

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: P580523

Luminaire Tested: **HC435D010-HM43040935-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580523
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-HM43040935-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3189.7 lumens
Efficiency: N/A
Efficacy: 94.7 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

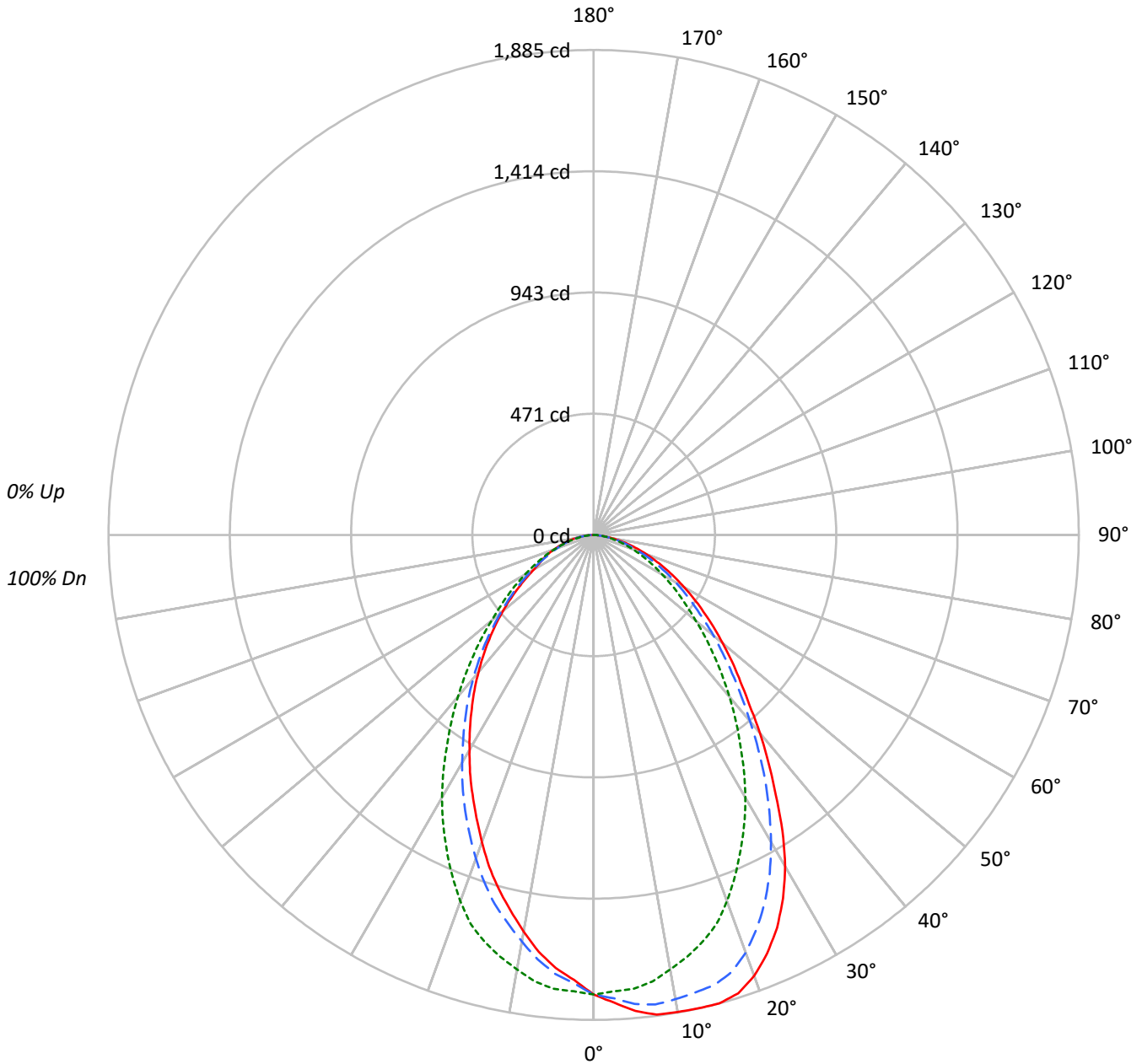
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									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																			
1	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87																			
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76																			
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66																			
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58																			
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52																			
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47																			
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42																			
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38																			
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35																			
10	59	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32																			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	220308	220308	220308
5°	230002	219329	209188
10°	235818	214763	196076
15°	240696	209040	181942
20°	239421	198861	166597
25°	229364	183894	151585
30°	211889	167907	137371
35°	185737	149342	124347
40°	161725	131953	111987
45°	140753	115094	100075
50°	125401	99189	88309
55°	112061	87201	76385
60°	100033	76203	65817
65°	88930	66865	62546
70°	78078	57594	58387
75°	66100	49087	54091
80°	50788	41767	49296
85°	29720	32833	41608



