

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: P831547

Luminaire Tested: S123DIP-S560D585U930-4F0-1E-UDD-G1

Issue Date: 05/03/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P831547  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2301-905-1, G3-1807-864-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 05/03/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123DIP-S560D585U930-4F0-1E-UDD-G1  
Description: DEFINE 3 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 560 LUMENS PER FOOT, GRAZE OPTIC  
UPLIGHT 585 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER  
Light Source: -  
Ballast/Driver: -

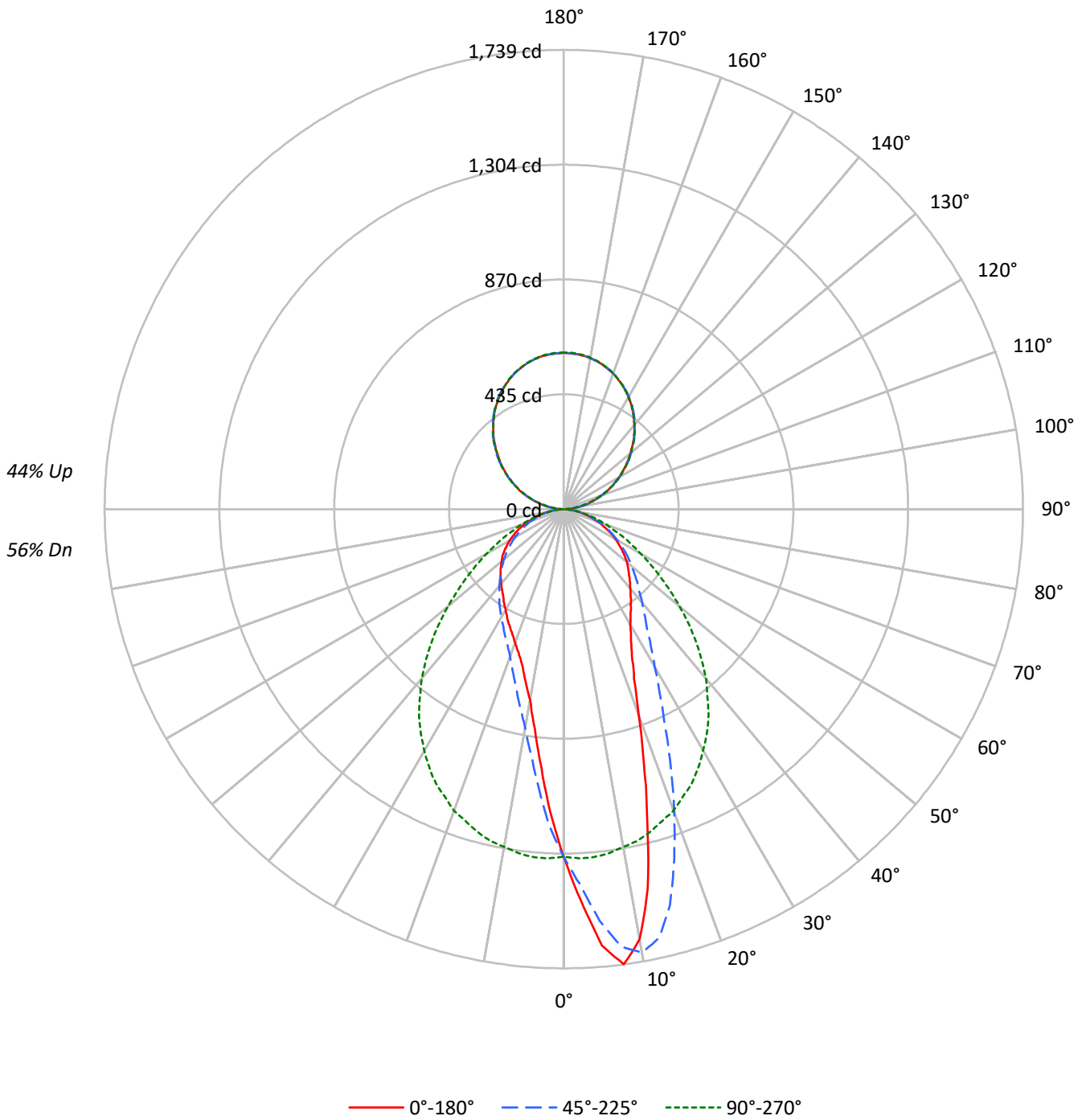
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3757.0 lumens  
Efficiency: N/A  
Efficacy: 108.0 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): 34.8  
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: P831547

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### Luminous Intensity Polar Plot





TEST NUMBER: P831547

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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 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 50 | 30 | 10 | 0 |  |  |  |    |  |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |
| RCR |     |     |     |     |     |     |     |     |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |
| 0   | 109 | 109 | 109 | 109 | 101 | 101 | 101 | 101 | 87 | 87 | 87 | 74 | 74 | 74 | 62 | 62 | 62 | 56 |    |    |    |    |    |    |    |    | 56 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |
| 1   | 100 | 96  | 92  | 89  | 93  | 89  | 86  | 83  | 77 | 75 | 73 | 66 | 64 | 63 | 56 | 54 | 53 | 49 |    |    |    |    |    |    |    |    | 49 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |
| 2   | 91  | 84  | 78  | 73  | 85  | 79  | 74  | 69  | 68 | 64 | 61 | 59 | 56 | 53 | 50 | 48 | 46 | 42 |    |    |    |    |    |    |    |    | 42 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |
| 3   | 84  | 75  | 68  | 62  | 78  | 70  | 64  | 59  | 61 | 56 | 52 | 52 | 49 | 46 | 45 | 42 | 40 | 36 |    |    |    |    |    |    |    |    | 36 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |
| 4   | 77  | 67  | 59  | 53  | 72  | 62  | 56  | 50  | 55 | 49 | 45 | 47 | 43 | 40 | 41 | 38 | 35 | 32 |    |    |    |    |    |    |    |    | 32 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |
| 5   | 71  | 60  | 52  | 46  | 66  | 56  | 49  | 44  | 49 | 44 | 40 | 43 | 39 | 35 | 37 | 34 | 31 | 28 |    |    |    |    |    |    |    |    | 28 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |
| 6   | 66  | 54  | 46  | 41  | 61  | 51  | 44  | 39  | 45 | 39 | 35 | 39 | 35 | 31 | 34 | 31 | 28 | 25 |    |    |    |    |    |    |    |    | 25 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |
| 7   | 61  | 49  | 42  | 36  | 57  | 46  | 39  | 35  | 41 | 35 | 31 | 36 | 32 | 28 | 31 | 28 | 25 | 23 |    |    |    |    |    |    |    |    | 23 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |
| 8   | 57  | 45  | 38  | 32  | 53  | 43  | 36  | 31  | 38 | 32 | 28 | 33 | 29 | 26 | 29 | 26 | 23 | 21 |    |    |    |    |    |    |    |    | 21 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |
| 9   | 53  | 41  | 34  | 29  | 50  | 39  | 33  | 28  | 35 | 29 | 26 | 31 | 26 | 23 | 27 | 24 | 21 | 19 |    |    |    |    |    |    |    |    | 19 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |
| 10  | 50  | 38  | 31  | 27  | 47  | 36  | 30  | 25  | 32 | 27 | 23 | 29 | 24 | 21 | 25 | 22 | 19 | 17 |    |    |    |    |    |    |    |    | 17 |    |    |    |    |    |   |  |  |  |    |  |  |  |  |  |  |  |  |   |  |  |  |  |  |  |  |  |

