

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: P581351

Luminaire Tested: **HC460D010-HM44560927-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581351
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-HM44560927-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4041.1 lumens
Efficiency: N/A
Efficacy: 73.5 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

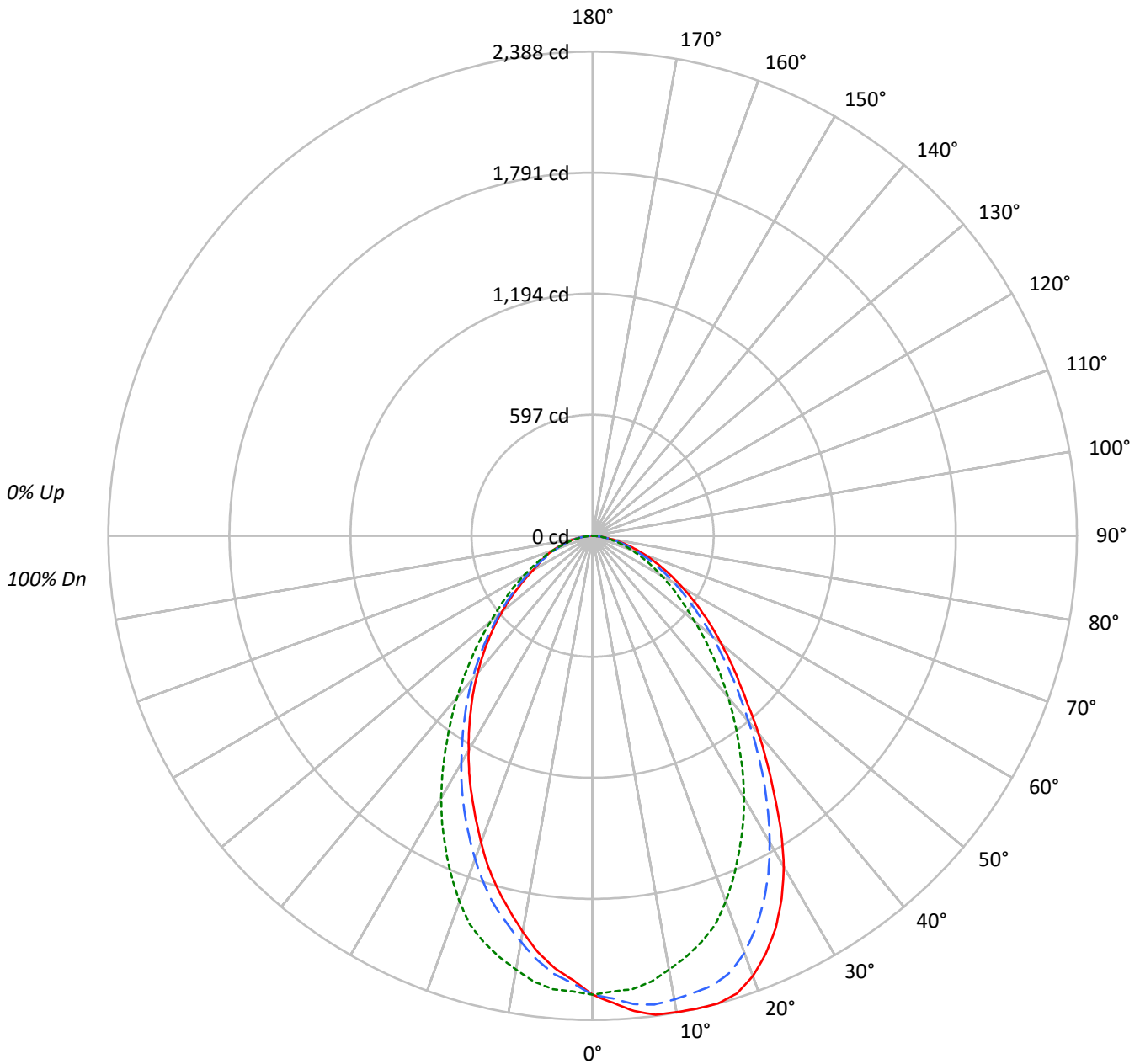
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87				87				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76				76				
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66				66				
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				58				
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52				52				
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47				47				
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	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	42	37	47	41	37	46	41	37	35				35				
10	59	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°	279131	279131	279131
5°	291403	277882	265030
10°	298768	272090	248418
15°	304953	264830	230493
20°	303319	251957	211069
25°	290594	232984	192033
30°	268461	212729	174046
35°	235307	189215	157534
40°	204909	167183	141888
45°	178327	145829	126781
50°	158886	125670	111892
55°	141974	110491	96771
60°	126750	96530	83406
65°	112658	84698	79240
70°	98887	72993	73931
75°	83734	62145	68483
80°	64284	52990	62437
85°	37645	41466	52647



