

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: P432758

Luminaire Tested: **LAM4B308R209050DE01021MMS**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P432758  
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: LAM4B308R209050DE01021MMS  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 20 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2811.0 lumens  
Efficiency: N/A  
Efficacy: 88.1 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

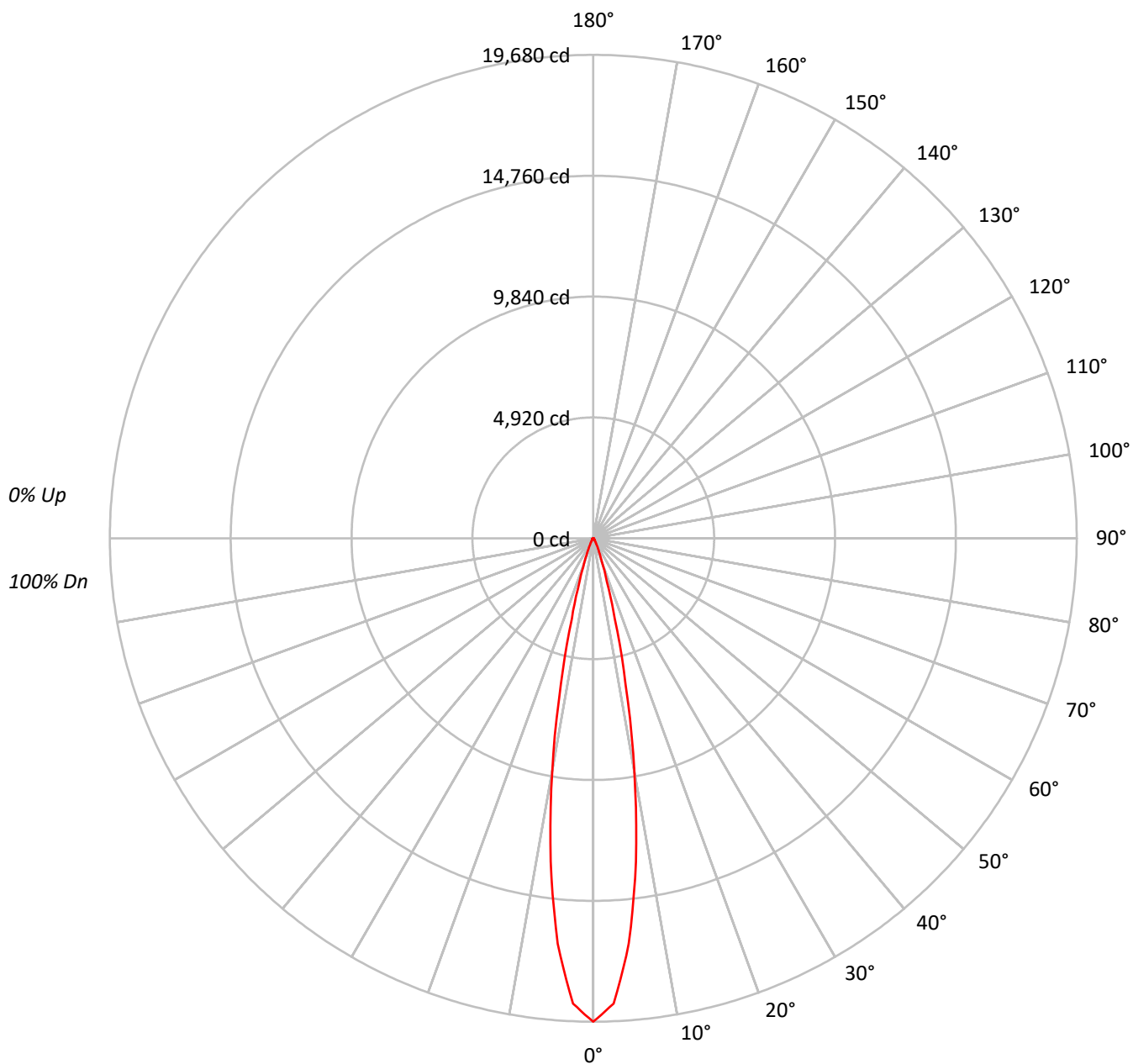
Input Watts (W): 31.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  | 95  |  | 98  | 96  | 94  |  | 96  |
| 4   | 105 | 100 | 97  | 94  | 104 | 99  | 96  | 93  | 97  | 94  | 92  |  | 95  | 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°  | 9709710 |
| 5°  | 8207221 |
| 10° | 4820633 |
| 15° | 1726042 |
| 20° | 571142  |
| 25° | 227335  |
| 30° | 108643  |
| 35° | 62098   |
| 40° | 44827   |
| 45° | 37748   |
| 50° | 43521   |
| 55° | 35439   |
| 60° | 17762   |
| 65° | 15060   |
| 70° | 18609   |
| 75° | 19635   |
| 80° | 14775   |
| 85° | 14718   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 1356.9 | 48.3      |
| 10°-20°   | 1058.2 | 37.6      |
| 20°-30°   | 219.6  | 7.8       |
| 30°-40°   | 69.2   | 2.5       |
| 40°-50°   | 44.5   | 1.6       |
| 50°-60°   | 35.7   | 1.3       |
| 60°-70°   | 14.0   | 0.5       |
| 70°-80°   | 10.5   | 0.4       |
| 80°-90°   | 2.1    | 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°    | 2634.7 | 93.7      |
| 0°-40°    | 2704.0 | 96.2      |
| 0°-60°    | 2784.3 | 99.1      |
| 0°-90°    | 2811.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2811.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | Flux |
|-----|-------|------|
| 0°  | 19680 |      |
| 5°  | 16571 | ###  |
| 15° | 3379  | 1058 |
| 25° | 418   | 220  |
| 35° | 103   | 69   |
| 45° | 54    | 45   |
| 55° | 41    | 36   |
| 65° | 13    | 14   |
| 75° | 10    | 11   |
| 85° | 3     | 2    |
| 90° | 0     |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      |
|-------|---------|
| 0°    | 19680.0 |
| 2.5°  | 18958.3 |
| 5°    | 16571.4 |
| 7.5°  | 13277.3 |
| 10°   | 9622.2  |
| 12.5° | 6070.3  |
| 15°   | 3379.2  |
| 17.5° | 1858.5  |
| 20°   | 1087.8  |
| 22.5° | 665.0   |
| 25°   | 417.6   |
| 27.5° | 275.8   |
| 30°   | 190.7   |
| 32.5° | 134.0   |
| 35°   | 103.1   |
| 37.5° | 82.5    |
| 40°   | 69.6    |
| 42.5° | 59.3    |
| 45°   | 54.1    |
| 47.5° | 54.1    |
| 50°   | 56.7    |
| 52.5° | 54.1    |
| 55°   | 41.2    |
| 57.5° | 28.4    |
| 60°   | 18.0    |
| 62.5° | 15.5    |
| 65°   | 12.9    |
| 67.5° | 12.9    |
| 70°   | 12.9    |
| 72.5° | 12.9    |
| 75°   | 10.3    |
| 77.5° | 7.7     |
| 80°   | 5.2     |
| 82.5° | 2.6     |
| 85°   | 2.6     |
| 87.5° | 0.0     |
| 90°   | 0.0     |



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— 0°-180°







(END OF REPORT)