

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: P582448

Luminaire Tested: **HC640D010-HM63040830-61WWW**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582448  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-16)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC640D010-HM63040830-61WWW  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4193.6 lumens  
Efficiency: N/A  
Efficacy: 102.3 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1.06 / 1.14  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

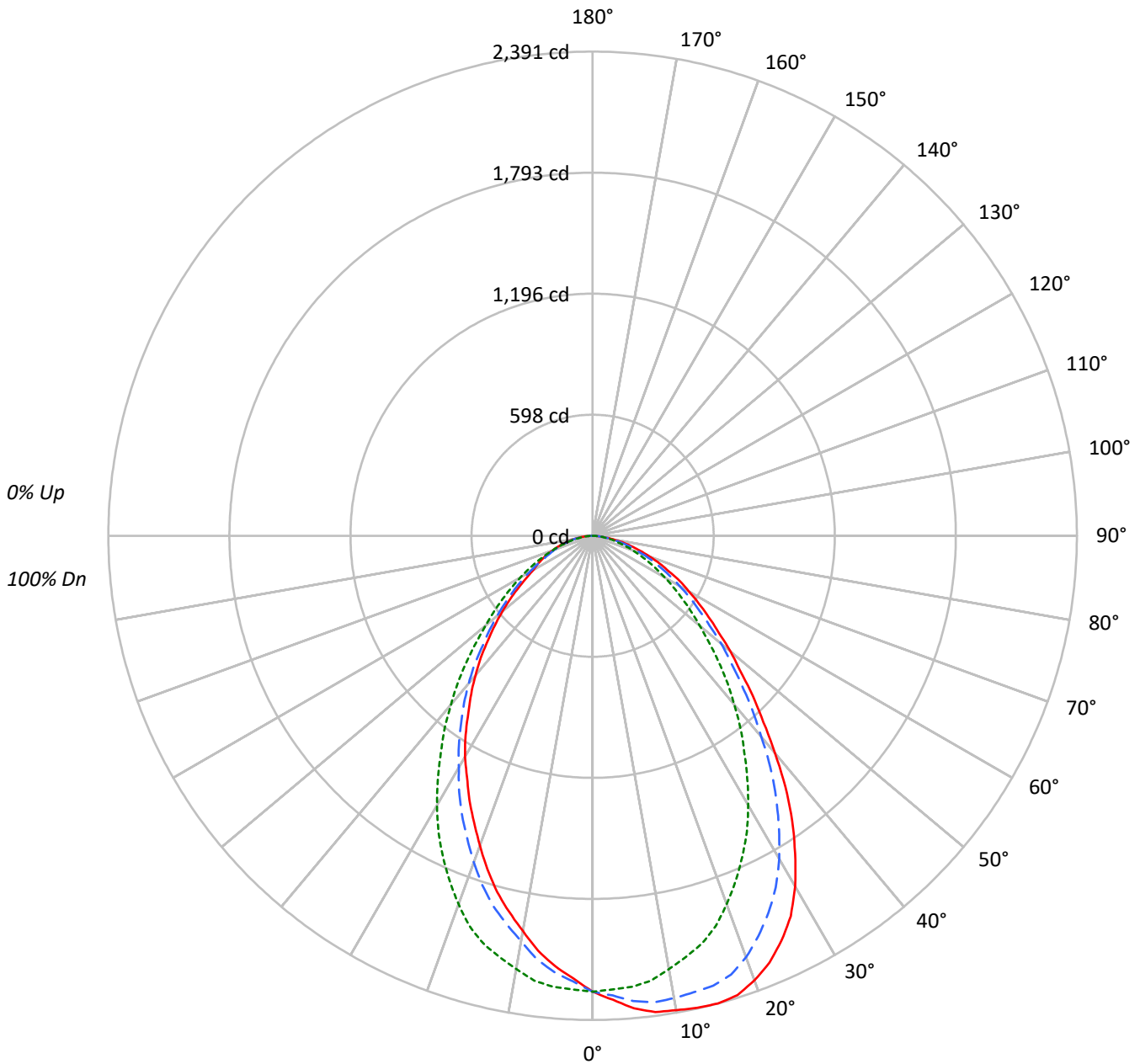
Input Watts (W): 41  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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

RF	20									20									20									20									
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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	93	91	89	87																			
2	102	95	89	84	99	93	88	83	90	85	81	86	83	79	83	80	78	76																			
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66																			
4	87	76	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58																			
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	53	51																			
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46																			
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42																			
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38																			
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34																			
10	58	46	39	34	57	45	38	34	44	38	33	44	38	33	43	37	33	32																			

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

	0°	90°	180°
0°	123417	123417	123417
5°	128885	123052	117384
10°	132407	120934	110313
15°	135682	118315	103349
20°	136284	112955	94922
25°	133429	105750	87059
30°	126595	97243	79784
35°	114974	87395	71581
40°	100181	77846	64406
45°	86683	68123	56611
50°	75716	58668	49619
55°	66903	51544	42570
60°	60127	45183	36872
65°	53845	39304	35763
70°	48069	33515	33515
75°	41705	28255	31454
80°	33464	23898	28697
85°	22895	21008	24782



