

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: P593316

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

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P593316  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-14)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC645D010-HM64560850-61RWWC  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5342.2 lumens  
Efficiency: N/A  
Efficacy: 121.4 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.15 / 1.2  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

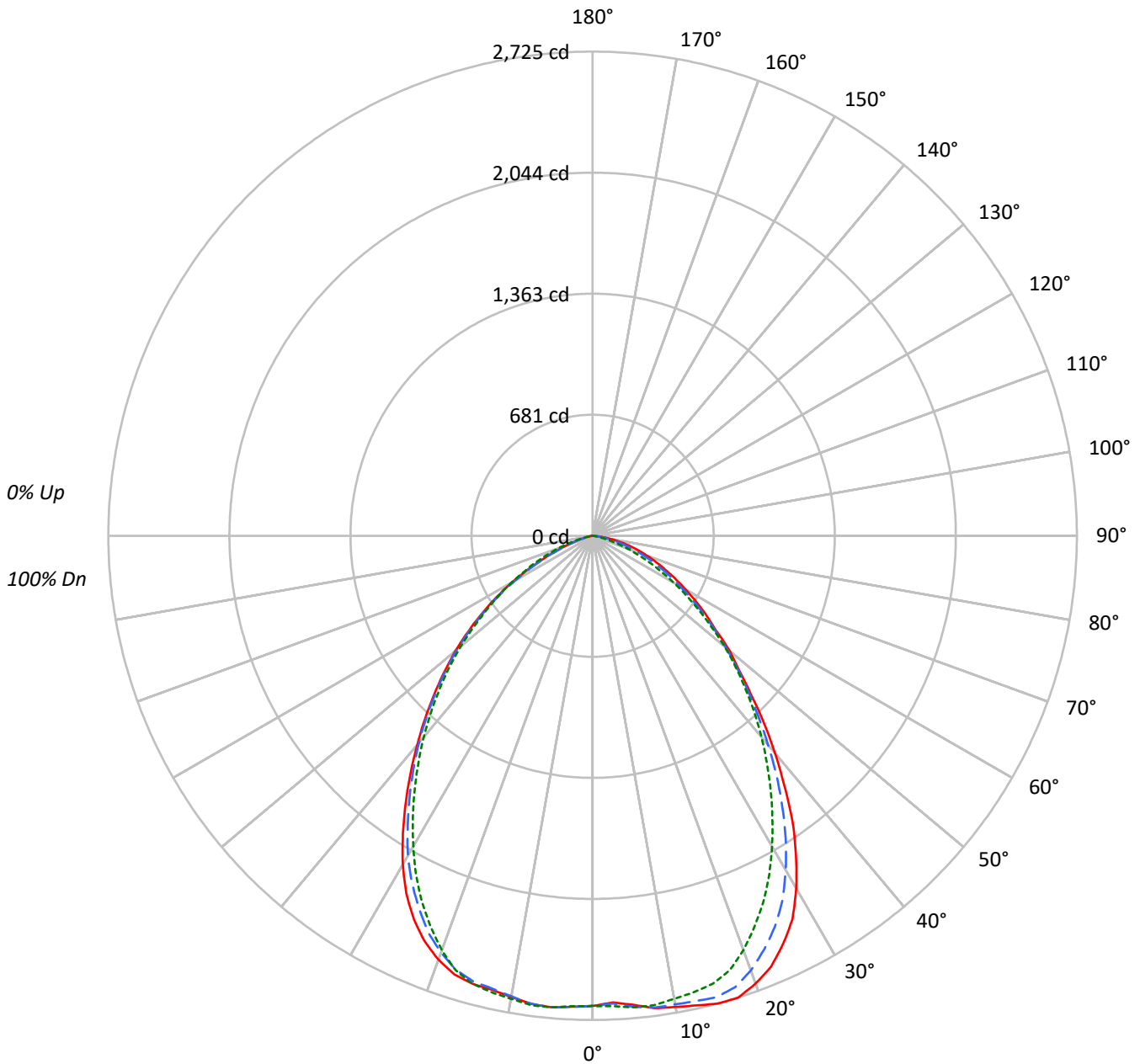
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20				20				20				20				20				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	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	88				88
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77				77
3	95	86	79	74	93	85	78	73	82	76	72	79	75	71	77	73	69	68				68
4	88	78	70	64	86	76	69	64	74	68	63	72	67	62	70	65	61	60				60
5	82	70	62	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53				53
6	76	64	56	50	74	63	56	50	62	55	50	60	54	49	58	53	49	47				47
7	71	59	51	45	69	58	50	45	56	50	45	55	49	45	54	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32				32

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

	0°	90°	180°
0°	145060	145060	145060
5°	145812	146599	146599
10°	149891	147297	146702
15°	154655	148145	148145
20°	156458	144743	148092
25°	153335	137500	144002
30°	145029	127779	135274
35°	131256	116854	122616
40°	114178	105720	109820
45°	97568	94235	97568
50°	85626	82564	85925
55°	74712	69560	72313
60°	66036	57780	57002
65°	58593	45582	39070
70°	51723	32185	23562
75°	44056	18237	11395
80°	32801	5651	3410
85°	18052	2264	2264



