

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: P882287

Luminaire Tested: **NAV-SB2A-830-U-T2**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882287
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-830-U-T2
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 3000K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7926 lumens
Efficiency: N/A
Efficacy: 138.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

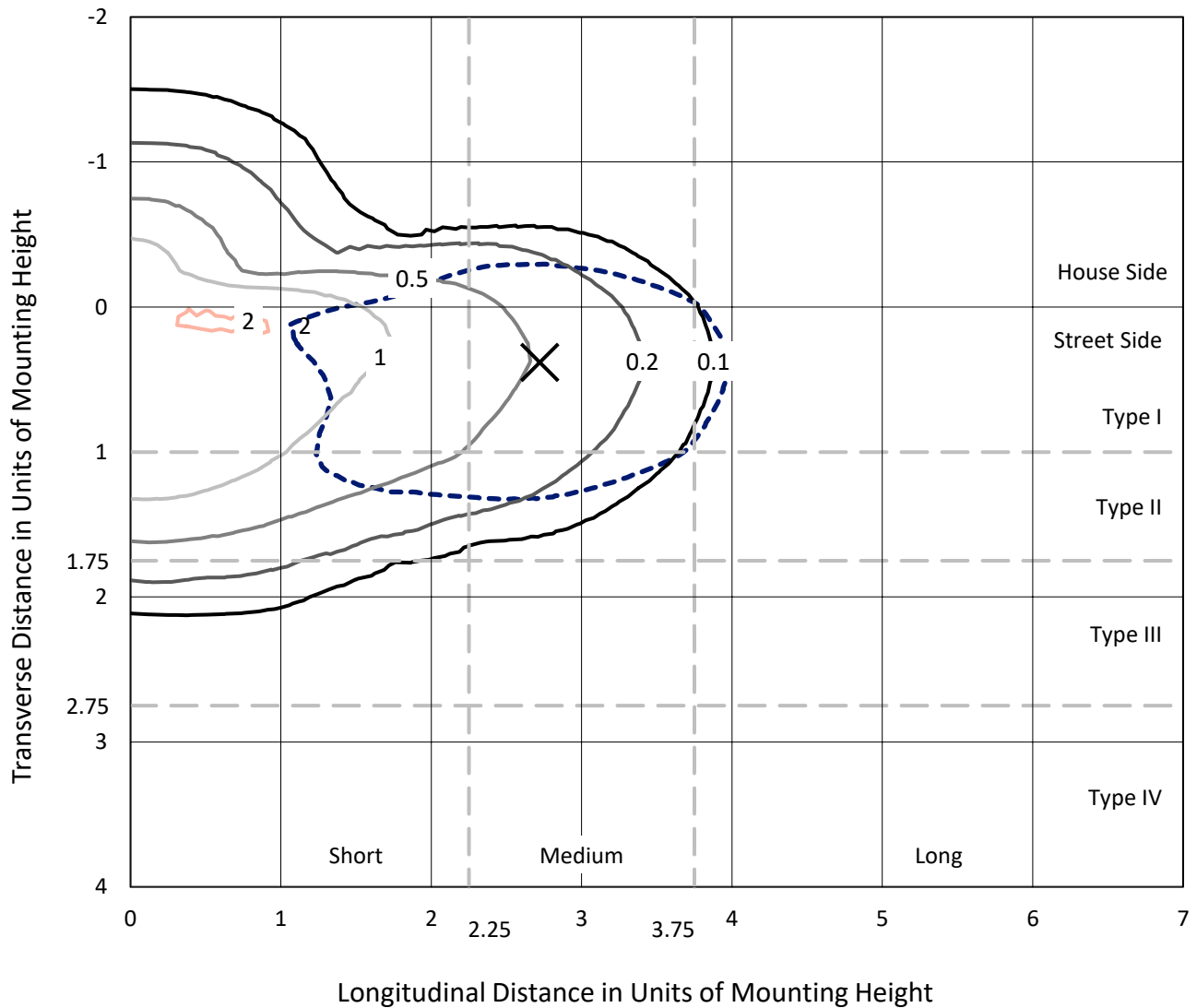
Input Watts (W): 57.3
Input Voltage (V): 120.0
Input Current (Ain): 0.484
Voltage Rise (V): NR
Power Factor: 0.994
Total Harmonic Distortion (THDi): 9.038
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

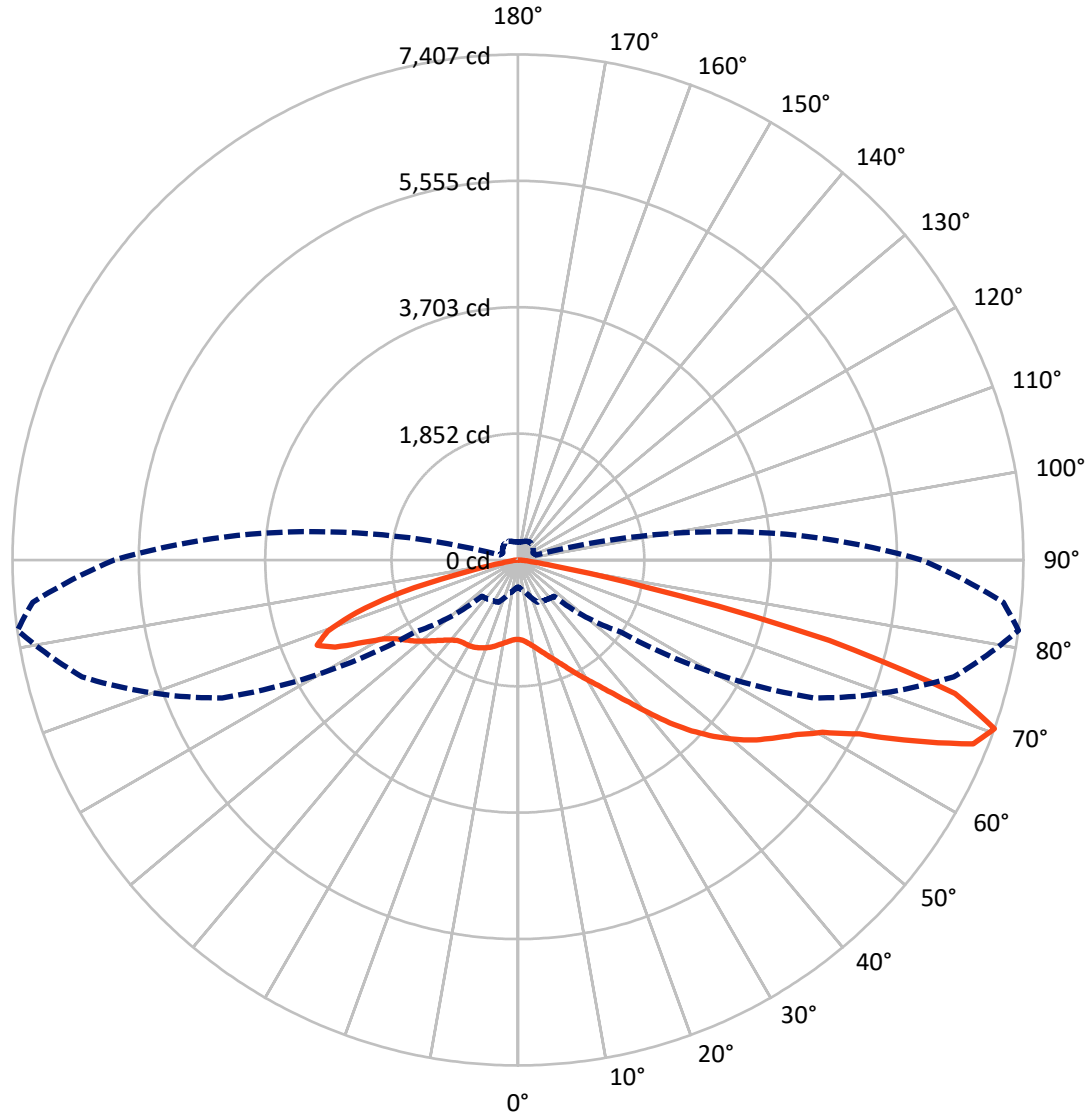
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 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 | 1954.0 | 0.0 | 1954.0 |
| | % Fixture | 24.7 | 0.0 | 24.7 |
| Street Side | Lumens | 5972.0 | 0.0 | 5972.0 |
| | % Fixture | 75.3 | 0.0 | 75.3 |
| Total | Lumens | 7926.0 | 0.0 | 7926.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 109.7 | 1.4 |
| 10°-20° | 315.2 | 4.0 |
| 20°-30° | 527.3 | 6.7 |
| 30°-40° | 823.8 | 10.4 |
| 40°-50° | 1312.1 | 16.6 |
| 50°-60° | 1825.9 | 23.0 |
| 60°-70° | 1910.0 | 24.1 |
| 70°-80° | 998.3 | 12.6 |
| 80°-90° | 103.7 | 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° | 7926.0 | 100.0 |