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	211.6	5.0
10°-20°	588.2	14.0
20°-30°	819.7	19.5
30°-40°	844.6	20.1
40°-50°	699.9	16.7
50°-60°	503.0	12.0
60°-70°	320.3	7.6
70°-80°	164.5	3.9
80°-90°	41.8	1.0
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°	1619.4	38.6
0°-40°	2464.0	58.8
0°-60°	3667.0	87.4
0°-90°	4193.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4193.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2251	2251	2251	2251	2251	
5°	2342	2306	2236	2163	2133	225
15°	2391	2300	2085	1894	1821	674
25°	2206	2054	1748	1524	1439	1011
35°	1718	1579	1306	1133	1070	1067
45°	1118	1039	879	767	730	865
55°	700	642	539	479	445	631
65°	415	370	303	264	276	416
75°	197	170	133	139	148	210
85°	36	33	33	36	39	47
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°	2251.3	2251.3	2251.3	2251.3	2251.3	2251.3	2251.3	2251.3	2251.3
2.5°	2293.7	2284.6	2272.5	2260.4	2242.2	2221.1	2202.9	2196.8	2187.7
5°	2342.1	2330.1	2305.9	2275.5	2236.1	2196.8	2163.4	2142.2	2133.1
7.5°	2372.5	2357.3	2324.1	2272.5	2215.0	2157.4	2108.9	2078.6	2066.5
10°	2378.6	2363.4	2318.0	2248.2	2172.5	2093.8	2033.1	1996.8	1981.7
12.5°	2387.7	2366.4	2308.9	2227.0	2130.1	2039.2	1963.5	1918.0	1902.8
15°	2390.7	2366.4	2299.8	2199.8	2084.7	1975.6	1893.8	1839.2	1821.0
17.5°	2378.6	2351.2	2272.5	2151.3	2021.0	1905.8	1808.9	1751.4	1727.1
20°	2336.1	2305.9	2215.0	2078.6	1936.2	1814.9	1715.0	1654.4	1627.1
22.5°	2281.6	2242.2	2139.2	1993.8	1845.3	1718.0	1618.0	1557.5	1530.2
25°	2205.9	2169.5	2054.3	1899.8	1748.3	1615.0	1524.1	1460.5	1439.3
27.5°	2117.9	2075.6	1957.4	1802.8	1648.4	1515.0	1427.2	1369.5	1342.3
30°	1999.9	1960.4	1842.2	1687.7	1536.2	1412.0	1321.1	1272.6	1260.4
32.5°	1860.4	1827.1	1711.9	1566.6	1421.1	1305.9	1230.2	1178.7	1166.5
35°	1718.0	1678.7	1578.6	1442.3	1305.9	1202.9	1133.3	1087.8	1069.6
37.5°	1563.5	1527.1	1442.3	1321.1	1199.9	1102.9	1042.3	1003.0	984.8
40°	1399.9	1372.6	1293.8	1196.9	1087.8	1003.0	951.4	918.2	900.0
42.5°	1248.3	1221.1	1166.5	1075.6	984.8	909.1	863.5	833.2	818.0
45°	1118.1	1093.8	1039.2	960.5	878.7	815.0	766.6	745.4	730.2
47.5°	987.8	975.7	927.1	854.4	778.7	724.1	690.9	666.6	654.5
50°	887.8	872.7	827.1	751.4	687.9	645.4	615.0	593.9	581.8
52.5°	784.8	769.6	727.2	663.6	612.0	572.7	542.4	524.2	512.0
55°	700.0	687.9	642.4	584.8	539.3	506.0	478.8	457.6	445.4
57.5°	621.1	609.0	566.6	512.0	472.7	442.4	418.1	399.9	384.8
60°	548.4	539.3	496.9	445.4	412.1	381.7	360.6	345.4	336.3
62.5°	484.9	466.7	430.3	384.8	354.5	330.3	309.0	299.9	306.0
65°	415.1	406.0	369.7	330.3	303.0	278.7	263.7	269.7	275.7
67.5°	357.6	345.4	315.1	278.7	254.6	236.4	227.3	239.4	242.4
70°	299.9	287.8	260.6	230.3	209.1	196.9	196.9	206.0	209.1
72.5°	245.5	236.4	212.1	187.8	172.7	163.6	169.6	175.7	178.7
75°	196.9	187.8	169.6	148.5	133.4	133.4	139.4	145.5	148.5
77.5°	151.6	145.5	127.3	112.1	106.0	106.0	112.1	115.1	118.2
80°	106.0	100.0	90.9	81.8	75.7	81.8	87.8	87.8	90.9
82.5°	69.6	66.6	60.5	54.5	54.5	57.5	60.5	63.6	63.6
85°	36.4	36.4	33.4	30.3	33.4	36.4	36.4	39.4	39.4
87.5°	12.1	12.1	12.1	12.1	15.2	15.2	15.2	15.2	15.2
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)