

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: P831216

Luminaire Tested: S123DIP-S1165D1195U850-4F0-1E-UDD-G

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831216  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S1165D1195U850-4F0-1E-UDD-G  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1165 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 1195 LUMENS PER FOOT, NO LENS  
Light Source: -  
Ballast/Driver: -

**Summary**

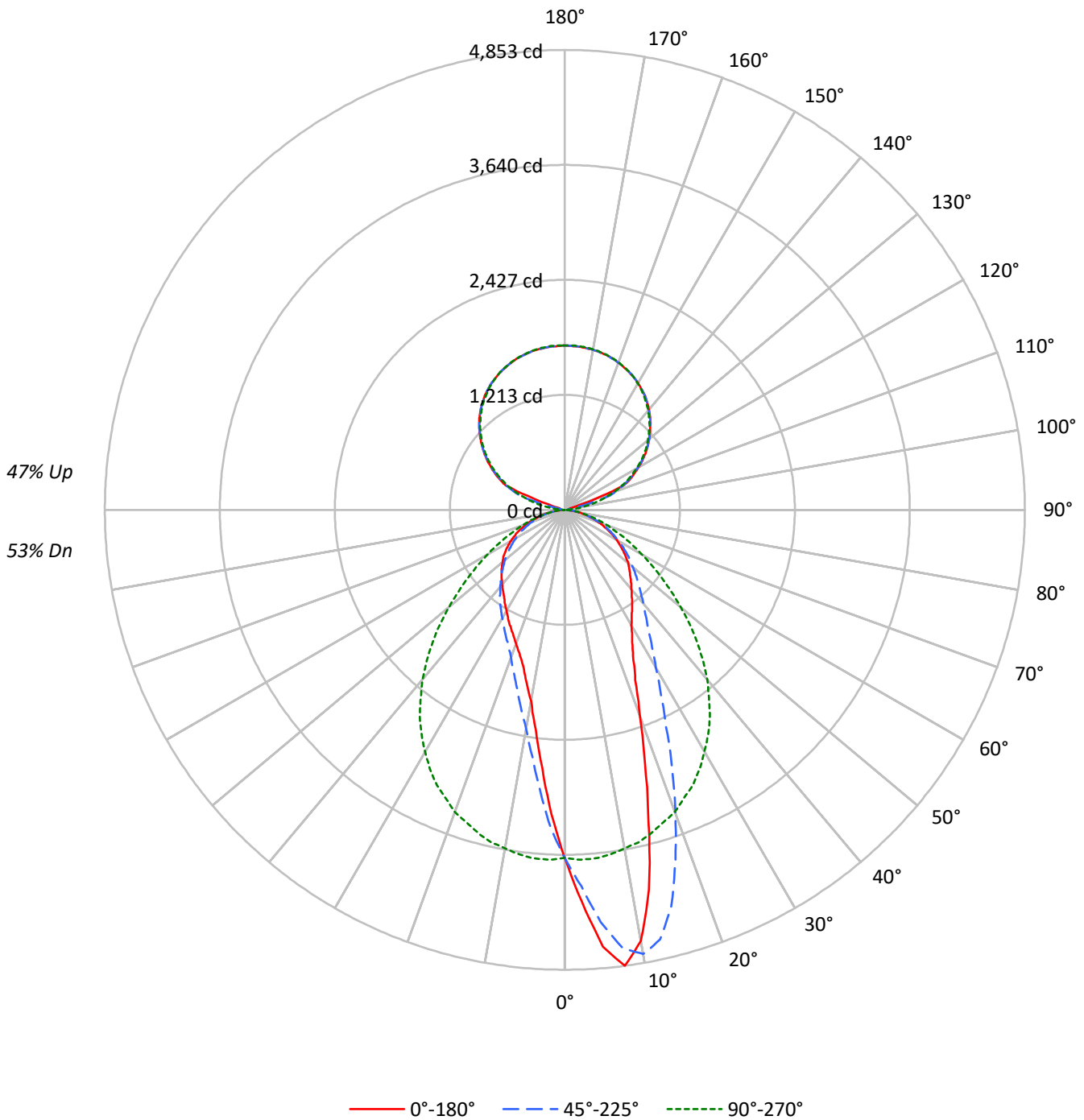
Lumens per Lamp: N/A  
Luminaire Lumens: 11195.1 lumens  
Efficiency: N/A  
Efficacy: 152.9 lumens/watt  
Spacing Criteria (0/90/45): 0.65 / 1.19 / 0.89  
Luminous Opening: Rectangular (W 4' x L: 0.25' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 73.2  
Input Voltage (V): 120  
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: P831216

CATALOG NUMBER: S123DIP-S1165D1195U850-4F0-1E-UDD-G

### Luminous Intensity Polar Plot





TEST NUMBER: P831216

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

|     |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |   |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|
| RF  | 20  |     |     |     |     | 20  |     |     |    |    | 20 |    |    |    |    | 20 |    |    |    |    | 20 |   |
| RC  | 80  |     |     |     |     | 70  |     |     |    |    | 50 |    |    |    |    | 30 |    |    |    |    | 10 | 0 |
| RW  | 70  | 50  | 30  | 10  | 70  | 50  | 30  | 10  | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0  |   |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |   |
| 0   | 108 | 108 | 108 | 108 | 100 | 100 | 100 | 100 | 85 | 85 | 85 | 71 | 71 | 71 | 59 | 59 | 59 | 53 |    |    |    |   |
| 1   | 99  | 95  | 91  | 88  | 92  | 88  | 85  | 82  | 75 | 73 | 71 | 63 | 62 | 60 | 53 | 52 | 51 | 46 |    |    |    |   |
| 2   | 91  | 83  | 78  | 73  | 84  | 78  | 73  | 68  | 67 | 63 | 60 | 56 | 54 | 51 | 47 | 45 | 44 | 39 |    |    |    |   |
| 3   | 83  | 74  | 67  | 61  | 77  | 69  | 63  | 58  | 59 | 55 | 51 | 51 | 47 | 44 | 42 | 40 | 38 | 34 |    |    |    |   |
| 4   | 76  | 66  | 58  | 53  | 71  | 62  | 55  | 50  | 53 | 48 | 44 | 46 | 42 | 39 | 38 | 36 | 33 | 30 |    |    |    |   |
| 5   | 70  | 59  | 51  | 46  | 65  | 55  | 48  | 43  | 48 | 43 | 39 | 41 | 37 | 34 | 35 | 32 | 29 | 26 |    |    |    |   |
| 6   | 65  | 53  | 46  | 40  | 60  | 50  | 43  | 38  | 44 | 38 | 34 | 38 | 33 | 30 | 32 | 29 | 26 | 24 |    |    |    |   |
| 7   | 61  | 49  | 41  | 36  | 56  | 46  | 39  | 34  | 40 | 34 | 30 | 35 | 30 | 27 | 30 | 26 | 24 | 21 |    |    |    |   |
| 8   | 56  | 44  | 37  | 32  | 52  | 42  | 35  | 30  | 37 | 31 | 27 | 32 | 28 | 25 | 27 | 24 | 22 | 19 |    |    |    |   |
| 9   | 53  | 41  | 34  | 29  | 49  | 38  | 32  | 27  | 34 | 29 | 25 | 30 | 25 | 22 | 25 | 22 | 20 | 18 |    |    |    |   |
| 10  | 49  | 38  | 31  | 26  | 46  | 36  | 29  | 25  | 31 | 26 | 23 | 28 | 23 | 20 | 24 | 21 | 18 | 16 |    |    |    |   |

