

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: P580828

Luminaire Tested: **HC445D010-HM44560940-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580828
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: HC445D010-HM44560940-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3146.9 lumens
Efficiency: N/A
Efficacy: 71.5 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

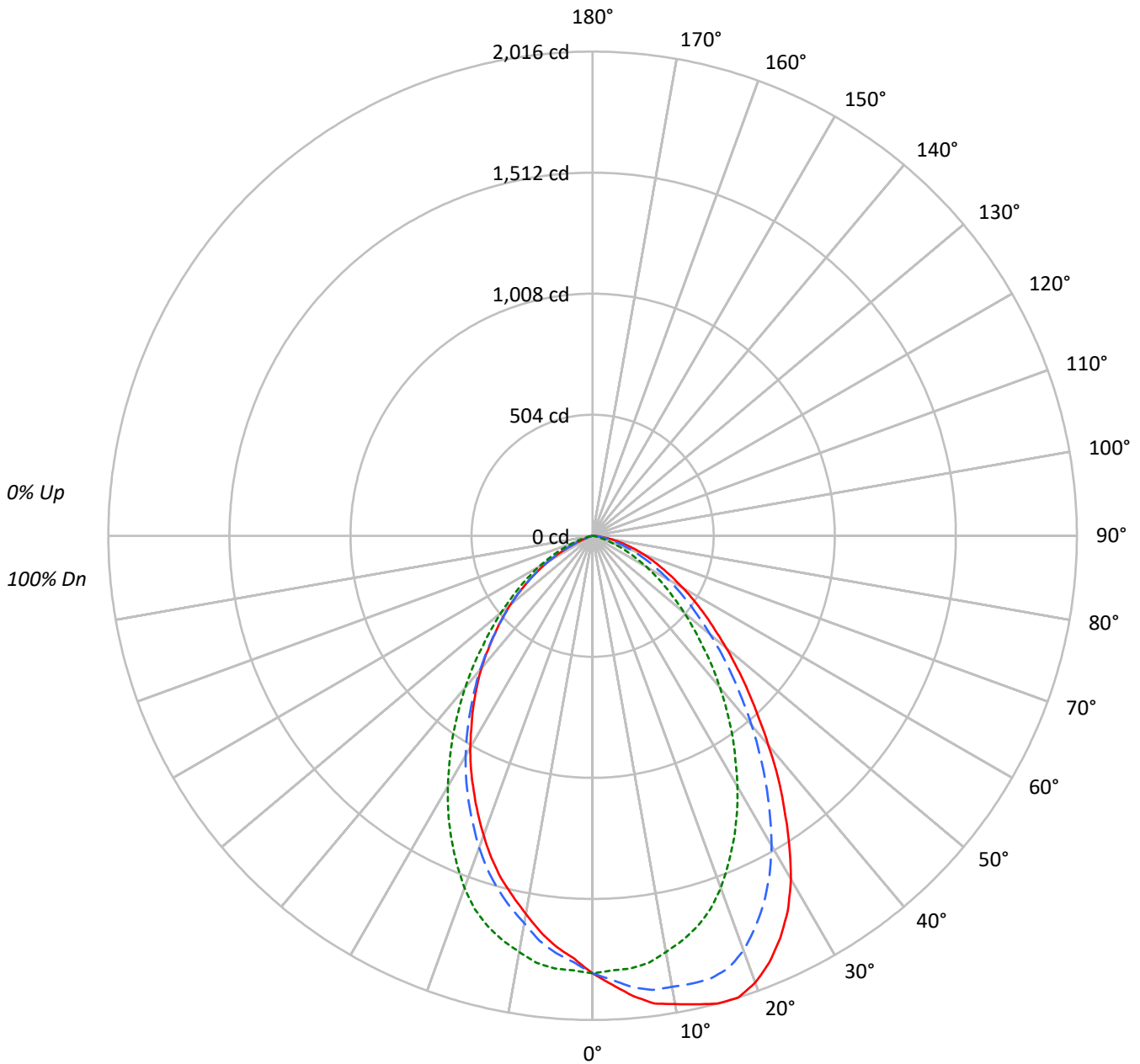
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	224723	224723	224723
5°	238087	223972	212742
10°	247979	220387	200272
15°	257462	215105	188289
20°	259885	204781	174171
25°	251466	189392	159424
30°	235119	171625	145048
35°	209543	152580	130340
40°	183188	132694	115996
45°	159575	112564	100371
50°	139237	95485	86044
55°	122039	79137	69654
60°	106768	63942	51139
65°	93045	47661	28748
70°	81288	30835	9341
75°	66672	16060	2478
80°	49722	7316	1847
85°	29437	3680	3680



