

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: P580918

Luminaire Tested: **HC450D010-HM44560927-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580918
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC450D010-HM44560927-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2963.4 lumens
Efficiency: N/A
Efficacy: 61.7 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

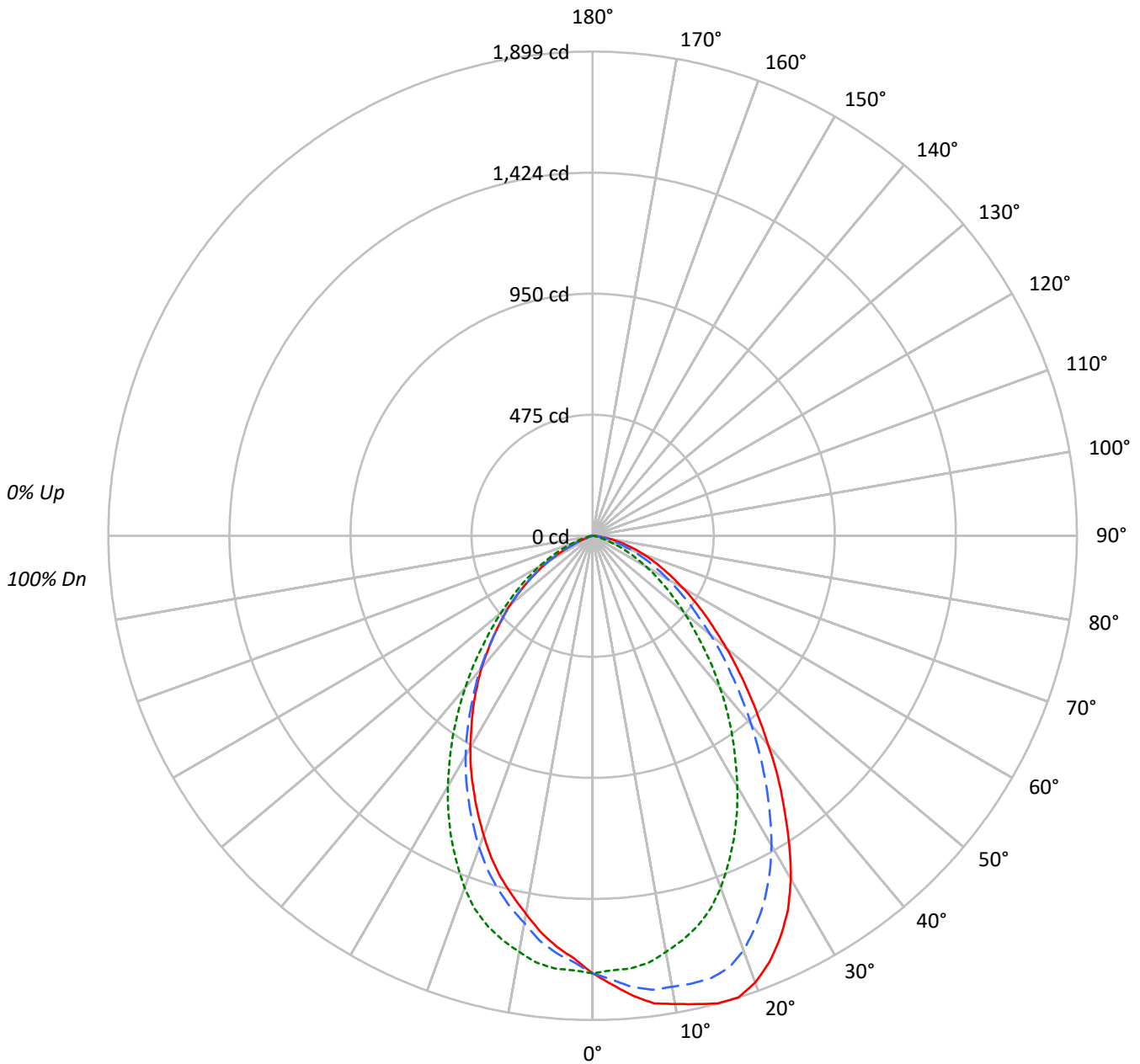
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	100
1	111	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89	89	89	89
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	85	83	80	78	78	78	78
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	69	69	69	69
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61	61	61	61
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55	55	55	55
6	77	66	58	52	75	65	57	52	63	57	52	61	56	51	60	55	51	49	49	49	49
7	72	60	53	47	71	59	52	47	58	51	47	57	51	46	55	50	46	44	44	44	44
8	68	56	48	43	66	55	48	43	54	47	42	53	47	42	51	46	42	40	40	40	40
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	43	39	37	37	37	37
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	36	34	34	34	34

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	211612	211612	211612
5°	224207	210922	200336
10°	233526	207549	188587
15°	242445	202565	177320
20°	244737	192837	164011
25°	236809	178355	150128
30°	221417	161626	136602
35°	197331	143681	122735
40°	172513	124949	109250
45°	150278	105988	94510
50°	131139	89920	81017
55°	114942	74514	65611
60°	100551	60217	48179
65°	87617	44888	27085
70°	76564	29067	8800
75°	62764	15155	2335
80°	46810	6890	1705
85°	27597	3397	3397



