

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: P430753

Luminaire Tested: **LAM4B412R409027DE01021MB**

Issue Date: 11/23/2020

Test Information

Test Method: LM-41-14
Report Number: P430753
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1911-585-7)
Test Lab: INNOVATION CENTER (G1)
Issue Date: 11/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LAM4B412R409027DE01021MB
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 40 DEG TIR OPTIC
Light Source: HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5653.4 lumens
Efficiency: N/A
Efficacy: 104.5 lumens/watt
Spacing Criteria (0/90/45): 0.7 / 0.7 / 0.6
Luminous Opening: Circular (Dia: 0.29' x H: 0')
CIE Type: Direct

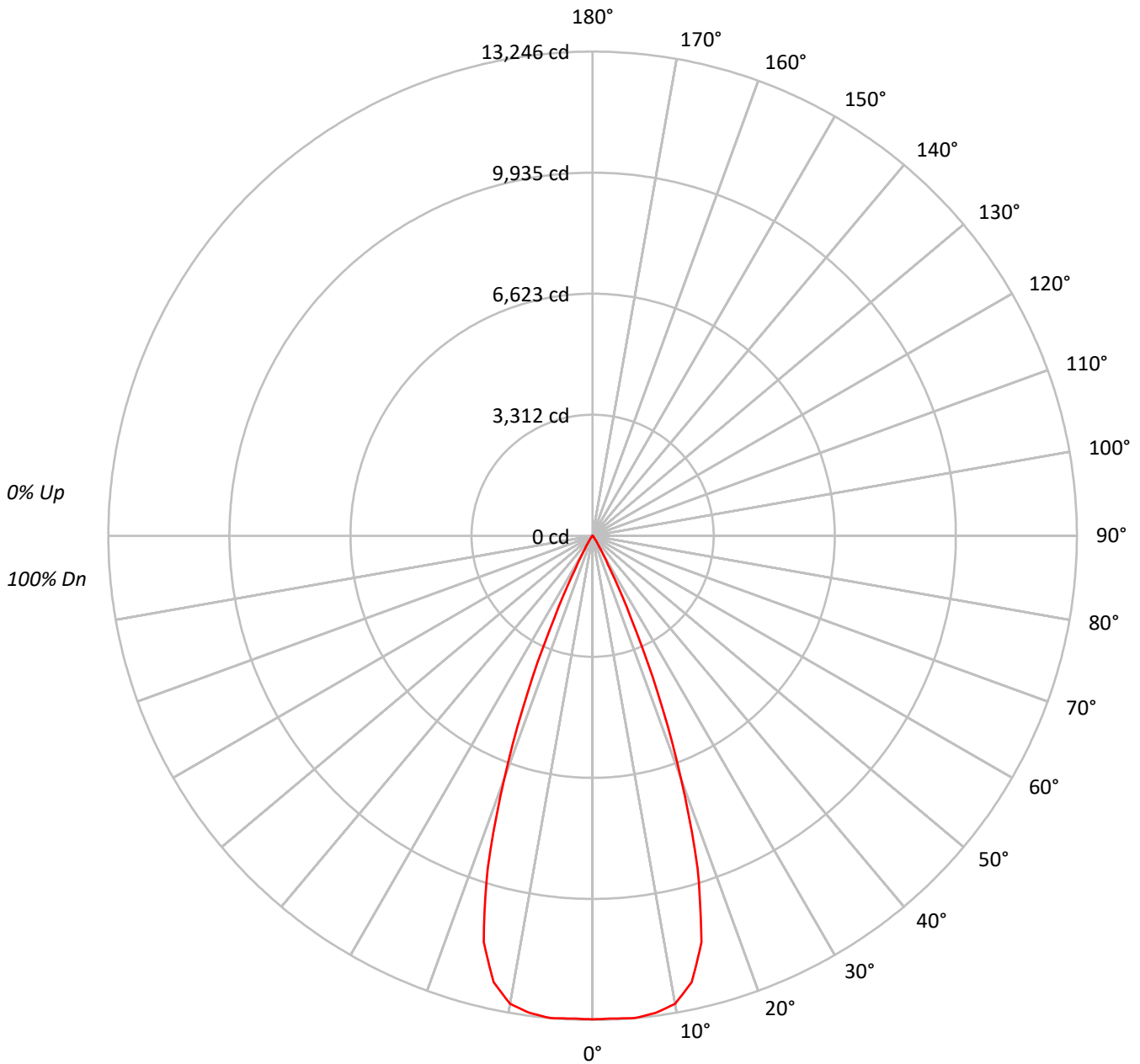
Input Watts (W): 54.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | | | |
| 1 | 115 | 113 | 111 | 109 | 112 | 110 | 109 | 107 | 106 | 105 | 104 | 103 | 102 | 101 | 99 | 99 | 98 | 96 | | | |
| 2 | 111 | 107 | 104 | 101 | 109 | 105 | 102 | 100 | 102 | 100 | 98 | 99 | 97 | 96 | 97 | 95 | 94 | 92 | | | |
| 3 | 107 | 102 | 98 | 95 | 105 | 101 | 97 | 94 | 98 | 95 | 93 | 96 | 94 | 92 | 94 | 92 | 90 | 89 | | | |
| 4 | 103 | 98 | 93 | 90 | 102 | 97 | 93 | 90 | 95 | 91 | 89 | 93 | 90 | 88 | 91 | 89 | 87 | 86 | | | |
| 5 | 100 | 94 | 89 | 86 | 98 | 93 | 89 | 86 | 91 | 88 | 85 | 90 | 87 | 84 | 88 | 86 | 84 | 82 | | | |
| 6 | 97 | 90 | 85 | 82 | 95 | 89 | 85 | 82 | 88 | 84 | 82 | 87 | 83 | 81 | 85 | 83 | 80 | 79 | | | |
| 7 | 93 | 87 | 82 | 79 | 92 | 86 | 82 | 79 | 85 | 81 | 78 | 84 | 80 | 78 | 83 | 80 | 78 | 77 | | | |
