

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: P430441

Luminaire Tested: **LAM4B312R359027DE01021MB**

Issue Date: 11/23/2020

Test Information

Test Method: LM-41-14
Report Number: P430441
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2008-908-6)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 11/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LAM4B312R359027DE01021MB
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 35 DEG TIR OPTIC
Light Source: HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3347.1 lumens
Efficiency: N/A
Efficacy: 81.8 lumens/watt
Spacing Criteria (0/90/45): 0.57 / 0.57 / 0.51
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

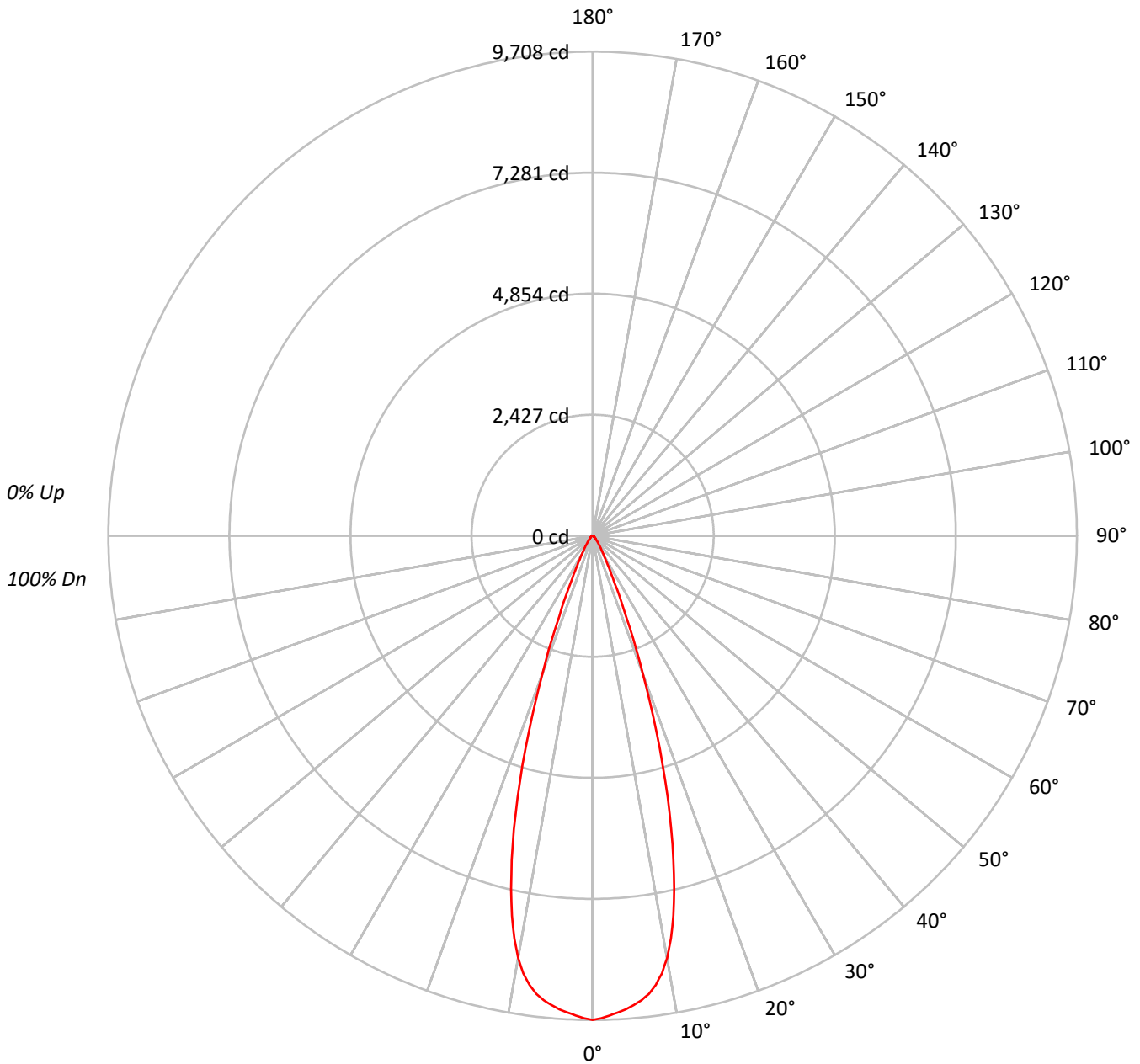
Input Watts (W): 40.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 105 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 96 | 96 | 96 | 96 |
| 2 | 110 | 106 | 103 | 100 | 108 | 104 | 101 | 99 | 101 | 99 | 97 | 98 | 96 | 95 | 96 | 94 | 93 | 91 | 91 | 91 | 91 |
| 3 | 106 | 101 | 97 | 94 | 104 | 100 | 96 | 93 | 97 | 94 | 92 | 95 | 92 | 90 | 93 | 91 | 89 | 87 | 87 | 87 | 87 |
| 4 | 102 | 96 | 92 | 89 | 101 | 95 | 91 | 88 | 93 | 90 | 87 | 91 | 88 | 86 | 90 | 87 | 85 | 84 | 84 | 84 | 84 |
| 5 | 99 | 92 | 88 | 84 | 97 | 91 | 87 | 84 | 90 | 86 | 83 | 88 | 85 | 83 | 87 | 84 | 82 | 81 | 81 | 81 | 81 |
| 6 | 96 | 89 | 84 | 81 | 94 | 88 | 84 | 80 | 87 | 83 | 80 | 85 | 82 | 79 | 84 | 81 | 79 | 78 | 78 | 78 | 78 |
| 7 | 92 | 85 | 81 | 77 | 91 | 85 | 80 | 77 | 84 | 80 | 77 | 82 | 79 | 76 | 81 | 78 | 76 | 75 | 75 | 75 | 75 |
| 8 | 90 | 82 | 78 | 74 | 88 | 82 | 77 | 74 | 81 | 77 | 74 | 80 | 76 | 74 | 79 | 76 | 73 | 72 | 72 | 72 | 72 |
| 9 | 87 | 79 | 75 | 72 | 86 | 79 | 75 | 72 | 78 | 74 | 71 | 77 | 74 | 71 | 77 | 73 | 71 | 70 | 70 | 70 | 70 |
| 10 | 84 | 77 | 72 | 69 | 83 | 76 | 72 | 69 | 76 | 72 | 69 | 75 | 71 | 69 | 74 | 71 | 69 | 68 | 68 | 68 | 68 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|---------|
| | 0° |
| 0° | 4789827 |
| 5° | 4679405 |
| 10° | 4306216 |
