

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: NEO-RAY

Report Number: P998093

Luminaire Tested: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-A\_4000K

Issue Date: 5/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P998093  
REPORT IS A COMBINATION OF REPORTS P983830 AND P1007351  
Test Lab: INNOVATION CENTER  
Issue Date: 5/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-A\_4000K  
Description: Define 2 Direct/Indirect Pendant with 4000K BioUP LEDs {m-DER=0.865} {m-EER=0.951}  
Light Source: -  
Ballast/Driver: -

**Summary**

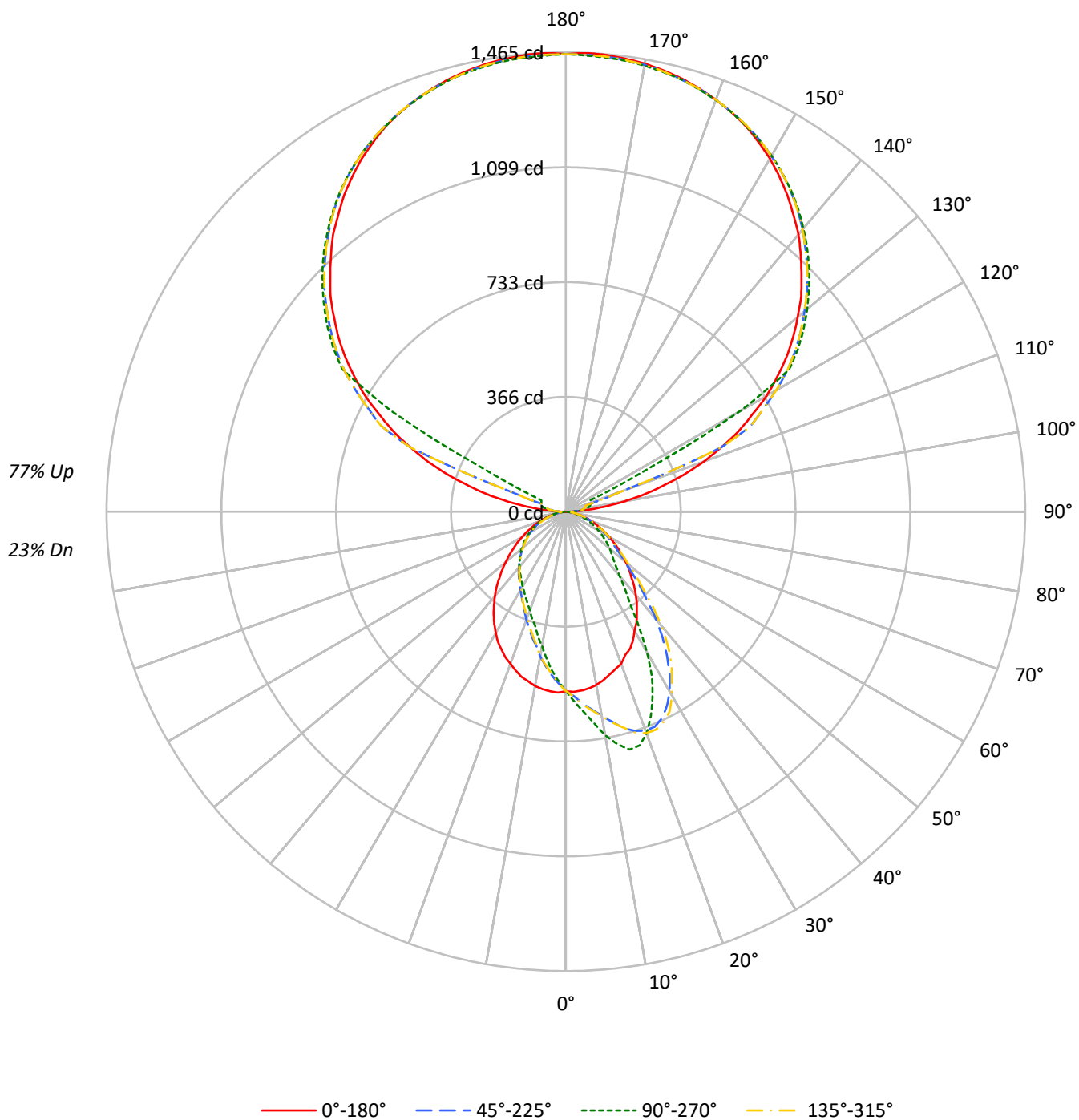
Lumens per Lamp: N/A  
Luminaire Lumens: 5544.0 lumens  
Efficiency: N/A  
Efficacy: 115.5 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.09 / 1.23  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.1')  
CIE Type: Semi-Indirect

Input Watts (W): 48  
Input Voltage (V):  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT

TEST NUMBER: P998093

CATALOG NUMBER: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-A\_4000K

### Luminous Intensity Polar Plot



TEST NUMBER: P998093

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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| RF  | 20  |     |     |     | 20 |    |    |    |    | 20 |    |    |    |    | 20 |    |    |    |    | 20 |
| RC  | 80  |     |     |     | 70 |    |    |    |    | 50 |    |    |    |    | 30 |    |    |    |    | 10 |
| RW  | 70  | 50  | 30  | 10  | 70 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 |
| RCR |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 0   | 101 | 101 | 101 | 101 | 89 | 89 | 89 | 89 | 68 | 68 | 68 | 49 | 49 | 49 | 31 | 31 | 31 | 23 |    |    |
| 1   | 92  | 88  | 84  | 81  | 81 | 78 | 75 | 72 | 60 | 58 | 56 | 43 | 42 | 41 | 28 | 27 | 27 | 20 |    |    |
| 2   | 84  | 77  | 71  | 66  | 74 | 68 | 64 | 60 | 53 | 50 | 47 | 38 | 36 | 34 | 25 | 24 | 23 | 17 |    |    |
| 3   | 77  | 68  | 61  | 55  | 68 | 60 | 55 | 50 | 47 | 43 | 40 | 34 | 31 | 29 | 22 | 21 | 20 | 14 |    |    |
| 4   | 70  | 60  | 53  | 47  | 62 | 54 | 47 | 42 | 41 | 37 | 34 | 30 | 28 | 25 | 20 | 18 | 17 | 13 |    |    |
| 5   | 64  | 53  | 46  | 40  | 57 | 48 | 41 | 36 | 37 | 33 | 29 | 27 | 24 | 22 | 18 | 16 | 15 | 11 |    |    |
| 6   | 59  | 48  | 40  | 35  | 52 | 43 | 36 | 31 | 33 | 29 | 25 | 25 | 22 | 19 | 16 | 15 | 13 | 10 |    |    |
| 7   | 55  | 43  | 35  | 30  | 48 | 39 | 32 | 28 | 30 | 26 | 22 | 22 | 19 | 17 | 15 | 13 | 12 | 9  |    |    |
| 8   | 51  | 39  | 32  | 27  | 45 | 35 | 29 | 24 | 27 | 23 | 20 | 20 | 17 | 15 | 14 | 12 | 11 | 8  |    |    |
| 9   | 47  | 35  | 28  | 24  | 42 | 32 | 26 | 22 | 25 | 21 | 17 | 19 | 16 | 14 | 13 | 11 | 10 | 7  |    |    |
| 10  | 44  | 32  | 26  | 21  | 39 | 29 | 23 | 19 | 23 | 19 | 16 | 17 | 14 | 12 | 12 | 10 | 9  | 7  |    |    |

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

|     | 0°   | 90°   | 180° | 270° |
|-----|------|-------|------|------|
| 0°  | 9054 | 9054  | 9054 | 9054 |
| 5°  | 9075 | 9654  | 9110 | 7680 |
| 10° | 8971 | 10539 | 9027 | 6332 |
| 15° | 8753 | 11116 | 8875 | 5334 |
| 20° | 8617 | 10438 | 8617 | 4636 |
| 25° | 8342 | 8967  | 8380 | 4146 |
| 30° | 7890 | 7049  | 8041 | 3755 |
| 35° | 7490 | 4874  | 7616 | 3435 |
| 40° | 7029 | 3680  | 7110 | 3181 |
| 45° | 6462 | 3025  | 6567 | 2906 |
| 50° | 5971 | 2654  | 5983 | 2661 |
| 55° | 5412 | 2262  | 5446 | 2394 |
| 60° | 4816 | 1890  | 4882 | 2089 |
| 65° | 4284 | 1537  | 4362 | 1784 |
| 70° | 3750 | 1205  | 3846 | 1438 |
| 75° | 3149 | 875   | 3273 | 1043 |
| 80° | 2459 | 555   | 2635 | 620  |
| 85° | 1610 | 280   | 1737 | 207  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 157.5°

Vertical Angle: 45°

Luminance: 9360 cd/sqm

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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 54.5   | 1.0       |
| 10°-20°   | 158.6  | 2.9       |
| 20°-30°   | 230.1  | 4.2       |
| 30°-40°   | 242.6  | 4.4       |
| 40°-50°   | 214.7  | 3.9       |
| 50°-60°   | 171.4  | 3.1       |
| 60°-70°   | 116.4  | 2.1       |
| 70°-80°   | 59.6   | 1.1       |
| 80°-90°   | 16.6   | 0.3       |
| 90°-100°  | 48.2   | 0.9       |
| 100°-110° | 179.4  | 3.2       |
| 110°-120° | 475.9  | 8.6       |
| 120°-130° | 789.3  | 14.2      |
| 130°-140° | 838.4  | 15.1      |
| 140°-150° | 779.2  | 14.1      |
| 150°-160° | 626.5  | 11.3      |
| 160°-170° | 403.7  | 7.3       |
| 170°-180° | 138.9  | 2.5       |
| 0°-30°    | 443.2  | 8.0       |
| 0°-40°    | 685.8  | 12.4      |
| 0°-60°    | 1071.9 | 19.3      |
| 0°-90°    | 1264.6 | 22.8      |
| 90°-120°  | 703.5  | 12.7      |
| 90°-150°  | 3110.4 | 56.1      |
| 90°-180°  | 4279.0 | 77.2      |
| 0°-180°   | 5544.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 90°  | 180° | 270° | 360° | Flux |
|------|------|------|------|------|------|------|
| 0°   | 572  | 572  | 572  | 572  | 572  |      |
| 5°   | 572  | 639  | 575  | 508  | 572  | 54   |
| 15°  | 538  | 785  | 545  | 377  | 538  | 152  |
| 25°  | 483  | 654  | 485  | 302  | 483  | 221  |
| 35°  | 394  | 356  | 401  | 251  | 394  | 247  |
| 45°  | 296  | 215  | 301  | 206  | 296  | 230  |
| 55°  | 203  | 151  | 204  | 160  | 203  | 181  |
| 65°  | 120  | 93   | 123  | 108  | 120  | 120  |
| 75°  | 56   | 46   | 58   | 54   | 56   | 60   |
| 85°  | 11   | 12   | 12   | 9    | 11   | 13   |
| 90°  | 1    | 28   | 1    | 28   | 1    | 5    |
| 95°  | 69   | 45   | 69   | 45   | 69   | 81   |
| 105° | 321  | 80   | 321  | 80   | 321  | 343  |
| 115° | 607  | 87   | 607  | 87   | 607  | 598  |
| 125° | 859  | 903  | 859  | 903  | 859  | 766  |
| 135° | 1063 | 1097 | 1063 | 1097 | 1063 | 821  |
| 145° | 1233 | 1252 | 1233 | 1252 | 1233 | 771  |
| 155° | 1357 | 1358 | 1357 | 1358 | 1357 | 625  |
| 165° | 1430 | 1427 | 1430 | 1427 | 1430 | 404  |
| 175° | 1463 | 1454 | 1463 | 1454 | 1463 | 139  |
| 180° | 1460 | 1460 | 1460 | 1460 | 1460 |      |

