

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: METALUX

Report Number: P893271

Luminaire Tested: 4MB-2SL-ASML-UNV-L940

Issue Date: 11/11/2024

**Test Information**

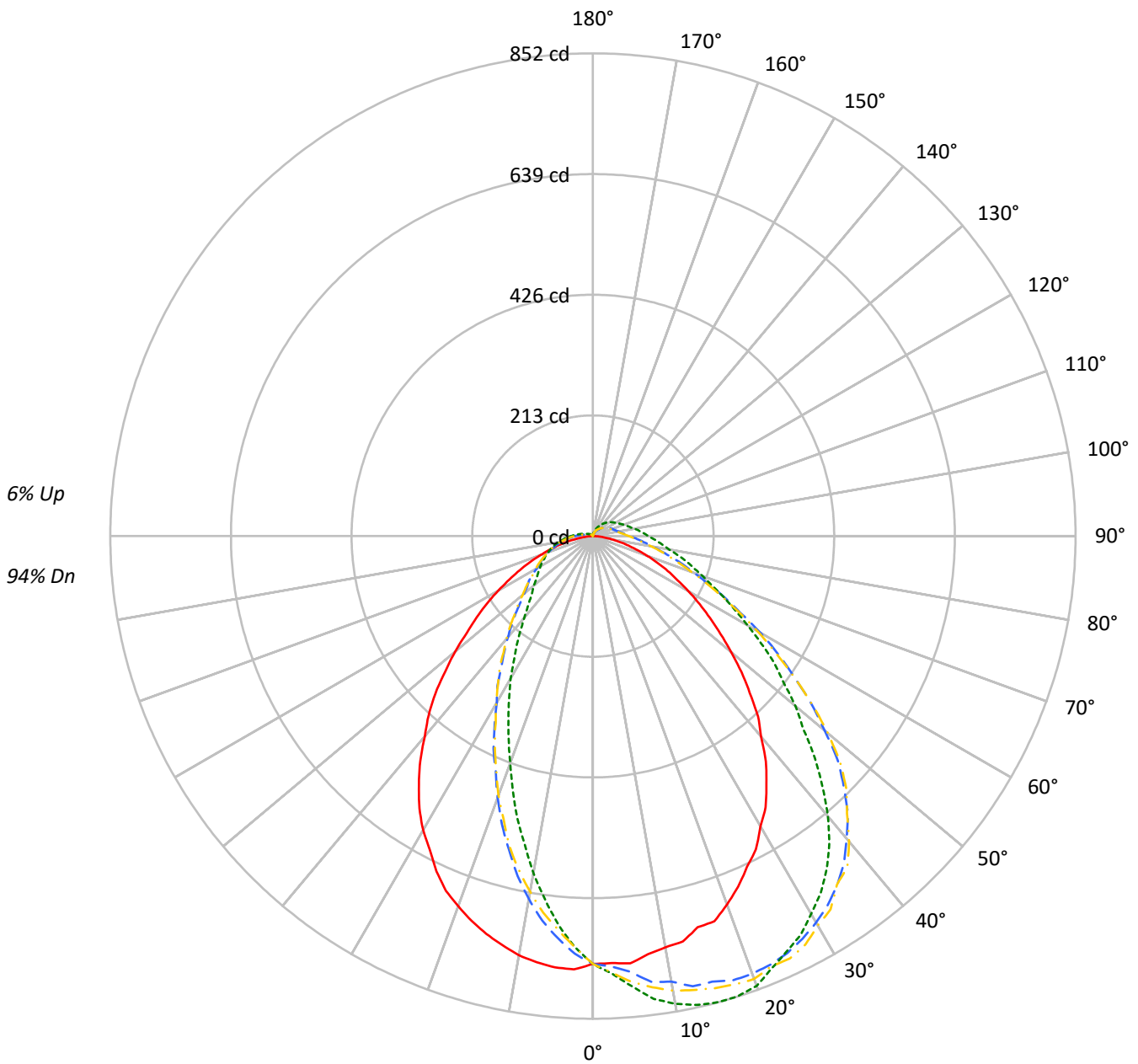
Test Method: LM-79-2019  
Report Number: P893271  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2404-077-33)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-2SL-ASML-UNV-L940  
Description: 2000 Lumen 4FT MICROBAY LINEAR BAY with ASYMMETRIC LENS, 90CRI, 4000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1882.0 lumens  
Efficiency: N/A  
Efficacy: 136.4 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.07 / 1.25  
Luminous Opening: Rectangular w/ Sides (W: 0.27' x L: 3.98' x H: 0.12')  
CIE Type: Direct  
  
Input Watts (W): 13.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: 0.996  
Total Harmonic Distortion (THDi): 5.92  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

TEST NUMBER: P893271  
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### Luminous Intensity Polar Plot



