

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: McGRAW-EDISON

Report Number: P299945

Luminaire Tested: **GLNA-AF-02-LED-E1-5WQ-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P299945
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24143)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-02-LED-E1-5WQ-7050-600
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(2) 70 CRI, 5000K CCT 600mA LIGHTSQUARE WITH 16 LEDS EACH AND Type IV
w/Spill Control OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8420.9 lumens
Efficiency: N/A
Efficacy: 127.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B3 - U0 - G2

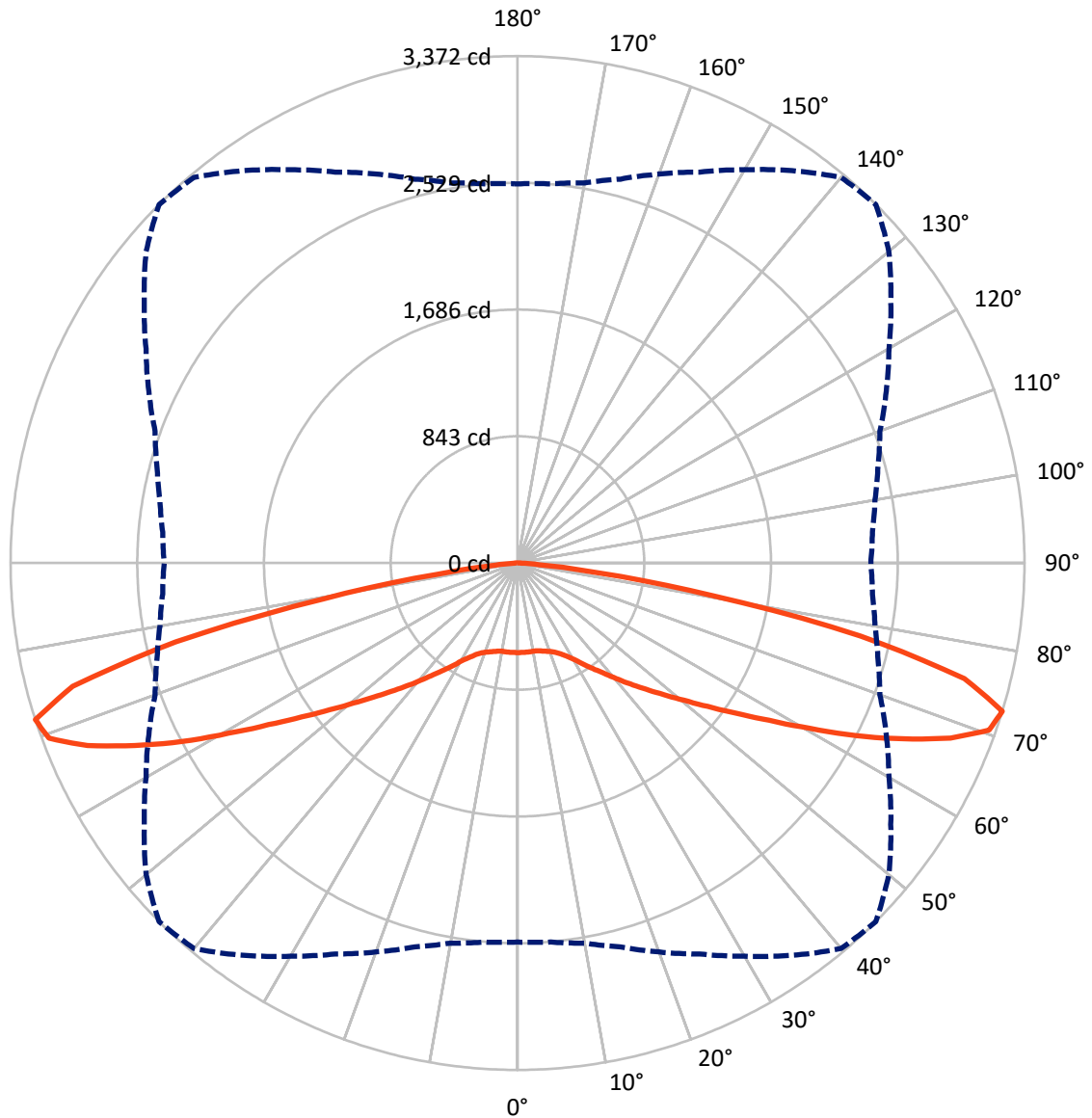
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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CATALOG NUMBER: GLNA-AF-02-LED-E1-5WQ-7050-600

