

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: P431605

Luminaire Tested: **LAMR4B312R359050DE01021MB**

Issue Date: 11/23/2020

Test Information

Test Method: LM-41-14
Report Number: P431605
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: LAMR4B312R359050DE01021MB
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 35 DEG TIR OPTIC
Light Source: HIGH LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3728.7 lumens
Efficiency: N/A
Efficacy: 91.2 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

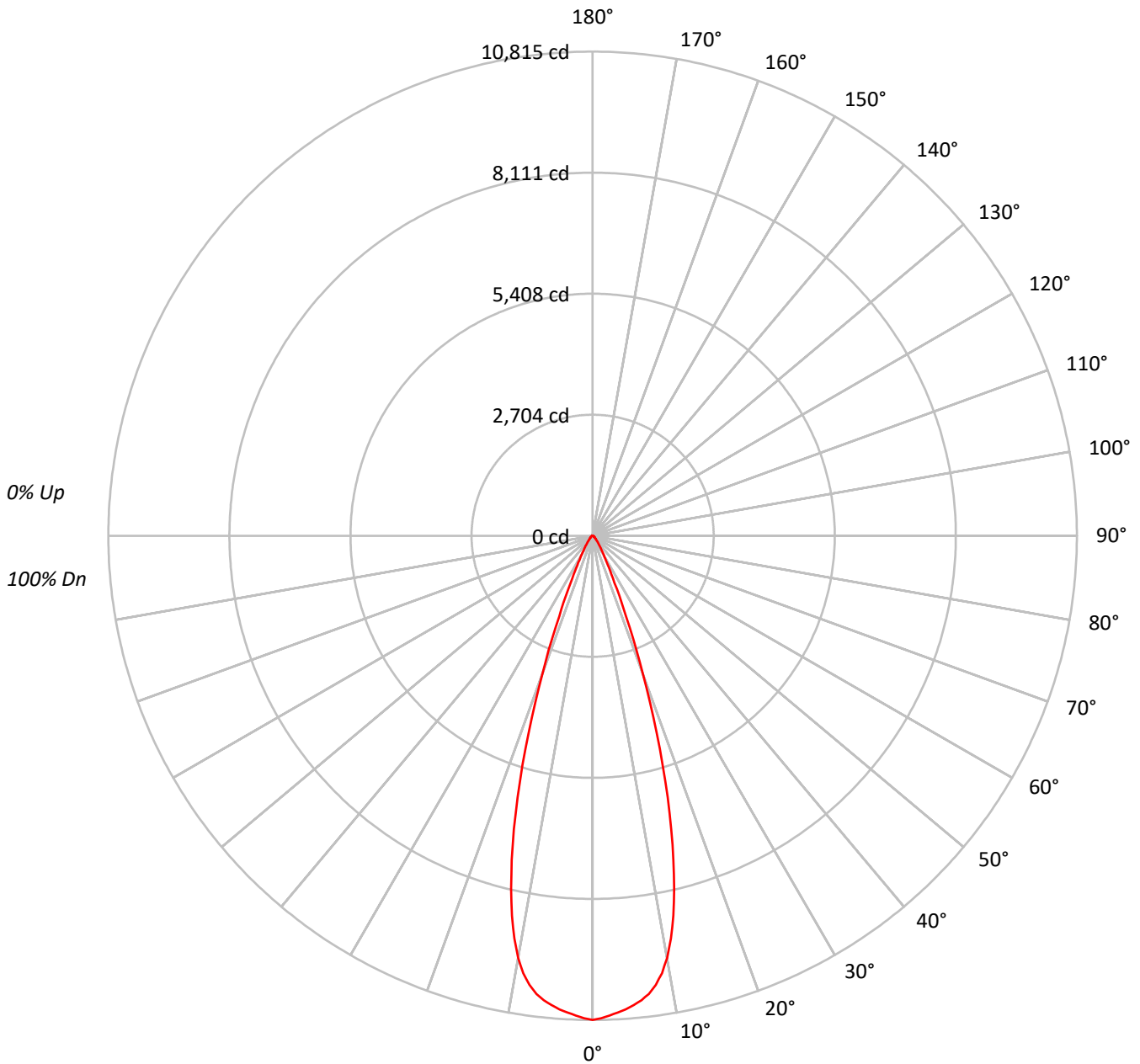
Input Watts (W): 40.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|---|--|--|--|--|--|--|---|--|--|--|--|--|--|--|--|
| RF | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | 20 | | | | | | | | | | | | | | | | | |
| 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 | 114 | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 105 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 96 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 | 110 | 106 | 103 | 100 | 108 | 104 | 101 | 99 | 101 | 99 | 97 | 98 | 96 | 95 | 96 | 94 | 93 | 91 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 3 | 106 | 101 | 97 | 94 | 104 | 100 | 96 | 93 | 97 | 94 | 92 | 95 | 92 | 90 | 93 | 91 | 89 | 87 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 4 | 102 | 96 | 92 | 89 | 101 | 95 | 91 | 88 | 93 | 90 | 87 | 91 | 88 | 86 | 90 | 87 | 85 | 84 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5 | 99 | 92 | 88 | 84 | 97 | 91 | 87 | 84 | 90 | 86 | 83 | 88 | 85 | 83 | 87 | 84 | 82 | 81 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6 | 96 | 89 | 84 | 81 | 94 | 88 | 84 | 80 | 87 | 83 | 80 | 85 | 82 | 79 | 84 | 81 | 79 | 78 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 | 92 | 85 | 81 | 77 | 91 | 85 | 80 | 77 | 84 | 80 | 77 | 82 | 79 | 76 | 81 | 78 | 76 | 75 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | 90 | 82 | 78 | 74 | 88 | 82 | 77 | 74 | 81 | 77 | 74 | 80 | 76 | 74 | 79 | 76 | 73 | 72 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | 87 | 79 | 75 | 72 | 86 | 79 | 75 | 72 | 78 | 74 | 71 | 77 | 74 | 71 | 77 | 73 | 71 | 70 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 10 | 84 | 77 | 72 | 69 | 83 | 76 | 72 | 69 | 76 | 72 | 69 | 75 | 71 | 69 | 74 | 71 | 69 | 68 | | | | | | | | | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° |
