

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P332972-840

Luminaire Tested: **SA4XXRDIP-C1020D810U840-4F0-1E-UDD-F4**

Issue Date: 10/7/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P332972-840  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-18,  
Test Lab: INNOVATION CENTER  
Issue Date: 10/7/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: SA4XXRDIP-C1020D810U840-4F0-1E-UDD-F4  
Description: DEFINE 4 DIRECT-INDIRECT PENDANT LED LUMINAIRE  
DOWNLIGHT 1020 LUMENS PER FOOT, FLUSH SATIN WHITE DIFFUSER, REGRESSED  
HOUSING  
UPLIGHT 810 LUMENS PER FOOT, BATWING OPTIC  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7138.4 lumens  
Efficiency: N/A  
Efficacy: 131.2 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.09 / 1.24  
Luminous Opening: Rectangular (W 0.33' x L: 4' x H: 0')  
CIE Type: General Diffuse

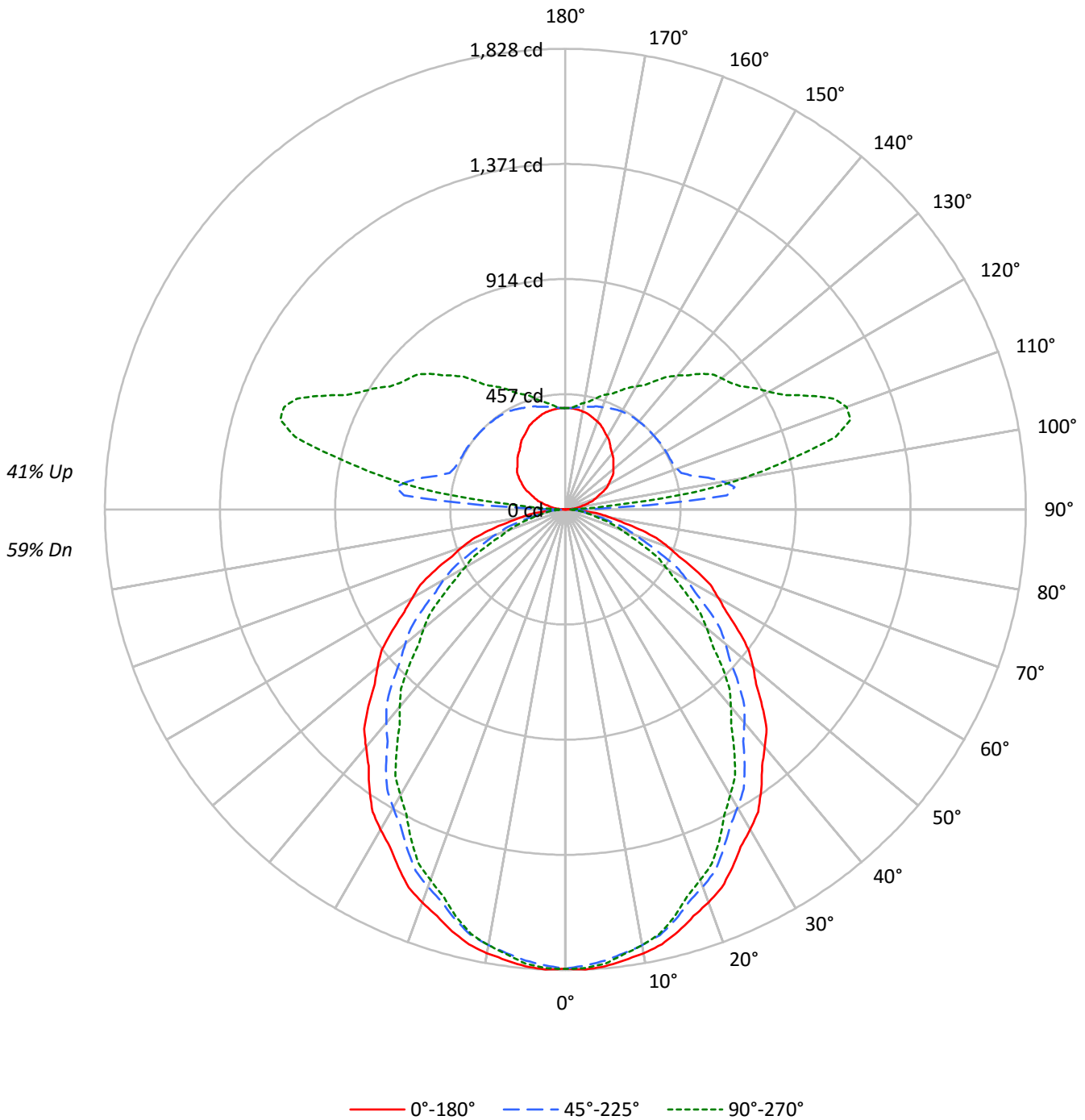
Input Watts (W): 54.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P332972-840

