

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: P188557

Luminaire Tested: **24SR-LD2-29-C-UNV-L830-CD1-PL-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P188557  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24637)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24SR-LD2-29-C-UNV-L830-CD1-PL-U  
Description: METALUX 2X4 SKYRIDGE LED FIXTURE WITH PEARL SKYTRIM.  
  
Light Source: EATON LED 3000K  
Ballast/Driver: OSRAM ELECTRONIC DRIVER

**Summary**

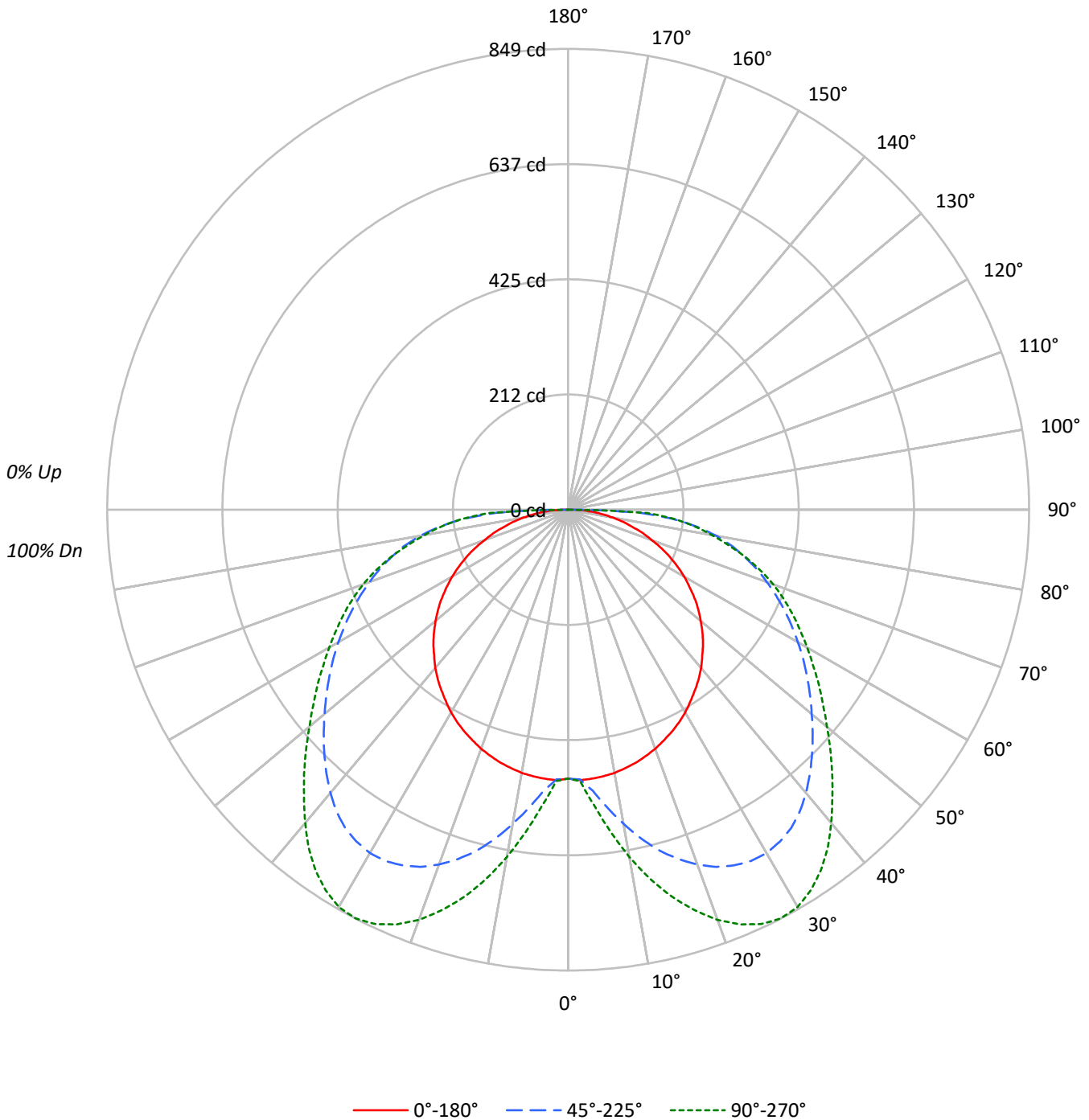
Lumens per Lamp: N/A  
Luminaire Lumens: 2731.0 lumens  
Efficiency: N/A  
Efficacy: 120.8 lumens/watt  
Spacing Criteria (0/90/45): 1.29 / 1.98 / 1.87  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 22.6  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P188557

