

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: P367664

Luminaire Tested: **MSA-SA3A-727-U-SL4**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367664
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-SA3A-727-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 9556 lumens
Efficiency: N/A
Efficacy: 99.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

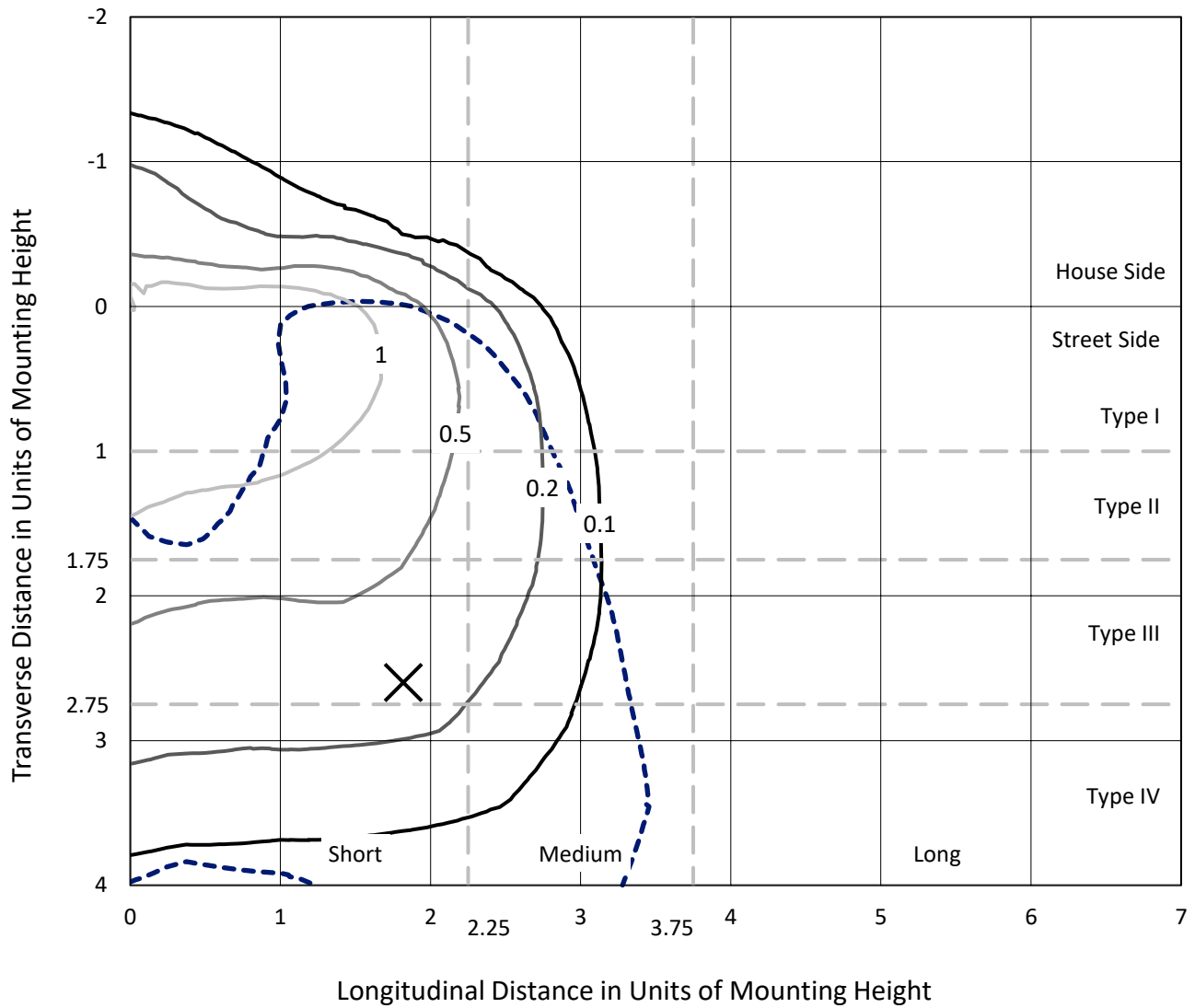
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P367664
 CATALOG NUMBER: MSA-SA3A-727-U-SL4

