

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: P884831

Luminaire Tested: **NAV-SB5D-827-U-T4FT**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884831
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-24)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB5D-827-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV
FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 41467 lumens
Efficiency: N/A
Efficacy: 113.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B4 - U0 - G5

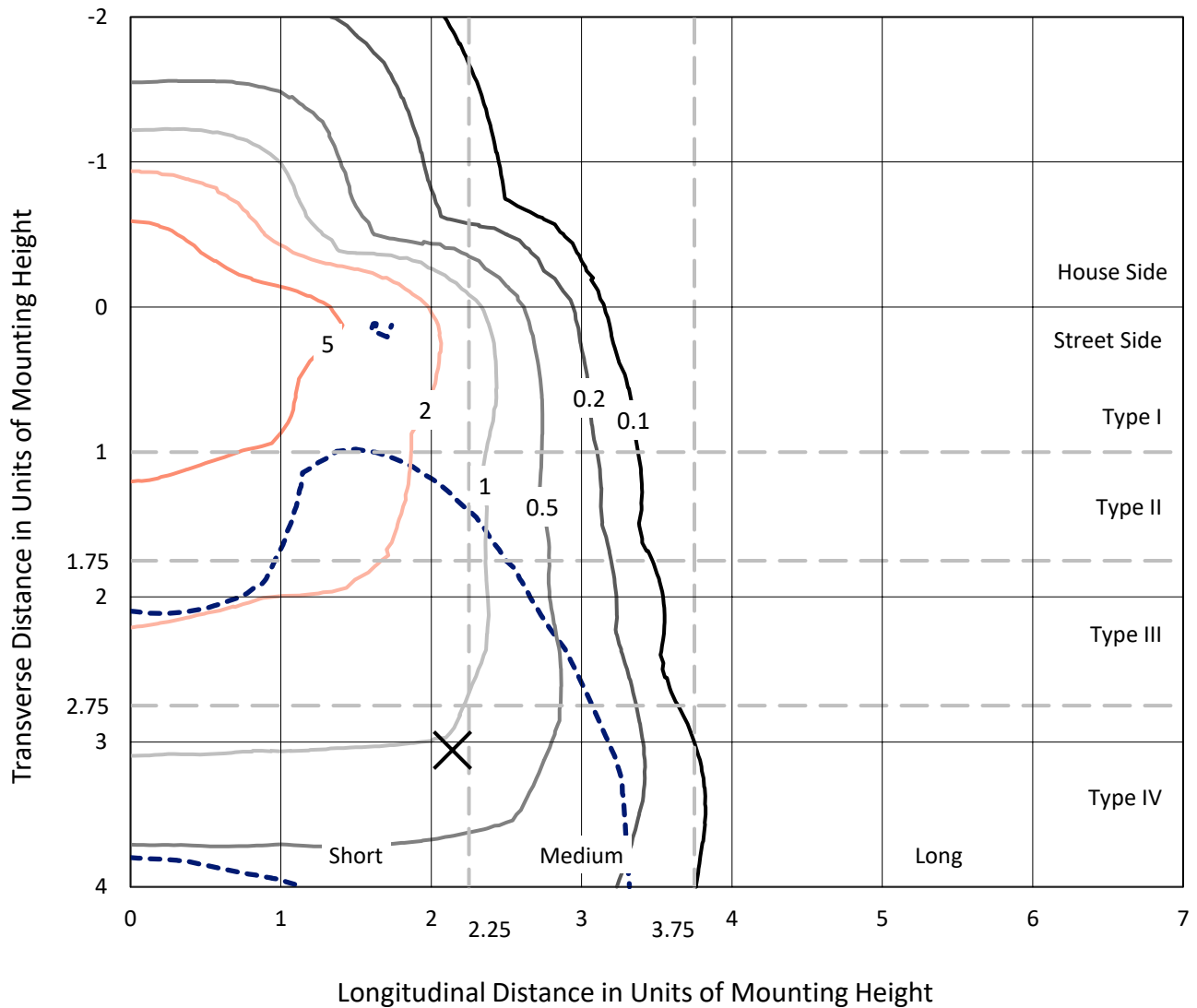
Input Watts (W): 364.9
Input Voltage (V): 120.0
Input Current (Ain): 3.094
Voltage Rise (V): NR
Power Factor: 0.998
Total Harmonic Distortion (THDi): 3.28
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

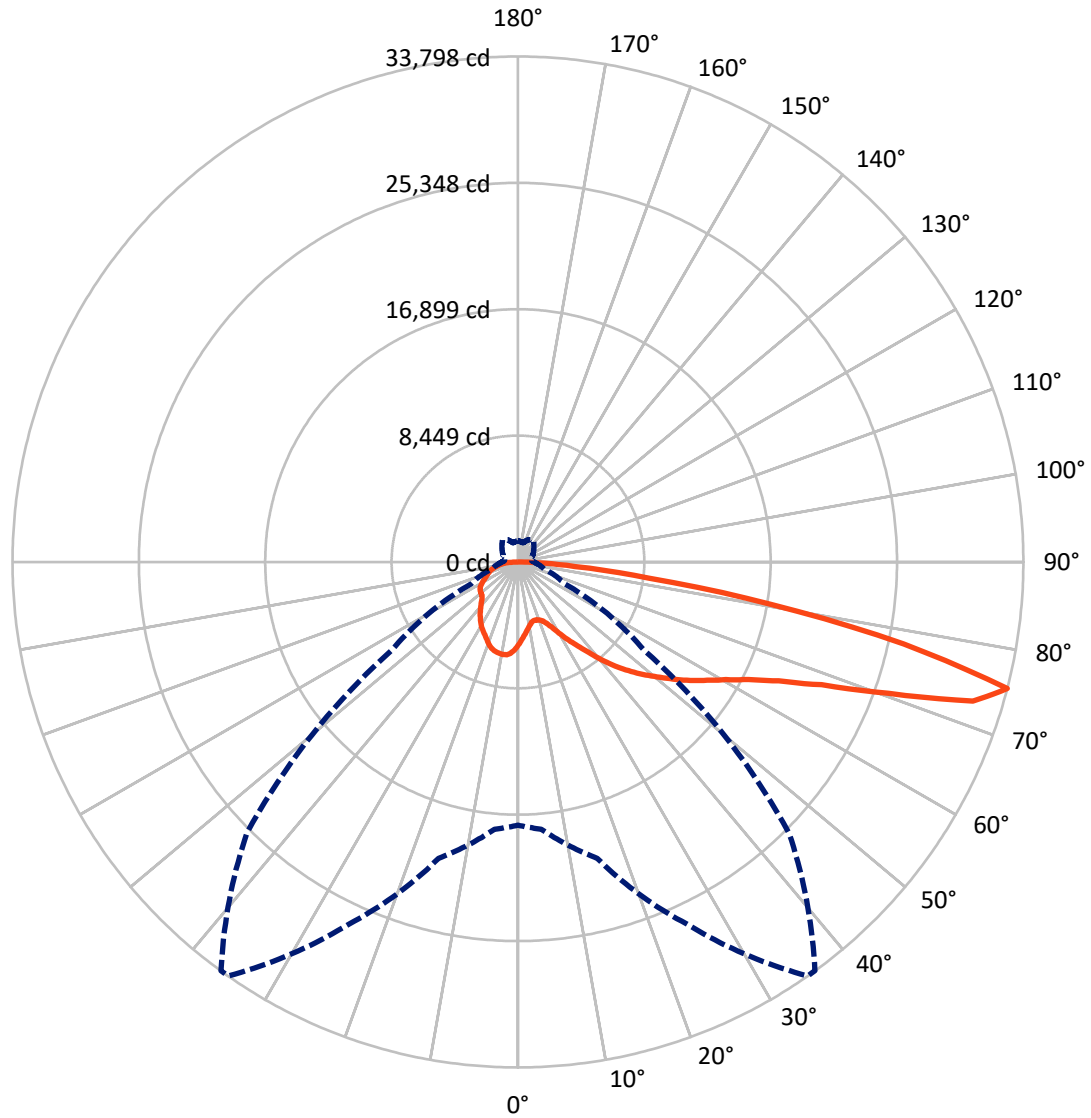
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 9.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 9868.1 | 0.0 | 9868.1 |
| | % Fixture | 23.8 | 0.0 | 23.8 |
| Street Side | Lumens | 31598.9 | 0.0 | 31598.9 |
| | % Fixture | 76.2 | 0.0 | 76.2 |
| Total | Lumens | 41467.0 | 0.0 | 41467.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 523.2 | 1.3 |
| 10°-20° | 1509.1 | 3.6 |
| 20°-30° | 2534.1 | 6.1 |
| 30°-40° | 3938.4 | 9.5 |
| 40°-50° | 5845.6 | 14.1 |
| 50°-60° | 8070.2 | 19.5 |
| 60°-70° | 9791.0 | 23.6 |
| 70°-80° | 8091.5 | 19.5 |
| 80°-90° | 1163.8 | 2.8 |
| 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° | 41467.0 | 100.0 |
