

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: P366616

Luminaire Tested: **MSA-SA1A-727-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366616
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-SA1A-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: 3375 lumens
Efficiency: N/A
Efficacy: 99.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

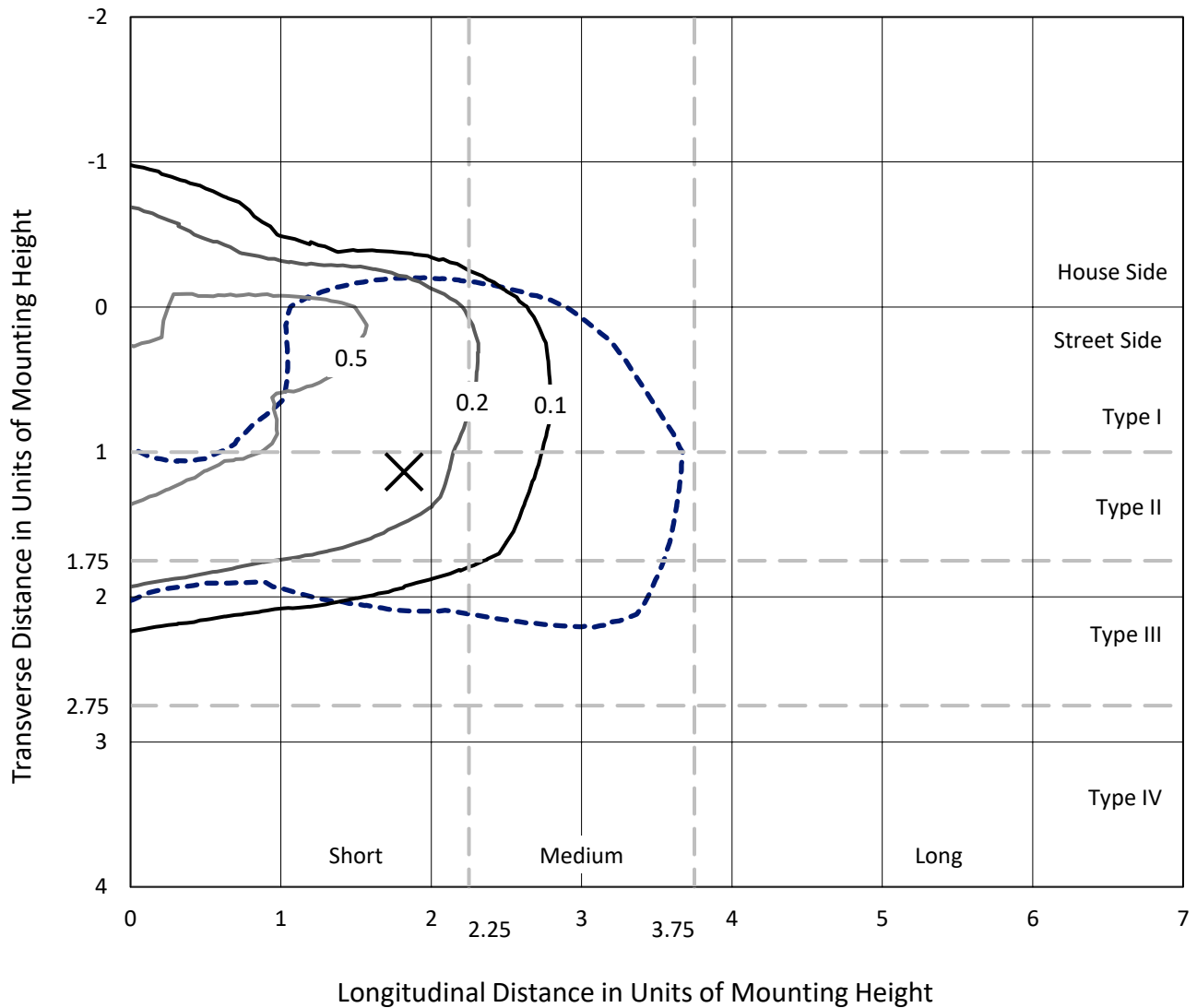
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

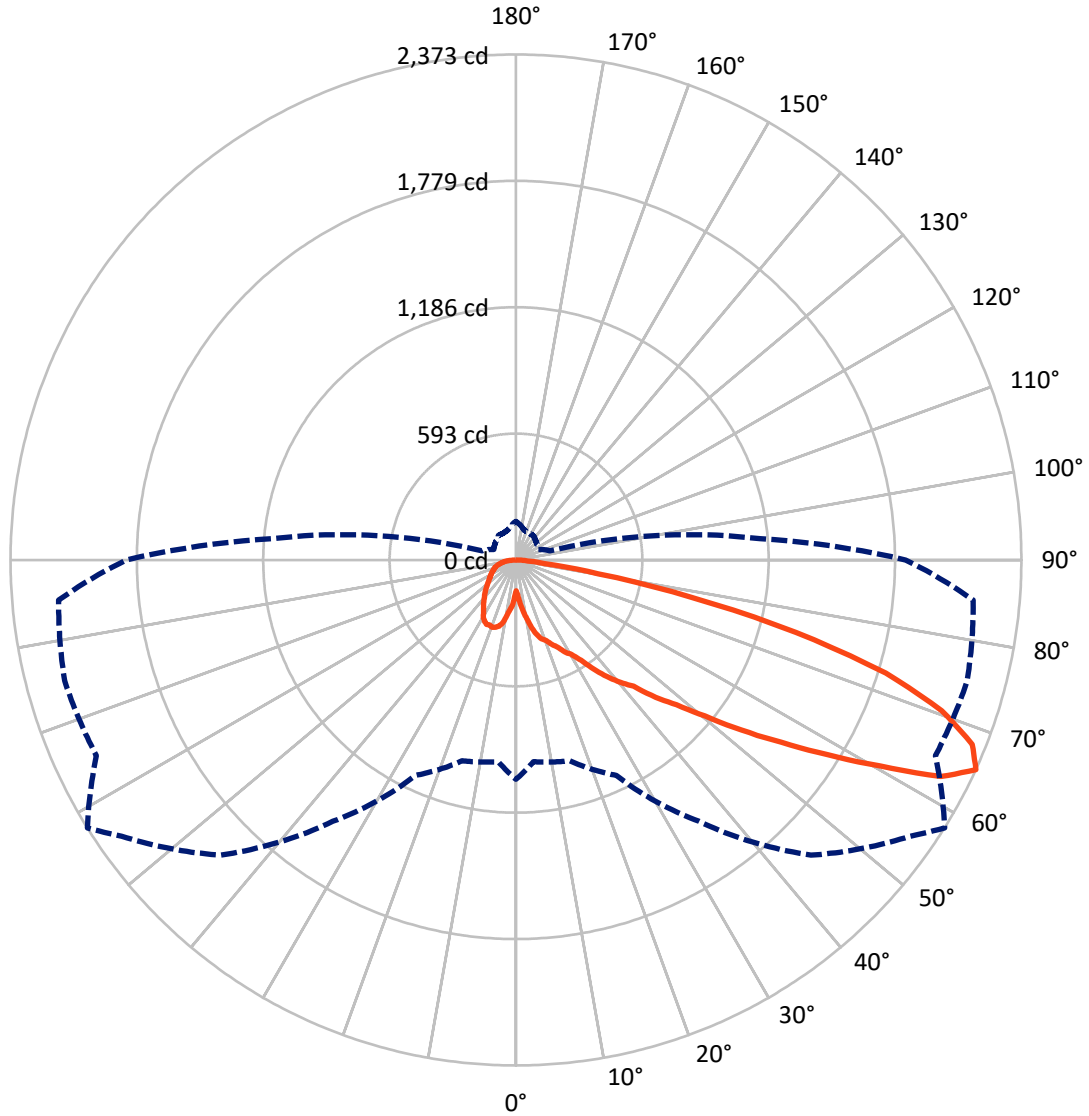
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.7 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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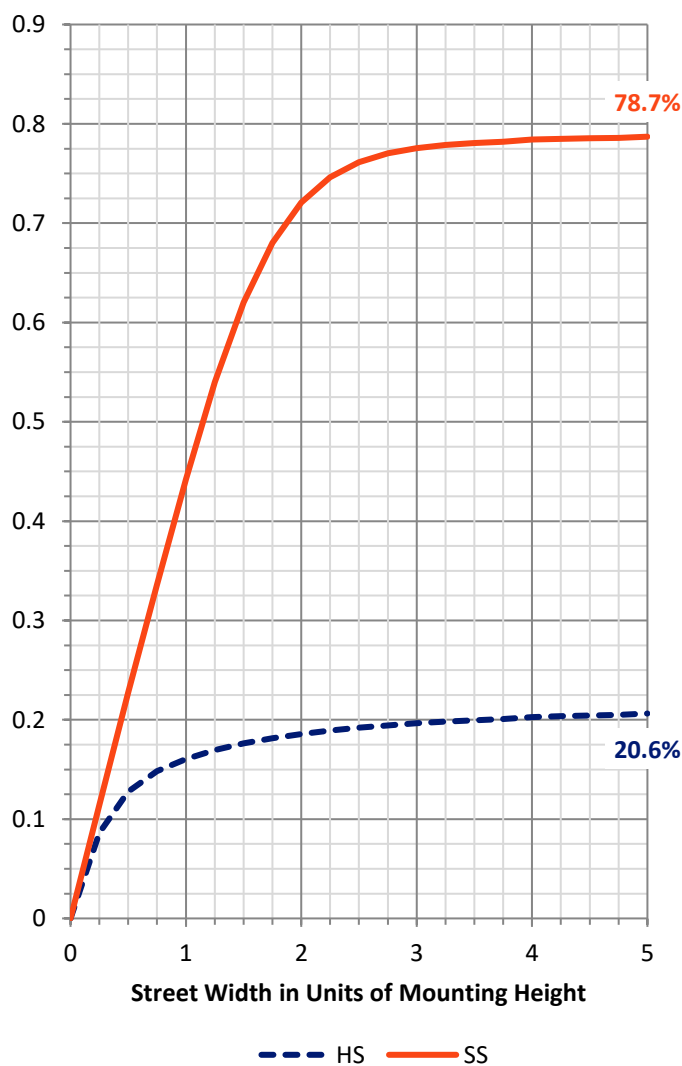
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	710.9	0.0	710.9
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	2664.1	0.0	2664.1
	% Fixture	78.9	0.0	78.9
Total	Lumens	3375.0	0.0	3375.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.1	0.7
10°-20°	96.3	2.9
20°-30°	184.8	5.5
30°-40°	305.1	9.0
40°-50°	507.2	15.0
50°-60°	837.6	24.8
60°-70°	939.6	27.8
70°-80°	427.2	12.7
80°-90°	55.1	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°	3375.0	100.0
