

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: P580468

Luminaire Tested: **HC435D010-HM43040840-41WWBB**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580468
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC435D010-HM43040840-41WWBB
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE BAFFLE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2993.7 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Spacing Criteria (0/90/45): 1.11 / 1.04 / 1.12
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

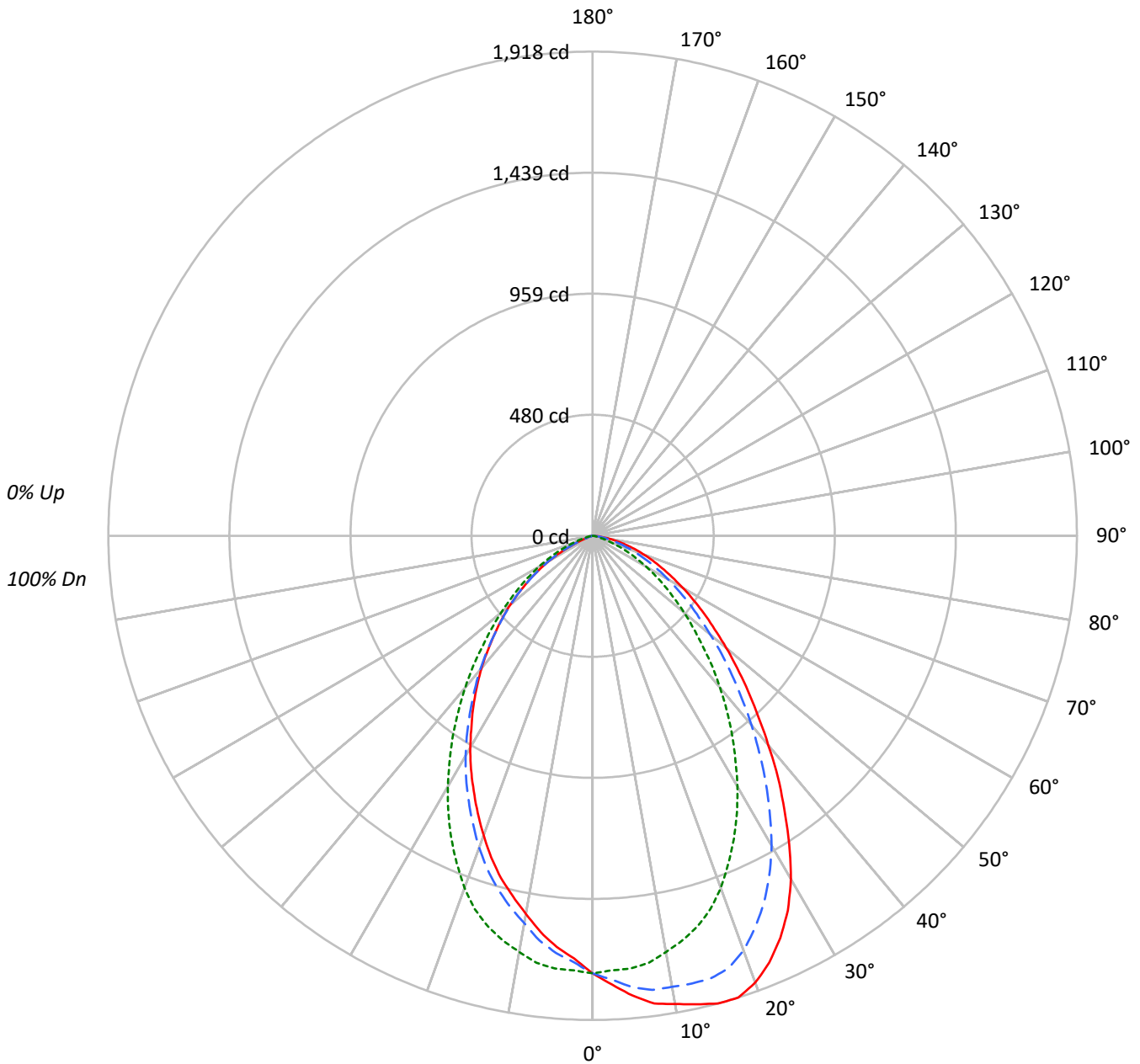
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	104	101	109	105	102	100	101	99	97	97	95	94	94	92	91	89	89	89	89
2	103	97	91	87	101	95	90	86	92	87	84	88	85	82	85	83	80	78	78	78	78
3	96	87	80	75	94	86	79	74	83	78	73	80	76	72	78	74	71	69	69	69	69
4	89	79	72	66	87	78	71	65	75	69	65	73	68	64	71	67	63	61	61	61	61
5	83	72	64	58	81	71	64	58	69	62	58	67	61	57	65	60	56	55	55	55	55
6	77	66	58	52	75	65	57	52	63	57	52	61	56	51	60	55	51	49	49	49	49
7	72	60	53	47	71	59	52	47	58	51	47	57	51	46	55	50	46	44	44	44	44
8	68	56	48	43	66	55	48	43	54	47	42	53	47	42	51	46	42	40	40	40	40
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	43	39	37	37	37	37
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	36	34	34	34	34

