

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: P894552

Luminaire Tested: 8TMB-12SL-RNDU-UNV-L850

Issue Date: 11/11/2024

**Test Information**

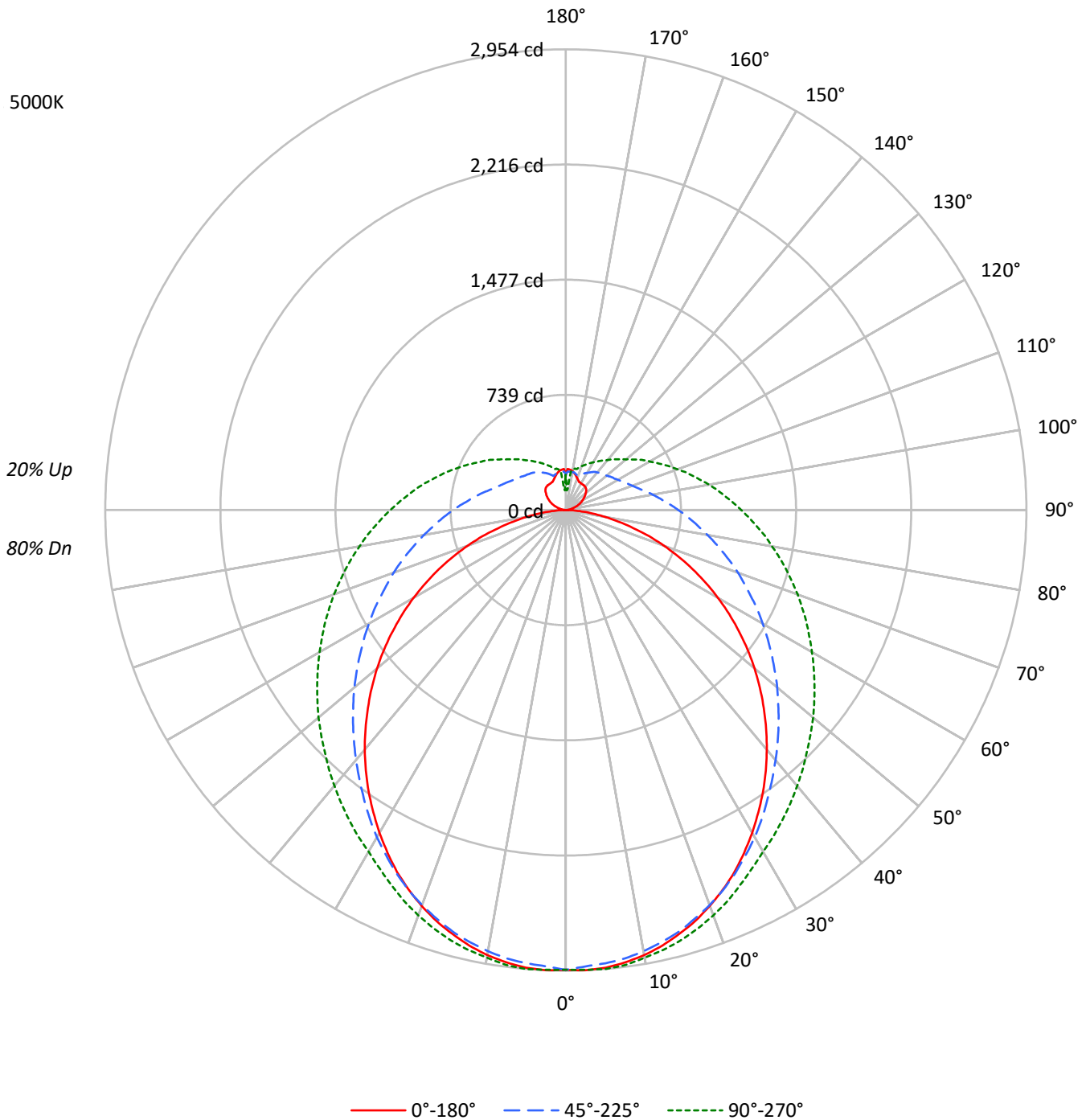
Test Method: LM-79-2019  
Report Number: P894552  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2403-327-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-12SL-RNDU-UNV-L850  
Description: 12000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 80CRI, CCT  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 12400.0 lumens  
Efficiency: N/A  
Efficacy: 139.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.28 / 1.37  
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 7.98' x H: 0.21')  
CIE Type: Semi-Direct  
  
Input Watts (W): 88.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.996  
Total Harmonic Distortion (THDi): 5.53  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

