

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: P367406

Luminaire Tested: **MSA-SA2C-727-U-T2**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367406  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2C-727-U-T2  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10290 lumens  
Efficiency: N/A  
Efficacy: 91.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B2 - U0 - G2

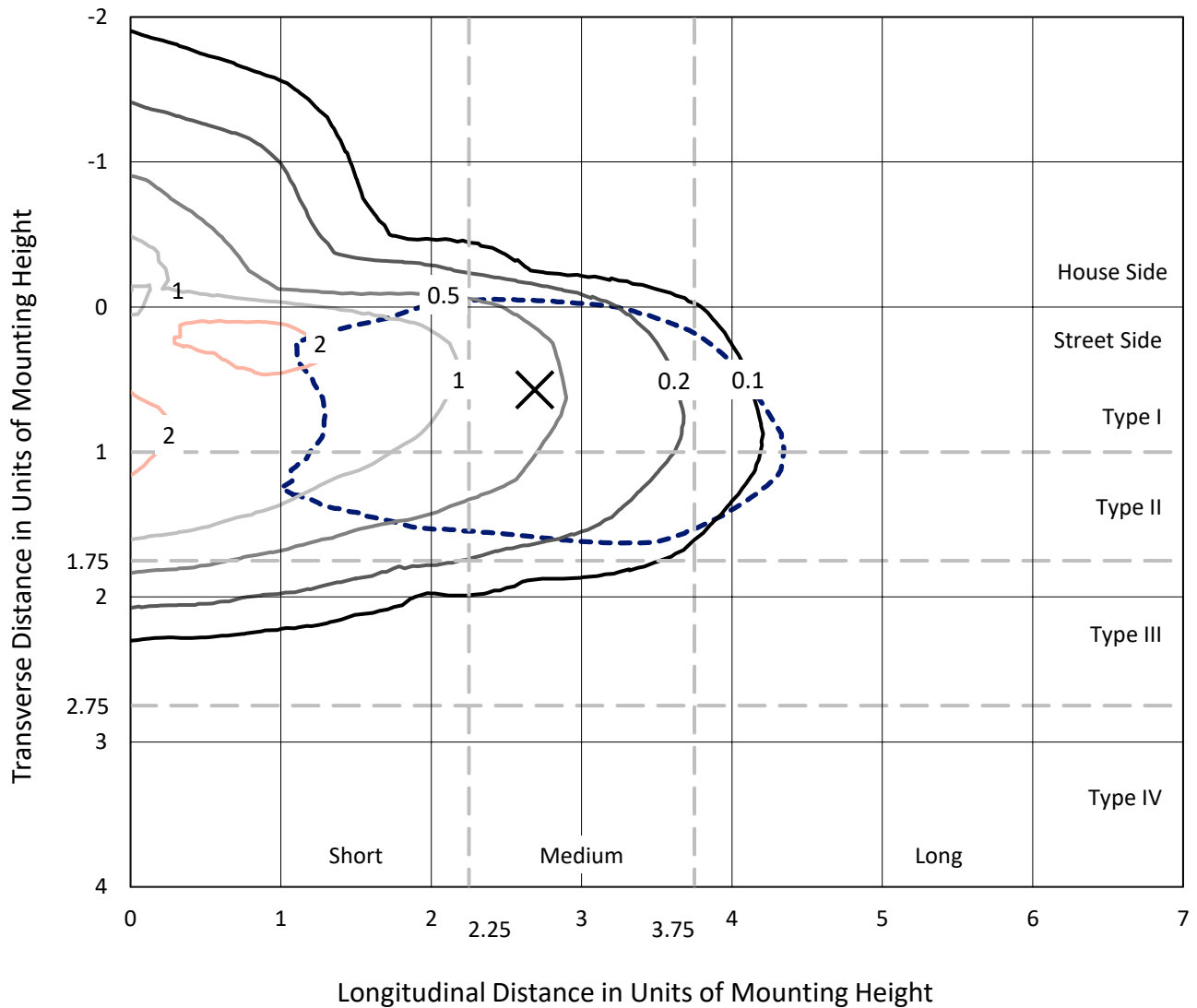
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

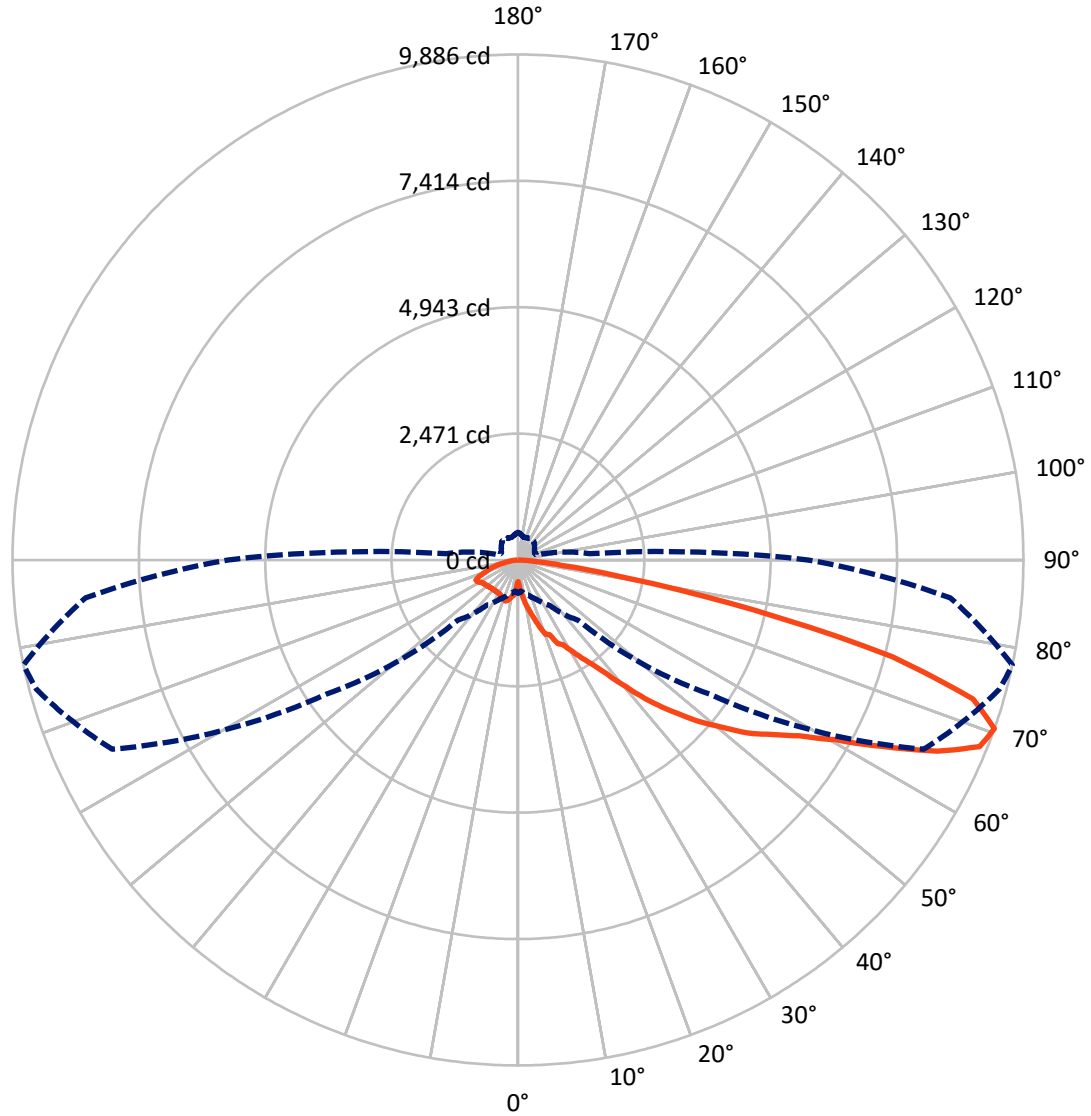
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1836.6	0.0	1836.6
	% Fixture	17.8	0.0	17.8
<b>Street Side</b>	Lumens	8453.4	0.0	8453.4
	% Fixture	82.2	0.0	82.2
<b>Total</b>	Lumens	10290.0	0.0	10290.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.8	0.6
10°-20°	285.6	2.8
20°-30°	549.8	5.3
30°-40°	926.1	9.0
40°-50°	1602.4	15.6
50°-60°	2419.5	23.5
60°-70°	2679.9	26.0
70°-80°	1545.1	15.0
80°-90°	216.7	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°	10290.0	100.0
0°-180°	10290.0	100.0

**Coefficient of Utilization**

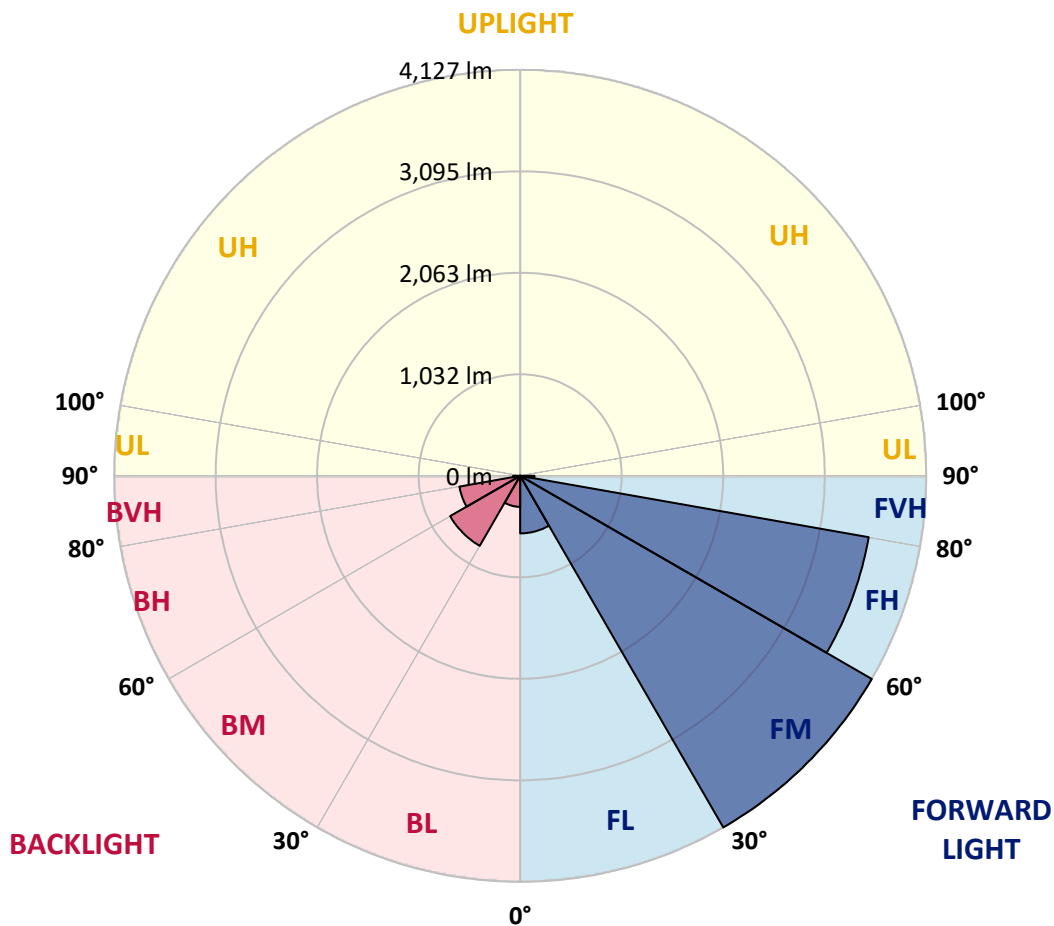


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	585.0	5.7			
FM (30°-60°)	4126.6	40.1			
FH (60°-80°)	3597.3	35.0			G2/5000
FVH (80°-90°)	144.6	1.4			G2/225
BL (0°-30°)	315.4	3.1	B1/500		
BM (30°-60°)	821.5	8.0	B1/1000		
BH (60°-80°)	627.7	6.1	B2/1000		G2/1000
