

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: P188693

Luminaire Tested: **24SR-LD2-45-C-UNV-L835-CD1-TB-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P188693
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-LD2-45-C-UNV-L835-CD1-TB-U
Description: METALUX 2X4 SKYRIDGE LED FIXTURE WITH TAHITIAN BLUE SKYTRIM.

Light Source: EATON LED 3500K
Ballast/Driver: OSRAM ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2979.0 lumens
Efficiency: N/A
Efficacy: 81.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 2.07 / 1.9
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

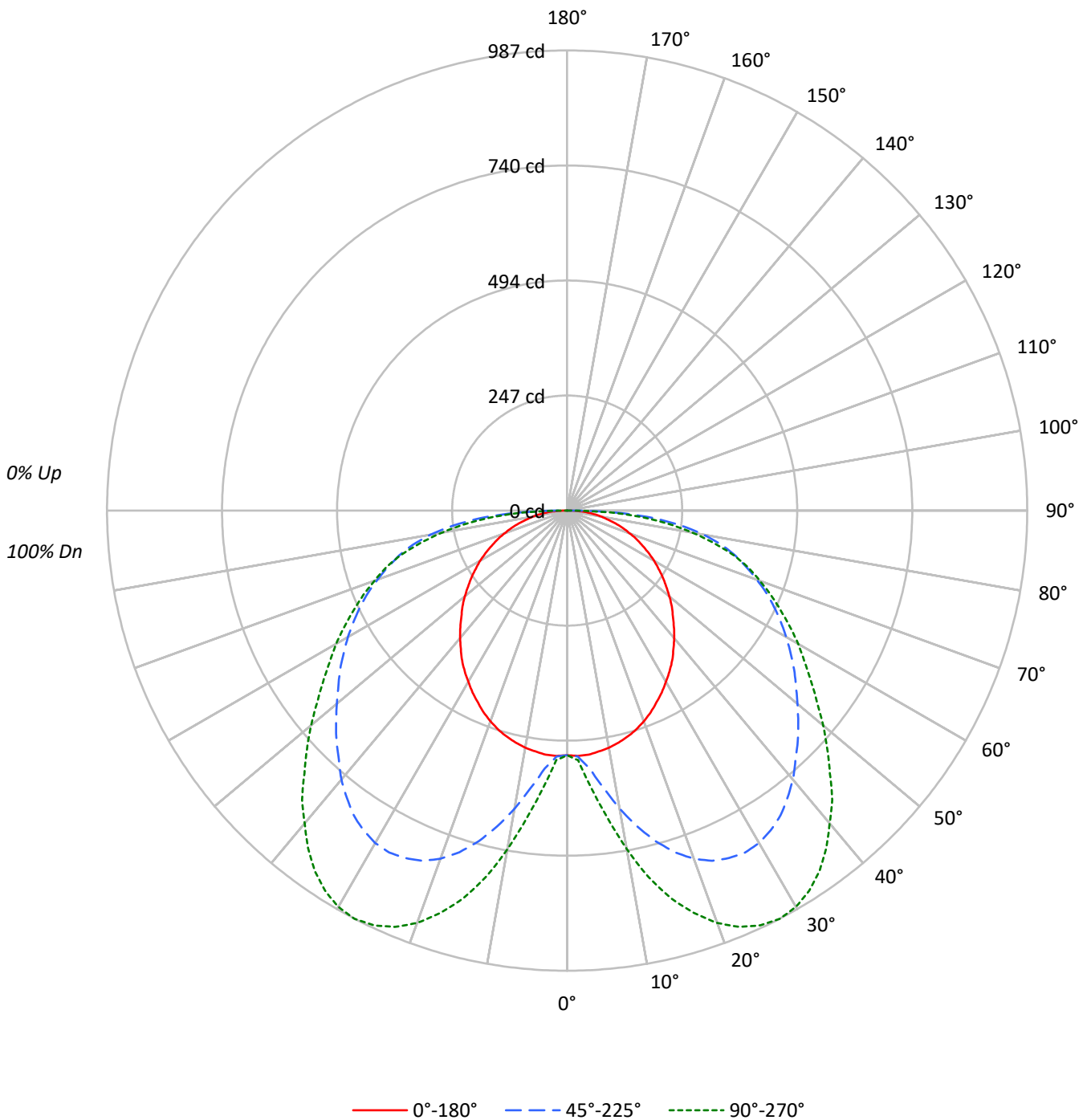
Input Watts (W): 36.7
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P188693

