

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: P883408

Luminaire Tested: **NAV-SB3D-727-U-T3-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883408
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-SB3D-727-U-T3-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(3) 70 CRI, 2700K, 900mA 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: 21694 lumens
Efficiency: N/A
Efficacy: 99.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G3

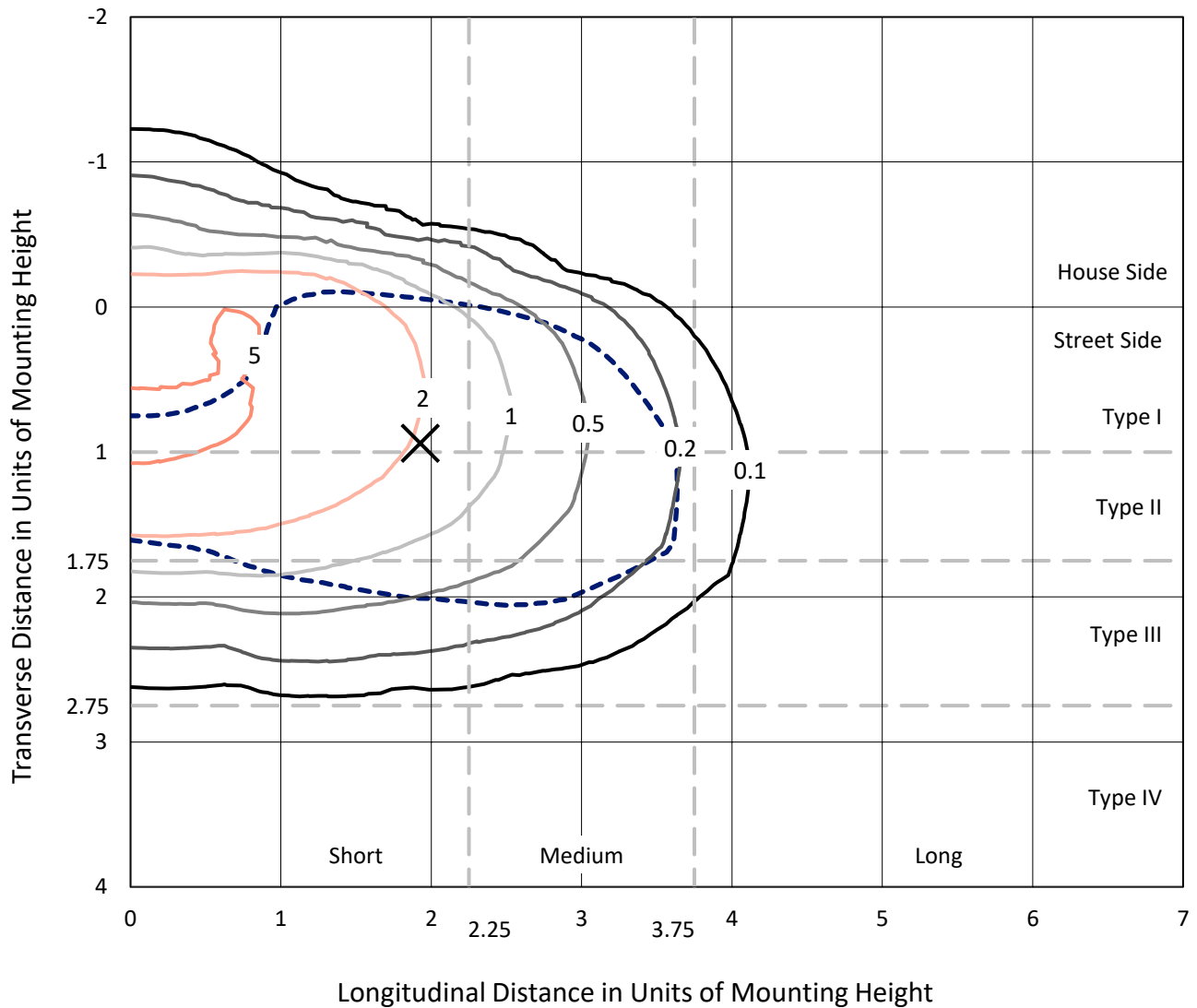
Input Watts (W): 218.1
Input Voltage (V): 120.0
Input Current (Ain): 1.84
Voltage Rise (V): NR
Power Factor: 0.998
Total Harmonic Distortion (THDi): 2.542
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

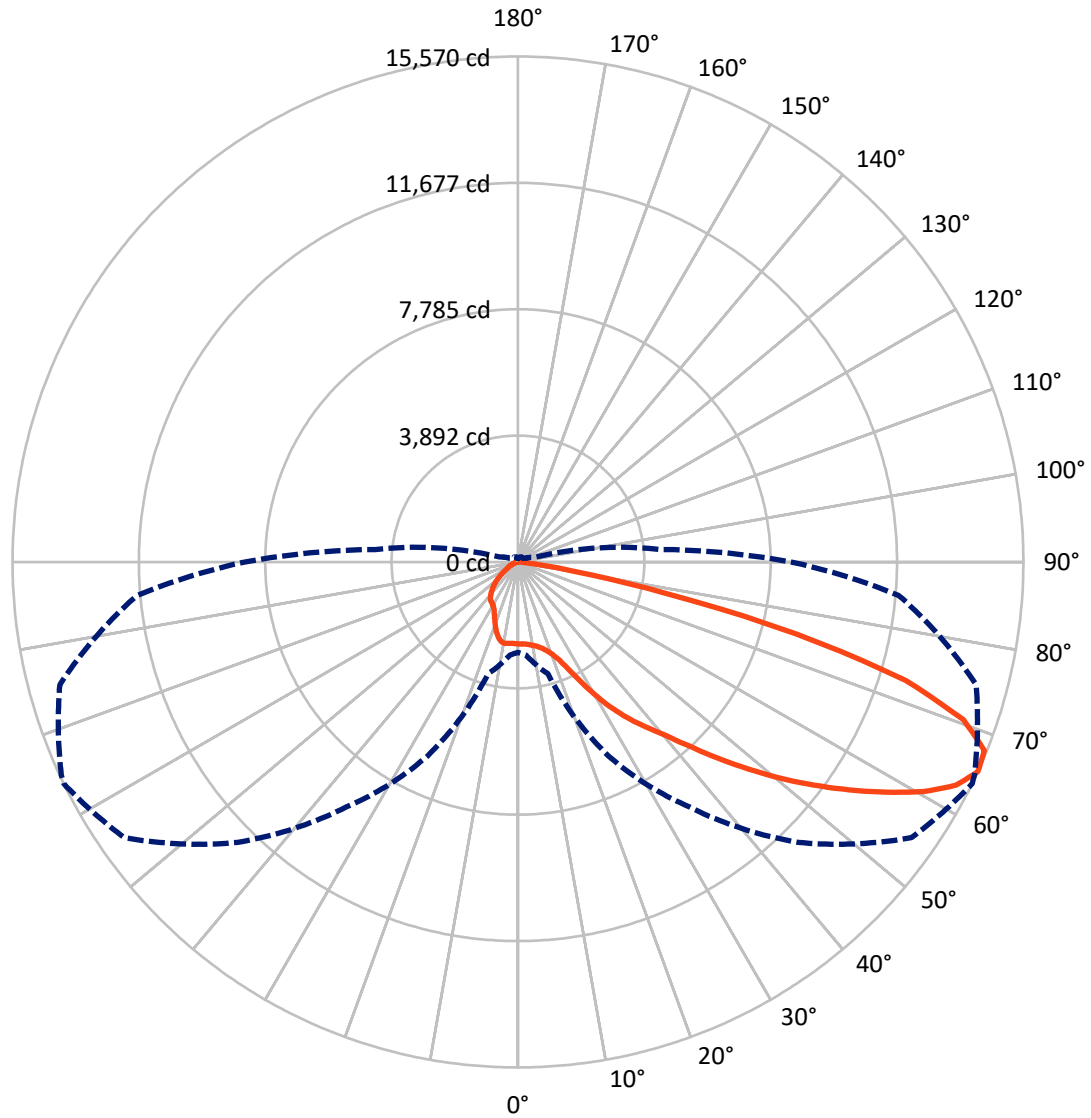
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.3 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 | 2901.2 | 0.0 | 2901.2 |
| | % Fixture | 13.4 | 0.0 | 13.4 |
| Street Side | Lumens | 18792.9 | 0.0 | 18792.9 |
| | % Fixture | 86.6 | 0.0 | 86.6 |
| Total | Lumens | 21694.0 | 0.0 | 21694.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 232.8 | 1.1 |
| 10°-20° | 631.4 | 2.9 |
| 20°-30° | 1196.5 | 5.5 |
| 30°-40° | 2421.1 | 11.2 |
| 40°-50° | 4124.3 | 19.0 |
| 50°-60° | 5608.7 | 25.9 |
| 60°-70° | 5266.9 | 24.3 |
| 70°-80° | 2110.1 | 9.7 |
| 80°-90° | 102.2 | 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° | 21694.0 | 100.0 |
