

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: P893508

Luminaire Tested: 4MB-4SL-FLT-UNV-L850

Issue Date: 11/11/2024

**Test Information**

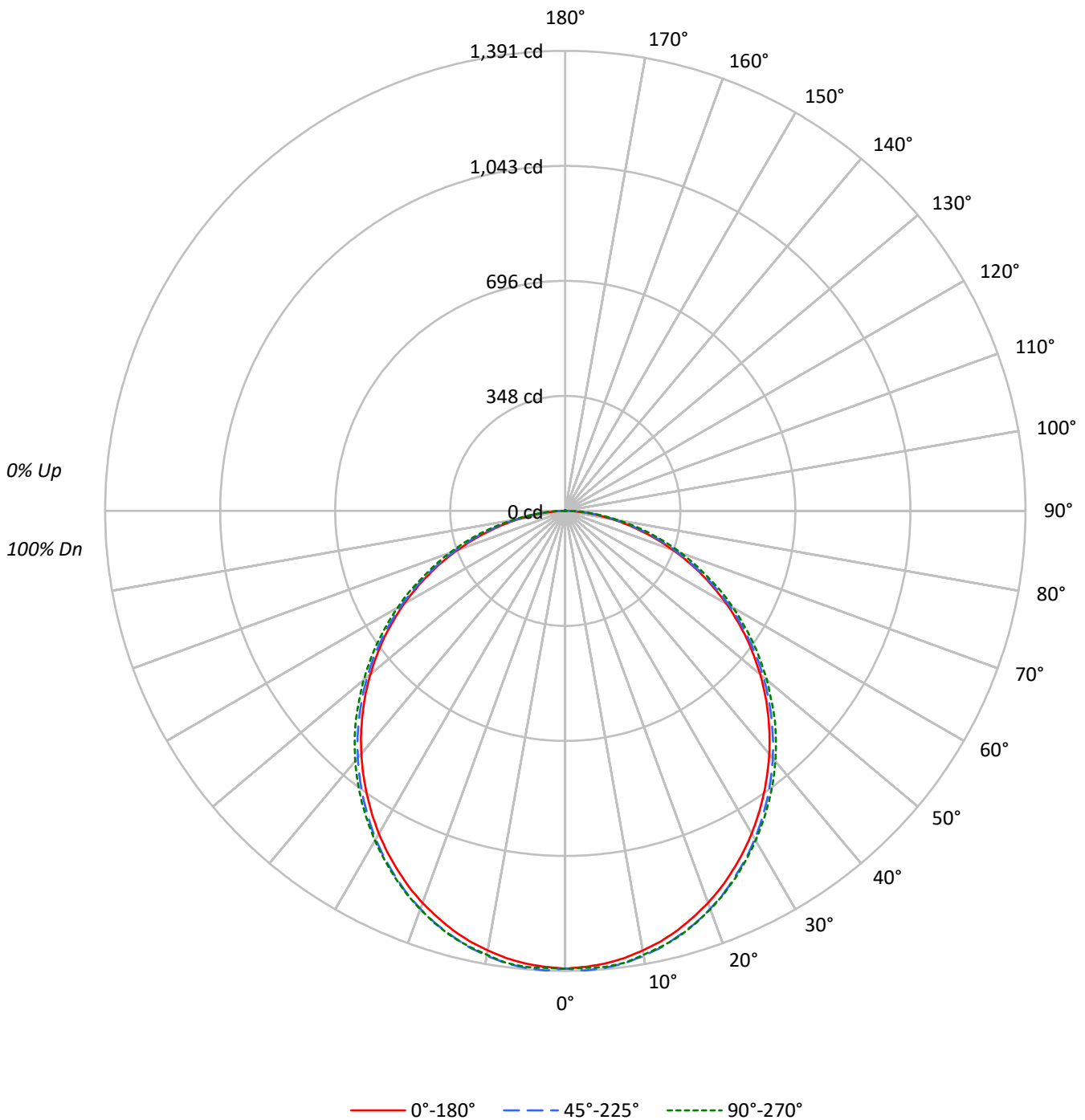
Test Method: LM-79-2019  
Report Number: P893508  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2403-327-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 4MB-4SL-FLT-UNV-L850  
Description: 4000 Lumen 4FT MICROBAY LINEAR BAY with FLAT FROSTED LENS, 80CRI, 5000K CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3842.0 lumens  
Efficiency: N/A  
Efficacy: 128.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.24 / 1.34  
Luminous Opening: Rectangular (W 0.38' x L: 3.98' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 29.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 5.5  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

