

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: P582431

Luminaire Tested: **HC640D010-HM63040827-61WWWB**

Issue Date: 9/16/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P582431  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2105-241-18)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC640D010-HM63040827-61WWWB  
Description: HALO COMMERCIAL 6" ROUND, NEW CONSTRUCTION FRAME, WITH 6" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4047.4 lumens  
Efficiency: N/A  
Efficacy: 98.7 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.09 / 1.17  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

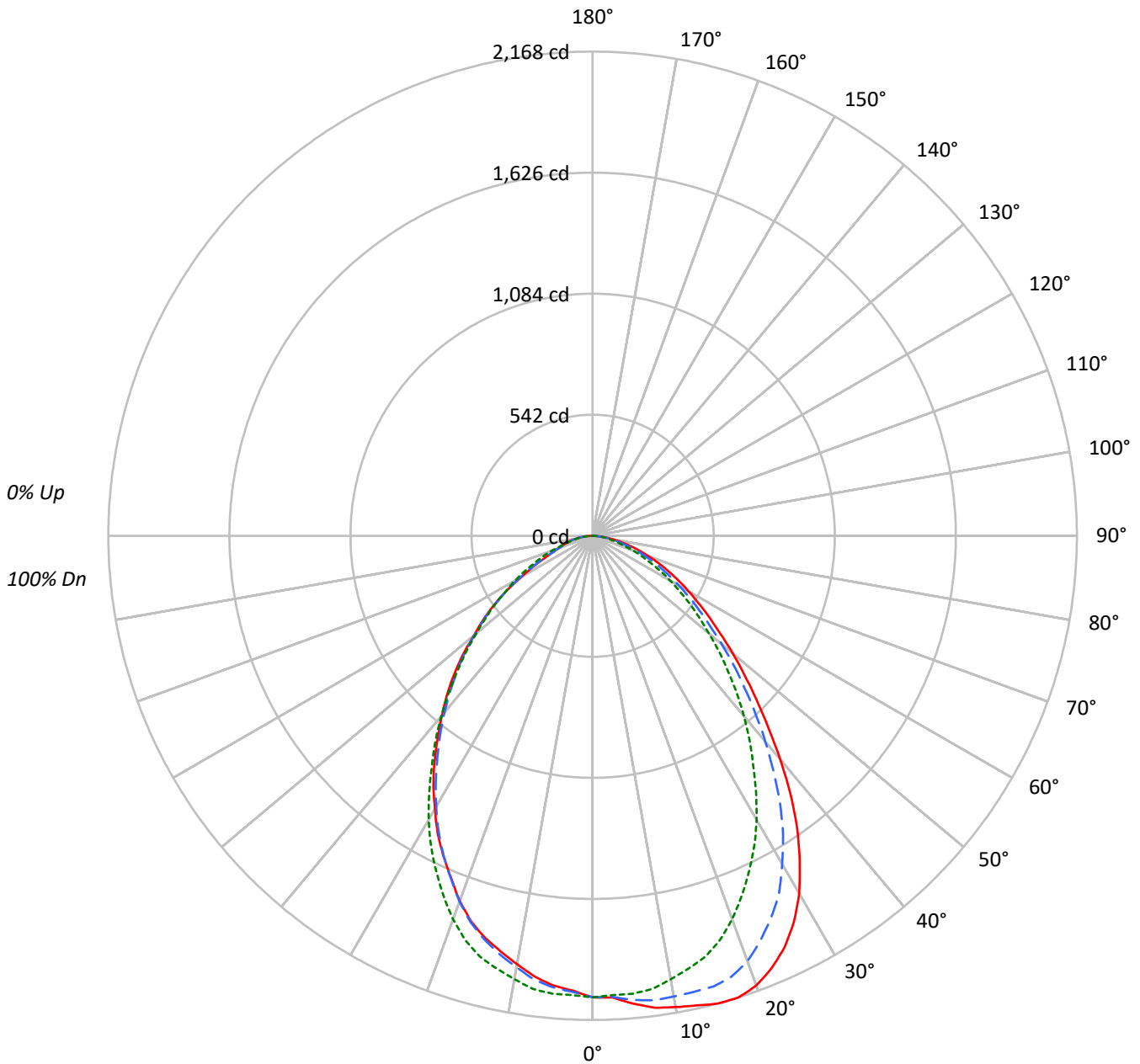
Input Watts (W): 41  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	100
1	111	107	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87	87	87	87
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76	76	76	76
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66	66	66	66
4	87	77	69	63	85	75	68	63	73	67	62	71	65	61	69	64	60	58	58	58	58
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52	52	52	52
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46	46	46	46
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	42	42	42	42
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38	38	38	38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34	34	34	34
10	58	46	38	34	57	45	38	33	44	38	33	43	37	33	43	37	33	31	31	31	31

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

	0°	90°	180°
0°	113297	113297	113297
5°	115749	113267	111248
10°	119292	112222	108448
15°	123065	110721	105761
20°	125019	106573	101462
25°	122959	100246	95637
30°	117069	92938	89362
35°	106756	83895	82570
40°	93353	75363	74962
45°	80334	66325	67860
50°	69831	57789	58992
55°	60987	50732	51267
60°	54173	43966	40249
65°	48345	36995	30769
70°	42539	30310	25790
75°	36495	23913	24527
80°	29391	20489	24056
85°	19499	17738	21323



