

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: P580919

Luminaire Tested: **HC450D010-HM44560927-41WWW**

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580919
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: HC450D010-HM44560927-41WWW
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3705.5 lumens
Efficiency: N/A
Efficacy: 77.2 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

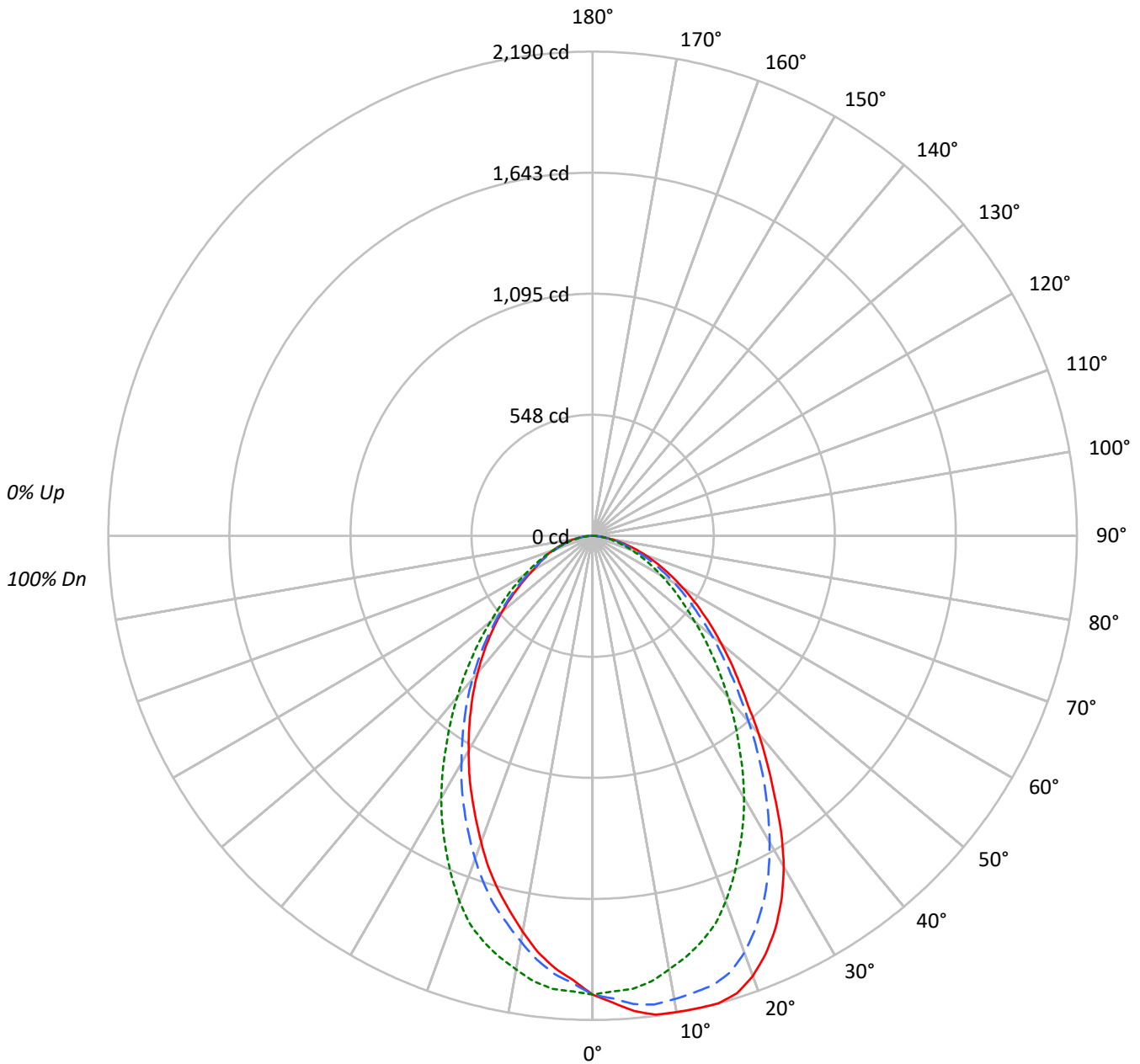
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	100
1	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	87	87	87	87
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76	76	76	76
3	94	85	78	72	92	84	77	72	81	75	71	78	73	69	76	72	68	66	66	66	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58	58	58	58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52	52	52	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47	47	47	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	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	42	37	47	41	37	46	41	37	35	35	35	35
10	59	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°	255942	255942	255942
5°	267197	254803	243015
10°	273956	249482	227789
15°	279630	242828	211351
20°	278130	231021	193532
25°	266450	213618	176096
30°	246171	195054	159590
35°	215777	173510	144449
40°	187890	153287	130101
45°	163517	133706	116245
50°	145684	115231	102585
55°	130189	101308	88728
60°	116216	88537	76499
65°	103319	77664	72673
70°	90665	66898	67800
75°	76776	57046	62812
80°	58956	48515	57252
85°	34673	38070	48401



