

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: P367560

Luminaire Tested: **MSA-SA2D-730-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367560
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-SA2D-730-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: 12251 lumens
Efficiency: N/A
Efficacy: 95.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

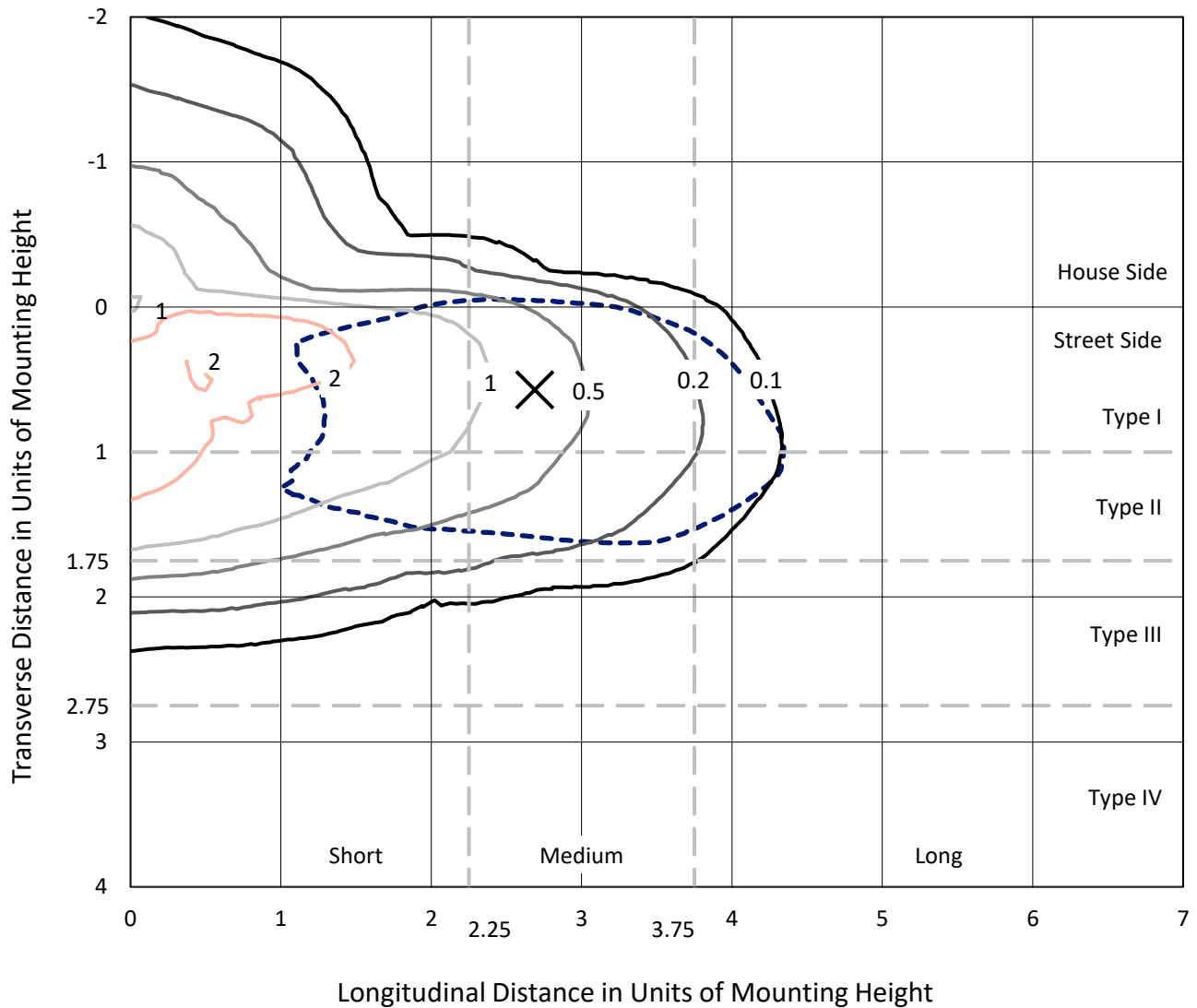
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

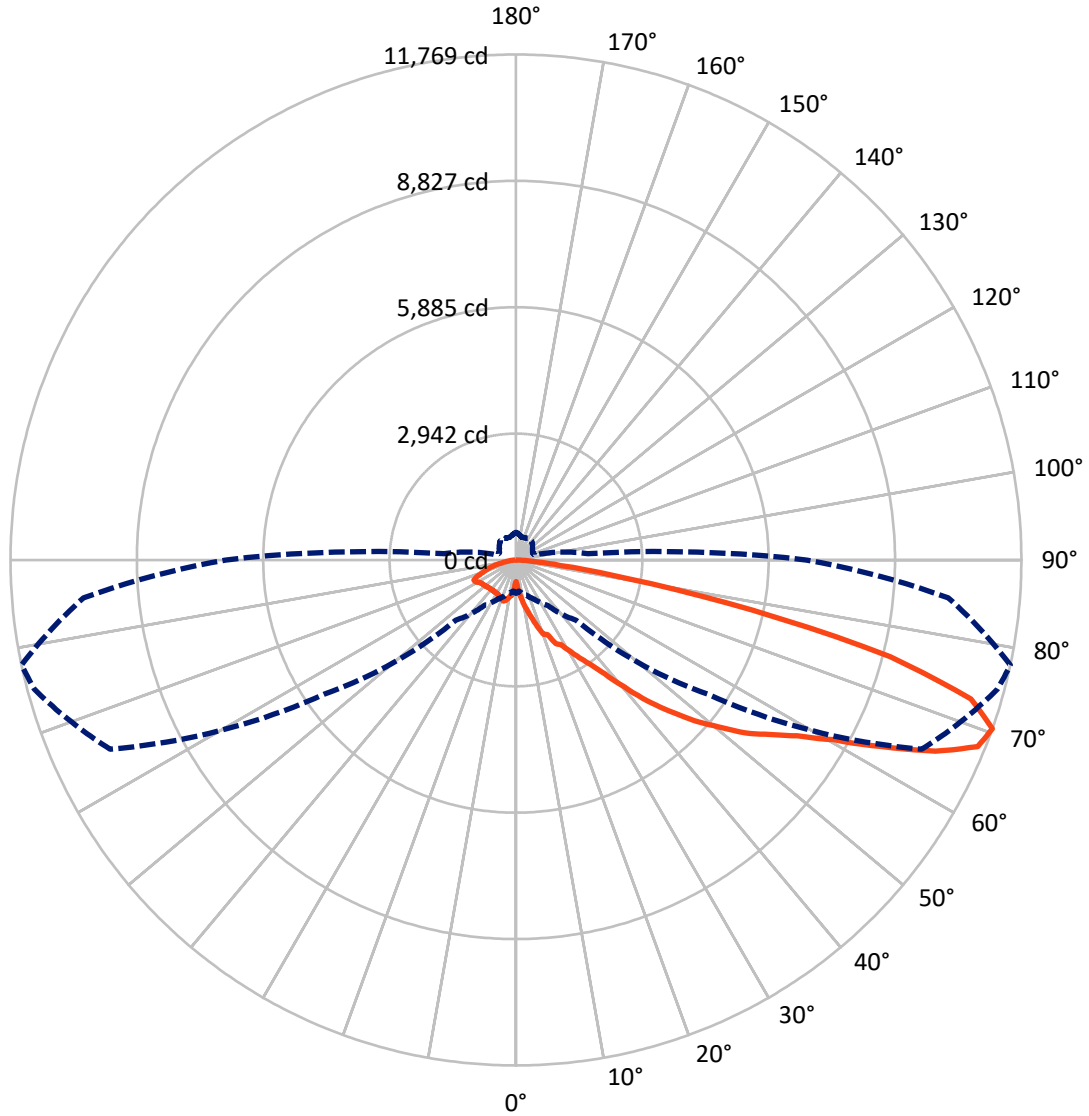
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.9 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
House Side	Lumens	2186.6	0.0	2186.6
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	10064.4	0.0	10064.4
	% Fixture	82.2	0.0	82.2
Total	Lumens	12251.0	0.0	12251.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.2	0.6
10°-20°	340.1	2.8
20°-30°	654.6	5.3
30°-40°	1102.6	9.0
40°-50°	1907.8	15.6
50°-60°	2880.6	23.5
60°-70°	3190.6	26.0
70°-80°	1839.5	15.0
80°-90°	258.0	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°	12251.0	100.0
0°-180°	12251.0	100.0

Coefficient of Utilization



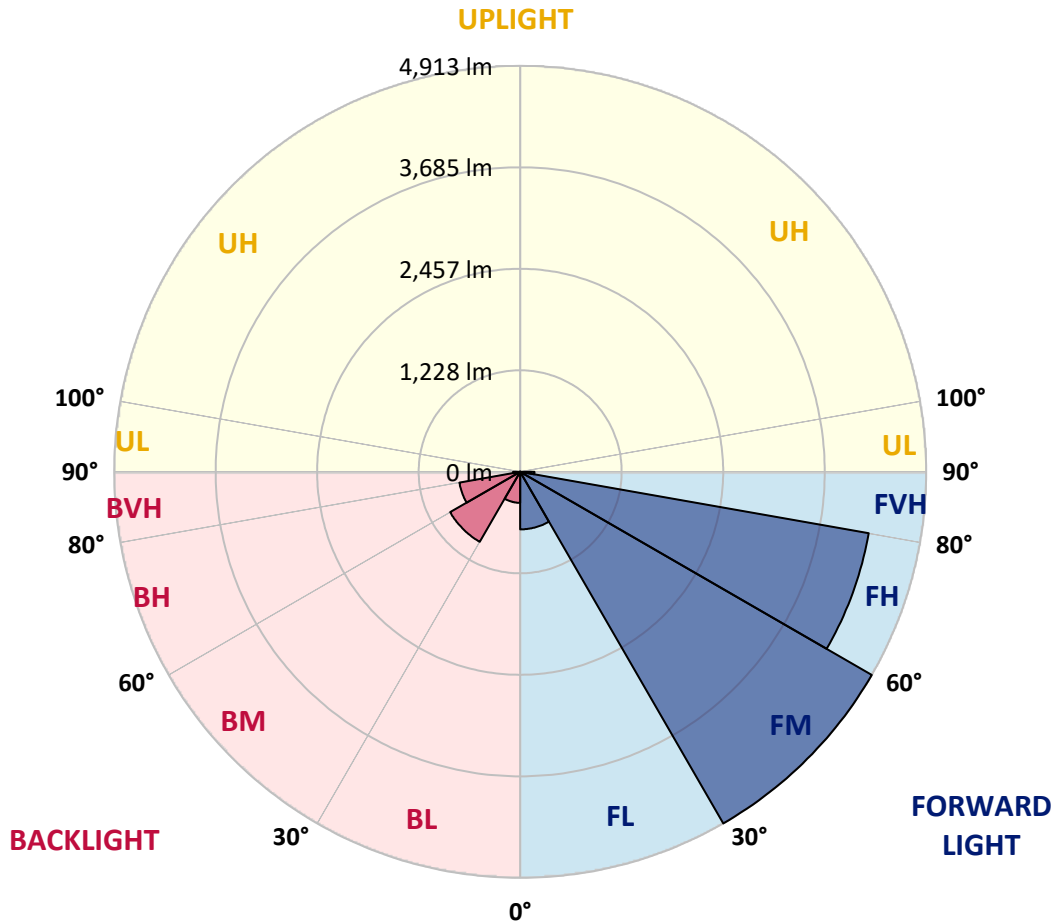
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	696.4	5.7			
FM (30°-60°)	4913.0	40.1			
FH (60°-80°)	4282.8	35.0			G2/5000
FVH (80°-90°)	172.1	1.4			G2/225
BL (0°-30°)	375.5	3.1	B1/500		
BM (30°-60°)	978.0	8.0	B1/1000		
BH (60°-80°)	747.3	6.1	B2/1000		G2/1000
