

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: P431515

Luminaire Tested: **LAMR4B312R159730DE01021MB**

Issue Date: 11/23/2020

Test Information

Test Method: LM-41-14
Report Number: P431515
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1911-585-6)
Test Lab: INNOVATION CENTER (G1)
Issue Date: 11/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LAMR4B312R159730DE01021MB
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 15 DEG TIR OPTIC
Light Source: HIGH LUMEN LED 97CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3369.7 lumens
Efficiency: N/A
Efficacy: 82.4 lumens/watt
Spacing Criteria (0/90/45): 0.3 / 0.3 / 0.29
Luminous Opening: Circular (Dia: 0.29' x H: 0')
CIE Type: Direct

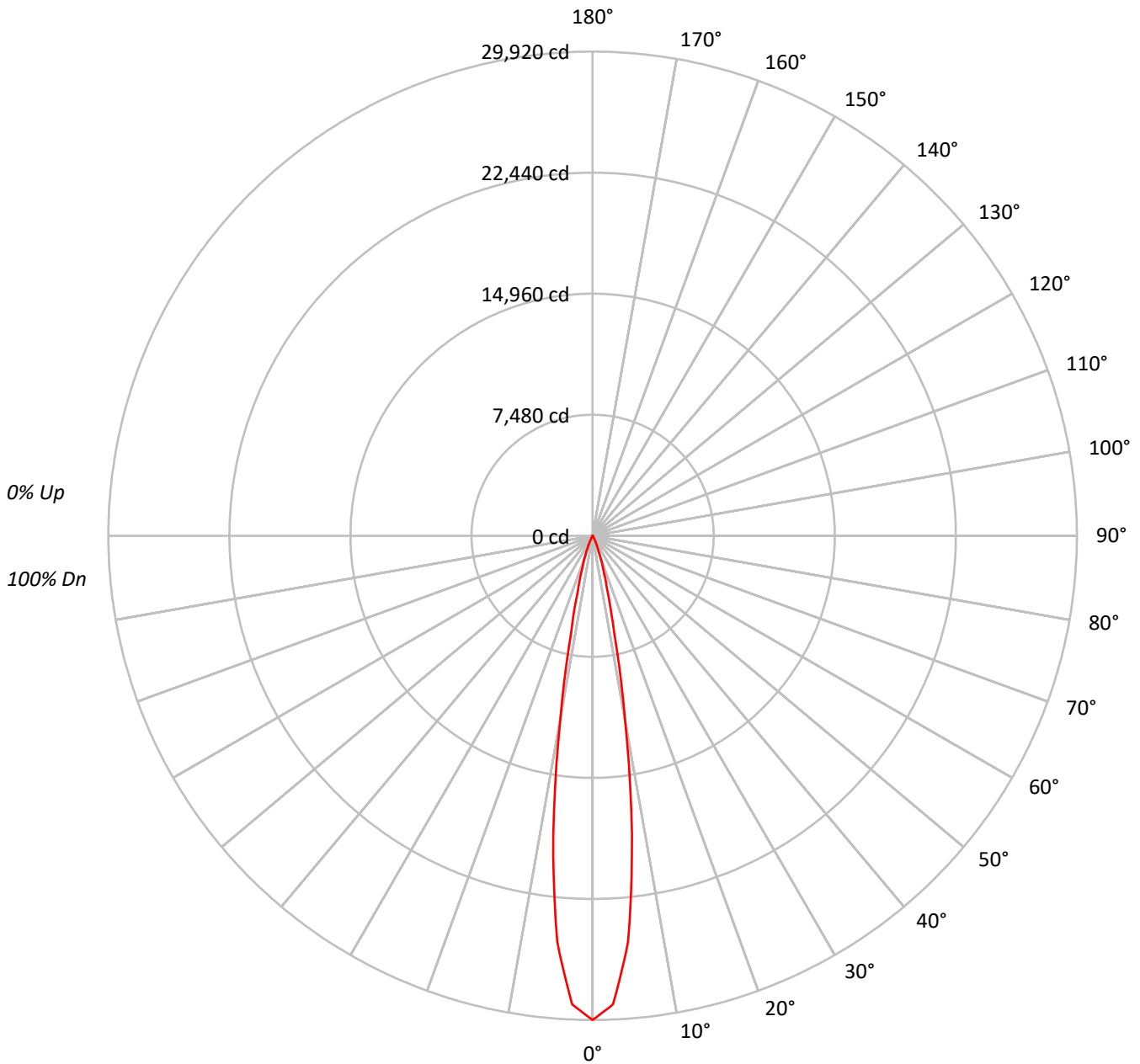
Input Watts (W): 40.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 116 | 114 | 112 | 111 | 113 | 112 | 110 | 109 | 108 | 107 | 106 | 104 | 103 | 103 | 101 | 100 | 100 | 98 | 98 | 98 | 98 |
| 2 | 113 | 110 | 107 | 105 | 111 | 108 | 106 | 104 | 105 | 103 | 102 | 102 | 101 | 100 | 100 | 99 | 98 | 96 | 96 | 96 | 96 |
| 3 | 110 | 106 | 103 | 101 | 108 | 105 | 102 | 100 | 103 | 100 | 98 | 100 | 99 | 97 | 98 | 97 | 96 | 94 | 94 | 94 | 94 |
| 4 | 108 | 103 | 100 | 97 | 106 | 102 | 99 | 97 | 100 | 98 | 96 | 98 | 96 | 95 | 97 | 95 | 94 | 93 | 93 | 93 | 93 |
| 5 | 105 | 101 | 97 | 95 | 104 | 100 | 97 | 94 | 98 | 96 | 94 | 97 | 95 | 93 | 95 | 94 | 92 | 91 | 91 | 91 | 91 |
| 6 | 103 | 98 | 95 | 92 | 102 | 98 | 94 | 92 | 96 | 94 | 92 | 95 | 93 | 91 | 94 | 92 | 91 | 90 | 90 | 90 | 90 |
| 7 | 101 | 96 | 93 | 90 | 100 | 96 | 92 | 90 | 95 | 92 | 90 | 94 | 91 | 89 | 93 | 91 | 89 | 88 | 88 | 88 | 88 |
| 8 | 99 | 94 | 91 | 89 | 99 | 94 | 91 | 89 | 93 | 90 | 88 | 92 | 90 | 88 | 91 | 89 | 88 | 87 | 87 | 87 | 87 |
| 9 | 98 | 92 | 89 | 87 | 97 | 92 | 89 | 87 | 91 | 89 | 87 | 91 | 88 | 87 | 90 | 88 | 86 | 86 | 86 | 86 | 86 |
| 10 | 96 | 91 | 88 | 86 | 95 | 91 | 88 | 86 | 90 | 87 | 85 | 89 | 87 | 85 | 89 | 87 | 85 | 84 | 84 | 84 | 84 |