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

|     | 0°    | 45°   | 90°   | 135°  | 180°  |
|-----|-------|-------|-------|-------|-------|
| 0°  | 14165 | 14165 | 14165 | 14165 | 14165 |
| 5°  | 17915 | 16908 | 14292 | 11517 | 10584 |
| 10° | 18088 | 18636 | 14197 | 9181  | 8023  |
| 15° | 13624 | 17302 | 14100 | 7775  | 6784  |
| 20° | 9493  | 14001 | 13920 | 6800  | 6163  |
| 25° | 7238  | 10766 | 13613 | 6255  | 5780  |
| 30° | 6262  | 8554  | 13123 | 5872  | 5473  |
| 35° | 5809  | 7222  | 12558 | 5593  | 5256  |
| 40° | 5500  | 6479  | 11764 | 5328  | 5182  |
| 45° | 5317  | 5996  | 10755 | 5122  | 5150  |
| 50° | 5226  | 5615  | 9562  | 4933  | 5123  |
| 55° | 5031  | 5335  | 8389  | 4755  | 5146  |
| 60° | 4850  | 5035  | 7231  | 4588  | 5061  |
| 65° | 4557  | 4753  | 6238  | 4409  | 4961  |
| 70° | 4208  | 4390  | 5303  | 4113  | 4670  |
| 75° | 3810  | 3938  | 4546  | 3822  | 4267  |
| 80° | 3143  | 3446  | 3595  | 3329  | 3595  |
| 85° | 2495  | 2791  | 2643  | 2828  | 2865  |

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 80°  
 Vertical Angle: 45°  
 Luminance: 12280 cd/sqm



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 124.4  | 3.3       |
| 10°-20°   | 309.5  | 8.2       |
| 20°-30°   | 366.5  | 9.8       |
| 30°-40°   | 368.5  | 9.8       |
| 40°-50°   | 338.1  | 9.0       |
| 50°-60°   | 279.0  | 7.4       |
| 60°-70°   | 197.4  | 5.3       |
| 70°-80°   | 105.4  | 2.8       |
| 80°-90°   | 28.0   | 0.7       |
| 90°-100°  | 38.1   | 1.0       |
| 100°-110° | 115.3  | 3.1       |
| 110°-120° | 196.4  | 5.2       |
| 120°-130° | 258.3  | 6.9       |
| 130°-140° | 290.4  | 7.7       |
| 140°-150° | 285.5  | 7.6       |
| 150°-160° | 240.3  | 6.4       |
| 160°-170° | 160.0  | 4.3       |
| 170°-180° | 56.0   | 1.5       |
| 0°-30°    | 800.4  | 21.3      |
| 0°-40°    | 1168.9 | 31.1      |
| 0°-60°    | 1786.0 | 47.5      |
| 0°-90°    | 2116.7 | 56.3      |
| 90°-120°  | 349.8  | 9.3       |
| 90°-150°  | 1183.9 | 31.5      |
| 90°-180°  | 1640.0 | 43.7      |
| 0°-180°   | 3757.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 45°  | 90°  | 135° | 180° | Flux |
|------|------|------|------|------|------|------|
| 0°   | 1316 | 1316 | 1316 | 1316 | 1316 |      |
| 5°   | 1658 | 1565 | 1323 | 1066 | 980  | 158  |
| 15°  | 1223 | 1553 | 1265 | 698  | 609  | 338  |
| 25°  | 609  | 906  | 1146 | 527  | 487  | 288  |
| 35°  | 442  | 550  | 956  | 426  | 400  | 278  |
| 45°  | 349  | 394  | 706  | 336  | 338  | 271  |
| 55°  | 268  | 284  | 447  | 253  | 274  | 240  |
| 65°  | 179  | 187  | 245  | 173  | 195  | 178  |
| 75°  | 92   | 95   | 109  | 92   | 103  | 96   |
| 85°  | 20   | 23   | 21   | 23   | 23   | 23   |
| 90°  | 14   | 11   | 0    | 11   | 14   | 8    |
| 95°  | 36   | 34   | 27   | 34   | 36   | 36   |
| 105° | 111  | 110  | 105  | 110  | 111  | 117  |
| 115° | 198  | 198  | 198  | 198  | 198  | 196  |
| 125° | 286  | 290  | 289  | 290  | 286  | 256  |
| 135° | 375  | 378  | 375  | 378  | 375  | 288  |
| 145° | 455  | 458  | 455  | 458  | 455  | 284  |
| 155° | 520  | 522  | 521  | 522  | 520  | 240  |
| 165° | 566  | 566  | 568  | 566  | 566  | 160  |
| 175° | 588  | 589  | 591  | 589  | 588  | 56   |
| 180° | 592  | 592  | 592  | 592  | 592  |      |



