

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: P366868

Luminaire Tested: **MSA-SA1C-727-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366868
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1C-727-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5211 lumens
Efficiency: N/A
Efficacy: 88.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B1 - U0 - G2

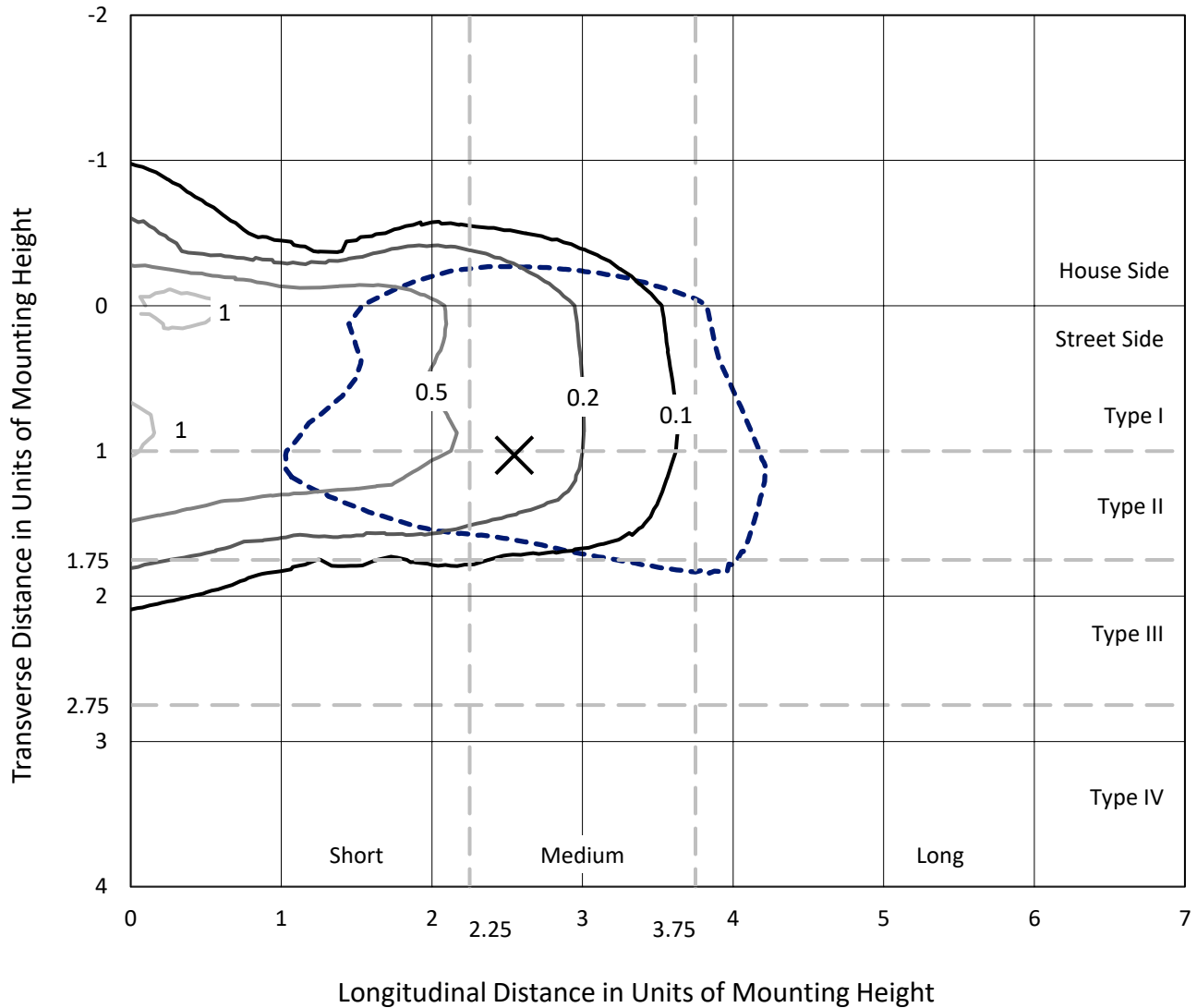
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

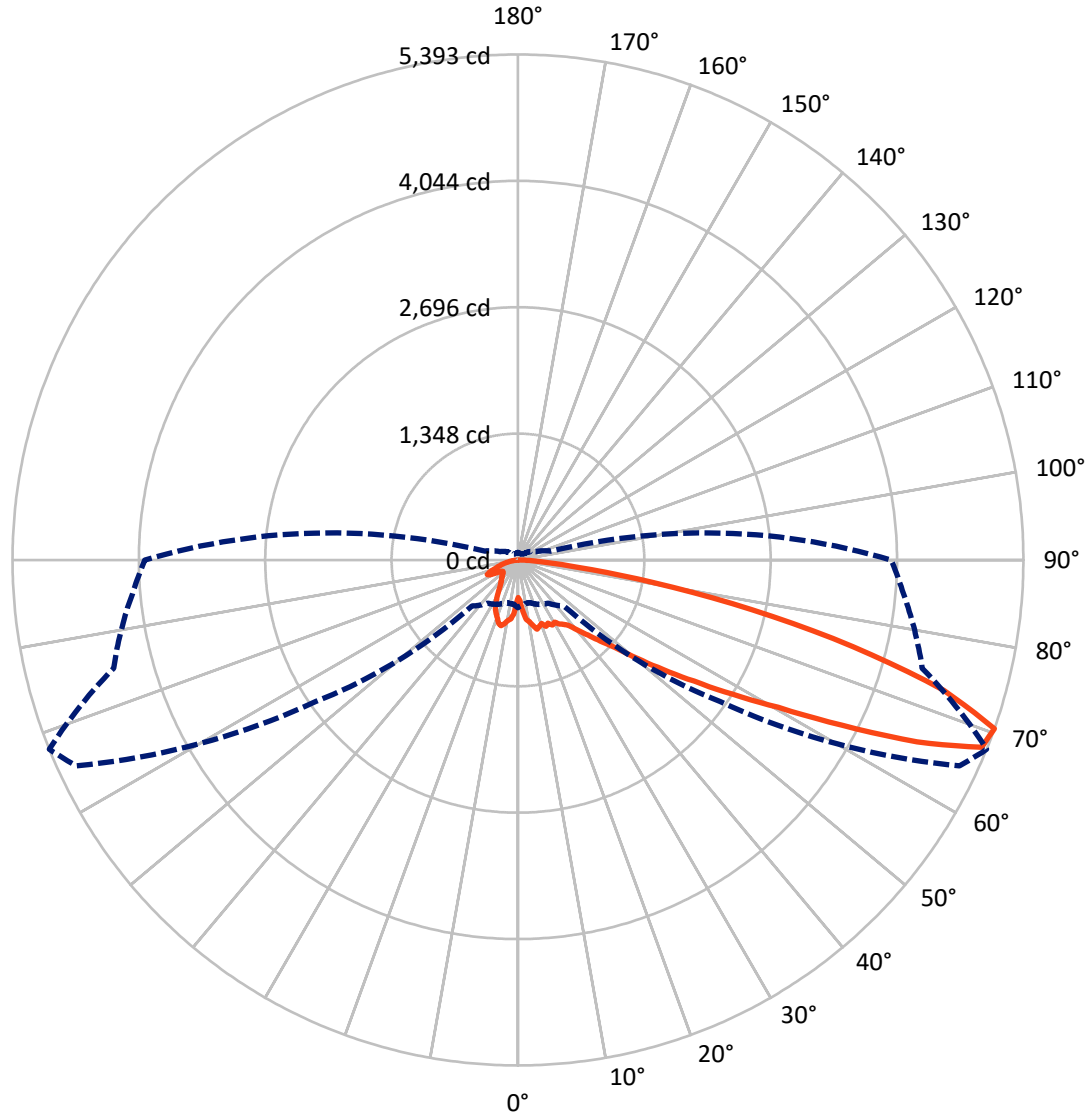
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.3 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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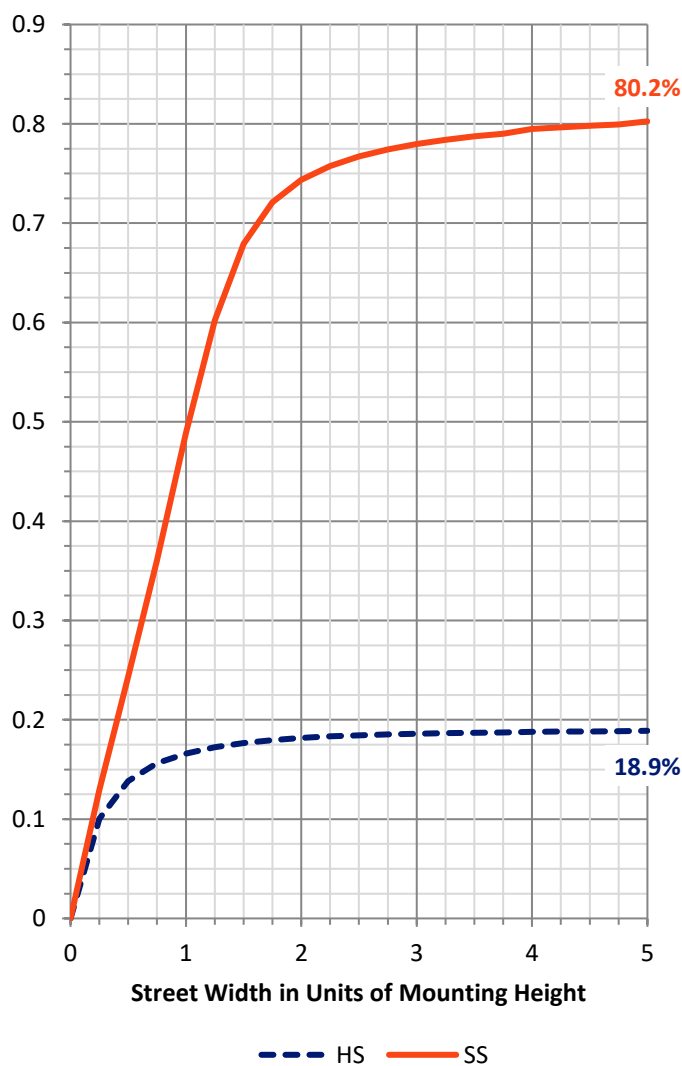
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	994.9	0.0	994.9
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	4216.1	0.0	4216.1
	% Fixture	80.9	0.0	80.9
Total	Lumens	5211.0	0.0	5211.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.4	1.0
10°-20°	173.9	3.3
20°-30°	264.6	5.1
30°-40°	404.1	7.8
40°-50°	694.8	13.3
50°-60°	1150.1	22.1
60°-70°	1417.9	27.2
70°-80°	910.9	17.5
80°-90°	141.3	2.7
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°	5211.0	100.0
