

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: P895052

Luminaire Tested: 8TMB-4SL-RNDU-UNV-L950

Issue Date: 11/11/2024

**Test Information**

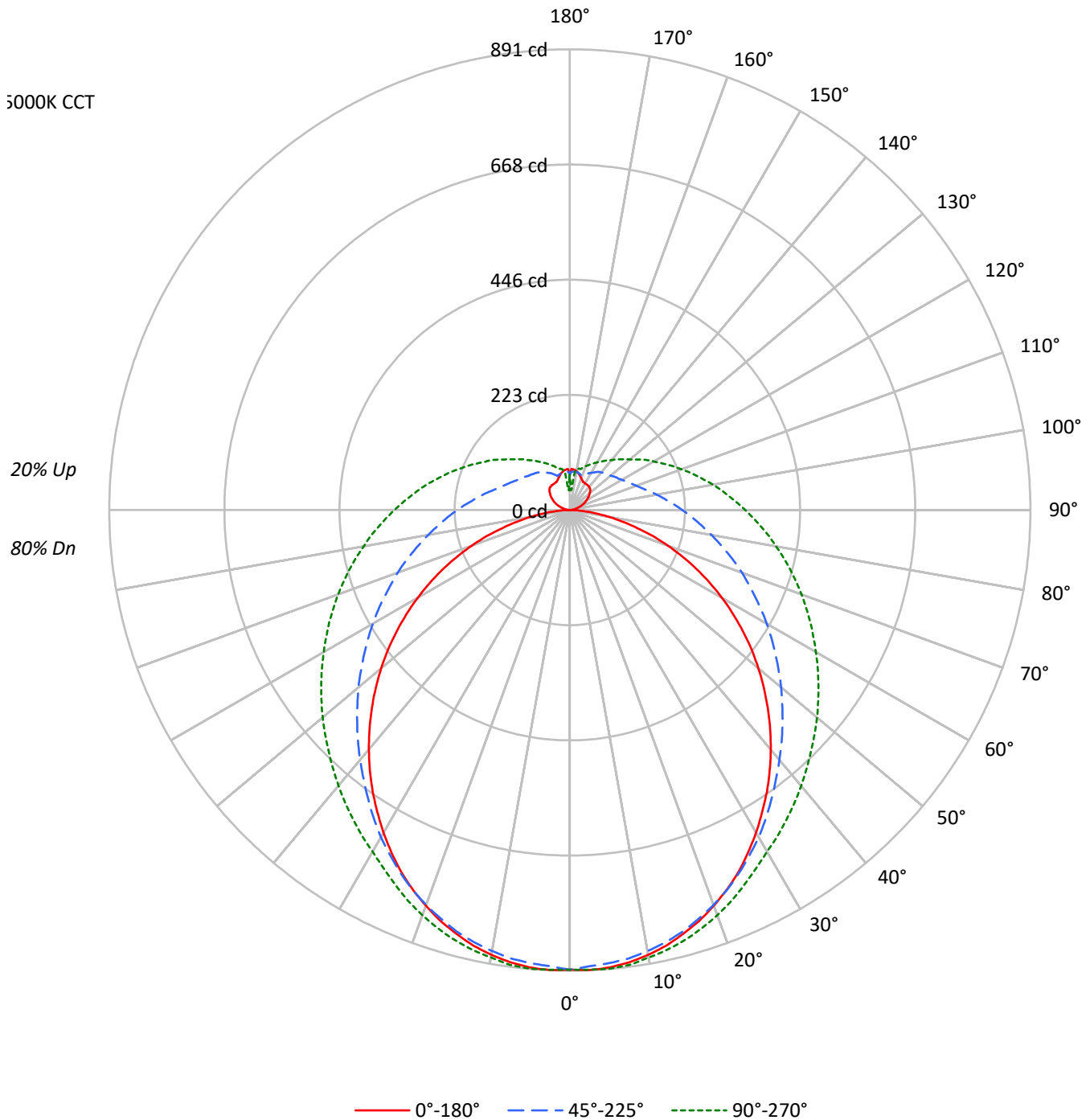
Test Method: LM-79-2019  
Report Number: P895052  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2403-327-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 11/11/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: METALUX  
Catalog Number: 8TMB-4SL-RNDU-UNV-L950  
Description: 4000 Lumen 8FT MICROBAY LINEAR BAY with ROUND FROSTED LENS WITH UPLIGHT, 90CRI, 5  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3739.0 lumens  
Efficiency: N/A  
Efficacy: 135.5 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): 27.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: 0.99  
Total Harmonic Distortion (THDi): 4.5  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

