

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: P199395

Luminaire Tested: **S122-DIP-U1-2-40-X-X0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199395
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P27883 P27986)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122-DIP-U1-2-40-X-X0048-1D-UDD-1-NA-W
Description: DEFINE 2-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE
UPLIGHT LL1-4000K, NO LENS
DOWNLIGHT LL2-4000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6947.6 lumens
Efficiency: N/A
Efficacy: 103.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.17 / 1.31
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4.08' x H: 0.38')
CIE Type: General Diffuse

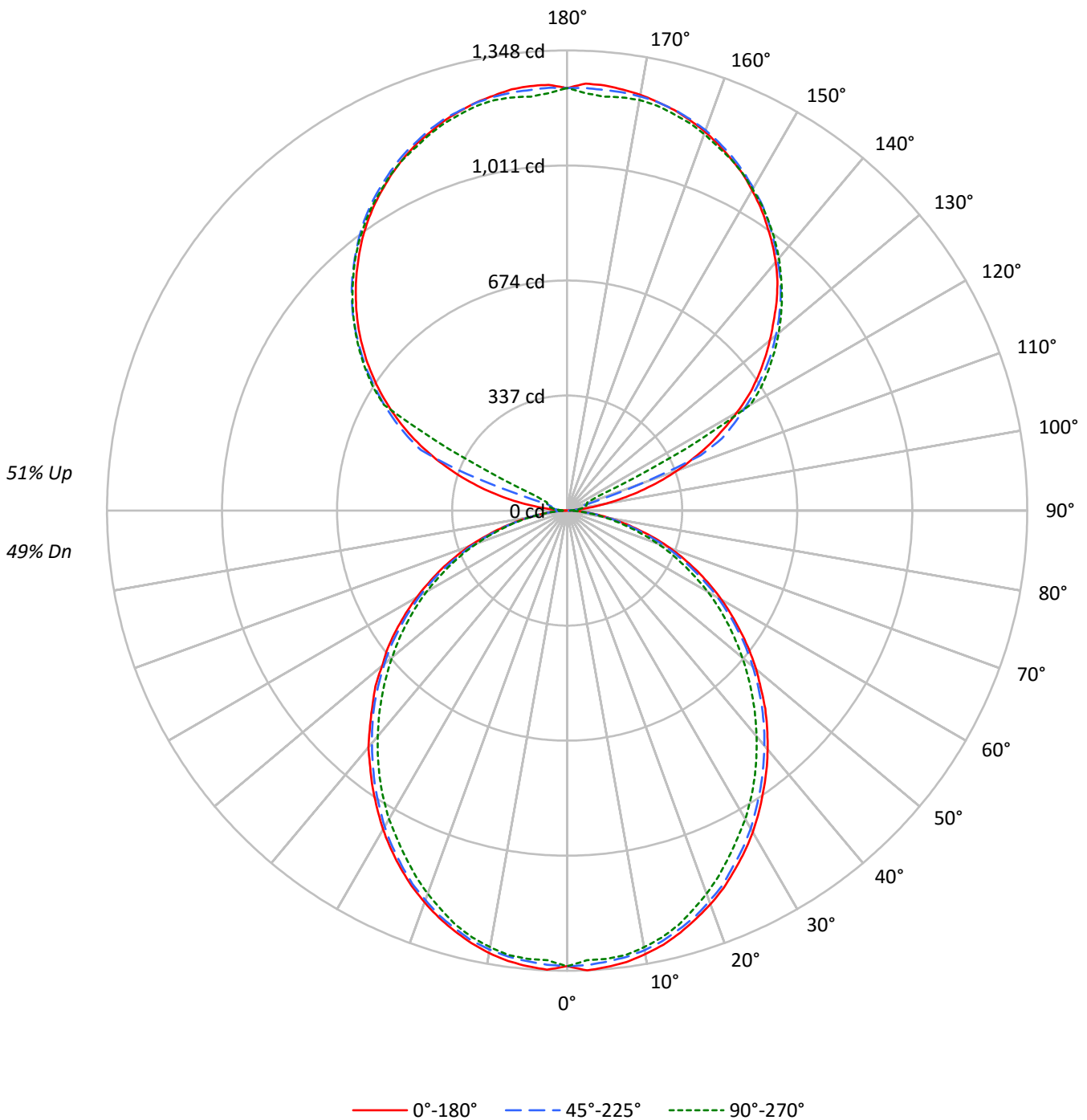
Input Watts (W): 67
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P199395

