

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: P882766

Luminaire Tested: **NAV-SB2D-750-U-T2-HSS**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P882766
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-4)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB2D-750-U-T2-HSS
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(2) 70 CRI, 5000K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE II
OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16328 lumens
Efficiency: N/A
Efficacy: 110.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

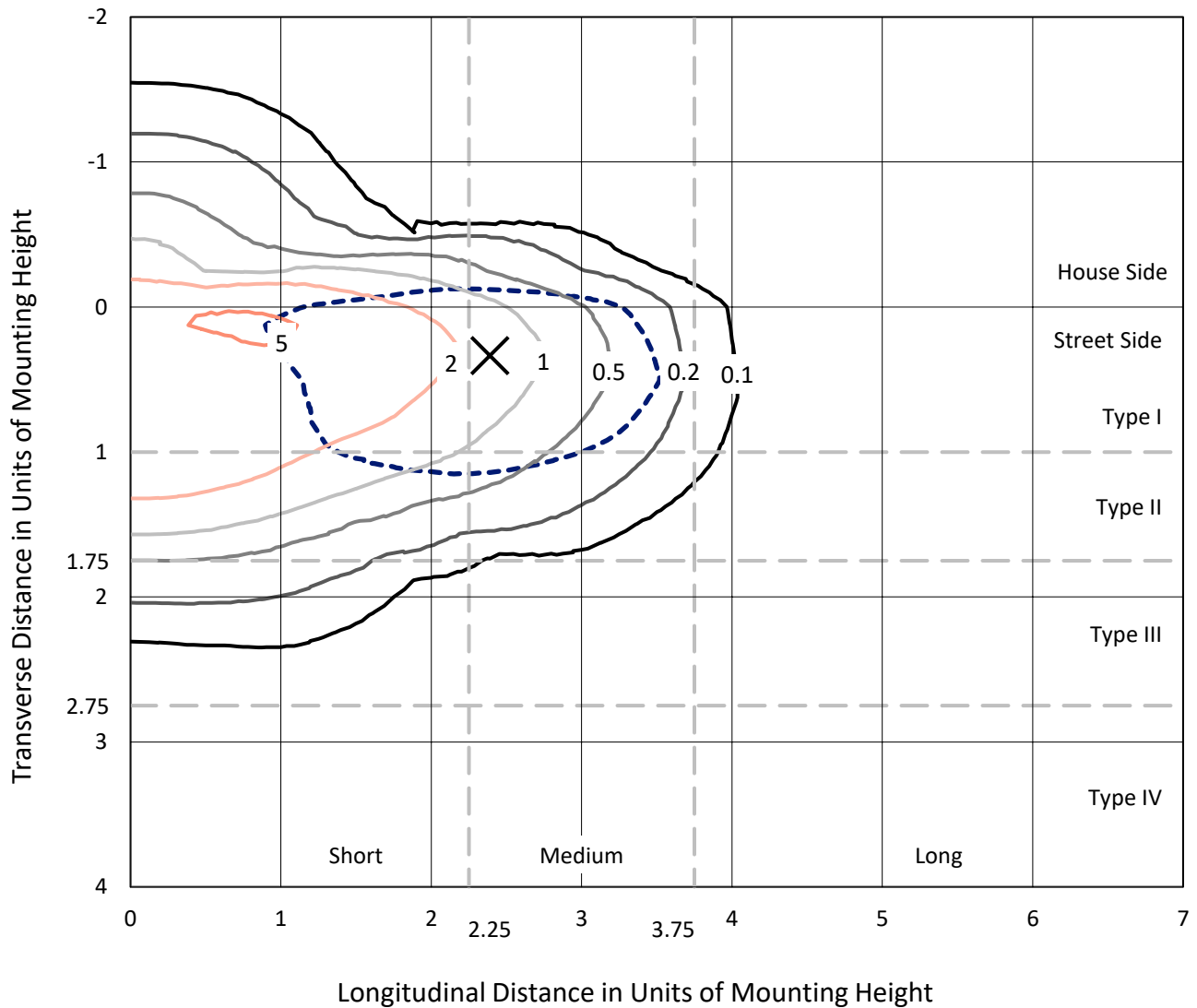
Input Watts (W): 147.6
Input Voltage (V): 120.0
Input Current (Ain): 1.234
Voltage Rise (V): NR
Power Factor: 0.999
Total Harmonic Distortion (THDi): 3.108
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

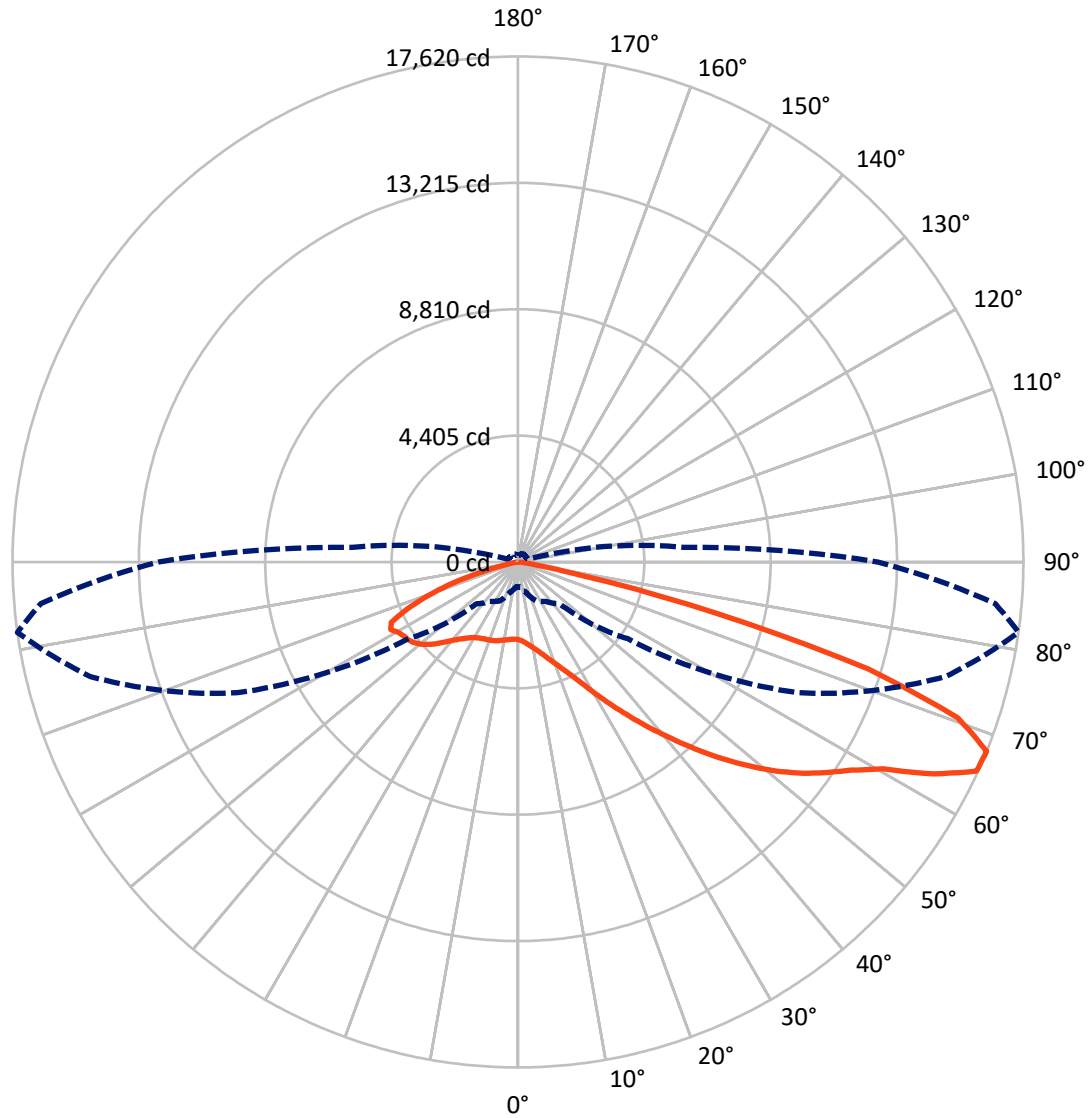
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.7 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 82-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 2957.7 | 0.0 | 2957.7 |
| | % Fixture | 18.1 | 0.0 | 18.1 |
| Street Side | Lumens | 13370.3 | 0.0 | 13370.3 |
| | % Fixture | 81.9 | 0.0 | 81.9 |
| Total | Lumens | 16328.0 | 0.0 | 16328.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 241.0 | 1.5 |
| 10°-20° | 626.2 | 3.8 |
| 20°-30° | 1003.1 | 6.1 |
| 30°-40° | 1773.7 | 10.9 |
| 40°-50° | 3107.7 | 19.0 |
| 50°-60° | 4144.8 | 25.4 |