| 0°-180° | 7926.0 | 100.0 |

Coefficient of Utilization

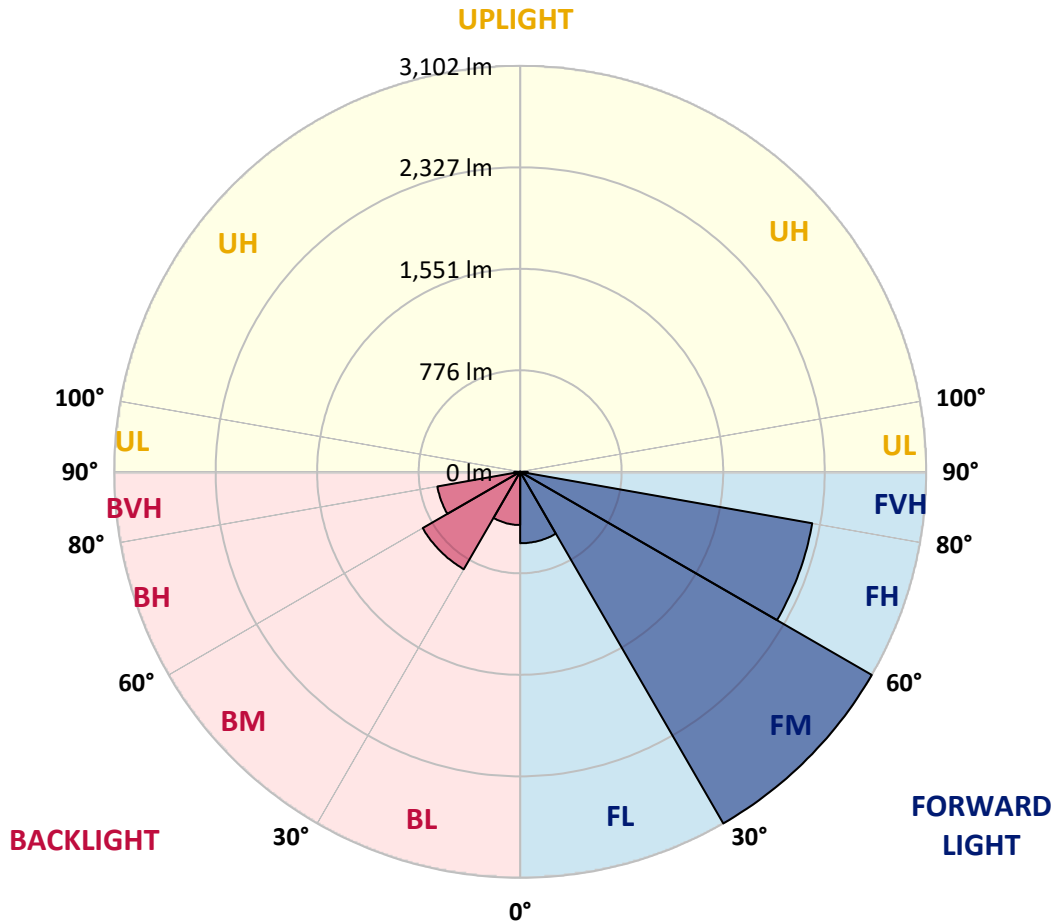


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 545.8 | 6.9 | | | |
| FM (30°-60°) | 3102.2 | 39.1 | | | |
| FH (60°-80°) | 2266.1 | 28.6 | | | G2/5000 |
| FVH (80°-90°) | 58.0 | 0.7 | | | G1/100 |
| BL (0°-30°) | 406.5 | 5.1 | B1/500 | | |
| BM (30°-60°) | 859.7 | 10.8 | B1/1000 | | |
| BH (60°-80°) | 642.2 | 8.1 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 45.6 | 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° | 1162.1 | 1162.1 | 1162.1 | 1162.1 | 1162.1 | 1162.1 | 1162.1 | 1162.1 | 1162.1 | 1162.1 | 1162.1 |
| 2.5° | 1189.8 | 1196.5 | 1194.4 | 1192.3 | 1192.3 | 1189.4 | 1189.0 | 1184.8 | 1181.4 | 1175.9 | 1174.7 |
| 5° | 1204.9 | 1212.1 | 1211.3 | 1212.9 | 1218.4 | 1219.7 | 1220.9 | 1218.4 | 1211.7 | 1204.9 | 1202.0 |
| 7.5° | 1191.5 | 1199.5 | 1202.0 | 1212.1 | 1228.9 | 1244.1 | 1255.4 | 1260.0 | 1253.7 | 1244.1 | 1239.4 |
| 10° | 1146.1 | 1154.9 | 1163.7 | 1187.7 | 1217.6 | 1253.3 | 1283.6 | 1301.7 | 1300.4 | 1291.2 | 1283.2 |
| 12.5° | 1054.0 | 1063.2 | 1082.1 | 1128.8 | 1183.5 | 1246.6 | 1302.9 | 1340.8 | 1353.8 | 1347.1 | 1333.2 |
| 15° | 980.4 | 988.4 | 1002.7 | 1050.6 | 1121.7 | 1217.6 | 1310.1 | 1383.7 | 1416.9 | 1413.1 | 1396.3 |
