

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: P580737

Luminaire Tested: **HC445D010-HM44560835-41RWWH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580737  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC445D010-HM44560835-41RWWH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4565.8 lumens  
Efficiency: N/A  
Efficacy: 103.8 lumens/watt  
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

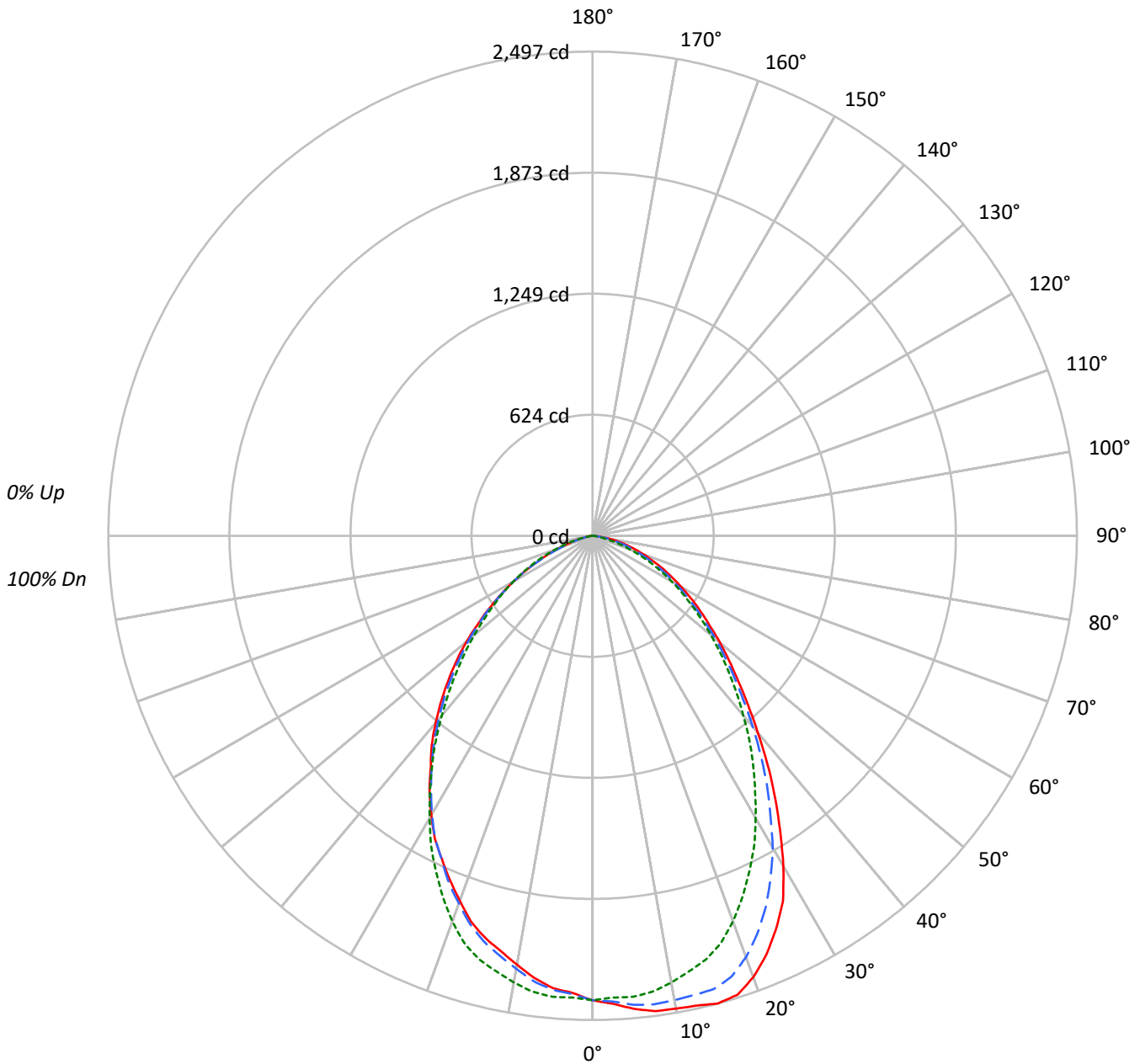
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88	88	88	88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77	77	77	77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67	67	67	67
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59	59	59	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52	52	52	52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47	47	47	47
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42	42	42	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38	38	38	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35	35	35	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32	32	32	32

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

	0°	90°	180°
0°	295474	295474	295474
5°	303227	295489	289979
10°	310090	292944	281396
15°	318821	288786	273973
20°	317955	277723	262878
25°	304544	259999	250282
30°	280154	239463	236928
35°	246450	217313	219105
40°	213218	194540	202687
45°	185304	172867	183229
50°	164451	152458	162743
55°	145909	133737	139501
60°	129932	115970	115970
65°	115489	96402	90302
70°	99825	72957	64374
75°	83686	48229	39746
80°	63432	23298	21096
85°	33683	8350	8350