0°-180°	5211.0	100.0

Coefficient of Utilization



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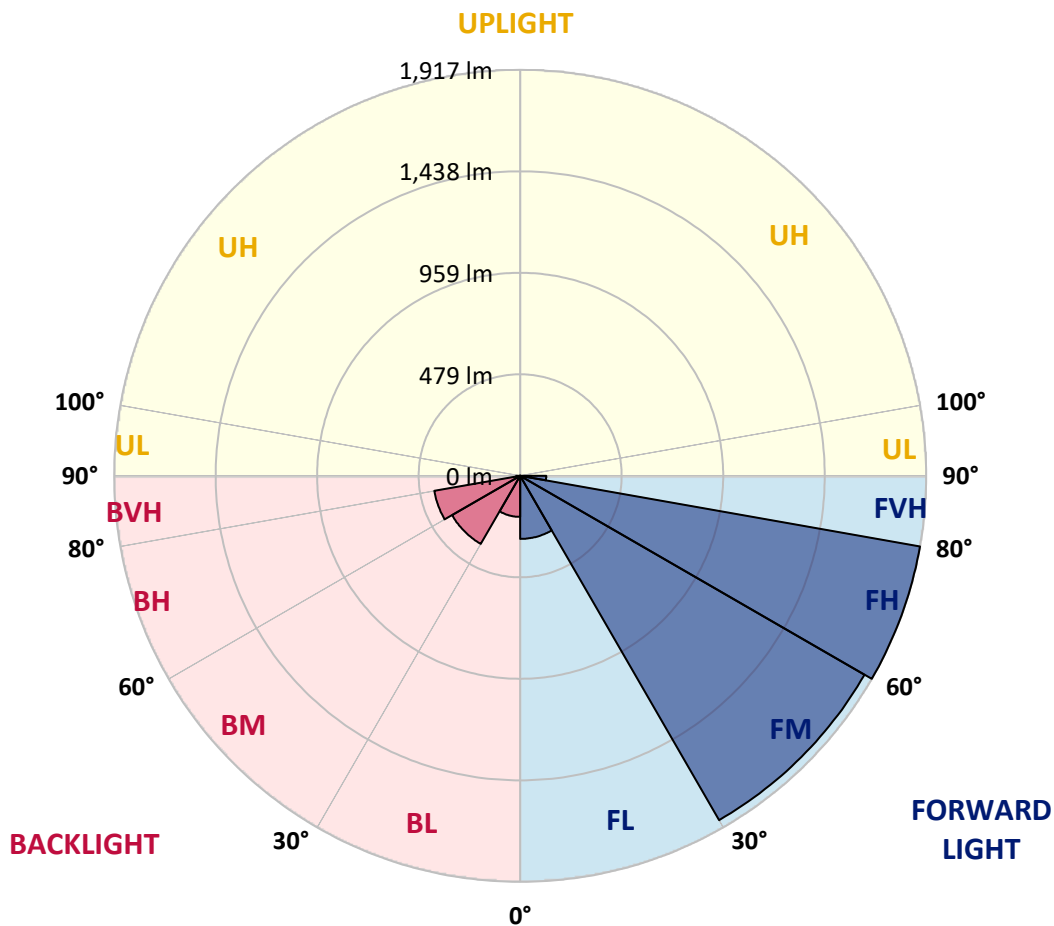
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	298.0	5.7			
FM (30°-60°)	1877.7	36.0			
FH (60°-80°)	1917.2	36.8			G2/5000
FVH (80°-90°)	123.1	2.4			G2/225
BL (0°-30°)	193.9	3.7	B1/500		
BM (30°-60°)	371.4	7.1	B1/1000		
BH (60°-80°)	411.6	7.9	B1/500		G1/500
BVH (80°-90°)	18.1	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-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	399.5	399.5	399.5	399.5	399.5	399.5	399.5	399.5	399.5	399.5	399.5
2.5°	459.1	440.5	421.8	431.0	445.6	458.4	455.8	457.3	439.7	437.3	483.7
5°	540.9	509.0	508.4	508.8	510.1	495.3	531.5	550.2	554.4	573.6	619.2
7.5°	569.2	556.4	543.3	549.8	533.2	534.8	579.3	628.1	639.7	653.6	716.0
10°	563.3	551.1	555.0	556.1	559.2	583.8	612.4	659.3	669.1	713.6	729.7
12.5°	564.2	562.0	580.3	581.0	613.7	658.0	669.3	712.5	716.4	749.1	816.5
15°	594.1	609.1	598.9	604.3	610.7	663.7	680.0	742.0	765.5	807.6	858.2
17.5°	652.3	656.7	625.9	617.9	638.6	654.7	692.0	718.8	743.5	861.0	930.8
20°	665.8	677.6	641.0	599.3	643.2	665.6	691.6	703.8	723.0	868.9	967.9
