

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: FAIL-SAFE

Report Number: P

Luminaire Tested: **4APN-X-34L930-UNV-ASY**

Issue Date: 06/06/2024



**Test Information**

Test Method: LM-79-08  
Report Number: P  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 06/06/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: 4APN-X-34L930-UNV-ASY  
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/  
ASYMMETRIC Lens  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

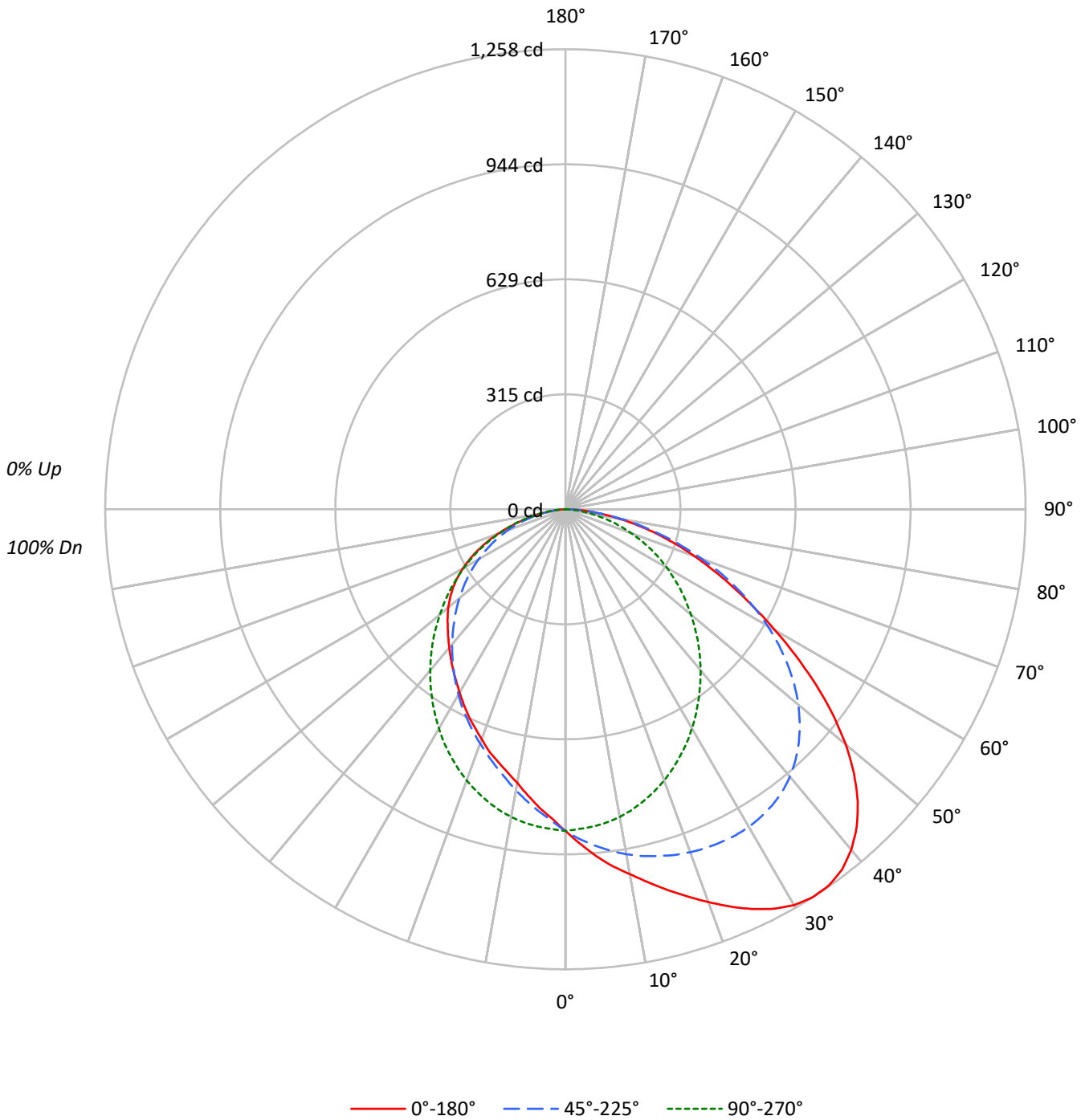
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2724.9 lumens  
Efficiency: N/A  
Efficacy: 74.0 lumens/watt  
Spacing Criteria (0/90/45): 1.53 / 1.18 / 1.46  
Luminous Opening: Rectangular (W 0.29' x L: 3.83' x H: 0')  
CIE Type: Direct

