

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: P434834

Luminaire Tested: **HCMR4R25930ED010MMS**

Issue Date: 11/24/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P434834  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2008-933-2)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 11/24/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCMR4R25930ED010MMS  
Description: HALO COMMERCIAL 4INCH ADJUSTABLE MULTIPLE, 25 DEG REFLECTOR OPTIC  
Light Source: HIGH LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4731.0 lumens  
Efficiency: N/A  
Efficacy: 87.4 lumens/watt  
Spacing Criteria (0/90/45): 0.39 / 0.39 / 0.39  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

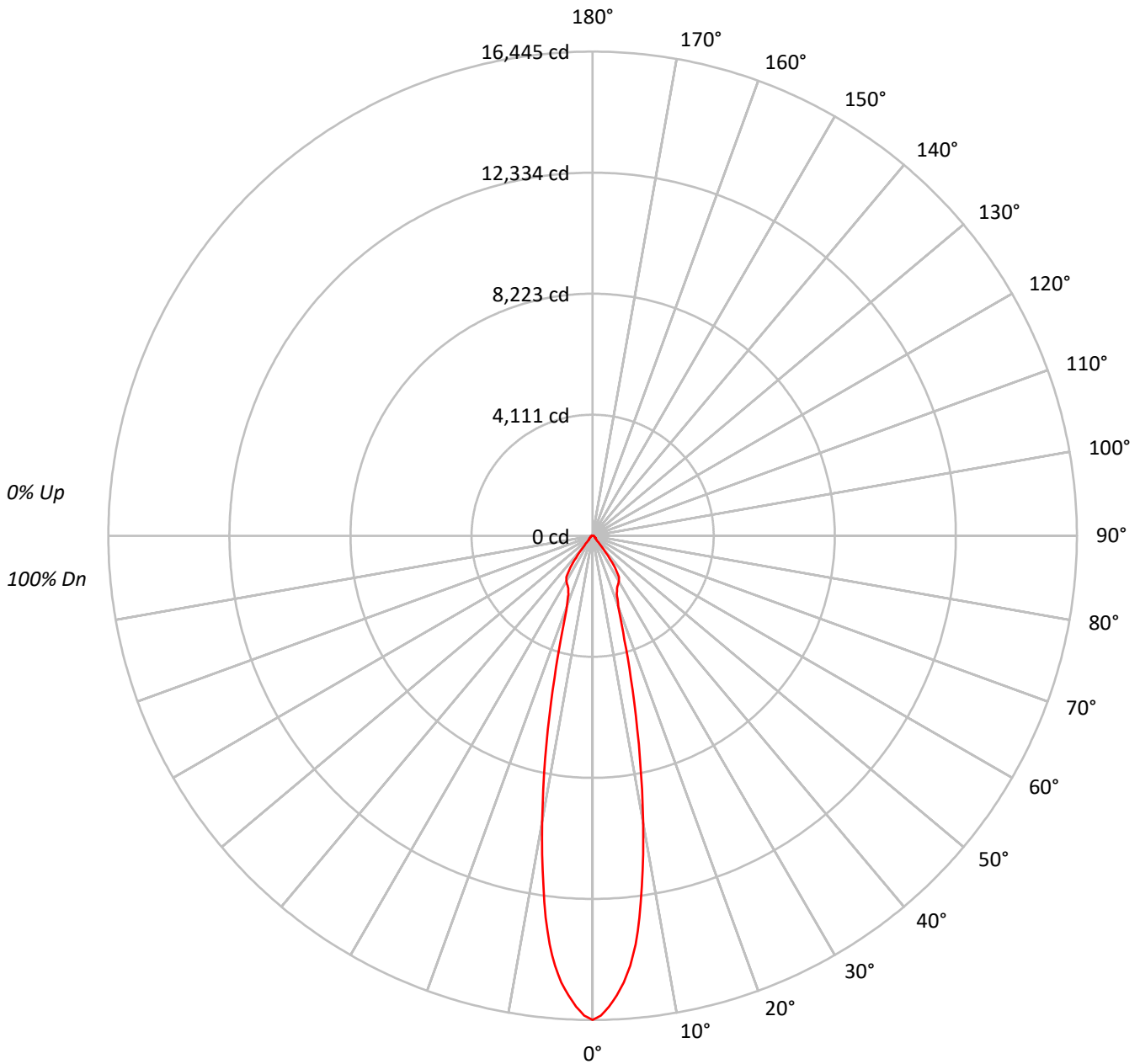
Input Watts (W): 54.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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			
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94			
2	109	104	100	97	107	102	99	96	99	96	94	96	94	92	94	92	90	88			
3	104	98	93	90	102	97	92	89	94	91	88	92	89	86	89	87	85	83			
4	100	93	88	84	98	92	87	83	89	85	82	88	84	81	86	83	80	79			
5	95	88	83	79	94	87	82	78	85	81	78	84	80	77	82	79	76	75			
6	92	84	78	75	90	83	78	74	81	77	74	80	76	73	79	76	73	72			
7	88	80	75	71	87	79	74	71	78	74	70	77	73	70	76	72	70	68			
8	85	76	71	68	84	76	71	67	75	70	67	74	70	67	73	69	67	65			
9	82	73	68	65	81	73	68	65	72	68	64	71	67	64	70	67	64	63			
10	79	70	65	62	78	70	65	62	69	65	62	69	65	62	68	64	62	60			

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

	0°
0°	8113528
5°	7261761
10°	4943626
15°	2555146
20°	1332876
25°	1069824
30°	1015443
35°	790767
40°	272953
45°	118826
50°	102086
55°	89373
60°	77855
65°	72731
70°	77897
75°	95123
80°	117912
85°	23776



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1241.7	26.2
10°-20°	1427.2	30.2
20°-30°	932.1	19.7
30°-40°	754.3	15.9
40°-50°	152.9	3.2
50°-60°	92.3	2.0
60°-70°	63.8	1.3
70°-80°	53.3	1.1
80°-90°	13.5	0.3
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°	3601.0	76.1
0°-40°	4355.3	92.1
0°-60°	4600.5	97.2
0°-90°	4731.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4731.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	16445	
5°	14662	###
15°	5002	1427
25°	1965	932
35°	1313	754
45°	170	153
55°	104	92
65°	62	64
75°	50	53
85°	4	14
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	16444.8
1°	16299.4
2°	16004.4
3°	15634.6
4°	15206.7
5°	14662.4
6°	13956.1
7°	13062.8
8°	12019.9
9°	10956.3
10°	9867.7
11°	8783.3
12°	7744.6
13°	6751.6
14°	5841.7
15°	5002.4
16°	4321.0
17°	3693.6
18°	3203.4
19°	2821.1
20°	2538.6
22.5°	2143.9
25°	1965.2
26°	1919.5
27°	1886.3
28°	1853.1
29°	1815.7
30°	1782.4
32.5°	1657.8
35°	1312.9
37.5°	843.4
40°	423.8
42.5°	203.6
45°	170.3
47.5°	149.6
50°	133.0
52.5°	116.3
55°	103.9
57.5°	87.3
60°	78.9
62.5°	70.6
65°	62.3
67.5°	58.2



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**CANDELA DISTRIBUTION (continued):**

	0°
75°	49.9
77.5°	49.9
80°	41.5
82.5°	24.9
85°	4.2
87.5°	0.0
90°	0.0



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— 0°-180°







70°		54.0
72.5°		54.0



(END OF REPORT)