BVH (80°-90°)	72.1	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**  
 Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	419.5	419.5	419.5	419.5	419.5	419.5	419.5	419.5	419.5	419.5	419.5
2.5°	540.1	520.8	491.6	503.6	518.2	519.9	515.2	488.6	479.6	499.7	505.8
5°	756.7	724.1	704.4	697.9	676.0	630.6	663.2	646.5	649.9	640.0	659.3
7.5°	939.0	917.1	888.0	879.8	829.6	794.0	816.3	809.0	773.9	760.1	782.0
10°	1031.7	1007.6	1008.9	991.3	978.0	981.5	970.3	938.1	912.0	893.5	840.8
12.5°	1087.4	1093.4	1125.6	1116.6	1166.8	1208.0	1176.7	1129.0	1046.2	1029.5	977.2
15°	1220.0	1242.3	1212.3	1226.0	1247.4	1326.4	1313.5	1303.2	1215.7	1183.1	1086.6
17.5°	1356.4	1360.7	1315.2	1307.9	1359.4	1399.3	1449.5	1391.6	1402.3	1379.6	1223.4
20°	1385.6	1415.2	1350.0	1304.9	1410.9	1489.8	1552.0	1490.7	1547.3	1553.3	1336.2
22.5°	1492.4	1456.8	1371.0	1326.8	1419.4	1516.4	1617.6	1651.9	1633.9	1583.3	1445.2
25°	1566.6	1547.7	1460.2	1411.3	1446.5	1535.7	1713.3	1802.9	1818.8	1811.9	1549.0
27.5°	1704.3	1713.7	1533.6	1547.3	1498.4	1506.5	1770.8	2003.3	1904.2	1876.7	1677.7
30°	1921.8	1879.7	1677.7	1688.8	1607.8	1594.0	1892.2	2176.1	2087.3	2054.3	1783.6
32.5°	2148.7	2152.5	1907.2	1811.9	1768.6	1754.9	1868.1	2266.7	2319.0	2276.1	1943.6
35°	2468.7	2446.4	2156.0	2030.7	1874.1	1850.1	2039.3	2529.2	2625.3	2505.2	2133.7
37.5°	2956.0	2888.7	2550.6	2261.1	2145.3	2117.8	2283.8	2764.7	2980.9	2831.6	2444.2
40°	3347.2	3210.4	2903.2	2550.6	2354.6	2388.5	2457.5	3050.4	3349.8	3265.7	2731.7
