

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: P434816

Luminaire Tested: **HCMR3R40940ED010MMS**

Issue Date: 11/24/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P434816  
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: HCMR3R40940ED010MMS  
Description: HALO COMMERCIAL 4INCH ADJUSTABLE MULTIPLE, 40 DEG REFLECTOR OPTIC  
Light Source: HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3870.6 lumens  
Efficiency: N/A  
Efficacy: 94.6 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

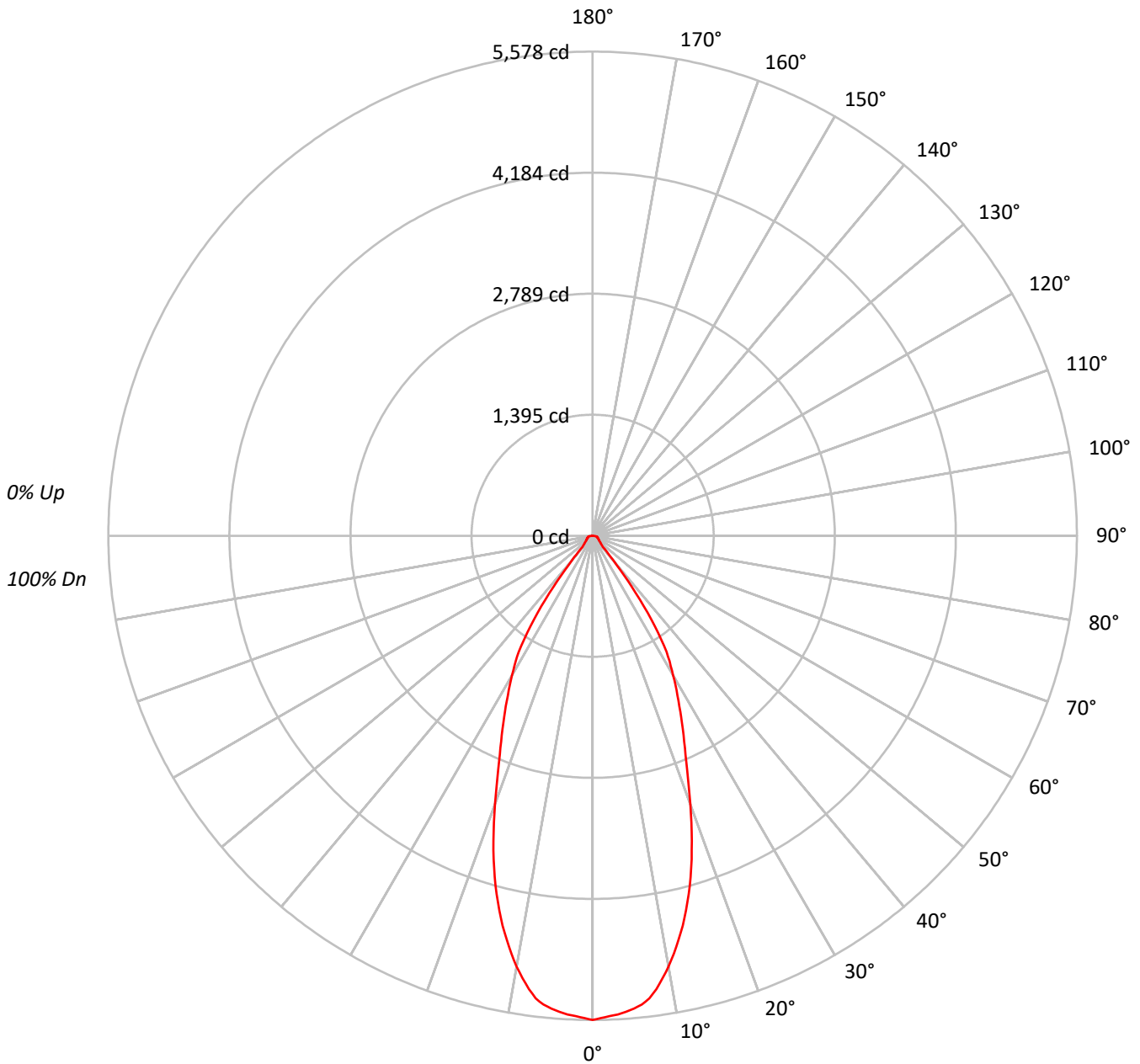
Input Watts (W): 40.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	2752170
5°	2707906
10°	2524492
15°	2183704
20°	1725713
25°	1335810
30°	1057317
35°	711925
40°	233730
45°	98870
50°	84892
55°	77330
60°	74994
65°	80670
70°	84822
75°	105417
80°	127573
85°	19813



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	509.1	13.2
10°-20°	1173.4	30.3
20°-30°	1133.6	29.3
30°-40°	705.3	18.2
40°-50°	128.8	3.3
50°-60°	81.1	2.1
60°-70°	67.2	1.7
70°-80°	57.5	1.5
80°-90°	14.5	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°	2816.1	72.8
0°-40°	3521.4	91.0
0°-60°	3731.3	96.4
0°-90°	3870.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3870.6	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	5578	
5°	5468	509
15°	4275	1173
25°	2454	1134
35°	1182	705
45°	142	129
55°	90	81
65°	69	67
75°	55	58
85°	4	15
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	5578.2
1°	5557.4
2°	5536.7
3°	5522.9
4°	5498.7
5°	5467.6
6°	5429.5
7°	5370.8
8°	5274.0
9°	5160.0
10°	5039.0
11°	4904.2
12°	4759.1
13°	4610.4
14°	4448.0
15°	4275.2
16°	4092.0
17°	3898.5
18°	3698.0
19°	3494.1
20°	3286.8
21°	3089.8
22°	2903.1
23°	2737.2
24°	2592.1
25°	2453.8
26°	2326.0
27°	2201.5
28°	2080.6
29°	1966.5
30°	1855.9
32.5°	1586.4
35°	1182.0
37.5°	736.2
40°	362.9
42.5°	172.8
45°	141.7
47.5°	124.4
50°	110.6
52.5°	96.8
55°	89.9
57.5°	82.9
60°	76.0



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**CANDELA DISTRIBUTION (continued):**

	0°
67.5°	62.2
70°	58.8
72.5°	58.8
75°	55.3
77.5°	51.8
80°	44.9
82.5°	27.6
85°	3.5
87.5°	0.0
90°	0.0



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— 0°-180°







62.5°		72.6
65°		69.1



(END OF REPORT)