

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: P581369

Luminaire Tested: **HC460D010-HM44560930-41WWW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P581369  
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: HC460D010-HM44560930-41WWW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WALLWASH DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4389.7 lumens  
Efficiency: N/A  
Efficacy: 79.8 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

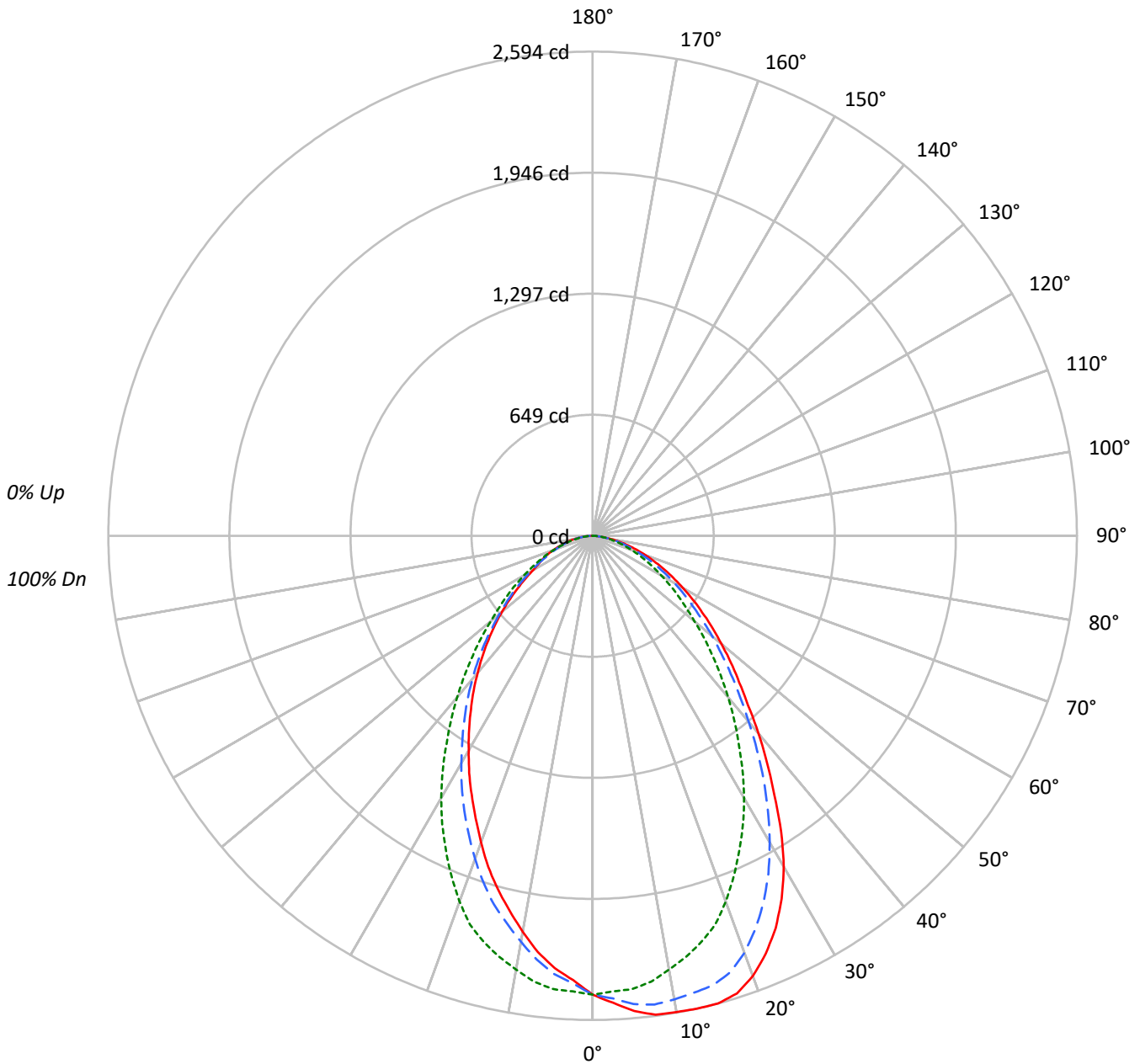
Input Watts (W): 55  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P581369

CATALOG NUMBER: HC460D010-HM44560930-41WWW

### Luminous Intensity Polar Plot





TEST NUMBER: P581369

CATALOG NUMBER: HC460D010-HM44560930-41WWW

**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°	303196	303196	303196
5°	316525	301841	287874
10°	324531	295561	269848
15°	331258	287663	250375
20°	329480	273694	229275
25°	315649	253072	208596
30°	291606	231074	189058
35°	255605	205538	171131
40°	222589	181610	154125
45°	193712	158389	137718
50°	172587	136512	121544
55°	154231	120017	105115
60°	137678	104868	90610
65°	122377	91994	86099
70°	107434	79232	80314
75°	90977	67530	74393
80°	69895	57536	67764
85°	40900	45004	57317



