

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: P882948

Luminaire Tested: **NAV-SB3A-760-U-T3-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882948
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-6)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB3A-760-U-T3-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(3) 70 CRI, 5700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE III
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11377 lumens
Efficiency: N/A
Efficacy: 134.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

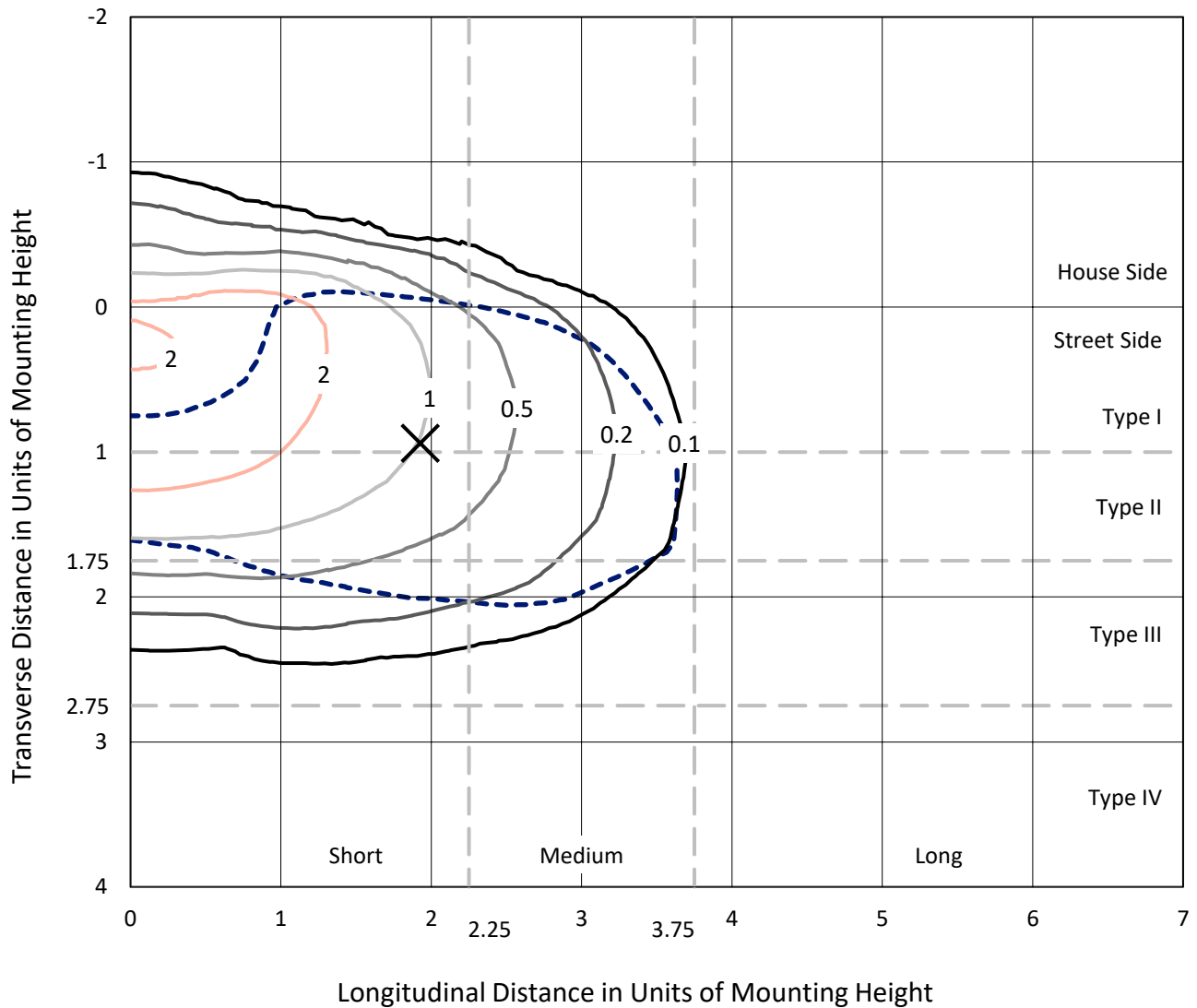
Input Watts (W): 84.7
Input Voltage (V): 120.0
Input Current (Ain): 0.717
Voltage Rise (V): NR
Power Factor: 0.99
Total Harmonic Distortion (THDi): 11.969
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

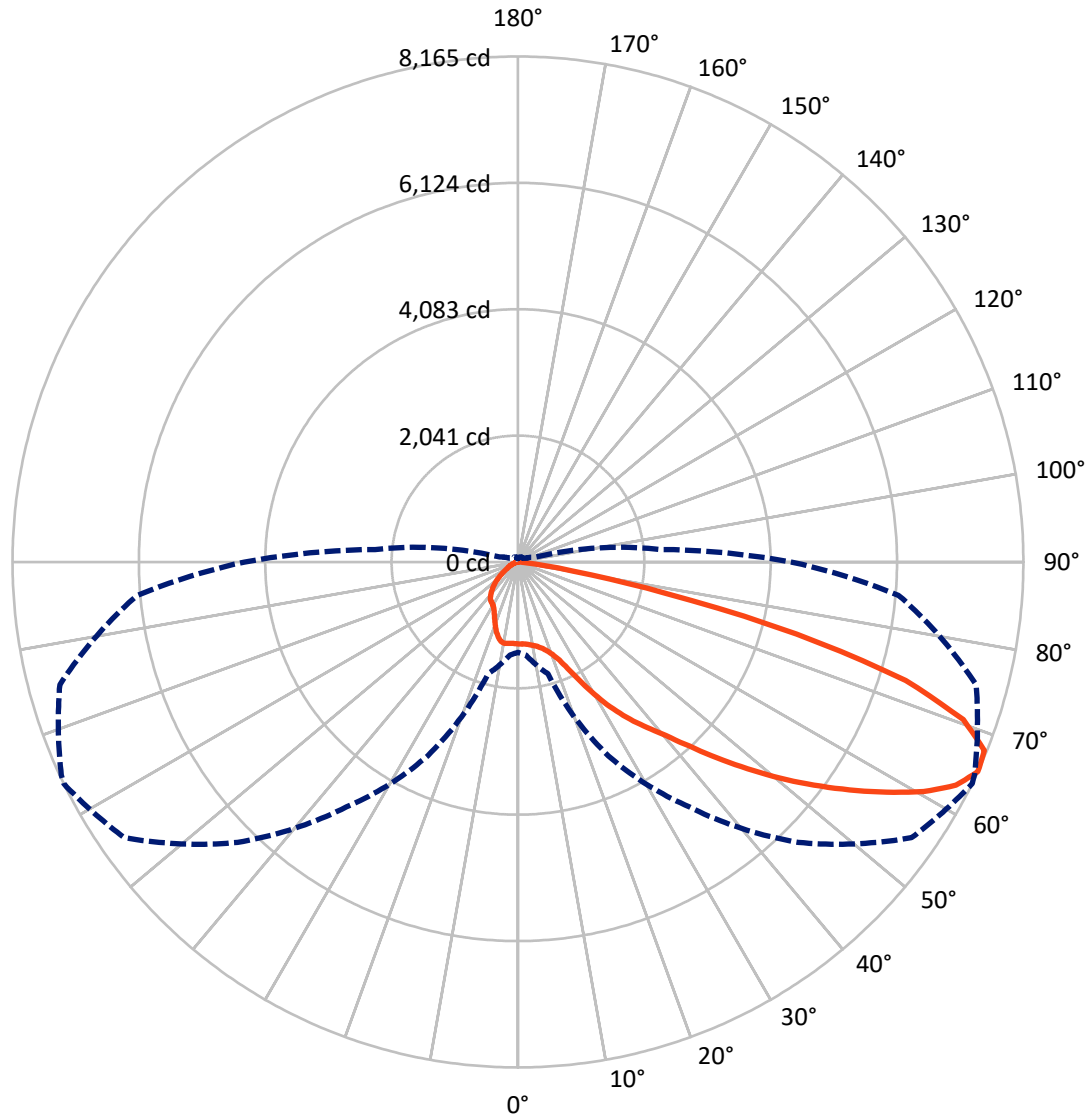
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 64-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 1521.4 | 0.0 | 1521.4 |
| | % Fixture | 13.4 | 0.0 | 13.4 |
| Street Side | Lumens | 9855.6 | 0.0 | 9855.6 |
| | % Fixture | 86.6 | 0.0 | 86.6 |
| Total | Lumens | 11377.0 | 0.0 | 11377.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 122.1 | 1.1 |
| 10°-20° | 331.1 | 2.9 |
| 20°-30° | 627.5 | 5.5 |
| 30°-40° | 1269.7 | 11.2 |
| 40°-50° | 2162.9 | 19.0 |
| 50°-60° | 2941.4 | 25.9 |
| 60°-70° | 2762.1 | 24.3 |