TEST NUMBER: P893508  
CATALOG NUMBER: 4MB-4SL-FLT-UNV-L850

### Luminous Intensity Polar Plot





TEST NUMBER: P893508

CATALOG NUMBER: 4MB-4SL-FLT-UNV-L850

**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 | 102 | 102 | 102 | 100 |
| 1   | 109 | 104 | 99  | 96  | 106 | 101 | 98  | 94  | 97  | 94  | 91  | 93  | 91  | 88  | 90  | 88  | 86  | 86  | 86  | 86  | 83  |
| 2   | 99  | 90  | 84  | 78  | 96  | 89  | 82  | 77  | 85  | 80  | 75  | 82  | 77  | 73  | 79  | 75  | 72  | 72  | 72  | 72  | 69  |
| 3   | 90  | 79  | 71  | 65  | 87  | 78  | 70  | 64  | 75  | 68  | 63  | 72  | 66  | 62  | 69  | 65  | 61  | 61  | 61  | 61  | 58  |
| 4   | 82  | 70  | 62  | 55  | 80  | 69  | 61  | 54  | 66  | 59  | 54  | 64  | 58  | 53  | 62  | 57  | 52  | 52  | 52  | 52  | 50  |
| 5   | 76  | 63  | 54  | 47  | 74  | 62  | 53  | 47  | 60  | 52  | 46  | 58  | 51  | 46  | 56  | 50  | 45  | 45  | 45  | 45  | 43  |
| 6   | 70  | 57  | 48  | 41  | 68  | 56  | 47  | 41  | 54  | 46  | 41  | 52  | 45  | 40  | 51  | 45  | 40  | 40  | 40  | 40  | 38  |
| 7   | 65  | 51  | 43  | 36  | 63  | 51  | 42  | 36  | 49  | 41  | 36  | 48  | 41  | 36  | 46  | 40  | 35  | 35  | 35  | 35  | 33  |
| 8   | 60  | 47  | 38  | 32  | 59  | 46  | 38  | 32  | 45  | 37  | 32  | 44  | 37  | 32  | 42  | 36  | 32  | 32  | 32  | 32  | 30  |
| 9   | 56  | 43  | 35  | 29  | 55  | 42  | 35  | 29  | 41  | 34  | 29  | 40  | 34  | 29  | 39  | 33  | 29  | 29  | 29  | 29  | 27  |
| 10  | 53  | 40  | 32  | 27  | 52  | 39  | 32  | 26  | 38  | 31  | 26  | 37  | 31  | 26  | 36  | 30  | 26  | 26  | 26  | 26  | 24  |

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 9847 | 9847 | 9847 |
| 5°  | 9813 | 9907 | 9885 |
| 10° | 9751 | 9868 | 9846 |
| 15° | 9665 | 9792 | 9806 |
| 20° | 9551 | 9697 | 9705 |
| 25° | 9410 | 9561 | 9585 |
| 30° | 9257 | 9414 | 9456 |
| 35° | 9082 | 9241 | 9320 |
| 40° | 8912 | 9062 | 9176 |
| 45° | 8717 | 8860 | 9013 |
| 50° | 8512 | 8647 | 8804 |
| 55° | 8283 | 8408 | 8584 |
| 60° | 8016 | 8147 | 8333 |
| 65° | 7658 | 7812 | 8017 |
| 70° | 7208 | 7418 | 7757 |
| 75° | 6628 | 6908 | 7354 |
| 80° | 5855 | 6310 | 6642 |
| 85° | 5045 | 5788 | 6204 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 9013 cd/sqm