| 0°-180° | 21694.0 | 100.0 |

Coefficient of Utilization



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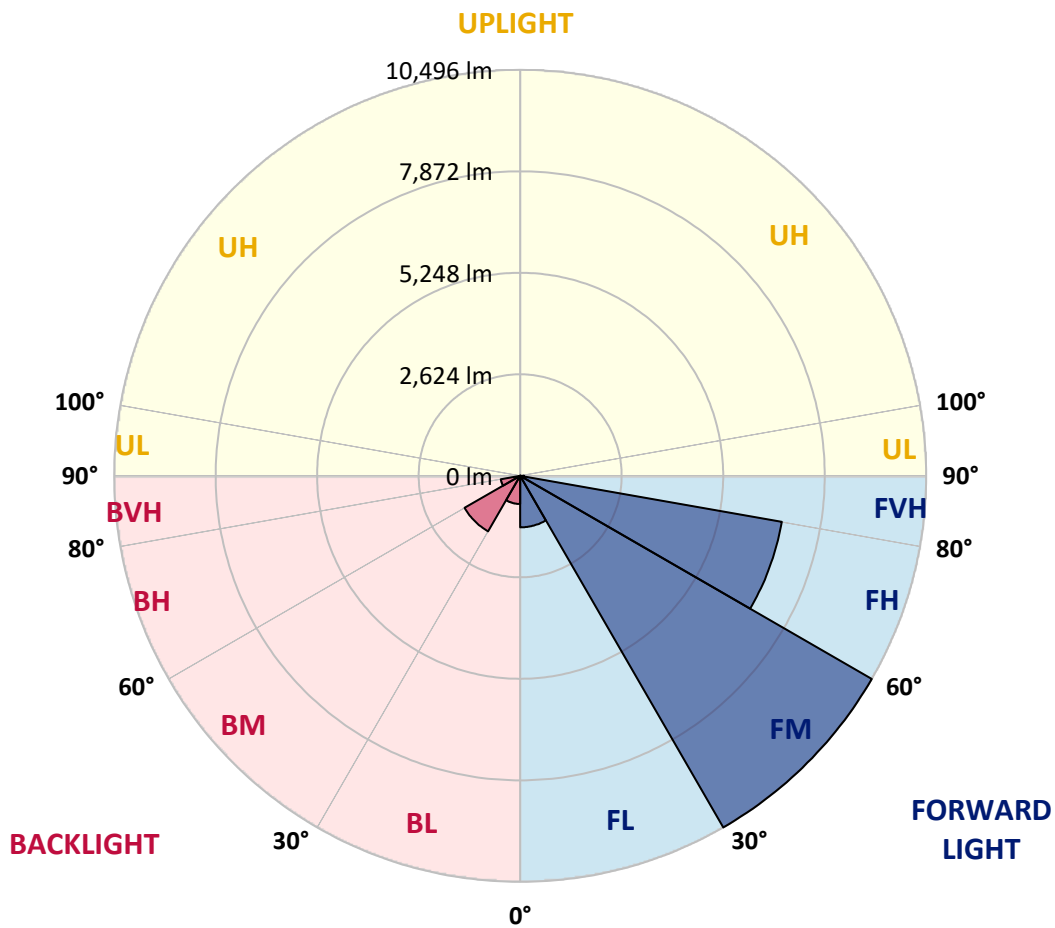
CATALOG NUMBER: NAV-SB3D-727-U-T3-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|---------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1332.3 | 6.1 | | | |
| FM (30°-60°) | 10495.5 | 48.4 | | | |
| FH (60°-80°) | 6867.8 | 31.7 | | | G3/7500 |
| FVH (80°-90°) | 97.2 | 0.4 | | | G1/100 |
| BL (0°-30°) | 728.4 | 3.4 | B2/1000 | | |
| BM (30°-60°) | 1658.6 | 7.6 | B2/2500 | | |
| BH (60°-80°) | 509.2 | 2.3 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 5.0 | 0.0 | | | G0/10 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B2-U0-G3

Type III Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 64° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 0° | 2523.2 | 2523.2 | 2523.2 | 2523.2 | 2523.2 | 2523.2 | 2523.2 | 2523.2 | 2523.2 | 2523.2 | 2523.2 |
| 2.5° | 2514.5 | 2532.0 | 2527.6 | 2523.2 | 2521.8 | 2524.7 | 2526.1 | 2524.7 | 2524.7 | 2524.7 | 2526.1 |
| 5° | 2466.5 | 2481.1 | 2481.1 | 2491.2 | 2505.8 | 2523.2 | 2536.3 | 2539.2 | 2542.1 | 2546.5 | 2545.1 |
| 7.5° | 2374.9 | 2386.5 | 2395.3 | 2428.7 | 2465.1 | 2511.6 | 2550.9 | 2571.2 | 2574.1 | 2590.1 | 2596.0 |
| 10° | 2312.4 | 2326.9 | 2341.4 | 2376.4 | 2428.7 | 2498.5 | 2565.4 | 2614.9 | 2622.1 | 2659.9 | 2677.4 |
