

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: P580614

Luminaire Tested: **HC440D010-HM43040840-41WWWB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580614
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-18)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC440D010-HM43040840-41WWWB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, BLACK BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4309.7 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.07 / 1.15
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

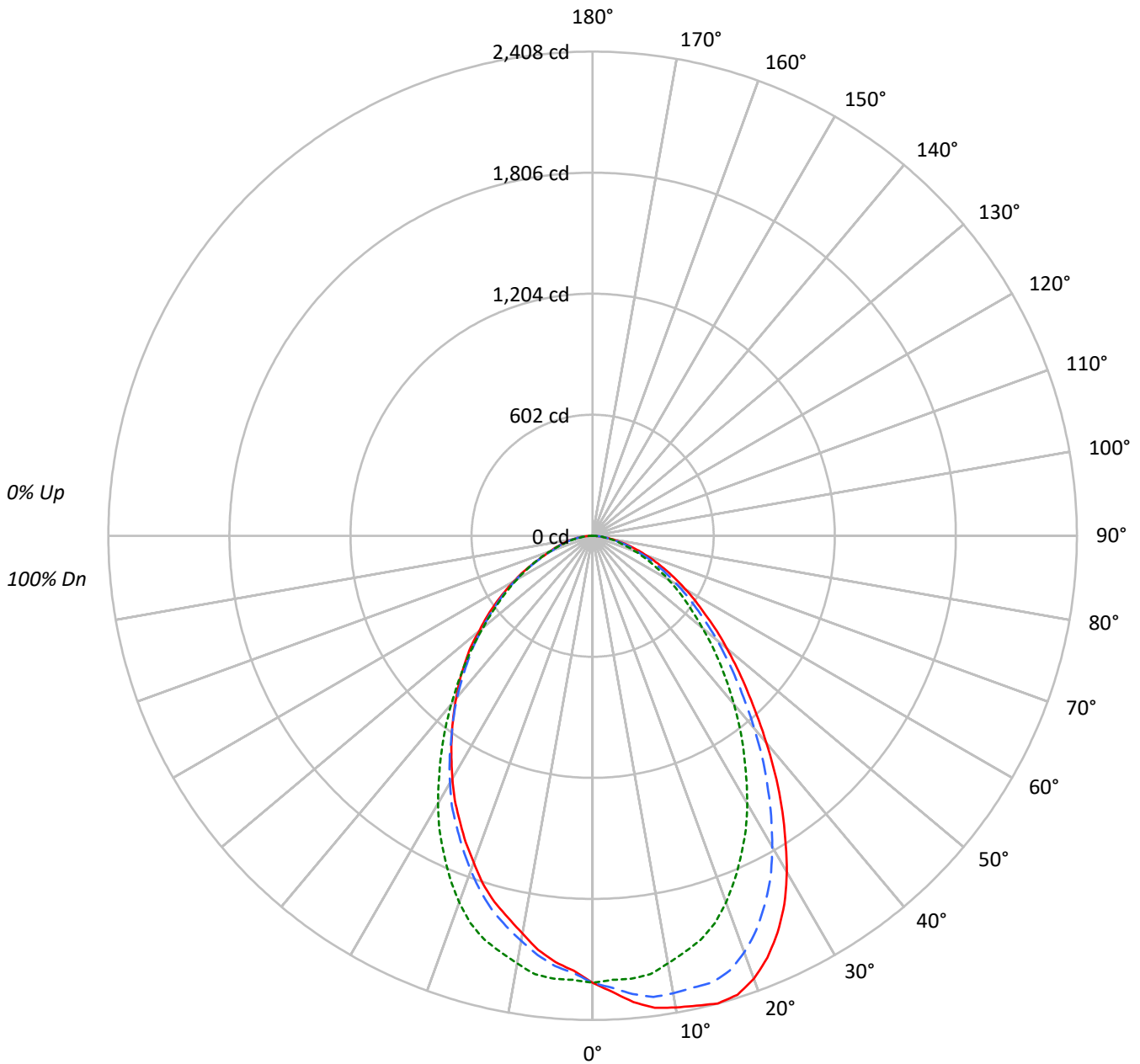
Input Watts (W): 41
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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			100
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87			87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75			75
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66			66
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	60	58			58
5	81	69	61	55	79	68	60	55	66	59	54	64	58	53	62	57	53	51			51
6	75	63	55	49	73	62	54	49	60	53	48	59	53	48	57	52	47	46			46
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41			41
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37			37
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34			34
10	58	45	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31			31

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	274111	274111	274111
5°	288221	273734	263495
10°	298342	270474	251536
15°	307456	265558	240785
20°	307796	254621	226912
25°	296228	237979	212747
30°	275070	218996	198686
35°	246555	197151	183855
40°	216341	175910	169953
45°	189090	155755	156749
50°	166965	136301	141213
55°	147221	120856	126985
60°	131610	106965	111208
65°	116569	94096	94096
70°	101844	80242	80242
75°	87022	67959	76108
80°	68901	60732	68901
85°	44438	52505	64535



