

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: LUMARK

Report Number: P882277

Luminaire Tested: **NAV-SB2A-827-U-T2**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882277
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-3)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2A-827-U-T2
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7360 lumens
Efficiency: N/A
Efficacy: 128.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

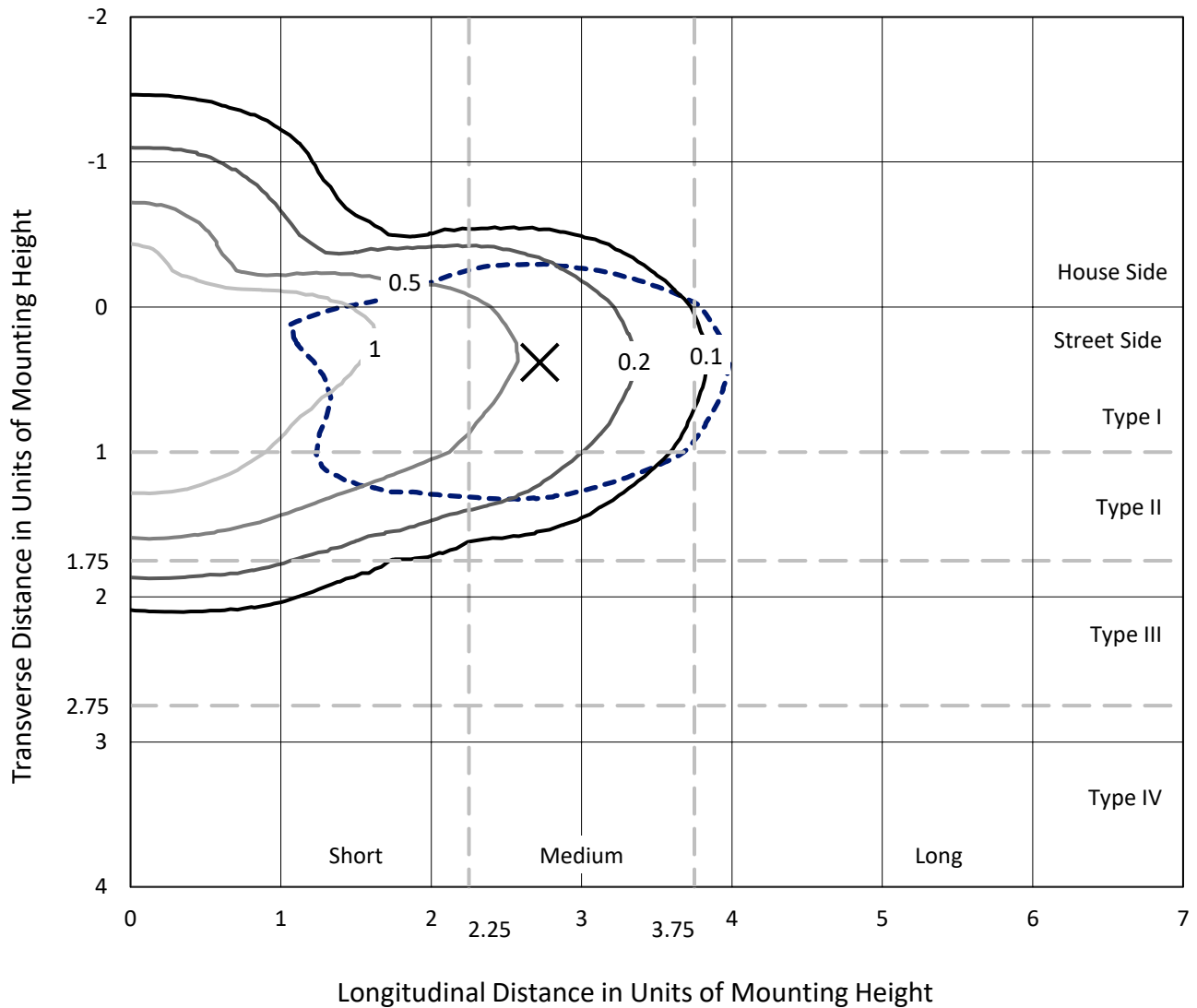
Input Watts (W): 57.3
Input Voltage (V): 120.0
Input Current (Ain): 0.484
Voltage Rise (V): NR
Power Factor: 0.994
Total Harmonic Distortion (THDi): 9.038
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

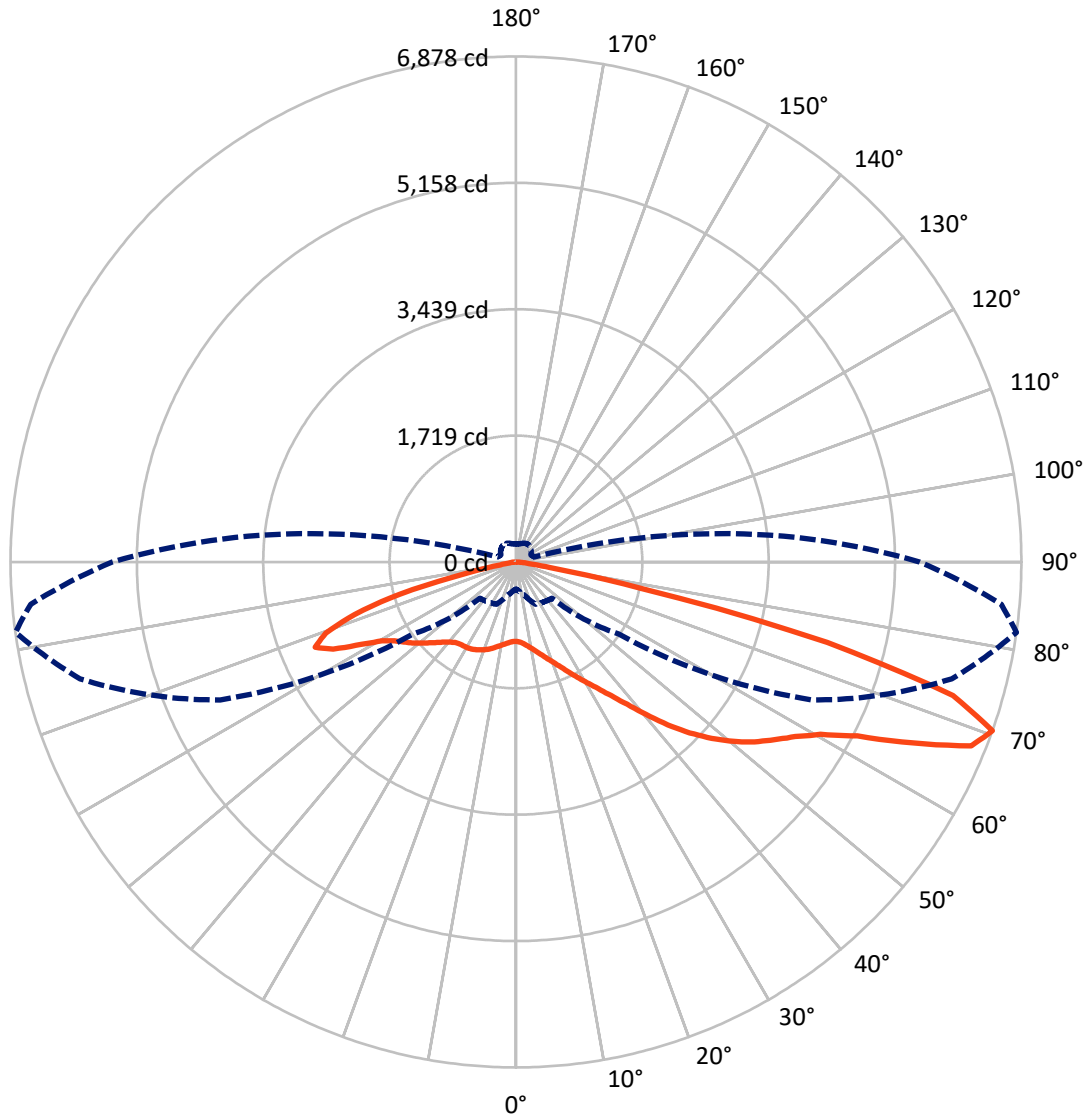
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 82-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1814.4 | 0.0 | 1814.4 |
| | % Fixture | 24.7 | 0.0 | 24.7 |
| Street Side | Lumens | 5545.6 | 0.0 | 5545.6 |
| | % Fixture | 75.3 | 0.0 | 75.3 |
| Total | Lumens | 7360.0 | 0.0 | 7360.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 101.9 | 1.4 |
| 10°-20° | 292.7 | 4.0 |
| 20°-30° | 489.7 | 6.7 |
| 30°-40° | 765.0 | 10.4 |
| 40°-50° | 1218.4 | 16.6 |
| 50°-60° | 1695.5 | 23.0 |
| 60°-70° | 1773.6 | 24.1 |
| 70°-80° | 927.0 | 12.6 |
| 80°-90° | 96.3 | 1.3 |
| 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°-90° | 7360.0 | 100.0 |
