

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: P431850

Luminaire Tested: **LAMR4B412R259727DE01021MW**

Issue Date: 11/23/2020

Test Information

Test Method: LM-41-14
Report Number: P431850
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: LAMR4B412R259727DE01021MW
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 25 DEG TIR OPTIC
Light Source: HIGH LUMEN LED 97CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5092.6 lumens
Efficiency: N/A
Efficacy: 94.1 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

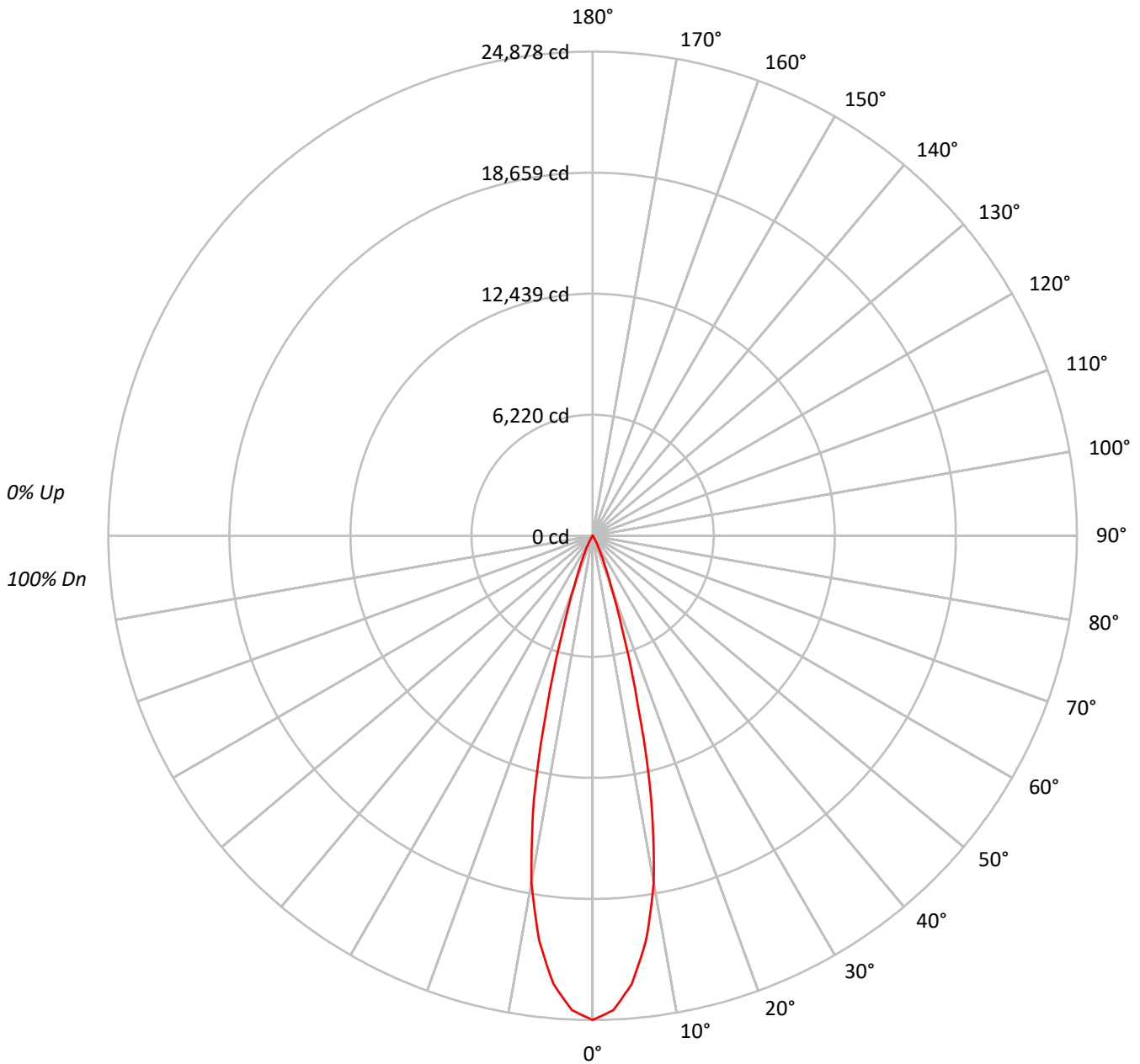
Input Watts (W): 54.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 |
| 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° | 4007989 |
| 5° | 3737314 |
| 10° | 2959376 |
| 15° | 1489374 |
| 20° | 477932 |
| 25° | 167128 |
| 30° | 55994 |
| 35° | 11230 |
| 40° | 3701 |
| 45° | 0 |
| 50° | 0 |
| 55° | 0 |
| 60° | 0 |
| 65° | 0 |
| 70° | 0 |
| 75° | 0 |
| 80° | 0 |
| 85° | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 2046.0 | 40.2 |
| 10°-20° | 2481.7 | 48.7 |
| 20°-30° | 505.0 | 9.9 |
| 30°-40° | 57.2 | 1.1 |
| 40°-50° | 2.8 | 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° | 5032.7 | 98.8 |
| 0°-40° | 5089.8 | 99.9 |
| 0°-60° | 5092.6 | 100.0 |
| 0°-90° | 5092.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5092.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-------|------|
| 0° | 24878 | |
| 5° | 23110 | ### |
| 15° | 8930 | 2482 |
| 25° | 940 | 505 |
| 35° | 57 | 57 |
| 45° | 0 | 3 |
| 55° | 0 | 0 |
| 65° | 0 | 0 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| 0° | |
|-------|---------|
| 0° | 24878.3 |
| 2.5° | 24397.2 |
| 5° | 23109.9 |
| 7.5° | 20985.7 |
| 10° | 18090.3 |
| 12.5° | 13942.9 |
| 15° | 8929.8 |
| 17.5° | 5030.6 |
| 20° | 2787.7 |
| 22.5° | 1588.3 |
| 25° | 940.2 |
| 27.5° | 562.4 |
| 30° | 301.0 |
| 32.5° | 131.8 |
| 35° | 57.1 |
| 37.5° | 35.1 |
| 40° | 17.6 |
| 42.5° | 6.6 |
| 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 |



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— 0°-180°







(END OF REPORT)