

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: P580915

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

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580915  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-9)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC450D010-HM44560927-41WDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3637.1 lumens  
Efficiency: N/A  
Efficacy: 75.8 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 1.07 / 1.04  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

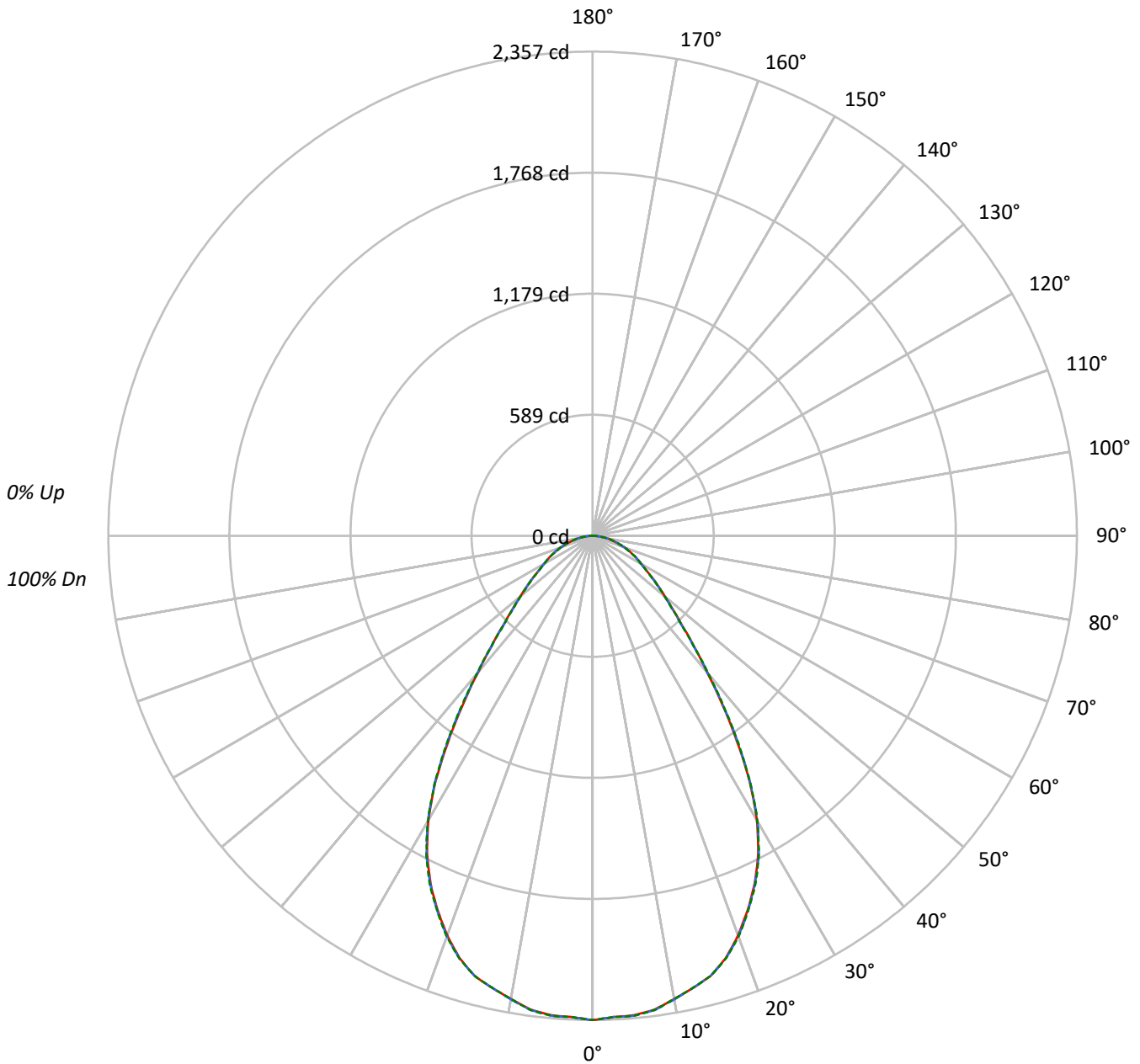
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P580915

