

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: P580415

Luminaire Tested: **HC435D010-HM43040827-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580415
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: HC435D010-HM43040827-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3297.5 lumens
Efficiency: N/A
Efficacy: 97.8 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

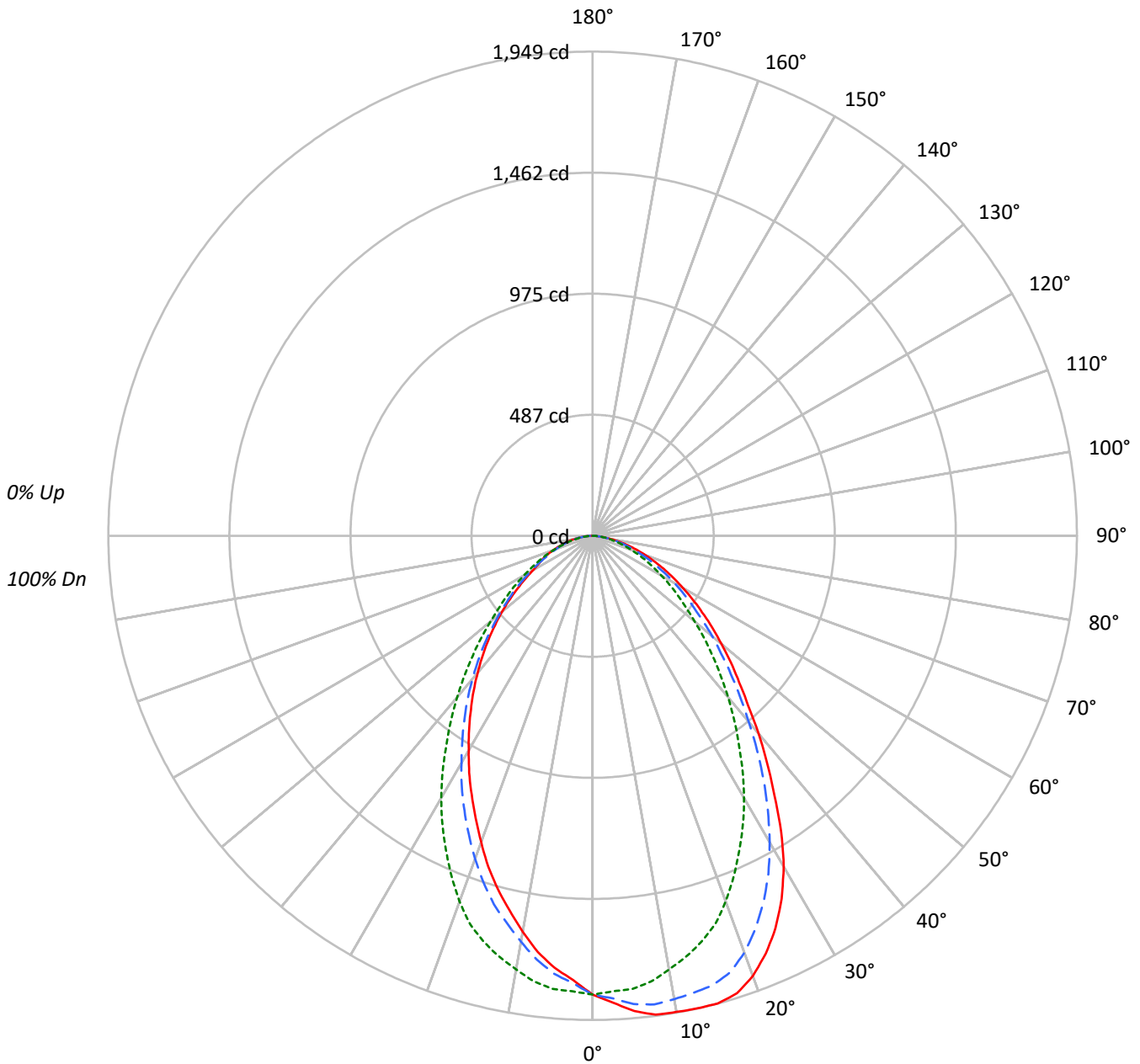
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	227758	227758	227758
5°	237778	226746	216258
10°	243784	222028	202702
15°	248830	216101	188085
20°	247507	205595	172242
25°	237108	190100	156688
30°	219067	173562	142014
35°	192016	154387	128563
40°	167199	136429	115771
45°	145515	119001	103441
50°	129642	102528	91302
55°	115846	90169	78944
60°	103438	78769	68062
65°	91907	69113	64647
70°	80711	59541	60335
75°	68340	50707	55902
80°	52422	43187	50930
85°	30711	33824	43165



