

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: P582566

Luminaire Tested: **HC645D010-HM64560827-61RWWC**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582566  
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-HM64560827-61RWWC  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4546.2 lumens  
Efficiency: N/A  
Efficacy: 103.3 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

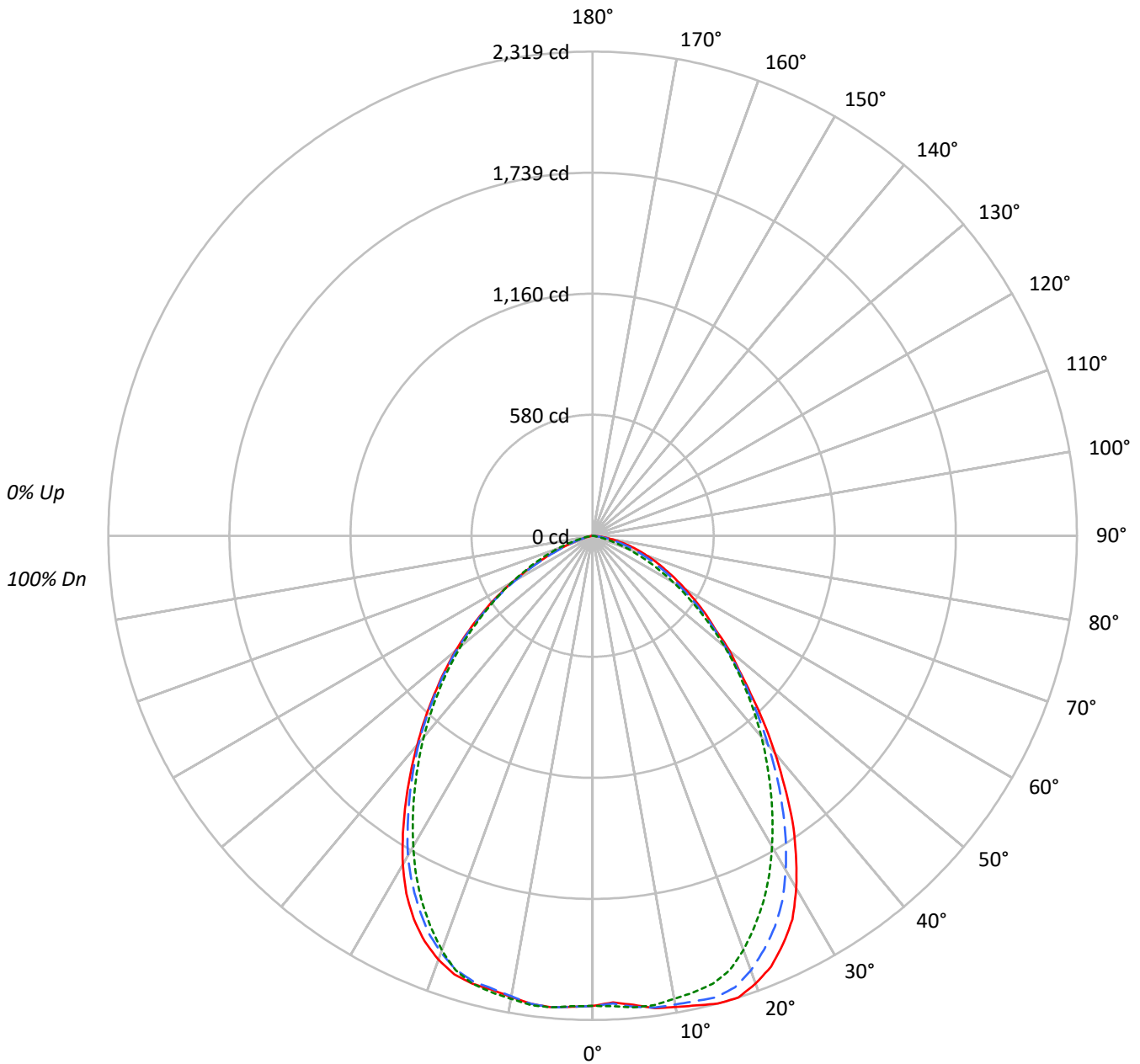
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20				20				20				20				20				
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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	88			
2	103	96	90	86	100	94	89	85	91	86	83	88	84	81	85	82	79	77			
3	95	86	79	74	93	85	78	73	82	76	72	79	75	71	77	73	69	68			
4	88	78	70	64	86	76	69	64	74	68	63	72	67	62	70	65	61	60			
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	62	55	50	60	54	49	58	53	49	47			
7	71	59	51	45	69	58	50	45	56	50	45	55	49	45	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°	123444	123444	123444
5°	124086	124758	124758
10°	127558	125348	124842
15°	131613	126068	126068
20°	133146	123182	126028
25°	130489	117013	122547
30°	123424	108745	115113
35°	111701	99448	104346
40°	97175	89961	93454
45°	83024	80194	83024
50°	72868	70258	73132
55°	63577	59209	61541
60°	56202	49185	48516
65°	49876	38785	33246
70°	44014	27392	20067
75°	37490	15504	9680
80°	27908	4799	2873
85°	15347	1887	1887