| 0°-180° | 7360.0 | 100.0 |

Coefficient of Utilization



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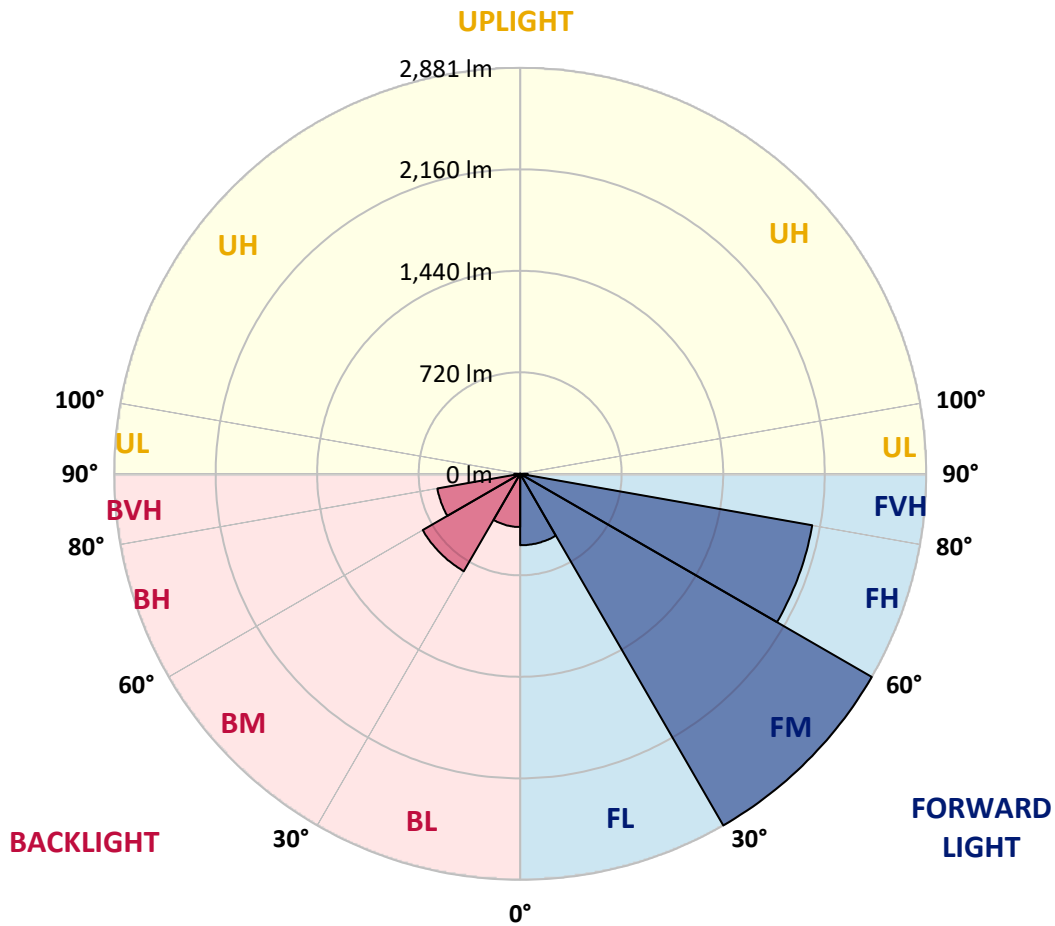
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 506.8 | 6.9 | | | |
| FM (30°-60°) | 2880.6 | 39.1 | | | |
| FH (60°-80°) | 2104.2 | 28.6 | | | G2/5000 |
| FVH (80°-90°) | 53.9 | 0.7 | | | G1/100 |
| BL (0°-30°) | 377.5 | 5.1 | B1/500 | | |
| BM (30°-60°) | 798.3 | 10.8 | B1/1000 | | |
| BH (60°-80°) | 596.3 | 8.1 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 42.4 | 0.6 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G2

Type II Medium



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 82° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1079.1 | 1079.1 | 1079.1 | 1079.1 | 1079.1 | 1079.1 | 1079.1 | 1079.1 | 1079.1 | 1079.1 | 1079.1 |
| 2.5° | 1104.8 | 1111.1 | 1109.1 | 1107.2 | 1107.2 | 1104.5 | 1104.1 | 1100.2 | 1097.0 | 1092.0 | 1090.8 |
| 5° | 1118.9 | 1125.5 | 1124.8 | 1126.3 | 1131.4 | 1132.6 | 1133.7 | 1131.4 | 1125.2 | 1118.9 | 1116.2 |
| 7.5° | 1106.4 | 1113.8 | 1116.2 | 1125.5 | 1141.2 | 1155.2 | 1165.8 | 1170.1 | 1164.2 | 1155.2 | 1150.9 |
| 10° | 1064.2 | 1072.4 | 1080.6 | 1102.9 | 1130.6 | 1163.8 | 1191.9 | 1208.7 | 1207.6 | 1199.0 | 1191.5 |
| 12.5° | 978.7 | 987.3 | 1004.9 | 1048.2 | 1099.0 | 1157.6 | 1209.9 | 1245.0 | 1257.2 | 1250.9 | 1238.0 |
