

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: P199473

Luminaire Tested: **S124-DIP-U1-2-35-X-X0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199473
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P28062 P28062)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S124-DIP-U1-2-35-X-X0048-1D-UDD-1-5-W
Description: DEFINE 4-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE
UPLIGHT LL1-3500K, SATIN WHITE DIFFUSER
DOWNLIGHT LL2-3500K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7041.0 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.14 / 1.28
Luminous Opening: Rectangular w/ Sides (W: 0.33' x L: 4.08' x H: 0.38')
CIE Type: General Diffuse

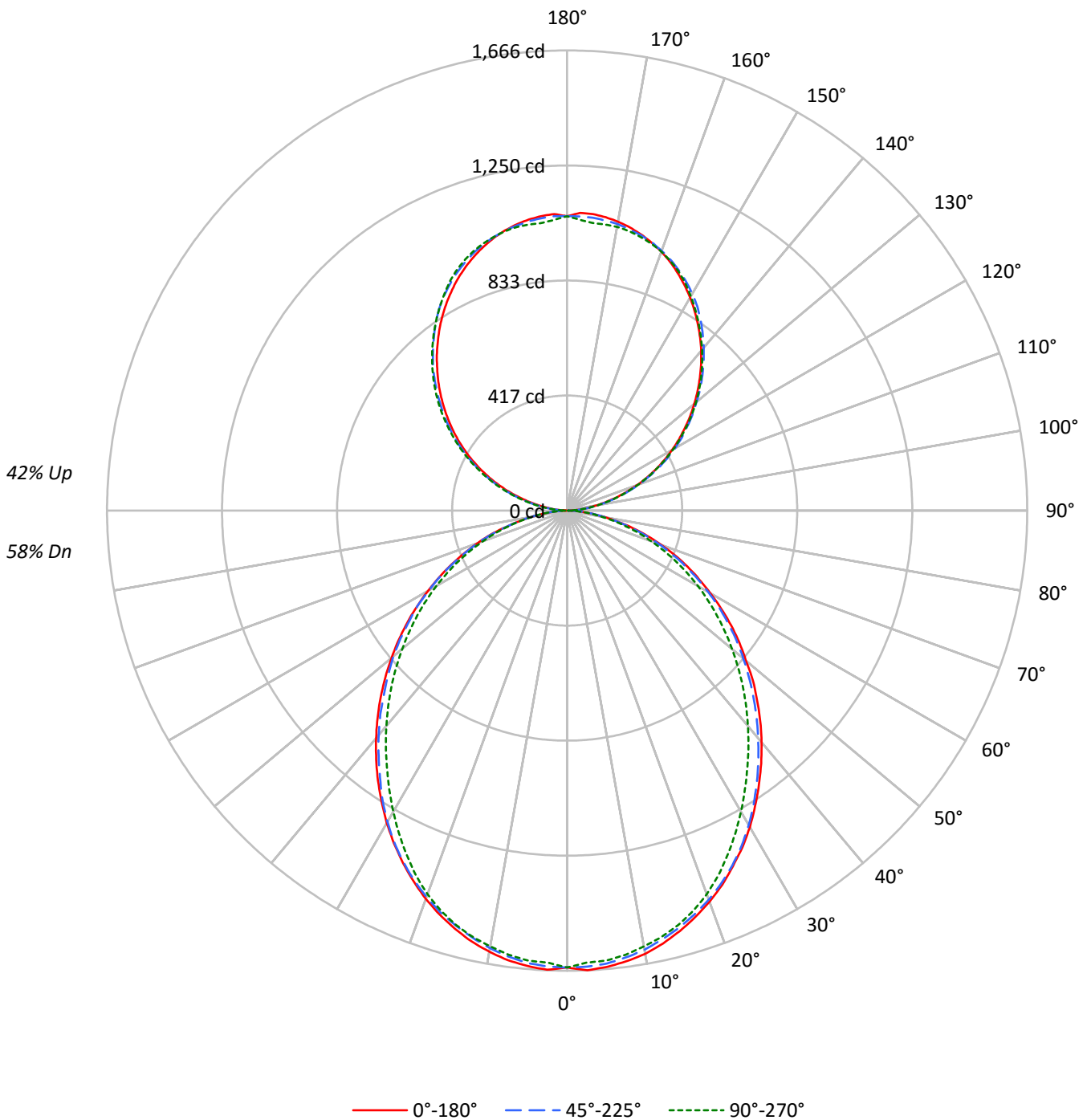
Input Watts (W): 67
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P199473