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

|     | 0°    | 45°   | 90°   | 135°  | 180°  |
|-----|-------|-------|-------|-------|-------|
| 0°  | 39539 | 39539 | 39539 | 39539 | 39539 |
| 5°  | 50004 | 47195 | 39892 | 32148 | 29542 |
| 10° | 50489 | 52017 | 39628 | 25626 | 22394 |
| 15° | 38028 | 48294 | 39357 | 21701 | 18937 |
| 20° | 26496 | 39079 | 38854 | 18978 | 17202 |
| 25° | 20203 | 30053 | 37998 | 17461 | 16134 |
| 30° | 17478 | 23876 | 36630 | 16388 | 15275 |
| 35° | 16216 | 20159 | 35053 | 15612 | 14671 |
| 40° | 15352 | 18083 | 32836 | 14873 | 14466 |
| 45° | 14842 | 16736 | 30020 | 14297 | 14375 |
| 50° | 14585 | 15671 | 26688 | 13772 | 14301 |
| 55° | 14043 | 14891 | 23415 | 13275 | 14362 |
| 60° | 13541 | 14053 | 20182 | 12807 | 14127 |
| 65° | 12720 | 13262 | 17408 | 12307 | 13848 |
| 70° | 11748 | 12258 | 14807 | 11481 | 13036 |
| 75° | 10634 | 10988 | 12689 | 10667 | 11911 |
| 80° | 8771  | 9614  | 10036 | 9298  | 10036 |
| 85° | 6941  | 7793  | 7373  | 7892  | 8003  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 34276 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens  | % Fixture |
|-----------|---------|-----------|
| 0°-10°    | 347.3   | 3.1       |
| 10°-20°   | 863.9   | 7.7       |
| 20°-30°   | 1022.9  | 9.1       |
| 30°-40°   | 1028.5  | 9.2       |
| 40°-50°   | 943.7   | 8.4       |
| 50°-60°   | 778.9   | 7.0       |
| 60°-70°   | 551.0   | 4.9       |
| 70°-80°   | 294.1   | 2.6       |
| 80°-90°   | 78.1    | 0.7       |
| 90°-100°  | 61.1    | 0.5       |
| 100°-110° | 295.6   | 2.6       |
| 110°-120° | 724.5   | 6.5       |
| 120°-130° | 919.8   | 8.2       |
| 130°-140° | 982.6   | 8.8       |
| 140°-150° | 918.9   | 8.2       |
| 150°-160° | 741.1   | 6.6       |
| 160°-170° | 478.3   | 4.3       |
| 170°-180° | 164.8   | 1.5       |
| 0°-30°    | 2234.1  | 20.0      |
| 0°-40°    | 3262.7  | 29.1      |
| 0°-60°    | 4985.2  | 44.5      |
| 0°-90°    | 5908.4  | 52.8      |
| 90°-120°  | 1081.2  | 9.7       |
| 90°-150°  | 3902.5  | 34.9      |
| 90°-180°  | 5287.0  | 47.2      |
| 0°-180°   | 11195.1 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|------|------|------|------|------|------|------|
| 0°   | 3673 | 3673 | 3673 | 3673 | 3673 |      |
| 5°   | 4628 | 4368 | 3692 | 2975 | 2734 | 441  |
| 15°  | 3412 | 4334 | 3532 | 1947 | 1699 | 943  |
| 25°  | 1701 | 2530 | 3199 | 1470 | 1358 | 803  |
| 35°  | 1234 | 1534 | 2668 | 1188 | 1116 | 775  |
| 45°  | 975  | 1099 | 1972 | 939  | 944  | 755  |
| 55°  | 748  | 794  | 1248 | 707  | 765  | 670  |
| 65°  | 499  | 521  | 684  | 483  | 544  | 496  |
| 75°  | 256  | 264  | 305  | 256  | 286  | 269  |
| 85°  | 56   | 63   | 60   | 64   | 65   | 63   |
| 90°  | 39   | 31   | 1    | 31   | 39   | 20   |
| 95°  | 49   | 40   | 79   | 40   | 49   | 41   |
| 105° | 57   | 282  | 384  | 282  | 57   | 118  |
| 115° | 758  | 740  | 720  | 740  | 758  | 713  |
| 125° | 1036 | 1031 | 1015 | 1031 | 1036 | 926  |
| 135° | 1277 | 1277 | 1264 | 1277 | 1277 | 985  |
| 145° | 1473 | 1470 | 1458 | 1470 | 1473 | 920  |
| 155° | 1604 | 1605 | 1607 | 1605 | 1604 | 740  |
| 165° | 1690 | 1689 | 1694 | 1689 | 1690 | 478  |
| 175° | 1728 | 1729 | 1734 | 1729 | 1728 | 164  |
| 180° | 1734 | 1734 | 1734 | 1734 | 1734 |      |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°    | 35°    | 40°    | 45°    | 50°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 |
| 2.5°   | 4140.3 | 4136.1 | 4131.8 | 4110.5 | 4089.2 | 4079.0 | 4068.7 | 4038.0 | 4007.4 | 3973.3 | 3939.2 |
| 5°     | 4627.8 | 4639.7 | 4651.7 | 4638.0 | 4624.4 | 4582.6 | 4540.9 | 4485.5 | 4430.1 | 4367.9 | 4305.7 |
| 7.5°   | 4852.8 | 4859.6 | 4866.5 | 4857.9 | 4849.4 | 4838.3 | 4827.2 | 4777.8 | 4728.4 | 4664.5 | 4600.5 |
| 10°    | 4619.3 | 4634.6 | 4650.0 | 4683.2 | 4716.5 | 4754.0 | 4791.5 | 4784.6 | 4777.8 | 4759.1 | 4740.3 |
| 12.5°  | 4106.2 | 4125.0 | 4143.7 | 4210.2 | 4276.7 | 4361.9 | 4447.1 | 4520.4 | 4593.7 | 4644.9 | 4696.0 |
| 15°    | 3412.5 | 3464.5 | 3516.5 | 3577.0 | 3637.5 | 3762.8 | 3888.0 | 4042.3 | 4196.6 | 4333.8 | 4471.0 |
| 17.5°  | 2810.8 | 2830.4 | 2850.0 | 2914.8 | 2979.5 | 3137.2 | 3294.9 | 3473.0 | 3651.1 | 3878.7 | 4106.2 |
| 20°    | 2313.1 | 2331.0 | 2348.9 | 2434.1 | 2519.3 | 2642.9 | 2766.5 | 2966.7 | 3167.0 | 3411.6 | 3656.2 |
| 22.5°  | 1943.2 | 1971.3 | 1999.4 | 2047.1 | 2094.9 | 2213.3 | 2331.8 | 2509.9 | 2688.1 | 2958.2 | 3228.4 |
| 25°    | 1701.1 | 1721.6 | 1742.0 | 1771.0 | 1800.0 | 1894.6 | 1989.2 | 2135.8 | 2282.4 | 2530.4 | 2778.4 |
| 27.5°  | 1535.8 | 1544.3 | 1552.8 | 1581.8 | 1610.8 | 1672.2 | 1733.5 | 1859.6 | 1985.8 | 2196.3 | 2406.8 |
| 30°    | 1406.2 | 1412.2 | 1418.2 | 1443.7 | 1469.3 | 1511.1 | 1552.8 | 1644.0 | 1735.2 | 1921.0 | 2106.8 |
| 32.5°  | 1315.9 | 1320.2 | 1324.4 | 1344.0 | 1363.6 | 1393.5 | 1423.3 | 1489.8 | 1556.2 | 1709.7 | 1863.1 |
| 35°    | 1234.1 | 1236.6 | 1239.2 | 1253.7 | 1268.2 | 1290.3 | 1312.5 | 1362.8 | 1413.1 | 1534.1 | 1655.1 |
| 37.5°  | 1162.5 | 1165.9 | 1169.3 | 1177.8 | 1186.4 | 1206.0 | 1225.6 | 1265.6 | 1305.7 | 1398.6 | 1491.5 |
| 40°    | 1092.6 | 1098.6 | 1104.5 | 1110.5 | 1116.5 | 1132.7 | 1148.9 | 1179.5 | 1210.2 | 1286.9 | 1363.6 |
| 42.5°  | 1032.9 | 1038.9 | 1044.9 | 1047.4 | 1050.0 | 1059.4 | 1068.7 | 1096.9 | 1125.0 | 1182.1 | 1239.2 |
| 45°    | 975.0  | 977.6  | 980.1  | 982.7  | 985.2  | 992.9  | 1000.6 | 1025.3 | 1050.0 | 1099.4 | 1148.9 |
| 47.5°  | 922.2  | 922.2  | 922.2  | 923.9  | 925.6  | 932.4  | 939.2  | 957.1  | 975.0  | 1013.3 | 1051.7 |
| 50°    | 871.0  | 871.0  | 871.0  | 868.5  | 865.9  | 870.2  | 874.4  | 888.1  | 901.7  | 935.8  | 969.9  |
| 52.5°  | 809.7  | 809.7  | 809.7  | 810.5  | 811.4  | 811.4  | 811.4  | 823.3  | 835.2  | 865.9  | 896.6  |
