

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: P401989

Luminaire Tested: **LA1MR102D010 EA1M102WW9027MMS1MW**

Issue Date: 6/3/2020



Test Information

Test Method: LM-41-14
Report Number: P401989
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1912-604-14)
Test Lab: INNOVATION CENTER (G3)
Issue Date: 6/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: PORTFOLIO
Catalog Number: LA1MR102D010 EA1M102WW9027MMS1MW
Description: 1 INCH WW OPTIC WITH MATTE METALIC SILVER BAFFLE
Light Source: HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

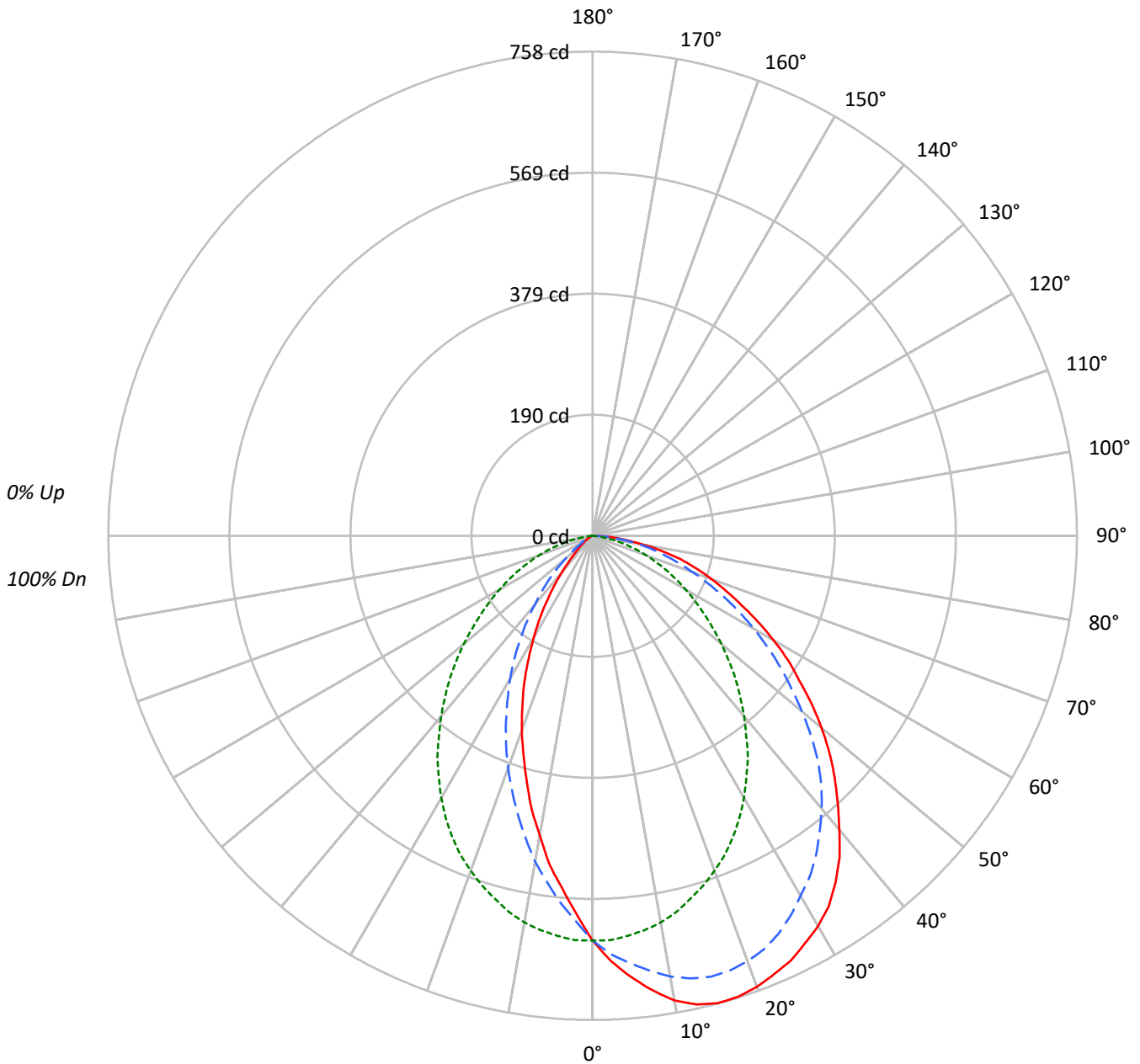
Lumens per Lamp: N/A
Luminaire Lumens: 1320.0 lumens
Efficiency: N/A
Efficacy: 56.2 lumens/watt
Spacing Criteria (0/90/45): 1.07 / 1.13 / 1.2
Luminous Opening: Rectangular (W 0.1' x L: 0.88' x H: 0')
CIE Type: Direct