0°-180°	3375.0	100.0

Coefficient of Utilization



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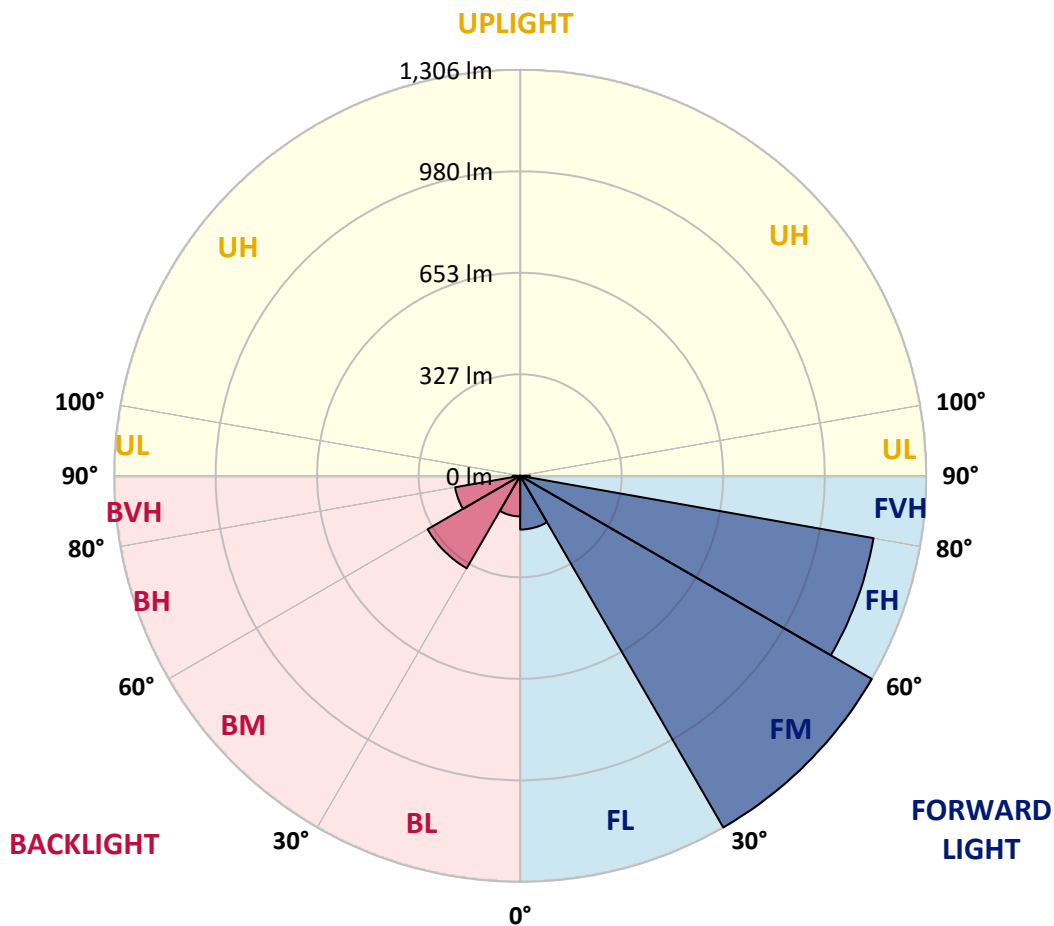
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	172.7	5.1			
FM (30°-60°)	1306.1	38.7			
FH (60°-80°)	1154.3	34.2			G1/1800
FVH (80°-90°)	31.0	0.9			G1/100
BL (0°-30°)	130.5	3.9	B1/500		
BM (30°-60°)	343.8	10.2	B1/1000		
BH (60°-80°)	212.5	6.3	B1/500		G1/500
BVH (80°-90°)	24.1	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-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9
2.5°	173.0	167.8	159.1	161.2	166.3	169.1	167.4	165.1	162.2	161.6	174.6
5°	224.0	214.1	210.0	208.3	202.1	198.5	204.8	203.9	207.3	213.5	226.1
7.5°	261.3	254.3	247.5	246.8	234.9	230.6	239.1	243.6	249.6	249.8	266.9
10°	281.2	275.2	275.1	268.7	267.7	275.8	275.9	279.3	280.0	287.1	283.8
12.5°	302.9	302.5	310.2	310.1	319.0	332.3	325.7	325.7	327.6	318.9	329.6
15°	354.5	359.0	344.5	346.9	346.9	359.8	359.4	361.9	368.0	365.7	360.9
17.5°	408.2	411.0	394.9	380.0	381.2	378.4	388.5	389.5	383.7	409.8	404.1
20°	442.7	453.7	420.0	401.3	404.9	408.2	408.6	402.5	399.6	439.8	431.9
