

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: P580431

Luminaire Tested: **HC435D010-HM43040830-41RWWH**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580431
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC435D010-HM43040830-41RWWH
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, HAZE TRIM
Light Source: (1) HIGH LUMEN LED 80CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3605.1 lumens
Efficiency: N/A
Efficacy: 107.0 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.08 / 1.16
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

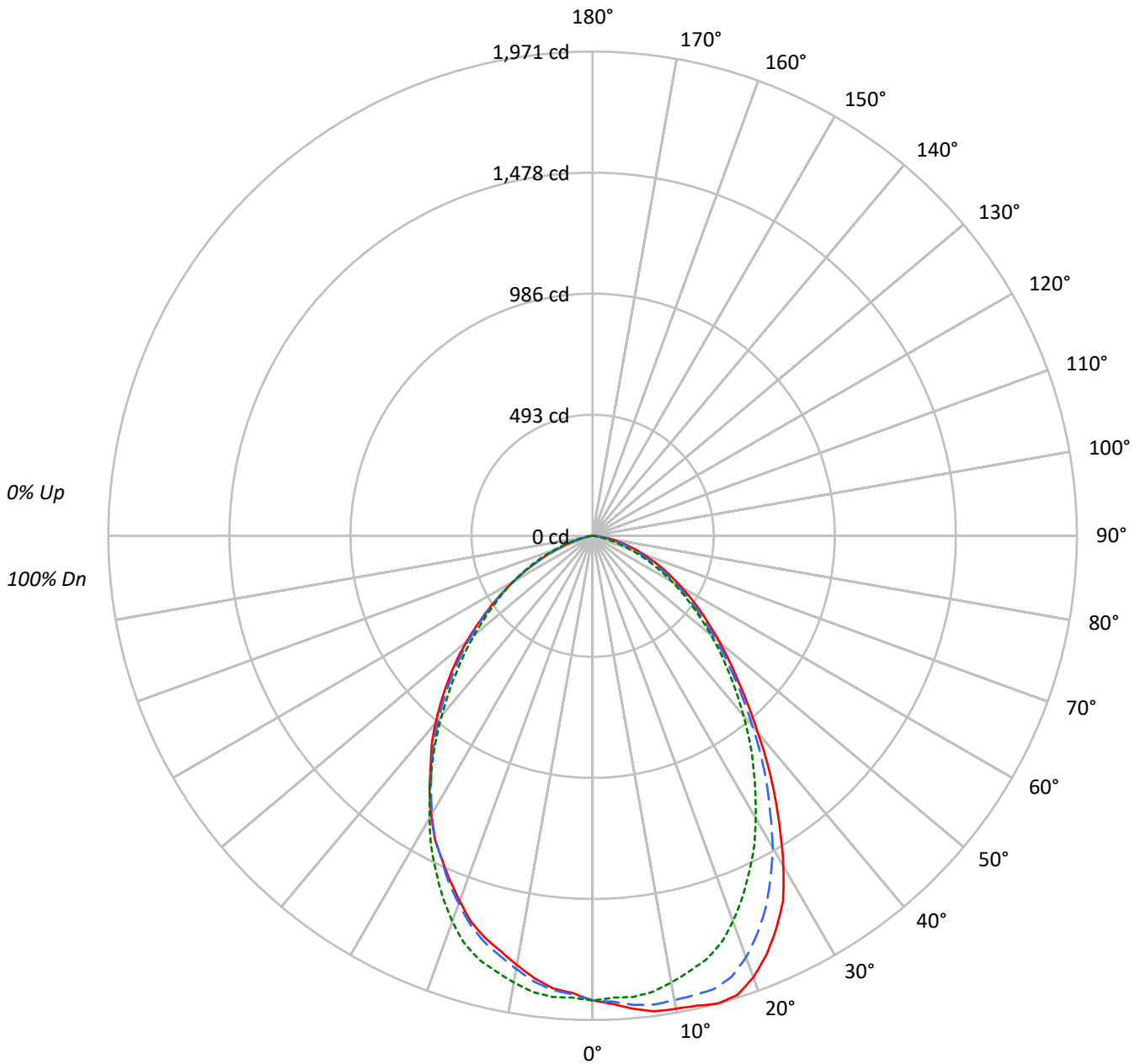
Input Watts (W): 33.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	100
1	111	107	104	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88	88	88	88
2	103	96	90	85	100	94	89	84	90	86	82	87	84	80	84	81	79	77	77	77	77
3	95	86	79	73	92	84	78	73	81	76	71	79	74	70	76	72	69	67	67	67	67
4	88	77	70	64	86	76	69	63	74	67	62	71	66	62	69	65	61	59	59	59	59
5	81	70	62	56	79	69	61	56	67	60	55	65	59	55	63	58	54	52	52	52	52
6	76	64	56	50	74	63	55	50	61	54	49	60	54	49	58	53	49	47	47	47	47
7	71	58	51	45	69	58	50	45	56	49	45	55	49	44	54	48	44	42	42	42	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38	38	38	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35	35	35	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32	32	32	32