| 12.5° | 2309.5 | 2324.0 | 2342.9 | 2380.7 | 2441.8 | 2516.0 | 2597.4 | 2668.7 | 2681.8 | 2737.0 | 2773.4 |
| 15° | 2340.0 | 2357.4 | 2374.9 | 2421.4 | 2486.9 | 2577.0 | 2664.3 | 2753.0 | 2766.1 | 2844.6 | 2883.9 |
| 17.5° | 2402.5 | 2425.8 | 2438.9 | 2485.4 | 2555.2 | 2655.6 | 2770.5 | 2872.3 | 2883.9 | 2975.5 | 3025.0 |
| 20° | 2526.1 | 2553.8 | 2558.1 | 2596.0 | 2664.3 | 2771.9 | 2908.6 | 3035.2 | 3049.7 | 3154.4 | 3209.7 |
| 22.5° | 2782.1 | 2821.4 | 2786.5 | 2805.4 | 2866.5 | 2974.1 | 3122.4 | 3282.4 | 3302.8 | 3422.0 | 3471.5 |
| 25° | 3232.9 | 3288.2 | 3198.0 | 3166.0 | 3192.2 | 3304.2 | 3490.4 | 3692.5 | 3715.8 | 3811.8 | 3836.5 |
| 27.5° | 4118.6 | 4047.4 | 3910.7 | 3776.9 | 3698.3 | 3762.3 | 3971.7 | 4221.9 | 4251.0 | 4344.0 | 4315.0 |
| 30° | 5091.6 | 5029.0 | 4844.3 | 4547.6 | 4361.5 | 4351.3 | 4544.7 | 4824.0 | 4857.4 | 4946.1 | 4857.4 |
| 32.5° | 6066.0 | 6006.3 | 5805.6 | 5440.6 | 5117.7 | 4957.8 | 5091.6 | 5401.3 | 5418.8 | 5475.5 | 5344.6 |
| 35° | 7024.3 | 6963.3 | 6762.6 | 6388.8 | 5991.8 | 5628.2 | 5602.0 | 5951.1 | 5956.9 | 6016.5 | 5821.6 |
| 37.5° | 7988.6 | 7937.7 | 7723.9 | 7357.4 | 6966.2 | 6464.4 | 6221.6 | 6471.7 | 6479.0 | 6537.1 | 6335.0 |
| 40° | 8676.4 | 8698.3 | 8551.4 | 8267.8 | 7931.8 | 7383.6 | 6916.7 | 7025.8 | 6982.2 | 7079.6 | 6958.9 |
| 42.5° | 9266.9 | 9310.5 | 9182.5 | 9040.0 | 8845.1 | 8362.3 | 7777.7 | 7758.8 | 7689.0 | 7741.3 | 7616.3 |
