

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: P884627

Luminaire Tested: **NAV-SB5C-740-U-T2**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884627
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-SB5C-740-U-T2
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 70 CRI, 4000K, 615mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 40596 lumens
Efficiency: N/A
Efficacy: 162.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B4 - U0 - G4

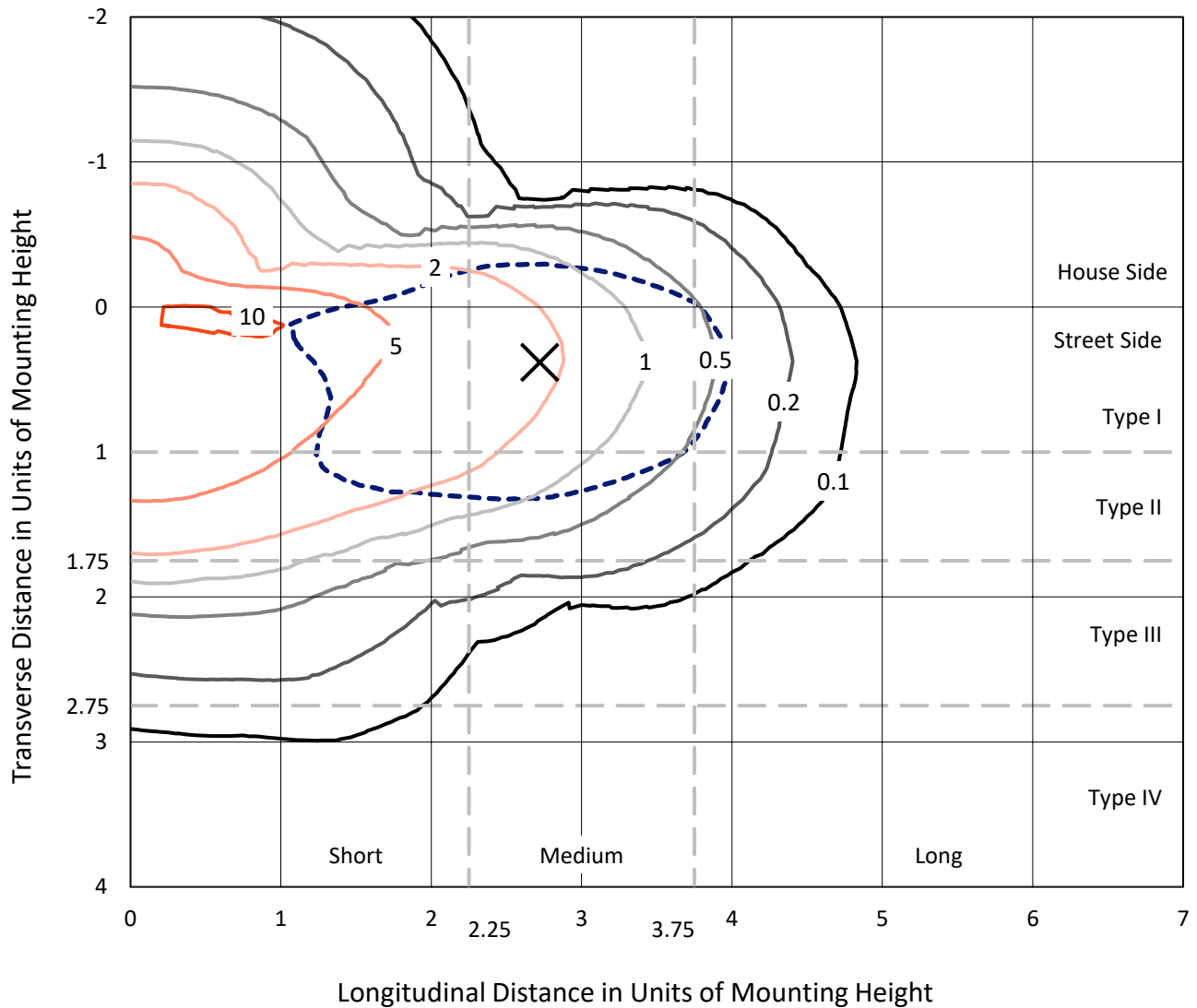
Input Watts (W): 249.5
Input Voltage (V): 120.0
Input Current (Ain): 2.116
Voltage Rise (V): NR
Power Factor: 0.996
Total Harmonic Distortion (THDi): 7.885
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

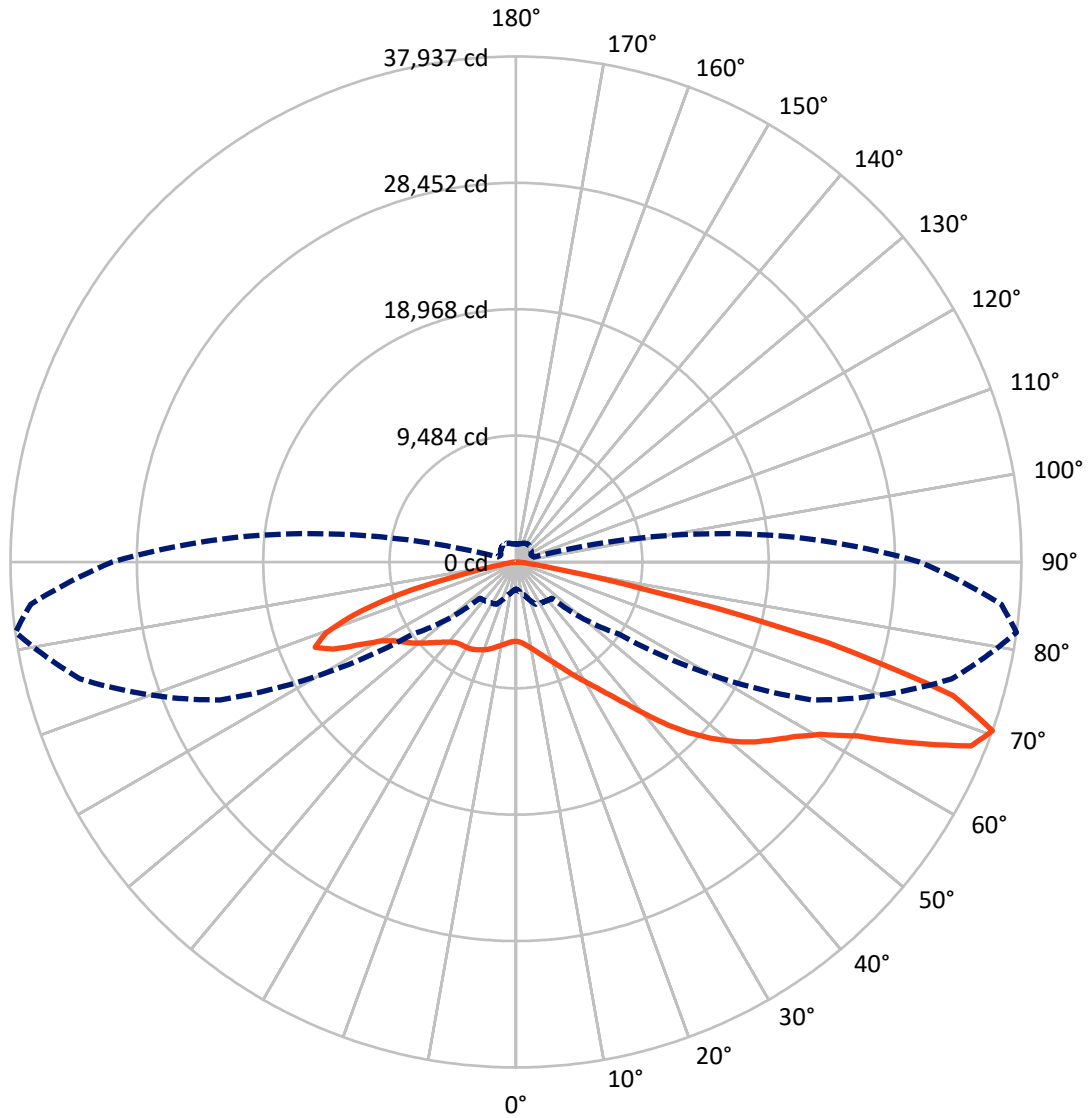
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 10.8 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 | 10007.9 | 0.0 | 10007.9 |
| | % Fixture | 24.7 | 0.0 | 24.7 |
| Street Side | Lumens | 30588.1 | 0.0 | 30588.1 |
| | % Fixture | 75.3 | 0.0 | 75.3 |
| Total | Lumens | 40596.0 | 0.0 | 40596.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 562.0 | 1.4 |
| 10°-20° | 1614.5 | 4.0 |
| 20°-30° | 2701.0 | 6.7 |
| 30°-40° | 4219.6 | 10.4 |
| 40°-50° | 6720.3 | 16.6 |
| 50°-60° | 9352.1 | 23.0 |
| 60°-70° | 9782.7 | 24.1 |
| 70°-80° | 5112.9 | 12.6 |
| 80°-90° | 530.9 | 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° | 40596.0 | 100.0 |