TEST NUMBER: P894552  
CATALOG NUMBER: 8TMB-12SL-RNDU-UNV-L850

### Luminous Intensity Polar Plot





TEST NUMBER: P894552  
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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|
| RF  | 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 |
| RCR |     |     |     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |
| 0   | 114 | 114 | 114 | 114 | 109 | 109 | 109 | 109 | 100 | 100 | 100 | 91 | 91 | 91 | 83 | 83 | 83 | 83 | 83 | 80 |
| 1   | 102 | 96  | 91  | 86  | 97  | 92  | 87  | 83  | 84  | 80  | 76  | 76 | 73 | 70 | 69 | 67 | 65 | 65 | 65 | 61 |
| 2   | 92  | 82  | 75  | 68  | 87  | 79  | 72  | 66  | 72  | 66  | 61  | 65 | 61 | 57 | 60 | 56 | 53 | 53 | 53 | 49 |
| 3   | 83  | 72  | 63  | 56  | 79  | 69  | 61  | 54  | 63  | 56  | 51  | 57 | 52 | 47 | 52 | 48 | 44 | 44 | 44 | 41 |
| 4   | 76  | 63  | 54  | 47  | 72  | 60  | 52  | 45  | 55  | 48  | 43  | 51 | 45 | 40 | 46 | 41 | 37 | 37 | 37 | 34 |
| 5   | 69  | 56  | 47  | 40  | 66  | 54  | 45  | 39  | 49  | 42  | 37  | 45 | 39 | 34 | 41 | 36 | 32 | 32 | 32 | 29 |
| 6   | 64  | 50  | 41  | 35  | 61  | 48  | 40  | 34  | 44  | 37  | 32  | 41 | 35 | 30 | 37 | 32 | 28 | 28 | 28 | 26 |
| 7   | 59  | 46  | 37  | 30  | 56  | 44  | 35  | 30  | 40  | 33  | 28  | 37 | 31 | 26 | 34 | 29 | 25 | 25 | 25 | 23 |
| 8   | 55  | 41  | 33  | 27  | 52  | 40  | 32  | 26  | 37  | 30  | 25  | 34 | 28 | 24 | 31 | 26 | 22 | 22 | 22 | 20 |
| 9   | 51  | 38  | 30  | 24  | 49  | 36  | 29  | 23  | 34  | 27  | 22  | 31 | 25 | 21 | 29 | 24 | 20 | 20 | 20 | 18 |
| 10  | 48  | 35  | 27  | 22  | 46  | 34  | 26  | 21  | 31  | 25  | 20  | 29 | 23 | 19 | 27 | 22 | 18 | 18 | 18 | 16 |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 10460 | 10460 | 10460 |
| 5°  | 10466 | 10034 | 10039 |
| 10° | 10392 | 9658  | 9575  |
| 15° | 10263 | 9275  | 9147  |
| 20° | 10104 | 8868  | 8707  |
| 25° | 9906  | 8458  | 8266  |
| 30° | 9646  | 8044  | 7875  |
| 35° | 9379  | 7616  | 7587  |
| 40° | 9090  | 7230  | 7325  |
| 45° | 8779  | 6888  | 7092  |
| 50° | 8454  | 6585  | 6913  |
| 55° | 8079  | 6305  | 6756  |
| 60° | 7656  | 6078  | 6638  |
| 65° | 7136  | 5880  | 6572  |
| 70° | 6489  | 5764  | 6551  |
| 75° | 5606  | 5688  | 6580  |
| 80° | 4544  | 5711  | 6684  |
| 85° | 3167  | 5893  | 6902  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8779 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 278.9   | 2.2       |
| 10°-20°   | 795.3   | 6.4       |
| 20°-30°   | 1194.1  | 9.6       |
| 30°-40°   | 1435.9  | 11.6      |
| 40°-50°   | 1521.4  | 12.3      |
| 50°-60°   | 1465.1  | 11.8      |
| 60°-70°   | 1296.6  | 10.5      |
| 70°-80°   | 1063.6  | 8.6       |
| 80°-90°   | 825.3   | 6.7       |
| 90°-100°  | 640.5   | 5.2       |
| 100°-110° | 507.5   | 4.1       |
| 110°-120° | 404.3   | 3.3       |
| 120°-130° | 321.2   | 2.6       |
| 130°-140° | 250.8   | 2.0       |
| 140°-150° | 184.6   | 1.5       |
| 150°-160° | 122.1   | 1.0       |
| 160°-170° | 70.2    | 0.6       |
| 170°-180° | 22.6    | 0.2       |
| 0°-30°    | 2268.4  | 18.3      |
| 0°-40°    | 3704.3  | 29.9      |
| 0°-60°    | 6690.7  | 54.0      |
| 0°-90°    | 9876.2  | 79.6      |
| 90°-120°  | 1552.4  | 12.5      |
| 90°-150°  | 2308.9  | 18.6      |
| 90°-180°  | 2524.0  | 20.4      |
| 0°-180°   | 12400.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 2948 | 2948  | 2948 | 2948  | 2948 |      |
| 5°   | 2945 | 2948  | 2917 | 2940  | 2954 | 280  |
| 15°  | 2814 | 2816  | 2800 | 2842  | 2856 | 794  |
| 25°  | 2561 | 2569  | 2569 | 2634  | 2651 | 1178 |
| 35°  | 2205 | 2233  | 2258 | 2376  | 2424 | 1378 |
| 45°  | 1795 | 1837  | 1930 | 2112  | 2188 | 1385 |
| 55°  | 1355 | 1422  | 1610 | 1848  | 1947 | 1212 |
| 65°  | 898  | 1021  | 1310 | 1585  | 1703 | 888  |
| 75°  | 449  | 673   | 1044 | 1338  | 1461 | 480  |
| 85°  | 101  | 407   | 816  | 1114  | 1231 | 116  |
| 90°  | 3    | 320   | 721  | 1010  | 1125 | 8    |
| 95°  | 14   | 264   | 637  | 912   | 1024 | 15   |
| 105° | 50   | 213   | 502  | 746   | 844  | 54   |
| 115° | 101  | 205   | 418  | 609   | 690  | 99   |
| 125° | 146  | 213   | 365  | 502   | 564  | 130  |
| 135° | 185  | 227   | 328  | 421   | 460  | 141  |
| 145° | 196  | 224   | 297  | 362   | 384  | 123  |
| 155° | 199  | 233   | 255  | 309   | 325  | 94   |
| 165° | 236  | 250   | 241  | 241   | 272  | 66   |
| 175° | 261  | 258   | 247  | 205   | 137  | 25   |
| 180° | 227  | 227   | 227  | 227   | 227  |      |