TEST NUMBER: P893508  
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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 130.9  | 3.4       |
| 10°-20°   | 373.0  | 9.7       |
| 20°-30°   | 559.0  | 14.6      |
| 30°-40°   | 665.2  | 17.3      |
| 40°-50°   | 682.5  | 17.8      |
| 50°-60°   | 611.4  | 15.9      |
| 60°-70°   | 464.6  | 12.1      |
| 70°-80°   | 270.0  | 7.0       |
| 80°-90°   | 81.0   | 2.1       |
| 90°-100°  | 1.9    | 0.0       |
| 100°-110° | 0.3    | 0.0       |
| 110°-120° | 0.0    | 0.0       |
| 120°-130° | 0.2    | 0.0       |
| 130°-140° | 0.4    | 0.0       |
| 140°-150° | 0.6    | 0.0       |
| 150°-160° | 0.5    | 0.0       |
| 160°-170° | 0.3    | 0.0       |
| 170°-180° | 0.1    | 0.0       |
| 0°-30°    | 1062.9 | 27.7      |
| 0°-40°    | 1728.1 | 45.0      |
| 0°-60°    | 3022.0 | 78.7      |
| 0°-90°    | 3837.6 | 99.9      |
| 90°-120°  | 2.3    | 0.1       |
| 90°-150°  | 3.4    | 0.1       |
| 90°-180°  | 4.0    | 0.1       |
| 0°-180°   | 3842.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1384 | 1384  | 1384 | 1384  | 1384 |      |
| 5°   | 1374 | 1397  | 1387 | 1380  | 1384 | 130  |
| 15°  | 1312 | 1337  | 1329 | 1327  | 1331 | 370  |
| 25°  | 1199 | 1226  | 1218 | 1216  | 1221 | 552  |
| 35°  | 1046 | 1071  | 1064 | 1067  | 1073 | 654  |
| 45°  | 866  | 888   | 880  | 888   | 896  | 668  |
| 55°  | 668  | 684   | 678  | 686   | 692  | 596  |
| 65°  | 455  | 466   | 464  | 472   | 476  | 450  |
| 75°  | 241  | 250   | 251  | 260   | 268  | 256  |
| 85°  | 62   | 67    | 71   | 76    | 76   | 68   |
| 90°  | 1    | 4     | 4    | 7     | 6    | 4    |
| 95°  | 0    | 1     | 1    | 2     | 3    | 0    |
| 105° | 0    | 0     | 0    | 1     | 1    | 0    |
| 115° | 0    | 0     | 0    | 0     | 0    | 0    |
| 125° | 0    | 0     | 0    | 0     | 0    | 1    |
| 135° | 0    | 0     | 1    | 0     | 0    | 0    |
| 145° | 1    | 1     | 1    | 1     | 1    | 1    |
| 155° | 1    | 1     | 1    | 1     | 1    | 0    |
| 165° | 1    | 1     | 1    | 1     | 1    | 0    |
| 175° | 2    | 2     | 2    | 1     | 1    | 0    |
| 180° | 1    | 1     | 1    | 1     | 1    |      |