| 70°-80° | 1106.6 | 9.7 |
| 80°-90° | 53.6 | 0.5 |
| 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°-90° | 11377.0 | 100.0 |
| 0°-180° | 11377.0 | 100.0 |

Coefficient of Utilization



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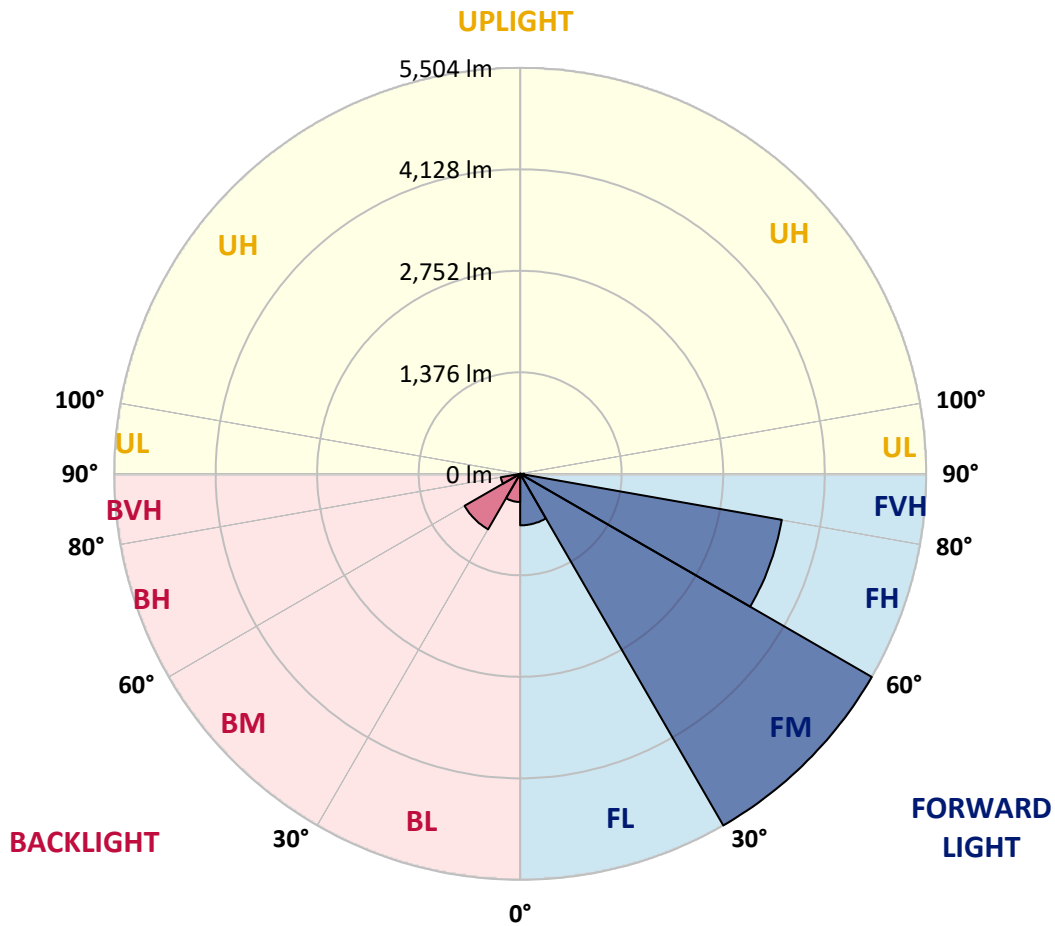
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 698.7 | 6.1 | | | |
| FM (30°-60°) | 5504.2 | 48.4 | | | |
| FH (60°-80°) | 3601.7 | 31.7 | | | G2/5000 |
| FVH (80°-90°) | 51.0 | 0.4 | | | G1/100 |
| BL (0°-30°) | 382.0 | 3.4 | B1/500 | | |
| BM (30°-60°) | 869.8 | 7.6 | B1/1000 | | |
| BH (60°-80°) | 267.0 | 2.3 | B1/500 | | G1/500 |
| BVH (80°-90°) | 2.6 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B1-U0-G2

Type III Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 64° | 65° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1323.3 | 1323.3 | 1323.3 | 1323.3 | 1323.3 | 1323.3 | 1323.3 | 1323.3 | 1323.3 | 1323.3 | 1323.3 |
| 2.5° | 1318.7 | 1327.8 | 1325.6 | 1323.3 | 1322.5 | 1324.0 | 1324.8 | 1324.0 | 1324.0 | 1324.0 | 1324.8 |
| 5° | 1293.5 | 1301.1 | 1301.1 | 1306.5 | 1314.1 | 1323.3 | 1330.1 | 1331.7 | 1333.2 | 1335.5 | 1334.7 |
| 7.5° | 1245.5 | 1251.6 | 1256.1 | 1273.7 | 1292.8 | 1317.2 | 1337.8 | 1348.4 | 1350.0 | 1358.3 | 1361.4 |
| 10° | 1212.7 | 1220.3 | 1227.9 | 1246.2 | 1273.7 | 1310.3 | 1345.4 | 1371.3 | 1375.1 | 1395.0 | 1404.1 |