TEST NUMBER: P894552  
 CATALOG NUMBER: 8TMB-12SL-RNDU-UNV-L850

**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 5°     | 10°    | 15°    | 20°    | 22.5°  | 25°    | 30°    | 35°    | 40°    | 45°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 2948.1 | 2948.1 | 2948.1 | 2948.1 | 2948.1 | 2948.1 | 2948.1 | 2948.1 | 2948.1 | 2948.1 | 2948.1 |
| 2.5°   | 2953.7 | 2950.9 | 2956.5 | 2962.1 | 2979.0 | 2956.5 | 2967.8 | 2936.9 | 2939.7 | 2942.5 | 2928.5 |
| 5°     | 2945.3 | 2936.9 | 2945.3 | 2950.9 | 2965.0 | 2948.1 | 2959.3 | 2925.7 | 2928.5 | 2934.1 | 2917.3 |
| 7.5°   | 2925.7 | 2917.3 | 2922.9 | 2928.5 | 2942.5 | 2925.7 | 2939.7 | 2906.0 | 2911.7 | 2914.5 | 2900.4 |
| 10°    | 2897.6 | 2886.4 | 2892.0 | 2900.4 | 2911.7 | 2897.6 | 2908.8 | 2878.0 | 2880.8 | 2886.4 | 2872.4 |
| 12.5°  | 2861.2 | 2849.9 | 2855.6 | 2861.2 | 2875.2 | 2861.2 | 2872.4 | 2841.5 | 2847.1 | 2852.7 | 2838.7 |
| 15°    | 2813.5 | 2802.3 | 2807.9 | 2813.5 | 2824.7 | 2816.3 | 2827.5 | 2796.6 | 2802.3 | 2813.5 | 2799.5 |
| 17.5°  | 2763.0 | 2746.2 | 2751.8 | 2760.2 | 2771.4 | 2765.8 | 2774.2 | 2749.0 | 2751.8 | 2763.0 | 2749.0 |
| 20°    | 2701.3 | 2684.4 | 2690.1 | 2698.5 | 2709.7 | 2706.9 | 2712.5 | 2690.1 | 2695.7 | 2709.7 | 2695.7 |
| 22.5°  | 2634.0 | 2617.1 | 2622.7 | 2634.0 | 2642.4 | 2642.4 | 2645.2 | 2628.3 | 2634.0 | 2648.0 | 2636.8 |
| 25°    | 2561.0 | 2544.2 | 2549.8 | 2561.0 | 2569.4 | 2569.4 | 2575.0 | 2558.2 | 2566.6 | 2580.7 | 2569.4 |
| 27.5°  | 2476.9 | 2468.5 | 2468.5 | 2479.7 | 2485.3 | 2490.9 | 2493.7 | 2479.7 | 2490.9 | 2504.9 | 2496.5 |
| 30°    | 2389.9 | 2378.7 | 2384.3 | 2398.3 | 2398.3 | 2409.5 | 2409.5 | 2398.3 | 2412.4 | 2429.2 | 2423.6 |
| 32.5°  | 2297.3 | 2288.9 | 2291.7 | 2308.6 | 2308.6 | 2322.6 | 2319.8 | 2314.2 | 2328.2 | 2347.8 | 2342.2 |
| 35°    | 2204.8 | 2196.4 | 2199.2 | 2216.0 | 2216.0 | 2232.8 | 2227.2 | 2227.2 | 2241.2 | 2263.7 | 2258.1 |
| 37.5°  | 2106.6 | 2101.0 | 2103.8 | 2120.6 | 2120.6 | 2137.5 | 2131.8 | 2134.7 | 2151.5 | 2176.7 | 2173.9 |
| 40°    | 2005.6 | 2000.0 | 2005.6 | 2019.6 | 2025.3 | 2039.3 | 2033.7 | 2039.3 | 2061.7 | 2084.2 | 2092.6 |
| 42.5°  | 1901.8 | 1899.0 | 1904.6 | 1918.7 | 1924.3 | 1938.3 | 1935.5 | 1943.9 | 1966.3 | 2000.0 | 2011.2 |
| 45°    | 1795.2 | 1795.2 | 1800.8 | 1814.9 | 1820.5 | 1837.3 | 1834.5 | 1845.7 | 1873.8 | 1910.2 | 1929.9 |
| 47.5°  | 1688.6 | 1691.5 | 1694.3 | 1711.1 | 1711.1 | 1739.1 | 1730.7 | 1747.6 | 1784.0 | 1826.1 | 1848.5 |
| 50°    | 1579.2 | 1584.9 | 1587.7 | 1601.7 | 1607.3 | 1632.5 | 1626.9 | 1655.0 | 1694.3 | 1739.1 | 1770.0 |