TEST NUMBER: P895052  
CATALOG NUMBER: 8TMB-4SL-RNDU-UNV-L950

### Luminous Intensity Polar Plot





TEST NUMBER: P895052

CATALOG NUMBER: 8TMB-4SL-RNDU-UNV-L950

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

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

|     | 0°   | 45°  | 90°  |
|-----|------|------|------|
| 0°  | 3154 | 3154 | 3154 |
| 5°  | 3156 | 3025 | 3027 |
| 10° | 3133 | 2912 | 2887 |
| 15° | 3095 | 2796 | 2758 |
| 20° | 3046 | 2674 | 2625 |
| 25° | 2987 | 2551 | 2492 |
| 30° | 2908 | 2426 | 2374 |
| 35° | 2828 | 2297 | 2288 |
| 40° | 2741 | 2180 | 2209 |
| 45° | 2647 | 2077 | 2138 |
| 50° | 2549 | 1986 | 2084 |
| 55° | 2436 | 1901 | 2037 |
| 60° | 2308 | 1833 | 2002 |
| 65° | 2152 | 1773 | 1982 |
| 70° | 1957 | 1738 | 1975 |
| 75° | 1690 | 1715 | 1984 |
| 80° | 1370 | 1722 | 2015 |
| 85° | 953  | 1777 | 2081 |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2647 cd/sqm



TEST NUMBER: P895052  
 CATALOG NUMBER: 8TMB-4SL-RNDU-UNV-L950

**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 84.1   | 2.2       |
| 10°-20°   | 239.8  | 6.4       |
| 20°-30°   | 360.1  | 9.6       |
| 30°-40°   | 433.0  | 11.6      |
| 40°-50°   | 458.7  | 12.3      |
| 50°-60°   | 441.8  | 11.8      |
| 60°-70°   | 391.0  | 10.5      |
| 70°-80°   | 320.7  | 8.6       |
| 80°-90°   | 248.8  | 6.7       |
| 90°-100°  | 193.1  | 5.2       |
| 100°-110° | 153.0  | 4.1       |
| 110°-120° | 121.9  | 3.3       |
| 120°-130° | 96.9   | 2.6       |
| 130°-140° | 75.6   | 2.0       |
| 140°-150° | 55.7   | 1.5       |
| 150°-160° | 36.8   | 1.0       |
| 160°-170° | 21.2   | 0.6       |
| 170°-180° | 6.8    | 0.2       |
| 0°-30°    | 684.0  | 18.3      |
| 0°-40°    | 1117.0 | 29.9      |
| 0°-60°    | 2017.5 | 54.0      |
| 0°-90°    | 2978.0 | 79.6      |
| 90°-120°  | 468.1  | 12.5      |
| 90°-150°  | 696.2  | 18.6      |
| 90°-180°  | 761.0  | 20.4      |
| 0°-180°   | 3739.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|------|-----|-------|-----|-------|-----|------|
| 0°   | 889 | 889   | 889 | 889   | 889 |      |
| 5°   | 888 | 889   | 880 | 886   | 891 | 84   |
| 15°  | 848 | 849   | 844 | 857   | 861 | 239  |
| 25°  | 772 | 775   | 775 | 794   | 799 | 355  |
| 35°  | 665 | 673   | 681 | 716   | 731 | 416  |
| 45°  | 541 | 554   | 582 | 637   | 660 | 418  |
| 55°  | 408 | 429   | 486 | 557   | 587 | 365  |
| 65°  | 271 | 308   | 395 | 478   | 513 | 268  |
| 75°  | 135 | 203   | 315 | 404   | 441 | 145  |
| 85°  | 30  | 123   | 246 | 336   | 371 | 35   |
| 90°  | 1   | 96    | 217 | 304   | 339 | 2    |
| 95°  | 4   | 80    | 192 | 275   | 309 | 4    |
| 105° | 15  | 64    | 151 | 225   | 255 | 16   |
| 115° | 30  | 62    | 126 | 184   | 208 | 30   |
| 125° | 44  | 64    | 110 | 151   | 170 | 39   |
| 135° | 56  | 68    | 99  | 127   | 139 | 43   |
| 145° | 59  | 68    | 90  | 109   | 116 | 37   |
| 155° | 60  | 70    | 77  | 93    | 98  | 28   |
| 165° | 71  | 75    | 73  | 73    | 82  | 20   |
| 175° | 79  | 78    | 74  | 62    | 41  | 7    |
| 180° | 68  | 68    | 68  | 68    | 68  |      |



