

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: P582674

Luminaire Tested: **HC645D010-HM64560935-61RWWC**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582674  
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-HM64560935-61RWWC  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4569.2 lumens  
Efficiency: N/A  
Efficacy: 103.8 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

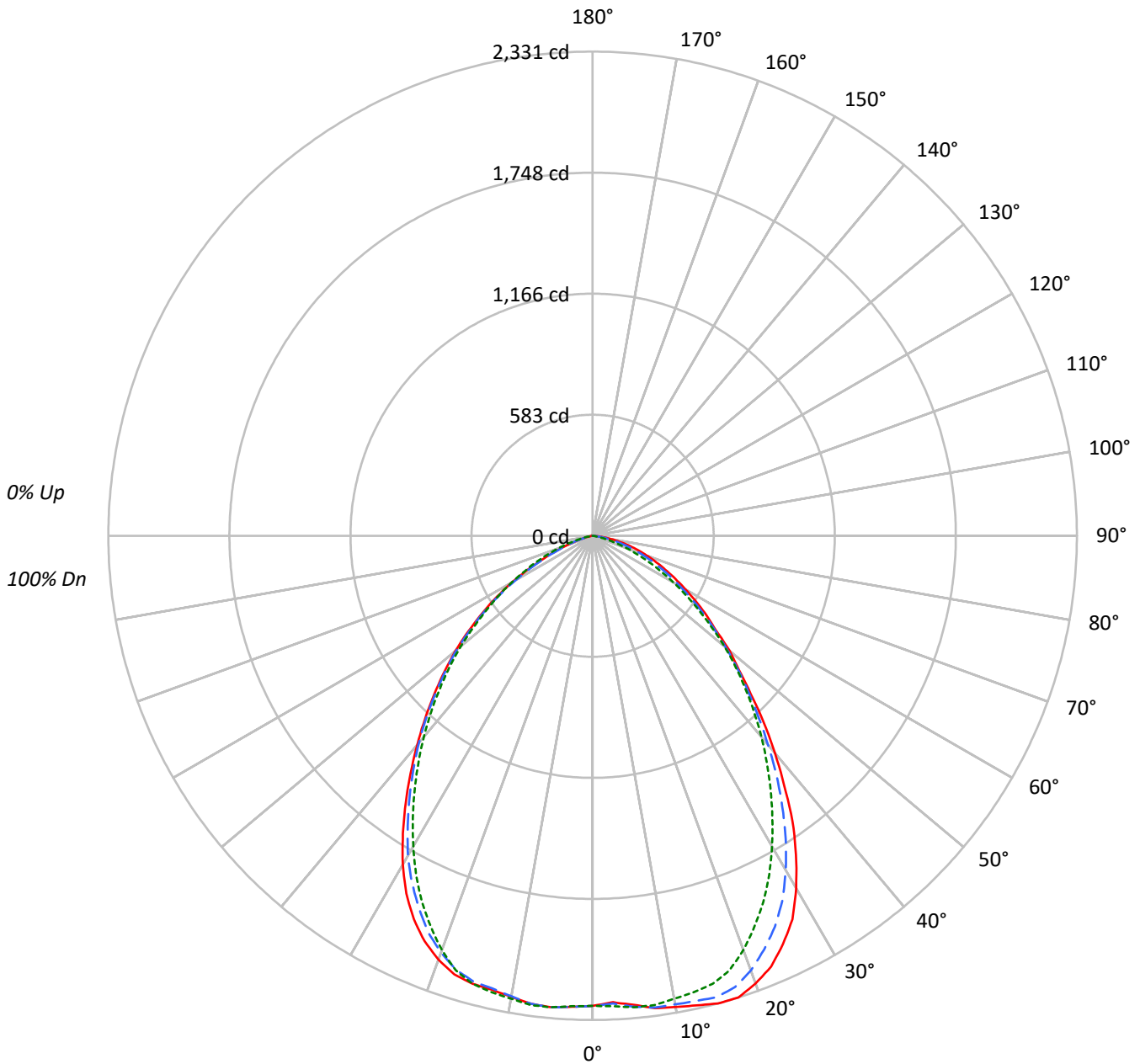
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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			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°	124074	124074	124074
5°	124719	125390	125390
10°	128210	125989	125471
15°	132282	126709	126709
20°	133822	123806	126664
25°	131149	117612	123170
30°	124044	109289	115701
35°	112263	99950	104875
40°	97662	90427	93933
45°	83458	80598	83458
50°	73226	70616	73499
55°	63902	59496	61847
60°	56487	49426	48757
65°	50122	38980	33415
70°	44238	27521	20148
75°	37660	15568	9743
80°	28065	4862	2873
85°	15410	1887	1887



