

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: P580738

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

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580738  
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: HC445D010-HM44560835-41WWBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3613.3 lumens  
Efficiency: N/A  
Efficacy: 82.1 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

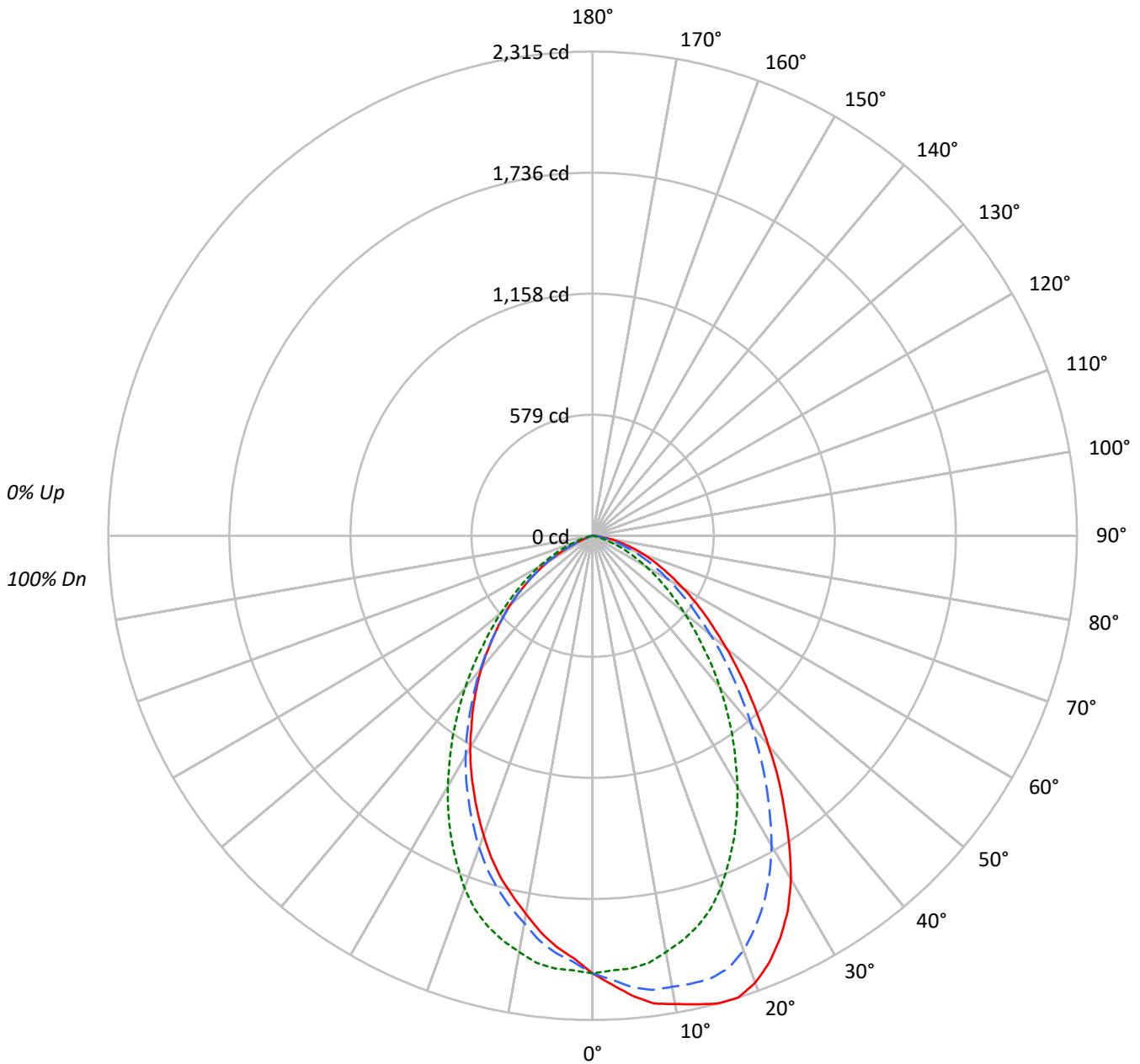
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89	89	89	89
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	85	83	80	78	78	78	78
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	69	69	69	69
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61	61	61	61
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55	55	55	55
6	77	66	58	52	75	65	57	52	63	57	52	61	56	51	60	55	51	49	49	49	49
7	72	60	53	47	71	59	52	47	58	51	47	57	51	46	55	50	46	44	44	44	44
8	68	56	48	43	66	55	48	43	54	47	42	53	47	42	51	46	42	40	40	40	40
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	43	39	37	37	37	37
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	36	34	34	34	34

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

	0°	90°	180°
0°	258027	258027	258027
5°	273387	257167	244266
10°	284740	253064	229944
15°	295618	246991	216203
20°	298410	235142	199990
25°	288757	217483	183064
30°	269971	197077	166569
35°	240622	175197	149659
40°	210336	152370	133209
45°	183229	129258	115233
50°	159884	109628	98786
55°	140146	90857	79976
60°	122581	73415	58737
65°	106821	54724	33009
70°	93333	35415	10711
75°	76585	18443	2812
80°	57039	8453	2131
85°	33683	4246	4246