| 60°-70° | 3858.6 | 23.6 |
| 70°-80° | 1480.9 | 9.1 |
| 80°-90° | 92.0 | 0.6 |
| 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° | 16328.0 | 100.0 |
| 0°-180° | 16328.0 | 100.0 |

Coefficient of Utilization



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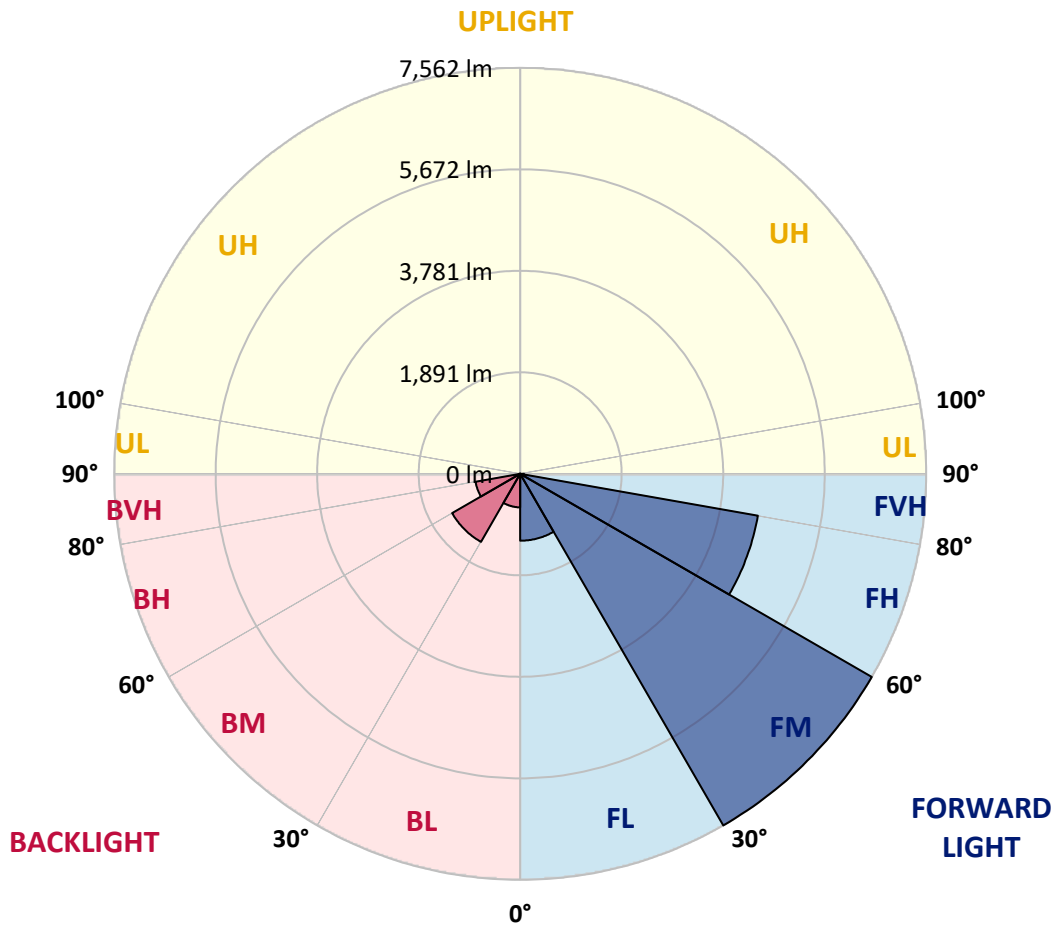
CATALOG NUMBER: NAV-SB2D-750-U-T2-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1245.6 | 7.6 | | | |
| FM (30°-60°) | 7562.5 | 46.3 | | | |
| FH (60°-80°) | 4495.3 | 27.5 | | | G2/5000 |
| FVH (80°-90°) | 66.9 | 0.4 | | | G1/100 |
| BL (0°-30°) | 624.7 | 3.8 | B2/1000 | | |
| BM (30°-60°) | 1463.7 | 9.0 | B2/2500 | | |
| BH (60°-80°) | 844.2 | 5.2 | B2/1000 | | G2/1000 |
| BVH (80°-90°) | 25.1 | 0.2 | | | 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 II Medium



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 82° | 85° |
|-------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|---------|
| 0° | 2705.0 | 2705.0 | 2705.0 | 2705.0 | 2705.0 | 2705.0 | 2705.0 | 2705.0 | 2705.0 | 2705.0 | 2705.0 |
| 2.5° | 2859.0 | 2875.5 | 2866.1 | 2861.3 | 2853.1 | 2841.4 | 2832.0 | 2802.6 | 2772.0 | 2752.0 | 2745.0 |
| 5° | 2916.6 | 2933.1 | 2931.9 | 2936.6 | 2942.5 | 2946.0 | 2943.6 | 2910.7 | 2867.2 | 2833.1 | 2813.1 |
| 7.5° | 2867.2 | 2886.0 | 2901.3 | 2924.8 | 2966.0 | 3009.5 | 3030.6 | 3023.6 | 2978.9 | 2931.9 | 2907.2 |
| 10° | 2727.3 | 2747.3 | 2783.8 | 2839.0 | 2926.0 | 3020.1 | 3098.8 | 3135.3 | 3107.0 | 3055.3 | 3021.2 |
