

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: P580451

Luminaire Tested: **HC435D010-HM43040835-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580451
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-HM43040835-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3577.6 lumens
Efficiency: N/A
Efficacy: 106.2 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

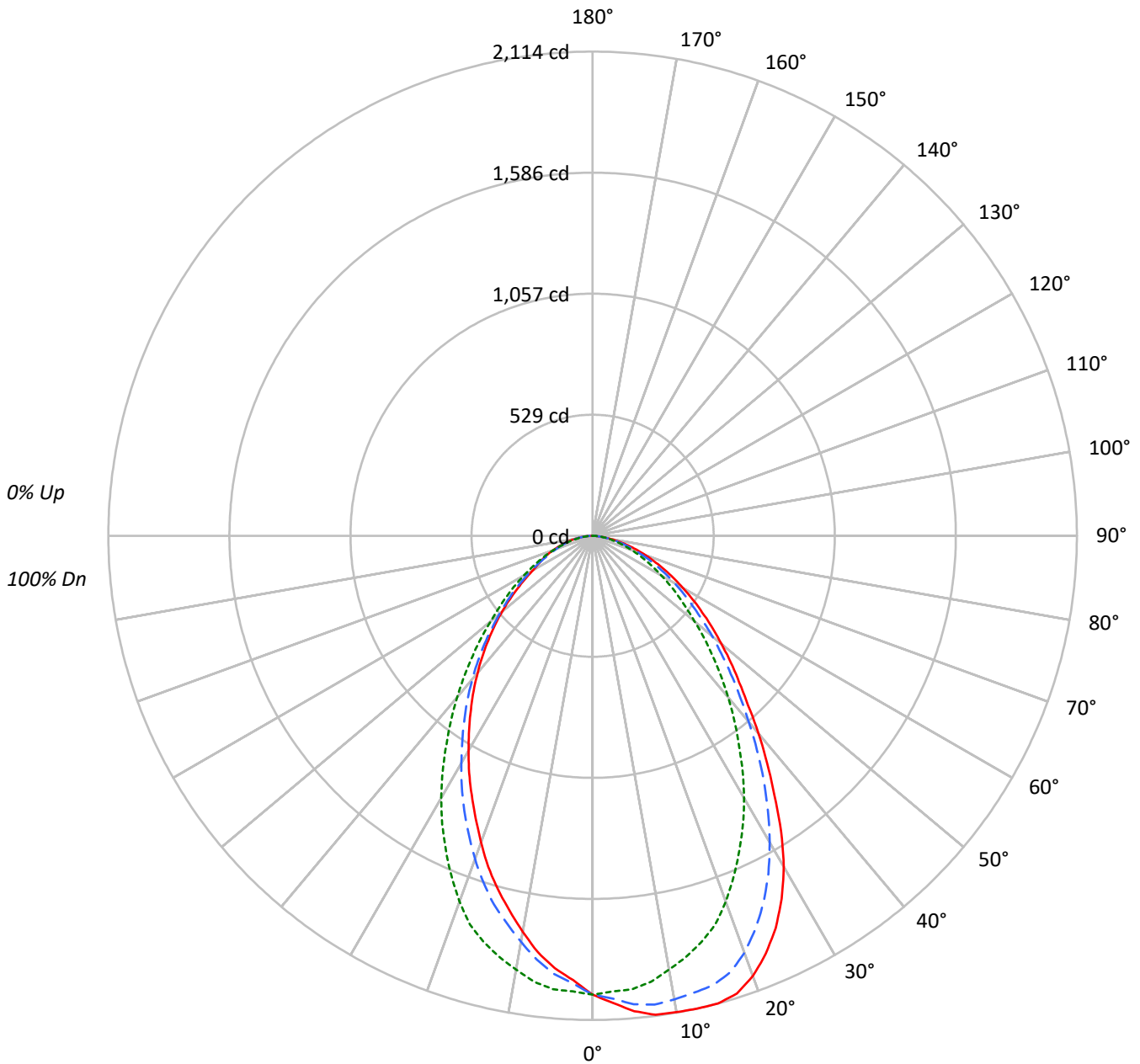
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				
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°	247111	247111	247111
5°	257985	246012	234633
10°	264500	240890	219924
15°	269964	234464	204059
20°	268535	223066	186851
25°	257250	206255	170012
30°	237668	188332	154092
35°	208324	167502	139480
40°	181401	148006	125625
45°	157866	129083	112250
50°	140657	111259	99035
55°	125695	97825	85653
60°	112220	85454	73835
65°	99758	74979	70163
70°	87563	64626	65456
75°	74154	54996	60620
80°	56897	46881	55263
85°	33399	36796	46703