TEST NUMBER: P895052  
 CATALOG NUMBER: 8TMB-4SL-RNDU-UNV-L950

**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 5°    | 10°   | 15°   | 20°   | 22.5° | 25°   | 30°   | 35°   | 40°   | 45°   |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°     | 889.0 | 889.0 | 889.0 | 889.0 | 889.0 | 889.0 | 889.0 | 889.0 | 889.0 | 889.0 | 889.0 |
| 2.5°   | 890.6 | 889.8 | 891.5 | 893.2 | 898.3 | 891.5 | 894.9 | 885.6 | 886.4 | 887.3 | 883.0 |
| 5°     | 888.1 | 885.6 | 888.1 | 889.8 | 894.0 | 889.0 | 892.3 | 882.2 | 883.0 | 884.7 | 879.6 |
| 7.5°   | 882.2 | 879.6 | 881.3 | 883.0 | 887.3 | 882.2 | 886.4 | 876.3 | 878.0 | 878.8 | 874.6 |
| 10°    | 873.7 | 870.3 | 872.0 | 874.6 | 878.0 | 873.7 | 877.1 | 867.8 | 868.7 | 870.3 | 866.1 |
| 12.5°  | 862.7 | 859.3 | 861.0 | 862.7 | 867.0 | 862.7 | 866.1 | 856.8 | 858.5 | 860.2 | 856.0 |
| 15°    | 848.4 | 845.0 | 846.7 | 848.4 | 851.7 | 849.2 | 852.6 | 843.3 | 845.0 | 848.4 | 844.1 |
| 17.5°  | 833.1 | 828.1 | 829.7 | 832.3 | 835.7 | 834.0 | 836.5 | 828.9 | 829.7 | 833.1 | 828.9 |
| 20°    | 814.5 | 809.4 | 811.1 | 813.7 | 817.1 | 816.2 | 817.9 | 811.1 | 812.8 | 817.1 | 812.8 |
| 22.5°  | 794.2 | 789.1 | 790.8 | 794.2 | 796.8 | 796.8 | 797.6 | 792.5 | 794.2 | 798.5 | 795.1 |
| 25°    | 772.2 | 767.2 | 768.8 | 772.2 | 774.8 | 774.8 | 776.5 | 771.4 | 773.9 | 778.2 | 774.8 |
| 27.5°  | 746.9 | 744.3 | 744.3 | 747.7 | 749.4 | 751.1 | 751.9 | 747.7 | 751.1 | 755.3 | 752.8 |
| 30°    | 720.6 | 717.3 | 718.9 | 723.2 | 723.2 | 726.6 | 726.6 | 723.2 | 727.4 | 732.5 | 730.8 |
| 32.5°  | 692.7 | 690.2 | 691.0 | 696.1 | 696.1 | 700.3 | 699.5 | 697.8 | 702.0 | 707.9 | 706.3 |
| 35°    | 664.8 | 662.3 | 663.1 | 668.2 | 668.2 | 673.3 | 671.6 | 671.6 | 675.8 | 682.6 | 680.9 |
| 37.5°  | 635.2 | 633.5 | 634.4 | 639.4 | 639.4 | 644.5 | 642.8 | 643.7 | 648.7 | 656.4 | 655.5 |
| 40°    | 604.8 | 603.1 | 604.8 | 609.0 | 610.7 | 614.9 | 613.2 | 614.9 | 621.7 | 628.4 | 631.0 |
| 42.5°  | 573.5 | 572.6 | 574.3 | 578.5 | 580.2 | 584.5 | 583.6 | 586.2 | 592.9 | 603.1 | 606.5 |
| 45°    | 541.3 | 541.3 | 543.0 | 547.2 | 548.9 | 554.0 | 553.2 | 556.5 | 565.0 | 576.0 | 581.9 |
| 47.5°  | 509.2 | 510.0 | 510.9 | 515.9 | 515.9 | 524.4 | 521.9 | 526.9 | 537.9 | 550.6 | 557.4 |
| 50°    | 476.2 | 477.9 | 478.7 | 483.0 | 484.7 | 492.3 | 490.6 | 499.0 | 510.9 | 524.4 | 533.7 |
