

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: P367158

Luminaire Tested: **MSA-SA2A-730-U-SL4**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367158
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-730-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7051 lumens
Efficiency: N/A
Efficacy: 106.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

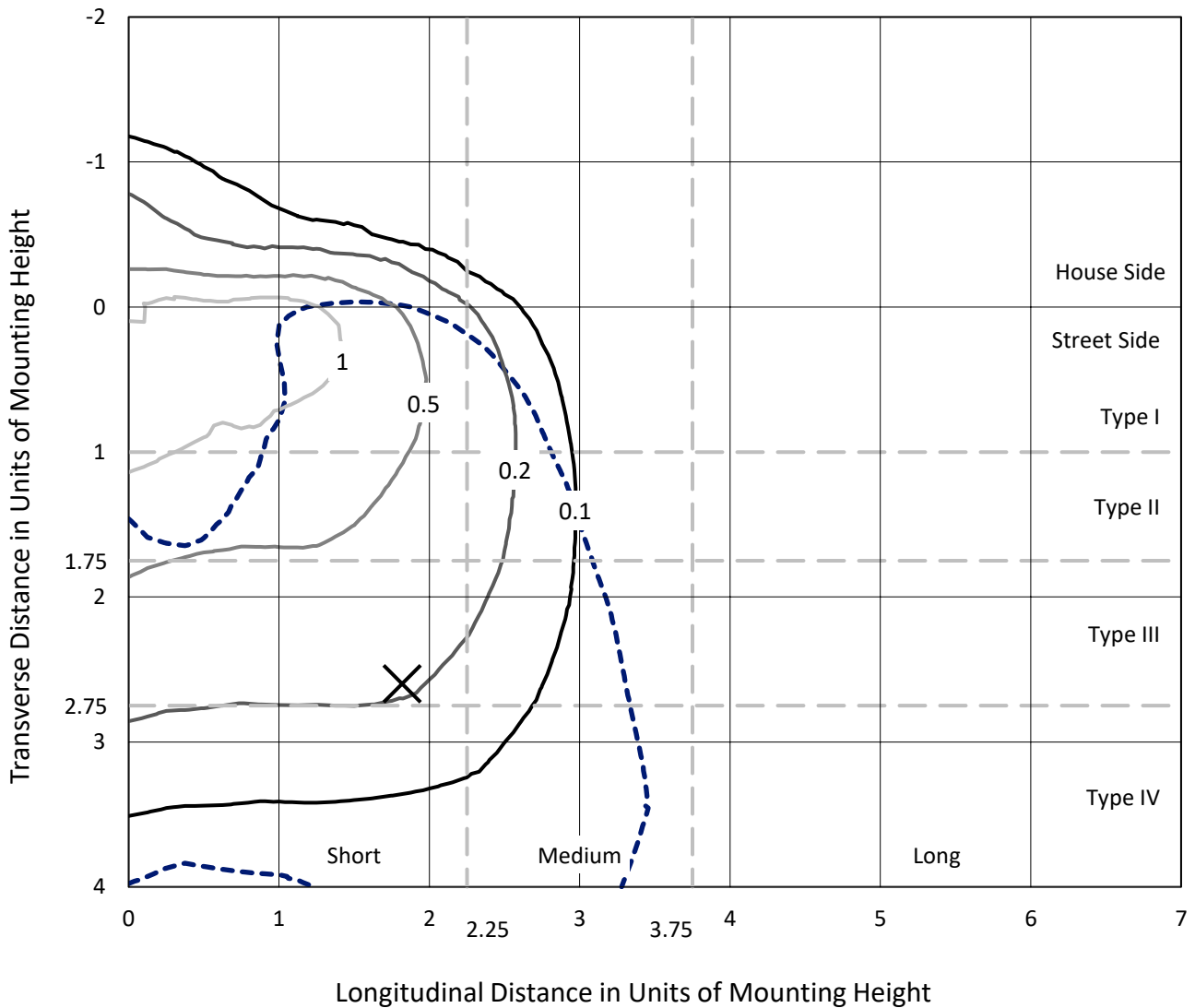
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

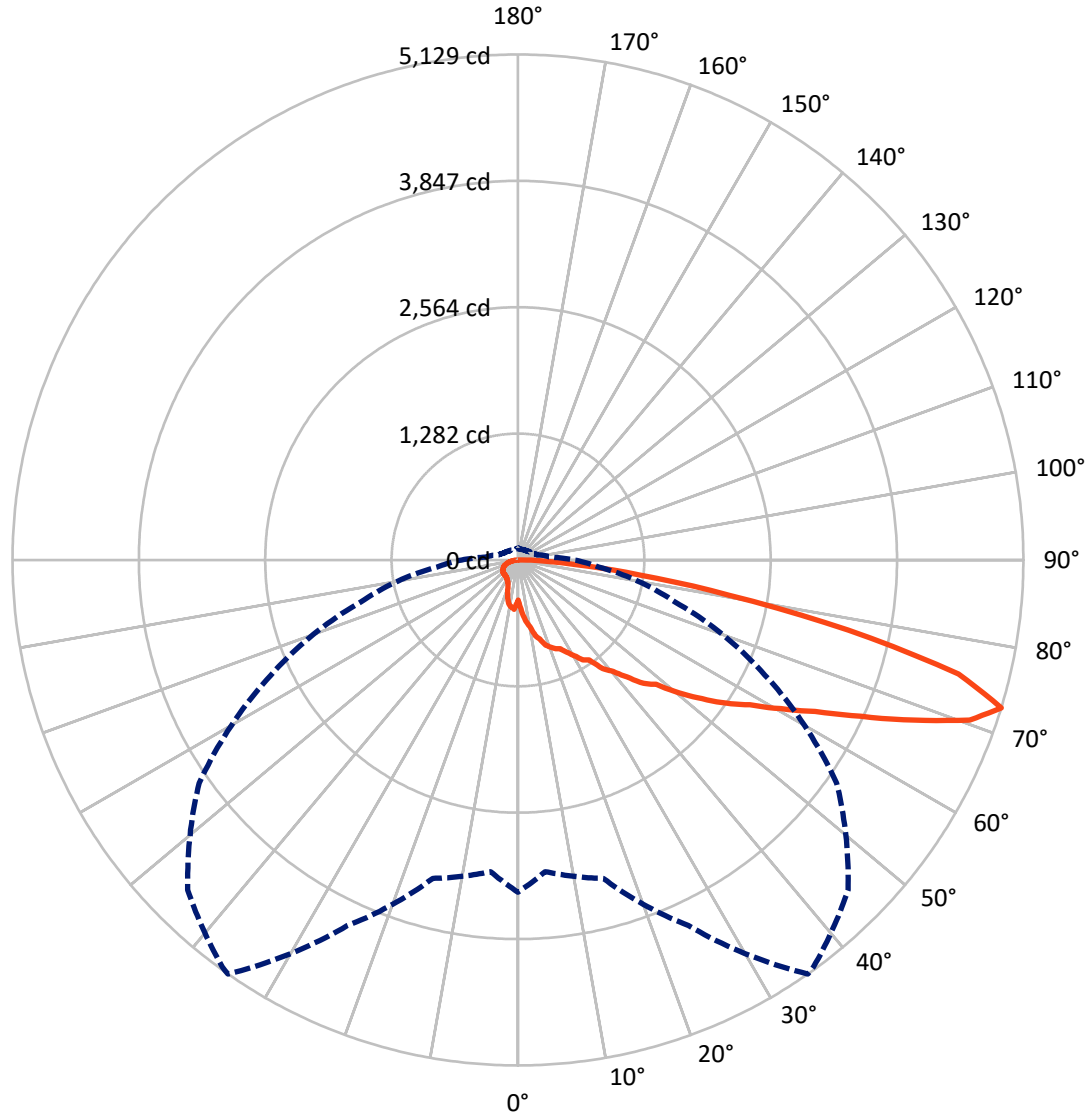
✕ Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	946.2	0.0	946.2
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	6104.8	0.0	6104.8
	% Fixture	86.6	0.0	86.6
Total	Lumens	7051.0	0.0	7051.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.2	0.8
10°-20°	190.8	2.7
20°-30°	331.5	4.7
30°-40°	554.0	7.9
40°-50°	961.5	13.6
50°-60°	1453.6	20.6
60°-70°	1883.1	26.7
70°-80°	1389.5	19.7
80°-90°	232.9	3.3
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°	7051.0	100.0
0°-180°	7051.0	100.0

Coefficient of Utilization



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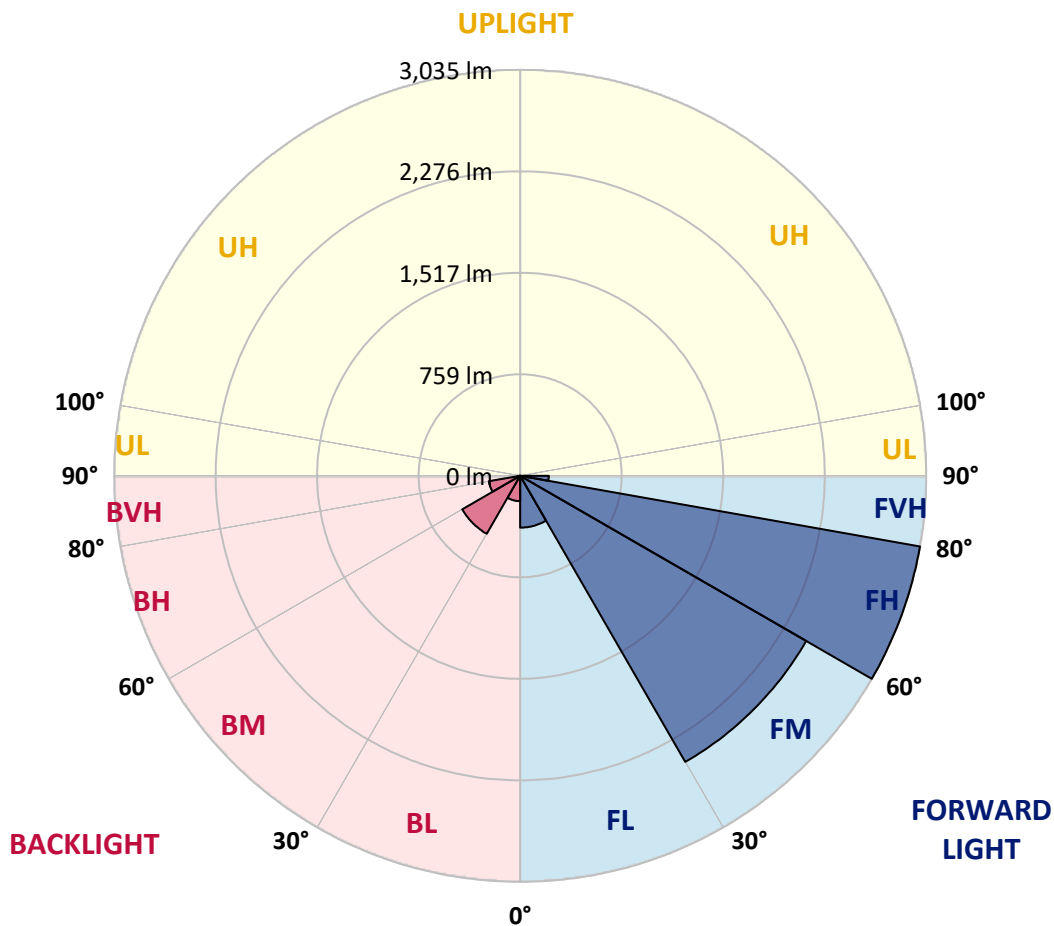
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	387.3	5.5			
FM (30°-60°)	2469.0	35.0			
FH (60°-80°)	3034.7	43.0			G2/5000
FVH (80°-90°)	213.8	3.0			G2/225
BL (0°-30°)	189.1	2.7	B1/500		
BM (30°-60°)	500.1	7.1	B1/1000		