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	187.8	5.2
10°-20°	518.0	14.5
20°-30°	707.7	19.8
30°-40°	710.6	19.9
40°-50°	587.9	16.4
50°-60°	426.0	11.9
60°-70°	269.8	7.5
70°-80°	136.4	3.8
80°-90°	33.4	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°	1413.5	39.5
0°-40°	2124.1	59.4
0°-60°	3138.0	87.7
0°-90°	3577.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3577.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2003	2003	2003	2003	2003	
5°	2084	2053	1987	1921	1895	200
15°	2114	2032	1836	1666	1598	595
25°	1890	1765	1516	1325	1249	864
35°	1384	1301	1112	976	926	867
45°	905	853	740	667	644	704
55°	584	533	455	415	398	526
65°	342	304	257	231	240	340
75°	156	134	115	120	127	166
85°	24	24	26	31	33	33
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°	2003.4	2003.4	2003.4	2003.4	2003.4	2003.4	2003.4	2003.4	2003.4
2.5°	2041.1	2034.0	2022.3	2008.1	1991.6	1972.7	1956.2	1946.9	1942.2
5°	2083.6	2074.1	2052.9	2022.3	1986.9	1951.5	1920.9	1902.0	1895.0
7.5°	2109.4	2095.4	2064.7	2017.6	1963.3	1911.5	1866.7	1840.8	1833.7
10°	2111.8	2095.4	2055.2	1991.6	1923.3	1854.9	1800.6	1763.0	1755.9
12.5°	2114.1	2093.0	2043.4	1968.0	1883.1	1798.3	1732.3	1687.6	1675.8
15°	2114.1	2093.0	2031.6	1942.2	1836.1	1739.4	1666.3	1614.5	1598.0
17.5°	2095.4	2071.8	1998.7	1895.0	1779.5	1671.1	1586.2	1532.0	1515.5
20°	2045.8	2019.9	1937.4	1824.3	1699.4	1586.2	1501.3	1444.8	1423.5
22.5°	1975.1	1944.5	1857.3	1734.7	1609.8	1494.2	1411.9	1352.8	1334.1
25°	1890.2	1859.7	1765.4	1645.2	1515.5	1407.1	1324.6	1270.3	1249.2
27.5°	1786.6	1753.6	1661.6	1541.5	1421.2	1312.8	1237.4	1187.8	1166.7
30°	1668.7	1633.4	1546.2	1430.6	1322.3	1218.5	1145.5	1105.5	1081.9
32.5°	1532.0	1501.3	1423.5	1319.9	1218.5	1119.5	1058.2	1023.0	1004.1
35°	1383.5	1367.0	1301.0	1211.4	1112.4	1030.0	975.7	942.8	926.3
37.5°	1251.6	1235.1	1178.5	1103.1	1015.9	940.5	895.6	867.4	853.2
40°	1126.6	1112.4	1058.2	994.6	919.2	853.2	815.5	794.3	780.2
42.5°	1004.1	997.0	952.3	893.2	827.3	770.7	740.0	723.6	711.8
45°	905.0	895.6	853.2	796.7	740.0	692.9	667.0	655.2	643.5
47.5°	817.8	806.0	761.3	711.8	659.9	617.5	593.9	582.1	577.4
50°	733.0	721.3	681.1	631.7	579.8	549.2	530.3	518.5	516.1
52.5°	657.5	645.9	601.0	553.9	513.8	487.9	471.4	459.6	454.9
55°	584.5	570.4	532.7	487.9	454.9	431.3	414.9	403.1	398.3
57.5°	518.5	504.3	471.4	428.9	398.3	377.1	362.9	351.1	346.4
60°	454.9	443.1	412.5	372.4	346.4	327.6	313.5	304.0	299.3
62.5°	396.0	386.5	355.9	320.6	299.3	282.8	271.0	261.7	266.4
65°	341.8	332.4	304.0	273.4	256.9	240.4	231.0	231.0	240.4
67.5°	289.9	280.4	256.9	231.0	216.8	205.0	197.9	205.0	212.1
70°	242.8	233.3	212.1	191.0	179.2	169.7	169.7	176.8	181.5
72.5°	197.9	188.6	172.1	155.6	146.1	139.0	146.1	150.8	155.6
75°	155.6	148.5	134.3	122.5	115.4	113.2	120.2	124.9	127.2
77.5°	115.4	110.8	101.4	91.9	87.2	89.6	96.7	99.0	101.4
80°	80.1	77.8	70.7	66.0	66.0	68.3	73.1	75.4	77.8
82.5°	49.5	49.5	44.7	42.4	44.7	49.5	51.8	54.2	54.2
85°	23.6	26.0	23.6	23.6	26.0	30.7	30.7	33.0	33.0
87.5°	7.1	7.1	9.4	9.4	11.8	11.8	11.8	11.8	14.2
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)