

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: P596654

Luminaire Tested: **MSA-SA3A-827-U-RW**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596654  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3A-827-U-RW  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8855 lumens  
Efficiency: N/A  
Efficacy: 92.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B3 - U0 - G3

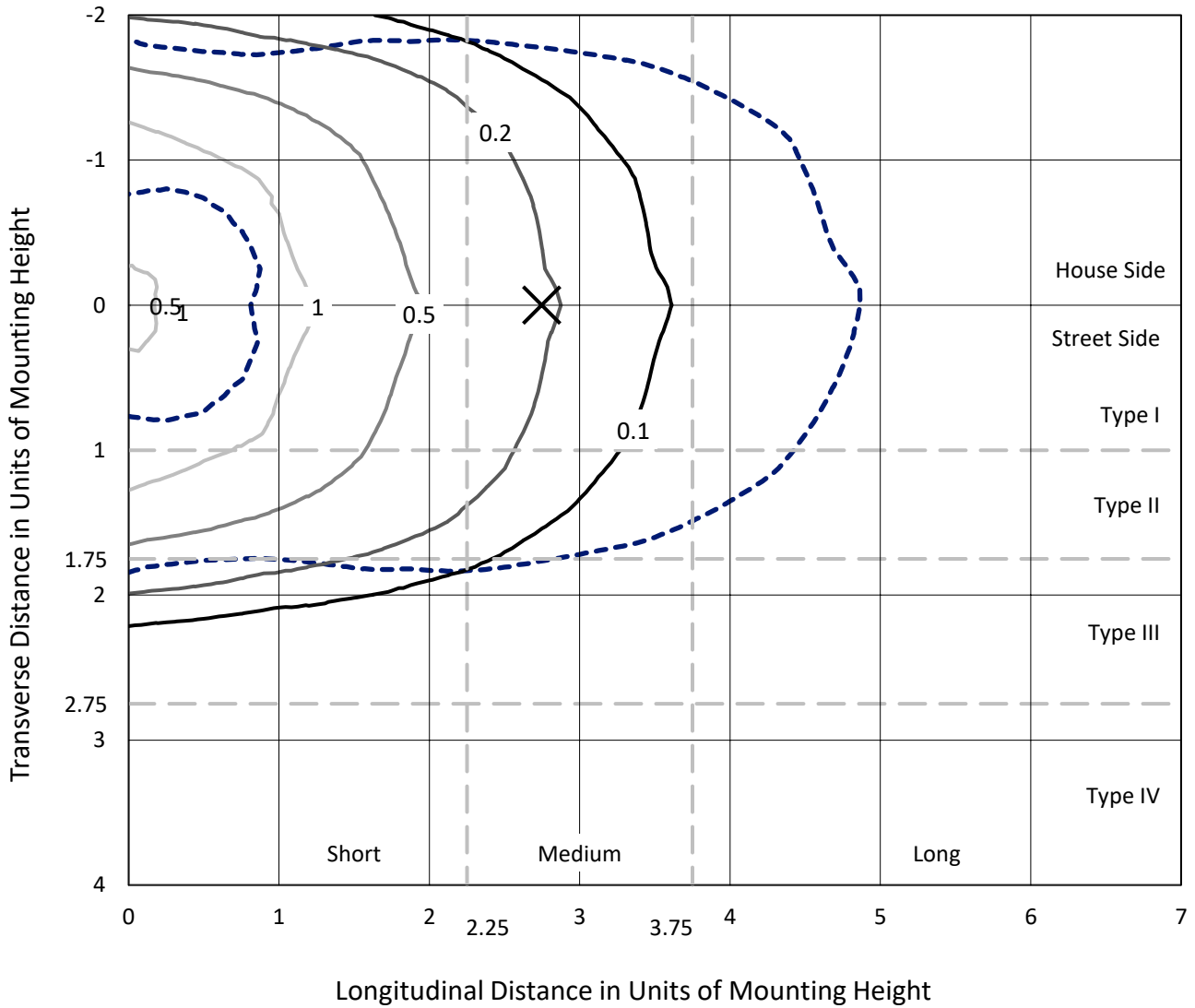
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

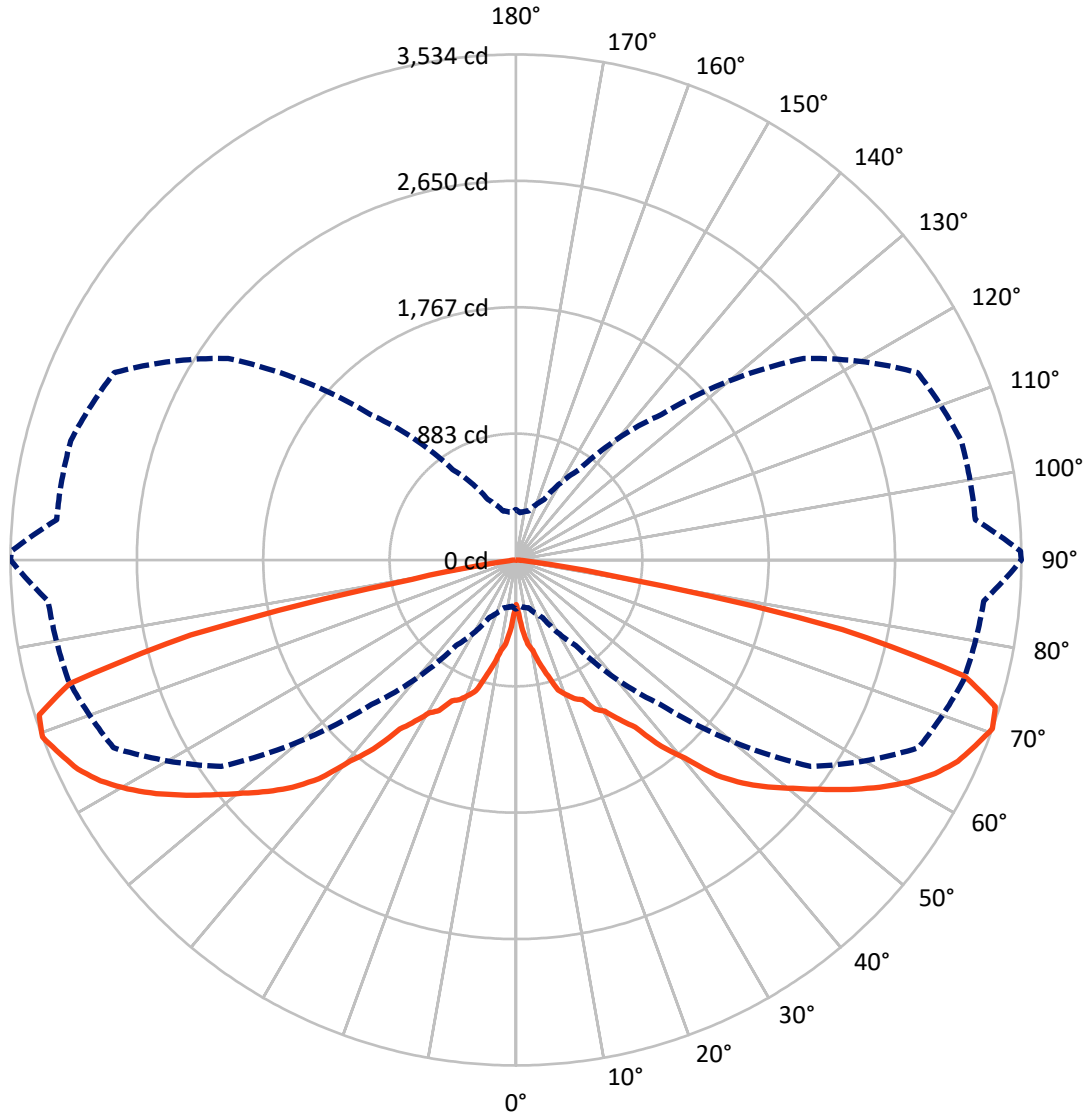
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	4411.1	0.0	4411.1
	% Fixture	49.8	0.0	49.8
<b>Street Side</b>	Lumens	4443.9	0.0	4443.9
	% Fixture	50.2	0.0	50.2
<b>Total</b>	Lumens	8855.0	0.0	8855.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.9	0.5
10°-20°	214.9	2.4
20°-30°	464.6	5.2
30°-40°	886.4	10.0
40°-50°	1610.3	18.2
50°-60°	2262.1	25.5
60°-70°	2159.8	24.4
70°-80°	1108.4	12.5
80°-90°	101.6	1.1
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°	8855.0	100.0
0°-180°	8855.0	100.0

**Coefficient of Utilization**

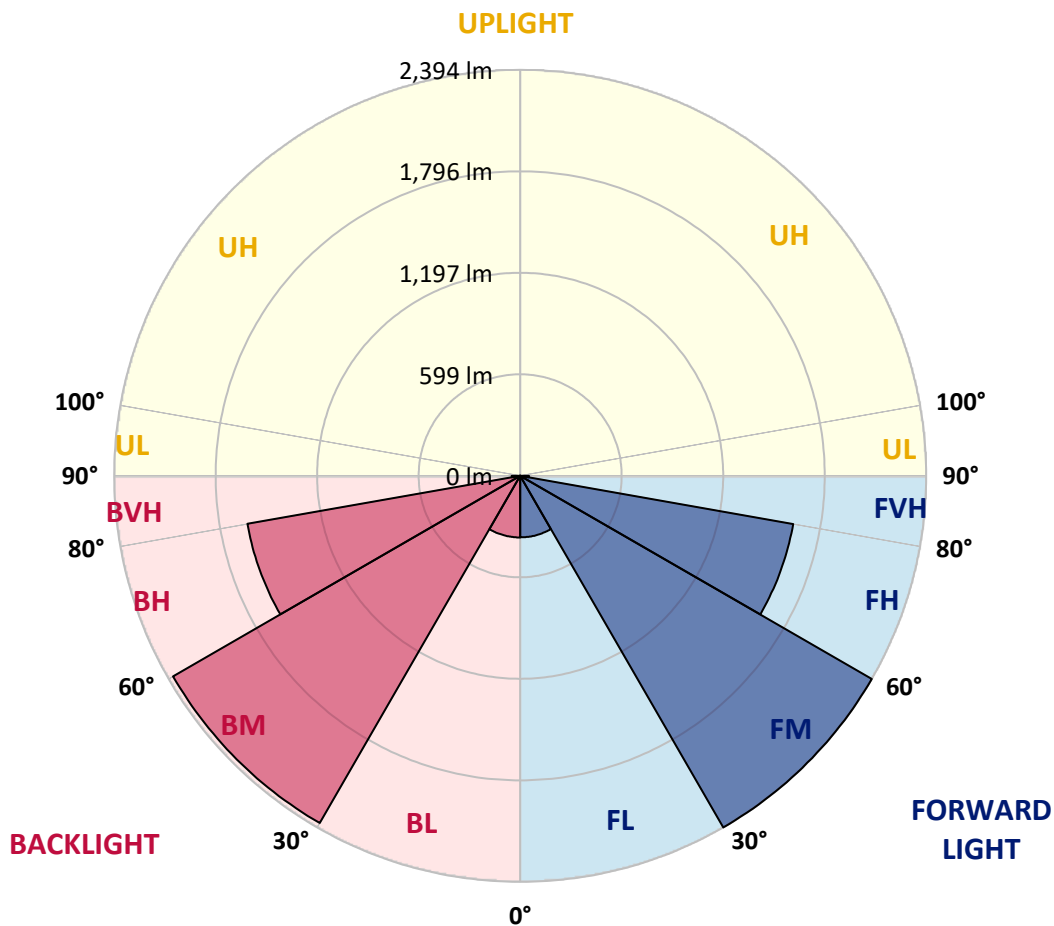


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	362.8	4.1			
FM (30°-60°)	2394.5	27.0			
FH (60°-80°)	1635.0	18.5			G1/1800
FVH (80°-90°)	51.6	0.6			G1/100
BL (0°-30°)	363.5	4.1	B1/500		
BM (30°-60°)	2364.3	26.7	B2/2500		
BH (60°-80°)	1633.2	18.4	B3/2500		G3/2500
BVH (80°-90°)	50.1	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G3**  
 Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	310.8	310.8	310.8	310.8	310.8	310.8	310.8	310.8	310.8	310.8	310.8
2.5°	376.5	362.5	344.9	355.3	359.6	367.1	366.1	362.5	347.0	372.9	375.7
5°	471.2	449.0	440.7	439.3	441.4	434.2	457.6	450.8	463.3	486.6	492.0
7.5°	536.5	520.0	502.4	507.8	485.6	482.3	512.5	539.4	546.2	588.9	591.8
10°	567.4	551.2	555.9	552.7	550.2	571.0	585.0	604.7	633.1	637.0	643.1
12.5°	593.6	600.0	620.5	619.8	653.5	690.5	685.1	705.6	710.2	759.7	744.7
15°	660.0	673.3	671.8	684.4	699.1	759.7	760.1	794.9	826.9	846.2	841.2
17.5°	757.2	761.9	742.5	743.2	785.9	810.7	838.3	832.2	915.5	953.5	956.1
20°	815.4	827.2	805.0	775.5	851.3	885.4	900.8	865.3	954.3	1005.6	1005.6
22.5°	916.9	886.4	852.7	833.0	899.7	936.0	934.2	924.1	971.5	1062.3	1053.7
25°	972.9	955.7	938.8	943.9	977.6	996.3	1021.0	997.7	1042.2	1109.7	1081.3
27.5°	1079.2	1047.2	964.3	1030.3	1030.3	1016.3	1068.7	1079.9	1050.8	1160.6	1181.8
30°	1199.4	1188.3	1070.9	1140.9	1119.3	1079.9	1180.4	1173.2	1124.4	1236.3	1226.7
32.5°	1313.1	1349.7	1238.5	1200.1	1232.4	1247.5	1194.7	1216.2	1225.6	1333.6	1328.9
35°	1487.6	1518.4	1370.9	1361.2	1307.4	1293.4	1333.6	1340.8	1341.5	1455.3	1434.4
37.5°	1789.4	1744.9	1599.2	1530.6	1536.7	1519.9	1527.8	1471.1	1478.9	1644.0	1654.4
40°	2010.1	1959.8	1797.6	1748.5	1627.9	1700.0	1636.1	1630.4	1614.6	1828.5	1822.8
42.5°	2253.8	2184.9	2005.4	1939.7	1811.6	1782.2	1752.8	1819.2	1814.9	2013.0	2056.7