| 17.5° | 978.3 | 981.6 | 990.5 | 1013.2 | 1067.8 | 1172.1 | 1302.5 | 1425.8 | 1489.3 | 1488.8 | 1467.8 |
| 20° | 1015.3 | 1016.5 | 1021.6 | 1026.2 | 1057.3 | 1137.7 | 1283.2 | 1460.7 | 1570.4 | 1570.4 | 1547.7 |
| 22.5° | 1066.6 | 1065.7 | 1070.8 | 1066.6 | 1081.7 | 1134.7 | 1271.0 | 1491.4 | 1660.9 | 1667.6 | 1639.0 |
| 25° | 1143.5 | 1139.3 | 1138.1 | 1128.4 | 1131.3 | 1162.1 | 1284.4 | 1526.3 | 1768.1 | 1782.0 | 1746.2 |
| 27.5° | 1246.2 | 1239.4 | 1234.8 | 1212.5 | 1204.9 | 1218.4 | 1325.7 | 1568.3 | 1887.5 | 1911.5 | 1866.1 |
| 30° | 1379.9 | 1367.7 | 1361.0 | 1322.3 | 1295.0 | 1297.1 | 1387.9 | 1624.3 | 2012.5 | 2051.1 | 1993.5 |
| 32.5° | 1562.4 | 1543.5 | 1525.4 | 1461.9 | 1411.9 | 1395.5 | 1468.2 | 1701.6 | 2147.9 | 2209.7 | 2135.7 |
| 35° | 1766.8 | 1751.7 | 1732.4 | 1634.4 | 1557.4 | 1519.5 | 1576.7 | 1809.7 | 2306.4 | 2404.4 | 2308.1 |
| 37.5° | 1963.7 | 1950.6 | 1959.9 | 1827.8 | 1728.6 | 1673.5 | 1718.9 | 1954.8 | 2502.0 | 2646.7 | 2524.3 |
| 40° | 2167.2 | 2157.1 | 2158.4 | 2032.2 | 1916.6 | 1854.7 | 1891.3 | 2136.9 | 2726.2 | 2934.8 | 2784.2 |
| 42.5° | 2388.4 | 2380.9 | 2355.6 | 2243.8 | 2113.8 | 2056.2 | 2089.8 | 2347.2 | 2966.7 | 3262.8 | 3069.4 |
| 45° | 2636.2 | 2631.5 | 2608.0 | 2479.7 | 2330.8 | 2266.1 | 2311.5 | 2579.4 | 3208.6 | 3571.5 | 3355.8 |
| 47.5° | 2850.2 | 2854.0 | 2851.1 | 2743.0 | 2588.6 | 2493.6 | 2547.8 | 2821.6 | 3433.6 | 3861.7 | 3630.4 |
