

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: P431350

Luminaire Tested: **LAMR4B212R459024DE010x1MB**

Issue Date: 11/23/2020

Test Information

Test Method: LM-41-14
Report Number: P431350
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2008-908-8)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 11/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LAMR4B212R459024DE010x1MB
Description: PORTFOLIO 4INCH ADJUSTABLE MULTIPLE, 45 DEG TIR OPTIC
Light Source: HIGH LUMEN LED 90CRI / 2400K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2029.0 lumens
Efficiency: N/A
Efficacy: 71.4 lumens/watt
Spacing Criteria (0/90/45): 0.73 / 0.73 / 0.66
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

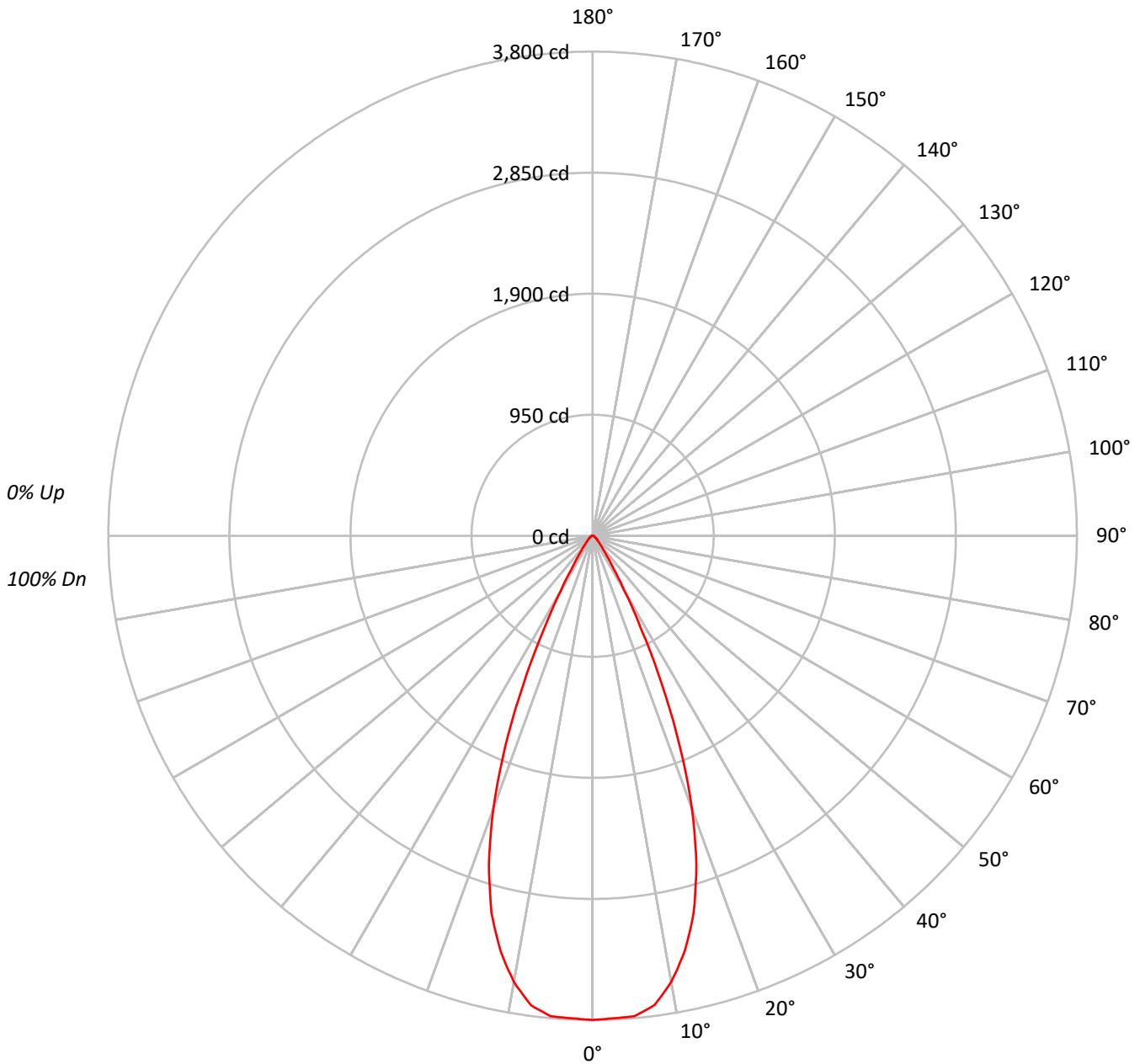
Input Watts (W): 28.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 0 | | | | | | | | | | | | | | | | |
| RCR | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 0 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 | | | | | | | | | | | | | | | | | | | |
| 1 | 114 | 112 | 109 | 107 | 112 | 109 | 107 | 105 | 105 | 104 | 102 | 102 | 100 | 99 | 98 | 97 | 96 | 95 | | | | | | | | | | | | | | | | | | | |
| 2 | 109 | 105 | 101 | 98 | 107 | 103 | 100 | 97 | 100 | 97 | 95 | 97 | 95 | 93 | 94 | 93 | 91 | 89 | | | | | | | | | | | | | | | | | | | |
| 3 | 105 | 99 | 94 | 91 | 103 | 98 | 93 | 90 | 95 | 92 | 89 | 93 | 90 | 87 | 90 | 88 | 86 | 85 | | | | | | | | | | | | | | | | | | | |
| 4 | 100 | 94 | 89 | 85 | 99 | 93 | 88 | 85 | 90 | 87 | 84 | 89 | 85 | 83 | 87 | 84 | 82 | 80 | | | | | | | | | | | | | | | | | | | |
| 5 | 96 | 89 | 84 | 80 | 95 | 88 | 83 | 80 | 86 | 82 | 79 | 85 | 81 | 78 | 83 | 80 | 78 | 76 | | | | | | | | | | | | | | | | | | | |
| 6 | 92 | 85 | 79 | 76 | 91 | 84 | 79 | 75 | 82 | 78 | 75 | 81 | 77 | 74 | 80 | 77 | 74 | 73 | | | | | | | | | | | | | | | | | | | |
| 7 | 89 | 81 | 75 | 72 | 87 | 80 | 75 | 72 | 79 | 74 | 71 | 78 | 74 | 71 | 77 | 73 | 71 | 69 | | | | | | | | | | | | | | | | | | | |
| 8 | 85 | 77 | 72 | 68 | 84 | 77 | 72 | 68 | 76 | 71 | 68 | 75 | 71 | 68 | 74 | 70 | 67 | 66 | | | | | | | | | | | | | | | | | | | |