AVERAGE LUMINANCE (cd/sqm):

| | |
|-----|---------|
| | 0° |
| 0° | 4820161 |
| 5° | 4068046 |
| 10° | 1868924 |
| 15° | 582770 |
| 20° | 237466 |
| 25° | 77911 |
| 30° | 24146 |
| 35° | 5113 |
| 40° | 1283 |
| 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° | 1941.1 | 57.6 |
| 10°-20° | 1156.9 | 34.3 |
| 20°-30° | 245.1 | 7.3 |
| 30°-40° | 25.8 | 0.8 |
| 40°-50° | 0.8 | 0.0 |
| 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° | 3343.1 | 99.2 |
| 0°-40° | 3368.9 | 100.0 |
| 0°-60° | 3369.7 | 100.0 |
| 0°-90° | 3369.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3369.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|-------|------|
| 0° | 29920 | |
| 5° | 25155 | ### |
| 15° | 3494 | 1157 |
| 25° | 438 | 245 |
| 35° | 26 | 26 |
| 45° | 0 | 1 |
| 55° | 0 | 0 |
| 65° | 0 | 0 |
| 75° | 0 | 0 |
| 85° | 0 | 0 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|---------|
| 0° | 29919.6 |
| 2.5° | 28974.3 |
| 5° | 25155.0 |
| 7.5° | 18621.9 |
| 10° | 11424.5 |
| 12.5° | 6096.3 |
| 15° | 3494.1 |
| 17.5° | 2194.5 |
| 20° | 1385.1 |
| 22.5° | 817.0 |
| 25° | 438.3 |
| 27.5° | 247.4 |
| 30° | 129.8 |
| 32.5° | 65.7 |
| 35° | 26.0 |
| 37.5° | 13.7 |
| 40° | 6.1 |
| 42.5° | 1.5 |
| 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)