| 12.5° | 1211.1 | 1218.8 | 1228.7 | 1248.5 | 1280.6 | 1319.4 | 1362.2 | 1399.5 | 1406.4 | 1435.4 | 1454.4 |
| 15° | 1227.2 | 1236.3 | 1245.5 | 1269.9 | 1304.2 | 1351.5 | 1397.2 | 1443.8 | 1450.6 | 1491.8 | 1512.4 |
| 17.5° | 1260.0 | 1272.2 | 1279.0 | 1303.4 | 1340.0 | 1392.7 | 1452.9 | 1506.3 | 1512.4 | 1560.5 | 1586.4 |
| 20° | 1324.8 | 1339.3 | 1341.6 | 1361.4 | 1397.2 | 1453.7 | 1525.4 | 1591.7 | 1599.4 | 1654.3 | 1683.3 |
| 22.5° | 1459.0 | 1479.6 | 1461.3 | 1471.2 | 1503.3 | 1559.7 | 1637.5 | 1721.4 | 1732.1 | 1794.6 | 1820.5 |
| 25° | 1695.5 | 1724.4 | 1677.2 | 1660.4 | 1674.1 | 1732.8 | 1830.5 | 1936.5 | 1948.7 | 1999.0 | 2012.0 |
| 27.5° | 2159.9 | 2122.6 | 2050.9 | 1980.7 | 1939.5 | 1973.1 | 2082.9 | 2214.1 | 2229.3 | 2278.1 | 2262.9 |
| 30° | 2670.2 | 2637.4 | 2540.5 | 2384.9 | 2287.3 | 2282.0 | 2383.4 | 2529.8 | 2547.4 | 2593.9 | 2547.4 |
| 32.5° | 3181.2 | 3149.9 | 3044.6 | 2853.2 | 2683.9 | 2600.0 | 2670.2 | 2832.6 | 2841.8 | 2871.5 | 2802.9 |
| 35° | 3683.8 | 3651.7 | 3546.5 | 3350.5 | 3142.3 | 2951.6 | 2937.9 | 3120.9 | 3124.0 | 3155.2 | 3053.0 |
| 37.5° | 4189.4 | 4162.7 | 4050.6 | 3858.4 | 3653.3 | 3390.1 | 3262.8 | 3394.0 | 3397.8 | 3428.3 | 3322.3 |
| 40° | 4550.2 | 4561.6 | 4484.6 | 4335.9 | 4159.7 | 3872.2 | 3627.3 | 3684.5 | 3661.7 | 3712.8 | 3649.5 |
| 42.5° | 4859.8 | 4882.7 | 4815.6 | 4740.9 | 4638.7 | 4385.5 | 4078.9 | 4068.9 | 4032.3 | 4059.8 | 3994.2 |