| 45° | 9777.4 | 9813.7 | 9698.8 | 9665.4 | 9661.0 | 9322.2 | 8718.6 | 8605.2 | 8507.7 | 8497.6 | 8347.8 |
| 47.5° | 9965.0 | 10034.8 | 10084.2 | 10196.2 | 10414.4 | 10271.8 | 9691.6 | 9515.6 | 9406.5 | 9326.5 | 9089.5 |
| 50° | 10036.2 | 10110.4 | 10279.1 | 10604.9 | 11121.2 | 11182.2 | 10660.1 | 10462.3 | 10328.5 | 10183.1 | 9834.1 |
| 52.5° | 9940.2 | 10072.6 | 10299.5 | 10847.7 | 11596.7 | 11912.3 | 11589.4 | 11416.4 | 11263.7 | 11026.6 | 10508.9 |
| 55° | 9374.5 | 9506.9 | 9970.8 | 10844.8 | 11833.8 | 12424.2 | 12467.8 | 12390.8 | 12219.2 | 11845.4 | 11054.3 |
| 57.5° | 8182.0 | 8378.3 | 9112.7 | 10475.4 | 11829.4 | 12864.9 | 13328.8 | 13384.1 | 13192.1 | 12656.9 | 11483.3 |
| 60° | 6529.9 | 6796.0 | 7691.9 | 9656.7 | 11464.4 | 13103.4 | 14083.6 | 14359.9 | 14156.3 | 13456.8 | 11830.9 |
| 62.5° | 4556.4 | 4864.7 | 5712.6 | 8373.9 | 10629.6 | 12931.8 | 14634.8 | 15145.2 | 14991.1 | 14172.3 | 11964.7 |
| 65° | 2779.2 | 2878.1 | 3561.6 | 6589.5 | 9210.2 | 12213.3 | 14804.9 | 15569.9 | 15519.0 | 14610.1 | 11766.9 |
| 67.5° | 1851.3 | 1934.2 | 2130.6 | 4518.6 | 7149.4 | 10777.9 | 14397.7 | 15495.7 | 15510.3 | 14538.8 | 11042.6 |
| 70° | 1115.5 | 1186.7 | 1314.7 | 2627.9 | 4633.4 | 8531.0 | 13136.8 | 14550.4 | 14634.8 | 13586.2 | 9669.7 |
| 72.5° | 459.6 | 507.6 | 623.9 | 1191.1 | 2399.6 | 5414.4 | 10460.9 | 12492.6 | 12688.9 | 11423.6 | 7421.4 |
