

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: P367012

Luminaire Tested: **MSA-SA1D-727-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367012
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1D-727-U-T3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5727 lumens
Efficiency: N/A
Efficacy: 85.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

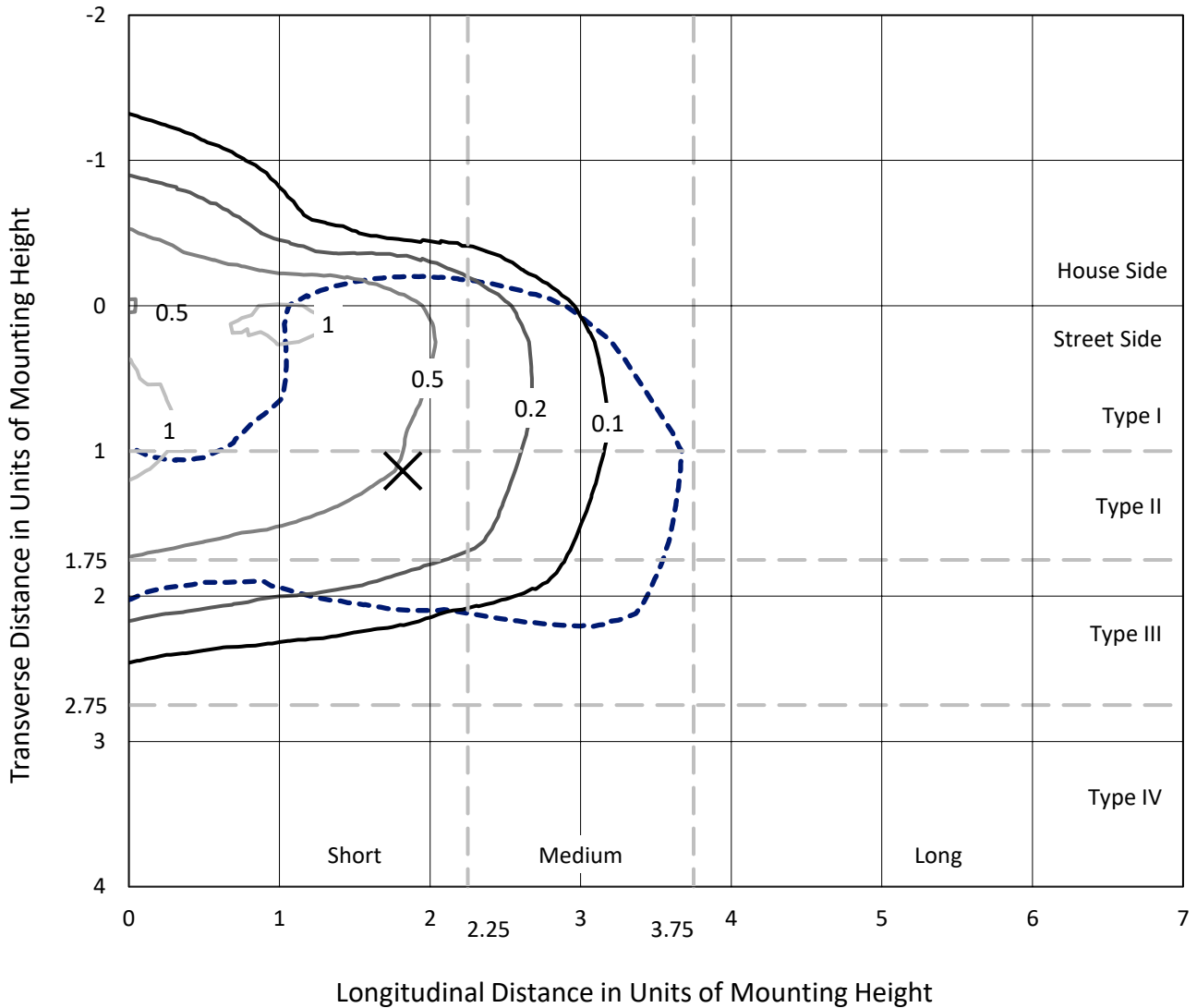
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

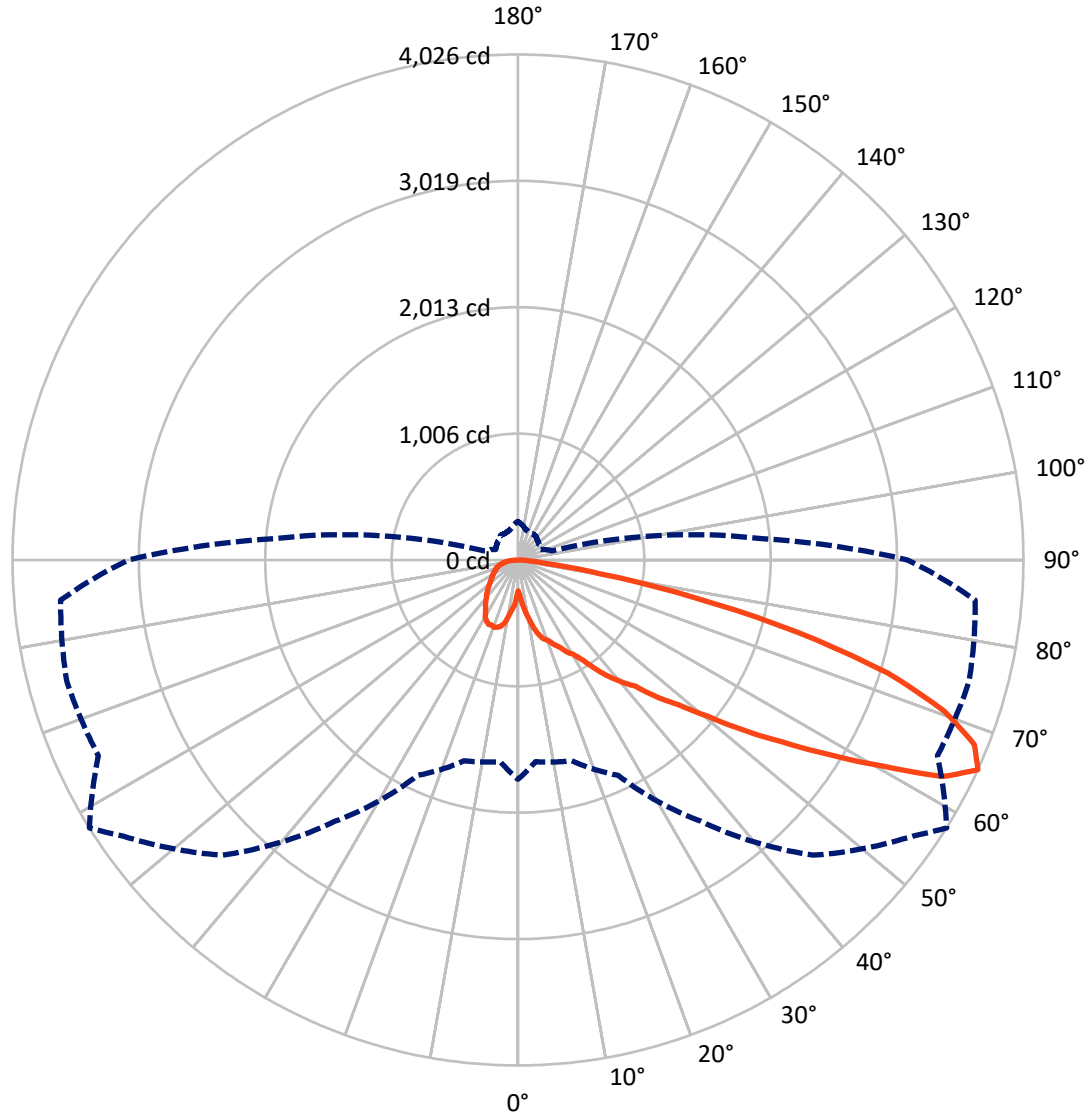
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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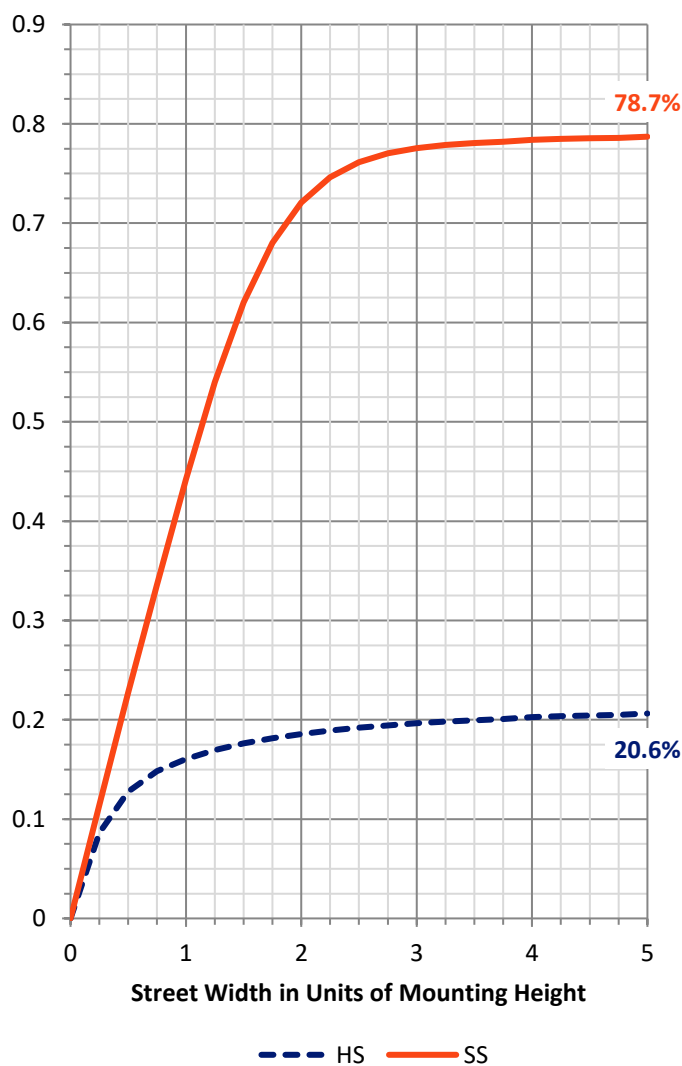
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1206.3	0.0	1206.3
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	4520.7	0.0	4520.7
	% Fixture	78.9	0.0	78.9
Total	Lumens	5727.0	0.0	5727.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.5	0.7
10°-20°	163.4	2.9
20°-30°	313.6	5.5
30°-40°	517.8	9.0
40°-50°	860.6	15.0
50°-60°	1421.3	24.8
60°-70°	1594.4	27.8
70°-80°	724.9	12.7
80°-90°	93.5	1.6
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°	5727.0	100.0
0°-180°	5727.0	100.0

