

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: P366735

Luminaire Tested: **MSA-SA1B-727-U-SL2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366735
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-727-U-SL2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3471 lumens
Efficiency: N/A
Efficacy: 78.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G1

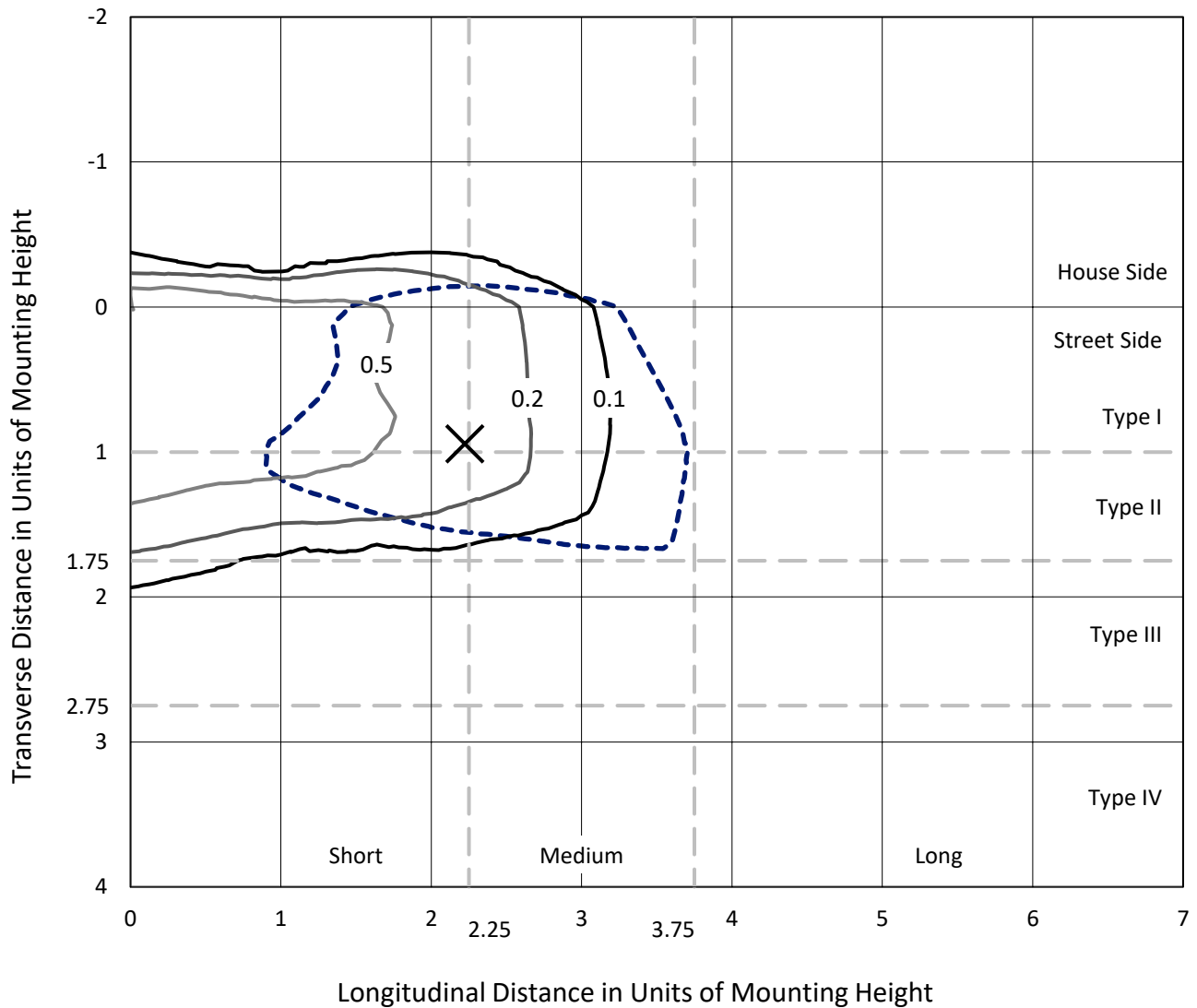
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

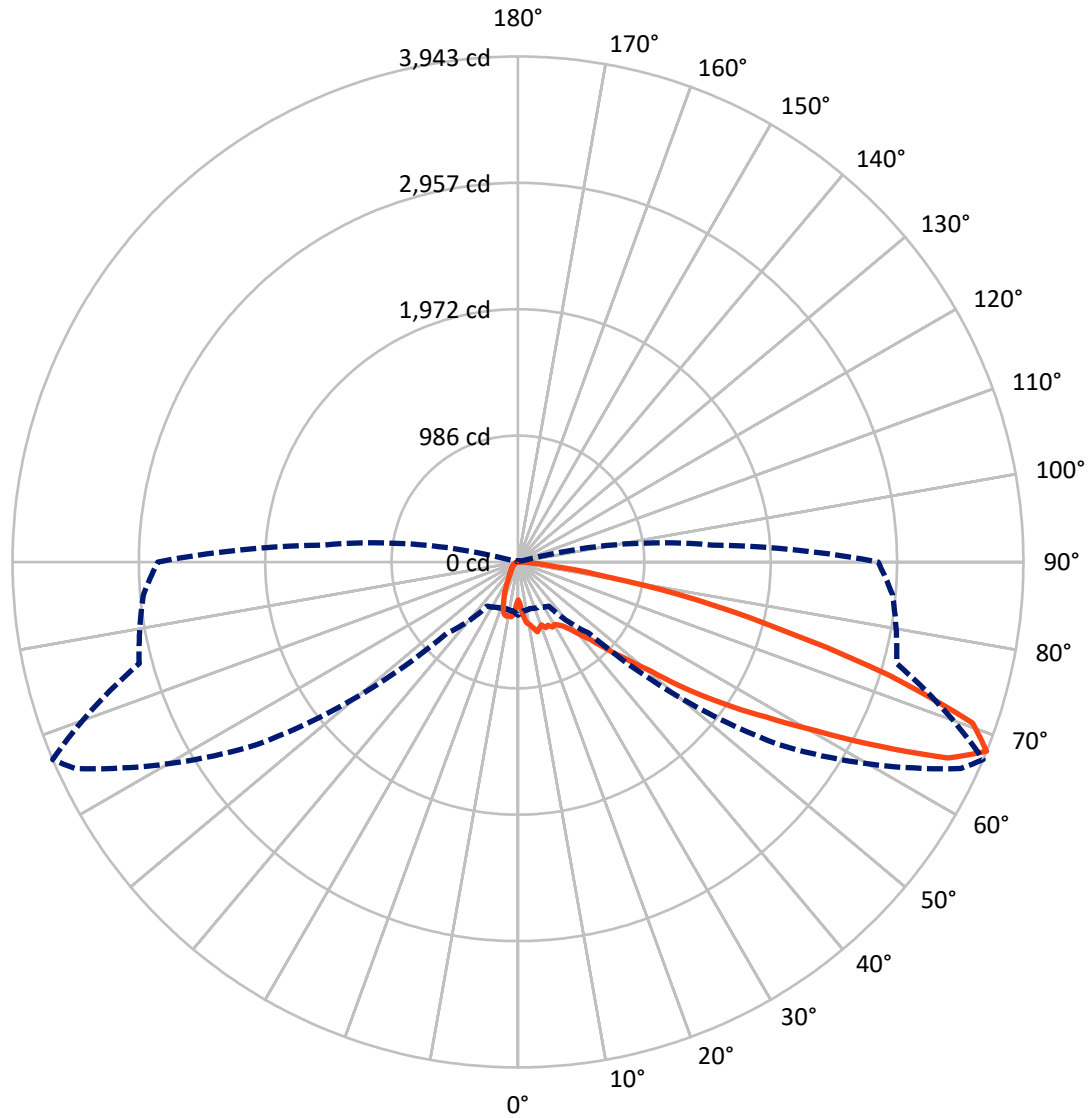
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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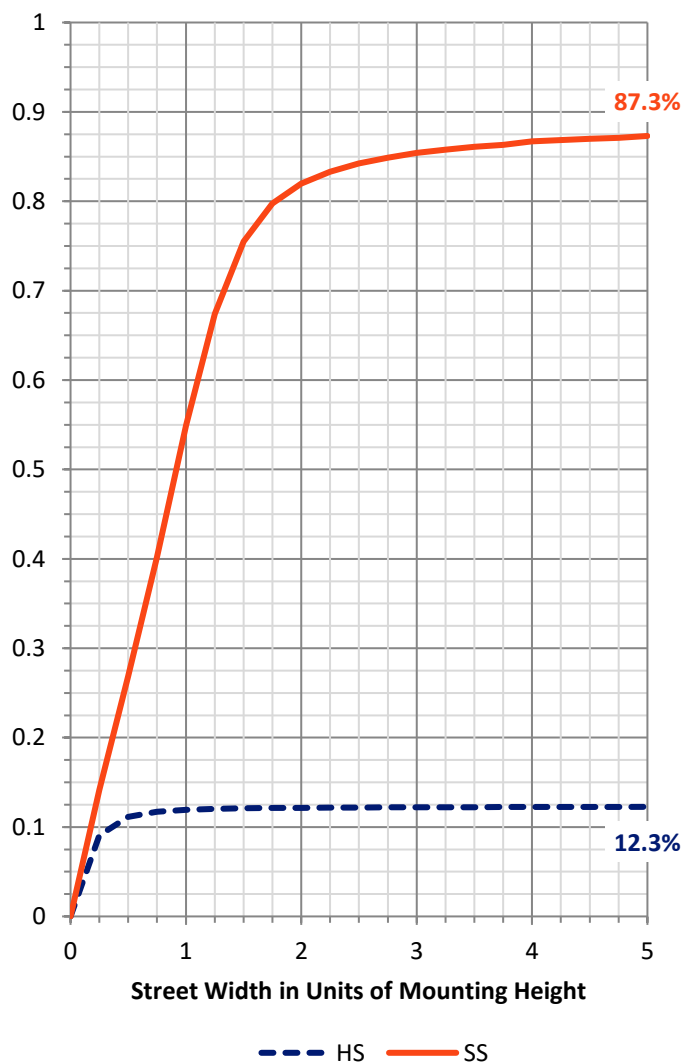
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	429.3	0.0	429.3
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	3041.7	0.0	3041.7
	% Fixture	87.6	0.0	87.6
Total	Lumens	3471.0	0.0	3471.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.1	1.1
10°-20°	109.8	3.2
20°-30°	172.1	5.0
30°-40°	277.5	8.0
40°-50°	509.8	14.7
50°-60°	861.1	24.8
60°-70°	951.9	27.4
70°-80°	498.2	14.4
80°-90°	53.5	1.5
