

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: P580776

Luminaire Tested: **HC445D010-HM44560927-41WWWB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580776  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC445D010-HM44560927-41WWWB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3491.3 lumens  
Efficiency: N/A  
Efficacy: 79.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

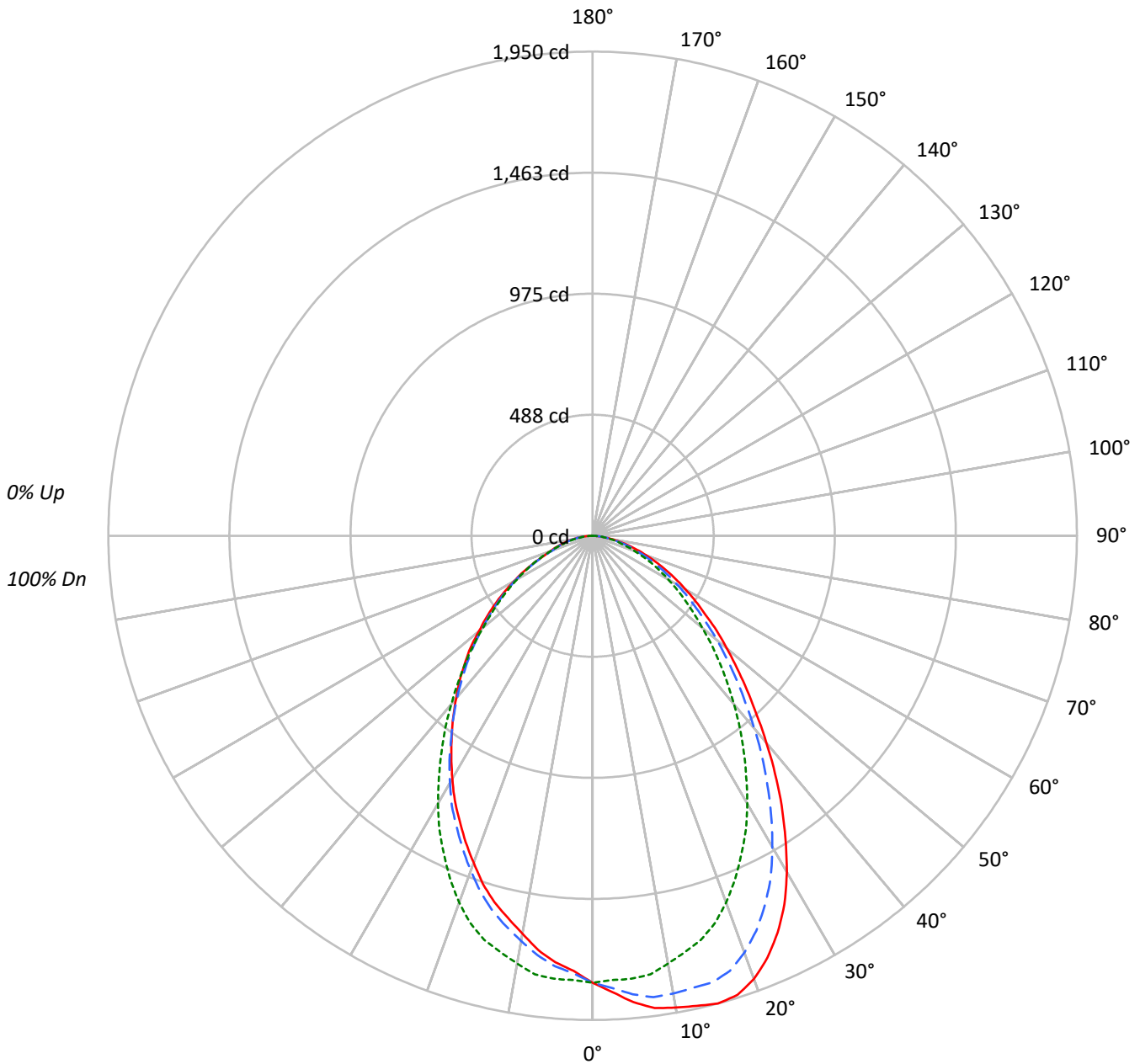
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				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	100	100
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87	87	87	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75	75	75	75
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66	66	66	66
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58	58	58	58
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51	51	51	51
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46	46	46	46
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41	41	41	41
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37	37	37	37
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34	34	34	34
10	58	45	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31	31	31	31

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	222047	222047	222047
5°	233481	221756	213460
10°	241692	219110	203767
15°	249073	215131	195070
20°	249358	206278	183832
25°	239980	192795	172353
30°	222827	177407	160957
35°	199741	159717	148951
40°	175266	142516	137685
45°	153191	126188	126990
50°	135245	110434	114406
55°	119265	97911	102878
60°	106620	86663	90067
65°	94446	76205	76205
70°	82514	65023	65023
75°	70485	55092	61668
80°	55760	49225	55760
85°	36088	42598	52364



