

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: NEO-RAY

Report Number: P231588

Luminaire Tested: **S125-DR-2-30-X-0048-1-U-DD-3-W**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P231588
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P29678)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S125-DR-2-30-X-0048-1-U-DD-3-W
Description: DEFINE 5 LED LINEAR DIRECT RECESSED LED LUMINAIRE WITH ASYMMETRIC LENS.
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4250.7 lumens
Efficiency: N/A
Efficacy: 99.8 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.24 / 1.52
Luminous Opening: Rectangular (W 3.92' x L: 0.39' x H: 0')
CIE Type: Direct

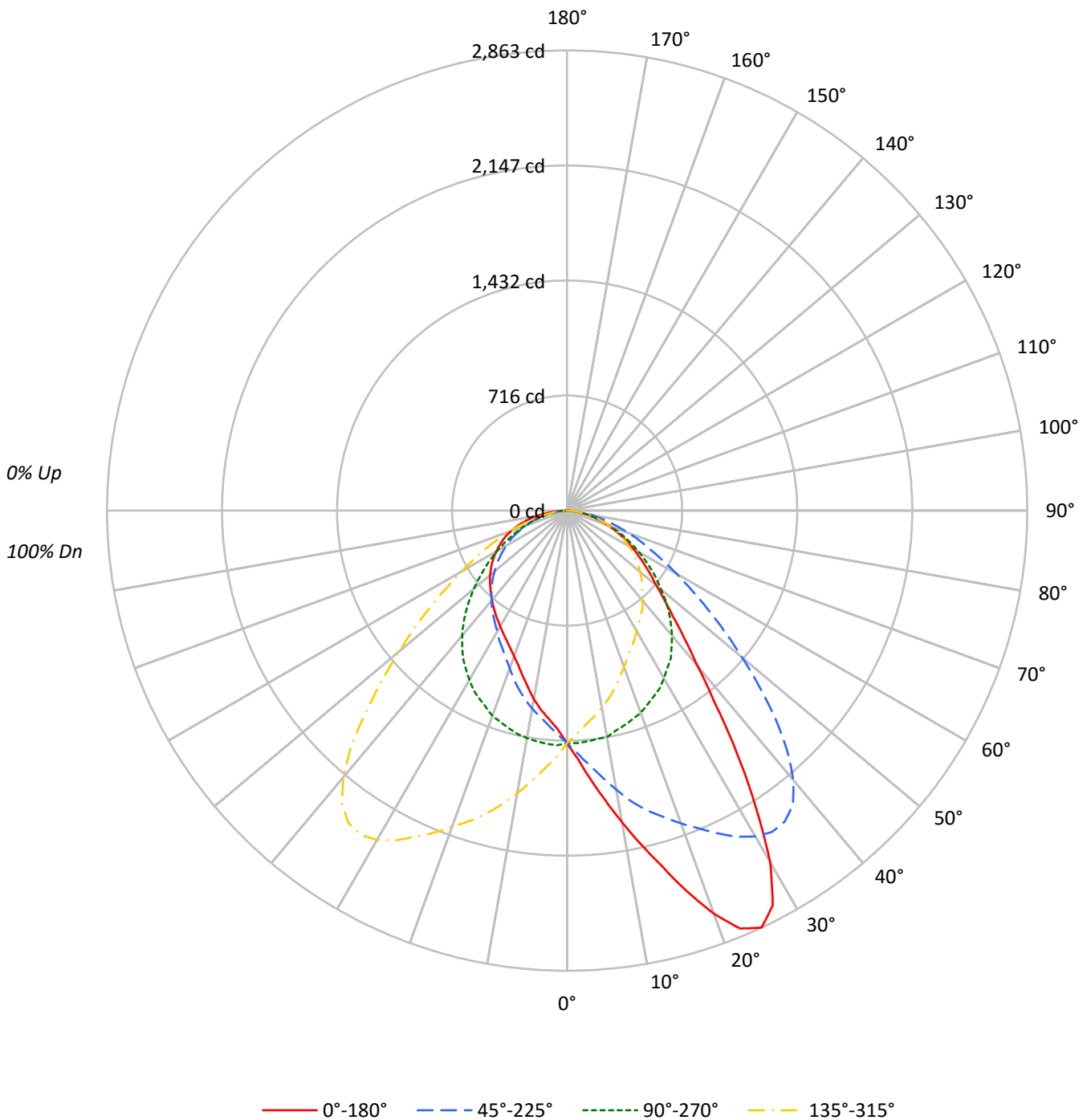
Input Watts (W): 42.6
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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 | 109 | 105 | 101 | 97 | 107 | 103 | 99 | 96 | 98 | 95 | 93 | 95 | 92 | 90 | 91 | 89 | 87 | 85 |
| 2 | 100 | 92 | 86 | 80 | 97 | 90 | 84 | 79 | 87 | 82 | 78 | 84 | 79 | 76 | 81 | 77 | 74 | 72 |
| 3 | 92 | 82 | 74 | 68 | 89 | 80 | 73 | 67 | 77 | 71 | 66 | 74 | 69 | 65 | 72 | 67 | 64 | 61 |
| 4 | 84 | 73 | 64 | 58 | 82 | 71 | 63 | 57 | 69 | 62 | 57 | 67 | 61 | 56 | 64 | 59 | 55 | 53 |
| 5 | 78 | 65 | 57 | 50 | 76 | 64 | 56 | 50 | 62 | 55 | 49 | 60 | 54 | 49 | 58 | 53 | 48 | 46 |
| 6 | 72 | 59 | 50 | 44 | 70 | 58 | 50 | 44 | 56 | 49 | 43 | 55 | 48 | 43 | 53 | 47 | 43 | 41 |
| 7 | 67 | 54 | 45 | 39 | 65 | 53 | 45 | 39 | 51 | 44 | 39 | 50 | 43 | 38 | 48 | 43 | 38 | 36 |
| 8 | 62 | 49 | 41 | 35 | 61 | 48 | 40 | 35 | 47 | 40 | 35 | 46 | 39 | 34 | 45 | 39 | 34 | 32 |
| 9 | 58 | 45 | 37 | 31 | 57 | 44 | 37 | 31 | 43 | 36 | 31 | 42 | 36 | 31 | 41 | 35 | 31 | 29 |
| 10 | 54 | 42 | 34 | 29 | 53 | 41 | 34 | 29 | 40 | 33 | 28 | 39 | 33 | 28 | 38 | 32 | 28 | 26 |

