

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: P366704

Luminaire Tested: **MSA-SA1A-760-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366704
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-760-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: 4035 lumens
Efficiency: N/A
Efficacy: 118.7 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

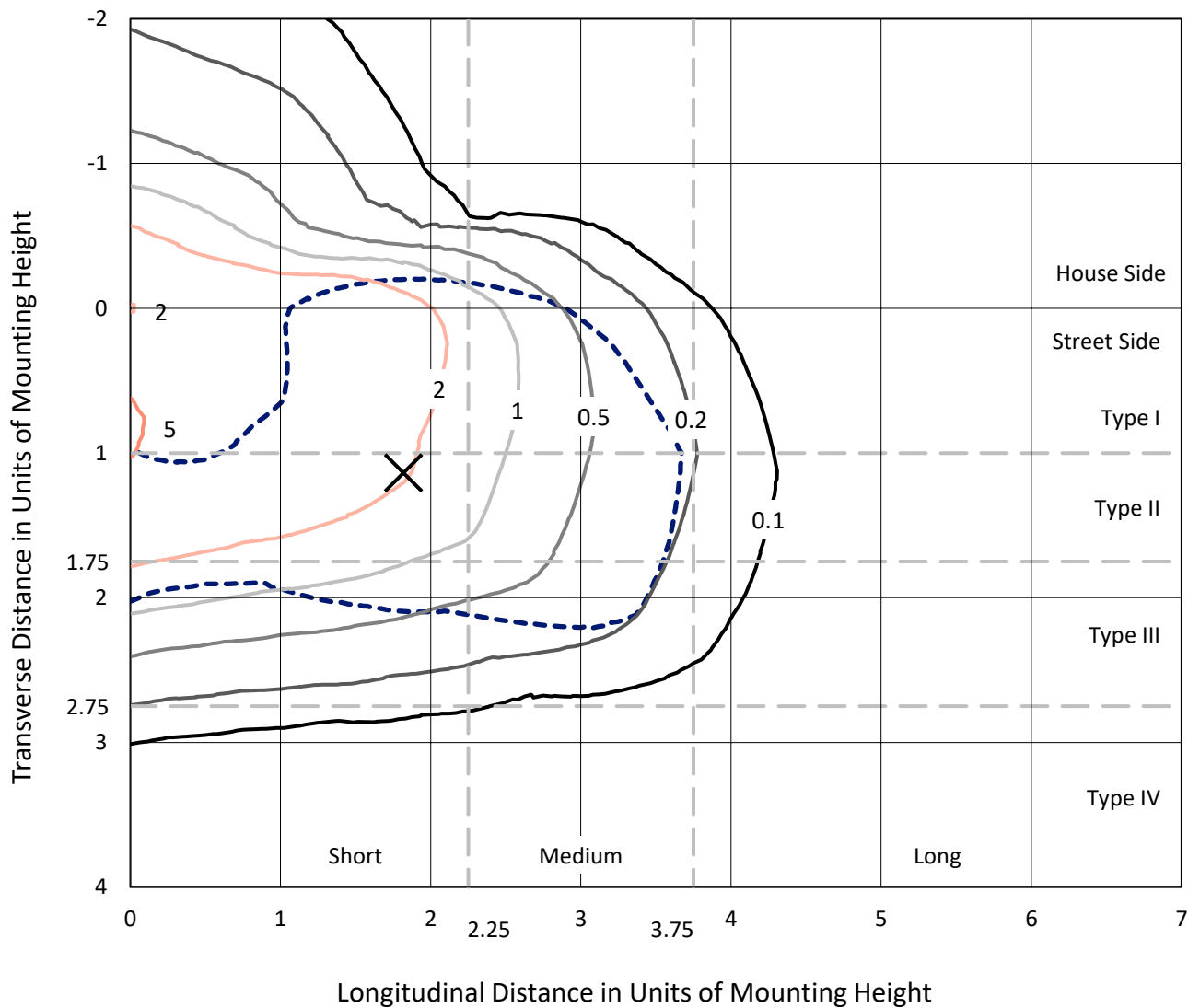
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

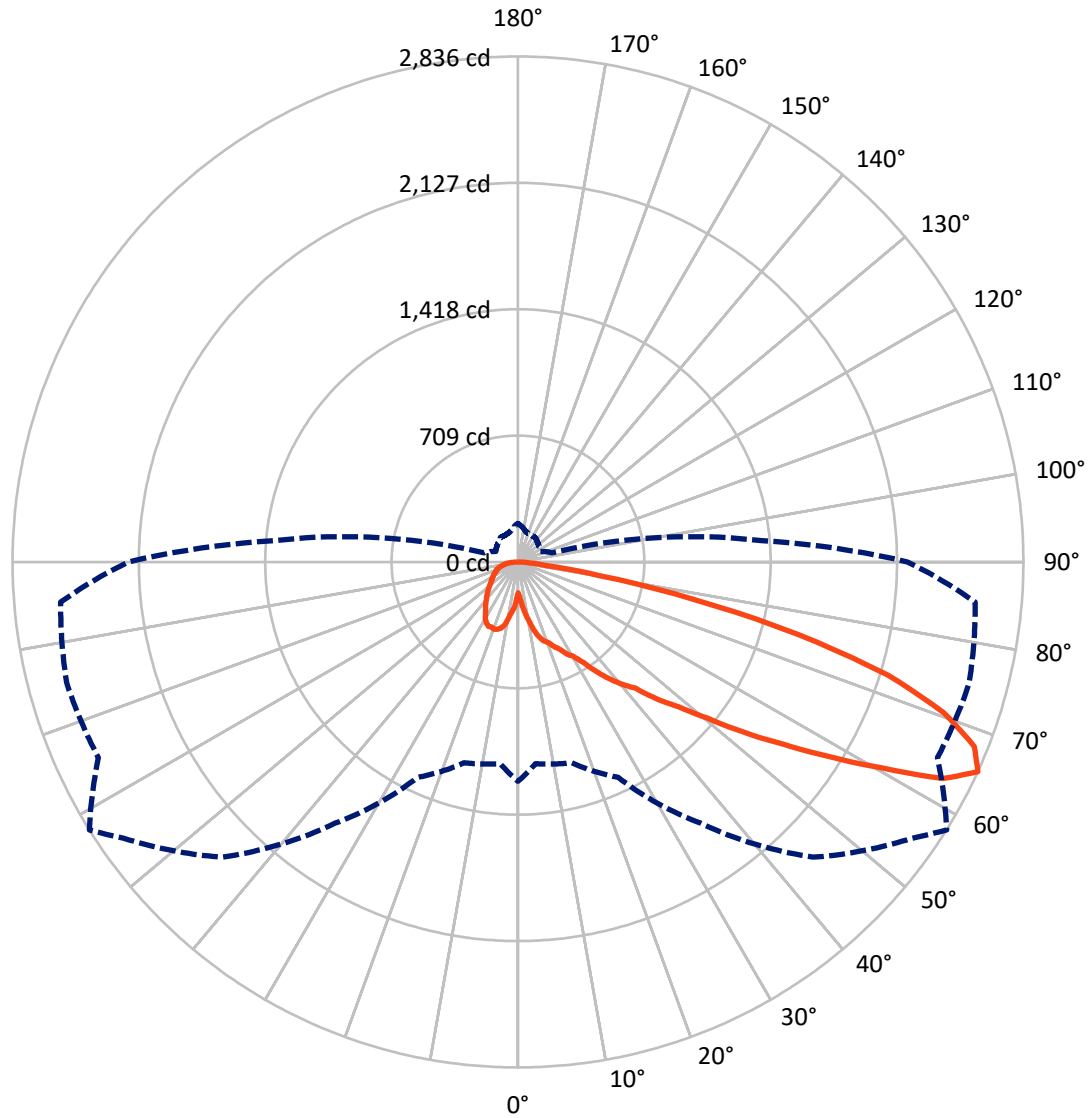
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.2 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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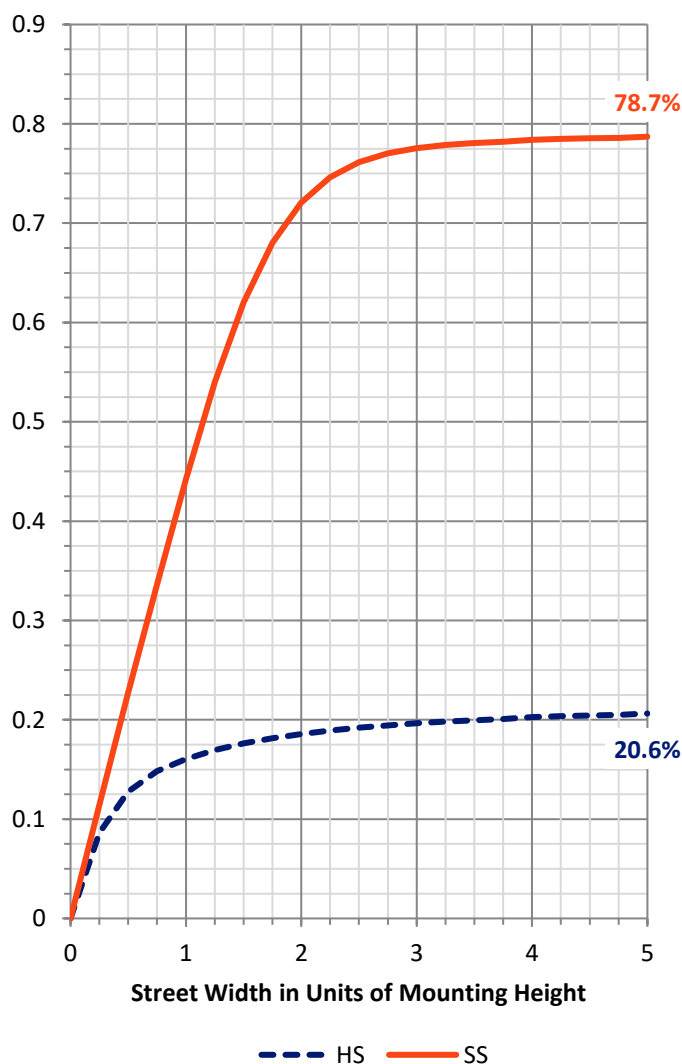
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	849.9	0.0	849.9
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	3185.1	0.0	3185.1
	% Fixture	78.9	0.0	78.9
Total	Lumens	4035.0	0.0	4035.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.4	0.7
10°-20°	115.2	2.9
20°-30°	221.0	5.5
30°-40°	364.8	9.0
40°-50°	606.3	15.0
50°-60°	1001.4	24.8
60°-70°	1123.3	27.8
70°-80°	510.8	12.7
80°-90°	65.9	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°	4035.0	100.0