42.5°	3659.1	3537.7	3152.9	2905.0	2638.6	2596.5	2672.0	3404.3	3851.7	3769.3	3090.3
45°	3958.1	3711.0	3433.4	3210.4	2954.3	3005.3	2994.2	3765.5	4467.2	4213.7	3407.3
47.5°	4253.2	4021.1	3730.7	3430.9	3173.1	3490.9	3372.1	4034.0	4882.5	4694.6	3741.0
50°	4632.4	4377.2	4046.4	3744.9	3590.4	3822.9	3623.5	4261.3	5347.5	5127.0	4055.9
52.5°	4884.2	4635.8	4345.8	4130.5	4116.4	4026.7	3975.6	4549.2	5755.0	5621.2	4389.6
55°	4854.6	4615.2	4484.0	4507.6	4682.6	4380.2	4338.6	4975.1	6180.1	6025.2	4749.9
57.5°	4483.5	4222.3	4250.2	4390.0	4860.2	5000.9	4930.1	5430.3	6559.3	6489.0	5195.6
60°	3492.6	3358.4	3585.3	3841.0	4622.5	5182.8	5680.4	5985.4	7026.0	7138.4	5895.7
62.5°	2268.8	2089.5	2448.1	2882.2	3913.4	5062.6	6444.3	7038.0	7790.4	8045.7	6959.5
65°	1175.4	1146.6	1397.6	1796.5	2724.4	4316.7	6713.7	8142.2	8719.6	9016.8	7975.8
67.5°	854.5	801.3	917.6	1152.2	1663.1	2943.6	6203.3	8986.8	9465.5	9737.9	8566.4
70°	650.7	611.3	700.1	845.5	1086.1	1662.7	4579.2	8756.5	9753.4	9885.5	8487.9
72.5°	487.3	453.4	531.1	666.6	836.9	936.0	2706.8	7199.8	9262.2	9307.3	7618.0
75°	389.1	362.9	396.4	526.3	682.1	637.0	1437.9	5216.2	7525.3	7563.9	5818.9
77.5°	319.2	296.8	310.6	394.6	530.6	479.2	713.4	3318.0	4777.8	4718.6	3273.9
80°	260.4	241.1	247.5	285.3	404.1	357.8	400.7	1730.9	2279.1	2187.3	1361.5
82.5°	200.3	184.0	196.9	209.8	292.6	257.0	233.8	787.6	933.4	869.5	499.3
85°	134.3	119.3	171.2	157.4	191.3	157.9	127.8	313.6	347.9	324.3	175.4
