

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: P580884

Luminaire Tested: **HC450D010-HM44560835-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580884
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC450D010-HM44560835-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4751.2 lumens
Efficiency: N/A
Efficacy: 99.0 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

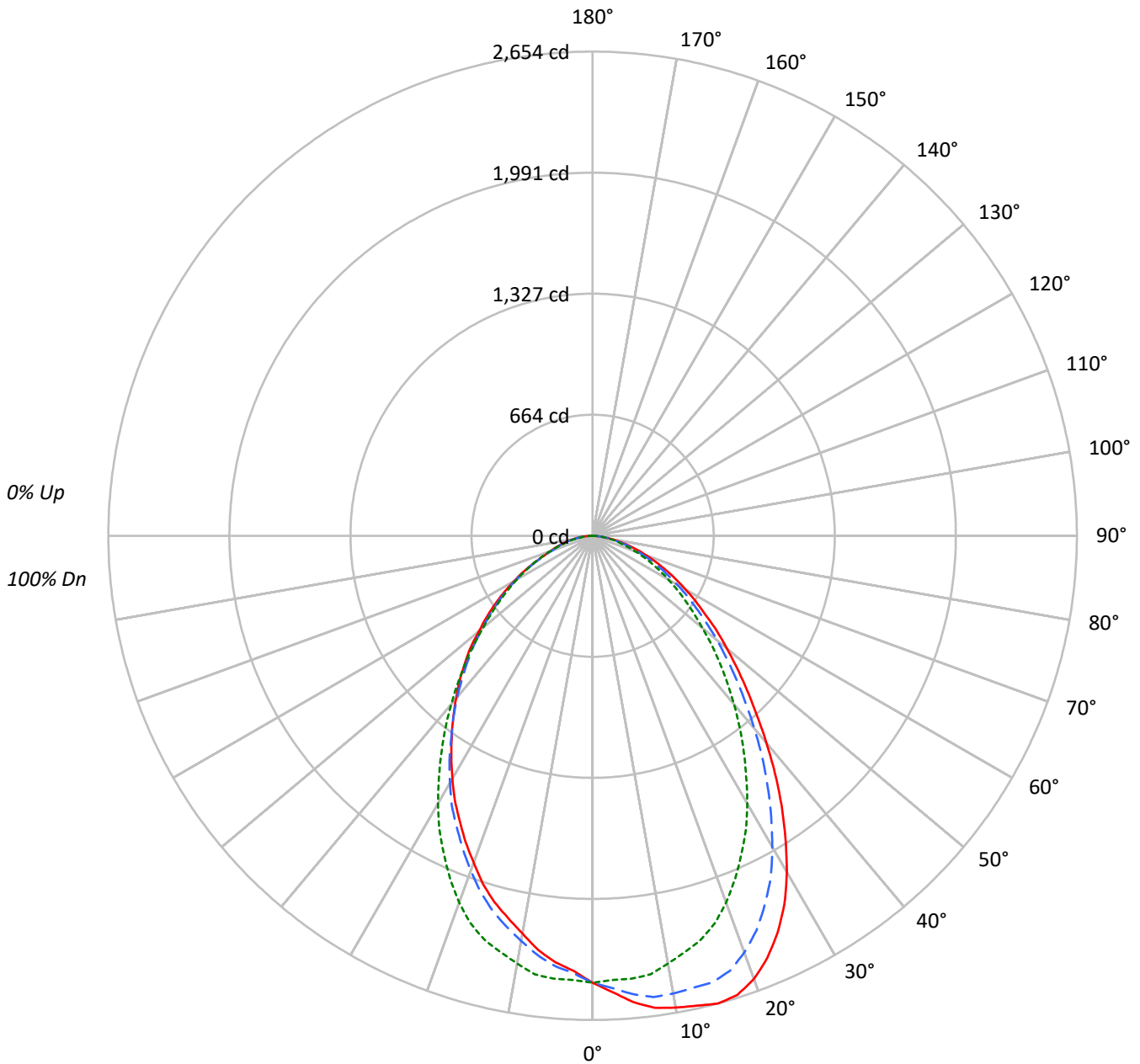
Input Watts (W): 48
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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								
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87								
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75								
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66								
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58								
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51								
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46								
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41								
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37								
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34								
10	58	45	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31								

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	302184	302184	302184
5°	317739	301779	290487
10°	328902	298179	277300
15°	338958	292758	265456
20°	339338	280703	250159
25°	326564	262367	234549
30°	303242	241428	219025
35°	271822	217358	202677
40°	238513	193944	187359
45°	208470	171698	172815
50°	184063	150270	155701
55°	162317	133243	139995
60°	145079	117918	122581
65°	128506	103698	103698
70°	112303	88465	88465
75°	95934	74917	83924
80°	75933	66983	75933
85°	48967	57741	71328