45°	2437.9	2298.6	2205.0	2164.0	2087.2	2015.1	1987.1	2016.9	2003.3	2150.4	2226.9
47.5°	2554.2	2433.2	2325.5	2239.4	2165.8	2342.8	2201.0	2161.2	2133.5	2298.3	2371.8
50°	2646.7	2507.1	2380.1	2351.4	2409.5	2566.0	2342.4	2254.5	2288.2	2409.5	2509.7
52.5°	2671.9	2524.0	2409.9	2391.6	2548.8	2577.1	2540.9	2393.0	2384.0	2543.0	2664.0
55°	2595.1	2453.3	2399.1	2499.2	2672.9	2649.3	2704.5	2610.1	2546.6	2679.4	2831.6
57.5°	2397.3	2256.6	2243.7	2388.0	2606.9	2808.6	2835.9	2761.2	2678.0	2818.6	2998.1
60°	2072.5	1944.1	1976.7	2136.1	2466.2	2753.3	2898.3	2830.1	2804.3	2944.3	3152.4
62.5°	1566.9	1466.7	1554.0	1776.1	2209.3	2681.9	2984.4	2973.7	2936.4	3077.8	3288.8
65°	999.1	946.4	1035.4	1261.1	1810.6	2552.0	3025.7	3040.1	3074.5	3180.8	3394.3
67.5°	580.7	552.7	606.9	791.7	1289.5	2095.5	2948.9	3154.9	3172.9	3233.9	3463.6
70°	343.4	325.1	347.4	444.7	730.0	1427.6	2515.4	3104.7	3240.3	3282.7	3533.5
72.5°	262.0	244.8	235.1	263.1	381.1	737.5	1700.7	2631.7	3186.1	3250.4	3504.1
75°	226.5	209.9	198.5	201.0	226.8	350.3	922.0	1882.3	2714.9	2959.7	3236.7
77.5°	194.5	179.8	171.5	170.8	174.1	192.4	385.4	1020.7	1700.4	2127.4	2333.4
80°	155.8	144.3	142.5	142.5	137.8	136.4	191.6	388.3	647.1	767.3	735.7
82.5°	113.8	102.3	113.8	112.3	105.2	99.4	122.0	168.0	199.5	157.5	124.5
85°	76.8	66.4	75.0	76.4	69.6	51.7	73.2	84.0	86.1	53.8	44.5
87.5°	26.9	26.2	42.3	37.0	30.1	17.6	26.9	29.1	30.5	19.0	12.9
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):**

