

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: METALUX

Report Number: P188712

Luminaire Tested: **24SR-LD2-64-C-UNV-L830-CD1-TB-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P188712
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P33587)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24SR-LD2-64-C-UNV-L830-CD1-TB-U
Description: METALUX 2X4 SKYRIDGE LED FIXTURE WITH TAHITIAN BLUE SKYTRIM.

Light Source: EATON LED 3000K
Ballast/Driver: OSRAM ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4148.0 lumens
Efficiency: N/A
Efficacy: 74.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 2.07 / 1.9
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

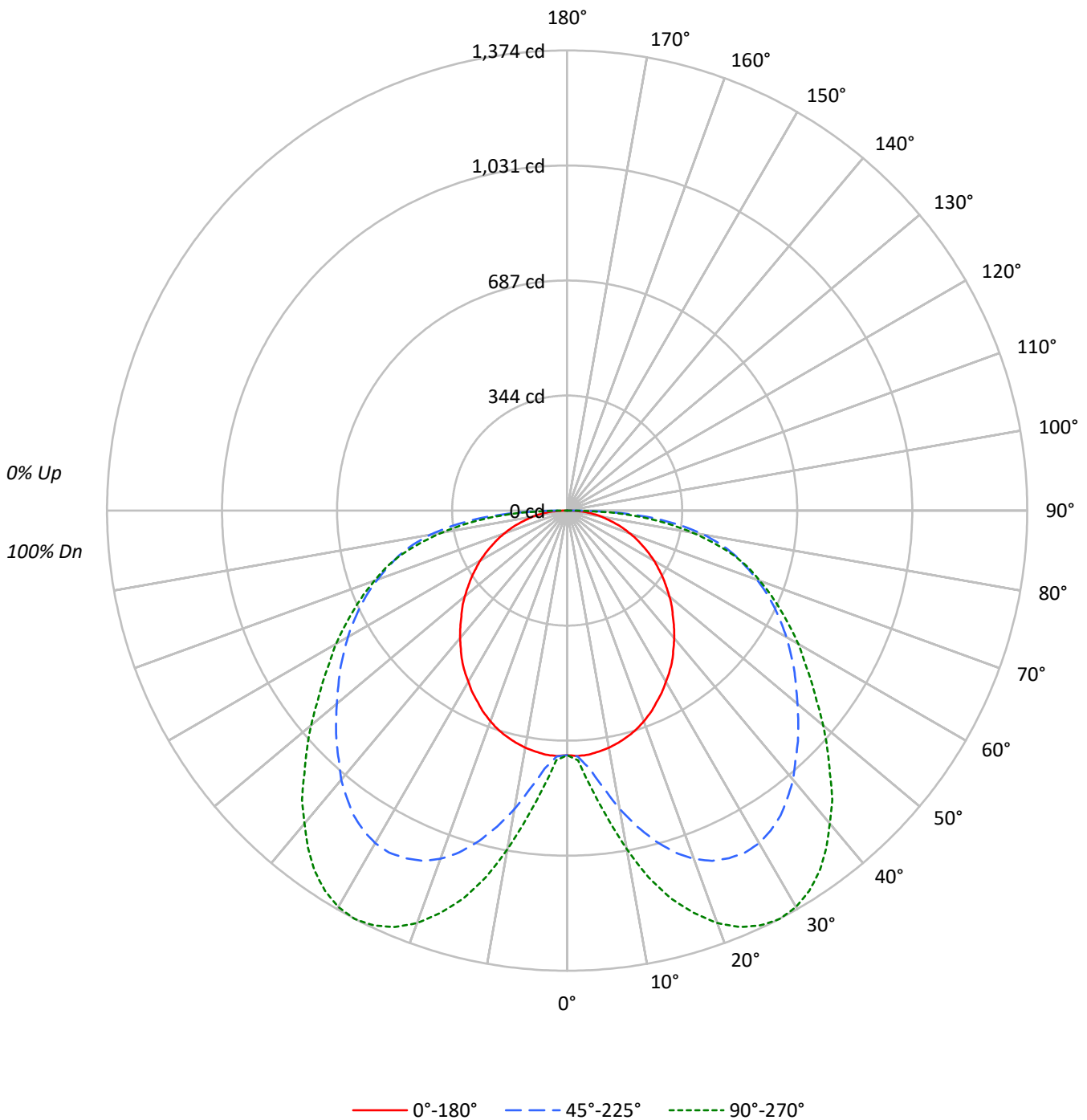
Input Watts (W): 55.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P188712

