

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: P433777

Luminaire Tested: **LAMR4B208R409027DE010x1MB**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P433777  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1911-585-7)  
Test Lab: INNOVATION CENTER (G1)  
Issue Date: 11/23/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LAMR4B208R409027DE010x1MB  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 40 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1646.4 lumens  
Efficiency: N/A  
Efficacy: 79.9 lumens/watt  
Spacing Criteria (0/90/45): 0.7 / 0.7 / 0.6  
Luminous Opening: Circular (Dia: 0.29' x H: 0')  
CIE Type: Direct

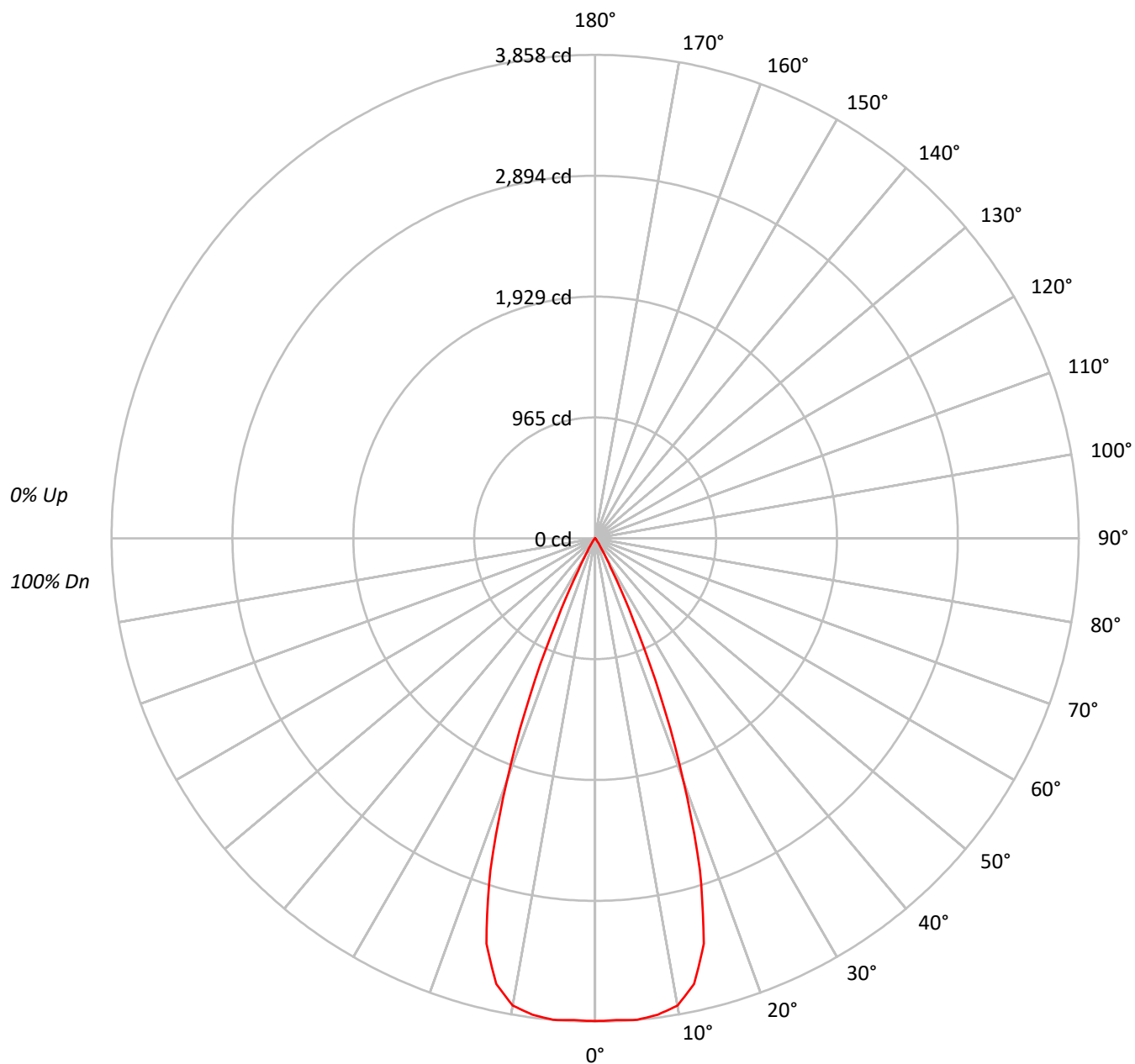
Input Watts (W): 20.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 109 | 112 | 110 | 109 | 107 | 106 | 105 | 104 |  | 103 | 102 | 101 |  | 99  |
| 2   | 111 | 107 | 104 | 101 | 109 | 105 | 102 | 100 | 102 | 100 | 98  |  | 99  | 97  | 96  |  | 97  |
| 3   | 107 | 102 | 98  | 95  | 105 | 101 | 97  | 94  | 98  | 95  | 93  |  | 96  | 94  | 92  |  | 94  |
| 4   | 103 | 98  | 93  | 90  | 102 | 97  | 93  | 90  | 95  | 91  | 89  |  | 93  | 90  | 88  |  | 91  |
| 5   | 100 | 94  | 89  | 86  | 98  | 93  | 89  | 86  | 91  | 88  | 85  |  | 90  | 87  | 84  |  | 88  |
| 6   | 97  | 90  | 85  | 82  | 95  | 89  | 85  | 82  | 88  | 84  | 82  |  | 87  | 83  | 81  |  | 85  |
| 7   | 93  | 87  | 82  | 79  | 92  | 86  | 82  | 79  | 85  | 81  | 78  |  | 84  | 80  | 78  |  | 83  |
| 8   | 91  | 83  | 79  | 76  | 90  | 83  | 79  | 76  | 82  | 78  | 75  |  | 81  | 78  | 75  |  | 80  |
| 9   | 88  | 81  | 76  | 73  | 87  | 80  | 76  | 73  | 79  | 75  | 73  |  | 79  | 75  | 73  |  | 78  |
| 10  | 85  | 78  | 73  | 71  | 84  | 77  | 73  | 70  | 77  | 73  | 70  |  | 76  | 73  | 70  |  | 75  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 620669 |
| 5°  | 623832 |
