

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: P582717

Luminaire Tested: **HC650D010-HM64560827-61WWBB**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582717  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-17)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC650D010-HM64560827-61WWBB  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4091.2 lumens  
Efficiency: N/A  
Efficacy: 85.2 lumens/watt  
Spacing Criteria (0/90/45): 1.15 / 1.06 / 1.14  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

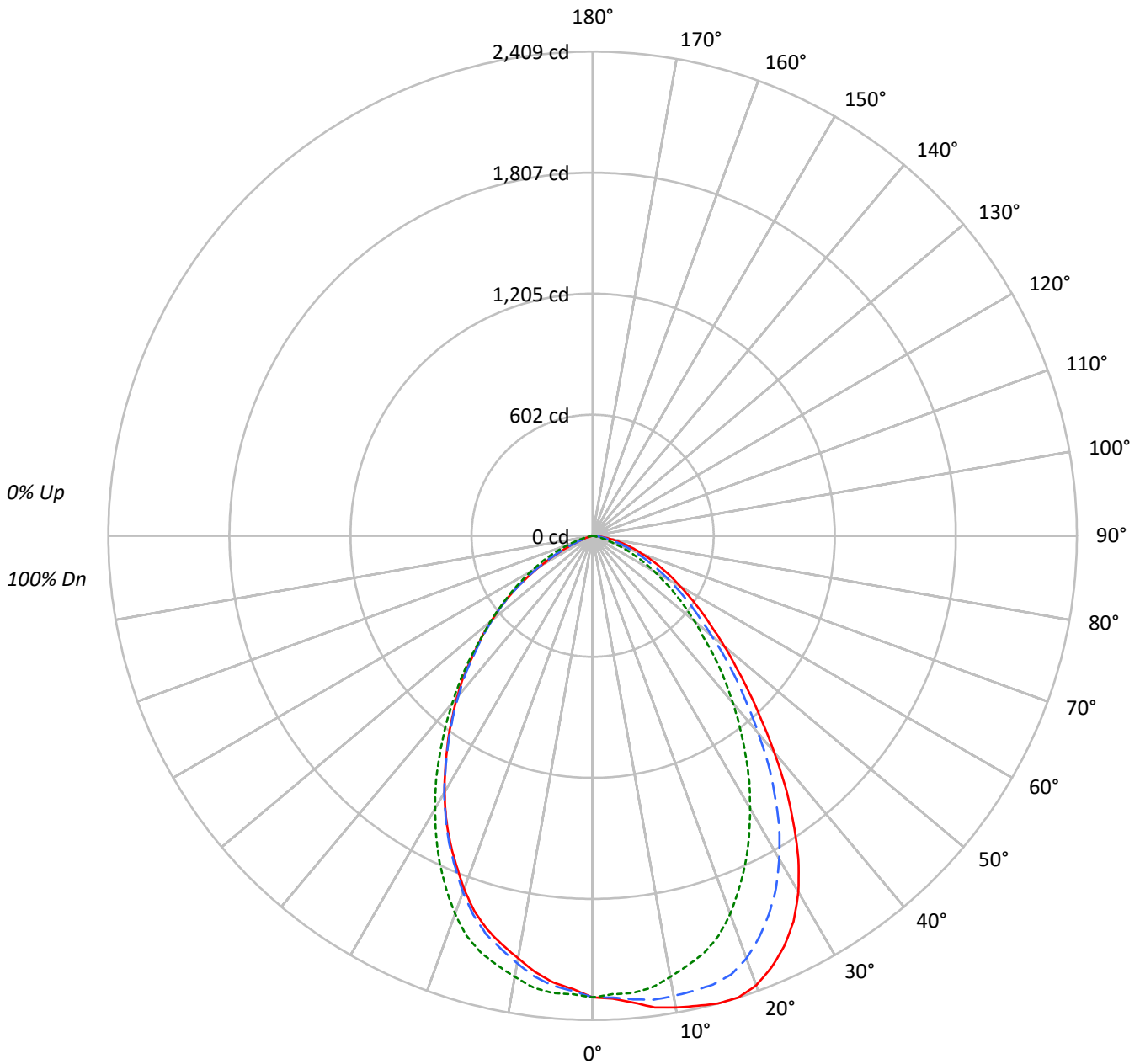
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	111	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89																			
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78																			
3	96	87	80	75	93	86	79	74	83	77	73	80	76	72	78	74	71	69																			
4	89	79	71	66	87	78	71	65	75	69	64	73	68	64	71	66	63	61																			
5	83	72	64	58	81	71	63	58	69	62	57	67	61	57	65	60	56	54																			
6	77	65	58	52	75	65	57	52	63	56	51	61	55	51	60	55	51	49																			
7	72	60	52	47	70	59	52	47	58	51	46	56	51	46	55	50	46	44																			
8	67	55	48	43	66	55	47	42	53	47	42	52	46	42	51	46	42	40																			
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37																			
10	60	48	40	36	58	47	40	36	46	40	36	45	40	35	45	39	35	34																			