Iso-Footcandle Lines of Horizontal Illumination

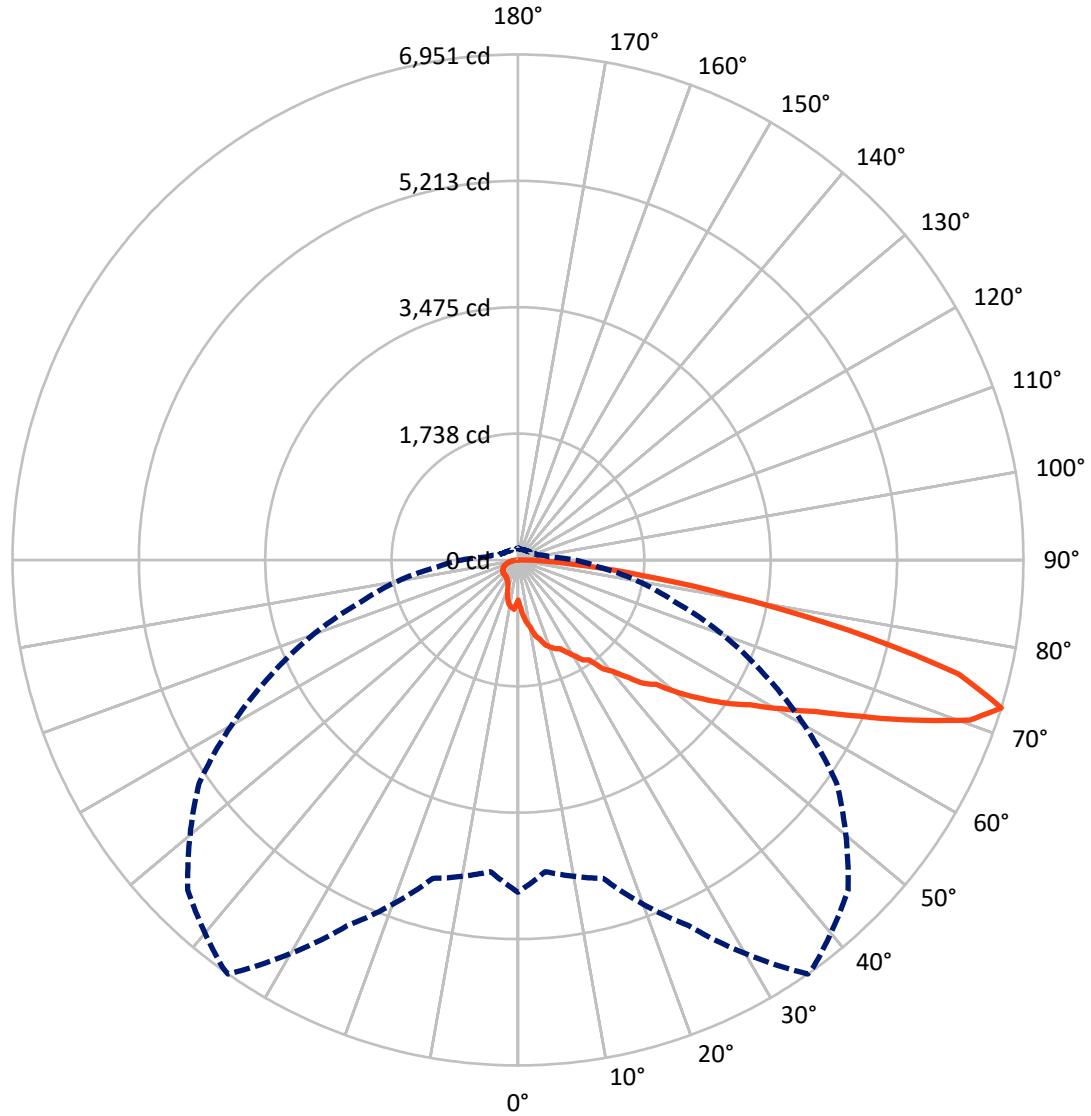
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 fc
 Type IV - Short - N/A

REPORT NUMBER: P367664
CATALOG NUMBER: MSA-SA3A-727-U-SL4

Luminous Intensity Polar Plot



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

REPORT NUMBER: P367664

CATALOG NUMBER: MSA-SA3A-727-U-SL4

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1282.4	0.0	1282.4
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	8273.6	0.0	8273.6
	% Fixture	86.6	0.0	86.6
Total	Lumens	9556.0	0.0	9556.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.4	0.8
10°-20°	258.5	2.7
20°-30°	449.2	4.7
30°-40°	750.8	7.9
40°-50°	1303.1	13.6
50°-60°	1970.0	20.6
60°-70°	2552.1	26.7
70°-80°	1883.2	19.7
80°-90°	315.6	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°	9556.0	100.0
0°-180°	9556.0	100.0