TEST NUMBER: P998093

CATALOG NUMBER: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-A\_4000K

**CANDELA DISTRIBUTION (FULL):**

|        | 0°    | 5°    | 10°   | 15°   | 20°   | 22.5° | 25°   | 30°   | 35°   | 40°   | 45°   |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°     | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 |
| 2.5°   | 575.1 | 576.4 | 578.6 | 579.0 | 583.4 | 586.9 | 590.9 | 590.9 | 592.2 | 591.8 | 588.3 |
| 5°     | 572.4 | 576.4 | 582.1 | 586.9 | 594.9 | 598.4 | 603.7 | 607.6 | 611.1 | 613.8 | 613.3 |
| 7.5°   | 568.0 | 575.1 | 583.4 | 592.7 | 603.2 | 609.4 | 616.8 | 623.9 | 628.7 | 633.1 | 636.2 |
| 10°    | 560.6 | 572.4 | 583.9 | 596.2 | 609.8 | 618.2 | 627.0 | 636.2 | 643.7 | 652.0 | 659.9 |
| 12.5°  | 550.5 | 567.6 | 581.7 | 597.9 | 614.6 | 623.9 | 637.9 | 645.0 | 659.5 | 680.6 | 686.3 |
| 15°    | 537.7 | 561.0 | 574.2 | 594.9 | 616.8 | 624.3 | 643.7 | 655.1 | 685.0 | 698.2 | 714.0 |
| 17.5°  | 525.8 | 551.8 | 569.4 | 593.1 | 614.6 | 629.2 | 648.1 | 671.4 | 696.4 | 715.3 | 732.9 |
| 20°    | 516.2 | 541.2 | 562.3 | 588.7 | 616.0 | 634.4 | 654.2 | 682.4 | 709.6 | 729.0 | 742.6 |
| 22.5°  | 494.2 | 526.3 | 550.9 | 580.4 | 613.3 | 638.8 | 657.7 | 688.5 | 718.0 | 729.8 | 741.7 |
| 25°    | 483.2 | 510.9 | 539.5 | 572.9 | 611.6 | 641.9 | 658.2 | 692.5 | 718.4 | 722.8 | 725.4 |
| 27.5°  | 463.0 | 494.2 | 527.6 | 565.8 | 611.1 | 636.6 | 657.3 | 688.5 | 709.2 | 706.1 | 698.2 |
| 30°    | 437.9 | 476.2 | 513.1 | 554.4 | 605.0 | 632.7 | 652.0 | 680.6 | 691.1 | 675.3 | 661.2 |
| 32.5°  | 419.4 | 455.5 | 496.4 | 544.3 | 597.9 | 624.3 | 643.2 | 665.6 | 667.8 | 639.3 | 615.5 |
| 35°    | 394.4 | 434.4 | 480.5 | 531.1 | 586.1 | 609.8 | 627.4 | 641.0 | 630.5 | 590.5 | 562.3 |
| 37.5°  | 372.0 | 411.5 | 460.8 | 512.2 | 569.8 | 593.1 | 607.2 | 609.4 | 583.4 | 548.3 | 506.9 |
| 40°    | 347.3 | 388.2 | 439.7 | 493.7 | 551.8 | 572.0 | 580.8 | 574.2 | 536.8 | 495.9 | 448.0 |
| 42.5°  | 322.7 | 363.2 | 418.6 | 474.0 | 528.9 | 546.1 | 549.6 | 531.5 | 485.8 | 437.9 | 382.5 |
| 45°    | 295.9 | 338.1 | 393.5 | 449.3 | 502.5 | 512.2 | 512.6 | 486.7 | 432.6 | 382.5 | 331.1 |
| 47.5°  | 273.9 | 313.0 | 368.0 | 423.8 | 468.7 | 475.3 | 472.6 | 442.7 | 383.8 | 327.5 | 282.7 |
| 50°    | 249.7 | 287.1 | 341.6 | 396.6 | 434.8 | 436.6 | 430.0 | 387.3 | 329.7 | 278.3 | 242.7 |
| 52.5°  | 223.8 | 261.6 | 311.7 | 364.5 | 398.8 | 396.1 | 383.4 | 337.7 | 283.6 | 240.9 | 213.7 |
| 55°    | 203.1 | 236.5 | 283.6 | 335.0 | 359.2 | 351.7 | 337.7 | 291.1 | 248.4 | 212.4 | 188.6 |
| 57.5°  | 180.3 | 209.7 | 255.9 | 300.7 | 314.8 | 307.8 | 293.7 | 250.2 | 210.6 | 183.3 | 167.5 |
| 60°    | 158.7 | 185.5 | 226.0 | 263.4 | 274.3 | 266.9 | 250.6 | 211.5 | 182.9 | 160.0 | 148.2 |
| 62.5°  | 138.9 | 162.2 | 196.1 | 230.4 | 234.8 | 227.3 | 213.2 | 181.6 | 157.0 | 138.9 | 130.1 |
| 65°    | 120.5 | 142.4 | 169.7 | 195.6 | 199.6 | 191.7 | 177.2 | 154.3 | 133.7 | 122.2 | 113.9 |
| 67.5°  | 102.4 | 120.0 | 144.2 | 163.1 | 165.3 | 157.8 | 146.0 | 127.5 | 114.8 | 102.4 | 96.3  |
| 70°    | 86.6  | 99.8  | 118.7 | 134.1 | 135.0 | 127.9 | 121.8 | 105.1 | 95.4  | 86.6  | 81.8  |
| 72.5°  | 71.2  | 80.5  | 95.0  | 106.4 | 106.8 | 102.4 | 96.7  | 86.2  | 77.8  | 71.7  | 66.8  |
| 75°    | 56.3  | 64.2  | 73.0  | 83.1  | 82.7  | 79.1  | 74.7  | 68.1  | 61.1  | 57.2  | 55.0  |
| 77.5°  | 43.1  | 47.9  | 55.0  | 61.6  | 61.6  | 59.8  | 57.2  | 52.3  | 47.9  | 44.0  | 41.8  |
| 80°    | 30.8  | 33.9  | 39.6  | 41.8  | 42.6  | 42.2  | 40.0  | 36.5  | 34.7  | 31.7  | 30.8  |
| 82.5°  | 19.8  | 22.0  | 24.6  | 26.8  | 28.1  | 27.3  | 26.8  | 25.1  | 22.4  | 21.5  | 20.7  |
| 85°    | 11.4  | 12.3  | 13.6  | 14.9  | 15.4  | 14.9  | 15.8  | 14.5  | 13.2  | 13.2  | 12.8  |
| 87.5°  | 4.8   | 5.3   | 6.2   | 6.2   | 6.6   | 6.6   | 6.2   | 6.6   | 6.6   | 6.2   | 5.7   |
| 90°    | 1.1   | 3.7   | 6.3   | 8.8   | 11.4  | 12.7  | 13.6  | 15.5  | 17.4  | 19.2  | 21.1  |
| 92.5°  | 26.4  | 25.5  | 24.5  | 23.6  | 22.7  | 22.2  | 22.5  | 23.2  | 23.9  | 24.6  | 25.3  |
| 95°    | 68.7  | 60.9  | 53.2  | 45.4  | 37.7  | 33.8  | 34.6  | 36.3  | 37.9  | 39.6  | 41.2  |
| 97.5°  | 123.6 | 104.4 | 85.1  | 65.9  | 46.6  | 37.0  | 38.9  | 42.6  | 46.4  | 50.1  | 53.9  |
| 100°   | 187.0 | 154.8 | 122.6 | 90.5  | 58.3  | 42.2  | 44.2  | 48.2  | 52.2  | 56.2  | 60.2  |
| 102.5° | 256.7 | 256.2 | 255.8 | 255.3 | 254.8 | 254.6 | 233.2 | 190.5 | 147.8 | 105.0 | 62.3  |
| 105°   | 321.1 | 328.1 | 335.2 | 342.2 | 349.3 | 352.8 | 320.8 | 256.7 | 192.6 | 128.5 | 64.4  |
| 107.5° | 396.1 | 402.0 | 407.8 | 413.7 | 419.6 | 422.5 | 382.9 | 303.8 | 224.7 | 145.6 | 66.5  |
| 110°   | 467.9 | 472.8 | 477.8 | 482.7 | 487.6 | 490.1 | 456.2 | 388.3 | 320.5 | 252.6 | 184.8 |

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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 5°     | 10°    | 15°    | 20°    | 22.5°  | 25°    | 30°    | 35°    | 40°    | 45°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 112.5° | 535.5  | 539.7  | 543.9  | 548.2  | 552.4  | 554.5  | 552.5  | 548.5  | 544.6  | 540.6  | 536.6  |
| 115°   | 607.3  | 611.3  | 615.3  | 619.3  | 623.3  | 625.3  | 628.2  | 634.1  | 640.0  | 645.8  | 651.7  |
| 117.5° | 669.7  | 674.4  | 679.1  | 683.8  | 688.5  | 690.8  | 692.8  | 696.8  | 700.7  | 704.7  | 708.7  |
| 120°   | 739.4  | 742.9  | 746.4  | 749.9  | 753.4  | 755.2  | 757.3  | 761.5  | 765.8  | 770.0  | 774.2  |
| 122.5° | 798.5  | 802.3  | 806.0  | 809.8  | 813.5  | 815.4  | 817.7  | 822.4  | 827.1  | 831.8  | 836.5  |
| 125°   | 858.7  | 861.8  | 864.8  | 867.9  | 871.0  | 872.5  | 874.7  | 879.2  | 883.6  | 888.1  | 892.5  |
| 127.5° | 913.7  | 917.0  | 920.2  | 923.5  | 926.8  | 928.4  | 930.2  | 933.7  | 937.2  | 940.8  | 944.3  |
| 130°   | 965.4  | 969.2  | 972.9  | 976.7  | 980.4  | 982.3  | 983.6  | 986.2  | 988.7  | 991.3  | 993.9  |
| 132.5° | 1018.2 | 1021.3 | 1024.3 | 1027.4 | 1030.5 | 1032.0 | 1033.3 | 1035.9 | 1038.4 | 1041.0 | 1043.6 |
| 135°   | 1062.6 | 1066.4 | 1070.1 | 1073.9 | 1077.6 | 1079.5 | 1080.6 | 1082.7 | 1084.8 | 1086.9 | 1089.0 |
| 137.5° | 1109.1 | 1111.9 | 1114.7 | 1117.5 | 1120.3 | 1121.7 | 1122.9 | 1125.2 | 1127.6 | 1129.9 | 1132.3 |
| 140°   | 1154.5 | 1156.4 | 1158.2 | 1160.1 | 1162.0 | 1162.9 | 1164.2 | 1166.8 | 1169.3 | 1171.9 | 1174.5 |
| 142.5° | 1192.5 | 1194.1 | 1195.8 | 1197.4 | 1199.1 | 1199.9 | 1201.4 | 1204.5 | 1207.5 | 1210.6 | 1213.6 |
| 145°   | 1232.6 | 1232.4 | 1232.2 | 1231.9 | 1231.7 | 1231.6 | 1233.6 | 1237.6 | 1241.5 | 1245.5 | 1249.5 |
| 147.5° | 1267.5 | 1266.8 | 1266.1 | 1265.4 | 1264.7 | 1264.3 | 1266.3 | 1270.3 | 1274.3 | 1278.3 | 1282.3 |
| 150°   | 1301.3 | 1299.7 | 1298.0 | 1296.4 | 1294.7 | 1293.9 | 1295.8 | 1299.5 | 1303.3 | 1307.0 | 1310.8 |
| 152.5° | 1329.8 | 1327.9 | 1326.1 | 1324.2 | 1322.3 | 1321.4 | 1323.2 | 1326.7 | 1330.2 | 1333.7 | 1337.2 |
| 155°   | 1357.3 | 1355.2 | 1353.1 | 1351.0 | 1348.9 | 1347.8 | 1349.2 | 1352.0 | 1354.8 | 1357.6 | 1360.4 |
| 157.5° | 1379.5 | 1377.6 | 1375.7 | 1373.8 | 1371.9 | 1371.0 | 1372.1 | 1374.2 | 1376.3 | 1378.4 | 1380.5 |
| 160°   | 1398.5 | 1397.1 | 1395.7 | 1394.2 | 1392.8 | 1392.1 | 1392.8 | 1394.2 | 1395.7 | 1397.1 | 1398.5 |
| 162.5° | 1415.4 | 1414.0 | 1412.6 | 1411.1 | 1409.7 | 1409.0 | 1409.6 | 1410.8 | 1411.9 | 1413.1 | 1414.3 |
| 165°   | 1430.2 | 1428.8 | 1427.4 | 1425.9 | 1424.5 | 1423.8 | 1424.2 | 1424.9 | 1425.6 | 1426.3 | 1427.0 |
| 167.5° | 1441.8 | 1440.4 | 1439.0 | 1437.5 | 1436.1 | 1435.4 | 1435.8 | 1436.5 | 1437.2 | 1437.9 | 1438.6 |
| 170°   | 1451.3 | 1449.9 | 1448.5 | 1447.0 | 1445.6 | 1444.9 | 1445.1 | 1445.6 | 1446.1 | 1446.6 | 1447.1 |
| 172.5° | 1457.6 | 1456.2 | 1454.8 | 1453.4 | 1452.0 | 1451.3 | 1451.5 | 1452.0 | 1452.5 | 1452.9 | 1453.4 |
| 175°   | 1462.9 | 1461.3 | 1459.6 | 1458.0 | 1456.3 | 1455.5 | 1455.7 | 1456.2 | 1456.7 | 1457.1 | 1457.6 |
| 177.5° | 1465.0 | 1463.4 | 1461.7 | 1460.1 | 1458.4 | 1457.6 | 1457.7 | 1458.0 | 1458.2 | 1458.5 | 1458.7 |
| 180°   | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 |

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**CANDELA DISTRIBUTION (continued):**

|        | 50°   | 55°   | 60°   | 65°   | 67.5° | 70°   | 75°   | 80°   | 85°   | 90°   | 95°   |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°     | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 |
| 2.5°   | 594.4 | 594.9 | 595.7 | 600.1 | 602.3 | 602.8 | 601.0 | 605.0 | 606.3 | 605.0 | 604.1 |
| 5°     | 622.6 | 625.2 | 630.5 | 636.2 | 635.7 | 636.2 | 638.8 | 641.5 | 642.3 | 638.8 | 640.1 |
| 7.5°   | 647.2 | 652.5 | 658.2 | 667.0 | 667.0 | 671.4 | 673.1 | 675.3 | 680.6 | 678.0 | 677.1 |
| 10°    | 675.3 | 682.4 | 692.9 | 707.0 | 707.4 | 711.8 | 716.2 | 723.2 | 725.4 | 723.7 | 724.6 |
| 12.5°  | 710.5 | 724.1 | 725.0 | 740.4 | 747.4 | 748.3 | 755.3 | 754.0 | 758.4 | 758.4 | 765.9 |
| 15°    | 725.9 | 747.0 | 758.9 | 773.8 | 778.2 | 772.9 | 778.6 | 784.8 | 785.2 | 785.2 | 784.8 |
| 17.5°  | 753.6 | 761.9 | 773.8 | 781.7 | 783.5 | 783.5 | 783.9 | 786.6 | 784.8 | 781.3 | 783.9 |
| 20°    | 759.3 | 762.8 | 767.2 | 766.3 | 767.2 | 762.8 | 758.4 | 754.0 | 754.5 | 752.3 | 758.9 |
| 22.5°  | 748.7 | 747.9 | 737.7 | 731.2 | 731.2 | 722.4 | 714.0 | 710.1 | 706.1 | 707.4 | 709.6 |
| 25°    | 722.4 | 708.7 | 696.4 | 686.7 | 684.6 | 670.5 | 659.0 | 655.5 | 648.9 | 654.2 | 655.1 |
| 27.5°  | 680.2 | 664.8 | 645.0 | 636.6 | 625.2 | 619.5 | 611.6 | 601.0 | 587.4 | 595.3 | 594.0 |
| 30°    | 634.9 | 612.0 | 595.7 | 575.5 | 557.5 | 556.2 | 541.2 | 523.6 | 516.6 | 516.6 | 520.6 |
| 32.5°  | 584.3 | 554.0 | 530.2 | 501.7 | 484.1 | 476.6 | 458.6 | 441.0 | 444.9 | 431.7 | 436.6 |
| 35°    | 525.4 | 485.4 | 455.5 | 427.8 | 414.6 | 405.8 | 382.5 | 372.8 | 362.3 | 356.1 | 367.6 |
| 37.5°  | 469.1 | 423.0 | 384.7 | 354.4 | 349.5 | 333.7 | 317.9 | 311.7 | 305.6 | 308.2 | 307.8 |
| 40°    | 400.5 | 359.6 | 325.3 | 301.6 | 293.3 | 285.8 | 275.2 | 267.8 | 263.8 | 266.0 | 266.4 |
| 42.5°  | 338.5 | 304.2 | 278.7 | 262.0 | 255.0 | 249.7 | 244.5 | 238.3 | 237.0 | 237.0 | 238.7 |
| 45°    | 290.6 | 262.5 | 245.3 | 231.7 | 227.7 | 223.8 | 219.8 | 217.2 | 216.3 | 214.6 | 215.9 |
| 47.5°  | 252.4 | 229.9 | 219.4 | 209.3 | 204.9 | 204.0 | 200.5 | 199.2 | 197.4 | 197.0 | 197.4 |
| 50°    | 220.3 | 206.2 | 196.5 | 190.8 | 187.7 | 186.4 | 184.7 | 182.0 | 181.1 | 183.3 | 182.5 |
| 52.5°  | 197.8 | 184.7 | 179.4 | 173.7 | 171.9 | 170.1 | 167.5 | 167.9 | 167.5 | 166.6 | 166.6 |
| 55°    | 175.4 | 167.1 | 161.8 | 157.4 | 157.0 | 155.2 | 153.0 | 152.1 | 151.7 | 150.8 | 152.1 |
| 57.5°  | 157.4 | 150.8 | 146.0 | 142.0 | 140.3 | 140.3 | 138.1 | 136.3 | 136.3 | 135.9 | 136.3 |
| 60°    | 139.4 | 132.8 | 129.7 | 125.7 | 124.4 | 124.0 | 122.7 | 121.8 | 120.5 | 120.5 | 120.5 |
| 62.5°  | 122.7 | 117.4 | 113.9 | 110.4 | 110.8 | 108.6 | 106.8 | 106.0 | 106.0 | 106.4 | 106.4 |
| 65°    | 106.8 | 103.3 | 98.9  | 95.8  | 95.0  | 94.5  | 93.6  | 93.2  | 91.9  | 92.8  | 92.8  |
| 67.5°  | 92.3  | 87.5  | 84.9  | 83.5  | 82.2  | 81.8  | 80.9  | 80.0  | 79.6  | 79.1  | 80.0  |
| 70°    | 77.8  | 73.9  | 71.7  | 70.8  | 69.5  | 69.0  | 68.6  | 67.3  | 67.7  | 68.1  | 68.6  |
| 72.5°  | 64.6  | 61.1  | 60.7  | 58.0  | 58.0  | 58.0  | 56.3  | 57.2  | 56.7  | 55.8  | 56.7  |
| 75°    | 51.0  | 49.2  | 48.4  | 47.0  | 47.5  | 47.0  | 46.6  | 45.3  | 45.3  | 45.7  | 46.2  |
| 77.5°  | 40.4  | 38.7  | 38.3  | 36.9  | 36.1  | 36.9  | 36.1  | 35.6  | 35.6  | 36.1  | 36.1  |
| 80°    | 29.9  | 29.0  | 27.7  | 27.7  | 27.7  | 27.3  | 27.3  | 27.3  | 26.8  | 26.4  | 26.8  |
| 82.5°  | 19.8  | 19.8  | 19.3  | 18.9  | 19.3  | 18.5  | 18.9  | 18.9  | 18.9  | 18.9  | 18.9  |
| 85°    | 12.8  | 12.3  | 12.3  | 11.9  | 11.9  | 11.9  | 12.3  | 11.4  | 11.4  | 11.9  | 11.9  |
| 87.5°  | 5.7   | 5.7   | 5.7   | 6.2   | 5.7   | 5.7   | 5.7   | 6.2   | 5.7   | 5.7   | 5.7   |
| 90°    | 22.3  | 23.5  | 24.6  | 25.8  | 26.4  | 26.6  | 27.1  | 27.6  | 28.0  | 28.5  | 28.0  |
| 92.5°  | 25.8  | 26.3  | 26.8  | 27.3  | 27.5  | 27.6  | 27.8  | 28.1  | 28.3  | 28.5  | 28.3  |
| 95°    | 42.4  | 43.6  | 44.7  | 45.9  | 46.5  | 46.4  | 46.1  | 45.9  | 45.6  | 45.4  | 45.6  |
| 97.5°  | 54.6  | 55.3  | 56.0  | 56.7  | 57.0  | 57.1  | 57.4  | 57.6  | 57.9  | 58.1  | 57.9  |
| 100°   | 62.1  | 64.0  | 65.9  | 67.8  | 68.7  | 68.9  | 69.4  | 69.9  | 70.3  | 70.8  | 70.3  |
| 102.5° | 64.9  | 67.5  | 70.0  | 72.6  | 73.9  | 74.3  | 75.0  | 75.7  | 76.4  | 77.1  | 76.4  |
| 105°   | 67.0  | 69.6  | 72.1  | 74.7  | 76.0  | 76.5  | 77.4  | 78.4  | 79.3  | 80.3  | 79.3  |
| 107.5° | 69.1  | 71.7  | 74.3  | 76.9  | 78.2  | 78.7  | 79.6  | 80.5  | 81.5  | 82.4  | 81.5  |
| 110°   | 161.3 | 137.9 | 114.4 | 90.9  | 79.2  | 79.7  | 80.6  | 81.5  | 82.5  | 83.4  | 82.5  |