BH (60°-80°)	237.9	3.4	B1/500		G1/500
BVH (80°-90°)	19.1	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	407.5	407.5	407.5	407.5	407.5	407.5	407.5	407.5	407.5	407.5	407.5
2.5°	508.3	483.9	462.9	462.0	481.5	489.0	486.0	479.4	471.6	455.0	491.1
5°	636.8	601.9	595.3	587.4	569.7	574.5	545.6	567.6	574.5	590.5	614.5
7.5°	712.6	692.2	676.2	669.6	638.9	635.3	613.9	645.2	658.5	656.4	692.2
10°	742.4	723.8	725.0	703.3	693.4	697.6	700.0	700.6	708.7	715.3	697.3
12.5°	757.8	765.0	791.5	776.7	789.4	794.5	819.8	793.9	794.8	760.8	779.4
15°	835.1	853.2	837.8	837.2	833.3	841.7	863.4	846.0	859.5	848.7	824.6
17.5°	928.4	933.8	904.3	892.3	908.0	905.2	899.8	902.5	868.8	931.4	901.9
20°	957.0	978.4	939.6	892.3	944.1	951.0	949.8	938.0	880.3	970.5	942.0
22.5°	1040.1	1011.2	980.5	950.4	976.9	980.8	974.2	946.2	926.9	961.2	983.8
25°	1077.7	1070.8	1031.6	1028.0	998.8	985.0	996.4	988.3	969.3	1030.4	1005.5
27.5°	1163.8	1155.6	1065.6	1102.7	1060.2	1056.6	996.1	1023.2	1042.2	1037.7	1075.0
30°	1261.3	1270.6	1139.1	1176.1	1127.0	1120.4	1059.6	1093.9	1106.9	1111.1	1157.7
32.5°	1369.6	1395.2	1264.6	1234.2	1208.0	1212.5	1161.0	1098.5	1148.7	1247.1	1267.3
35°	1487.0	1497.5	1360.6	1314.8	1246.5	1241.7	1242.6	1250.4	1301.3	1413.5	1429.2
37.5°	1704.0	1655.2	1535.1	1419.3	1396.4	1351.5	1381.9	1406.0	1456.9	1629.0	1694.6
40°	1837.6	1801.5	1618.5	1551.4	1488.2	1492.4	1549.3	1549.0	1669.0	1846.6	1946.8
