

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: P431177

Luminaire Tested: **LAMR4B112R659727DE010x1MMS**

Issue Date: 11/23/2020

Test Information

Test Method: LM-41-14
Report Number: P431177
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2008-908-22)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 11/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LAMR4B112R659727DE010x1MMS
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 65 DEG TIR OPTIC
Light Source: HIGH LUMEN LED 97CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1038.9 lumens
Efficiency: N/A
Efficacy: 72.6 lumens/watt
Spacing Criteria (0/90/45): 0.98 / 0.98 / 0.97
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

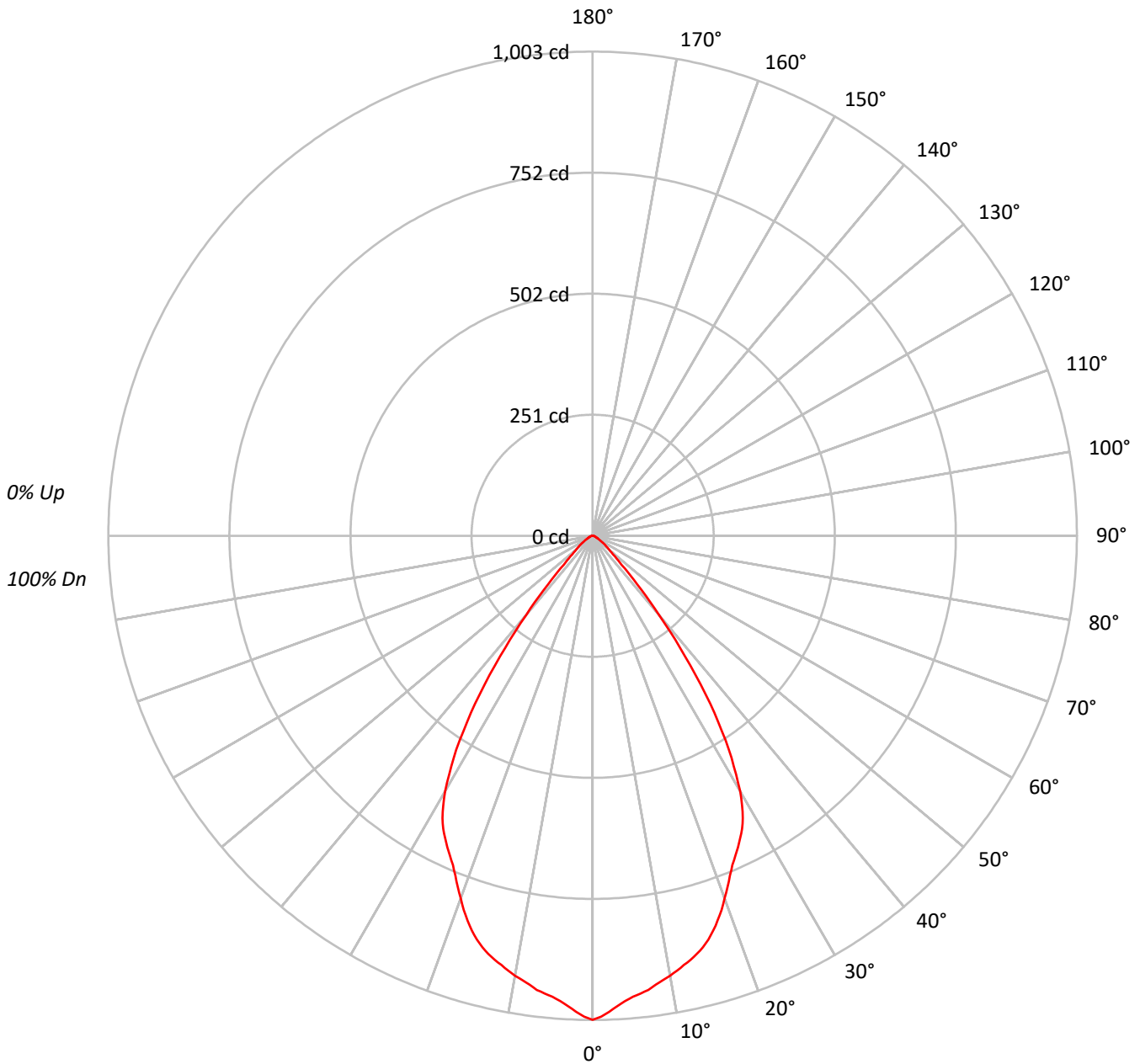
Input Watts (W): 14.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 113 | 110 | 107 | 105 | 111 | 108 | 106 | 103 | 104 | 102 | 100 | 100 | 99 | 97 | 97 | 96 | 94 | 93 | 93 | 93 | 93 |
| 2 | 107 | 102 | 98 | 94 | 105 | 100 | 96 | 93 | 97 | 94 | 91 | 94 | 91 | 89 | 91 | 89 | 87 | 85 | 85 | 85 | 85 |
| 3 | 101 | 94 | 89 | 85 | 99 | 93 | 88 | 84 | 90 | 86 | 83 | 88 | 84 | 81 | 86 | 83 | 80 | 79 | 79 | 79 | 79 |
| 4 | 96 | 88 | 82 | 77 | 94 | 86 | 81 | 77 | 84 | 80 | 76 | 82 | 78 | 75 | 80 | 77 | 74 | 72 | 72 | 72 | 72 |
| 5 | 90 | 82 | 75 | 71 | 89 | 81 | 75 | 70 | 79 | 74 | 70 | 77 | 73 | 69 | 75 | 72 | 68 | 67 | 67 | 67 | 67 |
| 6 | 85 | 76 | 70 | 65 | 84 | 75 | 69 | 65 | 74 | 68 | 64 | 72 | 68 | 64 | 71 | 67 | 64 | 62 | 62 | 62 | 62 |
| 7 | 81 | 71 | 65 | 60 | 80 | 70 | 64 | 60 | 69 | 64 | 60 | 68 | 63 | 59 | 67 | 62 | 59 | 58 | 58 | 58 | 58 |
| 8 | 77 | 67 | 60 | 56 | 75 | 66 | 60 | 56 | 65 | 59 | 56 | 64 | 59 | 55 | 63 | 58 | 55 | 54 | 54 | 54 | 54 |
| 9 | 73 | 63 | 56 | 52 | 72 | 62 | 56 | 52 | 61 | 56 | 52 | 60 | 55 | 52 | 59 | 55 | 51 | 50 | 50 | 50 | 50 |
| 10 | 69 | 59 | 53 | 49 | 68 | 58 | 53 | 49 | 58 | 52 | 48 | 57 | 52 | 48 | 56 | 51 | 48 | 47 | 47 | 47 | 47 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|--------|
| | 0° |
| 0° | 494761 |
| 5° | 474760 |
