

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: P433389

Luminaire Tested: **LAMR4B108R209730DE010x1MW**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P433389  
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: LAMR4B108R209730DE010x1MW  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 20 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 97CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 727.1 lumens  
Efficiency: N/A  
Efficacy: 63.8 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

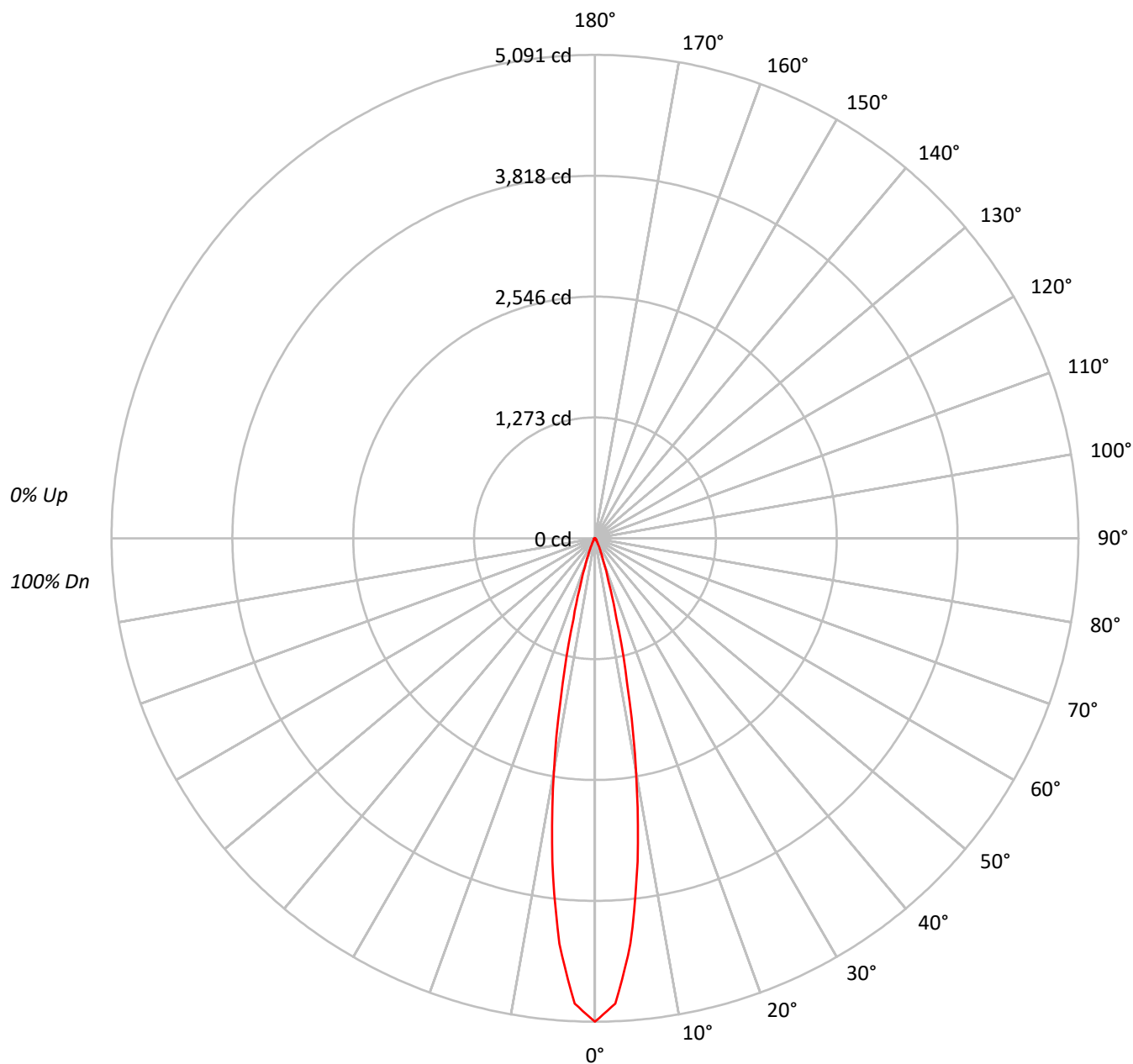
Input Watts (W): 11.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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 | 101 |  | 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°  | 2511746 |
| 5°  | 2123049 |
| 10° | 1247016 |
| 15° | 446527  |
| 20° | 147747  |
| 25° | 58793   |
| 30° | 28086   |
| 35° | 16082   |
| 40° | 11593   |
| 45° | 9768    |
| 50° | 11283   |
| 55° | 9204    |
| 60° | 4638    |
| 65° | 3853    |
| 70° | 4760    |
| 75° | 5147    |
| 80° | 3694    |
| 85° | 3963    |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 351.0  | 48.3      |
| 10°-20°   | 273.7  | 37.6      |
| 20°-30°   | 56.8   | 7.8       |
| 30°-40°   | 17.9   | 2.5       |
| 40°-50°   | 11.5   | 1.6       |
| 50°-60°   | 9.3    | 1.3       |
| 60°-70°   | 3.6    | 0.5       |
| 70°-80°   | 2.7    | 0.4       |
| 80°-90°   | 0.6    | 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°    | 681.6  | 93.7      |
| 0°-40°    | 699.5  | 96.2      |
| 0°-60°    | 720.2  | 99.1      |
| 0°-90°    | 727.1  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 727.1  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 5091 |      |
| 5°  | 4287 | 351  |
| 15° | 874  | 274  |
| 25° | 108  | 57   |
| 35° | 27   | 18   |
| 45° | 14   | 12   |
| 55° | 11   | 9    |
| 65° | 3    | 4    |
| 75° | 3    | 3    |
| 85° | 1    | 1    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 5090.9 |
| 2.5°  | 4904.2 |
| 5°    | 4286.7 |
| 7.5°  | 3434.6 |
| 10°   | 2489.1 |
| 12.5° | 1570.3 |
| 15°   | 874.2  |
| 17.5° | 480.8  |
| 20°   | 281.4  |
| 22.5° | 172.0  |
| 25°   | 108.0  |
| 27.5° | 71.3   |
| 30°   | 49.3   |
| 32.5° | 34.7   |
| 35°   | 26.7   |
| 37.5° | 21.3   |
| 40°   | 18.0   |
| 42.5° | 15.3   |
| 45°   | 14.0   |
| 47.5° | 14.0   |
| 50°   | 14.7   |
| 52.5° | 14.0   |
| 55°   | 10.7   |
| 57.5° | 7.3    |
| 60°   | 4.7    |
| 62.5° | 4.0    |
| 65°   | 3.3    |
| 67.5° | 3.3    |
| 70°   | 3.3    |
| 72.5° | 3.3    |
| 75°   | 2.7    |
| 77.5° | 2.0    |
| 80°   | 1.3    |
| 82.5° | 0.7    |
| 85°   | 0.7    |
| 87.5° | 0.0    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)