

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: P580936

Luminaire Tested: **HC450D010-HM44560930-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580936
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-HM44560930-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3219.1 lumens
Efficiency: N/A
Efficacy: 67.1 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

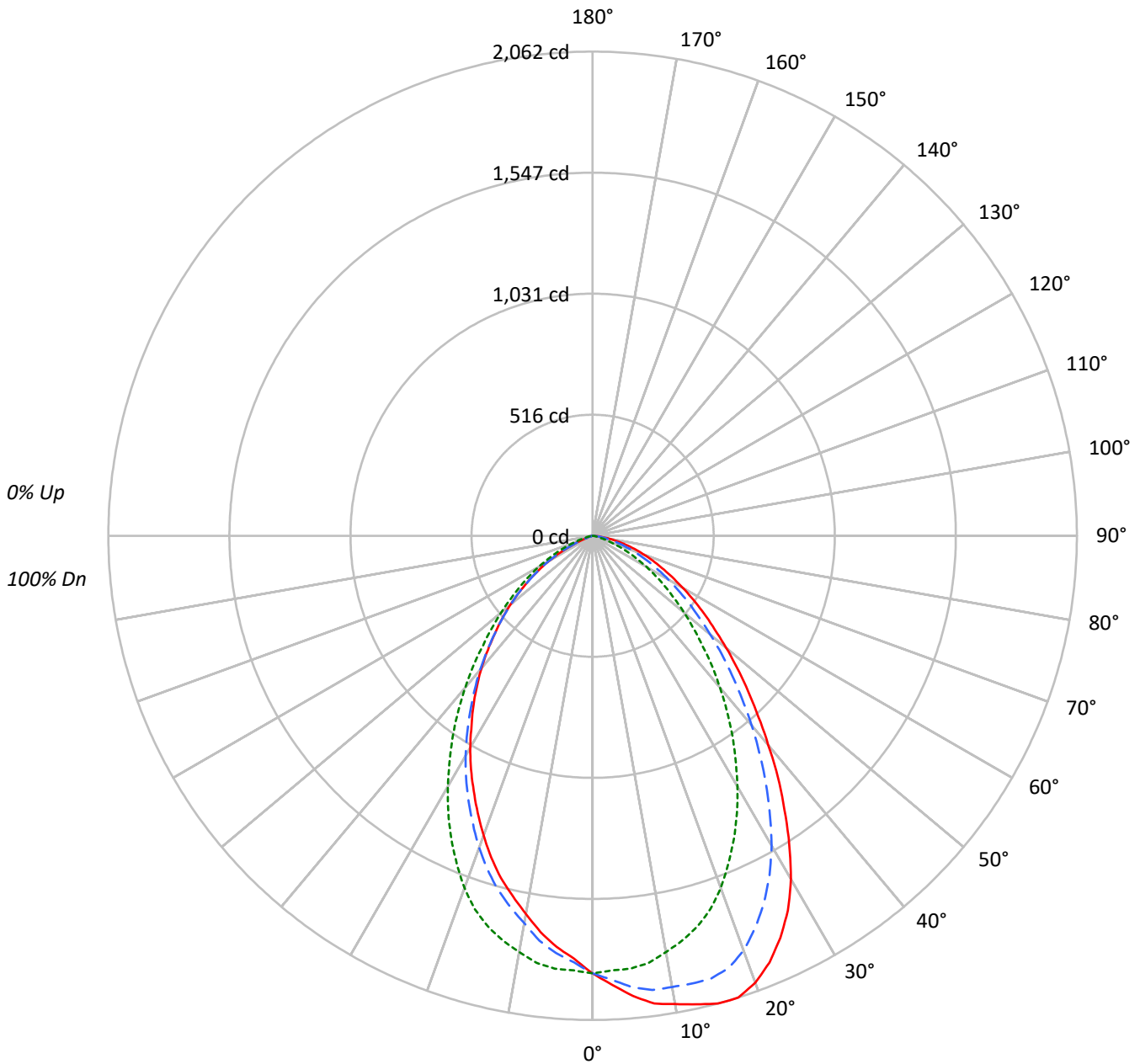
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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°	229867	229867	229867
5°	243548	229111	217620
10°	253666	225447	204856
15°	263375	220022	192618
20°	265844	209481	178161
25°	257237	193734	163071
30°	240503	175556	148381
35°	214347	156073	133321
40°	187391	135737	118653
45°	163221	115146	102656
50°	142422	97673	88002
55°	124835	80944	71245
60°	109210	65398	52323
65°	95147	48741	29390
70°	83163	31556	9557
75°	68197	16394	2526
80°	50859	7529	1918
85°	30144	3821	3821