| 55°    | 748.3  | 751.7  | 755.1  | 752.6  | 750.0  | 751.7  | 753.4  | 761.1  | 768.7  | 793.5  | 818.2  |
| 57.5°  | 686.9  | 688.6  | 690.3  | 689.5  | 688.6  | 689.5  | 690.3  | 697.2  | 704.0  | 722.7  | 741.5  |
| 60°    | 629.0  | 629.0  | 629.0  | 627.3  | 625.6  | 627.3  | 629.0  | 632.4  | 635.8  | 652.8  | 669.9  |
| 62.5°  | 564.2  | 565.1  | 565.9  | 566.8  | 567.6  | 565.9  | 564.2  | 568.5  | 572.7  | 585.5  | 598.3  |
| 65°    | 499.4  | 500.3  | 501.1  | 503.7  | 506.2  | 504.5  | 502.8  | 507.1  | 511.4  | 520.7  | 530.1  |
| 67.5°  | 441.5  | 439.8  | 438.1  | 438.9  | 439.8  | 442.3  | 444.9  | 445.7  | 446.6  | 456.8  | 467.0  |
| 70°    | 373.3  | 375.0  | 376.7  | 375.9  | 375.0  | 375.9  | 376.7  | 379.3  | 381.8  | 389.5  | 397.2  |
| 72.5°  | 311.9  | 312.8  | 313.6  | 313.6  | 313.6  | 315.3  | 317.0  | 319.6  | 322.2  | 326.4  | 330.7  |
| 75°    | 255.7  | 255.7  | 255.7  | 257.4  | 259.1  | 259.9  | 260.8  | 260.8  | 260.8  | 264.2  | 267.6  |
| 77.5°  | 194.3  | 198.6  | 202.8  | 202.0  | 201.1  | 202.8  | 204.5  | 207.1  | 209.7  | 211.4  | 213.1  |
| 80°    | 141.5  | 141.5  | 141.5  | 142.3  | 143.2  | 145.7  | 148.3  | 150.0  | 151.7  | 155.1  | 158.5  |
| 82.5°  | 90.3   | 91.2   | 92.0   | 94.6   | 97.2   | 98.9   | 100.6  | 103.1  | 105.7  | 105.7  | 105.7  |
| 85°    | 56.2   | 54.5   | 52.8   | 54.5   | 56.2   | 58.0   | 59.7   | 60.5   | 61.4   | 63.1   | 64.8   |
| 87.5°  | 27.3   | 27.3   | 27.3   | 27.3   | 27.3   | 28.1   | 29.0   | 29.0   | 29.0   | 29.0   | 29.0   |
| 90°    | 38.7   | 38.1   | 37.5   | 36.9   | 36.4   | 35.5   | 34.4   | 33.2   | 32.1   | 30.9   | 27.2   |
| 92.5°  | 43.8   | 43.5   | 43.2   | 42.9   | 42.7   | 41.5   | 39.5   | 37.5   | 35.5   | 33.5   | 30.9   |
| 95°    | 49.0   | 49.0   | 49.0   | 49.0   | 49.0   | 48.0   | 46.0   | 44.0   | 41.9   | 39.9   | 36.8   |
| 97.5°  | 52.8   | 52.5   | 52.3   | 52.0   | 51.7   | 50.4   | 48.1   | 45.8   | 43.5   | 41.2   | 55.8   |
| 100°   | 54.1   | 53.8   | 53.5   | 53.3   | 53.0   | 51.7   | 49.4   | 47.1   | 44.8   | 42.5   | 87.2   |
| 102.5° | 55.4   | 54.8   | 54.3   | 53.7   | 53.1   | 57.6   | 67.0   | 76.4   | 85.9   | 95.3   | 145.2  |
| 105°   | 56.7   | 56.1   | 55.5   | 55.0   | 54.4   | 79.5   | 130.1  | 180.8  | 231.5  | 282.2  | 307.9  |
| 107.5° | 134.0  | 171.5  | 209.0  | 246.5  | 284.0  | 324.8  | 368.9  | 413.0  | 457.1  | 501.2  | 496.9  |
| 110°   | 354.3  | 395.3  | 436.2  | 477.2  | 518.1  | 543.3  | 552.7  | 562.2  | 571.6  | 581.1  | 577.9  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°    | 35°    | 40°    | 45°    | 50°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 112.5° | 671.3  | 671.9  | 672.4  | 673.0  | 673.6  | 672.6  | 670.0  | 667.4  | 664.8  | 662.3  | 659.1  |
| 115°   | 757.6  | 756.5  | 755.3  | 754.2  | 753.0  | 751.0  | 748.2  | 745.3  | 742.4  | 739.6  | 737.0  |
| 117.5° | 827.2  | 826.9  | 826.6  | 826.3  | 826.0  | 824.7  | 822.5  | 820.2  | 817.9  | 815.6  | 814.2  |
| 120°   | 899.3  | 899.3  | 899.3  | 899.3  | 899.3  | 898.2  | 895.9  | 893.6  | 891.3  | 889.0  | 888.2  |
| 122.5° | 970.2  | 969.9  | 969.6  | 969.3  | 969.1  | 968.2  | 966.8  | 965.3  | 963.9  | 962.5  | 961.3  |
| 125°   | 1035.9 | 1035.3 | 1034.8 | 1034.2 | 1033.6 | 1033.0 | 1032.5 | 1031.9 | 1031.3 | 1030.8 | 1029.6 |
| 127.5° | 1100.3 | 1100.9 | 1101.5 | 1102.1 | 1102.6 | 1102.5 | 1101.6 | 1100.8 | 1099.9 | 1099.0 | 1097.6 |
| 130°   | 1162.2 | 1162.8 | 1163.3 | 1163.9 | 1164.5 | 1164.2 | 1163.0 | 1161.9 | 1160.7 | 1159.6 | 1158.5 |
| 132.5° | 1218.9 | 1219.7 | 1220.6 | 1221.4 | 1222.3 | 1222.2 | 1221.0 | 1219.9 | 1218.7 | 1217.6 | 1216.7 |
| 135°   | 1276.9 | 1277.7 | 1278.6 | 1279.4 | 1280.3 | 1280.3 | 1279.4 | 1278.6 | 1277.7 | 1276.9 | 1275.7 |
| 137.5° | 1332.3 | 1332.8 | 1333.4 | 1334.0 | 1334.5 | 1334.1 | 1332.7 | 1331.3 | 1329.8 | 1328.4 | 1327.8 |
| 140°   | 1381.2 | 1381.8 | 1382.4 | 1382.9 | 1383.5 | 1383.2 | 1382.1 | 1380.9 | 1379.8 | 1378.6 | 1377.8 |
| 142.5° | 1426.3 | 1427.2 | 1428.0 | 1428.9 | 1429.7 | 1429.7 | 1428.9 | 1428.0 | 1427.2 | 1426.3 | 1425.5 |
| 145°   | 1472.7 | 1472.7 | 1472.7 | 1472.7 | 1472.7 | 1472.4 | 1471.8 | 1471.3 | 1470.7 | 1470.1 | 1469.5 |
| 147.5° | 1506.2 | 1507.6 | 1509.1 | 1510.5 | 1511.9 | 1512.4 | 1511.8 | 1511.2 | 1510.6 | 1510.1 | 1509.5 |
| 150°   | 1544.8 | 1545.7 | 1546.6 | 1547.4 | 1548.3 | 1548.4 | 1547.9 | 1547.3 | 1546.7 | 1546.1 | 1545.6 |
| 152.5° | 1575.8 | 1577.2 | 1578.6 | 1580.1 | 1581.5 | 1581.6 | 1580.5 | 1579.3 | 1578.2 | 1577.1 | 1576.8 |
| 155°   | 1604.1 | 1605.8 | 1607.6 | 1609.3 | 1611.0 | 1611.1 | 1609.7 | 1608.3 | 1606.8 | 1605.4 | 1605.1 |
| 157.5° | 1628.6 | 1630.9 | 1633.2 | 1635.5 | 1637.8 | 1638.0 | 1636.3 | 1634.6 | 1632.9 | 1631.2 | 1631.5 |
| 160°   | 1651.8 | 1653.8 | 1655.8 | 1657.8 | 1659.8 | 1659.9 | 1658.2 | 1656.5 | 1654.8 | 1653.1 | 1653.4 |
| 162.5° | 1673.7 | 1675.4 | 1677.1 | 1678.8 | 1680.6 | 1680.4 | 1678.4 | 1676.4 | 1674.4 | 1672.4 | 1672.7 |
| 165°   | 1690.4 | 1692.4 | 1694.5 | 1696.5 | 1698.5 | 1698.3 | 1696.0 | 1693.7 | 1691.4 | 1689.2 | 1689.4 |
| 167.5° | 1703.3 | 1705.6 | 1707.9 | 1710.2 | 1712.5 | 1712.5 | 1710.2 | 1707.9 | 1705.6 | 1703.3 | 1703.3 |
| 170°   | 1714.9 | 1717.2 | 1719.5 | 1721.8 | 1724.1 | 1724.1 | 1721.8 | 1719.5 | 1717.2 | 1714.9 | 1714.9 |
| 172.5° | 1721.4 | 1723.9 | 1726.5 | 1729.1 | 1731.7 | 1731.8 | 1729.5 | 1727.2 | 1724.9 | 1722.7 | 1722.4 |
| 175°   | 1727.8 | 1730.1 | 1732.4 | 1734.7 | 1737.0 | 1737.1 | 1735.1 | 1733.1 | 1731.1 | 1729.1 | 1728.8 |
| 177.5° | 1729.1 | 1732.0 | 1734.8 | 1737.7 | 1740.5 | 1740.8 | 1738.5 | 1736.3 | 1734.0 | 1731.7 | 1731.4 |
| 180°   | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 |



