

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: P580736

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

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580736  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC445D010-HM44560835-41RWWC  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4589.6 lumens  
Efficiency: N/A  
Efficacy: 104.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

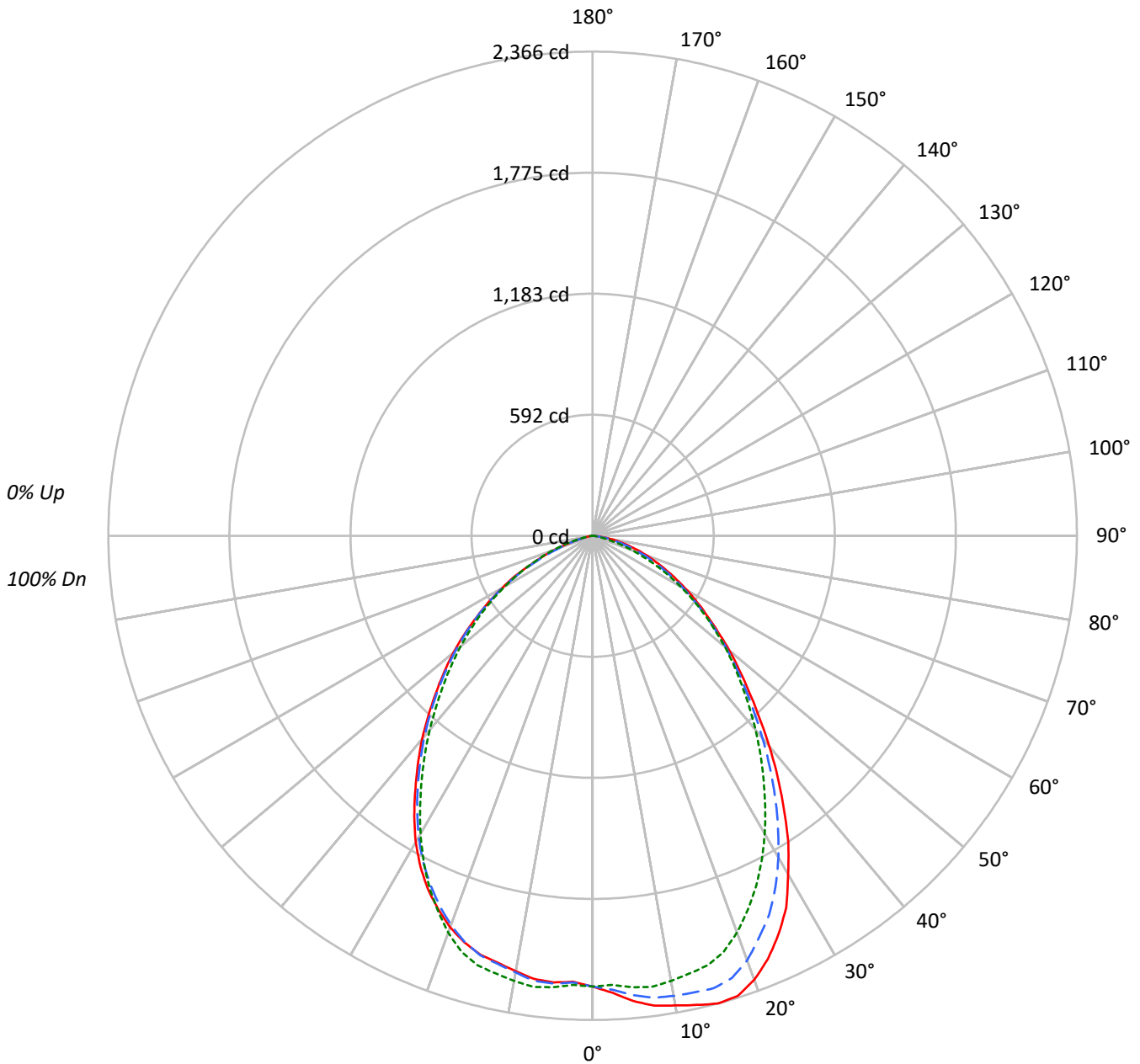
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20									20									20									20									
RC	80									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																
1	111	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88			88																
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76			76																
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67			67																
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58			58																
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52			52																
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46			46																
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41			41																
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37			37																
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34			34																
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31			31																

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

	0°	90°	180°
0°	271669	271669	271669
5°	282649	274180	271233
10°	291879	276599	270624
15°	302156	277434	270602
20°	303162	270740	267223
25°	292459	257209	259237
30°	272150	239520	246285
35°	245140	219165	227221
40°	216148	199354	208468
45°	188985	179635	188462
50°	167330	161630	170189
55°	147199	142726	148490
60°	131412	121865	125541
65°	115518	99028	97277
70°	100907	72993	66574
75°	83686	43940	35457
80°	63432	16906	10584
85°	29578	4246	4246