BVH (80°-90°)	85.9	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°	499.5	499.5	499.5	499.5	499.5	499.5	499.5	499.5	499.5	499.5	499.5
2.5°	643.0	620.0	585.3	599.6	616.9	619.0	613.4	581.7	571.0	595.0	602.1
5°	900.9	862.1	838.6	830.9	804.9	750.8	789.6	769.6	773.7	762.0	785.0
7.5°	1118.0	1091.9	1057.2	1047.5	987.7	945.3	971.9	963.2	921.3	905.0	931.0
10°	1228.3	1199.7	1201.2	1180.3	1164.4	1168.5	1155.2	1116.9	1085.8	1063.8	1001.0
12.5°	1294.7	1301.8	1340.1	1329.4	1389.1	1438.2	1400.9	1344.2	1245.6	1225.7	1163.4
15°	1452.5	1479.0	1443.3	1459.6	1485.2	1579.1	1563.8	1551.6	1447.4	1408.6	1293.6
17.5°	1614.9	1620.0	1565.9	1557.2	1618.5	1666.0	1725.7	1656.8	1669.5	1642.5	1456.6
20°	1649.6	1684.8	1607.2	1553.6	1679.7	1773.7	1847.8	1774.7	1842.1	1849.3	1590.9
22.5°	1776.8	1734.4	1632.2	1579.6	1690.0	1805.4	1925.9	1966.8	1945.3	1885.0	1720.6
25°	1865.1	1842.7	1738.5	1680.3	1722.1	1828.4	2039.8	2146.5	2165.4	2157.3	1844.2
27.5°	2029.1	2040.3	1825.8	1842.1	1783.9	1793.6	2108.2	2385.0	2267.1	2234.4	1997.4
30°	2288.0	2238.0	1997.4	2010.7	1914.2	1897.8	2252.8	2590.9	2485.1	2445.8	2123.6
32.5°	2558.2	2562.8	2270.6	2157.3	2105.7	2089.3	2224.2	2698.6	2760.9	2709.9	2314.0
35°	2939.2	2912.6	2566.9	2417.7	2231.3	2202.7	2427.9	3011.2	3125.6	2982.6	2540.3
37.5°	3519.3	3439.2	3036.7	2692.0	2554.1	2521.4	2719.0	3291.6	3549.0	3371.2	2910.1
40°	3985.1	3822.2	3456.5	3036.7	2803.3	2843.7	2925.9	3631.7	3988.2	3888.1	3252.2