| 12.5° | 2471.1 | 2491.0 | 2562.8 | 2682.7 | 2828.4 | 2991.8 | 3142.3 | 3239.9 | 3246.9 | 3195.2 | 3155.2 |
| 15° | 2183.0 | 2203.0 | 2279.4 | 2429.9 | 2652.1 | 2914.2 | 3165.8 | 3350.4 | 3412.7 | 3368.0 | 3319.8 |
| 17.5° | 2004.4 | 2022.0 | 2079.6 | 2200.7 | 2432.3 | 2759.1 | 3157.6 | 3467.9 | 3610.2 | 3574.9 | 3517.3 |
| 20° | 1950.3 | 1965.6 | 1992.6 | 2077.2 | 2270.0 | 2598.0 | 3103.5 | 3578.4 | 3823.0 | 3803.0 | 3738.3 |
| 22.5° | 2007.9 | 2022.0 | 2030.2 | 2067.8 | 2188.9 | 2492.2 | 3035.3 | 3691.3 | 4069.8 | 4072.2 | 3993.4 |
| 25° | 2140.7 | 2154.8 | 2145.4 | 2168.9 | 2221.8 | 2459.3 | 3009.5 | 3824.1 | 4380.2 | 4406.1 | 4316.7 |
| 27.5° | 2359.4 | 2360.6 | 2338.2 | 2337.0 | 2345.3 | 2508.7 | 3036.5 | 3966.4 | 4771.7 | 4819.9 | 4709.4 |
| 30° | 2797.9 | 2780.2 | 2694.4 | 2601.5 | 2559.2 | 2656.8 | 3111.7 | 4134.5 | 5233.7 | 5319.5 | 5180.8 |
| 32.5° | 3473.8 | 3448.0 | 3290.4 | 3068.2 | 2844.9 | 2895.4 | 3246.9 | 4326.1 | 5736.8 | 5892.0 | 5722.7 |
| 35° | 4207.4 | 4200.3 | 4035.7 | 3705.4 | 3315.1 | 3235.2 | 3466.8 | 4577.7 | 6285.8 | 6532.7 | 6331.6 |
| 37.5° | 4889.2 | 4885.7 | 4791.6 | 4402.5 | 3927.6 | 3708.9 | 3819.4 | 4906.8 | 6873.6 | 7231.0 | 6993.5 |
| 40° | 5512.3 | 5522.8 | 5428.8 | 5080.8 | 4602.4 | 4316.7 | 4299.1 | 5313.6 | 7527.2 | 7991.6 | 7709.4 |
| 42.5° | 6050.7 | 6062.4 | 5967.2 | 5709.8 | 5268.9 | 4989.1 | 4888.0 | 5812.0 | 8165.5 | 8808.6 | 8474.7 |
