

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: P883421

Luminaire Tested: **NAV-SB3D-730-U-T4FT**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883421
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-SB3D-730-U-T4FT
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(3) 70 CRI, 3000K, 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: 29696 lumens
Efficiency: N/A
Efficacy: 136.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B3 - U0 - G4

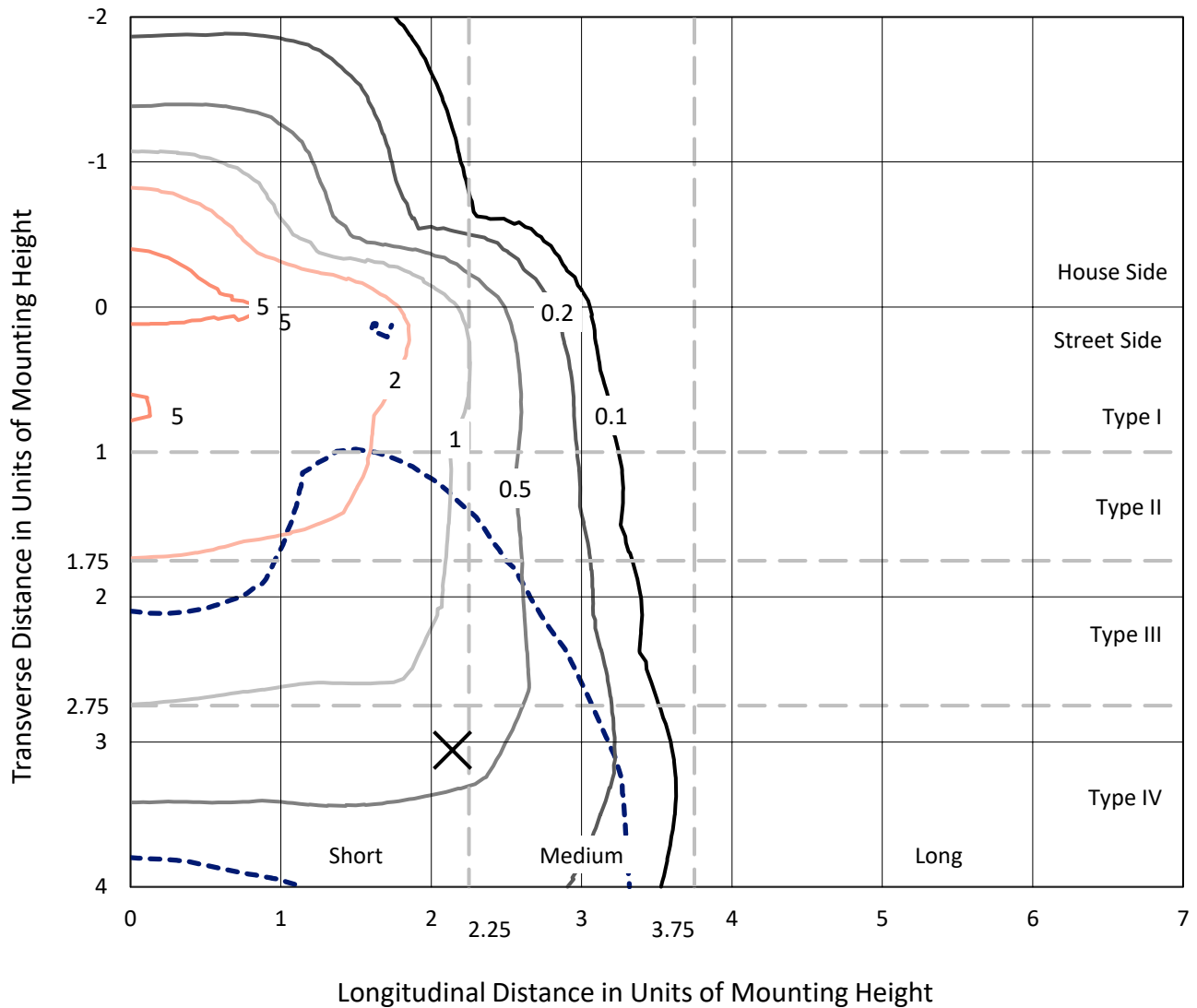
Input Watts (W): 218.1
Input Voltage (V): 120.0
Input Current (Ain): 1.84
Voltage Rise (V): NR
Power Factor: 0.998
Total Harmonic Distortion (THDi): 2.542
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

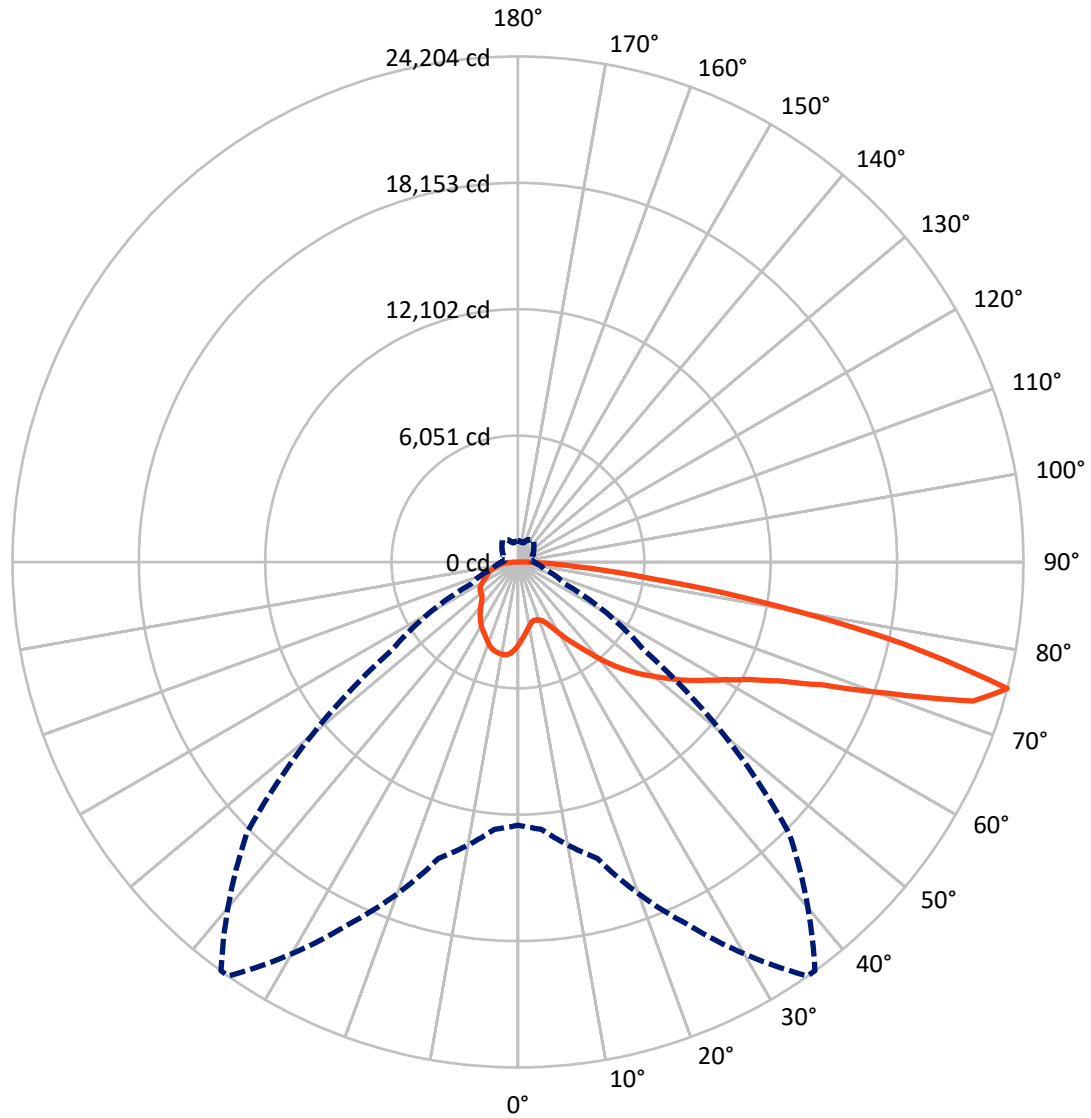
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7 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 | 7066.9 | 0.0 | 7066.9 |
| | % Fixture | 23.8 | 0.0 | 23.8 |
| Street Side | Lumens | 22629.1 | 0.0 | 22629.1 |
| | % Fixture | 76.2 | 0.0 | 76.2 |
| Total | Lumens | 29696.0 | 0.0 | 29696.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 374.7 | 1.3 |
| 10°-20° | 1080.7 | 3.6 |
| 20°-30° | 1814.8 | 6.1 |
| 30°-40° | 2820.4 | 9.5 |
| 40°-50° | 4186.3 | 14.1 |
| 50°-60° | 5779.4 | 19.5 |
| 60°-70° | 7011.7 | 23.6 |
| 70°-80° | 5794.6 | 19.5 |
| 80°-90° | 833.4 | 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° | 29696.0 | 100.0 |
