

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: P581224

Luminaire Tested: **HC455D010-HM44560930-41WWBB**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581224  
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: HC455D010-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: 3374.3 lumens  
Efficiency: N/A  
Efficacy: 64.9 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

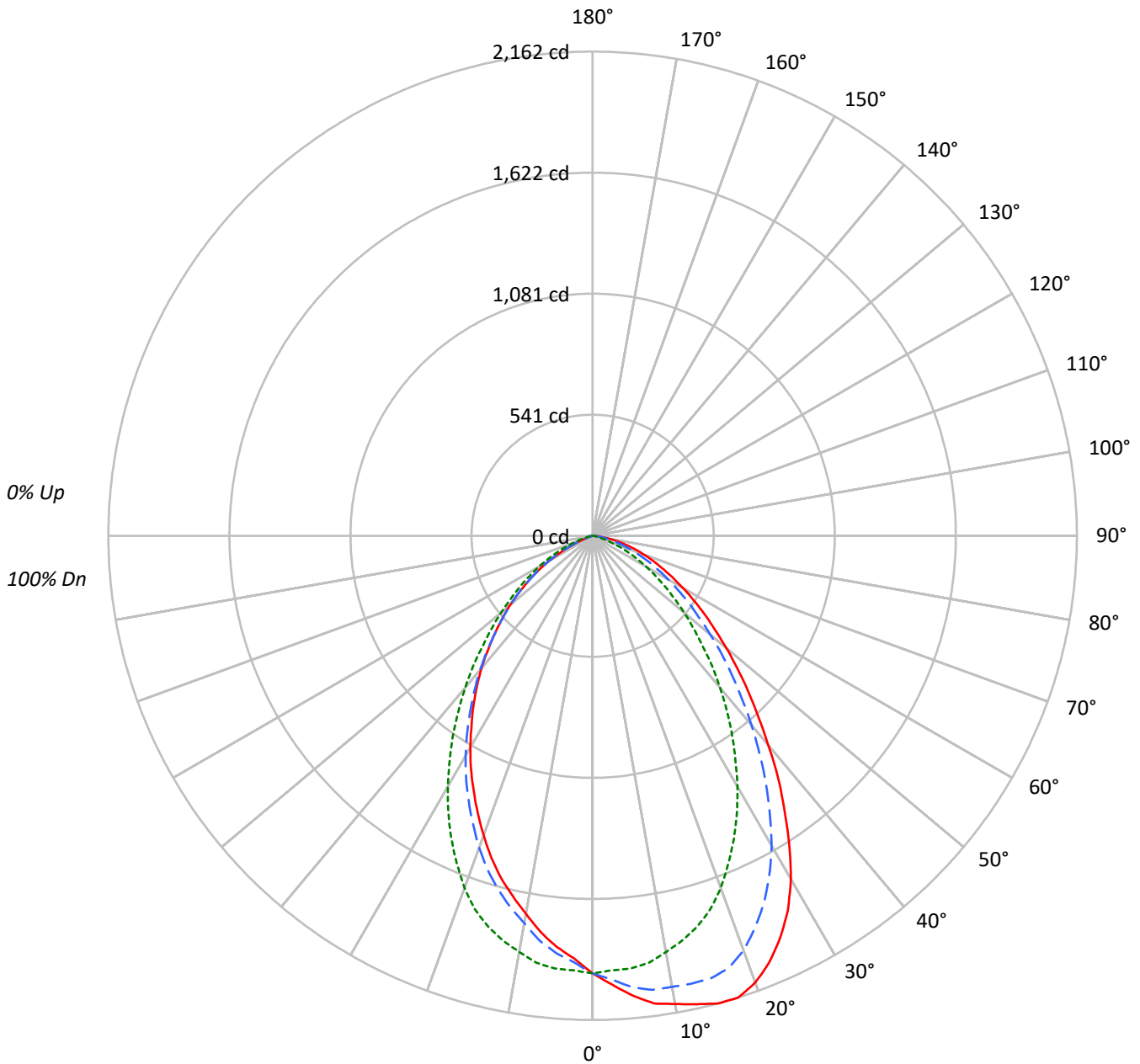
Input Watts (W): 52  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	240956	240956	240956
5°	255298	240155	228108
10°	265902	236319	214738
15°	276068	230646	201914
20°	278669	219588	186759
25°	269635	203084	170951
30°	252110	184045	155531
35°	224691	163602	139751
40°	196408	142290	124385
45°	171105	120693	107593
50°	149311	102374	92242
55°	130856	84836	74707
60°	114489	68555	54839
65°	99758	51076	30820
70°	87202	33071	10026
75°	71533	17204	2621
80°	53274	7885	1989
85°	31560	3963	3963



