

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: P580954

Luminaire Tested: **HC450D010-HM44560935-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580954
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-HM44560935-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3350.7 lumens
Efficiency: N/A
Efficacy: 69.8 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

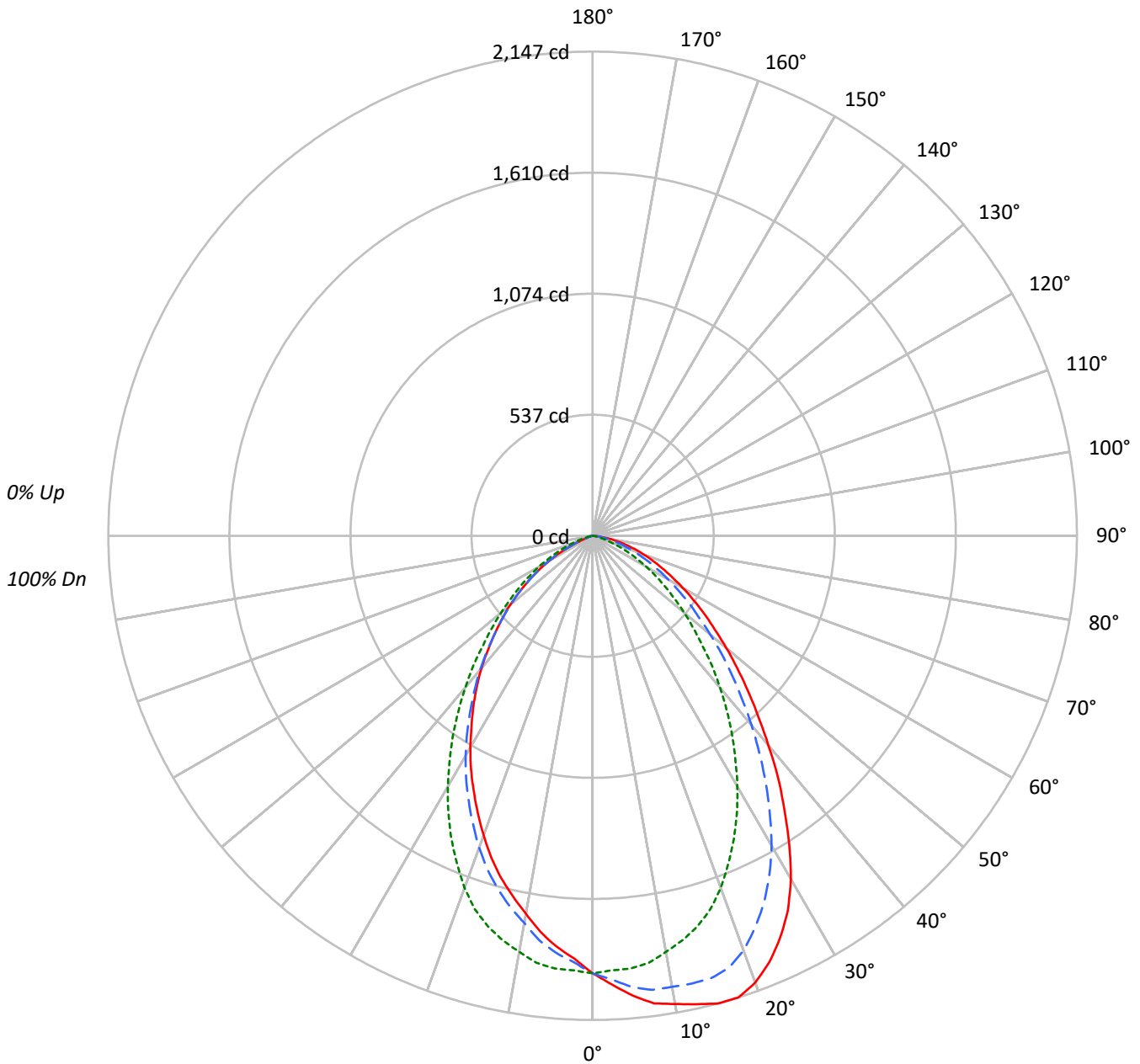
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	239266	239266	239266
5°	253502	238484	226510
10°	264049	234665	213248
15°	274139	229037	200497
20°	276726	218052	185446
25°	267757	201655	169754
30°	250344	182748	154448
35°	223110	162458	138772
40°	195055	141292	123532
45°	169902	119856	106860
50°	148256	101664	91590
55°	129953	84277	74170
60°	113675	68087	54445
65°	99057	50725	30587
70°	86589	32854	9954
75°	71009	17109	2621
80°	52919	7885	1989
85°	31135	3963	3963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.1	5.5
10°-20°	512.4	15.3
20°-30°	708.5	21.1
30°-40°	712.4	21.3
40°-50°	574.8	17.2
50°-60°	388.7	11.6
60°-70°	197.8	5.9
70°-80°	63.3	1.9
80°-90°	9.7	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°	1403.9	41.9
0°-40°	2116.3	63.2
0°-60°	3079.8	91.9
0°-90°	3350.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3350.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1940	1940	1940	1940	1940	
5°	2047	2009	1926	1857	1829	197
15°	2147	2031	1794	1622	1570	605
25°	1967	1796	1482	1300	1247	900
35°	1482	1338	1079	944	922	926
45°	974	872	687	613	613	755
55°	604	522	392	342	345	543
65°	339	276	174	113	105	340
75°	149	105	36	8	6	161
85°	22	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°	1939.8	1939.8	1939.8	1939.8	1939.8	1939.8	1939.8	1939.8	1939.8
2.5°	1992.3	1981.2	1970.1	1950.9	1928.7	1906.7	1892.9	1881.9	1876.4
5°	2047.4	2033.7	2008.8	1967.4	1926.1	1887.4	1857.0	1837.7	1829.4
7.5°	2091.6	2072.3	2030.9	1972.9	1909.5	1848.8	1810.2	1782.5	1771.5
