

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: P883464

Luminaire Tested: **NAV-SB3D-827-U-SL4**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P883464
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-9)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB3D-827-U-SL4
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(3) 80 CRI, 2700K, 900mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 24583 lumens
Efficiency: N/A
Efficacy: 112.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type IV - Medium
BUG Rating: B3 - U0 - G4

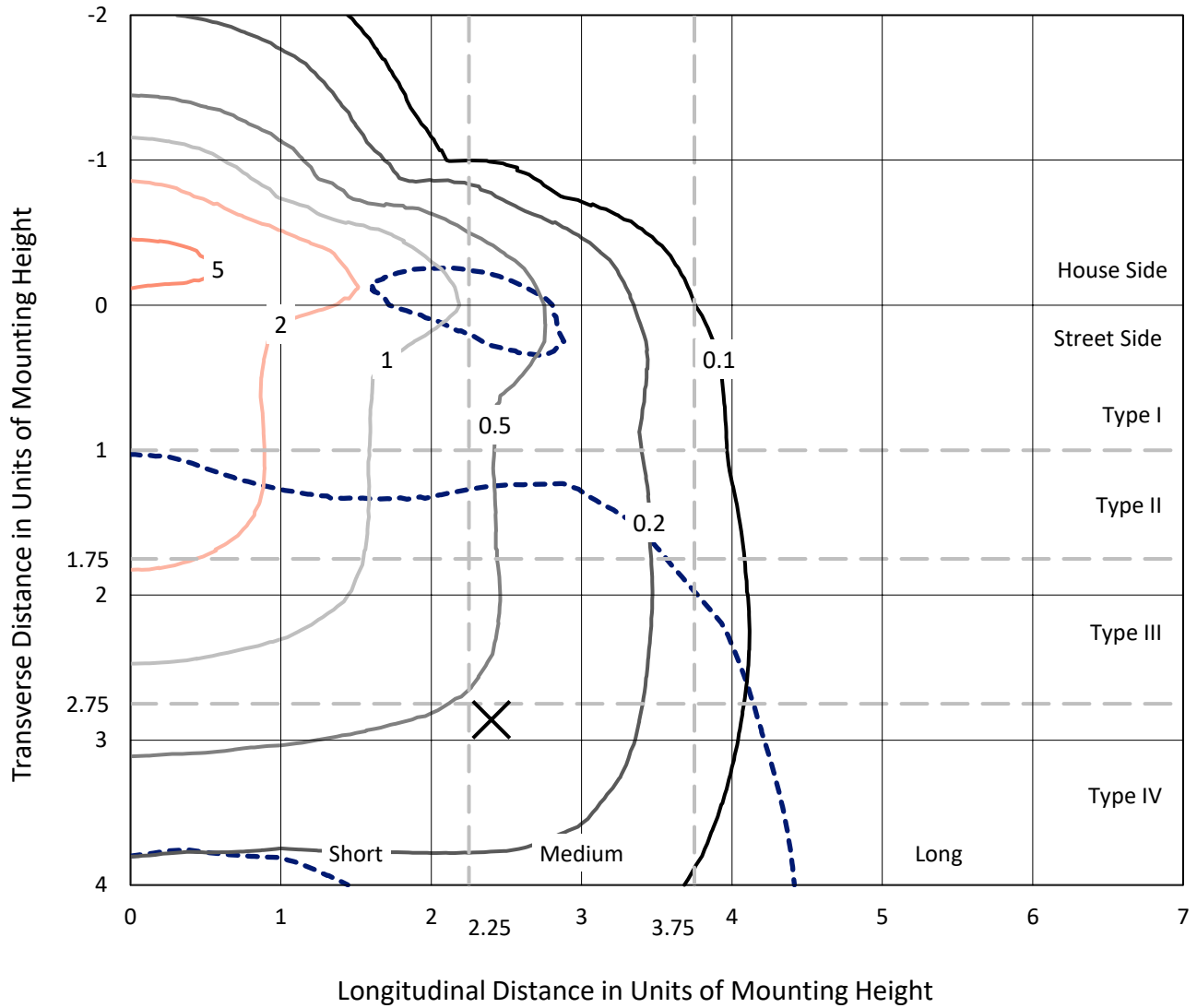
Input Watts (W): 218.1
Input Voltage (V): 120.0
Input Current (Ain): 1.84
Voltage Rise (V): NR
Power Factor: 0.998
Total Harmonic Distortion (THDi): 2.542
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P883464
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Iso-Footcandle Lines of Horizontal Illumination