22.5°	723.8	699.4	655.2	618.9	633.3	655.2	673.9	719.9	770.3	846.4	1005.0
25°	756.8	742.6	703.1	664.3	652.1	652.8	689.0	730.2	747.6	879.3	1012.4
27.5°	836.4	813.7	724.9	717.5	671.5	635.7	691.4	755.5	786.0	853.6	1048.6
30°	936.1	918.8	802.4	792.5	722.3	659.9	721.9	774.2	769.9	870.4	1073.7
32.5°	1016.7	1045.5	928.0	850.6	800.6	740.9	712.3	771.0	814.4	909.4	1116.2
35°	1131.9	1158.9	1025.9	973.6	865.2	778.4	779.2	815.9	842.7	955.0	1163.7
37.5°	1331.2	1307.5	1200.4	1117.7	1048.4	918.8	880.0	867.1	888.7	1010.9	1256.9
40°	1475.0	1454.9	1328.8	1281.7	1146.7	1071.5	965.1	952.8	991.0	1068.4	1333.0
42.5°	1645.3	1609.5	1492.2	1453.4	1312.3	1176.6	1069.3	1076.3	1094.8	1177.0	1435.9
45°	1818.7	1731.9	1665.4	1662.3	1568.1	1380.7	1236.6	1230.9	1231.6	1336.9	1551.5
47.5°	1956.3	1878.2	1802.1	1765.9	1718.4	1733.8	1479.5	1413.0	1393.0	1497.9	1724.9
50°	2049.4	1959.6	1873.4	1864.9	1991.8	2075.4	1707.7	1636.6	1649.0	1728.2	1956.1
52.5°	2051.4	1944.7	1854.9	1914.4	2213.4	2332.9	2100.7	1902.0	1941.7	1995.5	2257.7
55°	1908.7	1798.2	1739.7	1875.4	2300.0	2638.5	2652.9	2327.3	2281.5	2301.3	2618.2
57.5°	1608.0	1496.3	1462.3	1624.8	2135.8	2933.1	3319.8	2835.4	2701.1	2618.2	2987.7
