

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: P592905

Luminaire Tested: **HC450D010-HM44560950-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P592905
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-HM44560950-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3324.5 lumens
Efficiency: N/A
Efficacy: 69.3 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

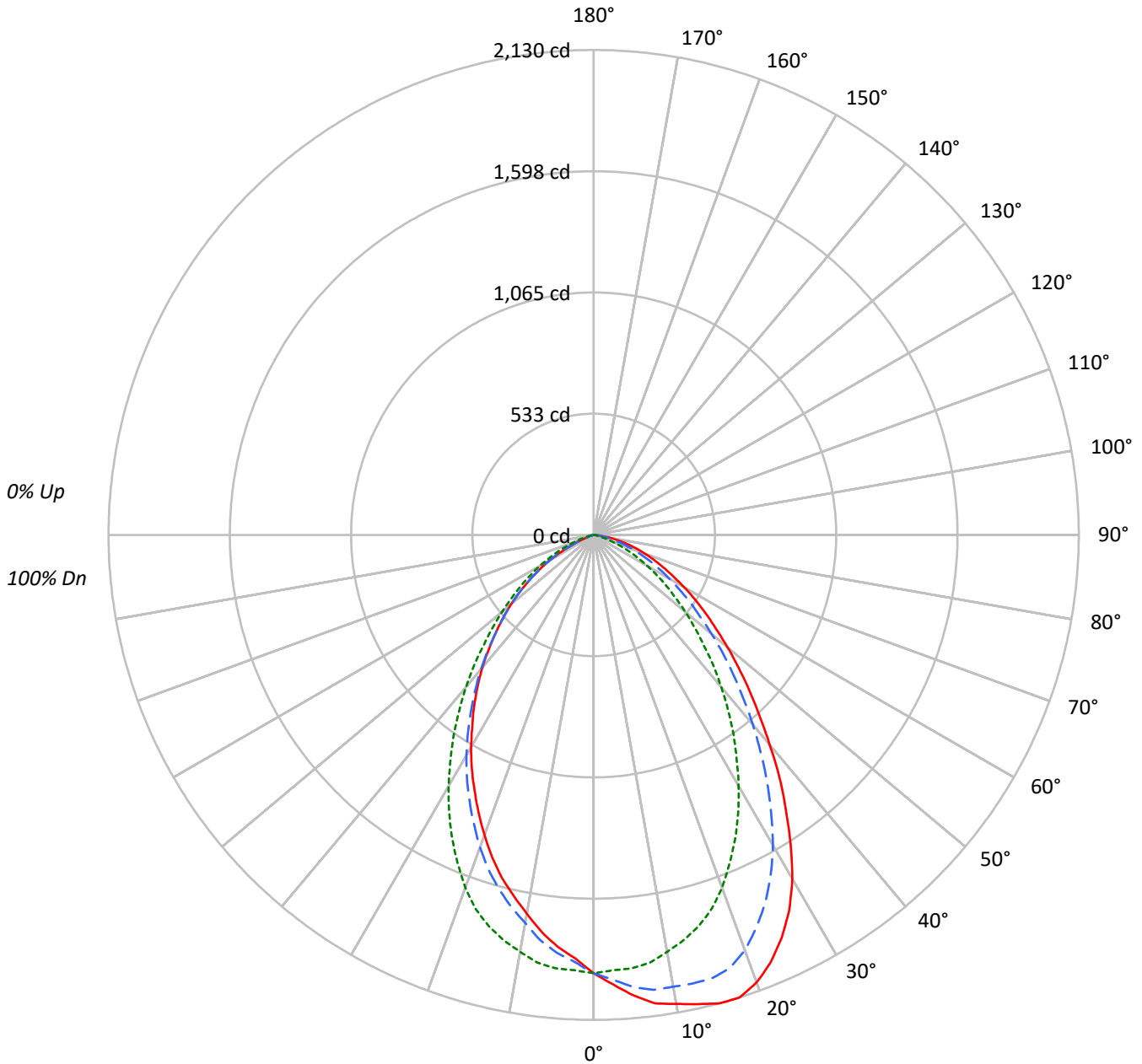
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	237391	237391	237391
5°	251534	236614	224740
10°	261982	232837	211582
15°	271994	227249	198926
20°	274560	216345	184003
25°	265675	200090	168420
30°	248393	181310	153252
35°	221379	161193	137688
40°	193525	140197	122549
45°	168576	118914	106005
50°	147104	100877	90899
55°	128942	83610	73589
60°	112787	67544	54050
65°	98269	50346	30383
70°	85904	32566	9845
75°	70485	16966	2573
80°	52493	7814	1989
85°	30994	3963	3963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.7	5.5
10°-20°	508.4	15.3
20°-30°	702.9	21.1
30°-40°	706.8	21.3
40°-50°	570.3	17.2
50°-60°	385.7	11.6
60°-70°	196.3	5.9
70°-80°	62.8	1.9
80°-90°	9.6	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°	1393.0	41.9
0°-40°	2099.8	63.2
0°-60°	3055.8	91.9
0°-90°	3324.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3324.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1925	1925	1925	1925	1925	
5°	2032	1993	1911	1843	1815	196
15°	2130	2015	1780	1610	1558	600
25°	1952	1782	1470	1290	1238	893
35°	1470	1328	1070	936	914	919
45°	966	865	682	608	608	749
55°	600	517	389	340	342	539
65°	337	274	172	112	104	338
75°	148	104	36	8	5	159
85°	22	11	3	3	3	29
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°	1924.6	1924.6	1924.6	1924.6	1924.6	1924.6	1924.6	1924.6	1924.6
2.5°	1976.7	1965.7	1954.9	1935.6	1913.8	1891.9	1878.1	1867.2	1861.8
5°	2031.5	2017.7	1993.2	1952.1	1911.0	1872.7	1842.6	1823.3	1815.1
7.5°	2075.3	2056.1	2015.1	1957.5	1894.5	1834.3	1796.0	1768.7	1757.7
