

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: PORTFOLIO

Report Number: P431810

Luminaire Tested: **LAMR4B412R209027DE01021MMS**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P431810  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2007-857-3)  
Test Lab: INNOVATION CENTER (G1)  
Issue Date: 11/23/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LAMR4B412R209027DE01021MMS  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 20 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5279.4 lumens  
Efficiency: N/A  
Efficacy: 97.6 lumens/watt  
Spacing Criteria (0/90/45): 0.34 / 0.34 / 0.33  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

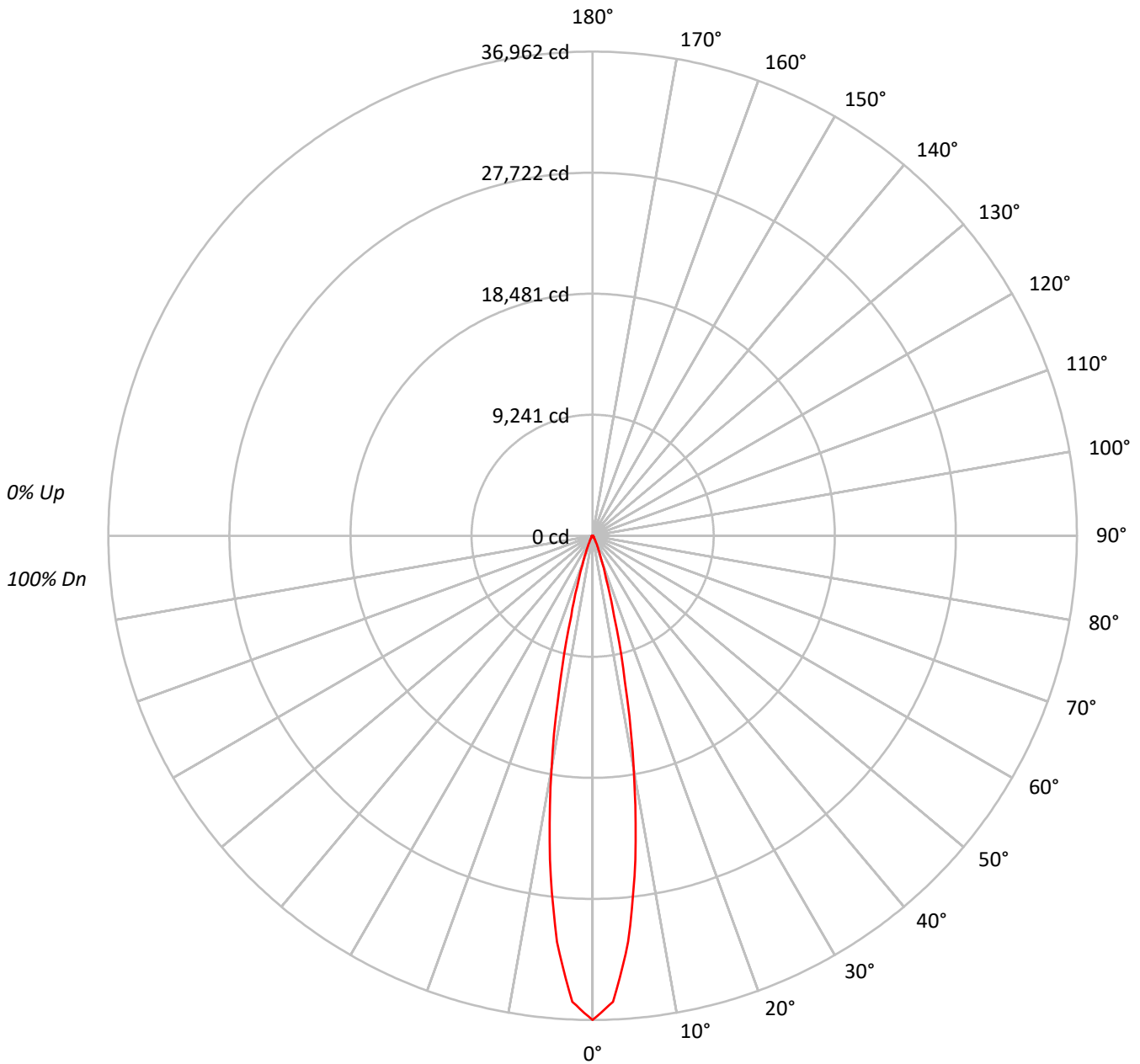
Input Watts (W): 54.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	100	100
1	115	113	111	110	113	111	109	108	107	106	105	103	102	102	100	99	99	97	97	97	97
2	112	108	105	103	110	106	104	102	103	101	100	101	99	97	98	97	95	94	94	94	94
3	108	104	100	98	107	103	100	97	100	98	96	98	96	94	96	94	93	91	91	91	91
4	105	100	97	94	104	99	96	93	97	94	92	96	93	91	94	92	90	89	89	89	89
5	103	97	93	90	101	96	93	90	95	92	89	93	91	89	92	90	88	87	87	87	87
6	100	94	90	88	99	94	90	87	92	89	87	91	88	86	90	88	86	85	85	85	85
7	98	92	88	85	97	91	88	85	90	87	85	89	86	84	88	86	84	83	83	83	83
8	96	90	86	83	95	89	86	83	88	85	83	87	85	82	87	84	82	81	81	81	81
9	94	88	84	81	93	87	84	81	86	83	81	86	83	81	85	82	81	80	80	80	80
10	92	86	82	80	91	85	82	80	85	82	79	84	81	79	83	81	79	78	78	78	78

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

	0°
0°	18236542
5°	15414652
10°	9054005
15°	3241844
20°	1072664
25°	426960
30°	204069
35°	116606
40°	84179
45°	70961
50°	81745
55°	66664
60°	33451
65°	28252
70°	34910
75°	36982
80°	27560
85°	27172



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	2548.5	48.3
10°-20°	1987.4	37.6
20°-30°	412.5	7.8
30°-40°	130.0	2.5
40°-50°	83.7	1.6
50°-60°	67.2	1.3
60°-70°	26.4	0.5
70°-80°	19.8	0.4
80°-90°	3.9	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°	4948.5	93.7
0°-40°	5078.5	96.2
0°-60°	5229.4	99.1
0°-90°	5279.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5279.4	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	36962	
5°	31124	###
15°	6347	1987
25°	784	413
35°	194	130
45°	102	84
55°	78	67
65°	24	26
75°	19	20
85°	5	4
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	36962.5
2.5°	35607.0
5°	31124.1
7.5°	24937.0
10°	18072.2
12.5°	11401.0
15°	6346.8
17.5°	3490.5
20°	2043.0
22.5°	1249.0
25°	784.3
27.5°	518.0
30°	358.2
32.5°	251.7
35°	193.6
37.5°	154.9
40°	130.7
42.5°	111.3
45°	101.7
47.5°	101.7
50°	106.5
52.5°	101.7
55°	77.5
57.5°	53.3
60°	33.9
62.5°	29.0
65°	24.2
67.5°	24.2
70°	24.2
72.5°	24.2
75°	19.4
77.5°	14.5
80°	9.7
82.5°	4.8
85°	4.8
87.5°	0.0
90°	0.0



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— 0°-180°







(END OF REPORT)