

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: P596616

Luminaire Tested: **MSA-SA2C-827-U-SL4**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596616
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2C-827-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: 8833 lumens
Efficiency: N/A
Efficacy: 78.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

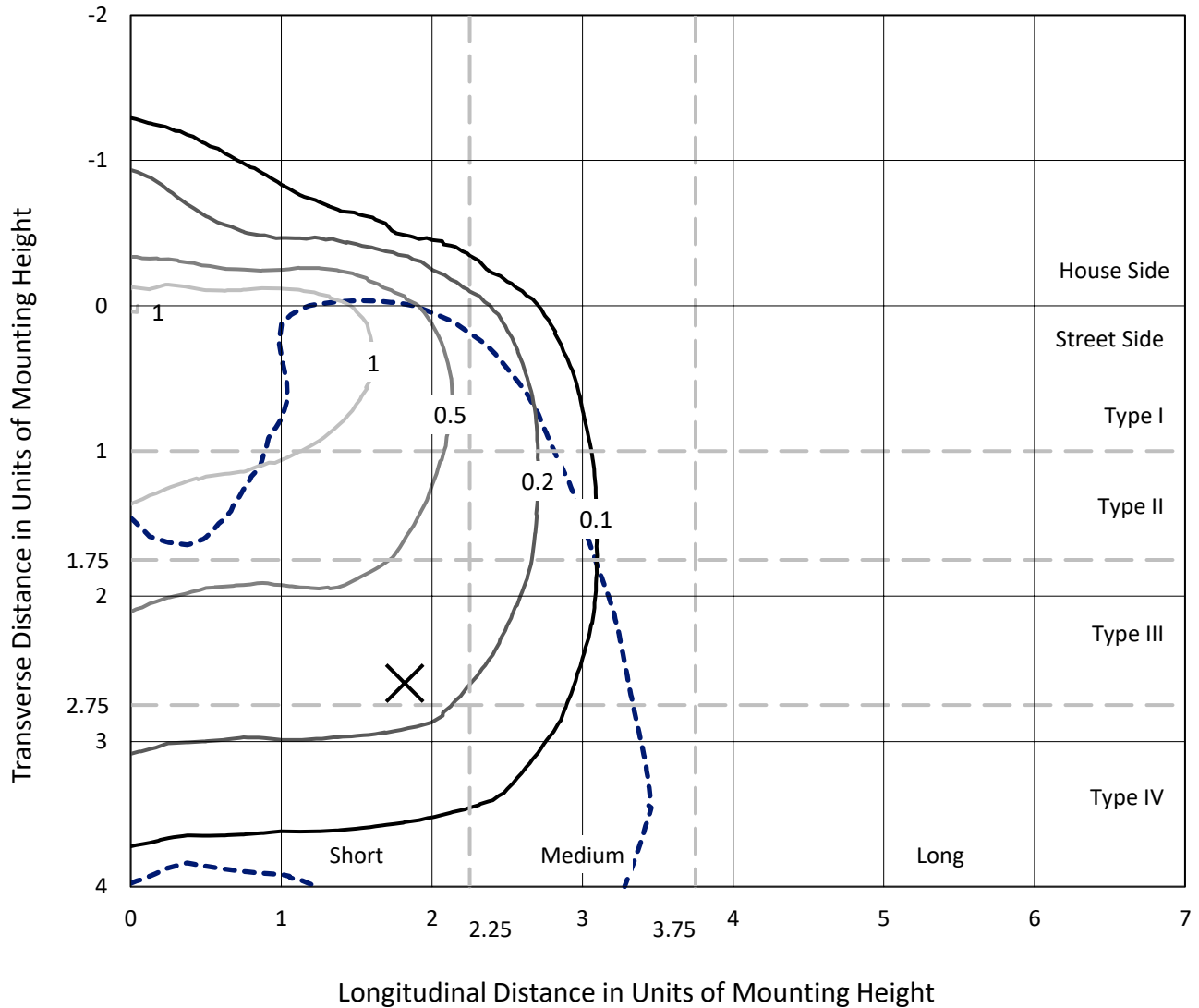
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

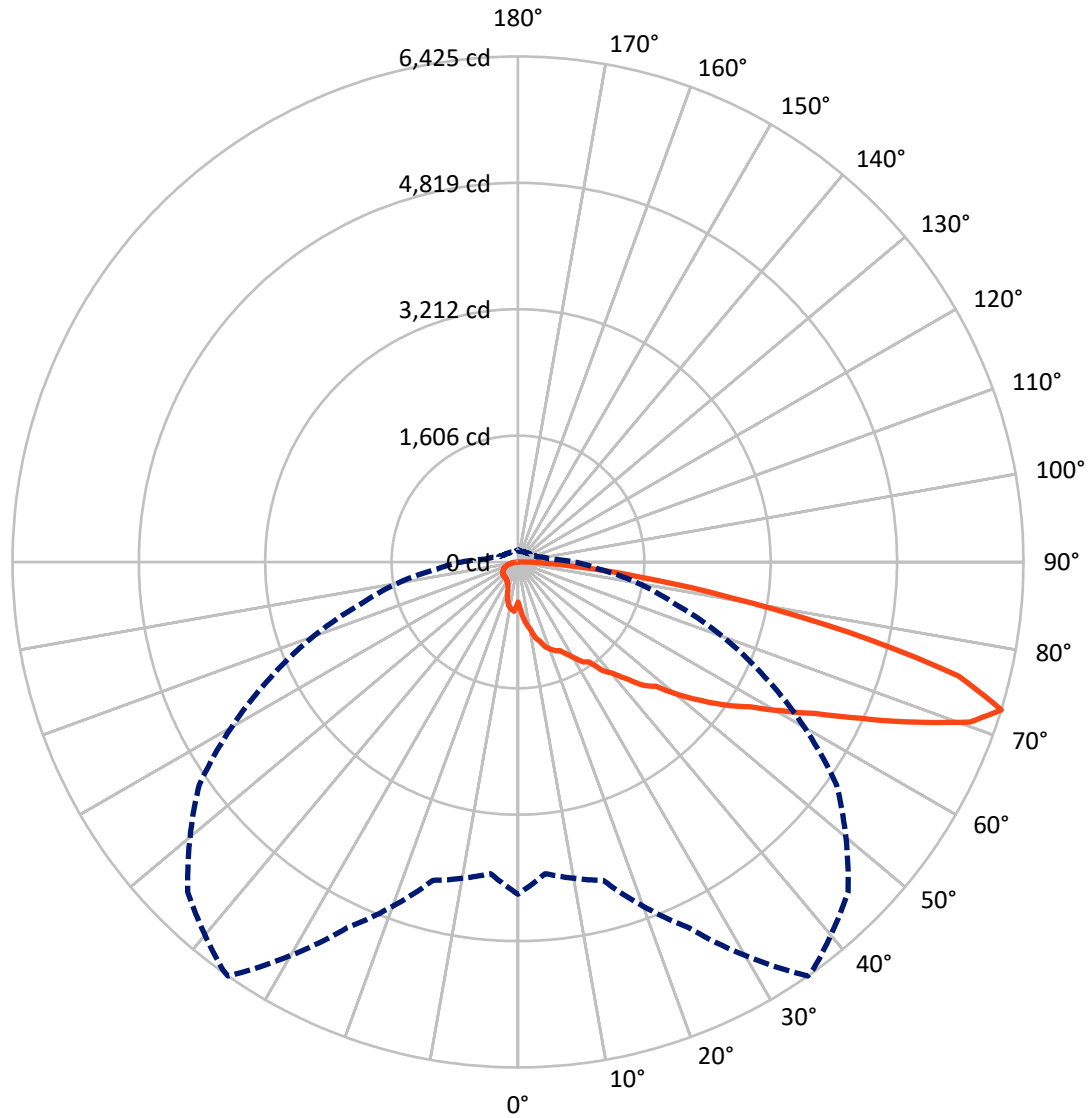
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.8 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	1185.4	0.0	1185.4
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	7647.6	0.0	7647.6
	% Fixture	86.6	0.0	86.6
Total	Lumens	8833.0	0.0	8833.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.8	0.8
10°-20°	239.0	2.7
20°-30°	415.2	4.7
30°-40°	694.0	7.9
40°-50°	1204.5	13.6
50°-60°	1821.0	20.6
60°-70°	2359.0	26.7
70°-80°	1740.7	19.7
80°-90°	291.7	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°	8833.0	100.0
0°-180°	8833.0	100.0

Coefficient of Utilization



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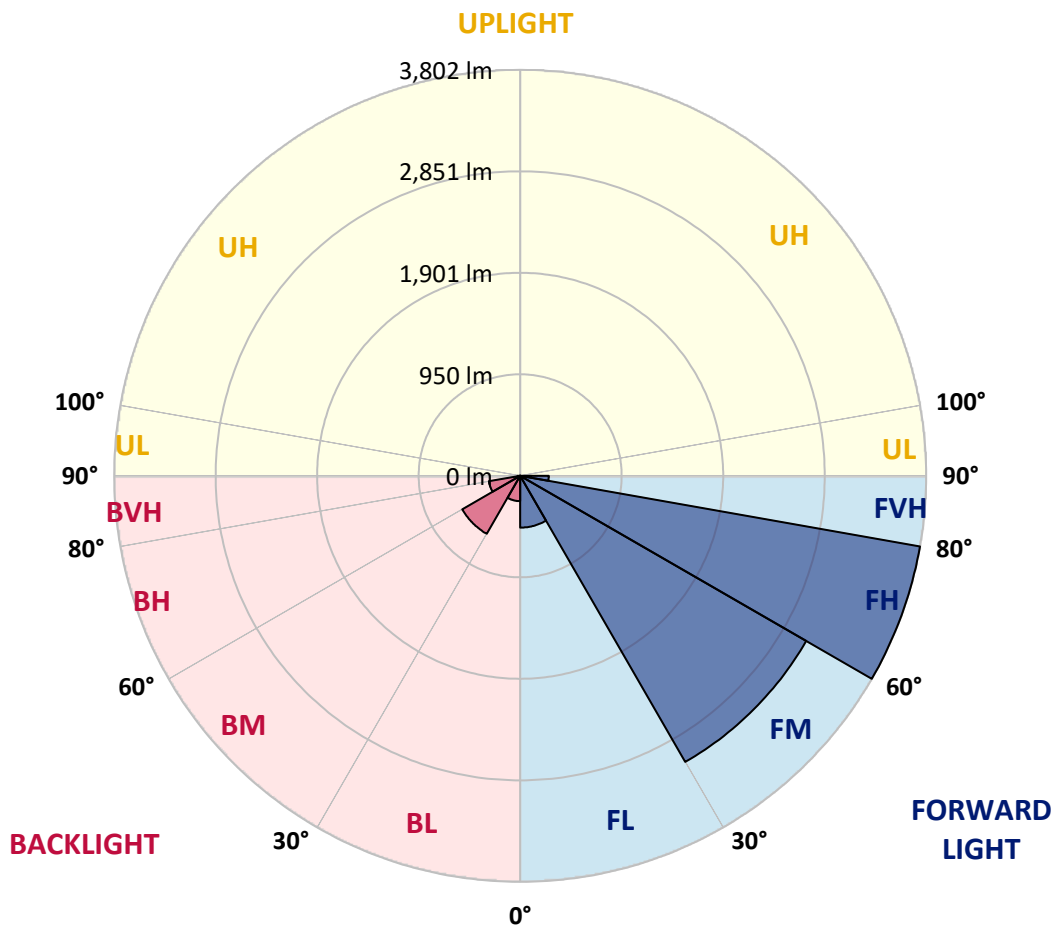
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	485.1	5.5			
FM (30°-60°)	3093.0	35.0			
FH (60°-80°)	3801.6	43.0			G2/5000
FVH (80°-90°)	267.9	3.0			G3/500
BL (0°-30°)	236.9	2.7	B1/500		
BM (30°-60°)	626.5	7.1	B1/1000		