CATALOG NUMBER: SA4XXRDIP-C1020D810U840-4F0-1E-UDD-F4

### Luminous Intensity Polar Plot





TEST NUMBER: P332972-840

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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   | 109 | 109 | 109 | 109 | 102 | 102 | 102 | 102 | 88 | 88 | 88 | 76 | 76 | 76 | 64 | 64 | 64 | 59 |    |    |    |   |
| 1   | 100 | 96  | 92  | 89  | 93  | 90  | 86  | 83  | 78 | 76 | 73 | 67 | 66 | 64 | 57 | 56 | 55 | 50 |    |    |    |   |
| 2   | 91  | 84  | 78  | 73  | 85  | 79  | 73  | 69  | 69 | 65 | 61 | 60 | 57 | 54 | 51 | 49 | 47 | 43 |    |    |    |   |
| 3   | 84  | 74  | 67  | 61  | 78  | 70  | 63  | 58  | 61 | 56 | 52 | 53 | 49 | 46 | 45 | 43 | 40 | 37 |    |    |    |   |
| 4   | 77  | 66  | 58  | 52  | 71  | 62  | 55  | 49  | 54 | 49 | 44 | 47 | 43 | 40 | 41 | 38 | 35 | 32 |    |    |    |   |
| 5   | 71  | 59  | 51  | 45  | 66  | 55  | 48  | 43  | 49 | 43 | 39 | 43 | 38 | 35 | 37 | 33 | 31 | 28 |    |    |    |   |
| 6   | 65  | 53  | 45  | 39  | 61  | 50  | 43  | 37  | 44 | 38 | 34 | 39 | 34 | 30 | 34 | 30 | 27 | 24 |    |    |    |   |
| 7   | 60  | 48  | 40  | 34  | 56  | 45  | 38  | 33  | 40 | 34 | 30 | 35 | 31 | 27 | 31 | 27 | 24 | 22 |    |    |    |   |
| 8   | 56  | 44  | 36  | 31  | 52  | 41  | 34  | 29  | 37 | 31 | 27 | 32 | 28 | 24 | 28 | 25 | 22 | 19 |    |    |    |   |
| 9   | 52  | 40  | 32  | 27  | 49  | 38  | 31  | 26  | 34 | 28 | 24 | 30 | 25 | 22 | 26 | 22 | 20 | 18 |    |    |    |   |
| 10  | 49  | 37  | 30  | 25  | 46  | 35  | 28  | 24  | 31 | 26 | 22 | 28 | 23 | 20 | 24 | 21 | 18 | 16 |    |    |    |   |

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

|     | 0°    | 45°   | 90°   |
|-----|-------|-------|-------|
| 0°  | 14721 | 14721 | 14721 |
| 5°  | 14755 | 14574 | 14665 |
| 10° | 14662 | 14399 | 14399 |
| 15° | 14493 | 14097 | 13992 |
| 20° | 14262 | 13698 | 13447 |
| 25° | 13967 | 13233 | 12897 |
| 30° | 13679 | 12743 | 12209 |
| 35° | 13361 | 12232 | 11517 |
| 40° | 12978 | 11653 | 10771 |
| 45° | 12625 | 11079 | 10011 |
| 50° | 12223 | 10417 | 9207  |
| 55° | 11792 | 9728  | 8332  |
| 60° | 11317 | 8972  | 7440  |
| 65° | 10883 | 8029  | 6562  |
| 70° | 10249 | 6987  | 5570  |
| 75° | 9451  | 5792  | 4529  |
| 80° | 8243  | 4412  | 4156  |
| 85° | 6984  | 4011  | 3751  |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 171.3  | 2.4       |
| 10°-20°   | 477.7  | 6.7       |
| 20°-30°   | 689.8  | 9.7       |
| 30°-40°   | 781.8  | 11.0      |
| 40°-50°   | 755.0  | 10.6      |
| 50°-60°   | 627.8  | 8.8       |
| 60°-70°   | 433.5  | 6.1       |
| 70°-80°   | 219.7  | 3.1       |
| 80°-90°   | 58.6   | 0.8       |
| 90°-100°  | 290.3  | 4.1       |
| 100°-110° | 604.2  | 8.5       |
| 110°-120° | 541.2  | 7.6       |
| 120°-130° | 455.2  | 6.4       |
| 130°-140° | 379.6  | 5.3       |
| 140°-150° | 290.0  | 4.1       |
| 150°-160° | 203.8  | 2.9       |
| 160°-170° | 119.9  | 1.7       |
| 170°-180° | 39.0   | 0.5       |
| 0°-30°    | 1338.7 | 18.8      |
| 0°-40°    | 2120.6 | 29.7      |
| 0°-60°    | 3503.4 | 49.1      |
| 0°-90°    | 4215.2 | 59.1      |
| 90°-120°  | 1435.7 | 20.1      |
| 90°-150°  | 2560.4 | 35.9      |
| 90°-180°  | 2923.0 | 40.9      |
| 0°-180°   | 7138.4 | 100.0     |

