

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: P884315

Luminaire Tested: **NAV-SB5A-827-U-T1**

Issue Date: 10/7/2024

Test Information

Test Method: LM-79-08
Report Number: P884315
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2405-108-2)
Test Lab: INNOVATION CENTER
Issue Date: 10/7/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-SB5A-827-U-T1
Description: NAVION ROADWAY AND AREA HIGH DENSITY LED LUMINAIRE
(5) 80 CRI, 2700K, 350mA LIGHTSQUARES WITH 26 LEDS EACH AND TYPE I OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18296 lumens
Efficiency: N/A
Efficacy: 129.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type I - Short
BUG Rating: B4 - U0 - G4

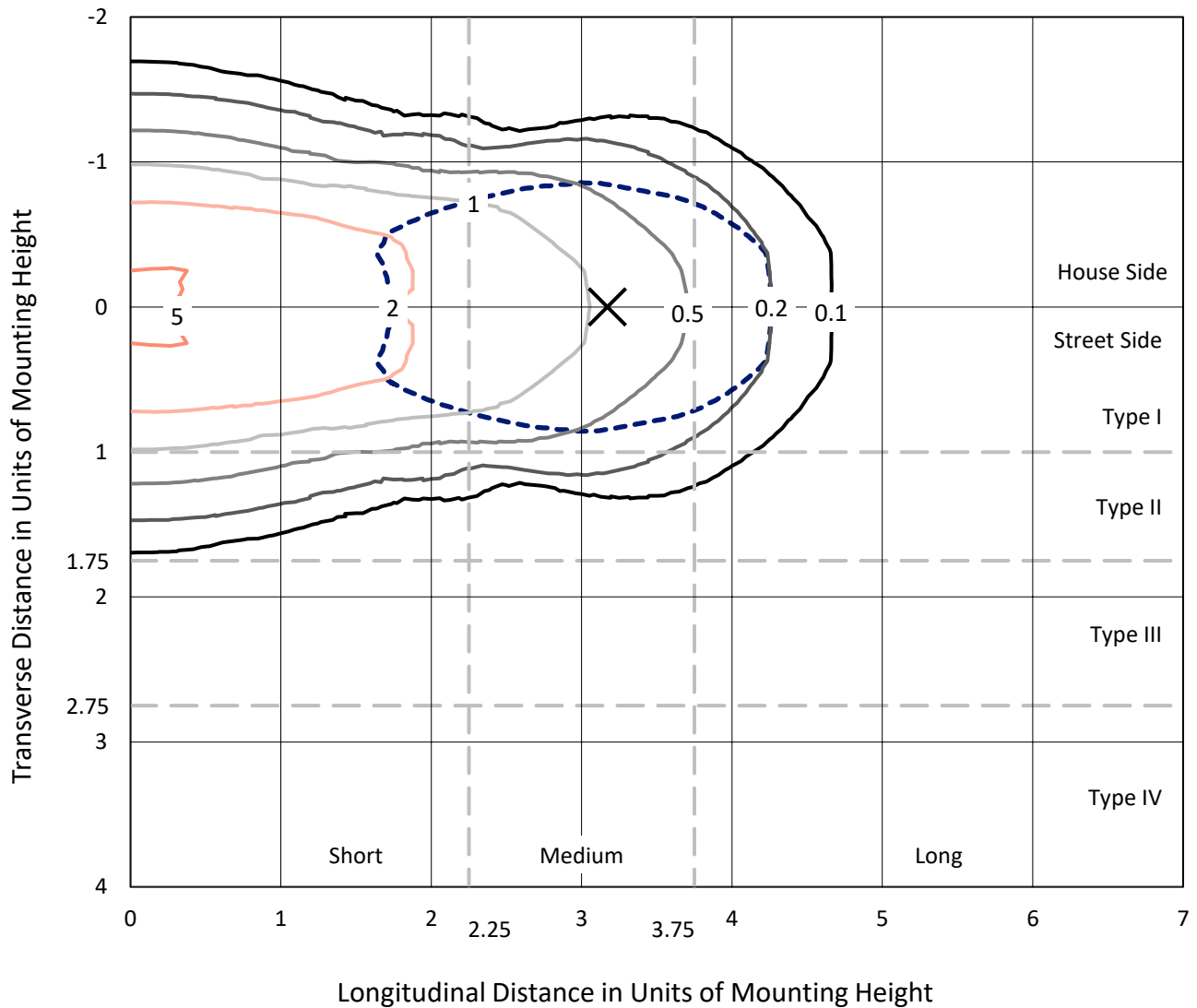
Input Watts (W): 141.7
Input Voltage (V): 120.0
Input Current (Ain): 1.201
Voltage Rise (V): NR
Power Factor: 0.992
Total Harmonic Distortion (THDi): 10.503
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