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	197.4	5.5
10°-20°	552.6	15.3
20°-30°	764.0	21.1
30°-40°	768.2	21.3
40°-50°	619.9	17.2
50°-60°	419.2	11.6
60°-70°	213.3	5.9
70°-80°	68.3	1.9
80°-90°	10.5	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°	1514.0	41.9
0°-40°	2282.2	63.2
0°-60°	3321.2	91.9
0°-90°	3613.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3613.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2092	2092	2092	2092	2092	
5°	2208	2166	2077	2003	1973	213
15°	2315	2190	1934	1750	1693	652
25°	2122	1937	1598	1402	1345	971
35°	1598	1443	1164	1018	994	998
45°	1050	940	741	661	661	814
55°	652	562	422	369	372	585
65°	366	298	188	122	113	367
75°	161	113	39	9	6	173
85°	24	12	3	3	3	32
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°	2091.9	2091.9	2091.9	2091.9	2091.9	2091.9	2091.9	2091.9	2091.9
2.5°	2148.4	2136.5	2124.6	2103.8	2080.0	2056.2	2041.3	2029.4	2023.4
5°	2208.0	2193.1	2166.2	2121.7	2077.0	2035.3	2002.7	1981.8	1972.8
7.5°	2255.6	2234.7	2190.0	2127.6	2059.2	1993.7	1952.1	1922.3	1910.4
10°	2273.4	2249.6	2190.0	2106.8	2020.5	1940.2	1880.6	1850.9	1835.9
12.5°	2294.3	2267.4	2193.1	2088.9	1981.8	1886.5	1818.1	1779.5	1764.6
15°	2315.0	2279.3	2190.0	2062.1	1934.2	1824.0	1749.6	1711.0	1693.1
17.5°	2315.0	2273.4	2166.2	2017.5	1871.7	1755.6	1672.3	1627.7	1612.8
20°	2273.4	2225.8	2109.7	1946.1	1791.4	1666.4	1586.1	1541.4	1523.6
22.5°	2208.0	2154.4	2029.4	1859.8	1696.1	1574.2	1493.8	1452.1	1434.3
25°	2121.7	2068.1	1937.1	1761.5	1598.0	1475.9	1401.5	1362.9	1345.1
27.5°	2020.5	1960.9	1830.0	1654.5	1493.8	1377.7	1309.3	1273.6	1258.7
30°	1895.5	1839.0	1711.0	1538.4	1383.7	1276.6	1214.1	1181.4	1169.5
32.5°	1749.6	1702.1	1577.1	1416.4	1270.6	1172.4	1115.8	1089.1	1077.2
35°	1598.0	1553.3	1443.2	1294.5	1163.5	1071.3	1017.7	999.8	993.9
37.5°	1455.1	1416.4	1309.3	1172.4	1053.3	973.0	925.4	913.5	907.6
40°	1306.3	1279.5	1181.4	1056.4	946.3	874.8	836.1	827.3	827.3
42.5°	1172.4	1142.6	1056.4	943.3	845.1	773.6	746.9	737.9	741.0
45°	1050.4	1020.7	940.3	836.1	741.0	681.4	660.6	660.6	660.6
47.5°	937.3	910.5	836.1	729.1	651.7	604.1	583.2	583.2	586.2
50°	833.2	815.4	732.0	639.8	571.3	526.7	511.9	508.8	514.8
52.5°	735.0	714.2	639.8	556.4	491.0	455.3	440.4	437.5	440.4
55°	651.7	627.9	562.3	482.0	422.5	386.9	369.0	366.0	371.9
57.5°	571.3	553.5	485.0	413.6	357.1	321.3	306.5	300.6	303.5
60°	496.9	479.1	416.6	348.2	297.6	261.9	241.0	235.1	238.1
62.5°	428.5	413.6	354.1	288.7	238.1	205.3	184.5	169.6	175.6
65°	366.0	351.1	297.6	232.1	187.5	151.8	122.0	110.1	113.1
67.5°	312.5	294.6	244.0	184.5	139.8	101.2	68.4	62.5	62.5
70°	258.8	241.0	196.4	142.8	98.2	53.5	29.7	29.7	29.7
72.5°	208.2	193.4	151.8	107.2	62.5	23.8	11.9	11.9	11.9
75°	160.7	148.8	113.1	74.4	38.7	11.9	9.0	5.9	5.9
77.5°	119.0	107.2	80.3	50.6	23.8	5.9	5.9	5.9	5.9
80°	80.3	71.5	53.5	29.7	11.9	3.0	3.0	3.0	3.0
82.5°	47.6	41.6	29.7	14.9	5.9	3.0	3.0	3.0	3.0
85°	23.8	17.8	11.9	5.9	3.0	3.0	3.0	3.0	3.0
87.5°	5.9	3.0	3.0	3.0	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)