| 52.5°  | 1469.9 | 1475.5 | 1481.1 | 1492.3 | 1497.9 | 1528.8 | 1523.1 | 1559.6 | 1607.3 | 1655.0 | 1688.6 |
| 55°    | 1354.8 | 1366.1 | 1368.9 | 1382.9 | 1391.3 | 1422.2 | 1422.2 | 1464.2 | 1514.7 | 1568.0 | 1610.1 |
| 57.5°  | 1242.6 | 1253.9 | 1256.7 | 1273.5 | 1284.7 | 1321.2 | 1326.8 | 1374.5 | 1430.6 | 1483.9 | 1534.4 |
| 60°    | 1127.6 | 1141.7 | 1144.5 | 1161.3 | 1180.9 | 1220.2 | 1228.6 | 1281.9 | 1343.6 | 1399.7 | 1458.6 |
| 62.5°  | 1012.6 | 1026.7 | 1032.3 | 1049.1 | 1079.9 | 1119.2 | 1133.2 | 1195.0 | 1259.5 | 1321.2 | 1385.7 |
| 65°    | 897.6  | 911.6  | 920.1  | 942.5  | 979.0  | 1021.0 | 1040.7 | 1105.2 | 1178.1 | 1242.6 | 1310.0 |
| 67.5°  | 782.6  | 799.4  | 810.7  | 838.7  | 886.4  | 931.3  | 950.9  | 1023.8 | 1099.6 | 1169.7 | 1239.8 |
| 70°    | 670.4  | 687.2  | 701.3  | 737.7  | 793.8  | 838.7  | 864.0  | 942.5  | 1021.0 | 1096.8 | 1175.3 |
| 72.5°  | 561.0  | 577.8  | 597.5  | 642.4  | 704.1  | 754.6  | 782.6  | 864.0  | 950.9  | 1026.7 | 1108.0 |
| 75°    | 448.8  | 468.4  | 490.9  | 552.6  | 622.7  | 673.2  | 704.1  | 791.0  | 880.8  | 956.5  | 1043.5 |
| 77.5°  | 347.8  | 367.5  | 401.1  | 462.8  | 541.4  | 597.5  | 631.1  | 723.7  | 816.3  | 892.0  | 981.8  |
| 80°    | 255.3  | 274.9  | 319.8  | 387.1  | 468.4  | 521.7  | 563.8  | 659.2  | 754.6  | 833.1  | 922.9  |
| 82.5°  | 173.9  | 193.5  | 246.8  | 319.8  | 406.7  | 460.0  | 499.3  | 600.3  | 695.7  | 777.0  | 866.8  |
| 85°    | 101.0  | 129.0  | 185.1  | 263.7  | 353.4  | 406.7  | 446.0  | 549.8  | 642.4  | 723.7  | 816.3  |
| 87.5°  | 44.9   | 78.5   | 140.3  | 218.8  | 308.6  | 359.0  | 401.1  | 496.5  | 594.7  | 676.0  | 768.6  |
| 90°    | 2.8    | 44.9   | 109.4  | 185.1  | 272.1  | 319.8  | 359.0  | 454.4  | 547.0  | 631.1  | 720.9  |
| 92.5°  | 5.6    | 30.9   | 89.8   | 159.9  | 241.2  | 288.9  | 328.2  | 418.0  | 504.9  | 591.9  | 678.8  |
| 95°    | 14.0   | 30.9   | 78.5   | 143.1  | 218.8  | 263.7  | 300.1  | 387.1  | 468.4  | 552.6  | 636.7  |
| 97.5°  | 22.4   | 33.7   | 75.7   | 134.6  | 202.0  | 244.0  | 277.7  | 359.0  | 440.4  | 516.1  | 600.3  |
| 100°   | 30.9   | 42.1   | 75.7   | 129.0  | 190.7  | 230.0  | 260.9  | 336.6  | 412.3  | 482.5  | 566.6  |
| 102.5° | 39.3   | 50.5   | 81.3   | 129.0  | 185.1  | 218.8  | 249.7  | 319.8  | 389.9  | 454.4  | 533.0  |
| 105°   | 50.5   | 58.9   | 87.0   | 129.0  | 179.5  | 213.2  | 238.4  | 302.9  | 370.3  | 432.0  | 502.1  |
| 107.5° | 61.7   | 67.3   | 92.6   | 131.8  | 179.5  | 207.6  | 232.8  | 291.7  | 353.4  | 409.5  | 476.9  |
| 110°   | 75.7   | 78.5   | 101.0  | 137.4  | 179.5  | 204.8  | 227.2  | 283.3  | 339.4  | 392.7  | 454.4  |



