

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: P882896

Luminaire Tested: **NAV-SB3A-727-U-T2-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882896
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB3A-727-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(3) 70 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8904 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

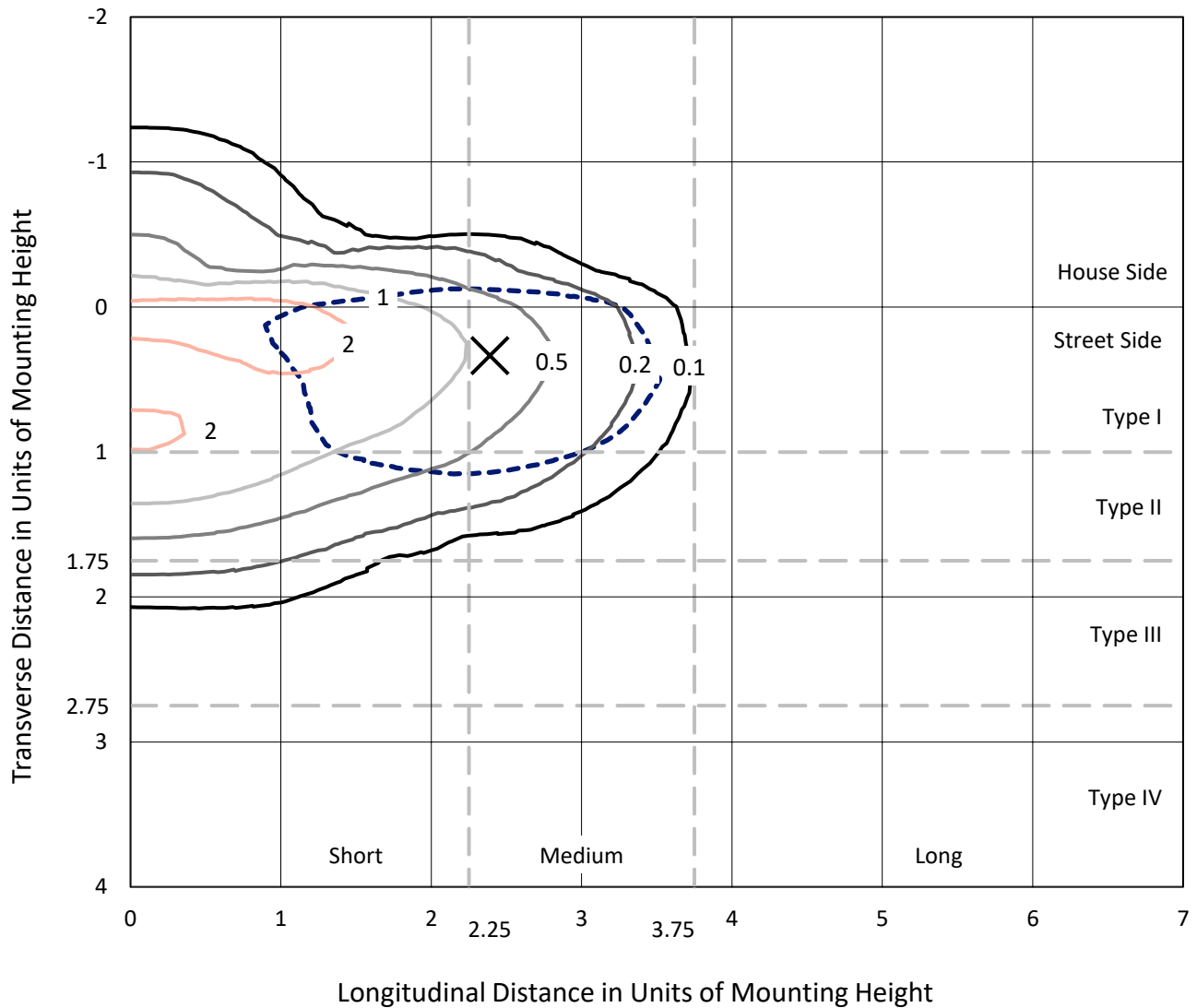
Input Watts (W): 84.7
Input Voltage (V): 120.0
Input Current (Ain): 0.717
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 11.969
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

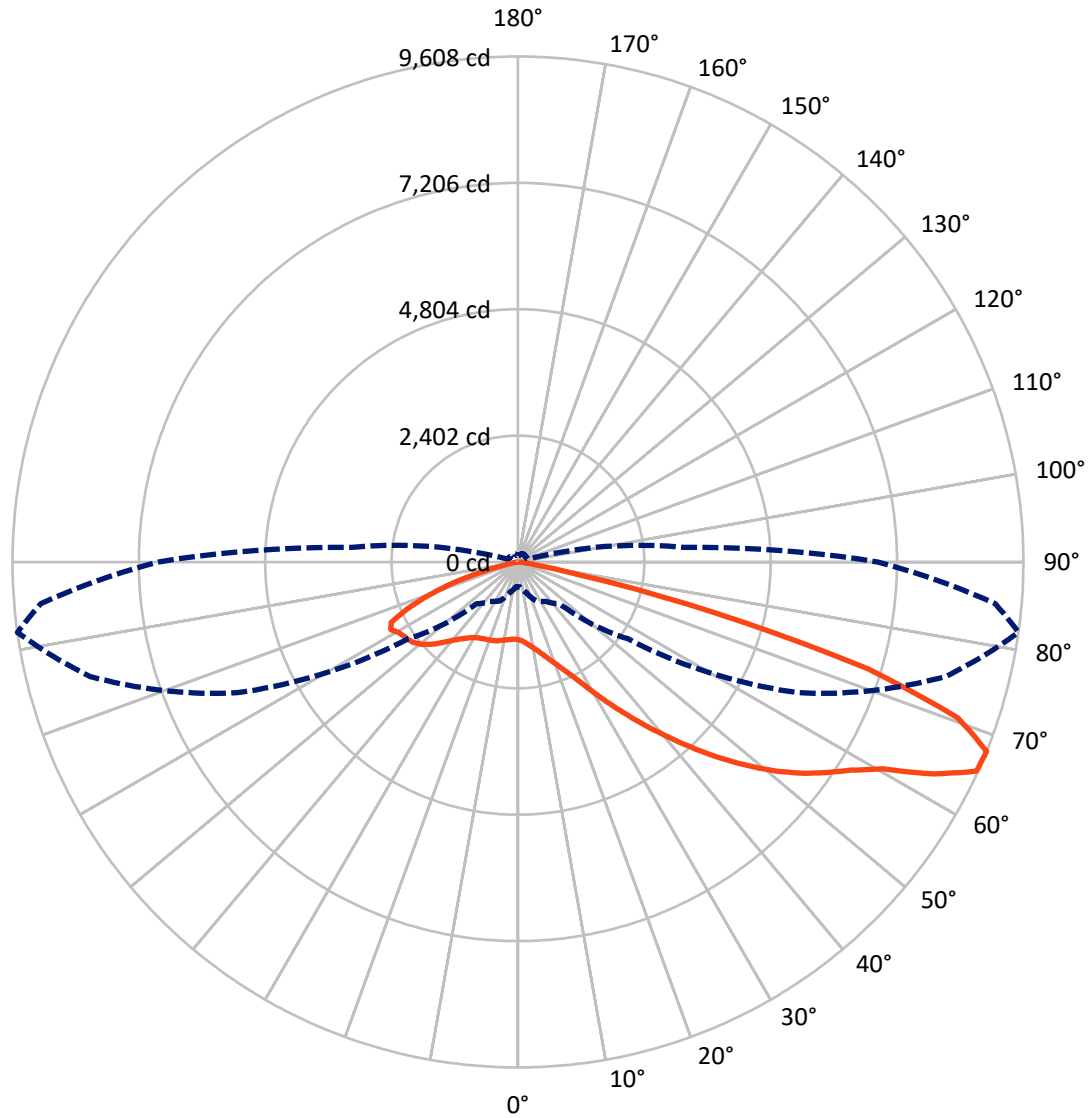
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 82-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 1612.9 | 0.0 | 1612.9 |
| | % Fixture | 18.1 | 0.0 | 18.1 |
| Street Side | Lumens | 7291.1 | 0.0 | 7291.1 |
| | % Fixture | 81.9 | 0.0 | 81.9 |
| Total | Lumens | 8904.0 | 0.0 | 8904.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 131.4 | 1.5 |
| 10°-20° | 341.5 | 3.8 |
| 20°-30° | 547.0 | 6.1 |
| 30°-40° | 967.2 | 10.9 |
| 40°-50° | 1694.7 | 19.0 |
| 50°-60° | 2260.2 | 25.4 |
| 60°-70° | 2104.2 | 23.6 |
| 70°-80° | 807.6 | 9.1 |
| 80°-90° | 50.2 | 0.6 |
| 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° | 8904.0 | 100.0 |
| 0°-180° | 8904.0 | 100.0 |