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

| | | Downward | Upward | Total |
|--------------------|-----------|----------|--------|--------|
| House Side | Lumens | 4210.4 | 0.0 | 4210.4 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Street Side | Lumens | 4210.4 | 0.0 | 4210.4 |
| | % Fixture | 50.0 | 0.0 | 50.0 |
| Total | Lumens | 8420.9 | 0.0 | 8420.9 |
| | % Fixture | 100.0 | 0.0 | 100.0 |

Coefficient of Utilization

ZONAL LUMENS:

| Zone | Lumens | % Fixture |
|-----------|--------|-----------|
| 0°-10° | 56.9 | 0.7 |
| 10°-20° | 172.9 | 2.1 |
| 20°-30° | 316.0 | 3.8 |
| 30°-40° | 544.9 | 6.5 |
| 40°-50° | 931.5 | 11.1 |
| 50°-60° | 1509.8 | 17.9 |
| 60°-70° | 2504.8 | 29.7 |
| 70°-80° | 2206.1 | 26.2 |
| 80°-90° | 177.9 | 2.1 |
| 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° | 8420.9 | 100.0 |
| 0°-180° | 8420.9 | 100.0 |



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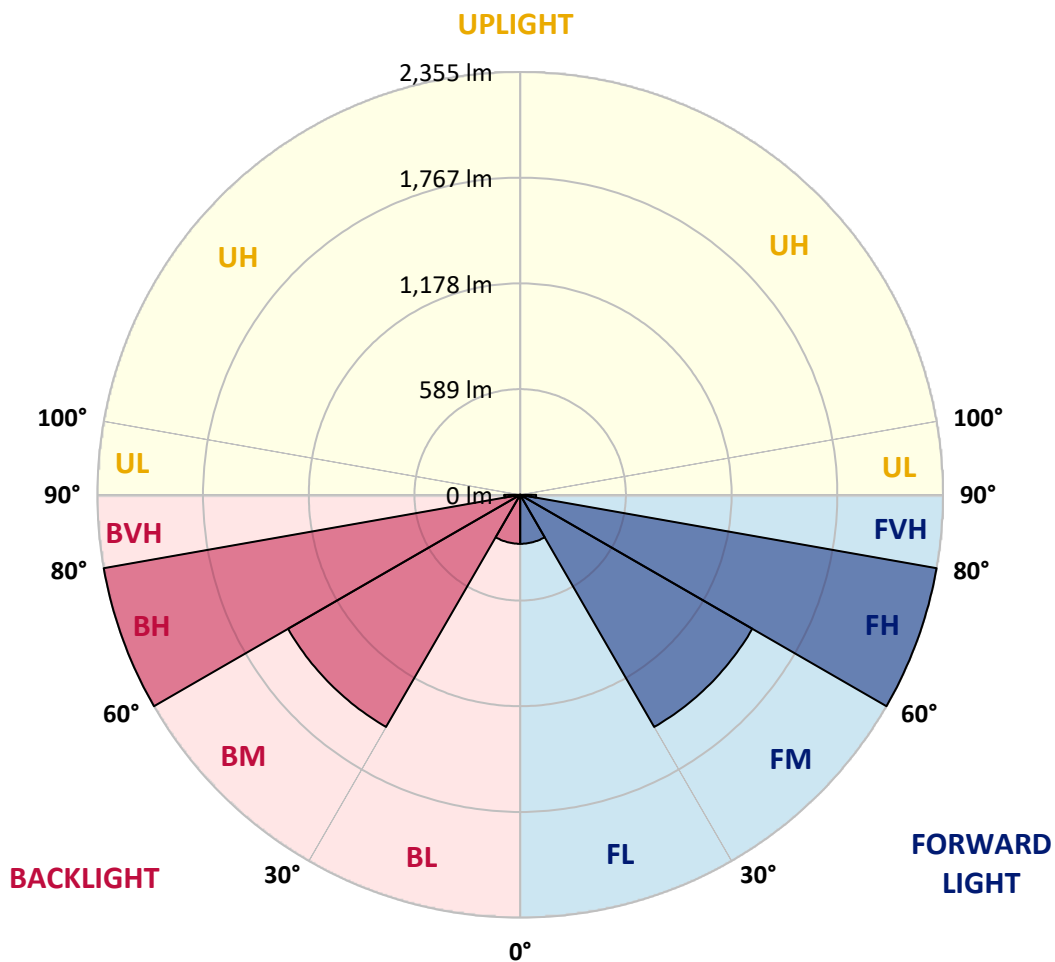
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