TEST NUMBER: P893508  
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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 5°     | 10°    | 15°    | 20°    | 22.5°  | 25°    | 30°    | 35°    | 40°    | 45°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 1384.0 | 1384.0 | 1384.0 | 1384.0 | 1384.0 | 1384.0 | 1384.0 | 1384.0 | 1384.0 | 1384.0 | 1384.0 |
| 2.5°   | 1380.0 | 1378.0 | 1380.0 | 1379.0 | 1389.1 | 1401.3 | 1399.2 | 1390.1 | 1380.0 | 1383.0 | 1391.1 |
| 5°     | 1373.9 | 1372.9 | 1375.9 | 1373.9 | 1384.0 | 1397.2 | 1393.2 | 1385.0 | 1375.9 | 1379.0 | 1387.1 |
| 7.5°   | 1363.8 | 1363.8 | 1367.8 | 1365.8 | 1374.9 | 1388.1 | 1384.0 | 1376.9 | 1367.8 | 1370.9 | 1379.0 |
| 10°    | 1349.6 | 1350.6 | 1355.7 | 1352.6 | 1360.7 | 1374.9 | 1370.9 | 1363.8 | 1355.7 | 1357.7 | 1365.8 |
| 12.5°  | 1333.4 | 1333.4 | 1339.5 | 1336.4 | 1344.5 | 1357.7 | 1352.6 | 1347.6 | 1339.5 | 1341.5 | 1350.6 |
| 15°    | 1312.1 | 1313.1 | 1320.2 | 1317.2 | 1324.3 | 1337.4 | 1332.4 | 1328.3 | 1321.2 | 1322.2 | 1329.3 |
| 17.5°  | 1287.8 | 1290.8 | 1297.9 | 1294.9 | 1302.0 | 1315.1 | 1309.1 | 1305.0 | 1298.9 | 1299.9 | 1307.0 |
| 20°    | 1261.4 | 1264.5 | 1271.6 | 1269.5 | 1274.6 | 1287.8 | 1281.7 | 1279.7 | 1273.6 | 1274.6 | 1280.7 |
| 22.5°  | 1232.1 | 1235.1 | 1243.2 | 1241.2 | 1246.2 | 1259.4 | 1252.3 | 1251.3 | 1245.2 | 1246.2 | 1251.3 |
| 25°    | 1198.6 | 1202.7 | 1211.8 | 1209.8 | 1213.8 | 1226.0 | 1219.9 | 1217.9 | 1213.8 | 1213.8 | 1217.9 |
| 27.5°  | 1164.2 | 1168.2 | 1178.4 | 1175.3 | 1178.4 | 1191.5 | 1184.4 | 1183.4 | 1179.4 | 1179.4 | 1183.4 |
| 30°    | 1126.7 | 1130.7 | 1141.9 | 1138.8 | 1141.9 | 1153.0 | 1145.9 | 1146.9 | 1142.9 | 1142.9 | 1145.9 |
| 32.5°  | 1087.2 | 1090.2 | 1102.4 | 1100.3 | 1102.4 | 1113.5 | 1106.4 | 1107.4 | 1103.4 | 1104.4 | 1105.4 |
| 35°    | 1045.6 | 1048.7 | 1061.8 | 1059.8 | 1060.8 | 1071.0 | 1065.9 | 1065.9 | 1062.9 | 1061.8 | 1063.9 |
| 37.5°  | 1003.1 | 1006.1 | 1022.3 | 1017.3 | 1017.3 | 1027.4 | 1023.3 | 1023.3 | 1020.3 | 1019.3 | 1020.3 |
| 40°    | 959.5  | 961.5  | 978.8  | 973.7  | 972.7  | 981.8  | 978.8  | 978.8  | 976.7  | 974.7  | 975.7  |
| 42.5°  | 913.9  | 916.9  | 934.2  | 930.1  | 926.1  | 936.2  | 933.2  | 934.2  | 931.1  | 929.1  | 929.1  |
| 45°    | 866.3  | 869.3  | 886.6  | 884.5  | 878.4  | 887.6  | 884.5  | 886.6  | 882.5  | 880.5  | 880.5  |
| 47.5°  | 818.7  | 822.7  | 838.9  | 835.9  | 829.8  | 838.9  | 835.9  | 837.9  | 833.9  | 831.8  | 831.8  |
| 50°    | 769.0  | 773.1  | 790.3  | 785.2  | 779.2  | 788.3  | 786.2  | 787.3  | 784.2  | 782.2  | 781.2  |
| 52.5°  | 718.4  | 723.4  | 739.6  | 733.6  | 728.5  | 736.6  | 735.6  | 736.6  | 732.5  | 731.5  | 730.5  |
| 55°    | 667.7  | 672.8  | 688.0  | 680.9  | 676.8  | 683.9  | 681.9  | 683.9  | 679.9  | 678.8  | 677.8  |
| 57.5°  | 615.0  | 620.1  | 634.3  | 627.2  | 624.1  | 630.2  | 629.2  | 630.2  | 627.2  | 626.2  | 625.1  |
| 60°    | 563.3  | 567.4  | 580.6  | 573.5  | 570.4  | 576.5  | 574.5  | 577.5  | 573.5  | 573.5  | 572.5  |
| 62.5°  | 508.6  | 513.7  | 526.9  | 518.8  | 516.7  | 521.8  | 519.8  | 522.8  | 520.8  | 518.8  | 517.7  |
| 65°    | 454.9  | 458.0  | 470.1  | 463.0  | 460.0  | 466.1  | 465.1  | 467.1  | 464.0  | 465.1  | 464.0  |
| 67.5°  | 401.2  | 403.3  | 415.4  | 407.3  | 405.3  | 411.4  | 412.4  | 411.4  | 409.3  | 410.3  | 409.3  |
| 70°    | 346.5  | 348.5  | 358.7  | 351.6  | 350.6  | 355.6  | 357.7  | 356.6  | 354.6  | 355.6  | 356.6  |
| 72.5°  | 293.8  | 294.8  | 304.0  | 297.9  | 296.9  | 302.9  | 302.9  | 302.9  | 302.9  | 302.9  | 305.0  |