| 50° | 2953.3 | 2973.0 | 3002.1 | 2968.4 | 2872.5 | 2775.8 | 2786.3 | 3055.5 | 3648.1 | 4133.8 | 3893.7 |
| 52.5° | 2899.4 | 2936.9 | 3015.9 | 3069.8 | 3106.8 | 3086.6 | 3058.4 | 3287.6 | 3850.0 | 4379.5 | 4142.7 |
| 55° | 2698.8 | 2751.4 | 2882.6 | 3012.6 | 3201.4 | 3348.2 | 3385.2 | 3545.0 | 4046.8 | 4595.6 | 4378.2 |
| 57.5° | 2333.4 | 2418.7 | 2536.5 | 2799.4 | 3117.3 | 3474.8 | 3766.3 | 3902.1 | 4255.4 | 4826.5 | 4624.7 |
| 60° | 1706.7 | 1821.1 | 1967.5 | 2358.6 | 2822.9 | 3407.1 | 4090.5 | 4450.5 | 4551.9 | 5125.6 | 4945.5 |
| 62.5° | 1092.2 | 1162.9 | 1297.5 | 1665.9 | 2199.6 | 3060.1 | 4189.8 | 5136.1 | 5054.5 | 5615.9 | 5426.7 |
| 65° | 747.8 | 793.2 | 916.4 | 1123.4 | 1422.0 | 2277.8 | 3924.0 | 5650.0 | 5852.7 | 6393.2 | 6249.3 |
| 67.5° | 543.4 | 577.9 | 683.0 | 864.3 | 926.5 | 1347.9 | 3045.0 | 5626.5 | 6628.7 | 7193.9 | 6970.2 |
| 70° | 396.2 | 420.6 | 508.9 | 683.0 | 712.9 | 749.9 | 1844.6 | 4782.8 | 6611.9 | 7406.8 | 7138.9 |
| 72.5° | 293.6 | 310.4 | 369.7 | 529.9 | 577.0 | 506.4 | 913.1 | 3476.1 | 5681.6 | 6699.4 | 6484.4 |
| 75° | 212.4 | 225.0 | 268.7 | 405.4 | 461.8 | 385.7 | 455.5 | 2031.4 | 3963.1 | 4712.6 | 4750.4 |
| 77.5° | 162.3 | 172.0 | 200.6 | 296.9 | 369.7 | 289.4 | 282.6 | 934.5 | 1879.1 | 1888.4 | 1994.4 |
