

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: P585263

Luminaire Tested: **HC880D010-HM86080927-81RWWH**

Issue Date: 10/21/2021

Test Information

Test Method: LM-41-14
Report Number: P585263
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-HM86080927-81RWWH
Description: HALO COMMERCIAL 8" ROUND, NEW CONSTRUCTION FRAME, WITH 8" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5020.2 lumens
Efficiency: N/A
Efficacy: 71.7 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

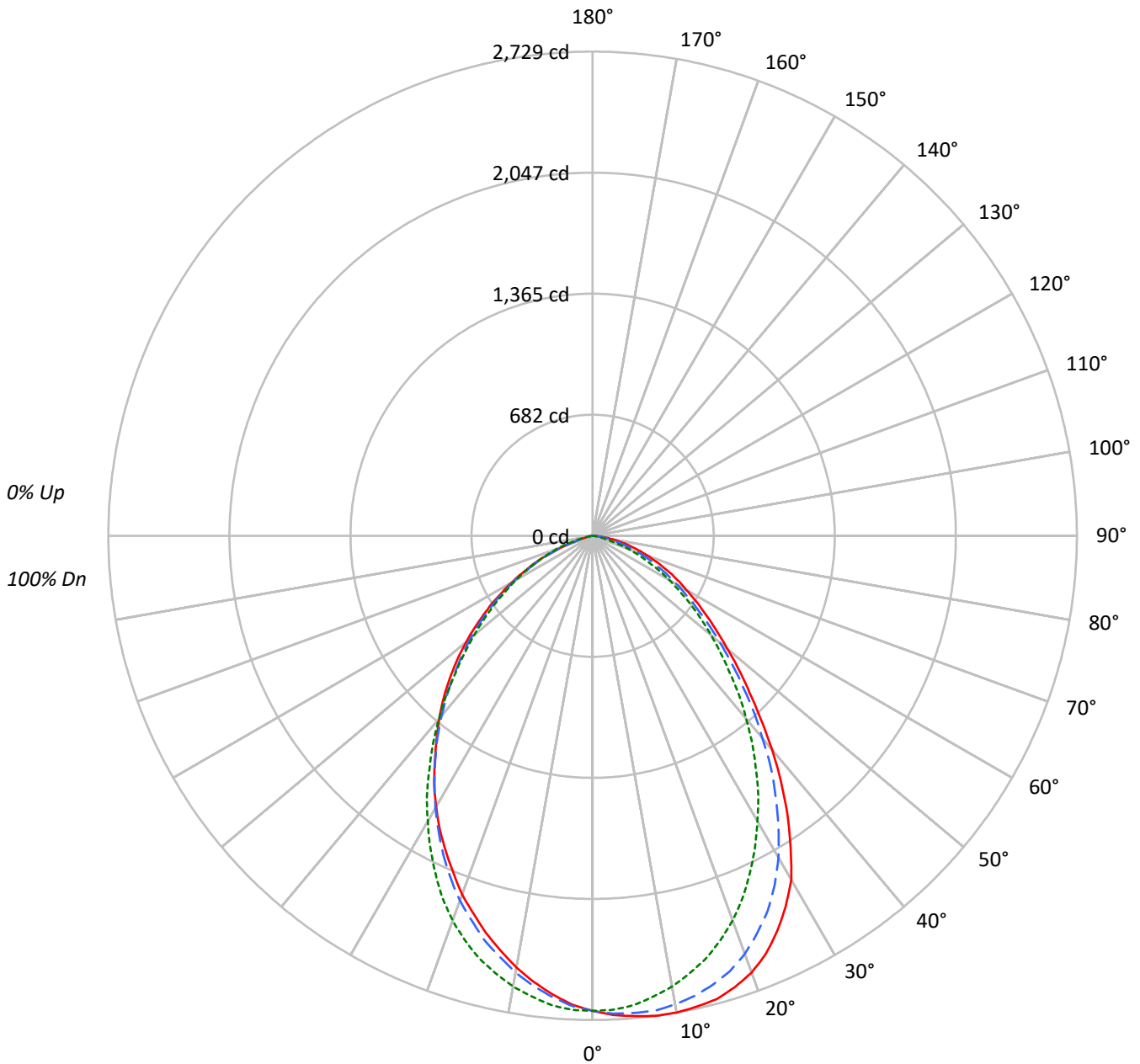
Input Watts (W): 70
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P585263