CATALOG NUMBER: S124-DIP-U1-2-35-X-X0048-1D-UDD-1-5-W

Luminous Intensity Polar Plot





TEST NUMBER: P199473

CATALOG NUMBER: S124-DIP-U1-2-35-X-X0048-1D-UDD-1-5-W

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 | 0 |
| RCR | | | | | | | | | | | | | | | | | | |
| 0 | 109 | 109 | 109 | 109 | 102 | 102 | 102 | 102 | 88 | 88 | 88 | 75 | 75 | 75 | 64 | 64 | 64 | 58 |
| 1 | 100 | 95 | 91 | 88 | 93 | 89 | 86 | 83 | 77 | 75 | 73 | 66 | 65 | 63 | 56 | 55 | 54 | 49 |
| 2 | 91 | 83 | 77 | 72 | 84 | 78 | 73 | 68 | 68 | 64 | 60 | 58 | 55 | 53 | 50 | 48 | 46 | 41 |
| 3 | 83 | 73 | 66 | 60 | 77 | 69 | 62 | 57 | 60 | 55 | 51 | 52 | 48 | 45 | 44 | 41 | 39 | 35 |
| 4 | 76 | 65 | 57 | 51 | 71 | 61 | 54 | 48 | 53 | 48 | 43 | 46 | 42 | 38 | 40 | 36 | 34 | 30 |
| 5 | 70 | 58 | 50 | 44 | 65 | 55 | 47 | 42 | 48 | 42 | 38 | 42 | 37 | 33 | 36 | 32 | 29 | 26 |
| 6 | 64 | 52 | 44 | 38 | 60 | 49 | 42 | 36 | 43 | 37 | 33 | 38 | 33 | 29 | 32 | 29 | 26 | 23 |
| 7 | 60 | 47 | 39 | 34 | 55 | 44 | 37 | 32 | 39 | 33 | 29 | 34 | 30 | 26 | 30 | 26 | 23 | 21 |
| 8 | 55 | 43 | 35 | 30 | 52 | 40 | 33 | 28 | 36 | 30 | 26 | 31 | 27 | 23 | 27 | 24 | 21 | 18 |
| 9 | 52 | 39 | 32 | 27 | 48 | 37 | 30 | 25 | 33 | 27 | 23 | 29 | 24 | 21 | 25 | 21 | 19 | 17 |
| 10 | 48 | 36 | 29 | 24 | 45 | 34 | 27 | 23 | 30 | 25 | 21 | 27 | 22 | 19 | 23 | 20 | 17 | 15 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 13080 | 13080 | 13080 |
| 5° | 13057 | 11816 | 13033 |
| 10° | 12873 | 10735 | 12818 |
| 15° | 12593 | 9770 | 12529 |
| 20° | 12272 | 8825 | 12183 |
| 25° | 11882 | 7870 | 11773 |
| 30° | 11473 | 6970 | 11325 |
| 35° | 10985 | 6140 | 10831 |
| 40° | 10495 | 5406 | 10313 |
| 45° | 9967 | 4731 | 9772 |
| 50° | 9371 | 4094 | 9204 |
| 55° | 8837 | 3502 | 8605 |
| 60° | 8174 | 2934 | 7942 |
| 65° | 7520 | 2380 | 7223 |
| 70° | 6684 | 1831 | 6370 |
| 75° | 5621 | 1287 | 5211 |
| 80° | 4222 | 784 | 3953 |
| 85° | 2479 | 347 | 2346 |



