

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: P402106

Luminaire Tested: **LA1MR052D010 EA1M52309030MW1MW**

Issue Date: 6/3/2020

Test Information

Test Method: LM-41-14
Report Number: P402106
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2005-766-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 6/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LA1MR052D010 EA1M52309030MW1MW
Description: 1 INCH 30° OPTIC WITH MATTE WHITE BAFFLE
Light Source: HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

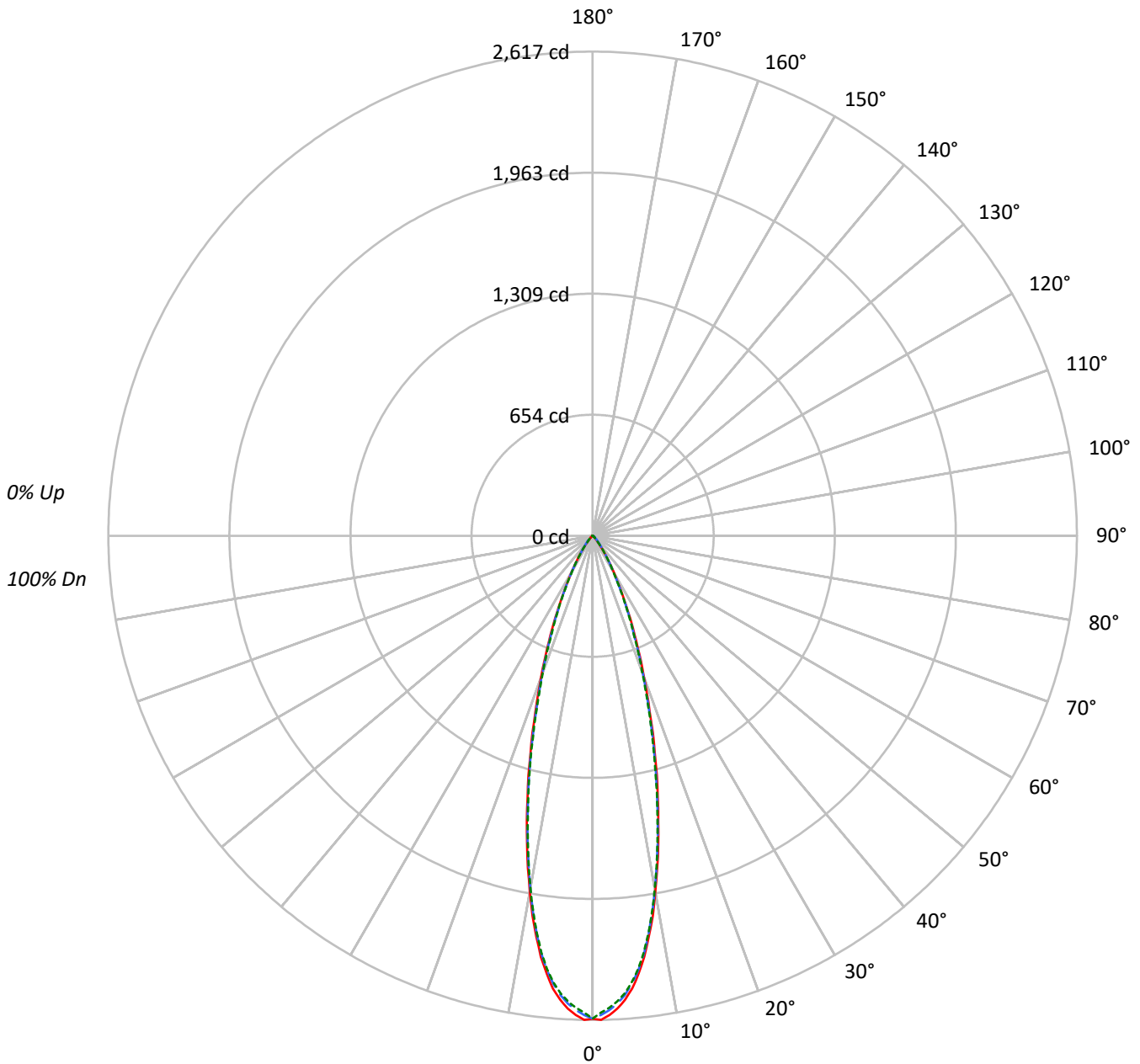
Lumens per Lamp: N/A
Luminaire Lumens: 889.7 lumens
Efficiency: N/A
Efficacy: 73.5 lumens/watt
Spacing Criteria (0/90/45): 0.51 / 0.5 / 0.52
Luminous Opening: Rectangular (W 0.08' x L: 0.42' x H: 0')
CIE Type: Direct

