

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: P433449

Luminaire Tested: **LAMR4B108R359035DE010x1MW**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P433449  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2008-908-6)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 11/23/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LAMR4B108R359035DE010x1MW  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 35 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 814.1 lumens  
Efficiency: N/A  
Efficacy: 71.4 lumens/watt  
Spacing Criteria (0/90/45): 0.57 / 0.57 / 0.51  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

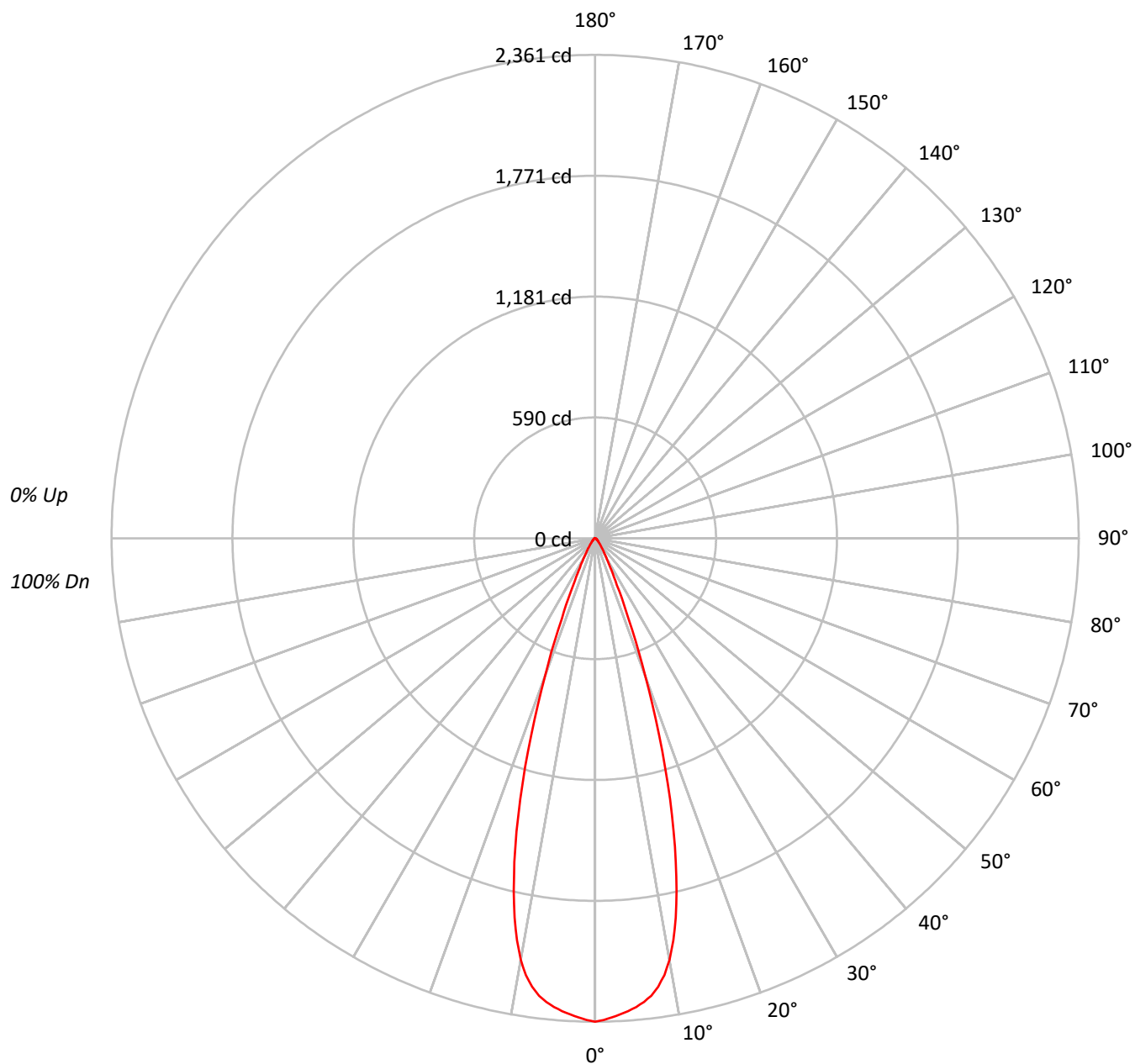
Input Watts (W): 11.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 114 | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 105 | 103 |  | 102 | 101 | 100 |  | 99  |
| 2   | 110 | 106 | 103 | 100 | 108 | 104 | 101 | 99  | 101 | 99  | 97  |  | 98  | 96  | 95  |  | 96  |
| 3   | 106 | 101 | 97  | 94  | 104 | 100 | 96  | 93  | 97  | 94  | 92  |  | 95  | 92  | 90  |  | 93  |
| 4   | 102 | 96  | 92  | 89  | 101 | 95  | 91  | 88  | 93  | 90  | 87  |  | 91  | 88  | 86  |  | 90  |
| 5   | 99  | 92  | 88  | 84  | 97  | 91  | 87  | 84  | 90  | 86  | 83  |  | 88  | 85  | 83  |  | 87  |
| 6   | 96  | 89  | 84  | 81  | 94  | 88  | 84  | 80  | 87  | 83  | 80  |  | 85  | 82  | 79  |  | 84  |
| 7   | 92  | 85  | 81  | 77  | 91  | 85  | 80  | 77  | 84  | 80  | 77  |  | 82  | 79  | 76  |  | 81  |
| 8   | 90  | 82  | 78  | 74  | 88  | 82  | 77  | 74  | 81  | 77  | 74  |  | 80  | 76  | 74  |  | 79  |
| 9   | 87  | 79  | 75  | 72  | 86  | 79  | 75  | 72  | 78  | 74  | 71  |  | 77  | 74  | 71  |  | 77  |
| 10  | 84  | 77  | 72  | 69  | 83  | 76  | 72  | 69  | 76  | 72  | 69  |  | 75  | 71  | 69  |  | 74  |