| 45° | 5127.5 | 5146.6 | 5086.4 | 5068.8 | 5066.5 | 4888.8 | 4572.3 | 4512.8 | 4461.7 | 4456.4 | 4377.8 |
| 47.5° | 5225.9 | 5262.5 | 5288.5 | 5347.2 | 5461.6 | 5386.9 | 5082.6 | 4990.3 | 4933.1 | 4891.1 | 4766.8 |
| 50° | 5263.3 | 5302.2 | 5390.7 | 5561.5 | 5832.3 | 5864.3 | 5590.5 | 5486.8 | 5416.6 | 5340.3 | 5157.3 |
| 52.5° | 5213.0 | 5282.4 | 5401.4 | 5688.9 | 6081.7 | 6247.2 | 6077.9 | 5987.1 | 5907.0 | 5782.7 | 5511.2 |
| 55° | 4916.3 | 4985.7 | 5229.0 | 5687.4 | 6206.0 | 6515.6 | 6538.5 | 6498.1 | 6408.1 | 6212.1 | 5797.2 |
| 57.5° | 4290.9 | 4393.8 | 4779.0 | 5493.6 | 6203.7 | 6746.7 | 6990.0 | 7019.0 | 6918.3 | 6637.7 | 6022.2 |
| 60° | 3424.5 | 3564.0 | 4033.9 | 5064.2 | 6012.3 | 6871.8 | 7385.9 | 7530.8 | 7424.0 | 7057.1 | 6204.5 |
| 62.5° | 2389.5 | 2551.2 | 2995.8 | 4391.6 | 5574.5 | 6781.8 | 7674.9 | 7942.6 | 7861.8 | 7432.4 | 6274.6 |
| 65° | 1457.5 | 1509.4 | 1867.8 | 3455.7 | 4830.1 | 6405.1 | 7764.2 | 8165.3 | 8138.6 | 7662.0 | 6170.9 |
| 67.5° | 970.9 | 1014.4 | 1117.3 | 2369.7 | 3749.4 | 5652.3 | 7550.6 | 8126.4 | 8134.1 | 7624.6 | 5791.1 |
| 70° | 585.0 | 622.4 | 689.5 | 1378.2 | 2429.9 | 4473.9 | 6889.4 | 7630.7 | 7674.9 | 7125.0 | 5071.1 |
| 72.5° | 241.0 | 266.2 | 327.2 | 624.6 | 1258.4 | 2839.5 | 5486.0 | 6551.5 | 6654.5 | 5990.9 | 3892.0 |
