

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: P882099

Luminaire Tested: **NAV-SB1D-760-U-T3**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882099
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-5)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB1D-760-U-T3
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(1) 70 CRI, 5700K, 900mA LIGHTSQUARE WITH 26 LEDS AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10988 lumens
Efficiency: N/A
Efficacy: 138.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

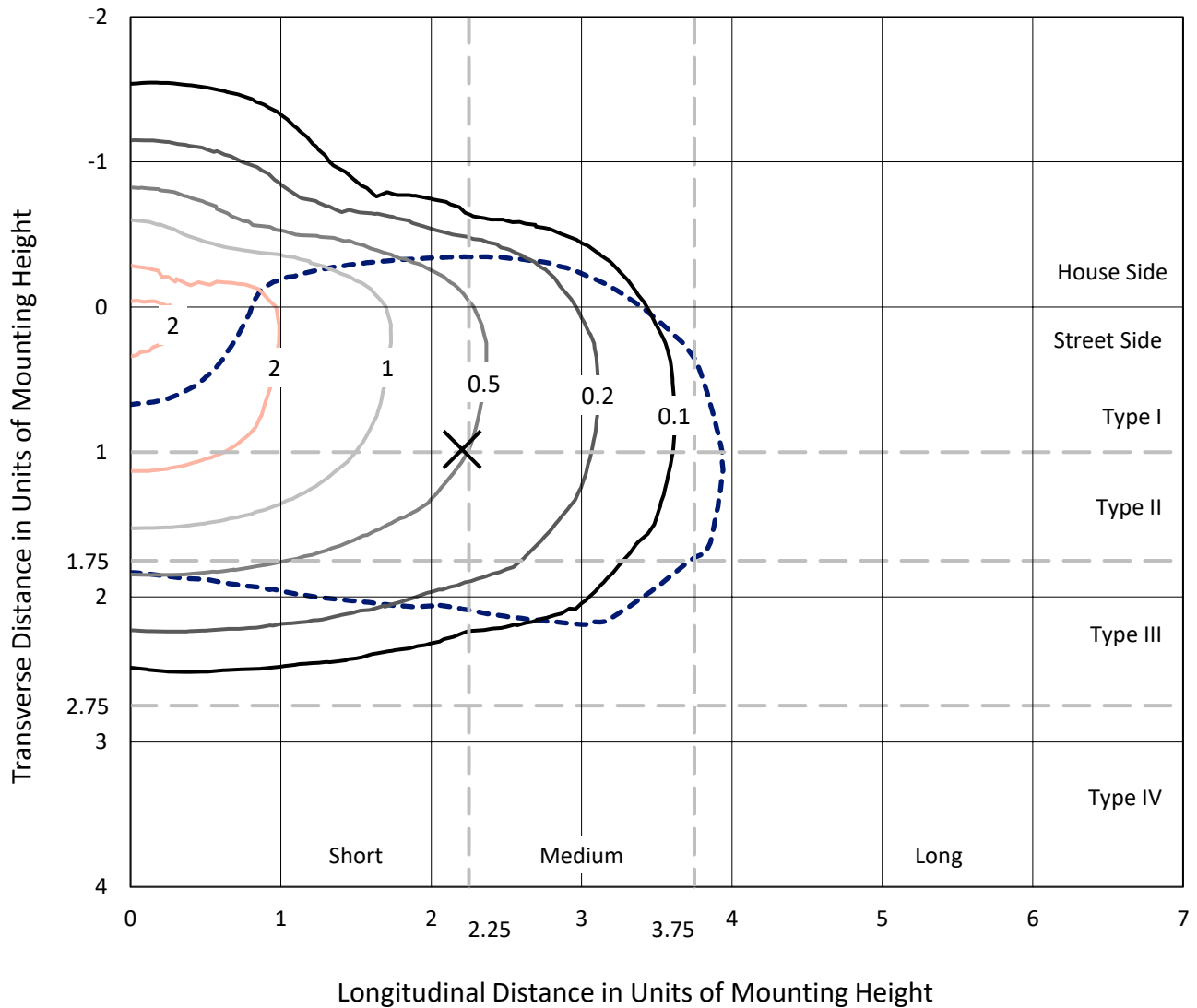
Input Watts (W): 79.6
Input Voltage (V): 120.0
Input Current (Ain): 0.638
Voltage Rise (V): NR
Power Factor: 0.997
Total Harmonic Distortion (THDi): 6.673
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

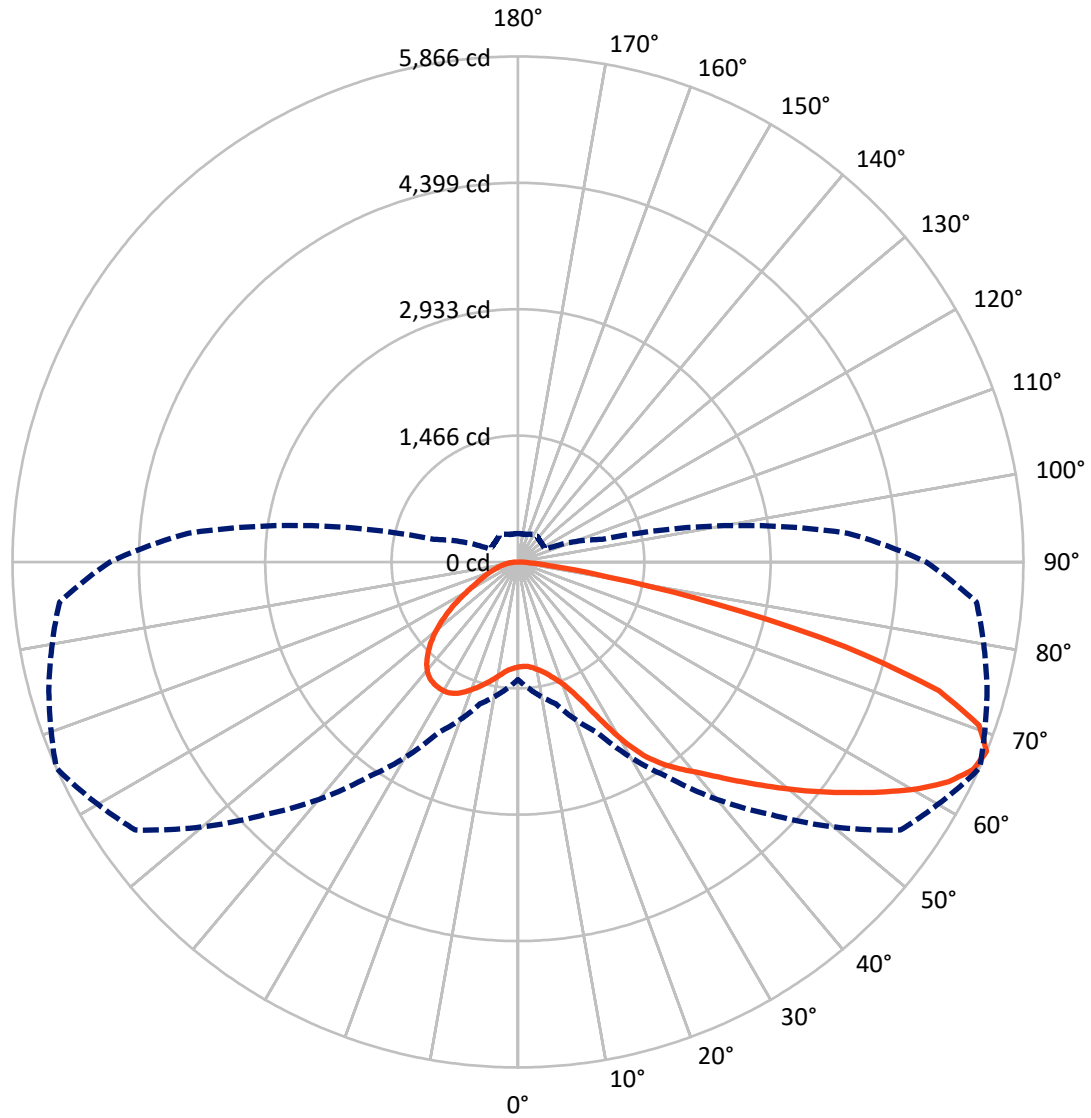
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2732.1 | 0.0 | 2732.1 |
| | % Fixture | 24.9 | 0.0 | 24.9 |
| Street Side | Lumens | 8255.9 | 0.0 | 8255.9 |
| | % Fixture | 75.1 | 0.0 | 75.1 |
| Total | Lumens | 10988.0 | 0.0 | 10988.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 120.8 | 1.1 |
| 10°-20° | 399.2 | 3.6 |
| 20°-30° | 769.5 | 7.0 |
| 30°-40° | 1349.1 | 12.3 |
| 40°-50° | 2005.7 | 18.3 |
| 50°-60° | 2542.4 | 23.1 |
| 60°-70° | 2487.7 | 22.6 |
| 70°-80° | 1186.7 | 10.8 |
| 80°-90° | 126.8 | 1.2 |
| 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° | 10988.0 | 100.0 |