| 0°-180° | 29696.0 | 100.0 |

Coefficient of Utilization



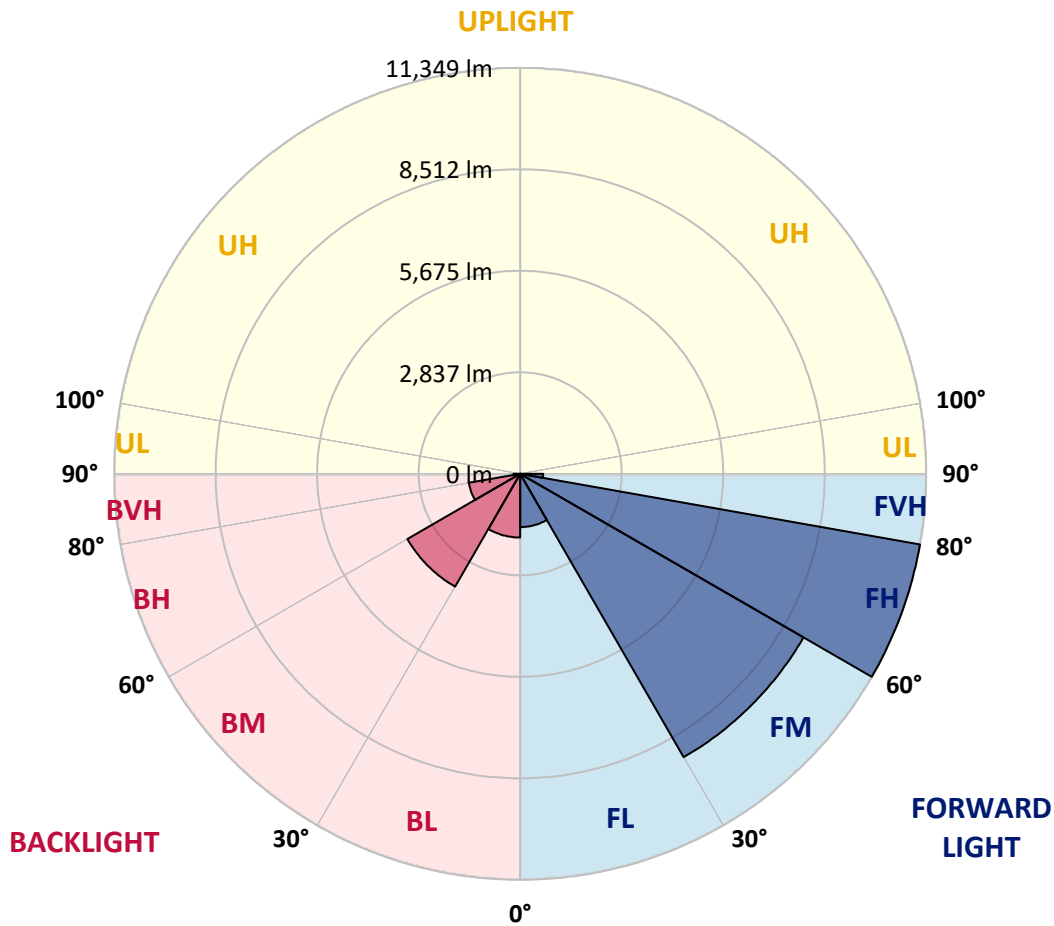
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 1489.2 | 5.0 | | | |
| FM (30°-60°) | 9144.8 | 30.8 | | | |
| FH (60°-80°) | 11349.4 | 38.2 | | | G4/12000 |
| FVH (80°-90°) | 645.8 | 2.2 | | | G4/750 |
| BL (0°-30°) | 1781.0 | 6.0 | B3/2500 | | |
| BM (30°-60°) | 3641.3 | 12.3 | B3/5000 | | |
| BH (60°-80°) | 1457.0 | 4.9 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 187.7 | 0.6 | | | G2/225 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G4

Type IV Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 36° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 3957.2 | 3957.2 | 3957.2 | 3957.2 | 3957.2 | 3957.2 | 3957.2 | 3957.2 | 3957.2 | 3957.2 | 3957.2 |
| 2.5° | 3649.0 | 3671.4 | 3681.1 | 3676.3 | 3700.3 | 3697.1 | 3730.8 | 3772.6 | 3830.4 | 3886.6 | 3968.4 |
| 5° | 3368.0 | 3392.1 | 3413.0 | 3432.2 | 3478.8 | 3493.2 | 3546.2 | 3626.5 | 3732.4 | 3840.0 | 3974.9 |
| 7.5° | 3106.4 | 3127.2 | 3159.3 | 3194.7 | 3273.3 | 3287.8 | 3376.1 | 3501.3 | 3649.0 | 3806.3 | 3992.5 |
| 10° | 2892.8 | 2913.7 | 2947.4 | 2987.6 | 3085.5 | 3103.1 | 3215.5 | 3382.5 | 3575.1 | 3774.2 | 4011.8 |
| 12.5° | 2801.3 | 2807.8 | 2827.0 | 2867.2 | 2952.2 | 2963.5 | 3087.1 | 3278.1 | 3502.9 | 3750.1 | 4040.7 |
| 15° | 2796.5 | 2809.4 | 2811.0 | 2831.8 | 2902.5 | 2907.3 | 3021.3 | 3210.7 | 3457.9 | 3745.3 | 4084.0 |
