

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: P368198

Luminaire Tested: **MSA-SA4A-727-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368198
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-SA4A-727-U-T2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12932 lumens
Efficiency: N/A
Efficacy: 100.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G2

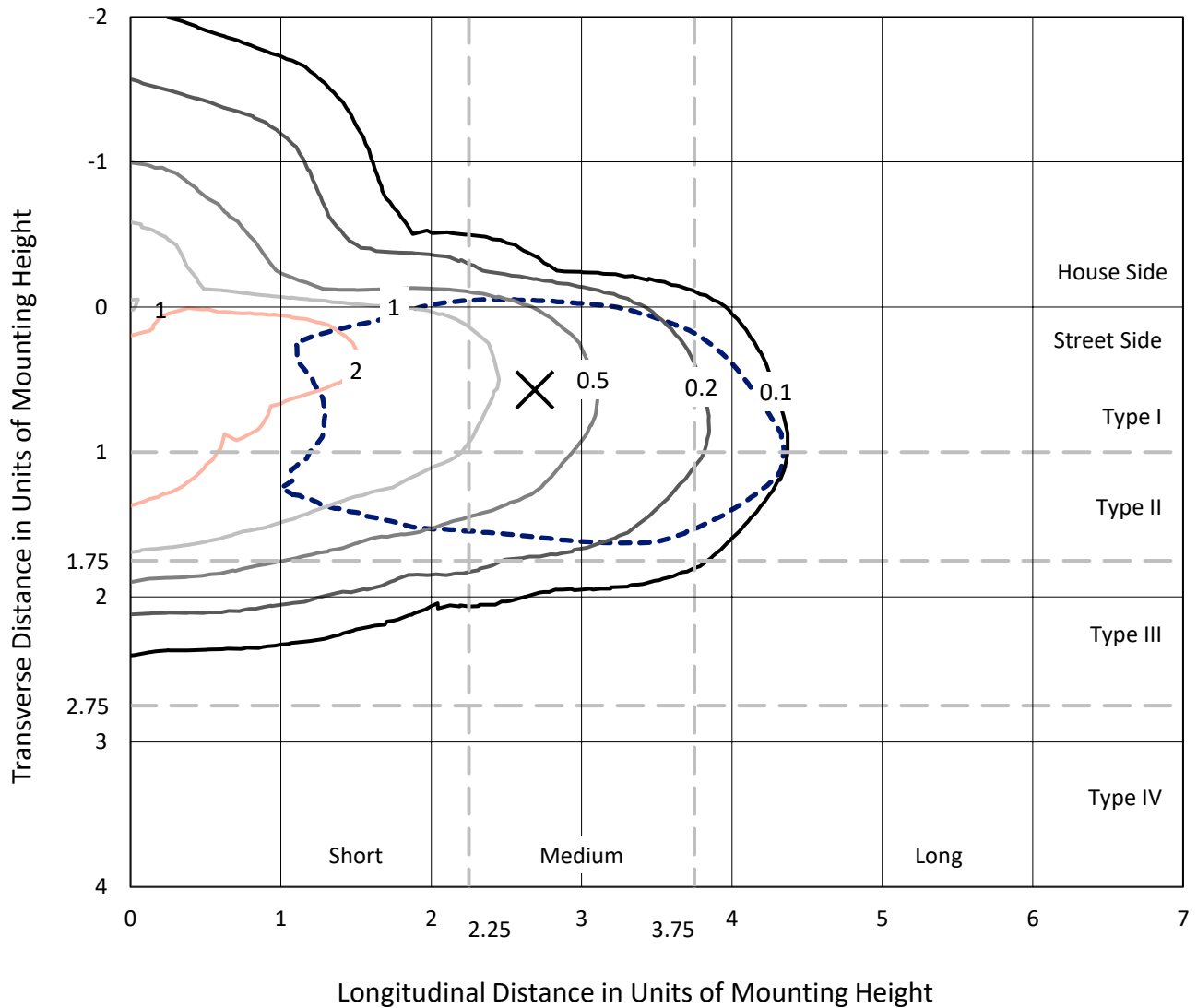
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

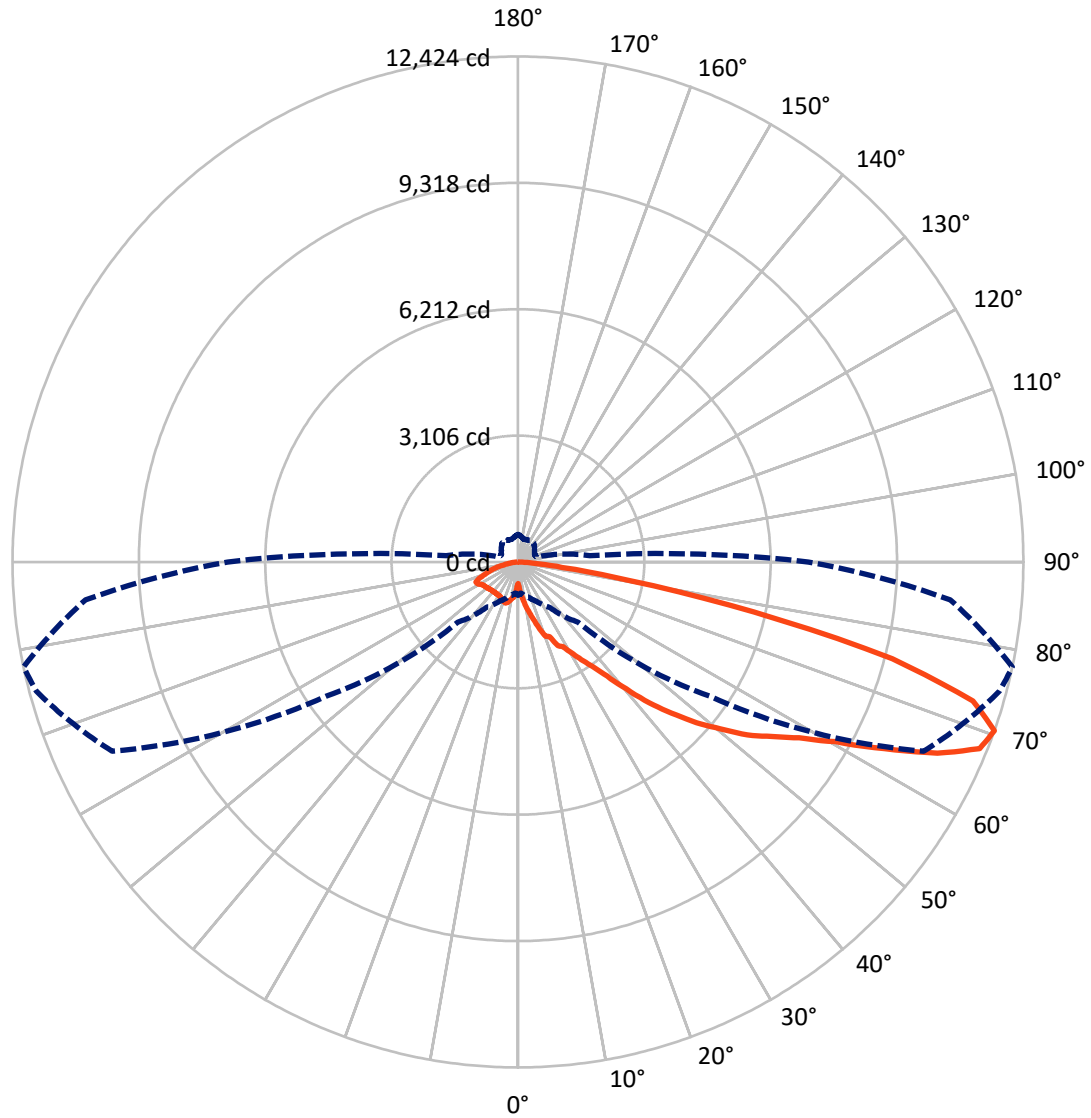
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 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	2308.2	0.0	2308.2
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	10623.8	0.0	10623.8
	% Fixture	82.2	0.0	82.2
Total	Lumens	12932.0	0.0	12932.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.5	0.6
10°-20°	359.0	2.8
20°-30°	691.0	5.3
30°-40°	1163.9	9.0
40°-50°	2013.9	15.6
50°-60°	3040.7	23.5
60°-70°	3368.0	26.0
70°-80°	1941.7	15.0
80°-90°	272.3	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°	12932.0	100.0
0°-180°	12932.0	100.0

Coefficient of Utilization



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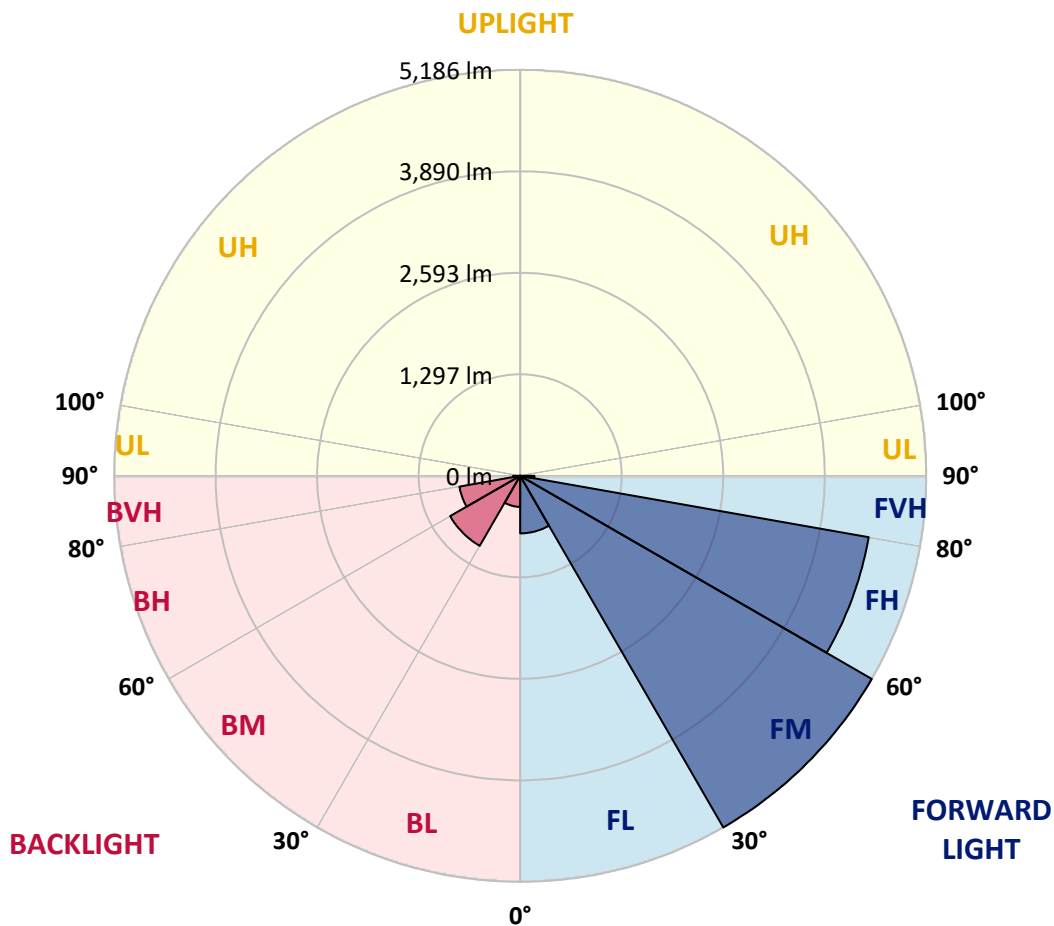
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	735.1	5.7			
FM (30°-60°)	5186.1	40.1			
FH (60°-80°)	4520.9	35.0			G2/5000
FVH (80°-90°)	181.7	1.4			G2/225
BL (0°-30°)	396.3	3.1	B1/500		
BM (30°-60°)	1032.4	8.0	B2/2500		