| 15° | 910.4 | 917.8 | 931.1 | 975.6 | 1041.6 | 1130.6 | 1216.5 | 1284.9 | 1315.7 | 1312.2 | 1296.6 |
| 17.5° | 908.4 | 911.5 | 919.7 | 940.8 | 991.6 | 1088.4 | 1209.5 | 1323.9 | 1382.9 | 1382.5 | 1363.0 |
| 20° | 942.8 | 943.9 | 948.6 | 952.9 | 981.8 | 1056.4 | 1191.5 | 1356.4 | 1458.3 | 1458.3 | 1437.2 |
| 22.5° | 990.4 | 989.6 | 994.3 | 990.4 | 1004.5 | 1053.7 | 1180.2 | 1384.9 | 1542.3 | 1548.5 | 1521.9 |
| 25° | 1061.9 | 1058.0 | 1056.8 | 1047.8 | 1050.6 | 1079.1 | 1192.7 | 1417.3 | 1641.8 | 1654.7 | 1621.5 |
| 27.5° | 1157.2 | 1150.9 | 1146.6 | 1125.9 | 1118.9 | 1131.4 | 1231.0 | 1456.3 | 1752.8 | 1775.0 | 1732.8 |
| 30° | 1281.4 | 1270.0 | 1263.8 | 1227.9 | 1202.5 | 1204.4 | 1288.8 | 1508.3 | 1868.7 | 1904.7 | 1851.2 |
| 32.5° | 1450.9 | 1433.3 | 1416.5 | 1357.5 | 1311.1 | 1295.8 | 1363.4 | 1580.1 | 1994.5 | 2051.9 | 1983.2 |
| 35° | 1640.7 | 1626.6 | 1608.6 | 1517.6 | 1446.2 | 1411.0 | 1464.1 | 1680.5 | 2141.7 | 2232.7 | 2143.3 |
| 37.5° | 1823.4 | 1811.3 | 1819.9 | 1697.3 | 1605.1 | 1554.0 | 1596.1 | 1815.2 | 2323.3 | 2457.7 | 2344.0 |
| 40° | 2012.5 | 2003.1 | 2004.3 | 1887.1 | 1779.7 | 1722.3 | 1756.3 | 1984.3 | 2531.5 | 2725.2 | 2585.4 |
| 42.5° | 2217.9 | 2210.9 | 2187.4 | 2083.5 | 1962.9 | 1909.4 | 1940.6 | 2179.6 | 2754.9 | 3029.8 | 2850.2 |
| 45° | 2447.9 | 2443.6 | 2421.8 | 2302.6 | 2164.4 | 2104.2 | 2146.4 | 2395.2 | 2979.4 | 3316.5 | 3116.1 |