CATALOG NUMBER: HC880D010-HM86080927-81RWWH

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°	82577	82577	82577
5°	84127	82217	80307
10°	85444	80782	77375
15°	86300	78770	74022
20°	85970	75731	70609
25°	83706	71359	66670
30°	79720	66150	62792
35°	71987	60374	58326
40°	63243	54190	54045
45°	54594	47630	49688
50°	47522	41775	44567
55°	42138	36284	38821
60°	37596	30657	32230
65°	33885	24888	25421
70°	30104	18654	15048
75°	25937	10806	6493
80°	19978	3871	1936
85°	12843	1309	1309



TEST NUMBER: P585263

CATALOG NUMBER: HC880D010-HM86080927-81RWWH

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	251.4	5.0
10°-20°	699.8	13.9
20°-30°	989.8	19.7
30°-40°	1043.0	20.8
40°-50°	886.4	17.7
50°-60°	638.3	12.7
60°-70°	368.2	7.3
70°-80°	126.0	2.5
80°-90°	17.3	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°	1941.0	38.7
0°-40°	2984.0	59.4
0°-60°	4508.7	89.8
0°-90°	5020.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5020.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2678	2678	2678	2678	2678	
5°	2718	2700	2656	2609	2594	260
15°	2703	2620	2467	2359	2319	761
25°	2460	2333	2097	1988	1960	1128
35°	1912	1800	1604	1546	1549	1191
45°	1252	1194	1092	1100	1139	973
55°	784	722	675	700	722	705
65°	464	399	341	334	348	462
75°	218	163	91	58	54	230
85°	36	22	4	4	4	49
90°	0	0	0	0	0	



TEST NUMBER: P585263

CATALOG NUMBER: HC880D010-HM86080927-81RWWH

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	2677.9	2677.9	2677.9	2677.9	2677.9	2677.9	2677.9	2677.9	2677.9	2677.9	2677.9
2.5°	2703.3	2707.0	2703.3	2703.3	2699.6	2696.1	2692.4	2688.8	2681.6	2674.3	2674.3
5°	2717.8	2725.1	2717.8	2717.8	2707.0	2699.6	2692.4	2681.6	2667.0	2656.1	2656.1
7.5°	2728.8	2728.8	2728.8	2717.8	2710.6	2699.6	2681.6	2663.4	2645.3	2627.1	2619.8
10°	2728.8	2728.8	2725.1	2710.6	2703.3	2681.6	2663.4	2638.0	2612.6	2587.1	2579.9
12.5°	2717.8	2721.5	2714.2	2699.6	2681.6	2656.1	2630.8	2598.1	2569.1	2540.1	2525.6
15°	2703.3	2699.6	2692.4	2674.3	2652.5	2619.8	2594.4	2558.1	2518.3	2481.9	2467.4
17.5°	2667.0	2667.0	2656.1	2638.0	2609.0	2572.6	2532.8	2492.9	2449.3	2409.4	2391.2
20°	2619.8	2619.8	2605.3	2583.6	2554.6	2507.4	2463.8	2416.6	2365.9	2325.9	2307.8
22.5°	2550.9	2554.6	2536.4	2511.0	2478.4	2423.9	2380.4	2322.4	2271.5	2224.4	2209.9
25°	2460.2	2467.4	2449.3	2423.9	2380.4	2333.2	2278.7	2224.4	2166.2	2119.2	2097.3