| Zone | | Lumens | % Fixture | Zone Rating/Lumen Limit | | |
|------|-------------|--------|-----------|-------------------------|------|---------|
| | | | | B | U | G |
| FL | (0°-30°) | 273.0 | 3.2 | | | |
| FM | (30°-60°) | 1493.1 | 17.7 | | | |
| FH | (60°-80°) | 2355.4 | 28.0 | | | G2/5000 |
| FVH | (80°-90°) | 88.9 | 1.1 | | | G1/100 |
| BL | (0°-30°) | 273.0 | 3.2 | B1/500 | | |
| BM | (30°-60°) | 1493.1 | 17.7 | B2/2500 | | |
| BH | (60°-80°) | 2355.4 | 28.0 | B3/2500 | | G2/5000 |
| BVH | (80°-90°) | 88.9 | 1.1 | | | G1/100 |
| UL | (90°-100°) | 0.0 | 0.0 | | U0/0 | |
| UH | (100°-180°) | 0.0 | 0.0 | | U0/0 | |

BUG Rating: B3-U0-G2

Type V Short





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CANDELA DISTRIBUTION (FULL):

| | 0° | 5° | 10° | 15° | 20° | 25° | 30° | 35° | 40° | 45° | 50° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 596.3 | 596.3 | 596.3 | 596.3 | 596.3 | 596.3 | 596.3 | 596.3 | 596.3 | 596.3 | 596.3 |
| 2.5° | 596.3 | 596.7 | 597.1 | 596.7 | 596.7 | 596.3 | 595.9 | 596.3 | 595.9 | 595.2 | 595.6 |
| 5° | 598.3 | 599.0 | 599.0 | 598.3 | 598.6 | 598.3 | 597.5 | 597.9 | 597.1 | 595.9 | 595.9 |
| 7.5° | 600.6 | 601.0 | 601.0 | 600.2 | 600.6 | 599.8 | 599.0 | 598.6 | 597.9 | 596.3 | 595.2 |
| 10° | 604.1 | 604.4 | 604.1 | 603.3 | 603.3 | 602.1 | 600.2 | 599.4 | 597.9 | 595.6 | 594.4 |
| 12.5° | 607.9 | 608.3 | 607.9 | 607.1 | 606.8 | 604.8 | 603.3 | 602.1 | 601.0 | 599.0 | 597.1 |
| 15° | 613.3 | 614.1 | 613.3 | 611.8 | 610.6 | 609.1 | 608.3 | 608.7 | 609.1 | 607.5 | 605.6 |
| 17.5° | 623.4 | 623.7 | 622.6 | 619.1 | 617.6 | 616.0 | 616.0 | 616.8 | 618.0 | 617.2 | 615.3 |
| 20° | 641.9 | 640.7 | 638.0 | 633.8 | 631.9 | 629.2 | 628.8 | 629.2 | 629.2 | 628.8 | 627.2 |
| 22.5° | 665.1 | 664.3 | 660.8 | 655.4 | 652.7 | 651.2 | 648.9 | 646.9 | 646.5 | 645.4 | 643.8 |
| 25° | 692.9 | 692.5 | 688.2 | 683.6 | 681.7 | 679.8 | 677.8 | 675.1 | 672.8 | 670.1 | 668.6 |
| 27.5° | 728.4 | 726.9 | 720.7 | 718.4 | 715.7 | 714.5 | 711.8 | 708.7 | 706.8 | 703.3 | 701.4 |
| 30° | 767.4 | 767.4 | 762.4 | 761.6 | 761.6 | 758.9 | 755.8 | 750.4 | 747.0 | 743.5 | 742.3 |
| 32.5° | 806.4 | 806.8 | 801.8 | 803.3 | 804.5 | 806.4 | 807.2 | 805.3 | 803.0 | 802.6 | 800.3 |
| 35° | 862.8 | 861.3 | 856.3 | 857.4 | 857.0 | 856.6 | 856.6 | 860.9 | 861.7 | 862.4 | 857.8 |