— 0°-180°    - - 45°-225°    - · - · 90°-270°    - · - · 135°-315°



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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   | 118 | 118 | 118 | 118 | 114 | 114 | 114 | 114 | 108 | 108 | 108 | 102 | 102 | 102 | 97 | 97 | 97 | 97 | 97 | 97 | 94 |
| 1   | 107 | 103 | 98  | 94  | 104 | 100 | 96  | 92  | 95  | 91  | 88  | 90  | 87  | 85  | 85 | 83 | 81 | 81 | 81 | 81 | 79 |
| 2   | 98  | 90  | 83  | 78  | 95  | 88  | 82  | 76  | 83  | 78  | 74  | 79  | 75  | 71  | 75 | 72 | 69 | 69 | 69 | 69 | 66 |
| 3   | 90  | 80  | 72  | 65  | 87  | 78  | 70  | 64  | 74  | 68  | 63  | 70  | 65  | 61  | 67 | 63 | 59 | 59 | 59 | 59 | 57 |
| 4   | 83  | 71  | 63  | 56  | 80  | 69  | 61  | 55  | 66  | 59  | 54  | 63  | 57  | 53  | 60 | 55 | 51 | 51 | 51 | 51 | 49 |
| 5   | 76  | 64  | 55  | 49  | 74  | 62  | 54  | 48  | 60  | 53  | 47  | 57  | 51  | 46  | 55 | 49 | 45 | 45 | 45 | 45 | 43 |
| 6   | 71  | 58  | 49  | 43  | 68  | 56  | 48  | 42  | 54  | 47  | 42  | 52  | 46  | 41  | 50 | 44 | 40 | 40 | 40 | 40 | 38 |
| 7   | 66  | 53  | 44  | 38  | 64  | 51  | 43  | 38  | 49  | 42  | 37  | 48  | 41  | 36  | 46 | 40 | 36 | 36 | 36 | 36 | 34 |
| 8   | 61  | 48  | 40  | 34  | 59  | 47  | 39  | 34  | 45  | 38  | 33  | 44  | 37  | 33  | 42 | 37 | 32 | 32 | 32 | 32 | 30 |
| 9   | 57  | 44  | 36  | 31  | 56  | 43  | 36  | 31  | 42  | 35  | 30  | 40  | 34  | 30  | 39 | 33 | 29 | 29 | 29 | 29 | 28 |
| 10  | 54  | 41  | 33  | 28  | 52  | 40  | 33  | 28  | 39  | 32  | 28  | 38  | 31  | 27  | 36 | 31 | 27 | 27 | 27 | 27 | 25 |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°   | 90°  | 180° | 270° |
|-----|------|------|------|------|
| 0°  | 7690 | 7690 | 7690 | 7690 |
| 5°  | 7719 | 7836 | 7791 | 6773 |
| 10° | 7580 | 8004 | 7728 | 5772 |
| 15° | 7474 | 7975 | 7600 | 4827 |
| 20° | 7415 | 7817 | 7447 | 3948 |
| 25° | 7133 | 7455 | 7232 | 3249 |
| 30° | 6834 | 7124 | 6922 | 2684 |
| 35° | 6497 | 6724 | 6514 | 2187 |
| 40° | 5979 | 6150 | 5977 | 1794 |
| 45° | 5468 | 5429 | 5496 | 1528 |
| 50° | 4864 | 4738 | 4841 | 1381 |
| 55° | 4286 | 4151 | 4257 | 1268 |
| 60° | 3759 | 3540 | 3726 | 1198 |
| 65° | 3294 | 3049 | 3215 | 1138 |
| 70° | 2799 | 2671 | 2705 | 1088 |
| 75° | 2282 | 2428 | 2219 | 1048 |
| 80° | 1762 | 2185 | 1598 | 977  |
| 85° | 1212 | 2110 | 980  | 914  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 157.5°  
 Vertical Angle: 45°  
 Luminance: 7607 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 70.9   | 3.8       |
| 10°-20°   | 197.2  | 10.5      |
| 20°-30°   | 283.6  | 15.1      |
| 30°-40°   | 321.9  | 17.1      |
| 40°-50°   | 307.6  | 16.3      |
| 50°-60°   | 250.0  | 13.3      |
| 60°-70°   | 174.4  | 9.3       |
| 70°-80°   | 108.0  | 5.7       |
| 80°-90°   | 62.0   | 3.3       |
| 90°-100°  | 37.0   | 2.0       |
| 100°-110° | 24.3   | 1.3       |
| 110°-120° | 17.0   | 0.9       |
| 120°-130° | 12.4   | 0.7       |
| 130°-140° | 8.2    | 0.4       |
| 140°-150° | 4.6    | 0.2       |
| 150°-160° | 2.1    | 0.1       |
| 160°-170° | 0.6    | 0.0       |
| 170°-180° | 0.1    | 0.0       |
| 0°-30°    | 551.8  | 29.3      |
| 0°-40°    | 873.7  | 46.4      |
| 0°-60°    | 1431.3 | 76.1      |
| 0°-90°    | 1775.7 | 94.4      |
| 90°-120°  | 78.4   | 4.2       |
| 90°-150°  | 103.6  | 5.5       |
| 90°-180°  | 106.0  | 5.6       |
| 0°-180°   | 1882.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 90° | 180° | 270° | 360° | Flux |
|------|-----|-----|------|------|------|------|
| 0°   | 755 | 755 | 755  | 755  | 755  |      |
| 5°   | 757 | 798 | 764  | 690  | 757  | 71   |
| 15°  | 715 | 852 | 727  | 516  | 715  | 203  |
| 25°  | 644 | 809 | 653  | 353  | 644  | 297  |
| 35°  | 534 | 719 | 536  | 234  | 534  | 333  |
| 45°  | 392 | 554 | 394  | 156  | 392  | 302  |
| 55°  | 252 | 391 | 250  | 119  | 252  | 227  |
| 65°  | 146 | 254 | 142  | 95   | 146  | 145  |
| 75°  | 65  | 170 | 63   | 73   | 65   | 70   |
| 85°  | 14  | 115 | 11   | 50   | 14   | 16   |
| 90°  | 0   | 97  | 0    | 38   | 0    | 1    |
| 95°  | 1   | 85  | 0    | 29   | 1    | 1    |
| 105° | 0   | 65  | 0    | 16   | 0    | 1    |
| 115° | 0   | 52  | 0    | 9    | 0    | 0    |
| 125° | 0   | 42  | 0    | 6    | 0    | 0    |
| 135° | 0   | 34  | 0    | 4    | 0    | 0    |
| 145° | 0   | 24  | 0    | 3    | 0    | 0    |
| 155° | 1   | 15  | 0    | 2    | 1    | 0    |
| 165° | 1   | 7   | 0    | 1    | 1    | 0    |
| 175° | 1   | 0   | 0    | 0    | 1    | 0    |
| 180° | 0   | 0   | 0    | 0    | 0    | 0    |