CATALOG NUMBER: 24SR-LD2-64-C-UNV-L830-CD1-TB-U

Luminous Intensity Polar Plot





TEST NUMBER: P188712

CATALOG NUMBER: 24SR-LD2-64-C-UNV-L830-CD1-TB-U

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 | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 100 |
| 1 | 106 | 100 | 95 | 91 | 103 | 98 | 93 | 89 | 94 | 90 | 86 | 90 | 86 | 83 | 86 | 83 | 81 | 79 |
| 2 | 95 | 86 | 78 | 71 | 93 | 84 | 77 | 70 | 80 | 74 | 69 | 77 | 72 | 67 | 74 | 69 | 65 | 63 |
| 3 | 86 | 74 | 65 | 58 | 83 | 73 | 64 | 57 | 69 | 62 | 56 | 67 | 60 | 55 | 64 | 59 | 54 | 52 |
| 4 | 78 | 65 | 55 | 48 | 76 | 64 | 54 | 47 | 61 | 53 | 47 | 59 | 52 | 46 | 56 | 50 | 45 | 43 |
| 5 | 72 | 58 | 48 | 40 | 69 | 56 | 47 | 40 | 54 | 46 | 40 | 52 | 45 | 39 | 50 | 44 | 39 | 36 |
| 6 | 66 | 51 | 42 | 35 | 64 | 50 | 41 | 35 | 49 | 40 | 34 | 47 | 39 | 34 | 45 | 39 | 34 | 31 |
| 7 | 61 | 46 | 37 | 30 | 59 | 45 | 37 | 30 | 44 | 36 | 30 | 42 | 35 | 30 | 41 | 34 | 29 | 27 |
| 8 | 56 | 42 | 33 | 27 | 55 | 41 | 33 | 27 | 40 | 32 | 26 | 39 | 31 | 26 | 37 | 31 | 26 | 24 |
| 9 | 53 | 38 | 30 | 24 | 51 | 38 | 29 | 24 | 37 | 29 | 24 | 35 | 28 | 23 | 34 | 28 | 23 | 21 |
| 10 | 49 | 35 | 27 | 21 | 48 | 35 | 27 | 21 | 34 | 26 | 21 | 33 | 26 | 21 | 32 | 25 | 21 | 19 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-----|------|------|
| 0° | 983 | 983 | 983 |
| 5° | 989 | 1045 | 1124 |
| 10° | 983 | 1235 | 1403 |
| 15° | 973 | 1424 | 1670 |
| 20° | 959 | 1584 | 1877 |
| 25° | 938 | 1700 | 2029 |
| 30° | 917 | 1781 | 2123 |
| 35° | 898 | 1826 | 2158 |
| 40° | 874 | 1843 | 2143 |
| 45° | 850 | 1854 | 2112 |
| 50° | 834 | 1879 | 2089 |
| 55° | 819 | 1941 | 2087 |
| 60° | 807 | 2034 | 2146 |
| 65° | 792 | 2173 | 2239 |
| 70° | 784 | 2371 | 2409 |
| 75° | 779 | 2702 | 2677 |
| 80° | 803 | 3212 | 2941 |
| 85° | 886 | 3988 | 3446 |



TEST NUMBER: P188712

CATALOG NUMBER: 24SR-LD2-64-C-UNV-L830-CD1-TB-U

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 77.8 | 1.9 |
| 10°-20° | 280.9 | 6.8 |
| 20°-30° | 500.3 | 12.1 |
| 30°-40° | 648.8 | 15.6 |
| 40°-50° | 691.8 | 16.7 |
| 50°-60° | 665.5 | 16.0 |
| 60°-70° | 595.5 | 14.4 |
| 70°-80° | 468.8 | 11.3 |
| 80°-90° | 218.6 | 5.3 |
| 90°-100° | 0.0 | 0.0 |
| 100°-110° | 0.0 | 0.0 |
| 110°-120° | 0.0 | 0.0 |
| 120°-130° | 0.0 | 0.0 |
| 130°-140° | 0.0 | 0.0 |
| 140°-150° | 0.0 | 0.0 |
| 150°-160° | 0.0 | 0.0 |
| 160°-170° | 0.0 | 0.0 |
| 170°-180° | 0.0 | 0.0 |
| 0°-30° | 859.1 | 20.7 |
| 0°-40° | 1507.8 | 36.4 |
| 0°-60° | 2865.1 | 69.1 |
| 0°-90° | 4148.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4148.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|------|-------|------|------|
| 0° | 730 | 730 | 730 | 730 | 730 | |
| 5° | 732 | 741 | 773 | 815 | 832 | 69 |
| 15° | 698 | 831 | 1022 | 1155 | 1199 | 197 |
| 25° | 632 | 883 | 1145 | 1317 | 1367 | 291 |
| 35° | 547 | 840 | 1111 | 1271 | 1314 | 341 |
| 45° | 446 | 733 | 974 | 1088 | 1110 | 346 |
| 55° | 349 | 629 | 828 | 882 | 890 | 312 |
| 65° | 249 | 533 | 682 | 697 | 703 | 247 |
| 75° | 150 | 411 | 520 | 513 | 515 | 159 |
| 85° | 57 | 218 | 258 | 230 | 223 | 61 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P188712

