

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: P580791

Luminaire Tested: **HC445D010-HM44560930-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580791
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC445D010-HM44560930-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3850.2 lumens
Efficiency: N/A
Efficacy: 87.5 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

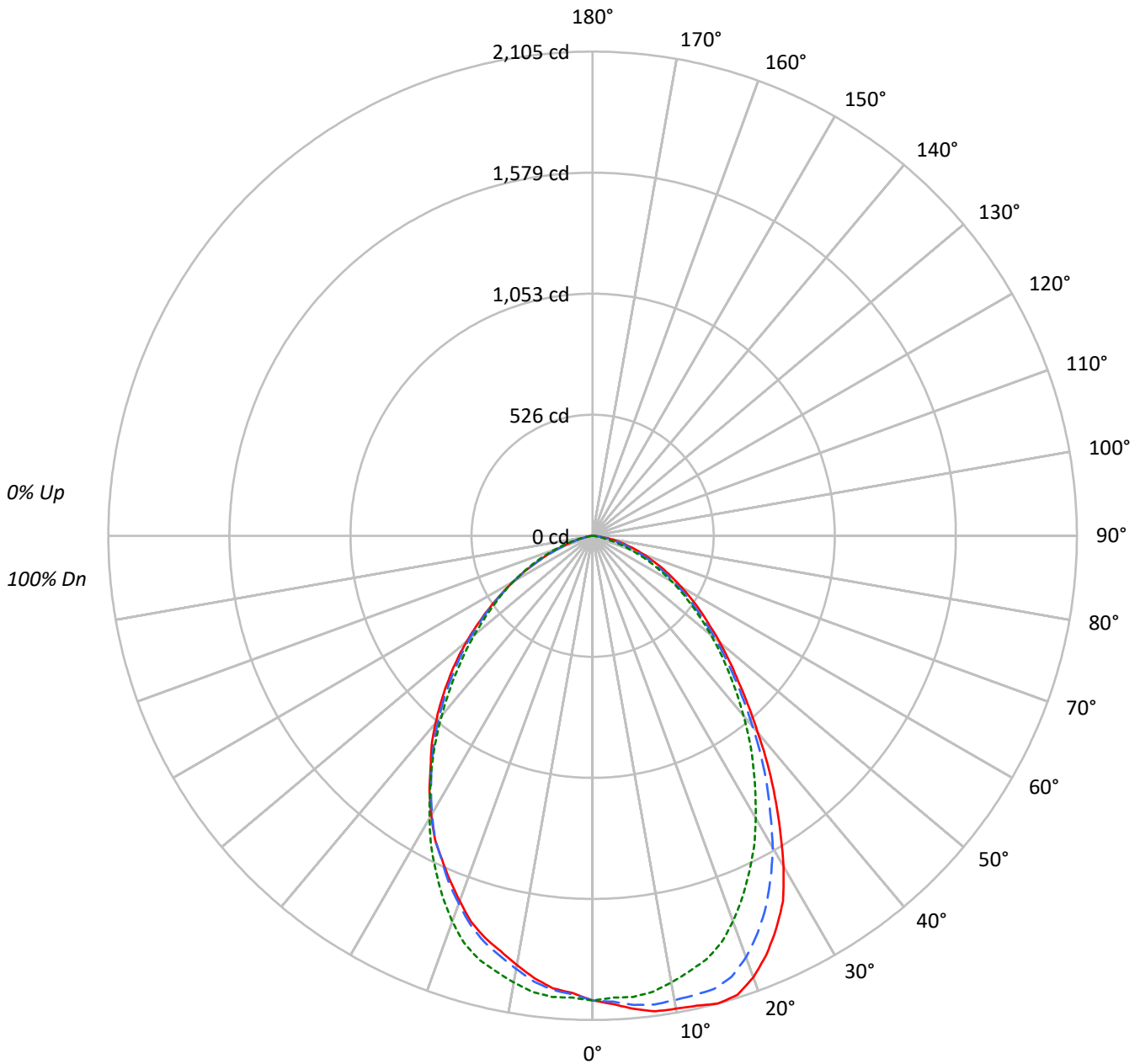
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77																			
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67																			
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47																			
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35																			
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	249158	249158	249158
5°	255706	249181	244513
10°	261494	247040	237283
15°	268840	243531	231029
20°	268115	234184	221675
25°	256815	219252	211045
30°	236244	201933	199783
35°	207827	183252	184758
40°	179791	164043	170903
45°	156261	145760	154516
50°	138680	128548	137241
55°	123028	112770	117652
60°	109580	97813	97813
65°	97423	81283	76176
70°	84173	61561	54312
75°	70580	40651	33455
80°	53487	19605	17829
85°	28446	7076	7076