42.5°	1961.3	1921.8	1749.4	1682.0	1622.1	1636.8	1653.1	1681.7	1911.9	2198.1	2243.9
45°	2060.9	1974.5	1850.5	1835.5	1786.1	1766.6	1835.5	1881.2	2202.3	2482.5	2509.0
47.5°	2128.6	2057.6	1936.3	1923.0	1886.6	1934.5	2122.6	2152.1	2427.4	2768.1	2766.0
50°	2231.5	2134.3	2024.8	2017.8	2120.5	2146.0	2375.4	2372.4	2646.5	3005.2	2955.6
52.5°	2350.1	2227.6	2108.7	2183.1	2339.6	2352.2	2551.1	2632.1	2885.8	3234.0	3104.3
55°	2486.4	2349.5	2234.5	2333.8	2566.8	2529.4	2730.8	2928.5	3185.2	3475.0	3211.7
57.5°	2655.2	2489.1	2396.1	2547.2	2774.1	2807.2	2988.1	3237.0	3426.3	3624.9	3289.9
60°	2833.4	2638.4	2553.2	2697.1	3064.5	3102.4	3279.4	3493.4	3696.5	3766.0	3275.2
62.5°	3003.4	2792.5	2715.4	2893.0	3386.5	3480.4	3611.0	3747.4	3921.3	3800.3	3096.7
65°	3192.7	2981.5	2933.0	3199.4	3823.2	3916.5	4087.1	4046.2	3998.4	3678.8	2801.5
67.5°	3393.2	3178.6	3187.6	3554.8	4338.1	4354.1	4616.2	4344.1	3907.8	3356.7	2305.8
70°	3500.9	3281.2	3374.2	3933.7	4862.1	4839.2	4892.8	4424.2	3538.5	2653.4	1589.3
72.5°	3370.3	3174.4	3344.7	4093.2	5128.7	5104.0	4737.5	3949.0	2766.6	1650.1	824.0
75°	2853.6	2664.6	2925.2	3648.7	4617.1	4640.0	4031.8	2936.6	1583.9	663.6	342.2
77.5°	1939.0	1841.5	2064.8	2719.6	3429.6	3508.7	2991.4	1717.2	665.1	274.8	207.1
80°	1024.7	978.4	1143.3	1566.7	2171.6	2230.6	1759.0	855.3	340.7	177.9	147.8
82.5°	556.7	537.2	625.7	805.6	1233.9	1285.3	912.2	568.2	229.6	111.3	90.3
