

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: P434699

Luminaire Tested: **HCM4R40927ED010MMS**

Issue Date: 11/24/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P434699  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2008-933-3)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 11/24/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCM4R40927ED010MMS  
Description: HALO COMMERCIAL 4INCH ADJUSTABLE MULTIPLE, 40 DEG REFLECTOR OPTIC  
Light Source: HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4366.9 lumens  
Efficiency: N/A  
Efficacy: 80.7 lumens/watt  
Spacing Criteria (0/90/45): 0.72 / 0.72 / 0.76  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

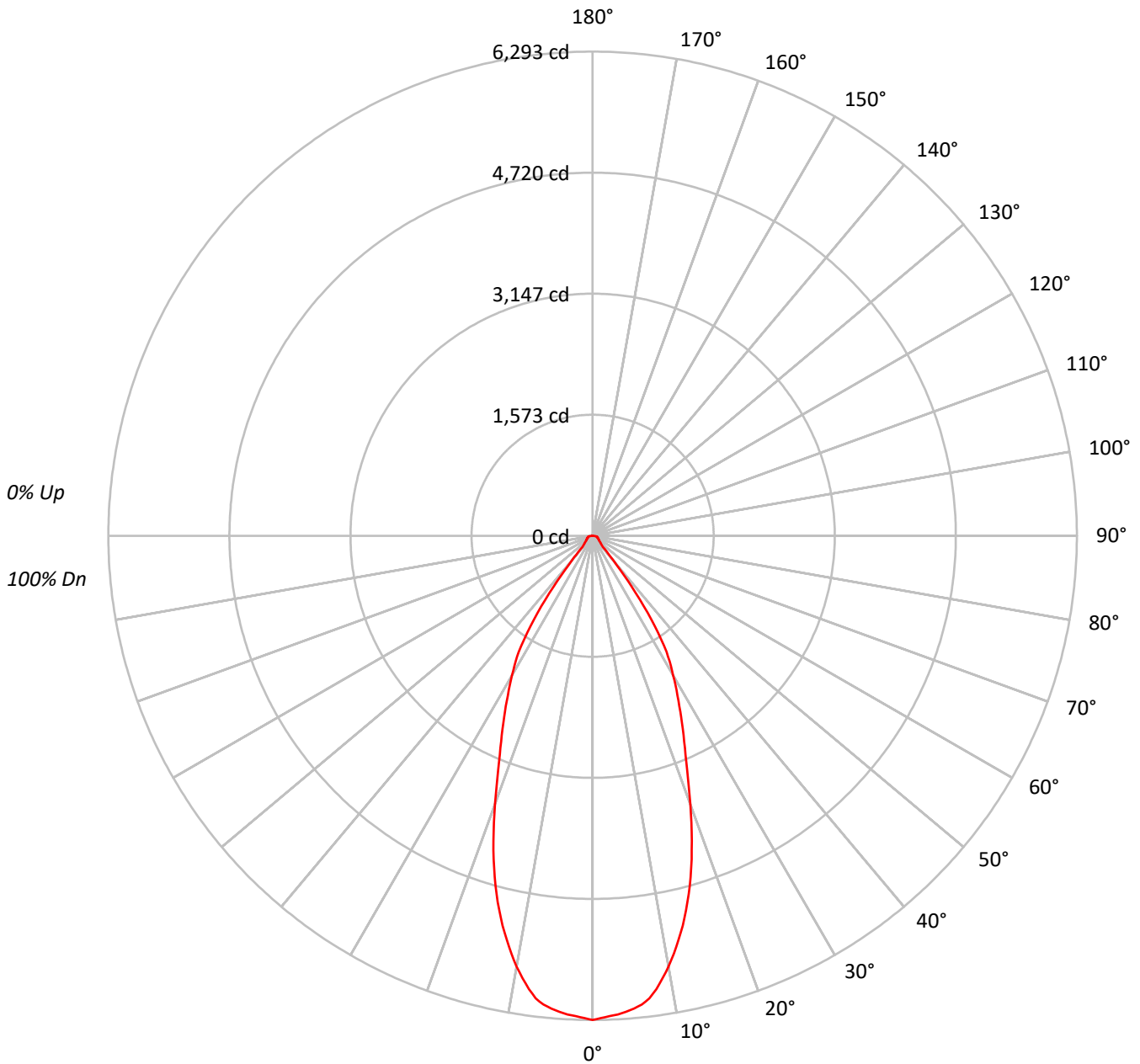
Input Watts (W): 54.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
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	95	105	101	97	94	97	94	92	94	92	90	92	90	88	86		
3	102	95	90	86	100	94	89	86	91	88	84	89	86	83	87	84	82	80		
4	97	89	84	80	95	88	83	79	86	82	78	84	80	77	82	79	76	75		
5	92	84	78	74	91	83	78	73	81	76	73	80	75	72	78	74	72	70		
6	88	79	73	69	86	78	73	69	77	72	68	75	71	68	74	70	67	66		
7	84	75	69	65	82	74	68	64	73	68	64	72	67	64	70	66	63	62		
8	80	71	65	61	79	70	64	61	69	64	60	68	63	60	67	63	60	58		
9	76	67	61	57	75	66	61	57	66	61	57	65	60	57	64	60	57	55		
10	73	64	58	54	72	63	58	54	62	57	54	62	57	54	61	57	54	52		

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

	0°
0°	3104986
5°	3055037
10°	2848132
15°	2463665
20°	1946914
25°	1507073
30°	1192907
35°	803174
40°	263679
45°	111569
50°	95792
55°	87222
60°	84664
65°	91060
70°	95641
75°	118951
80°	144052
85°	22077



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	574.4	13.2
10°-20°	1323.8	30.3
20°-30°	1278.9	29.3
30°-40°	795.7	18.2
40°-50°	145.3	3.3
50°-60°	91.5	2.1
60°-70°	75.8	1.7
70°-80°	64.9	1.5
80°-90°	16.4	0.4
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°	3177.1	72.8
0°-40°	3972.9	91.0
0°-60°	4209.7	96.4
0°-90°	4366.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4366.9	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	6293	
5°	6168	574
15°	4823	1324
25°	2768	1279
35°	1334	796
45°	160	145
55°	101	92
65°	78	76
75°	62	65
85°	4	16
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	6293.3
1°	6269.9
2°	6246.5
3°	6230.9
4°	6203.6
5°	6168.5
6°	6125.6
7°	6059.3
8°	5950.1
9°	5821.5
10°	5685.0
11°	5532.9
12°	5369.2
13°	5201.5
14°	5018.2
15°	4823.3
16°	4616.6
17°	4398.3
18°	4172.1
19°	3942.1
20°	3708.1
21°	3485.9
22°	3275.3
23°	3088.1
24°	2924.4
25°	2768.4
26°	2624.1
27°	2483.8
28°	2347.3
29°	2218.6
30°	2093.9
32.5°	1789.7
35°	1333.5
37.5°	830.5
40°	409.4
42.5°	195.0
45°	159.9
47.5°	140.4
50°	124.8
52.5°	109.2
55°	101.4
57.5°	93.6
60°	85.8



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**CANDELA DISTRIBUTION (continued):**

	0°
67.5°	70.2
70°	66.3
72.5°	66.3
75°	62.4
77.5°	58.5
80°	50.7
82.5°	31.2
85°	3.9
87.5°	0.0
90°	0.0



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— 0°-180°







62.5°		81.9
65°		78.0



(END OF REPORT)