

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: P402086

Luminaire Tested: **LA1MR022D010 EA1M22509027MW1MW**

Issue Date: 6/3/2020



Test Information

Test Method: LM-41-14
Report Number: P402086
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1912-604-8)
Test Lab: INNOVATION CENTER (G3)
Issue Date: 6/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LA1MR022D010 EA1M22509027MW1MW
Description: 1 INCH 50° OPTIC WITH MATTE WHITE BAFFLE
Light Source: HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

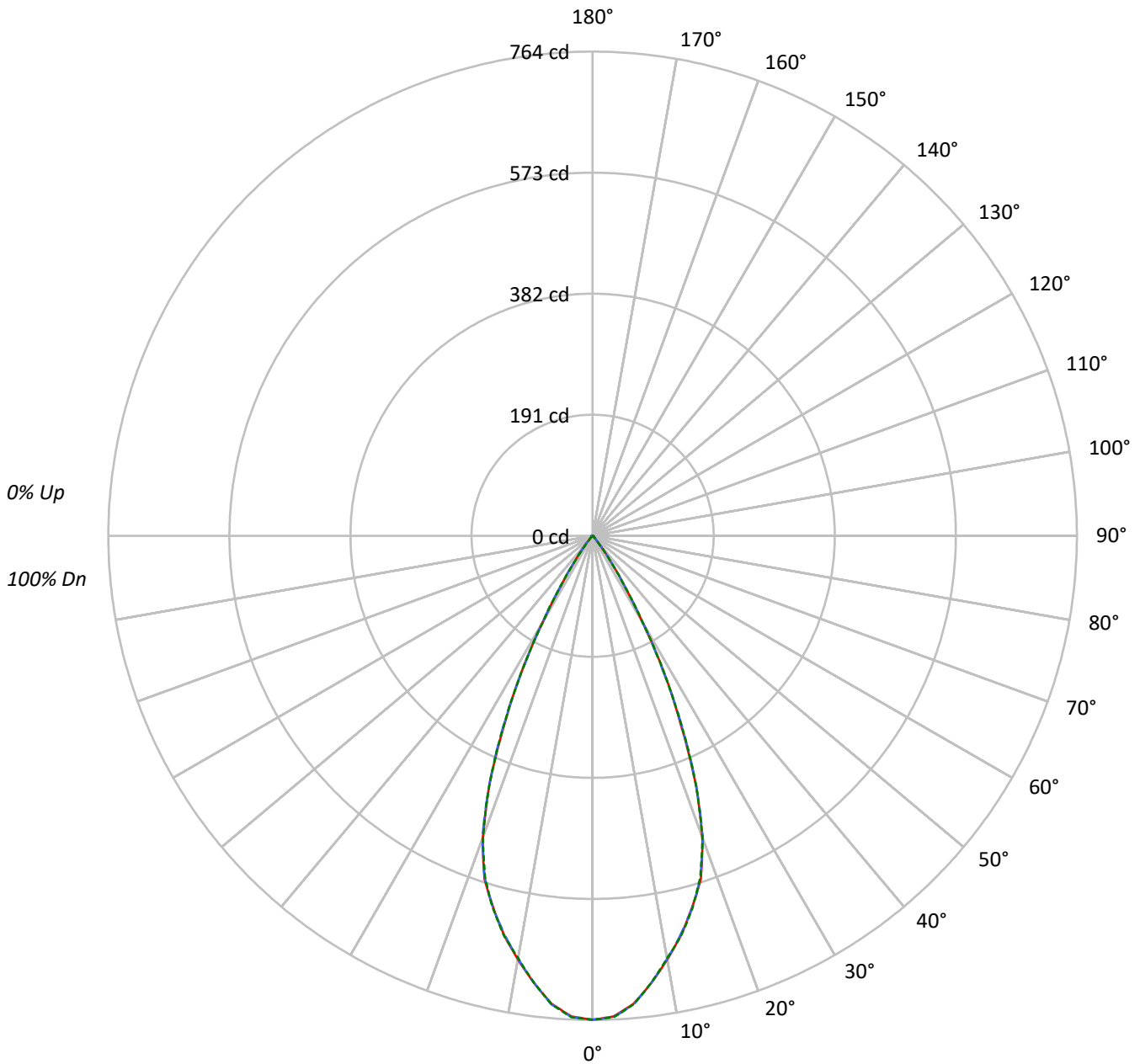
Lumens per Lamp: N/A
Luminaire Lumens: 431.0 lumens
Efficiency: N/A
Efficacy: 75.6 lumens/watt
Spacing Criteria (0/90/45): 0.77 / 0.77 / 0.71
Luminous Opening: Rectangular (W 0.1' x L: 1.29' x H: 0')
CIE Type: Direct

