

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: P882457

Luminaire Tested: **NAV-SB2B-830-U-T2**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882457
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-SB2B-830-U-T2
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 80 CRI, 3000K, 450mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9950 lumens
Efficiency: N/A
Efficacy: 134.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

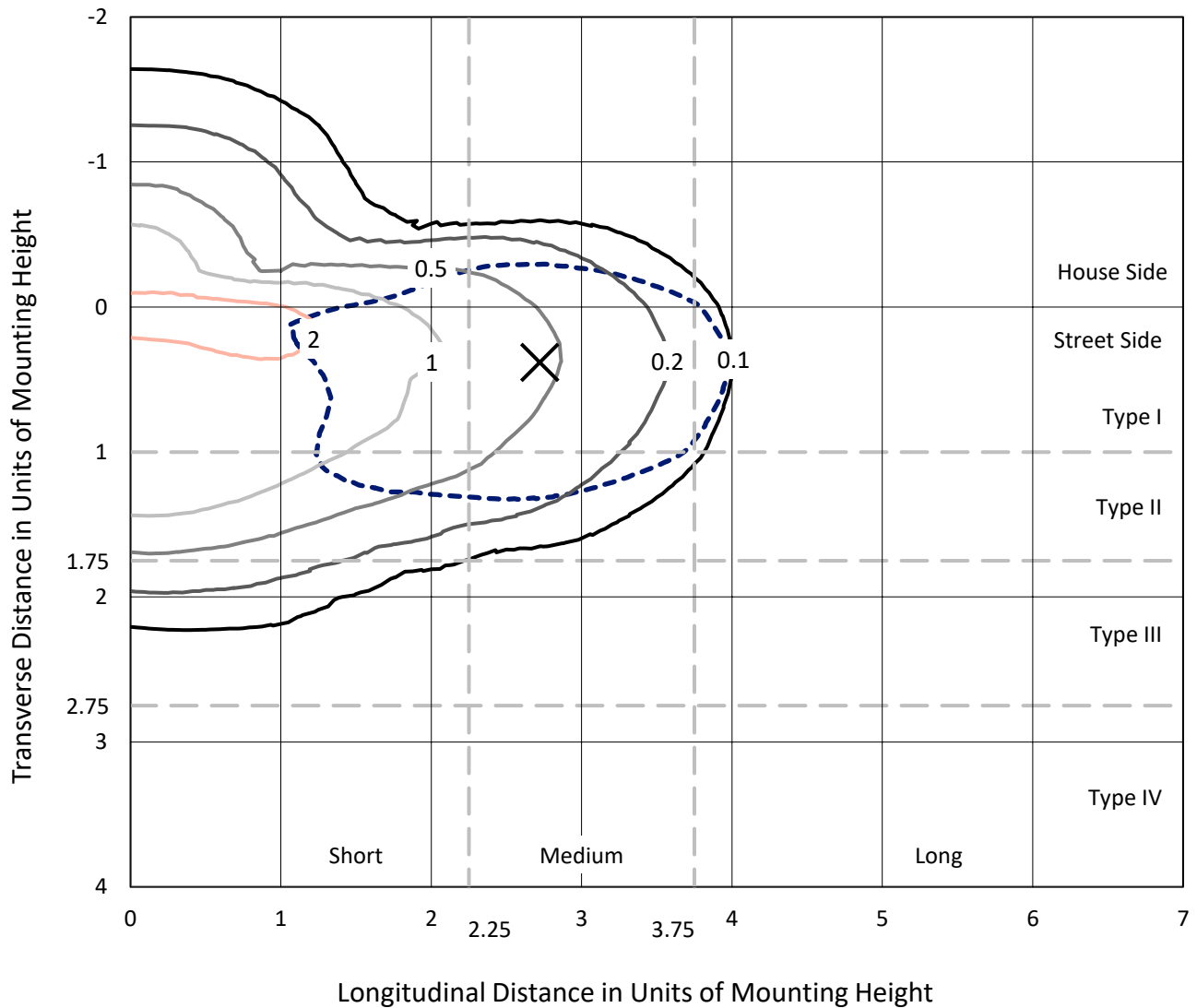
Input Watts (W): 73.9
Input Voltage (V): 120.0
Input Current (Ain): 0.627
Voltage Rise (V): NR
Power Factor: 0.988
Total Harmonic Distortion (THDi): 13.593
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

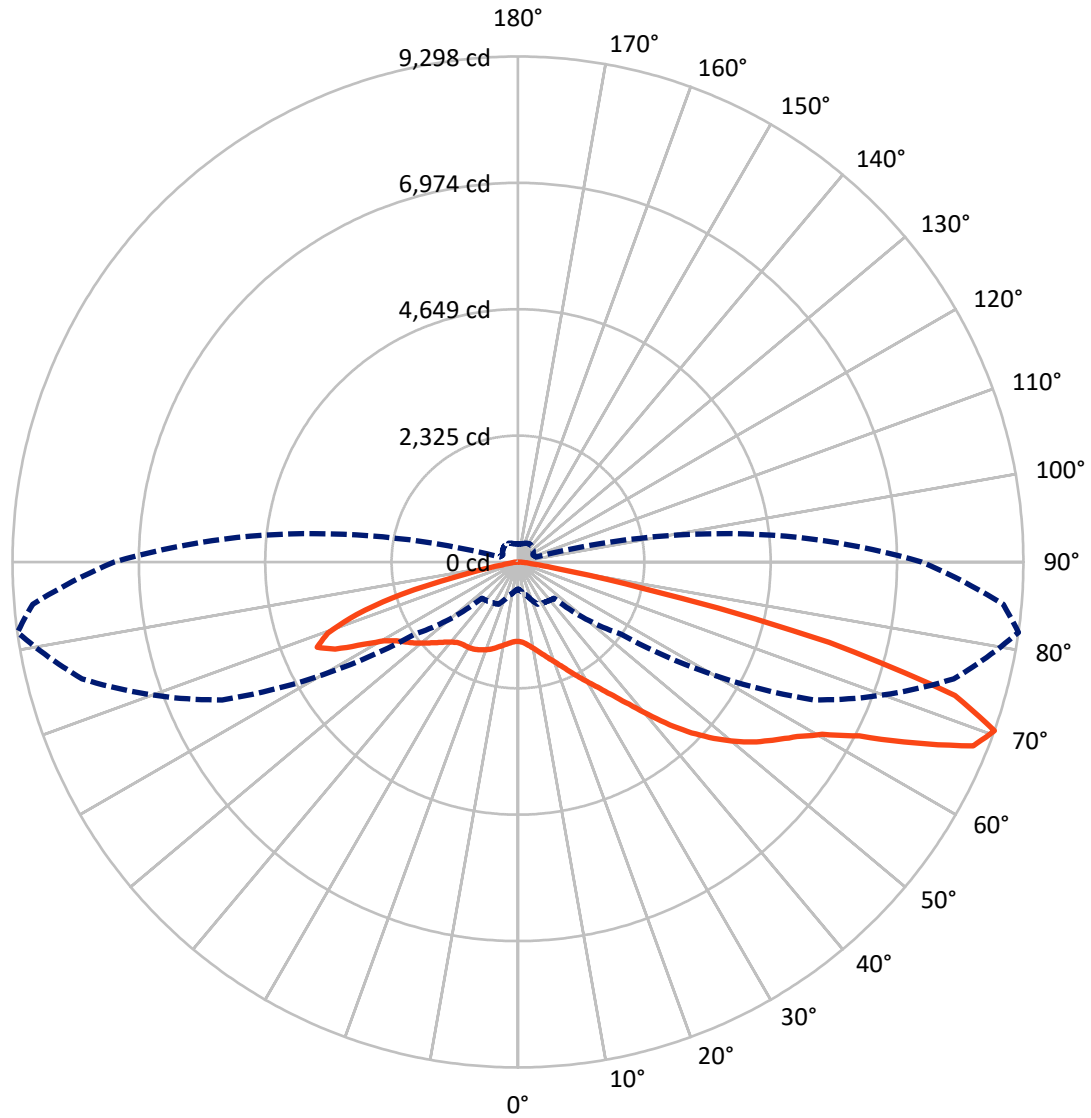
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 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 | 2452.9 | 0.0 | 2452.9 |
| | % Fixture | 24.7 | 0.0 | 24.7 |
| Street Side | Lumens | 7497.1 | 0.0 | 7497.1 |
| | % Fixture | 75.3 | 0.0 | 75.3 |
| Total | Lumens | 9950.0 | 0.0 | 9950.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 137.7 | 1.4 |
| 10°-20° | 395.7 | 4.0 |
| 20°-30° | 662.0 | 6.7 |
| 30°-40° | 1034.2 | 10.4 |
| 40°-50° | 1647.1 | 16.6 |
| 50°-60° | 2292.2 | 23.0 |
| 60°-70° | 2397.7 | 24.1 |
| 70°-80° | 1253.2 | 12.6 |
| 80°-90° | 130.1 | 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° | 9950.0 | 100.0 |