BH (60°-80°)	298.1	3.4	B1/500		G1/500
BVH (80°-90°)	23.9	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-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	510.5	510.5	510.5	510.5	510.5	510.5	510.5	510.5	510.5	510.5	510.5
2.5°	636.8	606.2	579.8	578.7	603.2	612.6	608.9	600.6	590.8	570.0	615.3
5°	797.7	754.0	745.7	735.9	713.7	719.7	683.5	711.0	719.7	739.7	769.8
7.5°	892.7	867.1	847.1	838.8	800.4	795.9	769.1	808.3	824.9	822.2	867.1
10°	930.1	906.7	908.2	881.1	868.6	873.9	876.9	877.7	887.8	896.1	873.5
12.5°	949.3	958.3	991.5	973.0	988.9	995.3	1027.0	994.5	995.7	953.1	976.4
15°	1046.2	1068.8	1049.6	1048.8	1043.9	1054.5	1081.6	1059.8	1076.7	1063.2	1033.0
17.5°	1163.1	1169.8	1132.9	1117.8	1137.4	1134.0	1127.2	1130.6	1088.4	1166.8	1129.9
20°	1198.9	1225.6	1177.0	1117.8	1182.7	1191.3	1189.8	1175.1	1102.7	1215.8	1180.0
22.5°	1302.9	1266.7	1228.3	1190.6	1223.8	1228.7	1220.4	1185.3	1161.2	1204.1	1232.4
25°	1350.0	1341.4	1292.4	1287.8	1251.3	1233.9	1248.3	1238.1	1214.3	1290.9	1259.6
27.5°	1457.9	1447.7	1335.0	1381.3	1328.2	1323.7	1247.9	1281.8	1305.6	1299.9	1346.7
30°	1580.0	1591.7	1427.0	1473.3	1411.9	1403.6	1327.4	1370.4	1386.6	1391.9	1450.3
32.5°	1715.7	1747.8	1584.2	1546.1	1513.3	1518.9	1454.5	1376.1	1439.0	1562.3	1587.6
35°	1862.8	1876.0	1704.4	1647.1	1561.5	1555.5	1556.6	1566.5	1630.2	1770.8	1790.4
37.5°	2134.6	2073.5	1923.1	1777.9	1749.3	1693.1	1731.2	1761.4	1825.1	2040.7	2122.9