TEST NUMBER: P831216

CATALOG NUMBER: S123DIP-S1165D1195U850-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

|        | 55°    | 60°    | 65°    | 70°    | 75°    | 80°    | 85°    | 90°    | 95°    | 100°   | 105°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 |
| 2.5°   | 3929.0 | 3918.7 | 3881.2 | 3843.7 | 3801.1 | 3758.5 | 3727.0 | 3695.4 | 3648.6 | 3601.7 | 3563.3 |
| 5°     | 4257.9 | 4210.2 | 4130.9 | 4051.7 | 3944.3 | 3836.9 | 3764.5 | 3692.0 | 3594.9 | 3497.7 | 3420.2 |
| 7.5°   | 4518.7 | 4436.9 | 4326.1 | 4215.3 | 4074.7 | 3934.1 | 3801.1 | 3668.2 | 3519.9 | 3371.6 | 3250.6 |
| 10°    | 4684.9 | 4629.5 | 4501.7 | 4373.8 | 4185.5 | 3997.1 | 3811.3 | 3625.6 | 3434.6 | 3243.7 | 3083.5 |
| 12.5°  | 4701.1 | 4706.2 | 4588.6 | 4471.0 | 4257.9 | 4044.9 | 3819.0 | 3593.2 | 3352.8 | 3112.5 | 2925.8 |
| 15°    | 4558.8 | 4646.6 | 4581.8 | 4517.0 | 4302.3 | 4087.5 | 3809.6 | 3531.8 | 3254.8 | 2977.8 | 2762.2 |
| 17.5°  | 4294.6 | 4482.9 | 4492.3 | 4501.7 | 4286.9 | 4072.1 | 3764.5 | 3456.8 | 3143.2 | 2829.5 | 2602.8 |
| 20°    | 3934.1 | 4211.9 | 4307.4 | 4402.8 | 4228.1 | 4053.4 | 3722.7 | 3392.0 | 3040.9 | 2689.8 | 2452.0 |
| 22.5°  | 3565.9 | 3903.4 | 4078.1 | 4252.8 | 4123.3 | 3993.7 | 3641.7 | 3289.8 | 2919.0 | 2548.3 | 2307.1 |
| 25°    | 3146.6 | 3514.8 | 3783.2 | 4051.7 | 3972.4 | 3893.2 | 3546.3 | 3199.4 | 2804.8 | 2410.2 | 2163.9 |
| 27.5°  | 2781.0 | 3155.1 | 3479.0 | 3802.8 | 3785.8 | 3768.7 | 3424.4 | 3080.1 | 2676.1 | 2272.1 | 2034.4 |
| 30°    | 2455.4 | 2804.0 | 3166.2 | 3528.4 | 3570.2 | 3611.9 | 3279.5 | 2947.1 | 2542.3 | 2137.5 | 1908.2 |
| 32.5°  | 2167.3 | 2471.6 | 2860.2 | 3248.8 | 3330.7 | 3412.5 | 3112.5 | 2812.5 | 2411.9 | 2011.4 | 1790.6 |
| 35°    | 1931.2 | 2207.4 | 2596.0 | 2984.6 | 3086.9 | 3189.2 | 2928.4 | 2667.6 | 2277.3 | 1886.9 | 1676.4 |
| 37.5°  | 1722.4 | 1953.4 | 2332.7 | 2711.9 | 2837.2 | 2962.5 | 2729.0 | 2495.4 | 2129.8 | 1764.2 | 1570.7 |
| 40°    | 1549.4 | 1735.2 | 2083.8 | 2432.4 | 2577.3 | 2722.1 | 2529.5 | 2336.9 | 1990.0 | 1643.2 | 1465.0 |
| 42.5°  | 1404.5 | 1569.9 | 1886.1 | 2202.3 | 2341.2 | 2480.1 | 2317.3 | 2154.5 | 1846.0 | 1537.5 | 1374.7 |
| 45°    | 1281.0 | 1413.1 | 1700.3 | 1987.5 | 2119.6 | 2251.7 | 2111.9 | 1972.1 | 1700.3 | 1428.4 | 1276.7 |
| 47.5°  | 1165.1 | 1278.4 | 1523.9 | 1769.3 | 1886.9 | 2004.5 | 1895.4 | 1786.4 | 1556.2 | 1326.1 | 1188.9 |
| 50°    | 1061.1 | 1152.3 | 1367.0 | 1581.8 | 1684.1 | 1786.4 | 1690.0 | 1593.7 | 1404.5 | 1215.3 | 1096.0 |
| 52.5°  | 970.7  | 1044.9 | 1224.7 | 1404.5 | 1492.3 | 1580.1 | 1497.4 | 1414.8 | 1264.8 | 1114.8 | 1010.8 |
| 55°    | 881.2  | 944.3  | 1100.3 | 1256.2 | 1315.9 | 1375.6 | 1311.6 | 1247.7 | 1126.7 | 1005.7 | 917.9  |
| 57.5°  | 797.7  | 854.0  | 981.8  | 1109.7 | 1155.7 | 1201.7 | 1143.7 | 1085.8 | 994.6  | 903.4  | 830.1  |
| 60°    | 715.9  | 761.9  | 868.5  | 975.0  | 1003.1 | 1031.2 | 984.4  | 937.5  | 873.6  | 809.7  | 744.0  |
| 62.5°  | 640.1  | 681.8  | 761.1  | 840.3  | 859.1  | 877.8  | 842.0  | 806.2  | 757.7  | 709.1  | 658.0  |
| 65°    | 561.6  | 593.2  | 658.0  | 722.7  | 734.7  | 746.6  | 715.1  | 683.5  | 646.9  | 610.2  | 572.7  |
| 67.5°  | 489.2  | 511.4  | 564.2  | 617.0  | 617.9  | 618.7  | 593.2  | 567.6  | 547.2  | 526.7  | 496.9  |
| 70°    | 418.5  | 439.8  | 474.7  | 509.7  | 510.5  | 511.4  | 490.9  | 470.5  | 455.1  | 439.8  | 417.6  |
| 72.5°  | 346.0  | 361.4  | 387.8  | 414.2  | 412.5  | 410.8  | 398.0  | 385.2  | 373.3  | 361.4  | 345.2  |
| 75°    | 280.4  | 293.2  | 311.1  | 329.0  | 323.9  | 318.7  | 311.9  | 305.1  | 294.9  | 284.7  | 274.4  |
| 77.5°  | 220.7  | 228.4  | 238.6  | 248.9  | 245.5  | 242.0  | 236.1  | 230.1  | 222.4  | 214.8  | 210.5  |
| 80°    | 161.9  | 165.3  | 172.2  | 179.0  | 177.3  | 175.6  | 168.7  | 161.9  | 160.2  | 158.5  | 152.6  |
| 82.5°  | 109.9  | 114.2  | 115.9  | 117.6  | 116.8  | 115.9  | 110.8  | 105.7  | 104.0  | 102.3  | 101.4  |
| 85°    | 65.6   | 66.5   | 67.3   | 68.2   | 65.6   | 63.1   | 61.4   | 59.7   | 59.7   | 59.7   | 58.8   |
| 87.5°  | 29.8   | 30.7   | 30.7   | 30.7   | 29.8   | 29.0   | 27.3   | 25.6   | 26.4   | 27.3   | 27.3   |
| 90°    | 23.5   | 19.8   | 16.0   | 12.7   | 9.9    | 7.0    | 4.2    | 1.3    | 4.2    | 7.0    | 9.9    |
| 92.5°  | 28.3   | 25.8   | 23.2   | 22.8   | 24.5   | 26.2   | 27.9   | 29.6   | 27.9   | 26.2   | 24.5   |
| 95°    | 33.6   | 30.5   | 27.3   | 31.6   | 43.4   | 55.1   | 66.9   | 78.6   | 66.9   | 55.1   | 43.4   |
| 97.5°  | 70.4   | 85.0   | 99.6   | 110.9  | 119.0  | 127.0  | 135.0  | 143.0  | 135.0  | 127.0  | 119.0  |
| 100°   | 131.9  | 176.5  | 221.2  | 240.7  | 234.9  | 229.2  | 223.5  | 217.7  | 223.5  | 229.2  | 234.9  |
| 102.5° | 195.0  | 244.8  | 294.6  | 317.7  | 314.0  | 310.2  | 306.5  | 302.8  | 306.5  | 310.2  | 314.0  |
| 105°   | 333.7  | 359.5  | 385.2  | 396.6  | 393.4  | 390.3  | 387.1  | 384.0  | 387.1  | 390.3  | 393.4  |
| 107.5° | 492.6  | 488.3  | 484.0  | 480.6  | 478.0  | 475.4  | 472.9  | 470.3  | 472.9  | 475.4  | 478.0  |
| 110°   | 574.8  | 571.6  | 568.5  | 565.8  | 563.5  | 561.2  | 558.9  | 556.6  | 558.9  | 561.2  | 563.5  |