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°	3471.0	100.0
0°-180°	3471.0	100.0

Coefficient of Utilization

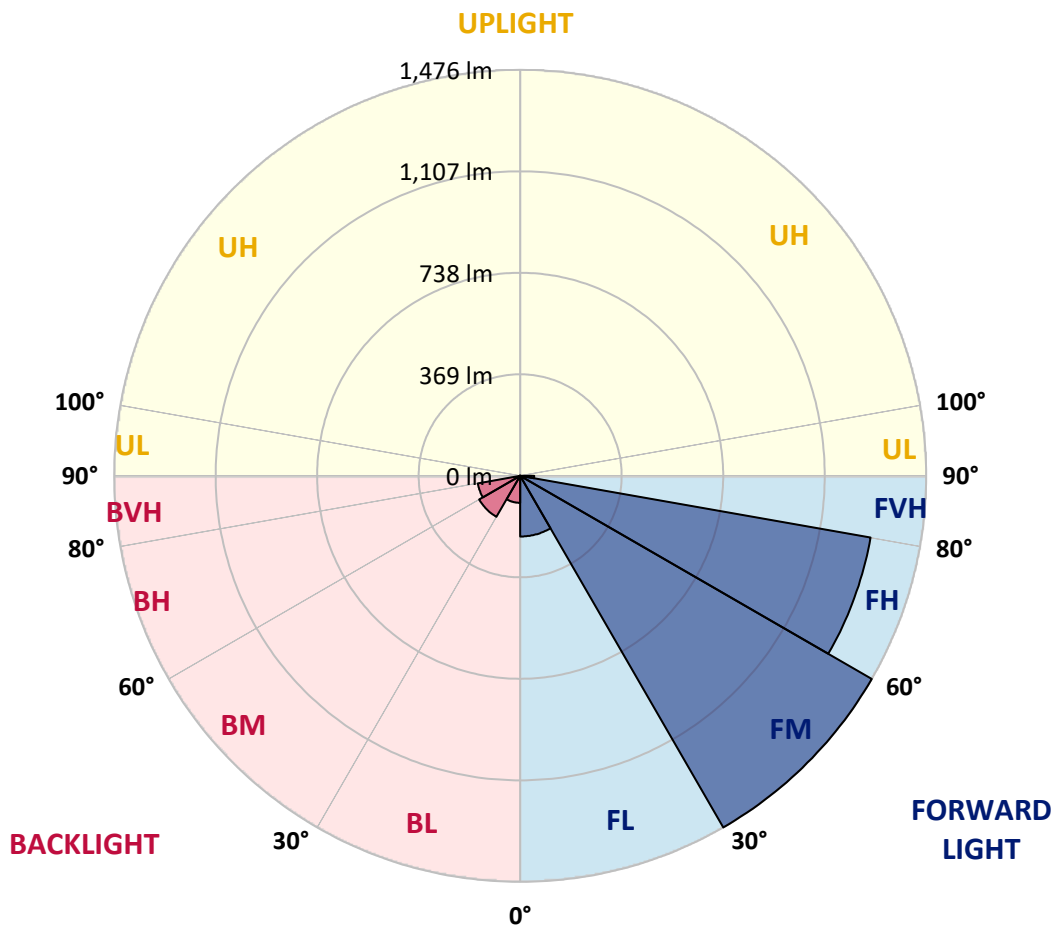


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	220.7	6.4			
FM (30°-60°)	1476.2	42.5			
FH (60°-80°)	1293.6	37.3			G1/1800
FVH (80°-90°)	51.2	1.5			G1/100
BL (0°-30°)	98.3	2.8	B0/110		
BM (30°-60°)	172.1	5.0	B0/220		
BH (60°-80°)	156.6	4.5	B1/500		G1/500
BVH (80°-90°)	2.3	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1
 Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	295.6	295.6	295.6	295.6	295.6	295.6	295.6	295.6	295.6	295.6	295.6
2.5°	349.0	337.2	317.1	322.9	334.5	344.2	339.7	330.7	330.8	321.7	354.6
5°	406.0	390.2	378.6	382.6	382.1	381.7	403.4	411.7	415.2	430.3	452.7
7.5°	422.4	416.8	404.6	408.3	396.2	397.1	435.1	471.0	476.6	486.0	525.8
10°	416.1	405.2	409.6	409.6	409.7	429.4	455.0	489.3	496.2	532.1	536.3
12.5°	409.2	409.7	427.2	424.0	447.9	483.3	492.0	530.5	527.2	558.3	604.6
15°	434.7	448.1	436.8	441.2	443.5	485.1	499.0	550.2	565.0	604.5	634.6
17.5°	478.6	480.3	456.9	450.6	467.1	478.9	506.9	531.6	541.4	645.0	687.6
