

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: P431662

Luminaire Tested: **LAMR4B312R509024DE01021MB**

Issue Date: 11/23/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P431662  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1911-585-8)  
Test Lab: INNOVATION CENTER (G1)  
Issue Date: 11/23/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: PORTFOLIO  
Catalog Number: LAMR4B312R509024DE01021MB  
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 50 DEG TIR OPTIC  
Light Source: HIGH LUMEN LED 90CRI / 2400K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3359.0 lumens  
Efficiency: N/A  
Efficacy: 82.1 lumens/watt  
Spacing Criteria (0/90/45): 0.82 / 0.82 / 0.74  
Luminous Opening: Circular (Dia: 0.29' x H: 0')  
CIE Type: Direct

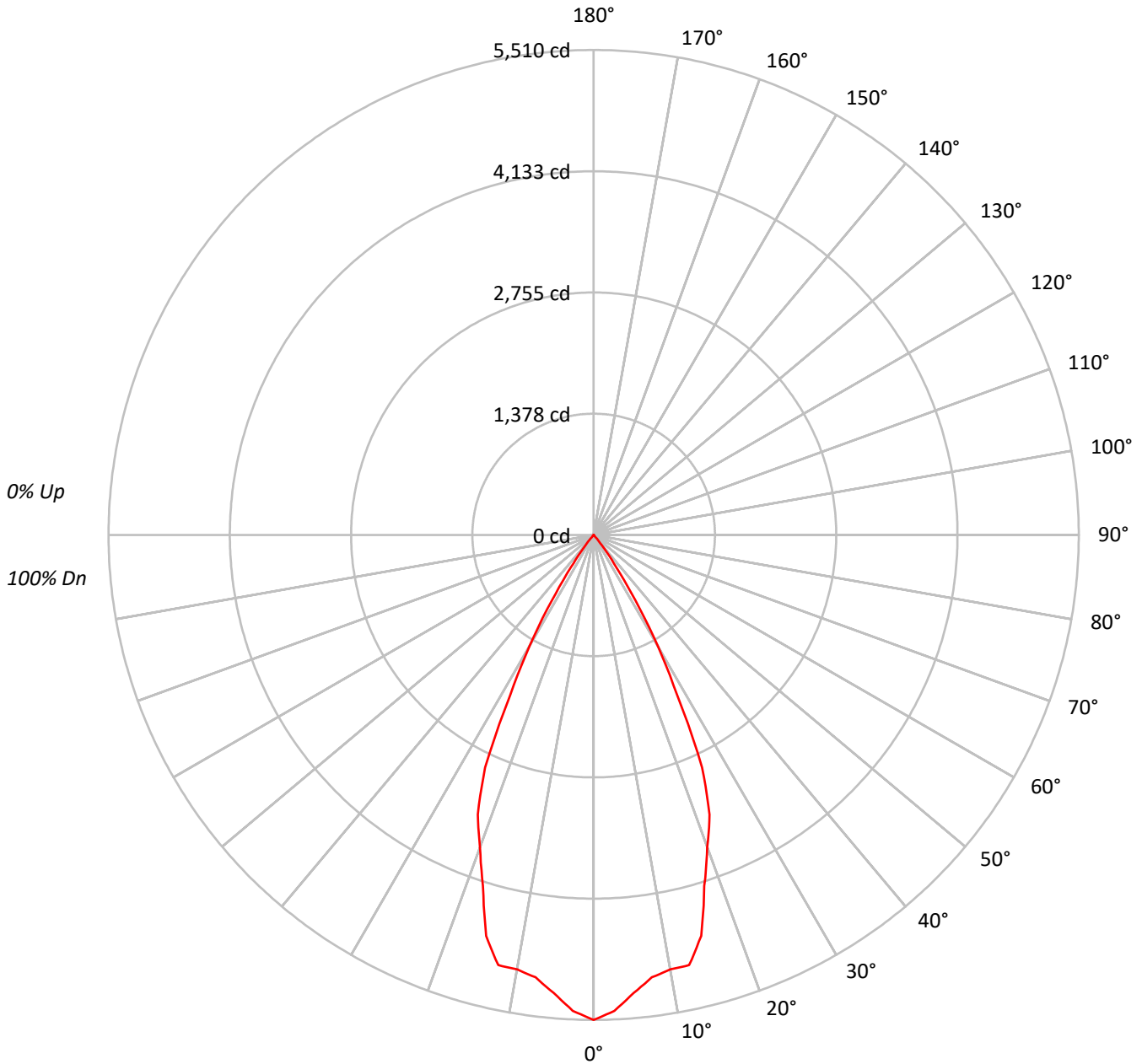
Input Watts (W): 40.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P431662

