

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: P582574

Luminaire Tested: **HC645D010-HM64560827-61WWW**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582574  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC645D010-HM64560827-61WWW  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4222.7 lumens  
Efficiency: N/A  
Efficacy: 96.0 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1.06 / 1.14  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

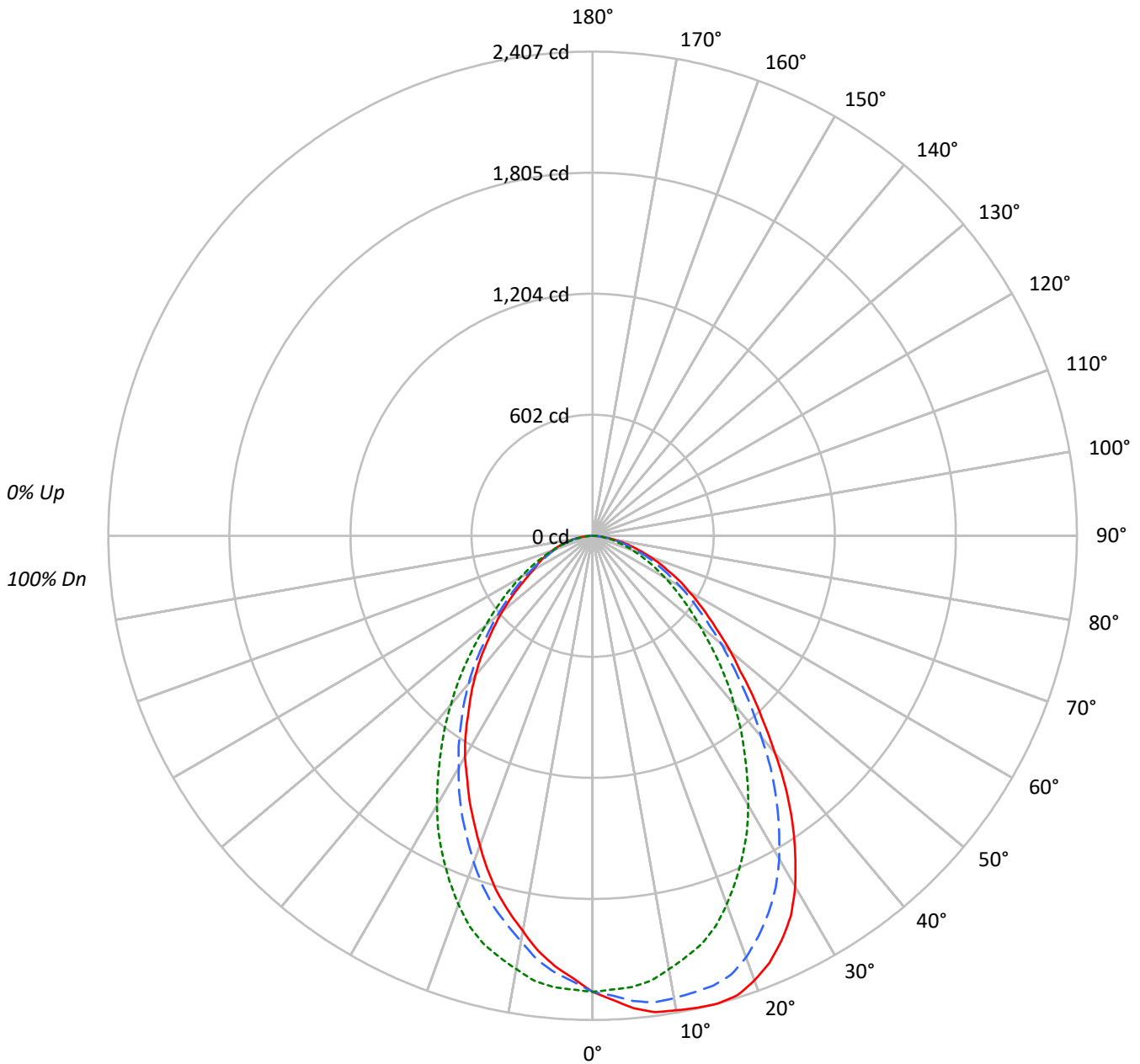
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20				20				20				20				20				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
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87				87
2	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76				76
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66
4	87	76	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58				58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	53	51				51
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46				46
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42				42
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38				38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34				34
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	32				32

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

	0°	90°	180°
0°	124272	124272	124272
5°	129782	123910	118198
10°	133320	121775	111076
15°	136618	119132	104064
20°	137229	113737	95582
25°	134355	106482	87658
30°	127469	97914	80341
35°	115770	88011	72076
40°	100875	78383	64843
45°	87280	68596	57014
50°	76236	59060	49960
55°	67352	51907	42875
60°	60543	45490	37124
65°	54208	39576	36009
70°	48406	33756	33756
75°	42023	28425	31687
80°	33685	24056	28886
85°	23021	21071	24908