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 CATALOG NUMBER: 8TMB-12SL-RNDU-UNV-L850

**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 5°    | 10°   | 15°   | 20°   | 22.5° | 25°   | 30°   | 35°   | 40°   | 45°   |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 112.5° | 87.0  | 87.0  | 109.4 | 143.1 | 179.5 | 204.8 | 224.4 | 274.9 | 328.2 | 375.9 | 434.8 |
| 115°   | 101.0 | 101.0 | 117.8 | 148.7 | 182.3 | 204.8 | 224.4 | 272.1 | 319.8 | 361.9 | 418.0 |
| 117.5° | 112.2 | 112.2 | 129.0 | 154.3 | 187.9 | 207.6 | 224.4 | 266.5 | 311.4 | 350.6 | 401.1 |
| 120°   | 123.4 | 123.4 | 134.6 | 159.9 | 190.7 | 210.4 | 224.4 | 263.7 | 302.9 | 342.2 | 387.1 |
| 122.5° | 134.6 | 134.6 | 143.1 | 168.3 | 193.5 | 210.4 | 224.4 | 260.9 | 297.3 | 331.0 | 373.1 |
| 125°   | 145.9 | 145.9 | 151.5 | 173.9 | 199.2 | 213.2 | 227.2 | 260.9 | 294.5 | 322.6 | 364.7 |
| 127.5° | 157.1 | 154.3 | 162.7 | 182.3 | 202.0 | 216.0 | 230.0 | 260.9 | 288.9 | 317.0 | 353.4 |
| 130°   | 165.5 | 162.7 | 173.9 | 187.9 | 207.6 | 218.8 | 230.0 | 258.1 | 286.1 | 311.4 | 342.2 |
| 132.5° | 176.7 | 171.1 | 185.1 | 190.7 | 213.2 | 224.4 | 232.8 | 258.1 | 283.3 | 305.8 | 336.6 |
| 135°   | 185.1 | 179.5 | 193.5 | 199.2 | 216.0 | 227.2 | 235.6 | 258.1 | 280.5 | 302.9 | 328.2 |
| 137.5° | 190.7 | 187.9 | 202.0 | 207.6 | 218.8 | 230.0 | 238.4 | 258.1 | 277.7 | 297.3 | 322.6 |
| 140°   | 193.5 | 190.7 | 202.0 | 213.2 | 218.8 | 230.0 | 235.6 | 255.3 | 274.9 | 291.7 | 314.2 |
| 142.5° | 196.4 | 196.4 | 204.8 | 216.0 | 218.8 | 227.2 | 235.6 | 252.5 | 269.3 | 283.3 | 308.6 |
| 145°   | 196.4 | 196.4 | 204.8 | 218.8 | 221.6 | 224.4 | 230.0 | 246.8 | 260.9 | 274.9 | 297.3 |
| 147.5° | 196.4 | 196.4 | 207.6 | 218.8 | 224.4 | 227.2 | 224.4 | 241.2 | 255.3 | 266.5 | 286.1 |
| 150°   | 196.4 | 196.4 | 207.6 | 218.8 | 227.2 | 230.0 | 227.2 | 235.6 | 246.8 | 258.1 | 274.9 |
| 152.5° | 199.2 | 199.2 | 207.6 | 218.8 | 227.2 | 230.0 | 230.0 | 230.0 | 238.4 | 249.7 | 266.5 |
| 155°   | 199.2 | 202.0 | 207.6 | 224.4 | 230.0 | 232.8 | 232.8 | 232.8 | 230.0 | 241.2 | 255.3 |
| 157.5° | 207.6 | 210.4 | 213.2 | 227.2 | 232.8 | 235.6 | 235.6 | 235.6 | 232.8 | 230.0 | 244.0 |
| 160°   | 216.0 | 218.8 | 221.6 | 232.8 | 238.4 | 241.2 | 241.2 | 241.2 | 235.6 | 232.8 | 232.8 |
| 162.5° | 224.4 | 230.0 | 230.0 | 235.6 | 241.2 | 244.0 | 244.0 | 246.8 | 241.2 | 238.4 | 235.6 |
| 165°   | 235.6 | 238.4 | 238.4 | 241.2 | 246.8 | 249.7 | 246.8 | 249.7 | 246.8 | 244.0 | 241.2 |
| 167.5° | 244.0 | 246.8 | 246.8 | 249.7 | 249.7 | 252.5 | 252.5 | 252.5 | 249.7 | 246.8 | 246.8 |
| 170°   | 252.5 | 255.3 | 255.3 | 255.3 | 255.3 | 255.3 | 255.3 | 255.3 | 252.5 | 246.8 | 246.8 |
| 172.5° | 258.1 | 260.9 | 260.9 | 258.1 | 258.1 | 258.1 | 258.1 | 255.3 | 249.7 | 246.8 | 246.8 |
| 175°   | 260.9 | 263.7 | 263.7 | 260.9 | 258.1 | 258.1 | 258.1 | 255.3 | 249.7 | 246.8 | 246.8 |
| 177.5° | 263.7 | 266.5 | 263.7 | 263.7 | 258.1 | 258.1 | 258.1 | 258.1 | 252.5 | 249.7 | 246.8 |
| 180°   | 227.2 | 227.2 | 227.2 | 227.2 | 227.2 | 227.2 | 227.2 | 227.2 | 227.2 | 227.2 | 227.2 |



