

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: P433993

Luminaire Tested: **LAMR4B308R209027DE01021MB**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P433993  
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: LAMR4B308R209027DE01021MB  
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: 2339.4 lumens  
Efficiency: N/A  
Efficacy: 73.3 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

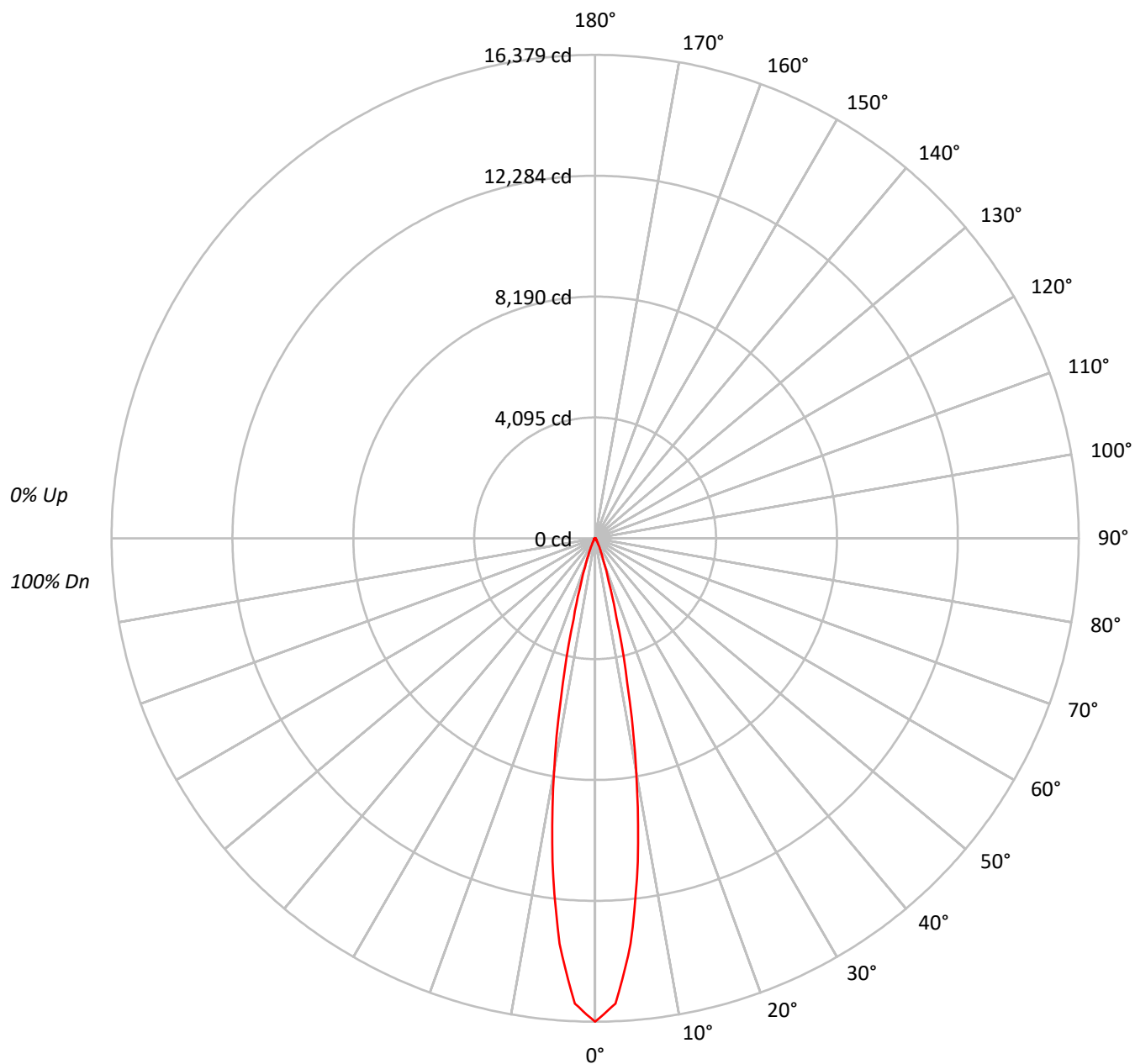
Input Watts (W): 31.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  |  | 50  | 30  | 10  |  | 50  |
| RCR |     |     |     |     |     |     |     |     |     |     |     |  |     |     |     |  |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 |
| 1   | 115 | 113 | 111 | 110 | 113 | 111 | 109 | 108 | 107 | 106 | 105 |  | 103 | 102 | 102 |  | 100 |
| 2   | 112 | 108 | 105 | 103 | 110 | 106 | 104 | 102 | 103 | 101 | 100 |  | 101 | 99  | 97  |  | 98  |
| 3   | 108 | 104 | 100 | 98  | 107 | 103 | 100 | 97  | 100 | 98  | 96  |  | 98  | 96  | 94  |  | 96  |
| 4   | 105 | 100 | 97  | 94  | 104 | 99  | 96  | 93  | 97  | 94  | 92  |  | 96  | 93  | 91  |  | 94  |
| 5   | 103 | 97  | 93  | 90  | 101 | 96  | 93  | 90  | 95  | 92  | 89  |  | 93  | 91  | 89  |  | 92  |
| 6   | 100 | 94  | 90  | 88  | 99  | 94  | 90  | 87  | 92  | 89  | 87  |  | 91  | 88  | 86  |  | 90  |
| 7   | 98  | 92  | 88  | 85  | 97  | 91  | 88  | 85  | 90  | 87  | 85  |  | 89  | 86  | 84  |  | 88  |
| 8   | 96  | 90  | 86  | 83  | 95  | 89  | 86  | 83  | 88  | 85  | 83  |  | 87  | 85  | 82  |  | 87  |
| 9   | 94  | 88  | 84  | 81  | 93  | 87  | 84  | 81  | 86  | 83  | 81  |  | 86  | 83  | 81  |  | 85  |
| 10  | 92  | 86  | 82  | 80  | 91  | 85  | 82  | 80  | 85  | 82  | 79  |  | 84  | 81  | 79  |  | 83  |

