

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: P582736

Luminaire Tested: **HC650D010-HM64560830-61WWW**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582736  
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: HC650D010-HM64560830-61WWW  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4826.2 lumens  
Efficiency: N/A  
Efficacy: 100.5 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

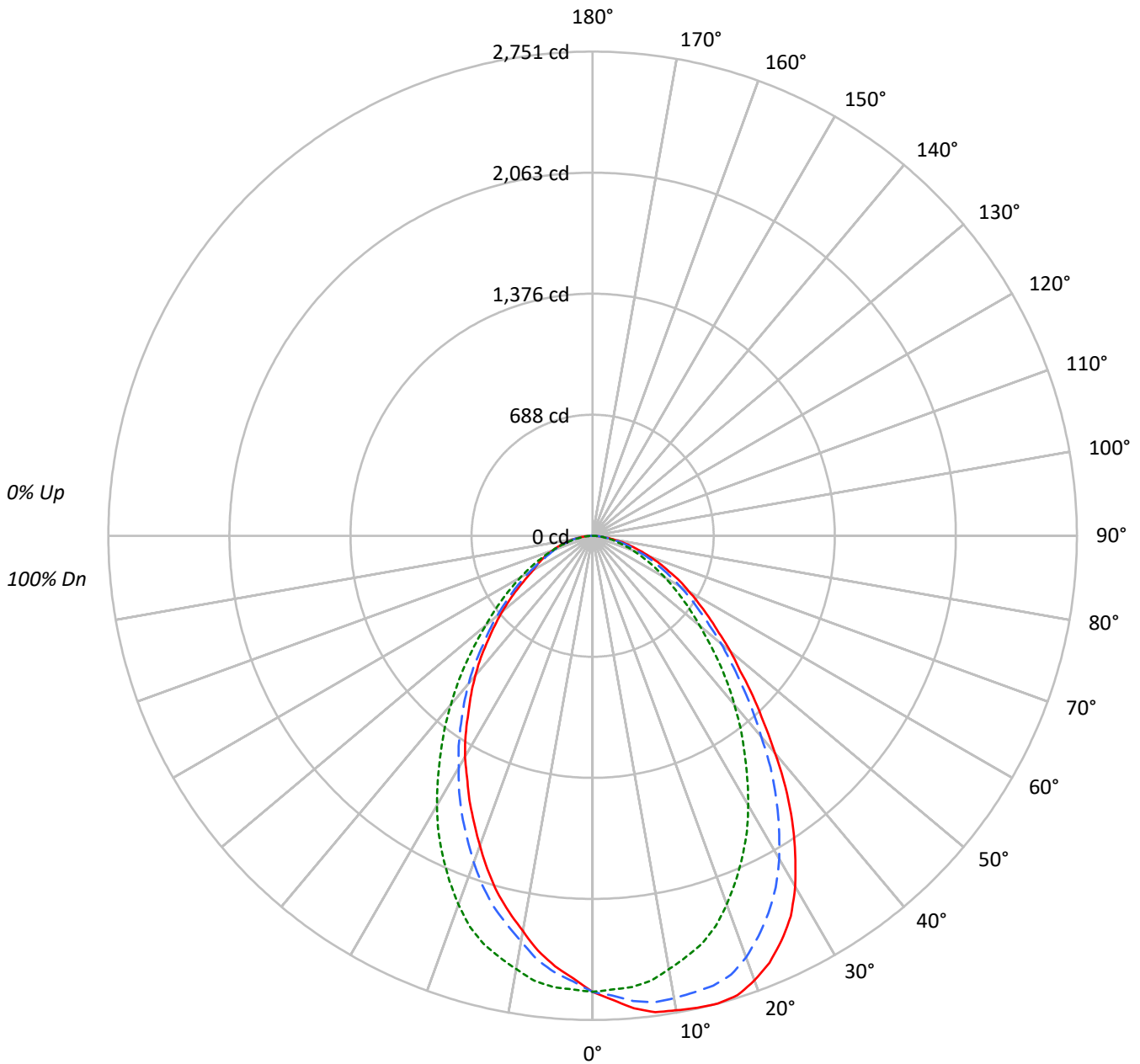
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	90°	180°
0°	142034	142034	142034
5°	148332	141613	135087
10°	152374	139176	126946
15°	156147	136159	118939
20°	156843	129990	109239
25°	153553	121701	100191
30°	145681	111916	91824
35°	132314	100579	82382
40°	115287	89589	74110
45°	99755	78403	65154
50°	87136	67503	57098
55°	76996	59324	48992
60°	69194	52002	42431
65°	61965	45232	41159
70°	55330	38564	38564
75°	47996	32491	36198
80°	38515	27529	33022
85°	26292	24153	28556