AVERAGE LUMINANCE (cd/sqm):

| | 0° | 90° | 180° | 270° |
|-----|-------|-------|-------|-------|
| 0° | 10197 | 10197 | 10197 | 10197 |
| 5° | 11874 | 10197 | 9204 | 10303 |
| 10° | 14088 | 10227 | 8521 | 10285 |
| 15° | 16739 | 10079 | 7773 | 10228 |
| 20° | 20015 | 10034 | 7234 | 10197 |
| 25° | 22257 | 9916 | 6928 | 10043 |
| 30° | 20565 | 9789 | 6774 | 9889 |
| 35° | 15847 | 9670 | 6705 | 9693 |
| 40° | 11581 | 9325 | 6693 | 9350 |
| 45° | 9274 | 8907 | 6735 | 8880 |
| 50° | 7916 | 8365 | 6856 | 8305 |
| 55° | 7231 | 7850 | 7014 | 7683 |
| 60° | 6701 | 7240 | 7182 | 7086 |
| 65° | 6179 | 6680 | 7407 | 6474 |
| 70° | 5586 | 5952 | 7636 | 5754 |
| 75° | 4933 | 5268 | 7716 | 5119 |
| 80° | 4090 | 4314 | 7576 | 4257 |
| 85° | 2975 | 3307 | 7163 | 3307 |



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ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 141.2 | 3.3 |
| 10°-20° | 436.9 | 10.3 |
| 20°-30° | 726.2 | 17.1 |
| 30°-40° | 845.7 | 19.9 |
| 40°-50° | 762.1 | 17.9 |
| 50°-60° | 611.7 | 14.4 |
| 60°-70° | 431.1 | 10.1 |
| 70°-80° | 233.5 | 5.5 |
| 80°-90° | 62.2 | 1.5 |
| 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° | 1304.3 | 30.7 |
| 0°-40° | 2150.0 | 50.6 |
| 0°-60° | 3523.8 | 82.9 |
| 0°-90° | 4250.7 | 100.0 |
| 90°-120° | 0.0 | 0.0 |
| 90°-150° | 0.0 | 0.0 |
| 90°-180° | 0.0 | 0.0 |
| 0°-180° | 4250.7 | 100.0 |