Coefficient of Utilization



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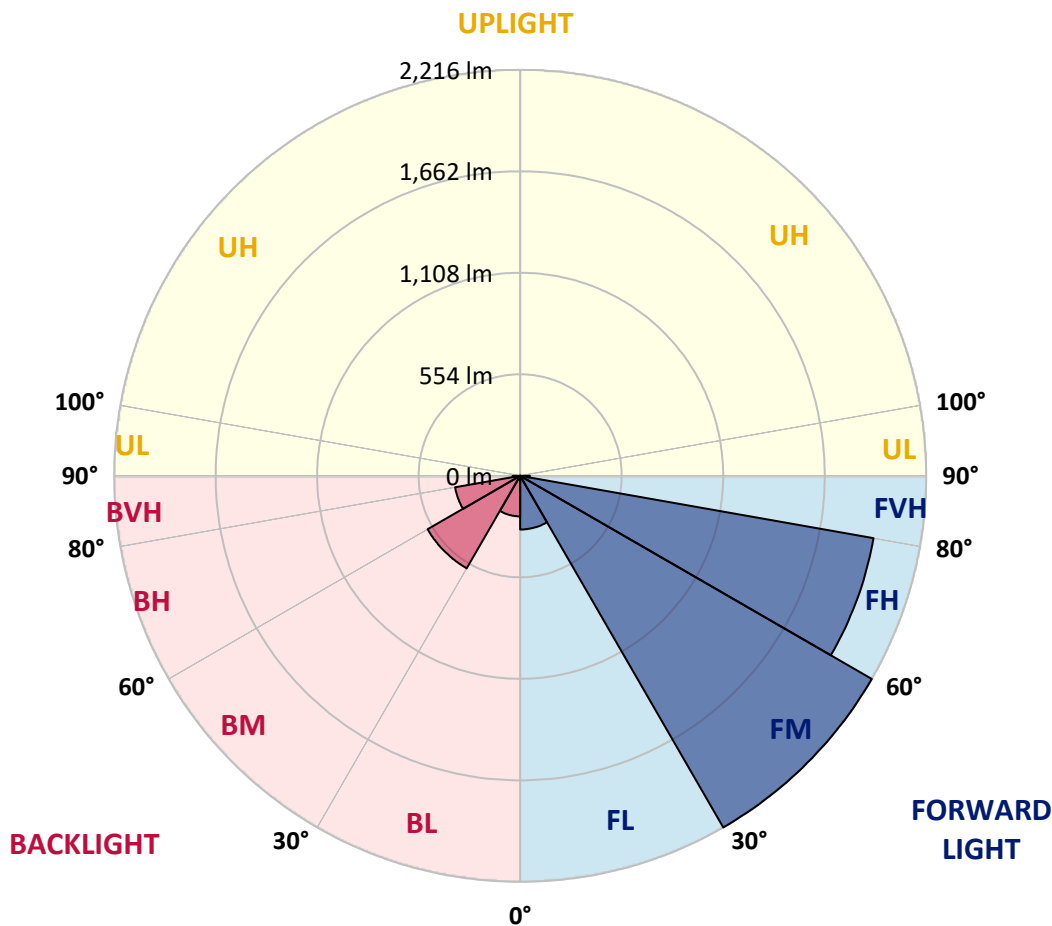
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	293.1	5.1			
FM (30°-60°)	2216.3	38.7			
FH (60°-80°)	1958.8	34.2			G2/5000
FVH (80°-90°)	52.6	0.9			G1/100
BL (0°-30°)	221.5	3.9	B1/500		
BM (30°-60°)	583.4	10.2	B1/1000		
BH (60°-80°)	360.6	6.3	B1/500		G1/500
BVH (80°-90°)	40.9	0.7			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	245.9	245.9	245.9	245.9	245.9	245.9	245.9	245.9	245.9	245.9	245.9
2.5°	293.6	284.8	270.0	273.6	282.1	286.9	284.1	280.2	275.2	274.3	296.2
5°	380.2	363.2	356.3	353.5	343.0	336.8	347.5	346.1	351.8	362.3	383.7
7.5°	443.4	431.4	420.0	418.8	398.5	391.4	405.7	413.3	423.6	423.8	452.9
10°	477.2	467.0	466.7	456.0	454.3	467.9	468.2	473.9	475.1	487.3	481.5
12.5°	514.0	513.2	526.4	526.1	541.4	563.8	552.6	552.6	555.9	541.2	559.3
15°	601.5	609.1	584.6	588.6	588.6	610.6	609.8	614.1	624.4	620.6	612.5
17.5°	692.6	697.4	670.2	644.9	646.8	642.0	659.2	660.9	651.1	695.5	685.7
20°	751.3	769.9	712.6	680.9	687.1	692.6	693.3	683.1	678.0	746.3	732.9
22.5°	823.8	808.0	755.6	720.5	729.8	722.4	721.0	728.8	735.8	761.5	783.2