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	310.8	310.8	310.8	310.8	310.8	310.8	310.8	310.8	310.8	310.8	310.8
2.5°	376.8	372.5	351.0	354.2	362.5	366.4	370.4	354.2	346.3	371.4	368.9
5°	493.5	477.7	460.1	457.6	458.6	443.2	452.2	448.2	450.0	466.2	469.4
7.5°	591.1	572.1	548.7	530.4	498.8	473.7	494.9	505.7	508.9	537.6	548.4
10°	643.8	627.7	620.9	586.4	576.0	572.8	567.7	550.5	569.5	562.7	568.1
12.5°	747.2	744.0	708.4	685.8	688.0	694.1	662.5	645.3	620.5	659.3	645.3
15°	835.1	849.1	813.6	772.3	751.9	762.3	738.2	713.1	690.8	702.7	687.6
17.5°	947.4	947.1	877.8	833.7	831.9	831.2	795.6	740.4	766.9	758.7	759.4
20°	1007.0	997.3	911.2	860.2	903.7	888.2	856.3	785.2	816.1	826.1	832.6
22.5°	1056.9	1051.5	947.1	909.8	937.8	938.1	906.2	868.8	864.9	896.1	879.3
25°	1091.7	1113.2	1014.9	1005.9	1018.1	1005.9	974.7	950.3	934.5	981.2	934.5
27.5°	1174.3	1143.8	1025.3	1076.3	1083.8	1022.5	1061.6	1032.9	989.1	1046.9	1065.9
30°	1233.1	1251.1	1098.5	1175.3	1166.4	1109.7	1125.8	1124.7	1072.3	1185.0	1171.7
32.5°	1334.3	1312.8	1218.0	1211.9	1233.5	1231.0	1203.7	1217.0	1229.9	1311.7	1331.4
35°	1438.0	1461.0	1294.5	1335.8	1329.7	1290.9	1362.3	1354.1	1392.5	1560.4	1504.8
37.5°	1672.0	1562.6	1466.0	1460.6	1501.6	1507.7	1484.7	1520.9	1603.8	1733.0	1792.6
40°	1825.3	1775.4	1611.4	1617.8	1561.1	1658.7	1594.1	1710.8	1773.9	1991.8	1970.6
42.5°	2057.1	1935.4	1777.9	1799.4	1787.9	1740.9	1826.0	1885.9	1976.4	2142.5	2249.8