TEST NUMBER: P893271  
 CATALOG NUMBER: 4MB-2SL-ASML-UNV-L940

**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 22.5° | 45°   | 67.5° | 90°   | 112.5° | 135°  | 157.5° | 180°  | 202.5° | 225°  |
|--------|-------|-------|-------|-------|-------|--------|-------|--------|-------|--------|-------|
| 0°     | 755.1 | 755.1 | 755.1 | 755.1 | 755.1 | 755.1  | 755.1 | 755.1  | 755.1 | 755.1  | 755.1 |
| 2.5°   | 754.3 | 760.0 | 760.5 | 778.3 | 773.1 | 779.8  | 771.4 | 772.9  | 765.5 | 763.5  | 737.8 |
| 5°     | 757.1 | 769.2 | 772.4 | 803.1 | 798.1 | 801.6  | 790.0 | 781.5  | 764.2 | 753.9  | 712.3 |
| 7.5°   | 744.2 | 776.1 | 793.9 | 815.7 | 823.8 | 826.5  | 803.1 | 787.5  | 758.8 | 733.3  | 684.6 |
| 10°    | 737.0 | 781.1 | 798.4 | 831.0 | 838.2 | 833.0  | 814.7 | 789.0  | 751.4 | 710.3  | 650.5 |
| 12.5°  | 733.1 | 783.8 | 813.9 | 847.3 | 847.6 | 842.1  | 820.6 | 792.9  | 739.3 | 685.6  | 614.4 |
| 15°    | 714.8 | 783.3 | 814.2 | 848.1 | 851.8 | 848.3  | 826.3 | 790.2  | 726.9 | 655.0  | 572.9 |
| 17.5°  | 712.8 | 782.0 | 822.1 | 857.7 | 851.5 | 849.0  | 829.8 | 789.0  | 712.1 | 623.8  | 533.8 |
| 20°    | 692.0 | 779.3 | 822.1 | 846.8 | 844.8 | 845.8  | 832.0 | 787.2  | 695.0 | 590.2  | 491.0 |
| 22.5°  | 670.0 | 776.1 | 818.6 | 837.4 | 825.6 | 843.6  | 822.1 | 782.5  | 677.7 | 555.1  | 448.5 |
| 25°    | 644.1 | 770.9 | 812.0 | 824.1 | 809.0 | 823.1  | 822.8 | 775.4  | 653.0 | 517.2  | 414.9 |
| 27.5°  | 623.1 | 762.8 | 801.1 | 819.4 | 793.7 | 805.8  | 812.7 | 766.7  | 623.8 | 479.9  | 375.3 |
| 30°    | 591.7 | 752.4 | 788.0 | 790.7 | 770.4 | 785.7  | 793.7 | 755.8  | 599.3 | 437.6  | 339.2 |
| 32.5°  | 567.7 | 740.5 | 771.9 | 768.2 | 747.9 | 768.2  | 781.1 | 745.0  | 570.2 | 400.5  | 313.8 |
| 35°    | 534.1 | 726.2 | 751.9 | 732.3 | 719.0 | 735.8  | 750.9 | 733.3  | 535.5 | 361.0  | 281.1 |
| 37.5°  | 501.4 | 713.6 | 727.9 | 703.7 | 685.4 | 704.2  | 737.3 | 711.6  | 500.7 | 329.6  | 256.9 |
| 40°    | 461.6 | 684.6 | 696.5 | 663.6 | 645.3 | 673.0  | 703.4 | 692.8  | 461.4 | 296.9  | 233.4 |
| 42.5°  | 431.4 | 663.1 | 666.6 | 621.6 | 599.8 | 629.2  | 663.9 | 666.1  | 429.5 | 267.5  | 212.6 |
| 45°    | 391.6 | 633.0 | 626.5 | 577.1 | 554.3 | 580.8  | 632.7 | 638.6  | 393.6 | 242.1  | 192.4 |
| 47.5°  | 355.8 | 599.3 | 586.7 | 528.9 | 503.4 | 534.8  | 592.4 | 608.0  | 353.6 | 218.6  | 173.3 |
| 50°    | 318.5 | 561.7 | 533.8 | 483.9 | 466.8 | 482.4  | 541.2 | 566.9  | 317.0 | 195.3  | 158.7 |