25°	872.2	871.0	808.0	769.6	759.4	757.2	771.8	768.7	785.1	831.9	818.3
27.5°	942.5	964.5	852.9	862.4	817.3	769.9	816.6	830.7	860.3	852.6	882.9
30°	1079.0	1062.5	945.9	943.3	892.2	852.4	884.8	872.9	926.1	924.4	946.8
32.5°	1190.3	1201.8	1055.1	1027.7	989.8	941.8	920.4	953.5	982.1	1029.1	1041.8
35°	1308.2	1305.5	1167.0	1111.6	1048.9	1029.1	1055.6	1069.4	1130.2	1173.4	1143.4
37.5°	1491.3	1470.6	1312.0	1207.3	1160.3	1153.1	1198.5	1178.4	1244.2	1254.5	1271.4
40°	1661.6	1599.1	1444.6	1324.6	1250.0	1276.7	1278.1	1280.7	1316.0	1343.9	1427.6
42.5°	1823.6	1779.7	1579.3	1489.2	1379.2	1353.2	1369.5	1374.9	1464.1	1521.1	1637.0
45°	2044.9	1927.3	1773.0	1680.5	1557.4	1524.2	1512.8	1560.0	1646.1	1775.9	1875.3
47.5°	2232.1	2126.0	1978.8	1856.9	1719.3	1814.0	1749.1	1722.7	1838.3	1999.1	2157.5
50°	2387.4	2270.5	2126.2	2055.9	2033.9	2118.3	1950.0	1953.1	2059.0	2285.8	2467.3
52.5°	2507.6	2382.8	2255.0	2219.2	2341.8	2390.5	2268.8	2250.5	2327.7	2595.8	2813.8
55°	2619.9	2487.5	2388.8	2461.8	2668.3	2673.8	2665.2	2563.4	2656.4	2928.0	3172.5
57.5°	2648.8	2506.1	2440.5	2545.2	2824.5	3041.8	3127.2	2927.3	3022.0	3230.2	3479.7
60°	2500.2	2378.1	2351.8	2494.0	2909.0	3226.6	3449.6	3330.1	3294.6	3472.8	3694.8