| 47.5° | 2646.7 | 2650.2 | 2647.5 | 2547.1 | 2403.8 | 2315.5 | 2365.9 | 2620.1 | 3188.4 | 3586.0 | 3371.2 |
| 50° | 2742.4 | 2760.7 | 2787.7 | 2756.4 | 2667.4 | 2577.6 | 2587.3 | 2837.3 | 3387.6 | 3838.6 | 3615.6 |
| 52.5° | 2692.4 | 2727.2 | 2800.6 | 2850.6 | 2884.9 | 2866.2 | 2840.0 | 3052.9 | 3575.0 | 4066.7 | 3846.8 |
| 55° | 2506.1 | 2554.9 | 2676.8 | 2797.5 | 2972.8 | 3109.1 | 3143.5 | 3291.9 | 3757.8 | 4267.5 | 4065.5 |
| 57.5° | 2166.7 | 2246.0 | 2355.4 | 2599.4 | 2894.7 | 3226.7 | 3497.3 | 3623.5 | 3951.5 | 4481.9 | 4294.4 |
| 60° | 1584.8 | 1691.0 | 1827.0 | 2190.2 | 2621.3 | 3163.8 | 3798.4 | 4132.7 | 4226.8 | 4759.5 | 4592.4 |
| 62.5° | 1014.2 | 1079.8 | 1204.8 | 1546.9 | 2042.5 | 2841.6 | 3890.6 | 4769.3 | 4693.5 | 5214.9 | 5039.2 |
| 65° | 694.4 | 736.6 | 851.0 | 1043.1 | 1320.4 | 2115.2 | 3643.8 | 5246.5 | 5434.8 | 5936.6 | 5803.1 |
| 67.5° | 504.6 | 536.6 | 634.2 | 802.6 | 860.4 | 1251.7 | 2827.5 | 5224.7 | 6155.3 | 6680.2 | 6472.5 |
| 70° | 367.9 | 390.5 | 472.6 | 634.2 | 662.0 | 696.3 | 1712.9 | 4441.2 | 6139.7 | 6877.8 | 6629.1 |
| 72.5° | 272.6 | 288.2 | 343.3 | 492.1 | 535.8 | 470.2 | 847.9 | 3227.8 | 5275.8 | 6220.9 | 6021.4 |
| 75° | 197.2 | 208.9 | 249.6 | 376.5 | 428.8 | 358.1 | 423.0 | 1886.3 | 3680.1 | 4376.0 | 4411.2 |
| 77.5° | 150.7 | 159.7 | 186.3 | 275.7 | 343.3 | 268.7 | 262.4 | 867.8 | 1744.9 | 1753.5 | 1852.0 |