TEST NUMBER: P894552  
 CATALOG NUMBER: 8TMB-12SL-RNDU-UNV-L850

**CANDELA DISTRIBUTION (continued):**

|        | 50°    | 55°    | 60°    | 65°    | 67.5°  | 70°    | 75°    | 80°    | 85°    | 90°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 2948.1 | 2948.1 | 2948.1 | 2948.1 | 2948.1 | 2948.1 | 2948.1 | 2948.1 | 2948.1 | 2948.1 |
| 2.5°   | 2945.3 | 2911.7 | 2934.1 | 2936.9 | 2948.1 | 2936.9 | 2945.3 | 2936.9 | 2959.3 | 2950.9 |
| 5°     | 2934.1 | 2903.2 | 2922.9 | 2925.7 | 2939.7 | 2925.7 | 2939.7 | 2934.1 | 2962.1 | 2953.7 |
| 7.5°   | 2914.5 | 2889.2 | 2906.0 | 2908.8 | 2925.7 | 2911.7 | 2925.7 | 2920.1 | 2953.7 | 2942.5 |
| 10°    | 2886.4 | 2866.8 | 2883.6 | 2886.4 | 2903.2 | 2889.2 | 2900.4 | 2894.8 | 2931.3 | 2914.5 |
| 12.5°  | 2855.6 | 2838.7 | 2852.7 | 2855.6 | 2875.2 | 2861.2 | 2875.2 | 2869.6 | 2906.0 | 2889.2 |
| 15°    | 2810.7 | 2802.3 | 2816.3 | 2821.9 | 2841.5 | 2830.3 | 2844.3 | 2838.7 | 2878.0 | 2855.6 |
| 17.5°  | 2765.8 | 2760.2 | 2774.2 | 2779.8 | 2802.3 | 2788.2 | 2802.3 | 2796.6 | 2835.9 | 2813.5 |
| 20°    | 2709.7 | 2706.9 | 2720.9 | 2729.3 | 2749.0 | 2734.9 | 2751.8 | 2746.2 | 2788.2 | 2765.8 |
| 22.5°  | 2650.8 | 2650.8 | 2662.0 | 2670.4 | 2690.1 | 2678.8 | 2695.7 | 2692.9 | 2734.9 | 2712.5 |
| 25°    | 2586.3 | 2589.1 | 2600.3 | 2611.5 | 2634.0 | 2625.5 | 2639.6 | 2639.6 | 2678.8 | 2650.8 |
| 27.5°  | 2513.3 | 2527.4 | 2535.8 | 2549.8 | 2569.4 | 2561.0 | 2575.0 | 2577.9 | 2617.1 | 2589.1 |
| 30°    | 2437.6 | 2457.2 | 2465.6 | 2482.5 | 2499.3 | 2499.3 | 2513.3 | 2518.9 | 2558.2 | 2530.2 |
| 32.5°  | 2359.1 | 2381.5 | 2392.7 | 2415.2 | 2437.6 | 2437.6 | 2457.2 | 2465.6 | 2504.9 | 2479.7 |
| 35°    | 2280.5 | 2311.4 | 2325.4 | 2353.4 | 2375.9 | 2378.7 | 2398.3 | 2409.5 | 2448.8 | 2423.6 |
| 37.5°  | 2204.8 | 2244.0 | 2258.1 | 2291.7 | 2311.4 | 2317.0 | 2339.4 | 2353.4 | 2389.9 | 2367.5 |
| 40°    | 2126.2 | 2173.9 | 2190.8 | 2227.2 | 2244.0 | 2255.3 | 2277.7 | 2294.5 | 2328.2 | 2308.6 |
| 42.5°  | 2050.5 | 2103.8 | 2120.6 | 2159.9 | 2179.5 | 2190.8 | 2213.2 | 2235.6 | 2269.3 | 2249.7 |
| 45°    | 1974.8 | 2033.7 | 2053.3 | 2095.4 | 2112.2 | 2129.0 | 2154.3 | 2173.9 | 2204.8 | 2187.9 |
| 47.5°  | 1901.8 | 1963.5 | 1983.2 | 2028.1 | 2047.7 | 2067.3 | 2089.8 | 2117.8 | 2145.9 | 2129.0 |
| 50°    | 1826.1 | 1890.6 | 1915.9 | 1963.5 | 1980.4 | 2002.8 | 2030.9 | 2056.1 | 2084.2 | 2070.1 |
| 52.5°  | 1753.2 | 1820.5 | 1845.7 | 1896.2 | 1915.9 | 1938.3 | 1966.3 | 1994.4 | 2019.6 | 2008.4 |
| 55°    | 1674.6 | 1747.6 | 1775.6 | 1828.9 | 1848.5 | 1871.0 | 1901.8 | 1932.7 | 1955.1 | 1946.7 |
| 57.5°  | 1601.7 | 1677.4 | 1705.5 | 1764.4 | 1781.2 | 1809.3 | 1840.1 | 1873.8 | 1893.4 | 1885.0 |
| 60°    | 1528.8 | 1604.5 | 1638.2 | 1697.1 | 1716.7 | 1744.7 | 1775.6 | 1812.1 | 1828.9 | 1823.3 |
| 62.5°  | 1455.8 | 1534.4 | 1570.8 | 1632.5 | 1649.4 | 1680.2 | 1716.7 | 1747.6 | 1764.4 | 1761.6 |
| 65°    | 1388.5 | 1464.2 | 1506.3 | 1568.0 | 1584.9 | 1618.5 | 1652.2 | 1685.8 | 1702.7 | 1702.7 |
| 67.5°  | 1318.4 | 1399.7 | 1441.8 | 1506.3 | 1520.3 | 1556.8 | 1593.3 | 1626.9 | 1641.0 | 1641.0 |
| 70°    | 1253.9 | 1332.4 | 1380.1 | 1444.6 | 1458.6 | 1492.3 | 1531.6 | 1568.0 | 1579.2 | 1582.1 |
| 72.5°  | 1189.3 | 1267.9 | 1318.4 | 1385.7 | 1399.7 | 1433.4 | 1469.9 | 1509.1 | 1517.5 | 1520.3 |
| 75°    | 1127.6 | 1206.2 | 1256.7 | 1324.0 | 1338.0 | 1371.7 | 1410.9 | 1447.4 | 1458.6 | 1461.4 |
| 77.5°  | 1065.9 | 1144.5 | 1200.6 | 1265.1 | 1279.1 | 1312.8 | 1352.0 | 1388.5 | 1396.9 | 1402.5 |
| 80°    | 1009.8 | 1085.6 | 1138.9 | 1209.0 | 1223.0 | 1256.7 | 1293.1 | 1329.6 | 1335.2 | 1343.6 |
| 82.5°  | 953.7  | 1029.5 | 1085.6 | 1152.9 | 1166.9 | 1200.6 | 1237.0 | 1273.5 | 1279.1 | 1290.3 |
| 85°    | 900.4  | 976.2  | 1032.3 | 1096.8 | 1113.6 | 1144.5 | 1183.7 | 1217.4 | 1223.0 | 1231.4 |
| 87.5°  | 852.7  | 922.9  | 981.8  | 1043.5 | 1060.3 | 1091.2 | 1130.4 | 1164.1 | 1166.9 | 1178.1 |
| 90°    | 802.2  | 872.4  | 931.3  | 993.0  | 1009.8 | 1037.9 | 1077.1 | 1110.8 | 1116.4 | 1124.8 |
| 92.5°  | 760.2  | 824.7  | 886.4  | 945.3  | 959.3  | 990.2  | 1026.7 | 1060.3 | 1065.9 | 1074.3 |
| 95°    | 715.3  | 779.8  | 841.5  | 897.6  | 911.6  | 942.5  | 976.2  | 1009.8 | 1015.4 | 1023.8 |
| 97.5°  | 676.0  | 737.7  | 796.6  | 852.7  | 866.8  | 894.8  | 931.3  | 962.1  | 967.7  | 979.0  |
| 100°   | 639.6  | 698.5  | 760.2  | 810.7  | 824.7  | 852.7  | 886.4  | 917.3  | 922.9  | 934.1  |
| 102.5° | 605.9  | 662.0  | 720.9  | 768.6  | 785.4  | 810.7  | 844.3  | 872.4  | 878.0  | 886.4  |
| 105°   | 575.0  | 628.3  | 684.4  | 729.3  | 746.1  | 771.4  | 802.2  | 830.3  | 835.9  | 844.3  |
| 107.5° | 544.2  | 594.7  | 648.0  | 692.9  | 706.9  | 729.3  | 760.2  | 788.2  | 793.8  | 805.1  |
| 110°   | 516.1  | 566.6  | 617.1  | 659.2  | 676.0  | 692.9  | 723.7  | 749.0  | 754.6  | 763.0  |