| 10° | 619397 |
| 15° | 558803 |
| 20° | 352556 |
| 25° | 126973 |
| 30° | 26602  |
| 35° | 8103   |
| 40° | 1619   |
| 45° | 0      |
| 50° | 0      |
| 55° | 0      |
| 60° | 0      |
| 65° | 0      |
| 70° | 0      |
| 75° | 0      |
| 80° | 0      |
| 85° | 0      |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 365.8  | 22.2      |
| 10°-20°   | 874.7  | 53.1      |
| 20°-30°   | 373.0  | 22.7      |
| 30°-40°   | 32.0   | 1.9       |
| 40°-50°   | 1.0    | 0.1       |
| 50°-60°   | 0.0    | 0.0       |
| 60°-70°   | 0.0    | 0.0       |
| 70°-80°   | 0.0    | 0.0       |
| 80°-90°   | 0.0    | 0.0       |
| 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°    | 1613.4 | 98.0      |
| 0°-40°    | 1645.4 | 99.9      |
| 0°-60°    | 1646.4 | 100.0     |
| 0°-90°    | 1646.4 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1646.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 3853 |      |
| 5°  | 3858 | 366  |
| 15° | 3350 | 875  |
| 25° | 714  | 373  |
| 35° | 41   | 32   |
| 45° | 0    | 1    |
| 55° | 0    | 0    |
| 65° | 0    | 0    |
| 75° | 0    | 0    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 3852.6 |
| 2.5°  | 3849.1 |
| 5°    | 3857.5 |
| 7.5°  | 3834.5 |
| 10°   | 3786.3 |
| 12.5° | 3642.6 |
| 15°   | 3350.4 |
| 17.5° | 2779.8 |
| 20°   | 2056.4 |
| 22.5° | 1354.0 |
| 25°   | 714.3  |
| 27.5° | 289.5  |
| 30°   | 143.0  |
| 32.5° | 76.0   |
| 35°   | 41.2   |
| 37.5° | 20.9   |
| 40°   | 7.7    |
| 42.5° | 1.4    |
| 45°   | 0.0    |
| 47.5° | 0.0    |
| 50°   | 0.0    |
| 52.5° | 0.0    |
| 55°   | 0.0    |
| 57.5° | 0.0    |
| 60°   | 0.0    |
| 62.5° | 0.0    |
| 65°   | 0.0    |
| 67.5° | 0.0    |
| 70°   | 0.0    |
| 72.5° | 0.0    |
| 75°   | 0.0    |
| 77.5° | 0.0    |
| 80°   | 0.0    |
| 82.5° | 0.0    |
| 85°   | 0.0    |
| 87.5° | 0.0    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)