

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: P188465

Luminaire Tested: **24SR-LD2-53-C-UNV-L850-CD1-BR-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P188465
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24786)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24SR-LD2-53-C-UNV-L850-CD1-BR-U
Description: METALUX 2X4 SKYRIDGE LED FIXTURE WITH BELLADONNA ROSE

Light Source: EATON LED 5000K
Ballast/Driver: OSRAM ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3648.0 lumens
Efficiency: N/A
Efficacy: 84.6 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 2.29 / 2.08
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

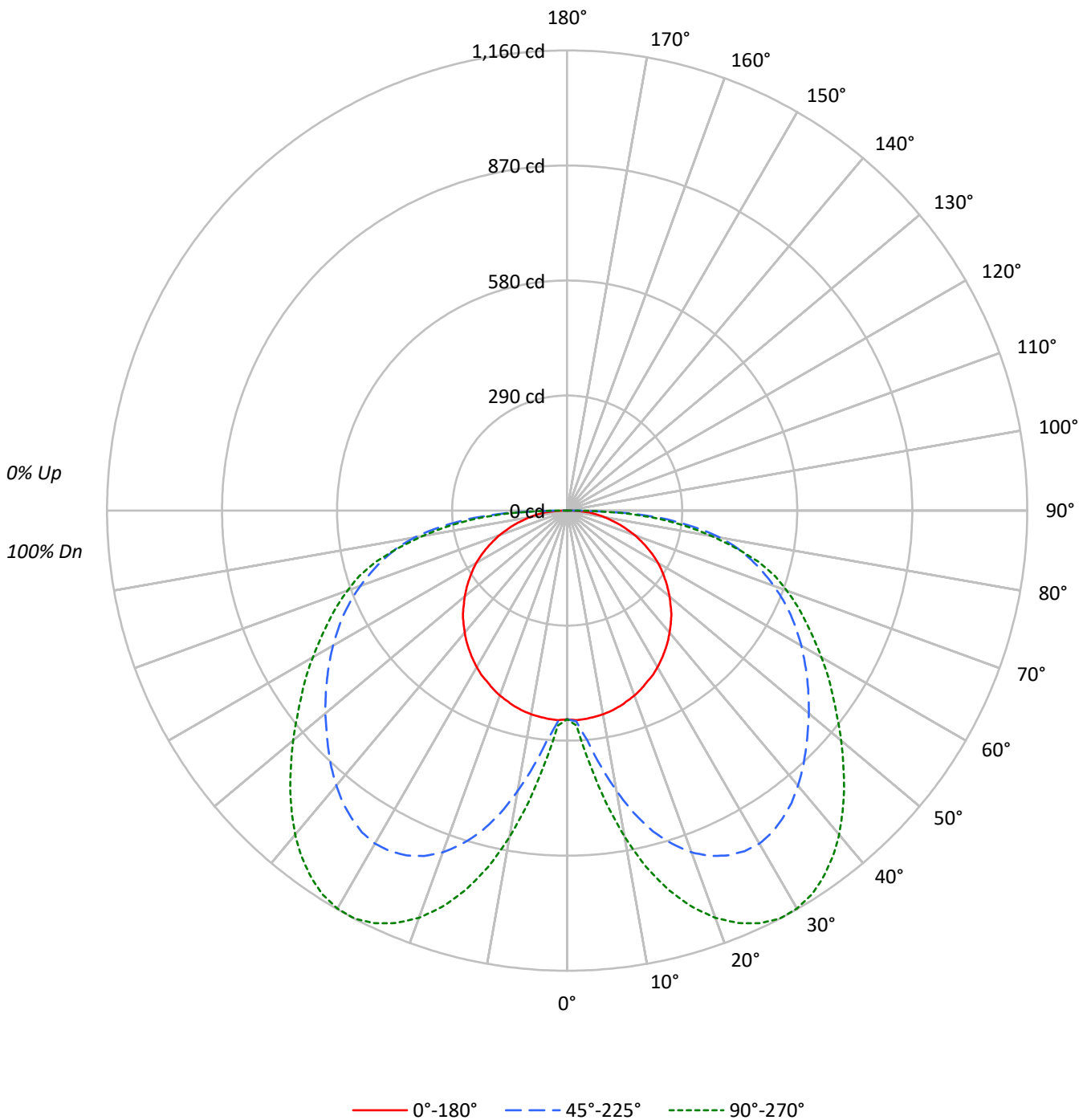
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P188465

