

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: P402098

Luminaire Tested: **LA1MR022D010 EA1M22509040MW1MW**

Issue Date: 6/3/2020



Test Information

Test Method: LM-41-14
Report Number: P402098
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 EA1M22509040MW1MW
Description: 1 INCH 50° OPTIC WITH MATTE WHITE BAFFLE
Light Source: HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

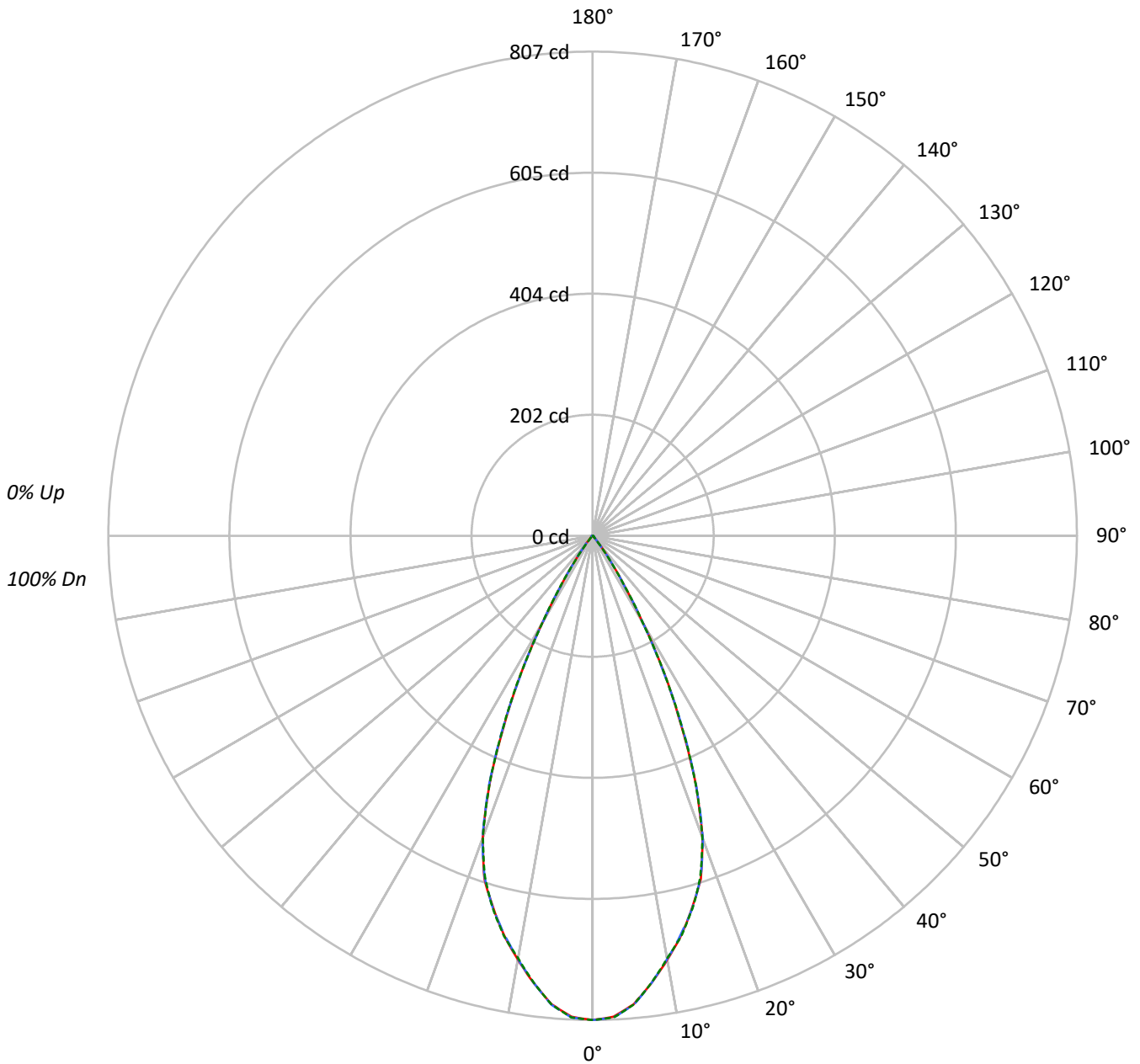
Lumens per Lamp: N/A
Luminaire Lumens: 455.6 lumens
Efficiency: N/A
Efficacy: 79.9 lumens/watt
Spacing Criteria (0/90/45): 0.77 / 0.77 / 0.71
Luminous Opening: Rectangular (W 0.1' x L: 1.29' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P402098