**CANDELA DISTRIBUTION:**

|      | 0°   | 22.5° | 45°  | 67.5° | 90°  | Flux |
|------|------|-------|------|-------|------|------|
| 0°   | 1824 | 1824  | 1824 | 1824  | 1824 |      |
| 5°   | 1821 | 1814  | 1798 | 1811  | 1810 | 173  |
| 15°  | 1734 | 1720  | 1687 | 1683  | 1674 | 488  |
| 25°  | 1568 | 1541  | 1486 | 1462  | 1448 | 722  |
| 35°  | 1356 | 1310  | 1241 | 1195  | 1169 | 847  |
| 45°  | 1106 | 1052  | 970  | 904   | 877  | 852  |
| 55°  | 838  | 780   | 691  | 621   | 592  | 749  |
| 65°  | 570  | 508   | 420  | 363   | 344  | 562  |
| 75°  | 303  | 251   | 186  | 155   | 145  | 320  |
| 85°  | 75   | 49    | 43   | 41    | 40   | 85   |
| 90°  | 1    | 6     | 14   | 16    | 17   | 5    |
| 95°  | 26   | 82    | 644  | 319   | 193  | 29   |
| 105° | 92   | 134   | 518  | 1115  | 1111 | 99   |
| 115° | 163  | 204   | 462  | 888   | 1067 | 161  |
| 125° | 227  | 269   | 460  | 755   | 851  | 202  |
| 135° | 269  | 321   | 456  | 670   | 761  | 208  |
| 145° | 310  | 355   | 453  | 565   | 622  | 195  |
| 155° | 353  | 381   | 441  | 499   | 520  | 163  |
| 165° | 385  | 396   | 422  | 447   | 454  | 109  |
| 175° | 401  | 402   | 405  | 411   | 409  | 38   |
| 180° | 402  | 402   | 402  | 402   | 402  |      |



TEST NUMBER: P332972-840

CATALOG NUMBER: SA4XXRDIP-C1020D810U840-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (FULL):**