87.5°	36.9	34.7	57.5	78.5	78.5	59.6	46.8	75.9	96.9	84.9	41.2
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):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	419.5	419.5	419.5	419.5	419.5	419.5	419.5	419.5	419.5	419.5	419.5
2.5°	508.3	498.9	474.0	471.9	477.9	478.7	474.9	465.9	461.1	486.9	483.0
5°	654.6	621.1	601.0	582.5	556.8	538.4	543.1	555.9	560.2	579.5	581.7
7.5°	768.3	724.1	679.9	620.7	581.7	556.8	575.7	589.4	600.1	627.6	638.7
10°	817.6	769.6	706.9	644.7	634.0	638.3	627.6	631.0	647.7	649.0	654.6
12.5°	909.4	854.9	742.1	685.9	682.9	691.9	688.1	703.9	715.5	746.8	733.5
15°	997.3	927.9	768.7	711.2	698.8	716.8	737.8	764.4	789.3	818.9	803.9
17.5°	1104.2	999.5	770.0	699.6	701.8	740.4	762.3	776.9	851.1	891.8	871.2
20°	1171.5	1006.8	741.3	670.9	701.8	736.5	767.0	782.9	866.1	927.4	941.6
22.5°	1232.4	1009.4	718.9	655.5	675.2	721.1	767.0	802.2	855.4	914.1	916.3
25°	1265.9	1007.2	690.2	656.7	674.8	697.5	738.2	770.4	809.9	891.8	894.0
27.5°	1351.7	979.3	661.9	661.9	671.3	672.2	724.1	743.0	748.5	823.2	836.5
30°	1376.5	985.3	658.5	661.0	665.8	657.2	679.9	692.3	700.5	764.8	767.0
32.5°	1416.4	937.3	668.8	653.3	647.3	646.0	651.6	662.8	666.2	705.6	712.9
35°	1464.9	918.0	672.2	651.2	639.2	632.7	649.5	635.7	646.5	692.8	697.9
37.5°	1622.8	891.4	689.8	651.2	635.7	628.4	620.3	626.7	664.9	709.5	737.0
40°	1723.6	899.5	685.5	657.6	624.1	617.3	603.6	627.1	686.3	765.3	785.9
