

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: P580631

Luminaire Tested: **HC440D010-HM43040927-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580631
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-HM43040927-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3295.8 lumens
Efficiency: N/A
Efficacy: 80.4 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

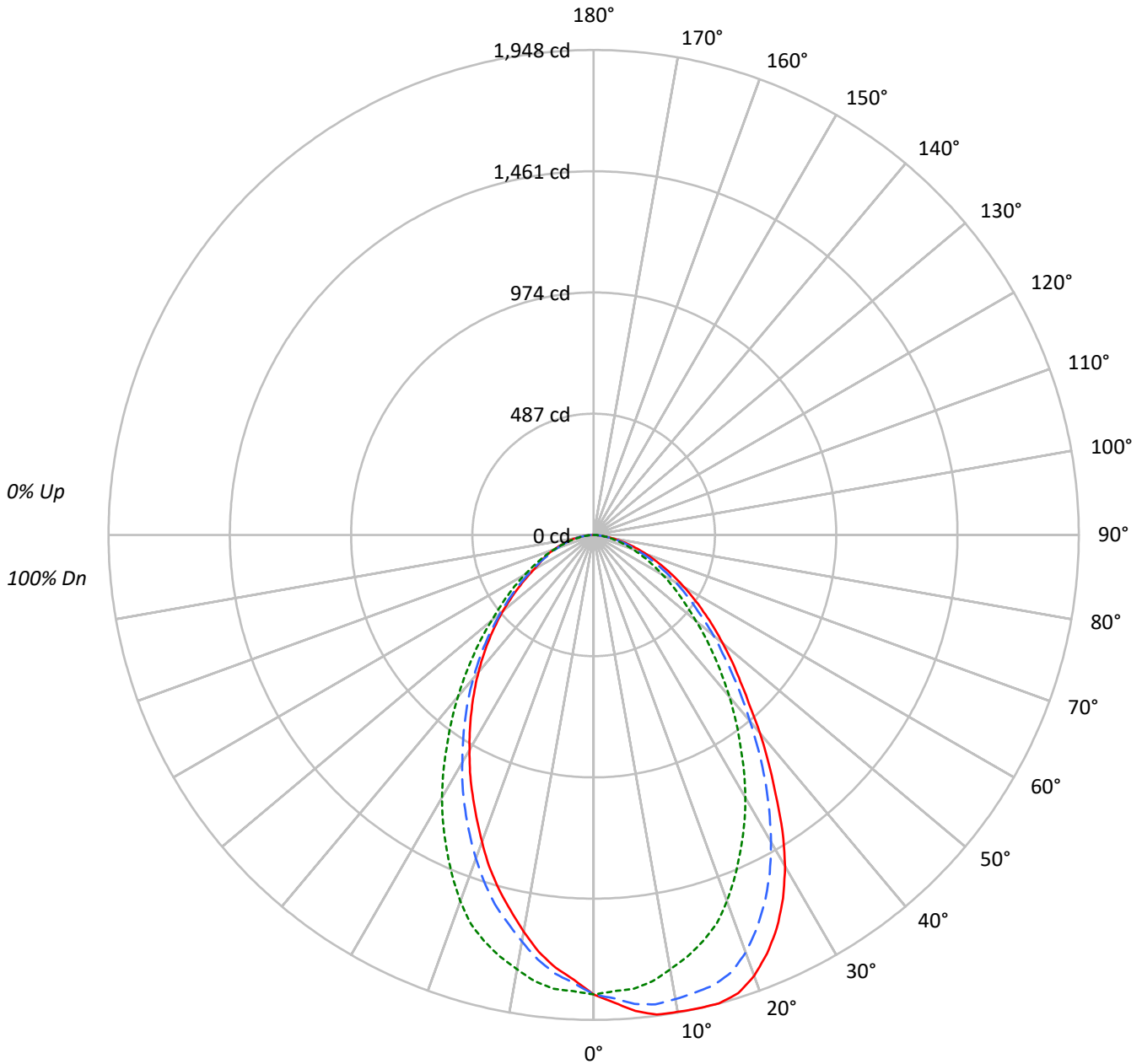
Input Watts (W): 41
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
1	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87			87
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76			76
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66			66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58			58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52			52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47			47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42			42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38			38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35			35
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32			32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	227634	227634	227634
5°	237654	226634	216135
10°	243658	221903	202602
15°	248702	215986	187982
20°	247376	205490	172150
25°	236999	190005	156607
30°	218939	173491	141943
35°	191911	154312	128488
40°	167103	136349	115722
45°	145446	118931	103406
50°	129584	102509	91245
55°	115781	90104	78901
60°	103364	78719	68037
65°	91878	69054	64647
70°	80639	59505	60263
75°	68293	50707	55902
80°	52493	43187	50859
85°	30711	33824	43023



