

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: P581387

Luminaire Tested: **HC460D010-HM44560935-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P581387
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-HM44560935-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4569.2 lumens
Efficiency: N/A
Efficacy: 83.1 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

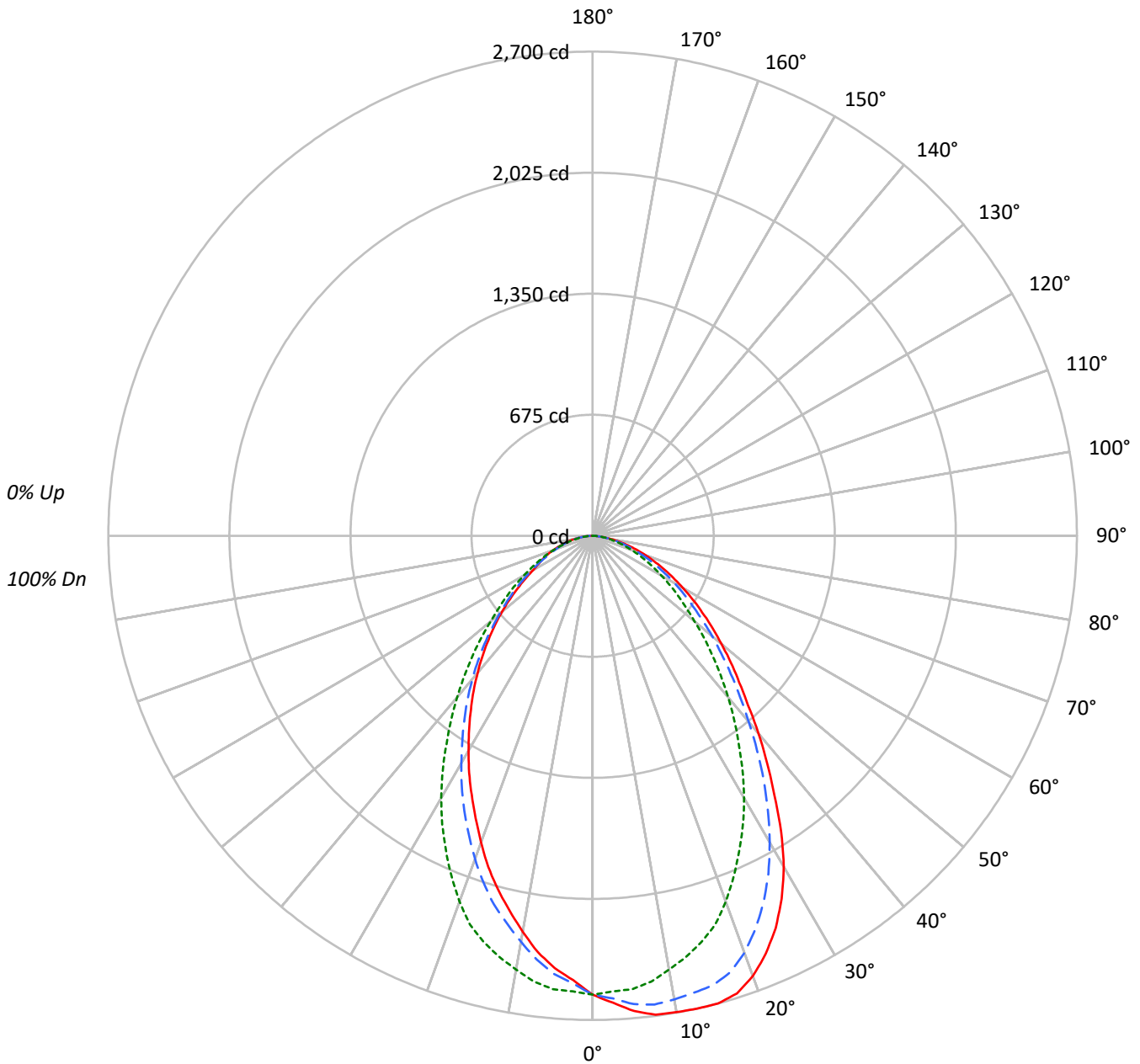
Input Watts (W): 55
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	315592	315592	315592
5°	329476	314185	299661
10°	337820	307648	280882
15°	344794	299436	260616
20°	342961	284890	238647
25°	328551	263415	217129
30°	303541	240517	196792
35°	266070	213940	178133
40°	231686	189033	160437
45°	201632	164878	143335
50°	179630	142096	126495
55°	160532	124921	109394
60°	143303	109161	94310
65°	127368	95759	89601
70°	111834	82514	83596
75°	94647	70294	77443
80°	72666	59880	70606
85°	42598	46986	59723



