

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: P582585

Luminaire Tested: **HC645D010-HM64560830-61RWWH**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582585  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-15)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC645D010-HM64560830-61RWWH  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4926.0 lumens  
Efficiency: N/A  
Efficacy: 112.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.12 / 1.19  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

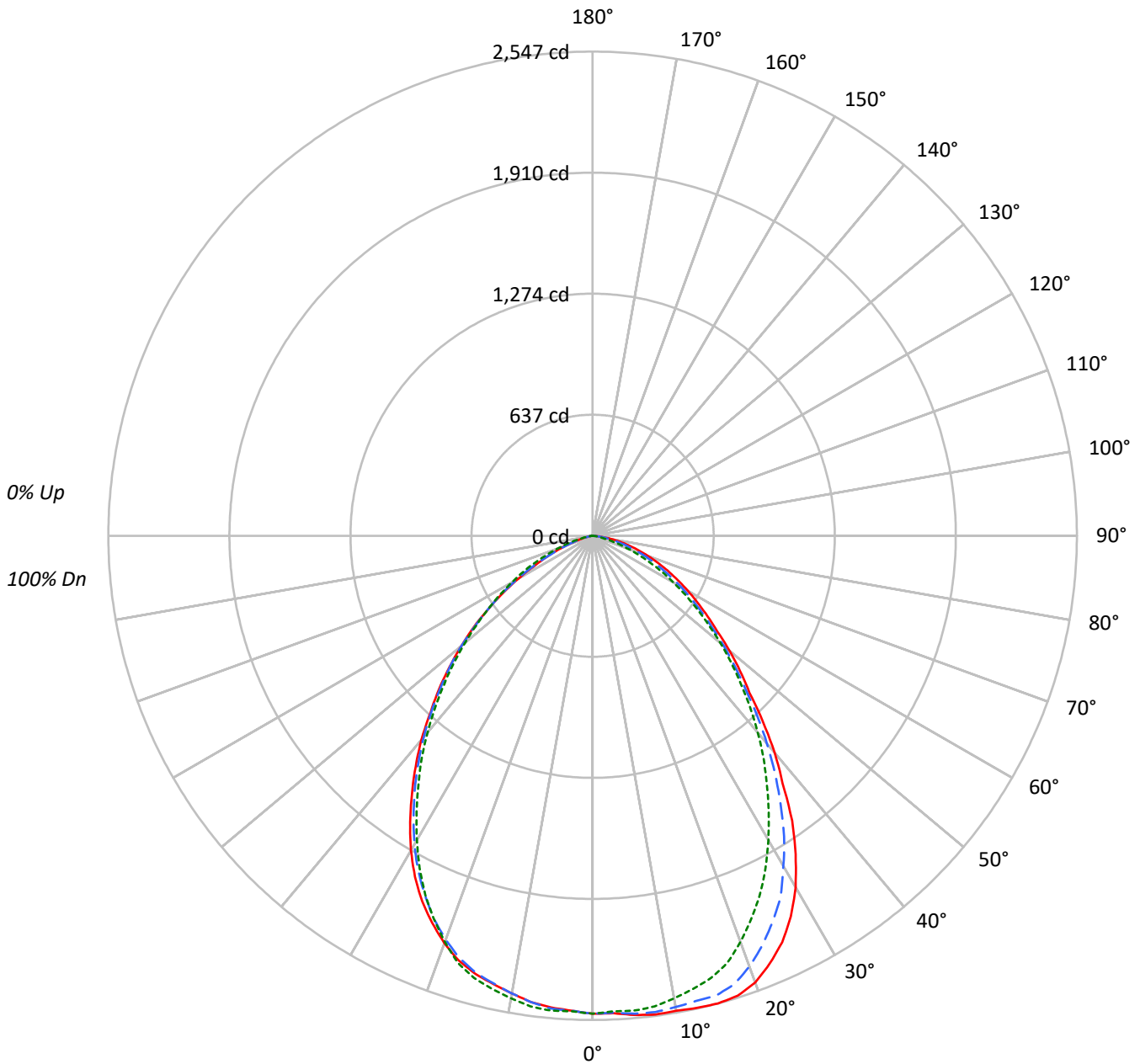
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20									20									20									20									
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	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88																			
2	103	96	90	85	100	94	89	84	91	86	83	87	84	81	85	82	79	77																			
3	95	86	79	74	93	84	78	73	82	76	72	79	74	70	77	73	69	67																			
4	88	78	70	64	86	76	69	64	74	68	63	72	66	62	70	65	61	59																			
5	82	70	62	57	80	69	62	56	67	61	56	65	60	55	64	59	55	53																			
6	76	64	56	50	74	63	56	50	61	55	50	60	54	49	58	53	49	47																			
7	71	59	51	45	69	58	50	45	56	50	45	55	49	44	54	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	41	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

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

	0°	90°	180°
0°	137818	137818	137818
5°	139247	137981	137073
10°	141224	137561	136092
15°	144547	136692	135381
20°	145887	132627	133012
25°	142696	125953	128342
30°	135154	117005	120974
35°	122376	106943	110912
40°	106571	96667	100209
45°	90420	85575	88637
50°	80083	74752	76714
55°	70545	63921	63615
60°	63219	53822	49492
65°	56413	43169	35464
70°	49640	31159	22183
75°	41875	18830	12581
80°	32264	8334	5177
85°	18681	2076	2076



