

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: P434791

Luminaire Tested: **HCMR3R15940ED010MB**

Issue Date: 11/24/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P434791  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2008-933-1)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 11/24/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO COMMERCIAL  
Catalog Number: HCMR3R15940ED010MB  
Description: HALO COMMERCIAL 4INCH ADJUSTABLE MULTIPLE, 15 DEG REFLECTOR OPTIC  
Light Source: HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3967.4 lumens  
Efficiency: N/A  
Efficacy: 97.0 lumens/watt  
Spacing Criteria (0/90/45): 0.25 / 0.25 / 0.25  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

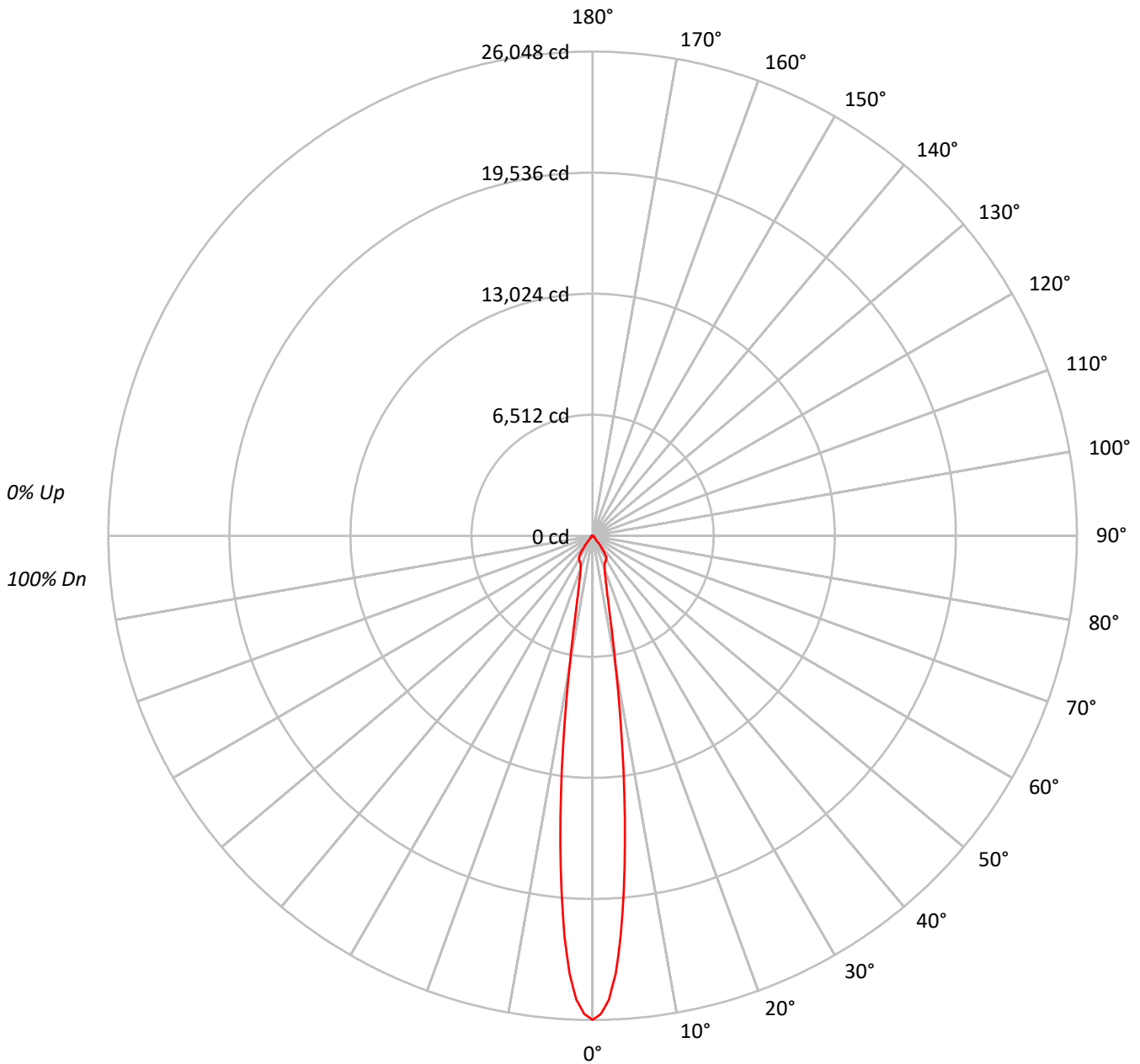
Input Watts (W): 40.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	114	111	109	107	112	109	107	105	105	104	102	102	100	99	98	97	96	95			
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	93	91	89			
3	105	99	95	91	103	98	94	90	95	92	89	93	90	88	91	88	86	85			
4	101	94	89	86	99	93	88	85	91	87	84	89	86	83	87	84	82	81			
5	97	90	85	81	95	89	84	81	87	83	80	85	82	79	84	81	79	77			
6	93	86	81	77	92	85	80	77	83	79	76	82	79	76	81	78	75	74			
7	90	82	77	74	89	82	77	73	80	76	73	79	75	73	78	75	72	71			
8	87	79	74	71	86	78	74	70	77	73	70	77	73	70	76	72	70	68			
9	84	76	71	68	83	76	71	68	75	71	68	74	70	67	73	70	67	66			
10	81	74	69	66	81	73	69	66	72	68	65	72	68	65	71	68	65	64			

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

	0°
0°	12851699
5°	9508280
10°	3585841
15°	1474021
20°	988972
25°	859800
30°	832853
35°	649466
40°	218144
45°	106127
50°	92875
55°	65374
60°	58021
65°	56504
70°	59866
75°	79110
80°	98308
85°	19813



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1414.0	35.6
10°-20°	889.3	22.4
20°-30°	740.5	18.7
30°-40°	618.3	15.6
40°-50°	131.3	3.3
50°-60°	72.4	1.8
60°-70°	48.4	1.2
70°-80°	42.0	1.1
80°-90°	11.3	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°	3043.9	76.7
0°-40°	3662.1	92.3
0°-60°	3865.8	97.4
0°-90°	3967.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3967.4	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	26048	
5°	19198	###
15°	2886	889
25°	1579	741
35°	1078	618
45°	152	131
55°	76	72
65°	48	48
75°	42	42
85°	4	11
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	26048.3
1°	25733.8
2°	24970.1
3°	23604.9
4°	21617.7
5°	19198.4
6°	16609.8
7°	13976.3
8°	11401.6
9°	9124.0
10°	7157.5
11°	5643.8
12°	4572.4
13°	3822.4
14°	3286.7
15°	2885.8
16°	2578.2
17°	2339.8
18°	2153.1
19°	2008.0
20°	1883.6
22.5°	1672.7
25°	1579.4
26°	1551.8
27°	1531.0
28°	1510.3
29°	1486.1
30°	1461.9
32.5°	1365.1
35°	1078.3
37.5°	687.8
40°	338.7
42.5°	162.4
45°	152.1
47.5°	141.7
50°	121.0
52.5°	93.3
55°	76.0
57.5°	65.7
60°	58.8
62.5°	51.8
65°	48.4
67.5°	44.9



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**CANDELA DISTRIBUTION (continued):**

	0°
75°	41.5
77.5°	38.0
80°	34.6
82.5°	20.7
85°	3.5
87.5°	0.0
90°	0.0



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— 0°-180°







70°	41.5
72.5°	41.5



(END OF REPORT)