| 0°-180° | 40596.0 | 100.0 |

Coefficient of Utilization

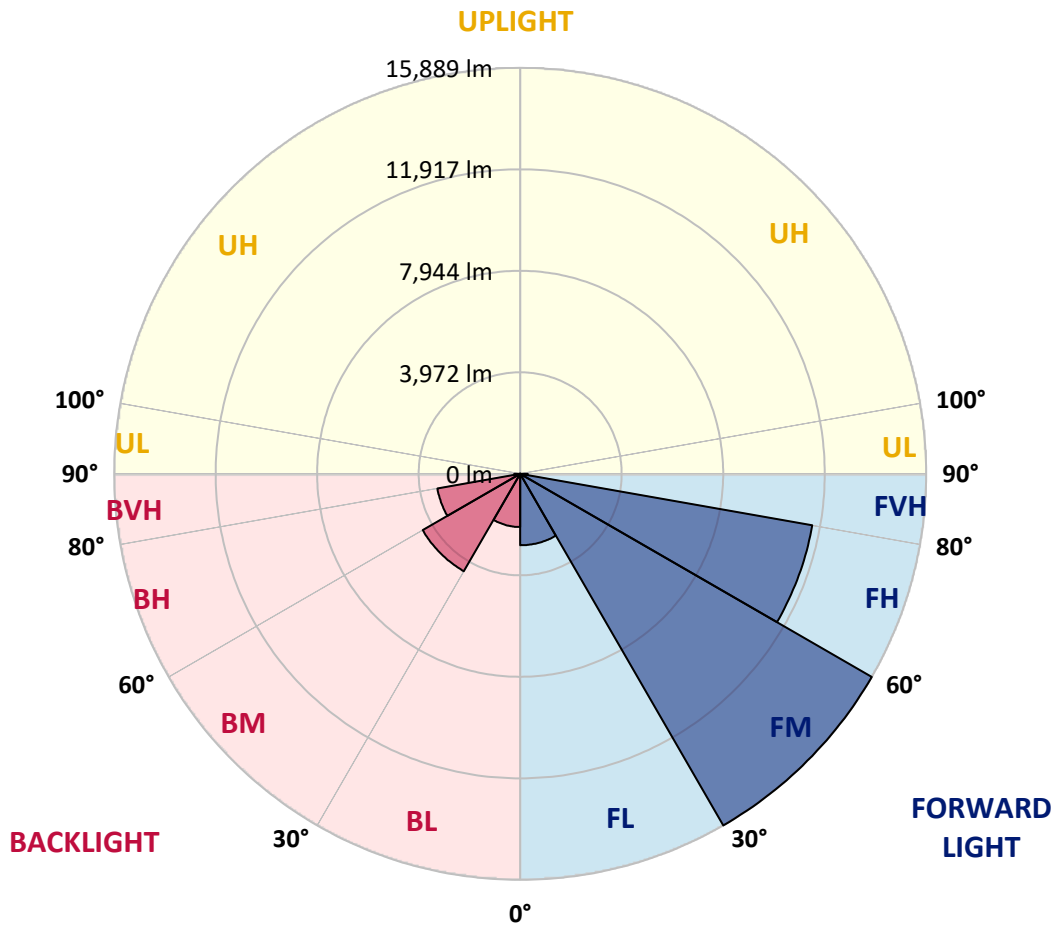


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 2795.5 | 6.9 | | | |
| FM (30°-60°) | 15888.9 | 39.1 | | | |
| FH (60°-80°) | 11606.5 | 28.6 | | | G4/12000 |
| FVH (80°-90°) | 297.2 | 0.7 | | | G3/500 |
| BL (0°-30°) | 2082.0 | 5.1 | B3/2500 | | |
| BM (30°-60°) | 4403.1 | 10.8 | B3/5000 | | |
| BH (60°-80°) | 3289.1 | 8.1 | B4/5000 | | G4/5000 |
| BVH (80°-90°) | 233.7 | 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-G4
 Type II Medium



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 82° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 5951.9 | 5951.9 | 5951.9 | 5951.9 | 5951.9 | 5951.9 | 5951.9 | 5951.9 | 5951.9 | 5951.9 | 5951.9 |
| 2.5° | 6094.1 | 6128.5 | 6117.7 | 6107.0 | 6107.0 | 6091.9 | 6089.7 | 6068.2 | 6051.0 | 6023.0 | 6016.5 |
| 5° | 6171.6 | 6208.2 | 6203.9 | 6212.5 | 6240.5 | 6247.0 | 6253.5 | 6240.5 | 6206.1 | 6171.6 | 6156.5 |
| 7.5° | 6102.7 | 6143.6 | 6156.5 | 6208.2 | 6294.4 | 6371.9 | 6430.1 | 6453.8 | 6421.5 | 6371.9 | 6348.2 |
| 10° | 5870.0 | 5915.3 | 5960.5 | 6083.3 | 6236.2 | 6419.3 | 6574.4 | 6667.1 | 6660.6 | 6613.2 | 6572.3 |
| 12.5° | 5398.3 | 5445.7 | 5542.6 | 5781.7 | 6061.7 | 6384.9 | 6673.5 | 6867.4 | 6934.2 | 6899.7 | 6828.6 |
| 15° | 5021.3 | 5062.2 | 5135.5 | 5381.0 | 5745.1 | 6236.2 | 6710.1 | 7087.1 | 7257.3 | 7237.9 | 7151.7 |