CATALOG NUMBER: 24SR-LD2-45-C-UNV-L835-CD1-TB-U

Luminous Intensity Polar Plot





TEST NUMBER: P188693

CATALOG NUMBER: 24SR-LD2-45-C-UNV-L835-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 | 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° | 706 | 706 | 706 |
| 5° | 710 | 750 | 807 |
| 10° | 706 | 887 | 1008 |
| 15° | 699 | 1023 | 1200 |
| 20° | 689 | 1138 | 1348 |
| 25° | 673 | 1221 | 1457 |
| 30° | 658 | 1279 | 1525 |
| 35° | 645 | 1311 | 1550 |
| 40° | 628 | 1323 | 1539 |
| 45° | 610 | 1331 | 1517 |
| 50° | 599 | 1349 | 1501 |
| 55° | 588 | 1394 | 1499 |
| 60° | 579 | 1461 | 1541 |
| 65° | 569 | 1560 | 1608 |
| 70° | 563 | 1703 | 1730 |
| 75° | 559 | 1941 | 1923 |
| 80° | 576 | 2307 | 2112 |
| 85° | 636 | 2864 | 2475 |



TEST NUMBER: P188693

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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 55.9 | 1.9 |
| 10°-20° | 201.7 | 6.8 |
| 20°-30° | 359.3 | 12.1 |
| 30°-40° | 465.9 | 15.6 |
| 40°-50° | 496.8 | 16.7 |
| 50°-60° | 477.9 | 16.0 |
| 60°-70° | 427.7 | 14.4 |
| 70°-80° | 336.7 | 11.3 |
| 80°-90° | 157.0 | 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° | 617.0 | 20.7 |
| 0°-40° | 1082.9 | 36.4 |
| 0°-60° | 2057.7 | 69.1 |
| 0°-90° | 2979.0 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 2979.0 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0° | 524 | 524 | 524 | 524 | 524 | |
| 5° | 526 | 532 | 555 | 585 | 598 | 50 |
| 15° | 502 | 597 | 734 | 830 | 861 | 141 |
| 25° | 454 | 634 | 822 | 946 | 981 | 209 |
| 35° | 393 | 603 | 798 | 913 | 944 | 245 |
| 45° | 321 | 526 | 700 | 781 | 797 | 248 |
| 55° | 251 | 452 | 594 | 633 | 639 | 224 |
| 65° | 179 | 383 | 490 | 500 | 505 | 177 |
| 75° | 108 | 295 | 373 | 368 | 370 | 114 |
| 85° | 41 | 156 | 186 | 165 | 160 | 43 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P188693