CATALOG NUMBER: 24SR-LD2-64-C-UNV-L830-CD1-TB-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|
| 0° | 730.3 | 730.3 | 730.3 | 730.3 | 730.3 | 730.3 | 730.3 | 730.3 | 730.3 | 730.3 | 730.3 |
| 2.5° | 733.5 | 733.5 | 731.9 | 731.9 | 733.5 | 733.5 | 733.5 | 733.5 | 735.1 | 735.1 | 736.7 |
| 5° | 731.9 | 730.3 | 730.3 | 733.5 | 738.3 | 743.1 | 747.9 | 755.8 | 762.2 | 773.4 | 782.9 |
| 7.5° | 725.5 | 725.5 | 728.7 | 736.7 | 747.9 | 763.8 | 781.3 | 800.5 | 818.0 | 835.6 | 856.3 |
| 10° | 719.2 | 719.2 | 727.1 | 741.5 | 763.8 | 792.5 | 821.2 | 849.9 | 877.0 | 904.1 | 926.4 |
| 12.5° | 709.6 | 711.2 | 723.9 | 749.5 | 786.1 | 826.0 | 862.7 | 899.3 | 936.0 | 966.3 | 999.8 |
| 15° | 698.4 | 701.6 | 720.7 | 759.0 | 806.9 | 854.7 | 899.3 | 944.0 | 985.4 | 1022.1 | 1057.2 |
| 17.5° | 685.7 | 690.5 | 717.6 | 767.0 | 822.8 | 877.0 | 932.8 | 983.9 | 1028.5 | 1070.0 | 1109.8 |
| 20° | 669.7 | 677.7 | 714.4 | 773.4 | 835.6 | 897.7 | 956.7 | 1011.0 | 1062.0 | 1106.6 | 1151.3 |
| 22.5° | 652.2 | 661.7 | 708.0 | 775.0 | 843.5 | 910.5 | 975.9 | 1031.7 | 1085.9 | 1132.1 | 1178.4 |
| 25° | 631.5 | 645.8 | 701.6 | 773.4 | 846.7 | 918.5 | 985.4 | 1042.9 | 1098.7 | 1144.9 | 1195.9 |
| 27.5° | 612.3 | 628.3 | 690.5 | 767.0 | 843.5 | 918.5 | 985.4 | 1046.0 | 1103.4 | 1151.3 | 1200.7 |
| 30° | 590.0 | 610.7 | 679.3 | 757.4 | 835.6 | 910.5 | 979.1 | 1039.7 | 1095.5 | 1146.5 | 1197.5 |
| 32.5° | 569.3 | 591.6 | 661.7 | 741.5 | 821.2 | 896.2 | 966.3 | 1025.3 | 1081.1 | 1132.1 | 1181.6 |
| 35° | 546.9 | 569.3 | 642.6 | 725.5 | 802.1 | 877.0 | 944.0 | 1004.6 | 1058.8 | 1111.4 | 1157.7 |
| 37.5° | 521.4 | 546.9 | 621.9 | 703.2 | 778.2 | 853.1 | 918.5 | 977.5 | 1031.7 | 1081.1 | 1125.8 |
| 40° | 497.5 | 524.6 | 598.0 | 679.3 | 754.2 | 826.0 | 889.8 | 945.6 | 998.2 | 1049.2 | 1089.1 |
| 42.5° | 472.0 | 500.7 | 575.6 | 653.8 | 727.1 | 795.7 | 856.3 | 913.7 | 964.7 | 1009.4 | 1049.2 |