CATALOG NUMBER: 24SR-LD2-53-C-UNV-L850-CD1-BR-U

Luminous Intensity Polar Plot





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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 | 94 | 90 | 103 | 97 | 93 | 88 | 93 | 89 | 85 | 89 | 86 | 83 | 85 | 83 | 80 | 78 |
| 2 | 95 | 85 | 77 | 70 | 92 | 83 | 75 | 69 | 79 | 73 | 67 | 76 | 70 | 66 | 73 | 68 | 64 | 62 |
| 3 | 85 | 73 | 64 | 56 | 83 | 71 | 63 | 56 | 68 | 61 | 55 | 65 | 59 | 54 | 63 | 57 | 53 | 50 |
| 4 | 77 | 64 | 54 | 46 | 75 | 62 | 53 | 46 | 60 | 52 | 45 | 57 | 50 | 45 | 55 | 49 | 44 | 41 |
| 5 | 71 | 56 | 46 | 39 | 68 | 55 | 46 | 39 | 53 | 45 | 38 | 51 | 44 | 38 | 49 | 42 | 37 | 35 |
| 6 | 65 | 50 | 40 | 33 | 63 | 49 | 40 | 33 | 47 | 39 | 33 | 46 | 38 | 33 | 44 | 37 | 32 | 30 |
| 7 | 60 | 45 | 36 | 29 | 58 | 44 | 35 | 29 | 43 | 35 | 29 | 41 | 34 | 28 | 40 | 33 | 28 | 26 |
| 8 | 56 | 41 | 32 | 25 | 54 | 40 | 31 | 25 | 39 | 31 | 25 | 38 | 30 | 25 | 36 | 30 | 25 | 23 |
| 9 | 52 | 37 | 29 | 23 | 50 | 37 | 28 | 22 | 36 | 28 | 22 | 34 | 27 | 22 | 33 | 27 | 22 | 20 |
| 10 | 48 | 34 | 26 | 20 | 47 | 34 | 26 | 20 | 33 | 25 | 20 | 32 | 25 | 20 | 31 | 24 | 20 | 18 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 45° | 90° |
|-----|-----|------|------|
| 0° | 708 | 708 | 708 |
| 5° | 712 | 785 | 860 |
| 10° | 712 | 981 | 1140 |
| 15° | 712 | 1167 | 1380 |
| 20° | 710 | 1313 | 1564 |
| 25° | 707 | 1424 | 1704 |
| 30° | 708 | 1506 | 1799 |
| 35° | 706 | 1555 | 1851 |
| 40° | 705 | 1590 | 1874 |
| 45° | 707 | 1619 | 1879 |
| 50° | 706 | 1665 | 1888 |
| 55° | 707 | 1733 | 1919 |
| 60° | 714 | 1835 | 1992 |
| 65° | 711 | 1980 | 2113 |
| 70° | 713 | 2181 | 2317 |
| 75° | 716 | 2501 | 2594 |
| 80° | 743 | 3030 | 2868 |
| 85° | 855 | 3909 | 3538 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 59.0 | 1.6 |
| 10°-20° | 225.5 | 6.2 |
| 20°-30° | 412.4 | 11.3 |
| 30°-40° | 548.4 | 15.0 |
| 40°-50° | 603.8 | 16.6 |
| 50°-60° | 598.4 | 16.4 |
| 60°-70° | 547.8 | 15.0 |
| 70°-80° | 441.1 | 12.1 |
| 80°-90° | 211.6 | 5.8 |
| 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° | 696.9 | 19.1 |
| 0°-40° | 1245.3 | 34.1 |
| 0°-60° | 2447.5 | 67.1 |
| 0°-90° | 3648.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 3648.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|------|------|
| 0° | 526 | 526 | 526 | 526 | 526 | |
| 5° | 527 | 532 | 581 | 621 | 637 | 50 |
| 15° | 511 | 643 | 838 | 949 | 990 | 144 |
| 25° | 476 | 714 | 959 | 1098 | 1148 | 220 |
| 35° | 430 | 702 | 947 | 1080 | 1127 | 269 |
| 45° | 372 | 633 | 851 | 954 | 987 | 286 |
| 55° | 301 | 558 | 739 | 800 | 818 | 270 |
| 65° | 223 | 482 | 622 | 649 | 664 | 221 |
| 75° | 138 | 376 | 481 | 494 | 499 | 145 |
| 85° | 55 | 205 | 253 | 232 | 229 | 57 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P188465

