

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: P580916

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

Issue Date: 9/9/2021

Test Information

Test Method: LM-41-14
Report Number: P580916
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-HM44560927-41RWWC
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, SPECULAR TRIM
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3764.1 lumens
Efficiency: N/A
Efficacy: 78.4 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

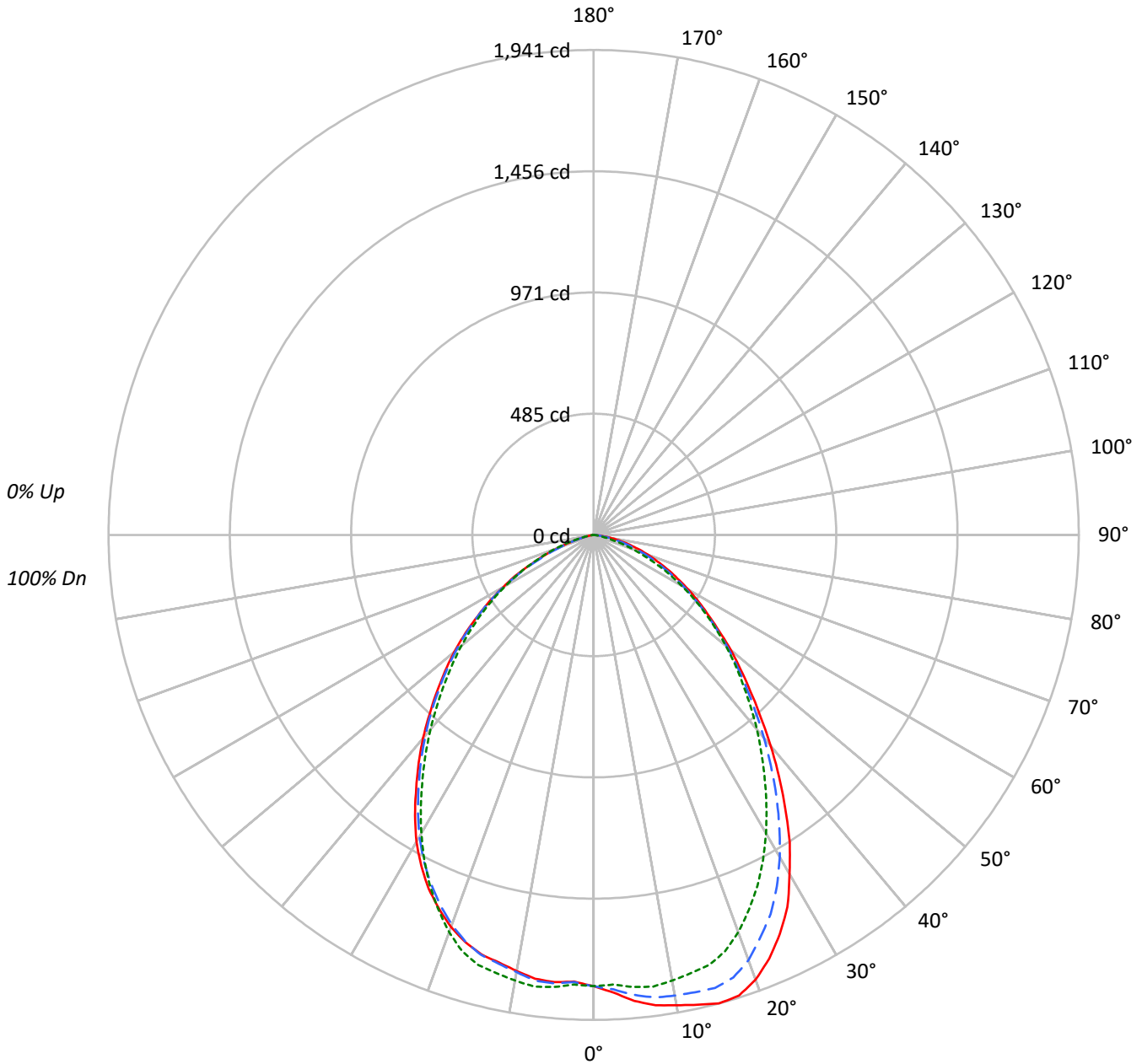
Input Watts (W): 48
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	222799	222799	222799
5°	231810	224851	222449
10°	239375	226850	221953
15°	247808	227543	221937
20°	248636	222042	219154
25°	239843	210950	212610
30°	223198	196421	201990
35°	201051	179744	186339
40°	177263	163512	170967
45°	154987	147312	154551
50°	137241	132559	139582
55°	120749	117050	121781
60°	107779	99959	102969
65°	94767	81225	79795
70°	82767	59830	54565
75°	68626	36076	29071
80°	52066	13851	8666
85°	24059	3397	3397