TEST NUMBER: P581369

CATALOG NUMBER: HC460D010-HM44560930-41WWW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	230.4	5.2
10°-20°	635.6	14.5
20°-30°	868.3	19.8
30°-40°	871.9	19.9
40°-50°	721.3	16.4
50°-60°	522.7	11.9
60°-70°	331.1	7.5
70°-80°	167.4	3.8
80°-90°	41.0	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°	1734.3	39.5
0°-40°	2606.2	59.4
0°-60°	3850.2	87.7
0°-90°	4389.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4389.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	2458	2458	2458	2458	2458	
5°	2556	2519	2438	2357	2325	245
15°	2594	2493	2253	2045	1961	730
25°	2319	2166	1860	1625	1533	1060
35°	1698	1596	1365	1197	1136	1064
45°	1110	1047	908	818	790	864
55°	717	654	558	509	489	645
65°	419	373	315	283	295	417
75°	191	165	142	148	156	204
85°	29	29	32	38	40	40
90°	0	0	0	0	0	



TEST NUMBER: P581369

CATALOG NUMBER: HC460D010-HM44560930-41WWW

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	2458.1	2458.1	2458.1	2458.1	2458.1	2458.1	2458.1	2458.1	2458.1
2.5°	2504.4	2495.7	2481.3	2463.9	2443.7	2420.5	2400.3	2388.7	2382.9
5°	2556.4	2544.9	2518.8	2481.3	2437.8	2394.5	2356.8	2333.7	2325.0
7.5°	2588.2	2570.9	2533.3	2475.5	2409.0	2345.3	2290.4	2258.6	2249.9
10°	2591.1	2570.9	2521.8	2443.7	2359.8	2276.0	2209.4	2163.2	2154.5
12.5°	2594.1	2568.0	2507.3	2414.7	2310.6	2206.5	2125.5	2070.6	2056.1
15°	2594.1	2568.0	2492.8	2382.9	2252.7	2134.2	2044.6	1981.0	1960.7
17.5°	2570.9	2541.9	2452.3	2325.0	2183.4	2050.4	1946.3	1879.7	1859.5
20°	2510.1	2478.3	2377.1	2238.3	2085.1	1946.3	1842.1	1772.8	1746.7
22.5°	2423.4	2385.8	2278.8	2128.4	1975.1	1833.5	1732.3	1660.0	1636.8
25°	2319.3	2281.7	2166.0	2018.6	1859.5	1726.4	1625.2	1558.8	1532.7
27.5°	2192.0	2151.5	2038.7	1891.3	1743.8	1610.8	1518.3	1457.5	1431.4
30°	2047.4	2004.1	1897.1	1755.4	1622.4	1495.2	1405.5	1356.3	1327.4
32.5°	1879.7	1842.1	1746.7	1619.5	1495.2	1373.7	1298.4	1255.1	1232.0
35°	1697.5	1677.3	1596.3	1486.5	1365.0	1263.8	1197.3	1156.8	1136.5
37.5°	1535.5	1515.4	1446.0	1353.4	1246.4	1153.8	1098.9	1064.3	1046.9
40°	1382.4	1365.0	1298.4	1220.4	1127.9	1046.9	1000.6	974.6	957.2
42.5°	1232.0	1223.3	1168.3	1096.1	1015.1	945.6	908.0	887.8	873.3
45°	1110.5	1098.9	1046.9	977.4	908.0	850.2	818.4	803.9	789.5
47.5°	1003.5	989.0	934.1	873.3	809.7	757.7	728.8	714.2	708.5
50°	899.4	884.9	835.7	775.0	711.4	673.9	650.6	636.2	633.4
52.5°	806.9	792.4	737.5	679.6	630.4	598.6	578.3	563.9	558.1
55°	717.2	699.8	653.6	598.6	558.1	529.3	509.0	494.5	488.8
57.5°	636.2	618.8	578.3	526.3	488.8	462.7	445.3	430.9	425.1
60°	558.1	543.7	506.1	457.0	425.1	402.0	384.6	373.0	367.3
62.5°	485.8	474.3	436.6	393.3	367.3	347.0	332.5	321.0	326.8
65°	419.3	407.8	373.0	335.5	315.2	295.0	283.4	283.4	295.0
67.5°	355.7	344.2	315.2	283.4	266.1	251.5	243.0	251.5	260.2
70°	297.9	286.3	260.2	234.3	219.7	208.2	208.2	216.9	222.7
72.5°	243.0	231.4	211.2	190.9	179.4	170.7	179.4	185.1	190.9
75°	190.9	182.2	164.8	150.4	141.7	138.9	147.5	153.3	156.1
77.5°	141.7	135.9	124.3	112.8	107.0	109.9	118.6	121.5	124.3
80°	98.4	95.4	86.7	81.0	81.0	83.8	89.7	92.5	95.4
82.5°	60.7	60.7	54.9	52.0	54.9	60.7	63.6	66.6	66.6
85°	28.9	31.8	28.9	28.9	31.8	37.6	37.6	40.5	40.5
87.5°	8.7	8.7	11.6	11.6	14.4	14.4	14.4	14.4	17.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



Report Generated By 670245859 / DESKTOP-HRDQ47P







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)