| 80° | 121.1 | 126.9 | 141.4 | 194.1 | 263.2 | 201.1 | 171.1 | 350.3 | 551.4 | 466.7 | 489.7 |
| 82.5° | 89.0 | 98.8 | 119.5 | 136.3 | 188.2 | 138.6 | 104.3 | 176.9 | 209.7 | 180.4 | 182.0 |
| 85° | 50.8 | 57.4 | 72.3 | 97.6 | 120.3 | 84.7 | 59.8 | 78.5 | 97.6 | 80.1 | 71.5 |
| 87.5° | 18.0 | 23.4 | 25.4 | 38.3 | 52.3 | 35.1 | 23.0 | 22.7 | 32.0 | 23.8 | 19.9 |
| 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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CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1079.1 | 1079.1 | 1079.1 | 1079.1 | 1079.1 | 1079.1 | 1079.1 | 1079.1 | 1079.1 | 1079.1 | 1079.1 |
| 2.5° | 1086.9 | 1084.9 | 1077.1 | 1066.6 | 1055.6 | 1045.1 | 1041.6 | 1034.2 | 1029.1 | 1026.3 | 1029.5 |
| 5° | 1108.7 | 1102.5 | 1084.1 | 1060.7 | 1036.1 | 1009.6 | 990.8 | 973.6 | 961.1 | 949.4 | 954.1 |
| 7.5° | 1140.0 | 1129.1 | 1097.4 | 1056.4 | 1012.7 | 968.5 | 935.7 | 910.7 | 894.0 | 883.0 | 885.4 |
| 10° | 1176.3 | 1159.5 | 1111.1 | 1049.8 | 982.2 | 918.9 | 880.3 | 858.8 | 848.3 | 842.4 | 844.0 |
| 12.5° | 1218.1 | 1194.3 | 1125.2 | 1034.5 | 935.7 | 863.5 | 836.9 | 830.7 | 831.1 | 831.5 | 832.2 |
| 15° | 1269.7 | 1236.5 | 1136.5 | 1001.4 | 875.2 | 820.9 | 816.2 | 826.4 | 836.9 | 842.0 | 841.6 |
| 17.5° | 1327.8 | 1281.0 | 1138.4 | 946.7 | 815.8 | 793.6 | 808.4 | 830.3 | 846.3 | 853.3 | 854.9 |