22.5°	485.5	476.2	445.3	424.6	430.1	425.7	424.9	429.5	433.6	448.8	461.6
25°	514.0	513.3	476.2	453.6	447.5	446.2	454.8	453.0	462.7	490.2	482.2
27.5°	555.5	568.4	502.6	508.2	481.7	453.7	481.2	489.5	507.0	502.5	520.3
30°	635.8	626.2	557.4	555.9	525.8	502.3	521.4	514.4	545.8	544.8	558.0
32.5°	701.5	708.2	621.8	605.6	583.3	555.0	542.4	561.9	578.8	606.5	613.9
35°	770.9	769.4	687.7	655.1	618.1	606.5	622.1	630.2	666.1	691.5	673.8
37.5°	878.9	866.6	773.2	711.5	683.8	679.6	706.3	694.5	733.2	739.3	749.3
40°	979.2	942.4	851.3	780.6	736.6	752.4	753.2	754.8	775.6	792.0	841.3
42.5°	1074.6	1048.8	930.7	877.6	812.8	797.5	807.0	810.3	862.8	896.4	964.7
45°	1205.1	1135.8	1044.8	990.3	917.8	898.3	891.5	919.3	970.1	1046.5	1105.1
47.5°	1315.4	1252.9	1166.1	1094.3	1013.2	1069.0	1030.8	1015.2	1083.4	1178.1	1271.4
50°	1406.9	1338.0	1253.0	1211.5	1198.6	1248.4	1149.1	1151.0	1213.4	1347.0	1454.0
52.5°	1477.7	1404.2	1328.9	1307.8	1380.1	1408.7	1337.1	1326.2	1371.8	1529.7	1658.2
55°	1543.9	1465.9	1407.7	1450.8	1572.5	1575.7	1570.6	1510.6	1565.4	1725.5	1869.6
57.5°	1560.9	1476.9	1438.2	1500.0	1664.5	1792.6	1842.9	1725.1	1780.9	1903.6	2050.6