27.5°	2354.9	2358.6	2340.4	2315.1	2271.5	2220.7	2166.2	2108.2	2053.8	2003.0	1981.2
30°	2238.9	2224.4	2217.1	2184.4	2137.2	2093.7	2032.0	1984.8	1926.8	1883.3	1857.8
32.5°	2075.5	2082.8	2061.0	2035.7	1999.3	1948.5	1897.8	1843.3	1788.9	1756.3	1738.1
35°	1912.3	1919.5	1908.7	1883.3	1843.3	1799.8	1749.0	1709.1	1661.9	1622.0	1603.8
37.5°	1741.8	1741.8	1734.5	1720.0	1690.9	1651.0	1600.2	1560.3	1520.4	1487.7	1476.9
40°	1571.1	1563.9	1560.3	1549.4	1524.1	1487.7	1455.1	1422.4	1382.5	1360.7	1346.2
42.5°	1404.3	1404.3	1397.0	1386.1	1360.7	1342.6	1309.9	1273.7	1244.6	1222.9	1222.9
45°	1251.9	1255.5	1244.6	1237.4	1222.9	1193.8	1164.7	1139.4	1114.0	1099.5	1092.2
47.5°	1117.7	1117.7	1106.7	1099.5	1085.0	1059.5	1034.2	1012.4	994.2	983.3	979.7
50°	990.6	990.6	990.6	972.5	954.3	936.2	918.0	892.6	881.8	874.5	870.8
52.5°	881.8	878.1	878.1	863.6	845.5	823.7	805.5	783.8	772.8	765.6	769.3
55°	783.8	783.8	780.1	762.0	743.8	722.1	704.0	685.8	678.6	671.3	674.9
56°	743.8	743.8	740.3	725.8	704.0	685.8	664.1	645.9	635.0	638.6	638.6
57°	714.8	707.6	707.6	689.4	671.3	645.9	627.8	609.6	602.3	598.7	598.7
58°	678.6	674.9	671.3	653.1	635.0	613.3	595.1	576.9	566.1	566.1	562.4
59°	642.3	642.3	635.0	620.5	602.3	580.6	562.4	544.3	533.4	529.8	529.8
60°	609.6	613.3	602.3	587.8	573.3	547.9	526.1	511.6	500.8	497.1	497.1
61°	580.6	580.6	573.3	555.1	537.1	518.9	497.1	478.9	471.7	464.4	464.4
62°	555.1	547.9	544.3	526.1	508.1	486.2	468.1	449.9	439.1	431.8	435.4
63°	522.6	518.9	511.6	497.1	478.9	457.2	435.4	420.9	410.1	399.1	402.8
64°	497.1	493.4	482.6	468.1	449.9	428.2	406.4	391.9	384.6	373.7	370.1
65°	464.4	460.9	457.2	439.1	420.9	399.1	381.0	366.4	355.6	348.4	341.1
66°	435.4	439.1	431.8	417.3	395.5	377.4	351.9	337.4	330.2	319.4	312.1
67°	410.1	410.1	402.8	388.2	366.4	348.4	330.2	312.1	301.2	290.2	286.7
67.5°	395.5	395.5	388.2	370.1	355.6	333.9	315.7	301.2	286.7	279.4	272.2
68°	381.0	381.0	377.4	362.9	344.7	322.9	304.9	286.7	272.2	261.2	257.7
69°	355.6	359.2	351.9	337.4	319.4	297.5	279.4	264.9	250.4	239.5	232.2
70°	333.9	330.2	322.9	308.4	290.2	275.7	257.7	239.5	225.0	210.5	206.9
71°	304.9	304.9	297.5	286.7	268.5	250.4	232.2	217.7	203.2	185.0	181.4
72°	283.0	283.0	275.7	261.2	246.7	228.6	210.5	192.3	181.4	163.2	156.0
72.5°	268.5	272.2	264.9	250.4	235.9	214.1	199.5	185.0	166.9	152.4	145.2
73°	261.2	257.7	254.0	239.5	221.4	206.9	188.7	174.2	156.0	141.5	134.2