TEST NUMBER: P998093

CATALOG NUMBER: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-A\_4000K

**CANDELA DISTRIBUTION (continued):**

|        | 50°    | 55°    | 60°    | 65°    | 67.5°  | 70°    | 75°    | 80°    | 85°    | 90°    | 95°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 112.5° | 435.4  | 334.2  | 233.1  | 131.9  | 81.3   | 81.7   | 82.4   | 83.1   | 83.8   | 84.5   | 83.8   |
| 115°   | 543.0  | 434.4  | 325.7  | 217.0  | 162.7  | 154.2  | 137.3  | 120.4  | 103.5  | 86.6   | 103.5  |
| 117.5° | 675.1  | 641.6  | 608.0  | 574.5  | 557.7  | 527.0  | 465.5  | 404.0  | 342.5  | 281.0  | 342.5  |
| 120°   | 777.0  | 779.8  | 782.7  | 785.5  | 786.9  | 771.1  | 739.4  | 707.7  | 676.0  | 644.3  | 676.0  |
| 122.5° | 837.9  | 839.3  | 840.8  | 842.2  | 842.9  | 843.0  | 843.2  | 843.5  | 843.7  | 843.9  | 843.7  |
| 125°   | 894.1  | 895.8  | 897.4  | 899.1  | 899.9  | 900.3  | 901.0  | 901.7  | 902.4  | 903.1  | 902.4  |
| 127.5° | 946.6  | 949.0  | 951.3  | 953.6  | 954.8  | 954.9  | 955.2  | 955.4  | 955.7  | 955.9  | 955.7  |
| 130°   | 996.5  | 999.1  | 1001.6 | 1004.2 | 1005.5 | 1005.4 | 1005.2 | 1004.9 | 1004.7 | 1004.5 | 1004.7 |
| 132.5° | 1045.7 | 1047.8 | 1049.9 | 1052.0 | 1053.1 | 1053.0 | 1052.7 | 1052.5 | 1052.2 | 1052.0 | 1052.2 |
| 135°   | 1091.4 | 1093.7 | 1096.1 | 1098.4 | 1099.6 | 1099.4 | 1098.9 | 1098.4 | 1097.9 | 1097.4 | 1097.9 |
| 137.5° | 1134.7 | 1137.0 | 1139.4 | 1141.7 | 1142.9 | 1142.5 | 1141.8 | 1141.1 | 1140.4 | 1139.7 | 1140.4 |
| 140°   | 1176.6 | 1178.8 | 1180.9 | 1183.0 | 1184.1 | 1183.5 | 1182.3 | 1181.2 | 1180.0 | 1178.8 | 1180.0 |
| 142.5° | 1215.5 | 1217.4 | 1219.3 | 1221.2 | 1222.1 | 1221.5 | 1220.3 | 1219.2 | 1218.0 | 1216.8 | 1218.0 |
| 145°   | 1251.1 | 1252.8 | 1254.4 | 1256.1 | 1256.9 | 1256.3 | 1255.2 | 1254.0 | 1252.9 | 1251.7 | 1252.9 |
| 147.5° | 1283.5 | 1284.7 | 1285.8 | 1287.0 | 1287.6 | 1287.1 | 1286.2 | 1285.2 | 1284.3 | 1283.3 | 1284.3 |
| 150°   | 1312.2 | 1313.6 | 1315.0 | 1316.4 | 1317.1 | 1316.5 | 1315.4 | 1314.2 | 1313.1 | 1311.9 | 1313.1 |
| 152.5° | 1338.6 | 1340.0 | 1341.4 | 1342.8 | 1343.5 | 1342.7 | 1341.1 | 1339.4 | 1337.8 | 1336.2 | 1337.8 |
| 155°   | 1361.8 | 1363.2 | 1364.7 | 1366.1 | 1366.8 | 1365.9 | 1364.0 | 1362.1 | 1360.2 | 1358.3 | 1360.2 |
| 157.5° | 1382.1 | 1383.8 | 1385.4 | 1387.1 | 1387.9 | 1387.0 | 1385.1 | 1383.2 | 1381.4 | 1379.5 | 1381.4 |
| 160°   | 1399.9 | 1401.3 | 1402.7 | 1404.1 | 1404.8 | 1404.0 | 1402.3 | 1400.7 | 1399.0 | 1397.4 | 1399.0 |
| 162.5° | 1415.9 | 1417.6 | 1419.2 | 1420.9 | 1421.7 | 1420.6 | 1418.5 | 1416.4 | 1414.3 | 1412.2 | 1414.3 |
| 165°   | 1428.6 | 1430.3 | 1431.9 | 1433.6 | 1434.4 | 1433.6 | 1431.9 | 1430.3 | 1428.6 | 1427.0 | 1428.6 |
| 167.5° | 1440.2 | 1441.9 | 1443.5 | 1445.2 | 1446.0 | 1444.9 | 1442.8 | 1440.7 | 1438.6 | 1436.5 | 1438.6 |
| 170°   | 1448.7 | 1450.4 | 1452.0 | 1453.7 | 1454.5 | 1453.4 | 1451.3 | 1449.2 | 1447.0 | 1444.9 | 1447.0 |
| 172.5° | 1455.0 | 1456.7 | 1458.3 | 1460.0 | 1460.8 | 1459.7 | 1457.6 | 1455.5 | 1453.4 | 1451.3 | 1453.4 |
| 175°   | 1459.2 | 1460.9 | 1462.5 | 1464.2 | 1465.0 | 1463.8 | 1461.5 | 1459.2 | 1456.8 | 1454.5 | 1456.8 |
| 177.5° | 1460.3 | 1462.0 | 1463.6 | 1465.3 | 1466.1 | 1465.0 | 1462.9 | 1460.8 | 1458.7 | 1456.6 | 1458.7 |
| 180°   | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 |

TEST NUMBER: P998093

CATALOG NUMBER: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-A\_4000K

**CANDELA DISTRIBUTION (continued):**

|        | 100°  | 105°  | 110°  | 112.5° | 115°  | 120°  | 125°  | 130°  | 135°  | 140°  | 145°  |
|--------|-------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| 0°     | 572.0 | 572.0 | 572.0 | 572.0  | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 |
| 2.5°   | 606.3 | 603.2 | 600.6 | 601.0  | 603.2 | 601.5 | 597.1 | 591.3 | 589.1 | 586.5 | 589.1 |
| 5°     | 642.8 | 640.1 | 634.9 | 635.3  | 634.0 | 632.2 | 625.2 | 616.4 | 616.4 | 609.4 | 608.5 |
| 7.5°   | 678.8 | 674.9 | 671.4 | 670.5  | 665.6 | 662.1 | 656.0 | 643.7 | 638.8 | 630.5 | 625.6 |
| 10°    | 719.3 | 716.2 | 712.2 | 707.4  | 704.8 | 698.6 | 688.5 | 670.5 | 661.7 | 650.3 | 641.9 |
| 12.5°  | 760.2 | 759.7 | 750.9 | 741.3  | 740.8 | 731.2 | 724.1 | 699.9 | 688.1 | 672.7 | 652.9 |
| 15°    | 786.1 | 783.9 | 779.1 | 774.2  | 775.6 | 765.0 | 749.2 | 720.6 | 712.7 | 694.2 | 673.1 |
| 17.5°  | 785.7 | 785.7 | 784.4 | 783.5  | 782.2 | 779.1 | 770.3 | 751.4 | 738.6 | 715.3 | 695.5 |
| 20°    | 760.6 | 766.3 | 767.6 | 767.2  | 771.6 | 773.8 | 773.4 | 761.5 | 751.4 | 730.7 | 710.5 |
| 22.5°  | 710.5 | 723.7 | 729.4 | 732.9  | 742.1 | 747.0 | 758.4 | 754.0 | 751.4 | 736.0 | 718.8 |
| 25°    | 663.9 | 668.3 | 685.4 | 686.3  | 699.1 | 710.9 | 722.4 | 729.8 | 739.5 | 733.8 | 719.3 |
| 27.5°  | 603.7 | 613.8 | 626.1 | 635.3  | 637.9 | 662.1 | 681.0 | 695.1 | 717.1 | 718.8 | 714.0 |
| 30°    | 535.5 | 540.3 | 560.6 | 572.9  | 586.9 | 604.5 | 631.8 | 656.0 | 675.8 | 693.8 | 699.9 |
| 32.5°  | 452.4 | 472.2 | 484.1 | 499.0  | 511.3 | 542.5 | 576.0 | 607.2 | 630.0 | 660.4 | 673.6 |
| 35°    | 376.3 | 391.7 | 412.0 | 418.1  | 440.5 | 466.9 | 510.4 | 550.5 | 585.2 | 616.0 | 642.8 |
| 37.5°  | 313.5 | 325.8 | 347.3 | 357.0  | 370.2 | 404.0 | 440.5 | 490.2 | 532.0 | 569.8 | 603.2 |
| 40°    | 270.4 | 279.6 | 295.9 | 299.0  | 310.0 | 340.7 | 370.2 | 416.8 | 472.2 | 523.2 | 559.7 |
| 42.5°  | 240.9 | 245.3 | 256.3 | 260.3  | 267.3 | 288.0 | 314.4 | 358.3 | 409.8 | 462.5 | 514.0 |
| 45°    | 219.8 | 222.9 | 229.5 | 233.0  | 241.8 | 251.0 | 272.6 | 307.8 | 348.2 | 401.4 | 456.8 |
| 47.5°  | 200.9 | 204.9 | 207.5 | 209.7  | 214.6 | 224.7 | 238.7 | 264.7 | 303.4 | 352.2 | 405.8 |
| 50°    | 185.1 | 186.4 | 191.3 | 191.7  | 194.8 | 201.4 | 214.6 | 230.4 | 261.2 | 300.7 | 352.6 |
| 52.5°  | 169.3 | 170.6 | 173.7 | 176.7  | 178.1 | 183.3 | 192.1 | 205.3 | 228.2 | 259.4 | 305.6 |
| 55°    | 153.4 | 155.2 | 158.3 | 160.5  | 161.8 | 166.2 | 171.5 | 184.2 | 202.2 | 224.2 | 262.0 |
| 57.5°  | 137.6 | 141.6 | 142.4 | 143.8  | 146.0 | 150.8 | 155.6 | 163.1 | 177.2 | 197.4 | 225.1 |
| 60°    | 122.7 | 124.0 | 127.1 | 128.4  | 130.6 | 133.2 | 139.4 | 145.1 | 155.2 | 171.0 | 196.1 |
| 62.5°  | 107.3 | 110.4 | 111.7 | 113.0  | 114.8 | 117.8 | 121.8 | 127.9 | 136.7 | 149.5 | 169.3 |
| 65°    | 94.1  | 94.5  | 97.2  | 98.9   | 100.7 | 102.9 | 106.8 | 112.6 | 117.8 | 129.7 | 144.2 |
| 67.5°  | 81.3  | 82.2  | 83.1  | 84.9   | 87.1  | 89.3  | 92.8  | 95.8  | 102.4 | 110.4 | 121.8 |
| 70°    | 69.0  | 69.0  | 71.2  | 72.5   | 72.1  | 74.7  | 77.4  | 80.9  | 85.7  | 93.2  | 102.4 |
| 72.5°  | 58.0  | 57.6  | 59.4  | 59.8   | 60.7  | 62.4  | 64.2  | 67.7  | 70.3  | 76.1  | 83.1  |
| 75°    | 46.2  | 47.0  | 47.9  | 47.9   | 49.2  | 50.6  | 52.3  | 54.1  | 57.2  | 60.7  | 65.9  |
| 77.5°  | 36.5  | 36.5  | 37.4  | 37.8   | 39.1  | 38.7  | 40.4  | 42.2  | 44.4  | 47.5  | 51.4  |
| 80°    | 26.8  | 27.7  | 27.7  | 27.7   | 28.1  | 28.6  | 30.3  | 31.7  | 33.0  | 35.2  | 36.9  |
| 82.5°  | 18.9  | 18.9  | 19.8  | 19.8   | 19.8  | 20.7  | 20.7  | 21.1  | 22.0  | 23.3  | 24.6  |
| 85°    | 11.9  | 11.9  | 11.9  | 12.3   | 11.9  | 12.3  | 13.2  | 12.8  | 13.2  | 14.1  | 14.1  |
| 87.5°  | 5.7   | 5.7   | 5.7   | 5.7    | 5.7   | 6.2   | 5.7   | 6.2   | 6.6   | 6.6   | 6.6   |
| 90°    | 27.6  | 27.1  | 26.6  | 26.4   | 25.8  | 24.6  | 23.5  | 22.3  | 21.1  | 19.2  | 17.4  |
| 92.5°  | 28.1  | 27.8  | 27.6  | 27.5   | 27.3  | 26.8  | 26.3  | 25.8  | 25.3  | 24.6  | 23.9  |
| 95°    | 45.9  | 46.1  | 46.4  | 46.5   | 45.9  | 44.7  | 43.6  | 42.4  | 41.2  | 39.6  | 37.9  |
| 97.5°  | 57.6  | 57.4  | 57.1  | 57.0   | 56.7  | 56.0  | 55.3  | 54.6  | 53.9  | 50.1  | 46.4  |
| 100°   | 69.9  | 69.4  | 68.9  | 68.7   | 67.8  | 65.9  | 64.0  | 62.1  | 60.2  | 56.2  | 52.2  |
| 102.5° | 75.7  | 75.0  | 74.3  | 73.9   | 72.6  | 70.0  | 67.5  | 64.9  | 62.3  | 105.0 | 147.8 |
| 105°   | 78.4  | 77.4  | 76.5  | 76.0   | 74.7  | 72.1  | 69.6  | 67.0  | 64.4  | 128.5 | 192.6 |
| 107.5° | 80.5  | 79.6  | 78.7  | 78.2   | 76.9  | 74.3  | 71.7  | 69.1  | 66.5  | 145.6 | 224.7 |
| 110°   | 81.5  | 80.6  | 79.7  | 79.2   | 90.9  | 114.4 | 137.9 | 161.3 | 184.8 | 252.6 | 320.5 |

