

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: P582665

Luminaire Tested: **HC645D010-HM64560930-61WWWB**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582665  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC645D010-HM64560930-61WWWB  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4343.4 lumens  
Efficiency: N/A  
Efficacy: 98.7 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.09 / 1.17  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

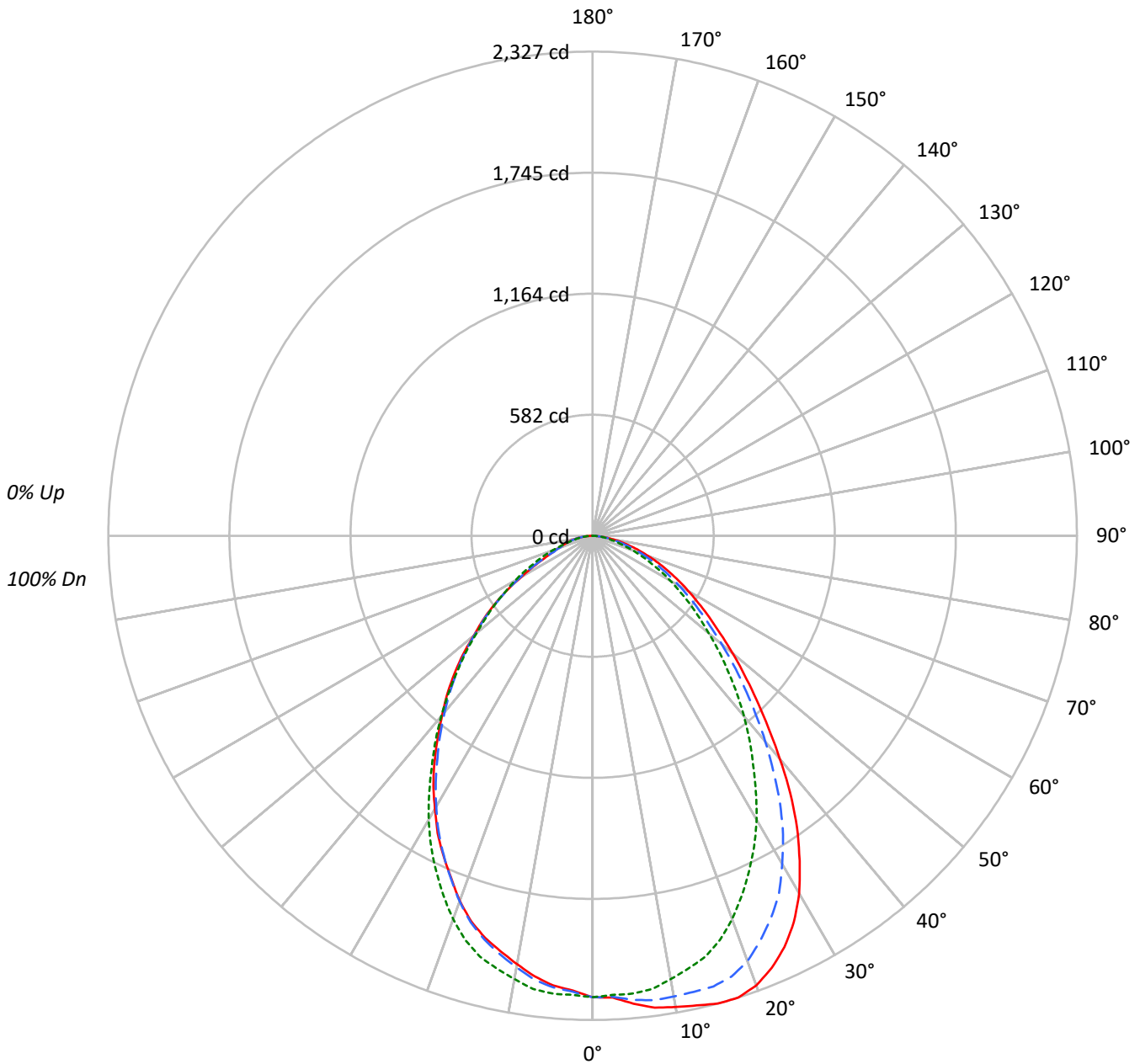
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20					20					20					20					20					
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	111	107	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87				87				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76				76				
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66				66				
4	87	77	69	63	85	75	68	63	73	67	62	71	65	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	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	38	34	57	45	38	33	44	38	33	43	37	33	43	37	33	31				31				

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

	0°	90°	180°
0°	121586	121586	121586
5°	124218	121549	119387
10°	128015	120428	116375
15°	132067	118826	113491
20°	134161	114361	108883
25°	131953	107577	102629
30°	125627	99737	95895
35°	114566	90032	88613
40°	100181	80880	80444
45°	86210	71178	72814
50°	74940	62011	63307
55°	65450	54440	55023
60°	58131	47178	43187
65°	51886	39693	33013
70°	45649	32538	27681
75°	39163	25671	26307
80°	31538	22004	25824
85°	20945	19058	22895



