

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: P581333

Luminaire Tested: **HC460D010-HM44560840-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581333
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC460D010-HM44560840-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5934.3 lumens
Efficiency: N/A
Efficacy: 107.9 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

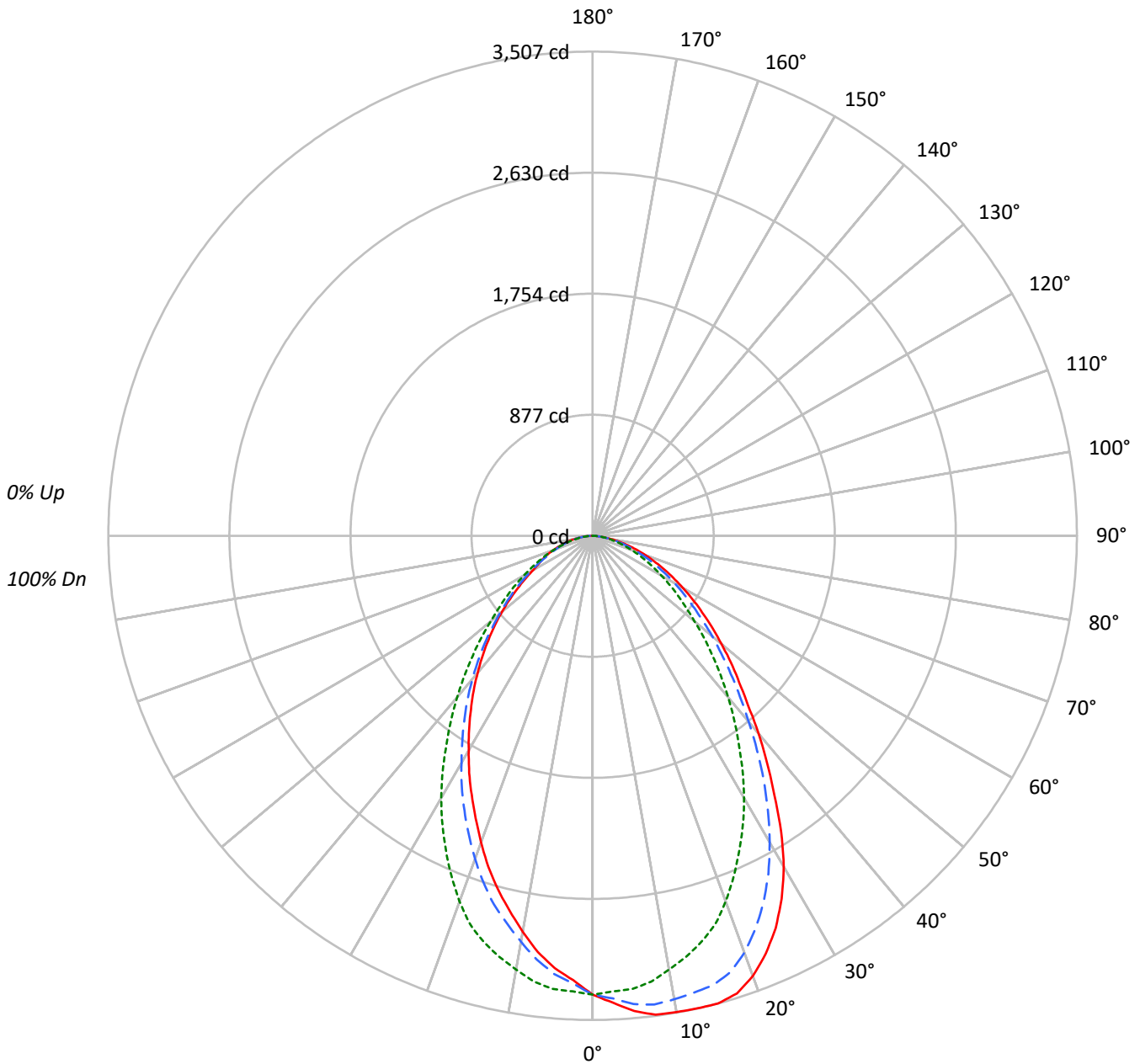
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87																			
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76																			
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66																			
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47																			
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	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	42	37	47	41	37	46	41	37	35																			
10	59	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°	409890	409890	409890
5°	427911	408063	389193
10°	438733	399555	364799
15°	447807	388901	338486
20°	445436	370000	309961
25°	426718	342107	281993
30°	394224	312371	255571
35°	345560	277860	231347
40°	300907	245502	208355
45°	261882	214139	186177
50°	233321	184542	164298
55°	208488	162253	142081
60°	186129	141773	122482
65°	165427	124391	116365
70°	145229	107146	108588
75°	122955	91263	100652
80°	94401	77709	91631
85°	55336	60855	77413