0°-180°	4035.0	100.0

Coefficient of Utilization



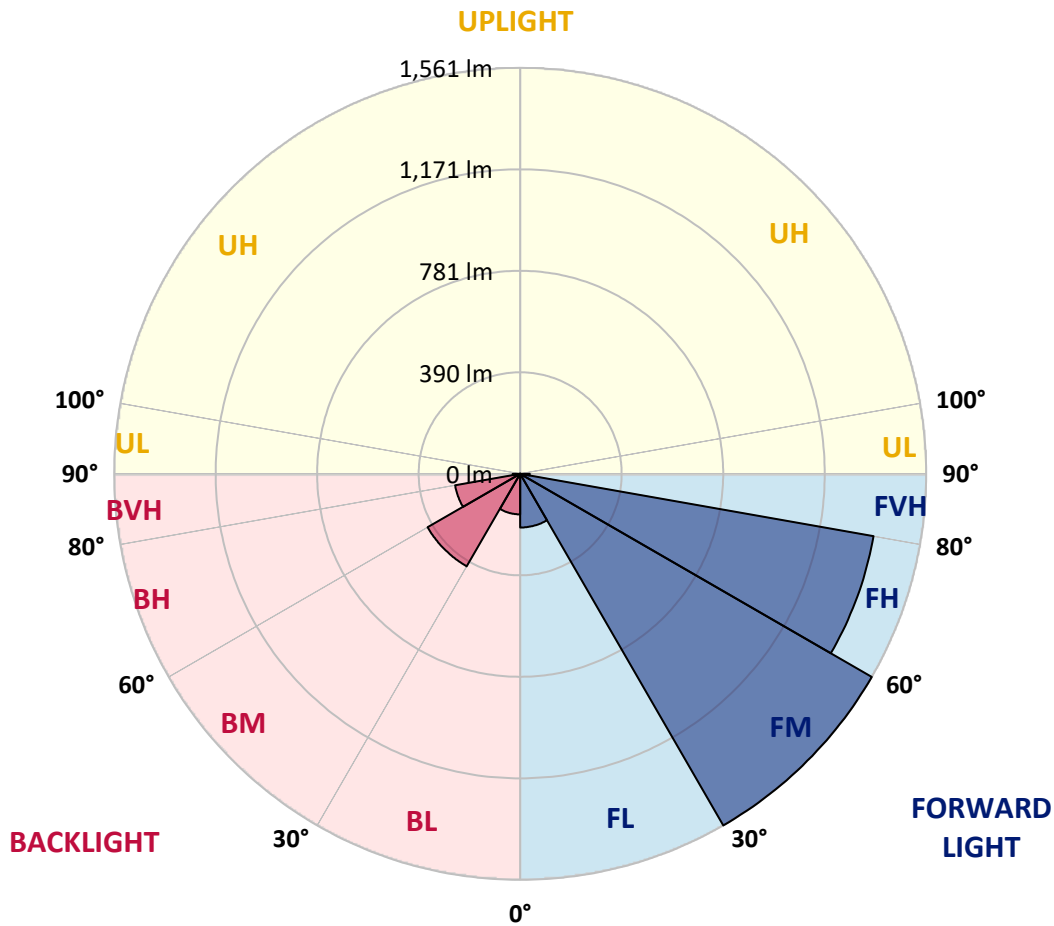
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	206.5	5.1			
FM (30°-60°)	1561.5	38.7			
FH (60°-80°)	1380.1	34.2			G1/1800
FVH (80°-90°)	37.1	0.9			G1/100
BL (0°-30°)	156.0	3.9	B1/500		
BM (30°-60°)	411.0	10.2	B1/1000		
BH (60°-80°)	254.1	6.3	B1/500		G1/500
BVH (80°-90°)	28.8	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°	173.2	173.2	173.2	173.2	173.2	173.2	173.2	173.2	173.2	173.2	173.2
2.5°	206.9	200.6	190.2	192.7	198.8	202.1	200.1	197.4	193.9	193.2	208.7
5°	267.8	255.9	251.0	249.0	241.6	237.3	244.8	243.8	247.9	255.2	270.4
7.5°	312.4	304.0	295.9	295.1	280.8	275.7	285.8	291.2	298.4	298.6	319.1
10°	336.2	329.0	328.8	321.3	320.1	329.7	329.9	333.9	334.7	343.3	339.3
12.5°	362.1	361.6	370.9	370.7	381.4	397.2	389.3	389.3	391.7	381.3	394.0
15°	423.8	429.2	411.9	414.7	414.7	430.2	429.7	432.7	439.9	437.2	431.5
17.5°	488.0	491.3	472.2	454.4	455.7	452.4	464.4	465.6	458.7	490.0	483.1
20°	529.3	542.4	502.1	479.7	484.1	488.0	488.5	481.3	477.7	525.8	516.4
22.5°	580.4	569.3	532.3	507.6	514.2	509.0	508.0	513.5	518.4	536.5	551.8