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**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°    | 35°    | 40°    | 45°    | 50°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 |
| 2.5°   | 1483.3 | 1481.8 | 1480.3 | 1472.6 | 1465.0 | 1461.3 | 1457.7 | 1446.7 | 1435.7 | 1423.5 | 1411.3 |
| 5°     | 1658.0 | 1662.2 | 1666.5 | 1661.6 | 1656.7 | 1641.8 | 1626.8 | 1607.0 | 1587.1 | 1564.8 | 1542.5 |
| 7.5°   | 1738.6 | 1741.0 | 1743.5 | 1740.4 | 1737.4 | 1733.4 | 1729.4 | 1711.7 | 1694.0 | 1671.1 | 1648.2 |
| 10°    | 1654.9 | 1660.4 | 1665.9 | 1677.8 | 1689.7 | 1703.2 | 1716.6 | 1714.1 | 1711.7 | 1705.0 | 1698.3 |
| 12.5°  | 1471.1 | 1477.8 | 1484.5 | 1508.4 | 1532.2 | 1562.7 | 1593.2 | 1619.5 | 1645.8 | 1664.1 | 1682.4 |
| 15°    | 1222.6 | 1241.2 | 1259.8 | 1281.5 | 1303.2 | 1348.0 | 1392.9 | 1448.2 | 1503.5 | 1552.6 | 1601.8 |
| 17.5°  | 1007.0 | 1014.0 | 1021.0 | 1044.2 | 1067.4 | 1123.9 | 1180.4 | 1244.2 | 1308.1 | 1389.6 | 1471.1 |
| 20°    | 828.7  | 835.1  | 841.5  | 872.0  | 902.6  | 946.8  | 991.1  | 1062.9 | 1134.6 | 1222.3 | 1309.9 |
| 22.5°  | 696.2  | 706.2  | 716.3  | 733.4  | 750.5  | 793.0  | 835.4  | 899.2  | 963.0  | 1059.8 | 1156.6 |
| 25°    | 609.4  | 616.8  | 624.1  | 634.5  | 644.9  | 678.8  | 712.6  | 765.2  | 817.7  | 906.5  | 995.4  |
| 27.5°  | 550.2  | 553.3  | 556.3  | 566.7  | 577.1  | 599.1  | 621.0  | 666.2  | 711.4  | 786.8  | 862.3  |
| 30°    | 503.8  | 505.9  | 508.1  | 517.2  | 526.4  | 541.4  | 556.3  | 589.0  | 621.7  | 688.2  | 754.8  |
| 32.5°  | 471.4  | 473.0  | 474.5  | 481.5  | 488.5  | 499.2  | 509.9  | 533.7  | 557.5  | 612.5  | 667.5  |
| 35°    | 442.1  | 443.0  | 444.0  | 449.1  | 454.3  | 462.3  | 470.2  | 488.2  | 506.2  | 549.6  | 593.0  |
| 37.5°  | 416.5  | 417.7  | 418.9  | 422.0  | 425.0  | 432.0  | 439.1  | 453.4  | 467.8  | 501.1  | 534.3  |
| 40°    | 391.4  | 393.6  | 395.7  | 397.9  | 400.0  | 405.8  | 411.6  | 422.6  | 433.6  | 461.1  | 488.5  |
| 42.5°  | 370.1  | 372.2  | 374.3  | 375.3  | 376.2  | 379.5  | 382.9  | 393.0  | 403.0  | 423.5  | 444.0  |
| 45°    | 349.3  | 350.2  | 351.1  | 352.1  | 353.0  | 355.7  | 358.5  | 367.3  | 376.2  | 393.9  | 411.6  |
| 47.5°  | 330.4  | 330.4  | 330.4  | 331.0  | 331.6  | 334.0  | 336.5  | 342.9  | 349.3  | 363.0  | 376.8  |
| 50°    | 312.1  | 312.1  | 312.1  | 311.1  | 310.2  | 311.7  | 313.3  | 318.2  | 323.0  | 335.3  | 347.5  |
| 52.5°  | 290.1  | 290.1  | 290.1  | 290.4  | 290.7  | 290.7  | 290.7  | 295.0  | 299.2  | 310.2  | 321.2  |
| 55°    | 268.1  | 269.3  | 270.5  | 269.6  | 268.7  | 269.3  | 269.9  | 272.7  | 275.4  | 284.3  | 293.1  |
| 57.5°  | 246.1  | 246.7  | 247.3  | 247.0  | 246.7  | 247.0  | 247.3  | 249.8  | 252.2  | 258.9  | 265.6  |
| 60°    | 225.3  | 225.3  | 225.3  | 224.7  | 224.1  | 224.7  | 225.3  | 226.6  | 227.8  | 233.9  | 240.0  |
| 62.5°  | 202.1  | 202.4  | 202.7  | 203.0  | 203.4  | 202.7  | 202.1  | 203.7  | 205.2  | 209.8  | 214.3  |
| 65°    | 178.9  | 179.2  | 179.5  | 180.5  | 181.4  | 180.8  | 180.1  | 181.7  | 183.2  | 186.6  | 189.9  |
| 67.5°  | 158.2  | 157.6  | 156.9  | 157.2  | 157.6  | 158.5  | 159.4  | 159.7  | 160.0  | 163.7  | 167.3  |
| 70°    | 133.7  | 134.3  | 135.0  | 134.7  | 134.3  | 134.7  | 135.0  | 135.9  | 136.8  | 139.5  | 142.3  |
| 72.5°  | 111.8  | 112.1  | 112.4  | 112.4  | 112.4  | 113.0  | 113.6  | 114.5  | 115.4  | 116.9  | 118.5  |
| 75°    | 91.6   | 91.6   | 91.6   | 92.2   | 92.8   | 93.1   | 93.4   | 93.4   | 93.4   | 94.7   | 95.9   |
| 77.5°  | 69.6   | 71.1   | 72.7   | 72.4   | 72.1   | 72.7   | 73.3   | 74.2   | 75.1   | 75.7   | 76.3   |
| 80°    | 50.7   | 50.7   | 50.7   | 51.0   | 51.3   | 52.2   | 53.1   | 53.7   | 54.3   | 55.6   | 56.8   |
| 82.5°  | 32.4   | 32.7   | 33.0   | 33.9   | 34.8   | 35.4   | 36.0   | 36.9   | 37.9   | 37.9   | 37.9   |
| 85°    | 20.2   | 19.5   | 18.9   | 19.5   | 20.2   | 20.8   | 21.4   | 21.7   | 22.0   | 22.6   | 23.2   |
| 87.5°  | 9.8    | 9.8    | 9.8    | 9.8    | 9.8    | 10.1   | 10.4   | 10.4   | 10.4   | 10.4   | 10.4   |
| 90°    | 14.0   | 13.7   | 13.5   | 13.3   | 13.1   | 12.8   | 12.4   | 12.0   | 11.6   | 11.2   | 9.8    |
| 92.5°  | 20.0   | 20.2   | 20.4   | 20.6   | 20.8   | 20.8   | 20.5   | 20.2   | 19.8   | 19.5   | 18.9   |
| 95°    | 36.3   | 36.3   | 36.3   | 36.3   | 36.3   | 36.1   | 35.7   | 35.2   | 34.8   | 34.4   | 33.6   |
| 97.5°  | 52.1   | 52.2   | 52.3   | 52.4   | 52.5   | 52.3   | 51.8   | 51.3   | 50.7   | 50.2   | 49.6   |
| 100°   | 70.7   | 70.5   | 70.3   | 70.1   | 69.9   | 69.6   | 69.3   | 69.0   | 68.7   | 68.4   | 67.8   |
| 102.5° | 89.8   | 89.9   | 90.0   | 90.1   | 90.2   | 90.1   | 89.8   | 89.4   | 89.1   | 88.8   | 88.1   |
| 105°   | 110.7  | 110.5  | 110.3  | 110.1  | 109.9  | 109.7  | 109.7  | 109.7  | 109.7  | 109.7  | 108.8  |
| 107.5° | 132.1  | 132.2  | 132.3  | 132.4  | 132.5  | 132.4  | 132.1  | 131.8  | 131.5  | 131.1  | 130.7  |
| 110°   | 153.9  | 154.1  | 154.3  | 154.5  | 154.8  | 154.7  | 154.2  | 153.8  | 153.4  | 153.0  | 152.8  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 5°    | 10°   | 15°   | 20°   | 25°   | 30°   | 35°   | 40°   | 45°   | 50°   |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 112.5° | 177.2 | 177.2 | 177.2 | 177.2 | 177.2 | 176.9 | 176.4 | 175.9 | 175.4 | 174.9 | 174.9 |
| 115°   | 198.1 | 198.2 | 198.3 | 198.4 | 198.5 | 198.5 | 198.4 | 198.3 | 198.2 | 198.1 | 198.3 |
| 117.5° | 219.5 | 219.8 | 220.1 | 220.4 | 220.7 | 220.9 | 220.9 | 220.9 | 220.9 | 220.9 | 221.1 |
| 120°   | 242.3 | 242.5 | 242.7 | 242.9 | 243.1 | 243.3 | 243.4 | 243.5 | 243.6 | 243.7 | 244.2 |
| 122.5° | 264.1 | 264.5 | 264.8 | 265.1 | 265.4 | 265.7 | 266.0 | 266.3 | 266.6 | 266.9 | 267.1 |
| 125°   | 286.0 | 286.4 | 286.8 | 287.2 | 287.7 | 288.1 | 288.5 | 288.9 | 289.3 | 289.7 | 289.9 |
| 127.5° | 307.9 | 308.3 | 308.7 | 309.1 | 309.5 | 310.0 | 310.6 | 311.3 | 311.9 | 312.5 | 312.7 |
| 130°   | 329.2 | 330.0 | 330.7 | 331.4 | 332.1 | 332.7 | 333.1 | 333.5 | 333.9 | 334.4 | 334.7 |
| 132.5° | 351.6 | 352.1 | 352.6 | 353.1 | 353.6 | 354.2 | 354.7 | 355.2 | 355.7 | 356.2 | 356.4 |
| 135°   | 374.8 | 375.0 | 375.2 | 375.4 | 375.6 | 376.0 | 376.4 | 376.8 | 377.2 | 377.6 | 377.7 |
| 137.5° | 395.3 | 395.6 | 395.9 | 396.2 | 396.5 | 396.9 | 397.5 | 398.0 | 398.5 | 399.0 | 398.7 |
| 140°   | 415.3 | 416.0 | 416.7 | 417.4 | 418.2 | 418.6 | 418.7 | 418.8 | 418.9 | 419.0 | 418.9 |
| 142.5° | 435.7 | 436.3 | 436.8 | 437.3 | 437.8 | 438.1 | 438.2 | 438.3 | 438.4 | 438.5 | 438.3 |
| 145°   | 455.3 | 455.7 | 456.1 | 456.5 | 456.9 | 457.2 | 457.3 | 457.4 | 457.5 | 457.6 | 457.3 |
| 147.5° | 472.9 | 473.6 | 474.2 | 474.8 | 475.4 | 475.7 | 475.7 | 475.7 | 475.7 | 475.7 | 475.4 |
| 150°   | 489.7 | 490.3 | 490.9 | 491.5 | 492.2 | 492.5 | 492.5 | 492.5 | 492.5 | 492.5 | 492.3 |
| 152.5° | 506.0 | 506.5 | 507.0 | 507.5 | 508.0 | 508.2 | 508.0 | 507.8 | 507.6 | 507.4 | 507.3 |
| 155°   | 520.4 | 521.1 | 521.8 | 522.5 | 523.3 | 523.4 | 523.0 | 522.6 | 522.2 | 521.8 | 521.7 |
| 157.5° | 533.9 | 534.5 | 535.1 | 535.7 | 536.3 | 536.4 | 536.0 | 535.6 | 535.2 | 534.8 | 534.7 |
| 160°   | 546.9 | 547.3 | 547.7 | 548.1 | 548.5 | 548.5 | 548.0 | 547.5 | 546.9 | 546.4 | 546.4 |
| 162.5° | 556.7 | 557.4 | 558.1 | 558.8 | 559.5 | 559.6 | 559.1 | 558.6 | 558.1 | 557.6 | 557.5 |
| 165°   | 566.0 | 566.7 | 567.4 | 568.1 | 568.8 | 568.9 | 568.3 | 567.7 | 567.0 | 566.4 | 566.4 |
| 167.5° | 574.3 | 574.9 | 575.6 | 576.2 | 576.8 | 576.8 | 576.2 | 575.6 | 574.9 | 574.3 | 574.2 |
| 170°   | 580.4 | 581.1 | 581.8 | 582.5 | 583.3 | 583.3 | 582.5 | 581.8 | 581.1 | 580.4 | 580.4 |
| 172.5° | 585.0 | 585.7 | 586.5 | 587.2 | 587.9 | 588.0 | 587.3 | 586.7 | 586.1 | 585.5 | 585.5 |
| 175°   | 588.3 | 589.0 | 589.7 | 590.4 | 591.2 | 591.2 | 590.6 | 590.0 | 589.4 | 588.7 | 588.7 |
| 177.5° | 590.1 | 590.9 | 591.6 | 592.3 | 593.0 | 593.1 | 592.5 | 591.8 | 591.2 | 590.6 | 590.6 |
| 180°   | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 |