10°	2091.7	2069.8	2015.1	1938.4	1859.0	1785.0	1730.4	1702.9	1689.3
12.5°	2110.8	2086.3	2017.7	1922.0	1823.3	1735.8	1672.8	1637.3	1623.5
15°	2130.0	2097.2	2015.1	1897.3	1779.6	1678.3	1609.8	1574.3	1557.8
17.5°	2130.0	2091.7	1993.2	1856.2	1722.0	1615.3	1538.6	1497.5	1483.9
20°	2091.7	2047.8	1941.1	1790.6	1648.2	1533.2	1459.2	1418.2	1401.8
22.5°	2031.5	1982.2	1867.2	1711.1	1560.5	1448.3	1374.3	1336.0	1319.7
25°	1952.1	1902.8	1782.3	1620.8	1470.2	1358.0	1289.5	1253.9	1237.5
27.5°	1859.0	1804.2	1683.7	1522.2	1374.3	1267.6	1204.6	1171.8	1158.1
30°	1744.0	1691.9	1574.3	1415.4	1273.0	1174.5	1117.1	1087.0	1076.0
32.5°	1609.8	1566.1	1451.1	1303.2	1169.0	1078.7	1026.6	1002.1	991.1
35°	1470.2	1429.1	1327.8	1190.9	1070.5	985.6	936.3	919.9	914.4
37.5°	1338.8	1303.2	1204.6	1078.7	969.2	895.2	851.5	840.5	835.0
40°	1201.9	1177.3	1087.0	971.9	870.7	804.9	769.4	761.1	761.1
42.5°	1078.7	1051.3	971.9	867.9	777.6	711.8	687.2	678.9	681.7
45°	966.4	939.1	865.1	769.4	681.7	627.0	607.7	607.7	607.7
47.5°	862.5	837.8	769.4	670.7	599.6	555.8	536.6	536.6	539.3
50°	766.6	750.2	673.5	588.6	525.7	484.6	470.9	468.2	473.7
52.5°	676.3	657.1	588.6	512.0	451.8	418.9	405.2	402.5	405.2
55°	599.6	577.6	517.4	443.6	388.8	355.9	339.5	336.7	342.2
57.5°	525.7	509.2	446.2	380.6	328.6	295.7	282.0	276.5	279.3
60°	457.2	440.8	383.2	320.4	273.8	240.9	221.7	216.3	219.1
62.5°	394.2	380.6	325.8	265.6	219.1	188.9	169.7	156.1	161.5
65°	336.7	323.0	273.8	213.5	172.5	139.6	112.2	101.3	104.1
67.5°	287.5	271.0	224.5	169.7	128.6	93.1	63.0	57.5	57.5
70°	238.2	221.7	180.7	131.4	90.3	49.3	27.3	27.3	27.3
72.5°	191.6	178.0	139.6	98.5	57.5	21.9	11.0	11.0	11.0
75°	147.9	136.9	104.1	68.4	35.6	11.0	8.2	5.4	5.4
77.5°	109.5	98.5	73.9	46.5	21.9	5.4	5.4	5.4	5.4
80°	73.9	65.8	49.3	27.3	11.0	2.8	2.8	2.8	2.8
82.5°	43.8	38.3	27.3	13.7	5.4	2.8	2.8	2.8	2.8
85°	21.9	16.4	11.0	5.4	2.8	2.8	2.8	2.8	2.8
87.5°	5.4	2.8	2.8	2.8	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)