

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: P366624

Luminaire Tested: **MSA-SA1A-730-U-RW**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366624
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-730-U-RW
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3780 lumens
Efficiency: N/A
Efficacy: 111.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

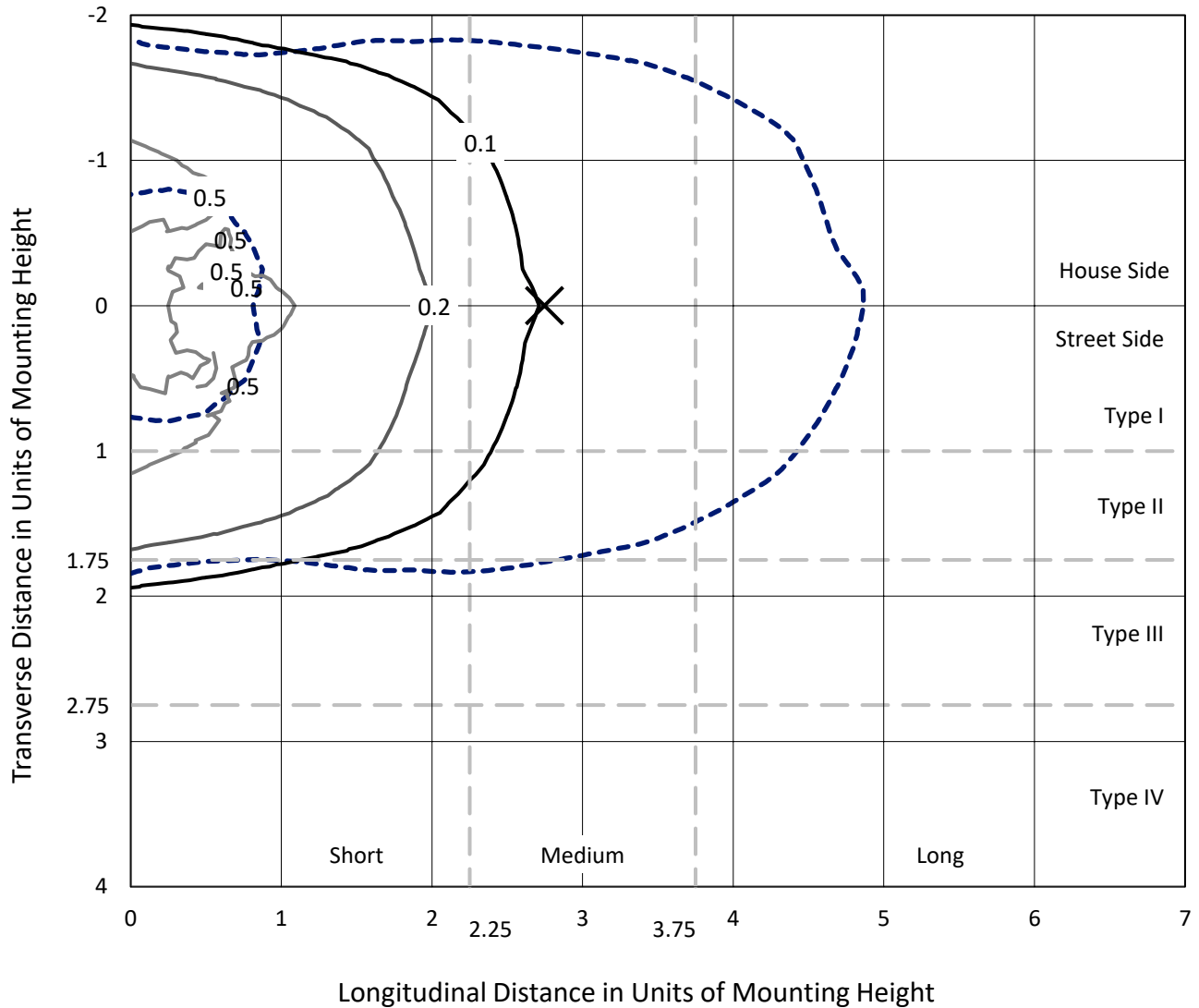
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