Coefficient of Utilization



REPORT NUMBER: P367664

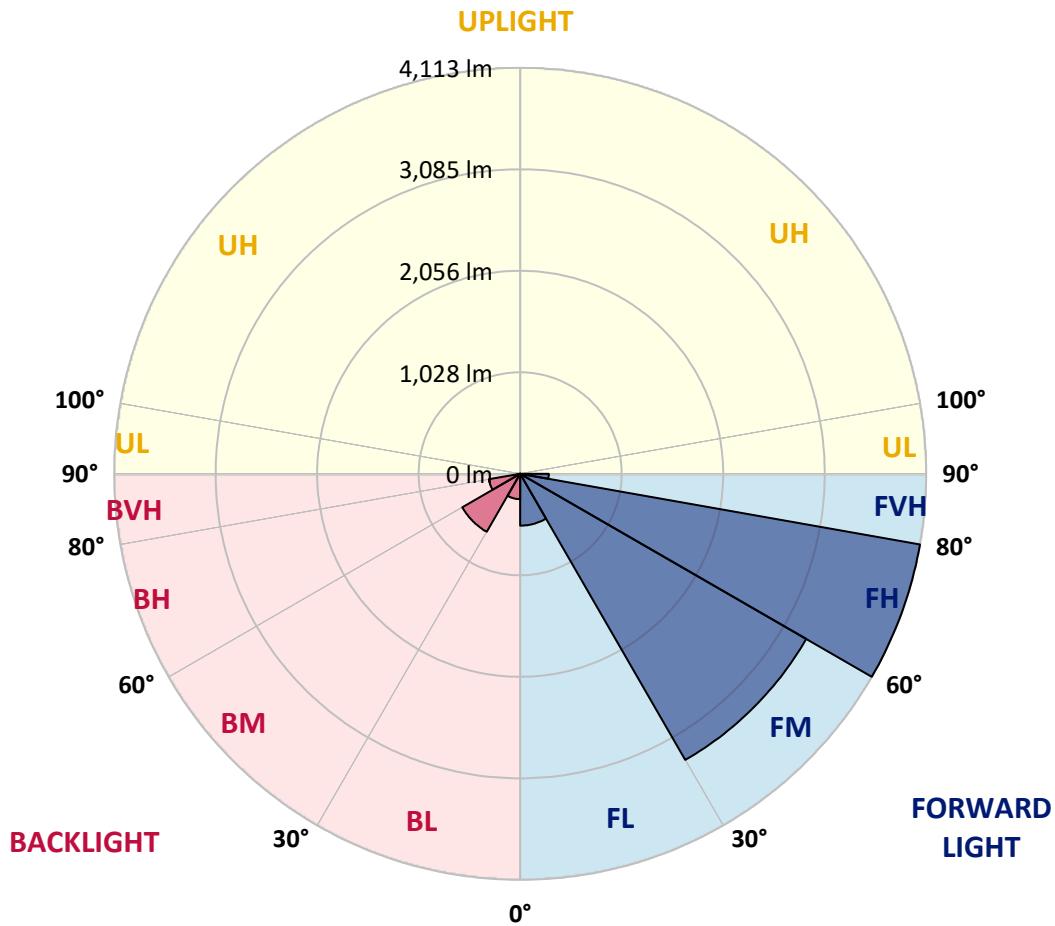
CATALOG NUMBER: MSA-SA3A-727-U-SL4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	524.8	5.5			
FM (30°-60°)	3346.2	35.0			
FH (60°-80°)	4112.8	43.0			G2/5000
FVH (80°-90°)	289.8	3.0			G3/500
BL (0°-30°)	256.3	2.7	B1/500		
BM (30°-60°)	677.8	7.1	B1/1000		
BH (60°-80°)	322.5	3.4	B1/500		G1/500
BVH (80°-90°)	25.8	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