| 0°-180° | 9950.0 | 100.0 |

Coefficient of Utilization

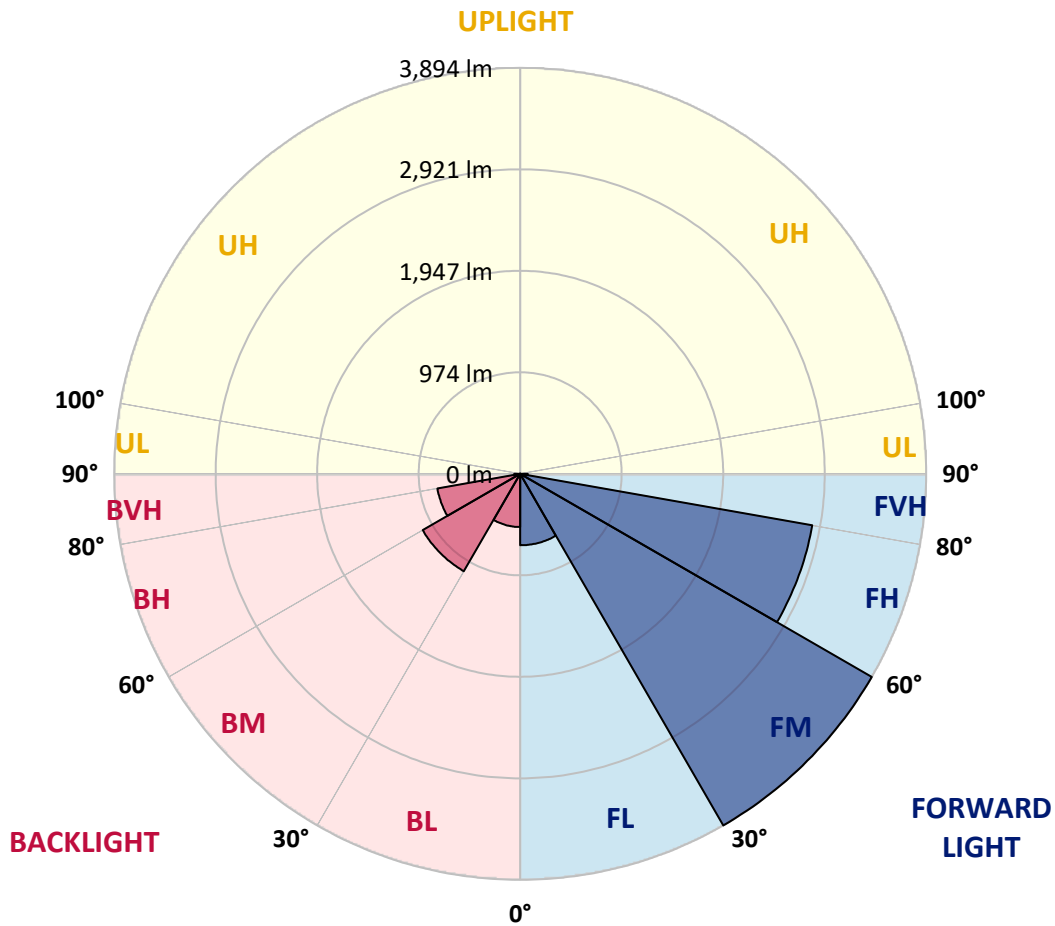


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 685.2 | 6.9 | | | |
| FM | (30°-60°) | 3894.3 | 39.1 | | | |
| FH | (60°-80°) | 2844.7 | 28.6 | | | G2/5000 |
| FVH | (80°-90°) | 72.8 | 0.7 | | | G1/100 |
| BL | (0°-30°) | 510.3 | 5.1 | B2/1000 | | |
| BM | (30°-60°) | 1079.2 | 10.8 | B2/2500 | | |
| BH | (60°-80°) | 806.1 | 8.1 | B2/1000 | | G2/1000 |
| BVH | (80°-90°) | 57.3 | 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° | 1458.8 | 1458.8 | 1458.8 | 1458.8 | 1458.8 | 1458.8 | 1458.8 | 1458.8 | 1458.8 | 1458.8 | 1458.8 |
| 2.5° | 1493.6 | 1502.1 | 1499.4 | 1496.8 | 1496.8 | 1493.1 | 1492.6 | 1487.3 | 1483.1 | 1476.2 | 1474.6 |
| 5° | 1512.6 | 1521.6 | 1520.6 | 1522.7 | 1529.5 | 1531.1 | 1532.7 | 1529.5 | 1521.1 | 1512.6 | 1509.0 |
| 7.5° | 1495.8 | 1505.8 | 1509.0 | 1521.6 | 1542.7 | 1561.7 | 1576.0 | 1581.8 | 1573.9 | 1561.7 | 1555.9 |
| 10° | 1438.7 | 1449.8 | 1460.9 | 1491.0 | 1528.5 | 1573.4 | 1611.4 | 1634.1 | 1632.5 | 1620.9 | 1610.9 |
| 12.5° | 1323.1 | 1334.7 | 1358.5 | 1417.1 | 1485.7 | 1564.9 | 1635.7 | 1683.2 | 1699.6 | 1691.1 | 1673.7 |
| 15° | 1230.7 | 1240.7 | 1258.7 | 1318.9 | 1408.1 | 1528.5 | 1644.6 | 1737.0 | 1778.7 | 1774.0 | 1752.9 |