42.5°	1900.3	904.3	690.6	654.6	628.0	601.4	610.4	636.2	698.4	743.4	775.1
45°	2083.1	918.8	687.2	645.6	619.4	631.9	619.4	642.6	672.2	673.5	697.5
47.5°	2262.4	977.6	679.9	627.1	617.3	649.9	618.1	622.0	624.1	631.9	660.2
50°	2473.0	1040.2	669.6	601.4	620.3	650.7	622.9	604.0	601.8	627.1	658.9
52.5°	2712.3	1111.0	656.3	576.5	602.7	642.6	639.2	605.3	586.8	611.3	643.0
55°	2994.2	1191.7	640.9	551.6	583.4	643.4	648.2	596.3	587.3	613.8	647.7
57.5°	3368.7	1308.3	610.8	515.6	559.8	630.1	625.0	586.0	577.4	605.7	640.9
60°	4007.8	1532.7	567.9	480.0	534.5	597.5	606.1	567.5	558.9	590.3	627.1
62.5°	4863.6	1802.5	516.0	445.3	503.6	562.4	582.5	540.9	540.1	580.0	618.6
65°	5660.2	1955.7	462.4	413.5	471.9	529.8	555.9	516.0	517.8	567.9	606.6
67.5°	5991.4	1775.5	414.4	385.2	435.4	492.5	534.1	496.7	491.2	551.6	587.3
70°	5680.4	1410.4	372.8	355.2	394.2	452.1	503.6	471.0	458.1	513.0	540.9
72.5°	5026.2	1175.8	333.7	320.0	358.2	409.7	462.4	436.3	419.5	461.6	486.4
75°	3928.9	964.7	289.1	285.3	317.0	371.1	419.5	401.5	380.1	406.7	431.5
77.5°	2237.1	610.4	242.8	245.4	268.1	325.2	368.1	353.9	332.0	343.2	371.9
80°	895.3	308.0	195.2	196.9	216.2	267.2	305.0	299.8	277.1	286.1	305.9
82.5°	334.6	169.0	144.1	145.0	164.3	211.5	260.4	257.8	236.4	229.9	241.1
85°	133.0	83.6	88.4	92.2	110.7	152.3	208.9	185.3	160.0	140.3	147.1
87.5°	31.7	26.6	30.9	32.6	36.0	47.6	76.4	61.3	63.1	50.6	37.7
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)