

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: P582575

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

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582575  
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-HM64560827-61WWWB  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4372.2 lumens  
Efficiency: N/A  
Efficacy: 99.4 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

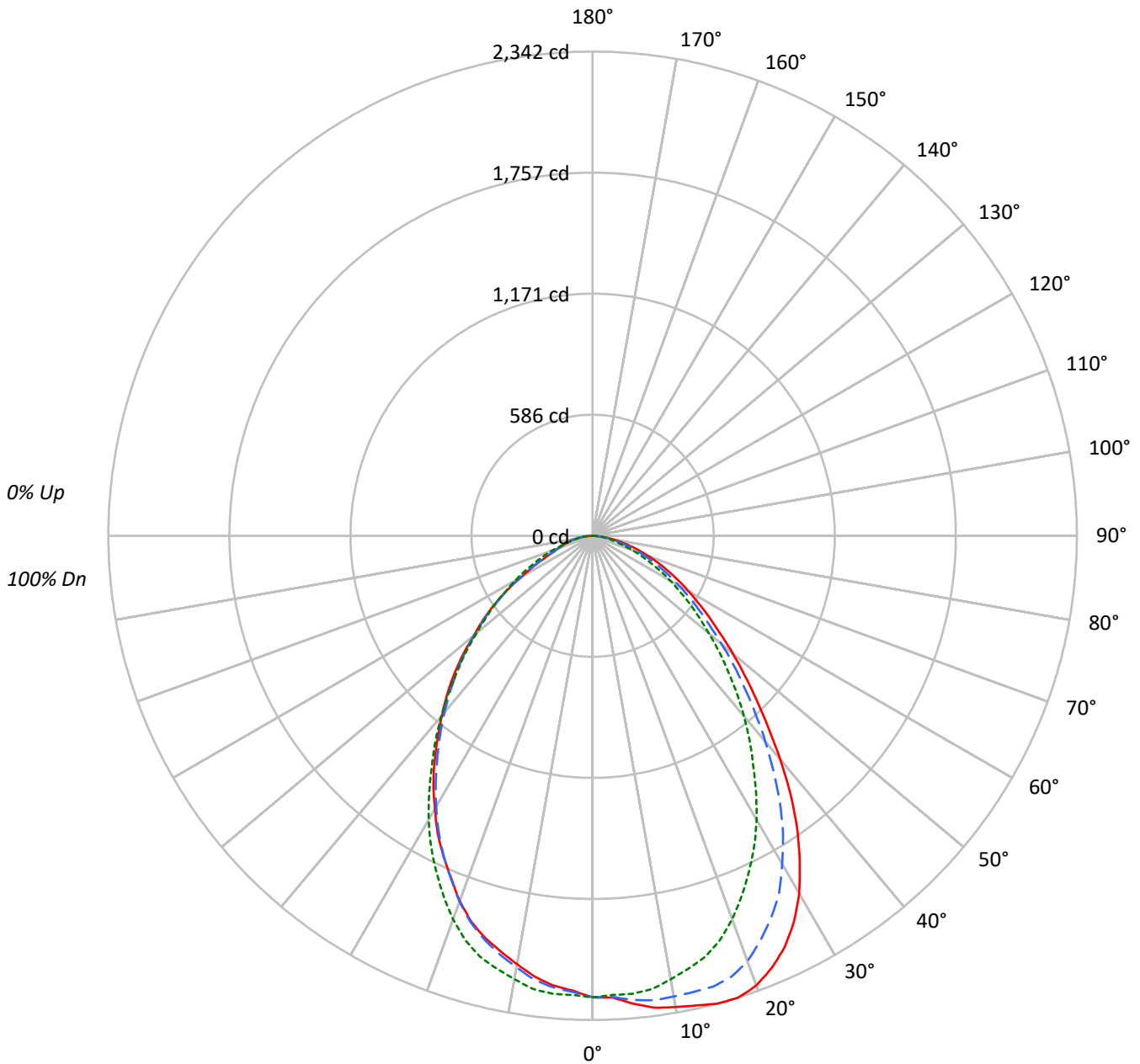
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20									20									20									20									
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																			
1	111	107	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87																			
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76																			
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66																			
4	87	77	69	63	85	75	68	63	73	67	62	71	65	61	69	64	60	58																			
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52																			
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46																			
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42																			
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38																			
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34																			
10	58	46	38	34	57	45	38	33	44	38	33	43	37	33	43	37	33	31																			

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

	0°	90°	180°
0°	122392	122392	122392
5°	125038	122353	120174
10°	128861	121224	117149
15°	132941	119609	114246
20°	135048	115119	109606
25°	132830	108291	103312
30°	126456	100395	96534
35°	115329	90627	89202
40°	100839	81417	80980
45°	86784	71651	73310
50°	75443	62429	63725
55°	65881	54803	55386
60°	58515	47485	43472
65°	52223	39952	33233
70°	45953	32746	27857
75°	39396	25841	26476
80°	31759	22130	25982
85°	21071	19184	23021