TEST NUMBER: P199473

CATALOG NUMBER: S124-DIP-U1-2-35-X-X0048-1D-UDD-1-5-W

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 155.7 | 2.2 |
| 10°-20° | 439.0 | 6.2 |
| 20°-30° | 643.1 | 9.1 |
| 30°-40° | 737.1 | 10.5 |
| 40°-50° | 726.6 | 10.3 |
| 50°-60° | 626.4 | 8.9 |
| 60°-70° | 456.7 | 6.5 |
| 70°-80° | 249.1 | 3.5 |
| 80°-90° | 65.4 | 0.9 |
| 90°-100° | 55.0 | 0.8 |
| 100°-110° | 198.6 | 2.8 |
| 110°-120° | 351.7 | 5.0 |
| 120°-130° | 467.5 | 6.6 |
| 130°-140° | 525.7 | 7.5 |
| 140°-150° | 516.9 | 7.3 |
| 150°-160° | 436.3 | 6.2 |
| 160°-170° | 289.4 | 4.1 |
| 170°-180° | 100.9 | 1.4 |
| 0°-30° | 1237.8 | 17.6 |
| 0°-40° | 1974.9 | 28.0 |
| 0°-60° | 3327.9 | 47.3 |
| 0°-90° | 4099.1 | 58.2 |
| 90°-120° | 605.3 | 8.6 |
| 90°-150° | 2115.4 | 30.0 |
| 90°-180° | 2942.0 | 41.8 |
| 0°-180° | 7041.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|------|------|------|------|------|------|------|
| 0° | 1654 | 1654 | 1654 | 1654 | 1654 | |
| 5° | 1658 | 1646 | 1635 | 1644 | 1655 | 157 |
| 15° | 1576 | 1564 | 1553 | 1556 | 1568 | 444 |
| 25° | 1420 | 1416 | 1375 | 1404 | 1407 | 654 |
| 35° | 1211 | 1198 | 1137 | 1181 | 1194 | 757 |
| 45° | 973 | 953 | 899 | 937 | 954 | 751 |
| 55° | 725 | 713 | 662 | 698 | 706 | 647 |
| 65° | 481 | 470 | 434 | 458 | 462 | 476 |
| 75° | 247 | 238 | 219 | 228 | 229 | 262 |
| 85° | 56 | 57 | 53 | 54 | 53 | 64 |
| 90° | 2 | 4 | 3 | 4 | 2 | 7 |
| 95° | 46 | 51 | 49 | 46 | 35 | 50 |
| 105° | 184 | 193 | 190 | 186 | 172 | 195 |
| 115° | 355 | 364 | 358 | 353 | 340 | 351 |
| 125° | 520 | 531 | 526 | 519 | 504 | 465 |
| 135° | 679 | 692 | 686 | 680 | 659 | 524 |
| 145° | 824 | 842 | 830 | 829 | 805 | 516 |
| 155° | 948 | 958 | 955 | 948 | 931 | 437 |
| 165° | 1035 | 1032 | 1026 | 1025 | 1022 | 292 |
| 175° | 1077 | 1064 | 1045 | 1063 | 1070 | 102 |
| 180° | 1066 | 1066 | 1066 | 1066 | 1066 | |



