

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: P580902

Luminaire Tested: **HC450D010-HM44560840-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580902
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-HM44560840-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5416.3 lumens
Efficiency: N/A
Efficacy: 112.8 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

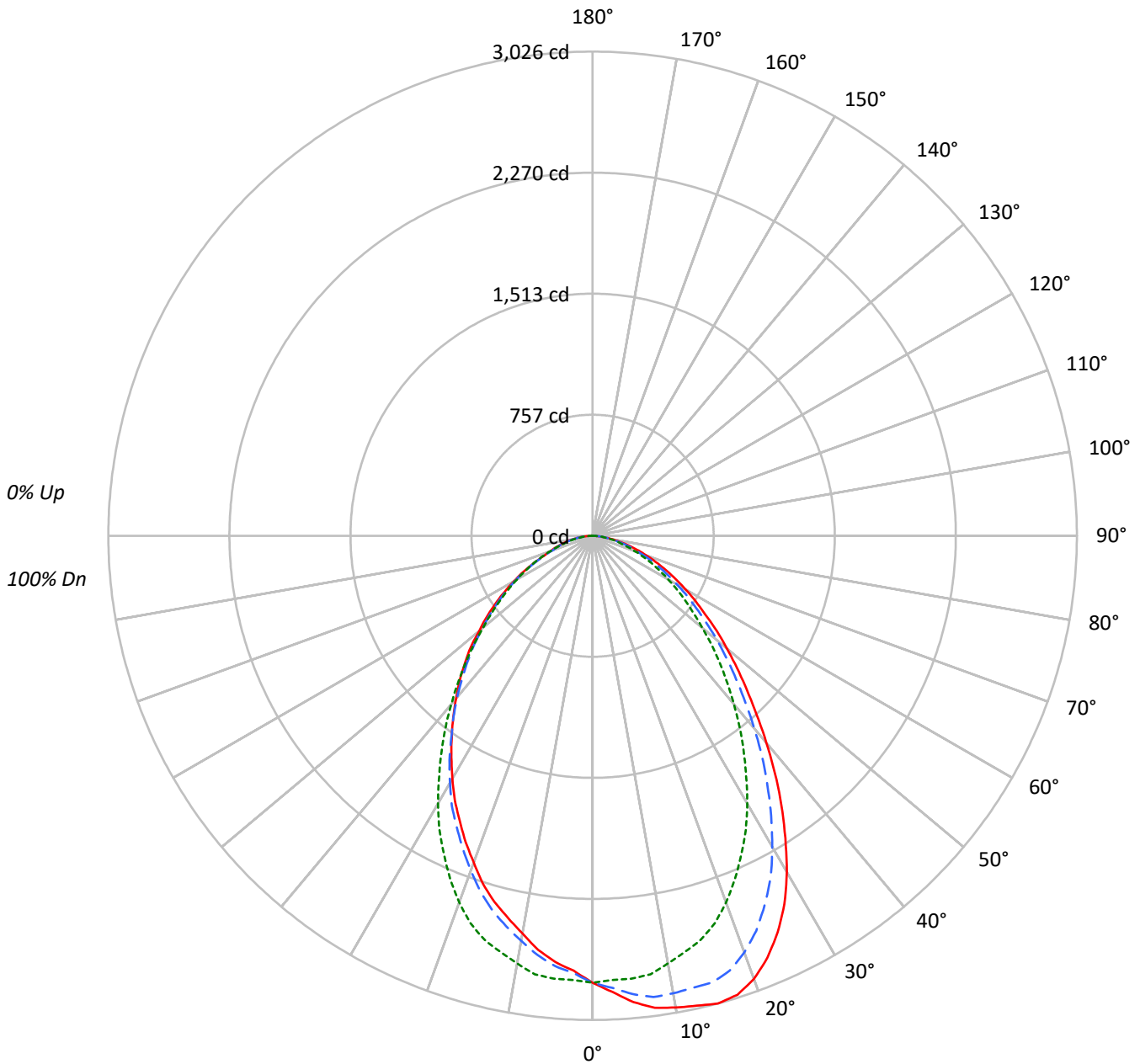
Input Watts (W): 48
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	344492	344492	344492
5°	362226	344037	331148
10°	374956	339924	316127
15°	386398	333748	302629
20°	386841	320003	285179
25°	372293	299100	267389
30°	345699	275226	249703
35°	309873	247790	231046
40°	271892	221091	213588
45°	237653	195753	197009
50°	209834	171302	177500
55°	185048	151887	159586
60°	165382	134447	139751
65°	146485	118262	118262
70°	127991	100835	100835
75°	109373	85402	95695
80°	86588	76430	86588
85°	55760	65950	81093