| 0°-180° | 41467.0 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P884831

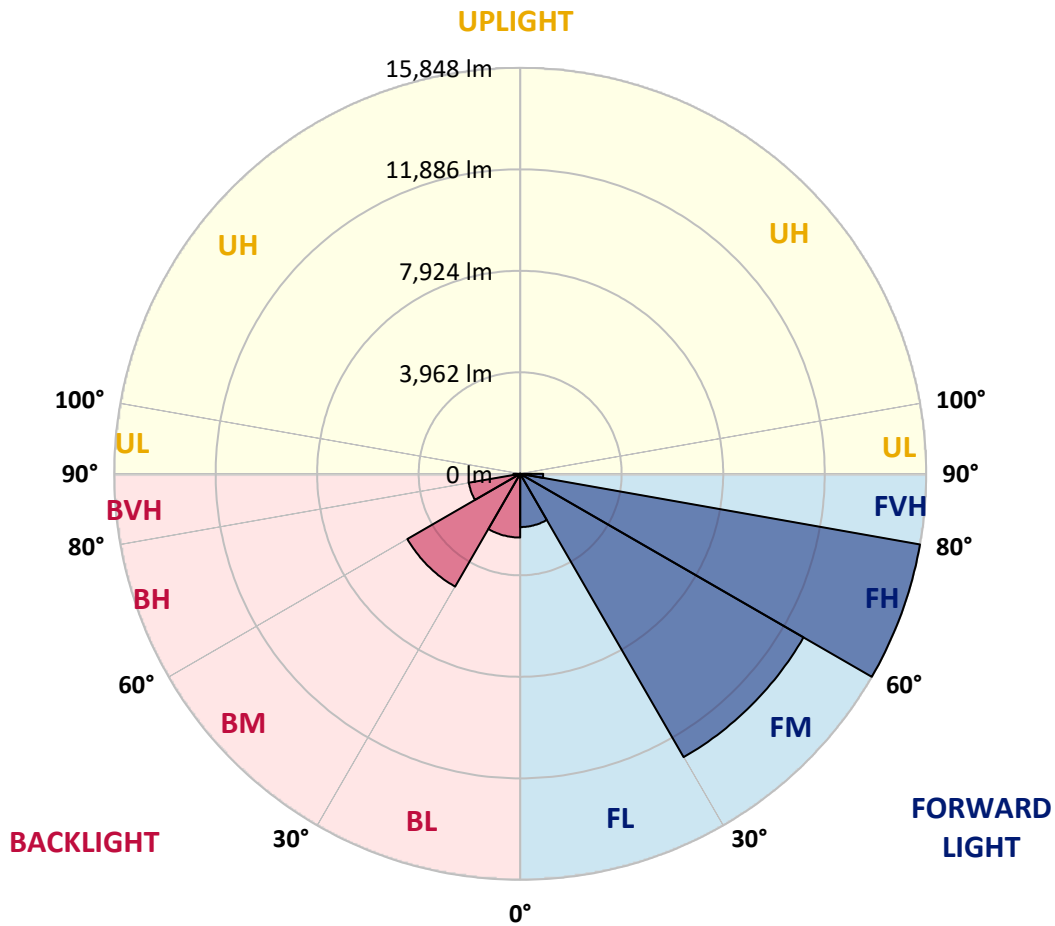
CATALOG NUMBER: NAV-SB5D-827-U-T4FT

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 2079.5 | 5.0 | | | |
| FM (30°-60°) | 12769.6 | 30.8 | | | |
| FH (60°-80°) | 15848.1 | 38.2 | | | G5 |
| FVH (80°-90°) | 901.7 | 2.2 | | | G5 |
| BL (0°-30°) | 2486.9 | 6.0 | B3/2500 | | |
| BM (30°-60°) | 5084.6 | 12.3 | B4/8500 | | |
| BH (60°-80°) | 2034.5 | 4.9 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 262.1 | 0.6 | | | G3/500 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G5

Type IV Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 36° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5525.8 | 5525.8 | 5525.8 | 5525.8 | 5525.8 | 5525.8 | 5525.8 | 5525.8 | 5525.8 | 5525.8 | 5525.8 |
| 2.5° | 5095.4 | 5126.7 | 5140.2 | 5133.5 | 5167.1 | 5162.6 | 5209.7 | 5268.0 | 5348.7 | 5427.1 | 5541.5 |
| 5° | 4703.1 | 4736.7 | 4765.8 | 4792.7 | 4857.7 | 4877.9 | 4951.9 | 5064.0 | 5211.9 | 5362.1 | 5550.4 |
| 7.5° | 4337.7 | 4366.8 | 4411.6 | 4461.0 | 4570.8 | 4591.0 | 4714.3 | 4889.1 | 5095.4 | 5315.0 | 5575.1 |
| 10° | 4039.5 | 4068.7 | 4115.7 | 4171.8 | 4308.5 | 4333.2 | 4490.1 | 4723.2 | 4992.2 | 5270.2 | 5602.0 |
| 12.5° | 3911.7 | 3920.7 | 3947.6 | 4003.7 | 4122.5 | 4138.2 | 4310.8 | 4577.5 | 4891.4 | 5236.6 | 5642.3 |
| 15° | 3905.0 | 3923.0 | 3925.2 | 3954.3 | 4053.0 | 4059.7 | 4218.9 | 4483.4 | 4828.6 | 5229.9 | 5702.9 |