Input Watts (W): 36.8  
Input Voltage (V): 120  
Input Current (Ain): 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: P  
CATALOG NUMBER: 4APN-X-34L930-UNV-ASY

### Luminous Intensity Polar Plot





TEST NUMBER: P  
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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| RF  | 20  |     |     |     | 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  | 0   |
| RCR |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 0   | 119 | 119 | 119 | 119 | 116 | 116 | 116 | 116 | 111 | 111 | 111 | 106 | 106 | 106 | 102 | 102 | 102 | 102 | 102 | 102 | 100 |
| 1   | 109 | 104 | 100 | 96  | 106 | 102 | 98  | 94  | 97  | 94  | 91  | 93  | 91  | 88  | 90  | 88  | 86  | 86  | 86  | 86  | 84  |
| 2   | 99  | 90  | 83  | 78  | 96  | 88  | 82  | 77  | 85  | 80  | 75  | 82  | 77  | 73  | 79  | 75  | 72  | 72  | 72  | 72  | 69  |
| 3   | 90  | 79  | 71  | 64  | 87  | 78  | 70  | 64  | 75  | 68  | 63  | 72  | 66  | 61  | 69  | 64  | 60  | 60  | 60  | 60  | 58  |
| 4   | 82  | 70  | 61  | 54  | 80  | 69  | 60  | 54  | 66  | 59  | 53  | 64  | 57  | 52  | 62  | 56  | 52  | 52  | 52  | 52  | 49  |
| 5   | 75  | 62  | 53  | 46  | 73  | 61  | 53  | 46  | 59  | 51  | 46  | 57  | 50  | 45  | 55  | 49  | 45  | 45  | 45  | 45  | 43  |
| 6   | 69  | 56  | 47  | 40  | 68  | 55  | 46  | 40  | 53  | 46  | 40  | 51  | 45  | 39  | 50  | 44  | 39  | 39  | 39  | 39  | 37  |
| 7   | 64  | 51  | 42  | 36  | 63  | 50  | 41  | 35  | 48  | 41  | 35  | 47  | 40  | 35  | 45  | 39  | 35  | 35  | 35  | 35  | 33  |
| 8   | 60  | 46  | 37  | 32  | 58  | 45  | 37  | 31  | 44  | 37  | 31  | 43  | 36  | 31  | 42  | 35  | 31  | 31  | 31  | 31  | 29  |
| 9   | 56  | 42  | 34  | 28  | 54  | 42  | 34  | 28  | 40  | 33  | 28  | 39  | 33  | 28  | 38  | 32  | 28  | 28  | 28  | 28  | 26  |
| 10  | 52  | 39  | 31  | 26  | 51  | 38  | 31  | 26  | 37  | 30  | 25  | 36  | 30  | 25  | 36  | 30  | 25  | 25  | 25  | 25  | 23  |

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

|     | 0°    | 90°  | 180° |
|-----|-------|------|------|
| 0°  | 8469  | 8469 | 8469 |
| 5°  | 9191  | 8418 | 7911 |
| 10° | 9901  | 8352 | 7423 |
| 15° | 10739 | 8232 | 7117 |
| 20° | 11710 | 8087 | 6853 |
| 25° | 12810 | 7897 | 6641 |
| 30° | 13896 | 7689 | 6428 |
| 35° | 14759 | 7462 | 6289 |
| 40° | 15282 | 7225 | 6207 |
| 45° | 15389 | 6976 | 6194 |
| 50° | 14985 | 6710 | 6261 |
| 55° | 14032 | 6469 | 6299 |
| 60° | 12754 | 6175 | 6239 |
| 65° | 11566 | 5841 | 5996 |
| 70° | 10584 | 5416 | 5506 |
| 75° | 9604  | 4869 | 4735 |
| 80° | 8399  | 4069 | 3648 |
| 85° | 7070  | 2960 | 2717 |



