

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: P199385

Luminaire Tested: **S122-DIP-U1-1-30-X-X0048-1D-UDD-1-NA-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P199385
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-U1-1-30-X-X0048-1D-UDD-1-NA-W
Description: DEFINE 2-INCH DIRECT/INDIRECT PENDANT LED LUMINAIRE
UPLIGHT LL1-3000K, NO LENS
DOWNLIGHT LL1-3000K, SATIN WHITE DIFFUSER
Light Source: -
757G
Ballast/Driver: ELECTRONIC DRIVERS

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5600.6 lumens
Efficiency: N/A
Efficacy: 107.7 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

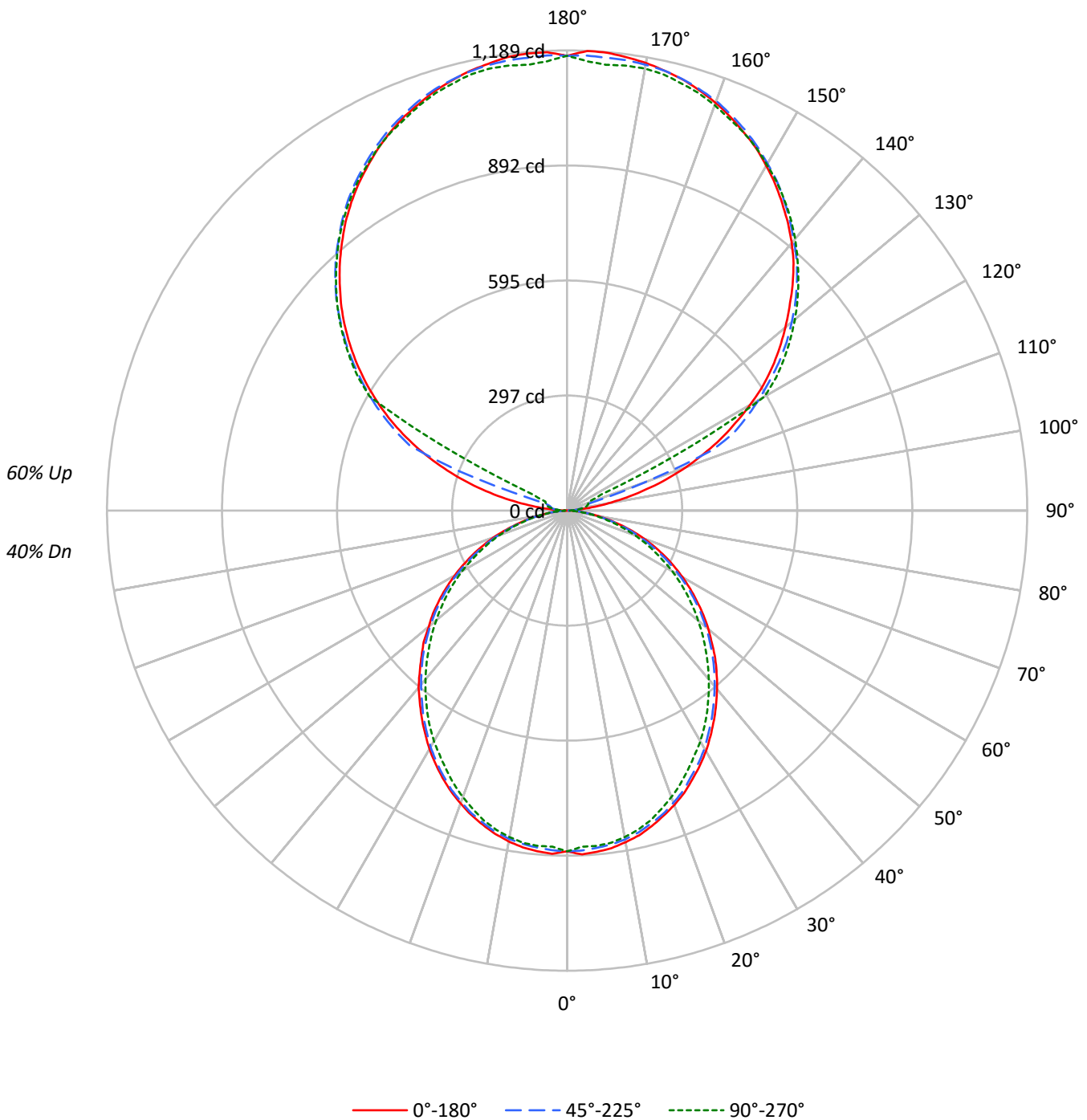
Input Watts (W): 52
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P199385