CATALOG NUMBER: S122-DIP-U1-2-40-X-X0048-1D-UDD-1-NA-W

Luminous Intensity Polar Plot





TEST NUMBER: P199395

CATALOG NUMBER: S122-DIP-U1-2-40-X-X0048-1D-UDD-1-NA-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 | 107 | 107 | 107 | 107 | 99 | 99 | 99 | 99 | 83 | 83 | 83 | 69 | 69 | 69 | 56 | 56 | 56 | 49 |
| 1 | 98 | 93 | 90 | 86 | 90 | 86 | 83 | 80 | 73 | 70 | 68 | 61 | 59 | 57 | 49 | 48 | 47 | 42 |
| 2 | 89 | 82 | 75 | 70 | 82 | 75 | 70 | 66 | 64 | 60 | 57 | 53 | 50 | 48 | 43 | 41 | 40 | 35 |
| 3 | 81 | 72 | 64 | 59 | 75 | 66 | 60 | 55 | 56 | 52 | 48 | 47 | 44 | 41 | 38 | 36 | 34 | 30 |
| 4 | 74 | 63 | 56 | 50 | 68 | 59 | 52 | 46 | 50 | 45 | 41 | 42 | 38 | 35 | 34 | 31 | 29 | 25 |
| 5 | 68 | 57 | 48 | 42 | 63 | 52 | 45 | 40 | 45 | 39 | 35 | 38 | 33 | 30 | 31 | 28 | 25 | 22 |
| 6 | 63 | 51 | 43 | 37 | 58 | 47 | 40 | 35 | 40 | 35 | 30 | 34 | 30 | 26 | 28 | 25 | 22 | 19 |
| 7 | 58 | 46 | 38 | 32 | 53 | 43 | 35 | 30 | 37 | 31 | 27 | 31 | 27 | 23 | 26 | 22 | 20 | 17 |
| 8 | 54 | 42 | 34 | 28 | 50 | 39 | 32 | 27 | 33 | 28 | 24 | 28 | 24 | 21 | 24 | 20 | 18 | 15 |
| 9 | 50 | 38 | 30 | 25 | 46 | 35 | 29 | 24 | 31 | 25 | 21 | 26 | 22 | 19 | 22 | 18 | 16 | 14 |
| 10 | 47 | 35 | 28 | 23 | 43 | 32 | 26 | 22 | 28 | 23 | 19 | 24 | 20 | 17 | 20 | 17 | 15 | 13 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 21110 | 21110 | 21110 |
| 5° | 21136 | 17486 | 21103 |
| 10° | 20850 | 14932 | 20801 |
| 15° | 20455 | 12844 | 20374 |
| 20° | 19990 | 11051 | 19889 |
| 25° | 19434 | 9538 | 19330 |
| 30° | 18869 | 8290 | 18708 |
| 35° | 18183 | 7174 | 18016 |
| 40° | 17513 | 6170 | 17354 |
| 45° | 16813 | 5279 | 16516 |
| 50° | 16026 | 4477 | 15682 |
| 55° | 15148 | 3749 | 14897 |
| 60° | 14254 | 3074 | 13888 |
| 65° | 13169 | 2414 | 12716 |
| 70° | 11816 | 1815 | 11244 |
| 75° | 9867 | 1222 | 9207 |
| 80° | 7354 | 711 | 6678 |
| 85° | 4568 | 281 | 3842 |