|        | 0°     | 5°     | 10°    | 15°    | 20°    | 25°    | 30°    | 35°    | 40°    | 45°    | 50°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 1823.5 | 1823.5 | 1823.5 | 1823.5 | 1823.5 | 1823.5 | 1823.5 | 1823.5 | 1823.5 | 1823.5 | 1823.5 |
| 2.5°   | 1828.0 | 1826.9 | 1825.9 | 1825.0 | 1824.0 | 1822.1 | 1819.4 | 1816.6 | 1813.9 | 1811.2 | 1813.9 |
| 5°     | 1820.7 | 1819.5 | 1818.3 | 1816.9 | 1815.7 | 1813.2 | 1809.6 | 1805.8 | 1802.1 | 1798.4 | 1801.5 |
| 7.5°   | 1804.2 | 1802.9 | 1801.6 | 1800.3 | 1799.0 | 1795.9 | 1791.1 | 1786.2 | 1781.4 | 1776.6 | 1778.6 |
| 10°    | 1788.6 | 1787.1 | 1785.4 | 1783.9 | 1782.4 | 1778.8 | 1773.2 | 1767.7 | 1762.0 | 1756.5 | 1757.7 |
| 12.5°  | 1768.5 | 1766.7 | 1764.8 | 1763.1 | 1761.3 | 1757.1 | 1750.5 | 1743.9 | 1737.4 | 1730.8 | 1731.5 |
| 15°    | 1734.1 | 1731.3 | 1728.6 | 1725.8 | 1722.9 | 1717.7 | 1709.9 | 1702.1 | 1694.5 | 1686.7 | 1686.1 |
| 17.5°  | 1692.5 | 1688.5 | 1684.5 | 1680.4 | 1676.4 | 1669.7 | 1660.4 | 1651.1 | 1641.8 | 1632.4 | 1630.7 |
| 20°    | 1660.1 | 1656.1 | 1652.0 | 1648.0 | 1644.0 | 1636.7 | 1626.2 | 1615.6 | 1605.1 | 1594.5 | 1592.1 |
| 22.5°  | 1624.4 | 1619.8 | 1615.3 | 1610.8 | 1606.3 | 1598.3 | 1587.1 | 1575.8 | 1564.5 | 1553.2 | 1549.4 |
| 25°    | 1568.0 | 1562.4 | 1556.8 | 1551.3 | 1545.6 | 1536.5 | 1523.8 | 1511.1 | 1498.3 | 1485.6 | 1480.4 |
| 27.5°  | 1508.7 | 1501.8 | 1494.8 | 1487.7 | 1480.8 | 1470.5 | 1456.8 | 1443.3 | 1429.7 | 1416.0 | 1409.6 |
| 30°    | 1467.4 | 1459.7 | 1452.0 | 1444.2 | 1436.4 | 1425.2 | 1410.7 | 1396.0 | 1381.5 | 1367.0 | 1359.2 |
| 32.5°  | 1423.9 | 1415.1 | 1406.3 | 1397.7 | 1388.9 | 1377.0 | 1361.9 | 1346.9 | 1331.7 | 1316.7 | 1307.7 |
| 35°    | 1355.7 | 1345.8 | 1335.8 | 1326.0 | 1316.1 | 1303.3 | 1287.8 | 1272.3 | 1256.8 | 1241.2 | 1230.7 |
| 37.5°  | 1282.8 | 1272.6 | 1262.4 | 1252.1 | 1241.9 | 1228.2 | 1211.0 | 1193.9 | 1176.6 | 1159.4 | 1147.6 |
| 40°    | 1231.5 | 1221.2 | 1211.0 | 1200.7 | 1190.5 | 1176.6 | 1158.9 | 1141.1 | 1123.5 | 1105.8 | 1092.8 |
| 42.5°  | 1182.3 | 1171.6 | 1160.8 | 1150.1 | 1139.4 | 1124.8 | 1106.4 | 1087.9 | 1069.5 | 1051.1 | 1037.8 |
| 45°    | 1105.8 | 1094.4 | 1082.9 | 1071.4 | 1059.9 | 1044.8 | 1026.2 | 1007.6 | 989.0  | 970.4  | 955.2  |
| 47.5°  | 1026.8 | 1014.9 | 1003.1 | 991.3  | 979.4  | 963.8  | 944.4  | 925.0  | 905.6  | 886.4  | 870.6  |
| 50°    | 973.2  | 961.1  | 949.0  | 936.9  | 924.7  | 908.8  | 889.0  | 869.1  | 849.2  | 829.4  | 813.9  |
| 52.5°  | 918.5  | 906.6  | 894.7  | 882.9  | 871.0  | 855.0  | 834.6  | 814.3  | 793.9  | 773.6  | 757.8  |