| 75°    | 241.1  | 242.2  | 250.3  | 245.2  | 244.2  | 250.3  | 250.3  | 250.3  | 250.3  | 252.3  | 251.3  |
| 77.5°  | 190.5  | 189.5  | 197.6  | 194.5  | 192.5  | 198.6  | 198.6  | 199.6  | 201.6  | 203.7  | 200.6  |
| 80°    | 142.9  | 141.8  | 147.9  | 143.9  | 143.9  | 150.0  | 148.9  | 150.0  | 152.0  | 153.0  | 154.0  |
| 82.5°  | 100.3  | 98.3   | 103.3  | 102.3  | 101.3  | 106.4  | 107.4  | 106.4  | 109.4  | 110.4  | 110.4  |
| 85°    | 61.8   | 61.8   | 64.8   | 62.8   | 62.8   | 66.9   | 66.9   | 67.9   | 69.9   | 70.9   | 70.9   |
| 87.5°  | 29.4   | 28.4   | 31.4   | 30.4   | 29.4   | 32.4   | 32.4   | 33.4   | 34.4   | 35.5   | 34.4   |
| 90°    | 1.0    | 1.0    | 2.0    | 2.0    | 2.0    | 4.1    | 4.1    | 4.1    | 5.1    | 5.1    | 4.1    |
| 92.5°  | 0.0    | 0.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 2.0    | 2.0    | 2.0    | 2.0    |
| 95°    | 0.0    | 0.0    | 0.0    | 0.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    |
| 97.5°  | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 1.0    | 1.0    | 1.0    | 1.0    |
| 100°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 1.0    |
| 102.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 1.0    |
| 105°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 107.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 110°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 1.0    |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°  | 5°  | 10° | 15° | 20° | 22.5° | 25° | 30° | 35° | 40° | 45° |
|--------|-----|-----|-----|-----|-----|-------|-----|-----|-----|-----|-----|
| 112.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 115°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 117.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 120°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 122.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 125°   | 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 127.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.0   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 130°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 0.0 | 1.0 |
| 132.5° | 0.0 | 0.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 135°   | 0.0 | 1.0 | 1.0 | 1.0 | 1.0 | 0.0   | 1.0 | 0.0 | 0.0 | 0.0 | 1.0 |
| 137.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 140°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 142.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 145°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 147.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 150°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 152.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 155°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 157.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 160°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 162.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 165°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 167.5° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 170°   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 172.5° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 175°   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0   | 2.0 | 2.0 | 1.0 | 2.0 | 2.0 |
| 177.5° | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | 2.0   | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 |
| 180°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |



