

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: P433290

Luminaire Tested: **LAM4B408R659727DE01021MW**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P433290  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2008-908-22)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 11/23/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LAM4B408R659727DE01021MW  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 65 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 97CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2649.6 lumens  
Efficiency: N/A  
Efficacy: 64.3 lumens/watt  
Spacing Criteria (0/90/45): 0.98 / 0.98 / 0.97  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

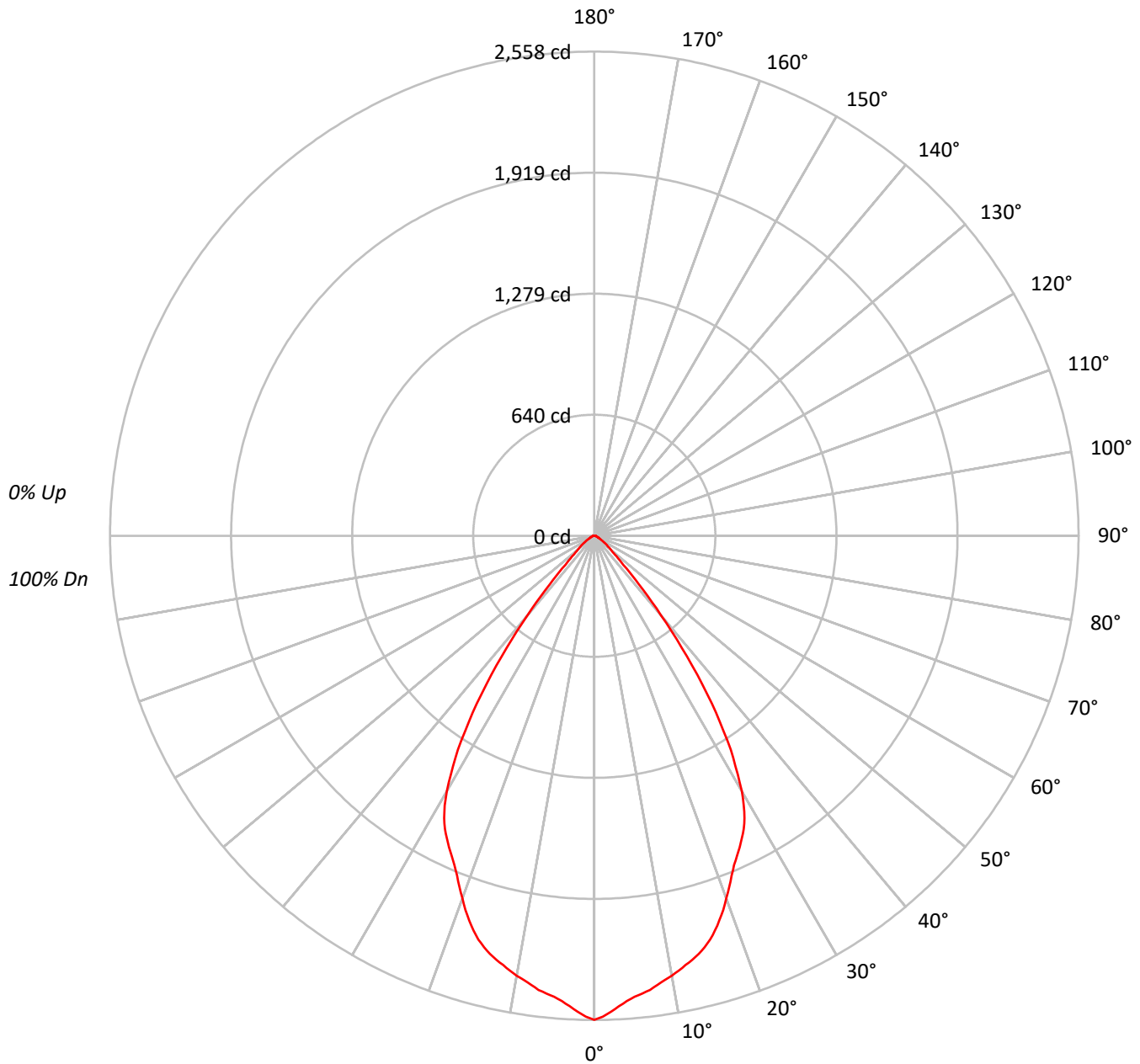
Input Watts (W): 41.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 113 | 110 | 107 | 105 | 111 | 108 | 106 | 103 | 104 | 102 | 100 |  | 100 | 99  | 97  |  | 97  |
| 2   | 107 | 102 | 98  | 94  | 105 | 100 | 96  | 93  | 97  | 94  | 91  |  | 94  | 91  | 89  |  | 91  |
| 3   | 101 | 94  | 89  | 85  | 99  | 93  | 88  | 84  | 90  | 86  | 83  |  | 88  | 84  | 81  |  | 86  |
| 4   | 96  | 88  | 82  | 77  | 94  | 86  | 81  | 77  | 84  | 80  | 76  |  | 82  | 78  | 75  |  | 80  |
| 5   | 90  | 82  | 75  | 71  | 89  | 81  | 75  | 70  | 79  | 74  | 70  |  | 77  | 73  | 69  |  | 75  |
| 6   | 85  | 76  | 70  | 65  | 84  | 75  | 69  | 65  | 74  | 68  | 64  |  | 72  | 68  | 64  |  | 71  |
| 7   | 81  | 71  | 65  | 60  | 80  | 70  | 64  | 60  | 69  | 64  | 60  |  | 68  | 63  | 59  |  | 67  |
| 8   | 77  | 67  | 60  | 56  | 75  | 66  | 60  | 56  | 65  | 59  | 56  |  | 64  | 59  | 55  |  | 63  |
| 9   | 73  | 63  | 56  | 52  | 72  | 62  | 56  | 52  | 61  | 56  | 52  |  | 60  | 55  | 52  |  | 59  |
| 10  | 69  | 59  | 53  | 49  | 68  | 58  | 53  | 49  | 58  | 52  | 48  |  | 57  | 52  | 48  |  | 56  |