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.5	4.9
10°-20°	592.9	13.8
20°-30°	830.7	19.3
30°-40°	855.8	19.9
40°-50°	728.6	16.9
50°-60°	539.8	12.5
60°-70°	338.8	7.9
70°-80°	168.3	3.9
80°-90°	44.2	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°	1634.1	37.9
0°-40°	2489.9	57.8
0°-60°	3758.4	87.2
0°-90°	4309.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4309.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2222	2222	2222	2222	2222	
5°	2328	2288	2211	2148	2128	224
15°	2408	2299	2080	1928	1886	677
25°	2177	2025	1749	1598	1563	995
35°	1637	1515	1309	1224	1221	1021
45°	1084	1010	893	876	899	841
55°	685	630	562	573	590	619
65°	399	359	322	317	322	398
75°	183	163	143	154	160	195
85°	31	31	37	43	46	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°	2222.3	2222.3	2222.3	2222.3	2222.3	2222.3	2222.3	2222.3	2222.3
2.5°	2270.7	2262.2	2250.7	2230.8	2210.8	2193.7	2176.6	2168.0	2165.2
5°	2327.8	2310.7	2287.8	2250.7	2210.8	2176.6	2148.1	2133.8	2128.1
7.5°	2367.8	2350.6	2313.5	2256.5	2199.4	2148.1	2102.4	2082.5	2076.8
10°	2382.0	2362.1	2310.7	2233.6	2159.5	2096.7	2045.4	2019.7	2008.3
12.5°	2393.4	2367.8	2302.1	2210.8	2119.6	2042.5	1988.3	1954.1	1945.5
15°	2407.7	2379.1	2299.3	2188.0	2079.6	1988.3	1928.5	1897.1	1885.6
17.5°	2393.4	2362.1	2267.9	2142.3	2019.7	1919.8	1854.2	1825.7	1814.3
20°	2344.9	2310.7	2205.1	2071.0	1939.8	1837.1	1771.5	1742.9	1728.7
22.5°	2270.7	2233.6	2125.2	1982.6	1848.5	1748.6	1686.0	1657.4	1648.9
25°	2176.6	2139.5	2025.4	1879.9	1748.6	1651.7	1597.5	1571.9	1563.2
27.5°	2065.3	2028.2	1917.0	1774.3	1648.9	1557.5	1514.8	1489.1	1483.4
30°	1931.3	1894.2	1785.8	1654.6	1537.6	1452.0	1417.7	1397.8	1395.0
32.5°	1783.0	1751.6	1651.7	1531.8	1420.6	1349.3	1323.7	1309.3	1306.5
35°	1637.4	1603.3	1514.8	1406.4	1309.3	1246.7	1223.8	1221.0	1221.0
37.5°	1489.1	1454.8	1383.5	1283.7	1200.9	1143.9	1135.3	1138.3	1138.3
40°	1343.6	1312.2	1249.5	1166.7	1092.5	1049.8	1046.9	1052.6	1055.5
42.5°	1206.6	1181.0	1123.9	1052.6	989.8	955.7	958.5	969.9	978.5
45°	1084.0	1061.3	1009.8	947.1	892.9	867.2	875.7	890.1	898.6
47.5°	972.8	952.7	904.3	847.3	801.6	784.5	795.9	813.1	824.4
50°	870.1	853.0	807.3	747.4	710.3	698.9	713.2	730.3	735.9
52.5°	778.8	761.7	713.2	661.8	633.3	627.5	641.9	656.1	664.6
55°	684.6	670.4	630.5	584.8	562.0	559.2	573.4	584.8	590.5
57.5°	607.6	593.3	556.2	516.3	496.4	493.5	507.8	516.3	519.1
60°	533.5	519.1	484.9	447.8	433.6	433.6	442.1	447.8	450.8
62.5°	465.0	450.8	419.4	388.0	376.5	376.5	376.5	379.5	388.0
65°	399.4	388.0	359.4	330.9	322.4	316.7	316.7	316.7	322.4
67.5°	339.4	328.0	305.2	279.6	271.1	262.4	259.6	265.3	265.3
70°	282.4	273.9	251.0	231.0	222.5	214.0	211.1	222.5	222.5
72.5°	231.0	222.5	208.3	188.3	179.7	176.9	182.6	188.3	191.1
75°	182.6	174.0	162.7	151.2	142.6	145.5	154.0	156.9	159.7
77.5°	136.9	134.1	122.6	114.1	114.1	116.9	122.6	128.4	131.3
80°	97.0	94.2	88.4	82.7	85.5	91.2	94.2	99.9	97.0
82.5°	59.9	59.9	57.1	57.1	59.9	65.6	68.5	71.3	74.2
85°	31.4	31.4	31.4	34.2	37.1	39.9	42.8	45.6	45.6
87.5°	8.5	11.4	11.4	14.2	17.2	17.2	20.0	20.0	20.0
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)