62.5°	2195.8	2054.2	2075.4	2272.9	2820.0	3299.9	3704.3	3797.6	3582.5	3665.7	3788.8
65°	1747.7	1612.5	1655.4	1893.0	2540.7	3324.2	3834.6	4025.8	3686.5	3720.3	3655.7
67.5°	1232.6	1109.7	1163.9	1471.1	2113.6	3012.7	3857.0	3919.5	3575.8	3564.6	3292.2
70°	698.3	621.3	680.0	936.1	1491.8	2400.0	3681.2	3598.9	3377.4	3218.5	2754.6
72.5°	320.3	293.8	322.0	476.5	858.8	1597.0	3005.3	3080.0	2910.2	2711.5	2095.7
75°	170.3	161.0	172.9	238.0	401.9	868.8	2135.3	2303.2	2212.8	2056.6	1367.1
77.5°	126.6	119.5	125.2	154.3	214.6	339.9	1213.2	1425.0	1459.4	1315.6	759.1
80°	97.1	91.3	97.1	116.6	148.6	161.5	518.7	664.2	756.5	611.3	301.7
82.5°	72.0	68.2	77.0	87.5	104.5	100.9	184.1	229.2	295.5	202.0	117.6
85°	57.2	52.5	55.8	59.4	66.8	55.3	84.2	94.2	99.7	83.5	43.4
87.5°	22.4	20.7	40.5	32.0	27.2	16.7	25.3	28.6	29.3	28.1	12.6
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°	245.9	245.9	245.9	245.9	245.9	245.9	245.9	245.9	245.9	245.9	245.9
2.5°	298.6	296.2	282.1	286.7	294.1	295.5	298.6	290.0	285.7	301.5	302.2
5°	385.7	372.8	366.1	366.8	362.0	354.6	365.9	373.2	376.1	387.8	392.1
7.5°	453.1	437.6	426.4	413.6	395.4	383.7	403.3	417.6	425.2	449.6	459.1