| 17.5° | 5010.5 | 5027.8 | 5073.0 | 5189.3 | 5469.4 | 6003.6 | 6671.4 | 7302.5 | 7627.8 | 7625.6 | 7517.9 |
| 20° | 5200.1 | 5206.5 | 5232.4 | 5256.1 | 5415.5 | 5826.9 | 6572.3 | 7481.3 | 8043.5 | 8043.5 | 7927.2 |
| 22.5° | 5462.9 | 5458.6 | 5484.4 | 5462.9 | 5540.4 | 5811.9 | 6509.8 | 7638.6 | 8506.7 | 8541.2 | 8394.7 |
| 25° | 5857.1 | 5835.6 | 5829.1 | 5779.6 | 5794.6 | 5951.9 | 6578.7 | 7817.4 | 9056.0 | 9127.1 | 8944.0 |
| 27.5° | 6382.7 | 6348.2 | 6324.5 | 6210.4 | 6171.6 | 6240.5 | 6789.8 | 8032.8 | 9667.8 | 9790.6 | 9557.9 |
| 30° | 7067.7 | 7005.3 | 6970.8 | 6772.6 | 6632.6 | 6643.4 | 7108.7 | 8319.3 | 10307.5 | 10505.7 | 10210.6 |
| 32.5° | 8002.6 | 7905.7 | 7813.1 | 7487.8 | 7231.4 | 7147.4 | 7520.1 | 8715.6 | 11001.2 | 11317.8 | 10938.7 |
| 35° | 9049.5 | 8972.0 | 8872.9 | 8371.0 | 7976.8 | 7782.9 | 8075.9 | 9269.3 | 11813.3 | 12315.2 | 11821.9 |
| 37.5° | 10057.7 | 9990.9 | 10038.3 | 9361.9 | 8853.5 | 8571.3 | 8804.0 | 10012.4 | 12815.0 | 13556.0 | 12929.1 |
| 40° | 11100.3 | 11048.6 | 11055.0 | 10408.8 | 9816.4 | 9499.7 | 9687.2 | 10945.2 | 13963.1 | 15031.6 | 14260.4 |
| 42.5° | 12233.3 | 12194.6 | 12065.3 | 11492.3 | 10826.7 | 10531.6 | 10703.9 | 12022.2 | 15195.3 | 16711.8 | 15720.9 |
| 45° | 13502.1 | 13478.4 | 13357.8 | 12700.8 | 11938.2 | 11606.5 | 11839.1 | 13211.3 | 16433.9 | 18292.9 | 17187.9 |
| 47.5° | 14598.6 | 14618.0 | 14602.9 | 14049.3 | 13258.7 | 12771.9 | 13049.8 | 14452.1 | 17586.4 | 19779.3 | 18594.5 |