| 55°    | 837.8  | 825.4  | 812.9  | 800.5  | 788.1  | 771.8  | 751.6  | 731.4  | 711.3  | 691.2  | 675.0  |
| 57.5°  | 757.9  | 745.0  | 732.1  | 719.1  | 706.3  | 689.8  | 670.0  | 650.2  | 630.3  | 610.5  | 594.1  |
| 60°    | 700.9  | 688.5  | 676.1  | 663.7  | 651.3  | 635.1  | 615.3  | 595.4  | 575.5  | 555.7  | 539.6  |
| 62.5°  | 649.5  | 636.6  | 623.7  | 610.8  | 597.9  | 581.3  | 560.9  | 540.6  | 520.2  | 499.9  | 484.9  |
| 65°    | 569.7  | 556.3  | 543.0  | 529.7  | 516.3  | 499.7  | 479.9  | 460.0  | 440.1  | 420.3  | 407.0  |
| 67.5°  | 486.8  | 473.9  | 461.2  | 448.4  | 435.6  | 420.0  | 401.5  | 383.1  | 364.7  | 346.3  | 334.8  |
| 70°    | 434.2  | 421.2  | 408.2  | 395.2  | 382.1  | 366.8  | 349.1  | 331.3  | 313.7  | 296.0  | 285.8  |
| 72.5°  | 378.4  | 366.6  | 354.8  | 343.1  | 331.2  | 317.0  | 300.3  | 283.6  | 266.9  | 250.2  | 241.5  |
| 75°    | 303.0  | 291.5  | 280.0  | 268.5  | 257.1  | 244.0  | 229.4  | 214.9  | 200.3  | 185.7  | 178.5  |
| 77.5°  | 226.5  | 216.7  | 207.0  | 197.2  | 187.5  | 176.7  | 164.9  | 153.2  | 141.4  | 129.6  | 125.4  |
| 80°    | 177.3  | 168.3  | 159.4  | 150.4  | 141.4  | 132.2  | 122.9  | 113.6  | 104.2  | 94.9   | 94.0   |
| 82.5°  | 134.9  | 126.6  | 118.4  | 110.1  | 101.9  | 95.0   | 89.8   | 84.4   | 79.1   | 73.7   | 73.0   |
| 85°    | 75.4   | 69.2   | 63.0   | 56.8   | 50.6   | 47.0   | 46.0   | 45.1   | 44.2   | 43.3   | 42.6   |
| 87.5°  | 25.9   | 24.1   | 22.6   | 20.8   | 19.0   | 17.9   | 18.6   | 18.4   | 18.4   | 18.5   | 18.1   |
| 90°    | 0.8    | 2.3    | 4.7    | 5.6    | 6.4    | 6.4    | 11.0   | 11.0   | 12.6   | 14.2   | 13.4   |
| 92.5°  | 9.0    | 13.1   | 20.5   | 30.2   | 41.7   | 58.1   | 98.3   | 159.5  | 219.2  | 250.4  | 208.6  |
| 95°    | 26.1   | 28.4   | 36.4   | 46.6   | 65.5   | 98.7   | 167.4  | 296.9  | 485.6  | 643.6  | 661.8  |
| 97.5°  | 46.8   | 46.8   | 53.5   | 63.0   | 79.3   | 107.0  | 160.0  | 266.9  | 454.5  | 677.8  | 831.3  |
| 100°   | 60.0   | 60.0   | 65.5   | 75.0   | 90.0   | 115.3  | 161.9  | 251.2  | 412.2  | 634.9  | 837.0  |
| 102.5° | 72.6   | 73.9   | 78.8   | 87.7   | 102.0  | 126.0  | 168.1  | 246.7  | 383.7  | 581.2  | 789.6  |
| 105°   | 92.4   | 94.7   | 98.7   | 108.2  | 122.4  | 145.3  | 183.2  | 248.7  | 359.3  | 518.0  | 703.6  |
| 107.5° | 114.2  | 115.7  | 119.7  | 129.8  | 143.4  | 166.0  | 200.8  | 260.4  | 354.9  | 482.6  | 634.1  |
| 110°   | 128.8  | 130.3  | 134.2  | 143.7  | 157.9  | 179.3  | 214.0  | 269.2  | 356.1  | 470.6  | 599.4  |