| 0°-180° | 10988.0 | 100.0 |

Coefficient of Utilization



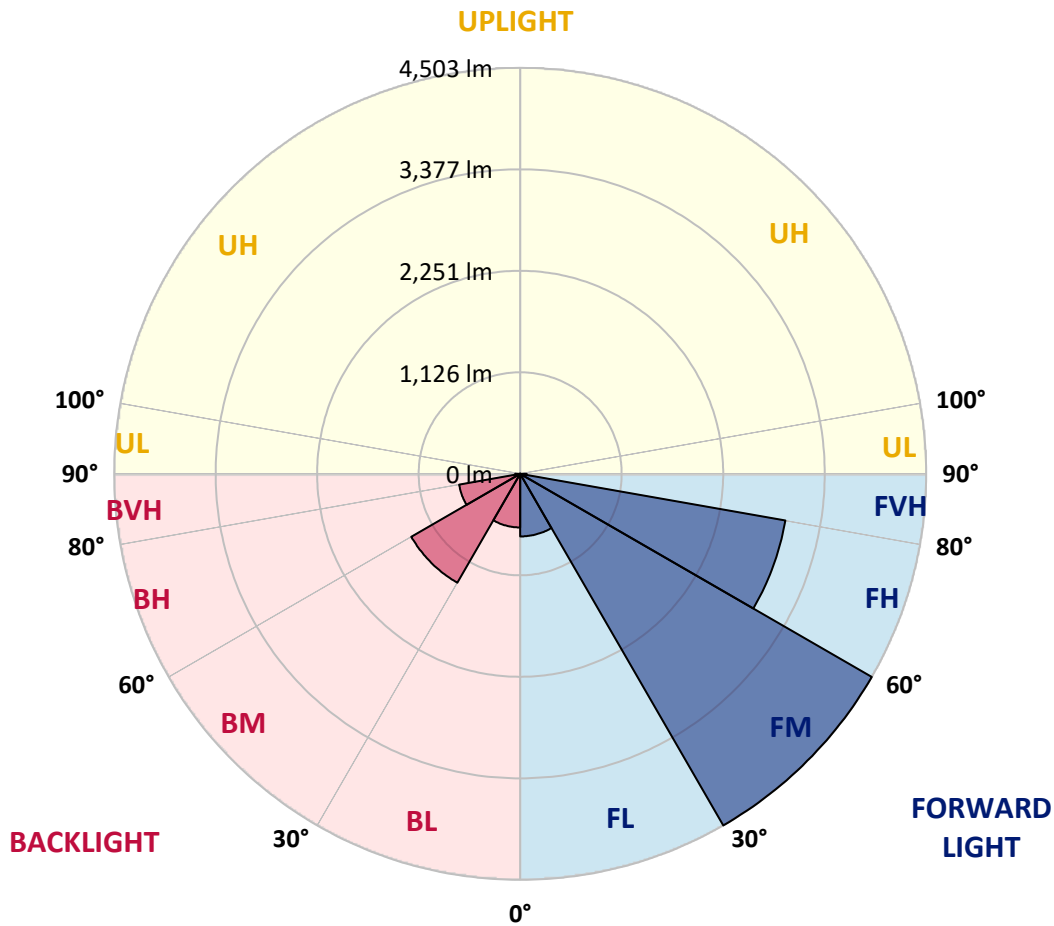
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 CATALOG NUMBER: NAV-SB1D-760-U-T3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 694.3 | 6.3 | | | |
| FM (30°-60°) | 4502.8 | 41.0 | | | |
| FH (60°-80°) | 2986.8 | 27.2 | | | G2/5000 |
| FVH (80°-90°) | 71.9 | 0.7 | | | G1/100 |
| BL (0°-30°) | 595.2 | 5.4 | B2/1000 | | |
| BM (30°-60°) | 1394.5 | 12.7 | B2/2500 | | |
| BH (60°-80°) | 687.5 | 6.3 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 54.9 | 0.5 | | | 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 III Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 66° | 75° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1218.7 | 1218.7 | 1218.7 | 1218.7 | 1218.7 | 1218.7 | 1218.7 | 1218.7 | 1218.7 | 1218.7 | 1218.7 |
| 2.5° | 1206.0 | 1212.9 | 1211.2 | 1208.3 | 1207.7 | 1208.9 | 1210.6 | 1212.4 | 1211.8 | 1214.7 | 1219.3 |
| 5° | 1202.5 | 1209.5 | 1208.9 | 1208.9 | 1211.2 | 1215.8 | 1218.7 | 1221.6 | 1218.7 | 1222.2 | 1228.5 |
| 7.5° | 1204.9 | 1210.1 | 1212.4 | 1214.7 | 1220.4 | 1229.1 | 1236.0 | 1242.4 | 1238.9 | 1243.0 | 1251.0 |
| 10° | 1234.3 | 1238.3 | 1240.7 | 1240.7 | 1244.7 | 1254.5 | 1261.4 | 1273.0 | 1270.1 | 1276.4 | 1286.8 |
| 12.5° | 1288.0 | 1292.0 | 1292.0 | 1289.7 | 1292.6 | 1299.0 | 1301.3 | 1314.0 | 1308.8 | 1319.2 | 1329.6 |