| 52.5°  | 443.2 | 444.9 | 446.6 | 450.0 | 451.7 | 461.0 | 459.3 | 470.3 | 484.7 | 499.0 | 509.2 |
| 55°    | 408.5 | 411.9 | 412.8 | 417.0 | 419.5 | 428.8 | 428.8 | 441.5 | 456.7 | 472.8 | 485.5 |
| 57.5°  | 374.7 | 378.1 | 378.9 | 384.0 | 387.4 | 398.4 | 400.1 | 414.5 | 431.4 | 447.4 | 462.7 |
| 60°    | 340.0 | 344.2 | 345.1 | 350.2 | 356.1 | 367.9 | 370.5 | 386.5 | 405.1 | 422.1 | 439.8 |
| 62.5°  | 305.3 | 309.6 | 311.3 | 316.3 | 325.6 | 337.5 | 341.7 | 360.3 | 379.8 | 398.4 | 417.8 |
| 65°    | 270.7 | 274.9 | 277.4 | 284.2 | 295.2 | 307.9 | 313.8 | 333.3 | 355.2 | 374.7 | 395.0 |
| 67.5°  | 236.0 | 241.1 | 244.4 | 252.9 | 267.3 | 280.8 | 286.7 | 308.7 | 331.6 | 352.7 | 373.9 |
| 70°    | 202.2 | 207.2 | 211.5 | 222.4 | 239.4 | 252.9 | 260.5 | 284.2 | 307.9 | 330.7 | 354.4 |
| 72.5°  | 169.2 | 174.2 | 180.2 | 193.7 | 212.3 | 227.5 | 236.0 | 260.5 | 286.7 | 309.6 | 334.1 |
| 75°    | 135.3 | 141.3 | 148.0 | 166.6 | 187.8 | 203.0 | 212.3 | 238.5 | 265.6 | 288.4 | 314.6 |
| 77.5°  | 104.9 | 110.8 | 121.0 | 139.6 | 163.2 | 180.2 | 190.3 | 218.2 | 246.1 | 269.0 | 296.0 |
| 80°    | 77.0  | 82.9  | 96.4  | 116.7 | 141.3 | 157.3 | 170.0 | 198.8 | 227.5 | 251.2 | 278.3 |
| 82.5°  | 52.4  | 58.4  | 74.4  | 96.4  | 122.6 | 138.7 | 150.6 | 181.0 | 209.8 | 234.3 | 261.4 |
| 85°    | 30.4  | 38.9  | 55.8  | 79.5  | 106.6 | 122.6 | 134.5 | 165.8 | 193.7 | 218.2 | 246.1 |
| 87.5°  | 13.5  | 23.7  | 42.3  | 66.0  | 93.0  | 108.3 | 121.0 | 149.7 | 179.3 | 203.8 | 231.8 |
| 90°    | 0.8   | 13.5  | 33.0  | 55.8  | 82.0  | 96.4  | 108.3 | 137.0 | 164.9 | 190.3 | 217.4 |
| 92.5°  | 1.7   | 9.3   | 27.1  | 48.2  | 72.7  | 87.1  | 99.0  | 126.0 | 152.2 | 178.5 | 204.7 |
| 95°    | 4.2   | 9.3   | 23.7  | 43.1  | 66.0  | 79.5  | 90.5  | 116.7 | 141.3 | 166.6 | 192.0 |
| 97.5°  | 6.8   | 10.1  | 22.8  | 40.6  | 60.9  | 73.6  | 83.7  | 108.3 | 132.8 | 155.6 | 181.0 |
| 100°   | 9.3   | 12.7  | 22.8  | 38.9  | 57.5  | 69.4  | 78.7  | 101.5 | 124.3 | 145.5 | 170.9 |
| 102.5° | 11.8  | 15.2  | 24.5  | 38.9  | 55.8  | 66.0  | 75.3  | 96.4  | 117.6 | 137.0 | 160.7 |
| 105°   | 15.2  | 17.8  | 26.2  | 38.9  | 54.1  | 64.3  | 71.9  | 91.3  | 111.6 | 130.3 | 151.4 |
| 107.5° | 18.6  | 20.3  | 27.9  | 39.8  | 54.1  | 62.6  | 70.2  | 88.0  | 106.6 | 123.5 | 143.8 |
| 110°   | 22.8  | 23.7  | 30.4  | 41.4  | 54.1  | 61.7  | 68.5  | 85.4  | 102.3 | 118.4 | 137.0 |