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

	0°	90°	180°
0°	125851	125851	125851
5°	128290	125627	122787
10°	132652	124024	118808
15°	136709	121868	115086
20°	138828	116788	109064
25°	136326	108787	101558
30°	129583	99129	93204
35°	116473	88599	84062
40°	100517	77645	75098
45°	85117	66836	65092
50°	72970	56459	55904
55°	63271	47530	45666
60°	55226	38582	32563
65°	48591	29731	18017
70°	41930	19667	8800
75°	35563	9574	3431
80°	27529	4072	2052
85°	16291	2013	2013



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	216.6	5.3
10°-20°	612.7	15.0
20°-30°	862.8	21.1
30°-40°	881.5	21.5
40°-50°	710.7	17.4
50°-60°	476.7	11.7
60°-70°	241.2	5.9
70°-80°	77.1	1.9
80°-90°	11.9	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°	1692.1	41.4
0°-40°	2573.5	62.9
0°-60°	3761.0	91.9
0°-90°	4091.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4091.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2296	2296	2296	2296	2296	
5°	2331	2315	2283	2247	2231	224
15°	2409	2312	2147	2050	2028	680
25°	2254	2076	1798	1689	1679	1032
35°	1740	1582	1324	1250	1256	1083
45°	1098	1011	862	833	840	854
55°	662	588	497	475	478	596
65°	375	310	229	152	139	374
75°	168	120	45	16	16	180
85°	26	13	3	3	3	35
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°	2295.7	2295.7	2295.7	2295.7	2295.7	2295.7	2295.7	2295.7	2295.7
2.5°	2305.4	2302.2	2299.1	2292.6	2282.9	2273.2	2266.7	2260.3	2257.0
5°	2331.3	2324.9	2315.1	2302.2	2282.9	2260.3	2247.3	2234.5	2231.3
7.5°	2366.8	2354.0	2328.1	2299.1	2266.7	2234.5	2211.9	2198.9	2189.2
10°	2383.0	2360.3	2324.9	2276.4	2228.0	2189.2	2160.2	2140.8	2134.3
12.5°	2395.9	2370.0	2318.4	2253.8	2189.2	2137.6	2105.3	2089.2	2082.7
15°	2408.8	2383.0	2311.9	2228.0	2147.3	2085.9	2050.5	2034.3	2027.8
17.5°	2408.8	2373.3	2289.4	2182.8	2085.9	2011.6	1976.2	1960.0	1956.8
20°	2379.7	2341.0	2237.6	2111.7	2001.9	1918.1	1885.7	1876.0	1869.5
22.5°	2324.9	2279.7	2163.4	2021.3	1901.9	1821.1	1785.7	1779.2	1772.7
25°	2253.8	2208.6	2076.2	1924.4	1798.5	1717.8	1688.7	1682.3	1679.0
27.5°	2163.4	2114.9	1976.2	1821.1	1685.5	1608.0	1582.2	1582.2	1579.0
30°	2047.1	1992.2	1856.7	1701.7	1566.0	1495.0	1475.7	1475.7	1472.4
32.5°	1905.1	1850.2	1727.4	1579.0	1449.8	1375.5	1359.4	1365.8	1362.6
35°	1740.4	1695.2	1582.2	1436.9	1323.9	1256.1	1249.6	1256.1	1256.1
37.5°	1575.7	1533.8	1436.9	1310.9	1204.4	1143.1	1143.1	1152.8	1149.5
40°	1404.6	1372.3	1281.9	1172.1	1085.0	1042.9	1036.4	1046.1	1049.4
42.5°	1243.1	1217.4	1139.8	1049.4	972.0	929.9	939.6	946.1	949.3
45°	1097.9	1072.0	1010.7	917.0	862.1	833.1	833.1	842.8	839.6
47.5°	968.7	949.3	888.0	797.5	749.1	736.2	742.6	749.1	749.1
50°	855.6	826.6	768.5	697.5	662.0	645.8	652.3	655.5	655.5
52.5°	749.1	729.7	671.6	607.0	574.8	565.1	565.1	568.3	568.3
55°	662.0	639.4	587.7	523.1	497.3	484.3	474.6	471.5	477.8
57.5°	578.0	558.6	510.2	448.8	419.7	406.9	387.5	381.0	387.5
60°	503.7	487.5	439.1	381.0	351.9	326.1	303.5	290.6	297.0
62.5°	439.1	419.7	371.3	322.9	290.6	261.6	226.0	206.7	216.4
65°	374.6	358.4	310.0	261.6	229.2	193.7	151.8	138.9	138.9
67.5°	316.4	300.3	255.1	213.2	174.3	132.4	93.7	90.5	93.7
70°	261.6	245.4	206.7	164.6	122.7	80.8	54.9	54.9	54.9
72.5°	216.4	197.0	161.4	119.5	77.5	41.9	29.1	32.2	32.2
75°	167.9	151.8	119.5	80.8	45.2	19.4	16.2	16.2	16.2
77.5°	125.9	113.0	84.0	51.6	22.6	6.5	6.5	6.5	6.5
80°	87.2	74.3	54.9	32.2	12.9	6.5	6.5	6.5	6.5
82.5°	51.6	45.2	32.2	16.2	6.5	3.2	3.2	3.2	3.2
85°	25.9	22.6	12.9	6.5	3.2	3.2	3.2	3.2	3.2
87.5°	6.5	6.5	3.2	3.2	0.0	3.2	3.2	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)