

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: P431831

Luminaire Tested: **LAMR4B412R259024DE01021MMS**

Issue Date: 11/23/2020

Test Information

Test Method: LM-41-14
Report Number: P431831
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: LAMR4B412R259024DE01021MMS
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 25 DEG TIR OPTIC
Light Source: HIGH LUMEN LED 90CRI / 2400K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4945.2 lumens
Efficiency: N/A
Efficacy: 91.4 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

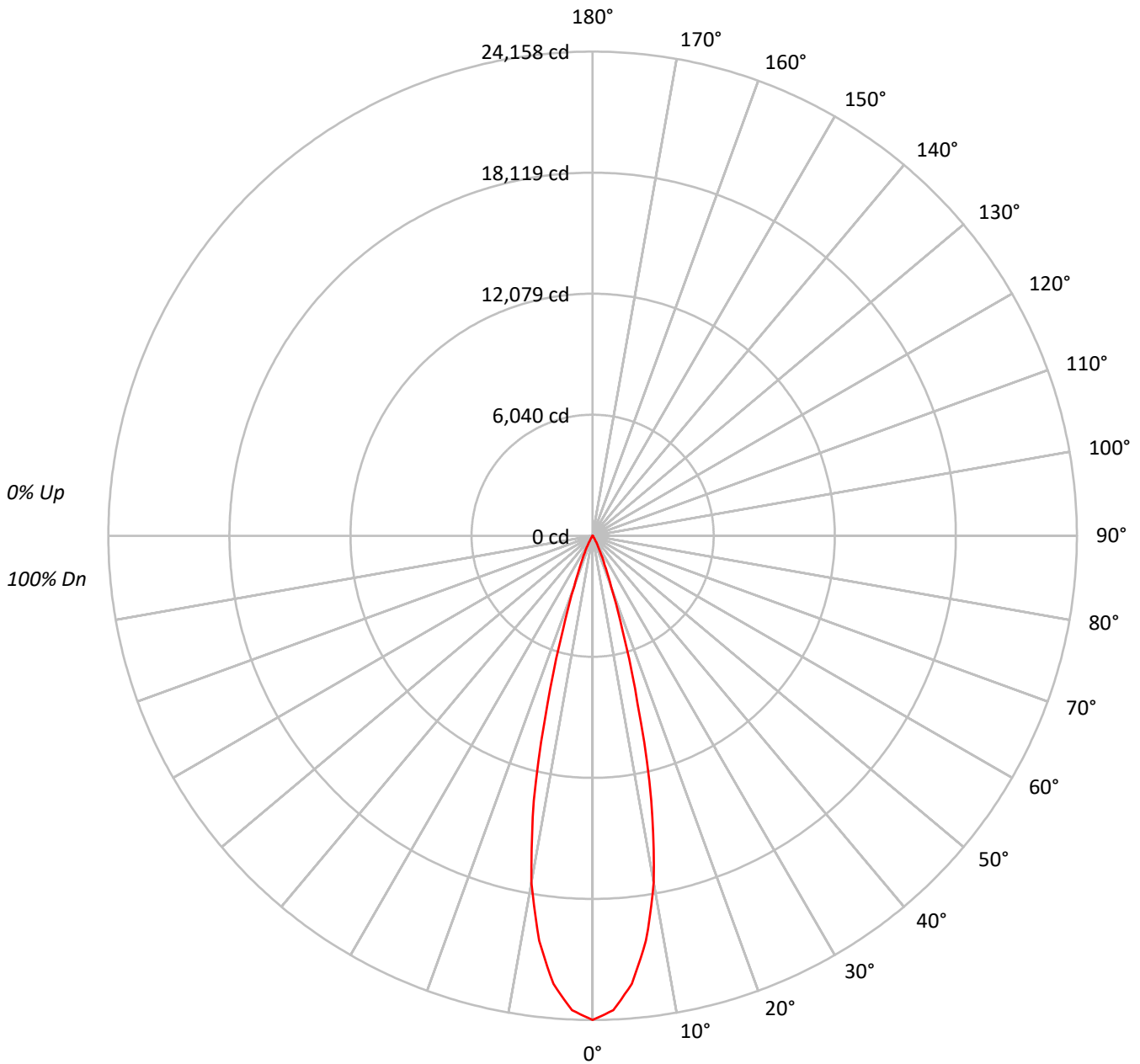
Input Watts (W): 54.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P431831

CATALOG NUMBER: LAMR4B412R259024DE01021MMS

Luminous Intensity Polar Plot





TEST NUMBER: P431831

CATALOG NUMBER: LAMR4B412R259024DE01021MMS

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

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|---------|
| | 0° |
| 0° | 3891978 |
| 5° | 3629140 |
| 10° | 2873720 |
| 15° | 1446276 |
| 20° | 464096 |
| 25° | 162293 |
| 30° | 54357 |
| 35° | 10915 |
| 40° | 3596 |
| 45° | 0 |
| 50° | 0 |
| 55° | 0 |
| 60° | 0 |
| 65° | 0 |
| 70° | 0 |
| 75° | 0 |
| 80° | 0 |
| 85° | 0 |



TEST NUMBER: P431831

CATALOG NUMBER: LAMR4B412R259024DE01021MMS

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 1986.8 | 40.2 |
| 10°-20° | 2409.8 | 48.7 |
| 20°-30° | 490.4 | 9.9 |
| 30°-40° | 55.5 | 1.1 |
| 40°-50° | 2.7 | 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° | 4887.0 | 98.8 |
| 0°-40° | 4942.5 | 99.9 |
| 0°-60° | 4945.2 | 100.0 |
| 0°-90° | 4945.2 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4945.2 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-------|------|
| 0° | 24158 | |
| 5° | 22441 | ### |
| 15° | 8671 | 2410 |
| 25° | 913 | 490 |
| 35° | 56 | 56 |
| 45° | 0 | 3 |
| 55° | 0 | 0 |
| 65° | 0 | 0 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |



TEST NUMBER: P431831

CATALOG NUMBER: LAMR4B412R259024DE01021MMS

CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|---------|
| 0° | 24158.2 |
| 2.5° | 23691.1 |
| 5° | 22441.0 |
| 7.5° | 20378.2 |
| 10° | 17566.7 |
| 12.5° | 13539.3 |
| 15° | 8671.4 |
| 17.5° | 4885.0 |
| 20° | 2707.0 |
| 22.5° | 1542.3 |
| 25° | 913.0 |
| 27.5° | 546.1 |
| 30° | 292.2 |
| 32.5° | 128.0 |
| 35° | 55.5 |
| 37.5° | 34.1 |
| 40° | 17.1 |
| 42.5° | 6.4 |
| 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)