BH (60°-80°)	788.8	6.1	B2/1000		G2/1000
BVH (80°-90°)	90.7	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°	527.2	527.2	527.2	527.2	527.2	527.2	527.2	527.2	527.2	527.2	527.2
2.5°	678.7	654.5	617.8	632.9	651.2	653.4	647.5	614.0	602.7	628.1	635.6
5°	951.0	910.0	885.2	877.1	849.6	792.5	833.5	812.4	816.7	804.3	828.6
7.5°	1180.1	1152.6	1115.9	1105.7	1042.6	997.9	1025.9	1016.7	972.5	955.3	982.8
10°	1296.5	1266.4	1268.0	1245.9	1229.2	1233.5	1219.5	1179.0	1146.1	1123.0	1056.6
12.5°	1366.6	1374.2	1414.6	1403.3	1466.4	1518.1	1478.8	1418.9	1314.9	1293.8	1228.1
15°	1533.2	1561.2	1523.5	1540.8	1567.7	1666.9	1650.7	1637.8	1527.8	1486.8	1365.5
17.5°	1704.6	1710.0	1652.9	1643.7	1708.4	1758.6	1821.6	1748.9	1762.3	1733.8	1537.5
20°	1741.3	1778.5	1696.6	1640.0	1773.1	1872.3	1950.5	1873.4	1944.5	1952.1	1679.3
22.5°	1875.5	1830.8	1723.0	1667.4	1783.9	1905.7	2033.0	2076.1	2053.4	1989.8	1816.2
25°	1968.8	1945.1	1835.1	1773.7	1817.9	1930.0	2153.2	2265.9	2285.8	2277.2	1946.7
27.5°	2141.9	2153.7	1927.3	1944.5	1883.1	1893.3	2225.4	2517.6	2393.1	2358.6	2108.4
30°	2415.2	2362.4	2108.4	2122.5	2020.6	2003.3	2378.0	2734.9	2623.3	2581.8	2241.6
32.5°	2700.4	2705.2	2396.9	2277.2	2222.7	2205.5	2347.8	2848.6	2914.4	2860.5	2442.7
35°	3102.5	3074.5	2709.5	2552.1	2355.3	2325.2	2562.9	3178.6	3299.3	3148.4	2681.5
37.5°	3715.0	3630.3	3205.5	2841.6	2696.1	2661.6	2870.2	3474.5	3746.2	3558.6	3071.8