| 17.5° | 2844.7 | 2854.3 | 2839.9 | 2852.7 | 2912.1 | 2920.1 | 3010.0 | 3178.6 | 3443.5 | 3766.2 | 4157.9 |
| 20° | 2973.1 | 2981.1 | 2937.8 | 2920.1 | 2963.5 | 2969.9 | 3058.2 | 3199.5 | 3457.9 | 3809.5 | 4259.0 |
| 22.5° | 3246.0 | 3250.8 | 3144.9 | 3072.6 | 3075.9 | 3079.1 | 3156.1 | 3284.6 | 3514.1 | 3888.2 | 4387.4 |
| 25° | 3671.4 | 3668.2 | 3499.7 | 3360.0 | 3279.7 | 3262.1 | 3313.4 | 3422.6 | 3608.8 | 3992.5 | 4552.8 |
| 27.5° | 4169.1 | 4145.0 | 3976.5 | 3767.8 | 3592.8 | 3567.1 | 3555.9 | 3602.4 | 3743.7 | 4130.6 | 4755.1 |
| 30° | 4731.0 | 4708.5 | 4527.1 | 4254.2 | 4011.8 | 3970.0 | 3864.1 | 3840.0 | 3944.4 | 4318.4 | 5036.0 |
| 32.5° | 5347.4 | 5333.0 | 5116.3 | 4785.6 | 4461.3 | 4413.1 | 4234.9 | 4170.7 | 4252.6 | 4602.5 | 5427.7 |
| 35° | 5864.4 | 5851.5 | 5671.7 | 5331.4 | 4934.9 | 4875.5 | 4694.0 | 4621.8 | 4663.5 | 4967.0 | 5939.8 |
| 37.5° | 6331.5 | 6325.1 | 6171.0 | 5902.9 | 5493.5 | 5421.3 | 5217.4 | 5193.3 | 5185.3 | 5447.0 | 6561.1 |
| 40° | 6765.0 | 6748.9 | 6588.4 | 6447.1 | 6143.7 | 6077.9 | 5898.1 | 5877.2 | 5816.2 | 6037.7 | 7264.2 |
| 42.5° | 7245.0 | 7203.2 | 6970.4 | 6904.6 | 6822.7 | 6768.2 | 6660.6 | 6663.8 | 6529.0 | 6704.0 | 8009.1 |
| 45° | 7636.7 | 7612.6 | 7373.4 | 7334.9 | 7423.1 | 7400.7 | 7493.8 | 7517.9 | 7256.2 | 7402.3 | 8782.9 |
| 47.5° | 8057.3 | 8034.8 | 7832.5 | 7805.2 | 8044.4 | 8050.8 | 8379.9 | 8388.0 | 7965.8 | 8127.9 | 9558.3 |