TEST NUMBER: P199395

CATALOG NUMBER: S122-DIP-U1-2-40-X-X0048-1D-UDD-1-NA-W

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 125.8 | 1.8 |
| 10°-20° | 356.2 | 5.1 |
| 20°-30° | 525.4 | 7.6 |
| 30°-40° | 612.7 | 8.8 |
| 40°-50° | 614.0 | 8.8 |
| 50°-60° | 537.1 | 7.7 |
| 60°-70° | 395.2 | 5.7 |
| 70°-80° | 214.2 | 3.1 |
| 80°-90° | 54.9 | 0.8 |
| 90°-100° | 30.9 | 0.4 |
| 100°-110° | 139.0 | 2.0 |
| 110°-120° | 404.0 | 5.8 |
| 120°-130° | 631.2 | 9.1 |
| 130°-140° | 680.5 | 9.8 |
| 140°-150° | 643.1 | 9.3 |
| 150°-160° | 524.4 | 7.5 |
| 160°-170° | 341.3 | 4.9 |
| 170°-180° | 117.6 | 1.7 |
| 0°-30° | 1007.5 | 14.5 |
| 0°-40° | 1620.2 | 23.3 |
| 0°-60° | 2771.4 | 39.9 |
| 0°-90° | 3435.6 | 49.5 |
| 90°-120° | 573.9 | 8.3 |
| 90°-150° | 2528.7 | 36.4 |
| 90°-180° | 3512.0 | 50.6 |
| 0°-180° | 6947.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|------|------|------|------|------|------|------|
| 0° | 1335 | 1335 | 1335 | 1335 | 1335 | |
| 5° | 1342 | 1326 | 1318 | 1325 | 1340 | 127 |
| 15° | 1280 | 1270 | 1257 | 1268 | 1275 | 361 |
| 25° | 1161 | 1150 | 1120 | 1147 | 1155 | 535 |
| 35° | 1002 | 989 | 957 | 982 | 993 | 627 |
| 45° | 821 | 806 | 767 | 798 | 806 | 632 |
| 55° | 621 | 610 | 573 | 599 | 611 | 556 |
| 65° | 421 | 405 | 376 | 392 | 407 | 417 |
| 75° | 217 | 206 | 188 | 193 | 202 | 231 |
| 85° | 52 | 48 | 41 | 42 | 43 | 58 |
| 90° | 2 | 5 | 7 | 6 | 1 | 5 |
| 95° | 30 | 24 | 28 | 29 | 52 | 42 |
| 105° | 223 | 47 | 57 | 49 | 262 | 237 |
| 115° | 461 | 500 | 102 | 517 | 493 | 454 |
| 125° | 682 | 703 | 721 | 715 | 699 | 608 |
| 135° | 868 | 885 | 890 | 893 | 875 | 669 |
| 145° | 1020 | 1030 | 1031 | 1037 | 1024 | 639 |
| 155° | 1136 | 1144 | 1136 | 1145 | 1137 | 524 |
| 165° | 1215 | 1215 | 1203 | 1213 | 1212 | 343 |
| 175° | 1250 | 1237 | 1217 | 1237 | 1248 | 119 |
| 180° | 1238 | 1238 | 1238 | 1238 | 1238 | |