| 15° | 1353.8 | 1361.9 | 1355.5 | 1351.5 | 1352.7 | 1359.0 | 1358.4 | 1368.2 | 1363.0 | 1371.7 | 1380.9 |
| 17.5° | 1426.5 | 1436.9 | 1426.5 | 1426.0 | 1423.7 | 1430.6 | 1431.2 | 1439.8 | 1430.6 | 1436.9 | 1443.3 |
| 20° | 1512.6 | 1527.0 | 1518.3 | 1521.2 | 1516.0 | 1518.9 | 1521.8 | 1534.5 | 1520.1 | 1524.7 | 1523.0 |
| 22.5° | 1633.8 | 1651.1 | 1641.9 | 1652.9 | 1649.4 | 1647.1 | 1646.5 | 1669.0 | 1646.5 | 1648.2 | 1631.5 |
| 25° | 1810.5 | 1831.2 | 1815.1 | 1830.1 | 1830.1 | 1837.6 | 1846.3 | 1875.1 | 1837.6 | 1826.6 | 1783.3 |
| 27.5° | 2071.4 | 2092.2 | 2060.4 | 2069.7 | 2066.8 | 2085.3 | 2076.0 | 2147.6 | 2107.2 | 2089.3 | 2002.1 |
| 30° | 2385.5 | 2422.4 | 2362.4 | 2360.1 | 2357.2 | 2386.6 | 2399.9 | 2447.2 | 2406.3 | 2388.4 | 2283.3 |
| 32.5° | 2724.9 | 2763.6 | 2692.0 | 2671.2 | 2660.3 | 2678.2 | 2667.2 | 2705.3 | 2677.0 | 2649.3 | 2519.4 |
| 35° | 3084.0 | 3122.1 | 3054.0 | 3013.6 | 2969.7 | 2932.2 | 2892.9 | 2902.7 | 2876.2 | 2834.0 | 2699.5 |
| 37.5° | 3423.5 | 3493.3 | 3421.2 | 3377.9 | 3297.1 | 3223.7 | 3114.0 | 3068.4 | 3043.6 | 3004.9 | 2869.3 |
| 40° | 3769.3 | 3809.1 | 3754.3 | 3717.3 | 3629.6 | 3514.7 | 3339.2 | 3242.8 | 3209.3 | 3171.8 | 3056.9 |
| 42.5° | 4023.9 | 4062.0 | 4032.6 | 4007.2 | 3938.5 | 3805.1 | 3578.2 | 3457.5 | 3409.1 | 3366.9 | 3269.3 |
| 45° | 4226.0 | 4254.2 | 4235.8 | 4245.0 | 4215.6 | 4086.2 | 3825.9 | 3687.9 | 3637.7 | 3586.3 | 3509.5 |