| 80° | 130.4 | 136.7 | 152.2 | 209.0 | 283.5 | 216.6 | 184.2 | 377.3 | 593.9 | 502.6 | 527.4 |
| 82.5° | 95.9 | 106.4 | 128.7 | 146.8 | 202.7 | 149.3 | 112.3 | 190.5 | 225.8 | 194.3 | 196.0 |
| 85° | 54.7 | 61.8 | 77.8 | 105.1 | 129.5 | 91.3 | 64.3 | 84.5 | 105.1 | 86.2 | 77.0 |
| 87.5° | 19.3 | 25.2 | 27.3 | 41.2 | 56.4 | 37.9 | 24.8 | 24.4 | 34.5 | 25.7 | 21.4 |
| 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° | 1162.1 | 1162.1 | 1162.1 | 1162.1 | 1162.1 | 1162.1 | 1162.1 | 1162.1 | 1162.1 | 1162.1 | 1162.1 |
| 2.5° | 1170.5 | 1168.4 | 1159.9 | 1148.6 | 1136.8 | 1125.5 | 1121.7 | 1113.7 | 1108.2 | 1105.3 | 1108.6 |
| 5° | 1194.0 | 1187.3 | 1167.5 | 1142.3 | 1115.8 | 1087.2 | 1067.0 | 1048.5 | 1035.0 | 1022.4 | 1027.5 |
| 7.5° | 1227.7 | 1215.9 | 1181.8 | 1137.7 | 1090.6 | 1043.0 | 1007.7 | 980.8 | 962.7 | 950.9 | 953.4 |
| 10° | 1266.8 | 1248.7 | 1196.5 | 1130.5 | 1057.7 | 989.6 | 948.0 | 924.8 | 913.5 | 907.2 | 908.9 |
| 12.5° | 1311.8 | 1286.1 | 1211.7 | 1114.1 | 1007.7 | 929.9 | 901.3 | 894.6 | 895.0 | 895.4 | 896.2 |
| 15° | 1367.3 | 1331.5 | 1223.9 | 1078.4 | 942.5 | 884.1 | 879.0 | 889.9 | 901.3 | 906.8 | 906.3 |
| 17.5° | 1430.0 | 1379.5 | 1226.0 | 1019.5 | 878.6 | 854.6 | 870.6 | 894.1 | 911.4 | 919.0 | 920.6 |
| 20° | 1497.2 | 1428.3 | 1210.8 | 936.2 | 826.0 | 830.6 | 859.2 | 889.5 | 908.4 | 918.1 | 920.6 |