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.9	5.5
10°-20°	492.3	15.3
20°-30°	680.6	21.1
30°-40°	684.4	21.3
40°-50°	552.2	17.2
50°-60°	373.4	11.6
60°-70°	190.1	5.9
70°-80°	60.9	1.9
80°-90°	9.3	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°	1348.8	41.9
0°-40°	2033.1	63.2
0°-60°	2958.8	91.9
0°-90°	3219.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3219.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1864	1864	1864	1864	1864	
5°	1967	1930	1850	1784	1758	190
15°	2062	1951	1723	1559	1508	581
25°	1890	1726	1424	1249	1198	865
35°	1424	1286	1036	907	885	890
45°	936	838	660	588	588	725
55°	580	501	376	329	331	522
65°	326	265	167	109	101	327
75°	143	101	34	8	5	154
85°	21	11	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°	1863.6	1863.6	1863.6	1863.6	1863.6	1863.6	1863.6	1863.6	1863.6
2.5°	1914.0	1903.4	1892.7	1874.2	1853.0	1831.8	1818.6	1808.0	1802.6
5°	1967.0	1953.7	1929.8	1890.1	1850.4	1813.3	1784.0	1765.6	1757.6
7.5°	2009.4	1990.8	1951.1	1895.4	1834.4	1776.1	1739.0	1712.5	1701.9
10°	2025.3	2004.1	1951.1	1876.8	1800.0	1728.4	1675.3	1648.9	1635.6
12.5°	2043.9	2019.9	1953.7	1861.0	1765.6	1680.6	1619.7	1585.2	1571.9
15°	2062.5	2030.6	1951.1	1837.1	1723.0	1625.0	1558.8	1524.2	1508.4
17.5°	2062.5	2025.3	1929.8	1797.3	1667.5	1564.1	1489.8	1450.1	1436.8
20°	2025.3	1982.9	1879.5	1733.7	1595.9	1484.5	1413.0	1373.1	1357.3
22.5°	1967.0	1919.2	1808.0	1656.8	1511.1	1402.3	1330.7	1293.6	1277.7
25°	1890.1	1842.4	1725.7	1569.4	1423.5	1314.9	1248.6	1214.2	1198.2
27.5°	1800.0	1747.0	1630.3	1473.9	1330.7	1227.3	1166.4	1134.6	1121.3
30°	1688.6	1638.2	1524.2	1370.5	1232.6	1137.2	1081.5	1052.4	1041.8
32.5°	1558.8	1516.4	1405.0	1261.9	1131.9	1044.5	994.1	970.3	959.7
35°	1423.5	1383.8	1285.7	1153.2	1036.5	954.3	906.6	890.7	885.4
37.5°	1296.3	1261.9	1166.4	1044.5	938.4	866.9	824.4	813.9	808.6
40°	1163.8	1139.9	1052.4	941.1	843.0	779.3	744.9	736.9	736.9
42.5°	1044.5	1018.0	941.1	840.3	752.9	689.2	665.4	657.4	660.1
45°	935.7	909.3	837.7	744.9	660.1	607.1	588.5	588.5	588.5
47.5°	835.0	811.2	744.9	649.5	580.5	538.1	519.6	519.6	522.3
50°	742.2	726.3	652.1	570.0	509.0	469.3	456.0	453.3	458.6
52.5°	654.8	636.2	570.0	495.7	437.4	405.6	392.3	389.7	392.3
55°	580.5	559.4	501.0	429.4	376.4	344.6	328.7	326.0	331.3
57.5°	509.0	493.1	432.1	368.5	318.2	286.3	273.1	267.8	270.4
60°	442.7	426.7	371.2	310.2	265.1	233.2	214.8	209.4	212.1
62.5°	381.7	368.5	315.5	257.2	212.1	182.9	164.4	151.1	156.4
65°	326.0	312.8	265.1	206.8	167.0	135.2	108.7	98.1	100.7
67.5°	278.3	262.5	217.4	164.4	124.5	90.1	61.0	55.7	55.7
70°	230.6	214.8	174.9	127.2	87.5	47.7	26.5	26.5	26.5
72.5°	185.5	172.4	135.2	95.4	55.7	21.3	10.6	10.6	10.6
75°	143.1	132.5	100.7	66.3	34.4	10.6	8.0	5.3	5.3
77.5°	106.1	95.4	71.6	45.1	21.3	5.3	5.3	5.3	5.3
80°	71.6	63.7	47.7	26.5	10.6	2.7	2.7	2.7	2.7
82.5°	42.4	37.1	26.5	13.3	5.3	2.7	2.7	2.7	2.7
85°	21.3	15.9	10.6	5.3	2.7	2.7	2.7	2.7	2.7
87.5°	5.3	2.7	2.7	2.7	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)