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	213.1	5.0
10°-20°	592.2	14.0
20°-30°	825.4	19.5
30°-40°	850.4	20.1
40°-50°	704.8	16.7
50°-60°	506.5	12.0
60°-70°	322.6	7.6
70°-80°	165.6	3.9
80°-90°	42.1	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°	1630.7	38.6
0°-40°	2481.1	58.8
0°-60°	3692.4	87.4
0°-90°	4222.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4222.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2267	2267	2267	2267	2267	
5°	2358	2322	2252	2178	2148	226
15°	2407	2316	2099	1907	1834	678
25°	2221	2069	1760	1535	1449	1018
35°	1730	1590	1315	1141	1077	1075
45°	1126	1047	885	772	735	871
55°	705	647	543	482	449	635
65°	418	372	305	265	278	419
75°	198	171	134	140	150	212
85°	37	34	34	37	40	47
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°	2266.9	2266.9	2266.9	2266.9	2266.9	2266.9	2266.9	2266.9	2266.9
2.5°	2309.6	2300.5	2288.3	2276.1	2257.8	2236.4	2218.1	2212.0	2202.9
5°	2358.4	2346.2	2321.8	2291.3	2251.7	2212.0	2178.5	2157.0	2147.9
7.5°	2388.9	2373.7	2340.1	2288.3	2230.3	2172.4	2123.5	2093.0	2080.8
10°	2395.0	2379.8	2334.0	2263.9	2187.6	2108.2	2047.2	2010.6	1995.4
12.5°	2404.2	2382.8	2324.9	2242.5	2144.8	2053.3	1977.1	1931.3	1916.1
15°	2407.2	2382.8	2315.7	2215.1	2099.1	1989.3	1906.9	1851.9	1833.6
17.5°	2395.0	2367.6	2288.3	2166.2	2035.0	1919.1	1821.4	1763.5	1739.1
20°	2352.3	2321.8	2230.3	2093.0	1949.6	1827.5	1726.9	1665.9	1638.4
22.5°	2297.4	2257.8	2154.0	2007.6	1858.0	1729.9	1629.3	1568.2	1540.7
25°	2221.2	2184.6	2068.6	1913.0	1760.4	1626.2	1534.6	1470.6	1449.2
27.5°	2132.6	2089.9	1971.0	1815.3	1659.8	1525.5	1437.0	1379.1	1351.6
30°	2013.7	1974.0	1855.0	1699.4	1546.8	1421.8	1330.3	1281.4	1269.2
32.5°	1873.3	1839.7	1723.8	1577.3	1430.9	1315.1	1238.7	1186.8	1174.6
35°	1729.9	1690.3	1589.5	1452.3	1315.1	1211.2	1141.1	1095.3	1077.0
37.5°	1574.3	1537.7	1452.3	1330.3	1208.2	1110.6	1049.6	1009.8	991.5
40°	1409.6	1382.1	1302.9	1205.1	1095.3	1009.8	958.0	924.4	906.1
42.5°	1257.0	1229.5	1174.6	1083.1	991.5	915.3	869.5	839.0	823.8
45°	1125.8	1101.4	1046.6	967.1	884.8	820.7	772.0	750.6	735.4
47.5°	994.6	982.4	933.6	860.4	784.2	729.3	695.6	671.2	659.0
50°	893.9	878.7	832.9	756.7	692.5	649.8	619.3	598.0	585.8
52.5°	790.3	775.0	732.3	668.1	616.3	576.6	546.1	527.8	515.7
55°	704.7	692.5	646.8	588.8	543.1	509.6	482.1	460.8	448.6
57.5°	625.4	613.2	570.5	515.7	476.0	445.5	421.0	402.7	387.4
60°	552.2	543.1	500.4	448.6	414.9	384.4	363.0	347.8	338.6
62.5°	488.2	469.9	433.2	387.4	356.9	332.5	311.2	302.0	308.1
65°	417.9	408.8	372.2	332.5	305.1	280.7	265.4	271.5	277.6
67.5°	360.0	347.8	317.3	280.7	256.3	238.0	228.9	241.1	244.1
70°	302.0	289.8	262.4	231.9	210.6	198.4	198.4	207.5	210.6
72.5°	247.2	238.0	213.6	189.2	174.0	164.8	170.9	177.0	180.1
75°	198.4	189.2	170.9	149.6	134.2	134.2	140.3	146.5	149.6
77.5°	152.6	146.5	128.1	112.8	106.7	106.7	112.8	115.9	118.9
80°	106.7	100.6	91.5	82.3	76.2	82.3	88.4	88.4	91.5
82.5°	70.1	67.1	61.0	54.9	54.9	57.9	61.0	64.0	64.0
85°	36.6	36.6	33.5	30.5	33.5	36.6	36.6	39.6	39.6
87.5°	12.2	12.2	12.2	12.2	15.2	15.2	15.2	15.2	15.2
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)