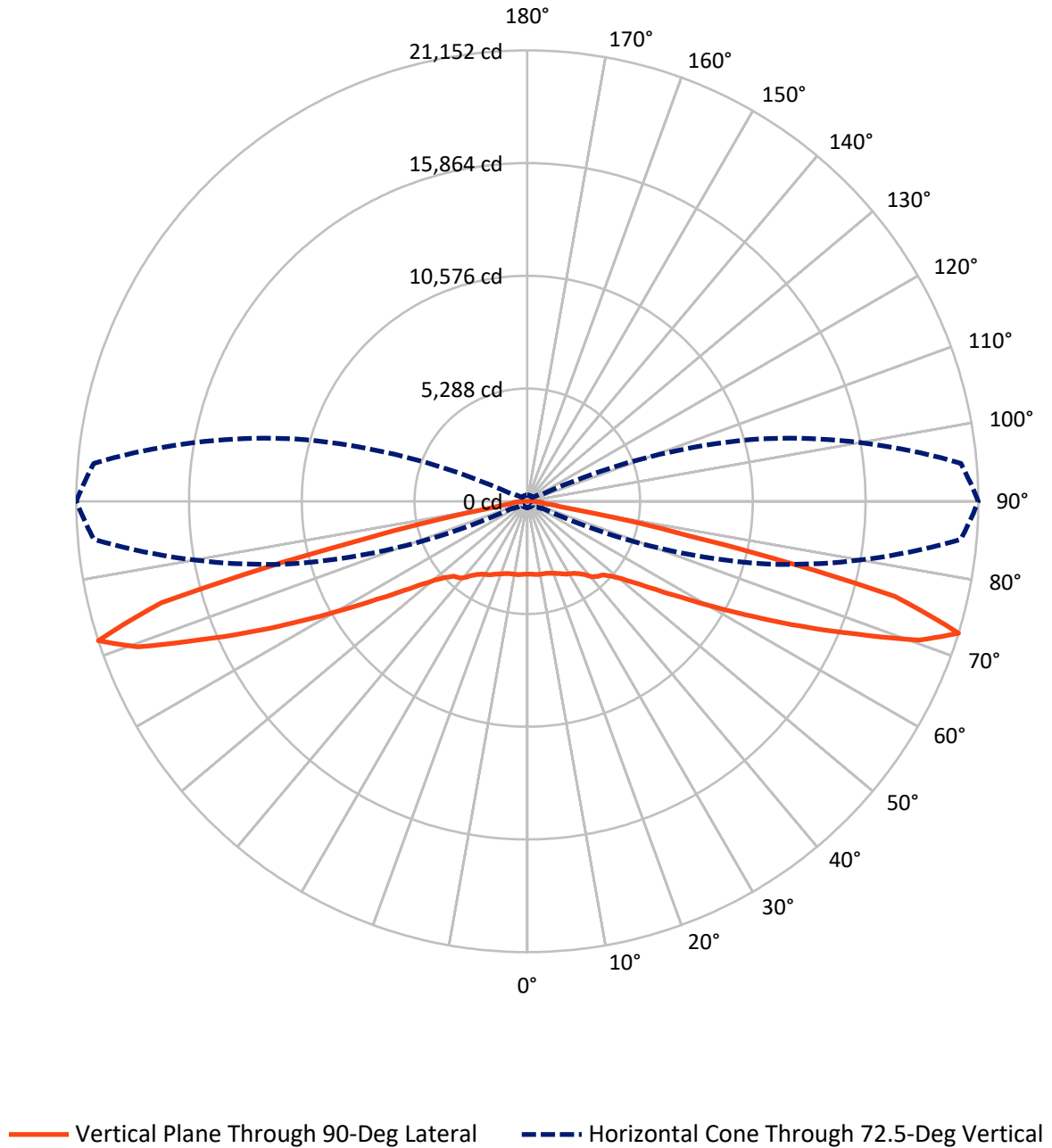
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.5 fc
 Type I - Short - N/A