TEST NUMBER: P199395

CATALOG NUMBER: S122-DIP-U1-2-40-X-X0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1334.7 | 1334.7 | 1334.7 | 1334.7 | 1334.7 | 1334.7 | 1334.7 | 1334.7 | 1334.7 |
| 2.5° | 1348.2 | 1329.6 | 1332.7 | 1328.5 | 1318.2 | 1327.5 | 1331.6 | 1328.5 | 1346.1 |
| 5° | 1342.0 | 1323.4 | 1326.5 | 1321.3 | 1318.2 | 1321.3 | 1325.4 | 1321.3 | 1339.9 |
| 7.5° | 1333.7 | 1313.1 | 1319.3 | 1316.2 | 1313.1 | 1315.1 | 1318.2 | 1311.0 | 1330.6 |
| 10° | 1319.3 | 1298.6 | 1307.9 | 1301.7 | 1298.6 | 1300.7 | 1305.8 | 1295.5 | 1316.2 |
| 12.5° | 1302.7 | 1282.1 | 1291.4 | 1284.2 | 1281.1 | 1281.1 | 1290.3 | 1279.0 | 1297.6 |
| 15° | 1280.0 | 1263.5 | 1269.7 | 1262.5 | 1257.3 | 1260.4 | 1267.6 | 1259.4 | 1274.9 |
| 17.5° | 1254.2 | 1239.8 | 1247.0 | 1235.6 | 1226.3 | 1233.6 | 1243.9 | 1234.6 | 1250.1 |
| 20° | 1227.4 | 1210.9 | 1218.1 | 1202.6 | 1194.3 | 1200.5 | 1214.0 | 1206.7 | 1221.2 |
| 22.5° | 1197.4 | 1182.0 | 1188.2 | 1167.5 | 1159.2 | 1164.4 | 1184.0 | 1176.8 | 1190.2 |
| 25° | 1161.3 | 1148.9 | 1150.0 | 1129.3 | 1120.0 | 1126.2 | 1146.9 | 1142.7 | 1155.1 |
| 27.5° | 1126.2 | 1113.8 | 1114.9 | 1091.1 | 1080.8 | 1089.1 | 1109.7 | 1106.6 | 1118.0 |
| 30° | 1088.0 | 1076.7 | 1075.6 | 1051.9 | 1043.6 | 1048.8 | 1069.4 | 1069.4 | 1078.7 |
| 32.5° | 1045.7 | 1036.4 | 1031.2 | 1009.6 | 1001.3 | 1007.5 | 1025.1 | 1028.1 | 1035.4 |
| 35° | 1002.3 | 996.1 | 988.9 | 968.3 | 956.9 | 965.2 | 981.7 | 985.8 | 993.1 |
| 37.5° | 959.0 | 951.8 | 943.5 | 922.9 | 910.5 | 920.8 | 935.2 | 942.5 | 947.6 |
| 40° | 913.6 | 908.4 | 899.1 | 878.5 | 863.0 | 873.3 | 889.8 | 898.1 | 905.3 |
| 42.5° | 867.1 | 864.0 | 852.7 | 831.0 | 815.5 | 826.9 | 844.4 | 851.6 | 854.7 |
| 45° | 820.7 | 816.5 | 806.2 | 783.5 | 767.0 | 779.4 | 798.0 | 805.2 | 806.2 |
| 47.5° | 769.0 | 770.1 | 757.7 | 735.0 | 718.5 | 730.9 | 747.4 | 757.7 | 761.8 |
| 50° | 722.6 | 723.6 | 709.2 | 686.5 | 669.9 | 679.2 | 698.9 | 709.2 | 707.1 |
| 52.5° | 673.0 | 676.1 | 660.7 | 637.9 | 621.4 | 630.7 | 650.3 | 661.7 | 662.7 |
| 55° | 621.4 | 626.6 | 610.1 | 587.4 | 572.9 | 582.2 | 598.7 | 612.1 | 611.1 |
| 57.5° | 571.9 | 576.0 | 559.5 | 538.8 | 524.4 | 532.7 | 547.1 | 564.7 | 560.5 |
| 60° | 522.3 | 526.5 | 508.9 | 488.3 | 475.9 | 480.0 | 496.5 | 511.0 | 508.9 |
| 62.5° | 471.8 | 475.9 | 457.3 | 438.7 | 424.3 | 430.5 | 444.9 | 462.5 | 457.3 |
| 65° | 421.2 | 424.3 | 404.7 | 388.1 | 375.7 | 381.9 | 392.3 | 410.8 | 406.7 |
| 67.5° | 370.6 | 372.7 | 355.1 | 339.6 | 329.3 | 332.4 | 341.7 | 357.2 | 355.1 |
| 70° | 320.0 | 322.1 | 305.6 | 291.1 | 281.8 | 284.9 | 292.1 | 306.6 | 304.5 |
| 72.5° | 268.4 | 271.5 | 255.0 | 241.6 | 232.3 | 235.4 | 240.5 | 253.9 | 250.8 |
| 75° | 216.8 | 218.8 | 206.5 | 196.1 | 187.9 | 188.9 | 193.0 | 203.4 | 202.3 |
| 77.5° | 169.3 | 174.5 | 161.0 | 151.7 | 145.6 | 146.6 | 151.7 | 156.9 | 154.8 |
| 80° | 122.8 | 129.0 | 119.7 | 112.5 | 107.4 | 106.3 | 110.5 | 114.6 | 111.5 |
| 82.5° | 86.7 | 87.7 | 81.6 | 76.4 | 71.2 | 71.2 | 74.3 | 77.4 | 74.3 |
| 85° | 51.6 | 53.7 | 48.5 | 44.4 | 41.3 | 40.3 | 42.3 | 45.4 | 43.4 |
| 87.5° | 24.8 | 25.8 | 20.6 | 18.6 | 15.5 | 14.5 | 15.5 | 17.5 | 17.5 |
| 90° | 2.1 | 5.2 | 5.2 | 6.2 | 7.2 | 7.2 | 6.2 | 6.2 | 1.0 |
| 92.5° | 4.3 | 10.0 | 10.0 | 12.2 | 12.9 | 15.1 | 17.2 | 17.9 | 19.4 |
| 95° | 30.1 | 21.5 | 24.4 | 26.5 | 28.0 | 30.1 | 28.7 | 26.5 | 52.3 |
| 97.5° | 67.4 | 27.2 | 34.4 | 35.8 | 38.0 | 38.7 | 38.7 | 30.1 | 95.4 |
| 100° | 112.6 | 31.5 | 40.9 | 46.6 | 48.0 | 48.0 | 43.7 | 67.4 | 147.0 |
| 102.5° | 165.6 | 140.5 | 44.5 | 51.6 | 54.5 | 52.3 | 46.6 | 228.7 | 204.3 |
| 105° | 223.0 | 253.1 | 47.3 | 54.5 | 57.4 | 55.9 | 48.8 | 281.8 | 262.4 |
| 107.5° | 283.2 | 306.9 | 50.2 | 57.4 | 60.2 | 58.1 | 59.5 | 336.3 | 320.5 |
| 110° | 343.4 | 363.5 | 225.1 | 59.5 | 62.4 | 59.5 | 311.9 | 391.5 | 378.6 |