CATALOG NUMBER: 24SR-LD2-53-C-UNV-L850-CD1-BR-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 0° | 525.9 | 525.9 | 525.9 | 525.9 | 525.9 | 525.9 | 525.9 | 525.9 | 525.9 | 525.9 | 525.9 |
| 2.5° | 528.9 | 528.9 | 527.4 | 527.4 | 527.4 | 527.4 | 527.4 | 527.4 | 528.9 | 531.9 | 533.4 |
| 5° | 527.4 | 527.4 | 527.4 | 527.4 | 528.9 | 534.9 | 542.4 | 554.4 | 566.4 | 581.4 | 594.8 |
| 7.5° | 524.4 | 524.4 | 524.4 | 528.9 | 542.4 | 563.4 | 582.9 | 605.3 | 627.8 | 650.3 | 668.3 |
| 10° | 521.4 | 521.4 | 524.4 | 540.9 | 567.9 | 599.3 | 629.3 | 659.3 | 687.7 | 717.7 | 743.2 |
| 12.5° | 516.9 | 516.9 | 525.9 | 555.9 | 594.8 | 633.8 | 672.8 | 708.7 | 744.7 | 782.1 | 810.6 |
| 15° | 510.9 | 510.9 | 530.4 | 570.9 | 618.8 | 666.8 | 711.7 | 755.2 | 797.1 | 837.6 | 869.0 |
| 17.5° | 503.4 | 506.4 | 534.9 | 585.9 | 639.8 | 695.2 | 744.7 | 794.1 | 839.1 | 881.0 | 918.5 |
| 20° | 496.0 | 500.5 | 539.4 | 597.8 | 657.8 | 719.2 | 773.2 | 824.1 | 872.0 | 917.0 | 956.0 |
| 22.5° | 487.0 | 493.0 | 542.4 | 606.8 | 671.3 | 735.7 | 792.6 | 846.6 | 897.5 | 942.5 | 982.9 |
| 25° | 476.5 | 485.5 | 543.9 | 611.3 | 681.8 | 746.2 | 804.6 | 860.1 | 912.5 | 958.9 | 999.4 |
| 27.5° | 467.5 | 479.5 | 542.4 | 614.3 | 686.2 | 752.2 | 812.1 | 867.5 | 921.5 | 967.9 | 1009.9 |
| 30° | 455.5 | 470.5 | 539.4 | 612.8 | 684.7 | 752.2 | 810.6 | 867.5 | 921.5 | 969.4 | 1009.9 |
| 32.5° | 443.5 | 461.5 | 531.9 | 606.8 | 680.3 | 744.7 | 804.6 | 861.6 | 914.0 | 961.9 | 1000.9 |
| 35° | 430.0 | 451.0 | 522.9 | 597.8 | 669.8 | 734.2 | 792.6 | 848.1 | 902.0 | 947.0 | 985.9 |
| 37.5° | 416.5 | 439.0 | 510.9 | 585.9 | 656.3 | 719.2 | 776.1 | 831.6 | 882.5 | 929.0 | 964.9 |
| 40° | 401.6 | 427.0 | 499.0 | 572.4 | 639.8 | 701.2 | 758.2 | 812.1 | 861.6 | 905.0 | 939.5 |
| 42.5° | 386.6 | 413.5 | 485.5 | 557.4 | 623.3 | 681.8 | 738.7 | 789.6 | 837.6 | 879.5 | 911.0 |