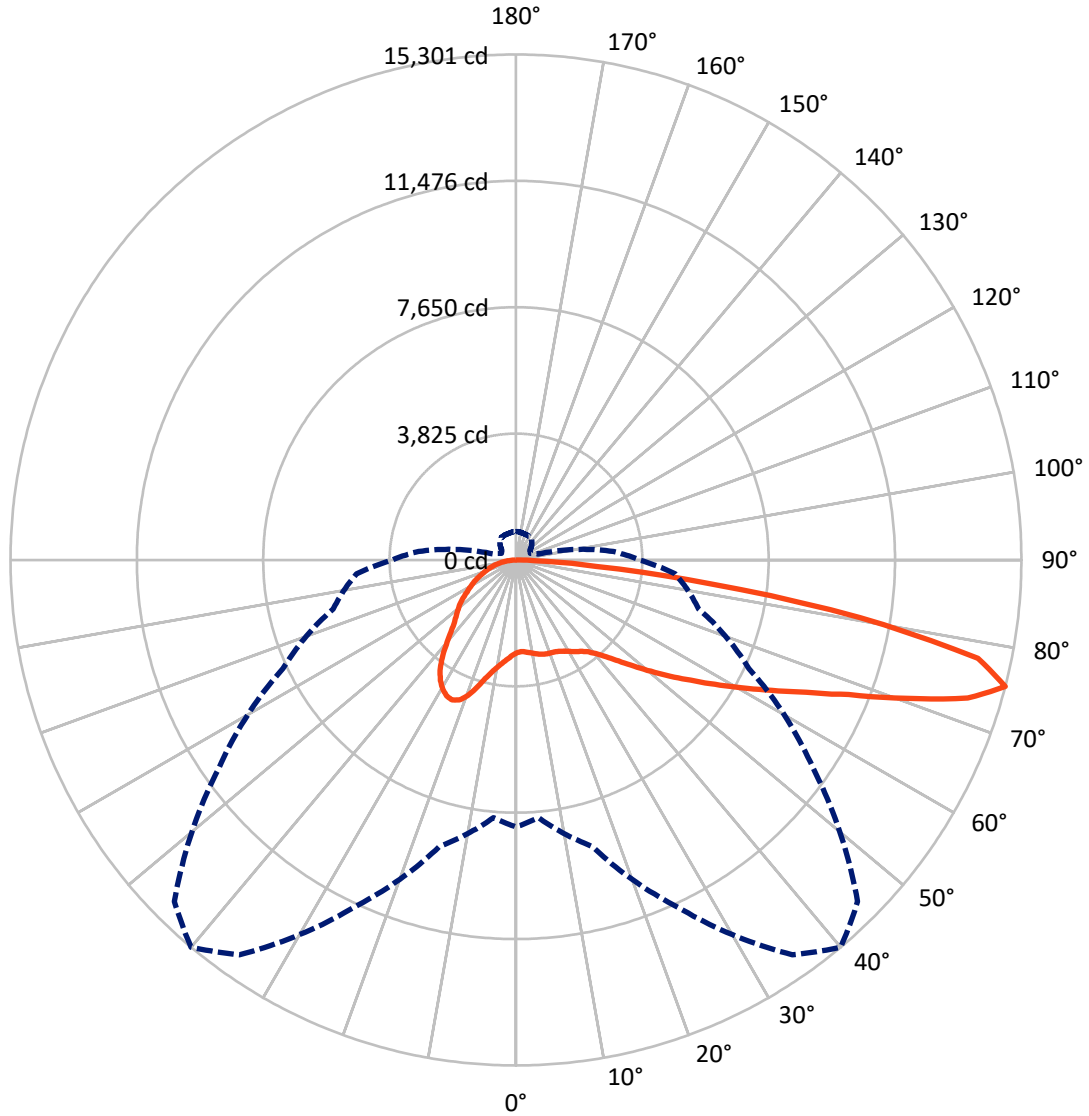
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.8 fc
 Type IV - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 7616.6 | 0.0 | 7616.6 |
| | % Fixture | 31.0 | 0.0 | 31.0 |
| Street Side | Lumens | 16966.4 | 0.0 | 16966.4 |
| | % Fixture | 69.0 | 0.0 | 69.0 |
| Total | Lumens | 24583.0 | 0.0 | 24583.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 280.6 | 1.1 |
| 10°-20° | 942.1 | 3.8 |
| 20°-30° | 1720.2 | 7.0 |
| 30°-40° | 2439.7 | 9.9 |
| 40°-50° | 3294.4 | 13.4 |
| 50°-60° | 4431.8 | 18.0 |
| 60°-70° | 5625.0 | 22.9 |
| 70°-80° | 5105.0 | 20.8 |
| 80°-90° | 744.2 | 3.0 |
| 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° | 24583.0 | 100.0 |
| 0°-180° | 24583.0 | 100.0 |