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	211.4	4.8
10°-20°	601.8	13.8
20°-30°	859.0	19.6
30°-40°	899.8	20.6
40°-50°	757.6	17.3
50°-60°	539.2	12.3
60°-70°	315.6	7.2
70°-80°	149.3	3.4
80°-90°	38.4	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°	1672.2	38.2
0°-40°	2572.0	58.8
0°-60°	3868.9	88.5
0°-90°	4372.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4372.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2233	2233	2233	2233	2233	
5°	2272	2254	2223	2193	2184	218
15°	2342	2257	2108	2022	2013	661
25°	2196	2040	1790	1705	1708	1005
35°	1723	1580	1354	1308	1333	1070
45°	1119	1037	924	927	946	869
55°	689	631	573	573	580	621
65°	403	357	308	259	256	401
75°	186	156	122	119	125	200
85°	34	27	30	37	37	44
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°	2232.6	2232.6	2232.6	2232.6	2232.6	2232.6	2232.6	2232.6	2232.6
2.5°	2235.6	2235.6	2232.6	2229.5	2223.4	2214.3	2208.2	2202.1	2202.1
5°	2272.2	2266.1	2253.9	2238.7	2223.4	2205.1	2192.9	2183.8	2183.8
7.5°	2302.7	2290.5	2266.1	2238.7	2211.2	2186.8	2165.5	2153.3	2150.2
10°	2314.9	2299.7	2263.1	2220.4	2177.7	2144.1	2119.7	2104.5	2104.5
12.5°	2327.1	2308.8	2260.0	2199.0	2144.1	2098.4	2074.0	2061.8	2058.7
15°	2342.4	2318.0	2257.0	2180.7	2107.5	2055.7	2022.1	2013.0	2013.0
17.5°	2342.4	2311.9	2235.6	2141.1	2049.6	1991.6	1961.1	1952.0	1955.0
20°	2314.9	2281.4	2189.9	2074.0	1973.3	1912.3	1881.8	1875.7	1878.8
22.5°	2263.1	2223.4	2119.7	1994.7	1884.9	1820.8	1793.4	1793.4	1790.3
25°	2196.0	2153.3	2040.4	1909.3	1790.3	1726.3	1705.0	1708.0	1708.0
27.5°	2107.5	2064.8	1952.0	1811.7	1692.8	1628.7	1613.5	1619.6	1622.6
30°	1997.7	1952.0	1833.0	1695.8	1586.0	1522.0	1512.8	1522.0	1525.0
32.5°	1863.5	1830.0	1714.1	1573.8	1470.1	1415.2	1412.2	1421.3	1433.5
35°	1723.3	1686.7	1579.9	1451.8	1354.2	1308.5	1308.5	1323.7	1332.9
37.5°	1570.8	1534.2	1436.6	1329.8	1247.5	1204.8	1210.9	1226.1	1229.2
40°	1409.1	1381.7	1299.3	1207.8	1137.7	1104.1	1113.3	1128.5	1131.6
42.5°	1256.6	1232.2	1165.1	1082.8	1030.9	1006.6	1018.8	1037.0	1043.1
45°	1119.4	1091.9	1037.0	966.9	924.2	912.0	927.3	939.5	945.6
47.5°	994.4	970.0	924.2	860.2	829.7	823.6	838.8	844.9	851.0
50°	884.6	860.2	814.4	756.4	732.0	732.0	744.2	750.3	747.2
52.5°	777.7	756.4	713.7	664.9	649.6	649.6	658.8	661.8	667.9
55°	689.3	667.9	631.3	585.6	573.4	567.3	573.4	573.4	579.5
57.5°	606.9	588.6	555.1	512.4	497.1	491.0	488.0	484.9	491.0
60°	533.7	518.5	481.9	445.3	433.1	417.8	405.6	393.4	396.5
62.5°	466.6	451.4	417.8	381.2	369.0	347.7	332.4	317.2	323.3
65°	402.6	387.3	356.8	326.3	308.0	283.6	259.2	250.1	256.2
67.5°	344.6	332.4	301.9	271.4	256.2	228.7	204.3	204.3	207.4
70°	286.7	274.5	250.1	222.6	204.3	179.9	170.8	173.8	173.8
72.5°	234.8	225.7	201.3	176.9	158.6	143.3	143.3	146.4	149.4
75°	186.0	179.9	155.5	134.2	122.0	112.8	118.9	122.0	125.0
77.5°	143.3	134.2	115.9	100.6	91.5	94.5	100.6	103.7	106.7
80°	100.6	97.6	82.3	73.2	70.1	73.2	79.3	82.3	82.3
82.5°	64.0	61.0	51.8	48.8	48.8	51.8	57.9	57.9	57.9
85°	33.5	30.5	27.4	27.4	30.5	33.5	36.6	36.6	36.6
87.5°	12.2	9.1	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)