| 22.5° | 1574.2 | 1480.4 | 1174.7 | 848.7 | 783.1 | 804.6 | 838.2 | 867.6 | 887.4 | 897.1 | 899.6 |
| 25° | 1662.1 | 1538.9 | 1117.9 | 775.1 | 746.1 | 775.1 | 808.8 | 833.2 | 849.1 | 858.0 | 860.5 |
| 27.5° | 1759.7 | 1599.9 | 1042.2 | 716.7 | 713.7 | 744.8 | 772.6 | 791.5 | 799.9 | 806.7 | 809.2 |
| 30° | 1857.7 | 1655.4 | 950.5 | 672.5 | 685.5 | 715.0 | 734.7 | 743.2 | 745.7 | 746.9 | 749.9 |
| 32.5° | 1963.7 | 1703.3 | 854.2 | 635.9 | 658.6 | 686.0 | 697.7 | 701.5 | 689.7 | 681.8 | 684.3 |
| 35° | 2091.9 | 1754.6 | 760.0 | 606.9 | 632.1 | 655.7 | 659.5 | 656.1 | 642.2 | 625.8 | 626.7 |
| 37.5° | 2250.5 | 1818.6 | 684.7 | 586.3 | 607.3 | 622.9 | 618.2 | 617.4 | 618.7 | 599.3 | 600.6 |
| 40° | 2444.8 | 1901.8 | 629.6 | 570.3 | 587.1 | 590.5 | 577.5 | 584.6 | 590.9 | 561.5 | 562.3 |
| 42.5° | 2660.6 | 2002.4 | 594.7 | 559.4 | 570.3 | 562.3 | 542.1 | 550.1 | 549.3 | 510.6 | 510.2 |
| 45° | 2880.5 | 2111.7 | 582.5 | 551.4 | 554.7 | 538.8 | 516.5 | 518.6 | 500.9 | 466.0 | 467.3 |
| 47.5° | 3099.2 | 2229.1 | 590.1 | 544.6 | 535.4 | 517.3 | 500.1 | 490.8 | 464.7 | 438.7 | 438.7 |
| 50° | 3313.7 | 2352.3 | 617.8 | 531.2 | 508.9 | 498.4 | 485.8 | 469.4 | 441.6 | 419.3 | 417.6 |
| 52.5° | 3512.6 | 2476.3 | 648.9 | 508.9 | 475.7 | 482.0 | 474.0 | 455.1 | 427.7 | 405.0 | 405.4 |
| 55° | 3701.1 | 2600.4 | 661.1 | 478.2 | 444.5 | 467.7 | 463.1 | 428.1 | 395.3 | 376.8 | 375.2 |