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.9	5.5
10°-20°	453.2	15.3
20°-30°	626.6	21.1
30°-40°	630.0	21.3
40°-50°	508.4	17.2
50°-60°	343.8	11.6
60°-70°	175.0	5.9
70°-80°	56.0	1.9
80°-90°	8.6	0.3
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°	1241.7	41.9
0°-40°	1871.7	63.2
0°-60°	2723.9	91.9
0°-90°	2963.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2963.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1716	1716	1716	1716	1716	
5°	1811	1777	1704	1642	1618	174
15°	1899	1796	1586	1435	1389	535
25°	1740	1589	1310	1149	1103	796
35°	1310	1184	954	835	815	819
45°	862	771	608	542	542	668
55°	534	461	346	303	305	480
65°	300	244	154	100	93	301
75°	132	93	32	7	5	142
85°	20	10	2	2	2	26
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°	1715.6	1715.6	1715.6	1715.6	1715.6	1715.6	1715.6	1715.6	1715.6
2.5°	1762.0	1752.3	1742.4	1725.4	1705.9	1686.3	1674.1	1664.4	1659.5
5°	1810.8	1798.7	1776.6	1740.0	1703.5	1669.2	1642.5	1625.3	1618.0
7.5°	1849.8	1832.7	1796.1	1745.0	1688.7	1635.0	1600.9	1576.5	1566.7
10°	1864.5	1844.9	1796.1	1727.8	1657.1	1591.2	1542.4	1517.9	1505.7
12.5°	1881.6	1859.6	1798.7	1713.2	1625.3	1547.3	1491.1	1459.4	1447.2
15°	1898.6	1869.4	1796.1	1691.3	1586.3	1496.0	1435.0	1403.2	1388.6
17.5°	1898.6	1864.5	1776.6	1654.6	1535.1	1439.9	1371.6	1334.9	1322.8
20°	1864.5	1825.4	1730.2	1596.1	1469.1	1366.6	1300.7	1264.2	1249.5
22.5°	1810.8	1766.9	1664.4	1525.2	1391.1	1291.0	1225.1	1190.9	1176.3
25°	1740.0	1696.1	1588.8	1444.7	1310.5	1210.5	1149.4	1117.7	1103.1
27.5°	1657.1	1608.2	1500.9	1356.8	1225.1	1129.9	1073.8	1044.5	1032.3
30°	1554.6	1508.2	1403.2	1261.8	1134.8	1047.0	995.7	968.8	959.1
32.5°	1435.0	1395.9	1293.4	1161.7	1042.0	961.5	915.2	893.2	883.4
35°	1310.5	1273.9	1183.6	1061.6	954.2	878.5	834.7	820.0	815.1
37.5°	1193.3	1161.7	1073.8	961.5	863.9	798.0	759.0	749.2	744.3
40°	1071.4	1049.4	968.8	866.3	776.0	717.4	685.8	678.5	678.5
42.5°	961.5	937.1	866.3	773.6	693.1	634.5	612.5	605.2	607.6
45°	861.5	837.1	771.1	685.8	607.6	558.8	541.8	541.8	541.8
47.5°	768.7	746.8	685.8	597.9	534.5	495.4	478.3	478.3	480.8
50°	683.4	668.6	600.3	524.7	468.6	432.0	419.8	417.3	422.2
52.5°	602.8	585.7	524.7	456.4	402.7	373.4	361.2	358.8	361.2
55°	534.5	515.0	461.3	395.3	346.5	317.3	302.7	300.2	305.1
57.5°	468.6	453.9	397.7	339.2	292.8	263.6	251.4	246.5	249.0
60°	407.6	392.9	341.6	285.5	244.1	214.8	197.7	192.8	195.3
62.5°	351.5	339.2	290.4	236.7	195.3	168.4	151.3	139.1	144.0
65°	300.2	287.9	244.1	190.4	153.8	124.4	100.1	90.3	92.8
67.5°	256.3	241.7	200.1	151.3	114.7	83.0	56.1	51.3	51.3
70°	212.3	197.7	161.1	117.1	80.6	43.9	24.4	24.4	24.4
72.5°	170.8	158.6	124.4	87.9	51.3	19.5	9.7	9.7	9.7
75°	131.7	122.0	92.8	61.0	31.8	9.7	7.3	4.9	4.9
77.5°	97.6	87.9	65.9	41.5	19.5	4.9	4.9	4.9	4.9
80°	65.9	58.6	43.9	24.4	9.7	2.4	2.4	2.4	2.4
82.5°	39.1	34.2	24.4	12.2	4.9	2.4	2.4	2.4	2.4
85°	19.5	14.6	9.7	4.9	2.4	2.4	2.4	2.4	2.4
87.5°	4.9	2.4	2.4	2.4	0.0	0.0	0.0	0.0	0.0
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)