| 47.5° | 4307.4 | 4337.4 | 4366.8 | 4421.7 | 4471.9 | 4376.6 | 4092.0 | 3937.3 | 3884.2 | 3831.6 | 3756.0 |
| 50° | 4298.1 | 4328.7 | 4414.2 | 4530.8 | 4686.7 | 4654.9 | 4372.6 | 4202.9 | 4153.8 | 4093.7 | 4023.9 |
| 52.5° | 4224.2 | 4258.9 | 4368.6 | 4562.5 | 4810.8 | 4863.3 | 4658.4 | 4477.1 | 4430.9 | 4359.3 | 4289.5 |
| 55° | 4030.2 | 4051.0 | 4215.6 | 4490.4 | 4840.2 | 5008.8 | 4938.4 | 4769.2 | 4723.0 | 4623.1 | 4546.9 |
| 57.5° | 3670.6 | 3700.6 | 3940.2 | 4295.8 | 4766.3 | 5107.5 | 5184.3 | 5076.3 | 5031.9 | 4888.1 | 4808.5 |
| 60° | 3201.2 | 3249.1 | 3523.4 | 3969.0 | 4578.1 | 5106.9 | 5407.7 | 5378.3 | 5341.3 | 5149.1 | 5065.9 |
| 62.5° | 2670.1 | 2725.5 | 2989.3 | 3507.2 | 4249.0 | 4962.0 | 5547.4 | 5631.1 | 5612.1 | 5389.8 | 5283.6 |
| 65° | 2050.6 | 2088.7 | 2351.4 | 2909.7 | 3737.0 | 4650.9 | 5563.6 | 5803.8 | 5807.2 | 5572.8 | 5397.3 |
| 67.5° | 1365.4 | 1475.0 | 1703.1 | 2183.4 | 3051.1 | 4142.2 | 5421.6 | 5832.0 | 5865.5 | 5635.8 | 5340.2 |
| 70° | 666.2 | 810.6 | 1034.0 | 1419.0 | 2183.4 | 3362.3 | 5050.4 | 5600.0 | 5674.4 | 5452.2 | 4999.6 |
| 72.5° | 276.5 | 323.3 | 445.1 | 700.3 | 1253.4 | 2268.9 | 4304.5 | 4970.7 | 5108.7 | 4831.0 | 4203.4 |
| 75° | 186.5 | 202.1 | 254.6 | 359.1 | 571.0 | 1118.8 | 3104.2 | 3706.4 | 3928.6 | 3648.6 | 2982.4 |
| 77.5° | 143.8 | 153.6 | 185.3 | 251.1 | 339.5 | 423.2 | 1661.5 | 2233.6 | 2348.5 | 2174.2 | 1551.8 |