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	210.0	4.8
10°-20°	597.8	13.8
20°-30°	853.4	19.6
30°-40°	893.9	20.6
40°-50°	752.6	17.3
50°-60°	535.7	12.3
60°-70°	313.5	7.2
70°-80°	148.4	3.4
80°-90°	38.1	0.9
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°	1661.2	38.2
0°-40°	2555.1	58.8
0°-60°	3843.3	88.5
0°-90°	4343.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4343.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2218	2218	2218	2218	2218	
5°	2257	2239	2209	2178	2170	217
15°	2327	2242	2094	2009	2000	657
25°	2182	2027	1778	1694	1697	999
35°	1712	1570	1345	1300	1324	1063
45°	1112	1030	918	921	939	863
55°	685	627	570	570	576	617
65°	400	354	306	258	254	399
75°	185	154	121	118	124	198
85°	33	27	30	36	36	43
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°	2217.9	2217.9	2217.9	2217.9	2217.9	2217.9	2217.9	2217.9	2217.9
2.5°	2221.0	2221.0	2217.9	2214.9	2208.8	2199.7	2193.6	2187.6	2187.6
5°	2257.3	2251.2	2239.1	2223.9	2208.8	2190.6	2178.5	2169.5	2169.5
7.5°	2287.6	2275.5	2251.2	2223.9	2196.7	2172.4	2151.3	2139.1	2136.0
10°	2299.7	2284.5	2248.2	2205.7	2163.4	2130.1	2105.8	2090.6	2090.6
12.5°	2311.9	2293.7	2245.1	2184.6	2130.1	2084.5	2060.4	2048.2	2045.1
15°	2327.0	2302.7	2242.1	2166.4	2093.7	2042.2	2008.9	1999.7	1999.7
17.5°	2327.0	2296.6	2221.0	2127.0	2036.1	1978.5	1948.2	1939.1	1942.1
20°	2299.7	2266.4	2175.4	2060.4	1960.3	1899.8	1869.4	1863.4	1866.4
22.5°	2248.2	2208.8	2105.8	1981.5	1872.5	1808.9	1781.6	1781.6	1778.5
25°	2181.5	2139.1	2027.1	1896.7	1778.5	1714.9	1693.7	1696.7	1696.7
27.5°	2093.7	2051.2	1939.1	1799.7	1681.6	1617.9	1602.8	1608.9	1611.9
30°	1984.6	1939.1	1821.0	1684.7	1575.6	1511.9	1502.8	1511.9	1514.9
32.5°	1851.2	1817.9	1702.8	1563.4	1460.4	1405.8	1402.8	1411.9	1424.0
35°	1711.9	1675.5	1569.5	1442.2	1345.3	1299.8	1299.8	1314.9	1324.1
37.5°	1560.4	1524.1	1427.1	1321.0	1239.3	1196.8	1202.9	1218.0	1221.1
40°	1399.9	1372.5	1290.8	1199.9	1130.2	1096.9	1105.9	1121.0	1124.1
42.5°	1248.3	1224.0	1157.4	1075.6	1024.1	999.9	1011.9	1030.1	1036.2
45°	1112.0	1084.7	1030.1	960.5	918.1	905.9	921.0	933.2	939.2
47.5°	987.8	963.5	918.1	854.4	824.1	818.1	833.2	839.3	845.4
50°	878.7	854.4	809.0	751.4	727.1	727.1	739.3	745.3	742.3
52.5°	772.7	751.4	709.0	660.5	645.4	645.4	654.4	657.5	663.6
55°	684.8	663.6	627.2	581.7	569.6	563.5	569.6	569.6	575.7
57.5°	602.9	584.7	551.4	509.0	493.8	487.9	484.8	481.8	487.9
60°	530.2	515.1	478.7	442.3	430.3	415.1	402.9	390.8	393.9
62.5°	463.6	448.4	415.1	378.8	366.6	345.4	330.3	315.1	321.2
65°	400.0	384.7	354.5	324.2	306.0	281.8	257.6	248.4	254.5
67.5°	342.4	330.3	299.9	269.7	254.5	227.2	203.0	203.0	206.0
70°	284.8	272.7	248.4	221.2	203.0	178.8	169.6	172.7	172.7
72.5°	233.3	224.2	200.0	175.7	157.5	142.4	142.4	145.5	148.5
75°	184.9	178.8	154.5	133.4	121.2	112.1	118.1	121.2	124.2
77.5°	142.4	133.4	115.2	99.9	90.9	94.0	99.9	103.0	106.0
80°	99.9	97.0	81.8	72.7	69.7	72.7	78.8	81.8	81.8
82.5°	63.6	60.6	51.5	48.4	48.4	51.5	57.6	57.6	57.6
85°	33.3	30.3	27.2	27.2	30.3	33.3	36.4	36.4	36.4
87.5°	12.1	9.0	12.1	12.1	15.1	15.1	15.1	15.1	15.1
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)