TEST NUMBER: P  
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**ZONAL LUMENS:**

| Zone      | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10°    | 83.6   | 3.1       |
| 10°-20°   | 243.0  | 8.9       |
| 20°-30°   | 380.7  | 14.0      |
| 30°-40°   | 477.3  | 17.5      |
| 40°-50°   | 508.1  | 18.6      |
| 50°-60°   | 458.7  | 16.8      |
| 60°-70°   | 339.5  | 12.5      |
| 70°-80°   | 186.3  | 6.8       |
| 80°-90°   | 47.8   | 1.8       |
| 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°    | 707.2  | 26.0      |
| 0°-40°    | 1184.5 | 43.5      |
| 0°-60°    | 2151.2 | 78.9      |
| 0°-90°    | 2724.9 | 100.0     |
| 90°-120°  | 0.0    | 0.0       |
| 90°-150°  | 0.0    | 0.0       |
| 90°-180°  | 0.0    | 0.0       |
| 0°-180°   | 2724.9 | 100.0     |

**CANDELA DISTRIBUTION:**

|     | 0°   | 45°  | 90° | 135° | 180° | Flux |
|-----|------|------|-----|------|------|------|
| 0°  | 880  | 880  | 880 | 880  | 880  |      |
| 5°  | 951  | 923  | 871 | 829  | 819  | 93   |
| 15° | 1078 | 982  | 826 | 729  | 714  | 307  |
| 25° | 1206 | 1005 | 743 | 634  | 625  | 558  |
| 35° | 1256 | 987  | 635 | 533  | 535  | 783  |
| 45° | 1130 | 902  | 512 | 429  | 455  | 867  |
| 55° | 836  | 742  | 385 | 326  | 375  | 745  |
| 65° | 508  | 523  | 256 | 221  | 263  | 507  |
| 75° | 258  | 274  | 131 | 113  | 127  | 274  |
| 85° | 64   | 63   | 27  | 25   | 25   | 76   |
| 90° | 0    | 0    | 0   | 0    | 0    |      |



