

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: INVUE

Report Number: P596432

Luminaire Tested: **MSA-SA4C-722-U-5NQ**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596432
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-5)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-722-U-5NQ
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V NARROW OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18100 lumens
Efficiency: N/A
Efficacy: 80.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type V - Short
BUG Rating: B4 - U0 - G2

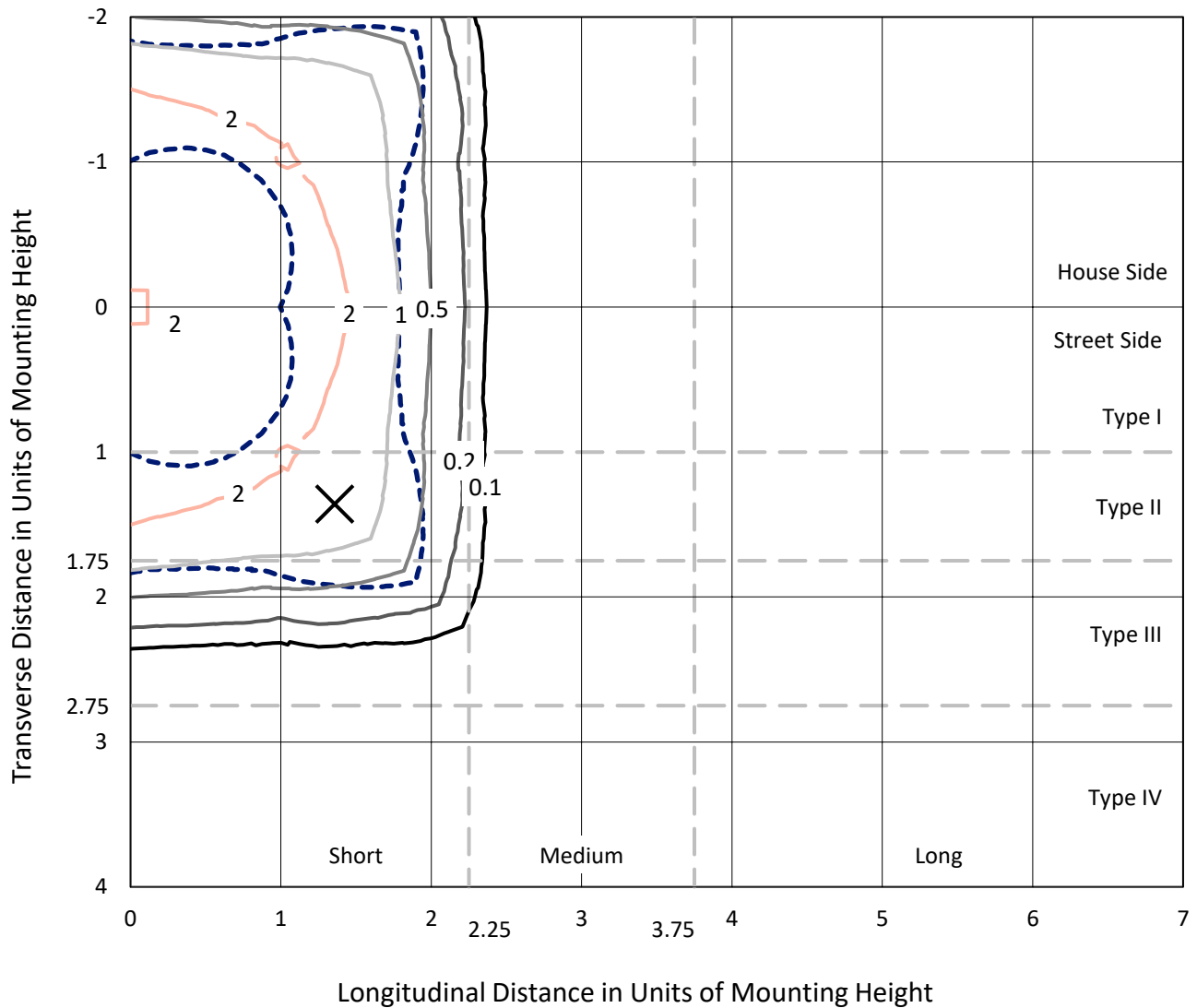
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

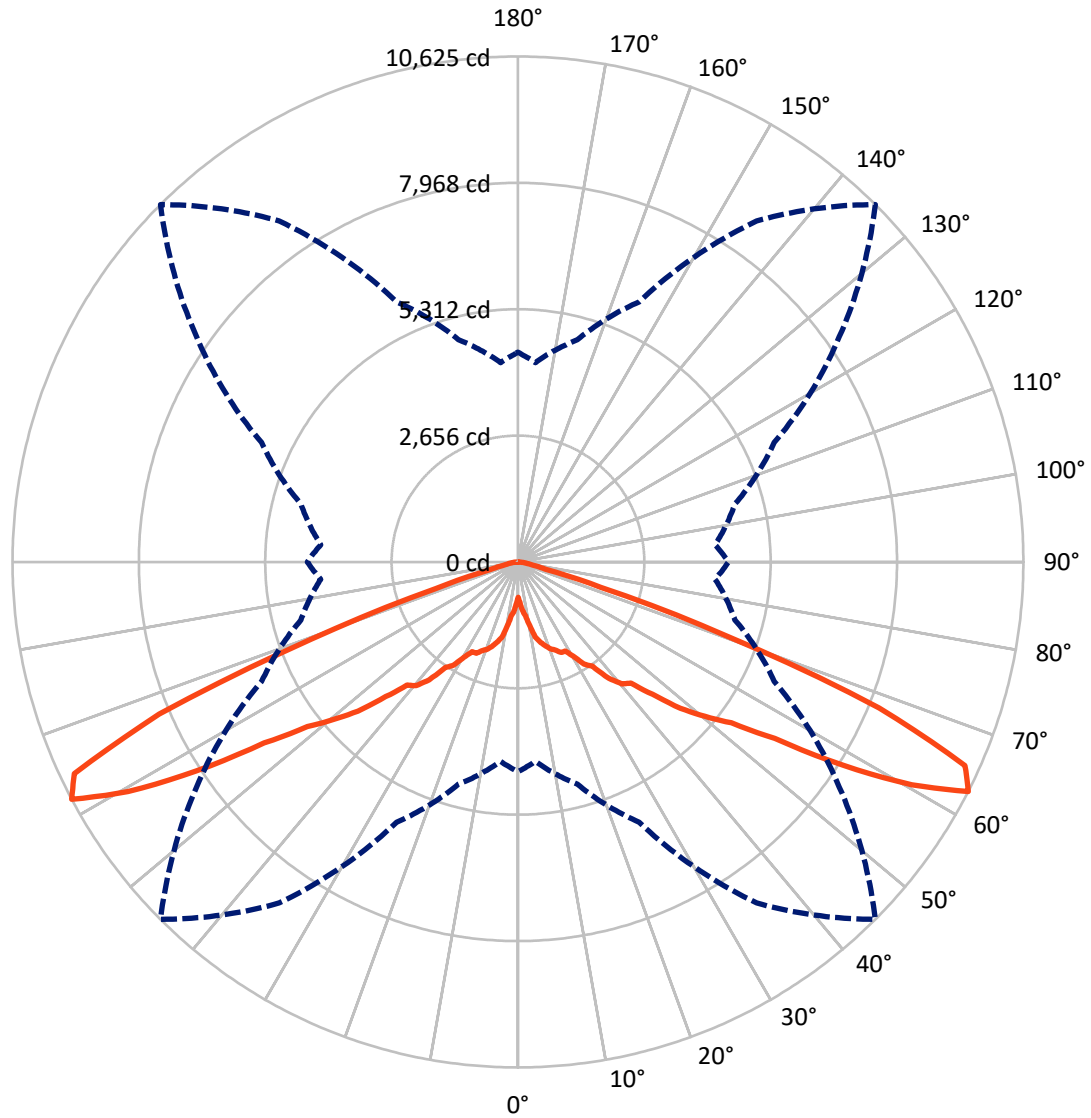
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc
 Type V - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 62.5-Deg Vertical

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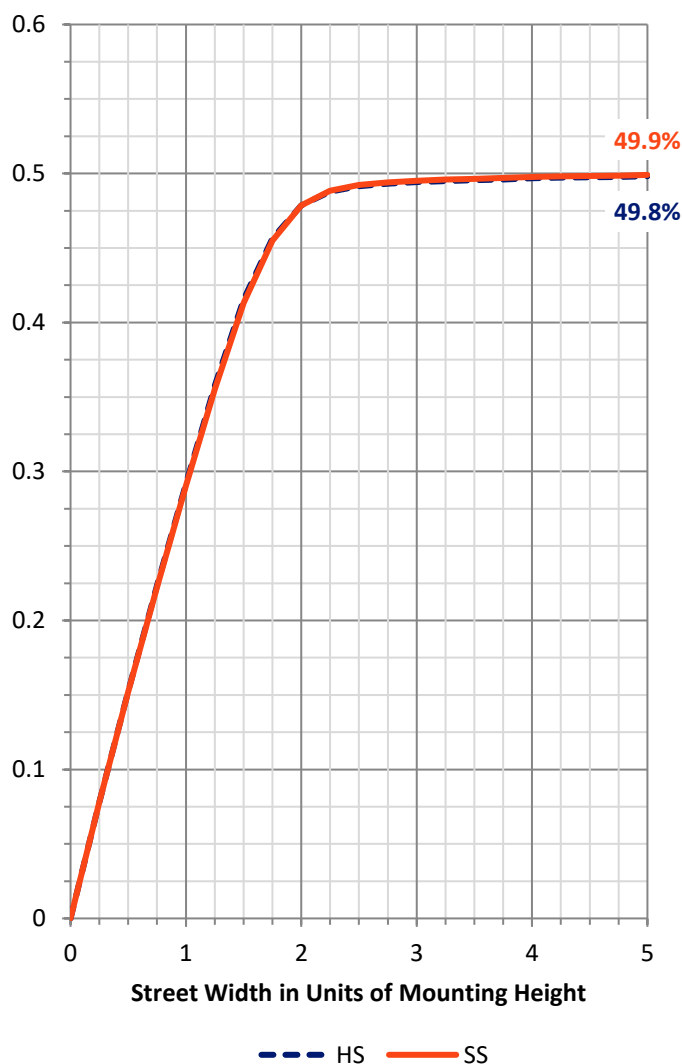
FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|---------|
| House Side | Lumens | 9050.0 | 0.0 | 9050.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 9050.0 | 0.0 | 9050.0 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 18100.0 | 0.0 | 18100.0 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|---------|-----------|