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	238.6	4.8
10°-20°	685.8	13.9
20°-30°	991.4	20.1
30°-40°	1043.2	21.2
40°-50°	876.9	17.8
50°-60°	615.5	12.5
60°-70°	338.6	6.9
70°-80°	120.2	2.4
80°-90°	15.7	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°	1915.9	38.9
0°-40°	2959.0	60.1
0°-60°	4451.5	90.4
0°-90°	4926.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4926.0	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2514	2514	2514	2514	2514	
5°	2530	2524	2507	2497	2491	242
15°	2547	2504	2408	2379	2385	719
25°	2359	2240	2082	2086	2122	1079
35°	1829	1723	1598	1631	1657	1133
45°	1166	1134	1104	1130	1143	915
55°	738	698	669	669	666	664
65°	435	389	333	273	273	433
75°	198	158	89	59	59	212
85°	30	16	3	3	3	41
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°	2514.0	2514.0	2514.0	2514.0	2514.0	2514.0	2514.0	2514.0	2514.0
2.5°	2514.0	2514.0	2510.7	2510.7	2504.1	2504.1	2500.7	2500.7	2500.7
5°	2530.4	2530.4	2523.8	2514.0	2507.4	2497.4	2497.4	2494.1	2490.9
7.5°	2540.2	2537.0	2527.1	2514.0	2497.4	2481.0	2474.4	2477.7	2474.4
10°	2537.0	2530.4	2517.3	2490.9	2471.2	2448.1	2444.8	2441.5	2444.8
12.5°	2543.7	2533.7	2507.4	2474.4	2441.5	2415.1	2411.8	2411.8	2415.1
15°	2546.9	2537.0	2504.1	2454.6	2408.5	2382.1	2378.8	2382.1	2385.4
17.5°	2537.0	2523.8	2474.4	2408.5	2355.9	2329.5	2329.5	2336.0	2342.6
20°	2500.7	2481.0	2411.8	2332.7	2273.4	2253.7	2260.3	2273.4	2280.0
22.5°	2434.9	2411.8	2332.7	2243.7	2181.2	2164.7	2181.2	2197.6	2204.2
25°	2359.1	2332.7	2240.4	2148.2	2082.3	2062.6	2085.6	2112.0	2121.8
27.5°	2257.0	2227.3	2141.7	2036.2	1970.3	1960.4	1986.8	2016.4	2023.1
30°	2135.1	2102.1	2006.5	1907.6	1848.4	1845.1	1874.8	1901.1	1911.1
32.5°	1986.8	1957.2	1874.8	1775.9	1723.1	1723.1	1752.8	1775.9	1785.8
35°	1828.6	1795.6	1723.1	1640.8	1598.0	1601.3	1630.9	1647.4	1657.3
37.5°	1640.8	1630.9	1574.9	1505.8	1476.1	1482.7	1505.8	1518.9	1528.8
40°	1489.2	1462.8	1426.6	1370.7	1350.8	1357.5	1380.5	1393.8	1400.3
42.5°	1324.6	1308.0	1278.3	1238.8	1225.7	1235.5	1255.3	1265.2	1261.9
45°	1166.3	1163.0	1133.5	1110.4	1103.8	1116.9	1130.1	1140.0	1143.3
47.5°	1051.0	1037.9	1011.5	995.1	988.5	1001.6	1014.8	1021.4	1021.4
50°	939.0	925.8	899.5	883.0	876.5	889.6	899.5	906.0	899.5
52.5°	827.0	813.8	790.7	771.0	767.7	774.3	777.6	780.9	787.4
55°	738.1	724.9	698.5	675.4	668.8	672.1	668.8	668.8	665.6
57.5°	652.4	639.2	612.9	586.5	576.6	573.2	563.4	560.1	556.8
60°	576.6	560.1	533.7	504.2	490.9	477.8	461.2	451.4	451.4
62.5°	504.2	487.6	457.9	431.7	411.8	388.7	362.5	349.2	349.2
65°	434.9	421.7	388.7	359.2	332.8	303.1	273.4	266.9	273.4
67.5°	369.0	355.9	322.9	293.2	260.3	224.0	197.7	197.7	204.3
70°	309.7	296.5	266.9	230.6	194.4	158.1	138.4	138.4	138.4
72.5°	253.7	240.5	207.6	174.7	138.4	102.2	92.2	95.6	92.2
75°	197.7	187.8	158.1	121.9	88.9	62.6	59.4	56.1	59.4
77.5°	148.3	138.4	112.0	79.1	49.4	36.2	33.0	33.0	33.0
80°	102.2	92.2	72.5	46.1	26.4	16.4	16.4	16.4	16.4
82.5°	62.6	52.7	39.5	23.1	9.9	9.9	9.9	9.9	9.9
85°	29.7	23.1	16.4	6.6	3.3	3.3	3.3	3.3	3.3
87.5°	6.6	6.6	3.3	3.3	0.0	3.3	3.3	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)