| 50° | 8575.8 | 8543.7 | 8343.0 | 8376.7 | 8644.8 | 8668.9 | 9270.9 | 9216.3 | 8619.1 | 8864.8 | 10327.2 |
| 52.5° | 8917.7 | 8937.0 | 8893.7 | 8948.2 | 9314.3 | 9336.7 | 10147.4 | 10007.8 | 9266.1 | 9592.0 | 11081.7 |
| 55° | 9169.8 | 9208.3 | 9343.1 | 9468.4 | 10020.6 | 10043.1 | 10974.2 | 10760.7 | 9802.3 | 10266.2 | 11791.3 |
| 57.5° | 9494.1 | 9439.5 | 9691.5 | 9935.5 | 10691.6 | 10751.0 | 11778.5 | 11486.3 | 10277.5 | 10847.4 | 12277.7 |
| 60° | 9959.6 | 9921.1 | 10116.9 | 10478.1 | 11442.9 | 11537.7 | 12629.3 | 12139.7 | 10625.8 | 11308.1 | 12372.4 |
| 62.5° | 10903.6 | 10807.2 | 10837.7 | 11157.2 | 12390.1 | 12515.3 | 13589.3 | 12709.6 | 10799.2 | 11487.9 | 11865.2 |
| 65° | 12314.7 | 12149.3 | 11995.2 | 12216.7 | 13724.2 | 13847.8 | 14672.9 | 13157.5 | 10735.0 | 11139.5 | 10518.3 |
| 67.5° | 14091.8 | 13928.0 | 13738.6 | 13947.3 | 15689.1 | 15787.0 | 16010.2 | 13409.5 | 10229.3 | 9797.5 | 8137.5 |
| 70° | 15557.5 | 15496.5 | 15722.8 | 16581.7 | 18827.6 | 18830.8 | 17724.7 | 13200.8 | 8843.9 | 6946.4 | 4708.5 |
| 72.5° | 15363.2 | 15326.3 | 16519.1 | 19174.3 | 22783.2 | 22698.1 | 19347.7 | 11621.1 | 5957.5 | 3133.6 | 1764.3 |
| 75° | 12603.6 | 12842.8 | 14690.6 | 19127.8 | 24203.9 | 24192.7 | 18354.0 | 7387.8 | 2464.2 | 1298.7 | 911.8 |
| 77.5° | 6758.5 | 7137.4 | 9537.4 | 14122.3 | 18895.0 | 19179.1 | 12903.8 | 2584.6 | 1057.9 | 831.6 | 630.9 |
| 80° | 2204.1 | 2534.9 | 3801.5 | 7190.4 | 12277.7 | 12224.8 | 5530.4 | 1014.6 | 724.0 | 589.2 | 436.7 |