| 0°-10° | 111.5 | 0.6 |
| 10°-20° | 491.8 | 2.7 |
| 20°-30° | 1030.8 | 5.7 |
| 30°-40° | 1942.1 | 10.7 |
| 40°-50° | 3524.8 | 19.5 |
| 50°-60° | 5955.8 | 32.9 |
| 60°-70° | 4452.3 | 24.6 |
| 70°-80° | 498.1 | 2.8 |
| 80°-90° | 92.7 | 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° | 18100.0 | 100.0 |
| 0°-180° | 18100.0 | 100.0 |

Coefficient of Utilization



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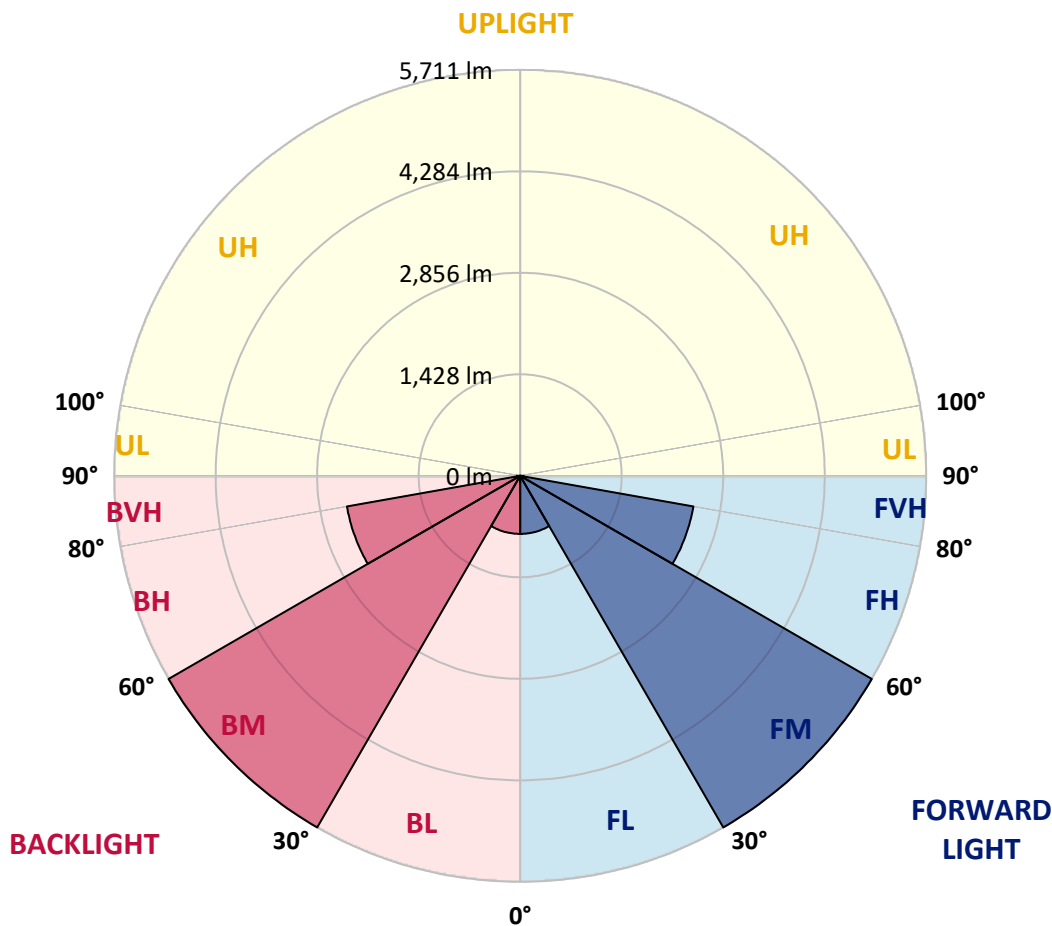
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|----------------|--------|-----------|-------------------------|------|---------|
| | | | B | U | G |
| FL (0°-30°) | 817.1 | 4.5 | | | |
| FM (30°-60°) | 5711.4 | 31.6 | | | |
| FH (60°-80°) | 2475.2 | 13.7 | | | G2/5000 |
| FVH (80°-90°) | 46.3 | 0.3 | | | G1/100 |
| BL (0°-30°) | 817.1 | 4.5 | B2/1000 | | |
| BM (30°-60°) | 5711.4 | 31.6 | B4/8500 | | |
| BH (60°-80°) | 2475.2 | 13.7 | B3/2500 | | G2/5000 |
| BVH (80°-90°) | 46.3 | 0.3 | | | G1/100 |
| UL (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B4-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 15° | 25° | 35° | 45° | 55° | 65° | 75° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|---------|--------|--------|--------|--------|--------|
