

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: P582675

Luminaire Tested: **HC645D010-HM64560935-61RWWH**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582675  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-15)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC645D010-HM64560935-61RWWH  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4584.6 lumens  
Efficiency: N/A  
Efficacy: 104.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.12 / 1.19  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

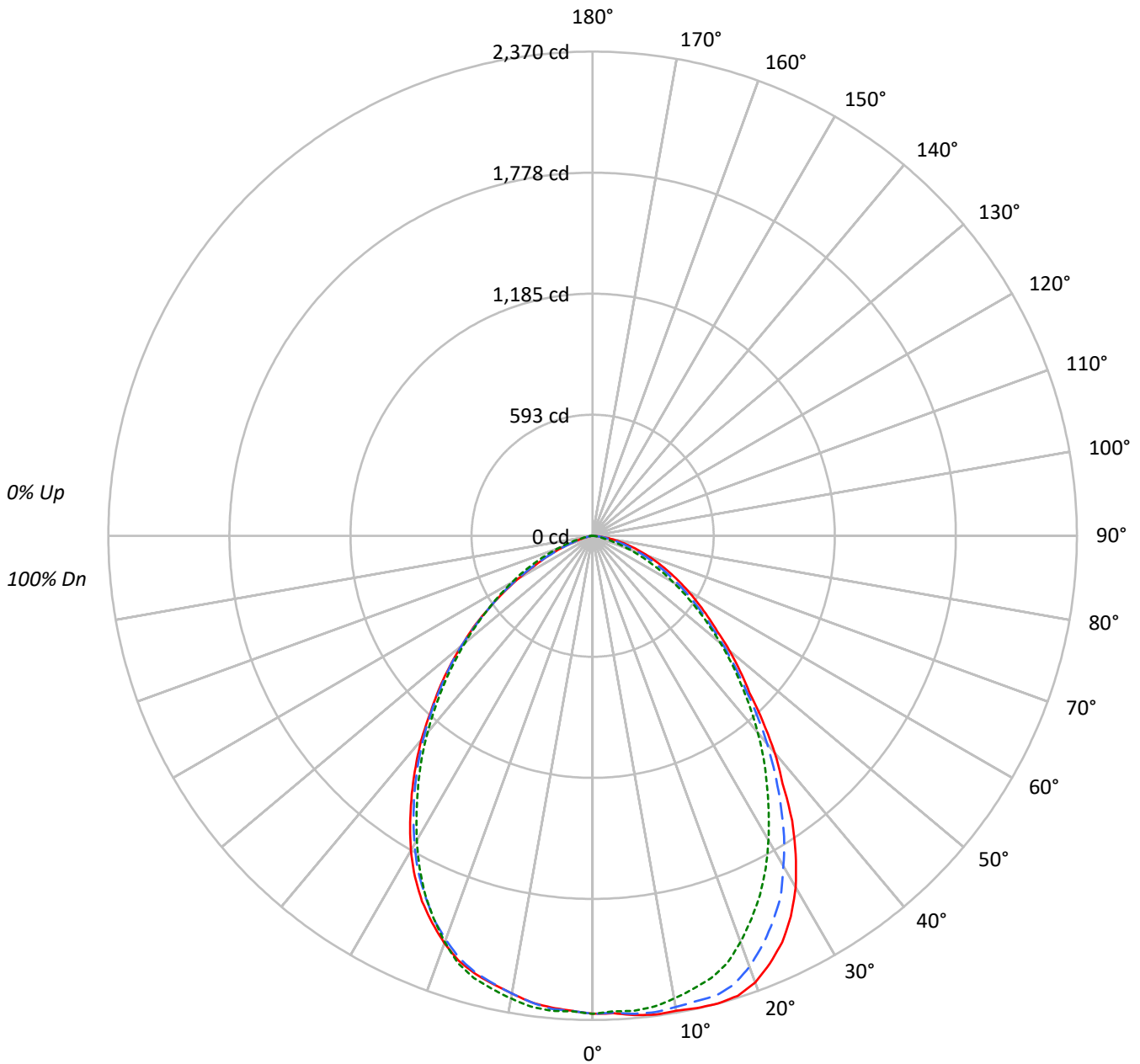
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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			
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88			
2	103	96	90	85	100	94	89	84	91	86	83	87	84	81	85	82	79	77			
3	95	86	79	74	93	84	78	73	82	76	72	79	74	70	77	73	69	67			
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59			
5	82	70	62	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53			
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47			
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42			
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35			
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32			

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

	0°	90°	180°
0°	128263	128263	128263
5°	129595	128417	127570
10°	131433	128020	126657
15°	134530	127220	126000
20°	135783	123438	123794
25°	132806	117225	119444
30°	125785	108897	112581
35°	113896	99528	103222
40°	99186	89969	93260
45°	84156	79644	82489
50°	74531	69567	71401
55°	65651	59496	59209
60°	58833	50095	46060
65°	52509	40173	33013
70°	46194	28995	20645
75°	38973	17538	11692
80°	29991	7735	4862
85°	17360	1887	1887