| 50° | 15126.4 | 15227.6 | 15376.2 | 15203.9 | 14712.8 | 14217.3 | 14271.2 | 15649.8 | 18685.0 | 21173.0 | 19943.0 |
| 52.5° | 14850.6 | 15042.3 | 15447.3 | 15723.0 | 15912.6 | 15809.2 | 15664.9 | 16838.9 | 19719.0 | 22431.0 | 21218.3 |
| 55° | 13823.1 | 14092.4 | 14764.5 | 15430.1 | 16397.3 | 17149.1 | 17338.7 | 18157.2 | 20727.1 | 23538.3 | 22424.6 |
| 57.5° | 11951.2 | 12388.4 | 12991.6 | 14337.9 | 15966.5 | 17797.5 | 19290.3 | 19986.1 | 21795.6 | 24720.9 | 23686.9 |
| 60° | 8741.5 | 9327.4 | 10077.1 | 12080.4 | 14458.6 | 17450.7 | 20951.1 | 22795.1 | 23314.2 | 26252.5 | 25330.5 |
| 62.5° | 5594.3 | 5956.2 | 6645.5 | 8532.5 | 11266.1 | 15673.5 | 21459.5 | 26306.3 | 25888.4 | 28764.2 | 27794.8 |
| 65° | 3830.1 | 4062.7 | 4693.9 | 5753.7 | 7283.1 | 11666.8 | 20098.1 | 28938.7 | 29977.0 | 32745.0 | 32008.3 |
| 67.5° | 2783.1 | 2959.8 | 3498.3 | 4426.8 | 4745.6 | 6904.0 | 15596.0 | 28818.0 | 33951.4 | 36846.5 | 35700.5 |
| 70° | 2029.2 | 2154.1 | 2606.5 | 3498.3 | 3651.3 | 3840.8 | 9448.0 | 24496.8 | 33865.2 | 37936.5 | 36564.3 |
| 72.5° | 1503.6 | 1589.8 | 1893.5 | 2714.2 | 2955.5 | 2593.6 | 4676.6 | 17803.9 | 29100.2 | 34313.3 | 33212.5 |
| 75° | 1087.8 | 1152.5 | 1376.5 | 2076.6 | 2365.2 | 1975.3 | 2332.9 | 10404.5 | 20298.4 | 24137.1 | 24331.0 |
| 77.5° | 831.5 | 881.0 | 1027.5 | 1520.8 | 1893.5 | 1482.0 | 1447.6 | 4786.5 | 9624.7 | 9672.1 | 10214.9 |
| 80° | 667.8 | 700.1 | 779.8 | 1070.6 | 1451.9 | 1109.4 | 943.5 | 1932.3 | 3041.6 | 2574.2 | 2701.3 |