TEST NUMBER: P

CATALOG NUMBER: 4APN-X-34L930-UNV-ASY

**CANDELA DISTRIBUTION (FULL):**

|       | 0°     | 5°     | 15°    | 25°    | 35°    | 45°    | 55°   | 65°   | 75°   | 85°   | 90°   |
|-------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|
| 0°    | 879.7  | 879.7  | 879.7  | 879.7  | 879.7  | 879.7  | 879.7 | 879.7 | 879.7 | 879.7 | 879.7 |
| 2.5°  | 915.2  | 913.4  | 911.2  | 910.5  | 907.2  | 902.9  | 898.9 | 898.9 | 894.2 | 883.0 | 875.0 |
| 5°    | 951.0  | 948.1  | 942.6  | 938.3  | 931.4  | 923.1  | 914.8 | 909.7 | 898.5 | 881.5 | 871.1 |
| 7.5°  | 983.9  | 980.3  | 973.4  | 965.1  | 953.9  | 941.6  | 927.8 | 917.0 | 900.0 | 877.2 | 863.8 |
| 10°   | 1012.8 | 1009.5 | 1001.2 | 991.1  | 975.2  | 957.8  | 937.6 | 921.3 | 898.2 | 870.0 | 854.4 |
| 12.5° | 1044.6 | 1041.4 | 1029.8 | 1016.0 | 994.4  | 971.2  | 944.5 | 922.0 | 893.5 | 859.5 | 841.8 |
| 15°   | 1077.5 | 1073.2 | 1060.2 | 1041.7 | 1012.8 | 981.7  | 948.8 | 919.9 | 885.9 | 846.8 | 825.9 |
| 17.5° | 1110.1 | 1105.7 | 1089.5 | 1065.9 | 1029.8 | 991.1  | 950.6 | 914.8 | 875.0 | 831.3 | 808.5 |
| 20°   | 1143.0 | 1138.6 | 1118.0 | 1088.4 | 1044.6 | 998.0  | 950.2 | 907.2 | 862.0 | 813.6 | 789.3 |
| 22.5° | 1175.9 | 1170.8 | 1145.9 | 1109.7 | 1056.9 | 1002.7 | 946.3 | 896.7 | 845.7 | 793.3 | 767.3 |
| 25°   | 1205.9 | 1200.8 | 1173.3 | 1130.7 | 1069.9 | 1004.8 | 939.4 | 882.3 | 827.7 | 770.9 | 743.4 |
| 27.5° | 1231.9 | 1225.8 | 1197.2 | 1150.2 | 1081.1 | 1005.6 | 930.4 | 866.0 | 806.7 | 746.7 | 718.8 |
| 30°   | 1250.0 | 1244.6 | 1214.2 | 1163.9 | 1087.6 | 1003.0 | 918.8 | 846.8 | 782.5 | 720.6 | 691.7 |
| 32.5° | 1257.9 | 1253.2 | 1223.2 | 1170.4 | 1088.7 | 996.5  | 904.7 | 825.5 | 757.2 | 693.2 | 663.9 |
| 35°   | 1255.8 | 1251.1 | 1222.5 | 1169.4 | 1085.5 | 987.1  | 887.0 | 801.3 | 730.0 | 664.6 | 634.9 |
| 37.5° | 1242.0 | 1236.6 | 1210.6 | 1159.6 | 1076.1 | 973.4  | 866.7 | 774.9 | 700.7 | 635.3 | 605.3 |
| 40°   | 1216.0 | 1210.6 | 1188.2 | 1141.2 | 1060.2 | 954.9  | 843.6 | 746.7 | 670.7 | 604.6 | 574.9 |
| 42.5° | 1178.8 | 1173.0 | 1155.3 | 1112.2 | 1037.4 | 930.7  | 817.2 | 716.7 | 638.9 | 574.9 | 543.8 |