TEST NUMBER: P199395

CATALOG NUMBER: S122-DIP-U1-2-40-X-X0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (continued):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 112.5° | 400.8 | 421.6 | 423.0 | 63.1 | 63.8 | 68.1 | 463.9 | 447.4 | 436.6 |
| 115° | 461.0 | 478.2 | 500.5 | 291.1 | 101.8 | 320.5 | 516.9 | 502.6 | 493.3 |
| 117.5° | 516.2 | 532.7 | 549.9 | 511.9 | 390.0 | 557.1 | 567.9 | 557.1 | 547.8 |
| 120° | 574.3 | 590.8 | 601.6 | 618.8 | 620.2 | 620.2 | 618.0 | 609.4 | 599.4 |
| 122.5° | 631.7 | 642.4 | 651.0 | 668.2 | 674.0 | 667.5 | 666.1 | 658.2 | 650.3 |
| 125° | 681.9 | 691.9 | 703.4 | 714.8 | 720.6 | 714.1 | 714.8 | 704.8 | 699.1 |
| 127.5° | 729.2 | 737.8 | 752.8 | 760.0 | 765.7 | 758.6 | 761.4 | 750.7 | 746.4 |
| 130° | 775.1 | 780.8 | 798.0 | 803.7 | 808.8 | 804.5 | 806.6 | 795.1 | 791.6 |
| 132.5° | 820.2 | 828.1 | 842.5 | 844.6 | 850.3 | 843.9 | 851.8 | 836.0 | 834.6 |
| 135° | 867.6 | 874.0 | 884.8 | 885.5 | 889.8 | 886.2 | 892.6 | 879.7 | 875.4 |
| 137.5° | 912.0 | 914.9 | 924.2 | 921.3 | 927.8 | 922.0 | 931.4 | 918.5 | 915.6 |
| 140° | 950.7 | 952.9 | 959.3 | 960.8 | 965.1 | 960.0 | 967.2 | 954.3 | 952.9 |
| 142.5° | 986.6 | 989.4 | 995.2 | 994.5 | 999.5 | 994.5 | 1003.1 | 991.6 | 990.2 |
| 145° | 1020.3 | 1024.6 | 1029.6 | 1027.4 | 1031.0 | 1028.2 | 1036.8 | 1024.6 | 1023.9 |
| 147.5° | 1054.0 | 1055.4 | 1062.6 | 1059.0 | 1061.1 | 1057.6 | 1066.9 | 1056.8 | 1055.4 |
| 150° | 1083.4 | 1086.2 | 1090.5 | 1086.2 | 1086.9 | 1084.8 | 1094.1 | 1085.5 | 1084.1 |
| 152.5° | 1112.8 | 1112.0 | 1118.5 | 1109.9 | 1113.5 | 1109.9 | 1120.6 | 1112.0 | 1112.0 |
| 155° | 1136.4 | 1135.7 | 1143.6 | 1134.3 | 1135.7 | 1132.8 | 1145.0 | 1135.0 | 1137.1 |
| 157.5° | 1160.1 | 1156.5 | 1165.8 | 1156.5 | 1153.6 | 1155.8 | 1165.1 | 1155.8 | 1160.1 |
| 160° | 1180.9 | 1177.3 | 1185.9 | 1175.9 | 1173.7 | 1175.1 | 1185.2 | 1176.6 | 1178.0 |
| 162.5° | 1198.8 | 1193.8 | 1201.7 | 1190.9 | 1190.9 | 1188.8 | 1201.7 | 1193.1 | 1197.4 |
| 165° | 1214.6 | 1208.8 | 1215.3 | 1204.5 | 1203.1 | 1201.7 | 1213.1 | 1207.4 | 1211.7 |
| 167.5° | 1226.0 | 1220.3 | 1226.0 | 1213.9 | 1215.3 | 1212.4 | 1223.9 | 1220.3 | 1225.3 |
| 170° | 1236.8 | 1229.6 | 1231.8 | 1221.0 | 1221.0 | 1218.9 | 1231.1 | 1227.5 | 1234.6 |
| 172.5° | 1244.0 | 1236.1 | 1236.1 | 1223.9 | 1221.0 | 1222.5 | 1235.4 | 1234.6 | 1244.7 |
| 175° | 1250.4 | 1239.7 | 1236.8 | 1225.3 | 1217.4 | 1224.6 | 1236.8 | 1239.0 | 1248.3 |
| 177.5° | 1251.9 | 1241.8 | 1239.0 | 1226.0 | 1223.9 | 1224.6 | 1239.7 | 1240.4 | 1248.3 |
| 180° | 1237.5 | 1237.5 | 1237.5 | 1237.5 | 1237.5 | 1237.5 | 1237.5 | 1237.5 | 1237.5 |

(END OF REPORT)