42.5°	4356.4	4211.9	3753.8	3458.6	3141.4	3091.4	3181.2	4053.0	4585.7	4487.6	3679.2
45°	4712.4	4418.2	4087.8	3822.2	3517.3	3578.1	3564.8	4483.1	5318.6	5016.7	4056.6
47.5°	5063.7	4787.4	4441.7	4084.7	3777.8	4156.2	4014.7	4802.8	5813.0	5589.3	4453.9
50°	5515.2	5211.3	4817.6	4458.5	4274.7	4551.5	4314.0	5073.4	6366.6	6104.1	4828.8
52.5°	5815.0	5519.3	5174.0	4917.7	4900.8	4794.1	4733.3	5416.1	6851.7	6692.4	5226.1
55°	5779.8	5494.8	5338.5	5366.6	5575.0	5214.9	5165.4	5923.3	7357.9	7173.5	5655.1
57.5°	5338.0	5027.0	5060.2	5226.7	5786.4	5953.9	5869.6	6465.1	7809.3	7725.6	6185.8
60°	4158.2	3998.4	4268.6	4572.9	5503.5	6170.5	6762.9	7126.0	8365.0	8498.8	7019.3
62.5°	2701.2	2487.7	2914.6	3431.5	4659.2	6027.5	7672.5	8379.3	9275.1	9579.0	8285.8
65°	1399.4	1365.1	1663.9	2138.9	3243.5	5139.3	7993.2	9693.9	10381.3	10735.2	9495.7
67.5°	1017.3	954.0	1092.4	1371.8	1980.0	3504.5	7385.4	10699.5	11269.4	11593.7	10199.0
70°	774.8	727.8	833.5	1006.6	1293.1	1979.5	5451.9	10425.2	11612.1	11769.4	10105.5
72.5°	580.2	539.8	632.3	793.7	996.4	1114.4	3222.6	8571.8	11027.3	11081.0	9069.8
75°	463.2	432.1	471.9	626.6	812.0	758.4	1711.9	6210.3	8959.5	9005.4	6927.8
77.5°	380.0	353.4	369.8	469.9	631.8	570.5	849.3	3950.4	5688.3	5617.9	3897.8
80°	310.0	287.0	294.7	339.6	481.1	425.9	477.0	2060.7	2713.4	2604.1	1621.0
82.5°	238.5	219.1	234.4	249.7	348.3	305.9	278.3	937.7	1111.3	1035.2	594.5