| 17.5° | 3972.3 | 3985.7 | 3965.5 | 3983.5 | 4066.4 | 4077.6 | 4203.2 | 4438.5 | 4808.4 | 5259.0 | 5806.0 |
| 20° | 4151.6 | 4162.8 | 4102.3 | 4077.6 | 4138.2 | 4147.1 | 4270.4 | 4467.7 | 4828.6 | 5319.5 | 5947.2 |
| 22.5° | 4532.7 | 4539.4 | 4391.5 | 4290.6 | 4295.1 | 4299.6 | 4407.2 | 4586.5 | 4907.1 | 5429.4 | 6126.5 |
| 25° | 5126.7 | 5122.3 | 4886.9 | 4691.9 | 4579.8 | 4555.1 | 4626.8 | 4779.3 | 5039.3 | 5575.1 | 6357.4 |
| 27.5° | 5821.7 | 5788.0 | 5552.7 | 5261.2 | 5016.9 | 4981.0 | 4965.3 | 5030.3 | 5227.6 | 5767.9 | 6639.9 |
| 30° | 6606.3 | 6574.9 | 6321.6 | 5940.5 | 5602.0 | 5543.7 | 5395.7 | 5362.1 | 5507.8 | 6030.1 | 7032.2 |
| 32.5° | 7467.1 | 7446.9 | 7144.3 | 6682.5 | 6229.6 | 6162.4 | 5913.6 | 5823.9 | 5938.2 | 6426.9 | 7579.1 |
| 35° | 8188.9 | 8170.9 | 7919.9 | 7444.6 | 6890.9 | 6808.0 | 6554.7 | 6453.8 | 6512.1 | 6935.8 | 8294.2 |
| 37.5° | 8841.2 | 8832.2 | 8617.0 | 8242.7 | 7671.1 | 7570.2 | 7285.5 | 7251.9 | 7240.6 | 7606.0 | 9161.8 |
| 40° | 9446.5 | 9424.1 | 9199.9 | 9002.6 | 8578.9 | 8487.0 | 8236.0 | 8206.8 | 8121.6 | 8431.0 | 10143.6 |
| 42.5° | 10116.7 | 10058.4 | 9733.4 | 9641.5 | 9527.2 | 9451.0 | 9300.8 | 9305.2 | 9116.9 | 9361.3 | 11183.8 |
| 45° | 10663.7 | 10630.1 | 10296.1 | 10242.3 | 10365.6 | 10334.2 | 10464.2 | 10497.8 | 10132.4 | 10336.4 | 12264.3 |
| 47.5° | 11251.0 | 11219.6 | 10937.2 | 10899.1 | 11233.1 | 11242.1 | 11701.6 | 11712.8 | 11123.3 | 11349.7 | 13347.0 |