| 45°   | 1130.3 | 1124.5 | 1112.6 | 1076.1 | 1007.7 | 902.2  | 787.2 | 684.1 | 605.7 | 541.3 | 512.4 |
| 47.5° | 1070.3 | 1065.2 | 1059.4 | 1031.2 | 971.2  | 869.2  | 753.5 | 649.4 | 570.9 | 509.8 | 480.2 |
| 50°   | 1000.5 | 995.4  | 997.2  | 978.1  | 928.9  | 831.3  | 716.7 | 612.9 | 535.1 | 474.8 | 448.0 |
| 52.5° | 921.3  | 917.3  | 926.0  | 917.7  | 879.7  | 789.0  | 677.2 | 575.3 | 498.6 | 441.5 | 415.8 |
| 55°   | 836.0  | 831.6  | 848.3  | 850.8  | 824.8  | 742.3  | 632.4 | 536.2 | 461.7 | 409.0 | 385.4 |
| 57.5° | 748.1  | 744.5  | 765.8  | 777.8  | 764.7  | 692.1  | 587.2 | 496.1 | 423.8 | 375.0 | 351.5 |
| 60°   | 662.4  | 659.5  | 681.9  | 701.5  | 700.0  | 638.9  | 540.2 | 452.7 | 385.8 | 340.6 | 320.7 |
| 62.5° | 581.8  | 578.5  | 601.0  | 624.1  | 632.4  | 582.1  | 493.6 | 410.0 | 347.8 | 306.3 | 288.5 |
| 65°   | 507.7  | 504.4  | 523.6  | 547.4  | 562.6  | 522.8  | 443.3 | 365.9 | 309.5 | 271.5 | 256.4 |
| 67.5° | 439.7  | 439.7  | 451.6  | 473.7  | 492.1  | 462.1  | 392.0 | 324.0 | 270.1 | 239.4 | 224.2 |
| 70°   | 376.0  | 375.7  | 384.4  | 399.9  | 421.2  | 397.0  | 339.9 | 279.9 | 232.9 | 205.7 | 192.4 |
| 72.5° | 315.7  | 318.2  | 321.4  | 333.4  | 355.8  | 334.8  | 288.2 | 236.5 | 196.3 | 172.5 | 161.3 |
| 75°   | 258.2  | 257.8  | 262.5  | 273.0  | 289.3  | 273.7  | 236.5 | 194.2 | 160.2 | 140.7 | 130.9 |
| 77.5° | 203.2  | 202.8  | 206.8  | 213.0  | 226.7  | 214.4  | 186.6 | 155.1 | 124.7 | 108.5 | 101.6 |
| 80°   | 151.5  | 151.5  | 155.1  | 158.4  | 168.5  | 158.7  | 139.2 | 116.1 | 91.5  | 78.8  | 73.4  |
| 82.5° | 105.2  | 107.4  | 105.9  | 110.3  | 116.1  | 107.8  | 95.5  | 79.5  | 60.7  | 52.1  | 48.5  |
| 85°   | 64.0   | 65.8   | 64.0   | 67.6   | 70.1   | 62.9   | 56.8  | 47.4  | 35.1  | 29.3  | 26.8  |
| 87.5° | 32.9   | 32.5   | 32.2   | 34.0   | 34.7   | 30.4   | 26.8  | 22.8  | 15.5  | 11.9  | 10.1  |
| 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: P  
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**CANDELA DISTRIBUTION (continued):**