Coefficient of Utilization



REPORT NUMBER: P883464

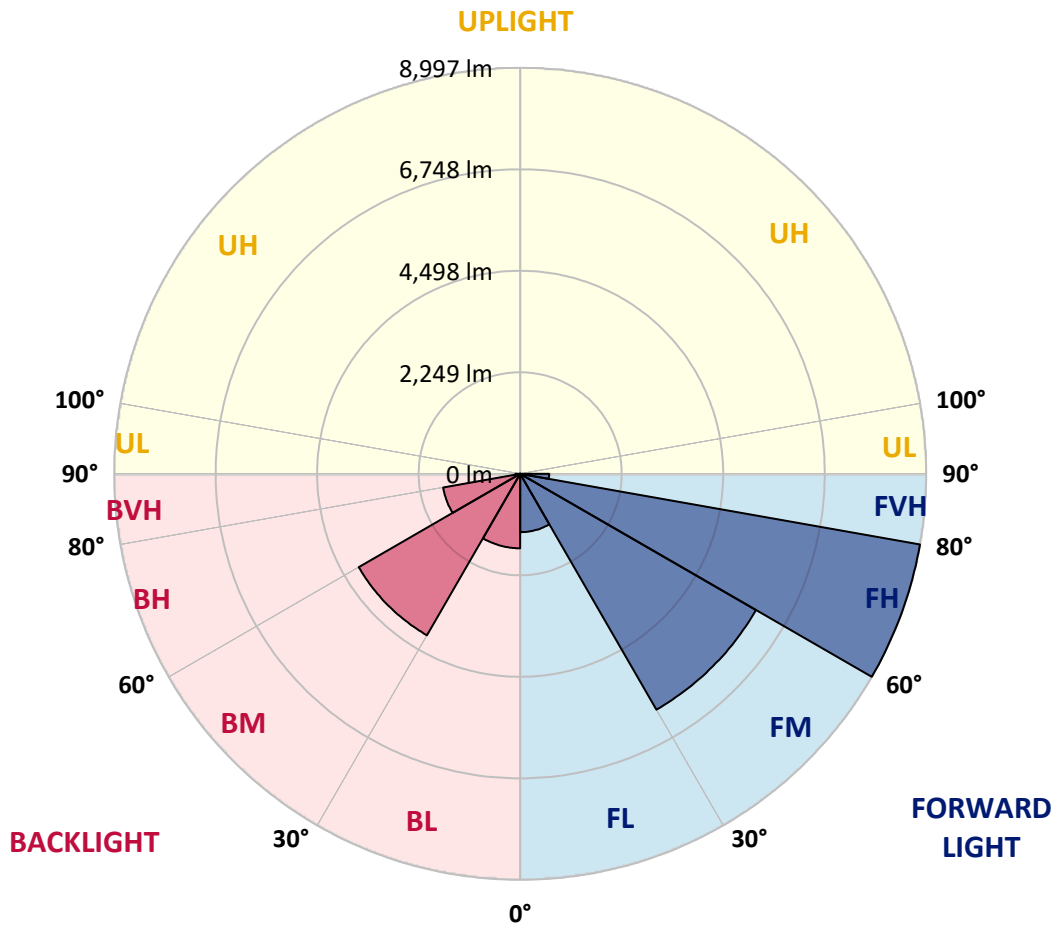
CATALOG NUMBER: NAV-SB3D-827-U-SL4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|----------|
| | | | B | U | G |
| FL (0°-30°) | 1293.1 | 5.3 | | | |
| FM (30°-60°) | 6034.6 | 24.5 | | | |
| FH (60°-80°) | 8997.0 | 36.6 | | | G4/12000 |
| FVH (80°-90°) | 641.7 | 2.6 | | | G4/750 |
| BL (0°-30°) | 1649.8 | 6.7 | B3/2500 | | |
| BM (30°-60°) | 4131.3 | 16.8 | B3/5000 | | |
| BH (60°-80°) | 1733.0 | 7.0 | B3/2500 | | G3/2500 |
| BVH (80°-90°) | 102.5 | 0.4 | | | 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 Medium