Input Watts (W): 12.1
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 | 110 | 108 | 112 | 110 | 108 | 106 | 106 | 105 | 103 | 102 | 101 | 100 | 99 | 98 | 97 | 95 | | | | | | | | | | | | | | | | | | | |
| 2 | 110 | 106 | 103 | 100 | 108 | 104 | 101 | 99 | 101 | 99 | 97 | 98 | 96 | 95 | 96 | 94 | 93 | 91 | | | | | | | | | | | | | | | | | | | |
| 3 | 106 | 101 | 96 | 93 | 104 | 99 | 95 | 92 | 97 | 94 | 91 | 94 | 92 | 90 | 92 | 90 | 88 | 87 | | | | | | | | | | | | | | | | | | | |
| 4 | 102 | 96 | 91 | 88 | 100 | 95 | 90 | 87 | 93 | 89 | 86 | 91 | 88 | 85 | 89 | 86 | 84 | 83 | | | | | | | | | | | | | | | | | | | |
| 5 | 98 | 91 | 87 | 83 | 97 | 90 | 86 | 83 | 89 | 85 | 82 | 87 | 84 | 81 | 86 | 83 | 81 | 79 | | | | | | | | | | | | | | | | | | | |
| 6 | 94 | 87 | 82 | 79 | 93 | 87 | 82 | 79 | 85 | 81 | 78 | 84 | 80 | 78 | 83 | 80 | 77 | 76 | | | | | | | | | | | | | | | | | | | |
| 7 | 91 | 84 | 79 | 75 | 90 | 83 | 78 | 75 | 82 | 78 | 75 | 81 | 77 | 74 | 80 | 77 | 74 | 73 | | | | | | | | | | | | | | | | | | | |
| 8 | 88 | 80 | 76 | 72 | 87 | 80 | 75 | 72 | 79 | 75 | 72 | 78 | 74 | 72 | 77 | 74 | 71 | 70 | | | | | | | | | | | | | | | | | | | |
| 9 | 85 | 77 | 73 | 69 | 84 | 77 | 72 | 69 | 76 | 72 | 69 | 75 | 71 | 69 | 74 | 71 | 69 | 67 | | | | | | | | | | | | | | | | | | | |
| 10 | 82 | 74 | 70 | 67 | 81 | 74 | 70 | 67 | 73 | 69 | 66 | 73 | 69 | 66 | 72 | 69 | 66 | 65 | | | | | | | | | | | | | | | | | | | |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|--------|--------|--------|
| 0° | 809229 | 809229 | 809229 |
| 5° | 764522 | 756742 | 754252 |
| 10° | 614742 | 610114 | 609390 |
| 15° | 430024 | 422707 | 420877 |
| 20° | 268305 | 261542 | 258540 |
| 25° | 155222 | 150570 | 148620 |
| 30° | 82653 | 80219 | 78572 |
| 35° | 39585 | 40910 | 40039 |
| 40° | 16551 | 22541 | 17037 |
| 45° | 8461 | 13941 | 8987 |
| 50° | 5498 | 8247 | 6028 |
| 55° | 3675 | 5513 | 4324 |
| 60° | 2108 | 3534 | 2790 |
| 65° | 807 | 2494 | 807 |
| 70° | 0 | 997 | 0 |
| 75° | 0 | 0 | 0 |
| 80° | 0 | 0 | 0 |
| 85° | 0 | 0 | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 216.8 | 24.4 |
| 10°-20° | 361.8 | 40.7 |
| 20°-30° | 208.1 | 23.4 |
| 30°-40° | 72.4 | 8.1 |
| 40°-50° | 20.5 | 2.3 |
| 50°-60° | 7.9 | 0.9 |
| 60°-70° | 2.1 | 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° | 786.7 | 88.4 |
| 0°-40° | 859.1 | 96.6 |
| 0°-60° | 887.5 | 99.8 |
| 0°-90° | 889.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 889.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|------|-------|------|-------|------|------|
| 0° | 2610 | 2610 | 2610 | 2610 | 2610 | |
| 5° | 2457 | 2442 | 2432 | 2436 | 2424 | 218 |
| 15° | 1340 | 1334 | 1317 | 1314 | 1311 | 366 |
| 25° | 454 | 448 | 440 | 438 | 434 | 213 |
| 35° | 105 | 109 | 108 | 108 | 106 | 71 |
| 45° | 19 | 23 | 32 | 23 | 20 | 17 |
| 55° | 7 | 8 | 10 | 8 | 8 | 6 |
| 65° | 1 | 2 | 3 | 2 | 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: P402106

