

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: P433524

Luminaire Tested: **LAMR4B108R509040DE010x1MW**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P433524  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1911-585-8)  
Test Lab: INNOVATION CENTER (G1)  
Issue Date: 11/23/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LAMR4B108R509040DE010x1MW  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 50 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 939.5 lumens  
Efficiency: N/A  
Efficacy: 82.4 lumens/watt  
Spacing Criteria (0/90/45): 0.82 / 0.82 / 0.74  
Luminous Opening: Circular (Dia: 0.29' x H: 0')  
CIE Type: Direct

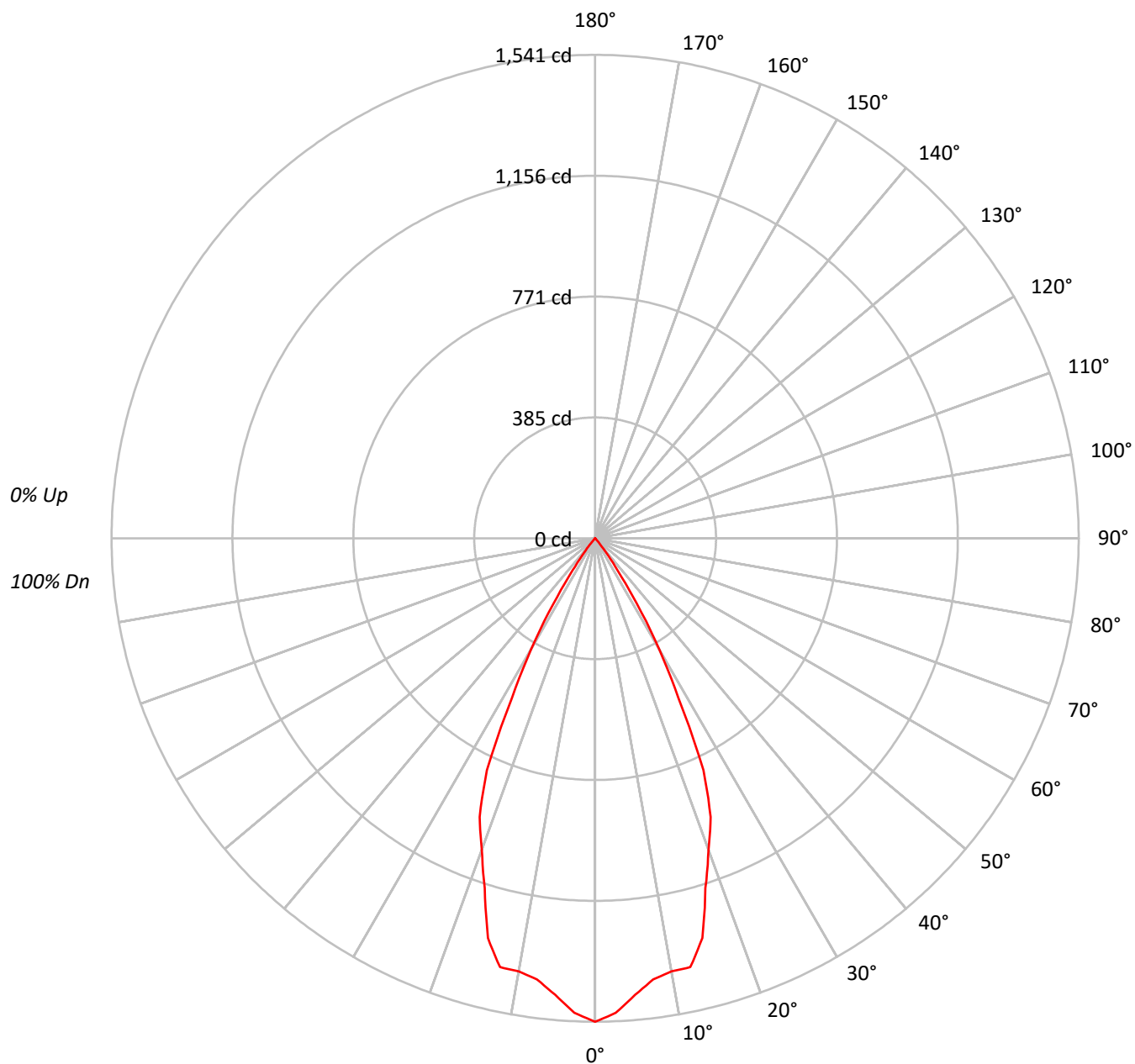
Input Watts (W): 11.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 30  | 10  |
| RCR |     |     |     |     |  |     |     |     |     |  |     |     |     |  |     |     |     |  |     |     |     |
| 0   | 119 | 119 | 119 | 119 |  | 116 | 116 | 116 | 116 |  | 111 | 111 | 111 |  | 106 | 106 | 106 |  | 102 | 102 | 102 |
| 1   | 114 | 112 | 110 | 108 |  | 112 | 110 | 108 | 106 |  | 106 | 104 | 103 |  | 102 | 101 | 100 |  | 99  | 98  | 97  |
| 2   | 110 | 105 | 102 | 99  |  | 107 | 104 | 100 | 98  |  | 100 | 98  | 96  |  | 97  | 95  | 93  |  | 95  | 93  | 92  |
| 3   | 105 | 99  | 95  | 92  |  | 103 | 98  | 94  | 91  |  | 95  | 92  | 89  |  | 93  | 90  | 88  |  | 91  | 89  | 87  |
| 4   | 101 | 94  | 89  | 86  |  | 99  | 93  | 89  | 85  |  | 91  | 87  | 84  |  | 89  | 86  | 83  |  | 87  | 84  | 82  |
| 5   | 96  | 89  | 84  | 80  |  | 95  | 88  | 84  | 80  |  | 87  | 83  | 79  |  | 85  | 81  | 79  |  | 84  | 80  | 78  |
| 6   | 92  | 85  | 80  | 76  |  | 91  | 84  | 79  | 76  |  | 83  | 78  | 75  |  | 81  | 77  | 75  |  | 80  | 77  | 74  |