| 52.5°  | 284.3 | 520.2 | 485.6 | 440.8 | 423.8 | 436.6  | 487.6 | 526.1  | 280.6 | 175.8  | 145.9 |
| 55°    | 252.2 | 478.7 | 433.9 | 394.4 | 390.9 | 394.9  | 433.2 | 477.4  | 250.5 | 158.5  | 137.7 |
| 57.5°  | 223.5 | 428.2 | 387.4 | 358.3 | 352.1 | 355.3  | 381.7 | 427.2  | 221.3 | 141.2  | 125.8 |
| 60°    | 194.6 | 376.6 | 341.4 | 318.9 | 315.5 | 318.0  | 335.0 | 378.3  | 192.9 | 126.6  | 114.7 |
| 62.5°  | 168.4 | 324.6 | 293.5 | 285.1 | 282.6 | 282.6  | 289.8 | 329.3  | 166.1 | 111.8  | 106.3 |
| 65°    | 145.9 | 280.1 | 256.6 | 253.4 | 254.2 | 253.9  | 249.5 | 274.9  | 142.4 | 98.7   | 98.9  |
| 67.5°  | 123.1 | 232.9 | 219.8 | 223.8 | 226.7 | 225.5  | 216.1 | 228.7  | 120.2 | 86.8   | 92.2  |
| 70°    | 102.1 | 192.4 | 189.9 | 198.8 | 205.7 | 199.3  | 185.7 | 186.9  | 98.7  | 75.2   | 83.6  |
| 72.5°  | 82.3  | 155.5 | 166.9 | 179.3 | 185.9 | 178.8  | 160.0 | 154.5  | 79.4  | 64.5   | 75.7  |
| 75°    | 64.8  | 125.1 | 143.2 | 161.5 | 170.1 | 161.0  | 139.2 | 120.7  | 63.0  | 54.4   | 69.2  |
| 77.5°  | 49.4  | 99.1  | 122.4 | 143.7 | 152.1 | 144.1  | 121.2 | 94.2   | 46.2  | 45.7   | 62.3  |
| 80°    | 35.4  | 78.4  | 108.5 | 129.1 | 136.7 | 129.1  | 105.1 | 74.4   | 32.1  | 36.6   | 54.9  |
| 82.5°  | 23.2  | 60.6  | 94.4  | 117.4 | 125.8 | 116.5  | 91.2  | 57.4   | 20.5  | 29.7   | 49.4  |
| 85°    | 14.1  | 48.0  | 82.3  | 105.6 | 115.2 | 106.1  | 79.9  | 43.5   | 11.4  | 22.7   | 43.0  |
| 87.5°  | 6.2   | 37.1  | 73.4  | 97.4  | 106.1 | 97.7   | 71.2  | 34.1   | 4.7   | 17.8   | 36.8  |
| 90°    | 0.5   | 29.4  | 64.8  | 89.8  | 97.4  | 89.5   | 63.0  | 27.7   | 0.0   | 12.9   | 31.6  |
| 92.5°  | 0.5   | 25.2  | 59.3  | 83.1  | 91.7  | 82.8   | 56.9  | 22.7   | 0.0   | 9.4    | 26.7  |
| 95°    | 0.7   | 21.3  | 53.9  | 77.9  | 84.8  | 77.1   | 51.9  | 19.5   | 0.0   | 6.4    | 22.5  |
| 97.5°  | 0.7   | 19.3  | 49.4  | 72.7  | 80.4  | 72.2   | 47.5  | 17.6   | 0.0   | 4.7    | 18.3  |
| 100°   | 0.5   | 17.8  | 46.0  | 67.7  | 74.9  | 67.3   | 44.0  | 15.8   | 0.0   | 3.0    | 14.8  |
| 102.5° | 0.5   | 16.6  | 43.0  | 63.5  | 69.2  | 62.8   | 41.0  | 14.8   | 0.0   | 2.5    | 12.1  |
| 105°   | 0.5   | 15.8  | 40.3  | 58.6  | 65.3  | 58.6   | 38.6  | 13.8   | 0.0   | 2.0    | 9.4   |
| 107.5° | 0.5   | 14.8  | 38.3  | 55.9  | 61.3  | 55.4   | 36.6  | 13.1   | 0.0   | 2.0    | 7.7   |
| 110°   | 0.5   | 14.1  | 36.6  | 51.9  | 58.1  | 52.4   | 34.9  | 11.9   | 0.0   | 1.2    | 6.2   |