CANDELA DISTRIBUTION:

| | 0° | 90° | 180° | 270° | 360° | Flux |
|-----|------|------|------|------|------|------|
| 0° | 1447 | 1447 | 1447 | 1447 | 1447 | |
| 5° | 1679 | 1442 | 1301 | 1456 | 1679 | 169 |
| 15° | 2294 | 1382 | 1066 | 1402 | 2294 | 664 |
| 25° | 2863 | 1275 | 891 | 1292 | 2863 | 1277 |
| 35° | 1842 | 1124 | 779 | 1127 | 1842 | 1151 |
| 45° | 931 | 894 | 676 | 891 | 931 | 734 |
| 55° | 589 | 639 | 571 | 625 | 589 | 529 |
| 65° | 371 | 401 | 444 | 388 | 371 | 367 |
| 75° | 181 | 194 | 283 | 188 | 181 | 193 |
| 85° | 37 | 41 | 89 | 41 | 37 | 46 |
| 90° | 0 | 0 | 0 | 0 | 0 | |



TEST NUMBER: P231588

CATALOG NUMBER: S125-DR-2-30-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (FULL):

| | 0° | 22.5° | 45° | 67.5° | 90° | 112.5° | 135° | 157.5° | 180° | 202.5° | 225° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1447.0 | 1447.0 | 1447.0 | 1447.0 | 1447.0 | 1447.0 | 1447.0 | 1447.0 | 1447.0 | 1447.0 | 1447.0 |
| 2.5° | 1547.8 | 1534.2 | 1513.7 | 1471.5 | 1448.3 | 1403.4 | 1388.4 | 1374.8 | 1359.8 | 1369.3 | 1392.5 |
| 5° | 1678.6 | 1640.5 | 1588.7 | 1502.8 | 1441.5 | 1368.0 | 1336.6 | 1312.1 | 1301.2 | 1308.0 | 1339.3 |
| 7.5° | 1817.6 | 1764.4 | 1673.2 | 1536.9 | 1433.4 | 1333.9 | 1290.3 | 1260.3 | 1249.4 | 1256.2 | 1293.0 |
| 10° | 1968.8 | 1892.5 | 1763.1 | 1573.7 | 1429.3 | 1308.0 | 1244.0 | 1204.5 | 1190.8 | 1201.7 | 1250.8 |
| 12.5° | 2128.2 | 2020.6 | 1855.7 | 1595.5 | 1402.0 | 1264.4 | 1196.3 | 1143.1 | 1125.4 | 1141.8 | 1204.5 |
| 15° | 2294.5 | 2177.3 | 1932.0 | 1620.0 | 1381.6 | 1227.6 | 1144.5 | 1083.2 | 1065.5 | 1083.2 | 1154.0 |
| 17.5° | 2485.2 | 2328.5 | 1998.8 | 1639.1 | 1359.8 | 1188.1 | 1085.9 | 1026.0 | 1009.6 | 1027.3 | 1099.5 |
| 20° | 2669.1 | 2482.5 | 2071.0 | 1652.7 | 1338.0 | 1152.7 | 1035.5 | 976.9 | 964.7 | 975.6 | 1043.7 |
| 22.5° | 2814.9 | 2618.7 | 2140.5 | 1641.8 | 1306.6 | 1102.3 | 985.1 | 937.4 | 925.1 | 932.0 | 994.6 |
| 25° | 2862.6 | 2735.9 | 2215.4 | 1625.5 | 1275.3 | 1054.6 | 941.5 | 908.8 | 891.1 | 896.5 | 949.7 |
| 27.5° | 2770.0 | 2753.6 | 2287.6 | 1596.9 | 1246.7 | 1008.3 | 906.1 | 873.4 | 861.1 | 865.2 | 912.9 |
| 30° | 2527.4 | 2655.5 | 2340.8 | 1564.2 | 1203.1 | 968.7 | 865.2 | 836.6 | 832.5 | 836.6 | 869.3 |
| 32.5° | 2182.7 | 2459.3 | 2370.8 | 1517.8 | 1160.9 | 915.6 | 831.1 | 806.6 | 805.2 | 802.5 | 833.9 |