TEST NUMBER: P831547

CATALOG NUMBER: S123DIP-S560D585U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

|        | 55°    | 60°    | 65°    | 70°    | 75°    | 80°    | 85°    | 90°    | 95°    | 100°   | 105°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 |
| 2.5°   | 1407.6 | 1403.9 | 1390.5 | 1377.1 | 1361.8 | 1346.5 | 1335.2 | 1323.9 | 1307.1 | 1290.3 | 1276.6 |
| 5°     | 1525.4 | 1508.4 | 1480.0 | 1451.6 | 1413.1 | 1374.6 | 1348.7 | 1322.7 | 1287.9 | 1253.1 | 1225.3 |
| 7.5°   | 1618.9 | 1589.6 | 1549.9 | 1510.2 | 1459.8 | 1409.4 | 1361.8 | 1314.2 | 1261.0 | 1207.9 | 1164.5 |
| 10°    | 1678.4 | 1658.6 | 1612.8 | 1567.0 | 1499.5 | 1432.0 | 1365.5 | 1298.9 | 1230.5 | 1162.1 | 1104.7 |
| 12.5°  | 1684.2 | 1686.1 | 1643.9 | 1601.8 | 1525.4 | 1449.1 | 1368.2 | 1287.3 | 1201.2 | 1115.1 | 1048.2 |
| 15°    | 1633.2 | 1664.7 | 1641.5 | 1618.3 | 1541.3 | 1464.4 | 1364.8 | 1265.3 | 1166.1 | 1066.8 | 989.6  |
| 17.5°  | 1538.6 | 1606.1 | 1609.4 | 1612.8 | 1535.8 | 1458.9 | 1348.7 | 1238.4 | 1126.1 | 1013.7 | 932.5  |
| 20°    | 1409.4 | 1509.0 | 1543.2 | 1577.4 | 1514.8 | 1452.2 | 1333.7 | 1215.2 | 1089.4 | 963.6  | 878.4  |
| 22.5°  | 1277.5 | 1398.4 | 1461.0 | 1523.6 | 1477.2 | 1430.8 | 1304.7 | 1178.6 | 1045.8 | 912.9  | 826.5  |
| 25°    | 1127.3 | 1259.2 | 1355.4 | 1451.6 | 1423.2 | 1394.8 | 1270.5 | 1146.2 | 1004.9 | 863.5  | 775.2  |
| 27.5°  | 996.3  | 1130.3 | 1246.4 | 1362.4 | 1356.3 | 1350.2 | 1226.8 | 1103.5 | 958.7  | 814.0  | 728.8  |
| 30°    | 879.7  | 1004.5 | 1134.3 | 1264.1 | 1279.0 | 1294.0 | 1174.9 | 1055.8 | 910.8  | 765.8  | 683.6  |
| 32.5°  | 776.5  | 885.5  | 1024.7 | 1163.9 | 1193.2 | 1222.6 | 1115.1 | 1007.6 | 864.1  | 720.6  | 641.5  |
| 35°    | 691.9  | 790.8  | 930.0  | 1069.3 | 1105.9 | 1142.6 | 1049.1 | 955.7  | 815.9  | 676.0  | 600.6  |
| 37.5°  | 617.1  | 699.8  | 835.7  | 971.6  | 1016.5 | 1061.3 | 977.7  | 894.0  | 763.0  | 632.0  | 562.7  |
| 40°    | 555.1  | 621.7  | 746.5  | 871.4  | 923.3  | 975.2  | 906.2  | 837.2  | 713.0  | 588.7  | 524.9  |
| 42.5°  | 503.2  | 562.4  | 675.7  | 789.0  | 838.8  | 888.5  | 830.2  | 771.9  | 661.4  | 550.8  | 492.5  |
| 45°    | 458.9  | 506.2  | 609.1  | 712.0  | 759.4  | 806.7  | 756.6  | 706.5  | 609.1  | 511.7  | 457.4  |
| 47.5°  | 417.4  | 458.0  | 545.9  | 633.9  | 676.0  | 718.1  | 679.1  | 640.0  | 557.5  | 475.1  | 425.9  |
| 50°    | 380.1  | 412.8  | 489.8  | 566.7  | 603.3  | 640.0  | 605.5  | 571.0  | 503.2  | 435.4  | 392.7  |
| 52.5°  | 347.8  | 374.3  | 438.8  | 503.2  | 534.6  | 566.1  | 536.5  | 506.9  | 453.1  | 399.4  | 362.1  |
| 55°    | 315.7  | 338.3  | 394.2  | 450.1  | 471.4  | 492.8  | 469.9  | 447.0  | 403.7  | 360.3  | 328.8  |
| 57.5°  | 285.8  | 305.9  | 351.7  | 397.5  | 414.0  | 430.5  | 409.8  | 389.0  | 356.3  | 323.7  | 297.4  |
| 60°    | 256.5  | 273.0  | 311.1  | 349.3  | 359.4  | 369.5  | 352.7  | 335.9  | 313.0  | 290.1  | 266.6  |
| 62.5°  | 229.3  | 244.3  | 272.7  | 301.1  | 307.8  | 314.5  | 301.7  | 288.8  | 271.4  | 254.0  | 235.7  |
| 65°    | 201.2  | 212.5  | 235.7  | 258.9  | 263.2  | 267.5  | 256.2  | 244.9  | 231.7  | 218.6  | 205.2  |
| 67.5°  | 175.3  | 183.2  | 202.1  | 221.1  | 221.4  | 221.7  | 212.5  | 203.4  | 196.0  | 188.7  | 178.0  |
| 70°    | 149.9  | 157.6  | 170.1  | 182.6  | 182.9  | 183.2  | 175.9  | 168.5  | 163.0  | 157.6  | 149.6  |
| 72.5°  | 124.0  | 129.5  | 138.9  | 148.4  | 147.8  | 147.2  | 142.6  | 138.0  | 133.7  | 129.5  | 123.7  |
| 75°    | 100.5  | 105.0  | 111.4  | 117.9  | 116.0  | 114.2  | 111.8  | 109.3  | 105.6  | 102.0  | 98.3   |
| 77.5°  | 79.1   | 81.8   | 85.5   | 89.2   | 87.9   | 86.7   | 84.6   | 82.4   | 79.7   | 76.9   | 75.4   |
| 80°    | 58.0   | 59.2   | 61.7   | 64.1   | 63.5   | 62.9   | 60.5   | 58.0   | 57.4   | 56.8   | 54.7   |
| 82.5°  | 39.4   | 40.9   | 41.5   | 42.1   | 41.8   | 41.5   | 39.7   | 37.9   | 37.3   | 36.6   | 36.3   |
| 85°    | 23.5   | 23.8   | 24.1   | 24.4   | 23.5   | 22.6   | 22.0   | 21.4   | 21.4   | 21.4   | 21.1   |
| 87.5°  | 10.7   | 11.0   | 11.0   | 11.0   | 10.7   | 10.4   | 9.8    | 9.2    | 9.5    | 9.8    | 9.8    |
| 90°    | 8.5    | 7.1    | 5.8    | 4.6    | 3.6    | 2.5    | 1.5    | 0.5    | 1.5    | 2.5    | 3.6    |
| 92.5°  | 18.3   | 17.7   | 17.1   | 16.4   | 15.8   | 15.2   | 14.6   | 14.0   | 14.6   | 15.2   | 15.8   |
| 95°    | 32.8   | 31.9   | 31.1   | 30.3   | 29.6   | 28.9   | 28.2   | 27.4   | 28.2   | 28.9   | 29.6   |
| 97.5°  | 49.0   | 48.4   | 47.7   | 47.2   | 46.7   | 46.1   | 45.6   | 45.1   | 45.6   | 46.1   | 46.7   |
| 100°   | 67.3   | 66.8   | 66.3   | 65.7   | 65.1   | 64.5   | 63.9   | 63.2   | 63.9   | 64.5   | 65.1   |
| 102.5° | 87.4   | 86.7   | 85.9   | 85.4   | 85.1   | 84.8   | 84.5   | 84.2   | 84.5   | 84.8   | 85.1   |
| 105°   | 107.9  | 107.0  | 106.0  | 105.5  | 105.3  | 105.0  | 104.8  | 104.6  | 104.8  | 105.0  | 105.3  |
| 107.5° | 130.3  | 129.9  | 129.5  | 129.2  | 129.1  | 129.0  | 128.9  | 128.8  | 128.9  | 129.0  | 129.1  |
| 110°   | 152.6  | 152.4  | 152.2  | 152.0  | 151.8  | 151.6  | 151.3  | 151.1  | 151.3  | 151.6  | 151.8  |