| 75° | 260.3 | 285.0 | 366.5 | 597.7 | 1041.3 | 2523.2 | 6336.5 | 8868.4 | 9157.8 | 7873.7 | 4464.7 |
| 77.5° | 173.1 | 184.7 | 237.1 | 386.8 | 586.1 | 861.0 | 2707.9 | 4620.4 | 5173.0 | 4300.4 | 1932.8 |
| 80° | 116.3 | 126.5 | 162.9 | 258.9 | 381.0 | 369.4 | 862.4 | 1711.7 | 2105.8 | 1477.6 | 471.2 |
| 82.5° | 78.5 | 80.0 | 116.3 | 170.2 | 241.4 | 178.9 | 254.5 | 532.3 | 669.0 | 427.6 | 178.9 |
| 85° | 45.1 | 43.6 | 85.8 | 98.9 | 107.6 | 74.2 | 77.1 | 160.0 | 209.4 | 180.3 | 101.8 |
| 87.5° | 5.8 | 8.7 | 33.4 | 26.2 | 14.5 | 16.0 | 16.0 | 27.6 | 40.7 | 43.6 | 21.8 |
| 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° | 2523.2 | 2523.2 | 2523.2 | 2523.2 | 2523.2 | 2523.2 | 2523.2 | 2523.2 | 2523.2 | 2523.2 | 2523.2 |
| 2.5° | 2526.1 | 2524.7 | 2520.3 | 2516.0 | 2505.8 | 2500.0 | 2502.9 | 2500.0 | 2498.5 | 2500.0 | 2505.8 |
| 5° | 2545.1 | 2540.7 | 2529.1 | 2514.5 | 2494.2 | 2469.4 | 2453.4 | 2430.2 | 2408.3 | 2395.3 | 2398.2 |
| 7.5° | 2596.0 | 2591.6 | 2575.6 | 2534.9 | 2469.4 | 2366.2 | 2271.6 | 2188.7 | 2126.2 | 2089.9 | 2091.3 |
| 10° | 2677.4 | 2670.1 | 2645.4 | 2555.2 | 2383.6 | 2158.2 | 1970.6 | 1815.0 | 1713.2 | 1665.2 | 1660.8 |
| 12.5° | 2773.4 | 2764.7 | 2721.0 | 2536.3 | 2220.7 | 1868.8 | 1609.9 | 1436.9 | 1342.3 | 1300.2 | 1295.8 |
| 15° | 2886.8 | 2875.2 | 2789.4 | 2446.2 | 1983.7 | 1548.8 | 1311.8 | 1182.4 | 1121.3 | 1083.5 | 1084.9 |