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 CATALOG NUMBER: 8TMB-4SL-RNDU-UNV-L950

**CANDELA DISTRIBUTION (continued):**

|        | 0°   | 5°   | 10°  | 15°  | 20°  | 22.5° | 25°  | 30°  | 35°  | 40°   | 45°   |
|--------|------|------|------|------|------|-------|------|------|------|-------|-------|
| 112.5° | 26.2 | 26.2 | 33.0 | 43.1 | 54.1 | 61.7  | 67.7 | 82.9 | 99.0 | 113.3 | 131.1 |
| 115°   | 30.4 | 30.4 | 35.5 | 44.8 | 55.0 | 61.7  | 67.7 | 82.0 | 96.4 | 109.1 | 126.0 |
| 117.5° | 33.8 | 33.8 | 38.9 | 46.5 | 56.7 | 62.6  | 67.7 | 80.4 | 93.9 | 105.7 | 121.0 |
| 120°   | 37.2 | 37.2 | 40.6 | 48.2 | 57.5 | 63.4  | 67.7 | 79.5 | 91.3 | 103.2 | 116.7 |
| 122.5° | 40.6 | 40.6 | 43.1 | 50.7 | 58.4 | 63.4  | 67.7 | 78.7 | 89.7 | 99.8  | 112.5 |
| 125°   | 44.0 | 44.0 | 45.7 | 52.4 | 60.1 | 64.3  | 68.5 | 78.7 | 88.8 | 97.3  | 110.0 |
| 127.5° | 47.4 | 46.5 | 49.1 | 55.0 | 60.9 | 65.1  | 69.4 | 78.7 | 87.1 | 95.6  | 106.6 |
| 130°   | 49.9 | 49.1 | 52.4 | 56.7 | 62.6 | 66.0  | 69.4 | 77.8 | 86.3 | 93.9  | 103.2 |
| 132.5° | 53.3 | 51.6 | 55.8 | 57.5 | 64.3 | 67.7  | 70.2 | 77.8 | 85.4 | 92.2  | 101.5 |
| 135°   | 55.8 | 54.1 | 58.4 | 60.1 | 65.1 | 68.5  | 71.0 | 77.8 | 84.6 | 91.3  | 99.0  |
| 137.5° | 57.5 | 56.7 | 60.9 | 62.6 | 66.0 | 69.4  | 71.9 | 77.8 | 83.7 | 89.7  | 97.3  |
| 140°   | 58.4 | 57.5 | 60.9 | 64.3 | 66.0 | 69.4  | 71.0 | 77.0 | 82.9 | 88.0  | 94.7  |
| 142.5° | 59.2 | 59.2 | 61.7 | 65.1 | 66.0 | 68.5  | 71.0 | 76.1 | 81.2 | 85.4  | 93.0  |
| 145°   | 59.2 | 59.2 | 61.7 | 66.0 | 66.8 | 67.7  | 69.4 | 74.4 | 78.7 | 82.9  | 89.7  |
| 147.5° | 59.2 | 59.2 | 62.6 | 66.0 | 67.7 | 68.5  | 67.7 | 72.7 | 77.0 | 80.4  | 86.3  |
| 150°   | 59.2 | 59.2 | 62.6 | 66.0 | 68.5 | 69.4  | 68.5 | 71.0 | 74.4 | 77.8  | 82.9  |
| 152.5° | 60.1 | 60.1 | 62.6 | 66.0 | 68.5 | 69.4  | 69.4 | 69.4 | 71.9 | 75.3  | 80.4  |
| 155°   | 60.1 | 60.9 | 62.6 | 67.7 | 69.4 | 70.2  | 70.2 | 70.2 | 69.4 | 72.7  | 77.0  |
| 157.5° | 62.6 | 63.4 | 64.3 | 68.5 | 70.2 | 71.0  | 71.0 | 71.0 | 70.2 | 69.4  | 73.6  |
| 160°   | 65.1 | 66.0 | 66.8 | 70.2 | 71.9 | 72.7  | 72.7 | 72.7 | 71.0 | 70.2  | 70.2  |
| 162.5° | 67.7 | 69.4 | 69.4 | 71.0 | 72.7 | 73.6  | 73.6 | 74.4 | 72.7 | 71.9  | 71.0  |
| 165°   | 71.0 | 71.9 | 71.9 | 72.7 | 74.4 | 75.3  | 74.4 | 75.3 | 74.4 | 73.6  | 72.7  |
| 167.5° | 73.6 | 74.4 | 74.4 | 75.3 | 75.3 | 76.1  | 76.1 | 76.1 | 75.3 | 74.4  | 74.4  |
| 170°   | 76.1 | 77.0 | 77.0 | 77.0 | 77.0 | 77.0  | 77.0 | 77.0 | 76.1 | 74.4  | 74.4  |
| 172.5° | 77.8 | 78.7 | 78.7 | 77.8 | 77.8 | 77.8  | 77.8 | 77.0 | 75.3 | 74.4  | 74.4  |
| 175°   | 78.7 | 79.5 | 79.5 | 78.7 | 77.8 | 77.8  | 77.8 | 77.0 | 75.3 | 74.4  | 74.4  |
| 177.5° | 79.5 | 80.4 | 79.5 | 79.5 | 77.8 | 77.8  | 77.8 | 77.8 | 76.1 | 75.3  | 74.4  |
| 180°   | 68.5 | 68.5 | 68.5 | 68.5 | 68.5 | 68.5  | 68.5 | 68.5 | 68.5 | 68.5  | 68.5  |