Coefficient of Utilization



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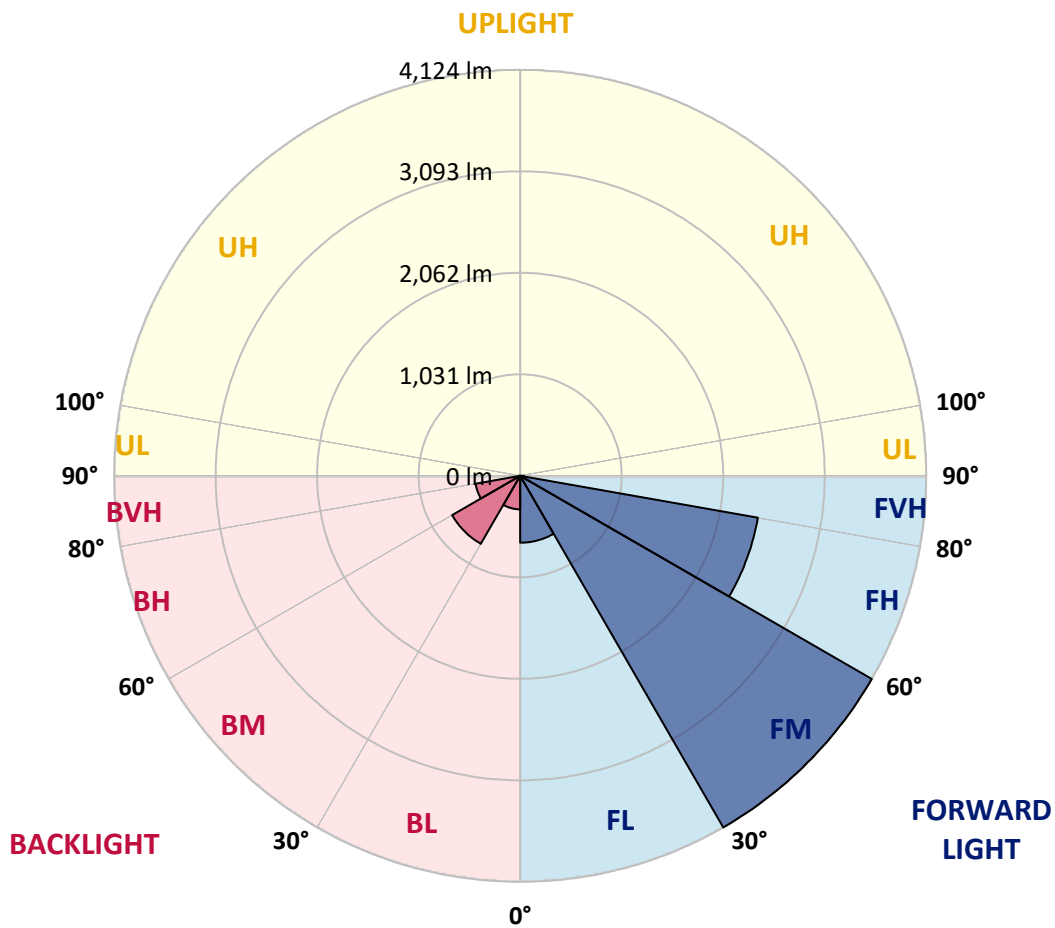
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 679.3 | 7.6 | | | |
| FM (30°-60°) | 4124.0 | 46.3 | | | |
| FH (60°-80°) | 2451.4 | 27.5 | | | G2/5000 |
| FVH (80°-90°) | 36.5 | 0.4 | | | G1/100 |
| BL (0°-30°) | 340.6 | 3.8 | B1/500 | | |
| BM (30°-60°) | 798.2 | 9.0 | B1/1000 | | |
| BH (60°-80°) | 460.3 | 5.2 | B1/500 | | G1/500 |
| BVH (80°-90°) | 13.7 | 0.2 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G2

Type II Medium



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 82° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1475.1 | 1475.1 | 1475.1 | 1475.1 | 1475.1 | 1475.1 | 1475.1 | 1475.1 | 1475.1 | 1475.1 | 1475.1 |
| 2.5° | 1559.1 | 1568.0 | 1562.9 | 1560.4 | 1555.9 | 1549.5 | 1544.3 | 1528.3 | 1511.6 | 1500.7 | 1496.9 |
| 5° | 1590.5 | 1599.5 | 1598.8 | 1601.4 | 1604.6 | 1606.5 | 1605.2 | 1587.3 | 1563.6 | 1545.0 | 1534.1 |
| 7.5° | 1563.6 | 1573.8 | 1582.1 | 1595.0 | 1617.4 | 1641.1 | 1652.7 | 1648.8 | 1624.5 | 1598.8 | 1585.4 |
| 10° | 1487.3 | 1498.2 | 1518.0 | 1548.2 | 1595.6 | 1646.9 | 1689.8 | 1709.7 | 1694.3 | 1666.1 | 1647.5 |
| 12.5° | 1347.5 | 1358.4 | 1397.5 | 1462.9 | 1542.4 | 1631.5 | 1713.6 | 1766.8 | 1770.6 | 1742.4 | 1720.6 |