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Luminous Intensity Polar Plot



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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 9148.0 | 0.0 | 9148.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 9148.0 | 0.0 | 9148.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 18296.0 | 0.0 | 18296.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 331.5 | 1.8 |
| 10°-20° | 1013.6 | 5.5 |
| 20°-30° | 1690.0 | 9.2 |
| 30°-40° | 2324.3 | 12.7 |
| 40°-50° | 2838.7 | 15.5 |
| 50°-60° | 3283.2 | 17.9 |
| 60°-70° | 3914.7 | 21.4 |
| 70°-80° | 2732.2 | 14.9 |
| 80°-90° | 167.8 | 0.9 |
| 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° | 18296.0 | 100.0 |
| 0°-180° | 18296.0 | 100.0 |

Coefficient of Utilization



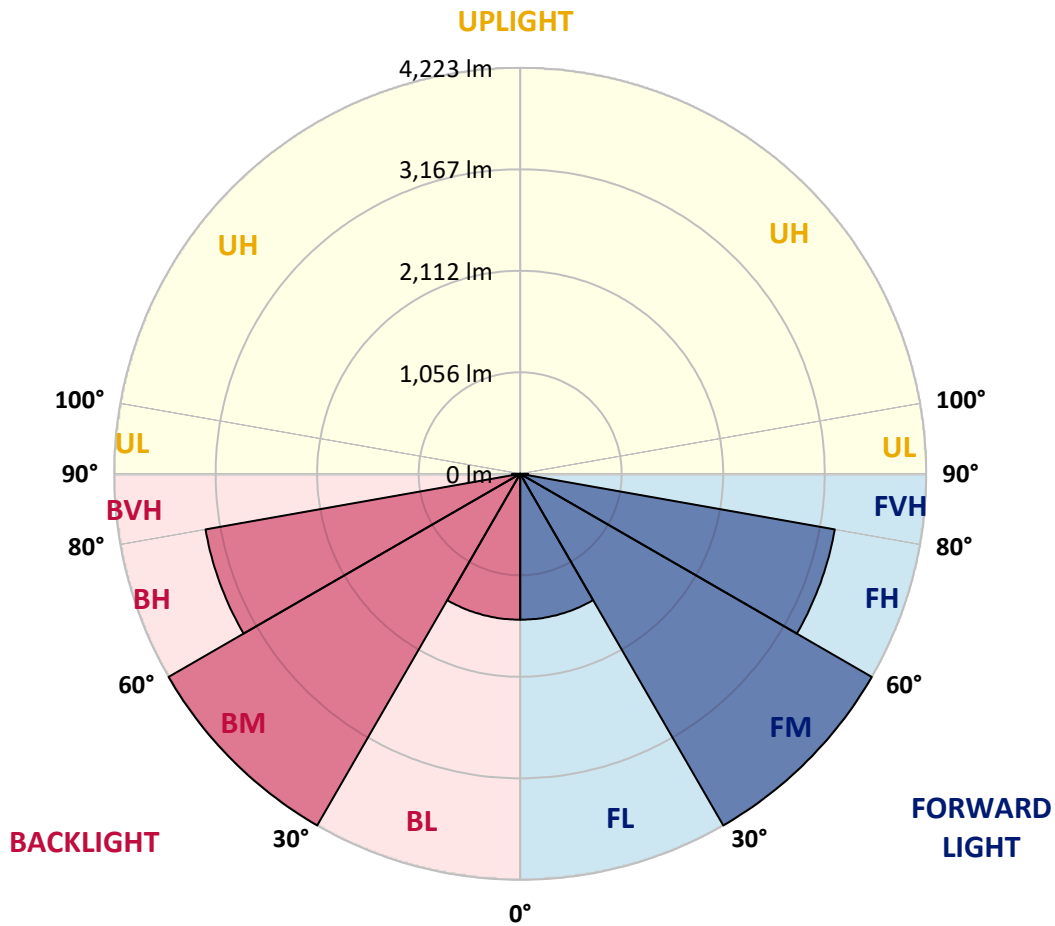
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 1517.6 | 8.3 | | | |
| FM (30°-60°) | 4223.1 | 23.1 | | | |
| FH (60°-80°) | 3323.4 | 18.2 | | | G2/5000 |
| FVH (80°-90°) | 83.9 | 0.5 | | | G1/100 |
| BL (0°-30°) | 1517.6 | 8.3 | B3/2500 | | |
| BM (30°-60°) | 4223.1 | 23.1 | B3/5000 | | |
| BH (60°-80°) | 3323.4 | 18.2 | B4/5000 | | G4/5000 |
| BVH (80°-90°) | 83.9 | 0.5 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G4