25°	614.5	613.7	569.3	542.3	535.0	533.5	543.8	541.6	553.2	586.1	576.5
27.5°	664.1	679.5	600.9	607.6	575.9	542.4	575.4	585.3	606.1	600.7	622.1
30°	760.2	748.6	666.4	664.6	628.6	600.6	623.4	615.0	652.5	651.3	667.1
32.5°	838.7	846.7	743.4	724.1	697.3	663.6	648.4	671.8	692.0	725.1	734.0
35°	921.7	919.8	822.2	783.2	739.0	725.1	743.7	753.5	796.3	826.7	805.6
37.5°	1050.7	1036.1	924.4	850.6	817.5	812.5	844.4	830.3	876.6	883.9	895.8
40°	1170.7	1126.7	1017.8	933.3	880.7	899.5	900.5	902.4	927.2	946.9	1005.9
42.5°	1284.8	1253.9	1112.7	1049.2	971.7	953.4	964.9	968.7	1031.6	1071.7	1153.4
45°	1440.7	1357.9	1249.2	1184.0	1097.3	1073.9	1065.8	1099.1	1159.8	1251.2	1321.3
47.5°	1572.6	1497.9	1394.2	1308.3	1211.4	1278.1	1232.4	1213.7	1295.2	1408.5	1520.0
50°	1682.0	1599.7	1498.0	1448.5	1433.0	1492.5	1373.9	1376.0	1450.6	1610.5	1738.3
52.5°	1766.7	1678.8	1588.8	1563.6	1649.9	1684.2	1598.5	1585.6	1640.0	1828.9	1982.5
55°	1845.9	1752.6	1683.0	1734.5	1880.0	1883.8	1877.8	1806.0	1871.6	2063.0	2235.2
57.5°	1866.2	1765.7	1719.5	1793.3	1990.0	2143.1	2203.3	2062.5	2129.2	2275.9	2451.6
60°	1761.5	1675.5	1657.0	1757.1	2049.5	2273.4	2430.5	2346.3	2321.2	2446.8	2603.2
