

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: P580846

Luminaire Tested: **HC450D010-HM44560827-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580846
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-HM44560827-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3419.4 lumens
Efficiency: N/A
Efficacy: 71.2 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

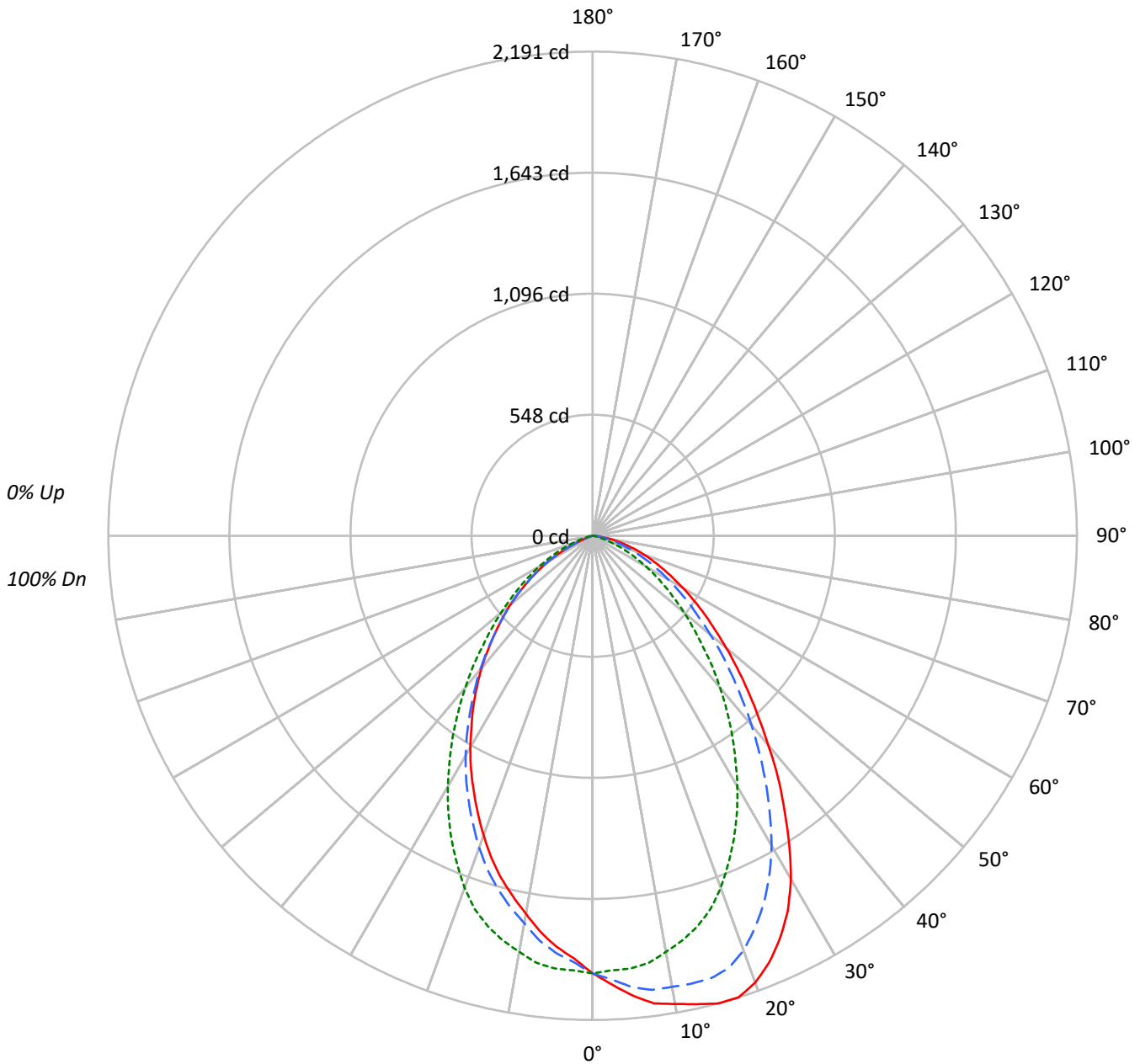
Input Watts (W): 48
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	244175	244175	244175
5°	258715	243362	231166
10°	269447	239475	217607
15°	279758	233723	204609
20°	282383	222502	189253
25°	273255	205806	173224
30°	255486	186494	157624
35°	227703	165786	141618
40°	199048	144190	126060
45°	173390	122315	109041
50°	151307	103756	93490
55°	132619	85976	75696
60°	116019	69468	55580
65°	101101	51805	31229
70°	88356	33503	10134
75°	72486	17442	2669
80°	54055	8027	1989
85°	31984	3963	3963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.8	5.5
10°-20°	522.9	15.3
20°-30°	723.0	21.1
30°-40°	727.0	21.3
40°-50°	586.6	17.2
50°-60°	396.6	11.6
60°-70°	201.9	5.9
70°-80°	64.6	1.9
80°-90°	9.9	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°	1432.7	41.9
0°-40°	2159.7	63.2
0°-60°	3143.0	91.9
0°-90°	3419.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3419.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1980	1980	1980	1980	1980	
5°	2090	2050	1966	1895	1867	201
15°	2191	2072	1830	1656	1602	617
25°	2008	1833	1512	1326	1273	919
35°	1512	1366	1101	963	940	945
45°	994	890	701	625	625	770
55°	617	532	400	349	352	554
65°	346	282	178	116	107	347
75°	152	107	37	8	6	164
85°	23	11	3	3	3	30
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°	1979.6	1979.6	1979.6	1979.6	1979.6	1979.6	1979.6	1979.6	1979.6
2.5°	2033.1	2021.8	2010.5	1990.8	1968.4	1945.8	1931.7	1920.4	1914.9
5°	2089.5	2075.4	2050.1	2007.8	1965.5	1926.1	1895.2	1875.4	1867.0
7.5°	2134.5	2114.8	2072.5	2013.4	1948.7	1886.7	1847.3	1819.1	1807.8