10°	483.2	470.8	468.4	452.2	451.7	451.5	450.5	445.5	462.0	459.6	466.3
12.5°	545.2	542.6	519.9	513.5	514.2	513.5	493.5	492.5	492.7	514.7	506.8
15°	602.9	603.4	582.7	559.3	538.3	531.9	524.0	520.4	525.6	538.1	530.4
17.5°	674.2	676.6	617.2	580.3	552.6	551.9	533.0	510.9	542.8	550.5	542.1
20°	720.3	710.2	637.3	575.3	567.4	545.9	522.5	492.0	519.7	538.3	543.5
22.5°	763.9	746.5	655.9	584.1	546.4	520.9	498.2	478.4	487.3	508.0	504.7
25°	793.5	788.7	681.6	605.3	545.7	488.9	458.4	445.8	450.3	482.5	479.4
27.5°	864.1	812.6	677.1	610.8	522.8	445.3	430.0	416.4	411.9	446.7	456.2
30°	911.3	890.1	707.4	602.2	493.9	409.5	387.1	384.2	385.7	425.2	427.9
32.5°	991.4	936.3	757.0	569.3	452.0	383.0	357.3	358.5	364.9	393.8	399.7
35°	1074.9	1042.0	763.7	545.7	417.8	354.9	344.4	336.0	339.6	364.9	366.1
37.5°	1229.9	1116.2	804.7	509.2	392.8	344.2	324.1	316.7	318.6	332.9	343.2
40°	1366.4	1265.2	785.6	473.9	361.8	329.8	304.8	299.3	293.6	307.7	314.1
42.5°	1585.1	1371.6	779.2	435.0	347.3	310.5	293.4	278.8	273.3	285.2	296.9
45°	1803.8	1484.4	744.1	395.7	326.7	309.1	276.7	262.8	264.3	275.0	286.9
47.5°	2047.5	1635.9	684.7	357.5	304.3	302.2	260.0	254.0	258.3	270.2	282.1