40°	4206.6	4034.7	3648.7	3205.5	2959.1	3001.7	3088.5	3833.6	4209.9	4104.2	3433.0
42.5°	4598.6	4446.0	3962.4	3650.8	3316.0	3263.2	3358.1	4278.3	4840.6	4737.1	3883.7
45°	4974.3	4663.8	4315.0	4034.7	3712.8	3777.0	3762.9	4732.3	5614.2	5295.6	4282.1
47.5°	5345.2	5053.6	4688.6	4311.8	3987.8	4387.2	4237.9	5069.7	6136.1	5900.0	4701.5
50°	5821.8	5501.0	5085.4	4706.4	4512.3	4804.5	4553.8	5355.5	6720.5	6443.4	5097.2
52.5°	6138.2	5826.1	5461.7	5191.0	5173.2	5060.6	4996.4	5717.2	7232.6	7064.4	5516.6
55°	6101.0	5800.2	5635.3	5664.9	5884.9	5504.8	5452.5	6252.5	7766.9	7572.3	5969.5
57.5°	5634.7	5306.4	5341.4	5517.2	6108.0	6284.9	6195.9	6824.5	8243.4	8155.0	6529.6
60°	4389.4	4220.6	4505.8	4827.1	5809.4	6513.5	7138.8	7522.1	8830.0	8971.2	7409.4
62.5°	2851.3	2626.0	3076.7	3622.2	4918.2	6362.5	8099.0	8845.1	9790.7	10111.4	8746.4
65°	1477.1	1441.0	1756.4	2257.8	3423.8	5425.0	8437.5	10232.7	10958.4	11332.0	10023.6
67.5°	1073.9	1007.0	1153.1	1448.0	2090.1	3699.3	7796.0	11294.2	11895.9	12238.2	10765.9
70°	817.8	768.2	879.8	1062.6	1365.0	2089.6	5754.9	11004.7	12257.6	12423.6	10667.2
72.5°	612.4	569.8	667.4	837.8	1051.8	1176.3	3401.7	9048.3	11640.3	11696.9	9573.9
75°	489.0	456.1	498.1	661.5	857.2	800.6	1807.1	6555.5	9457.5	9506.0	7312.9
77.5°	401.1	373.1	390.3	496.0	666.9	602.2	896.5	4170.0	6004.5	5930.1	4114.4
80°	327.2	303.0	311.1	358.5	507.8	449.6	503.5	2175.3	2864.3	2748.9	1711.1
82.5°	251.8	231.3	247.4	263.6	367.7	322.9	293.8	989.8	1173.1	1092.8	627.5