CATALOG NUMBER: S122-DIP-U1-1-30-X-X0048-1D-UDD-1-NA-W

Luminous Intensity Polar Plot





TEST NUMBER: P199385

CATALOG NUMBER: S122-DIP-U1-1-30-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 | 105 | 105 | 105 | 105 | 96 | 96 | 96 | 96 | 78 | 78 | 78 | 62 | 62 | 62 | 47 | 47 | 47 | 40 |
| 1 | 96 | 91 | 88 | 84 | 87 | 83 | 80 | 77 | 68 | 66 | 64 | 55 | 53 | 52 | 42 | 41 | 40 | 34 |
| 2 | 87 | 80 | 74 | 69 | 79 | 73 | 68 | 63 | 60 | 56 | 53 | 48 | 45 | 43 | 37 | 35 | 34 | 29 |
| 3 | 79 | 70 | 63 | 57 | 72 | 64 | 58 | 53 | 53 | 48 | 45 | 42 | 39 | 37 | 33 | 31 | 29 | 24 |
| 4 | 73 | 62 | 54 | 48 | 66 | 57 | 50 | 45 | 47 | 42 | 38 | 38 | 34 | 31 | 29 | 27 | 25 | 21 |
| 5 | 67 | 55 | 47 | 41 | 60 | 51 | 44 | 38 | 42 | 37 | 33 | 34 | 30 | 27 | 26 | 24 | 22 | 18 |
| 6 | 61 | 49 | 41 | 36 | 56 | 45 | 38 | 33 | 38 | 32 | 28 | 31 | 27 | 24 | 24 | 21 | 19 | 16 |
| 7 | 57 | 45 | 37 | 31 | 51 | 41 | 34 | 29 | 34 | 29 | 25 | 28 | 24 | 21 | 22 | 19 | 17 | 14 |
| 8 | 53 | 40 | 33 | 28 | 48 | 37 | 30 | 26 | 31 | 26 | 22 | 25 | 21 | 19 | 20 | 17 | 15 | 13 |
| 9 | 49 | 37 | 29 | 24 | 44 | 34 | 27 | 23 | 28 | 23 | 20 | 23 | 19 | 17 | 18 | 16 | 14 | 11 |
| 10 | 46 | 34 | 27 | 22 | 42 | 31 | 25 | 20 | 26 | 21 | 18 | 21 | 18 | 15 | 17 | 14 | 12 | 10 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° |
|-----|-------|-------|-------|
| 0° | 13923 | 13923 | 13923 |
| 5° | 13940 | 11533 | 13918 |
| 10° | 13751 | 9848 | 13720 |
| 15° | 13491 | 8472 | 13437 |
| 20° | 13184 | 7289 | 13117 |
| 25° | 12817 | 6291 | 12750 |
| 30° | 12446 | 5468 | 12340 |
| 35° | 11993 | 4731 | 11883 |
| 40° | 11549 | 4069 | 11446 |
| 45° | 11089 | 3482 | 10892 |
| 50° | 10570 | 2954 | 10344 |
| 55° | 9992 | 2473 | 9826 |
| 60° | 9402 | 2028 | 9159 |
| 65° | 8686 | 1592 | 8386 |
| 70° | 7795 | 1197 | 7415 |
| 75° | 6508 | 806 | 6071 |
| 80° | 4851 | 469 | 4402 |
| 85° | 3010 | 185 | 2532 |