10°	2151.3	2128.9	2072.5	1993.7	1912.0	1836.0	1779.7	1751.5	1737.4
12.5°	2171.0	2145.7	2075.4	1976.8	1875.4	1785.3	1720.5	1684.0	1669.9
15°	2190.8	2157.0	2072.5	1951.4	1830.3	1726.1	1655.7	1619.2	1602.3
17.5°	2190.8	2151.3	2050.1	1909.2	1771.2	1661.4	1582.6	1540.3	1526.2
20°	2151.3	2106.3	1996.5	1841.6	1695.1	1576.9	1500.9	1458.7	1441.8
22.5°	2089.5	2038.8	1920.4	1760.0	1605.0	1489.7	1413.6	1374.2	1357.3
25°	2007.8	1957.1	1833.2	1667.0	1512.2	1396.7	1326.3	1289.7	1272.8
27.5°	1912.0	1855.7	1731.8	1565.6	1413.6	1303.8	1239.1	1205.2	1191.1
30°	1793.8	1740.2	1619.2	1455.8	1309.4	1208.1	1149.0	1118.0	1106.7
32.5°	1655.7	1610.7	1492.5	1340.4	1202.4	1109.4	1056.0	1030.6	1019.3
35°	1512.2	1469.9	1365.7	1224.9	1101.0	1013.8	963.1	946.2	940.5
37.5°	1377.0	1340.4	1239.1	1109.4	996.9	920.8	875.7	864.5	858.8
40°	1236.2	1210.8	1118.0	999.6	895.5	827.9	791.3	782.9	782.9
42.5°	1109.4	1081.3	999.6	892.7	799.7	732.2	706.8	698.4	701.2
45°	994.0	965.9	889.8	791.3	701.2	644.8	625.1	625.1	625.1
47.5°	887.0	861.7	791.3	689.9	616.7	571.7	552.0	552.0	554.7
50°	788.5	771.6	692.8	605.4	540.7	498.4	484.3	481.5	487.2
52.5°	695.5	675.8	605.4	526.6	464.6	430.8	416.8	413.9	416.8
55°	616.7	594.1	532.2	456.2	399.8	366.1	349.1	346.4	352.0
57.5°	540.7	523.7	459.0	391.4	338.0	304.1	290.0	284.4	287.3
60°	470.3	453.3	394.2	329.4	281.6	247.9	228.0	222.5	225.3
62.5°	405.5	391.4	335.1	273.1	225.3	194.3	174.6	160.5	166.2
65°	346.4	332.3	281.6	219.6	177.5	143.6	115.5	104.2	107.0
67.5°	295.7	278.7	230.9	174.6	132.4	95.8	64.8	59.1	59.1
70°	245.0	228.0	185.9	135.2	92.9	50.7	28.1	28.1	28.1
72.5°	197.2	183.0	143.6	101.4	59.1	22.6	11.3	11.3	11.3
75°	152.1	140.8	107.0	70.4	36.6	11.3	8.4	5.6	5.6
77.5°	112.7	101.4	76.1	47.8	22.6	5.6	5.6	5.6	5.6
80°	76.1	67.6	50.7	28.1	11.3	2.8	2.8	2.8	2.8
82.5°	45.1	39.4	28.1	14.1	5.6	2.8	2.8	2.8	2.8
85°	22.6	16.9	11.3	5.6	2.8	2.8	2.8	2.8	2.8
87.5°	5.6	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)