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	212.1	5.2
10°-20°	585.1	14.5
20°-30°	799.4	19.8
30°-40°	802.7	19.9
40°-50°	664.0	16.4
50°-60°	481.2	11.9
60°-70°	304.8	7.5
70°-80°	154.1	3.8
80°-90°	37.7	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°	1596.6	39.5
0°-40°	2399.3	59.4
0°-60°	3544.5	87.7
0°-90°	4041.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4041.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2263	2263	2263	2263	2263	
5°	2354	2319	2244	2170	2140	226
15°	2388	2295	2074	1882	1805	672
25°	2135	1994	1712	1496	1411	976
35°	1563	1470	1257	1102	1046	980
45°	1022	964	836	753	727	795
55°	660	602	514	469	450	594
65°	386	344	290	261	272	384
75°	176	152	130	136	144	188
85°	27	27	29	35	37	37
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°	2263.0	2263.0	2263.0	2263.0	2263.0	2263.0	2263.0	2263.0	2263.0
2.5°	2305.5	2297.5	2284.2	2268.3	2249.6	2228.4	2209.6	2199.0	2193.7
5°	2353.5	2342.9	2318.8	2284.2	2244.3	2204.3	2169.7	2148.5	2140.5
7.5°	2382.8	2366.8	2332.1	2278.9	2217.6	2159.1	2108.6	2079.2	2071.2
10°	2385.4	2366.8	2321.5	2249.6	2172.4	2095.3	2034.0	1991.4	1983.4
12.5°	2388.1	2364.1	2308.2	2222.9	2127.2	2031.3	1956.7	1906.2	1892.9
15°	2388.1	2364.1	2294.9	2193.7	2073.9	1964.8	1882.2	1823.6	1805.0
17.5°	2366.8	2340.1	2257.6	2140.5	2010.0	1887.6	1791.7	1730.5	1711.9
20°	2310.8	2281.6	2188.4	2060.6	1919.5	1791.7	1695.8	1632.0	1608.0
22.5°	2231.0	2196.3	2097.9	1959.4	1818.3	1687.9	1594.7	1528.1	1506.9
25°	2135.2	2100.6	1994.1	1858.3	1711.9	1589.4	1496.2	1434.9	1411.0
27.5°	2018.0	1980.8	1876.9	1741.2	1605.4	1482.9	1397.7	1341.8	1317.8
30°	1884.9	1845.0	1746.5	1616.0	1493.6	1376.4	1293.8	1248.6	1222.0
32.5°	1730.5	1695.8	1608.0	1490.9	1376.4	1264.6	1195.3	1155.4	1134.1
35°	1562.7	1544.1	1469.6	1368.4	1256.6	1163.4	1102.2	1064.9	1046.2
37.5°	1413.7	1395.0	1331.2	1246.0	1147.4	1062.2	1011.7	979.7	963.8
40°	1272.6	1256.6	1195.3	1123.5	1038.3	963.8	921.1	897.2	881.2
42.5°	1134.1	1126.2	1075.5	1009.0	934.4	870.6	836.0	817.3	804.0
45°	1022.3	1011.7	963.8	899.8	836.0	782.7	753.4	740.1	726.8
47.5°	923.8	910.5	859.9	804.0	745.4	697.6	670.9	657.6	652.2
50°	828.0	814.6	769.4	713.5	654.9	620.3	599.0	585.7	583.1
52.5°	742.8	729.5	678.8	625.6	580.4	551.1	532.4	519.1	513.8
55°	660.2	644.3	601.7	551.1	513.8	487.2	468.6	455.3	450.0
57.5°	585.7	569.8	532.4	484.6	450.0	425.9	410.0	396.7	391.3
60°	513.8	500.5	465.9	420.6	391.3	370.1	354.1	343.5	338.1
62.5°	447.3	436.6	402.0	362.1	338.1	319.4	306.1	295.5	300.8
65°	386.0	375.4	343.5	308.8	290.2	271.5	260.9	260.9	271.5
67.5°	327.5	316.9	290.2	260.9	244.9	231.6	223.7	231.6	239.6
70°	274.2	263.6	239.6	215.7	202.4	191.6	191.6	199.7	205.0
72.5°	223.7	213.0	194.4	175.7	165.0	157.1	165.0	170.4	175.7
75°	175.7	167.7	151.7	138.4	130.4	127.8	135.8	141.1	143.7
77.5°	130.4	125.1	114.5	103.8	98.5	101.2	109.2	111.8	114.5
80°	90.5	87.9	79.9	74.6	74.6	77.2	82.6	85.2	87.9
82.5°	55.9	55.9	50.5	47.9	50.5	55.9	58.5	61.3	61.3
85°	26.6	29.3	26.6	26.6	29.3	34.6	34.6	37.2	37.2
87.5°	8.0	8.0	10.6	10.6	13.3	13.3	13.3	13.3	16.0
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)