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.1	5.2
10°-20°	477.4	14.5
20°-30°	652.3	19.8
30°-40°	655.0	19.9
40°-50°	541.8	16.4
50°-60°	392.7	11.9
60°-70°	248.7	7.5
70°-80°	125.7	3.8
80°-90°	30.8	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°	1302.8	39.5
0°-40°	1957.8	59.4
0°-60°	2892.3	87.7
0°-90°	3297.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3297.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1846	1846	1846	1846	1846	
5°	1920	1892	1831	1770	1747	184
15°	1949	1873	1692	1536	1473	548
25°	1742	1627	1397	1221	1151	796
35°	1275	1199	1025	899	854	799
45°	834	786	682	615	593	649
55°	539	491	419	382	367	485
65°	315	280	237	213	222	314
75°	143	124	106	111	117	153
85°	22	22	24	28	30	30
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°	1846.5	1846.5	1846.5	1846.5	1846.5	1846.5	1846.5	1846.5	1846.5
2.5°	1881.2	1874.7	1863.9	1850.9	1835.6	1818.3	1803.0	1794.4	1790.0
5°	1920.4	1911.7	1892.1	1863.9	1831.3	1798.7	1770.5	1753.1	1746.6
7.5°	1944.3	1931.3	1902.9	1859.5	1809.5	1761.8	1720.5	1696.6	1690.0
10°	1946.4	1931.3	1894.3	1835.6	1772.7	1709.6	1659.7	1625.0	1618.4
12.5°	1948.6	1929.0	1883.5	1813.9	1735.7	1657.6	1596.6	1555.4	1544.6
15°	1948.6	1929.0	1872.6	1790.0	1692.3	1603.2	1535.8	1488.1	1472.9
17.5°	1931.3	1909.5	1842.1	1746.6	1640.1	1540.2	1462.0	1412.1	1396.8
20°	1885.6	1861.7	1785.7	1681.4	1566.3	1462.0	1383.8	1331.6	1312.2
22.5°	1820.4	1792.2	1711.9	1598.9	1483.7	1377.2	1301.3	1247.0	1229.5
25°	1742.2	1714.0	1627.1	1516.3	1396.8	1296.9	1220.9	1170.9	1151.3
27.5°	1646.7	1616.2	1531.6	1420.7	1309.9	1210.0	1140.5	1094.9	1075.3
30°	1538.1	1505.5	1425.1	1318.7	1218.6	1123.1	1055.8	1018.8	997.1
32.5°	1412.1	1383.8	1312.2	1216.5	1123.1	1031.8	975.4	942.8	925.4
35°	1275.2	1260.0	1199.2	1116.6	1025.3	949.3	899.3	869.0	853.8
37.5°	1153.6	1138.3	1086.2	1016.7	936.3	866.7	825.5	799.4	786.4
40°	1038.4	1025.3	975.4	916.7	847.3	786.4	751.6	732.1	719.0
42.5°	925.4	918.9	877.6	823.3	762.5	710.4	682.2	666.9	656.1
45°	834.2	825.5	786.4	734.3	682.2	638.7	614.8	603.9	593.0
47.5°	753.8	743.0	701.7	656.1	608.3	569.2	547.4	536.6	532.2
50°	675.6	664.7	627.9	582.2	534.3	506.1	488.8	477.9	475.8
52.5°	606.1	595.3	553.9	510.5	473.5	449.7	434.4	423.6	419.3
55°	538.7	525.7	491.0	449.7	419.3	397.6	382.4	371.5	367.1
57.5°	477.9	464.9	434.4	395.4	367.1	347.5	334.5	323.7	319.3
60°	419.3	408.3	380.1	343.3	319.3	301.9	288.9	280.2	275.9
62.5°	365.0	356.3	328.0	295.4	275.9	260.7	249.9	241.1	245.5
65°	314.9	306.3	280.2	252.0	236.8	221.5	212.9	212.9	221.5
67.5°	267.2	258.5	236.8	212.9	199.8	188.9	182.4	188.9	195.5
70°	223.8	215.0	195.5	175.9	165.1	156.5	156.5	163.0	167.3
72.5°	182.4	173.8	158.6	143.4	134.7	128.1	134.7	139.0	143.4
75°	143.4	136.9	123.9	113.0	106.4	104.3	110.8	115.1	117.3
77.5°	106.4	102.1	93.4	84.7	80.4	82.5	89.0	91.3	93.4
80°	73.8	71.7	65.2	60.8	60.8	62.9	67.3	69.5	71.7
82.5°	45.6	45.6	41.3	39.1	41.3	45.6	47.8	50.0	50.0
85°	21.7	23.9	21.7	21.7	23.9	28.2	28.2	30.5	30.5
87.5°	6.5	6.5	8.7	8.7	10.9	10.9	10.9	10.9	13.0
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)