TEST NUMBER: P199385

CATALOG NUMBER: S122-DIP-U1-1-30-X-X0048-1D-UDD-1-NA-W

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 83.0 | 1.5 |
| 10°-20° | 235.0 | 4.2 |
| 20°-30° | 346.5 | 6.2 |
| 30°-40° | 404.1 | 7.2 |
| 40°-50° | 405.0 | 7.2 |
| 50°-60° | 354.3 | 6.3 |
| 60°-70° | 260.6 | 4.7 |
| 70°-80° | 141.3 | 2.5 |
| 80°-90° | 36.2 | 0.6 |
| 90°-100° | 29.1 | 0.5 |
| 100°-110° | 132.0 | 2.4 |
| 110°-120° | 383.6 | 6.8 |
| 120°-130° | 599.4 | 10.7 |
| 130°-140° | 646.2 | 11.5 |
| 140°-150° | 610.7 | 10.9 |
| 150°-160° | 498.0 | 8.9 |
| 160°-170° | 324.1 | 5.8 |
| 170°-180° | 111.7 | 2.0 |
| 0°-30° | 664.5 | 11.9 |
| 0°-40° | 1068.6 | 19.1 |
| 0°-60° | 1827.8 | 32.6 |
| 0°-90° | 2266.0 | 40.5 |
| 90°-120° | 544.7 | 9.7 |
| 90°-150° | 2400.9 | 42.9 |
| 90°-180° | 3335.0 | 59.5 |
| 0°-180° | 5600.6 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 45° | 90° | 135° | 180° | Flux |
|------|------|------|------|------|------|------|
| 0° | 880 | 880 | 880 | 880 | 880 | |
| 5° | 885 | 875 | 869 | 874 | 884 | 84 |
| 15° | 844 | 837 | 829 | 836 | 841 | 238 |
| 25° | 766 | 758 | 739 | 756 | 762 | 353 |
| 35° | 661 | 652 | 631 | 648 | 655 | 414 |
| 45° | 541 | 532 | 506 | 526 | 532 | 417 |
| 55° | 410 | 402 | 378 | 395 | 403 | 367 |
| 65° | 278 | 267 | 248 | 259 | 268 | 275 |
| 75° | 143 | 136 | 124 | 127 | 133 | 152 |
| 85° | 34 | 32 | 27 | 28 | 29 | 38 |
| 90° | 1 | 3 | 5 | 4 | 1 | 3 |
| 95° | 29 | 23 | 27 | 27 | 50 | 40 |
| 105° | 212 | 45 | 54 | 46 | 249 | 225 |
| 115° | 438 | 475 | 97 | 491 | 468 | 431 |
| 125° | 648 | 668 | 684 | 679 | 664 | 577 |
| 135° | 824 | 840 | 845 | 848 | 831 | 635 |
| 145° | 969 | 978 | 979 | 984 | 972 | 607 |
| 155° | 1079 | 1086 | 1078 | 1087 | 1080 | 498 |
| 165° | 1153 | 1154 | 1142 | 1152 | 1151 | 325 |
| 175° | 1187 | 1174 | 1156 | 1174 | 1185 | 113 |
| 180° | 1175 | 1175 | 1175 | 1175 | 1175 | |