| 15° | 1190.5 | 1201.4 | 1243.0 | 1325.1 | 1446.2 | 1589.2 | 1726.4 | 1827.0 | 1861.0 | 1836.7 | 1810.4 |
| 17.5° | 1093.0 | 1102.6 | 1134.0 | 1200.1 | 1326.4 | 1504.6 | 1721.9 | 1891.1 | 1968.7 | 1949.5 | 1918.1 |
| 20° | 1063.5 | 1071.9 | 1086.6 | 1132.8 | 1237.9 | 1416.8 | 1692.4 | 1951.4 | 2084.7 | 2073.8 | 2038.6 |
| 22.5° | 1094.9 | 1102.6 | 1107.1 | 1127.6 | 1193.7 | 1359.1 | 1655.2 | 2012.9 | 2219.4 | 2220.7 | 2177.7 |
| 25° | 1167.4 | 1175.1 | 1169.9 | 1182.8 | 1211.6 | 1341.1 | 1641.1 | 2085.4 | 2388.6 | 2402.7 | 2354.0 |
| 27.5° | 1286.6 | 1287.3 | 1275.1 | 1274.4 | 1278.9 | 1368.0 | 1655.9 | 2163.0 | 2602.1 | 2628.4 | 2568.1 |
| 30° | 1525.7 | 1516.1 | 1469.3 | 1418.7 | 1395.6 | 1448.8 | 1696.9 | 2254.6 | 2854.0 | 2900.8 | 2825.2 |
| 32.5° | 1894.3 | 1880.2 | 1794.3 | 1673.2 | 1551.4 | 1578.9 | 1770.6 | 2359.1 | 3128.4 | 3213.0 | 3120.7 |
| 35° | 2294.4 | 2290.5 | 2200.8 | 2020.6 | 1807.8 | 1764.2 | 1890.5 | 2496.3 | 3427.8 | 3562.4 | 3452.8 |
| 37.5° | 2666.2 | 2664.3 | 2613.0 | 2400.8 | 2141.8 | 2022.6 | 2082.8 | 2675.8 | 3748.3 | 3943.2 | 3813.7 |
| 40° | 3006.0 | 3011.7 | 2960.4 | 2770.7 | 2509.8 | 2354.0 | 2344.4 | 2897.6 | 4104.7 | 4358.0 | 4204.1 |
| 42.5° | 3299.6 | 3306.0 | 3254.0 | 3113.7 | 2873.3 | 2720.7 | 2665.5 | 3169.4 | 4452.8 | 4803.5 | 4621.4 |
| 45° | 3498.9 | 3538.7 | 3531.0 | 3418.8 | 3246.4 | 3088.0 | 3051.5 | 3510.5 | 4849.7 | 5276.0 | 5062.5 |