REPORT NUMBER: P883464

CATALOG NUMBER: NAV-SB3D-827-U-SL4

CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 40° | 45° | 55° | 65° | 75° | 85° |
|-------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|--------|
| 0° | 2811.1 | 2811.1 | 2811.1 | 2811.1 | 2811.1 | 2811.1 | 2811.1 | 2811.1 | 2811.1 | 2811.1 | 2811.1 |
| 2.5° | 2768.1 | 2783.7 | 2779.8 | 2774.6 | 2774.6 | 2775.9 | 2774.6 | 2783.7 | 2792.8 | 2802.0 | 2816.3 |
| 5° | 2796.8 | 2812.4 | 2804.6 | 2798.1 | 2792.8 | 2791.5 | 2787.6 | 2786.3 | 2791.5 | 2803.3 | 2822.8 |
| 7.5° | 2852.8 | 2868.5 | 2856.7 | 2845.0 | 2834.6 | 2829.4 | 2824.1 | 2816.3 | 2812.4 | 2818.9 | 2846.3 |
| 10° | 2915.4 | 2931.1 | 2916.7 | 2895.8 | 2878.9 | 2872.4 | 2867.2 | 2859.3 | 2854.1 | 2858.0 | 2888.0 |
| 12.5° | 2978.0 | 2993.6 | 2974.1 | 2945.4 | 2923.2 | 2919.3 | 2912.8 | 2910.2 | 2908.9 | 2907.6 | 2937.6 |
| 15° | 3036.7 | 3049.7 | 3024.9 | 2991.0 | 2967.6 | 2961.0 | 2954.5 | 2958.4 | 2965.0 | 2972.8 | 3006.7 |
| 17.5° | 3082.3 | 3095.3 | 3058.8 | 3014.5 | 2992.3 | 2989.7 | 2985.8 | 2998.9 | 3017.1 | 3036.7 | 3078.4 |
| 20° | 3124.0 | 3137.1 | 3090.1 | 3030.1 | 3004.1 | 3004.1 | 3005.4 | 3032.8 | 3058.8 | 3087.5 | 3144.9 |
| 22.5° | 3182.7 | 3193.1 | 3135.8 | 3053.6 | 3015.8 | 3018.4 | 3028.8 | 3056.2 | 3088.8 | 3127.9 | 3207.5 |
| 25° | 3270.1 | 3277.9 | 3207.5 | 3097.9 | 3054.9 | 3062.7 | 3071.9 | 3084.9 | 3116.2 | 3161.8 | 3268.7 |
| 27.5° | 3410.9 | 3417.4 | 3324.8 | 3176.2 | 3111.0 | 3124.0 | 3137.1 | 3127.9 | 3142.3 | 3181.4 | 3318.3 |
| 30° | 3609.1 | 3613.0 | 3495.6 | 3298.7 | 3206.2 | 3212.7 | 3215.3 | 3177.5 | 3150.1 | 3181.4 | 3353.5 |
| 32.5° | 3843.7 | 3842.4 | 3702.9 | 3447.4 | 3314.4 | 3307.9 | 3285.7 | 3211.4 | 3147.5 | 3174.9 | 3384.8 |
| 35° | 4207.5 | 4193.2 | 4013.2 | 3656.0 | 3436.9 | 3396.5 | 3344.4 | 3249.2 | 3160.5 | 3168.4 | 3412.2 |
| 37.5° | 4809.9 | 4765.6 | 4516.5 | 3997.6 | 3619.5 | 3516.5 | 3439.6 | 3310.5 | 3189.2 | 3165.7 | 3444.8 |
| 40° | 5489.2 | 5433.1 | 5159.3 | 4465.7 | 3893.3 | 3727.7 | 3603.8 | 3397.8 | 3236.2 | 3177.5 | 3493.0 |