CATALOG NUMBER: 24SR-LD2-29-C-UNV-L830-CD1-PL-U

### Luminous Intensity Polar Plot





TEST NUMBER: P188557

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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 | 95  | 90  | 103 | 98  | 93  | 88  | 93  | 89  | 85  | 89  | 86  | 83  | 86  | 83  | 80  | 78  |
| 2   | 95  | 85  | 77  | 70  | 92  | 83  | 76  | 70  | 80  | 73  | 68  | 76  | 71  | 66  | 73  | 69  | 65  | 62  |
| 3   | 86  | 74  | 64  | 57  | 83  | 72  | 63  | 56  | 69  | 61  | 55  | 66  | 60  | 54  | 63  | 58  | 53  | 51  |
| 4   | 78  | 64  | 55  | 47  | 75  | 63  | 54  | 47  | 60  | 52  | 46  | 58  | 51  | 45  | 56  | 50  | 45  | 42  |
| 5   | 71  | 57  | 47  | 40  | 69  | 56  | 47  | 40  | 54  | 45  | 39  | 52  | 44  | 39  | 50  | 43  | 38  | 36  |
| 6   | 65  | 51  | 41  | 34  | 63  | 50  | 41  | 34  | 48  | 40  | 34  | 46  | 39  | 33  | 45  | 38  | 33  | 31  |
| 7   | 60  | 46  | 36  | 30  | 59  | 45  | 36  | 30  | 43  | 35  | 29  | 42  | 35  | 29  | 40  | 34  | 29  | 27  |
| 8   | 56  | 42  | 32  | 26  | 54  | 41  | 32  | 26  | 39  | 32  | 26  | 38  | 31  | 26  | 37  | 30  | 26  | 23  |
| 9   | 52  | 38  | 29  | 23  | 51  | 37  | 29  | 23  | 36  | 28  | 23  | 35  | 28  | 23  | 34  | 27  | 23  | 21  |
| 10  | 49  | 35  | 26  | 21  | 48  | 34  | 26  | 21  | 33  | 26  | 21  | 32  | 25  | 21  | 31  | 25  | 20  | 19  |

**AVERAGE LUMINANCE (cd/sqm):**

|     | 0°  | 45°  | 90°  |
|-----|-----|------|------|
| 0°  | 666 | 666  | 666  |
| 5°  | 672 | 702  | 738  |
| 10° | 673 | 803  | 888  |
| 15° | 672 | 906  | 1028 |
| 20° | 671 | 996  | 1151 |
| 25° | 670 | 1074 | 1250 |
| 30° | 670 | 1135 | 1313 |
| 35° | 668 | 1176 | 1332 |
| 40° | 669 | 1197 | 1323 |
| 45° | 668 | 1209 | 1309 |
| 50° | 667 | 1225 | 1302 |
| 55° | 666 | 1260 | 1323 |
| 60° | 664 | 1315 | 1368 |
| 65° | 659 | 1400 | 1453 |
| 70° | 647 | 1531 | 1580 |
| 75° | 637 | 1750 | 1761 |
| 80° | 642 | 2145 | 2078 |
| 85° | 701 | 2972 | 3027 |



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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 51.5   | 1.9       |
| 10°-20°   | 178.9  | 6.5       |
| 20°-30°   | 317.0  | 11.6      |
| 30°-40°   | 417.2  | 15.3      |
| 40°-50°   | 452.4  | 16.6      |
| 50°-60°   | 440.4  | 16.1      |
| 60°-70°   | 395.7  | 14.5      |
| 70°-80°   | 313.5  | 11.5      |
| 80°-90°   | 164.3  | 6.0       |
| 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°    | 547.4  | 20.0      |
| 0°-40°    | 964.7  | 35.3      |
| 0°-60°    | 1857.5 | 68.0      |
| 0°-90°    | 2731.0 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2731.0 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°  | 22.5° | 45° | 67.5° | 90° | Flux |
|-----|-----|-------|-----|-------|-----|------|
| 0°  | 495 | 495   | 495 | 495   | 495 |      |
| 5°  | 498 | 497   | 520 | 540   | 546 | 47   |
| 15° | 482 | 545   | 650 | 716   | 738 | 136  |
| 25° | 451 | 575   | 723 | 811   | 842 | 208  |
| 35° | 407 | 560   | 716 | 789   | 811 | 255  |
| 45° | 351 | 508   | 635 | 677   | 688 | 271  |
| 55° | 284 | 442   | 537 | 556   | 564 | 254  |
| 65° | 207 | 370   | 440 | 448   | 456 | 204  |
| 75° | 123 | 278   | 337 | 337   | 339 | 130  |
| 85° | 45  | 148   | 192 | 193   | 196 | 48   |
| 90° | 0   | 0     | 0   | 0     | 0   |      |