TEST NUMBER: P998093

CATALOG NUMBER: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-A\_4000K

**CANDELA DISTRIBUTION (continued):**

|        | 100°   | 105°   | 110°   | 112.5° | 115°   | 120°   | 125°   | 130°   | 135°   | 140°   | 145°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 112.5° | 83.1   | 82.4   | 81.7   | 81.3   | 131.9  | 233.1  | 334.2  | 435.4  | 536.6  | 540.6  | 544.6  |
| 115°   | 120.4  | 137.3  | 154.2  | 162.7  | 217.0  | 325.7  | 434.4  | 543.0  | 651.7  | 645.8  | 640.0  |
| 117.5° | 404.0  | 465.5  | 527.0  | 557.7  | 574.5  | 608.0  | 641.6  | 675.1  | 708.7  | 704.7  | 700.7  |
| 120°   | 707.7  | 739.4  | 771.1  | 786.9  | 785.5  | 782.7  | 779.8  | 777.0  | 774.2  | 770.0  | 765.8  |
| 122.5° | 843.5  | 843.2  | 843.0  | 842.9  | 842.2  | 840.8  | 839.3  | 837.9  | 836.5  | 831.8  | 827.1  |
| 125°   | 901.7  | 901.0  | 900.3  | 899.9  | 899.1  | 897.4  | 895.8  | 894.1  | 892.5  | 888.1  | 883.6  |
| 127.5° | 955.4  | 955.2  | 954.9  | 954.8  | 953.6  | 951.3  | 949.0  | 946.6  | 944.3  | 940.8  | 937.2  |
| 130°   | 1004.9 | 1005.2 | 1005.4 | 1005.5 | 1004.2 | 1001.6 | 999.1  | 996.5  | 993.9  | 991.3  | 988.7  |
| 132.5° | 1052.5 | 1052.7 | 1053.0 | 1053.1 | 1052.0 | 1049.9 | 1047.8 | 1045.7 | 1043.6 | 1041.0 | 1038.4 |
| 135°   | 1098.4 | 1098.9 | 1099.4 | 1099.6 | 1098.4 | 1096.1 | 1093.7 | 1091.4 | 1089.0 | 1086.9 | 1084.8 |
| 137.5° | 1141.1 | 1141.8 | 1142.5 | 1142.9 | 1141.7 | 1139.4 | 1137.0 | 1134.7 | 1132.3 | 1129.9 | 1127.6 |
| 140°   | 1181.2 | 1182.3 | 1183.5 | 1184.1 | 1183.0 | 1180.9 | 1178.8 | 1176.6 | 1174.5 | 1171.9 | 1169.3 |
| 142.5° | 1219.2 | 1220.3 | 1221.5 | 1222.1 | 1221.2 | 1219.3 | 1217.4 | 1215.5 | 1213.6 | 1210.6 | 1207.5 |
| 145°   | 1254.0 | 1255.2 | 1256.3 | 1256.9 | 1256.1 | 1254.4 | 1252.8 | 1251.1 | 1249.5 | 1245.5 | 1241.5 |
| 147.5° | 1285.2 | 1286.2 | 1287.1 | 1287.6 | 1287.0 | 1285.8 | 1284.7 | 1283.5 | 1282.3 | 1278.3 | 1274.3 |
| 150°   | 1314.2 | 1315.4 | 1316.5 | 1317.1 | 1316.4 | 1315.0 | 1313.6 | 1312.2 | 1310.8 | 1307.0 | 1303.3 |
| 152.5° | 1339.4 | 1341.1 | 1342.7 | 1343.5 | 1342.8 | 1341.4 | 1340.0 | 1338.6 | 1337.2 | 1333.7 | 1330.2 |
| 155°   | 1362.1 | 1364.0 | 1365.9 | 1366.8 | 1366.1 | 1364.7 | 1363.2 | 1361.8 | 1360.4 | 1357.6 | 1354.8 |
| 157.5° | 1383.2 | 1385.1 | 1387.0 | 1387.9 | 1387.1 | 1385.4 | 1383.8 | 1382.1 | 1380.5 | 1378.4 | 1376.3 |
| 160°   | 1400.7 | 1402.3 | 1404.0 | 1404.8 | 1404.1 | 1402.7 | 1401.3 | 1399.9 | 1398.5 | 1397.1 | 1395.7 |
| 162.5° | 1416.4 | 1418.5 | 1420.6 | 1421.7 | 1420.9 | 1419.2 | 1417.6 | 1415.9 | 1414.3 | 1413.1 | 1411.9 |
| 165°   | 1430.3 | 1431.9 | 1433.6 | 1434.4 | 1433.6 | 1431.9 | 1430.3 | 1428.6 | 1427.0 | 1426.3 | 1425.6 |
| 167.5° | 1440.7 | 1442.8 | 1444.9 | 1446.0 | 1445.2 | 1443.5 | 1441.9 | 1440.2 | 1438.6 | 1437.9 | 1437.2 |
| 170°   | 1449.2 | 1451.3 | 1453.4 | 1454.5 | 1453.7 | 1452.0 | 1450.4 | 1448.7 | 1447.1 | 1446.6 | 1446.1 |
| 172.5° | 1455.5 | 1457.6 | 1459.7 | 1460.8 | 1460.0 | 1458.3 | 1456.7 | 1455.0 | 1453.4 | 1452.9 | 1452.5 |
| 175°   | 1459.2 | 1461.5 | 1463.8 | 1465.0 | 1464.2 | 1462.5 | 1460.9 | 1459.2 | 1457.6 | 1457.1 | 1456.7 |
| 177.5° | 1460.8 | 1462.9 | 1465.0 | 1466.1 | 1465.3 | 1463.6 | 1462.0 | 1460.3 | 1458.7 | 1458.5 | 1458.2 |
| 180°   | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 |

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**CANDELA DISTRIBUTION (continued):**

|        | 150°  | 155°  | 157.5° | 160°  | 165°  | 170°  | 175°  | 180°  | 185°  | 190°  | 195°  |
|--------|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°     | 572.0 | 572.0 | 572.0  | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 |
| 2.5°   | 586.9 | 584.7 | 583.4  | 584.3 | 581.7 | 575.1 | 575.1 | 577.3 | 574.6 | 572.0 | 568.0 |
| 5°     | 603.2 | 598.8 | 596.2  | 595.7 | 589.6 | 579.0 | 576.8 | 574.6 | 568.9 | 562.8 | 556.2 |
| 7.5°   | 619.0 | 611.1 | 606.7  | 603.7 | 594.9 | 581.2 | 575.5 | 570.7 | 561.4 | 552.2 | 543.9 |
| 10°    | 632.2 | 620.8 | 615.5  | 610.7 | 599.3 | 582.1 | 572.9 | 564.1 | 552.2 | 540.3 | 529.8 |
| 12.5°  | 642.8 | 629.6 | 623.0  | 616.0 | 601.9 | 579.5 | 568.0 | 554.0 | 542.1 | 526.3 | 515.7 |
| 15°    | 660.4 | 633.1 | 627.0  | 620.4 | 605.9 | 575.1 | 561.0 | 545.2 | 528.9 | 507.8 | 496.4 |
| 17.5°  | 674.4 | 637.9 | 637.5  | 623.4 | 604.5 | 573.3 | 551.8 | 531.1 | 513.5 | 492.4 | 474.4 |
| 20°    | 682.8 | 645.4 | 638.4  | 623.9 | 600.1 | 561.4 | 539.0 | 516.2 | 497.3 | 471.8 | 453.7 |
| 22.5°  | 689.8 | 656.0 | 637.5  | 619.9 | 590.9 | 557.5 | 524.5 | 503.0 | 477.0 | 449.3 | 432.2 |
| 25°    | 692.5 | 658.2 | 638.8  | 618.6 | 584.3 | 546.1 | 508.7 | 485.4 | 456.4 | 431.3 | 408.0 |
| 27.5°  | 692.9 | 657.7 | 634.0  | 612.9 | 575.1 | 531.1 | 492.9 | 468.2 | 436.1 | 407.1 | 383.8 |
| 30°    | 688.5 | 652.9 | 631.4  | 608.5 | 566.3 | 517.5 | 473.5 | 446.3 | 412.0 | 382.9 | 358.8 |
| 32.5°  | 675.3 | 643.2 | 625.6  | 600.6 | 554.9 | 498.6 | 455.0 | 424.7 | 388.7 | 360.1 | 336.8 |
| 35°    | 653.3 | 631.4 | 612.0  | 588.7 | 539.9 | 481.0 | 436.6 | 401.0 | 364.5 | 337.2 | 315.2 |
| 37.5°  | 626.1 | 614.2 | 596.2  | 573.3 | 522.8 | 465.2 | 415.9 | 376.3 | 339.9 | 313.5 | 291.9 |
| 40°    | 589.1 | 592.2 | 574.6  | 554.0 | 502.5 | 443.6 | 389.1 | 351.3 | 317.0 | 292.4 | 271.3 |
| 42.5°  | 549.1 | 561.9 | 551.8  | 532.0 | 480.1 | 419.9 | 369.3 | 327.5 | 294.1 | 268.6 | 251.0 |
| 45°    | 506.0 | 528.0 | 521.9  | 507.4 | 456.8 | 394.8 | 341.2 | 300.7 | 271.3 | 246.6 | 231.3 |
| 47.5°  | 459.0 | 490.2 | 490.2  | 479.7 | 430.9 | 369.8 | 317.0 | 275.7 | 246.6 | 229.1 | 214.1 |
| 50°    | 411.1 | 446.3 | 452.0  | 444.9 | 401.8 | 341.2 | 287.5 | 250.2 | 225.1 | 208.0 | 197.0 |
| 52.5°  | 361.0 | 401.8 | 412.4  | 408.9 | 371.1 | 313.9 | 263.4 | 226.9 | 204.0 | 189.1 | 179.4 |
| 55°    | 313.0 | 360.5 | 372.0  | 373.3 | 338.1 | 284.0 | 236.5 | 204.4 | 182.5 | 172.3 | 164.0 |
| 57.5°  | 267.8 | 313.5 | 326.2  | 328.4 | 304.7 | 256.8 | 211.5 | 183.3 | 163.6 | 155.2 | 148.6 |
| 60°    | 229.1 | 267.3 | 284.0  | 288.9 | 268.2 | 225.1 | 188.2 | 160.9 | 146.0 | 138.1 | 131.9 |
| 62.5°  | 197.4 | 228.2 | 245.8  | 247.1 | 237.9 | 197.4 | 164.0 | 141.1 | 128.4 | 121.3 | 118.3 |
| 65°    | 166.6 | 194.3 | 204.9  | 210.2 | 202.7 | 171.0 | 141.6 | 122.7 | 112.6 | 106.4 | 103.3 |
| 67.5°  | 142.0 | 159.6 | 168.4  | 175.4 | 167.9 | 144.2 | 120.5 | 105.1 | 97.6  | 91.4  | 89.7  |
| 70°    | 116.5 | 131.0 | 137.6  | 144.6 | 138.1 | 120.0 | 102.9 | 88.8  | 82.2  | 77.4  | 75.2  |
| 72.5°  | 93.2  | 104.6 | 110.8  | 115.2 | 111.2 | 96.3  | 82.2  | 72.5  | 67.7  | 64.2  | 62.9  |
| 75°    | 73.9  | 81.8  | 85.3   | 88.4  | 86.6  | 75.2  | 66.4  | 58.5  | 54.1  | 51.0  | 50.1  |
| 77.5°  | 56.3  | 62.0  | 65.9   | 66.8  | 64.6  | 57.2  | 49.7  | 44.8  | 41.3  | 39.6  | 38.7  |
| 80°    | 40.0  | 43.5  | 45.7   | 47.0  | 44.8  | 41.8  | 36.5  | 33.0  | 29.9  | 27.7  | 27.3  |
| 82.5°  | 26.8  | 28.6  | 30.3   | 29.9  | 29.0  | 26.4  | 23.3  | 21.5  | 20.2  | 18.5  | 18.5  |
| 85°    | 15.4  | 15.8  | 16.7   | 17.1  | 16.7  | 14.9  | 13.2  | 12.3  | 11.4  | 10.1  | 10.1  |
| 87.5°  | 6.6   | 7.0   | 7.0    | 7.5   | 6.6   | 6.6   | 5.7   | 4.8   | 4.8   | 4.4   | 4.0   |
| 90°    | 15.5  | 13.6  | 12.7   | 11.4  | 8.8   | 6.3   | 3.7   | 1.1   | 3.7   | 6.3   | 8.8   |
| 92.5°  | 23.2  | 22.5  | 22.2   | 22.7  | 23.6  | 24.5  | 25.5  | 26.4  | 25.5  | 24.5  | 23.6  |
| 95°    | 36.3  | 34.6  | 33.8   | 37.7  | 45.4  | 53.2  | 60.9  | 68.7  | 60.9  | 53.2  | 45.4  |
| 97.5°  | 42.6  | 38.9  | 37.0   | 46.6  | 65.9  | 85.1  | 104.4 | 123.6 | 104.4 | 85.1  | 65.9  |
| 100°   | 48.2  | 44.2  | 42.2   | 58.3  | 90.5  | 122.6 | 154.8 | 187.0 | 154.8 | 122.6 | 90.5  |
| 102.5° | 190.5 | 233.2 | 254.6  | 254.8 | 255.3 | 255.8 | 256.2 | 256.7 | 256.2 | 255.8 | 255.3 |
| 105°   | 256.7 | 320.8 | 352.8  | 349.3 | 342.2 | 335.2 | 328.1 | 321.1 | 328.1 | 335.2 | 342.2 |
| 107.5° | 303.8 | 382.9 | 422.5  | 419.6 | 413.7 | 407.8 | 402.0 | 396.1 | 402.0 | 407.8 | 413.7 |
| 110°   | 388.3 | 456.2 | 490.1  | 487.6 | 482.7 | 477.8 | 472.8 | 467.9 | 472.8 | 477.8 | 482.7 |

