

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: P430682

Luminaire Tested: **LAM4B412R259027DE01021MMS**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P430682  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1911-585-5)  
Test Lab: INNOVATION CENTER (G1)  
Issue Date: 11/23/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LAM4B412R259027DE01021MMS  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 25 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

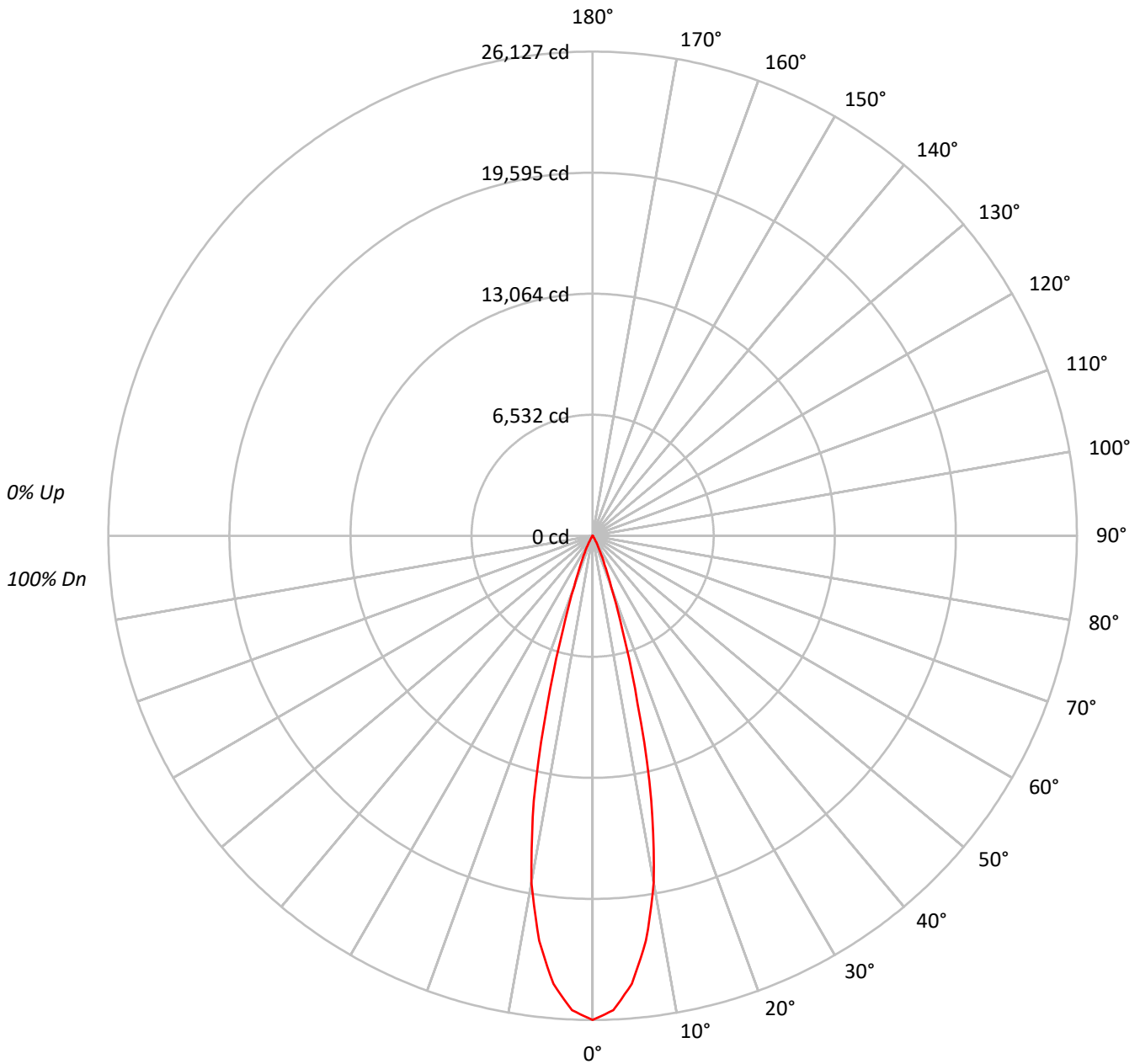
Lumens per Lamp: N/A  
Luminaire Lumens: 5348.2 lumens  
Efficiency: N/A  
Efficacy: 98.9 lumens/watt  
Spacing Criteria (0/90/45): 0.45 / 0.45 / 0.41  
Luminous Opening: Circular (Dia: 0.29' x H: 0')  
CIE Type: Direct