TEST NUMBER: P831547

CATALOG NUMBER: S123DIP-S560D585U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

|        | 55°   | 60°   | 65°   | 70°   | 75°   | 80°   | 85°   | 90°   | 95°   | 100°  | 105°  |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 112.5° | 174.9 | 174.9 | 174.9 | 174.8 | 174.7 | 174.6 | 174.5 | 174.4 | 174.5 | 174.6 | 174.7 |
| 115°   | 198.5 | 198.7 | 198.9 | 198.9 | 198.6 | 198.3 | 198.0 | 197.6 | 198.0 | 198.3 | 198.6 |
| 117.5° | 221.3 | 221.5 | 221.7 | 221.8 | 221.7 | 221.6 | 221.5 | 221.4 | 221.5 | 221.6 | 221.7 |
| 120°   | 244.7 | 245.2 | 245.7 | 245.7 | 245.1 | 244.5 | 243.8 | 243.2 | 243.8 | 244.5 | 245.1 |
| 122.5° | 267.3 | 267.6 | 267.8 | 267.7 | 267.2 | 266.8 | 266.4 | 266.0 | 266.4 | 266.8 | 267.2 |
| 125°   | 290.1 | 290.3 | 290.5 | 290.5 | 290.2 | 289.9 | 289.6 | 289.3 | 289.6 | 289.9 | 290.2 |
| 127.5° | 312.9 | 313.1 | 313.3 | 313.1 | 312.5 | 311.9 | 311.3 | 310.6 | 311.3 | 311.9 | 312.5 |
| 130°   | 335.0 | 335.3 | 335.6 | 335.3 | 334.5 | 333.7 | 332.9 | 332.0 | 332.9 | 333.7 | 334.5 |
| 132.5° | 356.6 | 356.8 | 357.0 | 356.7 | 355.9 | 355.1 | 354.3 | 353.4 | 354.3 | 355.1 | 355.9 |
| 135°   | 377.8 | 377.9 | 378.0 | 377.8 | 377.1 | 376.5 | 375.9 | 375.3 | 375.9 | 376.5 | 377.1 |
| 137.5° | 398.4 | 398.1 | 397.8 | 397.3 | 396.8 | 396.3 | 395.8 | 395.3 | 395.8 | 396.3 | 396.8 |
| 140°   | 418.8 | 418.7 | 418.6 | 418.3 | 417.8 | 417.2 | 416.7 | 416.2 | 416.7 | 417.2 | 417.8 |
| 142.5° | 438.1 | 437.9 | 437.7 | 437.3 | 436.8 | 436.3 | 435.8 | 435.3 | 435.8 | 436.3 | 436.8 |
| 145°   | 457.0 | 456.7 | 456.4 | 456.1 | 455.9 | 455.7 | 455.5 | 455.3 | 455.5 | 455.7 | 455.9 |
| 147.5° | 475.1 | 474.8 | 474.5 | 474.1 | 473.7 | 473.3 | 472.9 | 472.5 | 472.9 | 473.3 | 473.7 |
| 150°   | 492.1 | 491.9 | 491.6 | 491.4 | 491.2 | 491.0 | 490.8 | 490.6 | 490.8 | 491.0 | 491.2 |
| 152.5° | 507.2 | 507.0 | 506.9 | 506.7 | 506.4 | 506.1 | 505.8 | 505.5 | 505.8 | 506.1 | 506.4 |
| 155°   | 521.6 | 521.5 | 521.4 | 521.3 | 521.3 | 521.3 | 521.3 | 521.3 | 521.3 | 521.3 | 521.3 |
| 157.5° | 534.6 | 534.5 | 534.4 | 534.4 | 534.5 | 534.6 | 534.7 | 534.8 | 534.7 | 534.6 | 534.5 |
| 160°   | 546.4 | 546.4 | 546.4 | 546.5 | 546.7 | 546.9 | 547.1 | 547.4 | 547.1 | 546.9 | 546.7 |
| 162.5° | 557.4 | 557.3 | 557.2 | 557.3 | 557.6 | 557.9 | 558.2 | 558.5 | 558.2 | 557.9 | 557.6 |
| 165°   | 566.4 | 566.4 | 566.4 | 566.6 | 566.9 | 567.2 | 567.5 | 567.8 | 567.5 | 567.2 | 566.9 |
| 167.5° | 574.1 | 574.0 | 573.9 | 574.1 | 574.5 | 574.9 | 575.3 | 575.7 | 575.3 | 574.9 | 574.5 |
| 170°   | 580.4 | 580.4 | 580.4 | 580.6 | 581.0 | 581.4 | 581.8 | 582.2 | 581.8 | 581.4 | 581.0 |
| 172.5° | 585.5 | 585.5 | 585.5 | 585.7 | 586.1 | 586.5 | 586.9 | 587.3 | 586.9 | 586.5 | 586.1 |
| 175°   | 588.7 | 588.7 | 588.7 | 588.9 | 589.4 | 589.8 | 590.2 | 590.6 | 590.2 | 589.8 | 589.4 |
| 177.5° | 590.6 | 590.6 | 590.6 | 590.8 | 591.2 | 591.6 | 592.0 | 592.5 | 592.0 | 591.6 | 591.2 |
| 180°   | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 |