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CATALOG NUMBER: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-A\_4000K

**CANDELA DISTRIBUTION (continued):**

|        | 150°   | 155°   | 157.5° | 160°   | 165°   | 170°   | 175°   | 180°   | 185°   | 190°   | 195°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 112.5° | 548.5  | 552.5  | 554.5  | 552.4  | 548.2  | 543.9  | 539.7  | 535.5  | 539.7  | 543.9  | 548.2  |
| 115°   | 634.1  | 628.2  | 625.3  | 623.3  | 619.3  | 615.3  | 611.3  | 607.3  | 611.3  | 615.3  | 619.3  |
| 117.5° | 696.8  | 692.8  | 690.8  | 688.5  | 683.8  | 679.1  | 674.4  | 669.7  | 674.4  | 679.1  | 683.8  |
| 120°   | 761.5  | 757.3  | 755.2  | 753.4  | 749.9  | 746.4  | 742.9  | 739.4  | 742.9  | 746.4  | 749.9  |
| 122.5° | 822.4  | 817.7  | 815.4  | 813.5  | 809.8  | 806.0  | 802.3  | 798.5  | 802.3  | 806.0  | 809.8  |
| 125°   | 879.2  | 874.7  | 872.5  | 871.0  | 867.9  | 864.8  | 861.8  | 858.7  | 861.8  | 864.8  | 867.9  |
| 127.5° | 933.7  | 930.2  | 928.4  | 926.8  | 923.5  | 920.2  | 917.0  | 913.7  | 917.0  | 920.2  | 923.5  |
| 130°   | 986.2  | 983.6  | 982.3  | 980.4  | 976.7  | 972.9  | 969.2  | 965.4  | 969.2  | 972.9  | 976.7  |
| 132.5° | 1035.9 | 1033.3 | 1032.0 | 1030.5 | 1027.4 | 1024.3 | 1021.3 | 1018.2 | 1021.3 | 1024.3 | 1027.4 |
| 135°   | 1082.7 | 1080.6 | 1079.5 | 1077.6 | 1073.9 | 1070.1 | 1066.4 | 1062.6 | 1066.4 | 1070.1 | 1073.9 |
| 137.5° | 1125.2 | 1122.9 | 1121.7 | 1120.3 | 1117.5 | 1114.7 | 1111.9 | 1109.1 | 1111.9 | 1114.7 | 1117.5 |
| 140°   | 1166.8 | 1164.2 | 1162.9 | 1162.0 | 1160.1 | 1158.2 | 1156.4 | 1154.5 | 1156.4 | 1158.2 | 1160.1 |
| 142.5° | 1204.5 | 1201.4 | 1199.9 | 1199.1 | 1197.4 | 1195.8 | 1194.1 | 1192.5 | 1194.1 | 1195.8 | 1197.4 |
| 145°   | 1237.6 | 1233.6 | 1231.6 | 1231.7 | 1231.9 | 1232.2 | 1232.4 | 1232.6 | 1232.4 | 1232.2 | 1231.9 |
| 147.5° | 1270.3 | 1266.3 | 1264.3 | 1264.7 | 1265.4 | 1266.1 | 1266.8 | 1267.5 | 1266.8 | 1266.1 | 1265.4 |
| 150°   | 1299.5 | 1295.8 | 1293.9 | 1294.7 | 1296.4 | 1298.0 | 1299.7 | 1301.3 | 1299.7 | 1298.0 | 1296.4 |
| 152.5° | 1326.7 | 1323.2 | 1321.4 | 1322.3 | 1324.2 | 1326.1 | 1327.9 | 1329.8 | 1327.9 | 1326.1 | 1324.2 |
| 155°   | 1352.0 | 1349.2 | 1347.8 | 1348.9 | 1351.0 | 1353.1 | 1355.2 | 1357.3 | 1355.2 | 1353.1 | 1351.0 |
| 157.5° | 1374.2 | 1372.1 | 1371.0 | 1371.9 | 1373.8 | 1375.7 | 1377.6 | 1379.5 | 1377.6 | 1375.7 | 1373.8 |
| 160°   | 1394.2 | 1392.8 | 1392.1 | 1392.8 | 1394.2 | 1395.7 | 1397.1 | 1398.5 | 1397.1 | 1395.7 | 1394.2 |
| 162.5° | 1410.8 | 1409.6 | 1409.0 | 1409.7 | 1411.1 | 1412.6 | 1414.0 | 1415.4 | 1414.0 | 1412.6 | 1411.1 |
| 165°   | 1424.9 | 1424.2 | 1423.8 | 1424.5 | 1425.9 | 1427.4 | 1428.8 | 1430.2 | 1428.8 | 1427.4 | 1425.9 |
| 167.5° | 1436.5 | 1435.8 | 1435.4 | 1436.1 | 1437.5 | 1439.0 | 1440.4 | 1441.8 | 1440.4 | 1439.0 | 1437.5 |
| 170°   | 1445.6 | 1445.1 | 1444.9 | 1445.6 | 1447.0 | 1448.5 | 1449.9 | 1451.3 | 1449.9 | 1448.5 | 1447.0 |
| 172.5° | 1452.0 | 1451.5 | 1451.3 | 1452.0 | 1453.4 | 1454.8 | 1456.2 | 1457.6 | 1456.2 | 1454.8 | 1453.4 |
| 175°   | 1456.2 | 1455.7 | 1455.5 | 1456.3 | 1458.0 | 1459.6 | 1461.3 | 1462.9 | 1461.3 | 1459.6 | 1458.0 |
| 177.5° | 1458.0 | 1457.7 | 1457.6 | 1458.4 | 1460.1 | 1461.7 | 1463.4 | 1465.0 | 1463.4 | 1461.7 | 1460.1 |
| 180°   | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 |

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**CANDELA DISTRIBUTION (continued):**

|        | 200°  | 202.5° | 205°  | 210°  | 215°  | 220°  | 225°  | 230°  | 235°  | 240°  | 245°  |
|--------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°     | 572.0 | 572.0  | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 |
| 2.5°   | 565.8 | 568.0  | 567.6 | 563.2 | 558.4 | 554.4 | 546.9 | 547.8 | 545.2 | 545.6 | 548.3 |
| 5°     | 551.8 | 551.8  | 550.0 | 543.9 | 535.9 | 531.5 | 523.2 | 521.0 | 515.7 | 515.3 | 514.8 |
| 7.5°   | 536.8 | 534.6  | 532.4 | 523.6 | 514.0 | 506.9 | 495.5 | 492.9 | 487.6 | 484.1 | 482.3 |
| 10°    | 519.2 | 516.2  | 511.8 | 501.7 | 489.8 | 481.0 | 469.1 | 465.6 | 455.5 | 451.1 | 448.5 |
| 12.5°  | 499.9 | 498.1  | 491.1 | 482.7 | 463.4 | 453.7 | 436.6 | 440.1 | 430.0 | 421.2 | 419.9 |
| 15°    | 480.5 | 474.0  | 470.0 | 456.4 | 433.1 | 428.7 | 415.0 | 408.0 | 398.8 | 391.7 | 391.7 |
| 17.5°  | 461.6 | 451.5  | 442.7 | 428.2 | 411.1 | 398.8 | 388.7 | 385.1 | 373.7 | 366.7 | 365.4 |
| 20°    | 436.6 | 425.2  | 423.0 | 402.3 | 390.4 | 376.8 | 367.1 | 358.3 | 350.0 | 346.9 | 344.7 |
| 22.5°  | 412.8 | 399.7  | 396.1 | 378.5 | 366.7 | 353.0 | 343.4 | 337.2 | 331.1 | 328.9 | 324.9 |
| 25°    | 387.3 | 379.4  | 374.2 | 355.2 | 342.1 | 329.3 | 322.7 | 318.3 | 312.6 | 312.2 | 309.5 |
| 27.5°  | 362.7 | 355.2  | 350.0 | 331.9 | 322.3 | 310.4 | 305.1 | 300.3 | 297.2 | 295.9 | 294.6 |
| 30°    | 341.6 | 333.3  | 327.1 | 313.9 | 302.0 | 292.4 | 288.0 | 284.9 | 283.1 | 280.9 | 280.5 |
| 32.5°  | 318.3 | 313.5  | 305.1 | 295.0 | 285.8 | 276.5 | 273.9 | 271.7 | 269.1 | 268.2 | 267.8 |
| 35°    | 298.5 | 291.9  | 286.7 | 275.2 | 271.3 | 263.4 | 260.3 | 258.5 | 255.0 | 254.1 | 253.2 |
| 37.5°  | 279.2 | 273.0  | 267.3 | 260.3 | 252.8 | 248.4 | 246.6 | 244.0 | 242.3 | 242.7 | 241.8 |
| 40°    | 259.8 | 255.0  | 250.6 | 243.1 | 238.7 | 236.5 | 233.0 | 230.4 | 229.5 | 229.9 | 229.5 |
| 42.5°  | 240.9 | 236.5  | 233.9 | 228.2 | 223.8 | 221.6 | 219.4 | 216.8 | 218.1 | 218.1 | 219.4 |
| 45°    | 223.8 | 219.8  | 218.1 | 213.7 | 211.0 | 207.5 | 205.3 | 204.9 | 206.6 | 206.2 | 206.2 |
| 47.5°  | 206.2 | 204.9  | 202.7 | 198.7 | 195.2 | 193.0 | 192.6 | 192.6 | 194.3 | 195.2 | 194.8 |
| 50°    | 192.6 | 189.9  | 187.3 | 184.2 | 181.6 | 180.7 | 179.4 | 180.3 | 182.0 | 182.0 | 182.9 |
| 52.5°  | 175.4 | 173.7  | 172.8 | 170.1 | 168.4 | 168.4 | 168.4 | 168.8 | 170.1 | 171.5 | 171.0 |
| 55°    | 160.5 | 159.2  | 158.3 | 157.0 | 154.8 | 155.2 | 154.8 | 155.6 | 157.0 | 158.3 | 159.2 |
| 57.5°  | 144.6 | 144.2  | 143.3 | 141.1 | 141.1 | 140.7 | 142.0 | 142.4 | 144.6 | 145.5 | 146.8 |
| 60°    | 130.6 | 129.3  | 129.3 | 127.5 | 127.5 | 127.5 | 128.8 | 130.1 | 131.9 | 132.3 | 133.2 |
| 62.5°  | 115.6 | 115.6  | 115.2 | 113.9 | 113.9 | 115.2 | 115.6 | 117.4 | 118.3 | 118.3 | 119.6 |
| 65°    | 101.6 | 101.1  | 100.7 | 101.1 | 101.6 | 101.6 | 102.9 | 103.8 | 104.6 | 105.1 | 105.5 |
| 67.5°  | 87.5  | 87.1   | 87.9  | 87.5  | 88.4  | 90.1  | 89.7  | 91.0  | 92.3  | 92.3  | 92.8  |
| 70°    | 74.3  | 75.2   | 74.7  | 75.6  | 75.2  | 76.1  | 77.4  | 77.8  | 77.8  | 78.3  | 79.6  |
| 72.5°  | 62.0  | 62.0   | 62.0  | 61.6  | 62.0  | 62.9  | 63.8  | 64.2  | 65.1  | 65.5  | 66.8  |
| 75°    | 50.1  | 50.1   | 49.2  | 50.1  | 50.1  | 51.0  | 51.9  | 51.9  | 51.9  | 52.8  | 54.1  |
| 77.5°  | 37.8  | 38.3   | 37.8  | 38.7  | 38.7  | 39.1  | 40.0  | 39.6  | 40.4  | 40.9  | 41.3  |
| 80°    | 27.7  | 27.3   | 27.3  | 27.3  | 27.7  | 27.7  | 28.6  | 29.0  | 29.0  | 30.3  | 29.5  |
| 82.5°  | 17.6  | 18.0   | 17.6  | 18.0  | 18.0  | 18.5  | 18.0  | 18.5  | 18.9  | 19.8  | 19.3  |
| 85°    | 10.1  | 9.7    | 9.7   | 10.1  | 9.7   | 9.7   | 10.1  | 9.7   | 10.1  | 9.7   | 10.1  |
| 87.5°  | 4.0   | 3.5    | 3.5   | 3.5   | 3.5   | 3.1   | 3.1   | 2.6   | 2.6   | 2.6   | 2.2   |
| 90°    | 11.4  | 12.7   | 13.6  | 15.5  | 17.4  | 19.2  | 21.1  | 22.3  | 23.5  | 24.6  | 25.8  |
| 92.5°  | 22.7  | 22.2   | 22.5  | 23.2  | 23.9  | 24.6  | 25.3  | 25.8  | 26.3  | 26.8  | 27.3  |
| 95°    | 37.7  | 33.8   | 34.6  | 36.3  | 37.9  | 39.6  | 41.2  | 42.4  | 43.6  | 44.7  | 45.9  |
| 97.5°  | 46.6  | 37.0   | 38.9  | 42.6  | 46.4  | 50.1  | 53.9  | 54.6  | 55.3  | 56.0  | 56.7  |
| 100°   | 58.3  | 42.2   | 44.2  | 48.2  | 52.2  | 56.2  | 60.2  | 62.1  | 64.0  | 65.9  | 67.8  |
| 102.5° | 254.8 | 254.6  | 233.2 | 190.5 | 147.8 | 105.0 | 62.3  | 64.9  | 67.5  | 70.0  | 72.6  |
| 105°   | 349.3 | 352.8  | 320.8 | 256.7 | 192.6 | 128.5 | 64.4  | 67.0  | 69.6  | 72.1  | 74.7  |
| 107.5° | 419.6 | 422.5  | 382.9 | 303.8 | 224.7 | 145.6 | 66.5  | 69.1  | 71.7  | 74.3  | 76.9  |
| 110°   | 487.6 | 490.1  | 456.2 | 388.3 | 320.5 | 252.6 | 184.8 | 161.3 | 137.9 | 114.4 | 90.9  |