85°	374.1	366.6	425.2	432.8	583.5	600.4	477.9	437.6	137.8	54.5	59.6
87.5°	187.2	179.7	223.9	197.7	222.7	223.0	219.1	279.3	34.9	18.1	10.8
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°	407.5	407.5	407.5	407.5	407.5	407.5	407.5	407.5	407.5	407.5	407.5
2.5°	491.7	481.2	444.8	444.5	449.9	446.3	449.0	434.3	427.9	456.8	455.3
5°	611.2	579.6	549.2	538.7	526.4	499.6	501.1	501.4	496.9	514.0	515.2
7.5°	681.3	643.4	615.4	559.5	515.5	481.2	485.7	490.8	485.7	508.6	517.0
10°	691.6	661.5	628.1	565.8	536.6	505.6	474.3	446.6	443.3	432.8	436.1
12.5°	752.4	727.4	657.6	589.3	555.2	507.7	450.5	418.9	392.4	396.9	388.5
15°	802.3	784.6	700.9	611.5	530.3	471.3	410.5	367.2	343.4	340.7	332.2
17.5°	870.0	844.8	704.8	596.2	498.1	427.3	358.7	309.7	299.4	295.2	291.0
20°	902.5	857.1	690.7	548.0	460.4	375.0	307.6	265.4	262.4	269.9	268.4
22.5°	930.8	867.3	678.0	518.8	401.8	322.0	272.7	245.0	241.7	251.3	253.1
25°	947.4	896.5	664.2	489.0	365.3	282.6	246.5	230.8	231.4	244.1	242.6
27.5°	1022.0	906.7	629.3	453.8	323.5	253.4	233.8	225.7	222.4	239.9	241.4
30°	1069.0	973.6	621.5	416.5	292.5	232.0	222.4	219.1	218.5	239.6	241.1
32.5°	1156.2	995.8	625.1	375.9	264.5	225.4	214.0	213.7	219.7	239.9	242.3
35°	1277.2	1089.7	607.6	352.7	249.2	215.2	207.4	209.8	220.0	242.0	245.3
37.5°	1513.2	1178.2	613.0	331.0	244.1	211.9	205.5	207.1	223.6	247.4	256.4
40°	1700.0	1338.6	604.6	320.2	237.1	211.3	201.6	207.7	223.3	250.4	258.5