60°	1473.4	1401.4	1386.0	1469.7	1714.3	1901.5	2032.9	1962.5	1941.6	2046.5	2177.4
62.5°	1294.0	1210.6	1223.1	1339.4	1661.9	1944.7	2183.0	2238.0	2111.2	2160.3	2232.8
65°	1030.0	950.3	975.6	1115.5	1497.3	1959.0	2259.8	2372.5	2172.5	2192.4	2154.4
67.5°	726.4	654.0	685.9	866.9	1245.6	1775.4	2273.0	2309.8	2107.3	2100.7	1940.2
70°	411.5	366.1	400.7	551.7	879.1	1414.4	2169.4	2120.9	1990.3	1896.7	1623.4
72.5°	188.8	173.2	189.7	280.8	506.1	941.1	1771.1	1815.1	1715.0	1597.9	1235.0
75°	100.4	94.9	101.9	140.3	236.8	512.0	1258.3	1357.3	1304.0	1212.0	805.6
77.5°	74.6	70.4	73.8	90.9	126.5	200.3	715.0	839.8	860.0	775.3	447.4
80°	57.2	53.8	57.2	68.7	87.6	95.2	305.7	391.4	445.8	360.2	177.8
82.5°	42.4	40.2	45.4	51.6	61.6	59.5	108.5	135.1	174.1	119.0	69.3
85°	33.7	30.9	32.9	35.0	39.4	32.6	49.6	55.5	58.7	49.2	25.6
87.5°	13.2	12.2	23.9	18.8	16.0	9.8	14.9	16.9	17.3	16.6	7.4
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°	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9	144.9
2.5°	176.0	174.6	166.3	168.9	173.3	174.1	176.0	170.9	168.4	177.7	178.1
5°	227.3	219.7	215.7	216.2	213.4	209.0	215.6	220.0	221.6	228.5	231.1
7.5°	267.0	257.9	251.3	243.7	233.0	226.1	237.7	246.1	250.6	264.9	270.6