| 20° | 1390.3 | 1326.3 | 1124.4 | 869.3 | 767.0 | 771.3 | 797.9 | 826.0 | 843.6 | 852.6 | 854.9 |
| 22.5° | 1461.8 | 1374.7 | 1090.8 | 788.1 | 727.2 | 747.1 | 778.4 | 805.7 | 824.0 | 833.0 | 835.4 |
| 25° | 1543.4 | 1429.0 | 1038.1 | 719.8 | 692.8 | 719.8 | 751.0 | 773.7 | 788.5 | 796.7 | 799.0 |
| 27.5° | 1634.0 | 1485.6 | 967.8 | 665.5 | 662.8 | 691.7 | 717.4 | 735.0 | 742.8 | 749.1 | 751.4 |
| 30° | 1725.0 | 1537.2 | 882.6 | 624.5 | 636.6 | 663.9 | 682.3 | 690.1 | 692.4 | 693.6 | 696.3 |
| 32.5° | 1823.4 | 1581.7 | 793.2 | 590.5 | 611.6 | 637.0 | 647.9 | 651.4 | 640.5 | 633.1 | 635.4 |
| 35° | 1942.6 | 1629.3 | 705.7 | 563.6 | 587.0 | 608.9 | 612.4 | 609.2 | 596.4 | 581.1 | 581.9 |
| 37.5° | 2089.8 | 1688.7 | 635.8 | 544.4 | 563.9 | 578.4 | 574.1 | 573.3 | 574.5 | 556.5 | 557.7 |
| 40° | 2270.2 | 1766.0 | 584.6 | 529.6 | 545.2 | 548.3 | 536.2 | 542.9 | 548.7 | 521.4 | 522.2 |
| 42.5° | 2470.6 | 1859.4 | 552.2 | 519.4 | 529.6 | 522.2 | 503.4 | 510.8 | 510.0 | 474.1 | 473.7 |
| 45° | 2674.8 | 1960.9 | 540.9 | 512.0 | 515.1 | 500.3 | 479.6 | 481.5 | 465.1 | 432.7 | 433.9 |
| 47.5° | 2877.9 | 2069.9 | 547.9 | 505.8 | 497.2 | 480.4 | 464.4 | 455.8 | 431.5 | 407.3 | 407.3 |
| 50° | 3077.1 | 2184.3 | 573.7 | 493.3 | 472.6 | 462.8 | 451.1 | 435.8 | 410.1 | 389.4 | 387.8 |
| 52.5° | 3261.8 | 2299.5 | 602.6 | 472.6 | 441.7 | 447.6 | 440.1 | 422.6 | 397.2 | 376.1 | 376.5 |