|-----|---------|
| 0° | 5335949 |
| 5° | 5212953 |
| 10° | 4797237 |
| 15° | 3467305 |
| 20° | 1712902 |
| 25° | 628383 |
| 30° | 283315 |
| 35° | 154250 |
| 40° | 95643 |
| 45° | 64751 |
| 50° | 48433 |
| 55° | 41461 |
| 60° | 36609 |
| 65° | 34673 |
| 70° | 32169 |
| 75° | 28213 |
| 80° | 31538 |
| 85° | 20945 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 978.0 | 26.2 |
| 10°-20° | 1787.4 | 47.9 |
| 20°-30° | 622.3 | 16.7 |
| 30°-40° | 172.5 | 4.6 |
| 40°-50° | 75.0 | 2.0 |
| 50°-60° | 43.5 | 1.2 |
| 60°-70° | 29.4 | 0.8 |
| 70°-80° | 16.1 | 0.4 |
| 80°-90° | 4.5 | 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° | 3387.8 | 90.9 |
| 0°-40° | 3560.3 | 95.5 |
| 0°-60° | 3678.7 | 98.7 |
| 0°-90° | 3728.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3728.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-------|------|
| 0° | 10815 | |
| 5° | 10526 | 978 |
| 15° | 6788 | 1787 |
| 25° | 1154 | 622 |
| 35° | 256 | 172 |
| 45° | 93 | 75 |
| 55° | 48 | 43 |
| 65° | 30 | 29 |
| 75° | 15 | 16 |
| 85° | 4 | 5 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|---------|
| 0° | 10815.1 |
| 1° | 10778.0 |
| 2° | 10722.3 |
| 3° | 10666.7 |
| 4° | 10603.6 |
| 5° | 10525.6 |
| 6° | 10429.1 |
| 7° | 10310.4 |
| 8° | 10128.5 |
| 9° | 9894.7 |
| 10° | 9575.5 |
| 11° | 9167.3 |
| 12° | 8673.6 |
| 13° | 8094.6 |
| 14° | 7460.0 |
| 15° | 6788.2 |
| 16° | 6071.9 |
| 17° | 5351.9 |
| 18° | 4628.2 |
| 19° | 3930.4 |
| 20° | 3262.4 |
| 22.5° | 1944.8 |
| 25° | 1154.3 |
| 26° | 961.3 |
| 27° | 801.7 |
| 28° | 679.2 |
| 29° | 579.0 |
| 30° | 497.3 |
| 32.5° | 352.6 |
| 35° | 256.1 |
| 37.5° | 193.0 |
| 40° | 148.5 |
| 42.5° | 115.1 |
| 45° | 92.8 |
| 47.5° | 77.9 |
| 50° | 63.1 |
| 52.5° | 55.7 |
| 55° | 48.2 |
| 57.5° | 40.8 |
| 60° | 37.1 |
| 62.5° | 33.4 |
| 65° | 29.7 |
| 67.5° | 26.0 |



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CANDELA DISTRIBUTION (continued):

| | 0° |
|-------|------|
| 75° | 14.8 |
| 77.5° | 11.1 |
| 80° | 11.1 |
| 82.5° | 7.4 |
| 85° | 3.7 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







| | |
|-------|------|
| 70° | 22.3 |
| 72.5° | 18.6 |



(END OF REPORT)