TEST NUMBER: P199473

CATALOG NUMBER: S124-DIP-U1-2-35-X-X0048-1D-UDD-1-5-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1654.0 | 1654.0 | 1654.0 | 1654.0 | 1654.0 | 1654.0 | 1654.0 | 1654.0 | 1654.0 |
| 2.5° | 1666.0 | 1647.0 | 1653.0 | 1649.0 | 1638.0 | 1649.0 | 1652.0 | 1646.0 | 1664.0 |
| 5° | 1658.0 | 1640.0 | 1646.0 | 1640.0 | 1635.0 | 1639.0 | 1644.0 | 1637.0 | 1655.0 |
| 7.5° | 1646.0 | 1627.0 | 1632.0 | 1627.0 | 1622.0 | 1626.0 | 1629.0 | 1623.0 | 1642.0 |
| 10° | 1629.0 | 1609.0 | 1614.0 | 1608.0 | 1602.0 | 1606.0 | 1609.0 | 1603.0 | 1622.0 |
| 12.5° | 1605.0 | 1586.0 | 1590.0 | 1586.0 | 1581.0 | 1582.0 | 1584.0 | 1578.0 | 1598.0 |
| 15° | 1576.0 | 1557.0 | 1564.0 | 1560.0 | 1553.0 | 1557.0 | 1556.0 | 1549.0 | 1568.0 |
| 17.5° | 1543.0 | 1525.0 | 1533.0 | 1529.0 | 1519.0 | 1525.0 | 1525.0 | 1514.0 | 1534.0 |
| 20° | 1507.0 | 1488.0 | 1499.0 | 1489.0 | 1478.0 | 1484.0 | 1489.0 | 1476.0 | 1496.0 |
| 22.5° | 1467.0 | 1447.0 | 1460.0 | 1442.0 | 1430.0 | 1437.0 | 1449.0 | 1435.0 | 1453.0 |
| 25° | 1420.0 | 1404.0 | 1416.0 | 1391.0 | 1375.0 | 1385.0 | 1404.0 | 1390.0 | 1407.0 |
| 27.5° | 1374.0 | 1358.0 | 1368.0 | 1340.0 | 1318.0 | 1331.0 | 1355.0 | 1343.0 | 1358.0 |
| 30° | 1323.0 | 1310.0 | 1315.0 | 1282.0 | 1259.0 | 1273.0 | 1301.0 | 1294.0 | 1306.0 |
| 32.5° | 1267.0 | 1257.0 | 1257.0 | 1222.0 | 1198.0 | 1214.0 | 1244.0 | 1242.0 | 1250.0 |
| 35° | 1211.0 | 1205.0 | 1198.0 | 1160.0 | 1137.0 | 1152.0 | 1181.0 | 1189.0 | 1194.0 |
| 37.5° | 1154.0 | 1150.0 | 1137.0 | 1100.0 | 1078.0 | 1094.0 | 1121.0 | 1133.0 | 1136.0 |
| 40° | 1095.0 | 1093.0 | 1075.0 | 1040.0 | 1018.0 | 1034.0 | 1062.0 | 1077.0 | 1076.0 |
| 42.5° | 1035.0 | 1037.0 | 1015.0 | 981.0 | 959.0 | 975.0 | 1001.0 | 1021.0 | 1016.0 |
| 45° | 973.0 | 979.0 | 953.0 | 922.0 | 899.0 | 916.0 | 937.0 | 962.0 | 954.0 |
| 47.5° | 913.0 | 920.0 | 893.0 | 861.0 | 839.0 | 857.0 | 878.0 | 905.0 | 893.0 |