Input Watts (W): 23.5
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 | | | | 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 | 110 | 106 | 102 | 98 | 107 | 103 | 100 | 97 | 99 | 96 | 94 | 95 | 93 | 91 | 92 | 90 | 88 | 86 | | | | 86 |
| 2 | 101 | 93 | 87 | 82 | 98 | 92 | 86 | 81 | 88 | 83 | 79 | 85 | 81 | 77 | 82 | 79 | 76 | 74 | | | | 74 |
| 3 | 93 | 83 | 76 | 70 | 90 | 82 | 75 | 69 | 79 | 73 | 68 | 76 | 71 | 67 | 73 | 69 | 66 | 63 | | | | 63 |
| 4 | 86 | 74 | 66 | 60 | 83 | 73 | 66 | 60 | 71 | 64 | 59 | 68 | 63 | 58 | 66 | 61 | 57 | 55 | | | | 55 |
| 5 | 79 | 67 | 59 | 53 | 77 | 66 | 58 | 52 | 64 | 57 | 52 | 62 | 56 | 51 | 60 | 55 | 51 | 49 | | | | 49 |
| 6 | 73 | 61 | 53 | 47 | 72 | 60 | 52 | 46 | 58 | 51 | 46 | 57 | 50 | 46 | 55 | 50 | 45 | 43 | | | | 43 |
| 7 | 68 | 56 | 47 | 42 | 67 | 55 | 47 | 41 | 53 | 46 | 41 | 52 | 46 | 41 | 51 | 45 | 41 | 39 | | | | 39 |
| 8 | 64 | 51 | 43 | 37 | 62 | 50 | 43 | 37 | 49 | 42 | 37 | 48 | 42 | 37 | 47 | 41 | 37 | 35 | | | | 35 |
| 9 | 60 | 47 | 39 | 34 | 59 | 47 | 39 | 34 | 45 | 39 | 34 | 44 | 38 | 34 | 43 | 38 | 33 | 32 | | | | 32 |
| 10 | 56 | 44 | 36 | 31 | 55 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 40 | 35 | 31 | 29 | | | | 29 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 74837 | 74837 | 74837 |
| 5° | 82236 | 74530 | 65521 |
| 10° | 88583 | 73713 | 57056 |
| 15° | 92625 | 71975 | 48635 |
| 20° | 94457 | 70089 | 40693 |
| 25° | 95604 | 67732 | 32954 |
| 30° | 96232 | 64610 | 25077 |
| 35° | 95540 | 61098 | 18007 |
| 40° | 92605 | 56855 | 11562 |
| 45° | 89468 | 52759 | 6680 |
| 50° | 85946 | 48301 | 4409 |
| 55° | 81286 | 43835 | 2677 |
| 60° | 77187 | 39656 | 1890 |
| 65° | 71787 | 35461 | 1118 |
| 70° | 68332 | 30731 | 691 |
| 75° | 65203 | 24639 | 0 |
| 80° | 55767 | 15642 | 0 |
| 85° | 46070 | 5420 | 0 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 59.2 | 4.5 |
| 10°-20° | 164.1 | 12.4 |
| 20°-30° | 232.3 | 17.6 |
| 30°-40° | 253.8 | 19.2 |
| 40°-50° | 230.4 | 17.5 |
| 50°-60° | 180.6 | 13.7 |
| 60°-70° | 121.0 | 9.2 |
| 70°-80° | 63.3 | 4.8 |
| 80°-90° | 15.3 | 1.2 |
| 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° | 455.6 | 34.5 |
| 0°-40° | 709.3 | 53.7 |
| 0°-60° | 1120.4 | 84.9 |
| 0°-90° | 1320.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 1320.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|-----|-----|-----|-----|------|------|------|
| 0° | 634 | 634 | 634 | 634 | 634 | |
| 5° | 694 | 672 | 629 | 577 | 553 | 68 |
| 15° | 758 | 715 | 589 | 452 | 398 | 214 |
| 25° | 734 | 688 | 520 | 321 | 253 | 338 |
| 35° | 663 | 610 | 424 | 197 | 125 | 413 |
| 45° | 536 | 499 | 316 | 95 | 40 | 413 |
| 55° | 395 | 359 | 213 | 25 | 13 | 355 |
| 65° | 257 | 227 | 127 | 9 | 4 | 257 |
| 75° | 143 | 115 | 54 | 2 | 0 | 149 |
| 85° | 34 | 28 | 4 | 0 | 0 | 39 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