10°	284.8	277.4	276.0	266.5	266.2	266.1	265.5	262.5	272.2	270.8	274.8
12.5°	321.3	319.8	306.4	302.6	303.0	302.6	290.8	290.2	290.4	303.3	298.7
15°	355.3	355.6	343.4	329.6	317.2	313.4	308.8	306.7	309.8	317.1	312.6
17.5°	397.3	398.7	363.7	342.0	325.7	325.2	314.1	301.1	319.9	324.4	319.5
20°	424.5	418.6	375.5	339.0	334.4	321.7	307.9	290.0	306.3	317.2	320.3
22.5°	450.2	439.9	386.5	344.2	322.0	307.0	293.6	281.9	287.1	299.4	297.4
25°	467.6	464.8	401.7	356.7	321.6	288.1	270.1	262.7	265.4	284.3	282.5
27.5°	509.2	478.9	399.0	359.9	308.1	262.4	253.4	245.4	242.7	263.3	268.9
30°	537.0	524.5	416.9	354.9	291.1	241.3	228.1	226.4	227.3	250.6	252.1
32.5°	584.3	551.8	446.1	335.5	266.3	225.7	210.5	211.2	215.0	232.0	235.6
35°	633.5	614.1	450.0	321.6	246.2	209.1	203.0	198.0	200.1	215.0	215.7
37.5°	724.8	657.8	474.2	300.1	231.5	202.8	191.0	186.7	187.8	196.2	202.3
40°	805.2	745.6	463.0	279.3	213.2	194.4	179.6	176.4	173.0	181.3	185.1
42.5°	934.1	808.3	459.2	256.4	204.6	183.0	172.9	164.3	161.1	168.1	175.0
45°	1063.0	874.8	438.5	233.2	192.6	182.2	163.0	154.9	155.7	162.1	169.1
47.5°	1206.6	964.0	403.5	210.7	179.3	178.1	153.2	149.7	152.2	159.2	166.3