60°	1210.4	1113.8	1092.6	1196.2	1770.7	2846.5	3859.8	3467.9	3194.2	2972.2	3358.2
62.5°	907.7	838.3	806.5	821.3	1225.2	2565.0	4214.4	4267.0	3879.4	3358.6	3720.2
65°	737.6	681.5	653.2	634.0	762.0	1983.3	4150.3	4939.6	4679.8	3764.5	4002.0
67.5°	616.1	566.4	553.3	572.1	602.4	1150.7	3648.7	5315.8	5333.5	4164.9	4166.7
70°	511.4	474.6	469.8	523.0	562.9	694.4	2635.4	5197.6	5392.6	4465.2	4128.1
72.5°	395.2	375.3	374.7	458.2	559.2	591.9	1569.4	4490.1	4752.0	4369.3	3750.3
75°	274.1	260.4	270.9	376.6	546.3	600.4	895.7	3497.3	3693.4	3718.0	3004.2
77.5°	188.7	177.1	188.4	272.4	487.9	614.8	626.6	2528.8	2550.6	2493.2	1720.8
80°	131.3	123.2	131.9	192.8	379.7	608.5	533.5	1592.1	1460.8	1112.7	550.9
82.5°	81.3	78.9	88.5	137.4	267.4	553.5	505.5	821.6	627.2	307.1	196.7
85°	42.7	39.3	51.5	89.6	167.3	434.4	473.7	374.9	242.1	109.0	78.9
87.5°	12.6	11.3	19.8	36.2	70.9	194.8	271.1	159.0	90.3	32.1	24.6
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°	399.5	399.5	399.5	399.5	399.5	399.5	399.5	399.5	399.5	399.5	399.5
2.5°	487.0	484.6	452.3	456.5	463.4	465.2	465.0	453.2	440.8	475.4	474.4
5°	620.3	598.7	582.5	579.0	559.2	539.3	546.3	543.9	540.9	556.6	558.5
