

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: P593319

Luminaire Tested: **HC645D010-HM64560850-61WWBB**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P593319  
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: HC645D010-HM64560850-61WWBB  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4542.6 lumens  
Efficiency: N/A  
Efficacy: 103.2 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

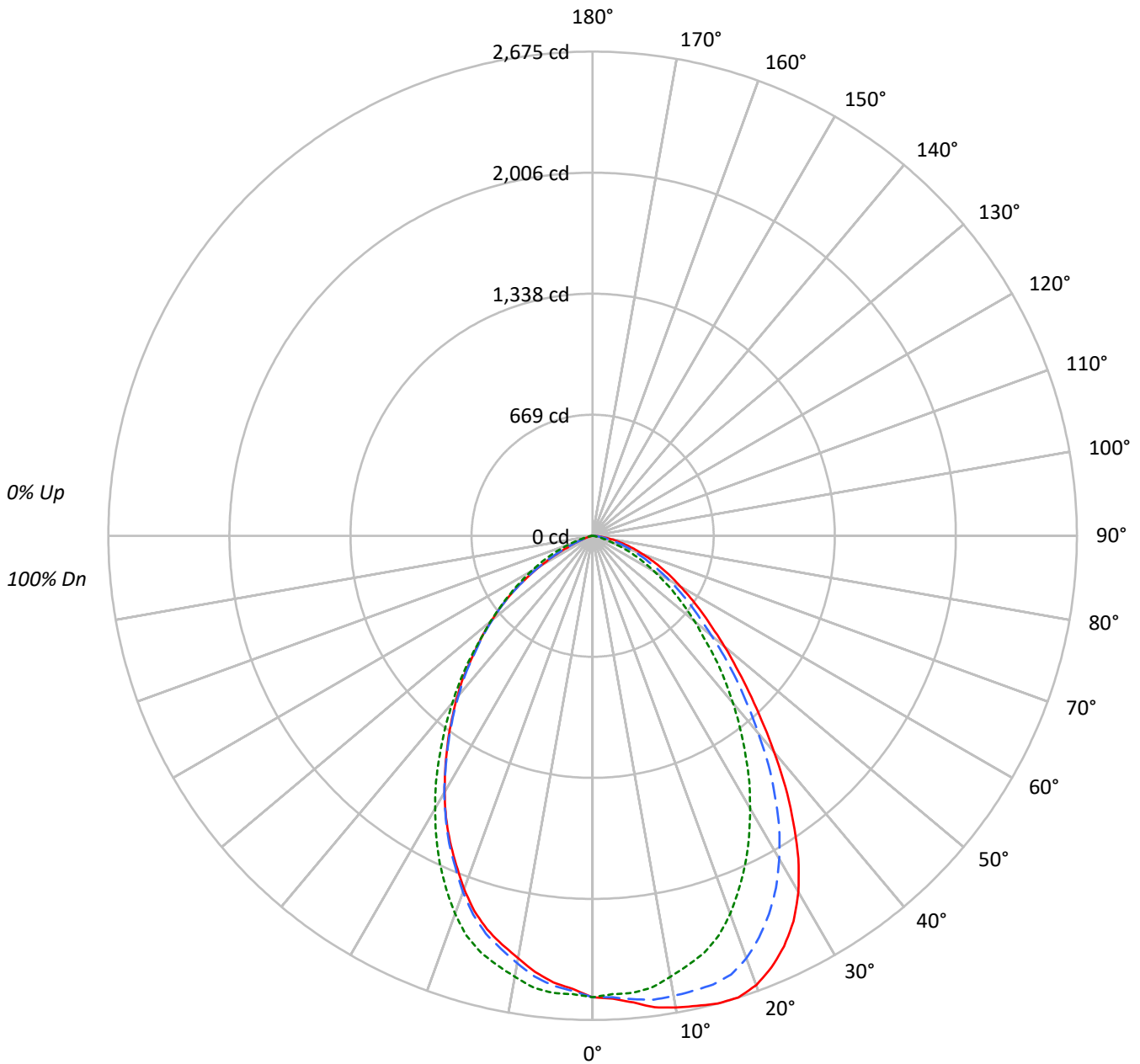
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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			100
1	111	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89			89
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78			78
3	96	87	80	75	93	86	79	74	83	77	73	80	76	72	78	74	71	69			69
4	89	79	71	66	87	78	71	65	75	69	64	73	68	64	71	66	63	61			61
5	83	72	64	58	81	71	63	58	69	62	57	67	61	57	65	60	56	54			54
6	77	65	58	52	75	65	57	52	63	56	51	61	55	51	60	55	51	49			49
7	72	60	52	47	70	59	52	47	58	51	46	56	51	46	55	50	46	44			44
8	67	55	48	43	66	55	47	42	53	47	42	52	46	42	51	46	42	40			40
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37			37
10	60	48	40	36	58	47	40	36	46	40	36	45	40	35	45	39	35	34			34