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	216.0	4.8
10°-20°	632.0	13.9
20°-30°	923.0	20.3
30°-40°	968.0	21.3
40°-50°	815.5	17.9
50°-60°	571.4	12.6
60°-70°	306.3	6.7
70°-80°	102.7	2.3
80°-90°	11.2	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°	1771.0	39.0
0°-40°	2739.0	60.2
0°-60°	4126.0	90.8
0°-90°	4546.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4546.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2252	2252	2252	2252	2252	
5°	2255	2264	2267	2267	2267	217
15°	2319	2288	2221	2209	2221	654
25°	2157	2066	1934	1968	2026	988
35°	1669	1584	1486	1529	1559	1036
45°	1071	1053	1034	1062	1071	834
55°	665	644	620	632	644	599
65°	384	351	299	247	256	384
75°	177	137	73	46	46	188
85°	24	12	3	3	3	34
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°	2251.8	2251.8	2251.8	2251.8	2251.8	2251.8	2251.8	2251.8	2251.8
2.5°	2236.6	2236.6	2242.7	2248.8	2254.9	2254.9	2257.9	2261.0	2257.9
5°	2254.9	2254.9	2264.0	2267.1	2267.1	2264.0	2267.1	2267.1	2267.1
7.5°	2282.3	2276.2	2279.3	2273.2	2267.1	2264.0	2261.0	2261.0	2261.0
10°	2291.5	2285.4	2279.3	2267.1	2251.8	2242.7	2239.6	2242.7	2242.7
12.5°	2303.7	2297.6	2282.3	2257.9	2239.6	2224.4	2221.3	2227.4	2227.4
15°	2319.0	2312.9	2288.4	2248.8	2221.3	2206.1	2209.1	2215.2	2221.3
17.5°	2319.0	2306.8	2267.1	2215.2	2181.7	2166.4	2178.6	2193.9	2203.0
20°	2282.3	2270.1	2215.2	2151.2	2111.5	2102.4	2123.7	2151.2	2160.3
22.5°	2233.5	2209.1	2145.1	2068.8	2026.0	2026.0	2056.5	2090.2	2102.4
25°	2157.3	2139.0	2065.8	1977.2	1934.5	1931.5	1968.1	2013.8	2026.0
27.5°	2071.9	2047.4	1968.1	1876.6	1830.8	1833.9	1873.5	1919.3	1931.5
30°	1949.8	1919.3	1849.1	1760.6	1717.9	1730.1	1769.7	1803.3	1818.5
32.5°	1812.4	1785.0	1720.9	1638.6	1602.0	1614.2	1647.7	1678.2	1690.4
35°	1669.1	1638.6	1583.7	1510.4	1486.0	1498.2	1528.7	1553.1	1559.2
37.5°	1507.3	1486.0	1446.3	1388.4	1370.1	1385.3	1409.7	1425.0	1431.1
40°	1357.9	1339.6	1305.9	1263.2	1257.1	1269.3	1293.7	1302.9	1305.9
42.5°	1211.4	1196.1	1174.8	1144.3	1144.3	1156.5	1177.8	1183.9	1187.0
45°	1070.9	1061.8	1052.7	1028.3	1034.4	1049.6	1061.8	1070.9	1070.9
47.5°	949.0	952.0	939.8	921.5	927.6	942.9	952.0	961.2	961.2
50°	854.4	845.1	832.9	814.6	823.8	836.0	848.2	854.4	857.5
52.5°	744.5	741.5	732.3	711.0	717.1	723.2	735.4	744.5	747.6
55°	665.2	656.1	643.9	619.5	619.5	625.6	631.7	637.8	643.9
57.5°	588.8	579.7	561.4	533.9	530.9	530.9	527.8	533.9	543.1
60°	512.6	509.6	482.1	457.7	448.6	439.4	427.2	430.3	442.5
62.5°	445.5	439.4	415.0	384.5	366.2	350.8	335.6	332.5	344.7
65°	384.5	378.4	350.8	320.3	299.0	271.5	247.2	247.2	256.3
67.5°	329.5	317.3	292.9	259.4	231.9	198.4	174.0	180.1	183.1
70°	274.6	265.4	238.0	204.5	170.9	137.4	122.1	125.2	125.2
72.5°	225.8	213.6	186.2	152.6	118.9	88.4	82.3	79.3	79.3
75°	177.0	164.8	137.4	103.7	73.2	51.8	45.7	45.7	45.7
77.5°	128.2	118.9	94.5	64.0	39.6	24.4	21.3	18.3	18.3
80°	88.4	79.3	57.9	33.5	15.2	9.1	9.1	9.1	9.1
82.5°	51.8	42.7	27.4	15.2	6.1	3.0	3.0	3.0	3.0
85°	24.4	18.3	12.2	6.1	3.0	3.0	3.0	3.0	3.0
87.5°	3.0	3.0	3.0	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)