TEST NUMBER: P831216

CATALOG NUMBER: S123DIP-S1165D1195U850-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

|        | 55°    | 60°    | 65°    | 70°    | 75°    | 80°    | 85°    | 90°    | 95°    | 100°   | 105°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 112.5° | 656.0  | 652.8  | 649.7  | 647.1  | 645.1  | 643.1  | 641.1  | 639.1  | 641.1  | 643.1  | 645.1  |
| 115°   | 734.4  | 731.8  | 729.3  | 727.1  | 725.4  | 723.7  | 722.0  | 720.2  | 722.0  | 723.7  | 725.4  |
| 117.5° | 812.7  | 811.3  | 809.9  | 808.1  | 806.1  | 804.1  | 802.1  | 800.1  | 802.1  | 804.1  | 806.1  |
| 120°   | 887.3  | 886.5  | 885.6  | 883.9  | 881.3  | 878.7  | 876.1  | 873.6  | 876.1  | 878.7  | 881.3  |
| 122.5° | 960.2  | 959.0  | 957.9  | 956.3  | 954.3  | 952.3  | 950.3  | 948.3  | 950.3  | 952.3  | 954.3  |
| 125°   | 1028.5 | 1027.3 | 1026.2 | 1024.5 | 1022.2 | 1019.9 | 1017.6 | 1015.3 | 1017.6 | 1019.9 | 1022.2 |
| 127.5° | 1096.2 | 1094.8 | 1093.3 | 1091.5 | 1089.2 | 1086.9 | 1084.6 | 1082.3 | 1084.6 | 1086.9 | 1089.2 |
| 130°   | 1157.3 | 1156.2 | 1155.0 | 1153.3 | 1151.0 | 1148.7 | 1146.4 | 1144.1 | 1146.4 | 1148.7 | 1151.0 |
| 132.5° | 1215.9 | 1215.0 | 1214.1 | 1212.6 | 1210.3 | 1208.0 | 1205.7 | 1203.4 | 1205.7 | 1208.0 | 1210.3 |
| 135°   | 1274.6 | 1273.4 | 1272.3 | 1270.8 | 1269.1 | 1267.4 | 1265.7 | 1264.0 | 1265.7 | 1267.4 | 1269.1 |
| 137.5° | 1327.2 | 1326.7 | 1326.1 | 1324.7 | 1322.4 | 1320.1 | 1317.8 | 1315.5 | 1317.8 | 1320.1 | 1322.4 |
| 140°   | 1376.9 | 1376.1 | 1375.2 | 1373.9 | 1372.2 | 1370.5 | 1368.8 | 1367.0 | 1368.8 | 1370.5 | 1372.2 |
| 142.5° | 1424.6 | 1423.7 | 1422.9 | 1421.6 | 1419.9 | 1418.2 | 1416.4 | 1414.7 | 1416.4 | 1418.2 | 1419.9 |
| 145°   | 1469.0 | 1468.4 | 1467.8 | 1466.5 | 1464.5 | 1462.5 | 1460.5 | 1458.5 | 1460.5 | 1462.5 | 1464.5 |
| 147.5° | 1508.9 | 1508.3 | 1507.8 | 1506.8 | 1505.3 | 1503.9 | 1502.5 | 1501.0 | 1502.5 | 1503.9 | 1505.3 |
| 150°   | 1545.0 | 1544.4 | 1543.8 | 1543.1 | 1542.3 | 1541.4 | 1540.6 | 1539.7 | 1540.6 | 1541.4 | 1542.3 |
| 152.5° | 1576.5 | 1576.2 | 1575.9 | 1575.6 | 1575.3 | 1575.1 | 1574.8 | 1574.5 | 1574.8 | 1575.1 | 1575.3 |
| 155°   | 1604.8 | 1604.5 | 1604.3 | 1604.4 | 1605.0 | 1605.5 | 1606.1 | 1606.7 | 1606.1 | 1605.5 | 1605.0 |
| 157.5° | 1631.7 | 1632.0 | 1632.3 | 1632.5 | 1632.5 | 1632.5 | 1632.5 | 1632.5 | 1632.5 | 1632.5 | 1632.5 |
| 160°   | 1653.7 | 1653.9 | 1654.2 | 1654.5 | 1654.8 | 1655.1 | 1655.4 | 1655.7 | 1655.4 | 1655.1 | 1654.8 |
| 162.5° | 1673.0 | 1673.3 | 1673.5 | 1674.1 | 1675.0 | 1675.8 | 1676.7 | 1677.6 | 1676.7 | 1675.8 | 1675.0 |
| 165°   | 1689.7 | 1690.0 | 1690.3 | 1690.9 | 1691.7 | 1692.6 | 1693.4 | 1694.3 | 1693.4 | 1692.6 | 1691.7 |
| 167.5° | 1703.3 | 1703.3 | 1703.3 | 1703.9 | 1705.0 | 1706.2 | 1707.3 | 1708.5 | 1707.3 | 1706.2 | 1705.0 |
| 170°   | 1714.9 | 1714.9 | 1714.9 | 1715.5 | 1716.6 | 1717.8 | 1718.9 | 1720.1 | 1718.9 | 1717.8 | 1716.6 |
| 172.5° | 1722.1 | 1721.8 | 1721.5 | 1722.1 | 1723.5 | 1724.9 | 1726.4 | 1727.8 | 1726.4 | 1724.9 | 1723.5 |
| 175°   | 1728.5 | 1728.2 | 1728.0 | 1728.5 | 1730.0 | 1731.4 | 1732.8 | 1734.2 | 1732.8 | 1731.4 | 1730.0 |
| 177.5° | 1731.1 | 1730.8 | 1730.5 | 1731.1 | 1732.5 | 1734.0 | 1735.4 | 1736.8 | 1735.4 | 1734.0 | 1732.5 |
| 180°   | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 |