REPORT NUMBER: P367664

CATALOG NUMBER: MSA-SA3A-727-U-SL4

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	552.2	552.2	552.2	552.2	552.2	552.2	552.2	552.2	552.2	552.2	552.2
2.5°	688.9	655.8	627.3	626.1	652.6	662.8	658.7	649.7	639.1	616.7	665.6
5°	863.0	815.7	806.8	796.1	772.1	778.6	739.5	769.2	778.6	800.2	832.9
7.5°	965.8	938.1	916.5	907.5	865.9	861.0	832.0	874.5	892.4	889.5	938.1
10°	1006.2	980.9	982.5	953.2	939.7	945.4	948.7	949.5	960.5	969.5	945.0
12.5°	1027.0	1036.8	1072.7	1052.7	1069.8	1076.8	1111.0	1075.9	1077.2	1031.1	1056.4
15°	1131.8	1156.3	1135.5	1134.7	1129.4	1140.8	1170.2	1146.5	1164.9	1150.2	1117.5
17.5°	1258.3	1265.6	1225.6	1209.3	1230.5	1226.8	1219.5	1223.2	1177.5	1262.3	1222.4
20°	1297.0	1326.0	1273.3	1209.3	1279.5	1288.8	1287.2	1271.3	1193.0	1315.4	1276.6
22.5°	1409.6	1370.4	1328.8	1288.0	1323.9	1329.2	1320.2	1282.3	1256.2	1302.7	1333.3
25°	1460.6	1451.2	1398.2	1393.3	1353.7	1334.9	1350.4	1339.4	1313.7	1396.5	1362.7
27.5°	1577.2	1566.2	1444.2	1494.4	1436.9	1432.0	1350.0	1386.7	1412.4	1406.3	1456.9
30°	1709.4	1722.0	1543.8	1593.9	1527.4	1518.5	1436.1	1482.6	1500.1	1505.8	1569.0
32.5°	1856.2	1890.8	1713.8	1672.6	1637.2	1643.3	1573.5	1488.7	1556.8	1690.2	1717.5
35°	2015.2	2029.5	1843.9	1781.9	1689.4	1682.8	1684.1	1694.7	1763.6	1915.7	1936.9
37.5°	2309.3	2243.2	2080.5	1923.5	1892.5	1831.7	1872.9	1905.5	1974.5	2207.8	2296.7
40°	2490.4	2441.5	2193.5	2102.5	2016.9	2022.6	2099.7	2099.3	2262.0	2502.6	2638.5
42.5°	2658.0	2604.6	2370.9	2279.5	2198.4	2218.4	2240.4	2279.1	2591.1	2979.0	3041.0
45°	2793.0	2676.0	2507.9	2487.6	2420.7	2394.2	2487.6	2549.5	2984.7	3364.5	3400.3
47.5°	2884.8	2788.6	2624.2	2606.2	2556.9	2621.7	2876.7	2916.6	3289.8	3751.5	3748.7
50°	3024.3	2892.6	2744.1	2734.7	2873.8	2908.5	3219.3	3215.2	3586.7	4072.9	4005.6
52.5°	3185.0	3019.0	2857.9	2958.6	3170.7	3187.9	3457.4	3567.2	3911.0	4382.9	4207.1
55°	3369.8	3184.2	3028.4	3163.0	3478.7	3428.1	3700.9	3968.9	4316.8	4709.6	4352.7
57.5°	3598.6	3373.4	3247.4	3452.1	3759.7	3804.5	4049.7	4387.0	4643.5	4912.7	4458.7
60°	3840.0	3575.7	3460.3	3655.3	4153.3	4204.7	4444.5	4734.5	5009.8	5104.0	4438.8
62.5°	4070.5	3784.6	3680.1	3920.8	4589.7	4716.9	4893.9	5078.7	5314.4	5150.5	4196.9
65°	4327.0	4040.7	3975.0	4336.0	5181.5	5307.9	5539.2	5483.7	5418.9	4985.7	3796.8
67.5°	4598.6	4307.8	4320.1	4817.7	5879.3	5900.9	6256.2	5887.5	5296.1	4549.3	3125.0
70°	4744.7	4446.9	4573.0	5331.2	6589.4	6558.4	6631.0	5996.0	4795.6	3596.1	2153.9
72.5°	4567.6	4302.1	4533.0	5547.3	6950.8	6917.3	6420.6	5352.0	3749.5	2236.3	1116.7
75°	3867.3	3611.2	3964.4	4944.9	6257.4	6288.4	5464.1	3979.9	2146.6	899.3	463.7
77.5°	2627.9	2495.7	2798.3	3685.9	4648.0	4755.3	4054.1	2327.3	901.4	372.4	280.6
80°	1388.8	1326.0	1549.5	2123.3	2943.1	3023.1	2384.0	1159.1	461.7	241.0	200.3
82.5°	754.5	728.0	847.9	1091.8	1672.2	1742.0	1236.2	770.0	311.2	150.9	122.4
85°	507.0	496.8	576.3	586.5	790.8	813.7	647.7	593.0	186.8	73.8	80.8
87.5°	253.7	243.5	303.4	268.0	301.8	302.2	296.9	378.5	47.3	24.5	14.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P367664
 CATALOG NUMBER: MSA-SA3A-727-U-SL4