| 0° | 740.1 | 740.1 | 740.1 | 740.1 | 740.1 | 740.1 | 740.1 | 740.1 | 740.1 | 740.1 | 740.1 |
| 2.5° | 899.9 | 883.7 | 827.0 | 846.8 | 867.5 | 864.5 | 859.4 | 843.9 | 829.9 | 888.1 | 899.9 |
| 5° | 1147.3 | 1110.5 | 1090.6 | 1074.4 | 1070.7 | 1030.9 | 1085.4 | 1079.5 | 1097.9 | 1128.9 | 1159.1 |
| 7.5° | 1344.6 | 1310.0 | 1257.7 | 1246.7 | 1187.0 | 1142.9 | 1190.0 | 1248.2 | 1266.6 | 1323.3 | 1357.1 |
| 10° | 1416.8 | 1386.6 | 1396.2 | 1346.8 | 1343.9 | 1356.4 | 1346.1 | 1359.4 | 1408.0 | 1401.3 | 1426.4 |
| 12.5° | 1578.8 | 1584.0 | 1553.0 | 1540.5 | 1565.5 | 1620.0 | 1573.6 | 1557.4 | 1545.7 | 1595.7 | 1611.2 |
| 15° | 1730.5 | 1760.7 | 1709.9 | 1701.8 | 1691.5 | 1742.3 | 1692.2 | 1716.5 | 1737.9 | 1748.2 | 1742.3 |
| 17.5° | 1945.5 | 1947.0 | 1890.3 | 1799.7 | 1833.6 | 1849.8 | 1827.7 | 1785.7 | 1886.6 | 1937.4 | 1940.4 |
| 20° | 2086.9 | 2092.1 | 1980.1 | 1838.7 | 1934.5 | 1949.2 | 1938.1 | 1850.5 | 1984.5 | 2069.2 | 2065.5 |
| 22.5° | 2239.3 | 2221.7 | 2070.0 | 1966.9 | 2000.7 | 2009.6 | 1986.0 | 1975.0 | 2069.2 | 2223.1 | 2200.3 |
| 25° | 2341.7 | 2374.1 | 2223.1 | 2156.9 | 2128.1 | 2107.5 | 2137.7 | 2143.6 | 2240.1 | 2380.0 | 2302.7 |
| 27.5° | 2586.2 | 2530.2 | 2293.8 | 2318.9 | 2257.7 | 2118.6 | 2251.1 | 2324.0 | 2303.4 | 2542.0 | 2600.2 |