| 45° | 6416.3 | 6489.2 | 6475.1 | 6269.3 | 5953.1 | 5662.7 | 5595.7 | 6437.4 | 8893.2 | 9675.0 | 9283.5 |
| 47.5° | 6519.7 | 6586.7 | 6692.5 | 6720.8 | 6528.0 | 6242.3 | 6322.2 | 7191.0 | 9629.1 | 10542.6 | 10097.0 |
| 50° | 6264.6 | 6326.9 | 6546.8 | 6839.5 | 6973.5 | 6885.3 | 7028.8 | 7998.6 | 10382.7 | 11407.8 | 10895.2 |
| 52.5° | 5761.5 | 5825.0 | 6102.4 | 6565.6 | 7112.2 | 7389.7 | 7737.6 | 8794.5 | 11112.7 | 12227.2 | 11651.1 |
| 55° | 5033.8 | 5100.8 | 5457.0 | 5981.3 | 6847.7 | 7597.7 | 8328.9 | 9589.2 | 11781.6 | 12964.2 | 12333.0 |
| 57.5° | 4044.0 | 4093.4 | 4463.7 | 5197.2 | 6182.3 | 7390.8 | 8765.1 | 10456.7 | 12411.7 | 13688.4 | 13008.9 |
| 60° | 2635.6 | 2679.1 | 3109.4 | 3927.6 | 5079.7 | 6699.6 | 8852.1 | 11424.2 | 13248.7 | 14630.0 | 13920.0 |
| 62.5° | 1752.8 | 1782.2 | 2037.3 | 2638.0 | 3577.3 | 5372.4 | 8343.1 | 12196.6 | 14476.0 | 16268.8 | 15482.3 |
| 65° | 1202.6 | 1232.0 | 1487.1 | 1905.6 | 2311.2 | 3553.8 | 6879.5 | 12094.3 | 15588.1 | 17570.1 | 16640.3 |
| 67.5° | 858.2 | 882.9 | 1099.2 | 1494.2 | 1672.8 | 2064.3 | 4663.5 | 10787.1 | 15428.2 | 17619.5 | 16702.6 |
| 70° | 614.8 | 628.9 | 807.6 | 1163.8 | 1329.6 | 1240.2 | 2593.3 | 8250.2 | 13508.5 | 16270.0 | 15430.6 |
| 72.5° | 430.3 | 435.0 | 560.7 | 886.4 | 1070.9 | 905.2 | 1234.4 | 5500.5 | 10216.9 | 12770.3 | 11962.6 |
| 75° | 291.5 | 297.4 | 377.4 | 650.1 | 859.3 | 691.2 | 653.6 | 2949.5 | 5997.8 | 7068.7 | 6336.3 |