TEST NUMBER: P895052  
 CATALOG NUMBER: 8TMB-4SL-RNDU-UNV-L950

**CANDELA DISTRIBUTION (continued):**

|        | 50°   | 55°   | 60°   | 65°   | 67.5° | 70°   | 75°   | 80°   | 85°   | 90°   |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°     | 889.0 | 889.0 | 889.0 | 889.0 | 889.0 | 889.0 | 889.0 | 889.0 | 889.0 | 889.0 |
| 2.5°   | 888.1 | 878.0 | 884.7 | 885.6 | 889.0 | 885.6 | 888.1 | 885.6 | 892.3 | 889.8 |
| 5°     | 884.7 | 875.4 | 881.3 | 882.2 | 886.4 | 882.2 | 886.4 | 884.7 | 893.2 | 890.6 |
| 7.5°   | 878.8 | 871.2 | 876.3 | 877.1 | 882.2 | 878.0 | 882.2 | 880.5 | 890.6 | 887.3 |
| 10°    | 870.3 | 864.4 | 869.5 | 870.3 | 875.4 | 871.2 | 874.6 | 872.9 | 883.9 | 878.8 |
| 12.5°  | 861.0 | 856.0 | 860.2 | 861.0 | 867.0 | 862.7 | 867.0 | 865.3 | 876.3 | 871.2 |
| 15°    | 847.5 | 845.0 | 849.2 | 850.9 | 856.8 | 853.4 | 857.7 | 856.0 | 867.8 | 861.0 |
| 17.5°  | 834.0 | 832.3 | 836.5 | 838.2 | 845.0 | 840.7 | 845.0 | 843.3 | 855.1 | 848.4 |
| 20°    | 817.1 | 816.2 | 820.4 | 823.0 | 828.9 | 824.7 | 829.7 | 828.1 | 840.7 | 834.0 |
| 22.5°  | 799.3 | 799.3 | 802.7 | 805.2 | 811.1 | 807.8 | 812.8 | 812.0 | 824.7 | 817.9 |
| 25°    | 779.8 | 780.7 | 784.1 | 787.5 | 794.2 | 791.7 | 795.9 | 795.9 | 807.8 | 799.3 |
| 27.5°  | 757.9 | 762.1 | 764.6 | 768.8 | 774.8 | 772.2 | 776.5 | 777.3 | 789.1 | 780.7 |
| 30°    | 735.0 | 740.9 | 743.5 | 748.5 | 753.6 | 753.6 | 757.9 | 759.5 | 771.4 | 762.9 |
| 32.5°  | 711.3 | 718.1 | 721.5 | 728.2 | 735.0 | 735.0 | 740.9 | 743.5 | 755.3 | 747.7 |
| 35°    | 687.6 | 697.0 | 701.2 | 709.6 | 716.4 | 717.3 | 723.2 | 726.6 | 738.4 | 730.8 |
| 37.5°  | 664.8 | 676.7 | 680.9 | 691.0 | 697.0 | 698.6 | 705.4 | 709.6 | 720.6 | 713.9 |
| 40°    | 641.1 | 655.5 | 660.6 | 671.6 | 676.7 | 680.0 | 686.8 | 691.9 | 702.0 | 696.1 |
| 42.5°  | 618.3 | 634.4 | 639.4 | 651.3 | 657.2 | 660.6 | 667.3 | 674.1 | 684.3 | 678.3 |
| 45°    | 595.5 | 613.2 | 619.1 | 631.8 | 636.9 | 642.0 | 649.6 | 655.5 | 664.8 | 659.7 |
| 47.5°  | 573.5 | 592.1 | 598.0 | 611.5 | 617.4 | 623.4 | 630.1 | 638.6 | 647.0 | 642.0 |
| 50°    | 550.6 | 570.1 | 577.7 | 592.1 | 597.1 | 603.9 | 612.4 | 620.0 | 628.4 | 624.2 |
| 52.5°  | 528.6 | 548.9 | 556.5 | 571.8 | 577.7 | 584.5 | 592.9 | 601.4 | 609.0 | 605.6 |
| 55°    | 505.0 | 526.9 | 535.4 | 551.5 | 557.4 | 564.2 | 573.5 | 582.8 | 589.5 | 587.0 |
| 57.5°  | 483.0 | 505.8 | 514.3 | 532.0 | 537.1 | 545.6 | 554.9 | 565.0 | 570.9 | 568.4 |
| 60°    | 461.0 | 483.8 | 494.0 | 511.7 | 517.6 | 526.1 | 535.4 | 546.4 | 551.5 | 549.8 |
| 62.5°  | 439.0 | 462.7 | 473.7 | 492.3 | 497.3 | 506.6 | 517.6 | 526.9 | 532.0 | 531.2 |
| 65°    | 418.7 | 441.5 | 454.2 | 472.8 | 477.9 | 488.0 | 498.2 | 508.3 | 513.4 | 513.4 |
| 67.5°  | 397.5 | 422.1 | 434.7 | 454.2 | 458.4 | 469.4 | 480.4 | 490.6 | 494.8 | 494.8 |
| 70°    | 378.1 | 401.8 | 416.1 | 435.6 | 439.8 | 450.0 | 461.8 | 472.8 | 476.2 | 477.0 |
| 72.5°  | 358.6 | 382.3 | 397.5 | 417.8 | 422.1 | 432.2 | 443.2 | 455.0 | 457.6 | 458.4 |
| 75°    | 340.0 | 363.7 | 378.9 | 399.2 | 403.5 | 413.6 | 425.4 | 436.4 | 439.8 | 440.7 |
| 77.5°  | 321.4 | 345.1 | 362.0 | 381.5 | 385.7 | 395.8 | 407.7 | 418.7 | 421.2 | 422.9 |
| 80°    | 304.5 | 327.3 | 343.4 | 364.5 | 368.8 | 378.9 | 389.9 | 400.9 | 402.6 | 405.1 |
| 82.5°  | 287.6 | 310.4 | 327.3 | 347.6 | 351.9 | 362.0 | 373.0 | 384.0 | 385.7 | 389.1 |
| 85°    | 271.5 | 294.3 | 311.3 | 330.7 | 335.8 | 345.1 | 356.9 | 367.1 | 368.8 | 371.3 |
| 87.5°  | 257.1 | 278.3 | 296.0 | 314.6 | 319.7 | 329.0 | 340.9 | 351.0 | 351.9 | 355.2 |
| 90°    | 241.9 | 263.0 | 280.8 | 299.4 | 304.5 | 313.0 | 324.8 | 334.9 | 336.6 | 339.2 |
| 92.5°  | 229.2 | 248.7 | 267.3 | 285.0 | 289.3 | 298.6 | 309.6 | 319.7 | 321.4 | 323.9 |
| 95°    | 215.7 | 235.1 | 253.7 | 270.7 | 274.9 | 284.2 | 294.3 | 304.5 | 306.2 | 308.7 |
| 97.5°  | 203.8 | 222.4 | 240.2 | 257.1 | 261.4 | 269.8 | 280.8 | 290.1 | 291.8 | 295.2 |
| 100°   | 192.8 | 210.6 | 229.2 | 244.4 | 248.7 | 257.1 | 267.3 | 276.6 | 278.3 | 281.7 |
| 102.5° | 182.7 | 199.6 | 217.4 | 231.8 | 236.8 | 244.4 | 254.6 | 263.0 | 264.7 | 267.3 |
| 105°   | 173.4 | 189.5 | 206.4 | 219.9 | 225.0 | 232.6 | 241.9 | 250.4 | 252.1 | 254.6 |
| 107.5° | 164.1 | 179.3 | 195.4 | 208.9 | 213.1 | 219.9 | 229.2 | 237.7 | 239.4 | 242.7 |
| 110°   | 155.6 | 170.9 | 186.1 | 198.8 | 203.8 | 208.9 | 218.2 | 225.8 | 227.5 | 230.1 |