| 17.5° | 1228.1 | 1232.3 | 1243.4 | 1271.9 | 1340.5 | 1471.5 | 1635.1 | 1789.8 | 1869.6 | 1869.0 | 1842.6 |
| 20° | 1274.5 | 1276.1 | 1282.5 | 1288.3 | 1327.3 | 1428.2 | 1610.9 | 1833.7 | 1971.5 | 1971.5 | 1942.9 |
| 22.5° | 1338.9 | 1337.9 | 1344.2 | 1338.9 | 1358.0 | 1424.5 | 1595.5 | 1872.2 | 2085.0 | 2093.4 | 2057.5 |
| 25° | 1435.6 | 1430.3 | 1428.7 | 1416.6 | 1420.3 | 1458.8 | 1612.4 | 1916.0 | 2219.6 | 2237.0 | 2192.2 |
| 27.5° | 1564.4 | 1555.9 | 1550.1 | 1522.2 | 1512.6 | 1529.5 | 1664.2 | 1968.8 | 2369.6 | 2399.6 | 2342.6 |
| 30° | 1732.3 | 1717.0 | 1708.5 | 1660.0 | 1625.6 | 1628.3 | 1742.3 | 2039.0 | 2526.4 | 2574.9 | 2502.6 |
| 32.5° | 1961.4 | 1937.7 | 1915.0 | 1835.2 | 1772.4 | 1751.8 | 1843.2 | 2136.2 | 2696.4 | 2774.0 | 2681.1 |
| 35° | 2218.0 | 2199.0 | 2174.7 | 2051.7 | 1955.1 | 1907.6 | 1979.4 | 2271.9 | 2895.4 | 3018.4 | 2897.5 |
| 37.5° | 2465.1 | 2448.7 | 2460.4 | 2294.6 | 2170.0 | 2100.8 | 2157.8 | 2454.0 | 3140.9 | 3322.5 | 3168.9 |
| 40° | 2720.7 | 2708.0 | 2709.6 | 2551.2 | 2406.0 | 2328.4 | 2374.3 | 2682.6 | 3422.3 | 3684.2 | 3495.2 |
| 42.5° | 2998.4 | 2988.9 | 2957.2 | 2816.7 | 2653.6 | 2581.3 | 2623.5 | 2946.6 | 3724.3 | 4096.0 | 3853.2 |
| 45° | 3309.3 | 3303.5 | 3274.0 | 3112.9 | 2926.0 | 2844.7 | 2901.7 | 3238.1 | 4027.9 | 4483.6 | 4212.7 |
| 47.5° | 3578.1 | 3582.8 | 3579.1 | 3443.5 | 3249.7 | 3130.4 | 3198.5 | 3542.2 | 4310.4 | 4847.9 | 4557.5 |
