

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: P430806

Luminaire Tested: **LAM4B412R509030DE01021MW**

Issue Date: 11/23/2020

Test Information

Test Method: LM-41-14
Report Number: P430806
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: LAM4B412R509030DE01021MW
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 50 DEG TIR OPTIC
Light Source: HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5932.9 lumens
Efficiency: N/A
Efficacy: 109.7 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

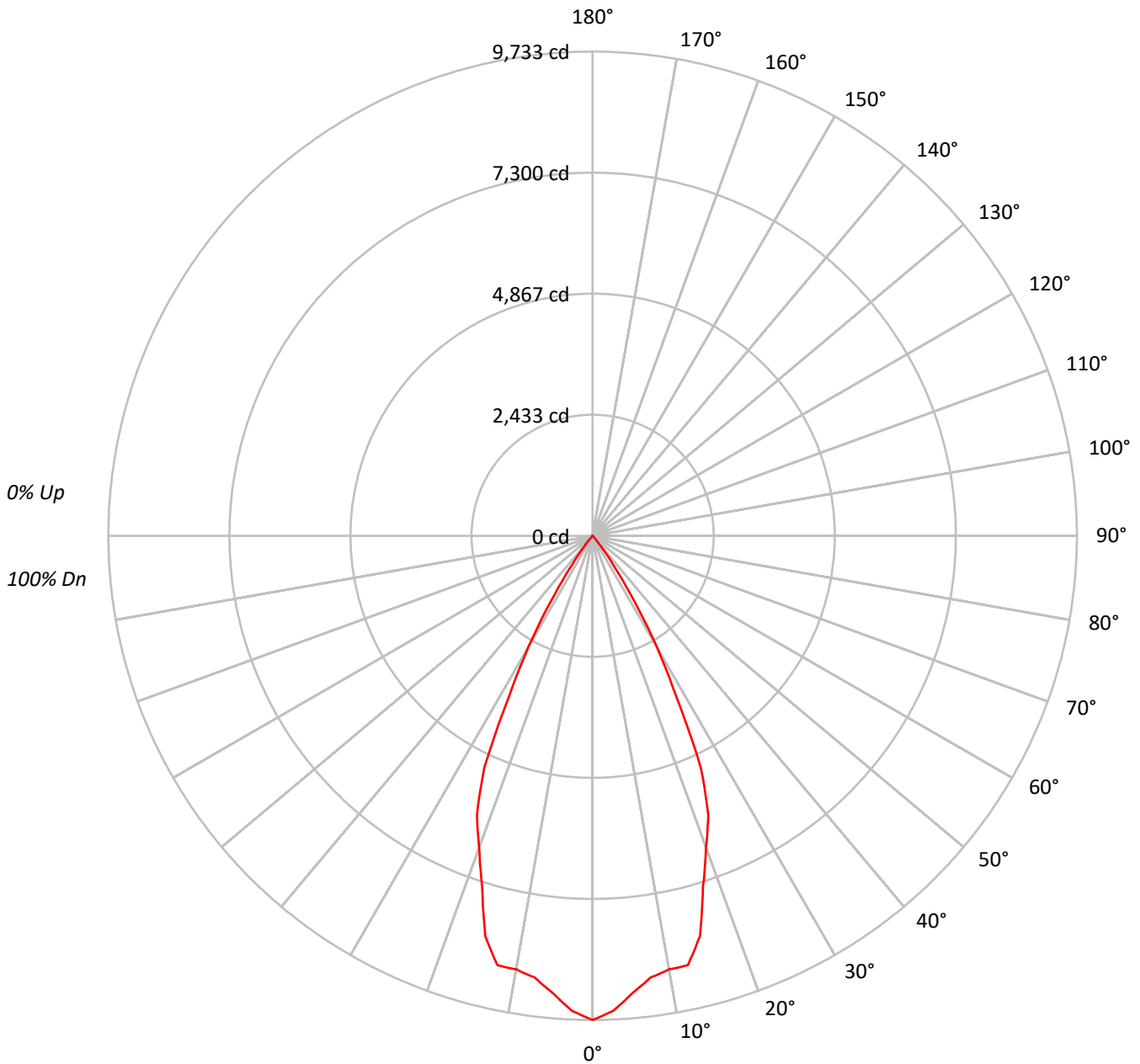
Input Watts (W): 54.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 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° | 1568039 |
| 5° | 1491795 |
| 10° | 1447943 |
| 15° | 1389285 |
| 20° | 1142977 |
| 25° | 915793 |
| 30° | 477754 |
| 35° | 154072 |
| 40° | 26183 |
| 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° | 868.6 | 14.6 |
| 10°-20° | 2254.3 | 38.0 |
| 20°-30° | 2193.1 | 37.0 |
| 30°-40° | 603.7 | 10.2 |
| 40°-50° | 13.2 | 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° | 5316.0 | 89.6 |
| 0°-40° | 5919.7 | 99.8 |
| 0°-60° | 5932.9 | 100.0 |
| 0°-90° | 5932.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5932.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 9733 | |
| 5° | 9225 | 869 |
| 15° | 8330 | 2254 |
| 25° | 5152 | 2193 |
| 35° | 783 | 604 |
| 45° | 0 | 13 |
| 55° | 0 | 0 |
| 65° | 0 | 0 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 9733.1 |
| 2.5° | 9559.3 |
| 5° | 9224.6 |
| 7.5° | 8954.8 |
| 10° | 8851.1 |
| 12.5° | 8843.3 |
| 15° | 8329.7 |
| 17.5° | 7382.8 |
| 20° | 6666.8 |
| 22.5° | 6072.8 |
| 25° | 5151.9 |
| 27.5° | 3626.6 |
| 30° | 2568.2 |
| 32.5° | 1553.9 |
| 35° | 783.4 |
| 37.5° | 350.2 |
| 40° | 124.5 |
| 42.5° | 10.4 |
| 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 |



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— 0°-180°







(END OF REPORT)