| 77.5° | 178.7 | 181.0 | 243.3 | 444.4 | 643.0 | 526.7 | 420.9 | 1249.6 | 2320.6 | 2278.3 | 1942.0 |
| 80° | 101.1 | 101.1 | 155.2 | 276.3 | 438.5 | 339.7 | 295.1 | 531.4 | 734.7 | 645.4 | 569.0 |
| 82.5° | 56.4 | 57.6 | 112.9 | 171.6 | 290.4 | 201.0 | 162.2 | 245.7 | 317.4 | 281.0 | 244.5 |
| 85° | 23.5 | 25.9 | 69.4 | 81.1 | 138.7 | 99.9 | 65.8 | 103.5 | 117.6 | 104.6 | 76.4 |
| 87.5° | 2.4 | 3.5 | 21.2 | 15.3 | 16.5 | 20.0 | 9.4 | 20.0 | 16.5 | 16.5 | 11.8 |
| 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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CATALOG NUMBER: NAV-SB2D-750-U-T2-HSS

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2705.0 | 2705.0 | 2705.0 | 2705.0 | 2705.0 | 2705.0 | 2705.0 | 2705.0 | 2705.0 | 2705.0 | 2705.0 |
| 2.5° | 2722.6 | 2705.0 | 2660.3 | 2608.6 | 2540.4 | 2507.5 | 2462.8 | 2432.3 | 2406.4 | 2408.8 | 2385.2 |
| 5° | 2775.5 | 2730.9 | 2630.9 | 2506.3 | 2351.1 | 2240.6 | 2123.1 | 2042.0 | 1976.1 | 1962.0 | 1930.3 |
| 7.5° | 2848.4 | 2777.9 | 2602.7 | 2378.2 | 2116.0 | 1917.4 | 1739.9 | 1625.8 | 1544.7 | 1518.8 | 1493.0 |
| 10° | 2942.5 | 2840.2 | 2566.3 | 2217.1 | 1839.8 | 1587.0 | 1396.6 | 1307.2 | 1252.0 | 1233.2 | 1219.1 |
| 12.5° | 3051.8 | 2911.9 | 2518.1 | 2020.8 | 1555.3 | 1311.9 | 1190.9 | 1146.2 | 1128.6 | 1122.7 | 1119.1 |
| 15° | 3189.3 | 3001.2 | 2445.2 | 1788.0 | 1314.3 | 1143.8 | 1092.1 | 1086.2 | 1088.6 | 1086.2 | 1085.1 |