85°	159.9	142.0	203.8	187.4	227.8	187.9	152.2	373.3	414.2	386.1	208.9
87.5°	43.9	41.4	68.4	93.5	93.5	71.0	55.7	90.4	115.4	101.1	49.0
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°	499.5	499.5	499.5	499.5	499.5	499.5	499.5	499.5	499.5	499.5	499.5
2.5°	605.2	594.0	564.3	561.8	568.9	570.0	565.4	554.6	549.0	579.7	575.1
5°	779.4	739.5	715.5	693.6	662.9	640.9	646.6	661.9	667.0	690.0	692.5
7.5°	914.7	862.1	809.5	739.0	692.5	662.9	685.4	701.7	714.5	747.2	760.5
10°	973.4	916.2	841.7	767.6	754.8	759.9	747.2	751.3	771.2	772.7	779.4
12.5°	1082.7	1017.9	883.5	816.6	813.1	823.8	819.2	838.1	851.9	889.2	873.3
15°	1187.4	1104.7	915.2	846.8	832.0	853.4	878.4	910.1	939.7	975.0	957.1
17.5°	1314.6	1190.0	916.7	833.0	835.5	881.5	907.5	924.9	1013.3	1061.8	1037.3
20°	1394.8	1198.6	882.5	798.8	835.5	876.9	913.2	932.1	1031.1	1104.2	1121.0
22.5°	1467.3	1201.7	856.0	780.4	803.9	858.5	913.2	955.0	1018.4	1088.3	1090.9
25°	1507.1	1199.2	821.7	781.9	803.4	830.4	878.9	917.2	964.2	1061.8	1064.3
27.5°	1609.3	1166.0	788.0	788.0	799.3	800.3	862.1	884.6	891.2	980.1	995.9
30°	1638.9	1173.1	783.9	787.0	792.6	782.4	809.5	824.3	834.0	910.6	913.2
32.5°	1686.4	1115.9	796.2	777.8	770.7	769.1	775.8	789.1	793.1	840.1	848.8
35°	1744.1	1092.9	800.3	775.3	761.0	753.3	773.2	756.9	769.6	824.8	830.9
37.5°	1932.0	1061.3	821.2	775.3	756.9	748.2	738.5	746.2	791.6	844.7	877.4
40°	2052.1	1071.0	816.1	782.9	743.1	734.9	718.6	746.7	817.1	911.1	935.6