| 35° | 1842.1 | 2159.6 | 2361.2 | 1470.1 | 1124.1 | 873.4 | 795.7 | 776.6 | 779.4 | 773.9 | 799.8 |
| 37.5° | 1512.4 | 1836.7 | 2306.7 | 1421.1 | 1066.8 | 842.0 | 769.8 | 748.0 | 753.5 | 746.7 | 768.5 |
| 40° | 1259.0 | 1545.1 | 2190.9 | 1363.9 | 1013.7 | 793.0 | 727.6 | 720.8 | 727.6 | 718.0 | 731.7 |
| 42.5° | 1080.5 | 1301.2 | 2027.4 | 1306.6 | 955.1 | 754.8 | 693.5 | 692.2 | 701.7 | 690.8 | 696.2 |
| 45° | 930.6 | 1100.9 | 1835.3 | 1244.0 | 893.8 | 711.2 | 659.5 | 662.2 | 675.8 | 662.2 | 662.2 |
| 47.5° | 818.9 | 945.6 | 1622.7 | 1177.2 | 832.5 | 671.7 | 626.8 | 633.6 | 651.3 | 633.6 | 628.1 |
| 50° | 722.1 | 824.3 | 1419.7 | 1106.4 | 763.0 | 634.9 | 592.7 | 603.6 | 625.4 | 602.2 | 590.0 |
| 52.5° | 654.0 | 726.2 | 1233.1 | 1030.1 | 701.7 | 591.3 | 557.3 | 572.3 | 598.1 | 572.3 | 551.8 |
| 55° | 588.6 | 643.1 | 1064.1 | 949.7 | 639.0 | 549.1 | 519.1 | 540.9 | 570.9 | 542.3 | 515.0 |
| 57.5° | 528.7 | 573.6 | 914.2 | 865.2 | 575.0 | 506.9 | 482.3 | 508.2 | 539.6 | 508.2 | 476.9 |
| 60° | 475.5 | 509.6 | 784.8 | 778.0 | 513.7 | 461.9 | 444.2 | 474.2 | 509.6 | 474.2 | 437.4 |
| 62.5° | 422.4 | 449.6 | 670.4 | 689.4 | 455.1 | 415.6 | 404.7 | 437.4 | 476.9 | 437.4 | 400.6 |
| 65° | 370.6 | 393.8 | 569.5 | 599.5 | 400.6 | 369.2 | 365.2 | 399.2 | 444.2 | 399.2 | 359.7 |
| 67.5° | 318.8 | 336.5 | 487.8 | 515.0 | 342.0 | 320.2 | 320.2 | 361.1 | 410.1 | 359.7 | 313.4 |
| 70° | 271.1 | 284.8 | 404.7 | 434.6 | 288.9 | 275.2 | 279.3 | 318.8 | 370.6 | 316.1 | 272.5 |
| 72.5° | 224.8 | 235.7 | 325.6 | 351.5 | 239.8 | 230.3 | 237.1 | 279.3 | 328.4 | 276.6 | 234.4 |
| 75° | 181.2 | 189.4 | 258.9 | 282.0 | 193.5 | 188.0 | 196.2 | 237.1 | 283.4 | 235.7 | 193.5 |
| 77.5° | 140.3 | 147.2 | 196.2 | 213.9 | 147.2 | 147.2 | 155.3 | 200.3 | 235.7 | 197.6 | 154.0 |
| 80° | 100.8 | 106.3 | 141.7 | 154.0 | 106.3 | 109.0 | 118.5 | 154.0 | 186.7 | 152.6 | 115.8 |
| 82.5° | 66.8 | 70.9 | 94.0 | 102.2 | 70.9 | 73.6 | 83.1 | 117.2 | 136.3 | 111.7 | 81.8 |
| 85° | 36.8 | 39.5 | 54.5 | 58.6 | 40.9 | 45.0 | 53.1 | 73.6 | 88.6 | 76.3 | 51.8 |
| 87.5° | 13.6 | 15.0 | 23.2 | 24.5 | 17.7 | 20.4 | 27.3 | 39.5 | 46.3 | 40.9 | 27.3 |
| 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: S125-DR-2-30-X-0048-1-U-DD-3-W