62.5°	1547.1	1447.3	1462.2	1601.4	1986.9	2324.9	2609.9	2675.6	2524.1	2582.7	2669.4
65°	1231.4	1136.1	1166.3	1333.7	1790.1	2342.1	2701.7	2836.4	2597.3	2621.2	2575.6
67.5°	868.4	781.9	820.0	1036.4	1489.1	2122.6	2717.5	2761.5	2519.4	2511.5	2319.6
70°	492.0	437.7	479.1	659.5	1051.1	1690.9	2593.6	2535.7	2379.5	2267.6	1940.8
72.5°	225.7	207.0	226.8	335.7	605.1	1125.2	2117.4	2170.0	2050.4	1910.4	1476.5
75°	120.0	113.4	121.8	167.7	283.1	612.2	1504.4	1622.7	1559.0	1449.0	963.2
77.5°	89.2	84.2	88.2	108.7	151.2	239.5	854.8	1004.0	1028.2	926.9	534.9
80°	68.4	64.4	68.4	82.2	104.7	113.8	365.5	468.0	533.0	430.7	212.6
82.5°	50.7	48.1	54.3	61.7	73.6	71.1	129.7	161.5	208.2	142.3	82.8
85°	40.3	37.0	39.3	41.8	47.0	39.0	59.3	66.4	70.2	58.8	30.6
87.5°	15.8	14.6	28.6	22.5	19.2	11.8	17.8	20.2	20.7	19.8	8.9
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°	173.2	173.2	173.2	173.2	173.2	173.2	173.2	173.2	173.2	173.2	173.2
2.5°	210.4	208.7	198.8	202.0	207.2	208.2	210.4	204.3	201.3	212.4	212.9
5°	271.7	262.6	257.9	258.4	255.1	249.9	257.8	263.0	265.0	273.2	276.3
7.5°	319.3	308.3	300.4	291.4	278.6	270.4	284.1	294.2	299.6	316.7	323.5