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	212.4	4.6
10°-20°	619.9	13.5
20°-30°	897.8	19.6
30°-40°	947.2	20.6
40°-50°	819.8	17.9
50°-60°	607.3	13.2
60°-70°	350.1	7.6
70°-80°	122.2	2.7
80°-90°	12.9	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°	1730.2	37.7
0°-40°	2677.4	58.3
0°-60°	4104.5	89.4
0°-90°	4589.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4589.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2202	2202	2202	2202	2202	
5°	2283	2253	2214	2196	2191	219
15°	2366	2289	2173	2122	2119	665
25°	2149	2042	1890	1878	1905	983
35°	1628	1554	1456	1488	1509	1017
45°	1083	1054	1030	1068	1080	841
55°	684	670	664	688	690	617
65°	396	372	339	322	333	395
75°	176	149	92	74	74	189
85°	21	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°	2202.5	2202.5	2202.5	2202.5	2202.5	2202.5	2202.5	2202.5	2202.5
2.5°	2235.2	2229.2	2220.3	2208.4	2196.5	2187.6	2184.6	2181.6	2181.6
5°	2282.8	2270.9	2253.1	2229.2	2214.4	2205.4	2196.5	2190.6	2190.6
7.5°	2315.6	2303.7	2276.9	2244.1	2223.2	2205.4	2193.5	2184.6	2184.6
10°	2330.4	2315.6	2282.8	2241.2	2208.4	2184.6	2166.7	2160.7	2160.7
12.5°	2348.3	2330.4	2285.9	2232.2	2190.6	2160.7	2142.9	2137.0	2137.0
15°	2366.2	2345.3	2288.8	2226.3	2172.6	2137.0	2122.2	2119.1	2119.1
17.5°	2357.2	2330.4	2265.0	2190.6	2131.0	2095.3	2080.4	2080.4	2083.4
20°	2309.6	2282.8	2208.4	2125.1	2062.6	2035.8	2023.9	2029.8	2035.8
22.5°	2238.2	2205.4	2125.1	2044.7	1979.2	1955.4	1955.4	1964.4	1973.3
25°	2148.9	2119.1	2041.7	1952.5	1889.9	1872.1	1878.0	1892.9	1904.8
27.5°	2047.6	2015.0	1934.6	1851.3	1788.8	1779.8	1794.8	1815.5	1821.5
30°	1910.8	1884.0	1815.5	1735.2	1681.7	1678.6	1699.5	1714.3	1729.2
32.5°	1779.8	1750.1	1684.6	1607.2	1568.6	1571.5	1595.3	1613.1	1622.1
35°	1628.0	1601.2	1553.6	1491.1	1455.5	1461.4	1488.1	1506.1	1509.0
37.5°	1485.2	1467.4	1419.7	1372.1	1345.3	1357.2	1381.0	1401.8	1401.8
40°	1342.4	1327.4	1291.8	1253.0	1238.1	1253.0	1276.8	1294.7	1294.7
42.5°	1205.4	1196.5	1166.7	1140.0	1131.0	1151.8	1172.7	1187.5	1184.6
45°	1083.4	1074.4	1053.6	1032.8	1029.8	1050.6	1068.5	1077.5	1080.4
47.5°	973.2	967.3	949.4	934.5	934.5	955.4	970.3	979.2	982.2
50°	872.0	866.1	851.3	839.4	842.3	863.2	875.0	883.9	886.9
52.5°	770.8	767.9	756.0	741.1	750.1	764.9	779.8	785.7	788.8
55°	684.5	684.5	669.7	657.7	663.7	678.6	687.6	690.5	690.5
57.5°	607.1	604.2	586.4	574.5	577.4	592.3	598.3	601.2	601.2
60°	532.7	529.8	512.0	494.0	494.0	503.0	506.0	508.9	508.9
62.5°	461.4	458.3	437.5	422.7	416.7	413.7	413.7	419.6	431.5
65°	395.8	392.9	372.1	348.3	339.3	330.3	321.5	327.4	333.3
67.5°	336.4	330.3	309.6	288.7	267.8	253.0	238.1	247.1	259.0
70°	279.8	273.8	250.0	226.2	202.4	178.6	166.6	178.6	184.6
72.5°	226.2	220.2	196.5	172.7	142.8	119.0	116.1	119.0	122.1
75°	175.6	172.7	148.8	122.1	92.2	74.4	74.4	74.4	74.4
77.5°	130.9	125.0	101.2	77.4	53.5	41.6	38.7	38.7	38.7
80°	89.3	83.4	62.5	44.7	23.8	17.8	17.8	14.9	14.9
82.5°	50.6	47.6	32.8	17.8	9.0	5.9	5.9	5.9	5.9
85°	20.9	17.8	11.9	5.9	3.0	3.0	3.0	3.0	3.0
87.5°	3.0	3.0	3.0	0.0	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



Report Generated By 670245859 / DESKTOP-HRDQ47P







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







(END OF REPORT)