CATALOG NUMBER: 24SR-LD2-45-C-UNV-L835-CD1-TB-U

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 524.5 | 524.5 | 524.5 | 524.5 | 524.5 | 524.5 | 524.5 | 524.5 | 524.5 | 524.5 | 524.5 |
| 2.5° | 526.8 | 526.8 | 525.6 | 525.6 | 526.8 | 526.8 | 526.8 | 526.8 | 527.9 | 527.9 | 529.1 |
| 5° | 525.6 | 524.5 | 524.5 | 526.8 | 530.2 | 533.7 | 537.1 | 542.8 | 547.4 | 555.4 | 562.3 |
| 7.5° | 521.1 | 521.1 | 523.4 | 529.1 | 537.1 | 548.5 | 561.1 | 574.9 | 587.5 | 600.1 | 615.0 |
| 10° | 516.5 | 516.5 | 522.2 | 532.5 | 548.5 | 569.2 | 589.8 | 610.4 | 629.9 | 649.3 | 665.4 |
| 12.5° | 509.6 | 510.8 | 519.9 | 538.2 | 564.6 | 593.2 | 619.5 | 645.9 | 672.2 | 694.0 | 718.0 |
| 15° | 501.6 | 503.9 | 517.6 | 545.1 | 579.5 | 613.8 | 645.9 | 678.0 | 707.7 | 734.1 | 759.3 |
| 17.5° | 492.4 | 495.9 | 515.3 | 550.8 | 590.9 | 629.9 | 669.9 | 706.6 | 738.6 | 768.4 | 797.1 |
| 20° | 481.0 | 486.7 | 513.0 | 555.4 | 600.1 | 644.7 | 687.1 | 726.1 | 762.7 | 794.8 | 826.8 |
| 22.5° | 468.4 | 475.3 | 508.5 | 556.6 | 605.8 | 653.9 | 700.9 | 740.9 | 779.9 | 813.1 | 846.3 |
| 25° | 453.5 | 463.8 | 503.9 | 555.4 | 608.1 | 659.6 | 707.7 | 749.0 | 789.0 | 822.2 | 858.9 |
| 27.5° | 439.8 | 451.2 | 495.9 | 550.8 | 605.8 | 659.6 | 707.7 | 751.2 | 792.5 | 826.8 | 862.3 |
| 30° | 423.7 | 438.6 | 487.9 | 544.0 | 600.1 | 653.9 | 703.1 | 746.7 | 786.7 | 823.4 | 860.0 |
| 32.5° | 408.8 | 424.9 | 475.3 | 532.5 | 589.8 | 643.6 | 694.0 | 736.4 | 776.4 | 813.1 | 848.6 |
| 35° | 392.8 | 408.8 | 461.5 | 521.1 | 576.0 | 629.9 | 678.0 | 721.5 | 760.4 | 798.2 | 831.4 |
| 37.5° | 374.5 | 392.8 | 446.6 | 505.0 | 558.9 | 612.7 | 659.6 | 702.0 | 740.9 | 776.4 | 808.5 |
| 40° | 357.3 | 376.8 | 429.4 | 487.9 | 541.7 | 593.2 | 639.0 | 679.1 | 716.9 | 753.5 | 782.2 |
| 42.5° | 339.0 | 359.6 | 413.4 | 469.5 | 522.2 | 571.4 | 615.0 | 656.2 | 692.8 | 724.9 | 753.5 |
| 45° | 320.7 | 343.6 | 396.2 | 451.2 | 501.6 | 550.8 | 594.4 | 632.1 | 667.6 | 699.7 | 723.8 |
| 47.5° | 304.6 | 327.5 | 377.9 | 432.9 | 483.3 | 530.2 | 572.6 | 609.2 | 643.6 | 672.2 | 696.3 |
| 50° | 286.3 | 309.2 | 360.7 | 414.6 | 463.8 | 510.8 | 550.8 | 586.3 | 618.4 | 644.7 | 667.6 |
| 52.5° | 268.0 | 293.2 | 343.6 | 397.4 | 446.6 | 491.3 | 531.4 | 565.7 | 594.4 | 618.4 | 637.9 |
| 55° | 250.8 | 276.0 | 327.5 | 380.2 | 429.4 | 474.1 | 511.9 | 545.1 | 572.6 | 594.4 | 609.2 |
| 57.5° | 232.5 | 260.0 | 312.6 | 365.3 | 413.4 | 455.8 | 493.6 | 524.5 | 549.7 | 568.0 | 580.6 |
| 60° | 215.3 | 243.9 | 297.7 | 349.3 | 397.4 | 439.8 | 475.3 | 505.0 | 526.8 | 542.8 | 553.1 |
| 62.5° | 197.0 | 227.9 | 281.7 | 333.3 | 380.2 | 422.6 | 455.8 | 483.3 | 503.9 | 516.5 | 523.4 |
| 65° | 178.6 | 211.9 | 265.7 | 317.2 | 363.0 | 403.1 | 435.2 | 460.4 | 478.7 | 490.1 | 495.9 |
| 67.5° | 161.5 | 195.8 | 249.7 | 300.0 | 344.7 | 382.5 | 413.4 | 437.5 | 453.5 | 462.7 | 464.9 |
| 70° | 143.1 | 178.6 | 232.5 | 281.7 | 325.2 | 360.7 | 390.5 | 411.1 | 426.0 | 432.9 | 435.2 |
| 72.5° | 126.0 | 161.5 | 214.2 | 262.2 | 303.5 | 336.7 | 365.3 | 385.9 | 398.5 | 403.1 | 403.1 |
| 75° | 107.6 | 143.1 | 194.7 | 240.5 | 278.3 | 311.5 | 337.8 | 356.2 | 367.6 | 373.3 | 371.0 |
| 77.5° | 89.3 | 124.8 | 174.1 | 216.4 | 250.8 | 280.6 | 306.9 | 324.1 | 335.5 | 339.0 | 336.7 |
| 80° | 74.4 | 106.5 | 150.0 | 189.0 | 221.0 | 248.5 | 272.6 | 289.7 | 300.0 | 297.7 | 292.0 |
| 82.5° | 57.3 | 87.0 | 124.8 | 158.0 | 186.7 | 213.0 | 235.9 | 249.7 | 251.9 | 247.4 | 240.5 |
| 85° | 41.2 | 64.1 | 95.1 | 121.4 | 146.6 | 166.1 | 182.1 | 191.2 | 191.2 | 185.5 | 180.9 |
| 87.5° | 24.0 | 37.8 | 55.0 | 73.3 | 84.7 | 97.3 | 109.9 | 112.2 | 112.2 | 112.2 | 106.5 |
| 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-LD2-45-C-UNV-L835-CD1-TB-U

