

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: P582808

Luminaire Tested: **HC650D010-HM64560930-61WWW**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582808  
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-HM64560930-61WWW  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4439.5 lumens  
Efficiency: N/A  
Efficacy: 92.5 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

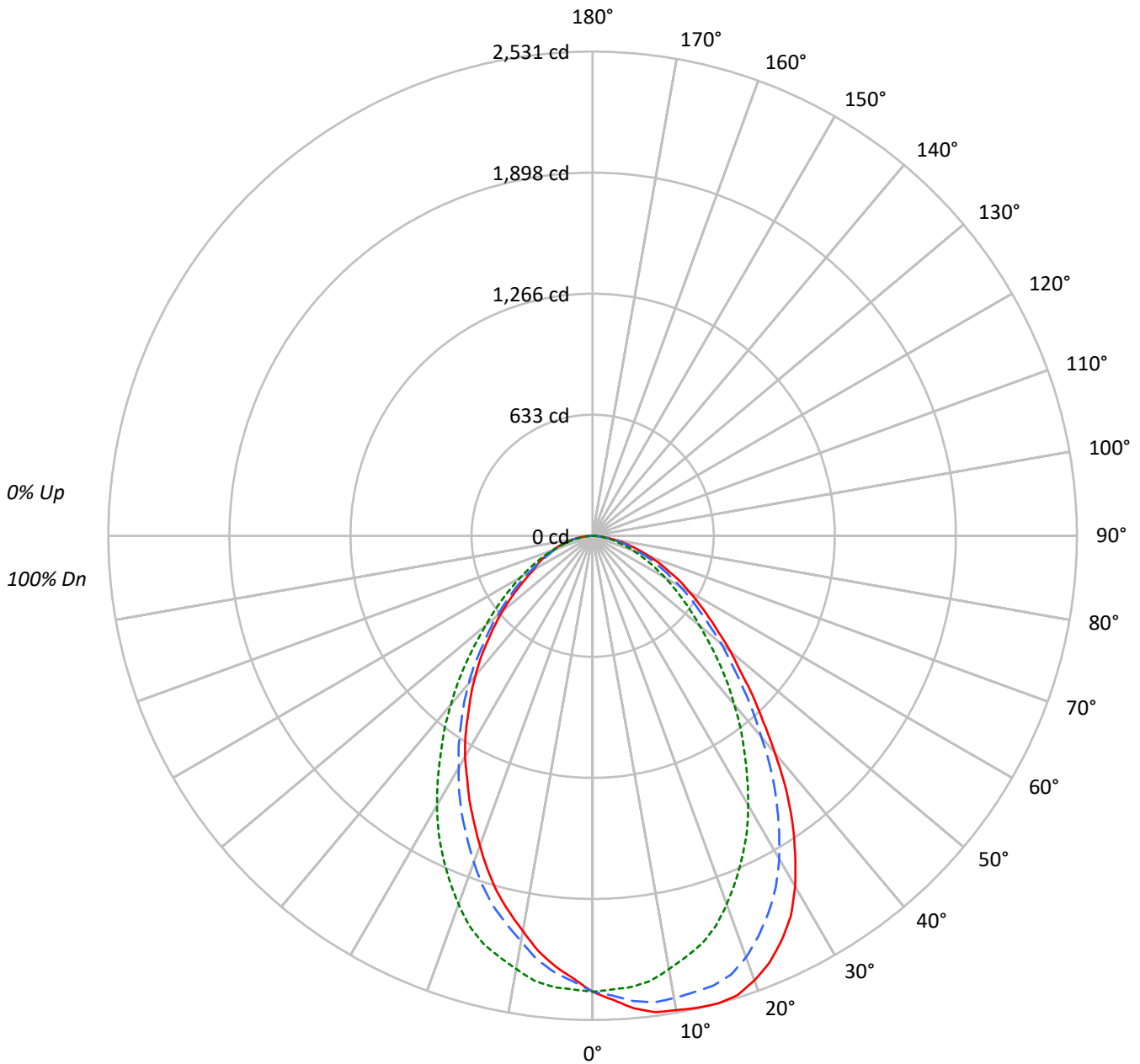
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20					20					20					20					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	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°	130653	130653	130653
5°	136446	130266	124268
10°	140167	128026	116776
15°	143633	125245	109405
20°	144277	119570	100488
25°	141250	111944	92159
30°	134014	102940	84469
35°	121713	92521	75777
40°	106049	82412	68178
45°	91761	72116	59936
50°	80151	62096	52527
55°	70822	54574	45074
60°	63657	47836	39043
65°	57010	41613	37864
70°	50906	35471	35471
75°	44141	29886	33296
80°	35453	25319	30402
85°	24216	22203	26229