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**CANDELA DISTRIBUTION (continued):**

|        | 0°    | 5°    | 10°   | 15°   | 20°   | 25°   | 30°   | 35°   | 40°   | 45°   | 50°   |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 112.5° | 142.6 | 144.2 | 148.8 | 157.6 | 171.8 | 193.2 | 226.6 | 278.7 | 359.9 | 464.9 | 579.8 |
| 115°   | 162.7 | 165.0 | 170.6 | 178.4 | 193.5 | 214.8 | 246.4 | 293.8 | 367.2 | 461.9 | 561.4 |
| 117.5° | 183.5 | 185.7 | 190.7 | 199.3 | 213.4 | 235.5 | 265.5 | 309.0 | 375.0 | 461.1 | 553.2 |
| 120°   | 197.4 | 198.9 | 204.5 | 213.2 | 226.6 | 248.7 | 278.7 | 319.8 | 380.6 | 461.1 | 548.8 |
| 122.5° | 210.1 | 211.7 | 217.1 | 225.2 | 239.8 | 261.4 | 291.3 | 329.9 | 386.3 | 460.5 | 543.7 |
| 125°   | 226.6 | 229.7 | 234.5 | 243.2 | 258.2 | 280.3 | 308.7 | 345.1 | 394.9 | 459.6 | 535.3 |
| 127.5° | 241.4 | 243.9 | 249.5 | 259.4 | 275.1 | 297.4 | 324.9 | 358.2 | 401.6 | 457.9 | 524.1 |
| 130°   | 249.5 | 252.7 | 259.0 | 270.8 | 285.9 | 308.7 | 335.6 | 366.4 | 406.7 | 457.2 | 517.3 |
| 132.5° | 257.7 | 260.2 | 268.5 | 279.7 | 296.0 | 317.6 | 344.5 | 374.6 | 411.1 | 456.6 | 510.9 |
| 135°   | 269.2 | 272.5 | 280.3 | 293.8 | 310.3 | 330.8 | 356.9 | 385.4 | 417.7 | 455.7 | 501.4 |
| 137.5° | 280.8 | 283.8 | 292.5 | 305.3 | 322.4 | 342.0 | 366.4 | 392.9 | 421.6 | 455.4 | 493.2 |
| 140°   | 289.0 | 291.3 | 300.0 | 313.5 | 330.0 | 349.0 | 372.7 | 398.0 | 424.9 | 454.8 | 488.8 |
| 142.5° | 297.8 | 300.2 | 308.3 | 321.0 | 337.0 | 355.4 | 378.4 | 401.7 | 427.4 | 454.8 | 485.0 |
| 145°   | 310.3 | 312.7 | 320.6 | 331.6 | 346.7 | 364.1 | 384.6 | 405.9 | 428.8 | 453.2 | 478.5 |
| 147.5° | 324.4 | 325.2 | 332.1 | 343.5 | 356.0 | 371.6 | 390.9 | 409.5 | 429.6 | 450.4 | 472.7 |
| 150°   | 333.3 | 334.1 | 340.3 | 349.8 | 361.6 | 376.7 | 394.0 | 411.4 | 429.6 | 448.5 | 468.3 |
| 152.5° | 341.4 | 341.6 | 347.9 | 356.8 | 367.4 | 381.1 | 396.6 | 412.6 | 428.3 | 445.4 | 463.2 |
| 155°   | 352.9 | 353.8 | 358.5 | 366.4 | 375.1 | 386.9 | 400.3 | 413.7 | 426.4 | 440.6 | 455.7 |
| 157.5° | 364.2 | 364.2 | 368.6 | 374.8 | 382.3 | 391.6 | 403.0 | 413.7 | 424.3 | 435.8 | 447.9 |
| 160°   | 371.1 | 371.1 | 374.3 | 379.8 | 386.2 | 394.9 | 404.2 | 413.7 | 422.4 | 431.9 | 442.2 |
| 162.5° | 377.5 | 376.8 | 379.3 | 384.3 | 389.9 | 396.7 | 405.6 | 413.7 | 420.6 | 428.2 | 437.2 |
| 165°   | 384.6 | 384.6 | 386.2 | 390.1 | 394.0 | 398.8 | 405.9 | 412.2 | 417.0 | 422.4 | 428.8 |
| 167.5° | 391.6 | 390.9 | 391.6 | 394.7 | 396.9 | 400.5 | 405.8 | 410.3 | 413.1 | 416.8 | 421.2 |
| 170°   | 394.9 | 394.0 | 394.9 | 397.2 | 398.8 | 401.1 | 405.1 | 409.0 | 410.6 | 412.9 | 416.2 |
| 172.5° | 398.0 | 397.2 | 397.4 | 399.1 | 400.0 | 401.7 | 404.5 | 407.8 | 408.1 | 409.2 | 411.7 |
| 175°   | 401.1 | 400.3 | 400.3 | 401.1 | 401.9 | 401.9 | 403.5 | 405.9 | 405.1 | 405.1 | 406.7 |
| 177.5° | 402.5 | 401.9 | 401.3 | 401.9 | 401.9 | 401.9 | 402.5 | 403.8 | 402.5 | 402.5 | 403.1 |
| 180°   | 401.9 | 401.9 | 401.9 | 401.9 | 401.9 | 401.9 | 401.9 | 401.9 | 401.9 | 401.9 | 401.9 |



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**CANDELA DISTRIBUTION (continued):**