42.5°	1970.9	1466.5	605.5	309.4	236.8	208.9	201.0	208.3	222.7	247.7	258.8
45°	2203.2	1581.2	618.4	303.1	233.8	212.8	200.1	209.2	218.8	238.0	250.4
47.5°	2393.7	1709.1	631.7	297.0	232.6	216.4	199.2	202.8	212.2	227.2	238.3
50°	2549.0	1799.1	648.5	295.8	232.6	214.6	196.8	196.5	204.3	216.4	226.9
52.5°	2670.0	1862.6	660.0	297.3	232.6	207.7	193.8	191.4	196.2	204.9	215.5
55°	2757.6	1882.1	650.6	301.2	232.3	201.3	188.4	186.3	188.7	194.7	204.6
57.5°	2792.8	1830.7	595.0	294.3	232.3	196.8	181.8	179.4	181.8	186.3	196.2
60°	2704.6	1665.1	514.6	276.6	227.8	190.8	174.2	172.7	176.4	180.3	189.9
62.5°	2483.4	1445.1	428.8	255.5	218.5	185.7	167.0	167.3	173.0	178.5	188.1
65°	2139.7	1179.1	357.5	234.1	206.7	177.6	159.5	161.6	169.7	177.0	186.6
67.5°	1683.8	873.6	300.9	213.4	190.2	164.3	151.1	151.7	157.4	164.3	173.6
70°	1125.5	555.8	247.4	189.0	168.5	147.2	138.1	136.0	134.5	140.5	148.7
72.5°	570.9	328.3	203.1	161.6	145.1	128.5	121.6	116.2	112.0	115.6	121.9
75°	299.1	229.6	164.0	134.2	119.8	109.2	104.1	96.9	93.9	96.0	100.5
77.5°	211.6	179.7	132.7	106.2	97.5	86.7	87.6	80.1	77.6	78.8	83.7
80°	162.5	142.3	102.0	80.4	75.2	64.7	67.7	63.2	60.2	59.6	63.2
82.5°	110.7	107.1	72.5	56.3	52.7	45.1	49.4	47.5	43.6	41.2	43.0
85°	74.6	71.0	44.2	32.5	31.0	23.5	30.1	28.9	25.6	22.0	22.3
87.5°	12.9	23.8	12.6	8.1	7.5	2.7	6.9	6.6	6.0	3.0	2.4
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)