50°	1376.4	1058.8	374.6	190.4	169.9	165.8	151.9	147.7	150.1	158.4	165.3
52.5°	1562.1	1162.6	353.5	171.8	159.2	156.2	153.6	149.5	152.4	159.5	166.7
55°	1746.6	1257.5	339.1	159.0	150.1	152.1	157.1	154.2	155.6	160.9	168.1
57.5°	1883.5	1307.5	310.3	145.3	142.7	149.7	157.6	152.6	153.5	160.9	168.7
60°	1963.1	1317.1	263.0	134.2	136.8	144.9	153.2	146.9	146.3	158.5	168.2
62.5°	1954.3	1261.6	208.6	124.1	130.0	137.7	146.6	140.6	142.1	158.8	169.1
65°	1829.5	1148.2	165.8	115.5	121.9	129.9	141.1	138.7	146.2	170.1	181.2
67.5°	1610.3	982.4	133.2	107.5	114.3	124.5	144.9	151.2	154.5	181.6	193.0
70°	1305.0	763.3	111.0	100.5	108.2	127.1	155.9	154.6	151.9	176.1	185.1
72.5°	942.8	523.3	97.7	93.6	100.8	119.5	156.2	149.4	146.0	160.8	167.3
75°	589.9	312.2	85.3	84.9	89.4	107.1	149.1	143.1	133.9	141.3	149.7
77.5°	336.9	159.8	71.8	75.6	78.3	92.9	133.5	128.0	119.9	123.0	131.3
80°	128.6	77.3	60.6	67.2	66.5	78.7	113.1	111.9	102.6	103.6	108.6
82.5°	60.6	43.3	50.3	57.8	54.0	62.7	91.9	91.5	83.3	75.5	79.6
85°	22.5	23.1	36.8	44.0	37.5	40.5	66.5	64.7	56.8	47.9	53.0
87.5°	5.1	8.3	18.1	22.9	13.1	12.5	26.8	23.3	22.5	13.4	14.1
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)