

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: P580921

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

Issue Date: 9/9/2021

**Test Information**

Test Method: LM-41-14  
Report Number: P580921  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2106-266-11)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 9/9/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HC450D010-HM44560930-41WDBB  
Description: HALO COMMERCIAL 4" ROUND, NEW CONSTRUCTION FRAME, WITH 4" WIDE DISTRIBUTION, BLACK BAFFLE TRIM  
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3439.1 lumens  
Efficiency: N/A  
Efficacy: 71.6 lumens/watt  
Spacing Criteria (0/90/45): 1.1 / 1.1 / 1.03  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

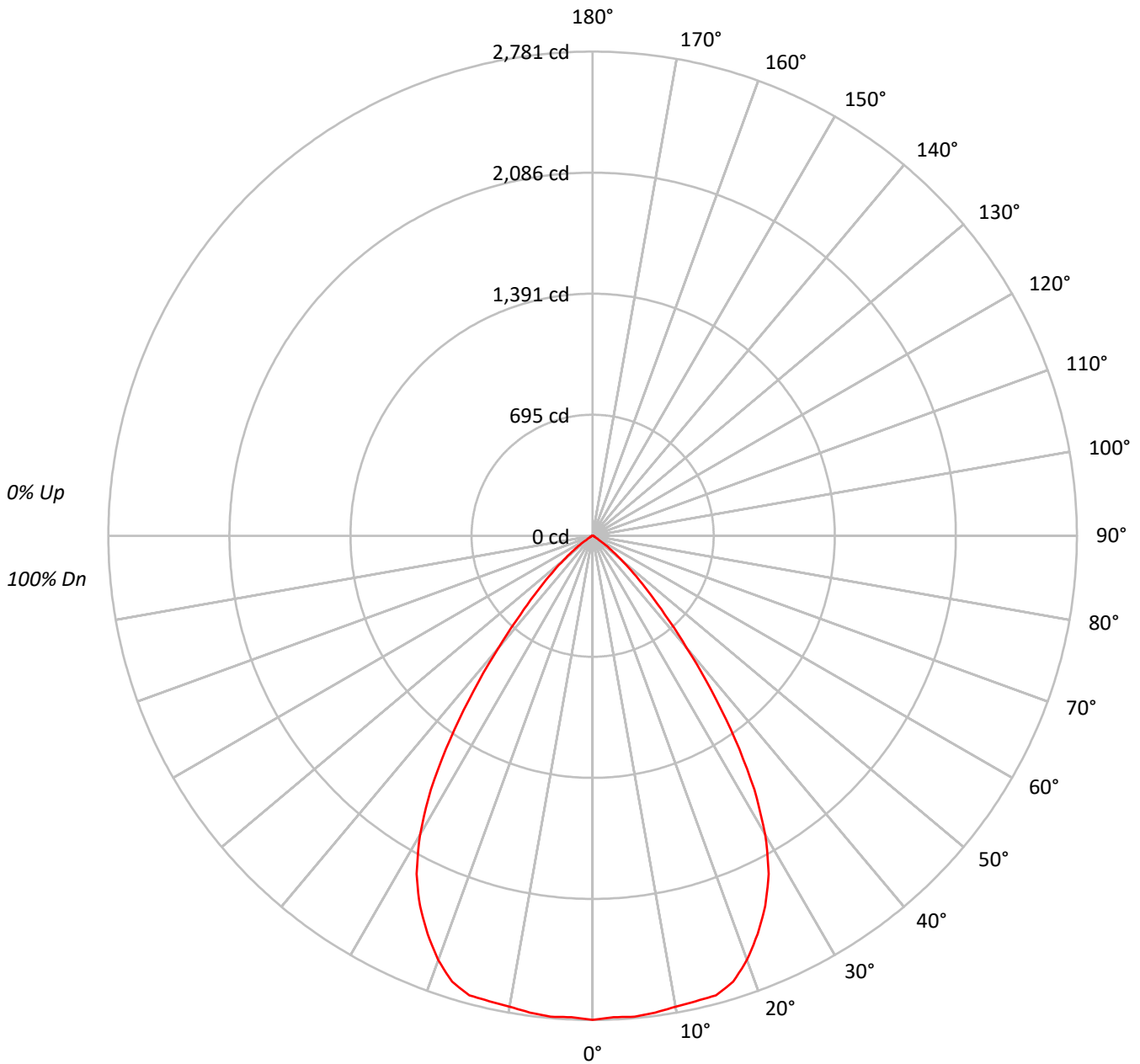
Input Watts (W): 48  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	107	105	111	108	106	103	104	102	100	100	99	97	97	96	94	93	93	93	93
2	107	102	97	94	105	100	96	93	97	93	91	94	91	89	91	89	87	85	85	85	85
3	101	94	89	84	99	93	88	84	90	86	82	87	84	81	85	82	80	78	78	78	78
4	95	87	81	77	93	86	80	76	84	79	75	82	78	74	80	76	73	72	72	72	72
5	90	81	75	70	88	80	74	70	78	73	69	76	72	68	75	71	68	66	66	66	66
6	85	75	69	64	83	74	68	64	73	67	63	71	67	63	70	66	62	61	61	61	61
7	80	70	64	59	79	69	63	59	68	63	59	67	62	58	66	61	58	56	56	56	56
8	76	65	59	55	74	65	59	54	64	58	54	63	58	54	62	57	54	52	52	52	52
9	72	61	55	51	71	61	55	51	60	54	50	59	54	50	58	53	50	49	49	49	49
10	68	58	51	47	67	57	51	47	56	51	47	55	50	47	55	50	47	45	45	45	45

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

	0°
0°	342975
5°	343307
10°	343945
15°	348983
20°	340283
25°	319256
30°	282391
35°	214723
40°	135302
45°	77677
50°	41218
55°	17096
60°	4588
65°	3882
70°	2885
75°	2526
80°	1918
85°	3821



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	263.7	7.7
10°-20°	765.2	22.3
20°-30°	1068.0	31.1
30°-40°	878.8	25.6
40°-50°	362.0	10.5
50°-60°	81.6	2.4
60°-70°	13.1	0.4
70°-80°	4.9	0.1
80°-90°	1.8	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°	2096.9	61.0
0°-40°	2975.7	86.5
0°-60°	3419.3	99.4
0°-90°	3439.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3439.1	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2781	
5°	2773	264
15°	2733	765
25°	2346	1068
35°	1426	879
45°	445	362
55°	80	82
65°	13	13
75°	5	5
85°	3	2
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2780.6
2.5°	2767.4
5°	2772.7
7.5°	2762.1
10°	2746.1
12.5°	2738.2
15°	2732.9
17.5°	2685.1
20°	2592.4
22.5°	2475.8
25°	2345.8
27.5°	2189.5
30°	1982.7
32.5°	1728.2
35°	1426.0
37.5°	1121.3
40°	840.3
42.5°	612.3
45°	445.3
47.5°	318.0
50°	214.8
52.5°	135.2
55°	79.5
57.5°	39.7
60°	18.6
62.5°	15.9
65°	13.3
67.5°	10.6
70°	8.0
72.5°	5.3
75°	5.3
77.5°	2.7
80°	2.7
82.5°	2.7
85°	2.7
87.5°	0.0
90°	0.0



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— 0°-180°







(END OF REPORT)