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

|     |         |
|-----|---------|
|     | 0°      |
| 0°  | 1261868 |
| 5°  | 1210871 |
| 10° | 1182238 |
| 15° | 1149213 |
| 20° | 1070249 |
| 25° | 988547  |
| 30° | 887373  |
| 35° | 651935  |
| 40° | 352108  |
| 45° | 151410  |
| 50° | 84355   |
| 55° | 59094   |
| 60° | 37990   |
| 65° | 28836   |
| 70° | 23802   |
| 75° | 20969   |
| 80° | 23298   |
| 85° | 15284   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 231.1  | 8.7       |
| 10°-20°   | 627.8  | 23.7      |
| 20°-30°   | 832.2  | 31.4      |
| 30°-40°   | 659.1  | 24.9      |
| 40°-50°   | 196.3  | 7.4       |
| 50°-60°   | 62.9   | 2.4       |
| 60°-70°   | 25.1   | 0.9       |
| 70°-80°   | 11.9   | 0.5       |
| 80°-90°   | 3.3    | 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°    | 1691.1 | 63.8      |
| 0°-40°    | 2350.1 | 88.7      |
| 0°-60°    | 2609.3 | 98.5      |
| 0°-90°    | 2649.6 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2649.6 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 2558 |      |
| 5°  | 2445 | 231  |
| 15° | 2250 | 628  |
| 25° | 1816 | 832  |
| 35° | 1082 | 659  |
| 45° | 217  | 196  |
| 55° | 69   | 63   |
| 65° | 25   | 25   |
| 75° | 11   | 12   |
| 85° | 3    | 3    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 2557.6 |
| 1°    | 2541.1 |
| 2°    | 2516.4 |
| 3°    | 2488.9 |
| 4°    | 2464.2 |
| 5°    | 2444.9 |
| 6°    | 2431.2 |
| 7°    | 2417.5 |
| 8°    | 2395.5 |
| 9°    | 2376.3 |
| 10°   | 2359.8 |
| 11°   | 2340.6 |
| 12°   | 2318.6 |
| 13°   | 2299.3 |
| 14°   | 2277.4 |
| 15°   | 2249.9 |
| 16°   | 2219.7 |
| 17°   | 2181.2 |
| 18°   | 2137.3 |
| 19°   | 2090.6 |
| 20°   | 2038.4 |
| 21°   | 1988.9 |
| 22°   | 1936.7 |
| 23°   | 1890.0 |
| 24°   | 1851.6 |
| 25°   | 1815.9 |
| 26°   | 1777.4 |
| 27°   | 1738.9 |
| 28°   | 1689.5 |
| 29°   | 1629.0 |
| 30°   | 1557.6 |
| 32.5° | 1340.6 |
| 35°   | 1082.4 |
| 37.5° | 802.2  |
| 40°   | 546.7  |
| 42.5° | 346.1  |
| 45°   | 217.0  |
| 47.5° | 145.6  |
| 50°   | 109.9  |
| 52.5° | 87.9   |
| 55°   | 68.7   |
| 57.5° | 52.2   |
| 60°   | 38.5   |



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**CANDELA DISTRIBUTION (continued):**

|       | 0°   |
|-------|------|
| 67.5° | 19.2 |
| 70°   | 16.5 |
| 72.5° | 13.7 |
| 75°   | 11.0 |
| 77.5° | 8.2  |
| 80°   | 8.2  |
| 82.5° | 5.5  |
| 85°   | 2.7  |
| 87.5° | 0.0  |
| 90°   | 0.0  |



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— 0°-180°







|       |      |
|-------|------|
| 62.5° | 30.2 |
| 65°   | 24.7 |



(END OF REPORT)