

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: P433700

Luminaire Tested: **LAMR4B208R209730DE010x1MMS**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P433700  
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: LAMR4B208R209730DE010x1MMS  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 20 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 97CRI / 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1461.5 lumens  
Efficiency: N/A  
Efficacy: 70.9 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

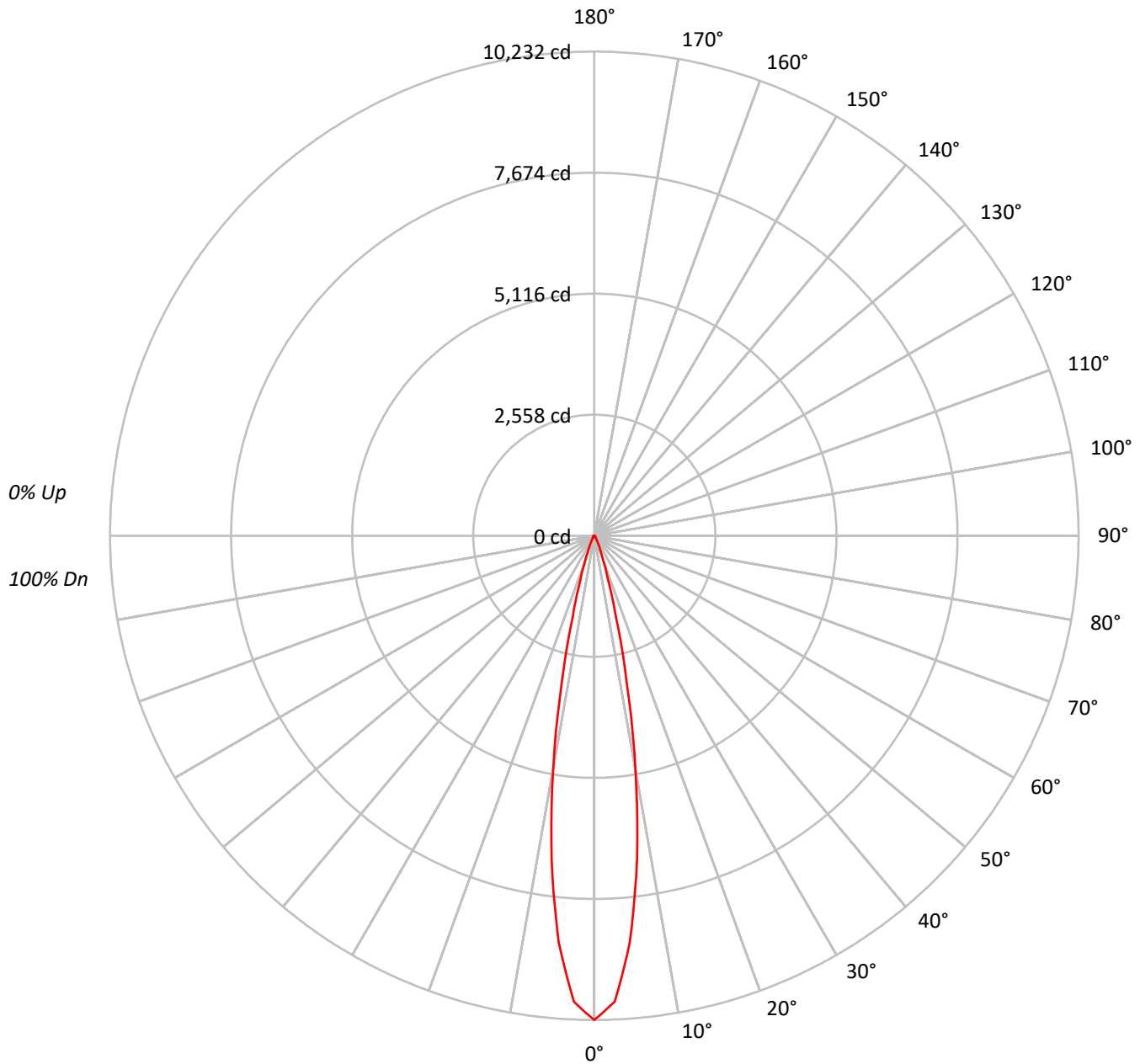
Input Watts (W): 20.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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   | 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  | 96  |  | 98  | 96  | 94  |  | 96  |
| 4   | 105 | 100 | 97  | 94  | 104 | 99  | 96  | 93  | 97  | 94  | 92  |  | 96  | 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°  | 5048358 |
| 5°  | 4267196 |
| 10° | 2506406 |
| 15° | 897448  |
| 20° | 296965  |
| 25° | 118186  |
| 30° | 56515   |
| 35° | 32284   |
| 40° | 23315   |
| 45° | 19607   |
| 50° | 22643   |
| 55° | 18408   |
| 60° | 9276    |
| 65° | 7822    |
| 70° | 9665    |
| 75° | 10294   |
| 80° | 7671    |
| 85° | 7359    |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 705.5  | 48.3      |
| 10°-20°   | 550.2  | 37.6      |
| 20°-30°   | 114.2  | 7.8       |
| 30°-40°   | 36.0   | 2.5       |
| 40°-50°   | 23.1   | 1.6       |
| 50°-60°   | 18.6   | 1.3       |
| 60°-70°   | 7.3    | 0.5       |
| 70°-80°   | 5.5    | 0.4       |
| 80°-90°   | 1.1    | 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°    | 1369.9 | 93.7      |
| 0°-40°    | 1405.9 | 96.2      |
| 0°-60°    | 1447.6 | 99.1      |
| 0°-90°    | 1461.5 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1461.5 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | Flux |
|-----|-------|------|
| 0°  | 10232 |      |
| 5°  | 8616  | 706  |
| 15° | 1757  | 550  |
| 25° | 217   | 114  |
| 35° | 54    | 36   |
| 45° | 28    | 23   |
| 55° | 21    | 19   |
| 65° | 7     | 7    |
| 75° | 5     | 5    |
| 85° | 1     | 1    |
| 90° | 0     |      |



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**CANDELA DISTRIBUTION (FULL):**

|       | 0°      |
|-------|---------|
| 0°    | 10232.2 |
| 2.5°  | 9857.0  |
| 5°    | 8616.0  |
| 7.5°  | 6903.2  |
| 10°   | 5002.9  |
| 12.5° | 3156.1  |
| 15°   | 1757.0  |
| 17.5° | 966.3   |
| 20°   | 565.6   |
| 22.5° | 345.8   |
| 25°   | 217.1   |
| 27.5° | 143.4   |
| 30°   | 99.2    |
| 32.5° | 69.7    |
| 35°   | 53.6    |
| 37.5° | 42.9    |
| 40°   | 36.2    |
| 42.5° | 30.8    |
| 45°   | 28.1    |
| 47.5° | 28.1    |
| 50°   | 29.5    |
| 52.5° | 28.1    |
| 55°   | 21.4    |
| 57.5° | 14.7    |
| 60°   | 9.4     |
| 62.5° | 8.0     |
| 65°   | 6.7     |
| 67.5° | 6.7     |
| 70°   | 6.7     |
| 72.5° | 6.7     |
| 75°   | 5.4     |
| 77.5° | 4.0     |
| 80°   | 2.7     |
| 82.5° | 1.3     |
| 85°   | 1.3     |
| 87.5° | 0.0     |
| 90°   | 0.0     |



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— 0°-180°







(END OF REPORT)