TEST NUMBER: P893508  
 CATALOG NUMBER: 4MB-4SL-FLT-UNV-L850

**CANDELA DISTRIBUTION (continued):**

|        | 50°    | 55°    | 60°    | 65°    | 67.5°  | 70°    | 75°    | 80°    | 85°    | 90°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 1384.0 | 1384.0 | 1384.0 | 1384.0 | 1384.0 | 1384.0 | 1384.0 | 1384.0 | 1384.0 | 1384.0 |
| 2.5°   | 1379.0 | 1371.9 | 1368.8 | 1370.9 | 1385.0 | 1370.9 | 1386.1 | 1391.1 | 1372.9 | 1383.0 |
| 5°     | 1374.9 | 1367.8 | 1363.8 | 1365.8 | 1380.0 | 1366.8 | 1383.0 | 1389.1 | 1373.9 | 1384.0 |
| 7.5°   | 1366.8 | 1358.7 | 1356.7 | 1359.7 | 1371.9 | 1360.7 | 1376.9 | 1383.0 | 1367.8 | 1378.0 |
| 10°    | 1354.7 | 1347.6 | 1345.5 | 1348.6 | 1359.7 | 1348.6 | 1362.8 | 1367.8 | 1353.6 | 1362.8 |
| 12.5°  | 1339.5 | 1332.4 | 1330.3 | 1334.4 | 1344.5 | 1334.4 | 1348.6 | 1353.6 | 1339.5 | 1348.6 |
| 15°    | 1320.2 | 1313.1 | 1312.1 | 1318.2 | 1327.3 | 1318.2 | 1332.4 | 1336.4 | 1322.2 | 1331.3 |
| 17.5°  | 1296.9 | 1289.8 | 1290.8 | 1297.9 | 1305.0 | 1296.9 | 1310.1 | 1314.1 | 1301.0 | 1308.0 |
| 20°    | 1271.6 | 1263.5 | 1265.5 | 1271.6 | 1277.6 | 1269.5 | 1282.7 | 1286.8 | 1274.6 | 1281.7 |
| 22.5°  | 1242.2 | 1234.1 | 1236.1 | 1243.2 | 1247.3 | 1240.2 | 1252.3 | 1256.4 | 1246.2 | 1253.3 |
| 25°    | 1209.8 | 1202.7 | 1205.7 | 1212.8 | 1215.8 | 1209.8 | 1220.9 | 1223.9 | 1214.8 | 1220.9 |
| 27.5°  | 1177.3 | 1169.2 | 1173.3 | 1180.4 | 1182.4 | 1176.3 | 1187.5 | 1189.5 | 1180.4 | 1186.5 |
| 30°    | 1140.9 | 1132.8 | 1137.8 | 1145.9 | 1145.9 | 1141.9 | 1151.0 | 1153.0 | 1145.9 | 1151.0 |
| 32.5°  | 1100.3 | 1094.3 | 1100.3 | 1107.4 | 1106.4 | 1103.4 | 1112.5 | 1114.5 | 1108.4 | 1112.5 |
| 35°    | 1059.8 | 1054.7 | 1060.8 | 1067.9 | 1066.9 | 1063.9 | 1073.0 | 1074.0 | 1068.9 | 1073.0 |
| 37.5°  | 1018.3 | 1014.2 | 1020.3 | 1026.4 | 1024.3 | 1022.3 | 1030.4 | 1030.4 | 1027.4 | 1031.4 |
| 40°    | 975.7  | 971.7  | 976.7  | 983.8  | 979.8  | 979.8  | 984.8  | 986.9  | 983.8  | 987.9  |
| 42.5°  | 931.1  | 927.1  | 933.2  | 939.2  | 935.2  | 934.2  | 940.3  | 941.3  | 939.2  | 942.3  |
| 45°    | 884.5  | 880.5  | 886.6  | 891.6  | 887.6  | 887.6  | 892.6  | 892.6  | 891.6  | 895.7  |
| 47.5°  | 836.9  | 833.9  | 838.9  | 844.0  | 839.9  | 843.0  | 843.0  | 843.0  | 845.0  | 844.0  |
| 50°    | 788.3  | 785.2  | 789.3  | 795.4  | 790.3  | 791.3  | 793.3  | 793.3  | 794.4  | 795.4  |