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	253.8	4.8
10°-20°	742.6	13.9
20°-30°	1084.6	20.3
30°-40°	1137.5	21.3
40°-50°	958.3	17.9
50°-60°	671.4	12.6
60°-70°	360.0	6.7
70°-80°	120.7	2.3
80°-90°	13.2	0.2
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°	2081.1	39.0
0°-40°	3218.6	60.2
0°-60°	4848.3	90.8
0°-90°	5342.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5342.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2646	2646	2646	2646	2646	
5°	2650	2660	2664	2664	2664	255
15°	2725	2689	2610	2596	2610	769
25°	2535	2427	2273	2313	2381	1161
35°	1961	1861	1746	1796	1832	1217
45°	1258	1237	1216	1248	1258	980
55°	782	757	728	742	757	704
65°	452	412	351	290	301	451
75°	208	161	86	54	54	221
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°	2646.1	2646.1	2646.1	2646.1	2646.1	2646.1	2646.1	2646.1	2646.1
2.5°	2628.2	2628.2	2635.4	2642.5	2649.7	2649.7	2653.3	2656.8	2653.3
5°	2649.7	2649.7	2660.5	2664.0	2664.0	2660.5	2664.0	2664.0	2664.0
7.5°	2681.9	2674.8	2678.3	2671.2	2664.0	2660.5	2656.8	2656.8	2656.8
10°	2692.7	2685.6	2678.3	2664.0	2646.1	2635.4	2631.7	2635.4	2635.4
12.5°	2707.0	2699.9	2681.9	2653.3	2631.7	2613.8	2610.3	2617.4	2617.4
15°	2725.0	2717.8	2689.1	2642.5	2610.3	2592.3	2595.8	2603.1	2610.3
17.5°	2725.0	2710.7	2664.0	2603.1	2563.6	2545.8	2560.1	2578.0	2588.7
20°	2681.9	2667.6	2603.1	2527.8	2481.1	2470.5	2495.6	2527.8	2538.5
22.5°	2624.6	2595.8	2520.7	2430.9	2380.7	2380.7	2416.6	2456.0	2470.5
25°	2535.0	2513.4	2427.4	2323.4	2273.2	2269.6	2312.7	2366.4	2380.7
27.5°	2434.6	2405.8	2312.7	2205.1	2151.3	2154.9	2201.5	2255.3	2269.6
30°	2291.1	2255.3	2172.9	2068.8	2018.6	2032.9	2079.6	2119.0	2137.0
32.5°	2129.8	2097.6	2022.3	1925.4	1882.4	1896.7	1936.2	1972.0	1986.4
35°	1961.3	1925.4	1860.8	1774.9	1746.1	1760.4	1796.3	1825.1	1832.2
37.5°	1771.2	1746.1	1699.6	1631.4	1609.9	1627.8	1656.5	1674.5	1681.6
40°	1595.5	1574.0	1534.6	1484.4	1477.3	1491.6	1520.2	1531.0	1534.6
42.5°	1423.4	1405.5	1380.4	1344.6	1344.6	1358.9	1384.0	1391.2	1394.8
45°	1258.5	1247.7	1237.0	1208.3	1215.5	1233.4	1247.7	1258.5	1258.5
47.5°	1115.1	1118.7	1104.4	1082.8	1090.0	1107.9	1118.7	1129.5	1129.5
50°	1004.0	993.2	978.9	957.3	968.1	982.4	996.8	1004.0	1007.5
52.5°	874.8	871.3	860.5	835.4	842.6	849.7	864.1	874.8	878.5
55°	781.7	770.9	756.6	727.8	727.8	735.0	742.2	749.3	756.6
57.5°	692.0	681.3	659.7	627.4	623.9	623.9	620.3	627.4	638.2
60°	602.3	598.8	566.6	537.8	527.0	516.4	501.9	505.6	519.9
62.5°	523.5	516.4	487.6	451.7	430.3	412.3	394.4	390.8	405.2
65°	451.7	444.6	412.3	376.5	351.4	319.1	290.4	290.4	301.2
67.5°	387.2	372.9	344.2	304.7	272.5	233.1	204.3	211.5	215.1
70°	322.7	311.9	279.6	240.2	200.8	161.4	143.5	147.0	147.0
72.5°	265.3	251.0	218.8	179.2	139.8	103.9	96.8	93.3	93.3
75°	208.0	193.7	161.4	121.9	86.1	61.0	53.8	53.8	53.8
77.5°	150.6	139.8	111.2	75.3	46.6	28.7	25.1	21.5	21.5
80°	103.9	93.3	68.2	39.4	17.9	10.8	10.8	10.8	10.8
82.5°	61.0	50.2	32.3	17.9	7.2	3.6	3.6	3.6	3.6
85°	28.7	21.5	14.3	7.2	3.6	3.6	3.6	3.6	3.6
87.5°	3.6	3.6	3.6	0.0	0.0	0.0	0.0	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)