40°	2302.0	2256.7	2027.5	1943.5	1864.3	1869.6	1940.8	1940.4	2090.9	2313.3	2438.8
42.5°	2456.9	2407.5	2191.5	2107.1	2032.0	2050.5	2070.9	2106.7	2395.1	2753.6	2810.9
45°	2581.7	2473.5	2318.2	2299.3	2237.5	2213.0	2299.3	2356.6	2758.9	3109.9	3143.1
47.5°	2666.5	2577.6	2425.6	2409.1	2363.4	2423.4	2659.0	2696.0	3040.9	3467.7	3465.0
50°	2795.5	2673.7	2536.5	2527.8	2656.4	2688.4	2975.7	2971.9	3315.4	3764.8	3702.6
52.5°	2944.0	2790.6	2641.7	2734.8	2930.8	2946.7	3195.9	3297.3	3615.1	4051.3	3888.8
55°	3114.8	2943.3	2799.3	2923.7	3215.5	3168.7	3420.9	3668.6	3990.2	4353.3	4023.4
57.5°	3326.3	3118.2	3001.7	3191.0	3475.2	3516.7	3743.3	4055.1	4292.2	4541.0	4121.4
60°	3549.5	3305.2	3198.5	3378.7	3839.0	3886.5	4108.2	4376.3	4630.7	4717.8	4102.9
62.5°	3762.5	3498.2	3401.7	3624.1	4242.4	4360.0	4523.7	4694.4	4912.4	4760.8	3879.4
65°	3999.6	3735.0	3674.3	4007.9	4789.5	4906.3	5120.1	5068.8	5008.9	4608.5	3509.5
67.5°	4250.7	3981.9	3993.2	4453.2	5434.5	5454.5	5782.9	5442.0	4895.4	4205.1	2888.6
70°	4385.7	4110.5	4227.0	4927.8	6090.9	6062.2	6129.3	5542.3	4432.8	3324.0	1991.0
72.5°	4222.1	3976.6	4190.0	5127.6	6424.9	6394.0	5934.8	4947.0	3465.8	2067.1	1032.2
75°	3574.7	3338.0	3664.5	4570.8	5784.0	5812.6	5050.7	3678.8	1984.2	831.3	428.7
77.5°	2429.0	2306.9	2586.6	3407.0	4296.3	4395.5	3747.4	2151.2	833.2	344.2	259.4
80°	1283.7	1225.6	1432.2	1962.7	2720.5	2794.4	2203.6	1071.4	426.8	222.8	185.1
82.5°	697.5	673.0	783.8	1009.2	1545.7	1610.2	1142.7	711.8	287.7	139.5	113.1