CATALOG NUMBER: LA1MR022D010 EA1M22509040MW1MW

Luminous Intensity Polar Plot





TEST NUMBER: P402098

CATALOG NUMBER: LA1MR022D010 EA1M22509040MW1MW

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

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-------|-------|-------|
| 0° | 64568 | 64568 | 64568 |
| 5° | 62935 | 63024 | 62984 |
| 10° | 58277 | 58188 | 58090 |
| 15° | 53114 | 53180 | 53255 |
| 20° | 45564 | 45700 | 45521 |
| 25° | 30886 | 31265 | 31212 |
| 30° | 15297 | 15399 | 15344 |
| 35° | 5108 | 5137 | 4834 |
| 40° | 1170 | 1138 | 982 |
| 45° | 453 | 509 | 419 |
| 50° | 373 | 386 | 336 |
| 55° | 335 | 335 | 293 |
| 60° | 256 | 288 | 240 |
| 65° | 170 | 189 | 133 |
| 70° | 0 | 23 | 0 |
| 75° | 0 | 0 | 0 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |



TEST NUMBER: P402098

CATALOG NUMBER: LA1MR022D010 EA1M22509040MW1MW

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 72.7 | 15.9 |
| 10°-20° | 178.1 | 39.1 |
| 20°-30° | 158.6 | 34.8 |
| 30°-40° | 39.6 | 8.7 |
| 40°-50° | 3.8 | 0.8 |
| 50°-60° | 2.1 | 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° | 409.3 | 89.9 |
| 0°-40° | 448.9 | 98.5 |
| 0°-60° | 454.7 | 99.8 |
| 0°-90° | 455.6 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 455.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 807 | 807 | 807 | 807 | 807 | |
| 5° | 784 | 786 | 785 | 784 | 784 | 73 |
| 15° | 641 | 645 | 642 | 641 | 643 | 178 |
| 25° | 350 | 354 | 354 | 357 | 354 | 158 |
| 35° | 52 | 54 | 53 | 52 | 50 | 39 |
| 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 |



TEST NUMBER: P402098

CATALOG NUMBER: LA1MR022D010 EA1M22509040MW1MW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-------|-------|-------|-------|-------|
| 0° | 807.1 | 807.1 | 807.1 | 807.1 | 807.1 |
| 2.5° | 802.5 | 806.1 | 803.5 | 803.7 | 803.8 |
| 5° | 783.7 | 786.5 | 784.8 | 784.2 | 784.3 |
| 7.5° | 752.0 | 754.5 | 751.7 | 752.7 | 751.5 |
| 10° | 717.4 | 719.9 | 716.3 | 716.3 | 715.1 |
| 12.5° | 682.2 | 684.9 | 680.5 | 680.1 | 682.9 |
| 15° | 641.3 | 644.6 | 642.1 | 640.9 | 643.0 |
| 17.5° | 600.0 | 599.6 | 598.1 | 597.4 | 596.6 |
| 20° | 535.2 | 537.9 | 536.8 | 532.4 | 534.7 |
| 22.5° | 449.9 | 450.1 | 451.6 | 452.3 | 450.4 |
| 25° | 349.9 | 353.8 | 354.2 | 356.6 | 353.6 |
| 27.5° | 259.2 | 260.0 | 256.0 | 256.3 | 259.1 |
| 30° | 165.6 | 167.9 | 166.7 | 167.9 | 166.1 |
| 32.5° | 95.6 | 97.5 | 96.8 | 97.6 | 97.8 |
| 35° | 52.3 | 54.3 | 52.6 | 51.9 | 49.5 |
| 37.5° | 25.9 | 25.9 | 26.5 | 24.4 | 23.3 |
| 40° | 11.2 | 11.5 | 10.9 | 10.3 | 9.4 |
| 42.5° | 5.7 | 5.7 | 6.0 | 5.1 | 4.9 |
| 45° | 4.0 | 4.0 | 4.5 | 3.9 | 3.7 |
| 47.5° | 3.4 | 3.4 | 3.7 | 3.3 | 3.1 |
| 50° | 3.0 | 3.0 | 3.1 | 2.8 | 2.7 |
| 52.5° | 2.7 | 2.7 | 2.8 | 2.5 | 2.4 |
| 55° | 2.4 | 2.4 | 2.4 | 2.2 | 2.1 |
| 57.5° | 1.9 | 2.1 | 2.1 | 1.9 | 1.8 |
| 60° | 1.6 | 1.6 | 1.8 | 1.6 | 1.5 |
| 62.5° | 1.3 | 1.3 | 1.3 | 1.3 | 1.2 |
| 65° | 0.9 | 0.9 | 1.0 | 0.9 | 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 |



Report Generated By E9808895 / USPTCWHP6082093





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







(END OF REPORT)