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.2	4.6
10°-20°	508.4	13.5
20°-30°	736.3	19.6
30°-40°	776.8	20.6
40°-50°	672.3	17.9
50°-60°	498.1	13.2
60°-70°	287.1	7.6
70°-80°	100.3	2.7
80°-90°	10.5	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°	1419.0	37.7
0°-40°	2195.8	58.3
0°-60°	3366.2	89.4
0°-90°	3764.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3764.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1806	1806	1806	1806	1806	
5°	1872	1848	1816	1801	1797	180
15°	1941	1877	1782	1740	1738	546
25°	1762	1674	1550	1540	1562	807
35°	1335	1274	1194	1220	1238	834
45°	888	864	844	876	886	690
55°	562	549	544	564	566	506
65°	325	305	278	264	273	324
75°	144	122	76	61	61	155
85°	17	10	2	2	2	27
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°	1806.3	1806.3	1806.3	1806.3	1806.3	1806.3	1806.3	1806.3	1806.3
2.5°	1833.2	1828.3	1820.9	1811.2	1801.4	1794.1	1791.7	1789.2	1789.2
5°	1872.2	1862.4	1847.8	1828.3	1816.0	1808.7	1801.4	1796.6	1796.6
7.5°	1899.1	1889.3	1867.3	1840.5	1823.3	1808.7	1799.0	1791.7	1791.7
10°	1911.2	1899.1	1872.2	1838.1	1811.2	1791.7	1777.1	1772.1	1772.1
12.5°	1926.0	1911.2	1874.7	1830.8	1796.6	1772.1	1757.5	1752.6	1752.6
15°	1940.6	1923.5	1877.1	1825.9	1781.9	1752.6	1740.4	1738.0	1738.0
17.5°	1933.3	1911.2	1857.5	1796.6	1747.7	1718.4	1706.2	1706.2	1708.7
20°	1894.2	1872.2	1811.2	1742.9	1691.6	1669.6	1659.8	1664.7	1669.6
22.5°	1835.6	1808.7	1742.9	1676.9	1623.2	1603.7	1603.7	1611.0	1618.3
25°	1762.3	1738.0	1674.4	1601.3	1550.0	1535.4	1540.3	1552.5	1562.2
27.5°	1679.4	1652.5	1586.7	1518.3	1467.0	1459.7	1471.9	1489.0	1493.9
30°	1567.1	1545.2	1489.0	1423.0	1379.1	1376.7	1393.8	1406.0	1418.2
32.5°	1459.7	1435.2	1381.5	1318.1	1286.3	1288.8	1308.4	1323.0	1330.3
35°	1335.2	1313.2	1274.2	1222.9	1193.7	1198.5	1220.5	1235.1	1237.5
37.5°	1218.0	1203.4	1164.3	1125.3	1103.3	1113.1	1132.6	1149.7	1149.7
40°	1100.9	1088.6	1059.4	1027.6	1015.5	1027.6	1047.2	1061.8	1061.8
42.5°	988.6	981.2	956.9	934.9	927.6	944.6	961.8	973.9	971.5
45°	888.5	881.2	864.1	847.0	844.5	861.7	876.3	883.6	886.0
47.5°	798.1	793.3	778.7	766.5	766.5	783.5	795.7	803.1	805.6
50°	715.2	710.4	698.1	688.3	690.8	707.9	717.7	725.0	727.4
52.5°	632.2	629.8	620.0	607.7	615.2	627.3	639.5	644.4	646.8
55°	561.5	561.5	549.2	539.4	544.3	556.5	563.9	566.3	566.3
57.5°	497.9	495.5	480.9	471.1	473.6	485.8	490.6	493.1	493.1
60°	436.9	434.5	419.9	405.2	405.2	412.5	415.0	417.4	417.4
62.5°	378.4	375.9	358.8	346.6	341.7	339.3	339.3	344.2	353.9
65°	324.7	322.2	305.1	285.6	278.3	271.0	263.6	268.6	273.4
67.5°	275.9	271.0	253.8	236.8	219.7	207.5	195.3	202.6	212.3
70°	229.5	224.6	205.0	185.5	165.9	146.5	136.7	146.5	151.3
72.5°	185.5	180.7	161.1	141.6	117.1	97.6	95.2	97.6	100.1
75°	144.0	141.6	122.1	100.1	75.7	61.0	61.0	61.0	61.0
77.5°	107.4	102.5	83.0	63.4	43.9	34.2	31.8	31.8	31.8
80°	73.3	68.3	51.3	36.6	19.5	14.6	14.6	12.2	12.2
82.5°	41.5	39.1	26.9	14.6	7.3	4.9	4.9	4.9	4.9
85°	17.0	14.6	9.7	4.9	2.4	2.4	2.4	2.4	2.4
87.5°	2.4	2.4	2.4	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)