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	170.6	4.9
10°-20°	480.3	13.8
20°-30°	672.9	19.3
30°-40°	693.3	19.9
40°-50°	590.2	16.9
50°-60°	437.3	12.5
60°-70°	274.5	7.9
70°-80°	136.4	3.9
80°-90°	35.8	1.0
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°	1323.8	37.9
0°-40°	2017.1	57.8
0°-60°	3044.7	87.2
0°-90°	3491.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3491.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1800	1800	1800	1800	1800	
5°	1886	1853	1791	1740	1724	181
15°	1950	1863	1685	1562	1528	548
25°	1763	1641	1417	1294	1266	806
35°	1326	1227	1061	991	989	827
45°	878	818	723	709	728	681
55°	555	511	455	464	478	501
65°	324	291	261	256	261	323
75°	148	132	116	125	129	158
85°	26	26	30	35	37	33
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°	1800.2	1800.2	1800.2	1800.2	1800.2	1800.2	1800.2	1800.2	1800.2
2.5°	1839.5	1832.7	1823.4	1807.2	1791.0	1777.1	1763.3	1756.4	1754.0
5°	1885.7	1871.9	1853.4	1823.4	1791.0	1763.3	1740.2	1728.7	1724.0
7.5°	1918.2	1904.3	1874.2	1828.0	1781.7	1740.2	1703.2	1687.0	1682.4
10°	1929.7	1913.5	1871.9	1809.6	1749.4	1698.6	1657.0	1636.2	1626.9
12.5°	1938.9	1918.2	1865.0	1791.0	1717.1	1654.7	1610.7	1583.0	1576.1
15°	1950.5	1927.4	1862.6	1772.5	1684.7	1610.7	1562.3	1536.8	1527.6
17.5°	1938.9	1913.5	1837.3	1735.5	1636.2	1555.3	1502.1	1479.0	1469.8
20°	1899.7	1871.9	1786.4	1677.8	1571.5	1488.3	1435.2	1412.0	1400.5
22.5°	1839.5	1809.6	1721.7	1606.1	1497.5	1416.6	1365.8	1342.7	1335.7
25°	1763.3	1733.3	1640.8	1523.0	1416.6	1338.1	1294.1	1273.4	1266.4
27.5°	1673.1	1643.2	1553.0	1437.4	1335.7	1261.8	1227.1	1206.4	1201.8
30°	1564.5	1534.4	1446.7	1340.3	1245.6	1176.3	1148.6	1132.4	1130.1
32.5°	1444.4	1419.0	1338.1	1241.0	1150.8	1093.1	1072.3	1060.7	1058.4
35°	1326.5	1298.8	1227.1	1139.3	1060.7	1009.9	991.4	989.2	989.2
37.5°	1206.4	1178.7	1120.9	1040.0	972.9	926.7	919.8	922.1	922.1
40°	1088.5	1063.1	1012.3	945.2	885.1	850.5	848.1	852.7	855.1
42.5°	977.6	956.7	910.5	852.7	801.9	774.2	776.5	785.7	792.7
45°	878.2	859.7	818.1	767.2	723.4	702.6	709.4	721.0	728.0
47.5°	788.1	771.8	732.6	686.3	649.4	635.5	644.8	658.6	667.9
50°	704.8	691.0	654.0	605.4	575.5	566.2	577.7	591.6	596.2
52.5°	630.9	617.0	577.7	536.2	513.1	508.4	519.9	531.5	538.4
55°	554.6	543.0	510.7	473.7	455.3	453.0	464.5	473.7	478.4
57.5°	492.2	480.7	450.6	418.3	402.1	399.8	411.3	418.3	420.6
60°	432.2	420.6	392.9	362.9	351.3	351.3	358.3	362.9	365.1
62.5°	376.7	365.1	339.7	314.3	305.1	305.1	305.1	307.3	314.3
65°	323.6	314.3	291.2	268.0	261.1	256.5	256.5	256.5	261.1
67.5°	275.0	265.8	247.3	226.5	219.6	212.6	210.3	215.0	215.0
70°	228.8	221.8	203.4	187.1	180.3	173.3	171.0	180.3	180.3
72.5°	187.1	180.3	168.7	152.5	145.6	143.3	147.9	152.5	154.8
75°	147.9	140.9	131.7	122.5	115.6	117.8	124.8	127.1	129.4
77.5°	111.0	108.6	99.4	92.5	92.5	94.7	99.4	104.0	106.3
80°	78.5	76.3	71.7	67.0	69.3	73.9	76.3	80.9	78.5
82.5°	48.6	48.6	46.2	46.2	48.6	53.2	55.4	57.8	60.1
85°	25.5	25.5	25.5	27.7	30.1	32.3	34.7	37.0	37.0
87.5°	7.0	9.2	9.2	11.6	13.9	13.9	16.2	16.2	16.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)