TEST NUMBER: P188557

CATALOG NUMBER: 24SR-LD2-29-C-UNV-L830-CD1-PL-U

**CANDELA DISTRIBUTION (FULL):**

|       | 0°    | 5°    | 10°   | 15°   | 20°   | 25°   | 30°   | 35°   | 40°   | 45°   | 50°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 495.3 | 495.3 | 495.3 | 495.3 | 495.3 | 495.3 | 495.3 | 495.3 | 495.3 | 495.3 | 495.3 |
| 2.5°  | 498.9 | 498.2 | 497.5 | 496.7 | 496.0 | 495.3 | 495.3 | 495.3 | 496.0 | 497.5 | 499.6 |
| 5°    | 497.5 | 496.7 | 496.0 | 496.0 | 496.7 | 498.2 | 502.5 | 507.6 | 512.6 | 519.8 | 527.7 |
| 7.5°  | 495.3 | 494.6 | 494.6 | 496.0 | 501.8 | 510.4 | 520.5 | 531.3 | 542.2 | 553.7 | 564.5 |
| 10°   | 492.4 | 491.7 | 492.4 | 498.9 | 511.9 | 526.3 | 541.4 | 556.6 | 571.0 | 587.6 | 602.7 |
| 12.5° | 487.4 | 487.4 | 491.0 | 503.9 | 522.7 | 542.2 | 561.6 | 581.8 | 600.6 | 620.7 | 638.0 |
| 15°   | 482.3 | 482.3 | 490.3 | 509.7 | 533.5 | 556.6 | 581.1 | 604.9 | 627.2 | 650.3 | 670.5 |
| 17.5° | 475.8 | 475.8 | 489.5 | 514.0 | 541.4 | 569.6 | 597.7 | 624.3 | 649.6 | 674.8 | 696.4 |
| 20°   | 468.6 | 470.1 | 488.1 | 517.6 | 548.6 | 580.4 | 610.7 | 640.2 | 668.3 | 695.7 | 719.5 |
| 22.5° | 460.0 | 462.9 | 485.9 | 519.1 | 554.4 | 587.6 | 620.7 | 652.5 | 682.0 | 712.3 | 736.1 |
| 25°   | 451.3 | 455.6 | 483.0 | 519.1 | 556.6 | 592.6 | 627.2 | 660.4 | 692.1 | 723.1 | 749.1 |
| 27.5° | 441.9 | 447.7 | 478.7 | 516.9 | 557.3 | 594.1 | 630.1 | 664.7 | 697.9 | 729.6 | 756.3 |
| 30°   | 431.1 | 438.3 | 472.2 | 512.6 | 554.4 | 591.9 | 629.4 | 665.4 | 698.6 | 730.3 | 756.3 |
| 32.5° | 418.9 | 428.2 | 464.3 | 506.1 | 548.6 | 586.9 | 624.3 | 660.4 | 694.3 | 725.3 | 749.8 |
| 35°   | 406.6 | 418.2 | 455.6 | 498.2 | 540.7 | 578.9 | 616.4 | 653.2 | 686.4 | 715.9 | 737.5 |
| 37.5° | 394.4 | 406.6 | 444.8 | 487.4 | 529.9 | 568.1 | 606.3 | 641.7 | 673.4 | 700.8 | 720.2 |
| 40°   | 380.7 | 394.4 | 432.6 | 475.8 | 517.6 | 555.9 | 593.3 | 627.2 | 656.1 | 681.3 | 699.3 |
| 42.5° | 365.5 | 380.7 | 419.6 | 462.9 | 503.9 | 541.4 | 577.5 | 609.2 | 636.6 | 659.0 | 674.1 |