| 45° | 446.5 | 478.4 | 551.7 | 628.3 | 698.4 | 767.0 | 827.6 | 880.2 | 929.6 | 974.3 | 1007.8 |
| 47.5° | 424.2 | 456.0 | 526.2 | 602.8 | 672.9 | 738.3 | 797.3 | 848.3 | 896.2 | 936.0 | 969.5 |
| 50° | 398.6 | 430.5 | 502.3 | 577.2 | 645.8 | 711.2 | 767.0 | 816.4 | 861.1 | 897.7 | 929.6 |
| 52.5° | 373.1 | 408.2 | 478.4 | 553.3 | 621.9 | 684.1 | 739.9 | 787.7 | 827.6 | 861.1 | 888.2 |
| 55° | 349.2 | 384.3 | 456.0 | 529.4 | 598.0 | 660.2 | 712.8 | 759.0 | 797.3 | 827.6 | 848.3 |
| 57.5° | 323.7 | 362.0 | 435.3 | 508.7 | 575.6 | 634.6 | 687.3 | 730.3 | 765.4 | 790.9 | 808.5 |
| 60° | 299.8 | 339.6 | 414.6 | 486.3 | 553.3 | 612.3 | 661.7 | 703.2 | 733.5 | 755.8 | 770.2 |
| 62.5° | 274.3 | 317.3 | 392.3 | 464.0 | 529.4 | 588.4 | 634.6 | 672.9 | 701.6 | 719.2 | 728.7 |
| 65° | 248.8 | 295.0 | 369.9 | 441.7 | 505.5 | 561.3 | 605.9 | 641.0 | 666.5 | 682.5 | 690.5 |
| 67.5° | 224.8 | 272.7 | 347.6 | 417.8 | 480.0 | 532.6 | 575.6 | 609.1 | 631.5 | 644.2 | 647.4 |
| 70° | 199.3 | 248.8 | 323.7 | 392.3 | 452.9 | 502.3 | 543.8 | 572.5 | 593.2 | 602.8 | 605.9 |
| 72.5° | 175.4 | 224.8 | 298.2 | 365.2 | 422.6 | 468.8 | 508.7 | 537.4 | 554.9 | 561.3 | 561.3 |
| 75° | 149.9 | 199.3 | 271.1 | 334.9 | 387.5 | 433.7 | 470.4 | 495.9 | 511.9 | 519.8 | 516.6 |
| 77.5° | 124.4 | 173.8 | 242.4 | 301.4 | 349.2 | 390.7 | 427.3 | 451.3 | 467.2 | 472.0 | 468.8 |
| 80° | 103.6 | 148.3 | 208.9 | 263.1 | 307.8 | 346.0 | 379.5 | 403.4 | 417.8 | 414.6 | 406.6 |
| 82.5° | 79.7 | 121.2 | 173.8 | 220.1 | 259.9 | 296.6 | 328.5 | 347.6 | 350.8 | 344.4 | 334.9 |
| 85° | 57.4 | 89.3 | 132.3 | 169.0 | 204.1 | 231.2 | 253.5 | 266.3 | 266.3 | 258.3 | 251.9 |
| 87.5° | 33.5 | 52.6 | 76.5 | 102.1 | 118.0 | 135.5 | 153.1 | 156.3 | 156.3 | 156.3 | 148.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