| 50° | 11975.1 | 11930.3 | 11650.0 | 11697.1 | 12071.5 | 12105.1 | 12945.7 | 12869.5 | 12035.6 | 12378.6 | 14420.8 |
| 52.5° | 12452.6 | 12479.5 | 12418.9 | 12495.2 | 13006.3 | 13037.7 | 14169.7 | 13974.7 | 12939.0 | 13394.1 | 15474.4 |
| 55° | 12804.5 | 12858.3 | 13046.6 | 13221.5 | 13992.6 | 14024.0 | 15324.2 | 15026.0 | 13687.7 | 14335.6 | 16465.2 |
| 57.5° | 13257.3 | 13181.1 | 13533.1 | 13873.8 | 14929.6 | 15012.6 | 16447.3 | 16039.3 | 14351.3 | 15147.1 | 17144.4 |
| 60° | 13907.4 | 13853.6 | 14127.1 | 14631.5 | 15978.7 | 16111.0 | 17635.4 | 16951.6 | 14837.7 | 15790.4 | 17276.7 |
| 62.5° | 15225.5 | 15091.0 | 15133.6 | 15579.7 | 17301.3 | 17476.2 | 18975.9 | 17747.4 | 15079.8 | 16041.5 | 16568.3 |
| 65° | 17196.0 | 16965.1 | 16749.9 | 17059.2 | 19164.2 | 19336.8 | 20489.0 | 18372.9 | 14990.2 | 15555.1 | 14687.5 |
| 67.5° | 19677.5 | 19448.9 | 19184.4 | 19475.8 | 21908.0 | 22044.7 | 22356.3 | 18724.8 | 14284.0 | 13681.0 | 11363.1 |
| 70° | 21724.2 | 21639.0 | 21955.1 | 23154.4 | 26290.5 | 26295.0 | 24750.5 | 18433.4 | 12349.5 | 9699.8 | 6574.9 |
| 72.5° | 21452.9 | 21401.4 | 23067.0 | 26774.7 | 31814.0 | 31695.2 | 27016.8 | 16227.6 | 8318.9 | 4375.8 | 2463.6 |
| 75° | 17599.5 | 17933.5 | 20513.7 | 26709.7 | 33797.9 | 33782.2 | 25629.2 | 10316.2 | 3441.0 | 1813.5 | 1273.3 |
| 77.5° | 9437.5 | 9966.5 | 13317.9 | 19720.1 | 26384.7 | 26781.4 | 18018.7 | 3609.1 | 1477.3 | 1161.2 | 881.0 |