| 50° | 845.0 | 859.0 | 833.0 | 801.0 | 779.0 | 796.0 | 821.0 | 844.0 | 830.0 |
| 52.5° | 786.0 | 796.0 | 773.0 | 742.0 | 721.0 | 735.0 | 760.0 | 783.0 | 768.0 |
| 55° | 725.0 | 736.0 | 713.0 | 682.0 | 662.0 | 676.0 | 698.0 | 721.0 | 706.0 |
| 57.5° | 661.0 | 672.0 | 651.0 | 623.0 | 604.0 | 619.0 | 642.0 | 658.0 | 644.0 |
| 60° | 599.0 | 613.0 | 590.0 | 563.0 | 547.0 | 559.0 | 577.0 | 596.0 | 582.0 |
| 62.5° | 539.0 | 552.0 | 530.0 | 505.0 | 490.0 | 501.0 | 520.0 | 535.0 | 522.0 |
| 65° | 481.0 | 489.0 | 470.0 | 447.0 | 434.0 | 441.0 | 458.0 | 475.0 | 462.0 |
| 67.5° | 422.0 | 430.0 | 411.0 | 391.0 | 378.0 | 385.0 | 399.0 | 415.0 | 403.0 |
| 70° | 362.0 | 369.0 | 353.0 | 335.0 | 324.0 | 331.0 | 344.0 | 356.0 | 345.0 |
| 72.5° | 305.0 | 310.0 | 295.0 | 281.0 | 273.0 | 278.0 | 287.0 | 298.0 | 293.0 |
| 75° | 247.0 | 253.0 | 238.0 | 226.0 | 219.0 | 221.0 | 228.0 | 237.0 | 229.0 |
| 77.5° | 192.0 | 198.0 | 186.0 | 177.0 | 173.0 | 174.0 | 179.0 | 186.0 | 176.0 |
| 80° | 141.0 | 146.0 | 139.0 | 131.0 | 127.0 | 129.0 | 132.0 | 136.0 | 132.0 |
| 82.5° | 95.0 | 100.0 | 95.0 | 90.0 | 87.0 | 89.0 | 90.0 | 92.0 | 89.0 |
| 85° | 56.0 | 60.0 | 57.0 | 54.0 | 53.0 | 53.0 | 54.0 | 56.0 | 53.0 |
| 87.5° | 25.0 | 28.0 | 26.0 | 24.0 | 21.0 | 22.0 | 23.0 | 25.0 | 23.0 |
| 90° | 2.0 | 5.0 | 4.0 | 3.0 | 3.0 | 3.0 | 4.0 | 5.0 | 2.0 |
| 92.5° | 20.8 | 23.6 | 24.3 | 22.2 | 22.2 | 21.5 | 20.1 | 19.4 | 12.5 |
| 95° | 45.8 | 50.0 | 50.7 | 50.7 | 49.3 | 47.9 | 46.5 | 43.1 | 35.4 |
| 97.5° | 74.3 | 79.2 | 80.6 | 79.2 | 79.9 | 78.5 | 75.0 | 71.5 | 63.9 |
| 100° | 107.0 | 113.2 | 114.6 | 113.2 | 113.9 | 110.4 | 109.0 | 105.6 | 96.5 |
| 102.5° | 143.1 | 150.7 | 151.4 | 150.0 | 150.0 | 147.2 | 145.9 | 141.7 | 132.7 |
| 105° | 184.1 | 192.4 | 193.1 | 190.3 | 190.3 | 187.5 | 186.1 | 182.0 | 171.6 |
| 107.5° | 225.7 | 234.1 | 234.1 | 231.3 | 231.3 | 229.2 | 226.4 | 223.7 | 213.2 |
| 110° | 268.8 | 275.7 | 277.1 | 273.7 | 273.0 | 270.9 | 268.1 | 263.9 | 254.9 |