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	552.2	552.2	552.2	552.2	552.2	552.2	552.2	552.2	552.2	552.2	552.2
2.5°	666.4	652.2	602.8	602.4	609.8	604.9	608.5	588.5	580.0	619.1	617.1
5°	828.4	785.5	744.3	730.1	713.4	677.1	679.1	679.5	673.4	696.6	698.3
7.5°	923.4	872.0	834.1	758.2	698.7	652.2	658.3	665.2	658.3	689.3	700.7
10°	937.3	896.5	851.2	766.8	727.2	685.2	642.8	605.3	600.8	586.5	591.0
12.5°	1019.7	985.8	891.2	798.6	752.5	688.1	610.6	567.7	531.9	538.0	526.6
15°	1087.4	1063.3	949.9	828.8	718.7	638.7	556.3	497.6	465.4	461.7	450.3
17.5°	1179.1	1144.9	955.2	808.0	675.0	579.2	486.2	419.7	405.8	400.1	394.4
20°	1223.2	1161.6	936.0	742.7	624.0	508.2	416.8	359.7	355.7	365.9	363.8
22.5°	1261.5	1175.5	918.9	703.2	544.5	436.4	369.5	332.0	327.5	340.6	343.0
25°	1284.0	1215.0	900.2	662.8	495.1	383.0	334.0	312.8	313.6	330.8	328.7
27.5°	1385.1	1228.9	852.8	615.1	438.5	343.4	316.9	305.9	301.4	325.1	327.1
30°	1448.7	1319.4	842.2	564.5	396.4	314.5	301.4	296.9	296.1	324.7	326.7
32.5°	1567.0	1349.6	847.1	509.4	358.5	305.5	290.0	289.6	297.7	325.1	328.3
35°	1731.0	1476.9	823.5	478.0	337.7	291.6	281.0	284.3	298.1	327.9	332.4
37.5°	2050.7	1596.8	830.8	448.6	330.8	287.1	278.6	280.6	303.0	335.3	347.5
40°	2304.0	1814.2	819.4	434.0	321.4	286.3	273.3	281.4	302.6	339.3	350.4
42.5°	2671.1	1987.5	820.6	419.3	321.0	283.1	272.5	282.2	301.8	335.7	350.8
45°	2986.0	2142.9	838.2	410.7	316.9	288.4	271.2	283.5	296.5	322.6	339.3
47.5°	3244.1	2316.2	856.1	402.6	315.3	293.3	270.0	274.9	287.5	307.9	323.0
50°	3454.6	2438.2	878.9	400.9	315.3	290.8	266.7	266.3	276.9	293.3	307.5
52.5°	3618.6	2524.3	894.4	403.0	315.3	281.4	262.7	259.4	265.9	277.8	292.0
55°	3737.2	2550.8	881.8	408.3	314.9	272.9	255.3	252.5	255.7	263.9	277.3
57.5°	3785.0	2481.0	806.3	398.9	314.9	266.7	246.3	243.1	246.3	252.5	265.9
60°	3665.5	2256.7	697.4	374.8	308.8	258.6	236.2	234.1	239.0	244.3	257.4
62.5°	3365.7	1958.6	581.2	346.3	296.1	251.7	226.4	226.8	234.5	241.9	254.9
65°	2899.9	1598.0	484.5	317.3	280.2	240.6	216.2	219.0	230.0	239.8	252.9
67.5°	2282.0	1184.0	407.9	289.2	257.8	222.7	204.7	205.6	213.3	222.7	235.3
70°	1525.4	753.3	335.3	256.1	228.4	199.4	187.2	184.4	182.3	190.5	201.5
72.5°	773.7	445.0	275.3	219.0	196.6	174.2	164.8	157.4	151.7	156.6	165.2
75°	405.4	311.2	222.3	181.9	162.3	148.1	141.1	131.3	127.3	130.1	136.2
77.5°	286.7	243.5	179.9	144.0	132.1	117.5	118.7	108.5	105.2	106.9	113.4
80°	220.2	192.9	138.3	108.9	102.0	87.7	91.8	85.7	81.6	80.8	85.7
82.5°	150.1	145.2	98.3	76.3	71.4	61.2	66.9	64.4	59.1	55.9	58.3
85°	101.1	96.3	60.0	44.0	42.0	31.8	40.8	39.2	34.7	29.8	30.2
87.5°	17.5	32.2	17.1	11.0	10.2	3.7	9.4	9.0	8.2	4.1	3.3
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)