| 30° | 2803.4 | 2804.9 | 2473.5 | 2521.4 | 2408.0 | 2295.3 | 2438.9 | 2544.2 | 2518.4 | 2824.0 | 2768.8 |
| 32.5° | 3081.0 | 3091.3 | 2783.5 | 2655.4 | 2578.8 | 2557.4 | 2539.8 | 2656.1 | 2816.6 | 3064.1 | 3069.2 |
| 35° | 3380.7 | 3469.1 | 3050.8 | 2916.1 | 2785.7 | 2691.5 | 2793.1 | 2954.4 | 3058.9 | 3454.4 | 3384.4 |
| 37.5° | 3964.7 | 3815.9 | 3473.5 | 3220.2 | 3137.0 | 3099.4 | 3153.2 | 3246.7 | 3472.8 | 3813.7 | 3933.7 |
| 40° | 4310.0 | 4268.8 | 3802.7 | 3590.6 | 3269.5 | 3369.7 | 3340.2 | 3596.5 | 3783.5 | 4292.4 | 4303.4 |
| 42.5° | 4838.0 | 4630.4 | 4211.4 | 3941.8 | 3653.2 | 3479.4 | 3663.5 | 4007.4 | 4233.4 | 4663.5 | 4866.7 |
| 45° | 5255.5 | 4989.0 | 4665.7 | 4461.0 | 4096.5 | 3967.6 | 4033.9 | 4474.2 | 4757.7 | 5053.0 | 5320.3 |
| 47.5° | 5717.2 | 5428.6 | 5105.3 | 4741.5 | 4385.9 | 4595.7 | 4478.7 | 4866.0 | 5142.9 | 5566.3 | 5816.7 |
| 50° | 6297.5 | 5977.9 | 5564.1 | 5263.6 | 5028.0 | 5101.6 | 5083.2 | 5359.4 | 5701.0 | 6086.9 | 6371.1 |
| 52.5° | 6936.7 | 6575.1 | 6176.0 | 5896.9 | 5797.5 | 5614.9 | 5853.5 | 5966.9 | 6218.7 | 6572.2 | 6905.8 |
| 55° | 7383.7 | 7022.1 | 6780.6 | 6870.4 | 6843.9 | 6550.8 | 6760.0 | 6771.7 | 6650.2 | 6777.6 | 7113.4 |
| 57.5° | 7314.5 | 6969.1 | 6936.0 | 7275.4 | 7782.8 | 8066.3 | 7743.0 | 7047.9 | 6592.8 | 6533.2 | 6888.8 |