| 47.5° | 3555.3 | 3591.9 | 3649.6 | 3665.0 | 3559.8 | 3404.1 | 3447.6 | 3921.4 | 5251.0 | 5749.1 | 5506.1 |
| 50° | 3416.2 | 3450.2 | 3570.1 | 3729.7 | 3802.8 | 3754.7 | 3832.9 | 4361.8 | 5661.9 | 6220.9 | 5941.4 |
| 52.5° | 3141.9 | 3176.5 | 3327.8 | 3580.4 | 3878.4 | 4029.7 | 4219.5 | 4795.8 | 6060.0 | 6667.7 | 6353.6 |
| 55° | 2745.0 | 2781.6 | 2975.8 | 3261.7 | 3734.2 | 4143.2 | 4541.9 | 5229.2 | 6424.8 | 7069.7 | 6725.4 |
| 57.5° | 2205.3 | 2232.2 | 2434.1 | 2834.2 | 3371.4 | 4030.4 | 4779.8 | 5702.3 | 6768.4 | 7464.6 | 7094.0 |
| 60° | 1437.3 | 1461.0 | 1695.6 | 2141.8 | 2770.0 | 3653.4 | 4827.2 | 6229.9 | 7224.8 | 7978.1 | 7590.9 |
| 62.5° | 955.8 | 971.9 | 1111.0 | 1438.6 | 1950.8 | 2929.7 | 4549.6 | 6651.1 | 7894.1 | 8871.7 | 8442.8 |
| 65° | 655.8 | 671.8 | 810.9 | 1039.2 | 1260.3 | 1937.9 | 3751.5 | 6595.3 | 8500.5 | 9581.4 | 9074.3 |
| 67.5° | 468.0 | 481.4 | 599.4 | 814.8 | 912.2 | 1125.7 | 2543.1 | 5882.4 | 8413.3 | 9608.3 | 9108.3 |
| 70° | 335.3 | 343.0 | 440.4 | 634.7 | 725.0 | 676.3 | 1414.2 | 4499.0 | 7366.5 | 8872.3 | 8414.6 |
| 72.5° | 234.6 | 237.2 | 305.8 | 483.4 | 584.0 | 493.6 | 673.1 | 2999.5 | 5571.5 | 6963.9 | 6523.5 |
| 75° | 159.0 | 162.2 | 205.8 | 354.5 | 468.6 | 376.9 | 356.4 | 1608.4 | 3270.7 | 3854.7 | 3455.3 |