45°	2229.7	2062.8	1988.2	1974.9	1973.5	2055.3	2044.5	2140.4	2172.7	2297.6	2386.6
47.5°	2360.7	2219.0	2108.4	2123.5	2079.7	2313.3	2188.8	2218.6	2283.9	2401.6	2505.3
50°	2516.1	2358.2	2232.6	2269.9	2376.5	2466.2	2353.5	2302.6	2334.5	2473.4	2589.0
52.5°	2660.0	2493.9	2355.7	2386.9	2561.0	2520.1	2507.9	2379.0	2375.1	2486.7	2618.0
55°	2828.3	2641.0	2519.0	2618.0	2679.8	2629.2	2609.8	2452.9	2356.0	2418.1	2542.0
57.5°	2993.4	2786.7	2665.4	2685.9	2764.1	2713.9	2568.5	2327.0	2206.0	2218.2	2343.5
60°	3148.1	2920.6	2820.4	2800.7	2863.1	2666.1	2411.7	2096.2	1935.8	1906.4	2014.8
62.5°	3280.5	3032.5	2937.8	2884.0	2943.5	2667.9	2167.3	1725.9	1549.6	1449.9	1534.2
65°	3385.7	3125.5	3058.0	3030.0	3051.6	2505.7	1786.5	1267.2	1051.2	940.6	989.8
67.5°	3455.7	3177.5	3146.7	3183.3	2896.2	2086.9	1323.6	811.1	611.2	550.9	581.7
70°	3528.2	3223.5	3222.4	3097.9	2455.8	1438.8	773.0	467.6	355.7	332.3	351.7
72.5°	3503.7	3168.9	3185.1	2709.2	1701.8	769.1	408.0	264.5	240.8	249.1	266.3
75°	3244.6	2881.1	2803.2	1947.6	965.4	357.4	235.1	200.3	198.8	211.4	228.2
77.5°	2353.5	2006.5	1800.5	1103.9	413.8	193.4	173.0	167.2	167.2	177.3	192.4
80°	775.9	671.5	699.8	427.1	195.6	133.5	134.9	137.5	136.7	139.2	151.8
82.5°	127.4	132.1	204.2	174.4	118.1	91.2	101.9	106.9	108.4	96.9	110.2
85°	45.2	51.0	86.8	80.7	68.2	45.9	67.1	75.0	73.9	64.6	71.4
87.5°	14.0	17.9	31.6	24.4	20.5	12.6	25.1	29.4	37.0	15.1	13.6
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)