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	213770	213770	213770
5°	226498	213064	202379
10°	235905	209666	190515
15°	244922	204634	179133
20°	247231	194805	165692
25°	239231	180165	151653
30°	223682	163279	137998
35°	199334	145141	123985
40°	174268	126237	110344
45°	151795	107069	95469
50°	132444	90822	81823
55°	116104	75288	66277
60°	101563	60809	48672
65°	88521	45326	27318
70°	77357	29356	8872
75°	63432	15250	2335
80°	47236	7032	1776
85°	27880	3538	3538



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.6	5.5
10°-20°	457.8	15.3
20°-30°	633.0	21.1
30°-40°	636.5	21.3
40°-50°	513.6	17.2
50°-60°	347.3	11.6
60°-70°	176.8	5.9
70°-80°	56.6	1.9
80°-90°	8.7	0.3
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°	1254.3	41.9
0°-40°	1890.8	63.2
0°-60°	2751.6	91.9
0°-90°	2993.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2993.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1733	1733	1733	1733	1733	
5°	1829	1795	1721	1659	1634	176
15°	1918	1814	1602	1450	1403	540
25°	1758	1605	1324	1161	1114	804
35°	1324	1196	964	843	823	827
45°	870	779	614	547	547	674
55°	540	466	350	306	308	485
65°	303	246	155	101	94	304
75°	133	94	32	7	5	143
85°	20	10	2	2	2	26
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°	1733.1	1733.1	1733.1	1733.1	1733.1	1733.1	1733.1	1733.1	1733.1
2.5°	1780.0	1770.1	1760.2	1743.0	1723.2	1703.5	1691.2	1681.4	1676.4
5°	1829.3	1816.9	1794.8	1757.8	1720.8	1686.2	1659.1	1641.9	1634.5
7.5°	1868.8	1851.5	1814.5	1762.7	1706.0	1651.7	1617.2	1592.6	1582.7
10°	1883.5	1863.8	1814.5	1745.5	1674.0	1607.4	1558.1	1533.5	1521.1
12.5°	1900.8	1878.5	1816.9	1730.6	1641.9	1563.0	1506.3	1474.2	1462.0
15°	1918.0	1888.4	1814.5	1708.5	1602.5	1511.2	1449.6	1417.6	1402.8
17.5°	1918.0	1883.5	1794.8	1671.5	1550.7	1454.6	1385.6	1348.6	1336.2
20°	1883.5	1844.0	1747.9	1612.3	1484.1	1380.6	1314.1	1277.1	1262.3
22.5°	1829.3	1784.9	1681.4	1540.8	1405.2	1304.2	1237.6	1203.0	1188.3
25°	1757.8	1713.4	1605.0	1459.5	1323.8	1222.8	1161.2	1129.1	1114.3
27.5°	1674.0	1624.6	1516.2	1370.7	1237.6	1141.4	1084.8	1055.1	1042.8
30°	1570.5	1523.6	1417.6	1274.6	1146.4	1057.6	1005.9	978.8	968.9
32.5°	1449.6	1410.2	1306.6	1173.5	1052.7	971.4	924.5	902.3	892.5
35°	1323.8	1286.9	1195.7	1072.4	963.9	887.5	843.1	828.4	823.4
37.5°	1205.5	1173.5	1084.8	971.4	872.7	806.1	766.7	756.9	752.0
40°	1082.3	1060.0	978.8	875.1	784.0	724.8	692.7	685.3	685.3
42.5°	971.4	946.6	875.1	781.5	700.1	641.0	618.8	611.3	613.8
45°	870.2	845.6	779.0	692.7	613.8	564.6	547.3	547.3	547.3
47.5°	776.6	754.4	692.7	604.0	539.9	500.4	483.2	483.2	485.7
50°	690.2	675.5	606.5	530.1	473.3	436.3	424.1	421.6	426.4
52.5°	609.0	591.7	530.1	461.1	406.8	377.2	364.9	362.4	364.9
55°	539.9	520.2	465.9	399.4	350.1	320.5	305.7	303.3	308.2
57.5°	473.3	458.6	401.8	342.7	295.8	266.3	253.9	249.0	251.4
60°	411.7	396.9	345.2	288.4	246.5	216.9	199.7	194.8	197.3
62.5°	355.0	342.7	293.4	239.2	197.3	170.1	152.9	140.5	145.4
65°	303.3	290.9	246.5	192.3	155.3	125.8	101.0	91.3	93.6
67.5°	258.9	244.0	202.2	152.9	115.9	83.9	56.6	51.8	51.8
70°	214.5	199.7	162.8	118.4	81.4	44.4	24.6	24.6	24.6
72.5°	172.5	160.3	125.8	88.8	51.8	19.7	9.9	9.9	9.9
75°	133.1	123.3	93.6	61.6	32.0	9.9	7.4	4.9	4.9
77.5°	98.6	88.8	66.5	41.9	19.7	4.9	4.9	4.9	4.9
80°	66.5	59.1	44.4	24.6	9.9	2.5	2.5	2.5	2.5
82.5°	39.5	34.5	24.6	12.4	4.9	2.5	2.5	2.5	2.5
85°	19.7	14.8	9.9	4.9	2.5	2.5	2.5	2.5	2.5
87.5°	4.9	2.5	2.5	2.5	0.0	0.0	0.0	0.0	0.0
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)