| 82.5° | 491.1 | 545.0 | 659.2 | 751.8 | 1038.3 | 764.7 | 575.2 | 975.8 | 1156.8 | 995.2 | 1003.8 |
| 85° | 280.0 | 316.7 | 398.5 | 538.5 | 663.5 | 467.4 | 329.6 | 433.0 | 538.5 | 441.6 | 394.2 |
| 87.5° | 99.1 | 129.2 | 140.0 | 211.1 | 288.7 | 193.9 | 127.1 | 124.9 | 176.6 | 131.4 | 109.9 |
| 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° | 5951.9 | 5951.9 | 5951.9 | 5951.9 | 5951.9 | 5951.9 | 5951.9 | 5951.9 | 5951.9 | 5951.9 | 5951.9 |
| 2.5° | 5995.0 | 5984.2 | 5941.1 | 5882.9 | 5822.6 | 5764.5 | 5745.1 | 5704.2 | 5676.2 | 5661.1 | 5678.3 |
| 5° | 6115.6 | 6081.1 | 5979.9 | 5850.6 | 5714.9 | 5568.4 | 5465.0 | 5370.3 | 5301.3 | 5236.7 | 5262.6 |
| 7.5° | 6287.9 | 6227.6 | 6053.1 | 5826.9 | 5585.7 | 5342.3 | 5161.3 | 5023.4 | 4930.8 | 4870.5 | 4883.4 |
| 10° | 6488.3 | 6395.6 | 6128.5 | 5790.3 | 5417.7 | 5068.7 | 4855.4 | 4736.9 | 4678.8 | 4646.5 | 4655.1 |
| 12.5° | 6718.8 | 6587.4 | 6206.1 | 5706.3 | 5161.3 | 4762.8 | 4616.3 | 4581.8 | 4584.0 | 4586.2 | 4590.5 |
| 15° | 7003.1 | 6820.0 | 6268.5 | 5523.2 | 4827.4 | 4528.0 | 4502.1 | 4558.2 | 4616.3 | 4644.3 | 4642.2 |
| 17.5° | 7324.1 | 7065.6 | 6279.3 | 5221.6 | 4500.0 | 4377.2 | 4459.1 | 4579.7 | 4668.0 | 4706.8 | 4715.4 |
| 20° | 7668.7 | 7315.5 | 6201.8 | 4795.1 | 4230.7 | 4254.4 | 4400.9 | 4556.0 | 4652.9 | 4702.5 | 4715.4 |
| 22.5° | 8062.9 | 7582.6 | 6016.5 | 4347.0 | 4011.0 | 4120.9 | 4293.2 | 4444.0 | 4545.2 | 4594.8 | 4607.7 |