7.5°	716.2	686.3	667.6	619.4	573.6	533.9	546.5	550.5	542.6	571.0	579.5
10°	741.5	718.0	697.7	635.7	610.4	587.3	553.1	514.0	508.8	492.5	494.4
12.5°	806.7	803.5	734.3	679.8	646.9	600.8	526.9	479.6	439.0	441.0	429.2
15°	858.2	859.9	776.8	700.5	612.2	542.0	454.9	396.1	354.4	346.1	337.6
17.5°	927.3	923.8	780.3	675.7	563.8	460.8	354.2	295.7	288.8	293.6	286.1
20°	957.4	926.7	758.1	613.9	488.1	350.0	267.6	236.6	250.2	269.3	269.8
22.5°	984.5	931.9	746.5	564.2	387.3	254.5	214.8	209.2	225.1	251.0	253.2
25°	983.4	956.1	725.8	514.0	300.3	198.7	186.7	190.8	209.8	236.8	238.4
27.5°	1032.9	937.6	671.9	448.2	226.2	170.1	173.2	180.8	189.7	215.5	220.5
30°	1032.5	972.0	644.9	368.1	181.7	155.9	163.8	170.3	177.7	201.3	204.1
32.5°	1056.9	949.6	628.5	286.4	162.9	152.4	154.4	161.0	171.6	187.6	189.5
35°	1086.3	975.1	576.2	227.5	155.9	149.4	150.9	154.6	164.4	179.1	181.0
37.5°	1180.8	979.9	555.5	191.7	155.5	148.1	147.9	149.8	161.0	174.3	180.1
40°	1217.6	1023.7	495.1	179.1	154.0	148.1	145.0	146.1	155.3	172.3	176.9
42.5°	1305.9	1038.3	450.4	174.7	154.0	145.5	140.7	142.4	153.1	168.1	175.3
45°	1396.9	1059.1	397.1	173.8	153.8	145.2	136.1	140.0	148.7	161.4	169.2