| 15° | 3112412 |
| 20° | 1537538 |
| 25° | 564036 |
| 30° | 254317 |
| 35° | 138470 |
| 40° | 85853 |
| 45° | 58122 |
| 50° | 43444 |
| 55° | 37246 |
| 60° | 32859 |
| 65° | 31171 |
| 70° | 28851 |
| 75° | 25353 |
| 80° | 28413 |
| 85° | 18681 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 877.9 | 26.2 |
| 10°-20° | 1604.5 | 47.9 |
| 20°-30° | 558.6 | 16.7 |
| 30°-40° | 154.8 | 4.6 |
| 40°-50° | 67.3 | 2.0 |
| 50°-60° | 39.0 | 1.2 |
| 60°-70° | 26.4 | 0.8 |
| 70°-80° | 14.5 | 0.4 |
| 80°-90° | 4.1 | 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° | 3041.0 | 90.9 |
| 0°-40° | 3195.8 | 95.5 |
| 0°-60° | 3302.1 | 98.7 |
| 0°-90° | 3347.1 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3347.1 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 9708 | |
| 5° | 9448 | 878 |
| 15° | 6093 | 1604 |
| 25° | 1036 | 559 |
| 35° | 230 | 155 |
| 45° | 83 | 67 |
| 55° | 43 | 39 |
| 65° | 27 | 26 |
| 75° | 13 | 15 |
| 85° | 3 | 4 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 9708.2 |
| 1° | 9674.8 |
| 2° | 9624.9 |
| 3° | 9574.9 |
| 4° | 9518.3 |
| 5° | 9448.3 |
| 6° | 9361.7 |
| 7° | 9255.1 |
| 8° | 9091.8 |
| 9° | 8881.9 |
| 10° | 8595.4 |
| 11° | 8228.9 |
| 12° | 7785.8 |
| 13° | 7266.1 |
| 14° | 6696.4 |
| 15° | 6093.4 |
| 16° | 5450.4 |
| 17° | 4804.1 |
| 18° | 4154.5 |
| 19° | 3528.1 |
| 20° | 2928.4 |
| 22.5° | 1745.7 |
| 25° | 1036.1 |
| 26° | 862.9 |
| 27° | 719.6 |
| 28° | 609.7 |
| 29° | 519.7 |
| 30° | 446.4 |
| 32.5° | 316.5 |
| 35° | 229.9 |
| 37.5° | 173.2 |
| 40° | 133.3 |
| 42.5° | 103.3 |
| 45° | 83.3 |
| 47.5° | 70.0 |
| 50° | 56.6 |
| 52.5° | 50.0 |
| 55° | 43.3 |
| 57.5° | 36.6 |
| 60° | 33.3 |
| 62.5° | 30.0 |
| 65° | 26.7 |
| 67.5° | 23.3 |



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CANDELA DISTRIBUTION (continued):

| | 0° |
|-------|------|
| 75° | 13.3 |
| 77.5° | 10.0 |
| 80° | 10.0 |
| 82.5° | 6.7 |
| 85° | 3.3 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







| | | |
|-------|--|------|
| 70° | | 20.0 |
| 72.5° | | 16.7 |



(END OF REPORT)