TEST NUMBER: P831216

CATALOG NUMBER: S123DIP-S1165D1195U850-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

|        | 110°   | 115°   | 120°   | 125°   | 130°   | 135°   | 140°   | 145°   | 150°   | 155°   | 160°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 | 3673.3 |
| 2.5°   | 3525.0 | 3491.7 | 3458.5 | 3432.9 | 3407.4 | 3363.9 | 3320.4 | 3310.2 | 3300.0 | 3285.5 | 3271.0 |
| 5°     | 3342.6 | 3260.8 | 3179.0 | 3105.7 | 3032.4 | 2975.3 | 2918.2 | 2880.7 | 2843.2 | 2815.9 | 2788.6 |
| 7.5°   | 3129.5 | 3006.8 | 2884.1 | 2797.1 | 2710.2 | 2627.5 | 2544.9 | 2518.5 | 2492.0 | 2456.2 | 2420.4 |
| 10°    | 2923.3 | 2787.8 | 2652.3 | 2538.9 | 2425.6 | 2344.6 | 2263.6 | 2231.2 | 2198.9 | 2153.7 | 2108.5 |
| 12.5°  | 2739.2 | 2590.9 | 2442.6 | 2328.4 | 2214.2 | 2135.8 | 2057.4 | 2010.5 | 1963.6 | 1938.1 | 1912.5 |
| 15°    | 2546.6 | 2388.1 | 2229.5 | 2123.9 | 2018.2 | 1947.4 | 1876.7 | 1835.8 | 1794.9 | 1770.2 | 1745.4 |
| 17.5°  | 2376.1 | 2219.3 | 2062.5 | 1961.1 | 1859.6 | 1794.9 | 1730.1 | 1694.3 | 1658.5 | 1639.8 | 1621.0 |
| 20°    | 2214.2 | 2060.8 | 1907.4 | 1808.5 | 1709.7 | 1656.8 | 1604.0 | 1581.0 | 1557.9 | 1542.6 | 1527.3 |
| 22.5°  | 2065.9 | 1915.0 | 1764.2 | 1679.8 | 1595.4 | 1552.8 | 1510.2 | 1494.0 | 1477.8 | 1465.0 | 1452.3 |
| 25°    | 1917.6 | 1782.9 | 1648.3 | 1576.7 | 1505.1 | 1470.2 | 1435.2 | 1419.0 | 1402.8 | 1390.0 | 1377.3 |
| 27.5°  | 1796.6 | 1667.9 | 1539.2 | 1477.8 | 1416.5 | 1389.2 | 1361.9 | 1349.1 | 1336.4 | 1324.4 | 1312.5 |
| 30°    | 1679.0 | 1563.9 | 1448.9 | 1396.0 | 1343.2 | 1318.5 | 1293.7 | 1281.0 | 1268.2 | 1257.1 | 1246.0 |
| 32.5°  | 1569.9 | 1471.0 | 1372.2 | 1323.6 | 1275.0 | 1254.5 | 1234.1 | 1218.7 | 1203.4 | 1194.9 | 1186.4 |
| 35°    | 1465.9 | 1377.3 | 1288.6 | 1248.6 | 1208.5 | 1188.1 | 1167.6 | 1154.8 | 1142.0 | 1135.2 | 1128.4 |
| 37.5°  | 1377.3 | 1298.0 | 1218.7 | 1180.4 | 1142.0 | 1122.4 | 1102.8 | 1091.8 | 1080.7 | 1078.1 | 1075.6 |
| 40°    | 1286.9 | 1218.7 | 1150.6 | 1113.1 | 1075.6 | 1058.5 | 1041.5 | 1034.7 | 1027.8 | 1026.1 | 1024.4 |
| 42.5°  | 1211.9 | 1145.4 | 1079.0 | 1044.9 | 1010.8 | 996.3  | 981.8  | 978.4  | 975.0  | 977.6  | 980.1  |
| 45°    | 1125.0 | 1069.6 | 1014.2 | 982.7  | 951.1  | 939.2  | 927.3  | 924.7  | 922.2  | 927.3  | 932.4  |
| 47.5°  | 1051.7 | 1000.6 | 949.4  | 919.6  | 889.8  | 881.2  | 872.7  | 871.9  | 871.0  | 877.8  | 884.7  |
| 50°    | 976.7  | 927.3  | 877.8  | 854.0  | 830.1  | 822.4  | 814.8  | 817.3  | 819.9  | 831.0  | 842.0  |
| 52.5°  | 906.8  | 860.8  | 814.8  | 792.6  | 770.5  | 765.3  | 760.2  | 766.2  | 772.2  | 784.1  | 796.0  |
| 55°    | 830.1  | 788.3  | 746.6  | 729.5  | 712.5  | 707.4  | 702.3  | 714.2  | 726.1  | 737.2  | 748.3  |
| 57.5°  | 756.8  | 720.2  | 683.5  | 668.2  | 652.8  | 652.0  | 651.1  | 662.2  | 673.3  | 685.2  | 697.2  |
| 60°    | 678.4  | 647.7  | 617.0  | 605.1  | 593.2  | 594.9  | 596.6  | 609.4  | 622.2  | 631.5  | 640.9  |
| 62.5°  | 606.8  | 581.2  | 555.7  | 544.6  | 533.5  | 537.8  | 542.0  | 554.8  | 567.6  | 578.7  | 589.8  |
| 65°    | 535.2  | 513.9  | 492.6  | 484.9  | 477.3  | 483.2  | 489.2  | 500.3  | 511.4  | 519.0  | 526.7  |
| 67.5°  | 467.0  | 449.1  | 431.2  | 425.3  | 419.3  | 425.3  | 431.2  | 442.3  | 453.4  | 461.1  | 468.7  |
| 70°    | 395.5  | 381.0  | 366.5  | 362.2  | 358.0  | 364.8  | 371.6  | 381.0  | 390.3  | 398.0  | 405.7  |
| 72.5°  | 329.0  | 317.9  | 306.8  | 306.0  | 305.1  | 311.1  | 317.0  | 326.4  | 335.8  | 340.9  | 346.0  |
| 75°    | 264.2  | 258.2  | 252.3  | 251.4  | 250.6  | 256.5  | 262.5  | 267.6  | 272.7  | 277.0  | 281.2  |
| 77.5°  | 206.2  | 201.1  | 196.0  | 196.9  | 197.7  | 202.0  | 206.2  | 211.4  | 216.5  | 219.0  | 221.6  |
| 80°    | 146.6  | 144.9  | 143.2  | 144.9  | 146.6  | 150.0  | 153.4  | 156.8  | 160.2  | 161.9  | 163.6  |
| 82.5°  | 100.6  | 98.9   | 97.2   | 99.7   | 102.3  | 104.8  | 107.4  | 109.9  | 112.5  | 113.4  | 114.2  |
| 85°    | 58.0   | 60.5   | 63.1   | 63.1   | 63.1   | 63.9   | 64.8   | 65.6   | 66.5   | 65.6   | 64.8   |
| 87.5°  | 27.3   | 28.1   | 29.0   | 29.0   | 29.0   | 29.8   | 30.7   | 30.7   | 30.7   | 29.8   | 29.0   |
| 90°    | 12.7   | 16.0   | 19.8   | 23.5   | 27.2   | 30.9   | 32.1   | 33.2   | 34.4   | 35.5   | 36.4   |
| 92.5°  | 22.8   | 23.2   | 25.8   | 28.3   | 30.9   | 33.5   | 35.5   | 37.5   | 39.5   | 41.5   | 42.7   |
| 95°    | 31.6   | 27.3   | 30.5   | 33.6   | 36.8   | 39.9   | 41.9   | 44.0   | 46.0   | 48.0   | 49.0   |
| 97.5°  | 110.9  | 99.6   | 85.0   | 70.4   | 55.8   | 41.2   | 43.5   | 45.8   | 48.1   | 50.4   | 51.7   |
| 100°   | 240.7  | 221.2  | 176.5  | 131.9  | 87.2   | 42.5   | 44.8   | 47.1   | 49.4   | 51.7   | 53.0   |
| 102.5° | 317.7  | 294.6  | 244.8  | 195.0  | 145.2  | 95.3   | 85.9   | 76.4   | 67.0   | 57.6   | 53.1   |
| 105°   | 396.6  | 385.2  | 359.5  | 333.7  | 307.9  | 282.2  | 231.5  | 180.8  | 130.1  | 79.5   | 54.4   |
| 107.5° | 480.6  | 484.0  | 488.3  | 492.6  | 496.9  | 501.2  | 457.1  | 413.0  | 368.9  | 324.8  | 284.0  |
| 110°   | 565.8  | 568.5  | 571.6  | 574.8  | 577.9  | 581.1  | 571.6  | 562.2  | 552.7  | 543.3  | 518.1  |



