

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: P434302

Luminaire Tested: **LAMR4B408R209024DE01021MB**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P434302  
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: LAMR4B408R209024DE01021MB  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 20 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 90CRI / 2400K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2847.1 lumens  
Efficiency: N/A  
Efficacy: 69.1 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

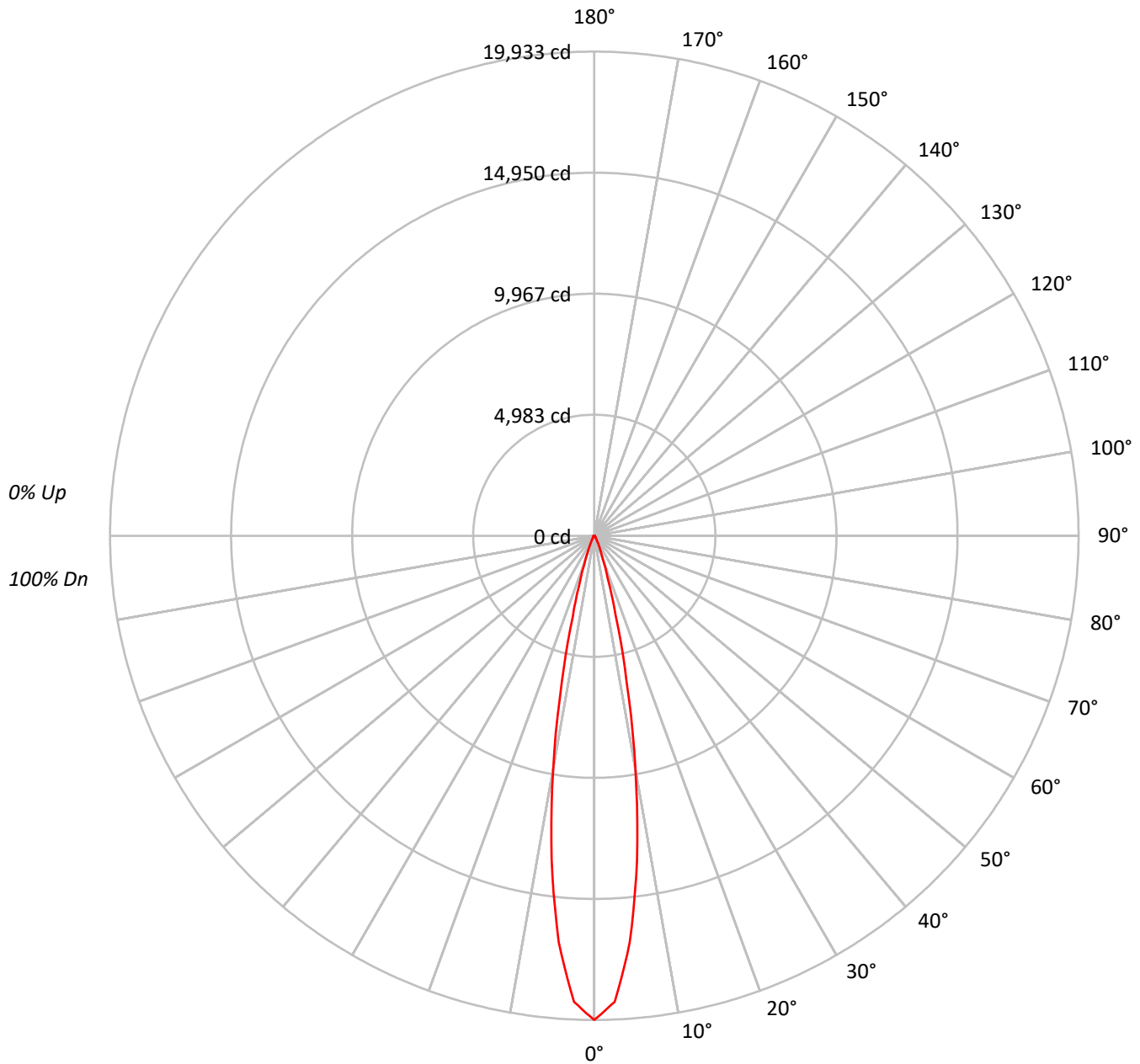
Input Watts (W): 41.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 115 | 113 | 111 | 110 | 113 | 111 | 109 | 108 | 107 | 106 | 105 |  | 103 | 102 | 102 |  | 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°  | 9834683 |
| 5°  | 8312861 |
| 10° | 4882656 |
| 15° | 1748261 |
| 20° | 578440  |
| 25° | 230220  |
| 30° | 110067  |
| 35° | 62881   |
| 40° | 45406   |
| 45° | 38236   |
| 50° | 44058   |
| 55° | 35956   |
| 60° | 18058   |
| 65° | 15293   |
| 70° | 18897   |
| 75° | 19825   |
| 80° | 14775   |
| 85° | 14718   |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 1374.4 | 48.3      |
| 10°-20°   | 1071.8 | 37.6      |
| 20°-30°   | 222.5  | 7.8       |
| 30°-40°   | 70.1   | 2.5       |
| 40°-50°   | 45.1   | 1.6       |
| 50°-60°   | 36.2   | 1.3       |
| 60°-70°   | 14.3   | 0.5       |
| 70°-80°   | 10.7   | 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°    | 2668.6 | 93.7      |
| 0°-40°    | 2738.8 | 96.2      |
| 0°-60°    | 2820.1 | 99.1      |
| 0°-90°    | 2847.1 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2847.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | Flux |
|-----|-------|------|
| 0°  | 19933 |      |
| 5°  | 16785 | ###  |
| 15° | 3423  | 1072 |
| 25° | 423   | 222  |
| 35° | 104   | 70   |
| 45° | 55    | 45   |
| 55° | 42    | 36   |
| 65° | 13    | 14   |
| 75° | 10    | 11   |
| 85° | 3     | 2    |
| 90° | 0     |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      |
|-------|---------|
| 0°    | 19933.3 |
| 2.5°  | 19202.3 |
| 5°    | 16784.7 |
| 7.5°  | 13448.1 |
| 10°   | 9746.0  |
| 12.5° | 6148.4  |
| 15°   | 3422.7  |
| 17.5° | 1882.4  |
| 20°   | 1101.7  |
| 22.5° | 673.6   |
| 25°   | 422.9   |
| 27.5° | 279.4   |
| 30°   | 193.2   |
| 32.5° | 135.8   |
| 35°   | 104.4   |
| 37.5° | 83.5    |
| 40°   | 70.5    |
| 42.5° | 60.0    |
| 45°   | 54.8    |
| 47.5° | 54.8    |
| 50°   | 57.4    |
| 52.5° | 54.8    |
| 55°   | 41.8    |
| 57.5° | 28.7    |
| 60°   | 18.3    |
| 62.5° | 15.7    |
| 65°   | 13.1    |
| 67.5° | 13.1    |
| 70°   | 13.1    |
| 72.5° | 13.1    |
| 75°   | 10.4    |
| 77.5° | 7.8     |
| 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)