

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: P199471

Luminaire Tested: **S124-DIP-U1-2-30-X-X0048-1D-UDD-1-5-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199471
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-U1-2-30-X-X0048-1D-UDD-1-5-W
Description: DEFINE 4-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE
UPLIGHT LL1-3000K, SATIN WHITE DIFFUSER
DOWNLIGHT LL2-3000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6901.8 lumens
Efficiency: N/A
Efficacy: 103.0 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

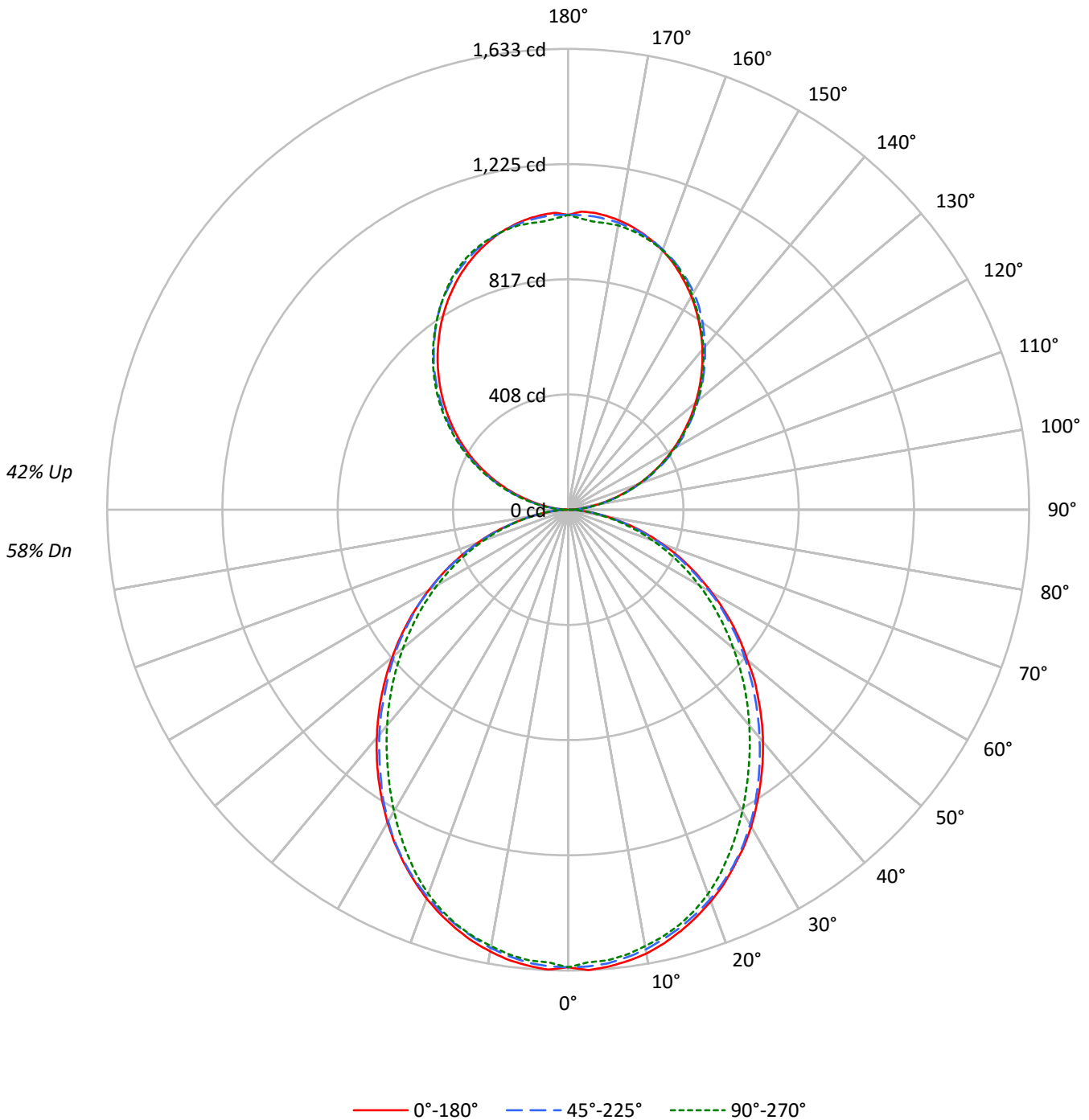
Input Watts (W): 67
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P199471

