

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: P581367

Luminaire Tested: **HC460D010-HM44560930-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581367
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC460D010-HM44560930-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4435.9 lumens
Efficiency: N/A
Efficacy: 80.7 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

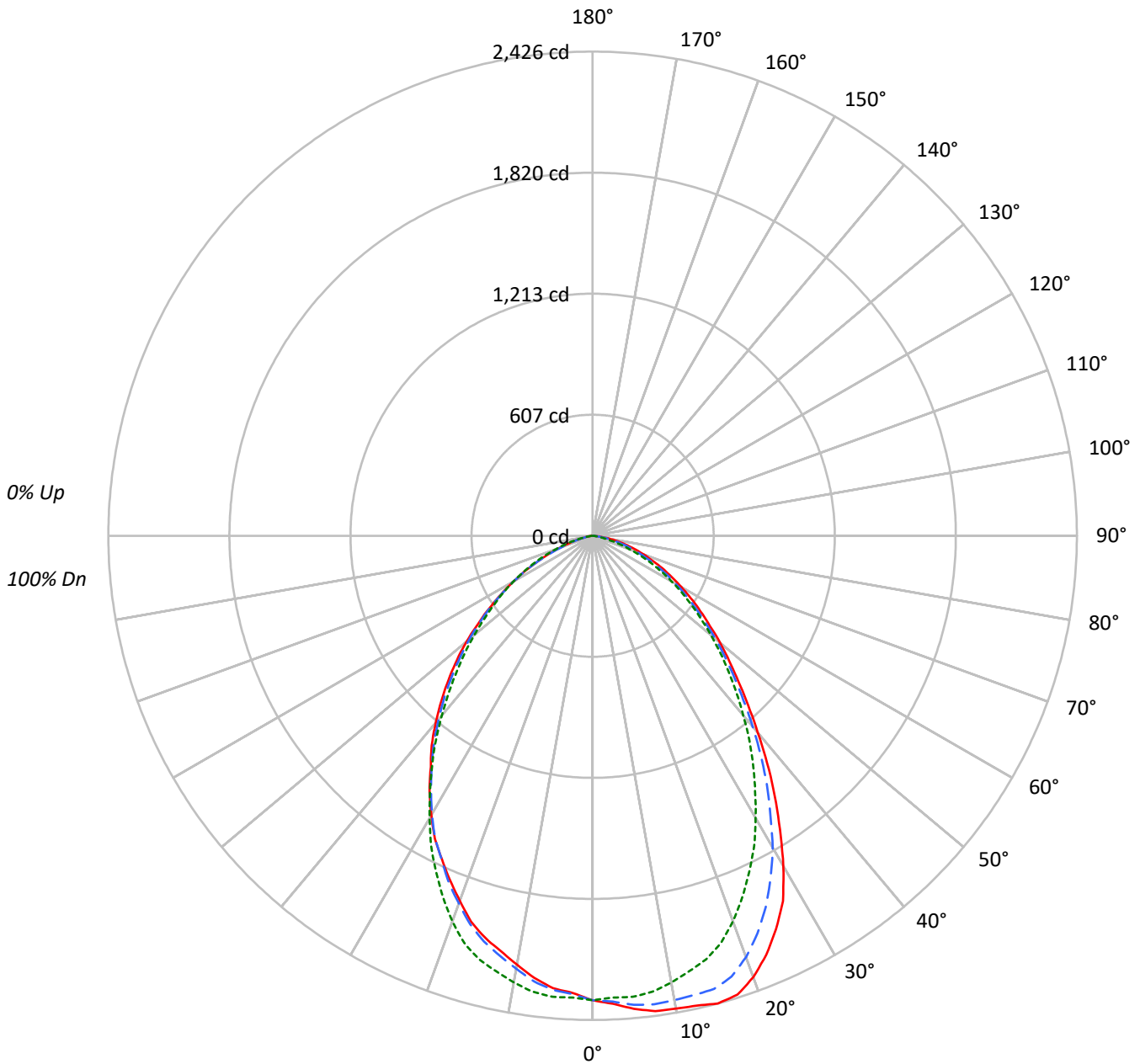
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	62	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	61	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	37	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°	287062	287062	287062
5°	294610	287094	281720
10°	301260	284615	273392
15°	309754	280575	266171
20°	308898	269821	255396
25°	295888	252609	243178
30°	272193	232655	230177
35°	239433	211139	212871
40°	207147	189001	196923
45°	180036	167931	178030
50°	159788	148121	158119
55°	141759	129953	135522
60°	126257	112689	112689
65°	112220	93658	87762
70°	96976	70902	62571
75°	81303	46799	38602
80°	61585	22588	20528
85°	32692	8208	8208