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	195.7	4.8
10°-20°	557.1	13.8
20°-30°	795.2	19.6
30°-40°	833.0	20.6
40°-50°	701.3	17.3
50°-60°	499.2	12.3
60°-70°	292.2	7.2
70°-80°	138.3	3.4
80°-90°	35.6	0.9
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°	1548.0	38.2
0°-40°	2381.0	58.8
0°-60°	3581.4	88.5
0°-90°	4047.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4047.4	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2067	2067	2067	2067	2067	
5°	2103	2086	2058	2030	2022	202
15°	2168	2089	1951	1872	1864	612
25°	2033	1889	1657	1578	1581	930
35°	1595	1462	1254	1211	1234	991
45°	1036	960	856	858	875	804
55°	638	584	531	531	536	575
65°	373	330	285	240	237	372
75°	172	144	113	110	116	185
85°	31	26	28	34	34	40
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°	2066.7	2066.7	2066.7	2066.7	2066.7	2066.7	2066.7	2066.7	2066.7
2.5°	2069.6	2069.6	2066.7	2064.0	2058.3	2049.9	2044.2	2038.5	2038.5
5°	2103.4	2097.9	2086.5	2072.4	2058.3	2041.3	2030.1	2021.6	2021.6
7.5°	2131.6	2120.4	2097.9	2072.4	2047.0	2024.4	2004.6	1993.4	1990.5
10°	2143.0	2128.9	2095.0	2055.4	2016.0	1984.8	1962.3	1948.2	1948.2
12.5°	2154.3	2137.3	2092.2	2035.7	1984.8	1942.5	1919.9	1908.6	1905.8
15°	2168.4	2145.7	2089.3	2018.7	1950.9	1903.1	1871.9	1863.5	1863.5
17.5°	2168.4	2140.2	2069.6	1982.1	1897.4	1843.7	1815.5	1807.0	1809.8
20°	2143.0	2112.0	2027.2	1919.9	1826.8	1770.2	1742.0	1736.5	1739.2
22.5°	2095.0	2058.3	1962.3	1846.5	1744.9	1685.6	1660.2	1660.2	1657.3
25°	2032.8	1993.4	1888.9	1767.5	1657.3	1598.1	1578.3	1581.1	1581.1
27.5°	1950.9	1911.5	1807.0	1677.1	1567.0	1507.7	1493.6	1499.3	1502.1
30°	1849.4	1807.0	1696.9	1569.9	1468.2	1409.0	1400.4	1409.0	1411.7
32.5°	1725.1	1694.1	1586.8	1456.8	1360.9	1310.0	1307.3	1315.7	1327.0
35°	1595.2	1561.3	1462.5	1343.9	1253.6	1211.2	1211.2	1225.4	1233.8
37.5°	1454.1	1420.2	1329.8	1231.0	1154.8	1115.2	1120.9	1135.0	1137.9
40°	1304.5	1279.0	1202.8	1118.1	1053.1	1022.1	1030.5	1044.6	1047.5
42.5°	1163.2	1140.7	1078.5	1002.3	954.3	931.7	943.1	960.0	965.6
45°	1036.2	1010.7	960.0	895.1	855.5	844.2	858.3	869.6	875.3
47.5°	920.4	897.8	855.5	796.1	767.9	762.4	776.5	782.0	787.7
50°	818.8	796.1	753.8	700.3	677.6	677.6	688.9	694.6	691.7
52.5°	720.0	700.3	660.7	615.4	601.3	601.3	609.9	612.7	618.3
55°	638.1	618.3	584.4	542.1	530.8	525.1	530.8	530.8	536.4
57.5°	561.9	544.9	513.9	474.3	460.2	454.5	451.8	449.0	454.5
60°	494.1	480.0	446.1	412.2	401.0	386.9	375.5	364.2	367.1
62.5°	432.0	417.9	386.9	353.0	341.6	321.8	307.7	293.6	299.3
65°	372.7	358.6	330.3	302.1	285.2	262.6	240.1	231.5	237.2
67.5°	319.1	307.7	279.5	251.3	237.2	211.7	189.1	189.1	192.0
70°	265.4	254.2	231.5	206.2	189.1	166.6	158.1	160.9	160.9
72.5°	217.4	208.9	186.4	163.8	146.8	132.7	132.7	135.5	138.4
75°	172.3	166.6	144.0	124.2	112.9	104.5	110.1	112.9	115.8
77.5°	132.7	124.2	107.2	93.1	84.7	87.6	93.1	96.0	98.8
80°	93.1	90.4	76.2	67.8	64.9	67.8	73.5	76.2	76.2
82.5°	59.4	56.5	48.0	45.1	45.1	48.0	53.7	53.7	53.7
85°	31.0	28.2	25.5	25.5	28.2	31.0	33.9	33.9	33.9
87.5°	11.3	8.4	11.3	11.3	14.1	14.1	14.1	14.1	14.1
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)