|        | 55°    | 60°    | 65°    | 70°    | 75°    | 80°    | 85°    | 90°    |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0°     | 1823.5 | 1823.5 | 1823.5 | 1823.5 | 1823.5 | 1823.5 | 1823.5 | 1823.5 |
| 2.5°   | 1816.6 | 1819.4 | 1822.1 | 1823.4 | 1823.1 | 1822.9 | 1822.6 | 1822.4 |
| 5°     | 1804.5 | 1807.7 | 1810.8 | 1812.0 | 1811.4 | 1810.8 | 1810.2 | 1809.6 |
| 7.5°   | 1780.6 | 1782.5 | 1784.5 | 1785.0 | 1784.0 | 1783.0 | 1782.0 | 1781.0 |
| 10°    | 1759.0 | 1760.2 | 1761.4 | 1761.4 | 1760.2 | 1759.0 | 1757.7 | 1756.5 |
| 12.5°  | 1732.2 | 1733.0 | 1733.7 | 1733.2 | 1731.5 | 1729.8 | 1728.1 | 1726.4 |
| 15°    | 1685.5 | 1684.8 | 1684.2 | 1682.7 | 1680.6 | 1678.4 | 1676.3 | 1674.1 |
| 17.5°  | 1629.0 | 1627.3 | 1625.6 | 1623.1 | 1619.7 | 1616.5 | 1613.2 | 1609.8 |
| 20°    | 1589.5 | 1587.1 | 1584.6 | 1581.3 | 1577.3 | 1573.3 | 1569.2 | 1565.2 |
| 22.5°  | 1545.7 | 1542.0 | 1538.3 | 1534.8 | 1531.5 | 1528.2 | 1524.9 | 1521.7 |
| 25°    | 1475.0 | 1469.8 | 1464.5 | 1460.3 | 1457.2 | 1454.1 | 1451.0 | 1447.9 |
| 27.5°  | 1403.0 | 1396.5 | 1390.0 | 1384.5 | 1380.1 | 1375.5 | 1371.1 | 1366.7 |
| 30°    | 1351.4 | 1343.6 | 1335.8 | 1329.5 | 1324.5 | 1319.6 | 1314.6 | 1309.7 |
| 32.5°  | 1298.7 | 1289.7 | 1280.7 | 1273.8 | 1269.1 | 1264.4 | 1259.7 | 1255.0 |
| 35°    | 1220.1 | 1209.6 | 1199.0 | 1191.0 | 1185.4 | 1179.8 | 1174.3 | 1168.6 |
| 37.5°  | 1135.9 | 1124.1 | 1112.3 | 1103.6 | 1098.0 | 1092.4 | 1086.8 | 1081.3 |
| 40°    | 1079.7 | 1066.7 | 1053.7 | 1044.4 | 1038.8 | 1033.2 | 1027.6 | 1022.1 |
| 42.5°  | 1024.5 | 1011.3 | 997.9  | 988.5  | 982.6  | 976.7  | 970.9  | 965.1  |
| 45°    | 940.0  | 924.7  | 909.6  | 899.2  | 893.6  | 888.0  | 882.4  | 876.9  |
| 47.5°  | 854.9  | 839.1  | 823.2  | 812.3  | 806.2  | 800.0  | 793.9  | 787.8  |
| 50°    | 798.3  | 782.8  | 767.3  | 756.6  | 750.7  | 744.8  | 738.9  | 733.1  |
| 52.5°  | 741.9  | 726.2  | 710.4  | 699.5  | 693.4  | 687.2  | 681.1  | 675.0  |
| 55°    | 658.8  | 642.8  | 626.6  | 615.6  | 609.7  | 603.8  | 597.9  | 592.0  |
| 57.5°  | 577.6  | 561.3  | 544.9  | 534.5  | 530.0  | 525.5  | 521.1  | 516.6  |
| 60°    | 523.4  | 507.3  | 491.2  | 480.6  | 475.6  | 470.7  | 465.7  | 460.8  |
| 62.5°  | 470.1  | 455.1  | 440.3  | 430.8  | 426.9  | 422.9  | 418.9  | 415.0  |
| 65°    | 393.5  | 380.2  | 366.9  | 358.4  | 354.7  | 350.9  | 347.2  | 343.5  |
| 67.5°  | 323.3  | 311.8  | 300.3  | 292.6  | 288.4  | 284.4  | 280.2  | 276.2  |
| 70°    | 275.5  | 265.3  | 255.1  | 248.3  | 245.3  | 242.2  | 239.0  | 236.0  |
| 72.5°  | 232.7  | 224.0  | 215.2  | 209.4  | 206.5  | 203.7  | 200.9  | 198.0  |
| 75°    | 171.5  | 164.3  | 157.1  | 152.7  | 150.8  | 149.0  | 147.0  | 145.2  |
| 77.5°  | 121.3  | 117.1  | 112.9  | 110.6  | 110.0  | 109.5  | 108.9  | 108.4  |
| 80°    | 93.1   | 92.2   | 91.2   | 90.6   | 90.3   | 90.0   | 89.7   | 89.4   |
| 82.5°  | 72.3   | 71.7   | 71.0   | 70.5   | 70.2   | 69.9   | 69.6   | 69.3   |
| 85°    | 42.0   | 41.4   | 40.8   | 40.5   | 40.5   | 40.5   | 40.5   | 40.5   |
| 87.5°  | 18.0   | 17.9   | 17.8   | 17.8   | 18.2   | 18.6   | 18.7   | 19.0   |
| 90°    | 14.2   | 15.0   | 15.8   | 15.8   | 16.6   | 17.4   | 16.6   | 16.6   |
| 92.5°  | 155.1  | 116.7  | 92.9   | 77.1   | 67.8   | 63.5   | 60.8   | 60.8   |
| 95°    | 585.1  | 462.7  | 356.9  | 280.3  | 241.7  | 217.1  | 203.0  | 192.7  |
| 97.5°  | 864.4  | 819.0  | 741.7  | 659.3  | 602.7  | 555.1  | 531.4  | 515.0  |
| 100°   | 952.3  | 968.1  | 929.4  | 871.0  | 802.2  | 754.1  | 730.4  | 724.1  |
| 102.5° | 947.9  | 1026.2 | 1037.4 | 1013.1 | 971.0  | 936.0  | 911.1  | 906.1  |
| 105°   | 884.4  | 1021.0 | 1099.1 | 1131.6 | 1133.2 | 1126.8 | 1115.8 | 1111.1 |
| 107.5° | 794.3  | 939.7  | 1049.8 | 1120.1 | 1159.2 | 1177.2 | 1185.1 | 1187.1 |
| 110°   | 739.9  | 876.5  | 991.0  | 1077.8 | 1133.9 | 1167.1 | 1181.3 | 1188.4 |