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CATALOG NUMBER: 4MB-2SL-ASML-UNV-L940

**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 22.5° | 45°  | 67.5° | 90°  | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|--------|-----|-------|------|-------|------|--------|------|--------|------|--------|------|
| 112.5° | 0.5 | 12.9  | 34.9 | 49.2  | 55.1 | 49.4   | 33.4 | 10.9   | 0.0  | 1.2    | 5.4  |
| 115°   | 0.5 | 11.6  | 33.4 | 47.5  | 51.9 | 47.0   | 31.9 | 9.6    | 0.0  | 1.0    | 4.9  |
| 117.5° | 0.5 | 10.9  | 32.4 | 45.2  | 49.7 | 44.8   | 30.7 | 9.1    | 0.0  | 1.0    | 4.7  |
| 120°   | 0.5 | 10.4  | 30.9 | 43.0  | 46.5 | 42.5   | 29.2 | 8.7    | 0.0  | 1.0    | 4.5  |
| 122.5° | 0.5 | 9.9   | 29.7 | 41.0  | 44.8 | 40.8   | 27.9 | 8.4    | 0.0  | 0.7    | 4.0  |
| 125°   | 0.5 | 9.4   | 27.9 | 38.8  | 42.3 | 38.3   | 25.7 | 8.2    | 0.0  | 0.5    | 3.5  |
| 127.5° | 0.5 | 8.9   | 26.2 | 37.1  | 40.3 | 36.6   | 24.2 | 7.9    | 0.0  | 0.5    | 3.2  |
| 130°   | 0.5 | 8.7   | 24.0 | 34.9  | 38.1 | 34.4   | 22.5 | 7.9    | 0.0  | 0.5    | 3.0  |
| 132.5° | 0.5 | 8.4   | 21.5 | 32.6  | 36.1 | 32.1   | 20.8 | 7.7    | 0.0  | 0.5    | 2.5  |
| 135°   | 0.5 | 8.2   | 19.0 | 30.4  | 33.6 | 29.9   | 19.3 | 7.4    | 0.0  | 0.5    | 2.2  |
| 137.5° | 0.5 | 7.7   | 16.8 | 27.9  | 31.2 | 27.4   | 18.3 | 6.9    | 0.0  | 0.5    | 2.0  |
| 140°   | 0.5 | 7.2   | 15.1 | 26.0  | 28.7 | 25.2   | 16.8 | 6.4    | 0.0  | 0.2    | 1.5  |
| 142.5° | 0.5 | 6.4   | 13.6 | 23.5  | 26.2 | 23.0   | 15.1 | 5.4    | 0.0  | 0.2    | 1.5  |
| 145°   | 0.5 | 5.7   | 12.4 | 20.5  | 23.7 | 20.5   | 14.1 | 4.9    | 0.0  | 0.2    | 1.2  |
| 147.5° | 0.5 | 5.2   | 11.1 | 17.3  | 21.5 | 18.8   | 12.6 | 4.2    | 0.0  | 0.2    | 1.0  |
| 150°   | 0.5 | 4.7   | 9.6  | 14.6  | 19.0 | 16.6   | 11.6 | 3.7    | 0.0  | 0.0    | 0.7  |
| 152.5° | 0.5 | 4.2   | 8.4  | 12.1  | 17.1 | 15.1   | 10.4 | 3.2    | 0.0  | 0.0    | 0.5  |
| 155°   | 0.7 | 4.0   | 7.2  | 10.6  | 14.8 | 13.1   | 8.7  | 2.7    | 0.0  | 0.0    | 0.5  |
| 157.5° | 0.7 | 3.5   | 5.9  | 8.7   | 13.1 | 11.4   | 6.9  | 2.2    | 0.0  | 0.0    | 0.2  |
| 160°   | 0.7 | 3.2   | 4.9  | 6.7   | 10.9 | 9.4    | 5.7  | 1.7    | 0.0  | 0.0    | 0.2  |
| 162.5° | 0.7 | 3.0   | 4.2  | 4.9   | 8.9  | 7.4    | 4.5  | 1.2    | 0.0  | 0.0    | 0.2  |
| 165°   | 0.7 | 2.5   | 3.7  | 3.5   | 6.9  | 5.7    | 3.5  | 0.7    | 0.0  | 0.0    | 0.0  |
| 167.5° | 0.7 | 2.2   | 3.0  | 2.5   | 5.2  | 4.2    | 2.5  | 0.5    | 0.0  | 0.0    | 0.0  |
| 170°   | 0.7 | 1.7   | 2.5  | 1.7   | 1.5  | 2.7    | 1.5  | 0.2    | 0.0  | 0.0    | 0.0  |
| 172.5° | 0.7 | 1.5   | 2.0  | 1.2   | 0.5  | 1.5    | 0.7  | 0.0    | 0.0  | 0.0    | 0.0  |
| 175°   | 0.7 | 1.2   | 1.2  | 0.7   | 0.2  | 0.5    | 0.0  | 0.0    | 0.0  | 0.0    | 0.0  |
| 177.5° | 0.7 | 1.0   | 0.7  | 0.2   | 0.0  | 0.0    | 0.0  | 0.0    | 0.0  | 0.0    | 0.0  |
| 180°   | 0.2 | 0.2   | 0.2  | 0.2   | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |



TEST NUMBER: P893271

CATALOG NUMBER: 4MB-2SL-ASML-UNV-L940

**CANDELA DISTRIBUTION (continued):**

|        | 247.5° | 270°  | 292.5° | 315°  | 337.5° | 360°  |
|--------|--------|-------|--------|-------|--------|-------|
| 0°     | 755.1  | 755.1 | 755.1  | 755.1 | 755.1  | 755.1 |
| 2.5°   | 734.3  | 726.2 | 718.7  | 726.7 | 732.3  | 754.3 |
| 5°     | 698.5  | 689.8 | 690.8  | 698.0 | 717.0  | 757.1 |
| 7.5°   | 661.4  | 647.0 | 650.5  | 670.5 | 698.7  | 744.2 |
| 10°    | 617.6  | 604.5 | 607.7  | 637.9 | 677.5  | 737.0 |
| 12.5°  | 578.6  | 556.6 | 575.3  | 603.8 | 652.7  | 733.1 |
| 15°    | 532.8  | 515.5 | 525.6  | 567.7 | 629.0  | 714.8 |
| 17.5°  | 483.4  | 470.0 | 482.1  | 523.9 | 599.8  | 712.8 |
| 20°    | 445.3  | 426.7 | 441.1  | 487.1 | 563.7  | 692.0 |
| 22.5°  | 402.5  | 388.4 | 403.5  | 445.8 | 526.9  | 670.0 |
| 25°    | 367.4  | 352.6 | 367.7  | 409.7 | 494.2  | 644.1 |
| 27.5°  | 333.3  | 319.7 | 333.3  | 371.9 | 461.9  | 623.1 |
| 30°    | 303.4  | 290.3 | 304.1  | 341.2 | 424.0  | 591.7 |
| 32.5°  | 275.4  | 258.6 | 276.4  | 312.3 | 390.6  | 567.7 |
| 35°    | 246.5  | 233.9 | 247.2  | 287.1 | 353.6  | 534.1 |
| 37.5°  | 222.5  | 209.4 | 225.2  | 259.4 | 322.2  | 501.4 |
| 40°    | 199.8  | 188.2 | 200.8  | 237.1 | 295.5  | 461.6 |
| 42.5°  | 182.0  | 170.4 | 183.2  | 216.8 | 268.5  | 431.4 |
| 45°    | 164.7  | 156.0 | 166.4  | 194.6 | 241.3  | 391.6 |
| 47.5°  | 152.1  | 144.6 | 153.3  | 178.3 | 218.6  | 355.8 |
| 50°    | 141.2  | 136.0 | 142.2  | 161.9 | 195.1  | 318.5 |
| 52.5°  | 131.5  | 126.3 | 133.5  | 149.3 | 176.5  | 284.3 |
| 55°    | 124.1  | 119.4 | 124.9  | 137.5 | 158.0  | 252.2 |
| 57.5°  | 116.0  | 113.0 | 117.2  | 124.9 | 143.4  | 223.5 |
| 60°    | 110.0  | 106.8 | 111.3  | 117.4 | 126.8  | 194.6 |
| 62.5°  | 103.3  | 101.6 | 104.3  | 109.3 | 114.2  | 168.4 |
| 65°    | 97.4   | 94.9  | 98.4   | 100.1 | 99.6   | 145.9 |
| 67.5°  | 91.0   | 90.2  | 92.2   | 92.5  | 88.8   | 123.1 |
| 70°    | 84.3   | 83.8  | 86.3   | 84.8  | 77.1   | 102.1 |
| 72.5°  | 78.9   | 78.9  | 80.4   | 77.4  | 67.3   | 82.3  |
| 75°    | 72.9   | 73.4  | 74.7   | 71.2  | 56.6   | 64.8  |
| 77.5°  | 67.5   | 68.0  | 68.2   | 63.5  | 47.5   | 49.4  |
| 80°    | 61.3   | 61.1  | 63.5   | 57.6  | 38.6   | 35.4  |
| 82.5°  | 55.9   | 54.9  | 56.4   | 50.4  | 31.2   | 23.2  |
| 85°    | 49.7   | 49.9  | 50.9   | 44.0  | 25.0   | 14.1  |
| 87.5°  | 44.8   | 44.8  | 45.7   | 38.8  | 18.8   | 6.2   |
| 90°    | 38.8   | 38.3  | 39.8   | 32.9  | 14.1   | 0.5   |
| 92.5°  | 33.9   | 33.9  | 34.9   | 28.2  | 10.4   | 0.5   |
| 95°    | 28.9   | 29.2  | 29.9   | 23.2  | 7.9    | 0.7   |
| 97.5°  | 24.7   | 25.0  | 26.0   | 19.8  | 5.7    | 0.7   |
| 100°   | 21.0   | 21.3  | 21.8   | 15.8  | 4.5    | 0.5   |
| 102.5° | 17.6   | 18.3  | 18.3   | 13.1  | 3.5    | 0.5   |
| 105°   | 14.8   | 15.8  | 15.3   | 10.6  | 3.2    | 0.5   |
| 107.5° | 12.4   | 13.4  | 13.4   | 8.7   | 3.2    | 0.5   |
| 110°   | 10.1   | 11.6  | 11.4   | 7.4   | 2.5    | 0.5   |