| 80° | 113.2 | 120.7 | 138.6 | 183.0 | 240.7 | 226.3 | 566.3 | 1012.0 | 1078.4 | 904.7 | 498.8 |
| 82.5° | 98.1 | 101.0 | 99.3 | 124.1 | 159.9 | 132.2 | 185.9 | 373.5 | 412.2 | 299.0 | 162.8 |
| 85° | 71.0 | 79.1 | 82.6 | 76.8 | 84.9 | 67.0 | 76.2 | 132.2 | 145.5 | 129.9 | 91.8 |
| 87.5° | 28.9 | 42.7 | 52.5 | 49.6 | 31.2 | 19.1 | 23.7 | 38.7 | 44.5 | 48.5 | 30.0 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

REPORT NUMBER: P882099
 CATALOG NUMBER: NAV-SB1D-760-U-T3

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 1218.7 | 1218.7 | 1218.7 | 1218.7 | 1218.7 | 1218.7 | 1218.7 | 1218.7 | 1218.7 | 1218.7 | 1218.7 |
| 2.5° | 1219.9 | 1223.9 | 1226.8 | 1230.3 | 1232.6 | 1236.0 | 1243.0 | 1247.0 | 1247.6 | 1250.5 | 1249.9 |
| 5° | 1230.8 | 1236.6 | 1243.0 | 1252.2 | 1262.6 | 1271.3 | 1284.5 | 1293.8 | 1297.2 | 1300.1 | 1299.5 |
| 7.5° | 1254.5 | 1262.6 | 1274.1 | 1290.3 | 1305.3 | 1316.9 | 1333.0 | 1344.0 | 1355.0 | 1359.0 | 1359.6 |
| 10° | 1289.7 | 1301.3 | 1318.0 | 1340.0 | 1356.1 | 1371.1 | 1387.9 | 1397.1 | 1408.1 | 1412.7 | 1415.0 |
| 12.5° | 1333.6 | 1345.7 | 1367.7 | 1398.3 | 1413.3 | 1423.7 | 1429.4 | 1427.1 | 1429.4 | 1433.5 | 1434.6 |
| 15° | 1383.8 | 1397.1 | 1421.9 | 1454.8 | 1465.2 | 1456.0 | 1443.3 | 1431.7 | 1430.0 | 1431.2 | 1435.2 |
| 17.5° | 1443.3 | 1453.1 | 1482.0 | 1509.7 | 1502.2 | 1464.1 | 1436.4 | 1417.9 | 1408.7 | 1405.8 | 1409.8 |