| 45°   | 351.1 | 367.0 | 405.9 | 449.2 | 489.5 | 526.3 | 560.9 | 590.5 | 615.0 | 635.2 | 648.1 |
| 47.5° | 335.2 | 351.8 | 392.2 | 434.0 | 473.7 | 509.7 | 542.9 | 569.6 | 593.3 | 610.7 | 622.2 |
| 50°   | 318.7 | 336.7 | 377.1 | 418.9 | 457.8 | 493.1 | 524.9 | 549.4 | 571.0 | 585.4 | 596.2 |
| 52.5° | 302.1 | 320.8 | 361.2 | 403.0 | 441.9 | 475.8 | 506.1 | 529.9 | 548.6 | 561.6 | 571.0 |
| 55°   | 284.1 | 305.0 | 345.3 | 387.2 | 424.6 | 458.5 | 487.4 | 509.0 | 526.3 | 537.1 | 545.8 |
| 57.5° | 265.3 | 287.7 | 329.5 | 371.3 | 408.8 | 441.2 | 468.6 | 488.8 | 503.9 | 513.3 | 519.8 |
| 60°   | 246.6 | 270.4 | 312.2 | 354.0 | 390.8 | 423.2 | 449.2 | 467.9 | 481.6 | 488.8 | 493.9 |
| 62.5° | 227.1 | 252.3 | 294.9 | 336.7 | 374.2 | 404.5 | 429.0 | 446.3 | 458.5 | 464.3 | 469.3 |
| 65°   | 206.9 | 233.6 | 276.8 | 318.7 | 356.2 | 384.3 | 408.1 | 423.9 | 434.7 | 439.8 | 442.7 |
| 67.5° | 186.0 | 214.1 | 258.1 | 299.9 | 336.0 | 363.4 | 385.7 | 401.6 | 410.2 | 414.6 | 416.7 |
| 70°   | 164.4 | 193.9 | 237.9 | 279.7 | 314.3 | 340.3 | 361.9 | 376.3 | 385.0 | 389.3 | 390.0 |
| 72.5° | 144.2 | 173.0 | 217.7 | 258.1 | 291.3 | 316.5 | 336.7 | 351.8 | 360.5 | 364.1 | 364.1 |
| 75°   | 122.6 | 151.4 | 195.4 | 234.3 | 266.0 | 290.5 | 310.7 | 325.2 | 333.1 | 336.7 | 336.7 |
| 77.5° | 103.8 | 130.5 | 171.6 | 209.1 | 238.6 | 262.4 | 281.9 | 297.0 | 305.7 | 309.3 | 309.3 |
| 80°   | 82.9  | 108.9 | 147.1 | 181.7 | 209.1 | 230.7 | 250.9 | 266.8 | 275.4 | 276.8 | 274.7 |
| 82.5° | 64.2  | 88.0  | 120.4 | 151.4 | 176.6 | 196.8 | 217.0 | 230.0 | 236.5 | 237.9 | 237.2 |
| 85°   | 45.4  | 64.9  | 92.3  | 117.5 | 138.4 | 157.2 | 171.6 | 183.8 | 190.3 | 192.5 | 193.9 |
| 87.5° | 26.7  | 37.5  | 54.8  | 74.3  | 90.1  | 102.4 | 111.0 | 121.8 | 128.3 | 132.7 | 137.0 |
| 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: P188557

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**CANDELA DISTRIBUTION (continued):**