| 50° | 3707.4 | 3732.3 | 3768.7 | 3726.4 | 3606.1 | 3484.6 | 3497.8 | 3835.7 | 4579.7 | 5189.5 | 4888.0 |
| 52.5° | 3639.9 | 3686.8 | 3786.1 | 3853.7 | 3900.1 | 3874.8 | 3839.4 | 4127.2 | 4833.1 | 5497.8 | 5200.6 |
| 55° | 3388.0 | 3454.0 | 3618.7 | 3781.9 | 4018.9 | 4203.2 | 4249.7 | 4450.3 | 5080.2 | 5769.2 | 5496.2 |
| 57.5° | 2929.2 | 3036.4 | 3184.2 | 3514.2 | 3913.3 | 4362.1 | 4728.0 | 4898.6 | 5342.0 | 6059.0 | 5805.6 |
| 60° | 2142.5 | 2286.1 | 2469.9 | 2960.9 | 3543.8 | 4277.1 | 5135.1 | 5587.0 | 5714.3 | 6434.4 | 6208.5 |
| 62.5° | 1371.2 | 1459.9 | 1628.8 | 2091.3 | 2761.3 | 3841.5 | 5259.7 | 6447.6 | 6345.2 | 7050.0 | 6812.5 |
| 65° | 938.7 | 995.8 | 1150.5 | 1410.2 | 1785.1 | 2859.5 | 4926.0 | 7092.8 | 7347.3 | 8025.7 | 7845.2 |
| 67.5° | 682.1 | 725.4 | 857.4 | 1085.0 | 1163.1 | 1692.2 | 3822.5 | 7063.2 | 8321.4 | 9031.0 | 8750.1 |
| 70° | 497.4 | 528.0 | 638.8 | 857.4 | 894.9 | 941.4 | 2315.7 | 6004.1 | 8300.3 | 9298.2 | 8961.8 |
| 72.5° | 368.5 | 389.6 | 464.1 | 665.2 | 724.4 | 635.7 | 1146.2 | 4363.7 | 7132.4 | 8410.1 | 8140.3 |
| 75° | 266.6 | 282.5 | 337.4 | 509.0 | 579.7 | 484.2 | 571.8 | 2550.1 | 4975.1 | 5916.0 | 5963.5 |
| 77.5° | 203.8 | 215.9 | 251.8 | 372.8 | 464.1 | 363.2 | 354.8 | 1173.2 | 2359.0 | 2370.6 | 2503.7 |
| 80° | 163.7 | 171.6 | 191.1 | 262.4 | 355.9 | 271.9 | 231.3 | 473.6 | 745.5 | 630.9 | 662.1 |