85°	468.6	459.2	532.7	542.1	731.0	752.1	598.7	548.2	172.7	68.2	74.6
87.5°	234.5	225.1	280.5	247.7	279.0	279.4	274.5	349.9	43.7	22.6	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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	510.5	510.5	510.5	510.5	510.5	510.5	510.5	510.5	510.5	510.5	510.5
2.5°	616.0	602.8	557.2	556.8	563.6	559.1	562.5	544.0	536.1	572.3	570.4
5°	765.7	726.1	688.0	674.8	659.4	625.8	627.7	628.1	622.4	643.9	645.4
7.5°	853.5	806.0	771.0	700.8	645.8	602.8	608.5	614.9	608.5	637.1	647.7
10°	866.4	828.7	786.8	708.8	672.2	633.4	594.2	559.5	555.3	542.1	546.3
12.5°	942.5	911.2	823.8	738.2	695.6	636.0	564.4	524.8	491.6	497.3	486.7
15°	1005.1	982.8	878.0	766.1	664.3	590.4	514.2	459.9	430.2	426.8	416.2
17.5°	1089.9	1058.2	882.9	746.8	623.9	535.3	449.4	387.9	375.1	369.8	364.6
20°	1130.6	1073.7	865.2	686.5	576.8	469.7	385.3	332.5	328.7	338.2	336.3
22.5°	1166.1	1086.5	849.4	650.0	503.3	403.4	341.6	306.9	302.7	314.8	317.1
25°	1186.8	1123.1	832.0	612.6	457.7	354.0	308.8	289.2	289.9	305.7	303.9
27.5°	1280.3	1135.9	788.3	568.5	405.3	317.4	292.9	282.8	278.6	300.5	302.4
30°	1339.1	1219.6	778.5	521.8	366.4	290.7	278.6	274.5	273.7	300.1	302.0
32.5°	1448.4	1247.5	783.0	470.9	331.4	282.4	268.0	267.7	275.2	300.5	303.5
35°	1600.0	1365.1	761.2	441.8	312.2	269.6	259.8	262.8	275.6	303.1	307.3
37.5°	1895.6	1476.0	768.0	414.7	305.7	265.4	257.5	259.4	280.1	309.9	321.2