85°	168.7	149.9	215.1	197.9	240.4	198.4	160.7	394.1	437.2	407.6	220.5
87.5°	46.4	43.7	72.2	98.7	98.7	74.9	58.8	95.4	121.8	106.7	51.8
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°	527.2	527.2	527.2	527.2	527.2	527.2	527.2	527.2	527.2	527.2	527.2
2.5°	638.8	627.0	595.7	593.0	600.6	601.6	596.8	585.5	579.5	611.9	607.0
5°	822.7	780.6	755.3	732.1	699.8	676.6	682.5	698.7	704.1	728.3	731.0
7.5°	965.5	910.0	854.5	780.1	731.0	699.8	723.5	740.7	754.2	788.7	802.7
10°	1027.5	967.2	888.4	810.3	796.8	802.2	788.7	793.0	814.0	815.7	822.7
12.5°	1142.9	1074.4	932.6	862.0	858.3	869.6	864.7	884.7	899.2	938.6	921.9
15°	1253.4	1166.1	966.1	893.8	878.2	900.8	927.3	960.7	992.0	1029.1	1010.3
17.5°	1387.7	1256.1	967.7	879.3	882.0	930.5	958.0	976.3	1069.6	1120.8	1094.9
20°	1472.3	1265.3	931.6	843.2	882.0	925.6	963.9	983.9	1088.5	1165.5	1183.3
22.5°	1548.8	1268.5	903.5	823.8	848.5	906.2	963.9	1008.1	1075.0	1148.8	1151.5
25°	1590.9	1265.8	867.4	825.4	848.0	876.6	927.8	968.2	1017.8	1120.8	1123.5
27.5°	1698.7	1230.8	831.8	831.8	843.7	844.8	910.0	933.7	940.7	1034.5	1051.3
30°	1730.0	1238.3	827.5	830.8	836.7	825.9	854.5	870.1	880.4	961.2	963.9
32.5°	1780.1	1177.9	840.5	821.1	813.5	811.9	818.9	832.9	837.2	886.8	896.0
35°	1841.0	1153.7	844.8	818.4	803.3	795.2	816.2	799.0	812.4	870.7	877.1
37.5°	2039.4	1120.3	866.9	818.4	799.0	789.8	779.5	787.6	835.6	891.7	926.2
40°	2166.1	1130.5	861.5	826.4	784.4	775.8	758.5	788.2	862.6	961.8	987.6
