

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: P580577

Luminaire Tested: **HC440D010-HM43040830-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580577
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC440D010-HM43040830-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" 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: 4126.3 lumens
Efficiency: N/A
Efficacy: 100.6 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.03 / 1.1
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

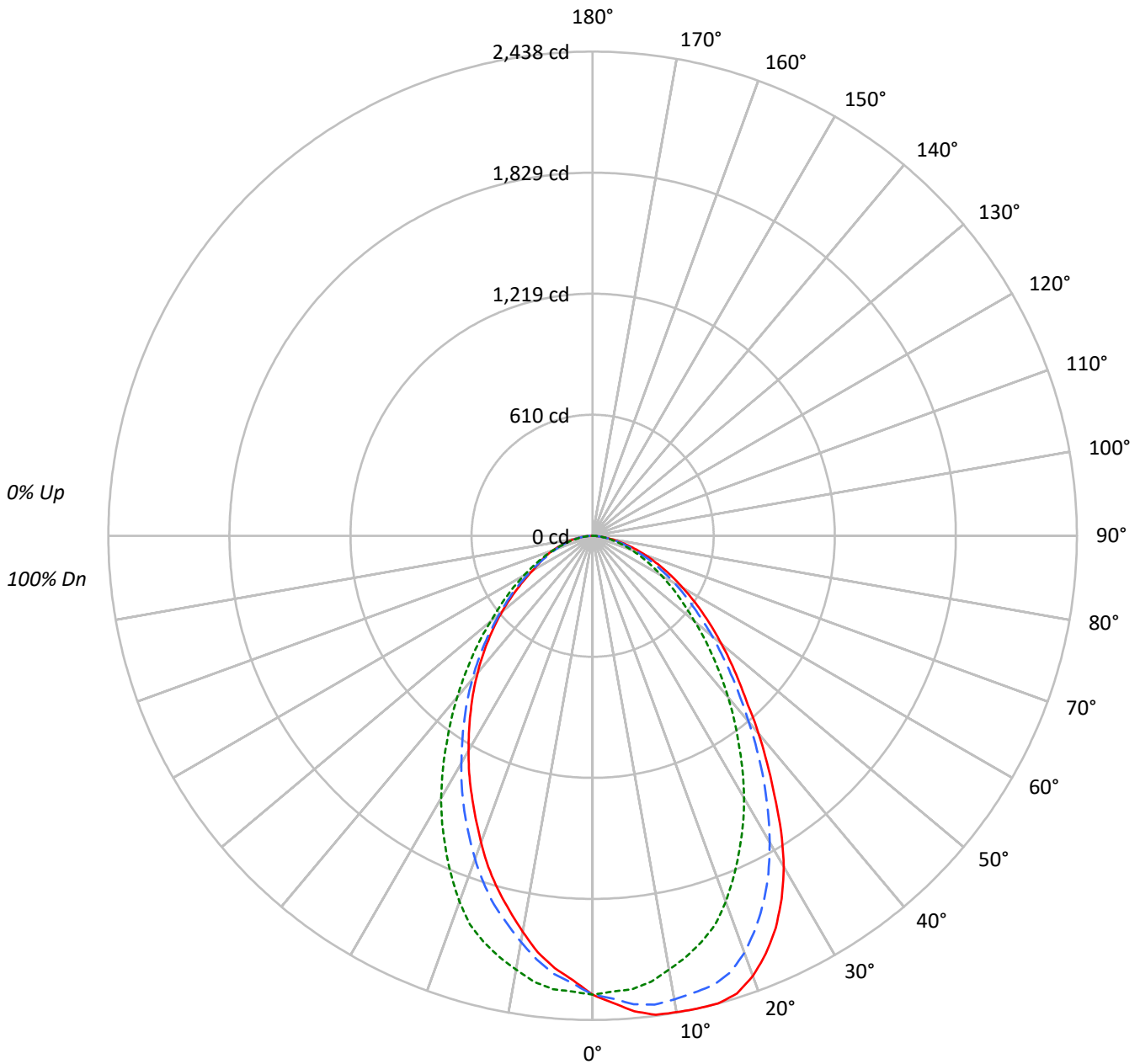
Input Watts (W): 41
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	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	76	68	63	73	67	62	71	66	61	69	64	60	58	58	58	58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52	52	52	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47	47	47	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42	42	42	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38	38	38	38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35	35	35	35
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32	32	32	32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	285002	285002	285002
5°	297544	283726	270614
10°	305068	277826	253653
15°	311376	270411	235345
20°	309725	257273	215519
25°	296705	237884	196075
30°	274116	217202	177706
35°	240261	193206	160862
40°	209225	170693	144882
45°	182095	148882	129450
50°	162244	128318	114252
55°	144984	112813	98792
60°	129414	98578	85182
65°	115022	86478	80904
70°	100979	74508	75482
75°	85497	63479	69913
80°	65633	54055	63716
85°	38353	42315	53779