CANDELA DISTRIBUTION (continued):

| | 247.5° | 270° | 292.5° | 315° | 337.5° | 360° |
|-------|--------|--------|--------|--------|--------|--------|
| 0° | 1447.0 | 1447.0 | 1447.0 | 1447.0 | 1447.0 | 1447.0 |
| 2.5° | 1410.2 | 1462.0 | 1486.5 | 1532.8 | 1553.3 | 1547.8 |
| 5° | 1374.8 | 1456.5 | 1520.6 | 1611.8 | 1662.3 | 1678.6 |
| 7.5° | 1342.1 | 1448.3 | 1557.3 | 1697.7 | 1791.7 | 1817.6 |
| 10° | 1302.6 | 1437.4 | 1591.4 | 1786.2 | 1922.5 | 1968.8 |
| 12.5° | 1272.6 | 1423.8 | 1628.2 | 1872.1 | 2060.1 | 2128.2 |
| 15° | 1231.7 | 1402.0 | 1648.6 | 1952.5 | 2201.8 | 2294.5 |
| 17.5° | 1193.6 | 1378.9 | 1667.7 | 2024.7 | 2359.9 | 2485.2 |
| 20° | 1151.3 | 1359.8 | 1675.9 | 2094.2 | 2522.0 | 2669.1 |
| 22.5° | 1106.4 | 1323.0 | 1671.8 | 2170.5 | 2670.5 | 2814.9 |
| 25° | 1055.9 | 1291.7 | 1652.7 | 2238.6 | 2767.2 | 2862.6 |
| 27.5° | 1009.6 | 1260.3 | 1622.7 | 2313.5 | 2776.8 | 2770.0 |
| 30° | 964.7 | 1215.4 | 1587.3 | 2365.3 | 2669.1 | 2527.4 |
| 32.5° | 918.3 | 1171.8 | 1539.6 | 2391.2 | 2441.6 | 2182.7 |
| 35° | 874.7 | 1126.8 | 1491.9 | 2372.1 | 2135.0 | 1842.1 |
| 37.5° | 832.5 | 1072.3 | 1440.2 | 2299.9 | 1802.6 | 1512.4 |
| 40° | 790.3 | 1016.4 | 1384.3 | 2165.0 | 1508.3 | 1259.0 |
| 42.5° | 752.1 | 955.1 | 1327.1 | 1989.3 | 1269.9 | 1080.5 |
| 45° | 709.9 | 891.1 | 1261.7 | 1765.8 | 1083.2 | 930.6 |
| 47.5° | 674.4 | 824.3 | 1194.9 | 1560.1 | 930.6 | 818.9 |
| 50° | 632.2 | 757.6 | 1121.3 | 1366.6 | 809.3 | 722.1 |
| 52.5° | 587.2 | 690.8 | 1041.0 | 1192.2 | 712.6 | 654.0 |
| 55° | 543.6 | 625.4 | 957.8 | 1028.7 | 633.6 | 588.6 |
| 57.5° | 504.1 | 564.1 | 870.6 | 882.9 | 564.1 | 528.7 |
| 60° | 456.4 | 502.8 | 780.7 | 756.2 | 498.7 | 475.5 |
| 62.5° | 414.2 | 444.2 | 689.4 | 648.6 | 438.7 | 422.4 |
| 65° | 363.8 | 388.3 | 598.1 | 553.2 | 384.2 | 370.6 |
| 67.5° | 314.7 | 331.1 | 512.3 | 461.9 | 328.4 | 318.8 |
| 70° | 273.9 | 279.3 | 423.7 | 382.9 | 276.6 | 271.1 |
| 72.5° | 228.9 | 235.7 | 347.4 | 306.6 | 228.9 | 224.8 |
| 75° | 185.3 | 188.0 | 272.5 | 242.5 | 185.3 | 181.2 |
| 77.5° | 144.4 | 144.4 | 204.4 | 182.6 | 141.7 | 140.3 |
| 80° | 106.3 | 104.9 | 145.8 | 130.8 | 103.6 | 100.8 |
| 82.5° | 72.2 | 69.5 | 95.4 | 85.8 | 68.1 | 66.8 |
| 85° | 43.6 | 40.9 | 54.5 | 50.4 | 38.2 | 36.8 |
| 87.5° | 21.8 | 20.4 | 23.2 | 20.4 | 13.6 | 13.6 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)