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	243.5	5.0
10°-20°	676.9	14.0
20°-30°	943.3	19.5
30°-40°	971.9	20.1
40°-50°	805.5	16.7
50°-60°	578.9	12.0
60°-70°	368.7	7.6
70°-80°	189.3	3.9
80°-90°	48.2	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°	1863.7	38.6
0°-40°	2835.6	58.8
0°-60°	4220.0	87.4
0°-90°	4826.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4826.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2591	2591	2591	2591	2591	
5°	2696	2654	2573	2490	2455	258
15°	2751	2647	2399	2179	2096	775
25°	2539	2364	2012	1754	1656	1163
35°	1977	1817	1503	1304	1231	1228
45°	1287	1196	1011	882	840	996
55°	806	739	621	551	513	726
65°	478	425	349	303	317	478
75°	227	195	153	160	171	242
85°	42	38	38	42	45	54
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°	2590.9	2590.9	2590.9	2590.9	2590.9	2590.9	2590.9	2590.9	2590.9
2.5°	2639.7	2629.3	2615.2	2601.3	2580.4	2556.0	2535.0	2528.0	2517.7
5°	2695.5	2681.5	2653.6	2618.7	2573.4	2528.0	2489.8	2465.3	2454.8
7.5°	2730.4	2712.9	2674.5	2615.2	2549.0	2482.8	2427.0	2392.1	2378.2
10°	2737.3	2719.8	2667.5	2587.3	2500.2	2409.5	2339.8	2298.0	2280.5
12.5°	2747.7	2723.4	2657.1	2563.0	2451.4	2346.8	2259.6	2207.3	2189.8
15°	2751.3	2723.4	2646.6	2531.6	2399.1	2273.5	2179.4	2116.6	2095.7
17.5°	2737.3	2705.9	2615.2	2475.7	2325.9	2193.4	2081.7	2015.5	1987.6
20°	2688.5	2653.6	2549.0	2392.1	2228.2	2088.7	1973.7	1903.9	1872.5
22.5°	2625.7	2580.4	2461.8	2294.4	2123.6	1977.1	1862.1	1792.3	1761.0
25°	2538.6	2496.8	2364.2	2186.4	2012.0	1858.5	1754.0	1680.8	1656.4
27.5°	2437.5	2388.6	2252.6	2074.8	1896.9	1743.5	1642.4	1576.2	1544.7
30°	2301.4	2256.1	2120.1	1942.3	1768.0	1624.9	1520.3	1464.6	1450.6
32.5°	2141.0	2102.7	1970.1	1802.8	1635.4	1502.9	1415.8	1356.5	1342.6
35°	1977.1	1931.8	1816.7	1659.8	1502.9	1384.4	1304.2	1251.9	1231.0
37.5°	1799.3	1757.4	1659.8	1520.3	1380.8	1269.2	1199.5	1154.2	1133.3
40°	1611.0	1579.6	1489.0	1377.4	1251.9	1154.2	1094.9	1056.5	1035.6
42.5°	1436.7	1405.3	1342.6	1237.9	1133.3	1046.1	993.8	959.0	941.5
45°	1286.7	1258.8	1196.0	1105.4	1011.3	938.0	882.2	857.8	840.4
47.5°	1136.7	1122.8	1067.0	983.3	896.1	833.4	795.0	767.2	753.2
50°	1021.7	1004.2	952.0	864.7	791.5	742.7	707.9	683.4	669.5
52.5°	903.1	885.8	836.9	763.6	704.3	659.0	624.2	603.3	589.3
55°	805.6	791.5	739.3	673.1	620.7	582.4	550.9	526.5	512.6
57.5°	714.9	700.9	652.0	589.3	544.0	509.1	481.3	460.2	442.9
60°	631.1	620.7	571.8	512.6	474.3	439.3	415.0	397.5	387.0
62.5°	557.9	537.0	495.2	442.9	408.0	380.0	355.7	345.2	352.2
65°	477.7	467.2	425.4	380.0	348.7	320.8	303.4	310.4	317.3
67.5°	411.5	397.5	362.7	320.8	292.9	272.0	261.5	275.5	279.0
70°	345.2	331.3	299.9	265.0	240.6	226.6	226.6	237.1	240.6
72.5°	282.5	272.0	244.1	216.2	198.8	188.3	195.2	202.3	205.7
75°	226.6	216.2	195.2	170.9	153.4	153.4	160.4	167.3	170.9
77.5°	174.3	167.3	146.4	129.0	122.0	122.0	129.0	132.5	136.1
80°	122.0	115.0	104.6	94.1	87.2	94.1	101.1	101.1	104.6
82.5°	80.2	76.8	69.8	62.7	62.7	66.3	69.8	73.2	73.2
85°	41.8	41.8	38.4	34.8	38.4	41.8	41.8	45.4	45.4
87.5°	13.9	13.9	13.9	13.9	17.5	17.5	17.5	17.5	17.5
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)