| 77.5° | 97.4 | 98.7 | 132.7 | 242.3 | 350.7 | 287.2 | 229.5 | 681.5 | 1265.5 | 1242.4 | 1059.0 |
| 80° | 55.1 | 55.1 | 84.6 | 150.7 | 239.1 | 185.3 | 160.9 | 289.8 | 400.7 | 351.9 | 310.3 |
| 82.5° | 30.8 | 31.4 | 61.5 | 93.6 | 158.3 | 109.6 | 88.5 | 134.0 | 173.1 | 153.2 | 133.3 |
| 85° | 12.8 | 14.1 | 37.8 | 44.2 | 75.6 | 54.5 | 35.9 | 56.4 | 64.1 | 57.1 | 41.7 |
| 87.5° | 1.3 | 1.9 | 11.5 | 8.3 | 9.0 | 10.9 | 5.1 | 10.9 | 9.0 | 9.0 | 6.4 |
| 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° | 1475.1 | 1475.1 | 1475.1 | 1475.1 | 1475.1 | 1475.1 | 1475.1 | 1475.1 | 1475.1 | 1475.1 | 1475.1 |
| 2.5° | 1484.7 | 1475.1 | 1450.7 | 1422.5 | 1385.3 | 1367.4 | 1343.0 | 1326.4 | 1312.3 | 1313.5 | 1300.7 |
| 5° | 1513.6 | 1489.2 | 1434.7 | 1366.8 | 1282.1 | 1221.9 | 1157.8 | 1113.5 | 1077.6 | 1069.9 | 1052.6 |
| 7.5° | 1553.3 | 1514.8 | 1419.3 | 1296.9 | 1153.9 | 1045.6 | 948.8 | 886.6 | 842.4 | 828.3 | 814.2 |
| 10° | 1604.6 | 1548.8 | 1399.4 | 1209.0 | 1003.3 | 865.4 | 761.6 | 712.9 | 682.7 | 672.5 | 664.8 |
| 12.5° | 1664.2 | 1587.9 | 1373.2 | 1102.0 | 848.1 | 715.4 | 649.4 | 625.0 | 615.4 | 612.2 | 610.3 |
| 15° | 1739.2 | 1636.6 | 1333.4 | 975.1 | 716.7 | 623.8 | 595.5 | 592.3 | 593.6 | 592.3 | 591.7 |
| 17.5° | 1828.3 | 1689.8 | 1268.7 | 844.3 | 628.2 | 577.0 | 566.7 | 569.3 | 572.5 | 571.8 | 570.5 |
| 20° | 1925.8 | 1742.4 | 1186.0 | 728.3 | 568.0 | 543.6 | 537.9 | 540.4 | 543.0 | 541.7 | 541.1 |