Type I Short



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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|---------|---------|---------|
| 0° | 3418.8 | 3418.8 | 3418.8 | 3418.8 | 3418.8 | 3418.8 | 3418.8 | 3418.8 | 3418.8 | 3418.8 | 3418.8 |
| 2.5° | 3421.7 | 3425.6 | 3425.6 | 3422.7 | 3429.5 | 3423.7 | 3423.7 | 3420.7 | 3423.7 | 3420.7 | 3420.7 |
| 5° | 3439.2 | 3444.1 | 3446.0 | 3445.1 | 3453.8 | 3448.9 | 3448.9 | 3445.1 | 3446.0 | 3443.1 | 3443.1 |
| 7.5° | 3472.3 | 3479.1 | 3483.0 | 3487.8 | 3500.5 | 3494.6 | 3490.8 | 3479.1 | 3474.2 | 3466.4 | 3466.4 |
| 10° | 3483.0 | 3490.8 | 3503.4 | 3528.7 | 3557.8 | 3558.8 | 3547.2 | 3518.0 | 3495.6 | 3478.1 | 3475.2 |
| 12.5° | 3449.9 | 3460.6 | 3486.9 | 3538.4 | 3603.5 | 3629.8 | 3611.3 | 3562.7 | 3519.0 | 3487.8 | 3483.0 |
| 15° | 3408.1 | 3419.8 | 3459.6 | 3537.4 | 3633.7 | 3694.9 | 3693.0 | 3628.8 | 3558.8 | 3510.2 | 3502.4 |
| 17.5° | 3343.0 | 3354.6 | 3412.0 | 3520.9 | 3657.0 | 3758.2 | 3785.4 | 3719.3 | 3621.1 | 3555.9 | 3545.2 |
| 20° | 3225.3 | 3236.0 | 3315.7 | 3468.4 | 3664.8 | 3825.2 | 3896.2 | 3837.9 | 3715.4 | 3626.9 | 3610.4 |
| 22.5° | 3072.6 | 3089.2 | 3182.5 | 3378.0 | 3646.3 | 3895.3 | 4022.6 | 3982.8 | 3825.2 | 3702.7 | 3680.4 |
| 25° | 2909.3 | 2926.8 | 3035.7 | 3267.1 | 3598.7 | 3945.8 | 4172.4 | 4147.1 | 3949.7 | 3797.0 | 3765.9 |
| 27.5° | 2768.3 | 2786.8 | 2905.4 | 3157.2 | 3524.8 | 3965.3 | 4320.2 | 4332.8 | 4100.4 | 3901.1 | 3868.0 |
| 30° | 2657.4 | 2674.9 | 2801.4 | 3068.8 | 3429.5 | 3945.8 | 4449.5 | 4537.0 | 4254.1 | 3991.5 | 3943.9 |
| 32.5° | 2535.9 | 2558.3 | 2691.5 | 2960.8 | 3316.7 | 3899.1 | 4562.3 | 4757.7 | 4432.0 | 4088.8 | 4028.5 |
| 35° | 2382.3 | 2402.7 | 2542.7 | 2813.0 | 3168.9 | 3824.3 | 4656.6 | 5002.8 | 4686.8 | 4236.6 | 4169.5 |
| 37.5° | 2195.6 | 2215.0 | 2354.1 | 2628.3 | 3022.1 | 3719.3 | 4728.6 | 5278.9 | 4990.1 | 4449.5 | 4360.0 |
| 40° | 2007.9 | 2026.4 | 2156.7 | 2422.1 | 2846.1 | 3585.1 | 4753.8 | 5549.2 | 5338.2 | 4742.2 | 4646.9 |