Input Watts (W): 54.1  
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



TEST NUMBER: P430682  
CATALOG NUMBER: LAM4B412R259027DE01021MMS

### Luminous Intensity Polar Plot





TEST NUMBER: P430682

CATALOG NUMBER: LAM4B412R259027DE01021MMS

**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  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1   | 115 | 113 | 112 | 110 | 113 | 111 | 110 | 108 | 107 | 106 | 105 | 104 | 103 | 102 | 100 | 100 | 99  | 97  |
| 2   | 112 | 109 | 106 | 103 | 110 | 107 | 104 | 102 | 104 | 102 | 100 | 101 | 99  | 98  | 98  | 97  | 96  | 95  |
| 3   | 109 | 104 | 101 | 99  | 107 | 103 | 100 | 98  | 101 | 98  | 96  | 99  | 96  | 95  | 96  | 95  | 93  | 92  |
| 4   | 106 | 101 | 97  | 95  | 104 | 100 | 97  | 94  | 98  | 95  | 93  | 96  | 94  | 92  | 94  | 93  | 91  | 90  |
| 5   | 103 | 98  | 94  | 91  | 102 | 97  | 93  | 91  | 95  | 92  | 90  | 94  | 91  | 89  | 92  | 90  | 89  | 88  |
| 6   | 100 | 95  | 91  | 88  | 99  | 94  | 91  | 88  | 93  | 90  | 87  | 92  | 89  | 87  | 91  | 88  | 86  | 85  |
| 7   | 98  | 92  | 88  | 86  | 97  | 92  | 88  | 86  | 91  | 87  | 85  | 90  | 87  | 85  | 89  | 86  | 84  | 83  |
| 8   | 96  | 90  | 86  | 83  | 95  | 89  | 86  | 83  | 88  | 85  | 83  | 88  | 85  | 83  | 87  | 84  | 82  | 81  |
| 9   | 94  | 88  | 84  | 81  | 93  | 87  | 84  | 81  | 86  | 83  | 81  | 86  | 83  | 81  | 85  | 82  | 81  | 80  |
| 10  | 91  | 85  | 82  | 79  | 91  | 85  | 82  | 79  | 84  | 81  | 79  | 84  | 81  | 79  | 83  | 81  | 79  | 78  |

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

|     |         |
|-----|---------|
|     | 0°      |
| 0°  | 4209143 |
| 5°  | 3924892 |
| 10° | 3107898 |
| 15° | 1564128 |
| 20° | 501917  |
| 25° | 175519  |
| 30° | 58803   |
| 35° | 11800   |
| 40° | 3891    |
| 45° | 0       |
| 50° | 0       |
| 55° | 0       |
| 60° | 0       |
| 65° | 0       |
| 70° | 0       |
| 75° | 0       |
| 80° | 0       |
| 85° | 0       |



TEST NUMBER: P430682

CATALOG NUMBER: LAM4B412R259027DE01021MMS

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 2148.7 | 40.2      |
| 10°-20°   | 2606.2 | 48.7      |
| 20°-30°   | 530.3  | 9.9       |
| 30°-40°   | 60.0   | 1.1       |
| 40°-50°   | 2.9    | 0.1       |
| 50°-60°   | 0.0    | 0.0       |
| 60°-70°   | 0.0    | 0.0       |
| 70°-80°   | 0.0    | 0.0       |
| 80°-90°   | 0.0    | 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°    | 5285.2 | 98.8      |
| 0°-40°    | 5345.3 | 99.9      |
| 0°-60°    | 5348.2 | 100.0     |
| 0°-90°    | 5348.2 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 5348.2 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°    | Flux |
|-----|-------|------|
| 0°  | 26127 |      |
| 5°  | 24270 | ###  |
| 15° | 9378  | 2606 |
| 25° | 987   | 530  |
| 35° | 60    | 60   |
| 45° | 0     | 3    |
| 55° | 0     | 0    |
| 65° | 0     | 0    |
| 75° | 0     | 0    |
| 85° | 0     | 0    |
| 90° | 0     |      |



TEST NUMBER: P430682

CATALOG NUMBER: LAM4B412R259027DE01021MMS

**CANDELA DISTRIBUTION (FULL):**

|       | 0°      |
|-------|---------|
| 0°    | 26126.9 |
| 2.5°  | 25621.7 |
| 5°    | 24269.8 |
| 7.5°  | 22038.9 |
| 10°   | 18998.2 |
| 12.5° | 14642.6 |
| 15°   | 9378.0  |
| 17.5° | 5283.1  |
| 20°   | 2927.6  |
| 22.5° | 1668.0  |
| 25°   | 987.4   |
| 27.5° | 590.6   |
| 30°   | 316.1   |
| 32.5° | 138.4   |
| 35°   | 60.0    |
| 37.5° | 36.9    |
| 40°   | 18.5    |
| 42.5° | 6.9     |
| 45°   | 0.0     |
| 47.5° | 0.0     |
| 50°   | 0.0     |
| 52.5° | 0.0     |
| 55°   | 0.0     |
| 57.5° | 0.0     |
| 60°   | 0.0     |
| 62.5° | 0.0     |
| 65°   | 0.0     |
| 67.5° | 0.0     |
| 70°   | 0.0     |
| 72.5° | 0.0     |
| 75°   | 0.0     |
| 77.5° | 0.0     |
| 80°   | 0.0     |
| 82.5° | 0.0     |
| 85°   | 0.0     |
| 87.5° | 0.0     |
| 90°   | 0.0     |



Report Generated By E9808895 / USPTCWHP6082093







— 0°-180°







(END OF REPORT)