

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: P580541

Luminaire Tested: **HC435D010-HM43040940-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580541
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-HM43040940-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3187.5 lumens
Efficiency: N/A
Efficacy: 94.6 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

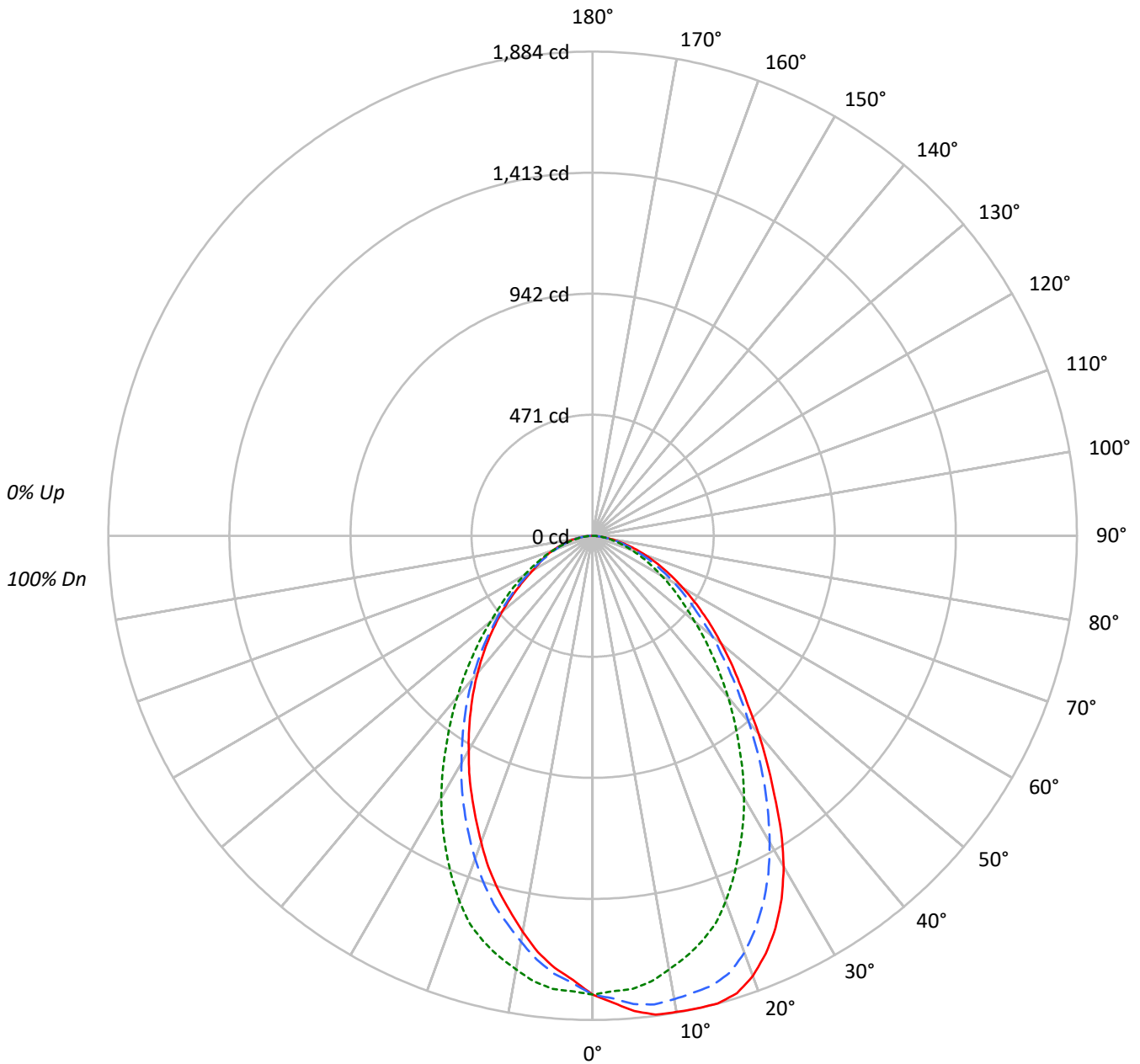
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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°	220160	220160	220160
5°	229841	219180	209028
10°	235655	214613	195939
15°	240530	208886	181802
20°	239251	198730	166479
25°	229201	183772	151476
30°	211747	167794	137271
35°	185601	149237	124256
40°	161612	131856	111922
45°	140666	115006	99987
50°	125305	99131	88232
55°	111975	87158	76299
60°	99984	76154	65793
65°	88872	66778	62517
70°	78006	57558	58315
75°	66053	48991	54043
80°	50717	41767	49296
85°	29720	32833	41608