20°	486.5	497.8	474.0	437.4	472.4	488.6	508.2	520.0	524.2	657.5	717.5
22.5°	534.2	521.7	483.7	455.9	465.9	483.5	495.7	531.2	556.6	633.9	746.2
25°	558.7	555.3	519.1	495.3	485.1	483.7	511.5	538.4	546.5	658.3	753.3
27.5°	617.3	609.8	539.5	536.5	502.9	473.3	512.0	560.5	575.6	635.3	779.7
30°	697.1	694.3	600.8	598.8	545.3	492.1	540.6	574.0	564.9	647.1	797.3
32.5°	777.4	800.3	704.7	650.1	609.9	561.3	532.5	569.8	586.2	675.8	829.7
35°	874.4	890.9	793.6	754.0	664.7	593.7	586.2	610.1	617.1	709.9	866.5
37.5°	1044.1	1019.1	936.2	868.8	821.9	709.4	672.1	653.1	669.4	756.2	941.7
40°	1169.5	1153.7	1051.5	1011.2	903.4	837.6	740.0	722.3	740.6	803.8	993.9
42.5°	1320.7	1287.8	1191.7	1164.4	1053.5	926.5	827.6	833.7	822.3	897.6	1085.7
45°	1457.6	1383.3	1329.7	1335.9	1276.7	1105.2	973.5	970.5	961.0	1033.6	1182.2
47.5°	1549.6	1484.7	1432.6	1415.5	1408.4	1419.5	1184.5	1131.3	1124.2	1176.4	1334.1
50°	1599.1	1528.0	1463.5	1467.1	1610.0	1717.6	1402.1	1326.6	1329.2	1383.6	1541.9
52.5°	1565.8	1485.4	1417.4	1483.4	1766.4	1916.4	1762.3	1581.7	1643.0	1629.1	1820.6
55°	1412.1	1342.2	1294.0	1412.1	1783.5	2130.3	2205.9	1965.7	1952.0	1920.3	2104.8