40°	2129.7	1676.9	757.4	401.1	297.1	264.7	252.6	260.1	279.7	313.7	323.8
42.5°	2469.0	1837.1	758.5	387.6	296.7	261.6	251.8	260.9	279.0	310.3	324.2
45°	2760.0	1980.8	774.7	379.6	292.9	266.5	250.7	262.0	274.1	298.2	313.7
47.5°	2998.7	2141.0	791.3	372.1	291.4	271.1	249.6	254.1	265.8	284.6	298.6
50°	3193.2	2253.7	812.4	370.6	291.4	268.8	246.6	246.2	256.0	271.1	284.3
52.5°	3344.8	2333.3	826.8	372.5	291.4	260.1	242.8	239.8	245.8	256.7	269.9
55°	3454.5	2357.8	815.1	377.4	291.0	252.2	236.0	233.4	236.4	243.9	256.4
57.5°	3498.6	2293.3	745.3	368.7	291.0	246.6	227.7	224.7	227.7	233.4	245.8
60°	3388.1	2086.0	644.7	346.5	285.4	239.0	218.3	216.4	220.9	225.8	237.9
62.5°	3111.0	1810.4	537.2	320.1	273.7	232.6	209.2	209.6	216.8	223.6	235.6
65°	2680.5	1477.1	447.9	293.3	259.0	222.4	199.8	202.5	212.6	221.7	233.7
67.5°	2109.3	1094.4	377.0	267.3	238.3	205.8	189.3	190.0	197.2	205.8	217.5
70°	1410.0	696.3	309.9	236.8	211.1	184.4	173.0	170.4	168.5	176.1	186.2
72.5°	715.2	411.3	254.5	202.5	181.7	161.0	152.3	145.5	140.2	144.8	152.7
75°	374.7	287.7	205.5	168.1	150.0	136.9	130.4	121.4	117.6	120.3	125.9
77.5°	265.0	225.1	166.3	133.1	122.1	108.6	109.7	100.3	97.3	98.8	104.8
80°	203.6	178.3	127.8	100.7	94.3	81.1	84.8	79.2	75.4	74.6	79.2
82.5°	138.7	134.2	90.9	70.5	66.0	56.6	61.8	59.6	54.7	51.6	53.9
85°	93.5	89.0	55.4	40.7	38.8	29.4	37.7	36.2	32.0	27.5	27.9
87.5°	16.2	29.8	15.8	10.2	9.4	3.4	8.7	8.3	7.5	3.8	3.0
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)