| 75° | 136.5 | 149.5 | 192.2 | 313.5 | 546.1 | 1323.3 | 3323.0 | 4650.9 | 4802.6 | 4129.2 | 2341.5 |
| 77.5° | 90.8 | 96.9 | 124.3 | 202.9 | 307.4 | 451.5 | 1420.1 | 2423.1 | 2712.9 | 2255.3 | 1013.6 |
| 80° | 61.0 | 66.4 | 85.4 | 135.8 | 199.8 | 193.7 | 452.3 | 897.7 | 1104.4 | 774.9 | 247.1 |
| 82.5° | 41.2 | 41.9 | 61.0 | 89.2 | 126.6 | 93.8 | 133.5 | 279.1 | 350.8 | 224.2 | 93.8 |
| 85° | 23.6 | 22.9 | 45.0 | 51.9 | 56.4 | 38.9 | 40.4 | 83.9 | 109.8 | 94.6 | 53.4 |
| 87.5° | 3.1 | 4.6 | 17.5 | 13.7 | 7.6 | 8.4 | 8.4 | 14.5 | 21.4 | 22.9 | 11.4 |
| 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° | 1323.3 | 1323.3 | 1323.3 | 1323.3 | 1323.3 | 1323.3 | 1323.3 | 1323.3 | 1323.3 | 1323.3 | 1323.3 |
| 2.5° | 1324.8 | 1324.0 | 1321.7 | 1319.4 | 1314.1 | 1311.1 | 1312.6 | 1311.1 | 1310.3 | 1311.1 | 1314.1 |
| 5° | 1334.7 | 1332.4 | 1326.3 | 1318.7 | 1308.0 | 1295.0 | 1286.7 | 1274.5 | 1263.0 | 1256.1 | 1257.7 |
| 7.5° | 1361.4 | 1359.1 | 1350.7 | 1329.4 | 1295.0 | 1240.9 | 1191.3 | 1147.8 | 1115.0 | 1096.0 | 1096.7 |
| 10° | 1404.1 | 1400.3 | 1387.3 | 1340.0 | 1250.0 | 1131.8 | 1033.4 | 951.8 | 898.4 | 873.3 | 871.0 |
| 12.5° | 1454.4 | 1449.9 | 1427.0 | 1330.1 | 1164.6 | 980.1 | 844.3 | 753.5 | 704.0 | 681.8 | 679.6 |
| 15° | 1513.9 | 1507.8 | 1462.8 | 1282.8 | 1040.3 | 812.3 | 687.9 | 620.1 | 588.0 | 568.2 | 569.0 |
| 17.5° | 1587.9 | 1577.2 | 1489.5 | 1211.9 | 905.3 | 684.1 | 591.8 | 540.7 | 512.5 | 493.5 | 491.9 |