CATALOG NUMBER: S124-DIP-U1-2-30-X-X0048-1D-UDD-1-5-W

Luminous Intensity Polar Plot





TEST NUMBER: P199471

CATALOG NUMBER: S124-DIP-U1-2-30-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° | 12822 | 12822 | 12822 |
| 5° | 12799 | 11583 | 12776 |
| 10° | 12618 | 10523 | 12564 |
| 15° | 12344 | 9577 | 12282 |
| 20° | 12030 | 8651 | 11942 |
| 25° | 11647 | 7714 | 11540 |
| 30° | 11246 | 6832 | 11102 |
| 35° | 10768 | 6019 | 10617 |
| 40° | 10287 | 5299 | 10109 |
| 45° | 9770 | 4638 | 9578 |
| 50° | 9185 | 4014 | 9022 |
| 55° | 8663 | 3432 | 8435 |
| 60° | 8013 | 2876 | 7785 |
| 65° | 7371 | 2333 | 7080 |
| 70° | 6551 | 1795 | 6244 |
| 75° | 5509 | 1262 | 5109 |
| 80° | 4138 | 768 | 3875 |
| 85° | 2430 | 340 | 2302 |



TEST NUMBER: P199471

CATALOG NUMBER: S124-DIP-U1-2-30-X-X0048-1D-UDD-1-5-W

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 152.6 | 2.2 |
| 10°-20° | 430.3 | 6.2 |
| 20°-30° | 630.4 | 9.1 |
| 30°-40° | 722.5 | 10.5 |
| 40°-50° | 712.3 | 10.3 |
| 50°-60° | 614.0 | 8.9 |
| 60°-70° | 447.7 | 6.5 |
| 70°-80° | 244.1 | 3.5 |
| 80°-90° | 64.1 | 0.9 |
| 90°-100° | 53.9 | 0.8 |
| 100°-110° | 194.7 | 2.8 |
| 110°-120° | 344.7 | 5.0 |
| 120°-130° | 458.3 | 6.6 |
| 130°-140° | 515.3 | 7.5 |
| 140°-150° | 506.7 | 7.3 |
| 150°-160° | 427.6 | 6.2 |
| 160°-170° | 283.7 | 4.1 |
| 170°-180° | 98.9 | 1.4 |
| 0°-30° | 1213.4 | 17.6 |
| 0°-40° | 1935.9 | 28.0 |
| 0°-60° | 3262.1 | 47.3 |
| 0°-90° | 4018.0 | 58.2 |
| 90°-120° | 593.3 | 8.6 |
| 90°-150° | 2073.6 | 30.0 |
| 90°-180° | 2884.0 | 41.8 |
| 0°-180° | 6901.8 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|------|------|------|------|------|------|------|
| 0° | 1621 | 1621 | 1621 | 1621 | 1621 | |
| 5° | 1625 | 1614 | 1603 | 1612 | 1622 | 154 |
| 15° | 1545 | 1533 | 1522 | 1525 | 1537 | 435 |
| 25° | 1392 | 1388 | 1348 | 1376 | 1379 | 641 |
| 35° | 1187 | 1174 | 1114 | 1158 | 1170 | 743 |
| 45° | 954 | 934 | 881 | 918 | 935 | 736 |
| 55° | 711 | 699 | 649 | 684 | 692 | 634 |
| 65° | 472 | 461 | 425 | 449 | 453 | 466 |
| 75° | 242 | 233 | 215 | 224 | 224 | 257 |
| 85° | 55 | 56 | 52 | 53 | 52 | 62 |
| 90° | 2 | 4 | 3 | 4 | 2 | 7 |
| 95° | 45 | 50 | 48 | 46 | 35 | 49 |
| 105° | 180 | 189 | 186 | 182 | 168 | 191 |
| 115° | 348 | 357 | 351 | 346 | 333 | 344 |
| 125° | 509 | 521 | 516 | 509 | 494 | 456 |
| 135° | 666 | 679 | 673 | 666 | 646 | 514 |
| 145° | 808 | 826 | 814 | 813 | 789 | 506 |
| 155° | 929 | 940 | 936 | 929 | 912 | 428 |
| 165° | 1014 | 1012 | 1006 | 1005 | 1002 | 286 |
| 175° | 1056 | 1043 | 1025 | 1042 | 1049 | 100 |
| 180° | 1044 | 1044 | 1044 | 1044 | 1044 | |