| 60° | 6395.5 | 6100.2 | 6403.6 | 7169.4 | 8647.3 | 9510.3 | 8265.9 | 6839.5 | 6089.9 | 5779.8 | 6123.0 |
| 62.5° | 4407.2 | 4207.7 | 4836.5 | 6033.9 | 8751.1 | 10624.5 | 8246.7 | 5943.3 | 4723.1 | 4160.5 | 4427.1 |
| 65° | 2089.1 | 2016.9 | 2547.9 | 3825.5 | 7289.4 | 10327.0 | 7204.7 | 4021.4 | 2718.7 | 2171.6 | 2232.0 |
| 67.5° | 785.7 | 749.6 | 935.2 | 1690.0 | 4591.3 | 8190.7 | 4843.2 | 1983.8 | 1051.5 | 817.4 | 845.4 |
| 70° | 446.2 | 420.5 | 444.8 | 616.3 | 1848.3 | 4639.2 | 2089.1 | 680.4 | 447.0 | 407.2 | 433.7 |
| 72.5° | 351.3 | 331.4 | 335.1 | 372.6 | 637.7 | 1821.1 | 676.0 | 388.1 | 324.7 | 308.5 | 332.1 |
| 75° | 290.1 | 272.5 | 271.7 | 292.3 | 371.9 | 591.3 | 382.2 | 296.8 | 262.9 | 251.1 | 270.3 |
| 77.5° | 230.5 | 220.2 | 223.1 | 239.3 | 266.6 | 330.6 | 276.9 | 240.1 | 215.8 | 201.8 | 215.0 |
| 80° | 168.6 | 167.2 | 178.9 | 193.7 | 198.8 | 222.4 | 207.7 | 193.7 | 172.3 | 152.4 | 157.6 |
| 82.5° | 110.5 | 111.2 | 133.3 | 145.1 | 142.9 | 142.1 | 148.7 | 148.0 | 128.9 | 100.9 | 100.9 |
| 85° | 63.3 | 64.8 | 81.7 | 91.3 | 89.8 | 71.4 | 94.3 | 95.0 | 82.5 | 61.1 | 58.9 |
| 87.5° | 20.6 | 25.8 | 35.3 | 37.6 | 36.1 | 19.9 | 36.1 | 39.8 | 36.1 | 25.8 | 22.8 |
| 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)