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	191.3	5.0
10°-20°	542.4	14.1
20°-30°	764.9	19.9
30°-40°	790.1	20.5
40°-50°	669.8	17.4
50°-60°	487.3	12.7
60°-70°	284.8	7.4
70°-80°	105.8	2.7
80°-90°	13.9	0.4
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°	1498.5	38.9
0°-40°	2288.6	59.4
0°-60°	3445.7	89.5
0°-90°	3850.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3850.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2020	2020	2020	2020	2020	
5°	2065	2048	2012	1982	1975	198
15°	2105	2040	1907	1827	1809	592
25°	1887	1782	1611	1553	1551	863
35°	1380	1320	1217	1220	1227	862
45°	896	871	836	866	886	697
55°	572	544	524	542	547	515
65°	334	306	278	261	261	331
75°	148	123	85	68	70	159
85°	20	13	5	5	5	28
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°	2020.0	2020.0	2020.0	2020.0	2020.0	2020.0	2020.0	2020.0	2020.0
2.5°	2037.6	2032.5	2027.6	2020.0	2010.0	2002.4	1994.9	1989.9	1989.9
5°	2065.2	2057.6	2047.6	2030.0	2012.5	1997.4	1982.3	1974.8	1974.8
7.5°	2085.2	2075.3	2055.2	2030.0	2000.0	1977.3	1954.7	1944.8	1939.7
10°	2087.8	2077.7	2050.1	2012.5	1972.4	1937.2	1912.1	1897.1	1894.5
12.5°	2092.8	2080.2	2045.1	1992.4	1939.7	1897.1	1869.5	1854.4	1849.4
15°	2105.3	2087.8	2040.1	1972.4	1907.1	1856.9	1826.8	1814.3	1809.2
17.5°	2092.8	2067.7	2010.0	1929.7	1856.9	1801.7	1771.6	1759.1	1759.1
20°	2042.6	2017.5	1949.7	1862.0	1784.1	1731.5	1701.3	1693.8	1688.8
22.5°	1972.4	1944.8	1871.9	1779.2	1701.3	1653.6	1633.5	1623.5	1621.1
25°	1887.0	1859.4	1781.6	1686.3	1611.0	1570.8	1553.3	1553.3	1550.7
27.5°	1791.6	1756.5	1676.3	1593.5	1520.6	1490.6	1483.1	1483.1	1485.5
30°	1658.7	1633.5	1565.9	1485.5	1417.8	1397.7	1397.7	1402.7	1402.7
32.5°	1515.6	1498.1	1437.8	1367.6	1314.9	1302.3	1307.4	1317.5	1319.9
35°	1380.2	1360.1	1319.9	1257.2	1217.0	1212.0	1219.5	1227.0	1227.0
37.5°	1247.1	1227.0	1199.4	1149.3	1119.2	1121.7	1131.8	1141.7	1149.3
40°	1116.6	1101.6	1081.5	1041.3	1018.8	1028.9	1041.3	1051.4	1061.4
42.5°	1001.3	986.1	971.1	941.0	926.0	938.4	953.6	963.6	973.7
45°	895.8	885.8	870.8	845.7	835.6	848.1	865.7	875.7	885.8
47.5°	805.5	800.4	780.4	757.8	752.7	765.3	780.4	792.9	800.4
50°	722.7	715.2	697.5	675.0	669.9	690.0	700.1	707.6	715.2
52.5°	642.3	634.8	614.7	594.7	594.7	609.8	617.3	619.8	627.3
55°	572.1	564.6	544.5	529.5	524.4	537.0	542.0	542.0	547.1
57.5°	506.9	499.4	479.3	461.7	459.2	466.8	466.8	466.8	469.2
60°	444.2	436.6	416.6	401.5	396.5	399.0	396.5	393.9	396.5
62.5°	386.4	378.9	358.8	341.3	336.3	336.3	328.7	326.2	328.7
65°	333.8	321.2	306.2	288.6	278.5	271.0	261.0	261.0	261.0
67.5°	281.1	271.0	253.5	235.8	223.3	210.8	195.7	200.7	203.3
70°	233.4	225.9	205.8	188.2	170.7	155.6	143.1	148.1	150.6
72.5°	190.7	180.6	163.1	143.1	128.0	107.9	100.4	105.4	105.4
75°	148.1	138.0	123.0	102.9	85.3	67.8	67.8	70.2	70.2
77.5°	110.4	100.4	85.3	67.8	52.7	40.2	42.6	42.6	42.6
80°	75.3	67.8	55.2	40.2	27.6	22.6	22.6	22.6	25.1
82.5°	42.6	37.6	30.1	20.1	12.6	12.6	12.6	12.6	12.6
85°	20.1	15.0	12.6	7.5	5.0	5.0	5.0	5.0	5.0
87.5°	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
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)