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CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|-------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 0° | 633.7 | 633.7 | 633.7 | 633.7 | 633.7 | 633.7 | 633.7 | 633.7 | 633.7 |
| 2.5° | 666.7 | 663.7 | 655.7 | 647.7 | 633.7 | 619.7 | 603.7 | 597.7 | 591.7 |
| 5° | 693.7 | 685.7 | 671.7 | 654.7 | 628.7 | 602.7 | 576.7 | 560.7 | 552.7 |
| 7.5° | 717.7 | 708.7 | 686.7 | 659.7 | 622.7 | 583.7 | 546.7 | 523.8 | 518.8 |
| 10° | 738.7 | 728.7 | 700.7 | 662.7 | 614.7 | 562.7 | 517.8 | 488.8 | 475.8 |
| 12.5° | 751.6 | 739.7 | 709.7 | 661.7 | 603.7 | 539.7 | 484.8 | 452.8 | 439.8 |
| 15° | 757.6 | 745.6 | 714.7 | 658.7 | 588.7 | 516.8 | 451.8 | 411.8 | 397.8 |
| 17.5° | 756.6 | 745.6 | 713.7 | 654.7 | 574.7 | 490.8 | 418.8 | 378.8 | 359.8 |
| 20° | 751.6 | 740.7 | 708.7 | 647.7 | 557.7 | 464.8 | 386.8 | 339.8 | 323.8 |
| 22.5° | 742.7 | 730.7 | 700.7 | 637.7 | 540.7 | 437.8 | 353.8 | 303.9 | 286.9 |
| 25° | 733.7 | 718.7 | 687.7 | 624.7 | 519.8 | 408.8 | 320.8 | 269.9 | 252.9 |
| 27.5° | 719.7 | 705.7 | 670.7 | 608.7 | 497.8 | 380.8 | 287.9 | 235.9 | 216.9 |
| 30° | 705.7 | 690.7 | 650.7 | 590.7 | 473.8 | 350.8 | 257.9 | 201.9 | 183.9 |
| 32.5° | 687.7 | 672.7 | 632.7 | 567.7 | 447.8 | 321.8 | 227.9 | 172.9 | 153.9 |
| 35° | 662.7 | 650.7 | 609.7 | 542.7 | 423.8 | 290.9 | 196.9 | 142.9 | 124.9 |
| 37.5° | 634.7 | 624.7 | 583.7 | 517.8 | 394.8 | 263.9 | 168.9 | 116.9 | 99.0 |
| 40° | 600.7 | 593.7 | 557.7 | 489.8 | 368.8 | 235.9 | 140.9 | 92.0 | 75.0 |
| 42.5° | 567.7 | 561.7 | 529.8 | 460.8 | 341.8 | 208.9 | 116.9 | 68.0 | 55.0 |
| 45° | 535.7 | 527.8 | 498.8 | 429.8 | 315.9 | 184.9 | 95.0 | 49.0 | 40.0 |
| 47.5° | 502.8 | 493.8 | 463.8 | 398.8 | 288.9 | 159.9 | 74.0 | 35.0 | 30.0 |
| 50° | 467.8 | 458.8 | 427.8 | 368.8 | 262.9 | 136.9 | 53.0 | 27.0 | 24.0 |
| 52.5° | 431.8 | 422.8 | 391.8 | 339.8 | 236.9 | 113.9 | 38.0 | 21.0 | 18.0 |
| 55° | 394.8 | 386.8 | 358.8 | 308.9 | 212.9 | 94.0 | 25.0 | 16.0 | 13.0 |
| 57.5° | 362.8 | 353.8 | 324.8 | 281.9 | 189.9 | 75.0 | 19.0 | 12.0 | 10.0 |
| 60° | 326.8 | 316.9 | 291.9 | 252.9 | 167.9 | 57.0 | 15.0 | 9.0 | 8.0 |
| 62.5° | 291.9 | 283.9 | 258.9 | 222.9 | 146.9 | 42.0 | 11.0 | 7.0 | 6.0 |
| 65° | 256.9 | 248.9 | 226.9 | 196.9 | 126.9 | 29.0 | 9.0 | 5.0 | 4.0 |
| 67.5° | 226.9 | 217.9 | 195.9 | 167.9 | 106.9 | 18.0 | 6.0 | 4.0 | 3.0 |
| 70° | 197.9 | 187.9 | 166.9 | 142.9 | 89.0 | 10.0 | 4.0 | 2.0 | 2.0 |
| 72.5° | 169.9 | 160.9 | 139.9 | 118.9 | 71.0 | 7.0 | 3.0 | 1.0 | 1.0 |
| 75° | 142.9 | 137.9 | 114.9 | 95.0 | 54.0 | 5.0 | 2.0 | 1.0 | 0.0 |
| 77.5° | 111.9 | 106.0 | 93.0 | 71.0 | 38.0 | 3.0 | 1.0 | 0.0 | 0.0 |
| 80° | 82.0 | 77.0 | 71.0 | 52.0 | 23.0 | 2.0 | 0.0 | 0.0 | 0.0 |
| 82.5° | 54.0 | 54.0 | 48.0 | 35.0 | 12.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| 85° | 34.0 | 32.0 | 28.0 | 19.0 | 4.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 15.0 | 14.0 | 12.0 | 7.0 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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







(END OF REPORT)