| 17.5° | 3352.7 | 3098.8 | 2326.5 | 1548.2 | 1152.1 | 1058.0 | 1039.2 | 1043.9 | 1049.8 | 1048.6 | 1046.3 |
| 20° | 3531.4 | 3195.2 | 2174.8 | 1335.5 | 1041.6 | 996.9 | 986.3 | 991.0 | 995.7 | 993.4 | 992.2 |
| 22.5° | 3734.8 | 3298.7 | 2006.7 | 1169.7 | 967.5 | 940.5 | 928.7 | 929.9 | 929.9 | 925.2 | 922.8 |
| 25° | 3978.1 | 3412.7 | 1830.4 | 1052.1 | 911.1 | 889.9 | 875.8 | 871.1 | 864.0 | 849.9 | 847.6 |
| 27.5° | 4268.5 | 3533.8 | 1661.1 | 969.8 | 866.4 | 846.4 | 830.0 | 818.2 | 800.6 | 777.1 | 774.7 |
| 30° | 4595.3 | 3680.7 | 1517.7 | 918.1 | 831.1 | 811.1 | 792.3 | 774.7 | 748.8 | 719.5 | 717.1 |
| 32.5° | 4979.7 | 3838.3 | 1413.0 | 884.0 | 799.4 | 778.2 | 755.9 | 734.7 | 706.5 | 677.1 | 678.3 |
| 35° | 5438.2 | 4028.7 | 1351.9 | 860.5 | 774.7 | 746.5 | 721.8 | 698.3 | 677.1 | 651.3 | 648.9 |
| 37.5° | 5935.5 | 4230.9 | 1333.1 | 848.8 | 758.2 | 714.7 | 686.5 | 670.1 | 667.7 | 652.4 | 651.3 |
| 40° | 6479.8 | 4470.7 | 1347.2 | 841.7 | 740.6 | 684.2 | 653.6 | 650.1 | 656.0 | 628.9 | 630.1 |
| 42.5° | 7055.8 | 4755.2 | 1370.7 | 833.5 | 715.9 | 653.6 | 624.2 | 624.2 | 619.5 | 581.9 | 581.9 |
| 45° | 7678.9 | 5083.2 | 1394.2 | 813.5 | 686.5 | 623.1 | 600.7 | 592.5 | 572.5 | 536.1 | 534.9 |
| 47.5° | 8306.6 | 5417.0 | 1411.9 | 777.1 | 651.3 | 597.2 | 577.2 | 558.4 | 529.0 | 496.1 | 494.9 |
| 50° | 8902.6 | 5716.8 | 1393.1 | 723.0 | 611.3 | 572.5 | 551.3 | 525.5 | 493.7 | 471.4 | 467.9 |
| 52.5° | 9435.2 | 5976.6 | 1313.1 | 659.5 | 569.0 | 546.6 | 527.8 | 500.8 | 474.9 | 451.4 | 449.1 |