| 80° | 3077.8 | 3539.6 | 5308.3 | 10040.5 | 17144.4 | 17070.4 | 7722.6 | 1416.7 | 1011.0 | 822.7 | 609.7 |
| 82.5° | 1306.9 | 1360.7 | 2371.7 | 4741.2 | 8798.6 | 8661.9 | 2459.1 | 813.7 | 710.6 | 562.7 | 376.6 |
| 85° | 511.1 | 571.6 | 1046.9 | 2192.4 | 3810.9 | 3727.9 | 887.7 | 403.5 | 455.1 | 367.6 | 224.2 |
| 87.5° | 168.1 | 204.0 | 374.4 | 751.0 | 1185.9 | 1143.3 | 217.4 | 139.0 | 197.3 | 168.1 | 80.7 |
| 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° | 5525.8 | 5525.8 | 5525.8 | 5525.8 | 5525.8 | 5525.8 | 5525.8 | 5525.8 | 5525.8 | 5525.8 | 5525.8 |
| 2.5° | 5572.8 | 5608.7 | 5651.3 | 5714.1 | 5767.9 | 5812.7 | 5859.8 | 5888.9 | 5900.1 | 5933.7 | 5931.5 |
| 5° | 5613.2 | 5691.6 | 5797.0 | 5900.1 | 6001.0 | 6061.5 | 6115.3 | 6142.2 | 6166.9 | 6184.8 | 6189.3 |
| 7.5° | 5680.4 | 5781.3 | 5947.2 | 6081.7 | 6166.9 | 6216.2 | 6252.1 | 6243.1 | 6252.1 | 6256.5 | 6263.3 |
| 10° | 5738.7 | 5879.9 | 6077.2 | 6205.0 | 6270.0 | 6272.2 | 6263.3 | 6231.9 | 6216.2 | 6218.4 | 6222.9 |
| 12.5° | 5808.2 | 5965.1 | 6178.1 | 6285.7 | 6303.6 | 6254.3 | 6216.2 | 6162.4 | 6142.2 | 6133.3 | 6128.8 |
| 15° | 5902.4 | 6081.7 | 6287.9 | 6328.3 | 6283.4 | 6220.7 | 6155.7 | 6068.2 | 6023.4 | 5987.5 | 5998.8 |
| 17.5° | 6016.7 | 6214.0 | 6373.1 | 6344.0 | 6247.6 | 6144.5 | 6039.1 | 5906.8 | 5814.9 | 5776.8 | 5779.1 |
| 20° | 6175.8 | 6352.9 | 6438.1 | 6310.3 | 6164.6 | 6007.7 | 5828.4 | 5667.0 | 5581.8 | 5543.7 | 5539.2 |