TEST NUMBER: P199471

CATALOG NUMBER: S124-DIP-U1-2-30-X-X0048-1D-UDD-1-5-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1621.3 | 1621.3 | 1621.3 | 1621.3 | 1621.3 | 1621.3 | 1621.3 | 1621.3 | 1621.3 |
| 2.5° | 1633.1 | 1614.4 | 1620.3 | 1616.4 | 1605.6 | 1616.4 | 1619.3 | 1613.5 | 1631.1 |
| 5° | 1625.2 | 1607.6 | 1613.5 | 1607.6 | 1602.7 | 1606.6 | 1611.5 | 1604.6 | 1622.3 |
| 7.5° | 1613.5 | 1594.8 | 1599.7 | 1594.8 | 1589.9 | 1593.8 | 1596.8 | 1590.9 | 1609.5 |
| 10° | 1596.8 | 1577.2 | 1582.1 | 1576.2 | 1570.3 | 1574.2 | 1577.2 | 1571.3 | 1589.9 |
| 12.5° | 1573.3 | 1554.6 | 1558.6 | 1554.6 | 1549.7 | 1550.7 | 1552.7 | 1546.8 | 1566.4 |
| 15° | 1544.8 | 1526.2 | 1533.1 | 1529.2 | 1522.3 | 1526.2 | 1525.2 | 1518.4 | 1537.0 |
| 17.5° | 1512.5 | 1494.8 | 1502.7 | 1498.8 | 1489.0 | 1494.8 | 1494.8 | 1484.1 | 1503.7 |
| 20° | 1477.2 | 1458.6 | 1469.4 | 1459.6 | 1448.8 | 1454.7 | 1459.6 | 1446.8 | 1466.4 |
| 22.5° | 1438.0 | 1418.4 | 1431.1 | 1413.5 | 1401.7 | 1408.6 | 1420.3 | 1406.6 | 1424.3 |
| 25° | 1391.9 | 1376.2 | 1388.0 | 1363.5 | 1347.8 | 1357.6 | 1376.2 | 1362.5 | 1379.2 |
| 27.5° | 1346.8 | 1331.1 | 1340.9 | 1313.5 | 1291.9 | 1304.7 | 1328.2 | 1316.4 | 1331.1 |
| 30° | 1296.8 | 1284.1 | 1289.0 | 1256.7 | 1234.1 | 1247.8 | 1275.3 | 1268.4 | 1280.2 |
| 32.5° | 1241.9 | 1232.1 | 1232.1 | 1197.8 | 1174.3 | 1190.0 | 1219.4 | 1217.4 | 1225.3 |
| 35° | 1187.1 | 1181.2 | 1174.3 | 1137.1 | 1114.5 | 1129.2 | 1157.6 | 1165.5 | 1170.4 |
| 37.5° | 1131.2 | 1127.3 | 1114.5 | 1078.2 | 1056.7 | 1072.4 | 1098.8 | 1110.6 | 1113.5 |
| 40° | 1073.3 | 1071.4 | 1053.7 | 1019.4 | 997.9 | 1013.6 | 1041.0 | 1055.7 | 1054.7 |
| 42.5° | 1014.5 | 1016.5 | 994.9 | 961.6 | 940.0 | 955.7 | 981.2 | 1000.8 | 995.9 |
| 45° | 953.8 | 959.6 | 934.2 | 903.8 | 881.2 | 897.9 | 918.5 | 943.0 | 935.1 |
| 47.5° | 894.9 | 901.8 | 875.3 | 844.0 | 822.4 | 840.1 | 860.6 | 887.1 | 875.3 |