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.5	5.2
10°-20°	536.5	14.5
20°-30°	733.0	19.8
30°-40°	736.0	19.9
40°-50°	608.9	16.4
50°-60°	441.2	11.9
60°-70°	279.5	7.5
70°-80°	141.3	3.8
80°-90°	34.6	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°	1464.0	39.5
0°-40°	2200.0	59.4
0°-60°	3250.1	87.7
0°-90°	3705.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3705.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	2075	2075	2075	2075	2075	
5°	2158	2126	2058	1990	1963	207
15°	2190	2104	1902	1726	1655	616
25°	1958	1828	1570	1372	1294	895
35°	1433	1348	1152	1011	959	898
45°	937	884	766	691	666	729
55°	605	552	471	430	413	544
65°	354	315	266	239	249	352
75°	161	139	120	124	132	172
85°	24	24	27	32	34	34
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°	2075.0	2075.0	2075.0	2075.0	2075.0	2075.0	2075.0	2075.0	2075.0
2.5°	2114.0	2106.7	2094.6	2079.8	2062.8	2043.2	2026.1	2016.4	2011.5
5°	2158.0	2148.2	2126.2	2094.6	2057.9	2021.3	1989.5	1970.0	1962.7
7.5°	2184.9	2170.2	2138.5	2089.6	2033.4	1979.8	1933.4	1906.6	1899.2
10°	2187.3	2170.2	2128.7	2062.8	1991.9	1921.2	1865.1	1826.0	1818.7
12.5°	2189.8	2167.7	2116.5	2038.3	1950.5	1862.6	1794.2	1747.8	1735.7
15°	2189.8	2167.7	2104.3	2011.5	1901.6	1801.5	1725.9	1672.2	1655.1
17.5°	2170.2	2145.8	2070.1	1962.7	1843.0	1730.8	1642.9	1586.8	1569.6
20°	2118.9	2092.1	2006.7	1889.4	1760.0	1642.9	1555.0	1496.4	1474.4
22.5°	2045.7	2014.0	1923.6	1796.7	1667.3	1547.7	1462.2	1401.2	1381.6
25°	1957.8	1926.1	1828.4	1703.9	1569.6	1457.4	1371.9	1315.8	1293.9
27.5°	1850.4	1816.3	1721.1	1596.5	1472.0	1359.7	1281.6	1230.3	1208.4
30°	1728.4	1691.7	1601.4	1481.8	1369.5	1262.1	1186.4	1144.9	1120.5
32.5°	1586.8	1555.0	1474.4	1367.0	1262.1	1159.6	1096.0	1059.5	1039.9
35°	1433.0	1415.9	1347.6	1254.8	1152.3	1066.8	1010.7	976.5	959.3
37.5°	1296.3	1279.1	1220.6	1142.4	1052.1	974.0	927.7	898.3	883.7
40°	1166.9	1152.3	1096.0	1030.2	952.0	883.7	844.6	822.7	808.0
42.5°	1039.9	1032.6	986.2	925.2	856.8	798.3	766.5	749.4	737.3
45°	937.4	927.7	883.7	825.2	766.5	717.7	690.9	678.6	666.4
47.5°	847.1	834.9	788.5	737.3	683.6	639.6	615.2	603.0	598.1
50°	759.2	747.0	705.5	654.2	600.5	568.8	549.3	537.0	534.6
52.5°	681.0	668.8	622.5	573.6	532.1	505.3	488.2	476.0	471.1
55°	605.4	590.8	551.7	505.3	471.1	446.8	429.6	417.4	412.6
57.5°	537.0	522.4	488.2	444.2	412.6	390.5	375.9	363.8	358.9
60°	471.1	459.0	427.2	385.7	358.9	339.3	324.7	314.9	310.1
62.5°	410.1	400.4	368.6	332.0	310.1	292.9	280.7	271.0	275.9
65°	354.0	344.2	314.9	283.2	266.1	249.0	239.2	239.2	249.0
67.5°	300.2	290.5	266.1	239.2	224.6	212.4	205.0	212.4	219.7
70°	251.4	241.7	219.7	197.7	185.5	175.8	175.8	183.1	188.0
72.5°	205.0	195.3	178.2	161.1	151.3	144.0	151.3	156.2	161.1
75°	161.1	153.8	139.1	127.0	119.7	117.1	124.5	129.4	131.8
77.5°	119.7	114.7	104.9	95.2	90.3	92.8	100.1	102.5	104.9
80°	83.0	80.6	73.3	68.3	68.3	70.8	75.7	78.2	80.6
82.5°	51.3	51.3	46.4	43.9	46.4	51.3	53.7	56.1	56.1
85°	24.5	26.9	24.5	24.5	26.9	31.8	31.8	34.2	34.2
87.5°	7.3	7.3	9.7	9.7	12.2	12.2	12.2	12.2	14.6
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)