| 25° | 8513.2 | 7882.0 | 5725.7 | 3970.1 | 3821.4 | 3970.1 | 4142.4 | 4267.3 | 4349.2 | 4394.4 | 4407.4 |
| 27.5° | 9012.9 | 8194.3 | 5338.0 | 3670.6 | 3655.6 | 3815.0 | 3957.2 | 4054.1 | 4097.2 | 4131.6 | 4144.6 |
| 30° | 9514.8 | 8478.7 | 4868.4 | 3444.5 | 3511.2 | 3662.0 | 3763.3 | 3806.4 | 3819.3 | 3825.7 | 3840.8 |
| 32.5° | 10057.7 | 8724.3 | 4375.1 | 3257.1 | 3373.4 | 3513.4 | 3573.7 | 3593.1 | 3532.8 | 3491.9 | 3504.8 |
| 35° | 10714.7 | 8987.1 | 3892.5 | 3108.4 | 3237.7 | 3358.3 | 3377.7 | 3360.5 | 3289.4 | 3205.4 | 3209.7 |
| 37.5° | 11526.8 | 9314.5 | 3506.9 | 3002.9 | 3110.6 | 3190.3 | 3166.6 | 3162.3 | 3168.7 | 3069.6 | 3076.1 |
| 40° | 12522.0 | 9741.0 | 3224.7 | 2921.0 | 3007.2 | 3024.4 | 2957.6 | 2994.3 | 3026.6 | 2875.8 | 2880.1 |
| 42.5° | 13627.1 | 10255.8 | 3046.0 | 2865.0 | 2921.0 | 2880.1 | 2776.7 | 2817.6 | 2813.3 | 2615.1 | 2613.0 |
| 45° | 14753.7 | 10815.9 | 2983.5 | 2824.1 | 2841.3 | 2759.4 | 2645.3 | 2656.1 | 2565.6 | 2386.8 | 2393.2 |
| 47.5° | 15873.8 | 11416.9 | 3022.3 | 2789.6 | 2742.2 | 2649.6 | 2561.3 | 2513.9 | 2380.3 | 2246.8 | 2246.8 |
| 50° | 16972.4 | 12048.1 | 3164.4 | 2720.7 | 2606.5 | 2552.7 | 2488.0 | 2404.0 | 2261.8 | 2147.7 | 2139.1 |
| 52.5° | 17991.4 | 12683.6 | 3323.8 | 2606.5 | 2436.3 | 2468.6 | 2427.7 | 2330.8 | 2190.8 | 2074.4 | 2076.6 |
| 55° | 18956.4 | 13319.0 | 3386.3 | 2449.3 | 2276.9 | 2395.4 | 2371.7 | 2192.9 | 2024.9 | 1930.1 | 1921.5 |