TEST NUMBER: P998093

CATALOG NUMBER: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-A\_4000K

**CANDELA DISTRIBUTION (continued):**

|        | 200°   | 202.5° | 205°   | 210°   | 215°   | 220°   | 225°   | 230°   | 235°   | 240°   | 245°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 112.5° | 552.4  | 554.5  | 552.5  | 548.5  | 544.6  | 540.6  | 536.6  | 435.4  | 334.2  | 233.1  | 131.9  |
| 115°   | 623.3  | 625.3  | 628.2  | 634.1  | 640.0  | 645.8  | 651.7  | 543.0  | 434.4  | 325.7  | 217.0  |
| 117.5° | 688.5  | 690.8  | 692.8  | 696.8  | 700.7  | 704.7  | 708.7  | 675.1  | 641.6  | 608.0  | 574.5  |
| 120°   | 753.4  | 755.2  | 757.3  | 761.5  | 765.8  | 770.0  | 774.2  | 777.0  | 779.8  | 782.7  | 785.5  |
| 122.5° | 813.5  | 815.4  | 817.7  | 822.4  | 827.1  | 831.8  | 836.5  | 837.9  | 839.3  | 840.8  | 842.2  |
| 125°   | 871.0  | 872.5  | 874.7  | 879.2  | 883.6  | 888.1  | 892.5  | 894.1  | 895.8  | 897.4  | 899.1  |
| 127.5° | 926.8  | 928.4  | 930.2  | 933.7  | 937.2  | 940.8  | 944.3  | 946.6  | 949.0  | 951.3  | 953.6  |
| 130°   | 980.4  | 982.3  | 983.6  | 986.2  | 988.7  | 991.3  | 993.9  | 996.5  | 999.1  | 1001.6 | 1004.2 |
| 132.5° | 1030.5 | 1032.0 | 1033.3 | 1035.9 | 1038.4 | 1041.0 | 1043.6 | 1045.7 | 1047.8 | 1049.9 | 1052.0 |
| 135°   | 1077.6 | 1079.5 | 1080.6 | 1082.7 | 1084.8 | 1086.9 | 1089.0 | 1091.4 | 1093.7 | 1096.1 | 1098.4 |
| 137.5° | 1120.3 | 1121.7 | 1122.9 | 1125.2 | 1127.6 | 1129.9 | 1132.3 | 1134.7 | 1137.0 | 1139.4 | 1141.7 |
| 140°   | 1162.0 | 1162.9 | 1164.2 | 1166.8 | 1169.3 | 1171.9 | 1174.5 | 1176.6 | 1178.8 | 1180.9 | 1183.0 |
| 142.5° | 1199.1 | 1199.9 | 1201.4 | 1204.5 | 1207.5 | 1210.6 | 1213.6 | 1215.5 | 1217.4 | 1219.3 | 1221.2 |
| 145°   | 1231.7 | 1231.6 | 1233.6 | 1237.6 | 1241.5 | 1245.5 | 1249.5 | 1251.1 | 1252.8 | 1254.4 | 1256.1 |
| 147.5° | 1264.7 | 1264.3 | 1266.3 | 1270.3 | 1274.3 | 1278.3 | 1282.3 | 1283.5 | 1284.7 | 1285.8 | 1287.0 |
| 150°   | 1294.7 | 1293.9 | 1295.8 | 1299.5 | 1303.3 | 1307.0 | 1310.8 | 1312.2 | 1313.6 | 1315.0 | 1316.4 |
| 152.5° | 1322.3 | 1321.4 | 1323.2 | 1326.7 | 1330.2 | 1333.7 | 1337.2 | 1338.6 | 1340.0 | 1341.4 | 1342.8 |
| 155°   | 1348.9 | 1347.8 | 1349.2 | 1352.0 | 1354.8 | 1357.6 | 1360.4 | 1361.8 | 1363.2 | 1364.7 | 1366.1 |
| 157.5° | 1371.9 | 1371.0 | 1372.1 | 1374.2 | 1376.3 | 1378.4 | 1380.5 | 1382.1 | 1383.8 | 1385.4 | 1387.1 |
| 160°   | 1392.8 | 1392.1 | 1392.8 | 1394.2 | 1395.7 | 1397.1 | 1398.5 | 1399.9 | 1401.3 | 1402.7 | 1404.1 |
| 162.5° | 1409.7 | 1409.0 | 1409.6 | 1410.8 | 1411.9 | 1413.1 | 1414.3 | 1415.9 | 1417.6 | 1419.2 | 1420.9 |
| 165°   | 1424.5 | 1423.8 | 1424.2 | 1424.9 | 1425.6 | 1426.3 | 1427.0 | 1428.6 | 1430.3 | 1431.9 | 1433.6 |
| 167.5° | 1436.1 | 1435.4 | 1435.8 | 1436.5 | 1437.2 | 1437.9 | 1438.6 | 1440.2 | 1441.9 | 1443.5 | 1445.2 |
| 170°   | 1445.6 | 1444.9 | 1445.1 | 1445.6 | 1446.1 | 1446.6 | 1447.1 | 1448.7 | 1450.4 | 1452.0 | 1453.7 |
| 172.5° | 1452.0 | 1451.3 | 1451.5 | 1452.0 | 1452.5 | 1452.9 | 1453.4 | 1455.0 | 1456.7 | 1458.3 | 1460.0 |
| 175°   | 1456.3 | 1455.5 | 1455.7 | 1456.2 | 1456.7 | 1457.1 | 1457.6 | 1459.2 | 1460.9 | 1462.5 | 1464.2 |
| 177.5° | 1458.4 | 1457.6 | 1457.7 | 1458.0 | 1458.2 | 1458.5 | 1458.7 | 1460.3 | 1462.0 | 1463.6 | 1465.3 |
| 180°   | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 |

TEST NUMBER: P998093

CATALOG NUMBER: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-A\_4000K

**CANDELA DISTRIBUTION (continued):**

|        | 247.5° | 250°  | 255°  | 260°  | 265°  | 270°  | 275°  | 280°  | 285°  | 290°  | 292.5° |
|--------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 0°     | 572.0  | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0  |
| 2.5°   | 545.2  | 546.5 | 543.4 | 542.5 | 543.4 | 540.3 | 541.2 | 542.1 | 542.1 | 543.4 | 544.3  |
| 5°     | 513.5  | 511.8 | 508.7 | 507.8 | 506.9 | 508.2 | 507.4 | 508.7 | 509.1 | 512.2 | 512.6  |
| 7.5°   | 482.3  | 479.7 | 477.0 | 474.4 | 473.5 | 471.3 | 473.5 | 473.5 | 476.6 | 475.7 | 477.9  |
| 10°    | 445.4  | 444.9 | 441.4 | 440.1 | 438.3 | 434.8 | 439.7 | 438.3 | 440.5 | 444.5 | 445.4  |
| 12.5°  | 418.1  | 413.3 | 415.5 | 409.3 | 411.5 | 408.0 | 408.4 | 408.4 | 412.0 | 412.4 | 411.5  |
| 15°    | 392.2  | 388.2 | 382.5 | 379.9 | 378.5 | 376.8 | 382.5 | 382.9 | 380.3 | 386.5 | 384.3  |
| 17.5°  | 365.8  | 365.8 | 360.5 | 359.2 | 355.7 | 357.4 | 356.6 | 357.0 | 356.1 | 360.5 | 362.7  |
| 20°    | 342.9  | 340.7 | 339.0 | 339.4 | 335.0 | 334.1 | 333.3 | 334.1 | 337.2 | 340.3 | 341.2  |
| 22.5°  | 324.5  | 323.1 | 318.8 | 319.6 | 316.1 | 317.4 | 316.6 | 318.8 | 319.2 | 319.2 | 322.3  |
| 25°    | 306.9  | 305.1 | 305.6 | 303.8 | 302.5 | 302.5 | 301.2 | 302.5 | 304.2 | 305.1 | 305.6  |
| 27.5°  | 293.7  | 292.4 | 290.2 | 288.9 | 289.7 | 287.5 | 289.3 | 290.6 | 290.6 | 289.7 | 290.6  |
| 30°    | 277.9  | 278.7 | 278.7 | 274.3 | 276.1 | 275.2 | 276.5 | 277.4 | 277.4 | 277.9 | 277.0  |
| 32.5°  | 267.3  | 264.7 | 264.2 | 263.8 | 263.8 | 262.0 | 262.0 | 263.4 | 263.8 | 264.2 | 265.6  |
| 35°    | 253.2  | 253.2 | 251.0 | 252.4 | 250.6 | 251.0 | 250.6 | 251.0 | 251.9 | 250.6 | 251.9  |
| 37.5°  | 240.5  | 240.9 | 240.1 | 240.9 | 241.4 | 240.5 | 239.6 | 241.4 | 240.5 | 240.5 | 239.6  |
| 40°    | 229.5  | 229.1 | 229.5 | 229.5 | 229.5 | 229.9 | 229.1 | 229.1 | 229.1 | 228.2 | 227.3  |
| 42.5°  | 220.3  | 217.6 | 218.5 | 219.0 | 217.6 | 217.6 | 218.1 | 217.6 | 219.0 | 216.3 | 216.3  |
| 45°    | 207.1  | 206.2 | 206.6 | 206.6 | 207.5 | 206.2 | 207.1 | 207.5 | 206.2 | 205.8 | 204.9  |
| 47.5°  | 195.2  | 196.1 | 195.2 | 196.1 | 196.1 | 197.0 | 195.2 | 195.6 | 196.1 | 194.3 | 193.0  |
| 50°    | 183.3  | 183.3 | 184.7 | 184.2 | 184.7 | 183.8 | 183.8 | 183.3 | 183.8 | 182.9 | 181.6  |
| 52.5°  | 172.3  | 171.0 | 173.2 | 172.8 | 172.3 | 171.9 | 171.5 | 171.9 | 171.0 | 170.1 | 170.1  |
| 55°    | 158.7  | 158.7 | 160.0 | 160.5 | 160.5 | 159.6 | 158.7 | 159.2 | 158.7 | 158.3 | 157.8  |
| 57.5°  | 147.7  | 146.0 | 146.8 | 147.3 | 147.3 | 146.0 | 146.8 | 146.0 | 146.0 | 146.4 | 145.1  |
| 60°    | 133.7  | 133.7 | 132.8 | 134.1 | 134.1 | 133.2 | 133.2 | 133.7 | 132.8 | 132.3 | 131.9  |
| 62.5°  | 118.7  | 119.1 | 120.5 | 120.9 | 121.3 | 120.5 | 119.6 | 120.0 | 120.0 | 118.7 | 119.1  |
| 65°    | 106.0  | 106.8 | 108.6 | 108.2 | 107.3 | 107.7 | 106.8 | 107.3 | 106.0 | 106.4 | 105.1  |
| 67.5°  | 93.6   | 93.2  | 93.6  | 93.6  | 94.5  | 94.1  | 93.2  | 93.2  | 92.8  | 94.1  | 92.8   |
| 70°    | 80.5   | 80.5  | 80.5  | 80.5  | 80.9  | 81.3  | 80.5  | 79.6  | 80.0  | 79.1  | 78.7   |
| 72.5°  | 66.8   | 67.3  | 66.8  | 67.7  | 66.4  | 67.3  | 67.3  | 66.8  | 66.4  | 66.4  | 66.4   |
| 75°    | 54.1   | 55.0  | 53.6  | 54.1  | 53.6  | 54.5  | 54.1  | 54.1  | 53.2  | 52.8  | 53.2   |
| 77.5°  | 41.3   | 41.8  | 40.9  | 41.3  | 40.9  | 41.3  | 41.3  | 40.9  | 40.9  | 40.9  | 40.9   |
| 80°    | 29.5   | 29.9  | 29.5  | 29.0  | 28.6  | 29.5  | 28.6  | 29.0  | 29.5  | 29.0  | 29.9   |
| 82.5°  | 18.9   | 18.9  | 18.5  | 18.9  | 18.0  | 18.0  | 18.5  | 18.5  | 18.0  | 18.9  | 18.0   |
| 85°    | 9.2    | 9.2   | 10.1  | 9.2   | 8.8   | 8.8   | 8.8   | 9.2   | 8.8   | 9.7   | 9.2    |
| 87.5°  | 2.2    | 1.8   | 2.2   | 2.2   | 1.8   | 1.8   | 2.2   | 1.8   | 2.2   | 2.6   | 1.8    |
| 90°    | 26.4   | 26.6  | 27.1  | 27.6  | 28.0  | 28.5  | 28.0  | 27.6  | 27.1  | 26.6  | 26.4   |
| 92.5°  | 27.5   | 27.6  | 27.8  | 28.1  | 28.3  | 28.5  | 28.3  | 28.1  | 27.8  | 27.6  | 27.5   |
| 95°    | 46.5   | 46.4  | 46.1  | 45.9  | 45.6  | 45.4  | 45.6  | 45.9  | 46.1  | 46.4  | 46.5   |
| 97.5°  | 57.0   | 57.1  | 57.4  | 57.6  | 57.9  | 58.1  | 57.9  | 57.6  | 57.4  | 57.1  | 57.0   |
| 100°   | 68.7   | 68.9  | 69.4  | 69.9  | 70.3  | 70.8  | 70.3  | 69.9  | 69.4  | 68.9  | 68.7   |
| 102.5° | 73.9   | 74.3  | 75.0  | 75.7  | 76.4  | 77.1  | 76.4  | 75.7  | 75.0  | 74.3  | 73.9   |
| 105°   | 76.0   | 76.5  | 77.4  | 78.4  | 79.3  | 80.3  | 79.3  | 78.4  | 77.4  | 76.5  | 76.0   |
| 107.5° | 78.2   | 78.7  | 79.6  | 80.5  | 81.5  | 82.4  | 81.5  | 80.5  | 79.6  | 78.7  | 78.2   |
| 110°   | 79.2   | 79.7  | 80.6  | 81.5  | 82.5  | 83.4  | 82.5  | 81.5  | 80.6  | 79.7  | 79.2   |