| 82.5° | 120.4 | 133.6 | 161.6 | 184.3 | 254.5 | 187.4 | 141.0 | 239.2 | 283.5 | 243.9 | 246.0 |
| 85° | 68.6 | 77.6 | 97.7 | 132.0 | 162.6 | 114.6 | 80.8 | 106.1 | 132.0 | 108.2 | 96.6 |
| 87.5° | 24.3 | 31.7 | 34.3 | 51.7 | 70.7 | 47.5 | 31.2 | 30.6 | 43.3 | 32.2 | 26.9 |
| 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° | 1458.8 | 1458.8 | 1458.8 | 1458.8 | 1458.8 | 1458.8 | 1458.8 | 1458.8 | 1458.8 | 1458.8 | 1458.8 |
| 2.5° | 1469.4 | 1466.7 | 1456.2 | 1441.9 | 1427.1 | 1412.9 | 1408.1 | 1398.1 | 1391.2 | 1387.5 | 1391.7 |
| 5° | 1498.9 | 1490.5 | 1465.7 | 1434.0 | 1400.7 | 1364.8 | 1339.5 | 1316.2 | 1299.3 | 1283.5 | 1289.8 |
| 7.5° | 1541.2 | 1526.4 | 1483.6 | 1428.2 | 1369.0 | 1309.4 | 1265.0 | 1231.2 | 1208.5 | 1193.8 | 1196.9 |
| 10° | 1590.3 | 1567.6 | 1502.1 | 1419.2 | 1327.9 | 1242.3 | 1190.1 | 1161.0 | 1146.8 | 1138.8 | 1141.0 |
| 12.5° | 1646.8 | 1614.5 | 1521.1 | 1398.6 | 1265.0 | 1167.4 | 1131.5 | 1123.0 | 1123.5 | 1124.1 | 1125.1 |
| 15° | 1716.4 | 1671.6 | 1536.4 | 1353.7 | 1183.2 | 1109.8 | 1103.5 | 1117.2 | 1131.5 | 1138.3 | 1137.8 |
| 17.5° | 1795.1 | 1731.8 | 1539.0 | 1279.8 | 1102.9 | 1072.8 | 1092.9 | 1122.5 | 1144.1 | 1153.6 | 1155.7 |
| 20° | 1879.6 | 1793.0 | 1520.0 | 1175.3 | 1036.9 | 1042.8 | 1078.7 | 1116.7 | 1140.4 | 1152.6 | 1155.7 |