TEST NUMBER: P894552  
 CATALOG NUMBER: 8TMB-12SL-RNDU-UNV-L850

**CANDELA DISTRIBUTION (continued):**

|        | 50°   | 55°   | 60°   | 65°   | 67.5° | 70°   | 75°   | 80°   | 85°   | 90°   |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 112.5° | 490.9 | 535.8 | 586.3 | 625.5 | 639.6 | 659.2 | 684.4 | 709.7 | 715.3 | 726.5 |
| 115°   | 468.4 | 510.5 | 561.0 | 597.5 | 608.7 | 625.5 | 653.6 | 676.0 | 681.6 | 690.0 |
| 117.5° | 448.8 | 485.3 | 530.2 | 566.6 | 580.6 | 594.7 | 619.9 | 639.6 | 648.0 | 653.6 |
| 120°   | 432.0 | 465.6 | 504.9 | 538.6 | 555.4 | 566.6 | 589.1 | 608.7 | 617.1 | 622.7 |
| 122.5° | 415.1 | 446.0 | 482.5 | 513.3 | 527.4 | 535.8 | 561.0 | 577.8 | 586.3 | 594.7 |
| 125°   | 401.1 | 429.2 | 462.8 | 488.1 | 502.1 | 510.5 | 533.0 | 549.8 | 558.2 | 563.8 |
| 127.5° | 387.1 | 412.3 | 446.0 | 465.6 | 479.7 | 485.3 | 504.9 | 521.7 | 530.2 | 533.0 |
| 130°   | 373.1 | 398.3 | 426.4 | 446.0 | 457.2 | 465.6 | 482.5 | 493.7 | 502.1 | 504.9 |
| 132.5° | 361.9 | 384.3 | 409.5 | 429.2 | 440.4 | 443.2 | 460.0 | 471.3 | 479.7 | 482.5 |
| 135°   | 353.4 | 370.3 | 395.5 | 412.3 | 420.8 | 426.4 | 440.4 | 448.8 | 457.2 | 460.0 |
| 137.5° | 342.2 | 359.0 | 381.5 | 392.7 | 403.9 | 406.7 | 420.8 | 429.2 | 437.6 | 440.4 |
| 140°   | 333.8 | 347.8 | 367.5 | 378.7 | 389.9 | 389.9 | 401.1 | 409.5 | 418.0 | 418.0 |
| 142.5° | 325.4 | 339.4 | 356.2 | 367.5 | 375.9 | 375.9 | 387.1 | 392.7 | 401.1 | 401.1 |
| 145°   | 314.2 | 328.2 | 345.0 | 353.4 | 361.9 | 361.9 | 370.3 | 375.9 | 384.3 | 384.3 |
| 147.5° | 302.9 | 317.0 | 333.8 | 339.4 | 347.8 | 347.8 | 356.2 | 361.9 | 367.5 | 367.5 |
| 150°   | 288.9 | 300.1 | 319.8 | 328.2 | 336.6 | 336.6 | 342.2 | 347.8 | 353.4 | 353.4 |
| 152.5° | 277.7 | 286.1 | 302.9 | 314.2 | 322.6 | 322.6 | 328.2 | 333.8 | 339.4 | 339.4 |
| 155°   | 263.7 | 272.1 | 286.1 | 300.1 | 308.6 | 311.4 | 317.0 | 319.8 | 325.4 | 325.4 |
| 157.5° | 252.5 | 260.9 | 272.1 | 283.3 | 291.7 | 297.3 | 305.8 | 308.6 | 311.4 | 311.4 |
| 160°   | 238.4 | 244.0 | 255.3 | 266.5 | 274.9 | 280.5 | 294.5 | 297.3 | 300.1 | 300.1 |
| 162.5° | 232.8 | 232.8 | 238.4 | 246.8 | 255.3 | 258.1 | 272.1 | 283.3 | 288.9 | 286.1 |
| 165°   | 235.6 | 232.8 | 232.8 | 235.6 | 241.2 | 244.0 | 252.5 | 269.3 | 274.9 | 272.1 |
| 167.5° | 241.2 | 235.6 | 232.8 | 232.8 | 238.4 | 238.4 | 246.8 | 260.9 | 277.7 | 272.1 |
| 170°   | 241.2 | 232.8 | 227.2 | 227.2 | 230.0 | 230.0 | 235.6 | 244.0 | 260.9 | 263.7 |
| 172.5° | 238.4 | 232.8 | 224.4 | 213.2 | 216.0 | 213.2 | 210.4 | 216.0 | 218.8 | 246.8 |
| 175°   | 241.2 | 232.8 | 224.4 | 210.4 | 204.8 | 196.4 | 182.3 | 171.1 | 168.3 | 137.4 |
| 177.5° | 238.4 | 230.0 | 218.8 | 207.6 | 202.0 | 190.7 | 173.9 | 154.3 | 143.1 | 126.2 |
| 180°   | 227.2 | 227.2 | 227.2 | 227.2 | 227.2 | 227.2 | 227.2 | 227.2 | 227.2 | 227.2 |