TEST NUMBER: P998093

CATALOG NUMBER: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-A\_4000K

**CANDELA DISTRIBUTION (continued):**

|        | 247.5° | 250°   | 255°   | 260°   | 265°   | 270°   | 275°   | 280°   | 285°   | 290°   | 292.5° |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 112.5° | 81.3   | 81.7   | 82.4   | 83.1   | 83.8   | 84.5   | 83.8   | 83.1   | 82.4   | 81.7   | 81.3   |
| 115°   | 162.7  | 154.2  | 137.3  | 120.4  | 103.5  | 86.6   | 103.5  | 120.4  | 137.3  | 154.2  | 162.7  |
| 117.5° | 557.7  | 527.0  | 465.5  | 404.0  | 342.5  | 281.0  | 342.5  | 404.0  | 465.5  | 527.0  | 557.7  |
| 120°   | 786.9  | 771.1  | 739.4  | 707.7  | 676.0  | 644.3  | 676.0  | 707.7  | 739.4  | 771.1  | 786.9  |
| 122.5° | 842.9  | 843.0  | 843.2  | 843.5  | 843.7  | 843.9  | 843.7  | 843.5  | 843.2  | 843.0  | 842.9  |
| 125°   | 899.9  | 900.3  | 901.0  | 901.7  | 902.4  | 903.1  | 902.4  | 901.7  | 901.0  | 900.3  | 899.9  |
| 127.5° | 954.8  | 954.9  | 955.2  | 955.4  | 955.7  | 955.9  | 955.7  | 955.4  | 955.2  | 954.9  | 954.8  |
| 130°   | 1005.5 | 1005.4 | 1005.2 | 1004.9 | 1004.7 | 1004.5 | 1004.7 | 1004.9 | 1005.2 | 1005.4 | 1005.5 |
| 132.5° | 1053.1 | 1053.0 | 1052.7 | 1052.5 | 1052.2 | 1052.0 | 1052.2 | 1052.5 | 1052.7 | 1053.0 | 1053.1 |
| 135°   | 1099.6 | 1099.4 | 1098.9 | 1098.4 | 1097.9 | 1097.4 | 1097.9 | 1098.4 | 1098.9 | 1099.4 | 1099.6 |
| 137.5° | 1142.9 | 1142.5 | 1141.8 | 1141.1 | 1140.4 | 1139.7 | 1140.4 | 1141.1 | 1141.8 | 1142.5 | 1142.9 |
| 140°   | 1184.1 | 1183.5 | 1182.3 | 1181.2 | 1180.0 | 1178.8 | 1180.0 | 1181.2 | 1182.3 | 1183.5 | 1184.1 |
| 142.5° | 1222.1 | 1221.5 | 1220.3 | 1219.2 | 1218.0 | 1216.8 | 1218.0 | 1219.2 | 1220.3 | 1221.5 | 1222.1 |
| 145°   | 1256.9 | 1256.3 | 1255.2 | 1254.0 | 1252.9 | 1251.7 | 1252.9 | 1254.0 | 1255.2 | 1256.3 | 1256.9 |
| 147.5° | 1287.6 | 1287.1 | 1286.2 | 1285.2 | 1284.3 | 1283.3 | 1284.3 | 1285.2 | 1286.2 | 1287.1 | 1287.6 |
| 150°   | 1317.1 | 1316.5 | 1315.4 | 1314.2 | 1313.1 | 1311.9 | 1313.1 | 1314.2 | 1315.4 | 1316.5 | 1317.1 |
| 152.5° | 1343.5 | 1342.7 | 1341.1 | 1339.4 | 1337.8 | 1336.2 | 1337.8 | 1339.4 | 1341.1 | 1342.7 | 1343.5 |
| 155°   | 1366.8 | 1365.9 | 1364.0 | 1362.1 | 1360.2 | 1358.3 | 1360.2 | 1362.1 | 1364.0 | 1365.9 | 1366.8 |
| 157.5° | 1387.9 | 1387.0 | 1385.1 | 1383.2 | 1381.4 | 1379.5 | 1381.4 | 1383.2 | 1385.1 | 1387.0 | 1387.9 |
| 160°   | 1404.8 | 1404.0 | 1402.3 | 1400.7 | 1399.0 | 1397.4 | 1399.0 | 1400.7 | 1402.3 | 1404.0 | 1404.8 |
| 162.5° | 1421.7 | 1420.6 | 1418.5 | 1416.4 | 1414.3 | 1412.2 | 1414.3 | 1416.4 | 1418.5 | 1420.6 | 1421.7 |
| 165°   | 1434.4 | 1433.6 | 1431.9 | 1430.3 | 1428.6 | 1427.0 | 1428.6 | 1430.3 | 1431.9 | 1433.6 | 1434.4 |
| 167.5° | 1446.0 | 1444.9 | 1442.8 | 1440.7 | 1438.6 | 1436.5 | 1438.6 | 1440.7 | 1442.8 | 1444.9 | 1446.0 |
| 170°   | 1454.5 | 1453.4 | 1451.3 | 1449.2 | 1447.0 | 1444.9 | 1447.0 | 1449.2 | 1451.3 | 1453.4 | 1454.5 |
| 172.5° | 1460.8 | 1459.7 | 1457.6 | 1455.5 | 1453.4 | 1451.3 | 1453.4 | 1455.5 | 1457.6 | 1459.7 | 1460.8 |
| 175°   | 1465.0 | 1463.8 | 1461.5 | 1459.2 | 1456.8 | 1454.5 | 1456.8 | 1459.2 | 1461.5 | 1463.8 | 1465.0 |
| 177.5° | 1466.1 | 1465.0 | 1462.9 | 1460.8 | 1458.7 | 1456.6 | 1458.7 | 1460.8 | 1462.9 | 1465.0 | 1466.1 |
| 180°   | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 |

TEST NUMBER: P998093

CATALOG NUMBER: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-A\_4000K

**CANDELA DISTRIBUTION (continued):**

|        | 295°  | 300°  | 305°  | 310°  | 315°  | 320°  | 325°  | 330°  | 335°  | 337.5° | 340°  |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|-------|
| 0°     | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0 | 572.0  | 572.0 |
| 2.5°   | 543.0 | 546.5 | 545.2 | 540.3 | 546.1 | 546.1 | 550.0 | 550.0 | 554.9 | 556.6  | 559.2 |
| 5°     | 512.2 | 514.8 | 517.0 | 514.8 | 518.8 | 525.0 | 528.5 | 531.5 | 538.1 | 540.8  | 544.7 |
| 7.5°   | 479.2 | 484.1 | 486.3 | 486.3 | 492.9 | 499.9 | 506.9 | 511.3 | 520.6 | 524.1  | 528.0 |
| 10°    | 447.1 | 452.8 | 457.2 | 456.8 | 467.8 | 472.2 | 481.0 | 491.1 | 500.3 | 505.6  | 511.3 |
| 12.5°  | 413.3 | 416.4 | 422.5 | 431.3 | 433.9 | 441.9 | 452.0 | 464.7 | 481.4 | 486.3  | 494.6 |
| 15°    | 385.1 | 393.5 | 398.3 | 402.3 | 408.4 | 415.9 | 426.9 | 439.2 | 455.9 | 466.5  | 475.3 |
| 17.5°  | 361.4 | 372.4 | 375.5 | 374.6 | 382.5 | 393.9 | 406.7 | 415.9 | 430.9 | 443.6  | 452.0 |
| 20°    | 342.1 | 346.5 | 351.7 | 353.9 | 360.1 | 372.4 | 384.7 | 395.3 | 407.6 | 417.7  | 427.3 |
| 22.5°  | 322.7 | 326.2 | 330.6 | 334.6 | 339.4 | 346.5 | 358.3 | 371.5 | 383.4 | 393.1  | 404.0 |
| 25°    | 306.9 | 309.1 | 313.0 | 316.1 | 321.4 | 326.2 | 334.6 | 349.1 | 363.2 | 368.9  | 378.5 |
| 27.5°  | 291.5 | 293.3 | 295.9 | 299.4 | 302.0 | 306.9 | 314.4 | 326.2 | 340.7 | 346.5  | 359.6 |
| 30°    | 277.9 | 279.2 | 281.8 | 283.6 | 284.9 | 290.6 | 296.3 | 305.6 | 316.6 | 324.5  | 334.1 |
| 32.5°  | 265.1 | 266.4 | 269.1 | 269.5 | 271.3 | 274.3 | 279.6 | 288.0 | 297.6 | 304.2  | 312.6 |
| 35°    | 251.0 | 251.9 | 254.6 | 255.4 | 256.8 | 259.4 | 263.4 | 269.5 | 278.3 | 283.1  | 290.6 |
| 37.5°  | 240.1 | 239.6 | 241.4 | 242.7 | 244.5 | 245.8 | 247.1 | 253.2 | 259.8 | 264.2  | 270.0 |
| 40°    | 228.2 | 227.3 | 227.7 | 229.5 | 230.4 | 232.1 | 232.1 | 238.3 | 242.7 | 246.2  | 250.6 |
| 42.5°  | 216.3 | 215.9 | 215.0 | 215.9 | 216.8 | 217.2 | 217.6 | 222.0 | 226.4 | 229.5  | 234.3 |
| 45°    | 204.4 | 204.0 | 203.1 | 203.6 | 203.6 | 204.4 | 205.8 | 207.5 | 210.6 | 213.2  | 215.9 |
| 47.5°  | 193.5 | 192.6 | 191.3 | 190.8 | 191.7 | 191.7 | 191.7 | 193.5 | 196.5 | 197.4  | 200.0 |
| 50°    | 182.0 | 180.7 | 178.9 | 178.1 | 178.1 | 177.6 | 178.5 | 178.9 | 181.6 | 182.5  | 184.7 |
| 52.5°  | 169.7 | 168.8 | 167.1 | 165.3 | 165.8 | 164.9 | 165.3 | 165.8 | 166.6 | 167.9  | 169.3 |
| 55°    | 157.4 | 155.6 | 154.3 | 153.9 | 152.6 | 152.6 | 151.2 | 153.0 | 152.6 | 153.0  | 154.8 |
| 57.5°  | 145.5 | 143.8 | 141.6 | 140.7 | 139.4 | 138.9 | 138.1 | 137.6 | 138.1 | 139.4  | 140.7 |
| 60°    | 131.5 | 130.6 | 129.3 | 127.9 | 127.1 | 125.7 | 124.9 | 124.9 | 124.4 | 124.4  | 124.9 |
| 62.5°  | 117.8 | 117.4 | 115.6 | 115.2 | 114.3 | 113.4 | 112.1 | 111.2 | 111.2 | 112.1  | 112.6 |
| 65°    | 104.6 | 104.2 | 102.9 | 102.4 | 100.2 | 99.4  | 98.9  | 98.5  | 97.6  | 97.6   | 97.6  |
| 67.5°  | 92.3  | 91.0  | 91.0  | 88.8  | 87.1  | 86.2  | 85.3  | 84.9  | 84.9  | 84.9   | 85.3  |
| 70°    | 78.7  | 78.7  | 77.4  | 76.1  | 74.3  | 74.7  | 73.4  | 72.1  | 72.1  | 71.2   | 71.7  |
| 72.5°  | 65.5  | 65.1  | 63.8  | 63.3  | 62.0  | 60.7  | 59.8  | 60.7  | 59.4  | 58.9   | 59.4  |
| 75°    | 52.8  | 52.3  | 51.4  | 50.6  | 51.0  | 49.7  | 48.4  | 47.9  | 47.9  | 47.0   | 47.0  |
| 77.5°  | 40.4  | 41.3  | 39.6  | 39.1  | 38.3  | 37.4  | 36.9  | 36.5  | 36.5  | 36.5   | 37.4  |
| 80°    | 28.1  | 28.6  | 28.6  | 27.7  | 28.1  | 26.8  | 26.8  | 26.8  | 25.5  | 25.9   | 26.4  |
| 82.5°  | 18.0  | 18.0  | 17.6  | 18.0  | 17.6  | 17.6  | 17.1  | 17.1  | 16.7  | 16.7   | 17.1  |
| 85°    | 10.1  | 9.7   | 9.2   | 10.1  | 9.7   | 9.7   | 9.2   | 9.2   | 9.2   | 9.2    | 9.2   |
| 87.5°  | 2.2   | 2.6   | 2.6   | 2.6   | 2.6   | 3.1   | 3.1   | 3.1   | 3.5   | 3.5    | 3.5   |
| 90°    | 25.8  | 24.6  | 23.5  | 22.3  | 21.1  | 19.2  | 17.4  | 15.5  | 13.6  | 12.7   | 11.4  |
| 92.5°  | 27.3  | 26.8  | 26.3  | 25.8  | 25.3  | 24.6  | 23.9  | 23.2  | 22.5  | 22.2   | 22.7  |
| 95°    | 45.9  | 44.7  | 43.6  | 42.4  | 41.2  | 39.6  | 37.9  | 36.3  | 34.6  | 33.8   | 37.7  |
| 97.5°  | 56.7  | 56.0  | 55.3  | 54.6  | 53.9  | 50.1  | 46.4  | 42.6  | 38.9  | 37.0   | 46.6  |
| 100°   | 67.8  | 65.9  | 64.0  | 62.1  | 60.2  | 56.2  | 52.2  | 48.2  | 44.2  | 42.2   | 58.3  |
| 102.5° | 72.6  | 70.0  | 67.5  | 64.9  | 62.3  | 105.0 | 147.8 | 190.5 | 233.2 | 254.6  | 254.8 |
| 105°   | 74.7  | 72.1  | 69.6  | 67.0  | 64.4  | 128.5 | 192.6 | 256.7 | 320.8 | 352.8  | 349.3 |
| 107.5° | 76.9  | 74.3  | 71.7  | 69.1  | 66.5  | 145.6 | 224.7 | 303.8 | 382.9 | 422.5  | 419.6 |
| 110°   | 90.9  | 114.4 | 137.9 | 161.3 | 184.8 | 252.6 | 320.5 | 388.3 | 456.2 | 490.1  | 487.6 |

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CATALOG NUMBER: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-A\_4000K