| 20° | 1526.4 | 1526.4 | 1550.1 | 1567.4 | 1517.2 | 1452.5 | 1409.2 | 1379.2 | 1360.2 | 1352.1 | 1350.3 |
| 22.5° | 1627.5 | 1618.2 | 1633.2 | 1621.1 | 1514.3 | 1420.2 | 1360.2 | 1308.2 | 1279.3 | 1267.8 | 1266.1 |
| 25° | 1755.6 | 1744.6 | 1740.6 | 1665.6 | 1493.5 | 1368.8 | 1271.3 | 1208.3 | 1182.9 | 1176.6 | 1177.7 |
| 27.5° | 1949.0 | 1921.3 | 1868.8 | 1689.8 | 1455.4 | 1288.0 | 1167.3 | 1109.0 | 1094.6 | 1095.2 | 1096.9 |
| 30° | 2206.5 | 2151.1 | 2022.3 | 1693.8 | 1393.1 | 1173.7 | 1061.1 | 1019.5 | 1012.6 | 1015.5 | 1025.3 |
| 32.5° | 2444.9 | 2392.4 | 2179.4 | 1675.4 | 1297.2 | 1061.7 | 965.8 | 938.1 | 927.7 | 931.2 | 935.8 |
| 35° | 2632.0 | 2617.6 | 2324.9 | 1649.4 | 1179.5 | 956.6 | 880.4 | 856.7 | 836.5 | 831.9 | 835.4 |
| 37.5° | 2808.6 | 2802.9 | 2434.0 | 1613.0 | 1062.8 | 882.1 | 811.7 | 780.5 | 751.1 | 734.9 | 735.5 |
| 40° | 3002.6 | 2996.8 | 2505.6 | 1557.0 | 959.5 | 817.5 | 749.9 | 708.9 | 672.6 | 643.1 | 646.0 |
| 42.5° | 3220.8 | 3186.8 | 2539.6 | 1476.8 | 871.7 | 762.6 | 699.7 | 644.3 | 596.4 | 569.2 | 571.0 |
| 45° | 3459.3 | 3382.5 | 2539.0 | 1374.6 | 797.9 | 712.4 | 646.0 | 567.5 | 523.0 | 497.6 | 496.5 |
| 47.5° | 3712.1 | 3569.5 | 2507.9 | 1261.4 | 726.3 | 657.0 | 562.9 | 502.8 | 473.4 | 457.8 | 454.3 |
| 50° | 3973.1 | 3744.5 | 2454.7 | 1131.5 | 652.9 | 594.1 | 510.9 | 469.9 | 447.4 | 433.0 | 427.8 |
| 52.5° | 4218.4 | 3903.2 | 2390.7 | 984.3 | 578.5 | 532.9 | 487.8 | 456.1 | 432.4 | 416.2 | 409.3 |