| 52.5°  | 737.6  | 733.6  | 737.6  | 744.7  | 737.6  | 740.7  | 741.7  | 742.7  | 745.7  | 743.7  |
| 55°    | 687.0  | 682.9  | 687.0  | 693.0  | 685.9  | 690.0  | 690.0  | 691.0  | 694.0  | 692.0  |
| 57.5°  | 634.3  | 630.2  | 636.3  | 640.3  | 633.3  | 637.3  | 637.3  | 639.3  | 641.4  | 638.3  |
| 60°    | 581.6  | 578.5  | 580.6  | 587.7  | 580.6  | 584.6  | 584.6  | 584.6  | 588.7  | 585.6  |
| 62.5°  | 527.9  | 525.9  | 527.9  | 534.0  | 526.9  | 530.9  | 529.9  | 530.9  | 535.0  | 534.0  |
| 65°    | 473.2  | 471.1  | 473.2  | 479.2  | 472.2  | 476.2  | 476.2  | 477.2  | 480.3  | 476.2  |
| 67.5°  | 419.5  | 416.4  | 419.5  | 424.5  | 418.5  | 421.5  | 421.5  | 421.5  | 426.6  | 424.5  |
| 70°    | 364.8  | 362.7  | 364.8  | 369.8  | 364.8  | 366.8  | 366.8  | 366.8  | 371.8  | 372.9  |
| 72.5°  | 311.1  | 311.1  | 313.1  | 317.1  | 313.1  | 317.1  | 314.1  | 312.1  | 319.2  | 320.2  |
| 75°    | 258.4  | 259.4  | 260.4  | 264.4  | 260.4  | 264.4  | 262.4  | 260.4  | 266.5  | 267.5  |
| 77.5°  | 209.7  | 209.7  | 210.7  | 213.8  | 210.7  | 213.8  | 211.8  | 211.8  | 215.8  | 214.8  |
| 80°    | 160.1  | 160.1  | 161.1  | 164.1  | 161.1  | 164.1  | 162.1  | 162.1  | 166.2  | 162.1  |
| 82.5°  | 116.5  | 116.5  | 116.5  | 119.6  | 117.5  | 119.6  | 118.5  | 116.5  | 121.6  | 117.5  |
| 85°    | 75.0   | 76.0   | 76.0   | 77.0   | 76.0   | 77.0   | 77.0   | 76.0   | 79.0   | 76.0   |
| 87.5°  | 38.5   | 38.5   | 38.5   | 39.5   | 38.5   | 38.5   | 39.5   | 38.5   | 40.5   | 39.5   |
| 90°    | 7.1    | 6.1    | 6.1    | 8.1    | 7.1    | 7.1    | 8.1    | 6.1    | 7.1    | 6.1    |
| 92.5°  | 3.0    | 3.0    | 3.0    | 3.0    | 3.0    | 3.0    | 3.0    | 3.0    | 4.1    | 4.1    |
| 95°    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 2.0    | 3.0    |
| 97.5°  | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 2.0    | 2.0    |
| 100°   | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    |
| 102.5° | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    |
| 105°   | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 1.0    | 0.0    | 1.0    | 1.0    |
| 107.5° | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    |
| 110°   | 0.0    | 0.0    | 0.0    | 0.0    | 0.0    | 1.0    | 0.0    | 0.0    | 0.0    | 1.0    |