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.0	5.5
10°-20°	481.2	15.3
20°-30°	665.4	21.1
30°-40°	669.0	21.3
40°-50°	539.9	17.2
50°-60°	365.1	11.6
60°-70°	185.8	5.9
70°-80°	59.5	1.9
80°-90°	9.1	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°	1318.6	41.9
0°-40°	1987.6	63.2
0°-60°	2892.5	91.9
0°-90°	3146.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3146.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1822	1822	1822	1822	1822	
5°	1923	1887	1809	1744	1718	185
15°	2016	1907	1684	1524	1474	568
25°	1848	1687	1392	1221	1171	846
35°	1392	1257	1013	886	866	870
45°	915	819	645	575	575	709
55°	568	490	368	321	324	510
65°	319	259	163	106	98	320
75°	140	98	34	8	5	151
85°	21	10	3	3	3	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°	1821.9	1821.9	1821.9	1821.9	1821.9	1821.9	1821.9	1821.9	1821.9
2.5°	1871.0	1860.7	1850.4	1832.2	1811.5	1790.7	1777.8	1767.4	1762.2
5°	1922.9	1910.0	1886.6	1847.7	1808.9	1772.6	1744.1	1726.0	1718.2
7.5°	1964.4	1946.2	1907.4	1853.0	1793.3	1736.3	1700.1	1674.1	1663.8
10°	1979.9	1959.2	1907.4	1834.8	1759.6	1689.7	1637.9	1612.0	1599.0
12.5°	1998.1	1974.7	1910.0	1819.2	1726.0	1643.1	1583.5	1549.7	1536.8
15°	2016.2	1985.2	1907.4	1796.0	1684.5	1588.6	1523.8	1490.1	1474.5
17.5°	2016.2	1979.9	1886.6	1757.1	1630.0	1528.9	1456.5	1417.5	1404.6
20°	1979.9	1938.5	1837.4	1694.9	1560.1	1451.3	1381.3	1342.4	1326.9
22.5°	1922.9	1876.3	1767.4	1619.7	1477.2	1371.0	1301.0	1264.7	1249.1
25°	1847.7	1801.1	1687.0	1534.2	1391.6	1285.4	1220.6	1187.0	1171.4
27.5°	1759.6	1707.8	1593.8	1440.9	1301.0	1199.9	1140.3	1109.2	1096.2
30°	1650.8	1601.5	1490.1	1339.8	1205.0	1111.8	1057.4	1028.9	1018.4
32.5°	1523.8	1482.4	1373.6	1233.5	1106.6	1021.0	971.9	948.5	938.1
35°	1391.6	1352.8	1256.9	1127.3	1013.3	932.9	886.3	870.8	865.6
37.5°	1267.3	1233.5	1140.3	1021.0	917.3	847.4	805.9	795.6	790.4
40°	1137.7	1114.4	1028.9	920.0	824.1	762.0	728.2	720.4	720.4
42.5°	1021.0	995.1	920.0	821.5	736.0	673.8	650.4	642.7	645.3
45°	914.8	888.8	818.9	728.2	645.3	593.4	575.4	575.4	575.4
47.5°	816.4	793.0	728.2	634.9	567.5	526.1	507.9	507.9	510.5
50°	725.6	710.1	637.5	557.2	497.6	458.7	445.8	443.2	448.4
52.5°	640.1	621.9	557.2	484.6	427.6	396.5	383.5	380.9	383.5
55°	567.5	546.9	489.8	419.9	368.0	336.9	321.3	318.8	323.9
57.5°	497.6	482.0	422.4	360.3	311.0	279.9	266.9	261.8	264.3
60°	432.8	417.3	362.9	303.2	259.2	228.1	209.9	204.8	207.3
62.5°	373.2	360.3	308.4	251.3	207.3	178.8	160.7	147.8	152.9
65°	318.8	305.7	259.2	202.2	163.3	132.2	106.3	95.9	98.5
67.5°	272.1	256.6	212.5	160.7	121.8	88.1	59.6	54.4	54.4
70°	225.4	209.9	171.0	124.4	85.5	46.7	25.9	25.9	25.9
72.5°	181.4	168.4	132.2	93.4	54.4	20.8	10.3	10.3	10.3
75°	139.9	129.6	98.5	64.7	33.7	10.3	7.7	5.2	5.2
77.5°	103.7	93.4	70.0	44.1	20.8	5.2	5.2	5.2	5.2
80°	70.0	62.2	46.7	25.9	10.3	2.6	2.6	2.6	2.6
82.5°	41.5	36.2	25.9	12.9	5.2	2.6	2.6	2.6	2.6
85°	20.8	15.6	10.3	5.2	2.6	2.6	2.6	2.6	2.6
87.5°	5.2	2.6	2.6	2.6	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)