

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: P582512

Luminaire Tested: **HC640D010-HM63040930-61RWWC**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582512  
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: HC640D010-HM63040930-61RWWC  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, SPECULAR TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4244.4 lumens  
Efficiency: N/A  
Efficacy: 103.5 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

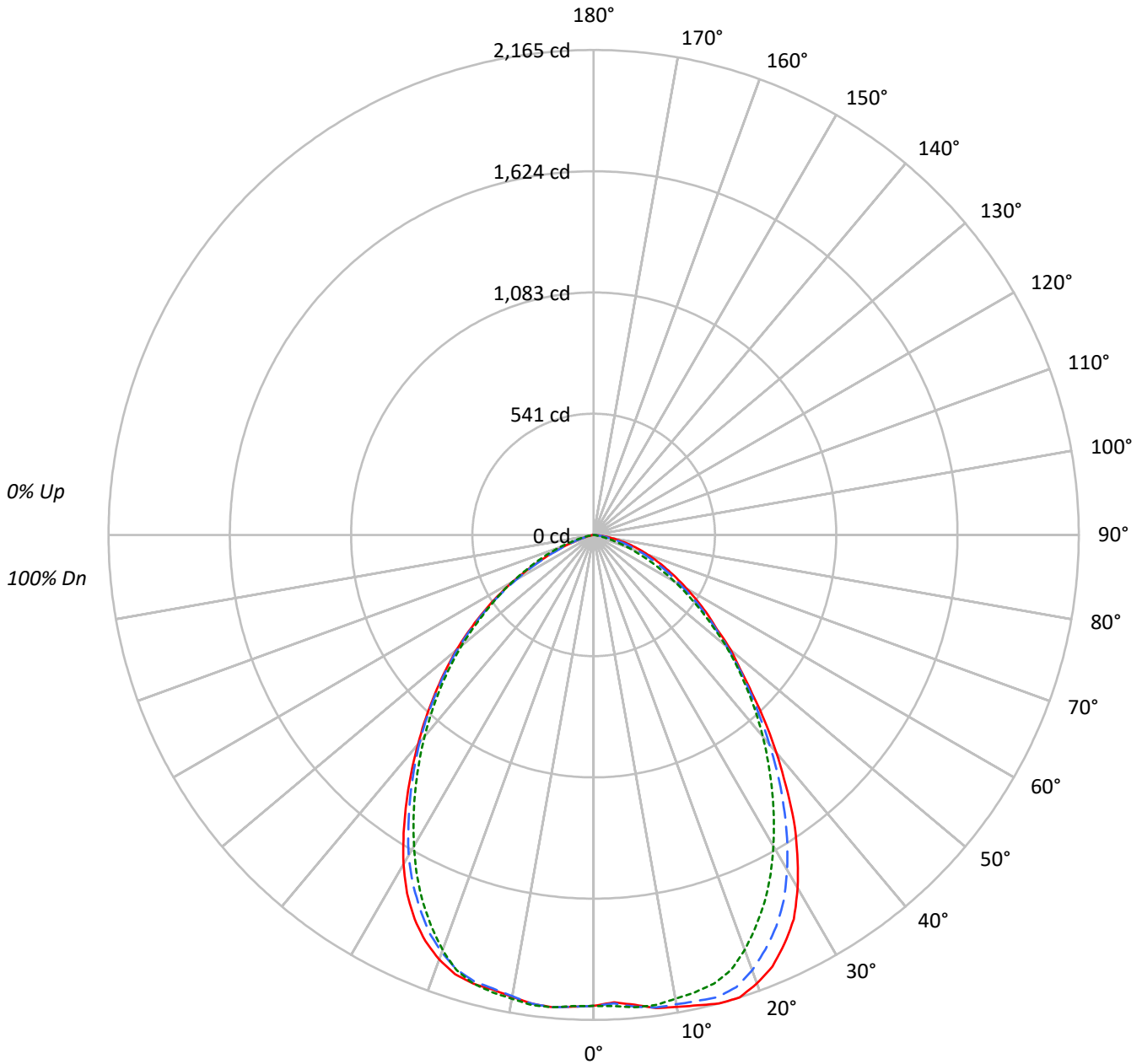
Input Watts (W): 41  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	115254	115254	115254
5°	115854	116476	116476
10°	119092	117032	116553
15°	122872	117702	117702
20°	124307	115008	117663
25°	121828	109246	114418
30°	115233	101522	107472
35°	104286	92842	97413
40°	90720	83986	87256
45°	77520	74876	77520
50°	68023	65593	68271
55°	59353	55262	57451
60°	52463	45917	45292
65°	46555	36217	31041
70°	41097	25565	18737
75°	35012	14467	9044
80°	26077	4483	2715
85°	14341	1824	1824



