

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: P580931

Luminaire Tested: **HC450D010-HM44560930-41NDW**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580931  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-3)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC450D010-HM44560930-41NDW  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" NARROW DISTRIBUTION, WHITE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3648.6 lumens  
Efficiency: N/A  
Efficacy: 76.0 lumens/watt  
Spacing Criteria (0/90/45): 1.03 / 1.03 / 1.01  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

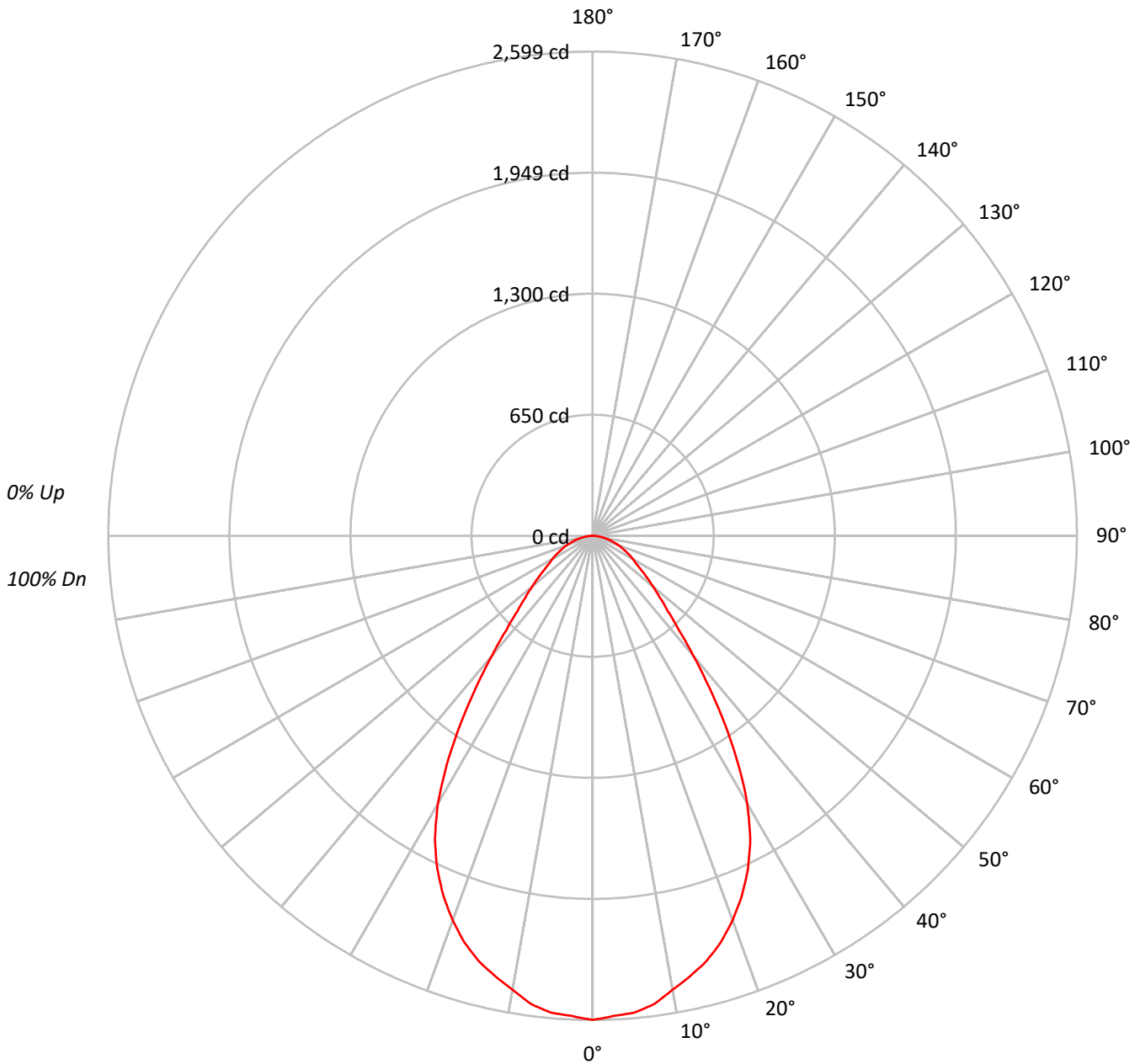
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	104	101	109	105	102	100	101	99	97	98	96	94	94	92	91	89			89
2	104	97	92	88	101	96	91	87	92	88	85	89	86	83	86	83	81	79			79
3	97	88	82	77	95	87	81	76	84	79	75	82	77	74	79	76	73	71			71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64			64
5	85	74	67	61	83	73	66	61	71	65	60	69	64	60	68	63	59	58			58
6	79	68	61	56	78	67	60	55	66	60	55	64	59	55	63	58	54	52			52
7	75	63	56	51	73	62	56	51	61	55	50	60	54	50	59	53	50	48			48
8	70	59	52	47	69	58	51	46	57	51	46	56	50	46	55	50	46	44			44
9	66	55	48	43	65	54	47	43	53	47	43	52	47	43	51	46	42	41			41
10	63	51	44	40	62	51	44	40	50	44	40	49	43	39	48	43	39	38			38

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

	0°
0°	320551
5°	318160
10°	309877
15°	301722
20°	288198
25°	268505
30°	236443
35°	186475
40°	135366
45°	99447
50°	80921
55°	67869
60°	61500
65°	56504
70°	52617
75°	47991
80°	43329
85°	37645



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	242.3	6.6
10°-20°	662.7	18.2
20°-30°	898.4	24.6
30°-40°	770.9	21.1
40°-50°	455.2	12.5
50°-60°	288.5	7.9
60°-70°	193.8	5.3
70°-80°	107.0	2.9
80°-90°	29.9	0.8
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°	1803.4	49.4
0°-40°	2574.2	70.6
0°-60°	3317.9	90.9
0°-90°	3648.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3648.6	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2599	
5°	2570	242
15°	2363	663
25°	1973	898
35°	1238	771
45°	570	455
55°	316	288
65°	194	194
75°	101	107
85°	27	30
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2598.8
2.5°	2580.2
5°	2569.6
7.5°	2535.1
10°	2474.1
12.5°	2421.1
15°	2362.8
17.5°	2288.5
20°	2195.6
22.5°	2092.2
25°	1972.9
27.5°	1832.4
30°	1660.1
32.5°	1455.8
35°	1238.4
37.5°	1028.8
40°	840.7
42.5°	684.1
45°	570.1
47.5°	488.0
50°	421.7
52.5°	366.0
55°	315.6
57.5°	275.8
60°	249.3
62.5°	222.7
65°	193.6
67.5°	169.7
70°	145.9
72.5°	122.0
75°	100.7
77.5°	79.6
80°	61.0
82.5°	42.4
85°	26.6
87.5°	10.6
90°	0.0



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— 0°-180°







(END OF REPORT)