| 17.5° | 3027.9 | 3007.5 | 2840.3 | 2310.9 | 1726.3 | 1304.5 | 1128.5 | 1031.1 | 977.3 | 940.9 | 938.0 |
| 20° | 3211.1 | 3177.7 | 2881.0 | 2149.5 | 1489.2 | 1150.4 | 1004.9 | 923.5 | 882.8 | 850.8 | 845.0 |
| 22.5° | 3467.1 | 3419.1 | 2930.4 | 1975.0 | 1322.0 | 1044.2 | 913.3 | 853.7 | 820.2 | 783.9 | 778.1 |
| 25° | 3784.1 | 3727.4 | 2991.5 | 1813.5 | 1207.1 | 952.6 | 846.4 | 797.0 | 757.7 | 715.5 | 711.2 |
| 27.5° | 4227.7 | 4125.9 | 3064.2 | 1681.2 | 1108.2 | 874.0 | 785.3 | 730.1 | 685.0 | 650.1 | 642.8 |
| 30° | 4722.2 | 4554.9 | 3128.2 | 1601.2 | 1018.0 | 801.3 | 705.3 | 650.1 | 607.9 | 583.2 | 578.8 |
| 32.5° | 5190.5 | 4963.6 | 3170.4 | 1566.3 | 936.6 | 718.4 | 618.1 | 558.5 | 526.5 | 519.2 | 523.6 |
| 35° | 5632.6 | 5333.0 | 3166.0 | 1532.8 | 863.9 | 635.5 | 532.3 | 471.2 | 446.5 | 450.8 | 450.8 |
| 37.5° | 6141.6 | 5727.1 | 3135.5 | 1480.5 | 804.2 | 559.9 | 458.1 | 404.3 | 382.5 | 383.9 | 389.8 |
| 40° | 6733.5 | 6182.3 | 3116.6 | 1381.6 | 738.8 | 490.1 | 397.0 | 353.4 | 337.4 | 331.6 | 330.1 |
| 42.5° | 7364.7 | 6623.0 | 3119.5 | 1269.6 | 657.4 | 427.6 | 354.9 | 318.5 | 304.0 | 299.6 | 298.1 |
| 45° | 7998.7 | 7043.3 | 3123.9 | 1153.3 | 571.5 | 379.6 | 324.3 | 293.8 | 285.0 | 279.2 | 279.2 |
| 47.5° | 8595.0 | 7401.0 | 3042.4 | 1028.2 | 487.2 | 343.2 | 299.6 | 279.2 | 272.0 | 264.7 | 264.7 |
| 50° | 9150.6 | 7639.5 | 2846.1 | 882.8 | 420.3 | 314.1 | 280.7 | 266.1 | 258.9 | 251.6 | 251.6 |