| 8 | 91 | 83 | 79 | 76 | 90 | 83 | 79 | 76 | 82 | 78 | 75 | 81 | 78 | 75 | 80 | 77 | 75 | 74 | | | |
| 9 | 88 | 81 | 76 | 73 | 87 | 80 | 76 | 73 | 79 | 75 | 73 | 79 | 75 | 73 | 78 | 75 | 72 | 71 | | | |
| 10 | 85 | 78 | 73 | 71 | 84 | 77 | 73 | 70 | 77 | 73 | 70 | 76 | 73 | 70 | 75 | 72 | 70 | 69 | | | |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|---------|
| | 0° |
| 0° | 2131307 |
| 5° | 2142149 |
| 10° | 2126953 |
| 15° | 1918834 |
| 20° | 1210628 |
| 25° | 436006 |
| 30° | 91339 |
| 35° | 27790 |
| 40° | 5531 |
| 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° | 1256.1 | 22.2 |
| 10°-20° | 3003.5 | 53.1 |
| 20°-30° | 1280.7 | 22.7 |
| 30°-40° | 109.8 | 1.9 |
| 40°-50° | 3.3 | 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° | 5540.3 | 98.0 |
| 0°-40° | 5650.2 | 99.9 |
| 0°-60° | 5653.4 | 100.0 |
| 0°-90° | 5653.4 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 5653.4 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-------|------|
| 0° | 13229 | |
| 5° | 13246 | ### |
| 15° | 11505 | 3004 |
| 25° | 2453 | 1281 |
| 35° | 141 | 110 |
| 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° | 13229.4 |
| 2.5° | 13217.4 |
| 5° | 13246.1 |
| 7.5° | 13167.1 |
| 10° | 13001.8 |
| 12.5° | 12508.4 |
| 15° | 11504.7 |
| 17.5° | 9545.4 |
| 20° | 7061.4 |
| 22.5° | 4649.3 |
| 25° | 2452.8 |
| 27.5° | 994.1 |
| 30° | 491.0 |
| 32.5° | 261.1 |
| 35° | 141.3 |
| 37.5° | 71.9 |
| 40° | 26.3 |
| 42.5° | 4.8 |
| 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)