TEST NUMBER: P188712

CATALOG NUMBER: 24SR-LD2-64-C-UNV-L830-CD1-TB-U

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 730.3 | 730.3 | 730.3 | 730.3 | 730.3 | 730.3 | 730.3 | 730.3 |
| 2.5° | 741.5 | 743.1 | 744.7 | 746.3 | 747.9 | 747.9 | 747.9 | 746.3 |
| 5° | 792.5 | 802.1 | 810.0 | 819.6 | 822.8 | 826.0 | 829.2 | 832.4 |
| 7.5° | 873.8 | 886.6 | 899.3 | 912.1 | 920.1 | 929.6 | 926.4 | 926.4 |
| 10° | 952.0 | 975.9 | 990.2 | 1006.2 | 1014.2 | 1023.7 | 1028.5 | 1026.9 |
| 12.5° | 1028.5 | 1055.6 | 1076.3 | 1090.7 | 1103.4 | 1113.0 | 1116.2 | 1121.0 |
| 15° | 1093.9 | 1121.0 | 1146.5 | 1164.0 | 1180.0 | 1189.6 | 1195.9 | 1199.1 |
| 17.5° | 1148.1 | 1175.2 | 1203.9 | 1226.2 | 1240.6 | 1253.3 | 1256.5 | 1259.7 |
| 20° | 1188.0 | 1223.0 | 1250.1 | 1274.1 | 1290.0 | 1302.8 | 1309.1 | 1310.7 |
| 22.5° | 1219.9 | 1253.3 | 1283.6 | 1307.6 | 1325.1 | 1339.4 | 1345.8 | 1345.8 |
| 25° | 1237.4 | 1272.5 | 1304.4 | 1329.9 | 1347.4 | 1360.2 | 1366.6 | 1366.6 |
| 27.5° | 1243.8 | 1280.4 | 1310.7 | 1336.3 | 1355.4 | 1368.1 | 1372.9 | 1374.5 |
| 30° | 1239.0 | 1275.7 | 1306.0 | 1329.9 | 1349.0 | 1360.2 | 1365.0 | 1366.6 |
| 32.5° | 1223.0 | 1259.7 | 1288.4 | 1310.7 | 1328.3 | 1341.0 | 1345.8 | 1345.8 |
| 35° | 1197.5 | 1231.0 | 1259.7 | 1282.0 | 1298.0 | 1307.6 | 1313.9 | 1313.9 |
| 37.5° | 1164.0 | 1197.5 | 1223.0 | 1242.2 | 1256.5 | 1267.7 | 1270.9 | 1270.9 |
| 40° | 1125.8 | 1154.5 | 1178.4 | 1197.5 | 1210.3 | 1218.3 | 1221.4 | 1219.9 |
| 42.5° | 1082.7 | 1109.8 | 1129.0 | 1144.9 | 1156.1 | 1164.0 | 1168.8 | 1172.0 |
| 45° | 1038.1 | 1063.6 | 1081.1 | 1093.9 | 1101.9 | 1106.6 | 1111.4 | 1109.8 |
| 47.5° | 998.2 | 1014.2 | 1030.1 | 1039.7 | 1047.6 | 1052.4 | 1054.0 | 1054.0 |
| 50° | 952.0 | 966.3 | 979.1 | 987.0 | 991.8 | 995.0 | 995.0 | 998.2 |
| 52.5° | 905.7 | 918.5 | 928.0 | 936.0 | 939.2 | 940.8 | 942.4 | 940.8 |
| 55° | 864.3 | 872.2 | 878.6 | 885.0 | 888.2 | 889.8 | 893.0 | 889.8 |
| 57.5° | 821.2 | 827.6 | 835.6 | 837.2 | 840.3 | 840.3 | 841.9 | 840.3 |
| 60° | 778.2 | 782.9 | 786.1 | 787.7 | 792.5 | 794.1 | 794.1 | 797.3 |
| 62.5° | 735.1 | 736.7 | 741.5 | 743.1 | 744.7 | 747.9 | 751.0 | 749.5 |
| 65° | 692.0 | 693.6 | 695.2 | 698.4 | 701.6 | 704.8 | 704.8 | 703.2 |
| 67.5° | 647.4 | 649.0 | 650.6 | 653.8 | 657.0 | 657.0 | 658.6 | 658.6 |
| 70° | 604.3 | 604.3 | 605.9 | 607.5 | 610.7 | 612.3 | 613.9 | 612.3 |
| 72.5° | 559.7 | 559.7 | 559.7 | 561.3 | 562.9 | 566.1 | 567.7 | 567.7 |
| 75° | 513.5 | 513.5 | 513.5 | 511.9 | 513.5 | 516.6 | 515.0 | 515.0 |
| 77.5° | 462.4 | 457.6 | 452.9 | 449.7 | 451.3 | 449.7 | 449.7 | 449.7 |
| 80° | 398.6 | 390.7 | 384.3 | 381.1 | 379.5 | 381.1 | 379.5 | 379.5 |
| 82.5° | 328.5 | 320.5 | 314.1 | 309.3 | 310.9 | 307.8 | 309.3 | 306.2 |
| 85° | 244.0 | 237.6 | 231.2 | 228.0 | 229.6 | 229.6 | 228.0 | 223.2 |
| 87.5° | 143.5 | 135.5 | 133.9 | 132.3 | 133.9 | 132.3 | 127.6 | 129.2 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)