| 50° | 828.3 | 842.0 | 816.5 | 785.2 | 763.6 | 780.3 | 804.8 | 827.3 | 813.6 |
| 52.5° | 770.5 | 780.3 | 757.7 | 727.3 | 706.7 | 720.5 | 745.0 | 767.5 | 752.8 |
| 55° | 710.7 | 721.4 | 698.9 | 668.5 | 648.9 | 662.6 | 684.2 | 706.7 | 692.0 |
| 57.5° | 647.9 | 658.7 | 638.1 | 610.7 | 592.1 | 606.8 | 629.3 | 645.0 | 631.3 |
| 60° | 587.2 | 600.9 | 578.3 | 551.9 | 536.2 | 547.9 | 565.6 | 584.2 | 570.5 |
| 62.5° | 528.3 | 541.1 | 519.5 | 495.0 | 480.3 | 491.1 | 509.7 | 524.4 | 511.7 |
| 65° | 471.5 | 479.3 | 460.7 | 438.2 | 425.4 | 432.3 | 448.9 | 465.6 | 452.9 |
| 67.5° | 413.7 | 421.5 | 402.9 | 383.3 | 370.5 | 377.4 | 391.1 | 406.8 | 395.0 |
| 70° | 354.8 | 361.7 | 346.0 | 328.4 | 317.6 | 324.5 | 337.2 | 349.0 | 338.2 |
| 72.5° | 299.0 | 303.9 | 289.2 | 275.4 | 267.6 | 272.5 | 281.3 | 292.1 | 287.2 |
| 75° | 242.1 | 248.0 | 233.3 | 221.5 | 214.7 | 216.6 | 223.5 | 232.3 | 224.5 |
| 77.5° | 188.2 | 194.1 | 182.3 | 173.5 | 169.6 | 170.6 | 175.5 | 182.3 | 172.5 |
| 80° | 138.2 | 143.1 | 136.3 | 128.4 | 124.5 | 126.4 | 129.4 | 133.3 | 129.4 |
| 82.5° | 93.1 | 98.0 | 93.1 | 88.2 | 85.3 | 87.2 | 88.2 | 90.2 | 87.2 |
| 85° | 54.9 | 58.8 | 55.9 | 52.9 | 52.0 | 52.0 | 52.9 | 54.9 | 52.0 |
| 87.5° | 24.5 | 27.4 | 25.5 | 23.5 | 20.6 | 21.6 | 22.5 | 24.5 | 22.5 |
| 90° | 2.0 | 4.9 | 3.9 | 2.9 | 2.9 | 2.9 | 3.9 | 4.9 | 2.0 |
| 92.5° | 20.4 | 23.1 | 23.8 | 21.8 | 21.8 | 21.1 | 19.7 | 19.1 | 12.3 |
| 95° | 44.9 | 49.0 | 49.7 | 49.7 | 48.3 | 47.0 | 45.6 | 42.2 | 34.7 |
| 97.5° | 72.8 | 77.6 | 79.0 | 77.6 | 78.3 | 76.9 | 73.5 | 70.1 | 62.6 |
| 100° | 104.8 | 111.0 | 112.3 | 111.0 | 111.7 | 108.3 | 106.9 | 103.5 | 94.6 |
| 102.5° | 140.3 | 147.7 | 148.4 | 147.1 | 147.1 | 144.3 | 143.0 | 138.9 | 130.0 |
| 105° | 180.4 | 188.6 | 189.3 | 186.5 | 186.5 | 183.8 | 182.5 | 178.4 | 168.2 |
| 107.5° | 221.3 | 229.4 | 229.4 | 226.7 | 226.7 | 224.7 | 222.0 | 219.2 | 209.0 |
| 110° | 263.5 | 270.3 | 271.7 | 268.2 | 267.6 | 265.5 | 262.8 | 258.7 | 249.9 |