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.4	5.0
10°-20°	624.9	14.1
20°-30°	881.2	19.9
30°-40°	910.3	20.5
40°-50°	771.7	17.4
50°-60°	561.5	12.7
60°-70°	328.1	7.4
70°-80°	121.9	2.7
80°-90°	16.0	0.4
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°	1726.5	38.9
0°-40°	2636.8	59.4
0°-60°	3970.0	89.5
0°-90°	4435.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4435.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2327	2327	2327	2327	2327	
5°	2379	2359	2319	2284	2275	228
15°	2426	2350	2197	2105	2084	682
25°	2174	2053	1856	1790	1787	994
35°	1590	1521	1402	1405	1414	993
45°	1032	1003	963	997	1021	803
55°	659	627	604	624	630	593
65°	384	353	321	301	301	382
75°	171	142	98	78	81	183
85°	23	14	6	6	6	32
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°	2327.3	2327.3	2327.3	2327.3	2327.3	2327.3	2327.3	2327.3	2327.3
2.5°	2347.6	2341.8	2336.0	2327.3	2315.8	2307.1	2298.4	2292.7	2292.7
5°	2379.4	2370.7	2359.1	2338.9	2318.7	2301.3	2284.0	2275.3	2275.3
7.5°	2402.5	2390.9	2367.8	2338.9	2304.2	2278.2	2252.2	2240.7	2234.8
10°	2405.3	2393.8	2362.0	2318.7	2272.4	2232.0	2203.0	2185.7	2182.8
12.5°	2411.2	2396.8	2356.3	2295.5	2234.8	2185.7	2153.9	2136.5	2130.8
15°	2425.7	2405.3	2350.4	2272.4	2197.2	2139.4	2104.7	2090.3	2084.4
17.5°	2411.2	2382.2	2315.8	2223.3	2139.4	2075.9	2041.1	2026.7	2026.7
20°	2353.3	2324.5	2246.4	2145.2	2055.6	1994.9	1960.1	1951.4	1945.7
22.5°	2272.4	2240.7	2156.7	2049.8	1960.1	1905.2	1882.1	1870.6	1867.6
25°	2174.1	2142.3	2052.7	1942.9	1856.1	1809.9	1789.6	1789.6	1786.8
27.5°	2064.2	2023.7	1931.2	1835.8	1752.0	1717.3	1708.7	1708.7	1711.5
30°	1911.1	1882.1	1804.0	1711.5	1633.5	1610.3	1610.3	1616.1	1616.1
32.5°	1746.3	1726.0	1656.6	1575.7	1514.9	1500.5	1506.2	1517.8	1520.8
35°	1590.1	1567.0	1520.8	1448.5	1402.2	1396.4	1405.0	1413.7	1413.7
37.5°	1436.8	1413.7	1381.9	1324.2	1289.4	1292.3	1303.9	1315.5	1324.2
40°	1286.5	1269.2	1246.1	1199.9	1173.8	1185.3	1199.9	1211.4	1223.0
42.5°	1153.6	1136.2	1118.9	1084.1	1066.9	1081.3	1098.7	1110.2	1121.8
45°	1032.1	1020.6	1003.2	974.3	962.7	977.2	997.4	1009.0	1020.6
47.5°	928.0	922.3	899.1	873.1	867.3	881.8	899.1	913.6	922.3
50°	832.7	824.0	803.7	777.8	771.9	795.0	806.6	815.3	824.0
52.5°	740.1	731.4	708.3	685.1	685.1	702.5	711.2	714.1	722.8
55°	659.2	650.5	627.4	610.0	604.3	618.7	624.5	624.5	630.2
57.5°	584.0	575.3	552.2	532.0	529.0	537.7	537.7	537.7	540.7
60°	511.8	503.1	480.0	462.6	456.8	459.7	456.8	453.9	456.8
62.5°	445.2	436.5	413.4	393.2	387.4	387.4	378.8	375.8	378.8
65°	384.5	370.1	352.7	332.4	320.9	312.2	300.7	300.7	300.7
67.5°	323.8	312.2	292.0	271.7	257.3	242.9	225.5	231.2	234.2
70°	268.9	260.2	237.1	216.8	196.6	179.2	164.8	170.6	173.5
72.5°	219.7	208.1	187.9	164.8	147.4	124.3	115.6	121.4	121.4
75°	170.6	159.0	141.7	118.6	98.2	78.1	78.1	81.0	81.0
77.5°	127.2	115.6	98.2	78.1	60.7	46.2	49.2	49.2	49.2
80°	86.7	78.1	63.6	46.2	31.8	26.1	26.1	26.1	28.9
82.5°	49.2	43.3	34.7	23.1	14.4	14.4	14.4	14.4	14.4
85°	23.1	17.4	14.4	8.7	5.8	5.8	5.8	5.8	5.8
87.5°	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9
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)