| 57.5° | 3906.3 | 2749.7 | 647.7 | 439.1 | 419.3 | 451.3 | 433.6 | 394.9 | 376.0 | 362.1 | 360.9 |
| 60° | 4190.6 | 2984.0 | 618.7 | 390.7 | 395.3 | 426.9 | 396.6 | 380.6 | 360.0 | 344.5 | 343.6 |
| 62.5° | 4662.9 | 3421.0 | 572.0 | 342.8 | 367.2 | 390.7 | 378.9 | 363.0 | 341.9 | 326.8 | 326.8 |
| 65° | 5361.1 | 4028.3 | 484.1 | 305.3 | 335.6 | 355.4 | 360.0 | 344.0 | 322.2 | 306.2 | 307.0 |
| 67.5° | 5949.9 | 4409.3 | 366.3 | 274.2 | 303.2 | 326.8 | 339.8 | 324.3 | 301.1 | 285.6 | 286.0 |
| 70° | 5917.5 | 4132.6 | 279.7 | 243.5 | 274.6 | 298.6 | 315.4 | 303.2 | 278.4 | 263.7 | 265.0 |
| 72.5° | 5255.9 | 3457.1 | 226.3 | 212.4 | 245.6 | 269.2 | 289.4 | 280.1 | 254.9 | 240.6 | 240.6 |
| 75° | 3861.3 | 2454.1 | 180.8 | 180.8 | 209.4 | 238.5 | 260.8 | 254.9 | 231.7 | 221.6 | 218.7 |
| 77.5° | 1627.6 | 1029.6 | 141.7 | 150.1 | 174.1 | 204.8 | 232.6 | 234.7 | 214.5 | 227.1 | 206.1 |
| 80° | 432.8 | 283.9 | 108.1 | 118.2 | 136.7 | 169.1 | 202.3 | 201.5 | 179.6 | 167.8 | 156.0 |
| 82.5° | 164.9 | 111.9 | 77.0 | 83.3 | 98.8 | 129.5 | 160.2 | 165.3 | 143.4 | 124.1 | 124.1 |
| 85° | 63.5 | 47.9 | 47.5 | 50.0 | 57.6 | 85.8 | 121.1 | 125.3 | 108.1 | 91.7 | 94.6 |
| 87.5° | 16.4 | 14.3 | 17.7 | 16.8 | 26.5 | 45.8 | 69.4 | 71.9 | 66.0 | 38.3 | 54.7 |
| 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)