| 20° | 1684.0 | 1666.5 | 1510.9 | 1127.3 | 781.0 | 603.3 | 527.0 | 484.3 | 463.0 | 446.2 | 443.1 |
| 22.5° | 1818.2 | 1793.1 | 1536.8 | 1035.7 | 693.3 | 547.6 | 479.0 | 447.7 | 430.2 | 411.1 | 408.0 |
| 25° | 1984.5 | 1954.8 | 1568.8 | 951.1 | 633.0 | 499.6 | 443.9 | 418.0 | 397.4 | 375.2 | 373.0 |
| 27.5° | 2217.1 | 2163.7 | 1607.0 | 881.7 | 581.2 | 458.4 | 411.9 | 382.9 | 359.2 | 340.9 | 337.1 |
| 30° | 2476.4 | 2388.7 | 1640.5 | 839.7 | 533.9 | 420.2 | 369.9 | 340.9 | 318.8 | 305.8 | 303.5 |
| 32.5° | 2722.0 | 2603.1 | 1662.7 | 821.4 | 491.2 | 376.8 | 324.1 | 292.9 | 276.1 | 272.3 | 274.6 |
| 35° | 2953.9 | 2796.8 | 1660.4 | 803.9 | 453.0 | 333.3 | 279.1 | 247.1 | 234.1 | 236.4 | 236.4 |
| 37.5° | 3220.8 | 3003.5 | 1644.4 | 776.4 | 421.8 | 293.6 | 240.2 | 212.0 | 200.6 | 201.3 | 204.4 |
| 40° | 3531.2 | 3242.2 | 1634.4 | 724.6 | 387.4 | 257.0 | 208.2 | 185.3 | 176.9 | 173.9 | 173.1 |
| 42.5° | 3862.3 | 3473.3 | 1636.0 | 665.8 | 344.7 | 224.2 | 186.1 | 167.0 | 159.4 | 157.1 | 156.4 |
| 45° | 4194.8 | 3693.7 | 1638.3 | 604.8 | 299.7 | 199.1 | 170.1 | 154.1 | 149.5 | 146.4 | 146.4 |
| 47.5° | 4507.5 | 3881.3 | 1595.5 | 539.2 | 255.5 | 180.0 | 157.1 | 146.4 | 142.6 | 138.8 | 138.8 |
| 50° | 4798.8 | 4006.4 | 1492.6 | 463.0 | 220.4 | 164.7 | 147.2 | 139.6 | 135.8 | 131.9 | 131.9 |