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	226.9	5.0
10°-20°	643.1	14.1
20°-30°	907.0	19.9
30°-40°	937.0	20.5
40°-50°	794.3	17.4
50°-60°	577.9	12.7
60°-70°	337.7	7.4
70°-80°	125.5	2.7
80°-90°	16.4	0.4
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°	1777.0	38.9
0°-40°	2714.0	59.4
0°-60°	4086.2	89.5
0°-90°	4565.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4565.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2396	2396	2396	2396	2396	
5°	2449	2428	2386	2351	2342	235
15°	2497	2419	2262	2166	2146	702
25°	2238	2113	1910	1842	1839	1023
35°	1637	1565	1443	1446	1455	1022
45°	1062	1033	991	1027	1050	827
55°	678	646	622	643	649	610
65°	396	363	330	309	309	393
75°	176	146	101	80	83	189
85°	24	15	6	6	6	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°	2395.5	2395.5	2395.5	2395.5	2395.5	2395.5	2395.5	2395.5	2395.5
2.5°	2416.3	2410.4	2404.3	2395.5	2383.6	2374.6	2365.7	2359.8	2359.8
5°	2449.0	2440.1	2428.2	2407.4	2386.5	2368.7	2350.8	2342.0	2342.0
7.5°	2472.8	2460.9	2437.1	2407.4	2371.7	2344.9	2318.1	2306.2	2300.2
10°	2475.8	2463.9	2431.1	2386.5	2338.9	2297.3	2267.4	2249.6	2246.7
12.5°	2481.8	2466.8	2425.2	2362.7	2300.2	2249.6	2217.0	2199.0	2193.1
15°	2496.7	2475.8	2419.3	2338.9	2261.5	2202.0	2166.4	2151.4	2145.5
17.5°	2481.8	2452.0	2383.6	2288.3	2202.0	2136.6	2100.8	2086.0	2086.0
20°	2422.3	2392.4	2312.1	2208.0	2115.8	2053.3	2017.6	2008.6	2002.7
22.5°	2338.9	2306.2	2219.9	2109.8	2017.6	1961.0	1937.2	1925.2	1922.3
25°	2237.7	2205.1	2112.7	1999.7	1910.4	1862.9	1842.0	1842.0	1839.0
27.5°	2124.6	2083.0	1987.7	1889.6	1803.3	1767.6	1758.6	1758.6	1761.7
30°	1967.0	1937.2	1856.8	1761.7	1681.3	1657.5	1657.5	1663.5	1663.5
32.5°	1797.3	1776.5	1705.1	1621.7	1559.2	1544.4	1550.4	1562.3	1565.2
35°	1636.7	1612.9	1565.2	1490.8	1443.2	1437.3	1446.3	1455.1	1455.1
37.5°	1478.9	1455.1	1422.4	1362.9	1327.2	1330.1	1342.0	1353.9	1362.9
40°	1324.2	1306.3	1282.6	1234.9	1208.2	1220.1	1234.9	1246.9	1258.8
42.5°	1187.3	1169.5	1151.6	1115.9	1098.0	1112.9	1130.8	1142.6	1154.5
45°	1062.3	1050.4	1032.6	1002.8	991.0	1005.8	1026.6	1038.5	1050.4
47.5°	955.2	949.2	925.4	898.7	892.7	907.6	925.4	940.3	949.2
50°	857.0	848.1	827.3	800.4	794.5	818.3	830.3	839.1	848.1
52.5°	761.8	752.9	729.1	705.3	705.3	723.1	732.0	735.0	743.9
55°	678.5	669.5	645.7	627.9	621.9	636.8	642.8	642.8	648.7
57.5°	601.1	592.2	568.4	547.5	544.5	553.5	553.5	553.5	556.5
60°	526.7	517.8	494.0	476.1	470.1	473.1	470.1	467.2	470.1
62.5°	458.2	449.4	425.6	404.7	398.8	398.8	389.8	386.9	389.8
65°	395.7	380.9	363.1	342.2	330.3	321.3	309.4	309.4	309.4
67.5°	333.2	321.3	300.6	279.7	264.8	250.0	232.1	238.1	241.0
70°	276.8	267.8	244.0	223.2	202.3	184.5	169.6	175.6	178.5
72.5°	226.2	214.3	193.4	169.6	151.8	127.9	119.0	125.0	125.0
75°	175.6	163.7	145.9	122.0	101.2	80.3	80.3	83.4	83.4
77.5°	130.9	119.0	101.2	80.3	62.5	47.6	50.6	50.6	50.6
80°	89.3	80.3	65.4	47.6	32.8	26.8	26.8	26.8	29.7
82.5°	50.6	44.7	35.7	23.8	14.9	14.9	14.9	14.9	14.9
85°	23.8	17.8	14.9	9.0	5.9	5.9	5.9	5.9	5.9
87.5°	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
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)