| 42.5° | 1835.8 | 1852.3 | 1971.9 | 2218.9 | 2648.7 | 3413.9 | 4720.8 | 5784.5 | 5650.4 | 4946.4 | 4823.9 |
| 45° | 1677.3 | 1691.9 | 1797.9 | 2028.3 | 2443.5 | 3205.9 | 4621.6 | 6037.4 | 6021.8 | 5092.2 | 4926.9 |
| 47.5° | 1496.5 | 1511.0 | 1620.9 | 1843.6 | 2238.4 | 2961.8 | 4453.4 | 6286.3 | 6538.1 | 5422.8 | 5232.2 |
| 50° | 1275.7 | 1288.4 | 1401.2 | 1630.6 | 2025.4 | 2702.2 | 4220.0 | 6481.7 | 7189.6 | 5923.6 | 5684.4 |
| 52.5° | 1014.2 | 1027.8 | 1137.7 | 1367.1 | 1772.6 | 2423.1 | 3912.8 | 6609.1 | 7942.2 | 6654.8 | 6360.2 |
| 55° | 754.5 | 764.3 | 859.6 | 1065.7 | 1459.5 | 2105.1 | 3527.7 | 6645.1 | 8795.9 | 7654.4 | 7285.9 |
| 57.5° | 547.4 | 553.3 | 614.5 | 768.2 | 1106.5 | 1707.5 | 3060.0 | 6551.7 | 9812.0 | 8935.9 | 8472.1 |
| 60° | 443.4 | 445.3 | 463.8 | 531.9 | 769.1 | 1258.2 | 2495.1 | 6230.9 | 10914.7 | 10588.0 | 10003.6 |
| 62.5° | 402.6 | 402.6 | 407.4 | 425.9 | 520.2 | 830.4 | 1811.5 | 5565.8 | 12097.1 | 12675.6 | 11892.9 |
| 65° | 374.4 | 374.4 | 376.3 | 385.1 | 410.3 | 529.0 | 1143.5 | 4482.6 | 13093.7 | 15121.1 | 14131.2 |
| 67.5° | 349.1 | 350.0 | 349.1 | 352.0 | 366.6 | 390.9 | 663.1 | 3096.0 | 13630.5 | 17655.1 | 16586.4 |
| 70° | 322.8 | 324.8 | 319.9 | 319.9 | 331.6 | 332.5 | 415.2 | 1697.7 | 13185.1 | 19778.7 | 19497.7 |
| 72.5° | 291.7 | 294.6 | 286.8 | 284.9 | 293.7 | 289.8 | 312.1 | 814.8 | 11320.2 | 20412.7 | 21151.6 |
| 75° | 264.5 | 268.4 | 250.9 | 246.0 | 246.0 | 243.1 | 253.8 | 418.1 | 7347.1 | 16651.6 | 17810.6 |
| 77.5° | 240.2 | 248.0 | 219.8 | 204.2 | 200.3 | 191.6 | 207.1 | 255.7 | 3213.6 | 7817.7 | 7655.4 |
| 80° | 198.4 | 209.1 | 180.9 | 162.4 | 155.6 | 145.9 | 163.4 | 178.9 | 955.8 | 1815.4 | 1738.6 |
| 82.5° | 147.8 | 152.7 | 128.4 | 115.7 | 109.9 | 103.1 | 122.5 | 124.5 | 311.2 | 642.7 | 726.3 |
| 85° | 94.3 | 96.3 | 78.8 | 68.1 | 65.1 | 62.2 | 77.8 | 68.1 | 118.6 | 472.6 | 686.5 |
| 87.5° | 33.1 | 37.9 | 30.1 | 27.2 | 29.2 | 24.3 | 36.0 | 20.4 | 33.1 | 333.5 | 413.3 |
| 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)