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
77.5°	163.2	163.2	159.7	145.2	130.7	116.2	101.7	87.0	72.5	58.0	50.8
80°	112.5	116.2	108.9	101.7	90.7	76.2	61.7	50.8	36.3	29.0	21.8
82.5°	72.5	72.5	69.0	61.7	54.5	43.5	36.3	25.4	18.2	14.5	10.9
85°	36.3	40.0	36.3	32.7	25.4	21.8	18.2	10.9	7.3	3.7	3.7
87.5°	14.5	14.5	14.5	10.9	10.9	7.3	3.7	3.7	3.7	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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CATALOG NUMBER: HC880D010-HM86080927-81RWWH

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2677.9	2677.9	2677.9	2677.9	2677.9	2677.9	2677.9	2677.9	2677.9	2677.9
2.5°	2667.0	2667.0	2659.8	2656.1	2652.5	2648.9	2645.3	2641.6	2641.6	2645.3
5°	2645.3	2638.0	2623.5	2619.8	2609.0	2605.3	2598.1	2594.4	2598.1	2594.4
7.5°	2612.6	2598.1	2579.9	2572.6	2558.1	2550.9	2540.1	2540.1	2532.8	2536.4
10°	2569.1	2547.3	2525.6	2511.0	2500.1	2489.2	2481.9	2474.7	2471.1	2471.1
12.5°	2514.6	2489.2	2467.4	2445.7	2427.6	2420.3	2405.8	2405.8	2398.5	2394.9
15°	2452.9	2420.3	2394.9	2373.1	2358.6	2344.1	2333.2	2325.9	2318.7	2318.7
17.5°	2373.1	2344.1	2318.7	2293.2	2271.5	2260.6	2249.7	2238.9	2238.9	2231.6
20°	2286.0	2253.4	2231.6	2206.2	2188.0	2169.9	2155.4	2155.4	2148.2	2151.7
22.5°	2188.0	2148.2	2126.4	2108.2	2090.0	2075.5	2061.0	2061.0	2057.4	2053.8
25°	2079.2	2046.5	2021.2	1999.3	1988.5	1974.0	1970.3	1963.0	1959.5	1959.5
27.5°	1963.0	1937.7	1905.0	1894.1	1879.6	1872.3	1872.3	1868.8	1861.5	1865.1
30°	1839.7	1810.7	1792.5	1785.3	1770.8	1770.8	1767.1	1759.8	1759.8	1763.5
32.5°	1720.0	1690.9	1676.4	1672.8	1658.3	1658.3	1654.6	1658.3	1658.3	1661.9
35°	1589.3	1563.9	1560.3	1549.4	1545.8	1545.8	1545.8	1553.1	1560.3	1549.4
37.5°	1465.9	1447.8	1436.9	1433.3	1436.9	1436.9	1440.6	1451.4	1447.8	1444.2
40°	1338.9	1324.4	1317.2	1317.2	1324.4	1331.7	1331.7	1342.6	1346.2	1342.6
42.5°	1211.9	1201.1	1201.1	1204.7	1211.9	1215.6	1226.5	1237.4	1241.0	1244.6
45°	1092.2	1092.2	1092.2	1095.8	1099.5	1106.7	1121.2	1132.2	1135.7	1139.4
47.5°	976.1	972.5	983.3	987.0	997.8	1001.5	1012.4	1026.9	1030.5	1034.2
50°	867.3	874.5	878.1	889.0	896.3	896.3	910.8	918.0	929.0	929.0
52.5°	765.6	776.5	780.1	791.0	794.6	798.3	805.5	816.5	823.7	823.7
55°	674.9	678.6	685.8	689.4	700.3	704.0	711.3	714.8	725.8	722.1
56°	635.0	642.3	645.9	653.1	660.4	664.1	671.3	674.9	682.1	685.8
57°	598.7	602.3	613.3	616.9	624.1	624.1	627.8	638.6	638.6	642.3
58°	562.4	569.6	573.3	576.9	584.2	587.8	595.1	598.7	602.3	598.7
59°	529.8	533.4	537.1	537.1	544.3	544.3	555.1	562.4	566.1	566.1
60°	497.1	497.1	500.8	504.4	511.6	515.3	515.3	522.6	522.6	522.6
61°	464.4	464.4	468.1	471.7	475.4	475.4	482.6	482.6	486.2	489.9
62°	435.4	431.8	431.8	435.4	435.4	442.7	446.4	449.9	453.6	449.9
63°	402.8	399.1	399.1	399.1	399.1	406.4	406.4	410.1	417.3	413.7
64°	366.4	366.4	366.4	366.4	370.1	370.1	377.4	381.0	384.6	388.2
65°	341.1	333.9	330.2	330.2	333.9	337.4	341.1	344.7	348.4	348.4
66°	312.1	304.9	301.2	301.2	301.2	301.2	308.4	308.4	315.7	315.7
67°	279.4	272.2	268.5	264.9	264.9	264.9	275.7	272.2	272.2	272.2
67.5°	268.5	257.7	254.0	250.4	246.7	254.0	250.4	254.0	254.0	250.4
68°	254.0	246.7	239.5	232.2	232.2	232.2	235.9	239.5	235.9	232.2
69°	225.0	221.4	210.5	203.2	199.5	203.2	199.5	203.2	199.5	203.2
70°	199.5	188.7	177.8	174.2	170.5	170.5	170.5	166.9	170.5	166.9
71°	174.2	163.2	152.4	145.2	141.5	141.5	137.9	141.5	137.9	141.5
72°	148.7	137.9	123.4	116.2	116.2	116.2	116.2	112.5	116.2	112.5
72.5°	137.9	123.4	112.5	105.2	101.7	101.7	101.7	101.7	98.0	101.7
73°	127.0	112.5	98.0	94.3	94.3	94.3	90.7	87.0	90.7	90.7



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
77.5°	43.5	32.7	29.0	29.0	29.0	29.0	29.0	29.0	25.4	25.4
80°	18.2	14.5	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
82.5°	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
85°	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7
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°	235.9	235.9	228.6	217.7	199.5	181.4	166.9	152.4	134.2	116.2	108.9
75°	217.7	214.1	206.9	195.9	181.4	163.2	148.7	130.7	116.2	98.0	90.7





74°	105.2	87.0	79.8	72.5	72.5	72.5	69.0	69.0	69.0	72.5
75°	83.5	69.0	61.7	54.5	58.0	54.5	58.0	54.5	54.5	54.5



(END OF REPORT)