| 57.5° | 20007.6 | 14083.7 | 3317.4 | 2248.9 | 2147.7 | 2311.4 | 2220.9 | 2022.7 | 1925.8 | 1854.7 | 1848.2 |
| 60° | 21463.8 | 15283.6 | 3168.7 | 2001.2 | 2024.9 | 2186.4 | 2031.4 | 1949.5 | 1843.9 | 1764.2 | 1759.9 |
| 62.5° | 23882.9 | 17521.8 | 2929.6 | 1755.6 | 1880.6 | 2001.2 | 1940.9 | 1859.0 | 1751.3 | 1673.8 | 1673.8 |
| 65° | 27458.8 | 20632.3 | 2479.4 | 1563.9 | 1719.0 | 1820.2 | 1843.9 | 1762.1 | 1650.1 | 1568.2 | 1572.5 |
| 67.5° | 30474.6 | 22584.0 | 1876.3 | 1404.5 | 1553.1 | 1673.8 | 1740.5 | 1660.8 | 1542.4 | 1462.7 | 1464.8 |
| 70° | 30308.7 | 21166.6 | 1432.5 | 1247.2 | 1406.7 | 1529.4 | 1615.6 | 1553.1 | 1426.0 | 1350.6 | 1357.1 |
| 72.5° | 26920.3 | 17707.0 | 1158.9 | 1087.8 | 1258.0 | 1378.6 | 1482.0 | 1434.7 | 1305.4 | 1232.2 | 1232.2 |
| 75° | 19777.1 | 12569.4 | 926.3 | 926.3 | 1072.8 | 1221.4 | 1335.6 | 1305.4 | 1186.9 | 1135.2 | 1120.2 |
| 77.5° | 8336.5 | 5273.3 | 725.9 | 769.0 | 891.8 | 1049.1 | 1191.2 | 1202.0 | 1098.6 | 1163.2 | 1055.5 |
| 80° | 2216.6 | 1454.0 | 553.6 | 605.3 | 700.1 | 866.0 | 1036.1 | 1031.8 | 919.8 | 859.5 | 799.2 |
| 82.5° | 844.4 | 573.0 | 394.2 | 426.5 | 506.2 | 663.5 | 820.7 | 846.6 | 734.6 | 635.5 | 635.5 |
| 85° | 325.3 | 245.6 | 243.4 | 256.3 | 295.1 | 439.4 | 620.4 | 641.9 | 553.6 | 469.6 | 484.7 |
| 87.5° | 84.0 | 73.2 | 90.5 | 86.2 | 135.7 | 234.8 | 355.4 | 368.4 | 338.2 | 196.0 | 280.0 |
| 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)