CATALOG NUMBER: LA1MR052D010 EA1M52309030MW1MW

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|--------|--------|--------|--------|--------|
| 0° | 2610.4 | 2610.4 | 2610.4 | 2610.4 | 2610.4 |
| 1° | 2617.2 | 2604.7 | 2591.0 | 2591.0 | 2577.4 |
| 2° | 2592.2 | 2580.8 | 2566.0 | 2567.1 | 2552.4 |
| 3° | 2559.2 | 2547.8 | 2533.0 | 2535.3 | 2521.6 |
| 4° | 2513.7 | 2498.9 | 2488.7 | 2492.1 | 2479.6 |
| 5° | 2456.8 | 2442.0 | 2431.8 | 2436.3 | 2423.8 |
| 6° | 2379.5 | 2369.2 | 2360.1 | 2365.8 | 2354.4 |
| 7° | 2293.0 | 2281.7 | 2274.8 | 2279.4 | 2270.3 |
| 8° | 2187.2 | 2179.3 | 2171.3 | 2175.9 | 2166.8 |
| 9° | 2079.2 | 2066.7 | 2058.7 | 2062.1 | 2055.3 |
| 10° | 1952.9 | 1947.3 | 1938.2 | 1941.6 | 1935.9 |
| 11° | 1831.2 | 1831.2 | 1814.2 | 1808.5 | 1811.9 |
| 12° | 1706.1 | 1705.0 | 1689.1 | 1682.2 | 1684.5 |
| 13° | 1579.9 | 1578.7 | 1562.8 | 1557.1 | 1558.3 |
| 14° | 1454.8 | 1455.9 | 1438.8 | 1434.3 | 1433.1 |
| 15° | 1339.9 | 1334.2 | 1317.1 | 1313.7 | 1311.4 |
| 16° | 1219.3 | 1218.2 | 1201.1 | 1196.6 | 1194.3 |
| 17° | 1111.3 | 1105.6 | 1088.5 | 1084.0 | 1080.5 |
| 18° | 998.6 | 999.8 | 982.7 | 979.3 | 973.6 |
| 19° | 903.1 | 900.8 | 884.9 | 881.5 | 875.8 |
| 20° | 813.3 | 803.0 | 792.8 | 789.4 | 783.7 |
| 22.5° | 613.1 | 607.4 | 593.7 | 590.3 | 589.2 |
| 25° | 453.8 | 448.1 | 440.2 | 437.9 | 434.5 |
| 26° | 397.0 | 398.1 | 387.9 | 385.6 | 383.3 |
| 27° | 351.5 | 349.2 | 340.1 | 338.9 | 335.5 |
| 28° | 302.6 | 304.8 | 294.6 | 293.5 | 291.2 |
| 29° | 263.9 | 263.9 | 258.2 | 254.8 | 252.5 |
| 30° | 230.9 | 229.8 | 224.1 | 221.8 | 219.5 |
| 32.5° | 159.2 | 158.1 | 155.8 | 154.7 | 152.4 |
| 35° | 104.6 | 109.2 | 108.1 | 108.1 | 105.8 |
| 37.5° | 64.8 | 73.9 | 77.3 | 76.2 | 69.4 |
| 40° | 40.9 | 47.8 | 55.7 | 51.2 | 42.1 |
| 42.5° | 27.3 | 33.0 | 40.9 | 34.1 | 27.3 |
| 45° | 19.3 | 22.7 | 31.8 | 22.7 | 20.5 |
| 47.5° | 14.8 | 17.1 | 23.9 | 17.1 | 14.8 |
| 50° | 11.4 | 13.6 | 17.1 | 13.6 | 12.5 |
| 52.5° | 9.1 | 10.2 | 13.6 | 10.2 | 9.1 |
| 55° | 6.8 | 8.0 | 10.2 | 8.0 | 8.0 |
| 57.5° | 5.7 | 6.8 | 8.0 | 6.8 | 5.7 |
| 60° | 3.4 | 4.5 | 5.7 | 4.5 | 4.5 |
| 62.5° | 2.3 | 3.4 | 4.5 | 3.4 | 2.3 |
| 65° | 1.1 | 2.3 | 3.4 | 2.3 | 1.1 |
| 67.5° | 0.0 | 1.1 | 1.1 | 0.0 | 0.0 |



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CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° |
|-------|-----|-------|-----|-------|-----|
| 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°







| | | | | | |
|-------|-----|-----|-----|-----|-----|
| 70° | 0.0 | 0.0 | 1.1 | 0.0 | 0.0 |
| 72.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



(END OF REPORT)