57.5°	1153.5	1093.3	1063.5	1188.2	1596.7	2302.7	2651.4	2399.7	2282.7	2149.9	2340.8
60°	859.4	815.1	784.1	849.9	1258.1	2135.3	2943.1	2808.8	2673.2	2371.2	2552.8
62.5°	636.5	600.4	567.5	573.5	866.3	1836.5	3055.1	3242.1	3164.3	2604.9	2752.8
65°	508.0	475.1	452.0	438.8	536.5	1381.7	2899.3	3597.2	3687.0	2825.0	2897.2
67.5°	414.8	387.0	375.6	390.7	420.8	787.6	2483.0	3812.8	3943.0	3058.4	2932.7
70°	337.5	314.6	313.4	354.3	387.5	480.2	1826.4	3664.0	3762.0	3098.2	2719.5
72.5°	235.2	225.2	241.2	299.2	384.0	399.9	1048.9	3032.0	3035.6	2736.4	2236.9
75°	133.1	131.5	156.9	238.6	374.0	395.8	584.7	2142.7	2144.3	2069.6	1549.6
77.5°	73.2	68.5	91.4	161.3	321.2	386.7	377.2	1463.0	1425.5	1151.7	707.8
80°	33.8	31.9	49.5	103.4	234.9	365.7	302.3	804.1	725.1	375.2	172.7
82.5°	13.9	13.2	22.7	66.4	148.4	294.6	254.8	356.7	286.3	71.3	53.4
85°	2.5	2.6	9.3	40.1	83.1	135.8	206.5	169.4	124.5	19.7	29.2
87.5°	0.0	0.0	1.9	9.7	20.1	37.2	83.8	47.4	32.6	5.8	8.6
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°	295.6	295.6	295.6	295.6	295.6	295.6	295.6	295.6	295.6	295.6	295.6