| 45° | 371.6 | 398.6 | 469.0 | 540.9 | 603.8 | 662.3 | 716.2 | 767.2 | 812.1 | 851.1 | 881.0 |
| 47.5° | 353.6 | 383.6 | 454.0 | 522.9 | 584.4 | 642.8 | 695.2 | 743.2 | 788.1 | 822.6 | 851.1 |
| 50° | 337.1 | 368.6 | 437.5 | 504.9 | 564.9 | 623.3 | 674.3 | 720.7 | 762.7 | 795.6 | 821.1 |
| 52.5° | 319.2 | 352.1 | 421.0 | 488.5 | 548.4 | 603.8 | 654.8 | 698.2 | 735.7 | 767.2 | 791.1 |
| 55° | 301.2 | 335.6 | 406.1 | 470.5 | 530.4 | 585.9 | 633.8 | 675.8 | 711.7 | 738.7 | 761.2 |
| 57.5° | 283.2 | 319.2 | 389.6 | 455.5 | 513.9 | 567.9 | 614.3 | 651.8 | 686.2 | 710.2 | 729.7 |
| 60° | 265.2 | 302.7 | 371.6 | 437.5 | 497.5 | 548.4 | 593.4 | 629.3 | 659.3 | 681.8 | 698.2 |
| 62.5° | 244.2 | 284.7 | 355.1 | 419.5 | 478.0 | 527.4 | 570.9 | 603.8 | 632.3 | 651.8 | 665.3 |
| 65° | 223.3 | 266.7 | 337.1 | 401.6 | 458.5 | 506.4 | 546.9 | 578.4 | 603.8 | 621.8 | 630.8 |
| 67.5° | 202.3 | 248.7 | 319.2 | 383.6 | 437.5 | 482.5 | 521.4 | 551.4 | 573.9 | 588.9 | 596.3 |
| 70° | 181.3 | 227.8 | 298.2 | 361.1 | 413.5 | 455.5 | 493.0 | 521.4 | 540.9 | 554.4 | 560.4 |
| 72.5° | 158.8 | 206.8 | 275.7 | 337.1 | 386.6 | 428.5 | 463.0 | 490.0 | 507.9 | 518.4 | 522.9 |
| 75° | 137.8 | 184.3 | 251.7 | 310.2 | 356.6 | 395.6 | 428.5 | 455.5 | 473.5 | 481.0 | 485.5 |
| 77.5° | 115.4 | 161.8 | 226.3 | 280.2 | 323.6 | 359.6 | 391.1 | 416.5 | 433.0 | 440.5 | 445.0 |
| 80° | 95.9 | 137.8 | 196.3 | 245.7 | 286.2 | 320.6 | 349.1 | 376.1 | 389.6 | 391.1 | 386.6 |
| 82.5° | 74.9 | 113.9 | 164.8 | 208.3 | 242.7 | 275.7 | 302.7 | 320.6 | 326.6 | 326.6 | 322.1 |
| 85° | 55.4 | 85.4 | 128.9 | 163.3 | 193.3 | 217.3 | 233.7 | 248.7 | 251.7 | 253.2 | 247.2 |
| 87.5° | 31.5 | 47.9 | 76.4 | 98.9 | 116.9 | 133.4 | 145.3 | 152.8 | 152.8 | 154.3 | 151.3 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |



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CATALOG NUMBER: 24SR-LD2-53-C-UNV-L850-CD1-BR-U

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 525.9 | 525.9 | 525.9 | 525.9 | 525.9 | 525.9 | 525.9 | 525.9 |
| 2.5° | 533.4 | 536.4 | 536.4 | 539.4 | 540.9 | 540.9 | 542.4 | 542.4 |
| 5° | 600.8 | 612.8 | 617.3 | 624.8 | 629.3 | 635.3 | 638.3 | 636.8 |
| 7.5° | 681.8 | 699.7 | 708.7 | 719.2 | 731.2 | 734.2 | 738.7 | 738.7 |
| 10° | 762.7 | 783.6 | 797.1 | 809.1 | 822.6 | 828.6 | 834.6 | 834.6 |
| 12.5° | 836.1 | 857.1 | 875.0 | 890.0 | 903.5 | 912.5 | 918.5 | 920.0 |
| 15° | 896.0 | 923.0 | 941.0 | 957.5 | 972.4 | 981.4 | 988.9 | 990.4 |
| 17.5° | 945.5 | 970.9 | 994.9 | 1012.9 | 1026.4 | 1039.9 | 1044.4 | 1047.4 |
| 20° | 984.4 | 1011.4 | 1036.9 | 1054.8 | 1069.8 | 1083.3 | 1089.3 | 1092.3 |
| 22.5° | 1012.9 | 1041.4 | 1066.8 | 1086.3 | 1101.3 | 1114.8 | 1122.3 | 1125.3 |
| 25° | 1030.9 | 1060.8 | 1087.8 | 1107.3 | 1123.8 | 1137.3 | 1144.7 | 1147.7 |
| 27.5° | 1042.9 | 1072.8 | 1098.3 | 1117.8 | 1134.3 | 1147.7 | 1155.2 | 1159.7 |
| 30° | 1042.9 | 1072.8 | 1098.3 | 1117.8 | 1134.3 | 1147.7 | 1155.2 | 1158.2 |
| 32.5° | 1033.9 | 1063.8 | 1089.3 | 1107.3 | 1123.8 | 1137.3 | 1144.7 | 1147.7 |
| 35° | 1017.4 | 1047.4 | 1071.3 | 1089.3 | 1105.8 | 1117.8 | 1125.3 | 1126.8 |
| 37.5° | 994.9 | 1023.4 | 1045.9 | 1063.8 | 1078.8 | 1090.8 | 1098.3 | 1099.8 |
| 40° | 969.4 | 996.4 | 1017.4 | 1033.9 | 1047.4 | 1057.8 | 1065.3 | 1066.8 |
| 42.5° | 939.5 | 964.9 | 982.9 | 999.4 | 1011.4 | 1021.9 | 1029.4 | 1027.9 |
| 45° | 908.0 | 932.0 | 947.0 | 960.4 | 973.9 | 981.4 | 987.4 | 987.4 |
| 47.5° | 876.5 | 896.0 | 909.5 | 921.5 | 932.0 | 939.5 | 944.0 | 944.0 |
| 50° | 843.6 | 860.1 | 872.0 | 882.5 | 891.5 | 897.5 | 902.0 | 902.0 |
| 52.5° | 810.6 | 825.6 | 834.6 | 843.6 | 851.1 | 855.6 | 860.1 | 858.6 |
| 55° | 777.6 | 789.6 | 795.6 | 804.6 | 810.6 | 816.6 | 819.6 | 818.1 |
| 57.5° | 744.7 | 752.2 | 758.2 | 765.7 | 771.7 | 777.6 | 779.1 | 780.6 |
| 60° | 708.7 | 716.2 | 720.7 | 728.2 | 734.2 | 738.7 | 741.7 | 740.2 |
| 62.5° | 674.3 | 678.8 | 683.3 | 689.2 | 693.7 | 699.7 | 701.2 | 701.2 |
| 65° | 636.8 | 641.3 | 645.8 | 651.8 | 656.3 | 662.3 | 665.3 | 663.8 |
| 67.5° | 600.8 | 605.3 | 609.8 | 614.3 | 620.3 | 626.3 | 627.8 | 627.8 |
| 70° | 563.4 | 567.9 | 570.9 | 576.9 | 581.4 | 587.4 | 588.9 | 588.9 |
| 72.5° | 527.4 | 530.4 | 533.4 | 539.4 | 542.4 | 546.9 | 549.9 | 549.9 |
| 75° | 487.0 | 490.0 | 493.0 | 496.0 | 497.5 | 499.0 | 500.5 | 499.0 |
| 77.5° | 442.0 | 439.0 | 436.0 | 436.0 | 433.0 | 434.5 | 436.0 | 434.5 |
| 80° | 380.6 | 377.6 | 374.6 | 373.1 | 370.1 | 370.1 | 371.6 | 370.1 |
| 82.5° | 316.2 | 310.2 | 307.2 | 305.7 | 302.7 | 302.7 | 302.7 | 302.7 |
| 85° | 238.2 | 235.2 | 233.7 | 230.7 | 227.8 | 226.3 | 227.8 | 229.2 |
| 87.5° | 148.3 | 145.3 | 142.3 | 139.3 | 137.8 | 136.4 | 139.3 | 134.9 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)