| 22.5° | 6368.6 | 6539.0 | 6500.9 | 6252.1 | 6045.8 | 5794.8 | 5570.6 | 5451.8 | 5409.2 | 5382.3 | 5386.8 |
| 25° | 6599.5 | 6745.2 | 6545.7 | 6166.9 | 5850.8 | 5512.3 | 5339.7 | 5301.6 | 5281.4 | 5261.2 | 5261.2 |
| 27.5° | 6899.9 | 6978.4 | 6579.4 | 6041.3 | 5545.9 | 5211.9 | 5149.2 | 5155.9 | 5149.2 | 5115.5 | 5122.3 |
| 30° | 7296.7 | 7281.0 | 6610.7 | 5837.4 | 5196.2 | 4940.7 | 4945.2 | 4974.3 | 4978.8 | 4956.4 | 4967.6 |
| 32.5° | 7819.0 | 7659.8 | 6626.4 | 5572.8 | 4862.2 | 4703.1 | 4707.5 | 4738.9 | 4761.3 | 4723.2 | 4741.2 |
| 35° | 8451.2 | 8101.5 | 6601.8 | 5241.1 | 4604.4 | 4476.6 | 4443.0 | 4452.0 | 4458.7 | 4422.8 | 4447.5 |
| 37.5° | 9188.7 | 8596.9 | 6491.9 | 4873.4 | 4391.5 | 4254.7 | 4183.0 | 4122.5 | 4086.6 | 4053.0 | 4075.4 |
| 40° | 9997.9 | 9137.1 | 6290.2 | 4514.8 | 4153.8 | 4019.3 | 3911.7 | 3797.4 | 3676.4 | 3631.5 | 3651.7 |
| 42.5° | 10845.3 | 9693.1 | 6045.8 | 4171.8 | 3880.4 | 3770.5 | 3656.2 | 3490.3 | 3308.7 | 3216.8 | 3228.0 |
| 45° | 11724.0 | 10262.4 | 5806.0 | 3833.3 | 3600.1 | 3553.1 | 3420.8 | 3221.3 | 3024.0 | 2907.5 | 2898.5 |
| 47.5° | 12584.8 | 10800.4 | 5454.0 | 3492.5 | 3337.9 | 3389.4 | 3286.3 | 3102.5 | 2882.8 | 2699.0 | 2678.8 |
| 50° | 13407.5 | 11304.8 | 4877.9 | 3147.3 | 3124.9 | 3340.1 | 3241.5 | 2977.0 | 2725.9 | 2490.5 | 2470.3 |
| 52.5° | 14223.5 | 11712.8 | 4140.4 | 2833.5 | 3010.6 | 3326.7 | 3183.2 | 2891.8 | 2584.7 | 2338.1 | 2311.2 |
| 55° | 14916.2 | 11923.5 | 3429.8 | 2564.5 | 2844.7 | 3212.3 | 3113.7 | 2790.9 | 2385.2 | 2122.9 | 2100.5 |
