

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: P430290

Luminaire Tested: **LAM4B212R609727DE010x1MW**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P430290  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2009-969-1)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 11/23/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LAM4B212R609727DE010x1MW  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 60 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 97CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1970.9 lumens  
Efficiency: N/A  
Efficacy: 69.4 lumens/watt  
Spacing Criteria (0/90/45): 0.96 / 0.96 / 0.89  
Luminous Opening: Circular (Dia: 0.17' x H: 0')  
CIE Type: Direct

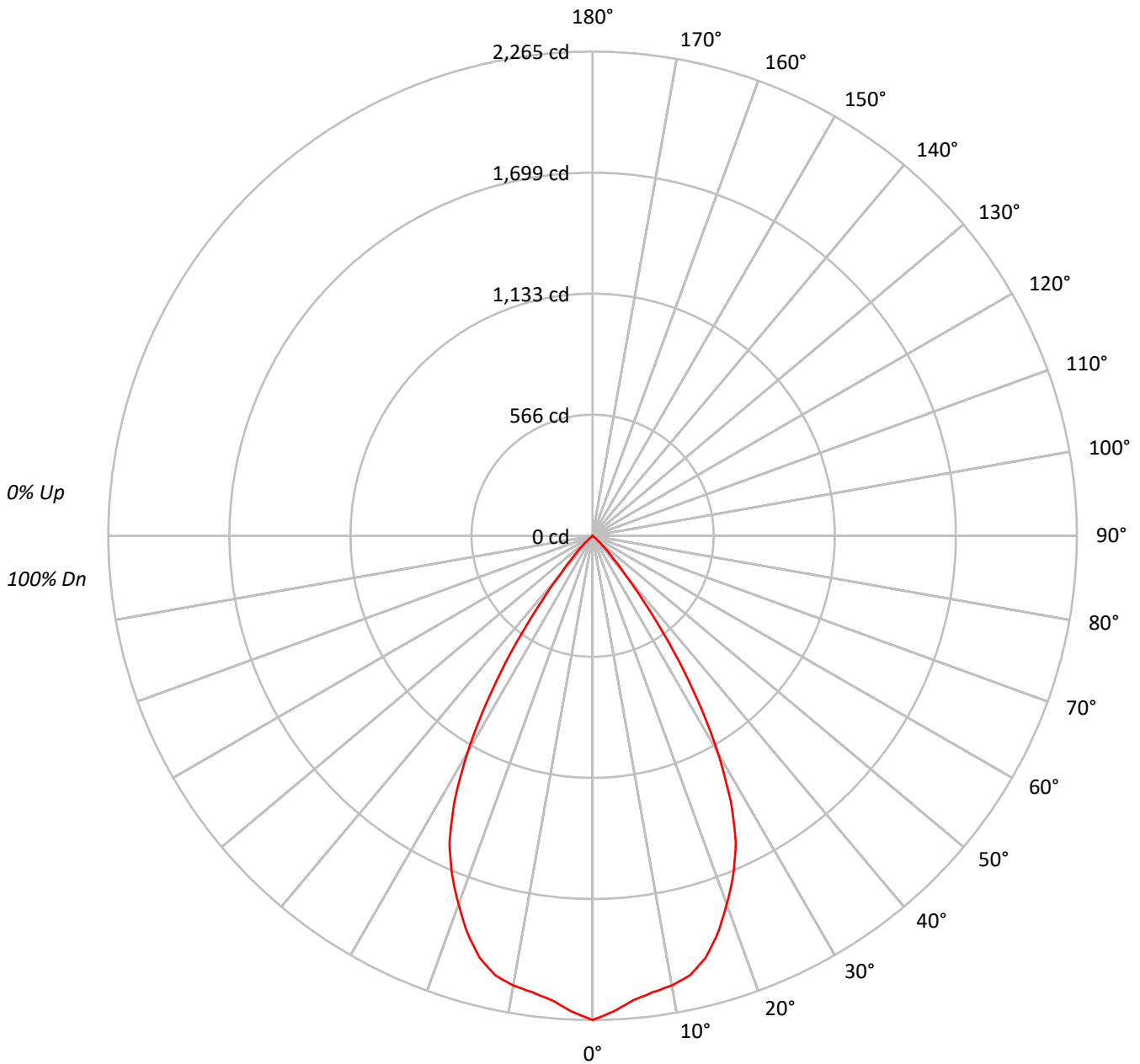
Input Watts (W): 28.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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  |     |    | 0  |   |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30  | 10  | 50  | 30 | 10 | 0 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |    |   |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |    |    |   |
| 1   | 114 | 111 | 109 | 106 | 111 | 109 | 107 | 105 | 105 | 103 | 102 | 101 | 100 | 99  | 98  | 97  | 96  | 94  |    |    |   |
| 2   | 108 | 104 | 100 | 96  | 106 | 102 | 98  | 95  | 99  | 96  | 93  | 96  | 93  | 91  | 93  | 91  | 89  | 88  |    |    |   |
| 3   | 103 | 97  | 92  | 88  | 101 | 96  | 91  | 88  | 93  | 89  | 86  | 91  | 87  | 85  | 88  | 86  | 84  | 82  |    |    |   |
| 4   | 98  | 91  | 85  | 81  | 96  | 90  | 85  | 81  | 88  | 83  | 80  | 86  | 82  | 79  | 84  | 81  | 78  | 77  |    |    |   |
| 5   | 93  | 85  | 80  | 75  | 92  | 84  | 79  | 75  | 83  | 78  | 74  | 81  | 77  | 74  | 79  | 76  | 73  | 72  |    |    |   |
| 6   | 89  | 80  | 74  | 70  | 87  | 79  | 74  | 70  | 78  | 73  | 69  | 76  | 72  | 69  | 75  | 71  | 69  | 67  |    |    |   |
| 7   | 84  | 75  | 70  | 66  | 83  | 75  | 69  | 65  | 74  | 69  | 65  | 72  | 68  | 65  | 71  | 67  | 64  | 63  |    |    |   |
| 8   | 80  | 71  | 65  | 61  | 79  | 71  | 65  | 61  | 70  | 65  | 61  | 69  | 64  | 61  | 68  | 64  | 60  | 59  |    |    |   |
| 9   | 77  | 67  | 62  | 58  | 76  | 67  | 61  | 58  | 66  | 61  | 57  | 65  | 60  | 57  | 64  | 60  | 57  | 56  |    |    |   |
| 10  | 73  | 64  | 58  | 54  | 72  | 63  | 58  | 54  | 62  | 58  | 54  | 62  | 57  | 54  | 61  | 57  | 54  | 53  |    |    |   |