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.0	5.2
10°-20°	477.2	14.5
20°-30°	651.9	19.8
30°-40°	654.6	19.9
40°-50°	541.6	16.4
50°-60°	392.5	11.9
60°-70°	248.6	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°	1302.1	39.5
0°-40°	1956.7	59.4
0°-60°	2890.8	87.7
0°-90°	3295.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3295.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1846	1846	1846	1846	1846	
5°	1919	1891	1830	1770	1746	184
15°	1948	1872	1691	1535	1472	548
25°	1741	1626	1396	1220	1151	796
35°	1274	1199	1025	899	853	799
45°	834	786	682	614	593	648
55°	538	491	419	382	367	484
65°	315	280	237	213	222	313
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°	1845.5	1845.5	1845.5	1845.5	1845.5	1845.5	1845.5	1845.5	1845.5
2.5°	1880.3	1873.8	1862.9	1849.9	1834.7	1817.4	1802.1	1793.5	1789.1
5°	1919.4	1910.6	1891.1	1862.9	1830.4	1797.7	1769.6	1752.2	1745.6
7.5°	1943.3	1930.2	1902.0	1858.6	1808.6	1760.9	1719.6	1695.7	1689.2
10°	1945.4	1930.2	1893.4	1834.7	1771.7	1708.7	1658.9	1624.1	1617.6
12.5°	1947.6	1928.0	1882.5	1813.0	1734.9	1656.6	1595.9	1554.6	1543.7
15°	1947.6	1928.0	1871.6	1789.1	1691.4	1602.4	1535.1	1487.3	1472.1
17.5°	1930.2	1908.5	1841.2	1745.6	1639.2	1539.4	1461.2	1411.3	1396.1
20°	1884.6	1860.7	1784.7	1680.5	1565.5	1461.2	1383.1	1331.0	1311.5
22.5°	1819.5	1791.2	1711.0	1598.0	1483.0	1376.6	1300.6	1246.3	1229.0
25°	1741.4	1713.1	1626.2	1515.5	1396.1	1296.2	1220.2	1170.3	1150.7
27.5°	1645.7	1615.4	1530.7	1420.0	1309.2	1209.3	1139.9	1094.3	1074.8
30°	1537.2	1504.7	1424.3	1318.0	1218.1	1122.6	1055.2	1018.3	996.6
32.5°	1411.3	1383.1	1311.5	1215.8	1122.6	1031.3	974.9	942.3	924.9
35°	1274.5	1259.3	1198.6	1116.1	1024.8	948.8	898.9	868.4	853.3
37.5°	1152.9	1137.7	1085.6	1016.2	935.8	866.3	825.1	799.0	785.9
40°	1037.8	1024.8	974.9	916.3	846.8	785.9	751.3	731.7	718.7
42.5°	924.9	918.4	877.2	822.9	762.1	710.0	681.8	666.5	655.7
45°	833.8	825.1	785.9	733.9	681.8	638.3	614.4	603.7	592.8
47.5°	753.4	742.6	701.3	655.7	607.9	568.9	547.2	536.3	531.9
50°	675.3	664.4	627.5	581.9	534.2	505.9	488.5	477.7	475.5
52.5°	605.8	594.9	553.7	510.3	473.3	449.4	434.3	423.4	419.0
55°	538.4	525.4	490.7	449.4	419.0	397.3	382.1	371.3	366.9
57.5°	477.7	464.7	434.3	395.2	366.9	347.4	334.4	323.5	319.1
60°	419.0	408.2	380.0	343.0	319.1	301.8	288.8	280.1	275.8
62.5°	364.8	356.0	327.9	295.3	275.8	260.5	249.6	241.0	245.4
65°	314.8	306.1	280.1	251.9	236.6	221.5	212.8	212.8	221.5
67.5°	267.0	258.4	236.6	212.8	199.8	188.9	182.4	188.9	195.4
70°	223.6	215.0	195.4	175.9	165.0	156.4	156.4	162.9	167.1
72.5°	182.4	173.6	158.5	143.3	134.6	128.1	134.6	139.0	143.3
75°	143.3	136.8	123.8	112.9	106.4	104.3	110.8	115.1	117.3
77.5°	106.4	102.0	93.4	84.6	80.4	82.5	89.0	91.1	93.4
80°	73.9	71.6	65.1	60.8	60.8	63.0	67.3	69.5	71.6
82.5°	45.6	45.6	41.3	39.1	41.3	45.6	47.8	49.9	49.9
85°	21.7	23.9	21.7	21.7	23.9	28.2	28.2	30.4	30.4
87.5°	6.5	6.5	8.6	8.6	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)