|       | 55°   | 60°   | 65°   | 70°   | 75°   | 80°   | 85°   | 90°   |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 495.3 | 495.3 | 495.3 | 495.3 | 495.3 | 495.3 | 495.3 | 495.3 |
| 2.5°  | 498.9 | 499.6 | 500.3 | 500.3 | 500.3 | 501.1 | 500.3 | 500.3 |
| 5°    | 530.6 | 535.0 | 538.6 | 540.7 | 542.9 | 546.5 | 545.8 | 546.5 |
| 7.5°  | 570.3 | 577.5 | 585.4 | 589.7 | 592.6 | 597.0 | 598.4 | 598.4 |
| 10°   | 611.4 | 621.5 | 630.8 | 637.3 | 641.7 | 648.1 | 648.9 | 649.6 |
| 12.5° | 650.3 | 662.6 | 673.4 | 680.6 | 687.1 | 692.8 | 695.7 | 696.4 |
| 15°   | 683.5 | 698.6 | 710.9 | 720.2 | 726.7 | 733.2 | 736.8 | 738.3 |
| 17.5° | 713.0 | 728.9 | 742.6 | 753.4 | 761.3 | 767.8 | 772.1 | 773.6 |
| 20°   | 736.1 | 753.4 | 768.5 | 780.1 | 789.4 | 796.7 | 802.4 | 803.9 |
| 22.5° | 754.8 | 772.9 | 788.7 | 801.7 | 811.1 | 819.7 | 824.8 | 826.9 |
| 25°   | 768.5 | 788.0 | 804.6 | 816.8 | 826.9 | 834.9 | 839.9 | 842.1 |
| 27.5° | 776.5 | 795.9 | 811.8 | 824.1 | 834.1 | 841.4 | 846.4 | 848.6 |
| 30°   | 776.5 | 795.2 | 811.1 | 822.6 | 832.0 | 839.2 | 842.8 | 845.0 |
| 32.5° | 768.5 | 786.6 | 801.0 | 811.1 | 819.7 | 826.9 | 829.8 | 831.3 |
| 35°   | 755.6 | 771.4 | 784.4 | 793.1 | 800.3 | 806.8 | 809.6 | 811.1 |
| 37.5° | 736.8 | 751.2 | 761.3 | 769.3 | 775.0 | 781.5 | 783.7 | 785.1 |
| 40°   | 713.0 | 726.7 | 733.9 | 741.1 | 746.2 | 752.0 | 753.4 | 753.4 |
| 42.5° | 687.1 | 698.6 | 705.8 | 710.9 | 714.5 | 718.1 | 720.2 | 720.2 |
| 45°   | 659.7 | 669.8 | 674.8 | 679.1 | 682.7 | 685.6 | 687.8 | 687.8 |
| 47.5° | 632.3 | 640.2 | 644.5 | 647.4 | 650.3 | 653.2 | 654.6 | 654.6 |
| 50°   | 604.9 | 610.7 | 614.3 | 616.4 | 619.3 | 621.5 | 622.9 | 622.2 |
| 52.5° | 577.5 | 581.8 | 584.7 | 586.9 | 588.3 | 590.5 | 591.2 | 591.9 |
| 55°   | 550.1 | 553.0 | 555.1 | 556.6 | 559.5 | 561.6 | 562.3 | 563.8 |
| 57.5° | 523.4 | 524.9 | 527.7 | 528.5 | 531.3 | 533.5 | 534.2 | 535.0 |
| 60°   | 496.0 | 497.5 | 499.6 | 501.1 | 504.7 | 506.1 | 506.8 | 508.3 |
| 62.5° | 469.3 | 470.1 | 472.9 | 475.8 | 478.7 | 480.2 | 480.9 | 481.6 |
| 65°   | 442.7 | 444.8 | 447.0 | 449.2 | 452.0 | 454.2 | 454.9 | 456.4 |
| 67.5° | 416.7 | 418.2 | 421.0 | 423.2 | 425.4 | 427.5 | 429.0 | 429.7 |
| 70°   | 390.0 | 391.5 | 393.6 | 395.1 | 397.2 | 399.4 | 401.6 | 401.6 |
| 72.5° | 364.1 | 364.1 | 365.5 | 367.0 | 369.1 | 370.6 | 371.3 | 371.3 |
| 75°   | 336.0 | 335.2 | 336.7 | 337.4 | 337.4 | 337.4 | 338.1 | 338.8 |
| 77.5° | 305.7 | 302.8 | 301.4 | 301.4 | 302.1 | 300.6 | 301.4 | 302.1 |
| 80°   | 271.1 | 268.2 | 267.5 | 267.5 | 268.2 | 267.5 | 268.2 | 268.2 |
| 82.5° | 234.3 | 234.3 | 232.1 | 232.9 | 233.6 | 232.1 | 233.6 | 235.0 |
| 85°   | 191.8 | 192.5 | 191.8 | 193.9 | 193.9 | 193.9 | 194.7 | 196.1 |
| 87.5° | 137.7 | 142.0 | 140.6 | 143.5 | 142.7 | 143.5 | 144.2 | 146.4 |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)