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

|     | 0°      |
|-----|---------|
| 0°  | 1117554 |
| 5°  | 1080072 |
| 10° | 1070016 |
| 15° | 1043481 |
| 20° | 962982  |
| 25° | 862359  |
| 30° | 667296  |
| 35° | 399750  |
| 40° | 153609  |
| 45° | 56168   |
| 50° | 2226    |
| 55° | 1634    |
| 60° | 1875    |
| 65° | 1167    |
| 70° | 1443    |
| 75° | 1906    |
| 80° | 2841    |
| 85° | 0       |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 207.1  | 10.5      |
| 10°-20°   | 568.3  | 28.8      |
| 20°-30°   | 709.0  | 36.0      |
| 30°-40°   | 413.0  | 21.0      |
| 40°-50°   | 69.0   | 3.5       |
| 50°-60°   | 1.8    | 0.1       |
| 60°-70°   | 1.3    | 0.1       |
| 70°-80°   | 1.1    | 0.1       |
| 80°-90°   | 0.4    | 0.0       |
| 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°    | 1484.4 | 75.3      |
| 0°-40°    | 1897.4 | 96.3      |
| 0°-60°    | 1968.2 | 99.9      |
| 0°-90°    | 1970.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 1970.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 2265 |      |
| 5°  | 2181 | 207  |
| 15° | 2043 | 568  |
| 25° | 1584 | 709  |
| 35° | 664  | 413  |
| 45° | 80   | 69   |
| 55° | 2    | 2    |
| 65° | 1    | 1    |
| 75° | 1    | 1    |
| 85° | 0    | 0    |
| 90° | 0    |      |



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**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 2265.1 |
| 2.5°  | 2227.7 |
| 5°    | 2180.8 |
| 7.5°  | 2154.0 |
| 10°   | 2135.8 |
| 12.5° | 2106.1 |
| 15°   | 2042.9 |
| 17.5° | 1948.1 |
| 20°   | 1834.1 |
| 22.5° | 1718.2 |
| 25°   | 1584.1 |
| 27.5° | 1398.3 |
| 30°   | 1171.3 |
| 32.5° | 917.5  |
| 35°   | 663.7  |
| 37.5° | 418.5  |
| 40°   | 238.5  |
| 42.5° | 139.8  |
| 45°   | 80.5   |
| 47.5° | 27.8   |
| 50°   | 2.9    |
| 52.5° | 1.9    |
| 55°   | 1.9    |
| 57.5° | 1.9    |
| 60°   | 1.9    |
| 62.5° | 1.9    |
| 65°   | 1.0    |
| 67.5° | 1.0    |
| 70°   | 1.0    |
| 72.5° | 1.0    |
| 75°   | 1.0    |
| 77.5° | 1.0    |
| 80°   | 1.0    |
| 82.5° | 1.0    |
| 85°   | 0.0    |
| 87.5° | 0.0    |
| 90°   | 0.0    |



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— 0°-180°







(END OF REPORT)