TEST NUMBER: P199385

CATALOG NUMBER: S122-DIP-U1-1-30-X-X0048-1D-UDD-1-NA-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° |
|--------|-------|-------|-------|-------|-------|--------|-------|--------|-------|
| 0° | 880.3 | 880.3 | 880.3 | 880.3 | 880.3 | 880.3 | 880.3 | 880.3 | 880.3 |
| 2.5° | 889.2 | 876.9 | 879.0 | 876.2 | 869.4 | 875.5 | 878.3 | 876.2 | 887.8 |
| 5° | 885.1 | 872.8 | 874.9 | 871.5 | 869.4 | 871.5 | 874.2 | 871.5 | 883.7 |
| 7.5° | 879.6 | 866.0 | 870.1 | 868.1 | 866.0 | 867.4 | 869.4 | 864.7 | 877.6 |
| 10° | 870.1 | 856.5 | 862.6 | 858.5 | 856.5 | 857.8 | 861.3 | 854.4 | 868.1 |
| 12.5° | 859.2 | 845.6 | 851.7 | 847.0 | 844.9 | 844.9 | 851.0 | 843.6 | 855.8 |
| 15° | 844.2 | 833.3 | 837.4 | 832.7 | 829.3 | 831.3 | 836.1 | 830.6 | 840.8 |
| 17.5° | 827.2 | 817.7 | 822.4 | 815.0 | 808.8 | 813.6 | 820.4 | 814.3 | 824.5 |
| 20° | 809.5 | 798.6 | 803.4 | 793.2 | 787.7 | 791.8 | 800.7 | 795.9 | 805.4 |
| 22.5° | 789.8 | 779.6 | 783.6 | 770.0 | 764.6 | 768.0 | 780.9 | 776.1 | 785.0 |
| 25° | 765.9 | 757.8 | 758.4 | 744.8 | 738.7 | 742.8 | 756.4 | 753.7 | 761.9 |
| 27.5° | 742.8 | 734.6 | 735.3 | 719.6 | 712.8 | 718.3 | 731.9 | 729.9 | 737.3 |
| 30° | 717.6 | 710.1 | 709.4 | 693.8 | 688.3 | 691.7 | 705.3 | 705.3 | 711.5 |
| 32.5° | 689.7 | 683.6 | 680.2 | 665.9 | 660.4 | 664.5 | 676.1 | 678.1 | 682.9 |
| 35° | 661.1 | 657.0 | 652.2 | 638.6 | 631.1 | 636.6 | 647.5 | 650.2 | 655.0 |
| 37.5° | 632.5 | 627.7 | 622.3 | 608.7 | 600.5 | 607.3 | 616.8 | 621.6 | 625.0 |
| 40° | 602.5 | 599.1 | 593.0 | 579.4 | 569.2 | 576.0 | 586.9 | 592.3 | 597.1 |
| 42.5° | 571.9 | 569.9 | 562.4 | 548.1 | 537.9 | 545.3 | 556.9 | 561.7 | 563.7 |
| 45° | 541.3 | 538.5 | 531.7 | 516.8 | 505.9 | 514.0 | 526.3 | 531.0 | 531.7 |
| 47.5° | 507.2 | 507.9 | 499.7 | 484.8 | 473.9 | 482.0 | 492.9 | 499.7 | 502.5 |
| 50° | 476.6 | 477.3 | 467.7 | 452.8 | 441.9 | 448.0 | 460.9 | 467.7 | 466.4 |
| 52.5° | 443.9 | 445.9 | 435.7 | 420.8 | 409.9 | 416.0 | 428.9 | 436.4 | 437.1 |
| 55° | 409.9 | 413.3 | 402.4 | 387.4 | 377.9 | 384.0 | 394.9 | 403.7 | 403.1 |
| 57.5° | 377.2 | 379.9 | 369.0 | 355.4 | 345.9 | 351.3 | 360.8 | 372.4 | 369.7 |
| 60° | 344.5 | 347.2 | 335.6 | 322.0 | 313.9 | 316.6 | 327.5 | 337.0 | 335.6 |
| 62.5° | 311.1 | 313.9 | 301.6 | 289.4 | 279.8 | 283.9 | 293.4 | 305.0 | 301.6 |
| 65° | 277.8 | 279.8 | 266.9 | 256.0 | 247.8 | 251.9 | 258.7 | 271.0 | 268.2 |
| 67.5° | 244.4 | 245.8 | 234.2 | 224.0 | 217.2 | 219.2 | 225.4 | 235.6 | 234.2 |
| 70° | 211.1 | 212.4 | 201.5 | 192.0 | 185.9 | 187.9 | 192.7 | 202.2 | 200.8 |
| 72.5° | 177.0 | 179.1 | 168.2 | 159.3 | 153.2 | 155.2 | 158.6 | 167.5 | 165.4 |
| 75° | 143.0 | 144.3 | 136.2 | 129.4 | 123.9 | 124.6 | 127.3 | 134.1 | 133.4 |
| 77.5° | 111.7 | 115.1 | 106.2 | 100.1 | 96.0 | 96.7 | 100.1 | 103.5 | 102.1 |
| 80° | 81.0 | 85.1 | 79.0 | 74.2 | 70.8 | 70.1 | 72.8 | 75.6 | 73.5 |
| 82.5° | 57.2 | 57.9 | 53.8 | 50.4 | 47.0 | 47.0 | 49.0 | 51.1 | 49.0 |
| 85° | 34.0 | 35.4 | 32.0 | 29.3 | 27.2 | 26.6 | 27.9 | 30.0 | 28.6 |
| 87.5° | 16.3 | 17.0 | 13.6 | 12.3 | 10.2 | 9.5 | 10.2 | 11.6 | 11.6 |
| 90° | 1.4 | 3.4 | 3.4 | 4.1 | 4.8 | 4.8 | 4.1 | 4.1 | 0.7 |
| 92.5° | 4.1 | 9.5 | 9.5 | 11.6 | 12.3 | 14.3 | 16.3 | 17.0 | 18.4 |
| 95° | 28.6 | 20.4 | 23.1 | 25.2 | 26.6 | 28.6 | 27.2 | 25.2 | 49.7 |
| 97.5° | 64.0 | 25.9 | 32.7 | 34.0 | 36.1 | 36.8 | 36.8 | 28.6 | 90.6 |
| 100° | 106.9 | 30.0 | 38.8 | 44.3 | 45.6 | 45.6 | 41.5 | 64.0 | 139.6 |
| 102.5° | 157.3 | 133.4 | 42.2 | 49.0 | 51.7 | 49.7 | 44.3 | 217.2 | 194.0 |
| 105° | 211.7 | 240.3 | 44.9 | 51.7 | 54.5 | 53.1 | 46.3 | 267.6 | 249.2 |
| 107.5° | 268.9 | 291.4 | 47.7 | 54.5 | 57.2 | 55.1 | 56.5 | 319.3 | 304.3 |
| 110° | 326.1 | 345.2 | 213.8 | 56.5 | 59.2 | 56.5 | 296.2 | 371.7 | 359.5 |