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	233296	233296	233296
5°	239425	233320	228950
10°	244848	231296	222178
15°	251729	228028	216331
20°	251051	219273	207551
25°	240470	205288	197613
30°	221190	189086	187064
35°	194591	171583	173013
40°	168343	153593	160018
45°	146318	136480	144678
50°	129834	120374	128510
55°	115200	105609	110147
60°	102599	91596	91596
65°	91206	76117	71331
70°	78800	57594	50814
75°	66053	38078	31358
80°	50078	18397	16693
85°	26606	6652	6652



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.1	5.0
10°-20°	507.8	14.1
20°-30°	716.2	19.9
30°-40°	739.8	20.5
40°-50°	627.2	17.4
50°-60°	456.3	12.7
60°-70°	266.6	7.4
70°-80°	99.1	2.7
80°-90°	13.0	0.4
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°	1403.1	38.9
0°-40°	2142.9	59.4
0°-60°	3226.4	89.5
0°-90°	3605.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3605.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1891	1891	1891	1891	1891	
5°	1934	1917	1884	1856	1849	185
15°	1971	1910	1786	1710	1694	554
25°	1767	1668	1508	1454	1452	808
35°	1292	1236	1140	1142	1149	807
45°	839	815	782	811	829	653
55°	536	510	491	508	512	482
65°	312	287	261	244	244	310
75°	139	115	80	63	66	149
85°	19	12	5	5	5	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°	1891.4	1891.4	1891.4	1891.4	1891.4	1891.4	1891.4	1891.4	1891.4
2.5°	1907.9	1903.2	1898.4	1891.4	1882.0	1874.9	1867.9	1863.3	1863.3
5°	1933.7	1926.6	1917.2	1900.8	1884.4	1870.2	1856.2	1849.1	1849.1
7.5°	1952.5	1943.1	1924.3	1900.8	1872.6	1851.5	1830.3	1820.9	1816.3
10°	1954.9	1945.4	1919.6	1884.4	1846.7	1813.9	1790.4	1776.3	1773.9
12.5°	1959.6	1947.8	1914.8	1865.5	1816.3	1776.3	1750.4	1736.4	1731.6
15°	1971.3	1954.9	1910.2	1846.7	1785.7	1738.7	1710.5	1698.7	1694.1
17.5°	1959.6	1936.1	1882.0	1806.8	1738.7	1687.0	1658.8	1647.0	1647.0
20°	1912.6	1889.1	1825.6	1743.4	1670.5	1621.3	1593.0	1586.0	1581.2
22.5°	1846.7	1820.9	1752.8	1665.9	1593.0	1548.4	1529.5	1520.2	1517.8
25°	1766.9	1741.1	1668.2	1578.9	1508.4	1470.9	1454.3	1454.3	1452.0
27.5°	1677.6	1644.7	1569.6	1492.0	1423.9	1395.7	1388.6	1388.6	1391.0
30°	1553.0	1529.5	1466.1	1391.0	1327.6	1308.7	1308.7	1313.4	1313.4
32.5°	1419.2	1402.6	1346.3	1280.5	1231.2	1219.4	1224.1	1233.5	1235.8
35°	1292.3	1273.5	1235.8	1177.2	1139.5	1134.8	1141.9	1149.0	1149.0
37.5°	1167.7	1149.0	1123.1	1076.1	1047.9	1050.3	1059.7	1069.0	1076.1
40°	1045.5	1031.5	1012.6	975.1	953.9	963.3	975.1	984.5	993.8
42.5°	937.5	923.4	909.3	881.1	866.9	878.7	892.8	902.2	911.7
45°	838.8	829.4	815.3	791.9	782.4	794.1	810.6	820.0	829.4
47.5°	754.2	749.5	730.7	709.6	704.9	716.7	730.7	742.5	749.5
50°	676.6	669.7	653.2	632.0	627.3	646.2	655.5	662.6	669.7
52.5°	601.5	594.5	575.6	556.8	556.8	571.0	578.0	580.3	587.4
55°	535.7	528.6	509.8	495.8	491.1	502.8	507.5	507.5	512.2
57.5°	474.7	467.6	448.8	432.3	429.9	437.0	437.0	437.0	439.4
60°	415.9	408.8	390.0	376.0	371.3	373.6	371.3	368.9	371.3
62.5°	361.8	354.7	336.0	319.6	314.8	314.8	307.8	305.4	307.8
65°	312.5	300.8	286.6	270.2	260.8	253.8	244.4	244.4	244.4
67.5°	263.1	253.8	237.3	220.9	209.1	197.4	183.2	187.9	190.3
70°	218.5	211.4	192.7	176.2	159.7	145.7	134.0	138.6	140.9
72.5°	178.6	169.2	152.8	134.0	119.8	101.0	94.0	98.7	98.7
75°	138.6	129.3	115.1	96.3	79.9	63.4	63.4	65.8	65.8
77.5°	103.4	94.0	79.9	63.4	49.3	37.5	39.9	39.9	39.9
80°	70.5	63.4	51.7	37.5	25.9	21.1	21.1	21.1	23.5
82.5°	39.9	35.3	28.2	18.8	11.8	11.8	11.8	11.8	11.8
85°	18.8	14.0	11.8	7.1	4.7	4.7	4.7	4.7	4.7
87.5°	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
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)