| 52.5° | 5025.3 | 4026.2 | 1322.5 | 384.4 | 196.0 | 153.3 | 141.1 | 134.2 | 129.7 | 125.8 | 125.1 |
| 55° | 5126.0 | 3901.9 | 1080.7 | 311.2 | 176.9 | 143.4 | 135.0 | 128.1 | 122.8 | 119.0 | 118.2 |
| 57.5° | 5100.1 | 3640.3 | 842.8 | 250.2 | 158.6 | 133.5 | 127.4 | 122.8 | 116.7 | 110.6 | 109.8 |
| 60° | 4972.7 | 3290.2 | 635.3 | 208.2 | 141.9 | 122.8 | 119.0 | 115.2 | 106.8 | 97.6 | 96.1 |
| 62.5° | 4752.3 | 2850.2 | 453.0 | 172.4 | 123.6 | 110.6 | 109.1 | 106.0 | 93.8 | 77.0 | 75.5 |
| 65° | 4415.2 | 2315.5 | 305.1 | 143.4 | 106.0 | 96.9 | 97.6 | 92.3 | 76.3 | 57.2 | 55.7 |
| 67.5° | 3922.5 | 1693.2 | 195.2 | 117.5 | 88.5 | 80.8 | 81.6 | 78.6 | 64.8 | 48.8 | 46.5 |
| 70° | 3294.8 | 1121.2 | 127.4 | 89.2 | 70.9 | 62.5 | 67.1 | 67.9 | 54.9 | 39.7 | 38.1 |
| 72.5° | 2415.4 | 662.0 | 89.2 | 66.4 | 51.9 | 43.5 | 54.9 | 56.4 | 44.2 | 29.7 | 28.2 |
| 75° | 1376.7 | 314.2 | 67.1 | 48.0 | 32.0 | 30.5 | 42.7 | 42.7 | 30.5 | 19.8 | 18.3 |
| 77.5° | 578.1 | 131.2 | 47.3 | 31.3 | 18.3 | 17.5 | 29.0 | 26.7 | 15.3 | 9.2 | 9.2 |
| 80° | 167.0 | 58.7 | 25.2 | 15.3 | 7.6 | 6.9 | 11.4 | 8.4 | 3.8 | 1.5 | 1.5 |
| 82.5° | 65.6 | 25.9 | 9.9 | 6.1 | 3.1 | 3.1 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 38.9 | 10.7 | 4.6 | 2.3 | 0.8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 9.9 | 2.3 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 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)