| 82.5° | 935.9 | 974.4 | 1698.5 | 3395.3 | 6301.0 | 6203.1 | 1761.1 | 582.7 | 508.9 | 402.9 | 269.7 |
| 85° | 366.0 | 409.4 | 749.7 | 1570.0 | 2729.1 | 2669.7 | 635.7 | 289.0 | 325.9 | 263.3 | 160.5 |
| 87.5° | 120.4 | 146.1 | 268.1 | 537.8 | 849.2 | 818.7 | 155.7 | 99.5 | 141.3 | 120.4 | 57.8 |
| 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° | 3957.2 | 3957.2 | 3957.2 | 3957.2 | 3957.2 | 3957.2 | 3957.2 | 3957.2 | 3957.2 | 3957.2 | 3957.2 |
| 2.5° | 3990.9 | 4016.6 | 4047.1 | 4092.0 | 4130.6 | 4162.7 | 4196.4 | 4217.3 | 4225.3 | 4249.4 | 4247.8 |
| 5° | 4019.8 | 4076.0 | 4151.4 | 4225.3 | 4297.5 | 4340.9 | 4379.4 | 4398.7 | 4416.3 | 4429.2 | 4432.4 |
| 7.5° | 4068.0 | 4140.2 | 4259.0 | 4355.3 | 4416.3 | 4451.6 | 4477.3 | 4470.9 | 4477.3 | 4480.5 | 4485.4 |
| 10° | 4109.7 | 4210.8 | 4352.1 | 4443.6 | 4490.2 | 4491.8 | 4485.4 | 4462.9 | 4451.6 | 4453.2 | 4456.5 |
| 12.5° | 4159.5 | 4271.8 | 4424.4 | 4501.4 | 4514.3 | 4478.9 | 4451.6 | 4413.1 | 4398.7 | 4392.2 | 4389.0 |
| 15° | 4226.9 | 4355.3 | 4503.0 | 4531.9 | 4499.8 | 4454.9 | 4408.3 | 4345.7 | 4313.6 | 4287.9 | 4295.9 |
| 17.5° | 4308.8 | 4450.0 | 4564.0 | 4543.1 | 4474.1 | 4400.3 | 4324.8 | 4230.1 | 4164.3 | 4137.0 | 4138.6 |
| 20° | 4422.7 | 4549.6 | 4610.6 | 4519.1 | 4414.7 | 4302.3 | 4173.9 | 4058.3 | 3997.3 | 3970.0 | 3966.8 |
| 22.5° | 4560.8 | 4682.8 | 4655.5 | 4477.3 | 4329.6 | 4149.8 | 3989.3 | 3904.2 | 3873.7 | 3854.5 | 3857.7 |