| 9 | 82 | 74 | 69 | 65 | 81 | 73 | 68 | 65 | 72 | 68 | 65 | 72 | 68 | 65 | 71 | 67 | 65 | 63 | | | | | | | | | | | | | | | | | | | |
| 10 | 79 | 71 | 66 | 62 | 78 | 70 | 66 | 62 | 70 | 65 | 62 | 69 | 65 | 62 | 68 | 65 | 62 | 61 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° |
|-----|---------|
| 0° | 1874990 |
| 5° | 1874377 |
| 10° | 1781573 |
| 15° | 1564991 |
| 20° | 1197204 |
| 25° | 698880 |
| 30° | 286049 |
| 35° | 120943 |
| 40° | 65952 |
| 45° | 42562 |
| 50° | 33235 |
| 55° | 28816 |
| 60° | 23288 |
| 65° | 18445 |
| 70° | 17022 |
| 75° | 15060 |
| 80° | 16763 |
| 85° | 11322 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 354.1 | 17.5 |
| 10°-20° | 834.1 | 41.1 |
| 20°-30° | 587.7 | 29.0 |
| 30°-40° | 144.7 | 7.1 |
| 40°-50° | 50.5 | 2.5 |
| 50°-60° | 29.9 | 1.5 |
| 60°-70° | 16.6 | 0.8 |
| 70°-80° | 9.1 | 0.4 |
| 80°-90° | 2.4 | 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° | 1776.0 | 87.5 |
| 0°-40° | 1920.6 | 94.7 |
| 0°-60° | 2001.0 | 98.6 |
| 0°-90° | 2029.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2029.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | Flux |
|-----|------|------|
| 0° | 3800 | |
| 5° | 3785 | 354 |
| 15° | 3064 | 834 |
| 25° | 1284 | 588 |
| 35° | 201 | 145 |
| 45° | 61 | 50 |
| 55° | 34 | 30 |
| 65° | 16 | 17 |
| 75° | 8 | 9 |
| 85° | 2 | 2 |
| 90° | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° |
|-------|--------|
| 0° | 3800.3 |
| 2.5° | 3790.5 |
| 5° | 3784.6 |
| 7.5° | 3715.6 |
| 10° | 3556.1 |
| 12.5° | 3339.5 |
| 15° | 3063.9 |
| 17.5° | 2707.5 |
| 20° | 2280.2 |
| 22.5° | 1789.9 |
| 25° | 1283.8 |
| 27.5° | 829.0 |
| 30° | 502.1 |
| 32.5° | 305.2 |
| 35° | 200.8 |
| 37.5° | 141.8 |
| 40° | 102.4 |
| 42.5° | 78.8 |
| 45° | 61.0 |
| 47.5° | 51.2 |
| 50° | 43.3 |
| 52.5° | 37.4 |
| 55° | 33.5 |
| 57.5° | 29.5 |
| 60° | 23.6 |
| 62.5° | 19.7 |
| 65° | 15.8 |
| 67.5° | 13.8 |
| 70° | 11.8 |
| 72.5° | 9.8 |
| 75° | 7.9 |
| 77.5° | 7.9 |
| 80° | 5.9 |
| 82.5° | 3.9 |
| 85° | 2.0 |
| 87.5° | 0.0 |
| 90° | 0.0 |



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— 0°-180°







(END OF REPORT)