TEST NUMBER: P332972-840

CATALOG NUMBER: SA4XXRDIP-C1020D810U840-4F0-1E-UDD-F4

**CANDELA DISTRIBUTION (continued):**

|        | 55°   | 60°   | 65°   | 70°    | 75°    | 80°    | 85°    | 90°    |
|--------|-------|-------|-------|--------|--------|--------|--------|--------|
| 112.5° | 700.1 | 820.9 | 929.1 | 1015.9 | 1079.5 | 1119.7 | 1139.6 | 1151.1 |
| 115°   | 660.1 | 757.3 | 849.6 | 925.4  | 987.8  | 1035.2 | 1060.5 | 1066.8 |
| 117.5° | 640.6 | 720.9 | 793.6 | 857.9  | 911.1  | 950.9  | 976.4  | 981.4  |
| 120°   | 631.7 | 705.2 | 768.3 | 824.4  | 869.4  | 904.1  | 924.6  | 933.3  |
| 122.5° | 624.1 | 695.0 | 752.6 | 801.6  | 839.7  | 869.4  | 886.8  | 895.4  |
| 125°   | 611.2 | 679.1 | 733.6 | 777.0  | 808.6  | 831.5  | 846.5  | 851.2  |
| 127.5° | 595.4 | 660.2 | 714.6 | 755.9  | 787.6  | 808.0  | 820.6  | 825.4  |
| 130°   | 582.8 | 645.1 | 698.8 | 740.6  | 773.1  | 792.8  | 805.5  | 810.2  |
| 132.5° | 569.5 | 628.0 | 680.5 | 722.4  | 754.1  | 776.4  | 788.4  | 793.1  |
| 135°   | 551.2 | 602.5 | 650.7 | 690.1  | 721.8  | 743.9  | 756.5  | 761.2  |
| 137.5° | 534.6 | 578.0 | 618.6 | 654.3  | 683.8  | 705.6  | 716.0  | 721.8  |
| 140°   | 525.1 | 562.2 | 597.7 | 631.0  | 658.5  | 675.9  | 687.0  | 693.3  |
| 142.5° | 516.2 | 549.0 | 579.5 | 608.1  | 632.7  | 648.7  | 658.5  | 663.0  |
| 145°   | 503.8 | 530.7 | 554.3 | 576.4  | 596.2  | 609.6  | 617.5  | 621.5  |
| 147.5° | 493.5 | 514.8 | 533.8 | 551.2  | 565.7  | 577.2  | 583.2  | 584.6  |
| 150°   | 487.2 | 505.3 | 521.2 | 535.3  | 548.1  | 558.3  | 563.0  | 563.8  |
| 152.5° | 480.3 | 495.8 | 510.4 | 522.1  | 532.8  | 541.2  | 544.0  | 544.8  |
| 155°   | 469.8 | 482.5 | 494.3 | 503.8  | 511.7  | 518.0  | 520.4  | 520.4  |
| 157.5° | 458.6 | 469.2 | 479.2 | 486.8  | 492.7  | 497.5  | 498.9  | 498.9  |
| 160°   | 451.7 | 460.4 | 469.1 | 475.3  | 480.1  | 484.8  | 485.6  | 485.6  |
| 162.5° | 444.7 | 452.1 | 459.0 | 464.6  | 468.1  | 472.8  | 473.6  | 473.0  |
| 165°   | 435.0 | 439.8 | 445.4 | 449.3  | 452.4  | 455.7  | 454.8  | 454.0  |
| 167.5° | 425.8 | 429.4 | 433.8 | 436.2  | 437.8  | 439.8  | 439.7  | 439.0  |
| 170°   | 420.1 | 422.4 | 425.7 | 428.0  | 429.6  | 430.3  | 429.6  | 429.6  |
| 172.5° | 415.1 | 416.8 | 418.7 | 420.4  | 421.3  | 422.1  | 421.3  | 420.1  |
| 175°   | 408.3 | 409.0 | 410.6 | 410.6  | 410.6  | 412.2  | 410.6  | 409.0  |
| 177.5° | 403.8 | 404.5 | 404.5 | 405.1  | 404.5  | 405.1  | 403.8  | 402.5  |
| 180°   | 401.9 | 401.9 | 401.9 | 401.9  | 401.9  | 401.9  | 401.9  | 401.9  |

(END OF REPORT)