2.5°	361.1	358.1	327.9	329.3	331.4	329.4	329.1	320.6	312.9	338.4	338.1
5°	456.7	435.4	414.5	406.4	389.0	366.1	366.2	359.0	351.6	362.0	362.0
7.5°	524.9	495.5	468.9	421.5	375.4	333.7	330.0	320.1	308.8	322.4	325.0
10°	540.7	515.2	480.9	411.3	367.6	327.0	282.3	245.5	228.4	220.4	219.0
12.5°	589.5	570.5	493.7	416.8	353.9	285.1	211.8	168.2	138.4	136.1	132.9
15°	622.1	608.7	506.4	403.2	295.8	205.0	133.1	102.1	90.2	89.1	87.5
17.5°	672.6	649.4	494.2	360.1	231.4	135.2	89.4	80.6	82.1	85.2	82.8
20°	693.2	647.8	467.8	297.6	162.5	90.7	77.6	72.9	76.6	79.6	78.2
22.5°	714.3	652.4	444.4	245.3	106.2	75.0	69.2	66.7	67.1	70.1	70.3
25°	714.2	665.0	417.3	191.0	79.1	66.7	62.5	59.3	58.1	60.2	59.7
27.5°	748.9	650.4	367.8	141.7	69.6	59.7	55.6	51.8	47.4	49.5	49.5
30°	749.0	674.2	333.3	101.8	63.7	53.2	49.7	43.7	38.6	40.3	40.5
32.5°	768.9	653.6	301.4	77.8	59.2	49.3	41.6	36.1	33.1	34.2	34.2
35°	791.6	671.2	252.5	68.7	54.6	43.8	35.6	31.2	28.9	29.8	29.8
37.5°	866.6	667.5	218.5	63.9	51.6	39.6	32.4	27.5	26.4	26.9	27.6
40°	893.8	693.7	172.4	61.1	46.7	35.7	28.5	24.8	23.4	23.8	23.9
42.5°	962.8	699.6	137.7	58.8	42.3	31.0	25.4	22.7	21.0	21.0	21.5
