

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: P580952

Luminaire Tested: **HC450D010-HM44560935-41RWWC**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580952
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-14)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 9/9/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO COMMERCIAL
Catalog Number: HC450D010-HM44560935-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4255.9 lumens
Efficiency: N/A
Efficacy: 88.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.15 / 1.21
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

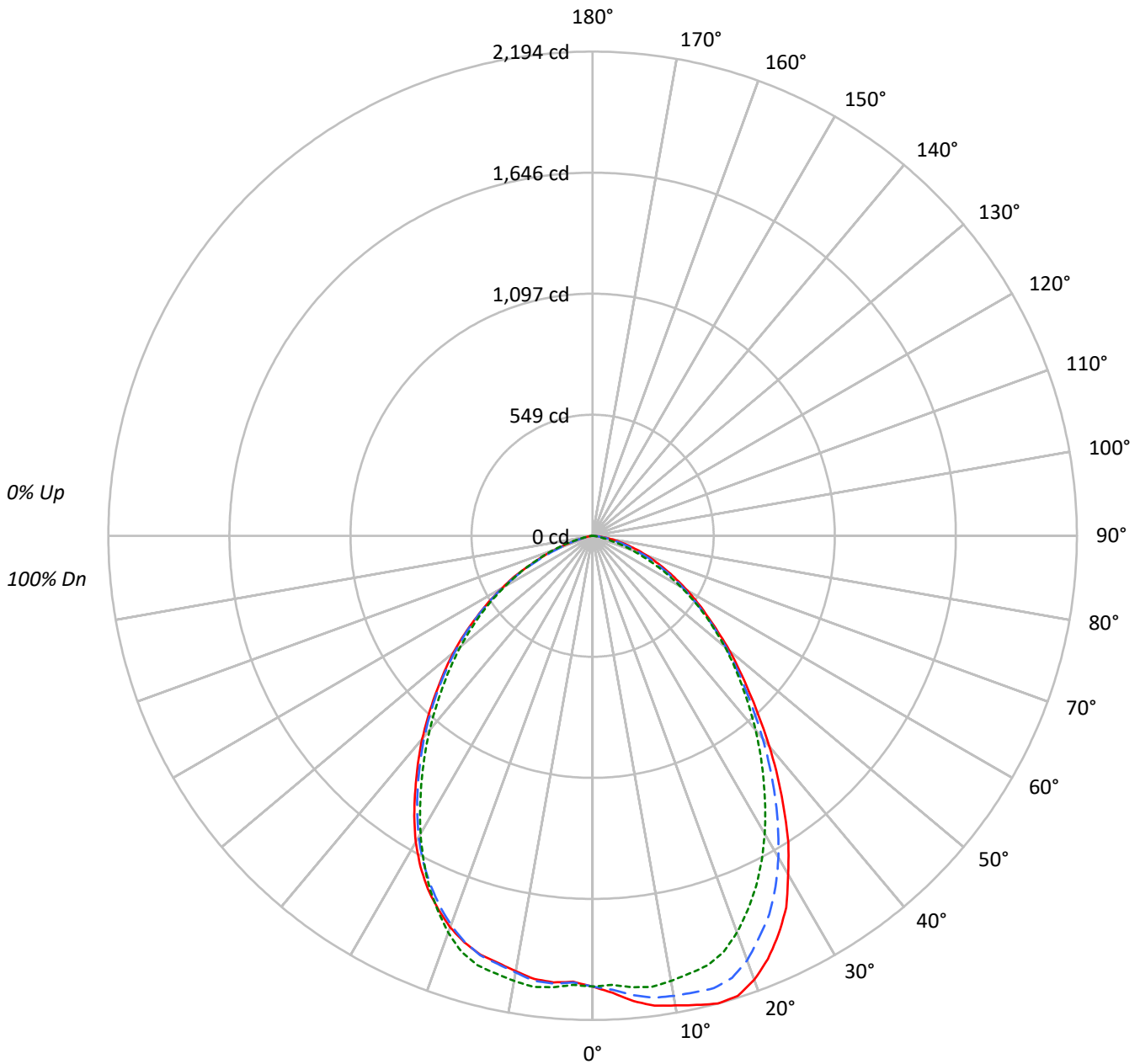
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	107	103	100	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88				
2	102	95	90	85	100	94	88	84	90	86	82	87	83	80	84	81	78	76				76				
3	95	85	78	73	92	84	77	72	81	75	71	78	74	70	76	72	69	67				67				
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				58				
5	81	70	61	56	79	68	61	55	66	60	55	65	59	54	63	58	54	52				52				
6	75	63	55	49	74	62	55	49	61	54	49	59	53	48	58	52	48	46				46				
7	70	58	50	44	69	57	49	44	56	49	44	54	48	44	53	47	43	41				41				
8	66	53	45	40	64	53	45	40	51	44	40	50	44	39	49	43	39	37				37				
9	62	49	42	36	60	49	41	36	47	41	36	46	40	36	45	40	36	34				34				
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31				31				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	251909	251909	251909
5°	262108	254245	251509
10°	270662	256484	250960
15°	280192	257271	250924
20°	281123	251064	247796
25°	271200	238523	240388
30°	252367	222087	228382
35°	227326	203234	210688
40°	200417	184879	193300
45°	175239	166570	174751
50°	155183	149887	157831
55°	136512	132361	137694
60°	121890	113034	116414
65°	107142	91819	90214
70°	93586	67656	61705
75°	77586	40794	32883
80°	58814	15627	9802
85°	27456	3963	3963