10°	2108.2	2086.0	2030.9	1953.6	1873.6	1799.1	1743.9	1716.3	1702.6
12.5°	2127.4	2102.6	2033.7	1937.0	1837.7	1749.4	1686.0	1650.1	1636.3
15°	2146.8	2113.7	2030.9	1912.2	1793.6	1691.5	1622.5	1586.7	1570.1
17.5°	2146.8	2108.2	2008.8	1870.8	1735.7	1628.1	1550.8	1509.4	1495.6
20°	2108.2	2064.0	1956.4	1804.6	1661.2	1545.3	1470.8	1429.4	1412.8
22.5°	2047.4	1997.8	1881.9	1724.6	1572.8	1459.7	1385.2	1346.6	1329.9
25°	1967.4	1917.8	1796.3	1633.5	1481.7	1368.6	1299.6	1263.8	1247.3
27.5°	1873.6	1818.4	1697.0	1534.2	1385.2	1277.6	1214.2	1180.9	1167.2
30°	1757.7	1705.2	1586.7	1426.6	1283.1	1183.7	1125.8	1095.5	1084.4
32.5°	1622.5	1578.4	1462.5	1313.5	1178.3	1087.2	1034.7	1009.9	998.8
35°	1481.7	1440.4	1338.3	1200.3	1078.9	993.3	943.7	927.1	921.6
37.5°	1349.3	1313.5	1214.2	1087.2	976.8	902.3	858.1	847.1	841.7
40°	1211.4	1186.5	1095.5	979.6	877.5	811.2	775.3	767.2	767.2
42.5°	1087.2	1059.6	979.6	874.8	783.6	717.4	692.5	684.3	687.1
45°	974.0	946.5	872.0	775.3	687.1	631.9	612.6	612.6	612.6
47.5°	869.2	844.3	775.3	676.0	604.3	560.1	540.9	540.9	543.5
50°	772.6	756.1	678.8	593.2	529.8	488.4	474.6	471.8	477.3
52.5°	681.6	662.2	593.2	516.0	455.3	422.2	408.4	405.6	408.4
55°	604.3	582.2	521.5	447.0	391.9	358.7	342.2	339.4	344.9
57.5°	529.8	513.2	449.8	383.6	331.1	298.0	284.2	278.7	281.4
60°	460.8	444.2	386.3	322.8	276.0	242.9	223.5	218.0	220.7
62.5°	397.3	383.6	328.3	267.7	220.7	190.4	171.0	157.3	162.8
65°	339.4	325.6	276.0	215.2	173.8	140.7	113.1	102.1	104.8
67.5°	289.7	273.2	226.3	171.0	129.7	93.8	63.4	57.9	57.9
70°	240.1	223.5	182.1	132.4	91.1	49.7	27.6	27.6	27.6
72.5°	193.2	179.3	140.7	99.3	57.9	22.0	11.1	11.1	11.1
75°	149.0	137.9	104.8	69.0	35.9	11.1	8.3	5.5	5.5
77.5°	110.4	99.3	74.5	46.9	22.0	5.5	5.5	5.5	5.5
80°	74.5	66.2	49.7	27.6	11.1	2.8	2.8	2.8	2.8
82.5°	44.2	38.6	27.6	13.8	5.5	2.8	2.8	2.8	2.8
85°	22.0	16.6	11.1	5.5	2.8	2.8	2.8	2.8	2.8
87.5°	5.5	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)