45°	1039.0	714.2	109.5	56.9	38.6	27.8	22.9	20.8	18.1	17.8	18.5
47.5°	1149.4	770.2	89.3	53.0	34.2	25.9	21.1	18.0	15.8	15.1	15.8
50°	1334.1	865.2	78.9	48.2	31.0	24.3	18.7	15.3	13.7	12.9	13.4
52.5°	1594.7	1029.5	73.4	43.8	28.2	21.8	16.7	13.4	11.8	11.1	11.4
55°	1884.2	1217.9	70.8	39.4	25.7	19.2	14.6	11.8	10.4	9.5	9.7
57.5°	2151.8	1395.1	68.1	35.2	23.2	17.1	12.9	10.4	9.0	8.1	8.3
60°	2415.6	1536.4	61.8	30.3	21.0	15.3	11.3	9.0	8.1	7.0	7.0
62.5°	2648.9	1621.0	52.6	26.2	18.8	13.6	10.0	8.1	7.4	6.3	6.3
65°	2807.7	1624.8	42.4	22.5	16.6	11.6	8.8	7.6	6.9	5.6	5.5
67.5°	2810.0	1519.2	34.0	20.1	14.6	10.2	7.9	7.2	6.3	5.3	4.9
70°	2515.1	1255.1	28.3	17.6	12.7	9.0	6.9	6.9	6.2	5.1	4.6
72.5°	2011.8	959.1	23.8	15.3	11.3	7.7	6.3	6.5	6.0	5.1	4.6
75°	1352.3	550.1	19.7	13.0	9.9	6.5	6.2	6.3	6.2	5.1	4.4
77.5°	622.8	175.2	15.3	10.7	8.5	5.5	6.0	6.0	5.6	4.6	3.9
80°	140.3	43.1	11.1	7.9	6.9	4.0	5.5	4.9	4.4	3.2	2.3
82.5°	51.1	13.2	6.7	4.9	4.2	1.6	3.5	3.5	3.2	2.3	1.4
85°	29.2	6.9	3.7	3.2	2.3	0.7	1.9	2.1	1.8	1.6	0.7
87.5°	9.5	1.6	1.8	1.9	1.8	0.4	0.7	0.7	0.5	0.4	0.0
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)