TEST NUMBER: P199471

CATALOG NUMBER: S124-DIP-U1-2-30-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° | 305.7 | 312.5 | 313.9 | 309.8 | 309.1 | 305.0 | 304.3 | 299.6 | 290.7 |
| 115° | 347.9 | 354.7 | 356.8 | 352.0 | 350.6 | 345.9 | 345.9 | 341.1 | 332.9 |
| 117.5° | 388.8 | 396.9 | 399.0 | 393.5 | 392.8 | 388.8 | 386.0 | 381.9 | 373.1 |
| 120° | 429.6 | 439.8 | 441.2 | 435.1 | 434.4 | 429.6 | 428.2 | 422.8 | 413.9 |
| 122.5° | 470.5 | 480.7 | 482.7 | 477.3 | 475.2 | 469.1 | 468.4 | 463.6 | 454.1 |
| 125° | 509.3 | 520.8 | 520.8 | 518.1 | 516.1 | 511.3 | 508.6 | 503.1 | 493.6 |
| 127.5° | 549.4 | 561.7 | 561.0 | 559.0 | 556.9 | 550.1 | 548.1 | 542.6 | 532.4 |
| 130° | 588.9 | 599.8 | 599.8 | 598.5 | 597.1 | 591.0 | 587.6 | 582.1 | 570.5 |
| 132.5° | 627.7 | 638.6 | 640.0 | 636.6 | 635.2 | 627.0 | 627.7 | 620.9 | 609.3 |
| 135° | 665.9 | 675.4 | 678.8 | 673.3 | 672.7 | 663.8 | 666.5 | 657.7 | 646.1 |
| 137.5° | 703.3 | 710.8 | 716.9 | 710.1 | 709.4 | 700.6 | 704.7 | 693.1 | 682.9 |
| 140° | 740.1 | 746.2 | 754.4 | 746.2 | 744.8 | 736.7 | 740.7 | 728.5 | 719.6 |
| 142.5° | 774.8 | 780.2 | 790.4 | 781.6 | 779.6 | 772.1 | 776.8 | 762.5 | 754.4 |
| 145° | 808.1 | 812.2 | 825.8 | 816.3 | 813.6 | 806.8 | 812.9 | 795.2 | 789.1 |
| 147.5° | 841.5 | 843.6 | 859.2 | 850.4 | 846.3 | 840.8 | 847.0 | 827.2 | 822.4 |
| 150° | 872.8 | 872.8 | 888.5 | 881.7 | 878.3 | 872.1 | 876.2 | 857.2 | 853.8 |
| 152.5° | 902.1 | 900.7 | 915.0 | 911.0 | 908.9 | 902.1 | 903.5 | 885.8 | 883.7 |
| 155° | 929.3 | 926.6 | 939.5 | 937.5 | 936.1 | 929.3 | 929.3 | 911.6 | 912.3 |
| 157.5° | 955.2 | 949.8 | 962.0 | 961.3 | 958.6 | 953.2 | 951.8 | 936.1 | 938.2 |
| 160° | 977.7 | 972.9 | 981.1 | 979.7 | 977.7 | 972.2 | 972.2 | 958.6 | 962.0 |
| 162.5° | 997.4 | 991.3 | 998.1 | 994.0 | 993.3 | 987.2 | 989.9 | 978.4 | 983.1 |
| 165° | 1014.4 | 1008.3 | 1011.7 | 1006.3 | 1005.6 | 1000.1 | 1004.9 | 996.7 | 1002.2 |
| 167.5° | 1029.4 | 1022.6 | 1021.9 | 1017.2 | 1015.8 | 1011.7 | 1017.2 | 1012.4 | 1018.5 |
| 170° | 1041.0 | 1034.2 | 1032.1 | 1024.0 | 1022.6 | 1019.2 | 1027.4 | 1026.0 | 1031.5 |
| 172.5° | 1049.8 | 1043.0 | 1038.3 | 1028.7 | 1024.0 | 1024.7 | 1035.5 | 1035.5 | 1041.7 |
| 175° | 1056.0 | 1048.5 | 1043.0 | 1033.5 | 1024.7 | 1030.1 | 1041.7 | 1042.4 | 1049.2 |
| 177.5° | 1057.3 | 1049.8 | 1045.1 | 1036.2 | 1032.8 | 1033.5 | 1045.8 | 1045.8 | 1053.2 |
| 180° | 1044.4 | 1044.4 | 1044.4 | 1044.4 | 1044.4 | 1044.4 | 1044.4 | 1044.4 | 1044.4 |

(END OF REPORT)