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.1	4.9
10°-20°	653.7	13.8
20°-30°	915.8	19.3
30°-40°	943.5	19.9
40°-50°	803.2	16.9
50°-60°	595.1	12.5
60°-70°	373.5	7.9
70°-80°	185.6	3.9
80°-90°	48.7	1.0
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°	1801.5	37.9
0°-40°	2745.0	57.8
0°-60°	4143.4	87.2
0°-90°	4751.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4751.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2450	2450	2450	2450	2450	
5°	2566	2522	2437	2368	2346	247
15°	2654	2535	2293	2126	2079	746
25°	2400	2233	1928	1761	1723	1097
35°	1805	1670	1444	1349	1346	1126
45°	1195	1113	984	966	991	927
55°	755	695	620	632	651	682
65°	440	396	355	349	355	439
75°	201	179	157	170	176	215
85°	35	35	41	47	50	44
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°	2449.9	2449.9	2449.9	2449.9	2449.9	2449.9	2449.9	2449.9	2449.9
2.5°	2503.4	2494.0	2481.3	2459.3	2437.3	2418.5	2399.5	2390.1	2387.0
5°	2566.2	2547.4	2522.2	2481.3	2437.3	2399.5	2368.1	2352.4	2346.1
7.5°	2610.3	2591.4	2550.5	2487.7	2424.8	2368.1	2317.8	2295.8	2289.5
10°	2626.0	2604.0	2547.4	2462.5	2380.7	2311.5	2255.0	2226.6	2214.0
12.5°	2638.5	2610.3	2537.9	2437.3	2336.7	2251.7	2192.0	2154.2	2144.8
15°	2654.4	2622.8	2534.8	2412.2	2292.6	2192.0	2126.0	2091.3	2078.8
17.5°	2638.5	2604.0	2500.2	2361.8	2226.6	2116.6	2044.2	2012.7	2000.1
20°	2585.2	2547.4	2431.0	2283.2	2138.5	2025.4	1953.0	1921.5	1905.8
22.5°	2503.4	2462.5	2343.0	2185.8	2037.9	1927.8	1858.7	1827.2	1817.8
25°	2399.5	2358.7	2232.9	2072.5	1927.8	1820.9	1761.1	1732.9	1723.4
27.5°	2276.9	2236.0	2113.4	1956.2	1817.8	1717.2	1669.9	1641.7	1635.4
30°	2129.1	2088.2	1968.7	1824.0	1695.1	1600.7	1563.0	1541.1	1537.8
32.5°	1965.6	1930.9	1820.9	1688.8	1566.2	1487.6	1459.2	1443.5	1440.4
35°	1805.2	1767.4	1669.9	1550.5	1443.5	1374.3	1349.2	1346.0	1346.0
37.5°	1641.7	1603.9	1525.3	1415.2	1324.0	1261.1	1251.7	1254.8	1254.8
40°	1481.3	1446.6	1377.4	1286.2	1204.5	1157.4	1154.2	1160.5	1163.6
42.5°	1330.3	1301.9	1239.1	1160.5	1091.3	1053.5	1056.7	1069.3	1078.7
45°	1195.1	1169.9	1113.3	1044.1	984.3	956.0	965.5	981.2	990.7
47.5°	1072.5	1050.4	997.0	934.1	883.7	864.9	877.4	896.3	908.8
50°	959.2	940.3	890.0	823.9	783.1	770.5	786.2	805.1	811.4
52.5°	858.6	839.7	786.2	729.6	698.2	691.9	707.6	723.3	732.7
55°	754.8	739.0	695.0	644.7	619.6	616.4	632.1	644.7	651.0
57.5°	669.8	654.1	613.3	569.2	547.2	544.1	559.8	569.2	572.4
60°	588.1	572.4	534.7	493.7	478.0	478.0	487.4	493.7	496.9
62.5°	512.7	496.9	462.3	427.7	415.1	415.1	415.1	418.2	427.7
65°	440.3	427.7	396.3	364.8	355.3	349.0	349.0	349.0	355.3
67.5°	374.3	361.7	336.5	308.2	298.8	289.4	286.2	292.5	292.5
70°	311.4	301.9	276.8	254.7	245.3	235.9	232.7	245.3	245.3
72.5°	254.7	245.3	229.6	207.6	198.2	194.9	201.3	207.6	210.7
75°	201.3	191.8	179.2	166.7	157.2	160.4	169.8	173.0	176.1
77.5°	151.0	147.8	135.3	125.8	125.8	129.0	135.3	141.5	144.7
80°	106.9	103.8	97.5	91.2	94.3	100.6	103.8	110.0	106.9
82.5°	66.1	66.1	62.9	62.9	66.1	72.3	75.5	78.6	81.8
85°	34.6	34.6	34.6	37.7	40.8	44.1	47.2	50.4	50.4
87.5°	9.4	12.6	12.6	15.7	18.8	18.8	22.0	22.0	22.0
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)