TEST NUMBER: P895052  
 CATALOG NUMBER: 8TMB-4SL-RNDU-UNV-L950

**CANDELA DISTRIBUTION (continued):**

|        | 50°   | 55°   | 60°   | 65°   | 67.5° | 70°   | 75°   | 80°   | 85°   | 90°   |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 112.5° | 148.0 | 161.6 | 176.8 | 188.6 | 192.8 | 198.8 | 206.4 | 214.0 | 215.7 | 219.1 |
| 115°   | 141.3 | 153.9 | 169.2 | 180.2 | 183.5 | 188.6 | 197.1 | 203.8 | 205.5 | 208.1 |
| 117.5° | 135.3 | 146.3 | 159.9 | 170.9 | 175.1 | 179.3 | 186.9 | 192.8 | 195.4 | 197.1 |
| 120°   | 130.3 | 140.4 | 152.2 | 162.4 | 167.5 | 170.9 | 177.6 | 183.5 | 186.1 | 187.8 |
| 122.5° | 125.2 | 134.5 | 145.5 | 154.8 | 159.0 | 161.6 | 169.2 | 174.2 | 176.8 | 179.3 |
| 125°   | 121.0 | 129.4 | 139.6 | 147.2 | 151.4 | 153.9 | 160.7 | 165.8 | 168.3 | 170.0 |
| 127.5° | 116.7 | 124.3 | 134.5 | 140.4 | 144.6 | 146.3 | 152.2 | 157.3 | 159.9 | 160.7 |
| 130°   | 112.5 | 120.1 | 128.6 | 134.5 | 137.9 | 140.4 | 145.5 | 148.9 | 151.4 | 152.2 |
| 132.5° | 109.1 | 115.9 | 123.5 | 129.4 | 132.8 | 133.6 | 138.7 | 142.1 | 144.6 | 145.5 |
| 135°   | 106.6 | 111.6 | 119.3 | 124.3 | 126.9 | 128.6 | 132.8 | 135.3 | 137.9 | 138.7 |
| 137.5° | 103.2 | 108.3 | 115.0 | 118.4 | 121.8 | 122.6 | 126.9 | 129.4 | 131.9 | 132.8 |
| 140°   | 100.7 | 104.9 | 110.8 | 114.2 | 117.6 | 117.6 | 121.0 | 123.5 | 126.0 | 126.0 |
| 142.5° | 98.1  | 102.3 | 107.4 | 110.8 | 113.3 | 113.3 | 116.7 | 118.4 | 121.0 | 121.0 |
| 145°   | 94.7  | 99.0  | 104.0 | 106.6 | 109.1 | 109.1 | 111.6 | 113.3 | 115.9 | 115.9 |
| 147.5° | 91.3  | 95.6  | 100.7 | 102.3 | 104.9 | 104.9 | 107.4 | 109.1 | 110.8 | 110.8 |
| 150°   | 87.1  | 90.5  | 96.4  | 99.0  | 101.5 | 101.5 | 103.2 | 104.9 | 106.6 | 106.6 |
| 152.5° | 83.7  | 86.3  | 91.3  | 94.7  | 97.3  | 97.3  | 99.0  | 100.7 | 102.3 | 102.3 |
| 155°   | 79.5  | 82.0  | 86.3  | 90.5  | 93.0  | 93.9  | 95.6  | 96.4  | 98.1  | 98.1  |
| 157.5° | 76.1  | 78.7  | 82.0  | 85.4  | 88.0  | 89.7  | 92.2  | 93.0  | 93.9  | 93.9  |
| 160°   | 71.9  | 73.6  | 77.0  | 80.4  | 82.9  | 84.6  | 88.8  | 89.7  | 90.5  | 90.5  |
| 162.5° | 70.2  | 70.2  | 71.9  | 74.4  | 77.0  | 77.8  | 82.0  | 85.4  | 87.1  | 86.3  |
| 165°   | 71.0  | 70.2  | 70.2  | 71.0  | 72.7  | 73.6  | 76.1  | 81.2  | 82.9  | 82.0  |
| 167.5° | 72.7  | 71.0  | 70.2  | 70.2  | 71.9  | 71.9  | 74.4  | 78.7  | 83.7  | 82.0  |
| 170°   | 72.7  | 70.2  | 68.5  | 68.5  | 69.4  | 69.4  | 71.0  | 73.6  | 78.7  | 79.5  |
| 172.5° | 71.9  | 70.2  | 67.7  | 64.3  | 65.1  | 64.3  | 63.4  | 65.1  | 66.0  | 74.4  |
| 175°   | 72.7  | 70.2  | 67.7  | 63.4  | 61.7  | 59.2  | 55.0  | 51.6  | 50.7  | 41.4  |
| 177.5° | 71.9  | 69.4  | 66.0  | 62.6  | 60.9  | 57.5  | 52.4  | 46.5  | 43.1  | 38.1  |
| 180°   | 68.5  | 68.5  | 68.5  | 68.5  | 68.5  | 68.5  | 68.5  | 68.5  | 68.5  | 68.5  |