TEST NUMBER: P893271  
 CATALOG NUMBER: 4MB-2SL-ASML-UNV-L940

**CANDELA DISTRIBUTION (continued):**

|        | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|--------|--------|------|--------|------|--------|------|
| 112.5° | 8.7    | 9.9  | 9.1    | 6.4  | 2.5    | 0.5  |
| 115°   | 7.4    | 8.7  | 8.2    | 5.9  | 2.2    | 0.5  |
| 117.5° | 6.7    | 7.4  | 7.4    | 5.7  | 2.2    | 0.5  |
| 120°   | 6.2    | 6.9  | 6.7    | 5.4  | 2.2    | 0.5  |
| 122.5° | 5.7    | 6.2  | 6.2    | 4.9  | 2.0    | 0.5  |
| 125°   | 5.4    | 5.7  | 5.9    | 4.5  | 2.0    | 0.5  |
| 127.5° | 5.2    | 5.7  | 5.7    | 4.2  | 1.7    | 0.5  |
| 130°   | 4.7    | 5.2  | 5.2    | 4.0  | 1.7    | 0.5  |
| 132.5° | 4.2    | 4.7  | 4.7    | 3.7  | 1.7    | 0.5  |
| 135°   | 4.0    | 4.5  | 4.5    | 3.5  | 1.7    | 0.5  |
| 137.5° | 3.7    | 4.0  | 4.0    | 3.2  | 1.7    | 0.5  |
| 140°   | 3.2    | 3.7  | 3.7    | 3.0  | 1.7    | 0.5  |
| 142.5° | 3.0    | 3.5  | 3.5    | 2.7  | 1.5    | 0.5  |
| 145°   | 2.7    | 3.0  | 3.2    | 2.5  | 1.5    | 0.5  |
| 147.5° | 2.2    | 2.7  | 3.0    | 2.2  | 1.5    | 0.5  |
| 150°   | 1.7    | 2.5  | 2.5    | 2.2  | 1.5    | 0.5  |
| 152.5° | 1.2    | 2.2  | 2.2    | 2.0  | 1.2    | 0.5  |
| 155°   | 1.0    | 1.7  | 2.0    | 1.7  | 1.2    | 0.7  |
| 157.5° | 0.7    | 1.5  | 1.7    | 1.7  | 1.2    | 0.7  |
| 160°   | 0.5    | 1.2  | 1.5    | 1.5  | 1.0    | 0.7  |
| 162.5° | 0.2    | 1.0  | 1.2    | 1.5  | 1.0    | 0.7  |
| 165°   | 0.0    | 0.7  | 1.0    | 1.2  | 1.0    | 0.7  |
| 167.5° | 0.0    | 0.5  | 0.7    | 1.0  | 0.7    | 0.7  |
| 170°   | 0.0    | 0.2  | 0.5    | 0.7  | 0.7    | 0.7  |
| 172.5° | 0.0    | 0.0  | 0.2    | 0.5  | 0.5    | 0.7  |
| 175°   | 0.0    | 0.0  | 0.0    | 0.2  | 0.5    | 0.7  |
| 177.5° | 0.0    | 0.0  | 0.0    | 0.2  | 0.5    | 0.7  |
| 180°   | 0.2    | 0.2  | 0.2    | 0.2  | 0.2    | 0.2  |