TEST NUMBER: P831216

CATALOG NUMBER: S123DIP-S1165D1195U850-4F0-1E-UDD-G

**CANDELA DISTRIBUTION (continued):**

|        | 110°   | 115°   | 120°   | 125°   | 130°   | 135°   | 140°   | 145°   | 150°   | 155°   | 160°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 112.5° | 647.1  | 649.7  | 652.8  | 656.0  | 659.1  | 662.3  | 664.8  | 667.4  | 670.0  | 672.6  | 673.6  |
| 115°   | 727.1  | 729.3  | 731.8  | 734.4  | 737.0  | 739.6  | 742.4  | 745.3  | 748.2  | 751.0  | 753.0  |
| 117.5° | 808.1  | 809.9  | 811.3  | 812.7  | 814.2  | 815.6  | 817.9  | 820.2  | 822.5  | 824.7  | 826.0  |
| 120°   | 883.9  | 885.6  | 886.5  | 887.3  | 888.2  | 889.0  | 891.3  | 893.6  | 895.9  | 898.2  | 899.3  |
| 122.5° | 956.3  | 957.9  | 959.0  | 960.2  | 961.3  | 962.5  | 963.9  | 965.3  | 966.8  | 968.2  | 969.1  |
| 125°   | 1024.5 | 1026.2 | 1027.3 | 1028.5 | 1029.6 | 1030.8 | 1031.3 | 1031.9 | 1032.5 | 1033.0 | 1033.6 |
| 127.5° | 1091.5 | 1093.3 | 1094.8 | 1096.2 | 1097.6 | 1099.0 | 1099.9 | 1100.8 | 1101.6 | 1102.5 | 1102.6 |
| 130°   | 1153.3 | 1155.0 | 1156.2 | 1157.3 | 1158.5 | 1159.6 | 1160.7 | 1161.9 | 1163.0 | 1164.2 | 1164.5 |
| 132.5° | 1212.6 | 1214.1 | 1215.0 | 1215.9 | 1216.7 | 1217.6 | 1218.7 | 1219.9 | 1221.0 | 1222.2 | 1222.3 |
| 135°   | 1270.8 | 1272.3 | 1273.4 | 1274.6 | 1275.7 | 1276.9 | 1277.7 | 1278.6 | 1279.4 | 1280.3 | 1280.3 |
| 137.5° | 1324.7 | 1326.1 | 1326.7 | 1327.2 | 1327.8 | 1328.4 | 1329.8 | 1331.3 | 1332.7 | 1334.1 | 1334.5 |
| 140°   | 1373.9 | 1375.2 | 1376.1 | 1376.9 | 1377.8 | 1378.6 | 1379.8 | 1380.9 | 1382.1 | 1383.2 | 1383.5 |
| 142.5° | 1421.6 | 1422.9 | 1423.7 | 1424.6 | 1425.5 | 1426.3 | 1427.2 | 1428.0 | 1428.9 | 1429.7 | 1429.7 |
| 145°   | 1466.5 | 1467.8 | 1468.4 | 1469.0 | 1469.5 | 1470.1 | 1470.7 | 1471.3 | 1471.8 | 1472.4 | 1472.7 |
| 147.5° | 1506.8 | 1507.8 | 1508.3 | 1508.9 | 1509.5 | 1510.1 | 1510.6 | 1511.2 | 1511.8 | 1512.4 | 1511.9 |
| 150°   | 1543.1 | 1543.8 | 1544.4 | 1545.0 | 1545.6 | 1546.1 | 1546.7 | 1547.3 | 1547.9 | 1548.4 | 1548.3 |
| 152.5° | 1575.6 | 1575.9 | 1576.2 | 1576.5 | 1576.8 | 1577.1 | 1578.2 | 1579.3 | 1580.5 | 1581.6 | 1581.5 |
| 155°   | 1604.4 | 1604.3 | 1604.5 | 1604.8 | 1605.1 | 1605.4 | 1606.8 | 1608.3 | 1609.7 | 1611.1 | 1611.0 |
| 157.5° | 1632.5 | 1632.3 | 1632.0 | 1631.7 | 1631.5 | 1631.2 | 1632.9 | 1634.6 | 1636.3 | 1638.0 | 1637.8 |
| 160°   | 1654.5 | 1654.2 | 1653.9 | 1653.7 | 1653.4 | 1653.1 | 1654.8 | 1656.5 | 1658.2 | 1659.9 | 1659.8 |
| 162.5° | 1674.1 | 1673.5 | 1673.3 | 1673.0 | 1672.7 | 1672.4 | 1674.4 | 1676.4 | 1678.4 | 1680.4 | 1680.6 |
| 165°   | 1690.9 | 1690.3 | 1690.0 | 1689.7 | 1689.4 | 1689.2 | 1691.4 | 1693.7 | 1696.0 | 1698.3 | 1698.5 |
| 167.5° | 1703.9 | 1703.3 | 1703.3 | 1703.3 | 1703.3 | 1703.3 | 1705.6 | 1707.9 | 1710.2 | 1712.5 | 1712.5 |
| 170°   | 1715.5 | 1714.9 | 1714.9 | 1714.9 | 1714.9 | 1714.9 | 1717.2 | 1719.5 | 1721.8 | 1724.1 | 1724.1 |
| 172.5° | 1722.1 | 1721.5 | 1721.8 | 1722.1 | 1722.4 | 1722.7 | 1724.9 | 1727.2 | 1729.5 | 1731.8 | 1731.7 |
| 175°   | 1728.5 | 1728.0 | 1728.2 | 1728.5 | 1728.8 | 1729.1 | 1731.1 | 1733.1 | 1735.1 | 1737.1 | 1737.0 |
| 177.5° | 1731.1 | 1730.5 | 1730.8 | 1731.1 | 1731.4 | 1731.7 | 1734.0 | 1736.3 | 1738.5 | 1740.8 | 1740.5 |
| 180°   | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 | 1734.2 |



TEST NUMBER: P831216

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**CANDELA DISTRIBUTION (continued):**