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	264.6	4.9
10°-20°	745.2	13.8
20°-30°	1044.0	19.3
30°-40°	1075.6	19.9
40°-50°	915.7	16.9
50°-60°	678.5	12.5
60°-70°	425.8	7.9
70°-80°	211.6	3.9
80°-90°	55.5	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°	2053.7	37.9
0°-40°	3129.3	57.8
0°-60°	4723.5	87.2
0°-90°	5416.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5416.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2793	2793	2793	2793	2793	
5°	2926	2875	2779	2700	2674	281
15°	3026	2890	2614	2424	2370	851
25°	2736	2545	2198	2008	1965	1251
35°	2058	1904	1646	1538	1534	1283
45°	1362	1269	1122	1101	1129	1057
55°	860	792	706	721	742	778
65°	502	452	405	398	405	501
75°	230	204	179	194	201	245
85°	39	39	47	54	57	51
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°	2792.9	2792.9	2792.9	2792.9	2792.9	2792.9	2792.9	2792.9	2792.9
2.5°	2853.8	2843.1	2828.7	2803.6	2778.6	2757.0	2735.5	2724.8	2721.1
5°	2925.5	2904.0	2875.3	2828.7	2778.6	2735.5	2699.6	2681.7	2674.5
7.5°	2975.7	2954.3	2907.6	2835.9	2764.2	2699.6	2642.3	2617.2	2610.0
10°	2993.7	2968.5	2904.0	2807.2	2714.0	2635.1	2570.6	2538.4	2524.0
12.5°	3007.9	2975.7	2893.3	2778.6	2663.8	2567.0	2498.8	2455.9	2445.1
15°	3025.9	2990.0	2889.7	2749.9	2613.6	2498.8	2423.6	2384.1	2369.9
17.5°	3007.9	2968.5	2850.2	2692.4	2538.4	2412.8	2330.3	2294.5	2280.2
20°	2947.1	2904.0	2771.4	2602.9	2437.9	2308.9	2226.4	2190.5	2172.6
22.5°	2853.8	2807.2	2671.0	2491.7	2323.3	2197.7	2118.8	2083.0	2072.2
25°	2735.5	2688.9	2545.4	2362.7	2197.7	2075.8	2007.7	1975.4	1964.7
27.5°	2595.7	2549.1	2409.3	2229.9	2072.2	1957.5	1903.7	1871.5	1864.3
30°	2427.2	2380.6	2244.3	2079.4	1932.4	1824.9	1781.8	1756.7	1753.2
32.5°	2240.8	2201.3	2075.8	1925.3	1785.5	1695.8	1663.5	1645.6	1642.0
35°	2057.9	2014.9	1903.7	1767.5	1645.6	1566.7	1538.1	1534.4	1534.4
37.5°	1871.5	1828.4	1738.8	1613.3	1509.4	1437.7	1426.9	1430.5	1430.5
40°	1688.6	1649.2	1570.3	1466.3	1373.1	1319.3	1315.8	1323.0	1326.5
42.5°	1516.6	1484.3	1412.5	1323.0	1244.0	1201.1	1204.6	1218.9	1229.8
45°	1362.4	1333.7	1269.2	1190.2	1122.2	1090.0	1100.7	1118.6	1129.4
47.5°	1222.6	1197.4	1136.6	1064.8	1007.5	985.9	1000.3	1021.8	1036.2
50°	1093.5	1072.0	1014.6	939.3	892.7	878.4	896.3	917.8	925.0
52.5°	978.8	957.2	896.3	831.8	795.9	788.7	806.7	824.6	835.3
55°	860.5	842.5	792.3	734.9	706.3	702.7	720.7	734.9	742.1
57.5°	763.6	745.7	699.1	648.9	623.8	620.3	638.2	648.9	652.5
60°	670.4	652.5	609.5	562.9	545.0	545.0	555.7	562.9	566.5
62.5°	584.4	566.5	527.0	487.6	473.2	473.2	473.2	476.8	487.6
65°	501.9	487.6	451.8	415.9	405.2	398.0	398.0	398.0	405.2
67.5°	426.6	412.2	383.6	351.4	340.6	329.9	326.2	333.4	333.4
70°	354.9	344.2	315.5	290.4	279.6	268.9	265.3	279.6	279.6
72.5°	290.4	279.6	261.7	236.7	225.8	222.3	229.5	236.7	240.2
75°	229.5	218.7	204.4	190.0	179.2	182.9	193.6	197.2	200.8
77.5°	172.1	168.5	154.2	143.4	143.4	147.0	154.2	161.3	164.9
80°	121.9	118.3	111.1	103.9	107.6	114.7	118.3	125.5	121.9
82.5°	75.3	75.3	71.7	71.7	75.3	82.5	86.0	89.7	93.2
85°	39.4	39.4	39.4	43.1	46.6	50.1	53.8	57.3	57.3
87.5°	10.7	14.4	14.4	17.9	21.5	21.5	25.1	25.1	25.1
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)