

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: P580960

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

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580960  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC450D010-HM44560940-41NDH  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" NARROW DISTRIBUTION, HAZE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3801.0 lumens  
Efficiency: N/A  
Efficacy: 79.2 lumens/watt  
Spacing Criteria (0/90/45): 0.89 / 0.89 / 0.91  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

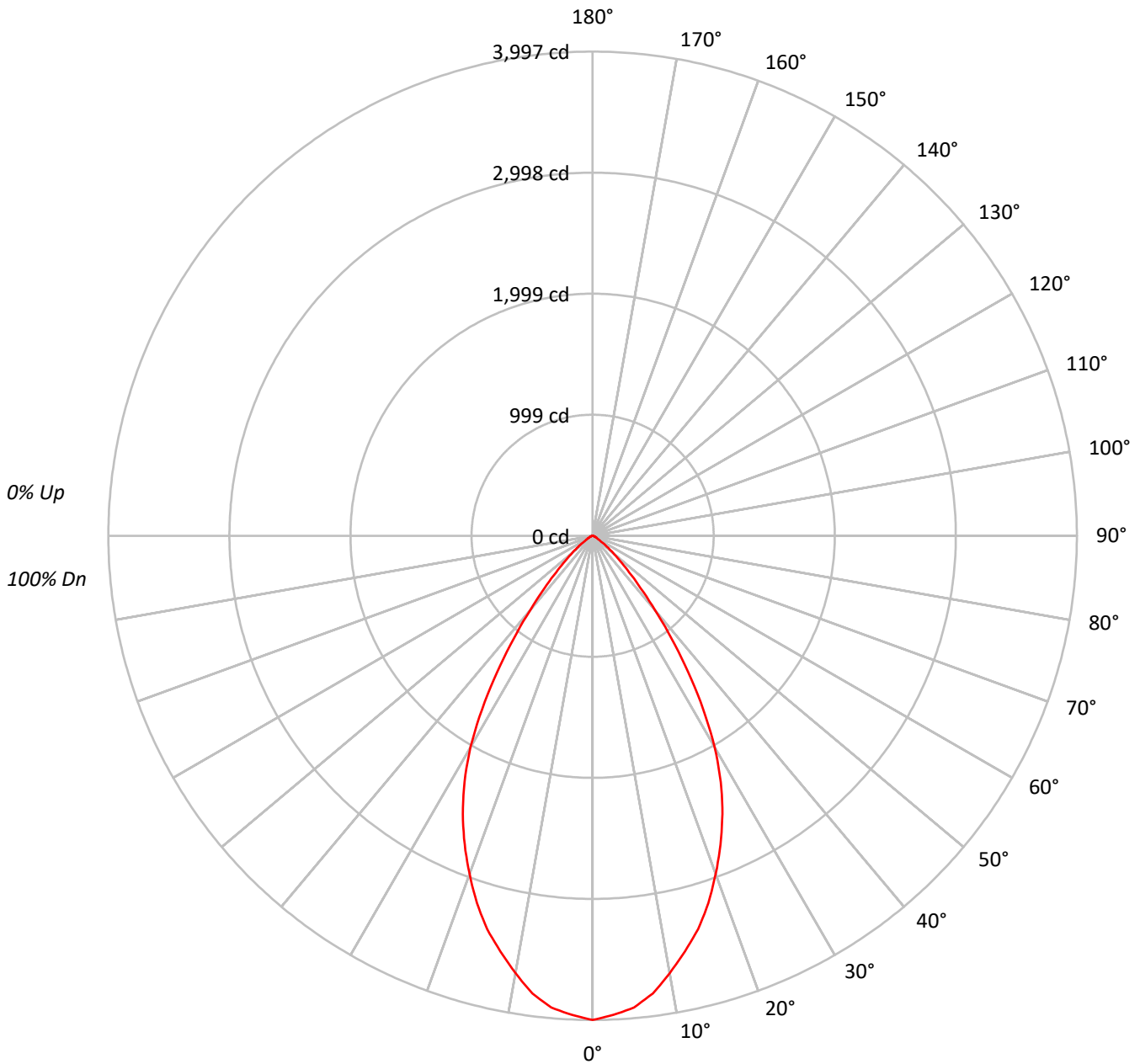
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	113	110	108	105	111	108	106	104	104	102	100	100	99	97	97	96	95	93		
2	107	102	98	94	105	100	96	93	97	94	91	94	91	89	91	89	87	86		
3	101	95	89	85	99	93	88	84	91	86	83	88	85	82	86	83	81	79		
4	96	88	82	78	94	87	81	77	85	80	76	82	79	75	81	77	74	73		
5	91	82	76	71	89	81	75	71	79	74	70	77	73	70	76	72	69	67		
6	86	76	70	66	84	76	70	65	74	69	65	73	68	64	71	67	64	63		
7	81	72	65	61	80	71	65	61	70	64	60	68	64	60	67	63	60	58		
8	77	67	61	57	76	67	61	56	65	60	56	64	59	56	63	59	56	54		
9	73	63	57	53	72	63	57	53	62	56	52	61	56	52	60	55	52	51		
10	70	59	53	49	69	59	53	49	58	53	49	57	52	49	57	52	49	48		

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

	0°
0°	493000
5°	484037
10°	459111
15°	429278
20°	389887
25°	345005
30°	286977
35°	206923
40°	129151
45°	74502
50°	42024
55°	20021
60°	11471
65°	8785
70°	5914
75°	3908
80°	3836
85°	3963



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	365.4	9.6
10°-20°	937.8	24.7
20°-30°	1153.4	30.3
30°-40°	856.6	22.5
40°-50°	348.2	9.2
50°-60°	96.4	2.5
60°-70°	30.0	0.8
70°-80°	10.1	0.3
80°-90°	3.0	0.1
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°	2456.6	64.6
0°-40°	3313.2	87.2
0°-60°	3757.9	98.9
0°-90°	3801.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3801.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	3997	
5°	3909	365
15°	3362	938
25°	2535	1153
35°	1374	857
45°	427	348
55°	93	96
65°	30	30
75°	8	10
85°	3	3
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	3996.9
2.5°	3958.6
5°	3909.3
7.5°	3810.7
10°	3665.6
12.5°	3515.1
15°	3361.7
17.5°	3178.4
20°	2970.3
22.5°	2759.5
25°	2535.0
27.5°	2291.4
30°	2014.9
32.5°	1700.0
35°	1374.2
37.5°	1067.7
40°	802.1
42.5°	585.8
45°	427.1
47.5°	306.6
50°	219.0
52.5°	150.6
55°	93.1
57.5°	60.2
60°	46.5
62.5°	38.3
65°	30.1
67.5°	21.9
70°	16.4
72.5°	13.7
75°	8.2
77.5°	5.4
80°	5.4
82.5°	2.8
85°	2.8
87.5°	2.8
90°	0.0



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— 0°-180°







(END OF REPORT)