| 37.5° | 932.7 | 932.7 | 927.7 | 927.7 | 925.4 | 923.1 | 920.0 | 922.7 | 926.9 | 928.1 | 925.0 |
| 40° | 1012.7 | 1015.4 | 1009.2 | 1008.8 | 1009.6 | 1002.2 | 998.8 | 1003.0 | 1005.7 | 1010.4 | 1006.9 |
| 42.5° | 1106.9 | 1105.0 | 1098.8 | 1098.0 | 1093.8 | 1091.5 | 1088.4 | 1091.9 | 1096.1 | 1099.2 | 1100.3 |
| 45° | 1197.3 | 1195.7 | 1188.8 | 1188.8 | 1184.5 | 1182.6 | 1184.2 | 1190.0 | 1191.9 | 1196.1 | 1200.4 |
| 47.5° | 1286.5 | 1284.6 | 1279.9 | 1281.9 | 1282.3 | 1285.7 | 1290.8 | 1296.2 | 1301.6 | 1307.4 | 1309.3 |
| 50° | 1377.7 | 1378.0 | 1373.0 | 1377.7 | 1383.4 | 1393.1 | 1406.6 | 1415.5 | 1426.7 | 1434.0 | 1436.4 |
| 52.5° | 1460.7 | 1462.2 | 1467.6 | 1478.5 | 1490.0 | 1509.0 | 1532.1 | 1553.8 | 1572.3 | 1584.7 | 1583.9 |
| 55° | 1560.3 | 1562.7 | 1575.8 | 1594.3 | 1613.3 | 1641.8 | 1676.2 | 1714.4 | 1745.3 | 1763.1 | 1751.9 |
| 57.5° | 1687.8 | 1692.8 | 1707.5 | 1732.6 | 1760.8 | 1797.9 | 1845.0 | 1902.5 | 1950.4 | 1974.4 | 1956.2 |
| 60° | 1862.8 | 1865.8 | 1883.6 | 1911.4 | 1945.4 | 1991.4 | 2054.3 | 2131.6 | 2199.1 | 2230.8 | 2210.0 |
| 62.5° | 2093.3 | 2099.1 | 2113.4 | 2141.6 | 2176.4 | 2228.5 | 2305.4 | 2401.9 | 2486.1 | 2530.1 | 2483.0 |
| 65° | 2368.7 | 2387.2 | 2399.2 | 2427.8 | 2460.2 | 2515.5 | 2595.8 | 2699.3 | 2789.7 | 2818.7 | 2764.2 |
| 67.5° | 2641.4 | 2657.6 | 2678.5 | 2711.3 | 2744.1 | 2806.3 | 2880.8 | 2981.2 | 3080.5 | 3106.8 | 3022.2 |
| 70° | 2760.7 | 2770.0 | 2802.4 | 2847.2 | 2910.2 | 2983.6 | 3069.7 | 3182.5 | 3305.3 | 3326.9 | 3219.5 |
| 72.5° | 2521.6 | 2530.9 | 2567.2 | 2643.3 | 2753.0 | 2869.6 | 3019.9 | 3185.6 | 3347.8 | 3372.1 | 3224.2 |
| 75° | 1907.2 | 1892.1 | 1945.8 | 2046.6 | 2194.5 | 2357.1 | 2567.2 | 2804.7 | 3039.2 | 3069.7 | 2893.2 |
| 77.5° | 985.6 | 983.7 | 1024.3 | 1149.4 | 1325.9 | 1510.9 | 1742.2 | 2010.7 | 2240.1 | 2332.8 | 2189.1 |
| 80° | 277.7 | 280.8 | 300.1 | 362.3 | 465.4 | 599.0 | 779.8 | 1031.2 | 1218.9 | 1314.7 | 1234.4 |
| 82.5° | 108.9 | 117.4 | 124.7 | 136.3 | 149.9 | 169.6 | 226.3 | 336.8 | 451.9 | 539.9 | 442.2 |
| 85° | 39.0 | 41.7 | 59.1 | 69.9 | 71.1 | 74.9 | 85.4 | 99.6 | 120.1 | 143.3 | 117.8 |
| 87.5° | 14.7 | 16.2 | 18.9 | 31.3 | 30.9 | 28.2 | 34.4 | 35.9 | 27.0 | 24.7 | 30.5 |
| 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):