| 25° | 4726.2 | 4830.5 | 4687.6 | 4416.3 | 4190.0 | 3947.6 | 3823.9 | 3796.7 | 3782.2 | 3767.8 | 3767.8 |
| 27.5° | 4941.3 | 4997.5 | 4711.7 | 4326.4 | 3971.6 | 3732.4 | 3687.5 | 3692.3 | 3687.5 | 3663.4 | 3668.2 |
| 30° | 5225.4 | 5214.2 | 4734.2 | 4180.3 | 3721.2 | 3538.2 | 3541.4 | 3562.3 | 3565.5 | 3549.4 | 3557.5 |
| 32.5° | 5599.5 | 5485.5 | 4745.4 | 3990.9 | 3482.0 | 3368.0 | 3371.2 | 3393.7 | 3409.8 | 3382.5 | 3395.3 |
| 35° | 6052.2 | 5801.7 | 4727.8 | 3753.3 | 3297.4 | 3205.9 | 3181.8 | 3188.2 | 3193.0 | 3167.4 | 3185.0 |
| 37.5° | 6580.3 | 6156.5 | 4649.1 | 3490.0 | 3144.9 | 3047.0 | 2995.6 | 2952.2 | 2926.6 | 2902.5 | 2918.5 |
| 40° | 7159.9 | 6543.4 | 4504.6 | 3233.2 | 2974.7 | 2878.4 | 2801.3 | 2719.5 | 2632.8 | 2600.7 | 2615.1 |
| 42.5° | 7766.7 | 6941.5 | 4329.6 | 2987.6 | 2778.9 | 2700.2 | 2618.3 | 2499.5 | 2369.5 | 2303.7 | 2311.7 |
| 45° | 8396.0 | 7349.3 | 4157.9 | 2745.2 | 2578.2 | 2544.5 | 2449.8 | 2306.9 | 2165.6 | 2082.1 | 2075.7 |
| 47.5° | 9012.4 | 7734.6 | 3905.8 | 2501.1 | 2390.4 | 2427.3 | 2353.4 | 2221.8 | 2064.5 | 1932.8 | 1918.4 |
| 50° | 9601.6 | 8095.8 | 3493.2 | 2253.9 | 2237.9 | 2392.0 | 2321.3 | 2131.9 | 1952.1 | 1783.5 | 1769.1 |
| 52.5° | 10186.0 | 8388.0 | 2965.1 | 2029.2 | 2156.0 | 2382.3 | 2279.6 | 2070.9 | 1851.0 | 1674.4 | 1655.1 |
| 55° | 10682.0 | 8538.9 | 2456.2 | 1836.5 | 2037.2 | 2300.5 | 2229.8 | 1998.7 | 1708.1 | 1520.3 | 1504.2 |