TEST NUMBER: P831547

CATALOG NUMBER: S123DIP-S560D585U930-4F0-1E-UDD-G1

**CANDELA DISTRIBUTION (continued):**

|        | 110°   | 115°   | 120°   | 125°   | 130°   | 135°   | 140°   | 145°   | 150°   | 155°   | 160°   |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 | 1316.0 |
| 2.5°   | 1262.9 | 1251.0 | 1239.0 | 1229.9 | 1220.7 | 1205.2 | 1189.6 | 1185.9 | 1182.3 | 1177.1 | 1171.9 |
| 5°     | 1197.5 | 1168.2 | 1138.9 | 1112.6 | 1086.4 | 1065.9 | 1045.5 | 1032.0 | 1018.6 | 1008.8 | 999.1  |
| 7.5°   | 1121.2 | 1077.2 | 1033.3 | 1002.1 | 971.0  | 941.3  | 911.7  | 902.3  | 892.8  | 880.0  | 867.1  |
| 10°    | 1047.3 | 998.7  | 950.2  | 909.6  | 869.0  | 840.0  | 811.0  | 799.4  | 787.8  | 771.6  | 755.4  |
| 12.5°  | 981.3  | 928.2  | 875.1  | 834.2  | 793.3  | 765.2  | 737.1  | 720.3  | 703.5  | 694.3  | 685.2  |
| 15°    | 912.3  | 855.5  | 798.8  | 760.9  | 723.0  | 697.7  | 672.3  | 657.7  | 643.0  | 634.2  | 625.3  |
| 17.5°  | 851.3  | 795.1  | 738.9  | 702.6  | 666.2  | 643.0  | 619.8  | 607.0  | 594.2  | 587.5  | 580.7  |
| 20°    | 793.3  | 738.3  | 683.3  | 647.9  | 612.5  | 593.6  | 574.6  | 566.4  | 558.2  | 552.7  | 547.2  |
| 22.5°  | 740.1  | 686.1  | 632.0  | 601.8  | 571.6  | 556.3  | 541.1  | 535.3  | 529.4  | 524.9  | 520.3  |
| 25°    | 687.0  | 638.8  | 590.5  | 564.9  | 539.2  | 526.7  | 514.2  | 508.4  | 502.6  | 498.0  | 493.4  |
| 27.5°  | 643.6  | 597.5  | 551.4  | 529.4  | 507.5  | 497.7  | 487.9  | 483.3  | 478.8  | 474.5  | 470.2  |
| 30°    | 601.5  | 560.3  | 519.1  | 500.1  | 481.2  | 472.4  | 463.5  | 458.9  | 454.3  | 450.4  | 446.4  |
| 32.5°  | 562.4  | 527.0  | 491.6  | 474.2  | 456.8  | 449.5  | 442.1  | 436.6  | 431.1  | 428.1  | 425.0  |
| 35°    | 525.2  | 493.4  | 461.7  | 447.3  | 433.0  | 425.6  | 418.3  | 413.7  | 409.1  | 406.7  | 404.3  |
| 37.5°  | 493.4  | 465.0  | 436.6  | 422.9  | 409.1  | 402.1  | 395.1  | 391.1  | 387.2  | 386.2  | 385.3  |
| 40°    | 461.1  | 436.6  | 412.2  | 398.8  | 385.3  | 379.2  | 373.1  | 370.7  | 368.2  | 367.6  | 367.0  |
| 42.5°  | 434.2  | 410.4  | 386.6  | 374.3  | 362.1  | 356.9  | 351.7  | 350.5  | 349.3  | 350.2  | 351.1  |
| 45°    | 403.0  | 383.2  | 363.3  | 352.1  | 340.8  | 336.5  | 332.2  | 331.3  | 330.4  | 332.2  | 334.0  |
| 47.5°  | 376.8  | 358.5  | 340.1  | 329.5  | 318.8  | 315.7  | 312.7  | 312.4  | 312.1  | 314.5  | 316.9  |
| 50°    | 349.9  | 332.2  | 314.5  | 305.9  | 297.4  | 294.6  | 291.9  | 292.8  | 293.7  | 297.7  | 301.7  |
| 52.5°  | 324.9  | 308.4  | 291.9  | 284.0  | 276.0  | 274.2  | 272.4  | 274.5  | 276.6  | 280.9  | 285.2  |
| 55°    | 297.4  | 282.4  | 267.5  | 261.4  | 255.3  | 253.4  | 251.6  | 255.9  | 260.1  | 264.1  | 268.1  |
| 57.5°  | 271.1  | 258.0  | 244.9  | 239.4  | 233.9  | 233.6  | 233.3  | 237.2  | 241.2  | 245.5  | 249.8  |
| 60°    | 243.0  | 232.1  | 221.1  | 216.8  | 212.5  | 213.1  | 213.7  | 218.3  | 222.9  | 226.3  | 229.6  |
| 62.5°  | 217.4  | 208.2  | 199.1  | 195.1  | 191.1  | 192.7  | 194.2  | 198.8  | 203.4  | 207.3  | 211.3  |
| 65°    | 191.7  | 184.1  | 176.5  | 173.7  | 171.0  | 173.1  | 175.3  | 179.2  | 183.2  | 185.9  | 188.7  |
| 67.5°  | 167.3  | 160.9  | 154.5  | 152.4  | 150.2  | 152.4  | 154.5  | 158.5  | 162.4  | 165.2  | 167.9  |
| 70°    | 141.7  | 136.5  | 131.3  | 129.8  | 128.2  | 130.7  | 133.1  | 136.5  | 139.8  | 142.6  | 145.3  |
| 72.5°  | 117.9  | 113.9  | 109.9  | 109.6  | 109.3  | 111.4  | 113.6  | 116.9  | 120.3  | 122.1  | 124.0  |
| 75°    | 94.7   | 92.5   | 90.4   | 90.1   | 89.8   | 91.9   | 94.0   | 95.9   | 97.7   | 99.2   | 100.8  |
| 77.5°  | 73.9   | 72.1   | 70.2   | 70.5   | 70.8   | 72.4   | 73.9   | 75.7   | 77.6   | 78.5   | 79.4   |
| 80°    | 52.5   | 51.9   | 51.3   | 51.9   | 52.5   | 53.7   | 55.0   | 56.2   | 57.4   | 58.0   | 58.6   |
| 82.5°  | 36.0   | 35.4   | 34.8   | 35.7   | 36.6   | 37.6   | 38.5   | 39.4   | 40.3   | 40.6   | 40.9   |
| 85°    | 20.8   | 21.7   | 22.6   | 22.6   | 22.6   | 22.9   | 23.2   | 23.5   | 23.8   | 23.5   | 23.2   |
| 87.5°  | 9.8    | 10.1   | 10.4   | 10.4   | 10.4   | 10.7   | 11.0   | 11.0   | 11.0   | 10.7   | 10.4   |
| 90°    | 4.6    | 5.8    | 7.1    | 8.5    | 9.8    | 11.2   | 11.6   | 12.0   | 12.4   | 12.8   | 13.1   |
| 92.5°  | 16.4   | 17.1   | 17.7   | 18.3   | 18.9   | 19.5   | 19.8   | 20.2   | 20.5   | 20.8   | 20.8   |
| 95°    | 30.3   | 31.1   | 31.9   | 32.8   | 33.6   | 34.4   | 34.8   | 35.2   | 35.7   | 36.1   | 36.3   |
| 97.5°  | 47.2   | 47.7   | 48.4   | 49.0   | 49.6   | 50.2   | 50.7   | 51.3   | 51.8   | 52.3   | 52.5   |
| 100°   | 65.7   | 66.3   | 66.8   | 67.3   | 67.8   | 68.4   | 68.7   | 69.0   | 69.3   | 69.6   | 69.9   |
| 102.5° | 85.4   | 85.9   | 86.7   | 87.4   | 88.1   | 88.8   | 89.1   | 89.4   | 89.8   | 90.1   | 90.2   |
| 105°   | 105.5  | 106.0  | 107.0  | 107.9  | 108.8  | 109.7  | 109.7  | 109.7  | 109.7  | 109.7  | 109.9  |
| 107.5° | 129.2  | 129.5  | 129.9  | 130.3  | 130.7  | 131.1  | 131.5  | 131.8  | 132.1  | 132.4  | 132.5  |
| 110°   | 152.0  | 152.2  | 152.4  | 152.6  | 152.8  | 153.0  | 153.4  | 153.8  | 154.2  | 154.7  | 154.8  |