Input Watts (W): 5.7
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 | | | | |
| 1 | 114 | 112 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 104 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 95 | | | | 95 | | | | |
| 2 | 110 | 105 | 102 | 99 | 107 | 104 | 100 | 98 | 100 | 98 | 96 | 98 | 95 | 94 | 95 | 93 | 92 | 90 | | | | 90 | | | | |
| 3 | 105 | 99 | 95 | 92 | 103 | 98 | 94 | 91 | 96 | 92 | 90 | 93 | 90 | 88 | 91 | 89 | 87 | 85 | | | | 85 | | | | |
| 4 | 101 | 94 | 89 | 86 | 99 | 93 | 89 | 85 | 91 | 87 | 84 | 89 | 86 | 83 | 87 | 85 | 82 | 81 | | | | 81 | | | | |
| 5 | 97 | 89 | 84 | 81 | 95 | 89 | 84 | 80 | 87 | 83 | 80 | 85 | 82 | 79 | 84 | 81 | 78 | 77 | | | | 77 | | | | |
| 6 | 93 | 85 | 80 | 76 | 91 | 84 | 79 | 76 | 83 | 79 | 75 | 82 | 78 | 75 | 80 | 77 | 75 | 73 | | | | 73 | | | | |
| 7 | 89 | 81 | 76 | 72 | 88 | 80 | 76 | 72 | 79 | 75 | 72 | 78 | 74 | 71 | 77 | 74 | 71 | 70 | | | | 70 | | | | |
| 8 | 85 | 77 | 72 | 69 | 84 | 77 | 72 | 69 | 76 | 71 | 68 | 75 | 71 | 68 | 74 | 70 | 68 | 67 | | | | 67 | | | | |
| 9 | 82 | 74 | 69 | 65 | 81 | 73 | 69 | 65 | 73 | 68 | 65 | 72 | 68 | 65 | 71 | 67 | 65 | 64 | | | | 64 | | | | |
| 10 | 79 | 71 | 66 | 62 | 78 | 70 | 66 | 62 | 70 | 65 | 62 | 69 | 65 | 62 | 68 | 64 | 62 | 61 | | | | 61 | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 61088 | 61088 | 61088 |
| 5° | 59539 | 59619 | 59587 |
| 10° | 55134 | 55052 | 54963 |
| 15° | 50248 | 50314 | 50381 |
| 20° | 43103 | 43240 | 43069 |
| 25° | 29217 | 29579 | 29526 |
| 30° | 14475 | 14568 | 14512 |
| 35° | 4834 | 4864 | 4571 |
| 40° | 1107 | 1076 | 929 |
| 45° | 430 | 475 | 396 |
| 50° | 348 | 373 | 311 |
| 55° | 321 | 321 | 279 |
| 60° | 256 | 272 | 224 |
| 65° | 151 | 189 | 133 |
| 70° | 0 | 23 | 0 |
| 75° | 0 | 0 | 0 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 68.7 | 15.9 |
| 10°-20° | 168.5 | 39.1 |
| 20°-30° | 150.0 | 34.8 |
| 30°-40° | 37.4 | 8.7 |
| 40°-50° | 3.6 | 0.8 |
| 50°-60° | 2.0 | 0.5 |
| 60°-70° | 0.8 | 0.2 |
| 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° | 387.3 | 89.8 |
| 0°-40° | 424.7 | 98.5 |
| 0°-60° | 430.2 | 99.8 |