| 7   | 89  | 81  | 75  | 72  |  | 87  | 80  | 75  | 72  |  | 79  | 74  | 71  |  | 78  | 74  | 71  |  | 77  | 73  | 71  |
| 8   | 85  | 77  | 72  | 68  |  | 84  | 76  | 71  | 68  |  | 75  | 71  | 68  |  | 74  | 70  | 67  |  | 73  | 70  | 67  |
| 9   | 82  | 73  | 68  | 65  |  | 81  | 73  | 68  | 65  |  | 72  | 68  | 64  |  | 71  | 67  | 64  |  | 70  | 67  | 64  |
| 10  | 79  | 70  | 65  | 62  |  | 78  | 70  | 65  | 62  |  | 69  | 64  | 61  |  | 68  | 64  | 61  |  | 68  | 64  | 61  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 248309 |
| 5°  | 236239 |
| 10° | 229303 |
| 15° | 220009 |
| 20° | 181010 |
| 25° | 145033 |
| 30° | 75657  |
| 35° | 24407  |
| 40° | 4143   |
| 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°    | 137.6  | 14.6      |
| 10°-20°   | 357.0  | 38.0      |
| 20°-30°   | 347.3  | 37.0      |
| 30°-40°   | 95.6   | 10.2      |
| 40°-50°   | 2.1    | 0.2       |
| 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       |
| <hr/>     |        |           |
| 0°-30°    | 841.9  | 89.6      |
| 0°-40°    | 937.5  | 99.8      |
| 0°-60°    | 939.5  | 100.0     |
| 0°-90°    | 939.5  | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 939.5  | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1541 |      |
| 5°  | 1461 | 138  |
| 15° | 1319 | 357  |
| 25° | 816  | 347  |
| 35° | 124  | 96   |
| 45° | 0    | 2    |
| 55° | 0    | 0    |
| 65° | 0    | 0    |
| 75° | 0    | 0    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 1541.3 |
| 2.5°  | 1513.8 |
| 5°    | 1460.8 |
| 7.5°  | 1418.1 |
| 10°   | 1401.7 |
| 12.5° | 1400.4 |
| 15°   | 1319.1 |
| 17.5° | 1169.1 |
| 20°   | 1055.8 |
| 22.5° | 961.7  |
| 25°   | 815.9  |
| 27.5° | 574.3  |
| 30°   | 406.7  |
| 32.5° | 246.1  |
| 35°   | 124.1  |
| 37.5° | 55.5   |
| 40°   | 19.7   |
| 42.5° | 1.6    |
| 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)