TEST NUMBER: P199473

CATALOG NUMBER: S124-DIP-U1-2-35-X-X0048-1D-UDD-1-5-W

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 112.5° | 311.9 | 318.8 | 320.2 | 316.0 | 315.3 | 311.2 | 310.5 | 305.6 | 296.6 |
| 115° | 354.9 | 361.9 | 364.0 | 359.1 | 357.7 | 352.8 | 352.8 | 348.0 | 339.6 |
| 117.5° | 396.6 | 404.9 | 407.0 | 401.5 | 400.8 | 396.6 | 393.8 | 389.7 | 380.6 |
| 120° | 438.3 | 448.7 | 450.1 | 443.8 | 443.1 | 438.3 | 436.9 | 431.3 | 422.3 |
| 122.5° | 479.9 | 490.4 | 492.4 | 486.9 | 484.8 | 478.6 | 477.9 | 473.0 | 463.3 |
| 125° | 519.5 | 531.3 | 531.3 | 528.6 | 526.5 | 521.6 | 518.8 | 513.3 | 503.6 |
| 127.5° | 560.5 | 573.0 | 572.3 | 570.2 | 568.2 | 561.2 | 559.1 | 553.6 | 543.2 |
| 130° | 600.8 | 611.9 | 611.9 | 610.5 | 609.1 | 602.9 | 599.4 | 593.9 | 582.0 |
| 132.5° | 640.4 | 651.5 | 652.9 | 649.4 | 648.0 | 639.7 | 640.4 | 633.4 | 621.6 |
| 135° | 679.3 | 689.0 | 692.5 | 686.9 | 686.2 | 677.2 | 680.0 | 671.0 | 659.1 |
| 137.5° | 717.5 | 725.1 | 731.4 | 724.4 | 723.7 | 714.7 | 718.9 | 707.1 | 696.6 |
| 140° | 755.0 | 761.2 | 769.6 | 761.2 | 759.9 | 751.5 | 755.7 | 743.2 | 734.2 |
| 142.5° | 790.4 | 796.0 | 806.4 | 797.4 | 795.3 | 787.6 | 792.5 | 777.9 | 769.6 |
| 145° | 824.4 | 828.6 | 842.5 | 832.8 | 830.0 | 823.1 | 829.3 | 811.3 | 805.0 |
| 147.5° | 858.5 | 860.6 | 876.5 | 867.5 | 863.3 | 857.8 | 864.0 | 843.9 | 839.0 |
| 150° | 890.4 | 890.4 | 906.4 | 899.5 | 896.0 | 889.7 | 893.9 | 874.5 | 871.0 |
| 152.5° | 920.3 | 918.9 | 933.5 | 929.3 | 927.2 | 920.3 | 921.7 | 903.6 | 901.5 |
| 155° | 948.1 | 945.3 | 958.5 | 956.4 | 955.0 | 948.1 | 948.1 | 930.0 | 930.7 |
| 157.5° | 974.5 | 968.9 | 981.4 | 980.7 | 977.9 | 972.4 | 971.0 | 955.0 | 957.1 |
| 160° | 997.4 | 992.5 | 1000.9 | 999.5 | 997.4 | 991.8 | 991.8 | 977.9 | 981.4 |
| 162.5° | 1017.5 | 1011.3 | 1018.2 | 1014.1 | 1013.4 | 1007.1 | 1009.9 | 998.1 | 1003.0 |
| 165° | 1034.9 | 1028.7 | 1032.1 | 1026.6 | 1025.9 | 1020.3 | 1025.2 | 1016.8 | 1022.4 |
| 167.5° | 1050.2 | 1043.2 | 1042.5 | 1037.7 | 1036.3 | 1032.1 | 1037.7 | 1032.8 | 1039.1 |
| 170° | 1062.0 | 1055.0 | 1053.0 | 1044.6 | 1043.2 | 1039.8 | 1048.1 | 1046.7 | 1052.3 |
| 172.5° | 1071.0 | 1064.1 | 1059.2 | 1049.5 | 1044.6 | 1045.3 | 1056.4 | 1056.4 | 1062.7 |
| 175° | 1077.3 | 1069.6 | 1064.1 | 1054.4 | 1045.3 | 1050.9 | 1062.7 | 1063.4 | 1070.3 |
| 177.5° | 1078.7 | 1071.0 | 1066.2 | 1057.1 | 1053.7 | 1054.4 | 1066.9 | 1066.9 | 1074.5 |
| 180° | 1065.5 | 1065.5 | 1065.5 | 1065.5 | 1065.5 | 1065.5 | 1065.5 | 1065.5 | 1065.5 |

(END OF REPORT)