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.4	5.2
10°-20°	461.8	14.5
20°-30°	631.0	19.8
30°-40°	633.6	19.9
40°-50°	524.1	16.4
50°-60°	379.8	11.9
60°-70°	240.6	7.5
70°-80°	121.6	3.8
80°-90°	29.8	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°	1260.2	39.5
0°-40°	1893.8	59.4
0°-60°	2797.7	87.7
0°-90°	3189.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3189.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1786	1786	1786	1786	1786	
5°	1858	1830	1771	1713	1690	178
15°	1885	1811	1637	1486	1425	530
25°	1685	1574	1351	1181	1114	770
35°	1234	1160	992	870	826	773
45°	807	761	660	595	574	628
55°	521	475	406	370	355	469
65°	305	271	229	206	214	303
75°	139	120	103	107	114	148
85°	21	21	23	27	29	29
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°	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1	1786.1
2.5°	1819.8	1813.5	1803.0	1790.4	1775.7	1758.8	1744.1	1735.7	1731.5
5°	1857.6	1849.2	1830.3	1803.0	1771.4	1740.0	1712.6	1695.8	1689.5
7.5°	1880.7	1868.1	1840.8	1798.7	1750.4	1704.2	1664.3	1641.2	1634.9
10°	1882.8	1868.1	1832.3	1775.7	1714.7	1653.7	1605.4	1571.8	1565.5
12.5°	1884.9	1866.1	1821.9	1754.7	1679.0	1603.4	1544.5	1504.6	1494.0
15°	1884.9	1866.1	1811.3	1731.5	1637.0	1550.8	1485.7	1439.4	1424.8
17.5°	1868.1	1847.1	1782.0	1689.5	1586.5	1489.9	1414.2	1365.9	1351.2
20°	1824.0	1800.9	1727.4	1626.4	1515.0	1414.2	1338.6	1288.1	1269.2
22.5°	1761.0	1733.7	1655.9	1546.6	1435.2	1332.3	1258.8	1206.2	1189.4
25°	1685.3	1658.0	1573.9	1466.7	1351.2	1254.5	1181.0	1132.7	1113.8
27.5°	1592.8	1563.4	1481.4	1374.3	1267.1	1170.4	1103.2	1059.0	1040.1
30°	1487.7	1456.3	1378.5	1275.5	1178.9	1086.5	1021.3	985.5	964.5
32.5°	1365.9	1338.6	1269.2	1176.7	1086.5	998.1	943.5	912.0	895.2
35°	1233.5	1218.8	1160.0	1080.1	991.8	918.3	870.0	840.5	825.8
37.5°	1115.8	1101.1	1050.7	983.4	905.7	838.4	798.5	773.3	760.7
40°	1004.4	991.8	943.5	886.7	819.5	760.7	727.1	708.1	695.5
42.5°	895.2	888.9	849.0	796.5	737.6	687.1	659.8	645.1	634.6
45°	806.9	798.5	760.7	710.3	659.8	617.8	594.7	584.1	573.7
47.5°	729.1	718.7	678.8	634.6	588.4	550.5	529.5	519.1	514.8
50°	653.5	643.0	607.3	563.1	516.9	489.6	472.8	462.3	460.2
52.5°	586.3	575.8	535.8	493.8	458.1	435.0	420.3	409.8	405.5
55°	521.1	508.5	474.9	435.0	405.5	384.5	369.8	359.3	355.2
57.5°	462.3	449.7	420.3	382.5	355.2	336.2	323.6	313.1	308.9
60°	405.5	395.1	367.8	332.0	308.9	292.1	279.4	271.1	266.8
62.5°	353.0	344.6	317.3	285.8	266.8	252.1	241.7	233.2	237.5
65°	304.7	296.3	271.1	243.8	229.1	214.3	205.9	205.9	214.3
67.5°	258.5	250.1	229.1	205.9	193.3	182.9	176.5	182.9	189.2
70°	216.5	208.1	189.2	170.2	159.7	151.3	151.3	157.6	161.9
72.5°	176.5	168.2	153.4	138.7	130.3	124.0	130.3	134.5	138.7
75°	138.7	132.4	119.8	109.3	103.0	100.8	107.1	111.4	113.5
77.5°	103.0	98.8	90.4	81.9	77.8	79.8	86.2	88.2	90.4
80°	71.5	69.4	63.1	58.8	58.8	60.9	65.2	67.2	69.4
82.5°	44.2	44.2	39.9	37.9	39.9	44.2	46.2	48.3	48.3
85°	21.0	23.2	21.0	21.0	23.2	27.3	27.3	29.4	29.4
87.5°	6.3	6.3	8.4	8.4	10.5	10.5	10.5	10.5	12.6
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)