| 22.5° | 1976.2 | 1858.5 | 1474.6 | 1065.5 | 983.1 | 1010.0 | 1052.3 | 1089.2 | 1114.0 | 1126.2 | 1129.3 |
| 25° | 2086.6 | 1931.9 | 1403.4 | 973.1 | 936.6 | 973.1 | 1015.3 | 1045.9 | 1066.0 | 1077.1 | 1080.2 |
| 27.5° | 2209.0 | 2008.4 | 1308.3 | 899.7 | 896.0 | 935.0 | 969.9 | 993.6 | 1004.2 | 1012.7 | 1015.8 |
| 30° | 2332.1 | 2078.1 | 1193.2 | 844.2 | 860.6 | 897.6 | 922.4 | 932.9 | 936.1 | 937.7 | 941.4 |
| 32.5° | 2465.1 | 2138.3 | 1072.3 | 798.3 | 826.8 | 861.1 | 875.9 | 880.7 | 865.9 | 855.8 | 859.0 |
| 35° | 2626.1 | 2202.7 | 954.1 | 761.9 | 793.5 | 823.1 | 827.9 | 823.6 | 806.2 | 785.6 | 786.7 |
| 37.5° | 2825.2 | 2283.0 | 859.5 | 736.0 | 762.4 | 781.9 | 776.1 | 775.1 | 776.7 | 752.4 | 753.9 |
| 40° | 3069.1 | 2387.5 | 790.4 | 715.9 | 737.1 | 741.3 | 724.9 | 733.9 | 741.8 | 704.8 | 705.9 |
| 42.5° | 3340.0 | 2513.7 | 746.6 | 702.2 | 715.9 | 705.9 | 680.6 | 690.6 | 689.5 | 641.0 | 640.4 |
| 45° | 3616.1 | 2651.0 | 731.2 | 692.2 | 696.4 | 676.3 | 648.4 | 651.0 | 628.8 | 585.0 | 586.6 |
| 47.5° | 3890.6 | 2798.3 | 740.7 | 683.7 | 672.1 | 649.4 | 627.8 | 616.1 | 583.4 | 550.7 | 550.7 |
| 50° | 4159.9 | 2953.0 | 775.6 | 666.8 | 638.8 | 625.7 | 609.8 | 589.2 | 554.4 | 526.4 | 524.3 |
| 52.5° | 4409.6 | 3108.7 | 814.7 | 638.8 | 597.1 | 605.1 | 595.0 | 571.3 | 537.0 | 508.4 | 509.0 |
| 55° | 4646.2 | 3264.5 | 830.0 | 600.3 | 558.1 | 587.1 | 581.3 | 537.5 | 496.3 | 473.1 | 471.0 |