TEST NUMBER: P893508  
 CATALOG NUMBER: 4MB-4SL-FLT-UNV-L850

**CANDELA DISTRIBUTION (continued):**

|        | 50° | 55° | 60° | 65° | 67.5° | 70° | 75° | 80° | 85° | 90° |
|--------|-----|-----|-----|-----|-------|-----|-----|-----|-----|-----|
| 112.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 115°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 117.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 120°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 122.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 125°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 127.5° | 0.0 | 1.0 | 0.0 | 0.0 | 0.0   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 130°   | 1.0 | 1.0 | 0.0 | 0.0 | 0.0   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 132.5° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 135°   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0   | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 137.5° | 1.0 | 1.0 | 1.0 | 1.0 | 0.0   | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 140°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 142.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 0.0 | 0.0 | 0.0 |
| 145°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 147.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 150°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 152.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 155°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 157.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 160°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 162.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 165°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 167.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 170°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 172.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 175°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 177.5° | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| 180°   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0   | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |



TEST NUMBER: P893508  
 CATALOG NUMBER: 4MB-4SL-FLT-UNV-L850

**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 | 19.45            | 21.09 | 19.82 | 21.41 | 21.72 | 19.59          | 21.23 | 19.96 | 21.54 | 21.86 |
|                 | 3H   | 21.28            | 22.76 | 21.66 | 23.09 | 23.45 | 21.42          | 22.90 | 21.80 | 23.23 | 23.59 |
|                 | 4H   | 21.94            | 23.33 | 22.34 | 23.68 | 24.06 | 22.13          | 23.53 | 22.53 | 23.88 | 24.25 |
|                 | 6H   | 22.39            | 23.68 | 22.80 | 24.05 | 24.44 | 22.69          | 23.98 | 23.10 | 24.35 | 24.74 |
|                 | 8H   | 22.53            | 23.77 | 22.96 | 24.16 | 24.56 | 22.88          | 24.12 | 23.31 | 24.51 | 24.91 |
|                 | 12H  | 22.63            | 23.81 | 23.06 | 24.19 | 24.63 | 23.02          | 24.21 | 23.45 | 24.59 | 25.02 |
| 4H              | 2H   | 20.09            | 21.48 | 20.49 | 21.83 | 22.21 | 20.20          | 21.59 | 20.59 | 21.94 | 22.32 |
|                 | 3H   | 22.13            | 23.30 | 22.54 | 23.70 | 24.10 | 22.26          | 23.43 | 22.67 | 23.83 | 24.24 |
|                 | 4H   | 22.92            | 23.98 | 23.35 | 24.40 | 24.84 | 23.11          | 24.17 | 23.54 | 24.58 | 25.02 |
|                 | 6H   | 23.50            | 24.43 | 23.95 | 24.87 | 25.33 | 23.80          | 24.73 | 24.25 | 25.17 | 25.63 |
|                 | 8H   | 23.69            | 24.56 | 24.15 | 25.00 | 25.47 | 24.04          | 24.91 | 24.51 | 25.36 | 25.83 |
|                 | 12H  | 23.83            | 24.61 | 24.31 | 25.09 | 25.56 | 24.24          | 25.02 | 24.72 | 25.50 | 25.97 |
| 8H              | 4H   | 23.25            | 24.12 | 23.71 | 24.56 | 25.03 | 23.42          | 24.29 | 23.88 | 24.73 | 25.20 |
|                 | 6H   | 23.95            | 24.68 | 24.45 | 25.17 | 25.64 | 24.24          | 24.97 | 24.74 | 25.46 | 25.93 |
|                 | 8H   | 24.22            | 24.87 | 24.73 | 25.37 | 25.86 | 24.57          | 25.22 | 25.08 | 25.73 | 26.22 |
|                 | 12H  | 24.43            | 25.01 | 24.94 | 25.50 | 26.06 | 24.86          | 25.43 | 25.36 | 25.92 | 26.49 |
| 12H             | 4H   | 23.29            | 24.08 | 23.78 | 24.55 | 25.02 | 23.45          | 24.23 | 23.93 | 24.71 | 25.18 |
|                 | 6H   | 24.02            | 24.68 | 24.53 | 25.18 | 25.67 | 24.30          | 24.95 | 24.81 | 25.46 | 25.95 |
|                 | 8H   | 24.35            | 24.93 | 24.86 | 25.42 | 25.98 | 24.69          | 25.27 | 25.20 | 25.76 | 26.32 |