

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: P433909

Luminaire Tested: **LAMR4B208R659050DE010x1MB**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P433909  
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: LAMR4B208R659050DE010x1MB  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 65 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1776.8 lumens  
Efficiency: N/A  
Efficacy: 86.3 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

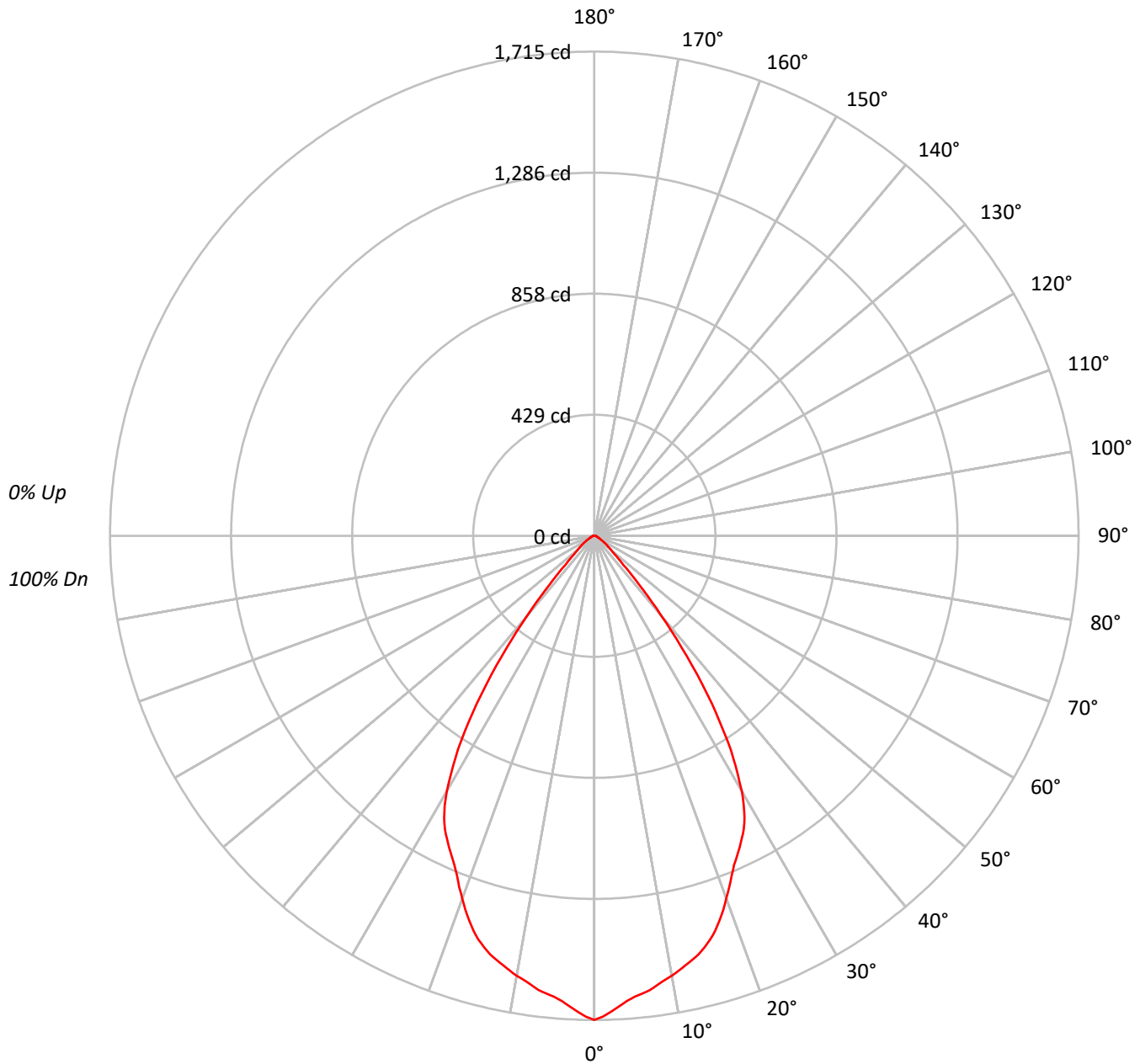
Input Watts (W): 20.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°  | 846146 |
| 5°  | 811986 |
| 10° | 792768 |
| 15° | 770620 |
| 20° | 717682 |
| 25° | 662897 |
| 30° | 595058 |
| 35° | 437153 |
| 40° | 236113 |
| 45° | 101522 |
| 50° | 56569  |
| 55° | 39654  |
| 60° | 25458  |
| 65° | 19379  |
| 70° | 16012  |
| 75° | 14106  |
| 80° | 15627  |
| 85° | 10190  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 154.9  | 8.7       |
| 10°-20°   | 421.0  | 23.7      |
| 20°-30°   | 558.1  | 31.4      |
| 30°-40°   | 441.9  | 24.9      |
| 40°-50°   | 131.6  | 7.4       |
| 50°-60°   | 42.1   | 2.4       |
| 60°-70°   | 16.8   | 0.9       |
| 70°-80°   | 8.0    | 0.5       |
| 80°-90°   | 2.2    | 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°    | 1134.0 | 63.8      |
| 0°-40°    | 1575.9 | 88.7      |
| 0°-60°    | 1749.7 | 98.5      |
| 0°-90°    | 1776.8 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1776.8 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 1715 |      |