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	216.6	5.2
10°-20°	597.4	14.5
20°-30°	816.2	19.8
30°-40°	819.6	19.9
40°-50°	678.0	16.4
50°-60°	491.4	11.9
60°-70°	311.2	7.5
70°-80°	157.3	3.8
80°-90°	38.5	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°	1630.2	39.5
0°-40°	2449.8	59.4
0°-60°	3619.2	87.7
0°-90°	4126.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4126.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2311	2311	2311	2311	2311	
5°	2403	2368	2292	2215	2186	230
15°	2438	2343	2118	1922	1843	686
25°	2180	2036	1748	1528	1441	996
35°	1596	1501	1283	1125	1068	1000
45°	1044	984	854	769	742	812
55°	674	614	525	478	459	606
65°	394	351	296	266	277	392
75°	179	155	133	139	147	192
85°	27	27	30	35	38	38
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°	2310.6	2310.6	2310.6	2310.6	2310.6	2310.6	2310.6	2310.6	2310.6
2.5°	2354.1	2345.9	2332.4	2316.1	2297.0	2275.3	2256.2	2245.4	2240.0
5°	2403.1	2392.2	2367.7	2332.4	2291.5	2250.9	2215.4	2193.7	2185.6
7.5°	2432.9	2416.7	2381.3	2327.0	2264.4	2204.6	2153.0	2123.1	2114.9
10°	2435.7	2416.7	2370.5	2297.0	2218.2	2139.3	2076.9	2033.4	2025.2
12.5°	2438.4	2414.0	2356.8	2269.8	2171.9	2074.1	1998.0	1946.4	1932.7
15°	2438.4	2414.0	2343.2	2240.0	2117.6	2006.1	1921.8	1862.1	1843.0
17.5°	2416.7	2389.4	2305.2	2185.6	2052.3	1927.3	1829.5	1766.9	1747.9
20°	2359.6	2329.7	2234.5	2104.0	1960.0	1829.5	1731.6	1666.4	1641.9
22.5°	2278.0	2242.7	2142.1	2000.8	1856.6	1723.4	1628.3	1560.3	1538.6
25°	2180.1	2144.8	2036.1	1897.4	1747.9	1622.9	1527.7	1465.1	1440.7
27.5°	2060.5	2022.5	1916.5	1777.8	1639.1	1514.1	1427.1	1370.1	1345.5
30°	1924.6	1883.8	1783.3	1650.0	1525.0	1405.4	1321.1	1274.9	1247.7
32.5°	1766.9	1731.6	1641.9	1522.3	1405.4	1291.2	1220.5	1179.7	1158.0
35°	1595.6	1576.7	1500.6	1397.2	1283.1	1187.9	1125.4	1087.4	1068.3
37.5°	1443.4	1424.5	1359.2	1272.2	1171.7	1084.7	1033.0	1000.4	984.0
40°	1299.4	1283.1	1220.5	1147.1	1060.1	984.0	940.5	916.1	899.8
42.5°	1158.0	1149.9	1098.2	1030.3	954.2	889.0	853.5	834.6	820.9
45°	1043.9	1033.0	984.0	918.8	853.5	799.2	769.3	755.7	742.1
47.5°	943.3	929.6	878.1	820.9	761.2	712.2	685.0	671.5	666.0
50°	845.5	831.8	785.6	728.5	668.7	633.4	611.6	598.1	595.4
52.5°	758.5	744.8	693.2	638.9	592.6	562.7	543.7	530.1	524.6
55°	674.2	657.8	614.3	562.7	524.6	497.5	478.4	464.9	459.4
57.5°	598.1	581.7	543.7	494.7	459.4	434.9	418.6	405.0	399.6
60°	524.6	511.1	475.8	429.5	399.6	377.9	361.5	350.6	345.3
62.5°	456.7	445.8	410.5	369.7	345.3	326.2	312.6	301.8	307.2
65°	394.1	383.3	350.6	315.3	296.3	277.2	266.3	266.3	277.2
67.5°	334.4	323.5	296.3	266.3	250.1	236.5	228.3	236.5	244.6
70°	280.0	269.2	244.6	220.2	206.6	195.7	195.7	203.9	209.3
72.5°	228.3	217.5	198.4	179.4	168.5	160.4	168.5	174.0	179.4
75°	179.4	171.3	154.9	141.4	133.2	130.5	138.7	144.0	146.7
77.5°	133.2	127.8	116.9	106.0	100.6	103.2	111.4	114.1	116.9
80°	92.4	89.7	81.5	76.1	76.1	78.8	84.3	87.0	89.7
82.5°	57.1	57.1	51.7	48.9	51.7	57.1	59.7	62.6	62.6
85°	27.1	29.9	27.1	27.1	29.9	35.3	35.3	38.0	38.0
87.5°	8.2	8.2	10.9	10.9	13.6	13.6	13.6	13.6	16.3
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)