TEST NUMBER: P893271  
 CATALOG NUMBER: 4MB-2SL-ASML-UNV-L940

**CIE UGR TABLE:**

| Reflectances:   |      |                  |       |       |       |       |                |       |       |       |       |
|-----------------|------|------------------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|
| Ceiling         |      | 0.7              | 0.7   | 0.5   | 0.5   | 0.3   | 0.7            | 0.7   | 0.5   | 0.5   | 0.3   |
| Wall            |      | 0.5              | 0.3   | 0.5   | 0.3   | 0.3   | 0.5            | 0.3   | 0.5   | 0.3   | 0.3   |
| Reference plane |      | 0.2              | 0.2   | 0.2   | 0.2   | 0.2   | 0.2            | 0.2   | 0.2   | 0.2   | 0.2   |
| Room dimensions |      | Viewed crosswise |       |       |       |       | Viewed endwise |       |       |       |       |
| X=2H            | Y=2H | 16.00            | 17.46 | 16.46 | 17.90 | 18.35 | 18.26          | 19.72 | 18.72 | 20.15 | 20.61 |
|                 | 3H   | 16.83            | 18.14 | 17.29 | 18.59 | 19.08 | 19.96          | 21.28 | 20.43 | 21.73 | 22.22 |
|                 | 4H   | 17.03            | 18.27 | 17.52 | 18.73 | 19.25 | 20.80          | 22.05 | 21.29 | 22.51 | 23.02 |
|                 | 6H   | 17.12            | 18.27 | 17.62 | 18.75 | 19.28 | 21.68          | 22.83 | 22.18 | 23.31 | 23.83 |
|                 | 8H   | 17.12            | 18.22 | 17.64 | 18.72 | 19.25 | 22.15          | 23.25 | 22.66 | 23.75 | 24.28 |
|                 | 12H  | 17.11            | 18.16 | 17.63 | 18.66 | 19.22 | 22.69          | 23.75 | 23.21 | 24.24 | 24.80 |
| 4H              | 2H   | 16.44            | 17.68 | 16.93 | 18.14 | 18.66 | 18.63          | 19.87 | 19.12 | 20.33 | 20.85 |
|                 | 3H   | 17.54            | 18.58 | 18.04 | 19.09 | 19.62 | 20.51          | 21.56 | 21.01 | 22.06 | 22.60 |
|                 | 4H   | 17.88            | 18.82 | 18.40 | 19.34 | 19.91 | 21.49          | 22.43 | 22.01 | 22.95 | 23.52 |
|                 | 6H   | 18.07            | 18.90 | 18.61 | 19.44 | 20.03 | 22.53          | 23.36 | 23.07 | 23.90 | 24.49 |
|                 | 8H   | 18.10            | 18.87 | 18.64 | 19.42 | 20.01 | 23.09          | 23.87 | 23.64 | 24.41 | 25.01 |
|                 | 12H  | 18.10            | 18.80 | 18.67 | 19.38 | 19.98 | 23.75          | 24.45 | 24.32 | 25.02 | 25.62 |
| 8H              | 4H   | 18.21            | 18.99 | 18.75 | 19.53 | 20.12 | 21.63          | 22.41 | 22.18 | 22.95 | 23.54 |
|                 | 6H   | 18.53            | 19.18 | 19.11 | 19.77 | 20.37 | 22.80          | 23.45 | 23.38 | 24.04 | 24.64 |
|                 | 8H   | 18.62            | 19.20 | 19.21 | 19.80 | 20.42 | 23.48          | 24.07 | 24.07 | 24.67 | 25.28 |
|                 | 12H  | 18.67            | 19.20 | 19.27 | 19.78 | 20.47 | 24.29          | 24.82 | 24.89 | 25.40 | 26.09 |
| 12H             | 4H   | 18.28            | 18.99 | 18.85 | 19.56 | 20.16 | 21.62          | 22.32 | 22.19 | 22.90 | 23.49 |
|                 | 6H   | 18.66            | 19.25 | 19.26 | 19.85 | 20.47 | 22.81          | 23.40 | 23.41 | 24.00 | 24.61 |
|                 | 8H   | 18.82            | 19.35 | 19.42 | 19.93 | 20.62 | 23.55          | 24.07 | 24.14 | 24.66 | 25.34 |