| 10° | 463517 |
| 15° | 450563 |
| 20° | 419615 |
| 25° | 387601 |
| 30° | 347919 |
| 35° | 255618 |
| 40° | 138022 |
| 45° | 59378 |
| 50° | 33082 |
| 55° | 23139 |
| 60° | 14900 |
| 65° | 11324 |
| 70° | 9377 |
| 75° | 8197 |
| 80° | 9092 |
| 85° | 6227 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 90.6 | 8.7 |
| 10°-20° | 246.1 | 23.7 |
| 20°-30° | 326.3 | 31.4 |
| 30°-40° | 258.4 | 24.9 |
| 40°-50° | 77.0 | 7.4 |
| 50°-60° | 24.7 | 2.4 |
| 60°-70° | 9.8 | 0.9 |
| 70°-80° | 4.7 | 0.5 |
| 80°-90° | 1.3 | 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° | 663.0 | 63.8 |
| 0°-40° | 921.4 | 88.7 |
| 0°-60° | 1023.0 | 98.5 |
| 0°-90° | 1038.9 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1038.9 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 1003 | |
| 5° | 959 | 91 |
| 15° | 882 | 246 |
| 25° | 712 | 326 |
| 35° | 424 | 258 |
| 45° | 85 | 77 |
| 55° | 27 | 25 |
| 65° | 10 | 10 |
| 75° | 4 | 5 |
| 85° | 1 | 1 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 1002.8 |
| 1° | 996.3 |
| 2° | 986.6 |
| 3° | 975.8 |
| 4° | 966.1 |
| 5° | 958.6 |
| 6° | 953.2 |
| 7° | 947.8 |
| 8° | 939.2 |
| 9° | 931.7 |
| 10° | 925.2 |
| 11° | 917.7 |
| 12° | 909.1 |
| 13° | 901.5 |
| 14° | 892.9 |
| 15° | 882.1 |
| 16° | 870.3 |
| 17° | 855.2 |
| 18° | 838.0 |
| 19° | 819.7 |
| 20° | 799.2 |
| 21° | 779.8 |
| 22° | 759.3 |
| 23° | 741.0 |
| 24° | 726.0 |
| 25° | 712.0 |
| 26° | 696.9 |
| 27° | 681.8 |
| 28° | 662.4 |
| 29° | 638.7 |
| 30° | 610.7 |
| 32.5° | 525.6 |
| 35° | 424.4 |
| 37.5° | 314.5 |
| 40° | 214.3 |
| 42.5° | 135.7 |
| 45° | 85.1 |
| 47.5° | 57.1 |
| 50° | 43.1 |
| 52.5° | 34.5 |
| 55° | 26.9 |
| 57.5° | 20.5 |
| 60° | 15.1 |



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CANDELA DISTRIBUTION (continued):

| | 0° |
|-------|-----|
| 67.5° | 7.5 |
| 70° | 6.5 |
| 72.5° | 5.4 |
| 75° | 4.3 |
| 77.5° | 3.2 |
| 80° | 3.2 |
| 82.5° | 2.2 |
| 85° | 1.1 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







| | | |
|-------|--|------|
| 62.5° | | 11.8 |
| 65° | | 9.7 |



(END OF REPORT)