

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: P431519

Luminaire Tested: **LAMR4B312R209024DE01021MMS**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P431519  
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: LAMR4B312R209024DE01021MMS  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 20 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 90CRI / 2400K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3133.2 lumens  
Efficiency: N/A  
Efficacy: 76.6 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

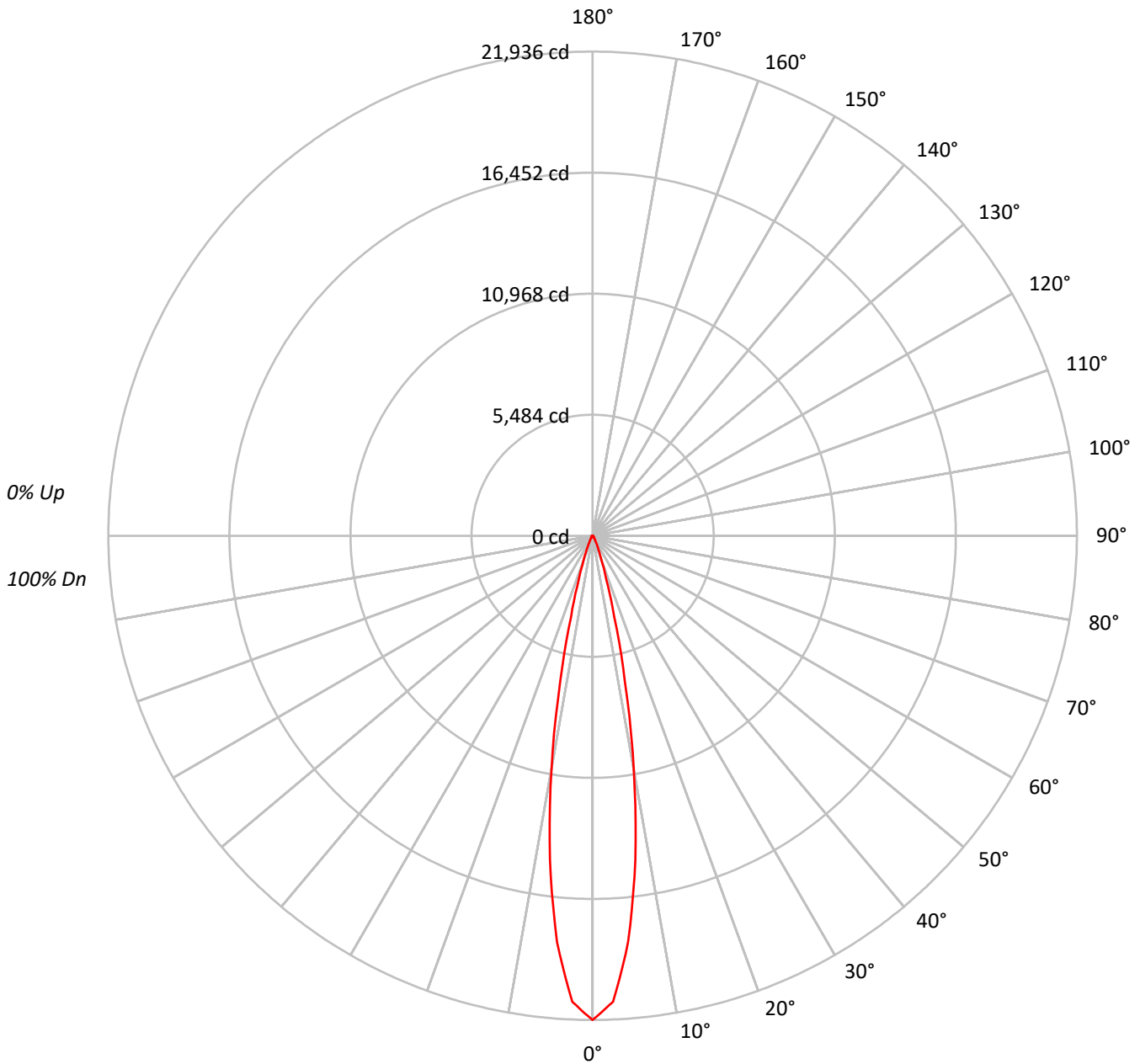
Input Watts (W): 40.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	100	100
1	115	113	111	110	113	111	109	108	107	106	105	103	102	101	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	95	98	96	94	96	94	93	91	91	91	91
4	105	100	97	94	104	99	96	93	97	94	92	95	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°	10822872
5°	9148124
10°	5373276
15°	1923970
20°	636615
25°	253356
30°	121119
35°	69205
40°	49979
45°	42074
50°	48510
55°	39568
60°	19834
65°	16811
70°	20773
75°	21922
80°	16195
85°	16417



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1512.5	48.3
10°-20°	1179.5	37.6
20°-30°	244.8	7.8
30°-40°	77.2	2.5
40°-50°	49.6	1.6
50°-60°	39.9	1.3
60°-70°	15.7	0.5
70°-80°	11.7	0.4
80°-90°	2.4	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°	2936.8	93.7
0°-40°	3014.0	96.2
0°-60°	3103.4	99.1
0°-90°	3133.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3133.2	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	21936	
5°	18471	###
15°	3767	1179
25°	465	245
35°	115	77
45°	60	50
55°	46	40
65°	14	16
75°	12	12
85°	3	2
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	21936.2
2.5°	21131.7
5°	18471.2
7.5°	14799.4
10°	10725.3
12.5°	6766.2
15°	3766.7
17.5°	2071.5
20°	1212.5
22.5°	741.3
25°	465.4
27.5°	307.4
30°	212.6
32.5°	149.4
35°	114.9
37.5°	91.9
40°	77.6
42.5°	66.1
45°	60.3
47.5°	60.3
50°	63.2
52.5°	60.3
55°	46.0
57.5°	31.6
60°	20.1
62.5°	17.2
65°	14.4
67.5°	14.4
70°	14.4
72.5°	14.4
75°	11.5
77.5°	8.6
80°	5.7
82.5°	2.9
85°	2.9
87.5°	0.0
90°	0.0



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— 0°-180°







(END OF REPORT)