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	224.0	5.0
10°-20°	622.6	14.0
20°-30°	867.7	19.5
30°-40°	894.1	20.1
40°-50°	741.0	16.7
50°-60°	532.5	12.0
60°-70°	339.1	7.6
70°-80°	174.2	3.9
80°-90°	44.3	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°	1714.4	38.6
0°-40°	2608.4	58.8
0°-60°	3881.9	87.4
0°-90°	4439.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4439.5	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2383	2383	2383	2383	2383	
5°	2480	2441	2367	2290	2258	238
15°	2531	2435	2207	2005	1928	713
25°	2335	2175	1851	1614	1524	1070
35°	1819	1671	1382	1200	1132	1130
45°	1184	1100	930	812	773	916
55°	741	680	571	507	472	667
65°	440	391	321	279	292	440
75°	208	180	141	148	157	222
85°	38	35	35	38	42	49
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°	2383.3	2383.3	2383.3	2383.3	2383.3	2383.3	2383.3	2383.3	2383.3
2.5°	2428.1	2418.6	2405.7	2392.9	2373.7	2351.3	2332.0	2325.5	2315.9
5°	2479.5	2466.6	2441.0	2408.9	2367.2	2325.5	2290.2	2267.8	2258.2
7.5°	2511.6	2495.6	2460.3	2405.7	2344.8	2283.8	2232.6	2200.4	2187.6
10°	2518.0	2501.9	2453.9	2380.1	2299.9	2216.5	2152.4	2113.9	2097.8
12.5°	2527.6	2505.1	2444.2	2357.6	2255.0	2158.7	2078.6	2030.4	2014.4
15°	2530.8	2505.1	2434.6	2328.7	2206.8	2091.4	2004.7	1947.0	1927.7
17.5°	2518.0	2489.1	2405.7	2277.4	2139.5	2017.6	1915.0	1854.1	1828.3
20°	2473.1	2441.0	2344.8	2200.4	2049.6	1921.4	1815.6	1751.4	1722.5
22.5°	2415.4	2373.7	2264.6	2110.6	1953.5	1818.7	1712.9	1648.7	1619.9
25°	2335.2	2296.7	2174.8	2011.2	1850.7	1709.6	1613.5	1546.0	1523.6
27.5°	2242.1	2197.3	2072.2	1908.5	1744.9	1603.8	1510.9	1449.8	1421.0
30°	2117.1	2075.4	1950.2	1786.6	1626.2	1494.8	1398.5	1347.2	1334.4
32.5°	1969.4	1934.2	1812.4	1658.4	1504.4	1382.5	1302.3	1247.7	1235.0
35°	1818.7	1777.1	1671.2	1526.8	1382.5	1273.5	1199.7	1151.6	1132.3
37.5°	1655.2	1616.7	1526.8	1398.5	1270.2	1167.5	1103.4	1061.7	1042.5
40°	1481.9	1453.1	1369.6	1267.0	1151.6	1061.7	1007.2	972.0	952.7
42.5°	1321.5	1292.7	1235.0	1138.7	1042.5	962.3	914.2	882.1	866.0
45°	1183.6	1158.0	1100.2	1016.8	930.2	862.8	811.6	789.0	773.1
47.5°	1045.7	1032.9	981.5	904.5	824.3	766.6	731.4	705.6	692.9
50°	939.8	923.8	875.7	795.5	728.1	683.2	651.2	628.6	615.9
52.5°	830.8	814.8	769.8	702.5	647.9	606.2	574.2	555.0	542.1
55°	741.0	728.1	680.0	619.1	571.0	535.7	506.8	484.3	471.6
57.5°	657.6	644.7	599.8	542.1	500.4	468.3	442.6	423.4	407.3
60°	580.6	571.0	526.0	471.6	436.3	404.1	381.7	365.6	356.1
62.5°	513.3	494.0	455.5	407.3	375.3	349.6	327.1	317.6	323.9
65°	439.5	429.8	391.4	349.6	320.8	295.1	279.1	285.4	291.9
67.5°	378.5	365.6	333.6	295.1	269.4	250.3	240.6	253.4	256.6
70°	317.6	304.7	275.9	243.8	221.3	208.4	208.4	218.1	221.3
72.5°	259.8	250.3	224.5	198.9	182.8	173.3	179.6	186.0	189.2
75°	208.4	198.9	179.6	157.2	141.1	141.1	147.5	154.0	157.2
77.5°	160.4	154.0	134.8	118.7	112.3	112.3	118.7	121.9	125.1
80°	112.3	105.8	96.3	86.6	80.2	86.6	93.1	93.1	96.3
82.5°	73.8	70.6	64.1	57.8	57.8	60.9	64.1	67.3	67.3
85°	38.5	38.5	35.3	32.1	35.3	38.5	38.5	41.7	41.7
87.5°	12.9	12.9	12.9	12.9	16.1	16.1	16.1	16.1	16.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)