|       | 95°   | 105°  | 115°  | 125°  | 135°  | 145°  | 155°  | 165°  | 175°  | 180°  |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 0°    | 879.7 | 879.7 | 879.7 | 879.7 | 879.7 | 879.7 | 879.7 | 879.7 | 879.7 | 879.7 |
| 2.5°  | 870.3 | 872.5 | 869.2 | 857.3 | 852.6 | 847.6 | 845.4 | 843.2 | 847.2 | 846.1 |
| 5°    | 863.1 | 860.6 | 852.3 | 837.1 | 829.1 | 820.8 | 816.8 | 814.3 | 819.7 | 818.6 |
| 7.5°  | 853.3 | 846.1 | 833.8 | 815.4 | 805.2 | 794.0 | 788.6 | 785.4 | 789.0 | 788.3 |
| 10°   | 841.0 | 829.1 | 813.9 | 791.9 | 779.9 | 767.6 | 761.5 | 756.8 | 759.7 | 759.3 |
| 12.5° | 825.5 | 809.9 | 791.5 | 766.6 | 754.3 | 741.6 | 736.2 | 732.9 | 736.5 | 735.5 |
| 15°   | 808.1 | 789.3 | 768.0 | 742.7 | 729.3 | 717.7 | 713.8 | 711.2 | 714.1 | 714.1 |
| 17.5° | 789.0 | 766.9 | 743.4 | 717.7 | 705.1 | 696.0 | 692.1 | 690.3 | 691.7 | 693.9 |
| 20°   | 767.6 | 743.1 | 717.7 | 692.8 | 681.9 | 672.5 | 668.9 | 667.1 | 670.4 | 668.9 |
| 22.5° | 744.1 | 718.1 | 691.7 | 668.2 | 658.4 | 649.0 | 645.4 | 644.3 | 648.0 | 646.5 |
| 25°   | 719.2 | 691.0 | 665.0 | 643.6 | 633.9 | 625.9 | 622.6 | 621.6 | 623.4 | 625.2 |
| 27.5° | 695.7 | 663.9 | 638.2 | 619.0 | 610.4 | 602.8 | 599.9 | 598.1 | 599.5 | 601.7 |
| 30°   | 667.1 | 636.4 | 611.1 | 593.4 | 585.0 | 577.8 | 575.6 | 574.2 | 576.4 | 578.2 |
| 32.5° | 640.4 | 609.3 | 584.0 | 566.6 | 559.4 | 552.5 | 552.1 | 551.4 | 553.9 | 556.1 |
| 35°   | 611.4 | 581.1 | 556.5 | 540.2 | 533.3 | 527.6 | 528.6 | 529.7 | 532.6 | 535.1 |
| 37.5° | 582.1 | 552.5 | 529.0 | 514.2 | 507.7 | 503.0 | 506.2 | 507.7 | 511.6 | 514.2 |
| 40°   | 552.5 | 522.8 | 501.2 | 487.8 | 481.3 | 479.1 | 483.8 | 487.1 | 491.8 | 493.9 |
| 42.5° | 522.1 | 494.6 | 473.0 | 460.7 | 455.2 | 455.2 | 461.4 | 466.4 | 471.9 | 474.0 |
| 45°   | 491.8 | 465.0 | 444.4 | 433.2 | 429.2 | 432.1 | 439.3 | 445.8 | 452.7 | 454.9 |
| 47.5° | 461.0 | 435.0 | 416.2 | 406.1 | 403.9 | 408.2 | 417.3 | 425.9 | 433.9 | 436.8 |
| 50°   | 430.3 | 406.8 | 388.0 | 378.6 | 378.6 | 384.0 | 395.6 | 406.4 | 415.1 | 418.0 |
| 52.5° | 399.5 | 377.1 | 358.0 | 351.1 | 352.5 | 360.1 | 373.5 | 384.7 | 394.5 | 397.4 |
| 55°   | 368.5 | 346.4 | 329.8 | 324.0 | 326.5 | 335.9 | 349.7 | 362.7 | 372.1 | 375.3 |
| 57.5° | 337.7 | 316.7 | 301.6 | 296.9 | 300.5 | 311.0 | 326.9 | 338.1 | 347.8 | 350.7 |
| 60°   | 306.6 | 285.3 | 273.4 | 269.7 | 274.4 | 285.3 | 301.6 | 312.0 | 321.1 | 324.0 |
| 62.5° | 275.9 | 256.0 | 245.5 | 242.3 | 247.7 | 259.3 | 275.2 | 284.6 | 291.4 | 294.3 |
| 65°   | 244.8 | 227.1 | 217.3 | 215.1 | 220.9 | 232.1 | 247.3 | 255.3 | 260.3 | 263.2 |
| 67.5° | 214.1 | 198.9 | 189.8 | 188.0 | 194.2 | 204.3 | 218.4 | 222.7 | 227.4 | 230.3 |
| 70°   | 183.7 | 169.9 | 162.4 | 161.3 | 166.7 | 176.5 | 188.4 | 190.6 | 193.1 | 195.6 |
| 72.5° | 153.7 | 142.8 | 135.2 | 134.9 | 139.9 | 147.9 | 157.7 | 158.0 | 158.7 | 161.3 |
| 75°   | 124.7 | 115.0 | 109.2 | 110.3 | 113.2 | 119.7 | 127.3 | 125.1 | 125.5 | 127.3 |
| 77.5° | 96.9  | 88.9  | 85.0  | 85.7  | 87.9  | 92.6  | 97.6  | 95.1  | 93.7  | 95.5  |
| 80°   | 69.8  | 62.9  | 61.5  | 61.8  | 63.3  | 66.5  | 69.4  | 67.3  | 64.4  | 65.8  |
| 82.5° | 45.9  | 41.6  | 40.9  | 41.2  | 42.3  | 44.1  | 44.8  | 41.6  | 40.9  | 41.9  |
| 85°   | 25.3  | 23.5  | 23.5  | 24.6  | 24.9  | 25.3  | 25.3  | 23.5  | 23.9  | 24.6  |
| 87.5° | 10.1  | 10.1  | 11.2  | 12.3  | 11.6  | 10.1  | 8.7   | 5.8   | 5.8   | 6.9   |
| 90°   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |

(END OF REPORT)