10°	340.4	331.7	330.0	318.6	318.3	318.1	317.4	313.9	325.5	323.8	328.5
12.5°	384.1	382.3	366.3	361.8	362.3	361.8	347.7	347.0	347.2	362.6	357.1
15°	424.8	425.1	410.5	394.0	379.3	374.7	369.2	366.7	370.4	379.1	373.7
17.5°	475.0	476.7	434.9	408.8	389.3	388.8	375.6	359.9	382.4	387.8	381.9
20°	507.5	500.4	449.0	405.3	399.8	384.6	368.2	346.7	366.1	379.3	383.0
22.5°	538.2	526.0	462.1	411.5	385.0	367.0	351.0	337.1	343.3	357.9	355.6
25°	559.1	555.7	480.2	426.5	384.5	344.5	323.0	314.1	317.3	339.9	337.8
27.5°	608.8	572.5	477.1	430.3	368.3	313.7	303.0	293.4	290.2	314.7	321.5
30°	642.1	627.1	498.4	424.3	348.0	288.5	272.7	270.7	271.7	299.6	301.5
32.5°	698.5	659.7	533.3	401.1	318.4	269.9	251.7	252.6	257.1	277.4	281.6
35°	757.3	734.1	538.0	384.5	294.4	250.0	242.6	236.8	239.3	257.1	257.9
37.5°	866.6	786.4	567.0	358.8	276.8	242.5	228.4	223.2	224.5	234.6	241.8
40°	962.7	891.4	553.5	333.9	254.9	232.4	214.7	210.9	206.9	216.8	221.3
42.5°	1116.8	966.4	549.0	306.5	244.7	218.8	206.7	196.4	192.6	201.0	209.2
45°	1270.9	1045.9	524.3	278.8	230.2	217.8	194.9	185.2	186.2	193.7	202.1
47.5°	1442.6	1152.6	482.4	251.9	214.4	212.9	183.2	179.0	182.0	190.4	198.8