42.5°	2388.2	1136.4	868.0	822.7	789.2	755.8	767.1	799.5	877.7	934.3	974.2
45°	2617.9	1154.8	863.6	811.4	778.5	794.1	778.5	807.6	844.8	846.4	876.6
47.5°	2843.2	1228.6	854.5	788.2	775.8	816.7	776.8	781.7	784.4	794.1	829.7
50°	3107.9	1307.3	841.5	755.8	779.5	817.8	782.8	759.1	756.4	788.2	828.1
52.5°	3408.8	1396.3	824.8	724.6	757.4	807.6	803.3	760.7	737.5	768.2	808.1
55°	3762.9	1497.6	805.4	693.3	733.2	808.7	814.6	749.4	738.0	771.5	814.0
57.5°	4233.6	1644.3	767.7	648.0	703.5	791.9	785.5	736.4	725.6	761.2	805.4
60°	5036.8	1926.2	713.8	603.3	671.7	751.0	761.8	713.2	702.5	741.8	788.2
62.5°	6112.4	2265.3	648.5	559.6	632.9	706.8	732.1	679.8	678.7	728.9	777.4
65°	7113.5	2457.8	581.2	519.7	593.0	665.8	698.7	648.5	650.7	713.8	762.3
67.5°	7529.7	2231.4	520.8	484.1	547.2	618.9	671.2	624.3	617.3	693.3	738.0
70°	7138.8	1772.6	468.5	446.4	495.4	568.2	632.9	591.9	575.8	644.8	679.8
72.5°	6316.7	1477.7	419.4	402.2	450.2	514.8	581.2	548.3	527.2	580.1	611.3
75°	4937.7	1212.4	363.4	358.5	398.4	466.3	527.2	504.6	477.6	511.1	542.3
77.5°	2811.4	767.1	305.1	308.4	336.9	408.6	462.6	444.8	417.3	431.3	467.4
80°	1125.1	387.1	245.3	247.4	271.7	335.9	383.3	376.8	348.3	359.6	384.4
82.5°	420.5	212.4	181.1	182.2	206.5	265.8	327.2	324.0	297.0	289.0	303.0
85°	167.1	105.1	111.1	115.9	139.1	191.4	262.5	232.9	201.1	176.3	184.9
87.5°	39.9	33.4	38.8	41.0	45.3	59.8	96.0	77.1	79.2	63.6	47.4
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)