TEST NUMBER: P831547

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**CANDELA DISTRIBUTION (continued):**

|        | 110°  | 115°  | 120°  | 125°  | 130°  | 135°  | 140°  | 145°  | 150°  | 155°  | 160°  |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 112.5° | 174.8 | 174.9 | 174.9 | 174.9 | 174.9 | 174.9 | 175.4 | 175.9 | 176.4 | 176.9 | 177.2 |
| 115°   | 198.9 | 198.9 | 198.7 | 198.5 | 198.3 | 198.1 | 198.2 | 198.3 | 198.4 | 198.5 | 198.5 |
| 117.5° | 221.8 | 221.7 | 221.5 | 221.3 | 221.1 | 220.9 | 220.9 | 220.9 | 220.9 | 220.9 | 220.7 |
| 120°   | 245.7 | 245.7 | 245.2 | 244.7 | 244.2 | 243.7 | 243.6 | 243.5 | 243.4 | 243.3 | 243.1 |
| 122.5° | 267.7 | 267.8 | 267.6 | 267.3 | 267.1 | 266.9 | 266.6 | 266.3 | 266.0 | 265.7 | 265.4 |
| 125°   | 290.5 | 290.5 | 290.3 | 290.1 | 289.9 | 289.7 | 289.3 | 288.9 | 288.5 | 288.1 | 287.7 |
| 127.5° | 313.1 | 313.3 | 313.1 | 312.9 | 312.7 | 312.5 | 311.9 | 311.3 | 310.6 | 310.0 | 309.5 |
| 130°   | 335.3 | 335.6 | 335.3 | 335.0 | 334.7 | 334.4 | 333.9 | 333.5 | 333.1 | 332.7 | 332.1 |
| 132.5° | 356.7 | 357.0 | 356.8 | 356.6 | 356.4 | 356.2 | 355.7 | 355.2 | 354.7 | 354.2 | 353.6 |
| 135°   | 377.8 | 378.0 | 377.9 | 377.8 | 377.7 | 377.6 | 377.2 | 376.8 | 376.4 | 376.0 | 375.6 |
| 137.5° | 397.3 | 397.8 | 398.1 | 398.4 | 398.7 | 399.0 | 398.5 | 398.0 | 397.5 | 396.9 | 396.5 |
| 140°   | 418.3 | 418.6 | 418.7 | 418.8 | 418.9 | 419.0 | 418.9 | 418.8 | 418.7 | 418.6 | 418.2 |
| 142.5° | 437.3 | 437.7 | 437.9 | 438.1 | 438.3 | 438.5 | 438.4 | 438.3 | 438.2 | 438.1 | 437.8 |
| 145°   | 456.1 | 456.4 | 456.7 | 457.0 | 457.3 | 457.6 | 457.5 | 457.4 | 457.3 | 457.2 | 456.9 |
| 147.5° | 474.1 | 474.5 | 474.8 | 475.1 | 475.4 | 475.7 | 475.7 | 475.7 | 475.7 | 475.7 | 475.4 |
| 150°   | 491.4 | 491.6 | 491.9 | 492.1 | 492.3 | 492.5 | 492.5 | 492.5 | 492.5 | 492.5 | 492.2 |
| 152.5° | 506.7 | 506.9 | 507.0 | 507.2 | 507.3 | 507.4 | 507.6 | 507.8 | 508.0 | 508.2 | 508.0 |
| 155°   | 521.3 | 521.4 | 521.5 | 521.6 | 521.7 | 521.8 | 522.2 | 522.6 | 523.0 | 523.4 | 523.3 |
| 157.5° | 534.4 | 534.4 | 534.5 | 534.6 | 534.7 | 534.8 | 535.2 | 535.6 | 536.0 | 536.4 | 536.3 |
| 160°   | 546.5 | 546.4 | 546.4 | 546.4 | 546.4 | 546.4 | 546.9 | 547.5 | 548.0 | 548.5 | 548.5 |
| 162.5° | 557.3 | 557.2 | 557.3 | 557.4 | 557.5 | 557.6 | 558.1 | 558.6 | 559.1 | 559.6 | 559.5 |
| 165°   | 566.6 | 566.4 | 566.4 | 566.4 | 566.4 | 566.4 | 567.0 | 567.7 | 568.3 | 568.9 | 568.8 |
| 167.5° | 574.1 | 573.9 | 574.0 | 574.1 | 574.2 | 574.3 | 574.9 | 575.6 | 576.2 | 576.8 | 576.8 |
| 170°   | 580.6 | 580.4 | 580.4 | 580.4 | 580.4 | 580.4 | 581.1 | 581.8 | 582.5 | 583.3 | 583.3 |
| 172.5° | 585.7 | 585.5 | 585.5 | 585.5 | 585.5 | 585.5 | 586.1 | 586.7 | 587.3 | 588.0 | 587.9 |
| 175°   | 588.9 | 588.7 | 588.7 | 588.7 | 588.7 | 588.7 | 589.4 | 590.0 | 590.6 | 591.2 | 591.2 |
| 177.5° | 590.8 | 590.6 | 590.6 | 590.6 | 590.6 | 590.6 | 591.2 | 591.8 | 592.5 | 593.1 | 593.0 |
| 180°   | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 | 592.0 |



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**CANDELA DISTRIBUTION (continued):**