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	311.5	5.2
10°-20°	859.2	14.5
20°-30°	1173.9	19.8
30°-40°	1178.7	19.9
40°-50°	975.1	16.4
50°-60°	706.6	11.9
60°-70°	447.6	7.5
70°-80°	226.3	3.8
80°-90°	55.4	0.9
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°	2344.6	39.5
0°-40°	3523.3	59.4
0°-60°	5205.1	87.7
0°-90°	5934.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5934.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	3323	3323	3323	3323	3323	
5°	3456	3405	3296	3186	3143	331
15°	3507	3370	3046	2764	2651	986
25°	3135	2928	2514	2197	2072	1433
35°	2295	2158	1845	1619	1536	1438
45°	1501	1415	1228	1106	1067	1168
55°	970	884	754	688	661	872
65°	567	504	426	383	399	564
75°	258	223	192	199	211	276
85°	39	39	43	51	55	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	3323.1	3323.1	3323.1	3323.1	3323.1	3323.1	3323.1	3323.1	3323.1
2.5°	3385.6	3373.8	3354.3	3330.9	3303.6	3272.2	3244.9	3229.2	3221.5
5°	3456.0	3440.4	3405.2	3354.3	3295.7	3237.0	3186.3	3154.9	3143.3
7.5°	3498.9	3475.5	3424.7	3346.6	3256.6	3170.6	3096.4	3053.3	3041.5
10°	3502.9	3475.5	3409.0	3303.6	3190.1	3076.7	2986.8	2924.3	2912.6
12.5°	3506.8	3471.6	3389.5	3264.4	3123.7	2983.0	2873.5	2799.2	2779.6
15°	3506.8	3471.6	3370.0	3221.5	3045.5	2885.2	2764.1	2678.0	2650.7
17.5°	3475.5	3436.5	3315.2	3143.3	2951.6	2771.8	2631.1	2541.2	2513.7
20°	3393.5	3350.4	3213.6	3026.0	2818.8	2631.1	2490.4	2396.5	2361.4
22.5°	3276.2	3225.3	3080.7	2877.4	2670.2	2478.7	2341.8	2244.0	2212.8
25°	3135.4	3084.6	2928.2	2728.9	2513.7	2333.9	2197.1	2107.2	2072.0
27.5°	2963.4	2908.7	2756.2	2556.8	2357.4	2177.6	2052.5	1970.4	1935.2
30°	2767.9	2709.2	2564.6	2373.1	2193.2	2021.2	1900.0	1833.6	1794.4
32.5°	2541.2	2490.4	2361.4	2189.3	2021.2	1857.0	1755.4	1696.7	1665.5
35°	2294.9	2267.5	2158.1	2009.5	1845.3	1708.5	1618.6	1563.7	1536.4
37.5°	2076.0	2048.6	1954.7	1829.6	1685.0	1559.9	1485.6	1438.7	1415.2
40°	1868.8	1845.3	1755.4	1649.8	1524.7	1415.2	1352.7	1317.5	1294.0
42.5°	1665.5	1653.8	1579.4	1481.7	1372.2	1278.4	1227.6	1200.2	1180.7
45°	1501.3	1485.6	1415.2	1321.5	1227.6	1149.4	1106.3	1086.8	1067.3
47.5°	1356.6	1337.0	1262.8	1180.7	1094.6	1024.3	985.2	965.7	957.8
50°	1215.9	1196.4	1129.8	1047.8	961.7	910.9	879.6	860.1	856.2
52.5°	1090.8	1071.1	996.9	918.8	852.3	809.2	781.9	762.3	754.5
55°	969.5	946.1	883.6	809.2	754.5	715.5	688.1	668.6	660.7
57.5°	860.1	836.6	781.9	711.5	660.7	625.5	602.0	582.5	574.7
60°	754.5	735.0	684.1	617.7	574.7	543.5	520.0	504.3	496.5
62.5°	656.8	641.2	590.3	531.7	496.5	469.1	449.6	433.9	441.7
65°	566.8	551.3	504.3	453.5	426.2	398.7	383.2	383.2	398.7
67.5°	480.9	465.2	426.2	383.2	359.7	340.1	328.4	340.1	351.8
70°	402.7	387.0	351.8	316.6	297.1	281.4	281.4	293.2	301.1
72.5°	328.4	312.8	285.4	258.0	242.4	230.7	242.4	250.2	258.0
75°	258.0	246.2	222.9	203.3	191.5	187.7	199.4	207.2	211.2
77.5°	191.5	183.8	168.1	152.5	144.6	148.6	160.3	164.2	168.1
80°	132.9	129.0	117.3	109.4	109.4	113.4	121.1	125.1	129.0
82.5°	82.1	82.1	74.3	70.4	74.3	82.1	86.0	89.9	89.9
85°	39.1	43.0	39.1	39.1	43.0	50.9	50.9	54.7	54.7
87.5°	11.7	11.7	15.7	15.7	19.5	19.5	19.5	19.5	23.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)