| 57.5° | 10964.6 | 8416.9 | 2032.4 | 1647.1 | 1873.4 | 2165.6 | 2144.8 | 1844.5 | 1537.9 | 1393.4 | 1374.2 |
| 60° | 10842.5 | 7922.4 | 1685.6 | 1481.7 | 1717.7 | 2019.5 | 1997.1 | 1692.0 | 1407.9 | 1271.4 | 1252.2 |
| 62.5° | 10169.9 | 6980.1 | 1411.1 | 1337.3 | 1576.5 | 1870.2 | 1849.4 | 1574.9 | 1308.4 | 1176.7 | 1155.9 |
| 65° | 8815.0 | 5678.1 | 1197.6 | 1216.9 | 1433.6 | 1690.4 | 1720.9 | 1476.9 | 1229.7 | 1101.3 | 1080.4 |
| 67.5° | 6723.2 | 4112.9 | 1030.6 | 1112.5 | 1293.9 | 1513.8 | 1602.1 | 1406.3 | 1163.9 | 1041.9 | 1022.6 |
| 70° | 3832.0 | 2335.8 | 889.4 | 1011.4 | 1170.3 | 1350.1 | 1510.6 | 1350.1 | 1093.2 | 992.1 | 979.3 |
| 72.5° | 1452.8 | 1072.4 | 769.0 | 910.2 | 1051.5 | 1212.0 | 1409.5 | 1261.8 | 1011.4 | 935.9 | 923.1 |
| 75° | 775.4 | 653.4 | 647.0 | 791.4 | 915.1 | 1077.2 | 1282.7 | 1175.1 | 950.4 | 988.9 | 1021.0 |
| 77.5° | 528.2 | 462.3 | 541.0 | 677.5 | 765.8 | 927.9 | 1147.8 | 1043.5 | 823.5 | 820.3 | 756.1 |
| 80° | 366.0 | 327.5 | 439.9 | 545.8 | 592.4 | 780.2 | 1001.7 | 895.8 | 671.0 | 626.1 | 598.8 |
| 82.5° | 219.9 | 213.5 | 329.1 | 407.8 | 419.0 | 602.0 | 830.0 | 751.3 | 549.0 | 478.4 | 481.6 |
| 85° | 120.4 | 126.8 | 210.3 | 239.2 | 244.0 | 420.6 | 650.2 | 581.1 | 422.2 | 354.8 | 358.0 |
| 87.5° | 33.7 | 43.3 | 77.1 | 94.7 | 117.2 | 218.3 | 386.9 | 345.2 | 211.9 | 147.7 | 147.7 |
| 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)