CATALOG NUMBER: LAMR4B312R509024DE01021MB

### Luminous Intensity Polar Plot





TEST NUMBER: P431662

CATALOG NUMBER: LAMR4B312R509024DE01021MB

**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 | 100 | 100 | 100 |
| 1   | 114 | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 104 | 103 | 102 | 101 | 100 | 99  | 98  | 97  | 95  | 95  | 95  | 95  |
| 2   | 110 | 105 | 102 | 99  | 107 | 104 | 100 | 98  | 100 | 98  | 96  | 97  | 95  | 93  | 95  | 93  | 92  | 90  | 90  | 90  | 90  |
| 3   | 105 | 99  | 95  | 92  | 103 | 98  | 94  | 91  | 95  | 92  | 89  | 93  | 90  | 88  | 91  | 89  | 87  | 85  | 85  | 85  | 85  |
| 4   | 101 | 94  | 89  | 86  | 99  | 93  | 89  | 85  | 91  | 87  | 84  | 89  | 86  | 83  | 87  | 84  | 82  | 81  | 81  | 81  | 81  |
| 5   | 96  | 89  | 84  | 80  | 95  | 88  | 84  | 80  | 87  | 83  | 79  | 85  | 81  | 79  | 84  | 80  | 78  | 77  | 77  | 77  | 77  |
| 6   | 92  | 85  | 80  | 76  | 91  | 84  | 79  | 76  | 83  | 78  | 75  | 81  | 77  | 75  | 80  | 77  | 74  | 73  | 73  | 73  | 73  |
| 7   | 89  | 81  | 75  | 72  | 87  | 80  | 75  | 72  | 79  | 74  | 71  | 78  | 74  | 71  | 77  | 73  | 71  | 69  | 69  | 69  | 69  |
| 8   | 85  | 77  | 72  | 68  | 84  | 76  | 71  | 68  | 75  | 71  | 68  | 74  | 70  | 67  | 73  | 70  | 67  | 66  | 66  | 66  | 66  |
| 9   | 82  | 73  | 68  | 65  | 81  | 73  | 68  | 65  | 72  | 68  | 64  | 71  | 67  | 64  | 70  | 67  | 64  | 63  | 63  | 63  | 63  |
| 10  | 79  | 70  | 65  | 62  | 78  | 70  | 65  | 62  | 69  | 64  | 61  | 68  | 64  | 61  | 68  | 64  | 61  | 60  | 60  | 60  | 60  |

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

|     |        |
|-----|--------|
|     | 0°     |
| 0°  | 887763 |
| 5°  | 844595 |
| 10° | 819778 |
| 15° | 786567 |
| 20° | 647112 |
| 25° | 518486 |
| 30° | 270483 |
| 35° | 87224  |
| 40° | 14827  |
| 45° | 0      |
| 50° | 0      |
| 55° | 0      |
| 60° | 0      |
| 65° | 0      |
| 70° | 0      |
| 75° | 0      |
| 80° | 0      |
| 85° | 0      |



TEST NUMBER: P431662

CATALOG NUMBER: LAMR4B312R509024DE01021MB

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 491.8  | 14.6      |
| 10°-20°   | 1276.3 | 38.0      |
| 20°-30°   | 1241.6 | 37.0      |
| 30°-40°   | 341.8  | 10.2      |
| 40°-50°   | 7.5    | 0.2       |
| 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°    | 3009.7 | 89.6      |
| 0°-40°    | 3351.5 | 99.8      |
| 0°-60°    | 3359.0 | 100.0     |
| 0°-90°    | 3359.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 3359.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | Flux |
|-----|------|------|
| 0°  | 5510 |      |
| 5°  | 5223 | 492  |
| 15° | 4716 | 1276 |
| 25° | 2917 | 1242 |
| 35° | 444  | 342  |
| 45° | 0    | 7    |
| 55° | 0    | 0    |
| 65° | 0    | 0    |
| 75° | 0    | 0    |
| 85° | 0    | 0    |
| 90° | 0    |      |



TEST NUMBER: P431662

CATALOG NUMBER: LAMR4B312R509024DE01021MB

**CANDELA DISTRIBUTION (FULL):**

| 0°    |        |
|-------|--------|
| 0°    | 5510.5 |
| 2.5°  | 5412.1 |
| 5°    | 5222.6 |
| 7.5°  | 5069.9 |
| 10°   | 5011.2 |
| 12.5° | 5006.8 |
| 15°   | 4716.0 |
| 17.5° | 4179.9 |
| 20°   | 3774.5 |
| 22.5° | 3438.2 |
| 25°   | 2916.8 |
| 27.5° | 2053.2 |
| 30°   | 1454.0 |
| 32.5° | 879.7  |
| 35°   | 443.5  |
| 37.5° | 198.3  |
| 40°   | 70.5   |
| 42.5° | 5.9    |
| 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)