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	184.4	5.5
10°-20°	516.0	15.3
20°-30°	713.5	21.1
30°-40°	717.4	21.3
40°-50°	578.9	17.2
50°-60°	391.4	11.6
60°-70°	199.2	5.9
70°-80°	63.8	1.9
80°-90°	9.8	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°	1413.8	41.9
0°-40°	2131.2	63.2
0°-60°	3101.5	91.9
0°-90°	3374.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3374.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1954	1954	1954	1954	1954	
5°	2062	2023	1940	1870	1842	199
15°	2162	2045	1806	1634	1581	609
25°	1981	1809	1492	1309	1256	907
35°	1492	1348	1086	950	928	932
45°	981	878	692	617	617	760
55°	608	525	394	345	347	547
65°	342	278	175	114	106	343
75°	150	106	36	8	6	162
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°	1953.5	1953.5	1953.5	1953.5	1953.5	1953.5	1953.5	1953.5	1953.5
2.5°	2006.3	1995.2	1984.0	1964.6	1942.4	1920.2	1906.2	1895.2	1889.6
5°	2061.9	2048.0	2023.0	1981.2	1939.6	1900.7	1870.1	1850.6	1842.3
7.5°	2106.3	2086.9	2045.1	1986.9	1923.0	1861.8	1822.8	1795.0	1784.0
10°	2123.0	2100.7	2045.1	1967.4	1886.8	1811.8	1756.2	1728.4	1714.5
12.5°	2142.5	2117.5	2048.0	1950.8	1850.6	1761.8	1697.8	1661.7	1647.8
15°	2161.9	2128.5	2045.1	1925.7	1806.2	1703.4	1634.0	1597.8	1581.2
17.5°	2161.9	2123.0	2023.0	1884.0	1747.9	1639.5	1561.7	1520.0	1506.1
20°	2123.0	2078.5	1970.2	1817.3	1672.9	1556.1	1481.1	1439.4	1422.8
22.5°	2061.9	2011.8	1895.2	1736.8	1583.9	1469.9	1395.0	1356.1	1339.4
25°	1981.2	1931.3	1809.0	1645.1	1492.2	1378.2	1308.8	1272.7	1256.1
27.5°	1886.8	1831.3	1709.0	1545.0	1395.0	1286.6	1222.6	1189.4	1175.4
30°	1770.1	1717.3	1597.8	1436.6	1292.2	1192.0	1133.8	1103.2	1092.0
32.5°	1634.0	1589.5	1472.7	1322.7	1186.5	1094.9	1042.1	1017.0	1006.0
35°	1492.2	1450.6	1347.8	1208.8	1086.5	1000.4	950.4	933.6	928.1
37.5°	1358.8	1322.7	1222.6	1094.9	983.7	908.7	864.2	853.1	847.6
40°	1219.8	1194.9	1103.2	986.5	883.7	817.0	780.9	772.5	772.5
42.5°	1094.9	1067.1	986.5	880.9	789.2	722.5	697.5	689.2	691.9
45°	980.9	953.1	878.1	780.9	691.9	636.3	616.8	616.8	616.8
47.5°	875.4	850.3	780.9	680.8	608.5	564.1	544.6	544.6	547.4
50°	778.1	761.4	683.6	597.5	533.5	491.8	477.9	475.2	480.7
52.5°	686.4	666.9	597.5	519.6	458.6	425.1	411.3	408.5	411.3
55°	608.5	586.4	525.2	450.1	394.5	361.2	344.6	341.8	347.4
57.5°	533.5	516.8	452.9	386.2	333.4	300.2	286.2	280.7	283.4
60°	464.1	447.4	389.0	325.1	277.9	244.6	225.1	219.5	222.3
62.5°	400.2	386.2	330.6	269.6	222.3	191.7	172.2	158.4	163.9
65°	341.8	327.9	277.9	216.8	175.0	141.8	114.0	102.8	105.6
67.5°	291.8	275.1	227.8	172.2	130.6	94.5	63.9	58.4	58.4
70°	241.8	225.1	183.4	133.4	91.7	50.1	27.8	27.8	27.8
72.5°	194.5	180.7	141.8	100.0	58.4	22.3	11.1	11.1	11.1
75°	150.1	138.9	105.6	69.5	36.1	11.1	8.3	5.5	5.5
77.5°	111.2	100.0	75.0	47.2	22.3	5.5	5.5	5.5	5.5
80°	75.0	66.7	50.1	27.8	11.1	2.8	2.8	2.8	2.8
82.5°	44.4	38.9	27.8	14.0	5.5	2.8	2.8	2.8	2.8
85°	22.3	16.7	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)