| | 55° | 60° | 65° | 70° | 75° | 80° | 85° | 90° |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| 0° | 596.3 | 596.3 | 596.3 | 596.3 | 596.3 | 596.3 | 596.3 | 596.3 |
| 2.5° | 594.8 | 595.2 | 595.2 | 595.6 | 595.9 | 595.9 | 596.7 | 596.7 |
| 5° | 595.2 | 595.2 | 594.4 | 594.8 | 594.4 | 594.4 | 594.8 | 594.8 |
| 7.5° | 594.4 | 594.0 | 593.2 | 592.9 | 592.1 | 592.1 | 592.1 | 592.1 |
| 10° | 593.2 | 592.9 | 592.1 | 591.7 | 591.3 | 591.3 | 591.3 | 591.3 |
| 12.5° | 596.3 | 595.2 | 594.4 | 594.0 | 594.0 | 594.0 | 594.0 | 594.0 |
| 15° | 604.4 | 601.7 | 599.8 | 599.8 | 600.2 | 601.0 | 601.0 | 601.7 |
| 17.5° | 614.5 | 611.4 | 609.5 | 607.9 | 608.7 | 609.8 | 610.6 | 611.4 |
| 20° | 626.5 | 624.9 | 622.2 | 620.7 | 620.7 | 622.2 | 623.0 | 623.4 |
| 22.5° | 643.1 | 641.9 | 640.7 | 638.8 | 638.8 | 639.6 | 641.1 | 641.1 |
| 25° | 667.8 | 667.0 | 666.2 | 664.7 | 664.3 | 664.3 | 665.1 | 665.8 |
| 27.5° | 698.7 | 699.1 | 698.3 | 697.9 | 696.7 | 696.4 | 697.5 | 697.1 |
| 30° | 740.0 | 741.9 | 743.9 | 742.3 | 740.4 | 739.2 | 738.1 | 736.5 |
| 32.5° | 796.0 | 793.7 | 792.1 | 789.4 | 786.0 | 782.9 | 780.6 | 777.9 |
| 35° | 848.9 | 845.1 | 843.5 | 845.8 | 845.4 | 843.5 | 840.8 | 838.5 |
| 37.5° | 913.8 | 913.0 | 913.8 | 918.1 | 917.3 | 919.2 | 913.8 | 913.4 |
| 40° | 995.7 | 996.5 | 1001.9 | 1006.9 | 1009.6 | 1012.3 | 1009.2 | 1006.1 |
| 42.5° | 1090.7 | 1090.3 | 1092.2 | 1099.2 | 1103.8 | 1106.9 | 1100.3 | 1099.6 |
| 45° | 1191.1 | 1188.4 | 1190.0 | 1195.7 | 1200.4 | 1203.9 | 1196.5 | 1196.5 |
| 47.5° | 1301.6 | 1296.9 | 1291.9 | 1298.5 | 1301.2 | 1303.5 | 1297.7 | 1295.8 |
| 50° | 1424.8 | 1415.1 | 1404.3 | 1407.0 | 1407.0 | 1406.2 | 1398.9 | 1398.5 |
| 52.5° | 1566.1 | 1548.4 | 1528.7 | 1521.3 | 1517.1 | 1512.4 | 1499.7 | 1493.5 |
| 55° | 1728.7 | 1702.1 | 1671.2 | 1652.3 | 1642.2 | 1629.5 | 1608.2 | 1602.4 |
| 57.5° | 1918.8 | 1877.0 | 1823.7 | 1800.6 | 1778.2 | 1757.3 | 1733.8 | 1727.2 |
| 60° | 2143.9 | 2082.5 | 2011.8 | 1969.0 | 1944.6 | 1924.5 | 1900.2 | 1899.1 |
| 62.5° | 2395.0 | 2298.0 | 2218.1 | 2179.5 | 2161.7 | 2143.9 | 2120.7 | 2123.8 |
| 65° | 2650.3 | 2549.1 | 2474.1 | 2442.9 | 2426.2 | 2411.6 | 2388.4 | 2391.9 |
| 67.5° | 2902.1 | 2809.0 | 2726.7 | 2694.7 | 2676.1 | 2657.6 | 2636.7 | 2640.2 |
| 70° | 3082.8 | 2967.3 | 2874.7 | 2803.6 | 2759.2 | 2709.0 | 2676.5 | 2668.4 |
| 72.5° | 3031.1 | 2853.0 | 2705.9 | 2564.9 | 2482.3 | 2415.0 | 2369.5 | 2349.8 |
| 75° | 2623.2 | 2379.9 | 2190.7 | 2017.6 | 1920.3 | 1841.1 | 1783.6 | 1747.7 |
| 77.5° | 1948.1 | 1674.7 | 1451.0 | 1251.7 | 1094.2 | 988.3 | 913.8 | 865.5 |
| 80° | 1066.4 | 811.1 | 592.9 | 416.7 | 306.3 | 254.5 | 224.8 | 210.5 |
| 82.5° | 332.2 | 214.4 | 158.0 | 136.3 | 126.7 | 121.3 | 112.4 | 98.1 |
| 85° | 105.8 | 92.7 | 86.1 | 82.3 | 78.4 | 68.4 | 47.1 | 42.9 |
| 87.5° | 40.9 | 42.1 | 41.7 | 39.4 | 40.2 | 29.0 | 23.2 | 20.5 |
| 90° | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |

(END OF REPORT)