**CANDELA DISTRIBUTION (continued):**

|        | 295°   | 300°   | 305°   | 310°   | 315°   | 320°   | 325°   | 330°   | 335°   | 337.5° | 340°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 112.5° | 131.9  | 233.1  | 334.2  | 435.4  | 536.6  | 540.6  | 544.6  | 548.5  | 552.5  | 554.5  | 552.4  |
| 115°   | 217.0  | 325.7  | 434.4  | 543.0  | 651.7  | 645.8  | 640.0  | 634.1  | 628.2  | 625.3  | 623.3  |
| 117.5° | 574.5  | 608.0  | 641.6  | 675.1  | 708.7  | 704.7  | 700.7  | 696.8  | 692.8  | 690.8  | 688.5  |
| 120°   | 785.5  | 782.7  | 779.8  | 777.0  | 774.2  | 770.0  | 765.8  | 761.5  | 757.3  | 755.2  | 753.4  |
| 122.5° | 842.2  | 840.8  | 839.3  | 837.9  | 836.5  | 831.8  | 827.1  | 822.4  | 817.7  | 815.4  | 813.5  |
| 125°   | 899.1  | 897.4  | 895.8  | 894.1  | 892.5  | 888.1  | 883.6  | 879.2  | 874.7  | 872.5  | 871.0  |
| 127.5° | 953.6  | 951.3  | 949.0  | 946.6  | 944.3  | 940.8  | 937.2  | 933.7  | 930.2  | 928.4  | 926.8  |
| 130°   | 1004.2 | 1001.6 | 999.1  | 996.5  | 993.9  | 991.3  | 988.7  | 986.2  | 983.6  | 982.3  | 980.4  |
| 132.5° | 1052.0 | 1049.9 | 1047.8 | 1045.7 | 1043.6 | 1041.0 | 1038.4 | 1035.9 | 1033.3 | 1032.0 | 1030.5 |
| 135°   | 1098.4 | 1096.1 | 1093.7 | 1091.4 | 1089.0 | 1086.9 | 1084.8 | 1082.7 | 1080.6 | 1079.5 | 1077.6 |
| 137.5° | 1141.7 | 1139.4 | 1137.0 | 1134.7 | 1132.3 | 1129.9 | 1127.6 | 1125.2 | 1122.9 | 1121.7 | 1120.3 |
| 140°   | 1183.0 | 1180.9 | 1178.8 | 1176.6 | 1174.5 | 1171.9 | 1169.3 | 1166.8 | 1164.2 | 1162.9 | 1162.0 |
| 142.5° | 1221.2 | 1219.3 | 1217.4 | 1215.5 | 1213.6 | 1210.6 | 1207.5 | 1204.5 | 1201.4 | 1199.9 | 1199.1 |
| 145°   | 1256.1 | 1254.4 | 1252.8 | 1251.1 | 1249.5 | 1245.5 | 1241.5 | 1237.6 | 1233.6 | 1231.6 | 1231.7 |
| 147.5° | 1287.0 | 1285.8 | 1284.7 | 1283.5 | 1282.3 | 1278.3 | 1274.3 | 1270.3 | 1266.3 | 1264.3 | 1264.7 |
| 150°   | 1316.4 | 1315.0 | 1313.6 | 1312.2 | 1310.8 | 1307.0 | 1303.3 | 1299.5 | 1295.8 | 1293.9 | 1294.7 |
| 152.5° | 1342.8 | 1341.4 | 1340.0 | 1338.6 | 1337.2 | 1333.7 | 1330.2 | 1326.7 | 1323.2 | 1321.4 | 1322.3 |
| 155°   | 1366.1 | 1364.7 | 1363.2 | 1361.8 | 1360.4 | 1357.6 | 1354.8 | 1352.0 | 1349.2 | 1347.8 | 1348.9 |
| 157.5° | 1387.1 | 1385.4 | 1383.8 | 1382.1 | 1380.5 | 1378.4 | 1376.3 | 1374.2 | 1372.1 | 1371.0 | 1371.9 |
| 160°   | 1404.1 | 1402.7 | 1401.3 | 1399.9 | 1398.5 | 1397.1 | 1395.7 | 1394.2 | 1392.8 | 1392.1 | 1392.8 |
| 162.5° | 1420.9 | 1419.2 | 1417.6 | 1415.9 | 1414.3 | 1413.1 | 1411.9 | 1410.8 | 1409.6 | 1409.0 | 1409.7 |
| 165°   | 1433.6 | 1431.9 | 1430.3 | 1428.6 | 1427.0 | 1426.3 | 1425.6 | 1424.9 | 1424.2 | 1423.8 | 1424.5 |
| 167.5° | 1445.2 | 1443.5 | 1441.9 | 1440.2 | 1438.6 | 1437.9 | 1437.2 | 1436.5 | 1435.8 | 1435.4 | 1436.1 |
| 170°   | 1453.7 | 1452.0 | 1450.4 | 1448.7 | 1447.1 | 1446.6 | 1446.1 | 1445.6 | 1445.1 | 1444.9 | 1445.6 |
| 172.5° | 1460.0 | 1458.3 | 1456.7 | 1455.0 | 1453.4 | 1452.9 | 1452.5 | 1452.0 | 1451.5 | 1451.3 | 1452.0 |
| 175°   | 1464.2 | 1462.5 | 1460.9 | 1459.2 | 1457.6 | 1457.1 | 1456.7 | 1456.2 | 1455.7 | 1455.5 | 1456.3 |
| 177.5° | 1465.3 | 1463.6 | 1462.0 | 1460.3 | 1458.7 | 1458.5 | 1458.2 | 1458.0 | 1457.7 | 1457.6 | 1458.4 |
| 180°   | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 | 1459.7 |

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**CANDELA DISTRIBUTION (continued):**

|        | 345°  | 350°  | 355°  | 360°  |
|--------|-------|-------|-------|-------|
| 0°     | 572.0 | 572.0 | 572.0 | 572.0 |
| 2.5°   | 561.4 | 561.4 | 568.0 | 575.1 |
| 5°     | 549.1 | 552.2 | 562.8 | 572.4 |
| 7.5°   | 537.3 | 542.5 | 555.7 | 568.0 |
| 10°    | 522.8 | 529.8 | 546.1 | 560.6 |
| 12.5°  | 508.7 | 515.3 | 534.2 | 550.5 |
| 15°    | 488.9 | 497.3 | 517.5 | 537.7 |
| 17.5°  | 469.1 | 477.5 | 502.1 | 525.8 |
| 20°    | 445.8 | 456.8 | 484.5 | 516.2 |
| 22.5°  | 424.3 | 437.9 | 468.7 | 494.2 |
| 25°    | 400.5 | 421.6 | 450.2 | 483.2 |
| 27.5°  | 379.4 | 400.5 | 429.5 | 463.0 |
| 30°    | 355.7 | 377.2 | 407.1 | 437.9 |
| 32.5°  | 332.8 | 352.6 | 381.6 | 419.4 |
| 35°    | 309.1 | 328.0 | 356.1 | 394.4 |
| 37.5°  | 287.5 | 306.0 | 336.8 | 372.0 |
| 40°    | 266.4 | 285.8 | 312.2 | 347.3 |
| 42.5°  | 246.6 | 263.8 | 287.5 | 322.7 |
| 45°    | 228.6 | 240.9 | 262.9 | 295.9 |
| 47.5°  | 209.7 | 220.7 | 240.9 | 273.9 |
| 50°    | 192.1 | 201.4 | 219.0 | 249.7 |
| 52.5°  | 175.0 | 182.9 | 199.2 | 223.8 |
| 55°    | 159.6 | 167.1 | 178.9 | 203.1 |
| 57.5°  | 143.8 | 149.5 | 160.9 | 180.3 |
| 60°    | 128.4 | 133.7 | 142.9 | 158.7 |
| 62.5°  | 113.0 | 117.4 | 126.2 | 138.9 |
| 65°    | 99.4  | 102.9 | 109.5 | 120.5 |
| 67.5°  | 86.2  | 88.4  | 93.6  | 102.4 |
| 70°    | 73.4  | 75.2  | 79.6  | 86.6  |
| 72.5°  | 59.8  | 61.6  | 66.4  | 71.2  |
| 75°    | 48.4  | 48.8  | 52.3  | 56.3  |
| 77.5°  | 37.8  | 37.4  | 40.0  | 43.1  |
| 80°    | 25.9  | 27.3  | 29.5  | 30.8  |
| 82.5°  | 17.6  | 18.0  | 18.9  | 19.8  |
| 85°    | 9.7   | 10.1  | 10.1  | 11.4  |
| 87.5°  | 4.0   | 4.4   | 4.4   | 4.8   |
| 90°    | 8.8   | 6.3   | 3.7   | 1.1   |
| 92.5°  | 23.6  | 24.5  | 25.5  | 26.4  |
| 95°    | 45.4  | 53.2  | 60.9  | 68.7  |
| 97.5°  | 65.9  | 85.1  | 104.4 | 123.6 |
| 100°   | 90.5  | 122.6 | 154.8 | 187.0 |
| 102.5° | 255.3 | 255.8 | 256.2 | 256.7 |
| 105°   | 342.2 | 335.2 | 328.1 | 321.1 |
| 107.5° | 413.7 | 407.8 | 402.0 | 396.1 |
| 110°   | 482.7 | 477.8 | 472.8 | 467.9 |

TEST NUMBER: P998093

CATALOG NUMBER: SA2XXDIP-B290D1080UB2750-4F0-XX-W2A-A\_4000K

**CANDELA DISTRIBUTION (continued):**

|        | 345°   | 350°   | 355°   | 360°   |
|--------|--------|--------|--------|--------|
| 112.5° | 548.2  | 543.9  | 539.7  | 535.5  |
| 115°   | 619.3  | 615.3  | 611.3  | 607.3  |
| 117.5° | 683.8  | 679.1  | 674.4  | 669.7  |
| 120°   | 749.9  | 746.4  | 742.9  | 739.4  |
| 122.5° | 809.8  | 806.0  | 802.3  | 798.5  |
| 125°   | 867.9  | 864.8  | 861.8  | 858.7  |
| 127.5° | 923.5  | 920.2  | 917.0  | 913.7  |
| 130°   | 976.7  | 972.9  | 969.2  | 965.4  |
| 132.5° | 1027.4 | 1024.3 | 1021.3 | 1018.2 |
| 135°   | 1073.9 | 1070.1 | 1066.4 | 1062.6 |
| 137.5° | 1117.5 | 1114.7 | 1111.9 | 1109.1 |
| 140°   | 1160.1 | 1158.2 | 1156.4 | 1154.5 |
| 142.5° | 1197.4 | 1195.8 | 1194.1 | 1192.5 |
| 145°   | 1231.9 | 1232.2 | 1232.4 | 1232.6 |
| 147.5° | 1265.4 | 1266.1 | 1266.8 | 1267.5 |
| 150°   | 1296.4 | 1298.0 | 1299.7 | 1301.3 |
| 152.5° | 1324.2 | 1326.1 | 1327.9 | 1329.8 |
| 155°   | 1351.0 | 1353.1 | 1355.2 | 1357.3 |
| 157.5° | 1373.8 | 1375.7 | 1377.6 | 1379.5 |
| 160°   | 1394.2 | 1395.7 | 1397.1 | 1398.5 |
| 162.5° | 1411.1 | 1412.6 | 1414.0 | 1415.4 |
| 165°   | 1425.9 | 1427.4 | 1428.8 | 1430.2 |
| 167.5° | 1437.5 | 1439.0 | 1440.4 | 1441.8 |
| 170°   | 1447.0 | 1448.5 | 1449.9 | 1451.3 |
| 172.5° | 1453.4 | 1454.8 | 1456.2 | 1457.6 |
| 175°   | 1458.0 | 1459.6 | 1461.3 | 1462.9 |
| 177.5° | 1460.1 | 1461.7 | 1463.4 | 1465.0 |
| 180°   | 1459.7 | 1459.7 | 1459.7 | 1459.7 |

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**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 | 10.16            | 10.81 | 11.33 | 11.96 | 13.57 | 7.66           | 8.30  | 8.82  | 9.45  | 11.06 |
|                 | 3H   | 10.96            | 11.54 | 12.13 | 12.69 | 14.32 | 8.98           | 9.56  | 10.15 | 10.72 | 12.35 |
|                 | 4H   | 11.12            | 11.67 | 12.30 | 12.82 | 14.45 | 9.44           | 9.99  | 10.62 | 11.14 | 12.78 |
|                 | 6H   | 11.15            | 11.66 | 12.34 | 12.81 | 14.46 | 9.73           | 10.24 | 10.92 | 11.40 | 13.04 |
|                 | 8H   | 11.12            | 11.60 | 12.31 | 12.78 | 14.41 | 9.81           | 10.29 | 11.00 | 11.46 | 13.10 |
|                 | 12H  | 11.08            | 11.54 | 12.27 | 12.70 | 14.36 | 9.84           | 10.30 | 11.04 | 11.47 | 13.12 |
| 4H              | 2H   | 10.18            | 10.73 | 11.36 | 11.88 | 13.52 | 8.07           | 8.63  | 9.26  | 9.78  | 11.41 |
|                 | 3H   | 11.14            | 11.60 | 12.33 | 12.78 | 14.42 | 9.52           | 9.97  | 10.71 | 11.15 | 12.80 |
|                 | 4H   | 11.41            | 11.83 | 12.60 | 13.00 | 14.66 | 10.04          | 10.46 | 11.23 | 11.63 | 13.30 |
|                 | 6H   | 11.53            | 11.89 | 12.72 | 13.08 | 14.73 | 10.41          | 10.77 | 11.61 | 11.96 | 13.61 |
|                 | 8H   | 11.52            | 11.86 | 12.71 | 13.04 | 14.71 | 10.52          | 10.85 | 11.71 | 12.04 | 13.70 |
|                 | 12H  | 11.47            | 11.78 | 12.68 | 12.97 | 14.65 | 10.56          | 10.87 | 11.77 | 12.06 | 13.74 |
| 8H              | 4H   | 11.40            | 11.74 | 12.59 | 12.92 | 14.59 | 10.17          | 10.51 | 11.36 | 11.69 | 13.36 |
|                 | 6H   | 11.57            | 11.85 | 12.78 | 13.07 | 14.74 | 10.60          | 10.87 | 11.81 | 12.10 | 13.76 |
|                 | 8H   | 11.60            | 11.84 | 12.82 | 13.04 | 14.73 | 10.74          | 10.99 | 11.96 | 12.19 | 13.87 |
|                 | 12H  | 11.57            | 11.79 | 12.80 | 12.99 | 14.70 | 10.83          | 11.04 | 12.05 | 12.24 | 13.96 |
| 12H             | 4H   | 11.35            | 11.65 | 12.56 | 12.84 | 14.52 | 10.13          | 10.44 | 11.34 | 11.63 | 13.31 |
|                 | 6H   | 11.55            | 11.79 | 12.77 | 12.99 | 14.68 | 10.59          | 10.84 | 11.81 | 12.04 | 13.72 |
|                 | 8H   | 11.57            | 11.78 | 12.79 | 12.98 | 14.70 | 10.74          | 10.95 | 11.96 | 12.15 | 13.87 |