1	268.6	259.6	245.9	227.7	204.9	186.7	163.8	145.7	122.9	113.8





74°	132.0	109.3	100.1	91.1	91.1	91.1	86.6	86.6	86.6	91.1
75°	104.8	86.6	77.4	68.2	72.9	68.2	72.9	68.2	68.2	68.2



(END OF REPORT)