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	201.7	4.8
10°-20°	590.0	13.9
20°-30°	861.8	20.3
30°-40°	903.8	21.3
40°-50°	761.4	17.9
50°-60°	533.5	12.6
60°-70°	286.0	6.7
70°-80°	95.9	2.3
80°-90°	10.5	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°	1653.4	39.0
0°-40°	2557.2	60.2
0°-60°	3852.0	90.8
0°-90°	4244.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4244.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2102	2102	2102	2102	2102	
5°	2105	2114	2117	2117	2117	202
15°	2165	2136	2074	2062	2074	611
25°	2014	1929	1806	1837	1892	923
35°	1558	1478	1387	1427	1456	967
45°	1000	983	966	991	1000	779
55°	621	601	578	590	601	559
65°	359	328	279	231	239	358
75°	165	128	68	43	43	175
85°	23	11	3	3	3	31
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°	2102.4	2102.4	2102.4	2102.4	2102.4	2102.4	2102.4	2102.4	2102.4
2.5°	2088.1	2088.1	2093.8	2099.5	2105.3	2105.3	2108.0	2110.9	2108.0
5°	2105.3	2105.3	2113.7	2116.6	2116.6	2113.7	2116.6	2116.6	2116.6
7.5°	2130.8	2125.2	2127.9	2122.3	2116.6	2113.7	2110.9	2110.9	2110.9
10°	2139.4	2133.7	2127.9	2116.6	2102.4	2093.8	2091.0	2093.8	2093.8
12.5°	2150.8	2145.1	2130.8	2108.0	2091.0	2076.8	2073.9	2079.5	2079.5
15°	2165.0	2159.3	2136.5	2099.5	2073.9	2059.6	2062.5	2068.2	2073.9
17.5°	2165.0	2153.7	2116.6	2068.2	2036.8	2022.6	2034.0	2048.3	2056.7
20°	2130.8	2119.5	2068.2	2008.3	1971.4	1962.8	1982.7	2008.3	2016.9
22.5°	2085.2	2062.5	2002.6	1931.4	1891.6	1891.6	1920.1	1951.3	1962.8
25°	2014.1	1997.0	1928.6	1845.9	1806.1	1803.2	1837.4	1880.1	1891.6
27.5°	1934.3	1911.5	1837.4	1752.0	1709.3	1712.1	1749.1	1791.9	1803.2
30°	1820.4	1791.9	1726.3	1643.7	1603.8	1615.2	1652.3	1683.6	1697.8
32.5°	1692.1	1666.6	1606.7	1529.8	1495.6	1507.0	1538.3	1566.8	1578.2
35°	1558.3	1529.8	1478.5	1410.1	1387.3	1398.7	1427.2	1450.0	1455.6
37.5°	1407.2	1387.3	1350.3	1296.2	1279.0	1293.3	1316.1	1330.3	1336.0
40°	1267.7	1250.5	1219.3	1179.3	1173.6	1185.1	1207.8	1216.4	1219.3
42.5°	1130.9	1116.7	1096.7	1068.3	1068.3	1079.7	1099.7	1105.3	1108.1
45°	999.9	991.4	982.8	960.0	965.8	980.0	991.4	999.9	999.9
47.5°	886.0	888.7	877.4	860.3	866.1	880.3	888.7	897.3	897.3
50°	797.6	789.2	777.7	760.7	769.1	780.6	791.9	797.6	800.5
52.5°	695.1	692.2	683.6	663.7	669.4	675.2	686.5	695.1	697.9
55°	621.0	612.4	601.1	578.2	578.2	584.1	589.7	595.4	601.1
57.5°	549.8	541.3	524.2	498.6	495.7	495.7	492.8	498.6	507.0
60°	478.5	475.8	450.0	427.4	418.8	410.2	398.9	401.6	413.1
62.5°	415.9	410.2	387.4	358.9	341.9	327.6	313.4	310.5	322.0
65°	358.9	353.2	327.6	299.1	279.2	253.5	230.7	230.7	239.3
67.5°	307.7	296.2	273.4	242.2	216.4	185.2	162.4	168.0	170.9
70°	256.4	247.8	222.3	190.9	159.5	128.2	114.0	116.9	116.9
72.5°	210.8	199.4	173.7	142.5	111.1	82.6	76.9	74.1	74.1
75°	165.3	153.8	128.2	96.8	68.3	48.4	42.7	42.7	42.7
77.5°	119.6	111.1	88.4	59.9	37.1	22.8	19.9	17.1	17.1
80°	82.6	74.1	54.1	31.4	14.2	8.6	8.6	8.6	8.6
82.5°	48.4	39.8	25.6	14.2	5.7	2.9	2.9	2.9	2.9
85°	22.8	17.1	11.3	5.7	2.9	2.9	2.9	2.9	2.9
87.5°	2.9	2.9	2.9	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)