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	217.1	4.8
10°-20°	635.2	13.9
20°-30°	927.7	20.3
30°-40°	972.9	21.3
40°-50°	819.7	17.9
50°-60°	574.3	12.6
60°-70°	307.9	6.7
70°-80°	103.2	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°	1780.0	39.0
0°-40°	2752.9	60.2
0°-60°	4146.9	90.8
0°-90°	4569.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4569.2	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2263	2263	2263	2263	2263	
5°	2266	2276	2279	2279	2279	218
15°	2331	2300	2233	2220	2233	657
25°	2168	2076	1944	1978	2036	993
35°	1678	1592	1494	1536	1567	1041
45°	1076	1058	1040	1067	1076	839
55°	669	647	622	635	647	602
65°	386	353	300	248	258	386
75°	178	138	74	46	46	189
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°	2263.3	2263.3	2263.3	2263.3	2263.3	2263.3	2263.3	2263.3	2263.3
2.5°	2247.9	2247.9	2254.0	2260.3	2266.4	2266.4	2269.4	2272.5	2269.4
5°	2266.4	2266.4	2275.5	2278.6	2278.6	2275.5	2278.6	2278.6	2278.6
7.5°	2293.9	2287.8	2290.9	2284.8	2278.6	2275.5	2272.5	2272.5	2272.5
10°	2303.2	2297.0	2290.9	2278.6	2263.3	2254.0	2251.0	2254.0	2254.0
12.5°	2315.4	2309.3	2293.9	2269.4	2251.0	2235.6	2232.6	2238.8	2238.8
15°	2330.8	2324.7	2300.0	2260.3	2232.6	2217.3	2220.4	2226.5	2232.6
17.5°	2330.8	2318.4	2278.6	2226.5	2192.7	2177.4	2189.6	2205.0	2214.2
20°	2293.9	2281.7	2226.5	2162.1	2122.2	2113.0	2134.5	2162.1	2171.2
22.5°	2244.9	2220.4	2156.0	2079.3	2036.3	2036.3	2066.9	2100.7	2113.0
25°	2168.2	2149.8	2076.2	1987.3	1944.4	1941.3	1978.0	2024.0	2036.3
27.5°	2082.3	2057.8	1978.0	1886.1	1840.1	1843.1	1883.0	1929.0	1941.3
30°	1959.6	1929.0	1858.5	1769.5	1726.5	1738.9	1778.7	1812.4	1827.8
32.5°	1821.7	1794.1	1729.7	1646.9	1610.1	1622.3	1656.0	1686.8	1699.0
35°	1677.5	1646.9	1591.6	1518.1	1493.5	1505.8	1536.4	1561.0	1567.1
37.5°	1514.9	1493.5	1453.7	1395.4	1377.0	1392.4	1416.9	1432.2	1438.3
40°	1364.7	1346.3	1312.6	1269.7	1263.6	1275.8	1300.3	1309.5	1312.6
42.5°	1217.5	1202.2	1180.7	1150.0	1150.0	1162.3	1183.8	1189.9	1192.9
45°	1076.5	1067.2	1058.0	1033.5	1039.6	1055.0	1067.2	1076.5	1076.5
47.5°	953.8	956.8	944.6	926.2	932.3	947.7	956.8	966.1	966.1
50°	858.6	849.5	837.2	818.9	828.0	840.3	852.5	858.6	861.8
52.5°	748.3	745.2	736.1	714.6	720.7	726.8	739.1	748.3	751.3
55°	668.6	659.3	647.1	622.5	622.5	628.7	634.8	640.9	647.1
57.5°	591.9	582.6	564.3	536.6	533.6	533.6	530.5	536.6	545.9
60°	515.2	512.1	484.6	460.1	450.8	441.6	429.3	432.4	444.7
62.5°	447.7	441.6	417.1	386.4	368.0	352.7	337.4	334.3	346.5
65°	386.4	380.3	352.7	322.0	300.5	273.0	248.4	248.4	257.6
67.5°	331.3	318.9	294.4	260.6	233.1	199.3	174.8	181.0	184.0
70°	276.0	266.9	239.2	205.5	171.7	138.1	122.7	125.7	125.7
72.5°	227.0	214.7	187.1	153.3	119.6	88.9	82.8	79.8	79.8
75°	177.8	165.6	138.1	104.3	73.5	52.1	46.0	46.0	46.0
77.5°	128.8	119.6	95.0	64.4	39.9	24.5	21.5	18.4	18.4
80°	88.9	79.8	58.3	33.8	15.4	9.1	9.1	9.1	9.1
82.5°	52.1	42.9	27.6	15.4	6.1	3.0	3.0	3.0	3.0
85°	24.5	18.4	12.3	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)