| 55° | 3436.8 | 2414.7 | 613.9 | 444.0 | 412.8 | 434.3 | 430.0 | 397.6 | 367.1 | 349.9 | 348.4 |
| 57.5° | 3627.4 | 2553.4 | 601.4 | 407.7 | 389.4 | 419.1 | 402.6 | 366.7 | 349.1 | 336.3 | 335.1 |
| 60° | 3891.4 | 2770.9 | 574.5 | 362.8 | 367.1 | 396.4 | 368.3 | 353.4 | 334.3 | 319.9 | 319.1 |
| 62.5° | 4329.9 | 3176.7 | 531.1 | 318.3 | 340.9 | 362.8 | 351.9 | 337.0 | 317.5 | 303.5 | 303.5 |
| 65° | 4978.2 | 3740.6 | 449.5 | 283.5 | 311.7 | 330.0 | 334.3 | 319.5 | 299.2 | 284.3 | 285.1 |
| 67.5° | 5525.0 | 4094.4 | 340.2 | 254.6 | 281.6 | 303.5 | 315.6 | 301.1 | 279.6 | 265.2 | 265.6 |
| 70° | 5494.9 | 3837.5 | 259.7 | 226.1 | 255.0 | 277.3 | 292.9 | 281.6 | 258.5 | 244.9 | 246.0 |
| 72.5° | 4880.6 | 3210.3 | 210.1 | 197.2 | 228.1 | 249.9 | 268.7 | 260.1 | 236.7 | 223.4 | 223.4 |
| 75° | 3585.6 | 2278.8 | 167.9 | 167.9 | 194.5 | 221.4 | 242.1 | 236.7 | 215.2 | 205.8 | 203.1 |
| 77.5° | 1511.4 | 956.0 | 131.6 | 139.4 | 161.7 | 190.2 | 216.0 | 217.9 | 199.2 | 210.9 | 191.4 |
| 80° | 401.9 | 263.6 | 100.4 | 109.7 | 126.9 | 157.0 | 187.9 | 187.1 | 166.8 | 155.8 | 144.9 |
| 82.5° | 153.1 | 103.9 | 71.5 | 77.3 | 91.8 | 120.3 | 148.8 | 153.5 | 133.2 | 115.2 | 115.2 |
| 85° | 59.0 | 44.5 | 44.1 | 46.5 | 53.5 | 79.7 | 112.5 | 116.4 | 100.4 | 85.1 | 87.9 |
| 87.5° | 15.2 | 13.3 | 16.4 | 15.6 | 24.6 | 42.6 | 64.4 | 66.8 | 61.3 | 35.5 | 50.8 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)