

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: P433438

Luminaire Tested: **LAMR4B108R359024DE010x1MB**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P433438  
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: LAMR4B108R359024DE010x1MB  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 35 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 90CRI / 2400K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 692.8 lumens  
Efficiency: N/A  
Efficacy: 60.8 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

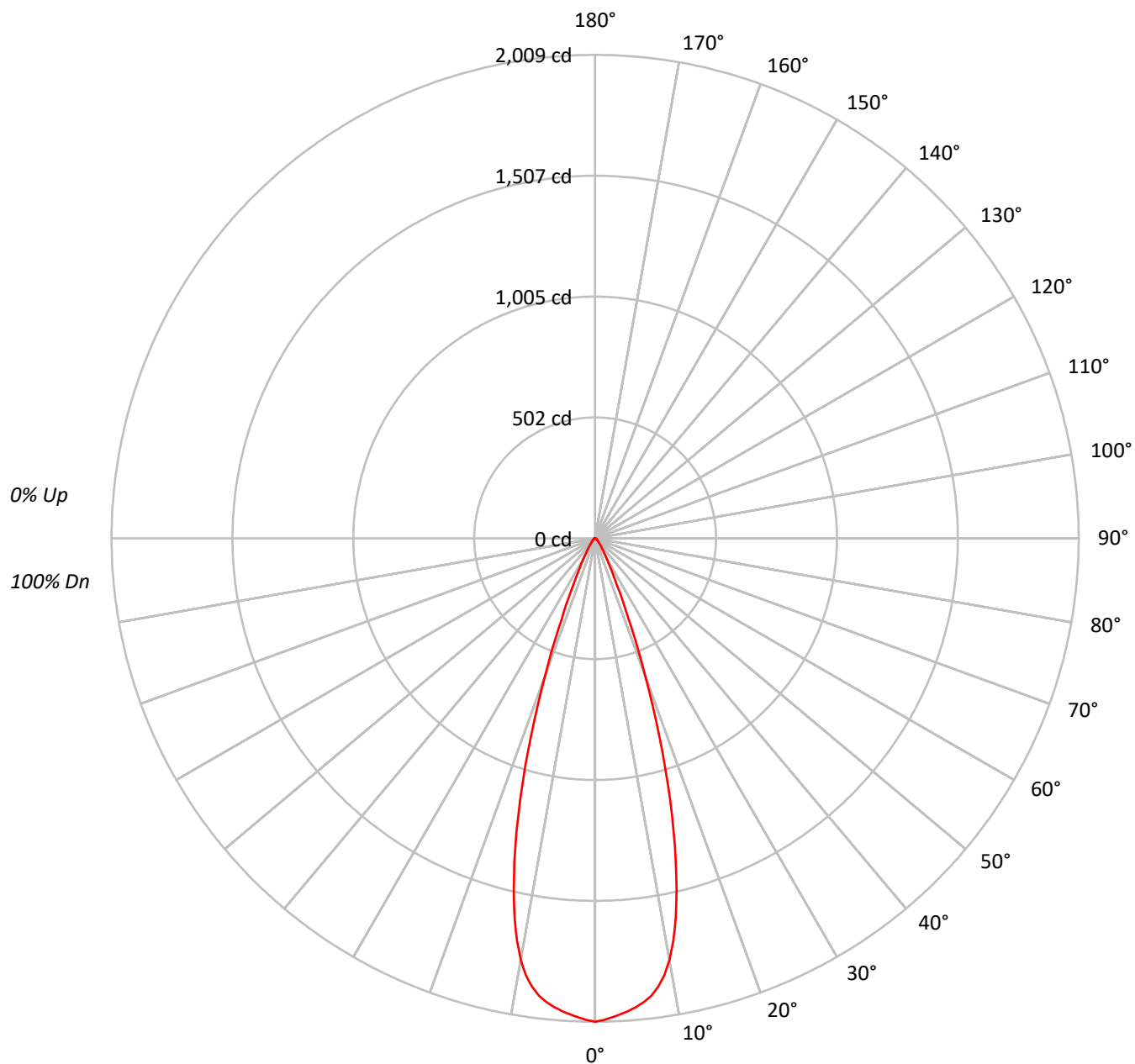
Input Watts (W): 11.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 991348 |
| 5°  | 968489 |
| 10° | 891262 |
| 15° | 644201 |
| 20° | 318229 |
| 25° | 116716 |
| 30° | 52641  |
| 35° | 28670  |
| 40° | 17776  |
| 45° | 12001  |
| 50° | 8980   |
| 55° | 7742   |
| 60° | 6809   |
| 65° | 6421   |
| 70° | 5914   |
| 75° | 5338   |
| 80° | 5967   |
| 85° | 3963   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 181.7  | 26.2      |
| 10°-20°   | 332.1  | 47.9      |
| 20°-30°   | 115.6  | 16.7      |
| 30°-40°   | 32.1   | 4.6       |
| 40°-50°   | 13.9   | 2.0       |
| 50°-60°   | 8.1    | 1.2       |
| 60°-70°   | 5.4    | 0.8       |
| 70°-80°   | 3.0    | 0.4       |
| 80°-90°   | 0.9    | 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°    | 629.4  | 90.9      |
| 0°-40°    | 661.5  | 95.5      |
| 0°-60°    | 683.5  | 98.7      |
| 0°-90°    | 692.8  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 692.8  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 2009 |      |
| 5°  | 1956 | 182  |
| 15° | 1261 | 332  |
| 25° | 214  | 116  |
| 35° | 48   | 32   |
| 45° | 17   | 14   |
| 55° | 9    | 8    |
| 65° | 6    | 5    |
| 75° | 3    | 3    |
| 85° | 1    | 1    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 2009.3 |
| 1°    | 2002.4 |
| 2°    | 1992.1 |
| 3°    | 1981.7 |
| 4°    | 1970.0 |
| 5°    | 1955.5 |
| 6°    | 1937.6 |
| 7°    | 1915.5 |
| 8°    | 1881.8 |
| 9°    | 1838.3 |
| 10°   | 1779.0 |
| 11°   | 1703.2 |
| 12°   | 1611.5 |
| 13°   | 1503.9 |
| 14°   | 1386.0 |
| 15°   | 1261.2 |
| 16°   | 1128.1 |
| 17°   | 994.3  |
| 18°   | 859.9  |
| 19°   | 730.2  |
| 20°   | 606.1  |
| 22.5° | 361.3  |
| 25°   | 214.4  |
| 26°   | 178.6  |
| 27°   | 148.9  |
| 28°   | 126.2  |
| 29°   | 107.6  |
| 30°   | 92.4   |
| 32.5° | 65.5   |
| 35°   | 47.6   |
| 37.5° | 35.9   |
| 40°   | 27.6   |
| 42.5° | 21.4   |
| 45°   | 17.2   |
| 47.5° | 14.5   |
| 50°   | 11.7   |
| 52.5° | 10.3   |
| 55°   | 9.0    |
| 57.5° | 7.6    |
| 60°   | 6.9    |
| 62.5° | 6.2    |
| 65°   | 5.5    |
| 67.5° | 4.8    |



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CANDELA DISTRIBUTION (continued):

|       | 0°  |
|-------|-----|
| 75°   | 2.8 |
| 77.5° | 2.1 |
| 80°   | 2.1 |
| 82.5° | 1.4 |
| 85°   | 0.7 |
| 87.5° | 0.0 |
| 90°   | 0.0 |



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— 0°-180°







|       |     |
|-------|-----|
| 70°   | 4.1 |
| 72.5° | 3.4 |



(END OF REPORT)