| 5°  | 1640 | 155  |
| 15° | 1509 | 421  |
| 25° | 1218 | 558  |
| 35° | 726  | 442  |
| 45° | 146  | 132  |
| 55° | 46   | 42   |
| 65° | 17   | 17   |
| 75° | 7    | 8    |
| 85° | 2    | 2    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°     |
|-------|--------|
| 0°    | 1715.0 |
| 1°    | 1704.0 |
| 2°    | 1687.4 |
| 3°    | 1669.0 |
| 4°    | 1652.4 |
| 5°    | 1639.5 |
| 6°    | 1630.3 |
| 7°    | 1621.1 |
| 8°    | 1606.4 |
| 9°    | 1593.5 |
| 10°   | 1582.4 |
| 11°   | 1569.5 |
| 12°   | 1554.8 |
| 13°   | 1541.9 |
| 14°   | 1527.1 |
| 15°   | 1508.7 |
| 16°   | 1488.5 |
| 17°   | 1462.7 |
| 18°   | 1433.2 |
| 19°   | 1401.9 |
| 20°   | 1366.9 |
| 21°   | 1333.7 |
| 22°   | 1298.7 |
| 23°   | 1267.4 |
| 24°   | 1241.6 |
| 25°   | 1217.7 |
| 26°   | 1191.9 |
| 27°   | 1166.1 |
| 28°   | 1132.9 |
| 29°   | 1092.4 |
| 30°   | 1044.5 |
| 32.5° | 899.0  |
| 35°   | 725.8  |
| 37.5° | 537.9  |
| 40°   | 366.6  |
| 42.5° | 232.1  |
| 45°   | 145.5  |
| 47.5° | 97.6   |
| 50°   | 73.7   |
| 52.5° | 58.9   |
| 55°   | 46.1   |
| 57.5° | 35.0   |
| 60°   | 25.8   |



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CANDELA DISTRIBUTION (continued):

|       | 0°   |
|-------|------|
| 67.5° | 12.9 |
| 70°   | 11.1 |
| 72.5° | 9.2  |
| 75°   | 7.4  |
| 77.5° | 5.5  |
| 80°   | 5.5  |
| 82.5° | 3.7  |
| 85°   | 1.8  |
| 87.5° | 0.0  |
| 90°   | 0.0  |



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— 0°-180°







|       |      |
|-------|------|
| 62.5° | 20.3 |
| 65°   | 16.6 |



(END OF REPORT)