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

|     |         |
|-----|---------|
|     | 0°      |
| 0°  | 1164968 |
| 5°  | 1138117 |
| 10° | 1047321 |
| 15° | 756982  |
| 20° | 373936  |
| 25° | 137185  |
| 30° | 61870   |
| 35° | 33669   |
| 40° | 20868   |
| 45° | 14164   |
| 50° | 10592   |
| 55° | 9032    |
| 60° | 7993    |
| 65° | 7588    |
| 70° | 7068    |
| 75° | 6100    |
| 80° | 6819    |
| 85° | 4529    |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 213.5  | 26.2      |
| 10°-20°   | 390.2  | 47.9      |
| 20°-30°   | 135.9  | 16.7      |
| 30°-40°   | 37.7   | 4.6       |
| 40°-50°   | 16.4   | 2.0       |
| 50°-60°   | 9.5    | 1.2       |
| 60°-70°   | 6.4    | 0.8       |
| 70°-80°   | 3.5    | 0.4       |
| 80°-90°   | 1.0    | 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°    | 739.6  | 90.9      |
| 0°-40°    | 777.3  | 95.5      |
| 0°-60°    | 803.1  | 98.7      |
| 0°-90°    | 814.1  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 814.1  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 2361 |      |
| 5°  | 2298 | 214  |
| 15° | 1482 | 390  |
| 25° | 252  | 136  |
| 35° | 56   | 38   |
| 45° | 20   | 16   |
| 55° | 10   | 9    |
| 65° | 6    | 6    |
| 75° | 3    | 4    |
| 85° | 1    | 1    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 2361.2 |
| 1°    | 2353.1 |
| 2°    | 2340.9 |
| 3°    | 2328.8 |
| 4°    | 2315.0 |
| 5°    | 2298.0 |
| 6°    | 2276.9 |
| 7°    | 2251.0 |
| 8°    | 2211.3 |
| 9°    | 2160.2 |
| 10°   | 2090.5 |
| 11°   | 2001.4 |
| 12°   | 1893.6 |
| 13°   | 1767.2 |
| 14°   | 1628.7 |
| 15°   | 1482.0 |
| 16°   | 1325.6 |
| 17°   | 1168.4 |
| 18°   | 1010.4 |
| 19°   | 858.1  |
| 20°   | 712.2  |
| 22.5° | 424.6  |
| 25°   | 252.0  |
| 26°   | 209.9  |
| 27°   | 175.0  |
| 28°   | 148.3  |
| 29°   | 126.4  |
| 30°   | 108.6  |
| 32.5° | 77.0   |
| 35°   | 55.9   |
| 37.5° | 42.1   |
| 40°   | 32.4   |
| 42.5° | 25.1   |
| 45°   | 20.3   |
| 47.5° | 17.0   |
| 50°   | 13.8   |
| 52.5° | 12.2   |
| 55°   | 10.5   |
| 57.5° | 8.9    |
| 60°   | 8.1    |
| 62.5° | 7.3    |
| 65°   | 6.5    |
| 67.5° | 5.7    |



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CANDELA DISTRIBUTION (continued):

|       | 0°  |
|-------|-----|
| 75°   | 3.2 |
| 77.5° | 2.4 |
| 80°   | 2.4 |
| 82.5° | 1.6 |
| 85°   | 0.8 |
| 87.5° | 0.0 |
| 90°   | 0.0 |



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— 0°-180°







|       |     |
|-------|-----|
| 70°   | 4.9 |
| 72.5° | 4.1 |



(END OF REPORT)