TEST NUMBER: P895052  
 CATALOG NUMBER: 8TMB-4SL-RNDU-UNV-L950

**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 | 10.95            | 12.26 | 11.59 | 12.92 | 13.69 | 14.57          | 15.88 | 15.21 | 16.55 | 17.32 |
|                 | 3H   | 12.29            | 13.49 | 12.95 | 14.17 | 14.97 | 17.52          | 18.72 | 18.18 | 19.40 | 20.20 |
|                 | 4H   | 12.70            | 13.84 | 13.37 | 14.52 | 15.34 | 19.03          | 20.17 | 19.70 | 20.86 | 21.67 |
|                 | 6H   | 12.91            | 13.97 | 13.60 | 14.67 | 15.50 | 20.64          | 21.70 | 21.33 | 22.40 | 23.23 |
|                 | 8H   | 12.95            | 13.96 | 13.64 | 14.68 | 15.51 | 21.49          | 22.51 | 22.19 | 23.23 | 24.06 |
|                 | 12H  | 12.95            | 13.93 | 13.65 | 14.64 | 15.50 | 22.44          | 23.41 | 23.14 | 24.13 | 24.99 |
| 4H              | 2H   | 12.10            | 13.24 | 12.78 | 13.93 | 14.74 | 14.89          | 16.02 | 15.56 | 16.71 | 17.53 |
|                 | 3H   | 13.74            | 14.72 | 14.43 | 15.44 | 16.28 | 18.07          | 19.05 | 18.76 | 19.77 | 20.60 |
|                 | 4H   | 14.31            | 15.21 | 15.02 | 15.94 | 16.80 | 19.75          | 20.65 | 20.45 | 21.38 | 22.24 |
|                 | 6H   | 14.65            | 15.45 | 15.37 | 16.20 | 17.07 | 21.57          | 22.37 | 22.29 | 23.12 | 23.98 |
|                 | 8H   | 14.73            | 15.48 | 15.45 | 16.22 | 17.11 | 22.54          | 23.29 | 23.27 | 24.04 | 24.92 |
|                 | 12H  | 14.75            | 15.44 | 15.50 | 16.21 | 17.10 | 23.63          | 24.31 | 24.38 | 25.08 | 25.97 |
| 8H              | 4H   | 15.42            | 16.17 | 16.14 | 16.92 | 17.80 | 19.92          | 20.67 | 20.65 | 21.42 | 22.30 |
|                 | 6H   | 16.03            | 16.67 | 16.78 | 17.46 | 18.34 | 21.91          | 22.56 | 22.67 | 23.34 | 24.23 |
|                 | 8H   | 16.22            | 16.80 | 16.99 | 17.59 | 18.49 | 23.03          | 23.61 | 23.80 | 24.40 | 25.30 |
|                 | 12H  | 16.34            | 16.85 | 17.11 | 17.63 | 18.59 | 24.31          | 24.83 | 25.08 | 25.61 | 26.56 |
| 12H             | 4H   | 15.78            | 16.47 | 16.53 | 17.24 | 18.13 | 19.91          | 20.60 | 20.66 | 21.37 | 22.26 |
|                 | 6H   | 16.56            | 17.14 | 17.33 | 17.93 | 18.83 | 21.94          | 22.52 | 22.71 | 23.31 | 24.21 |
|                 | 8H   | 16.89            | 17.41 | 17.66 | 18.19 | 19.14 | 23.13          | 23.64 | 23.89 | 24.42 | 25.38 |