CATALOG NUMBER: HC450D010-HM44560927-41WDW

### Luminous Intensity Polar Plot





TEST NUMBER: P580915

CATALOG NUMBER: HC450D010-HM44560927-41WDW

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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																			
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89																			
2	103	97	91	87	101	95	90	86	91	87	84	88	85	82	85	83	80	78																			
3	96	87	81	76	94	86	80	75	83	78	74	81	76	72	78	74	71	69																			
4	90	80	72	67	87	78	72	66	76	70	66	74	69	65	72	68	64	62																			
5	84	73	65	60	82	72	65	59	70	64	59	68	63	58	66	62	58	56																			
6	78	67	59	54	77	66	59	54	64	58	53	63	57	53	61	56	53	51																			
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46																			
8	69	57	50	45	68	57	50	45	55	49	45	54	49	44	53	48	44	42																			
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39																			
10	61	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	290775	290775	290775
5°	290066	290375	290375
10°	286706	287007	286706
15°	283270	283270	283270
20°	271633	272276	272591
25°	254066	254406	255073
30°	227656	228354	228354
35°	184818	186309	186671
40°	139488	140277	140664
45°	106843	106424	106424
50°	88021	87560	87560
55°	75567	75030	75030
60°	67421	66829	66829
65°	63392	63392	63392
70°	58964	58964	58964
75°	53471	54663	53471
80°	50220	48515	50220
85°	41466	41466	41466



TEST NUMBER: P580915

CATALOG NUMBER: HC450D010-HM44560927-41WDW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	222.1	6.1
10°-20°	621.5	17.1
20°-30°	854.1	23.5
30°-40°	768.0	21.1
40°-50°	485.2	13.3
50°-60°	316.8	8.7
60°-70°	214.6	5.9
70°-80°	120.8	3.3
80°-90°	33.9	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°	1697.8	46.7
0°-40°	2465.7	67.8
0°-60°	3267.8	89.8
0°-90°	3637.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3637.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2357	2357	2357	2357	2357	
5°	2343	2343	2345	2345	2345	222
15°	2218	2218	2218	2218	2218	621
25°	1867	1869	1869	1874	1874	852
35°	1227	1232	1237	1242	1240	764
45°	612	610	610	610	610	486
55°	351	351	349	351	349	318
65°	217	217	217	217	217	215
75°	112	115	115	115	112	120
85°	29	29	29	29	29	34
90°	0	0	0	0	0	



TEST NUMBER: P580915

CATALOG NUMBER: HC450D010-HM44560927-41WDW

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2357.4	2357.4	2357.4	2357.4	2357.4
2.5°	2345.2	2345.2	2345.2	2345.2	2345.2
5°	2342.7	2342.7	2345.2	2345.2	2345.2
7.5°	2325.6	2328.1	2328.1	2328.1	2328.1
10°	2289.1	2289.1	2291.5	2291.5	2289.1
12.5°	2254.8	2254.8	2254.8	2257.3	2254.8
15°	2218.3	2218.3	2218.3	2218.3	2218.3
17.5°	2154.8	2157.2	2157.2	2157.2	2157.2
20°	2069.4	2074.3	2074.3	2076.7	2076.7
22.5°	1971.8	1974.2	1976.7	1979.1	1976.7
25°	1866.8	1869.3	1869.3	1874.2	1874.2
27.5°	1744.9	1747.3	1752.2	1752.2	1752.2
30°	1598.4	1600.8	1603.3	1603.3	1603.3
32.5°	1425.2	1425.2	1430.0	1432.5	1430.0
35°	1227.4	1232.4	1237.3	1242.2	1239.7
37.5°	1039.6	1044.5	1046.9	1046.9	1049.3
40°	866.3	871.2	871.2	876.1	873.6
42.5°	729.6	727.2	727.2	732.1	729.6
45°	612.5	610.1	610.1	610.1	610.1
47.5°	527.2	524.7	524.7	524.7	524.7
50°	458.7	456.3	456.3	456.3	456.3
52.5°	402.6	400.2	400.2	400.2	397.7
55°	351.4	351.4	348.9	351.4	348.9
57.5°	305.1	305.1	305.1	305.1	305.1
60°	273.3	270.9	270.9	270.9	270.9
62.5°	244.0	244.0	244.0	244.0	244.0
65°	217.2	217.2	217.2	217.2	217.2
67.5°	190.3	187.9	190.3	190.3	187.9
70°	163.5	161.1	163.5	163.5	163.5
72.5°	136.6	136.6	136.6	139.1	136.6
75°	112.2	114.7	114.7	114.7	112.2
77.5°	90.3	92.8	90.3	90.3	90.3
80°	70.7	68.3	68.3	68.3	70.7
82.5°	48.8	48.8	48.8	48.8	48.8
85°	29.3	29.3	29.3	29.3	29.3
87.5°	12.2	12.2	12.2	12.2	12.2
90°	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)