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	222.1	4.8
10°-20°	638.3	13.9
20°-30°	922.7	20.1
30°-40°	970.9	21.2
40°-50°	816.2	17.8
50°-60°	572.8	12.5
60°-70°	315.1	6.9
70°-80°	111.9	2.4
80°-90°	14.6	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°	1783.1	38.9
0°-40°	2754.0	60.1
0°-60°	4143.0	90.4
0°-90°	4584.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4584.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2340	2340	2340	2340	2340	
5°	2355	2349	2334	2324	2318	225
15°	2370	2330	2242	2214	2220	669
25°	2196	2085	1938	1941	1975	1004
35°	1702	1604	1487	1518	1542	1055
45°	1086	1055	1027	1052	1064	852
55°	687	650	622	622	620	618
65°	405	362	310	254	254	403
75°	184	147	83	55	55	197
85°	28	15	3	3	3	38
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°	2339.7	2339.7	2339.7	2339.7	2339.7	2339.7	2339.7	2339.7	2339.7
2.5°	2339.7	2339.7	2336.6	2336.6	2330.5	2330.5	2327.5	2327.5	2327.5
5°	2355.0	2355.0	2348.9	2339.7	2333.6	2324.4	2324.4	2321.2	2318.2
7.5°	2364.2	2361.1	2352.0	2339.7	2324.4	2309.1	2303.0	2306.0	2303.0
10°	2361.1	2355.0	2342.7	2318.2	2299.8	2278.3	2275.3	2272.2	2275.3
12.5°	2367.3	2358.1	2333.6	2303.0	2272.2	2247.7	2244.7	2244.7	2247.7
15°	2370.4	2361.1	2330.5	2284.5	2241.6	2217.1	2213.9	2217.1	2220.1
17.5°	2361.1	2348.9	2303.0	2241.6	2192.5	2167.9	2167.9	2174.2	2180.3
20°	2327.5	2309.1	2244.7	2171.0	2115.9	2097.4	2103.5	2115.9	2122.0
22.5°	2266.1	2244.7	2171.0	2088.3	2030.0	2014.6	2030.0	2045.4	2051.5
25°	2195.6	2171.0	2085.1	1999.4	1938.0	1919.6	1941.1	1965.6	1974.7
27.5°	2100.5	2072.9	1993.2	1895.1	1833.8	1824.5	1849.1	1876.7	1882.8
30°	1987.1	1956.4	1867.4	1775.5	1720.3	1717.2	1744.8	1769.4	1778.5
32.5°	1849.1	1821.4	1744.8	1652.8	1603.7	1603.7	1631.3	1652.8	1662.0
35°	1701.9	1671.2	1603.7	1527.1	1487.2	1490.3	1517.9	1533.2	1542.4
37.5°	1527.1	1517.9	1465.8	1401.4	1373.8	1379.9	1401.4	1413.6	1422.8
40°	1386.0	1361.5	1327.7	1275.6	1257.2	1263.3	1284.8	1297.1	1303.2
42.5°	1232.7	1217.3	1189.8	1152.9	1140.7	1149.9	1168.3	1177.5	1174.4
45°	1085.5	1082.4	1054.9	1033.4	1027.3	1039.5	1051.8	1061.0	1064.0
47.5°	978.2	966.0	941.4	926.1	920.0	932.2	944.5	950.6	950.6
50°	873.9	861.7	837.2	821.8	815.7	827.9	837.2	843.3	837.2
52.5°	769.7	757.4	735.9	717.5	714.5	720.6	723.6	726.8	732.9
55°	686.9	674.6	650.1	628.6	622.5	625.6	622.5	622.5	619.5
57.5°	607.1	594.9	570.3	545.8	536.6	533.6	524.3	521.3	518.2
60°	536.6	521.3	496.8	469.2	456.9	444.7	429.3	420.1	420.1
62.5°	469.2	453.8	426.3	401.8	383.3	361.9	337.4	325.0	325.0
65°	404.8	392.5	361.9	334.2	309.7	282.1	254.5	248.3	254.5
67.5°	343.5	331.1	300.5	273.0	242.2	208.6	184.0	184.0	190.1
70°	288.2	276.0	248.3	214.7	180.9	147.2	128.8	128.8	128.8
72.5°	236.1	223.8	193.2	162.6	128.8	95.0	85.9	88.9	85.9
75°	184.0	174.8	147.2	113.4	82.8	58.3	55.2	52.1	55.2
77.5°	137.9	128.8	104.3	73.5	46.0	33.8	30.6	30.6	30.6
80°	95.0	85.9	67.4	42.9	24.5	15.4	15.4	15.4	15.4
82.5°	58.3	49.0	36.8	21.5	9.1	9.1	9.1	9.1	9.1
85°	27.6	21.5	15.4	6.1	3.0	3.0	3.0	3.0	3.0
87.5°	6.1	6.1	3.0	3.0	0.0	3.0	3.0	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)