TEST NUMBER: P199385

CATALOG NUMBER: S122-DIP-U1-1-30-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° | 380.6 | 400.3 | 401.7 | 59.9 | 60.6 | 64.7 | 440.5 | 424.8 | 414.6 |
| 115° | 437.8 | 454.1 | 475.2 | 276.4 | 96.7 | 304.3 | 490.9 | 477.3 | 468.4 |
| 117.5° | 490.2 | 505.9 | 522.2 | 486.1 | 370.4 | 529.0 | 539.2 | 529.0 | 520.2 |
| 120° | 545.3 | 561.0 | 571.2 | 587.6 | 588.9 | 588.9 | 586.9 | 578.7 | 569.2 |
| 122.5° | 599.8 | 610.0 | 618.2 | 634.5 | 640.0 | 633.9 | 632.5 | 625.0 | 617.5 |
| 125° | 647.5 | 657.0 | 667.9 | 678.8 | 684.2 | 678.1 | 678.8 | 669.3 | 663.8 |
| 127.5° | 692.4 | 700.6 | 714.9 | 721.7 | 727.1 | 720.3 | 723.0 | 712.8 | 708.7 |
| 130° | 736.0 | 741.4 | 757.8 | 763.2 | 768.0 | 763.9 | 765.9 | 755.0 | 751.6 |
| 132.5° | 778.9 | 786.4 | 800.0 | 802.0 | 807.5 | 801.3 | 808.8 | 793.8 | 792.5 |
| 135° | 823.8 | 829.9 | 840.1 | 840.8 | 844.9 | 841.5 | 847.6 | 835.4 | 831.3 |
| 137.5° | 866.0 | 868.7 | 877.6 | 874.9 | 881.0 | 875.5 | 884.4 | 872.1 | 869.4 |
| 140° | 902.8 | 904.8 | 911.0 | 912.3 | 916.4 | 911.6 | 918.4 | 906.2 | 904.8 |
| 142.5° | 936.8 | 939.5 | 945.0 | 944.3 | 949.1 | 944.3 | 952.5 | 941.6 | 940.2 |
| 145° | 968.8 | 972.9 | 977.7 | 975.6 | 979.0 | 976.3 | 984.5 | 972.9 | 972.2 |
| 147.5° | 1000.8 | 1002.2 | 1009.0 | 1005.6 | 1007.6 | 1004.2 | 1013.1 | 1003.5 | 1002.2 |
| 150° | 1028.7 | 1031.5 | 1035.5 | 1031.5 | 1032.1 | 1030.1 | 1038.9 | 1030.8 | 1029.4 |
| 152.5° | 1056.7 | 1056.0 | 1062.1 | 1053.9 | 1057.3 | 1053.9 | 1064.1 | 1056.0 | 1056.0 |
| 155° | 1079.1 | 1078.4 | 1085.9 | 1077.1 | 1078.4 | 1075.7 | 1087.3 | 1077.8 | 1079.8 |
| 157.5° | 1101.6 | 1098.2 | 1107.0 | 1098.2 | 1095.5 | 1097.5 | 1106.4 | 1097.5 | 1101.6 |
| 160° | 1121.3 | 1117.9 | 1126.1 | 1116.6 | 1114.5 | 1115.9 | 1125.4 | 1117.2 | 1118.6 |
| 162.5° | 1138.4 | 1133.6 | 1141.1 | 1130.9 | 1130.9 | 1128.8 | 1141.1 | 1132.9 | 1137.0 |
| 165° | 1153.3 | 1147.9 | 1154.0 | 1143.8 | 1142.4 | 1141.1 | 1152.0 | 1146.5 | 1150.6 |
| 167.5° | 1164.2 | 1158.8 | 1164.2 | 1152.6 | 1154.0 | 1151.3 | 1162.2 | 1158.8 | 1163.5 |
| 170° | 1174.4 | 1167.6 | 1169.7 | 1159.5 | 1159.5 | 1157.4 | 1169.0 | 1165.6 | 1172.4 |
| 172.5° | 1181.2 | 1173.8 | 1173.8 | 1162.2 | 1159.5 | 1160.8 | 1173.1 | 1172.4 | 1181.9 |
| 175° | 1187.4 | 1177.2 | 1174.4 | 1163.5 | 1156.1 | 1162.9 | 1174.4 | 1176.5 | 1185.3 |
| 177.5° | 1188.7 | 1179.2 | 1176.5 | 1164.2 | 1162.2 | 1162.9 | 1177.2 | 1177.8 | 1185.3 |
| 180° | 1175.1 | 1175.1 | 1175.1 | 1175.1 | 1175.1 | 1175.1 | 1175.1 | 1175.1 | 1175.1 |

(END OF REPORT)