| 57.5° | 4903.8 | 3451.9 | 813.1 | 551.2 | 526.4 | 566.5 | 544.3 | 495.8 | 472.0 | 454.6 | 453.0 |
| 60° | 5260.7 | 3746.0 | 776.7 | 490.5 | 496.3 | 535.9 | 497.9 | 477.8 | 451.9 | 432.4 | 431.4 |
| 62.5° | 5853.7 | 4294.5 | 718.0 | 430.3 | 460.9 | 490.5 | 475.7 | 455.6 | 429.2 | 410.2 | 410.2 |
| 65° | 6730.1 | 5056.9 | 607.7 | 383.3 | 421.3 | 446.1 | 451.9 | 431.9 | 404.4 | 384.4 | 385.4 |
| 67.5° | 7469.3 | 5535.3 | 459.9 | 344.2 | 380.7 | 410.2 | 426.6 | 407.1 | 378.0 | 358.5 | 359.0 |
| 70° | 7428.6 | 5187.9 | 351.1 | 305.7 | 344.8 | 374.9 | 396.0 | 380.7 | 349.5 | 331.0 | 332.6 |
| 72.5° | 6598.1 | 4340.0 | 284.1 | 266.6 | 308.3 | 337.9 | 363.2 | 351.6 | 320.0 | 302.0 | 302.0 |
| 75° | 4847.3 | 3080.7 | 227.0 | 227.0 | 262.9 | 299.4 | 327.3 | 320.0 | 290.9 | 278.2 | 274.5 |
| 77.5° | 2043.3 | 1292.5 | 177.9 | 188.5 | 218.6 | 257.1 | 292.0 | 294.6 | 269.3 | 285.1 | 258.7 |
| 80° | 543.3 | 356.4 | 135.7 | 148.4 | 171.6 | 212.2 | 254.0 | 252.9 | 225.4 | 210.7 | 195.9 |
| 82.5° | 207.0 | 140.4 | 96.6 | 104.5 | 124.1 | 162.6 | 201.2 | 207.5 | 180.0 | 155.8 | 155.8 |
| 85° | 79.7 | 60.2 | 59.7 | 62.8 | 72.3 | 107.7 | 152.1 | 157.3 | 135.7 | 115.1 | 118.8 |
| 87.5° | 20.6 | 18.0 | 22.2 | 21.1 | 33.3 | 57.5 | 87.1 | 90.3 | 82.9 | 48.0 | 68.6 |
| 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)