| 55° | 4446.5 | 4040.1 | 2300.0 | 833.6 | 517.9 | 491.9 | 476.9 | 450.3 | 423.2 | 404.1 | 396.6 |
| 57.5° | 4649.1 | 4129.0 | 2143.6 | 692.2 | 474.6 | 463.6 | 465.3 | 440.5 | 409.3 | 393.2 | 382.8 |
| 60° | 4817.7 | 4194.2 | 1912.1 | 561.2 | 439.3 | 435.9 | 447.4 | 422.0 | 385.6 | 367.2 | 359.1 |
| 62.5° | 4918.7 | 4193.0 | 1628.0 | 459.5 | 409.3 | 410.5 | 423.8 | 398.9 | 362.0 | 344.7 | 339.5 |
| 65° | 4910.1 | 4090.3 | 1316.3 | 393.2 | 380.5 | 381.6 | 398.9 | 373.5 | 342.3 | 332.0 | 331.4 |
| 67.5° | 4736.3 | 3839.7 | 1009.7 | 349.9 | 348.7 | 353.9 | 374.1 | 356.2 | 330.2 | 329.1 | 330.8 |
| 70° | 4265.8 | 3319.6 | 727.4 | 315.2 | 315.8 | 323.3 | 349.9 | 345.2 | 323.9 | 326.2 | 325.6 |
| 72.5° | 3420.6 | 2531.0 | 488.4 | 278.8 | 279.4 | 291.5 | 326.8 | 336.6 | 317.5 | 348.1 | 352.7 |
| 75° | 2278.1 | 1578.4 | 314.1 | 240.2 | 240.7 | 256.3 | 306.6 | 319.8 | 300.2 | 347.0 | 349.9 |
| 77.5° | 1094.6 | 709.5 | 227.5 | 202.1 | 202.1 | 216.5 | 265.0 | 286.3 | 255.8 | 269.6 | 247.1 |
| 80° | 378.1 | 266.7 | 179.0 | 162.8 | 159.3 | 169.2 | 223.4 | 248.2 | 220.5 | 203.2 | 190.5 |
| 82.5° | 148.9 | 138.6 | 143.8 | 126.4 | 114.9 | 121.2 | 173.8 | 204.9 | 162.2 | 146.6 | 146.1 |
| 85° | 85.4 | 90.1 | 101.6 | 83.7 | 66.4 | 74.5 | 127.6 | 147.2 | 122.4 | 108.0 | 110.3 |
| 87.5° | 23.1 | 31.8 | 46.8 | 43.3 | 30.0 | 31.8 | 60.6 | 81.4 | 70.4 | 54.3 | 56.0 |
| 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)