| 0°-90° | 431.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 431.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 764 | 764 | 764 | 764 | 764 | |
| 5° | 741 | 744 | 742 | 742 | 742 | 69 |
| 15° | 607 | 610 | 608 | 606 | 608 | 169 |
| 25° | 331 | 335 | 335 | 337 | 334 | 150 |
| 35° | 50 | 51 | 50 | 49 | 47 | 37 |
| 45° | 4 | 4 | 4 | 4 | 4 | 4 |
| 55° | 2 | 2 | 2 | 2 | 2 | 2 |
| 65° | 1 | 1 | 1 | 1 | 1 | 1 |
| 75° | 0 | 0 | 0 | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 | 0 | 0 | 0 |
| 90° | 0 | 0 | 0 | 0 | 0 | 0 |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 763.6 | 763.6 | 763.6 | 763.6 | 763.6 |
| 2.5° | 759.2 | 762.6 | 760.2 | 760.3 | 760.5 |
| 5° | 741.4 | 744.1 | 742.4 | 741.9 | 742.0 |
| 7.5° | 711.4 | 713.8 | 711.1 | 712.1 | 711.0 |
| 10° | 678.7 | 681.1 | 677.7 | 677.7 | 676.6 |
| 12.5° | 645.4 | 647.9 | 643.8 | 643.4 | 646.1 |
| 15° | 606.7 | 609.8 | 607.5 | 606.3 | 608.3 |
| 17.5° | 567.7 | 567.3 | 565.8 | 565.1 | 564.4 |
| 20° | 506.3 | 508.9 | 507.9 | 503.6 | 505.9 |
| 22.5° | 425.7 | 425.8 | 427.2 | 427.9 | 426.1 |
| 25° | 331.0 | 334.7 | 335.1 | 337.4 | 334.5 |
| 27.5° | 245.3 | 246.0 | 242.2 | 242.4 | 245.1 |
| 30° | 156.7 | 158.8 | 157.7 | 158.8 | 157.1 |
| 32.5° | 90.4 | 92.2 | 91.5 | 92.4 | 92.5 |
| 35° | 49.5 | 51.3 | 49.8 | 49.1 | 46.8 |
| 37.5° | 24.5 | 24.5 | 25.1 | 23.1 | 22.0 |
| 40° | 10.6 | 10.9 | 10.3 | 9.7 | 8.9 |
| 42.5° | 5.4 | 5.4 | 5.6 | 4.8 | 4.7 |
| 45° | 3.8 | 3.8 | 4.2 | 3.7 | 3.5 |
| 47.5° | 3.2 | 3.2 | 3.5 | 3.1 | 3.0 |
| 50° | 2.8 | 2.8 | 3.0 | 2.7 | 2.5 |
| 52.5° | 2.5 | 2.5 | 2.7 | 2.4 | 2.3 |
| 55° | 2.3 | 2.3 | 2.3 | 2.1 | 2.0 |
| 57.5° | 1.8 | 2.0 | 2.0 | 1.8 | 1.7 |
| 60° | 1.6 | 1.6 | 1.7 | 1.6 | 1.4 |
| 62.5° | 1.3 | 1.3 | 1.3 | 1.3 | 1.1 |
| 65° | 0.8 | 0.8 | 1.0 | 0.8 | 0.7 |
| 67.5° | 0.1 | 0.3 | 0.7 | 0.0 | 0.0 |
| 70° | 0.0 | 0.0 | 0.1 | 0.0 | 0.0 |
| 72.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 75° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 77.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 80° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)