50°	1645.6	1265.8	447.8	227.7	203.2	198.3	181.6	176.6	179.5	189.4	197.6
52.5°	1867.5	1390.0	422.6	205.3	190.4	186.7	183.7	178.8	182.2	190.7	199.3
55°	2088.2	1503.4	405.5	190.0	179.5	181.8	187.9	184.3	186.0	192.4	201.0
57.5°	2251.8	1563.2	371.0	173.7	170.6	179.0	188.4	182.5	183.5	192.4	201.6
60°	2347.0	1574.7	314.4	160.5	163.5	173.2	183.2	175.6	174.9	189.5	201.1
62.5°	2336.5	1508.3	249.4	148.4	155.4	164.7	175.3	168.0	169.9	189.9	202.1
65°	2187.3	1372.7	198.3	138.1	145.7	155.3	168.7	165.9	174.8	203.3	216.6
67.5°	1925.2	1174.6	159.3	128.5	136.6	148.9	173.2	180.8	184.7	217.1	230.7
70°	1560.2	912.6	132.7	120.1	129.4	151.9	186.4	184.8	181.6	210.5	221.3
72.5°	1127.2	625.6	116.8	111.9	120.5	142.8	186.7	178.6	174.6	192.2	200.0
75°	705.2	373.2	102.0	101.5	106.9	128.0	178.3	171.1	160.1	168.9	179.0
77.5°	402.8	191.1	85.9	90.4	93.6	111.1	159.6	153.1	143.3	147.0	156.9
80°	153.8	92.4	72.4	80.3	79.5	94.1	135.3	133.8	122.7	123.8	129.9
82.5°	72.4	51.8	60.2	69.1	64.5	74.9	109.9	109.4	99.6	90.2	95.1
85°	26.9	27.6	44.0	52.6	44.9	48.4	79.5	77.3	67.9	57.3	63.3
87.5°	6.0	9.9	21.7	27.4	15.6	15.0	32.1	27.9	26.9	16.0	16.8
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)