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	239.8	5.2
10°-20°	661.6	14.5
20°-30°	903.8	19.8
30°-40°	907.6	19.9
40°-50°	750.8	16.4
50°-60°	544.1	11.9
60°-70°	344.6	7.5
70°-80°	174.2	3.8
80°-90°	42.7	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°	1805.2	39.5
0°-40°	2712.8	59.4
0°-60°	4007.7	87.7
0°-90°	4569.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4569.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2559	2559	2559	2559	2559	
5°	2661	2622	2538	2453	2420	255
15°	2700	2595	2345	2128	2041	759
25°	2414	2255	1936	1692	1595	1103
35°	1767	1662	1421	1246	1183	1108
45°	1156	1090	945	852	822	899
55°	746	680	581	530	509	671
65°	436	388	328	295	307	434
75°	199	172	148	154	162	212
85°	30	30	33	39	42	42
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°	2558.6	2558.6	2558.6	2558.6	2558.6	2558.6	2558.6	2558.6	2558.6
2.5°	2606.8	2597.8	2582.8	2564.6	2543.6	2519.5	2498.4	2486.5	2480.4
5°	2661.0	2649.0	2621.8	2582.8	2537.5	2492.4	2453.3	2429.3	2420.2
7.5°	2694.1	2676.1	2636.9	2576.7	2507.4	2441.2	2384.0	2351.0	2342.0
10°	2697.2	2676.1	2624.9	2543.6	2456.3	2369.0	2299.8	2251.6	2242.6
12.5°	2700.1	2673.0	2609.9	2513.5	2405.1	2296.7	2212.5	2155.3	2140.3
15°	2700.1	2673.0	2594.7	2480.4	2344.9	2221.5	2128.2	2062.0	2040.9
17.5°	2676.1	2645.9	2552.7	2420.2	2272.7	2134.2	2025.9	1956.6	1935.5
20°	2612.8	2579.7	2474.4	2329.9	2170.4	2025.9	1917.5	1845.2	1818.1
22.5°	2522.5	2483.4	2372.1	2215.5	2056.0	1908.5	1803.1	1727.9	1703.7
25°	2414.1	2375.0	2254.6	2101.1	1935.5	1797.1	1691.8	1622.5	1595.4
27.5°	2281.7	2239.5	2122.2	1968.7	1815.2	1676.7	1580.3	1517.2	1490.1
30°	2131.2	2086.0	1974.7	1827.1	1688.7	1556.3	1462.9	1411.8	1381.7
32.5°	1956.6	1917.5	1818.1	1685.7	1556.3	1429.9	1351.6	1306.4	1282.3
35°	1767.0	1745.9	1661.7	1547.3	1420.8	1315.5	1246.2	1204.0	1183.0
37.5°	1598.4	1577.3	1505.1	1408.8	1297.4	1201.1	1143.9	1107.7	1089.6
40°	1438.9	1420.8	1351.6	1270.2	1174.0	1089.6	1041.5	1014.4	996.4
42.5°	1282.3	1273.3	1216.1	1140.9	1056.6	984.3	945.2	924.2	909.1
45°	1155.9	1143.9	1089.6	1017.5	945.2	885.0	851.9	836.9	821.7
47.5°	1044.5	1029.5	972.3	909.1	842.8	788.7	758.6	743.5	737.5
50°	936.1	921.1	869.9	806.7	740.5	701.4	677.3	662.2	659.2
52.5°	839.8	824.8	767.6	707.4	656.3	623.1	602.0	587.0	580.9
55°	746.5	728.5	680.3	623.1	580.9	550.9	529.8	514.7	508.7
57.5°	662.2	644.2	602.0	547.9	508.7	481.7	463.6	448.5	442.5
60°	580.9	565.9	526.8	475.6	442.5	418.4	400.3	388.3	382.3
62.5°	505.7	493.6	454.6	409.4	382.3	361.2	346.2	334.1	340.2
65°	436.4	424.5	388.3	349.2	328.1	307.0	295.0	295.0	307.0
67.5°	370.2	358.3	328.1	295.0	276.9	261.9	252.9	261.9	270.9
70°	310.1	298.0	270.9	243.9	228.8	216.7	216.7	225.7	231.8
72.5°	252.9	240.8	219.7	198.6	186.7	177.5	186.7	192.7	198.6
75°	198.6	189.6	171.6	156.6	147.5	144.5	153.5	159.5	162.5
77.5°	147.5	141.5	129.4	117.4	111.3	114.4	123.4	126.4	129.4
80°	102.3	99.4	90.4	84.3	84.3	87.3	93.3	96.3	99.4
82.5°	63.2	63.2	57.2	54.1	57.2	63.2	66.2	69.3	69.3
85°	30.1	33.2	30.1	30.1	33.2	39.1	39.1	42.2	42.2
87.5°	9.0	9.0	12.1	12.1	15.0	15.0	15.0	15.0	18.0
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)