CANDELA DISTRIBUTION (continued):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0° | 524.5 | 524.5 | 524.5 | 524.5 | 524.5 | 524.5 | 524.5 | 524.5 |
| 2.5° | 532.5 | 533.7 | 534.8 | 535.9 | 537.1 | 537.1 | 537.1 | 535.9 |
| 5° | 569.2 | 576.0 | 581.8 | 588.6 | 590.9 | 593.2 | 595.5 | 597.8 |
| 7.5° | 627.6 | 636.7 | 645.9 | 655.0 | 660.8 | 667.6 | 665.4 | 665.4 |
| 10° | 683.7 | 700.9 | 711.2 | 722.6 | 728.3 | 735.2 | 738.6 | 737.5 |
| 12.5° | 738.6 | 758.1 | 773.0 | 783.3 | 792.5 | 799.3 | 801.6 | 805.1 |
| 15° | 785.6 | 805.1 | 823.4 | 836.0 | 847.4 | 854.3 | 858.9 | 861.2 |
| 17.5° | 824.5 | 844.0 | 864.6 | 880.7 | 891.0 | 900.1 | 902.4 | 904.7 |
| 20° | 853.2 | 878.4 | 897.8 | 915.0 | 926.5 | 935.6 | 940.2 | 941.3 |
| 22.5° | 876.1 | 900.1 | 921.9 | 939.1 | 951.7 | 962.0 | 966.5 | 966.5 |
| 25° | 888.7 | 913.9 | 936.8 | 955.1 | 967.7 | 976.8 | 981.4 | 981.4 |
| 27.5° | 893.2 | 919.6 | 941.3 | 959.7 | 973.4 | 982.6 | 986.0 | 987.2 |
| 30° | 889.8 | 916.2 | 937.9 | 955.1 | 968.8 | 976.8 | 980.3 | 981.4 |
| 32.5° | 878.4 | 904.7 | 925.3 | 941.3 | 953.9 | 963.1 | 966.5 | 966.5 |
| 35° | 860.0 | 884.1 | 904.7 | 920.7 | 932.2 | 939.1 | 943.6 | 943.6 |
| 37.5° | 836.0 | 860.0 | 878.4 | 892.1 | 902.4 | 910.4 | 912.7 | 912.7 |
| 40° | 808.5 | 829.1 | 846.3 | 860.0 | 869.2 | 874.9 | 877.2 | 876.1 |
| 42.5° | 777.6 | 797.1 | 810.8 | 822.2 | 830.3 | 836.0 | 839.4 | 841.7 |
| 45° | 745.5 | 763.8 | 776.4 | 785.6 | 791.3 | 794.8 | 798.2 | 797.1 |
| 47.5° | 716.9 | 728.3 | 739.8 | 746.7 | 752.4 | 755.8 | 757.0 | 757.0 |
| 50° | 683.7 | 694.0 | 703.1 | 708.9 | 712.3 | 714.6 | 714.6 | 716.9 |
| 52.5° | 650.5 | 659.6 | 666.5 | 672.2 | 674.5 | 675.7 | 676.8 | 675.7 |
| 55° | 620.7 | 626.4 | 631.0 | 635.6 | 637.9 | 639.0 | 641.3 | 639.0 |
| 57.5° | 589.8 | 594.4 | 600.1 | 601.2 | 603.5 | 603.5 | 604.7 | 603.5 |
| 60° | 558.9 | 562.3 | 564.6 | 565.7 | 569.2 | 570.3 | 570.3 | 572.6 |
| 62.5° | 527.9 | 529.1 | 532.5 | 533.7 | 534.8 | 537.1 | 539.4 | 538.2 |
| 65° | 497.0 | 498.2 | 499.3 | 501.6 | 503.9 | 506.2 | 506.2 | 505.0 |
| 67.5° | 464.9 | 466.1 | 467.2 | 469.5 | 471.8 | 471.8 | 473.0 | 473.0 |
| 70° | 434.0 | 434.0 | 435.2 | 436.3 | 438.6 | 439.8 | 440.9 | 439.8 |
| 72.5° | 402.0 | 402.0 | 402.0 | 403.1 | 404.3 | 406.5 | 407.7 | 407.7 |
| 75° | 368.8 | 368.8 | 368.8 | 367.6 | 368.8 | 371.0 | 369.9 | 369.9 |
| 77.5° | 332.1 | 328.7 | 325.2 | 322.9 | 324.1 | 322.9 | 322.9 | 322.9 |
| 80° | 286.3 | 280.6 | 276.0 | 273.7 | 272.6 | 273.7 | 272.6 | 272.6 |
| 82.5° | 235.9 | 230.2 | 225.6 | 222.2 | 223.3 | 221.0 | 222.2 | 219.9 |
| 85° | 175.2 | 170.6 | 166.1 | 163.8 | 164.9 | 164.9 | 163.8 | 160.3 |
| 87.5° | 103.1 | 97.3 | 96.2 | 95.1 | 96.2 | 95.1 | 91.6 | 92.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)