| 52.5° | 9582.5 | 7677.3 | 2521.8 | 733.0 | 373.8 | 292.3 | 269.0 | 256.0 | 247.2 | 240.0 | 238.5 |
| 55° | 9774.5 | 7440.3 | 2060.8 | 593.4 | 337.4 | 273.4 | 257.4 | 244.3 | 234.1 | 226.9 | 225.4 |
| 57.5° | 9725.0 | 6941.4 | 1607.0 | 477.0 | 302.5 | 254.5 | 242.9 | 234.1 | 222.5 | 210.9 | 209.4 |
| 60° | 9482.1 | 6273.9 | 1211.4 | 397.0 | 270.5 | 234.1 | 226.9 | 219.6 | 203.6 | 186.2 | 183.2 |
| 62.5° | 9061.8 | 5434.8 | 863.9 | 328.7 | 235.6 | 210.9 | 208.0 | 202.1 | 178.9 | 146.9 | 144.0 |
| 65° | 8419.0 | 4415.3 | 581.7 | 273.4 | 202.1 | 184.7 | 186.2 | 176.0 | 145.4 | 109.1 | 106.2 |
| 67.5° | 7479.5 | 3228.6 | 372.3 | 224.0 | 168.7 | 154.2 | 155.6 | 149.8 | 123.6 | 93.1 | 88.7 |
| 70° | 6282.6 | 2137.8 | 242.9 | 170.2 | 135.3 | 119.3 | 128.0 | 129.4 | 104.7 | 75.6 | 72.7 |
| 72.5° | 4605.8 | 1262.3 | 170.2 | 126.5 | 98.9 | 82.9 | 104.7 | 107.6 | 84.4 | 56.7 | 53.8 |
| 75° | 2625.0 | 599.2 | 128.0 | 91.6 | 61.1 | 58.2 | 81.4 | 81.4 | 58.2 | 37.8 | 34.9 |
| 77.5° | 1102.4 | 250.1 | 90.2 | 59.6 | 34.9 | 33.4 | 55.3 | 50.9 | 29.1 | 17.5 | 17.5 |
| 80° | 318.5 | 112.0 | 48.0 | 29.1 | 14.5 | 13.1 | 21.8 | 16.0 | 7.3 | 2.9 | 2.9 |
| 82.5° | 125.1 | 49.4 | 18.9 | 11.6 | 5.8 | 5.8 | 2.9 | 0.0 | 0.0 | 0.0 | 0.0 |
| 85° | 74.2 | 20.4 | 8.7 | 4.4 | 1.5 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 87.5° | 18.9 | 4.4 | 2.9 | 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)