

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: P431867

Luminaire Tested: **LAMR4B412R309040DE01021MMS**

Issue Date: 11/23/2020

Test Information

Test Method: LM-41-14
Report Number: P431867
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2007-857-8)
Test Lab: INNOVATION CENTER (G1)
Issue Date: 11/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LAMR4B412R309040DE01021MMS
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 30 DEG TIR OPTIC
Light Source: HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6094.7 lumens
Efficiency: N/A
Efficacy: 112.7 lumens/watt
Spacing Criteria (0/90/45): 0.51 / 0.51 / 0.46
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

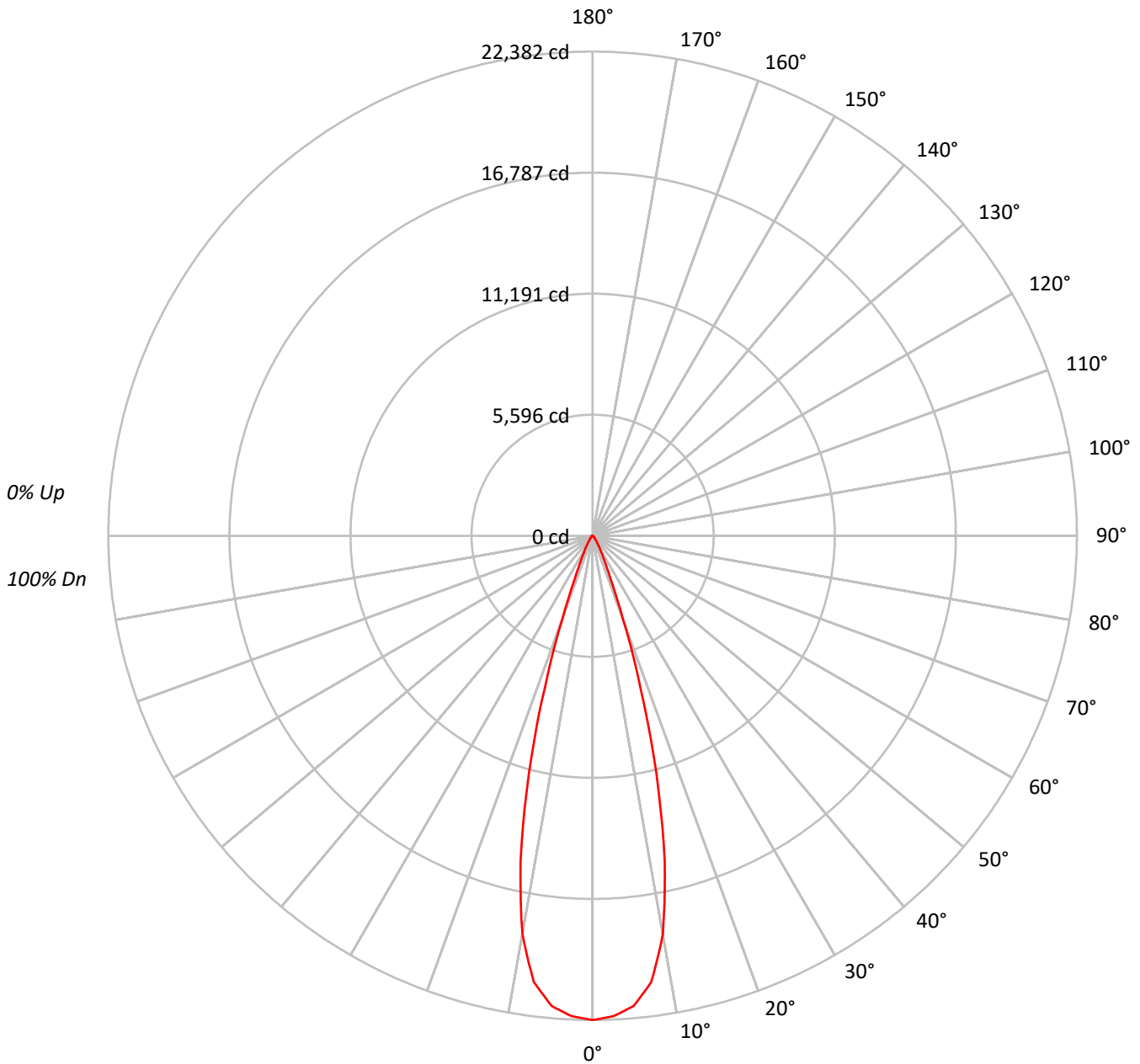
Input Watts (W): 54.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|---|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | | | | | | | | | |
| RC | 80 | | | | | | | | | 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 | 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 | 111 | 109 | 112 | 111 | 109 | 107 | 107 | 105 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 96 | 96 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 111 | 107 | 104 | 102 | 109 | 106 | 103 | 100 | 102 | 100 | 98 | 100 | 98 | 96 | 97 | 95 | 94 | 93 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 107 | 103 | 99 | 96 | 105 | 101 | 98 | 95 | 99 | 96 | 94 | 96 | 94 | 92 | 94 | 92 | 91 | 90 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 104 | 98 | 94 | 91 | 102 | 97 | 94 | 91 | 95 | 92 | 90 | 93 | 91 | 89 | 92 | 90 | 88 | 87 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 101 | 95 | 91 | 87 | 99 | 94 | 90 | 87 | 92 | 89 | 86 | 91 | 88 | 86 | 89 | 87 | 85 | 84 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 98 | 91 | 87 | 84 | 97 | 91 | 87 | 84 | 89 | 86 | 83 | 88 | 85 | 83 | 87 | 84 | 82 | 81 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 95 | 88 | 84 | 81 | 94 | 88 | 84 | 81 | 87 | 83 | 81 | 86 | 83 | 80 | 85 | 82 | 80 | 79 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 92 | 86 | 81 | 79 | 91 | 85 | 81 | 78 | 84 | 81 | 78 | 83 | 80 | 