| 42.5° | 6295.0 | 6215.4 | 5920.8 | 5017.2 | 4240.1 | 4000.2 | 3813.8 | 3508.7 | 3305.3 | 3215.3 | 3558.2 |
| 45° | 7284.6 | 7179.0 | 6761.8 | 5639.1 | 4676.9 | 4357.5 | 4108.4 | 3676.9 | 3410.9 | 3288.3 | 3656.0 |
| 47.5° | 8284.7 | 8310.7 | 7717.5 | 6351.0 | 5201.1 | 4798.2 | 4477.4 | 3929.8 | 3564.7 | 3405.7 | 3813.8 |
| 50° | 9347.3 | 9365.5 | 8668.0 | 7139.9 | 5795.6 | 5296.2 | 4892.0 | 4212.7 | 3778.6 | 3572.5 | 4049.8 |
| 52.5° | 10176.5 | 10179.2 | 9531.1 | 7965.2 | 6414.9 | 5843.9 | 5339.3 | 4536.1 | 4026.3 | 3794.2 | 4364.0 |
| 55° | 10695.5 | 10689.0 | 10136.1 | 8746.2 | 7126.8 | 6418.8 | 5834.7 | 4903.8 | 4328.8 | 4055.0 | 4759.0 |
| 57.5° | 11072.3 | 11052.7 | 10553.4 | 9417.7 | 7885.7 | 7098.2 | 6395.4 | 5321.0 | 4686.0 | 4365.3 | 5279.3 |
| 60° | 11215.7 | 11204.0 | 10836.3 | 9997.9 | 8683.6 | 7849.2 | 7042.1 | 5787.8 | 5091.5 | 4731.7 | 5948.2 |
| 62.5° | 11270.5 | 11292.6 | 11114.0 | 10559.9 | 9537.7 | 8681.0 | 7752.7 | 6345.8 | 5547.9 | 5146.3 | 6653.5 |
| 65° | 11463.4 | 11503.9 | 11467.4 | 11295.2 | 10502.5 | 9655.0 | 8695.4 | 7009.5 | 6045.9 | 5590.9 | 7390.2 |
| 67.5° | 11845.5 | 11885.9 | 11901.5 | 12175.3 | 11681.2 | 10868.9 | 9871.4 | 7836.1 | 6628.8 | 6052.5 | 7944.4 |
| 70° | 11836.3 | 11824.6 | 12101.0 | 12875.5 | 13157.1 | 12549.5 | 11456.9 | 8853.1 | 7323.7 | 6435.8 | 8014.8 |
| 72.5° | 10773.7 | 10679.8 | 11333.1 | 12867.7 | 14385.4 | 14304.5 | 13393.1 | 10164.8 | 7923.5 | 6482.7 | 6954.7 |
| 75° | 8082.6 | 7832.2 | 8986.1 | 11596.4 | 14590.1 | 15300.7 | 14624.0 | 10978.4 | 7781.4 | 5727.8 | 4839.9 |
| 77.5° | 3456.5 | 3204.9 | 4564.8 | 8584.5 | 13058.0 | 14303.2 | 13494.8 | 9578.1 | 6211.5 | 3787.7 | 2376.9 |
| 80° | 904.9 | 903.6 | 1379.5 | 3892.0 | 8880.5 | 10562.5 | 9266.5 | 6185.5 | 3549.1 | 1353.4 | 655.8 |
| 82.5° | 374.2 | 365.1 | 507.2 | 1513.8 | 4339.2 | 5927.3 | 4837.3 | 2758.9 | 1281.7 | 366.4 | 217.7 |
| 85° | 139.5 | 138.2 | 246.4 | 522.8 | 1530.7 | 2444.7 | 1769.3 | 705.4 | 319.4 | 178.6 | 97.8 |
| 87.5° | 39.1 | 37.8 | 53.5 | 181.2 | 372.9 | 565.9 | 302.5 | 116.0 | 90.0 | 70.4 | 28.7 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