50°	2335.6	1796.6	635.6	323.2	288.3	281.4	257.8	250.7	254.7	268.8	280.5
52.5°	2650.7	1972.9	599.8	291.4	270.2	265.0	260.7	253.8	258.5	270.7	282.9
55°	2963.8	2133.8	575.5	269.7	254.7	258.1	266.6	261.6	264.0	273.1	285.2
57.5°	3196.1	2218.7	526.6	246.6	242.1	254.0	267.4	259.0	260.4	273.1	286.2
60°	3331.1	2235.0	446.2	227.8	232.1	245.9	260.0	249.2	248.3	269.0	285.5
62.5°	3316.3	2140.8	353.9	210.6	220.6	233.7	248.8	238.5	241.1	269.5	286.9
65°	3104.5	1948.3	281.4	196.0	206.8	220.4	239.5	235.4	248.0	288.6	307.4
67.5°	2732.5	1667.1	226.1	182.5	193.9	211.3	245.9	256.6	262.1	308.1	327.5
70°	2214.5	1295.3	188.4	170.5	183.6	215.6	264.5	262.3	257.8	298.8	314.1
72.5°	1599.8	887.9	165.8	158.8	171.0	202.7	265.0	253.5	247.8	272.8	283.8
75°	1001.0	529.7	144.8	144.1	151.7	181.7	253.0	242.8	227.3	239.7	254.0
77.5°	571.7	271.2	121.9	128.3	132.8	157.6	226.6	217.3	203.4	208.7	222.8
80°	218.2	131.2	102.8	114.0	112.8	133.6	192.0	189.8	174.1	175.8	184.4
82.5°	102.8	73.5	85.4	98.0	91.6	106.4	156.0	155.3	141.4	128.1	135.0
85°	38.2	39.1	62.5	74.6	63.7	68.7	112.8	109.7	96.4	81.3	89.9
87.5°	8.6	14.1	30.8	38.9	22.2	21.2	45.6	39.6	38.2	22.7	23.8
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)