78 | 83 | 80 | 78 | 77 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 90 | 83 | 79 | 76 | 89 | 83 | 79 | 76 | 82 | 78 | 76 | 81 | 78 | 76 | 80 | 78 | 75 | 74 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 88 | 81 | 77 | 74 | 87 | 80 | 77 | 74 | 80 | 76 | 74 | 79 | 76 | 74 | 78 | 76 | 73 | 72 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|----------|
| | 0° |
| 0° | 11042870 |
| 5° | 10801662 |
| 10° | 9365621 |
| 15° | 5804806 |
| 20° | 2127529 |
| 25° | 711183 |
| 30° | 349059 |
| 35° | 174066 |
| 40° | 107945 |
| 45° | 68588 |
| 50° | 48817 |
| 55° | 39740 |
| 60° | 34241 |
| 65° | 26968 |
| 70° | 33323 |
| 75° | 32979 |
| 80° | 32959 |
| 85° | 32833 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 1987.7 | 32.6 |
| 10°-20° | 3000.9 | 49.2 |
| 20°-30° | 731.7 | 12.0 |
| 30°-40° | 200.4 | 3.3 |
| 40°-50° | 80.7 | 1.3 |
| 50°-60° | 43.2 | 0.7 |
| 60°-70° | 25.7 | 0.4 |
| 70°-80° | 19.8 | 0.3 |
| 80°-90° | 4.7 | 0.1 |
| 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° | 5720.3 | 93.9 |
| 0°-40° | 5920.6 | 97.1 |
| 0°-60° | 6044.5 | 99.2 |
| 0°-90° | 6094.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 6094.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-------|------|
| 0° | 22382 | |
| 5° | 21810 | ### |
| 15° | 11364 | 3001 |
| 25° | 1306 | 732 |
| 35° | 289 | 200 |
| 45° | 98 | 81 |
| 55° | 46 | 43 |
| 65° | 23 | 26 |
| 75° | 17 | 20 |
| 85° | 6 | 5 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|---------|
| 0° | 22382.1 |
| 2.5° | 22231.8 |
| 5° | 21809.9 |
| 7.5° | 20804.1 |
| 10° | 18694.2 |
| 12.5° | 15387.7 |
| 15° | 11364.5 |
| 17.5° | 7323.9 |
| 20° | 4052.1 |
| 22.5° | 2161.9 |
| 25° | 1306.4 |
| 27.5° | 884.4 |
| 30° | 612.7 |
| 32.5° | 416.2 |
| 35° | 289.0 |
| 37.5° | 213.9 |
| 40° | 167.6 |
| 42.5° | 127.2 |
| 45° | 98.3 |
| 47.5° | 80.9 |
| 50° | 63.6 |
| 52.5° | 57.8 |
| 55° | 46.2 |
| 57.5° | 40.5 |
| 60° | 34.7 |
| 62.5° | 28.9 |
| 65° | 23.1 |
| 67.5° | 23.1 |
| 70° | 23.1 |
| 72.5° | 23.1 |
| 75° | 17.3 |
| 77.5° | 17.3 |
| 80° | 11.6 |
| 82.5° | 5.8 |
| 85° | 5.8 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)