REPORT NUMBER: P883464

CATALOG NUMBER: NAV-SB3D-827-U-SL4

CANDELA DISTRIBUTION (continued):

| | 90° | 95° | 105° | 115° | 125° | 135° | 145° | 155° | 165° | 175° | 180° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 2811.1 | 2811.1 | 2811.1 | 2811.1 | 2811.1 | 2811.1 | 2811.1 | 2811.1 | 2811.1 | 2811.1 | 2811.1 |
| 2.5° | 2820.2 | 2826.7 | 2838.5 | 2847.6 | 2859.3 | 2872.4 | 2890.6 | 2902.4 | 2914.1 | 2921.9 | 2916.7 |
| 5° | 2832.0 | 2846.3 | 2876.3 | 2906.3 | 2941.5 | 2974.1 | 3011.9 | 3039.3 | 3061.4 | 3068.0 | 3070.6 |
| 7.5° | 2858.0 | 2881.5 | 2932.4 | 2983.2 | 3039.3 | 3092.7 | 3147.5 | 3194.4 | 3232.2 | 3246.6 | 3247.9 |
| 10° | 2903.7 | 2935.0 | 3006.7 | 3078.4 | 3152.7 | 3234.8 | 3305.3 | 3373.1 | 3426.5 | 3448.7 | 3450.0 |
| 12.5° | 2961.0 | 3000.2 | 3094.0 | 3193.1 | 3296.1 | 3409.6 | 3500.8 | 3584.3 | 3650.8 | 3680.8 | 3680.8 |
| 15° | 3035.4 | 3086.2 | 3206.2 | 3339.2 | 3490.4 | 3648.2 | 3764.2 | 3856.8 | 3931.1 | 3967.6 | 3965.0 |
| 17.5° | 3116.2 | 3184.0 | 3335.2 | 3536.0 | 3752.5 | 3959.8 | 4095.4 | 4163.2 | 4240.1 | 4275.3 | 4274.0 |
| 20° | 3194.4 | 3277.9 | 3494.3 | 3786.4 | 4074.5 | 4294.9 | 4404.4 | 4422.7 | 4427.9 | 4431.8 | 4442.2 |
| 22.5° | 3275.3 | 3387.4 | 3693.8 | 4101.9 | 4410.9 | 4563.5 | 4579.1 | 4500.9 | 4391.4 | 4340.5 | 4354.9 |
| 25° | 3363.9 | 3512.6 | 3954.6 | 4450.0 | 4700.4 | 4718.6 | 4598.7 | 4408.3 | 4201.0 | 4105.8 | 4120.2 |
| 27.5° | 3450.0 | 3657.3 | 4267.5 | 4782.5 | 4909.0 | 4748.6 | 4490.5 | 4220.6 | 3970.2 | 3869.8 | 3881.6 |
| 30° | 3536.0 | 3822.9 | 4613.0 | 5073.3 | 5004.2 | 4674.3 | 4319.7 | 4018.5 | 3766.8 | 3661.2 | 3672.9 |
| 32.5° | 3623.4 | 4015.9 | 5010.7 | 5283.2 | 4987.2 | 4516.5 | 4107.1 | 3791.6 | 3569.9 | 3459.1 | 3473.5 |
| 35° | 3722.5 | 4253.2 | 5387.5 | 5397.9 | 4873.8 | 4284.4 | 3826.8 | 3520.4 | 3327.4 | 3238.8 | 3258.3 |
| 37.5° | 3851.6 | 4554.3 | 5720.0 | 5426.6 | 4675.6 | 3944.1 | 3478.7 | 3199.6 | 3040.6 | 3000.2 | 3028.8 |
| 40° | 4011.9 | 4916.8 | 5974.2 | 5381.0 | 4382.2 | 3530.8 | 3097.9 | 2875.0 | 2785.0 | 2794.1 | 2825.4 |