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

|     |         |
|-----|---------|
|     | 0°      |
| 0°  | 8081162 |
| 5°  | 6830684 |
| 10° | 4012084 |
| 15° | 1436580 |
| 20° | 475322  |
| 25° | 189173  |
| 30° | 90469   |
| 35° | 51678   |
| 40° | 37291   |
| 45° | 31468   |
| 50° | 36229   |
| 55° | 29504   |
| 60° | 14801   |
| 65° | 12492   |
| 70° | 15435   |
| 75° | 16394   |
| 80° | 12217   |
| 85° | 11888   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 1129.3 | 48.3      |
| 10°-20°   | 880.7  | 37.6      |
| 20°-30°   | 182.8  | 7.8       |
| 30°-40°   | 57.6   | 2.5       |
| 40°-50°   | 37.1   | 1.6       |
| 50°-60°   | 29.8   | 1.3       |
| 60°-70°   | 11.7   | 0.5       |
| 70°-80°   | 8.8    | 0.4       |
| 80°-90°   | 1.7    | 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°    | 2192.8 | 93.7      |
| 0°-40°    | 2250.4 | 96.2      |
| 0°-60°    | 2317.3 | 99.1      |
| 0°-90°    | 2339.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2339.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | Flux |
|-----|-------|------|
| 0°  | 16379 |      |
| 5°  | 13792 | ###  |
| 15° | 2812  | 881  |
| 25° | 348   | 183  |
| 35° | 86    | 58   |
| 45° | 45    | 37   |
| 55° | 34    | 30   |
| 65° | 11    | 12   |
| 75° | 9     | 9    |
| 85° | 2     | 2    |
| 90° | 0     |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      |
|-------|---------|
| 0°    | 16379.2 |
| 2.5°  | 15778.5 |
| 5°    | 13792.0 |
| 7.5°  | 11050.3 |
| 10°   | 8008.3  |
| 12.5° | 5052.1  |
| 15°   | 2812.5  |
| 17.5° | 1546.7  |
| 20°   | 905.3   |
| 22.5° | 553.5   |
| 25°   | 347.5   |
| 27.5° | 229.5   |
| 30°   | 158.8   |
| 32.5° | 111.6   |
| 35°   | 85.8    |
| 37.5° | 68.6    |
| 40°   | 57.9    |
| 42.5° | 49.3    |
| 45°   | 45.1    |
| 47.5° | 45.1    |
| 50°   | 47.2    |
| 52.5° | 45.1    |
| 55°   | 34.3    |
| 57.5° | 23.6    |
| 60°   | 15.0    |
| 62.5° | 12.9    |
| 65°   | 10.7    |
| 67.5° | 10.7    |
| 70°   | 10.7    |
| 72.5° | 10.7    |
| 75°   | 8.6     |
| 77.5° | 6.4     |
| 80°   | 4.3     |
| 82.5° | 2.1     |
| 85°   | 2.1     |
| 87.5° | 0.0     |
| 90°   | 0.0     |



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— 0°-180°







(END OF REPORT)