

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: P580959

Luminaire Tested: **HC450D010-HM44560940-41MDH**

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580959  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-5)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC450D010-HM44560940-41MDH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" MEDIUM DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4025.7 lumens  
Efficiency: N/A  
Efficacy: 83.9 lumens/watt  
Spacing Criteria (0/90/45): 0.9 / 0.9 / 0.91  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

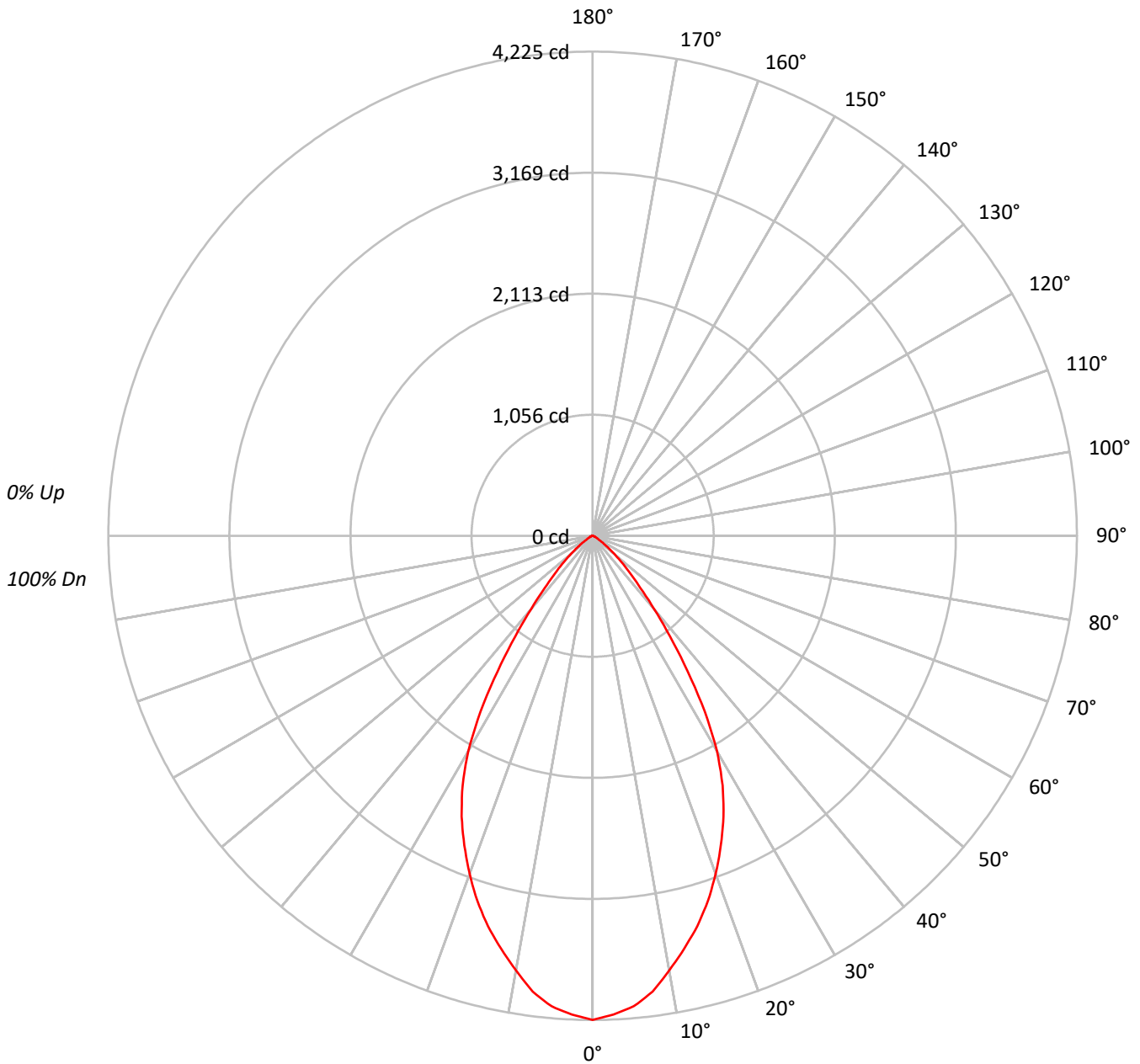
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93	93	93	93
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	86	86	86	86
3	101	95	89	85	99	93	88	84	91	86	83	88	85	82	86	83	81	79	79	79	79
4	96	88	82	78	94	87	81	77	85	80	76	82	79	75	81	77	74	73	73	73	73
5	91	82	76	71	89	81	75	71	79	74	70	77	73	70	76	72	69	67	67	67	67
6	86	76	70	66	84	76	70	65	74	69	65	73	68	64	71	67	64	62	62	62	62
7	81	71	65	61	80	71	65	61	69	64	60	68	63	60	67	63	60	58	58	58	58
8	77	67	61	56	76	66	60	56	65	60	56	64	59	56	63	59	56	54	54	54	54
9	73	63	57	53	72	63	57	53	62	56	52	61	56	52	60	55	52	51	51	51	51
10	70	59	53	49	69	59	53	49	58	53	49	57	52	49	57	52	49	47	47	47	47

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

	0°
0°	521148
5°	510249
10°	482194
15°	450361
20°	411899
25°	367815
30°	308882
35°	217298
40°	134046
45°	80258
50°	47282
55°	23548
60°	12162
65°	7968
70°	4941
75°	3908
80°	1989
85°	3963



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	384.8	9.6
10°-20°	985.9	24.5
20°-30°	1229.5	30.5
30°-40°	905.7	22.5
40°-50°	372.5	9.3
50°-60°	108.8	2.7
60°-70°	28.0	0.7
70°-80°	8.6	0.2
80°-90°	1.9	0.0
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°	2600.2	64.6
0°-40°	3505.8	87.1
0°-60°	3987.1	99.0
0°-90°	4025.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4025.7	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	4225	
5°	4121	385
15°	3527	986
25°	2703	1229
35°	1443	906
45°	460	372
55°	110	109
65°	27	28
75°	8	9
85°	3	2
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	4225.1
2.5°	4181.2
5°	4121.0
7.5°	4011.5
10°	3849.9
12.5°	3691.2
15°	3526.8
17.5°	3343.4
20°	3138.0
22.5°	2924.5
25°	2702.6
27.5°	2456.2
30°	2168.7
32.5°	1820.9
35°	1443.1
37.5°	1109.0
40°	832.5
42.5°	616.2
45°	460.1
47.5°	339.5
50°	246.4
52.5°	169.8
55°	109.5
57.5°	65.8
60°	49.3
62.5°	35.6
65°	27.3
67.5°	19.2
70°	13.7
72.5°	11.0
75°	8.2
77.5°	5.4
80°	2.8
82.5°	2.8
85°	2.8
87.5°	0.0
90°	0.0



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— 0°-180°







(END OF REPORT)