47.5°	1526.4	1133.6	343.9	171.2	152.0	146.3	135.0	134.8	142.4	153.3	160.7
50°	1737.8	1250.1	302.7	167.9	152.2	145.5	132.8	129.8	134.8	144.4	151.6
52.5°	2032.0	1448.6	286.6	166.2	150.5	142.0	129.1	124.3	127.1	134.8	141.8
55°	2373.5	1716.6	302.5	166.2	147.0	136.5	123.9	118.2	119.7	125.0	131.7
57.5°	2772.6	2049.6	379.5	163.8	142.6	130.0	117.6	111.0	111.4	116.0	122.1
60°	3189.4	2421.7	552.0	161.8	139.6	122.8	110.1	103.4	102.7	107.1	112.5
62.5°	3606.8	2765.0	733.4	166.4	138.7	116.7	102.3	95.5	95.3	99.2	103.8
65°	3938.8	2999.6	778.6	184.9	144.4	109.7	94.2	87.9	87.5	90.7	95.7
67.5°	4101.7	3033.7	591.5	208.1	156.4	103.2	86.4	80.5	80.0	83.5	87.9
70°	3981.1	2801.2	365.1	210.5	155.7	95.5	78.3	73.3	72.4	76.1	79.4
72.5°	3534.8	2450.3	277.4	186.3	134.8	84.6	70.2	65.9	64.6	67.8	70.9
75°	2837.2	1945.4	222.2	150.3	106.2	71.3	62.2	58.0	56.5	59.5	62.2
77.5°	1652.7	1094.4	162.5	117.3	80.3	58.2	53.0	49.3	47.5	50.8	52.8
80°	537.4	364.7	102.1	84.2	58.7	45.6	43.0	40.3	38.6	40.8	41.4
82.5°	193.0	135.7	56.5	51.7	39.0	32.7	32.5	31.0	28.8	29.7	29.7
85°	85.5	61.9	33.6	27.7	23.3	17.4	20.5	19.4	17.2	16.8	16.1
87.5°	24.0	20.5	12.2	9.4	7.6	2.8	6.5	5.9	4.8	4.4	3.1
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)