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	197.0	4.6
10°-20°	574.9	13.5
20°-30°	832.5	19.6
30°-40°	878.4	20.6
40°-50°	760.2	17.9
50°-60°	563.1	13.2
60°-70°	324.6	7.6
70°-80°	113.4	2.7
80°-90°	11.9	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°	1604.4	37.7
0°-40°	2482.8	58.3
0°-60°	3806.1	89.4
0°-90°	4255.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4255.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2042	2042	2042	2042	2042	
5°	2117	2089	2053	2037	2031	203
15°	2194	2122	2015	1968	1965	617
25°	1993	1893	1753	1742	1766	912
35°	1510	1441	1350	1380	1399	943
45°	1005	977	955	991	1002	780
55°	635	621	616	638	640	572
65°	367	345	315	298	309	367
75°	163	138	86	69	69	175
85°	19	11	3	3	3	30
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°	2042.3	2042.3	2042.3	2042.3	2042.3	2042.3	2042.3	2042.3	2042.3
2.5°	2072.7	2067.2	2058.9	2047.8	2036.9	2028.6	2025.8	2023.0	2023.0
5°	2116.9	2105.8	2089.2	2067.2	2053.4	2045.1	2036.9	2031.3	2031.3
7.5°	2147.2	2136.2	2111.4	2080.9	2061.7	2045.1	2034.1	2025.8	2025.8
10°	2161.0	2147.2	2116.9	2078.2	2047.8	2025.8	2009.2	2003.7	2003.7
12.5°	2177.6	2161.0	2119.6	2070.0	2031.3	2003.7	1987.2	1981.6	1981.6
15°	2194.2	2174.8	2122.3	2064.4	2014.7	1981.6	1967.8	1965.0	1965.0
17.5°	2185.9	2161.0	2100.3	2031.3	1976.1	1943.0	1929.2	1929.2	1931.9
20°	2141.7	2116.9	2047.8	1970.6	1912.7	1887.8	1876.7	1882.2	1887.8
22.5°	2075.5	2045.1	1970.6	1896.1	1835.4	1813.3	1813.3	1821.6	1829.9
25°	1992.7	1965.0	1893.3	1810.5	1752.6	1736.0	1741.5	1755.3	1766.3
27.5°	1898.8	1868.5	1794.0	1716.6	1658.7	1650.4	1664.3	1683.5	1689.1
30°	1771.9	1747.1	1683.5	1609.0	1559.3	1556.6	1575.9	1589.8	1603.5
32.5°	1650.4	1622.9	1562.1	1490.4	1454.5	1457.3	1479.3	1495.9	1504.2
35°	1509.7	1484.8	1440.6	1382.8	1349.7	1355.1	1380.0	1396.5	1399.2
37.5°	1377.2	1360.6	1316.4	1272.3	1247.5	1258.5	1280.6	1300.0	1300.0
40°	1244.7	1230.9	1197.8	1161.9	1148.2	1161.9	1184.0	1200.5	1200.5
42.5°	1117.7	1109.5	1081.9	1057.1	1048.8	1068.1	1087.4	1101.2	1098.5
45°	1004.6	996.3	977.0	957.7	954.9	974.3	990.8	999.1	1001.8
47.5°	902.5	897.0	880.4	866.7	866.7	885.9	899.8	908.0	910.7
50°	808.7	803.1	789.3	778.3	781.1	800.4	811.4	819.7	822.5
52.5°	714.8	712.0	701.1	687.2	695.5	709.3	723.1	728.6	731.4
55°	634.8	634.8	621.0	610.0	615.5	629.2	637.5	640.3	640.3
57.5°	563.0	560.3	543.8	532.7	535.5	549.2	554.7	557.5	557.5
60°	494.1	491.3	474.7	458.2	458.2	466.4	469.1	471.9	471.9
62.5°	427.7	425.0	405.7	391.9	386.3	383.6	383.6	389.1	400.2
65°	367.1	364.3	344.9	322.9	314.6	306.3	298.1	303.5	309.1
67.5°	311.8	306.3	287.0	267.7	248.4	234.6	220.8	229.0	240.1
70°	259.5	253.9	231.8	209.8	187.6	165.6	154.5	165.6	171.1
72.5°	209.8	204.2	182.1	160.1	132.5	110.4	107.6	110.4	113.1
75°	162.8	160.1	138.0	113.1	85.6	69.0	69.0	69.0	69.0
77.5°	121.4	115.9	93.9	71.7	49.7	38.6	35.9	35.9	35.9
80°	82.8	77.3	58.0	41.4	22.0	16.6	16.6	13.8	13.8
82.5°	46.9	44.2	30.3	16.6	8.3	5.5	5.5	5.5	5.5
85°	19.4	16.6	11.1	5.5	2.8	2.8	2.8	2.8	2.8
87.5°	2.8	2.8	2.8	0.0	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)