| 55° | 9898.3 | 6187.0 | 1172.0 | 599.5 | 531.4 | 524.3 | 505.5 | 471.4 | 436.1 | 416.2 | 413.8 |
| 57.5° | 10342.7 | 6346.9 | 995.7 | 550.2 | 497.3 | 499.6 | 471.4 | 440.8 | 407.9 | 386.8 | 384.4 |
| 60° | 10934.0 | 6560.9 | 817.0 | 504.3 | 460.8 | 467.9 | 437.3 | 415.0 | 373.8 | 346.8 | 343.3 |
| 62.5° | 11879.2 | 6893.6 | 648.9 | 447.9 | 418.5 | 420.9 | 407.9 | 380.9 | 331.5 | 299.8 | 297.4 |
| 65° | 12629.2 | 6771.3 | 511.4 | 386.8 | 370.3 | 373.8 | 373.8 | 344.4 | 291.5 | 255.1 | 251.6 |
| 67.5° | 12544.6 | 5797.9 | 407.9 | 326.8 | 324.5 | 326.8 | 335.0 | 310.4 | 258.6 | 229.2 | 224.5 |
| 70° | 11555.9 | 4611.8 | 326.8 | 271.6 | 282.1 | 276.3 | 299.8 | 283.3 | 232.8 | 203.4 | 199.8 |
| 72.5° | 9429.3 | 3322.2 | 249.2 | 224.5 | 216.3 | 225.7 | 270.4 | 255.1 | 194.0 | 161.1 | 157.5 |
| 75° | 5509.9 | 1772.8 | 185.7 | 177.5 | 156.4 | 188.1 | 239.8 | 217.5 | 148.1 | 118.7 | 115.2 |
| 77.5° | 1793.9 | 618.4 | 136.4 | 130.5 | 116.4 | 151.6 | 204.5 | 183.4 | 121.1 | 94.0 | 90.5 |
| 80° | 480.8 | 186.9 | 92.9 | 85.8 | 75.2 | 112.9 | 162.2 | 145.8 | 87.0 | 61.1 | 60.0 |
| 82.5° | 192.8 | 78.8 | 54.1 | 48.2 | 41.1 | 77.6 | 128.1 | 117.6 | 64.7 | 38.8 | 38.8 |
| 85° | 62.3 | 25.9 | 20.0 | 15.3 | 18.8 | 48.2 | 76.4 | 79.9 | 45.8 | 20.0 | 15.3 |
| 87.5° | 8.2 | 3.5 | 3.5 | 4.7 | 3.5 | 8.2 | 23.5 | 22.3 | 12.9 | 2.4 | 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)