TEST NUMBER: P894552  
 CATALOG NUMBER: 8TMB-12SL-RNDU-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 | 15.11            | 16.42 | 15.75 | 17.09 | 17.86 | 18.73          | 20.05 | 19.38 | 20.71 | 21.48 |
|                 | 3H   | 16.46            | 17.66 | 17.11 | 18.33 | 19.13 | 21.69          | 22.89 | 22.34 | 23.56 | 24.36 |
|                 | 4H   | 16.86            | 18.00 | 17.53 | 18.69 | 19.50 | 23.20          | 24.34 | 23.87 | 25.02 | 25.84 |
|                 | 6H   | 17.08            | 18.14 | 17.76 | 18.84 | 19.67 | 24.81          | 25.87 | 25.49 | 26.56 | 27.40 |
|                 | 8H   | 17.11            | 18.13 | 17.81 | 18.85 | 19.68 | 25.66          | 26.68 | 26.35 | 27.39 | 28.23 |
|                 | 12H  | 17.11            | 18.09 | 17.82 | 18.80 | 19.66 | 26.60          | 27.58 | 27.31 | 28.29 | 29.15 |
| 4H              | 2H   | 16.27            | 17.41 | 16.94 | 18.09 | 18.91 | 19.05          | 20.19 | 19.73 | 20.88 | 21.69 |
|                 | 3H   | 17.91            | 18.89 | 18.60 | 19.61 | 20.44 | 22.23          | 23.21 | 22.92 | 23.93 | 24.77 |
|                 | 4H   | 18.48            | 19.38 | 19.18 | 20.10 | 20.97 | 23.91          | 24.82 | 24.62 | 25.54 | 26.40 |
|                 | 6H   | 18.82            | 19.62 | 19.54 | 20.37 | 21.23 | 25.73          | 26.53 | 26.45 | 27.28 | 28.15 |
|                 | 8H   | 18.89            | 19.64 | 19.62 | 20.39 | 21.27 | 26.71          | 27.46 | 27.43 | 28.21 | 29.09 |
|                 | 12H  | 18.92            | 19.60 | 19.67 | 20.37 | 21.26 | 27.79          | 28.48 | 28.54 | 29.25 | 30.14 |
| 8H              | 4H   | 19.58            | 20.34 | 20.31 | 21.08 | 21.97 | 24.08          | 24.84 | 24.81 | 25.58 | 26.47 |
|                 | 6H   | 20.19            | 20.83 | 20.95 | 21.62 | 22.51 | 26.08          | 26.72 | 26.84 | 27.51 | 28.39 |
|                 | 8H   | 20.39            | 20.97 | 21.15 | 21.75 | 22.65 | 27.20          | 27.78 | 27.96 | 28.57 | 29.46 |
|                 | 12H  | 20.50            | 21.02 | 21.27 | 21.80 | 22.75 | 28.48          | 28.99 | 29.25 | 29.77 | 30.73 |
| 12H             | 4H   | 19.95            | 20.64 | 20.70 | 21.40 | 22.29 | 24.08          | 24.76 | 24.83 | 25.53 | 26.42 |
|                 | 6H   | 20.73            | 21.31 | 21.49 | 22.10 | 22.99 | 26.11          | 26.69 | 26.87 | 27.48 | 28.37 |
|                 | 8H   | 21.06            | 21.57 | 21.83 | 22.35 | 23.31 | 27.29          | 27.81 | 28.06 | 28.59 | 29.54 |