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

	0°	90°	180°
0°	139748	139748	139748
5°	142450	139483	136330
10°	147286	137712	131917
15°	151794	135313	127787
20°	154148	129675	121105
25°	151370	120793	112773
30°	143883	110074	103491
35°	129322	98377	93338
40°	111609	86212	83392
45°	94506	74217	72271
50°	81029	62685	62070
55°	70248	52768	50722
60°	61322	42847	36159
65°	53949	33013	19989
70°	46546	21831	9777
75°	39481	10633	3791
80°	30559	4514	2273
85°	18052	2264	2264



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	240.5	5.3
10°-20°	680.3	15.0
20°-30°	958.0	21.1
30°-40°	978.8	21.5
40°-50°	789.1	17.4
50°-60°	529.3	11.7
60°-70°	267.8	5.9
70°-80°	85.6	1.9
80°-90°	13.2	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°	1878.8	41.4
0°-40°	2857.5	62.9
0°-60°	4176.0	91.9
0°-90°	4542.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4542.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2549	2549	2549	2549	2549	
5°	2589	2571	2535	2495	2477	249
15°	2675	2567	2384	2277	2252	755
25°	2502	2305	1997	1875	1864	1146
35°	1932	1757	1470	1388	1395	1203
45°	1219	1122	957	925	932	948
55°	735	652	552	527	531	661
65°	416	344	254	169	154	415
75°	186	133	50	18	18	200
85°	29	14	4	4	4	39
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°	2549.2	2549.2	2549.2	2549.2	2549.2	2549.2	2549.2	2549.2	2549.2
2.5°	2559.8	2556.3	2552.7	2545.5	2534.7	2524.1	2516.9	2509.6	2506.1
5°	2588.6	2581.4	2570.6	2556.3	2534.7	2509.6	2495.3	2481.0	2477.4
7.5°	2628.0	2613.7	2584.9	2552.7	2516.9	2481.0	2455.9	2441.6	2430.8
10°	2645.9	2620.8	2581.4	2527.6	2473.9	2430.8	2398.6	2377.1	2369.8
12.5°	2660.2	2631.6	2574.3	2502.5	2430.8	2373.4	2337.6	2319.6	2312.5
15°	2674.6	2645.9	2567.0	2473.9	2384.2	2316.1	2276.7	2258.7	2251.6
17.5°	2674.6	2635.1	2541.9	2423.7	2316.1	2233.6	2194.2	2176.3	2172.6
20°	2642.3	2599.4	2484.5	2344.7	2222.8	2129.7	2093.8	2083.0	2075.9
22.5°	2581.4	2531.2	2402.1	2244.4	2111.8	2022.1	1982.6	1975.4	1968.3
25°	2502.5	2452.3	2305.3	2136.9	1997.0	1907.4	1875.0	1867.9	1864.4
27.5°	2402.1	2348.3	2194.2	2022.1	1871.5	1785.4	1756.8	1756.8	1753.2
30°	2273.0	2212.2	2061.5	1889.5	1738.9	1660.0	1638.4	1638.4	1634.9
32.5°	2115.3	2054.4	1918.1	1753.2	1609.8	1527.4	1509.4	1516.6	1512.9
35°	1932.4	1882.3	1756.8	1595.4	1470.0	1394.7	1387.5	1394.7	1394.7
37.5°	1749.6	1703.0	1595.4	1455.6	1337.3	1269.2	1269.2	1280.0	1276.3
40°	1559.6	1523.7	1423.3	1301.4	1204.7	1158.0	1150.8	1161.6	1165.3
42.5°	1380.3	1351.6	1265.5	1165.3	1079.2	1032.6	1043.3	1050.5	1054.1
45°	1219.0	1190.4	1122.2	1018.2	957.3	925.0	925.0	935.7	932.2
47.5°	1075.5	1054.1	985.9	885.6	831.8	817.5	824.6	831.8	831.8
50°	950.1	917.9	853.2	774.4	735.0	717.1	724.2	727.8	727.8
52.5°	831.8	810.3	745.7	674.0	638.2	627.4	627.4	631.0	631.0
55°	735.0	709.9	652.5	580.9	552.1	537.8	527.0	523.4	530.7
57.5°	641.7	620.3	566.4	498.4	466.0	451.7	430.3	423.1	430.3
60°	559.3	541.3	487.6	423.1	390.8	362.1	337.0	322.7	329.8
62.5°	487.6	466.0	412.3	358.5	322.7	290.4	251.0	229.4	240.2
65°	415.9	398.0	344.2	290.4	254.5	215.1	168.6	154.1	154.1
67.5°	351.3	333.5	283.3	236.6	193.7	147.0	103.9	100.4	103.9
70°	290.4	272.5	229.4	182.9	136.2	89.6	61.0	61.0	61.0
72.5°	240.2	218.6	179.2	132.7	86.1	46.6	32.3	35.9	35.9
75°	186.4	168.6	132.7	89.6	50.2	21.5	17.9	17.9	17.9
77.5°	139.8	125.5	93.3	57.4	25.1	7.2	7.2	7.2	7.2
80°	96.8	82.5	61.0	35.9	14.3	7.2	7.2	7.2	7.2
82.5°	57.4	50.2	35.9	17.9	7.2	3.6	3.6	3.6	3.6
85°	28.7	25.1	14.3	7.2	3.6	3.6	3.6	3.6	3.6
87.5°	7.2	7.2	3.6	3.6	0.0	3.6	3.6	0.0	0.0
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)