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.3	5.2
10°-20°	461.5	14.5
20°-30°	630.5	19.8
30°-40°	633.1	19.9
40°-50°	523.8	16.4
50°-60°	379.6	11.9
60°-70°	240.4	7.5
70°-80°	121.5	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°	1259.3	39.5
0°-40°	1892.4	59.4
0°-60°	2795.8	87.7
0°-90°	3187.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3187.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1785	1785	1785	1785	1785	
5°	1856	1829	1770	1711	1688	178
15°	1884	1810	1636	1485	1424	530
25°	1684	1573	1350	1180	1113	770
35°	1233	1159	991	869	825	773
45°	806	760	659	594	573	627
55°	521	475	405	370	355	468
65°	304	271	229	206	214	303
75°	139	120	103	107	113	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°	1784.9	1784.9	1784.9	1784.9	1784.9	1784.9	1784.9	1784.9	1784.9
2.5°	1818.5	1812.2	1801.7	1789.1	1774.3	1757.6	1742.9	1734.4	1730.3
5°	1856.3	1847.9	1829.0	1801.7	1770.2	1738.7	1711.4	1694.5	1688.2
7.5°	1879.4	1866.7	1839.5	1797.5	1749.2	1703.0	1663.1	1640.0	1633.7
10°	1881.5	1866.7	1831.1	1774.3	1713.5	1652.6	1604.3	1570.7	1564.4
12.5°	1883.6	1864.7	1820.5	1753.4	1677.8	1602.1	1543.4	1503.5	1493.0
15°	1883.6	1864.7	1810.1	1730.3	1635.8	1549.7	1484.6	1438.4	1423.7
17.5°	1866.7	1845.8	1780.6	1688.2	1585.4	1488.9	1413.2	1364.9	1350.3
20°	1822.7	1799.6	1726.1	1625.3	1514.0	1413.2	1337.7	1287.2	1268.3
22.5°	1759.7	1732.4	1654.8	1545.5	1434.2	1331.3	1257.9	1205.4	1188.5
25°	1684.1	1656.8	1572.8	1465.7	1350.3	1253.6	1180.1	1131.9	1113.0
27.5°	1591.7	1562.4	1480.4	1373.3	1266.2	1169.6	1102.4	1058.4	1039.5
30°	1486.7	1455.2	1377.5	1274.6	1178.1	1085.7	1020.6	984.8	963.8
32.5°	1364.9	1337.7	1268.3	1175.9	1085.7	997.4	942.8	911.3	894.6
35°	1232.6	1218.0	1159.2	1079.4	991.1	917.6	869.3	840.0	825.2
37.5°	1115.0	1100.3	1049.9	982.7	905.0	837.8	797.9	772.8	760.2
40°	1003.7	991.1	942.8	886.2	818.9	760.2	726.6	707.7	695.1
42.5°	894.6	888.3	848.4	795.9	737.0	686.7	659.3	644.6	634.2
45°	806.4	797.9	760.2	709.8	659.3	617.4	594.3	583.8	573.2
47.5°	728.7	718.1	678.2	634.2	588.0	550.2	529.2	518.6	514.5
50°	653.0	642.6	606.8	562.8	516.6	489.3	472.4	462.0	459.8
52.5°	585.8	575.4	535.5	493.4	457.8	434.7	419.9	409.5	405.3
55°	520.7	508.2	474.6	434.7	405.3	384.3	369.6	359.1	354.8
57.5°	462.0	449.4	419.9	382.2	354.8	336.0	323.4	312.9	308.7
60°	405.3	394.7	367.4	331.8	308.7	291.9	279.3	270.9	266.7
62.5°	352.8	344.4	317.1	285.6	266.7	252.0	241.4	233.1	237.3
65°	304.5	296.1	270.9	243.6	228.8	214.2	205.8	205.8	214.2
67.5°	258.3	249.9	228.8	205.8	193.2	182.6	176.4	182.6	188.9
70°	216.3	207.9	188.9	170.1	159.6	151.2	151.2	157.5	161.7
72.5°	176.4	168.0	153.3	138.6	130.2	123.9	130.2	134.4	138.6
75°	138.6	132.3	119.7	109.1	102.8	100.8	107.1	111.3	113.4
77.5°	102.8	98.7	90.3	81.9	77.7	79.8	86.1	88.2	90.3
80°	71.4	69.4	62.9	58.8	58.8	60.9	65.1	67.2	69.4
82.5°	44.1	44.1	39.9	37.8	39.9	44.1	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)