|        | 165°   | 170°   | 175°   | 180°   |
|--------|--------|--------|--------|--------|
| 0°     | 3673.3 | 3673.3 | 3673.3 | 3673.3 |
| 2.5°   | 3265.0 | 3259.1 | 3235.2 | 3211.3 |
| 5°     | 2768.2 | 2747.7 | 2740.9 | 2734.1 |
| 7.5°   | 2418.7 | 2417.0 | 2381.2 | 2345.4 |
| 10°    | 2111.1 | 2113.6 | 2081.2 | 2048.9 |
| 12.5°  | 1891.2 | 1869.9 | 1867.3 | 1864.8 |
| 15°    | 1725.8 | 1706.2 | 1702.8 | 1699.4 |
| 17.5°  | 1609.1 | 1597.2 | 1593.7 | 1590.3 |
| 20°    | 1520.4 | 1513.6 | 1507.7 | 1501.7 |
| 22.5°  | 1443.7 | 1435.2 | 1430.1 | 1425.0 |
| 25°    | 1369.6 | 1361.9 | 1360.2 | 1358.5 |
| 27.5°  | 1303.1 | 1293.7 | 1293.7 | 1293.7 |
| 30°    | 1240.1 | 1234.1 | 1231.5 | 1229.0 |
| 32.5°  | 1181.2 | 1176.1 | 1176.1 | 1176.1 |
| 35°    | 1125.8 | 1123.3 | 1119.9 | 1116.5 |
| 37.5°  | 1075.6 | 1075.6 | 1073.9 | 1072.2 |
| 40°    | 1027.0 | 1029.5 | 1029.5 | 1029.5 |
| 42.5°  | 982.7  | 985.2  | 985.2  | 985.2  |
| 45°    | 936.6  | 940.9  | 942.6  | 944.3  |
| 47.5°  | 891.5  | 898.3  | 900.0  | 901.7  |
| 50°    | 847.2  | 852.3  | 853.1  | 854.0  |
| 52.5°  | 802.0  | 808.0  | 812.2  | 816.5  |
| 55°    | 754.3  | 760.2  | 762.8  | 765.3  |
| 57.5°  | 703.1  | 709.1  | 709.9  | 710.8  |
| 60°    | 646.9  | 652.8  | 654.5  | 656.2  |
| 62.5°  | 593.2  | 596.6  | 598.3  | 600.0  |
| 65°    | 531.8  | 536.9  | 540.3  | 543.7  |
| 67.5°  | 473.0  | 477.3  | 477.3  | 477.3  |
| 70°    | 407.4  | 409.1  | 411.6  | 414.2  |
| 72.5°  | 346.9  | 347.7  | 347.7  | 347.7  |
| 75°    | 283.0  | 284.7  | 285.5  | 286.4  |
| 77.5°  | 222.4  | 223.3  | 223.3  | 223.3  |
| 80°    | 162.8  | 161.9  | 161.9  | 161.9  |
| 82.5°  | 111.6  | 109.1  | 109.1  | 109.1  |
| 85°    | 63.9   | 63.1   | 63.9   | 64.8   |
| 87.5°  | 29.0   | 29.0   | 29.0   | 29.0   |
| 90°    | 36.9   | 37.5   | 38.1   | 38.7   |
| 92.5°  | 42.9   | 43.2   | 43.5   | 43.8   |
| 95°    | 49.0   | 49.0   | 49.0   | 49.0   |
| 97.5°  | 52.0   | 52.3   | 52.5   | 52.8   |
| 100°   | 53.3   | 53.5   | 53.8   | 54.1   |
| 102.5° | 53.7   | 54.3   | 54.8   | 55.4   |
| 105°   | 55.0   | 55.5   | 56.1   | 56.7   |
| 107.5° | 246.5  | 209.0  | 171.5  | 134.0  |
| 110°   | 477.2  | 436.2  | 395.3  | 354.3  |



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**CANDELA DISTRIBUTION (continued):**

|        | 165°   | 170°   | 175°   | 180°   |
|--------|--------|--------|--------|--------|
| 112.5° | 673.0  | 672.4  | 671.9  | 671.3  |
| 115°   | 754.2  | 755.3  | 756.5  | 757.6  |
| 117.5° | 826.3  | 826.6  | 826.9  | 827.2  |
| 120°   | 899.3  | 899.3  | 899.3  | 899.3  |
| 122.5° | 969.3  | 969.6  | 969.9  | 970.2  |
| 125°   | 1034.2 | 1034.8 | 1035.3 | 1035.9 |
| 127.5° | 1102.1 | 1101.5 | 1100.9 | 1100.3 |
| 130°   | 1163.9 | 1163.3 | 1162.8 | 1162.2 |
| 132.5° | 1221.4 | 1220.6 | 1219.7 | 1218.9 |
| 135°   | 1279.4 | 1278.6 | 1277.7 | 1276.9 |
| 137.5° | 1334.0 | 1333.4 | 1332.8 | 1332.3 |
| 140°   | 1382.9 | 1382.4 | 1381.8 | 1381.2 |
| 142.5° | 1428.9 | 1428.0 | 1427.2 | 1426.3 |
| 145°   | 1472.7 | 1472.7 | 1472.7 | 1472.7 |
| 147.5° | 1510.5 | 1509.1 | 1507.6 | 1506.2 |
| 150°   | 1547.4 | 1546.6 | 1545.7 | 1544.8 |
| 152.5° | 1580.1 | 1578.6 | 1577.2 | 1575.8 |
| 155°   | 1609.3 | 1607.6 | 1605.8 | 1604.1 |
| 157.5° | 1635.5 | 1633.2 | 1630.9 | 1628.6 |
| 160°   | 1657.8 | 1655.8 | 1653.8 | 1651.8 |
| 162.5° | 1678.8 | 1677.1 | 1675.4 | 1673.7 |
| 165°   | 1696.5 | 1694.5 | 1692.4 | 1690.4 |
| 167.5° | 1710.2 | 1707.9 | 1705.6 | 1703.3 |
| 170°   | 1721.8 | 1719.5 | 1717.2 | 1714.9 |
| 172.5° | 1729.1 | 1726.5 | 1723.9 | 1721.4 |
| 175°   | 1734.7 | 1732.4 | 1730.1 | 1727.8 |
| 177.5° | 1737.7 | 1734.8 | 1732.0 | 1729.1 |
| 180°   | 1734.2 | 1734.2 | 1734.2 | 1734.2 |

TEST NUMBER: P831216

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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 | 16.60            | 17.45 | 17.54 | 18.40 | 19.64 | 18.84          | 19.68 | 19.78 | 20.64 | 21.87 |
|                 | 3H   | 18.25            | 19.01 | 19.20 | 19.97 | 21.23 | 20.26          | 21.02 | 21.21 | 21.98 | 23.24 |
|                 | 4H   | 18.82            | 19.54 | 19.79 | 20.51 | 21.77 | 20.71          | 21.43 | 21.68 | 22.39 | 23.66 |
|                 | 6H   | 19.19            | 19.85 | 20.17 | 20.83 | 22.10 | 20.99          | 21.65 | 21.96 | 22.62 | 23.90 |
|                 | 8H   | 19.29            | 19.92 | 20.27 | 20.91 | 22.18 | 21.05          | 21.68 | 22.03 | 22.66 | 23.94 |
|                 | 12H  | 19.33            | 19.93 | 20.32 | 20.91 | 22.21 | 21.07          | 21.66 | 22.05 | 22.65 | 23.95 |
| 4H              | 2H   | 17.17            | 17.89 | 18.15 | 18.86 | 20.12 | 19.00          | 19.72 | 19.97 | 20.68 | 21.95 |
|                 | 3H   | 19.00            | 19.60 | 19.98 | 20.59 | 21.87 | 20.62          | 21.21 | 21.60 | 22.21 | 23.49 |
|                 | 4H   | 19.70            | 20.25 | 20.69 | 21.23 | 22.54 | 21.20          | 21.75 | 22.19 | 22.73 | 24.04 |
|                 | 6H   | 20.17            | 20.64 | 21.18 | 21.66 | 22.96 | 21.60          | 22.07 | 22.61 | 23.09 | 24.39 |
|                 | 8H   | 20.31            | 20.75 | 21.31 | 21.75 | 23.07 | 21.72          | 22.15 | 22.72 | 23.16 | 24.48 |
|                 | 12H  | 20.38            | 20.77 | 21.40 | 21.79 | 23.11 | 21.76          | 22.15 | 22.78 | 23.18 | 24.50 |
| 8H              | 4H   | 19.96            | 20.40 | 20.97 | 21.41 | 22.72 | 21.30          | 21.74 | 22.31 | 22.75 | 24.06 |
|                 | 6H   | 20.55            | 20.91 | 21.58 | 21.96 | 23.28 | 21.81          | 22.17 | 22.83 | 23.22 | 24.53 |
|                 | 8H   | 20.76            | 21.08 | 21.80 | 22.11 | 23.45 | 21.99          | 22.30 | 23.02 | 23.34 | 24.67 |
|                 | 12H  | 20.88            | 21.16 | 21.92 | 22.19 | 23.57 | 22.09          | 22.37 | 23.13 | 23.40 | 24.77 |
| 12H             | 4H   | 19.97            | 20.36 | 20.99 | 21.38 | 22.70 | 21.28          | 21.67 | 22.30 | 22.70 | 24.02 |
|                 | 6H   | 20.60            | 20.92 | 21.64 | 21.96 | 23.29 | 21.82          | 22.14 | 22.86 | 23.17 | 24.51 |
|                 | 8H   | 20.84            | 21.12 | 21.88 | 22.14 | 23.52 | 22.02          | 22.30 | 23.06 | 23.33 | 24.71 |