|        | 165°   | 170°   | 175°   | 180°   |
|--------|--------|--------|--------|--------|
| 0°     | 1316.0 | 1316.0 | 1316.0 | 1316.0 |
| 2.5°   | 1169.7 | 1167.6 | 1159.0 | 1150.5 |
| 5°     | 991.7  | 984.4  | 982.0  | 979.5  |
| 7.5°   | 866.5  | 865.9  | 853.1  | 840.3  |
| 10°    | 756.3  | 757.2  | 745.6  | 734.0  |
| 12.5°  | 677.5  | 669.9  | 669.0  | 668.1  |
| 15°    | 618.3  | 611.3  | 610.1  | 608.8  |
| 17.5°  | 576.5  | 572.2  | 571.0  | 569.8  |
| 20°    | 544.7  | 542.3  | 540.1  | 538.0  |
| 22.5°  | 517.2  | 514.2  | 512.4  | 510.5  |
| 25°    | 490.7  | 487.9  | 487.3  | 486.7  |
| 27.5°  | 466.9  | 463.5  | 463.5  | 463.5  |
| 30°    | 444.3  | 442.1  | 441.2  | 440.3  |
| 32.5°  | 423.2  | 421.4  | 421.4  | 421.4  |
| 35°    | 403.3  | 402.4  | 401.2  | 400.0  |
| 37.5°  | 385.3  | 385.3  | 384.7  | 384.1  |
| 40°    | 367.9  | 368.8  | 368.8  | 368.8  |
| 42.5°  | 352.1  | 353.0  | 353.0  | 353.0  |
| 45°    | 335.6  | 337.1  | 337.7  | 338.3  |
| 47.5°  | 319.4  | 321.8  | 322.4  | 323.0  |
| 50°    | 303.5  | 305.3  | 305.6  | 305.9  |
| 52.5°  | 287.3  | 289.5  | 291.0  | 292.5  |
| 55°    | 270.2  | 272.4  | 273.3  | 274.2  |
| 57.5°  | 251.9  | 254.0  | 254.3  | 254.6  |
| 60°    | 231.7  | 233.9  | 234.5  | 235.1  |
| 62.5°  | 212.5  | 213.7  | 214.3  | 215.0  |
| 65°    | 190.5  | 192.4  | 193.6  | 194.8  |
| 67.5°  | 169.5  | 171.0  | 171.0  | 171.0  |
| 70°    | 145.9  | 146.6  | 147.5  | 148.4  |
| 72.5°  | 124.3  | 124.6  | 124.6  | 124.6  |
| 75°    | 101.4  | 102.0  | 102.3  | 102.6  |
| 77.5°  | 79.7   | 80.0   | 80.0   | 80.0   |
| 80°    | 58.3   | 58.0   | 58.0   | 58.0   |
| 82.5°  | 40.0   | 39.1   | 39.1   | 39.1   |
| 85°    | 22.9   | 22.6   | 22.9   | 23.2   |
| 87.5°  | 10.4   | 10.4   | 10.4   | 10.4   |
| 90°    | 13.3   | 13.5   | 13.7   | 14.0   |
| 92.5°  | 20.6   | 20.4   | 20.2   | 20.0   |
| 95°    | 36.3   | 36.3   | 36.3   | 36.3   |
| 97.5°  | 52.4   | 52.3   | 52.2   | 52.1   |
| 100°   | 70.1   | 70.3   | 70.5   | 70.7   |
| 102.5° | 90.1   | 90.0   | 89.9   | 89.8   |
| 105°   | 110.1  | 110.3  | 110.5  | 110.7  |
| 107.5° | 132.4  | 132.3  | 132.2  | 132.1  |
| 110°   | 154.5  | 154.3  | 154.1  | 153.9  |



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**CANDELA DISTRIBUTION (continued):**

|        | 165°  | 170°  | 175°  | 180°  |
|--------|-------|-------|-------|-------|
| 112.5° | 177.2 | 177.2 | 177.2 | 177.2 |
| 115°   | 198.4 | 198.3 | 198.2 | 198.1 |
| 117.5° | 220.4 | 220.1 | 219.8 | 219.5 |
| 120°   | 242.9 | 242.7 | 242.5 | 242.3 |
| 122.5° | 265.1 | 264.8 | 264.5 | 264.1 |
| 125°   | 287.2 | 286.8 | 286.4 | 286.0 |
| 127.5° | 309.1 | 308.7 | 308.3 | 307.9 |
| 130°   | 331.4 | 330.7 | 330.0 | 329.2 |
| 132.5° | 353.1 | 352.6 | 352.1 | 351.6 |
| 135°   | 375.4 | 375.2 | 375.0 | 374.8 |
| 137.5° | 396.2 | 395.9 | 395.6 | 395.3 |
| 140°   | 417.4 | 416.7 | 416.0 | 415.3 |
| 142.5° | 437.3 | 436.8 | 436.3 | 435.7 |
| 145°   | 456.5 | 456.1 | 455.7 | 455.3 |
| 147.5° | 474.8 | 474.2 | 473.6 | 472.9 |
| 150°   | 491.5 | 490.9 | 490.3 | 489.7 |
| 152.5° | 507.5 | 507.0 | 506.5 | 506.0 |
| 155°   | 522.5 | 521.8 | 521.1 | 520.4 |
| 157.5° | 535.7 | 535.1 | 534.5 | 533.9 |
| 160°   | 548.1 | 547.7 | 547.3 | 546.9 |
| 162.5° | 558.8 | 558.1 | 557.4 | 556.7 |
| 165°   | 568.1 | 567.4 | 566.7 | 566.0 |
| 167.5° | 576.2 | 575.6 | 574.9 | 574.3 |
| 170°   | 582.5 | 581.8 | 581.1 | 580.4 |
| 172.5° | 587.2 | 586.5 | 585.7 | 585.0 |
| 175°   | 590.4 | 589.7 | 589.0 | 588.3 |
| 177.5° | 592.3 | 591.6 | 590.9 | 590.1 |
| 180°   | 592.0 | 592.0 | 592.0 | 592.0 |



TEST NUMBER: P831547

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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 | 13.35            | 14.23 | 14.26 | 15.15 | 16.33 | 15.59          | 16.47 | 16.50 | 17.39 | 18.57 |
|                 | 3H   | 15.00            | 15.79 | 15.92 | 16.72 | 17.92 | 17.01          | 17.80 | 17.93 | 18.73 | 19.94 |
|                 | 4H   | 15.58            | 16.32 | 16.51 | 17.26 | 18.47 | 17.46          | 18.21 | 18.40 | 19.14 | 20.36 |
|                 | 6H   | 15.95            | 16.63 | 16.90 | 17.58 | 18.80 | 17.74          | 18.43 | 18.69 | 19.37 | 20.60 |
|                 | 8H   | 16.05            | 16.70 | 17.00 | 17.66 | 18.88 | 17.80          | 18.46 | 18.76 | 19.42 | 20.64 |
|                 | 12H  | 16.09            | 16.71 | 17.05 | 17.67 | 18.92 | 17.82          | 18.44 | 18.78 | 19.40 | 20.65 |
| 4H              | 2H   | 13.93            | 14.67 | 14.87 | 15.61 | 16.82 | 15.75          | 16.50 | 16.69 | 17.43 | 18.65 |
|                 | 3H   | 15.76            | 16.38 | 16.71 | 17.35 | 18.57 | 17.37          | 17.99 | 18.32 | 18.96 | 20.19 |
|                 | 4H   | 16.46            | 17.02 | 17.42 | 17.98 | 19.24 | 17.96          | 18.52 | 18.92 | 19.48 | 20.74 |
|                 | 6H   | 16.93            | 17.42 | 17.91 | 18.40 | 19.66 | 18.36          | 18.85 | 19.34 | 19.83 | 21.09 |
|                 | 8H   | 17.07            | 17.52 | 18.05 | 18.50 | 19.77 | 18.48          | 18.93 | 19.45 | 19.91 | 21.17 |
|                 | 12H  | 17.14            | 17.55 | 18.13 | 18.54 | 19.81 | 18.52          | 18.93 | 19.51 | 19.93 | 21.20 |
| 8H              | 4H   | 16.72            | 17.18 | 17.70 | 18.16 | 19.42 | 18.07          | 18.52 | 19.04 | 19.50 | 20.76 |
|                 | 6H   | 17.31            | 17.69 | 18.31 | 18.71 | 19.97 | 18.57          | 18.94 | 19.57 | 19.96 | 21.23 |
|                 | 8H   | 17.52            | 17.85 | 18.53 | 18.86 | 20.14 | 18.75          | 19.08 | 19.76 | 20.09 | 21.37 |
|                 | 12H  | 17.65            | 17.94 | 18.66 | 18.94 | 20.27 | 18.85          | 19.14 | 19.86 | 20.14 | 21.47 |
| 12H             | 4H   | 16.73            | 17.14 | 17.72 | 18.13 | 19.40 | 18.04          | 18.45 | 19.03 | 19.44 | 20.72 |
|                 | 6H   | 17.36            | 17.70 | 18.37 | 18.70 | 19.99 | 18.58          | 18.91 | 19.59 | 19.92 | 21.20 |
|                 | 8H   | 17.60            | 17.89 | 18.61 | 18.89 | 20.22 | 18.78          | 19.07 | 19.79 | 20.08 | 21.41 |