42.5°	2262.5	1076.6	822.3	779.4	747.7	716.0	726.7	757.4	831.4	885.1	922.9
45°	2480.0	1094.0	818.2	768.6	737.5	752.3	737.5	765.1	800.3	801.8	830.4
47.5°	2693.5	1163.9	809.5	746.7	734.9	773.7	735.9	740.5	743.1	752.3	786.0
50°	2944.3	1238.5	797.2	716.0	738.5	774.8	741.6	719.1	716.5	746.7	784.5
52.5°	3229.2	1322.8	781.4	686.4	717.6	765.1	761.0	720.6	698.7	727.8	765.6
55°	3564.8	1418.8	763.0	656.8	694.6	766.1	771.7	709.9	699.2	730.8	771.2
57.5°	4010.6	1557.7	727.3	613.9	666.5	750.2	744.1	697.6	687.4	721.1	763.0
60°	4771.6	1824.8	676.2	571.5	636.4	711.4	721.6	675.7	665.5	702.7	746.7
62.5°	5790.5	2146.0	614.4	530.1	599.6	669.5	693.6	644.0	643.0	690.5	736.5
65°	6738.9	2328.3	550.6	492.3	561.8	630.7	661.9	614.4	616.4	676.2	722.2
67.5°	7133.2	2113.8	493.4	458.6	518.4	586.3	635.8	591.4	584.8	656.8	699.2
70°	6762.9	1679.2	443.8	422.9	469.3	538.3	599.6	560.8	545.4	610.8	644.0
72.5°	5984.0	1399.9	397.3	381.0	426.4	487.7	550.6	519.4	499.5	549.5	579.2
75°	4677.6	1148.6	344.2	339.6	377.4	441.8	499.5	478.0	452.5	484.2	513.8
77.5°	2663.4	726.7	289.1	292.1	319.2	387.1	438.2	421.3	395.3	408.6	442.8
80°	1065.9	366.7	232.4	234.4	257.4	318.2	363.1	357.0	329.9	340.6	364.1
82.5°	398.4	201.2	171.6	172.6	195.6	251.8	310.0	306.9	281.4	273.7	287.0
85°	158.3	99.6	105.2	109.8	131.8	181.3	248.7	220.6	190.5	167.0	175.2
87.5°	37.8	31.7	36.8	38.8	42.9	56.7	90.9	73.0	75.1	60.3	44.9
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)