| 42.5° | 4220.6 | 5322.3 | 6152.9 | 5263.6 | 3974.1 | 3104.5 | 2764.2 | 2665.1 | 2708.1 | 2744.6 | 2778.5 |
| 45° | 4491.8 | 5743.5 | 6263.7 | 5064.2 | 3512.6 | 2743.3 | 2567.3 | 2590.7 | 2623.3 | 2627.3 | 2653.3 |
| 47.5° | 4838.6 | 6169.8 | 6336.7 | 4763.0 | 3041.9 | 2489.0 | 2442.1 | 2447.3 | 2440.8 | 2413.4 | 2434.3 |
| 50° | 5271.5 | 6584.4 | 6401.9 | 4364.0 | 2641.6 | 2330.0 | 2267.4 | 2249.1 | 2159.2 | 2070.5 | 2082.2 |
| 52.5° | 5764.3 | 6965.2 | 6429.3 | 3868.5 | 2330.0 | 2197.0 | 2095.3 | 1980.5 | 1812.4 | 1785.0 | 1794.1 |
| 55° | 6311.9 | 7317.2 | 6358.9 | 3259.6 | 2067.9 | 2026.2 | 1872.3 | 1734.1 | 1715.9 | 1692.4 | 1696.3 |
| 57.5° | 6966.5 | 7696.6 | 6215.4 | 2580.3 | 1799.3 | 1826.7 | 1676.8 | 1692.4 | 1659.8 | 1623.3 | 1616.8 |
| 60° | 7682.3 | 8089.1 | 5963.8 | 1961.0 | 1521.6 | 1577.7 | 1625.9 | 1624.6 | 1615.5 | 1585.5 | 1575.0 |
| 62.5° | 8326.4 | 8347.2 | 5468.3 | 1502.0 | 1277.8 | 1384.7 | 1516.4 | 1515.1 | 1507.2 | 1490.3 | 1483.8 |
| 65° | 8709.7 | 8308.1 | 4641.7 | 1182.6 | 1077.0 | 1225.6 | 1367.7 | 1378.2 | 1379.5 | 1378.2 | 1378.2 |
| 67.5° | 8641.9 | 7850.5 | 3507.4 | 941.4 | 911.4 | 1063.9 | 1220.4 | 1234.7 | 1245.2 | 1247.8 | 1250.4 |
| 70° | 7875.2 | 6845.2 | 2287.0 | 751.0 | 764.1 | 921.8 | 1080.9 | 1095.2 | 1104.4 | 1114.8 | 1120.0 |
| 72.5° | 6138.5 | 5032.9 | 1309.1 | 607.6 | 635.0 | 799.3 | 942.7 | 959.6 | 964.8 | 984.4 | 992.2 |
| 75° | 3740.7 | 2959.7 | 706.7 | 478.5 | 521.5 | 683.2 | 805.8 | 825.3 | 834.5 | 857.9 | 860.5 |
| 77.5° | 1778.5 | 1281.7 | 402.9 | 372.9 | 419.8 | 558.0 | 680.6 | 702.8 | 678.0 | 691.0 | 680.6 |
| 80° | 601.1 | 475.9 | 254.3 | 284.2 | 320.7 | 435.5 | 545.0 | 567.2 | 515.0 | 512.4 | 507.2 |
| 82.5° | 209.9 | 193.0 | 161.7 | 189.1 | 207.3 | 311.6 | 412.0 | 440.7 | 383.3 | 382.0 | 363.8 |
| 85° | 82.1 | 78.2 | 90.0 | 103.0 | 123.9 | 191.7 | 271.2 | 285.5 | 236.0 | 190.4 | 187.8 |
| 87.5° | 17.0 | 18.3 | 22.2 | 23.5 | 37.8 | 66.5 | 97.8 | 120.0 | 95.2 | 80.8 | 74.3 |
| 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)