| 22.5° | 2036.7 | 1798.8 | 1094.3 | 637.9 | 527.6 | 512.9 | 506.4 | 507.1 | 507.1 | 504.5 | 503.2 |
| 25° | 2169.4 | 1861.0 | 998.1 | 573.8 | 496.8 | 485.3 | 477.6 | 475.0 | 471.2 | 463.5 | 462.2 |
| 27.5° | 2327.7 | 1927.0 | 905.8 | 528.9 | 472.5 | 461.6 | 452.6 | 446.2 | 436.6 | 423.7 | 422.5 |
| 30° | 2505.9 | 2007.2 | 827.6 | 500.7 | 453.2 | 442.3 | 432.1 | 422.5 | 408.4 | 392.3 | 391.0 |
| 32.5° | 2715.6 | 2093.1 | 770.6 | 482.1 | 435.9 | 424.4 | 412.2 | 400.7 | 385.3 | 369.3 | 369.9 |
| 35° | 2965.6 | 2196.9 | 737.2 | 469.3 | 422.5 | 407.1 | 393.6 | 380.8 | 369.3 | 355.2 | 353.9 |
| 37.5° | 3236.7 | 2307.2 | 727.0 | 462.8 | 413.5 | 389.8 | 374.4 | 365.4 | 364.1 | 355.8 | 355.2 |
| 40° | 3533.6 | 2438.0 | 734.7 | 459.0 | 403.9 | 373.1 | 356.4 | 354.5 | 357.7 | 343.0 | 343.6 |
| 42.5° | 3847.7 | 2593.1 | 747.5 | 454.5 | 390.4 | 356.4 | 340.4 | 340.4 | 337.8 | 317.3 | 317.3 |
| 45° | 4187.4 | 2772.0 | 760.3 | 443.6 | 374.4 | 339.8 | 327.6 | 323.1 | 312.2 | 292.3 | 291.7 |
| 47.5° | 4529.8 | 2954.0 | 769.9 | 423.7 | 355.2 | 325.7 | 314.8 | 304.5 | 288.5 | 270.5 | 269.9 |
| 50° | 4854.8 | 3117.5 | 759.7 | 394.3 | 333.4 | 312.2 | 300.7 | 286.6 | 269.2 | 257.1 | 255.1 |
| 52.5° | 5145.2 | 3259.2 | 716.1 | 359.6 | 310.3 | 298.1 | 287.8 | 273.1 | 259.0 | 246.2 | 244.9 |