| 57.5° | 15310.7 | 11753.2 | 2838.0 | 2300.0 | 2616.0 | 3024.0 | 2994.9 | 2575.7 | 2147.5 | 1945.8 | 1918.9 |
| 60° | 15140.4 | 11062.7 | 2353.8 | 2069.1 | 2398.6 | 2820.0 | 2788.7 | 2362.7 | 1966.0 | 1775.4 | 1748.5 |
| 62.5° | 14201.1 | 9746.9 | 1970.4 | 1867.3 | 2201.3 | 2611.6 | 2582.4 | 2199.1 | 1827.0 | 1643.2 | 1614.0 |
| 65° | 12309.1 | 7928.8 | 1672.3 | 1699.2 | 2001.8 | 2360.5 | 2403.1 | 2062.4 | 1717.1 | 1537.8 | 1508.7 |
| 67.5° | 9388.2 | 5743.2 | 1439.2 | 1553.5 | 1806.8 | 2113.9 | 2237.2 | 1963.7 | 1625.2 | 1454.9 | 1428.0 |
| 70° | 5350.9 | 3261.7 | 1241.9 | 1412.3 | 1634.2 | 1885.3 | 2109.4 | 1885.3 | 1526.6 | 1385.4 | 1367.4 |
| 72.5° | 2028.7 | 1497.4 | 1073.8 | 1271.0 | 1468.3 | 1692.5 | 1968.2 | 1762.0 | 1412.3 | 1306.9 | 1289.0 |
| 75° | 1082.7 | 912.4 | 903.4 | 1105.2 | 1277.8 | 1504.2 | 1791.1 | 1640.9 | 1327.1 | 1380.9 | 1425.7 |
| 77.5° | 737.5 | 645.6 | 755.4 | 946.0 | 1069.3 | 1295.7 | 1602.8 | 1457.1 | 1150.0 | 1145.5 | 1055.8 |
| 80° | 511.1 | 457.3 | 614.2 | 762.2 | 827.2 | 1089.5 | 1398.8 | 1250.9 | 937.0 | 874.3 | 836.1 |
| 82.5° | 307.1 | 298.1 | 459.5 | 569.4 | 585.1 | 840.6 | 1159.0 | 1049.1 | 766.7 | 668.0 | 672.5 |
| 85° | 168.1 | 177.1 | 293.7 | 334.0 | 340.7 | 587.3 | 907.9 | 811.5 | 589.6 | 495.4 | 499.9 |
| 87.5° | 47.1 | 60.5 | 107.6 | 132.3 | 163.6 | 304.9 | 540.2 | 482.0 | 295.9 | 206.2 | 206.2 |
| 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)