| 55° | 5397.8 | 3373.9 | 639.1 | 326.9 | 289.8 | 285.9 | 275.7 | 257.1 | 237.8 | 226.9 | 225.7 |
| 57.5° | 5640.1 | 3461.1 | 543.0 | 300.0 | 271.2 | 272.5 | 257.1 | 240.4 | 222.4 | 210.9 | 209.6 |
| 60° | 5962.5 | 3577.8 | 445.5 | 275.0 | 251.3 | 255.1 | 238.5 | 226.3 | 203.9 | 189.1 | 187.2 |
| 62.5° | 6478.0 | 3759.2 | 353.9 | 244.2 | 228.2 | 229.5 | 222.4 | 207.7 | 180.8 | 163.5 | 162.2 |
| 65° | 6887.0 | 3692.5 | 278.9 | 210.9 | 201.9 | 203.9 | 203.9 | 187.8 | 159.0 | 139.1 | 137.2 |
| 67.5° | 6840.8 | 3161.7 | 222.4 | 178.2 | 176.9 | 178.2 | 182.7 | 169.2 | 141.0 | 125.0 | 122.4 |
| 70° | 6301.7 | 2514.9 | 178.2 | 148.1 | 153.9 | 150.7 | 163.5 | 154.5 | 126.9 | 110.9 | 109.0 |
| 72.5° | 5142.0 | 1811.7 | 135.9 | 122.4 | 118.0 | 123.1 | 147.4 | 139.1 | 105.8 | 87.8 | 85.9 |
| 75° | 3004.7 | 966.7 | 101.3 | 96.8 | 85.3 | 102.6 | 130.8 | 118.6 | 80.8 | 64.7 | 62.8 |
| 77.5° | 978.3 | 337.2 | 74.4 | 71.2 | 63.5 | 82.7 | 111.5 | 100.0 | 66.0 | 51.3 | 49.4 |
| 80° | 262.2 | 101.9 | 50.6 | 46.8 | 41.0 | 61.5 | 88.5 | 79.5 | 47.4 | 33.3 | 32.7 |
| 82.5° | 105.1 | 43.0 | 29.5 | 26.3 | 22.4 | 42.3 | 69.9 | 64.1 | 35.3 | 21.2 | 21.2 |
| 85° | 34.0 | 14.1 | 10.9 | 8.3 | 10.3 | 26.3 | 41.7 | 43.6 | 25.0 | 10.9 | 8.3 |
| 87.5° | 4.5 | 1.9 | 1.9 | 2.6 | 1.9 | 4.5 | 12.8 | 12.2 | 7.1 | 1.3 | 0.0 |
| 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)