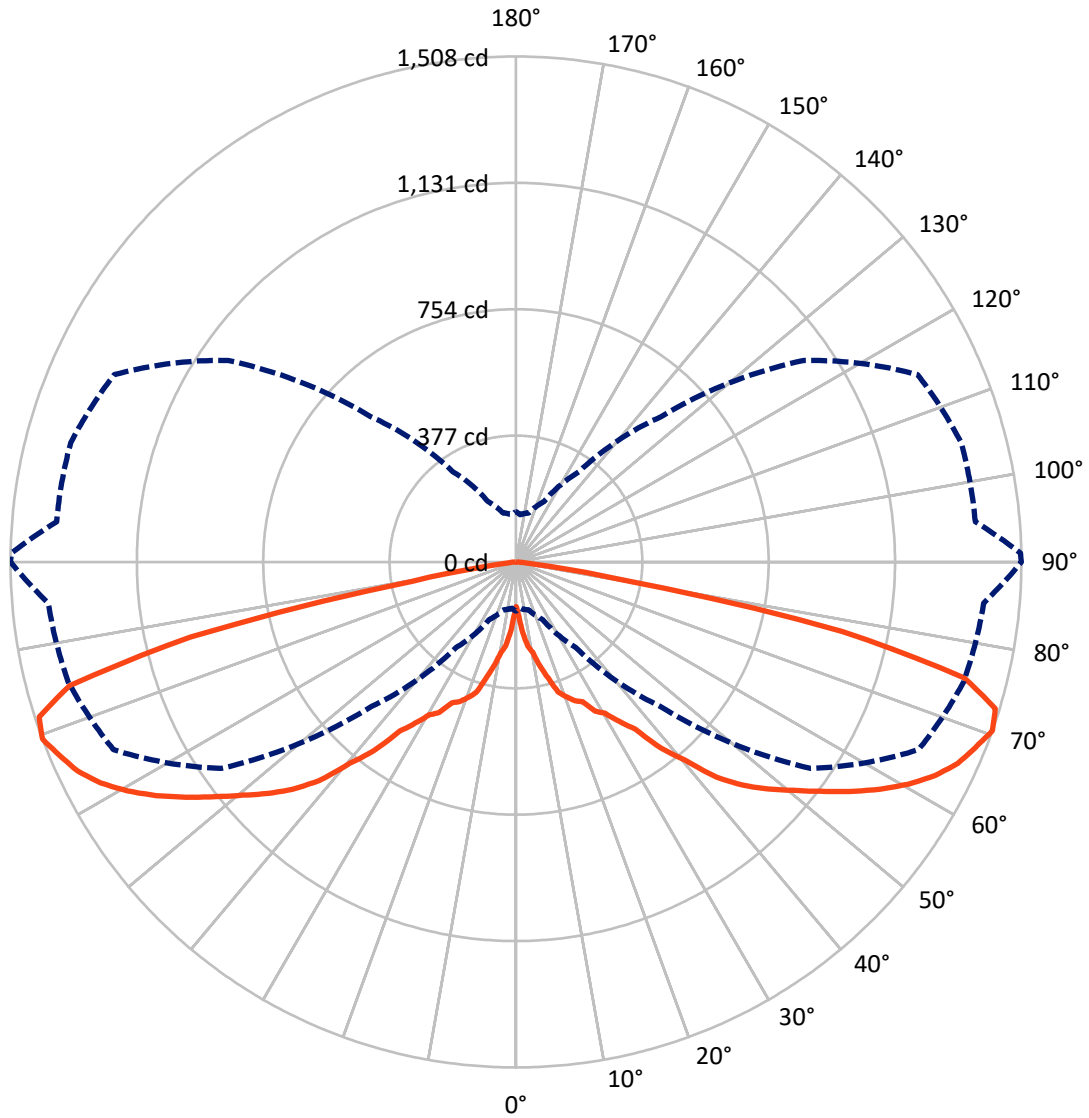
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.6 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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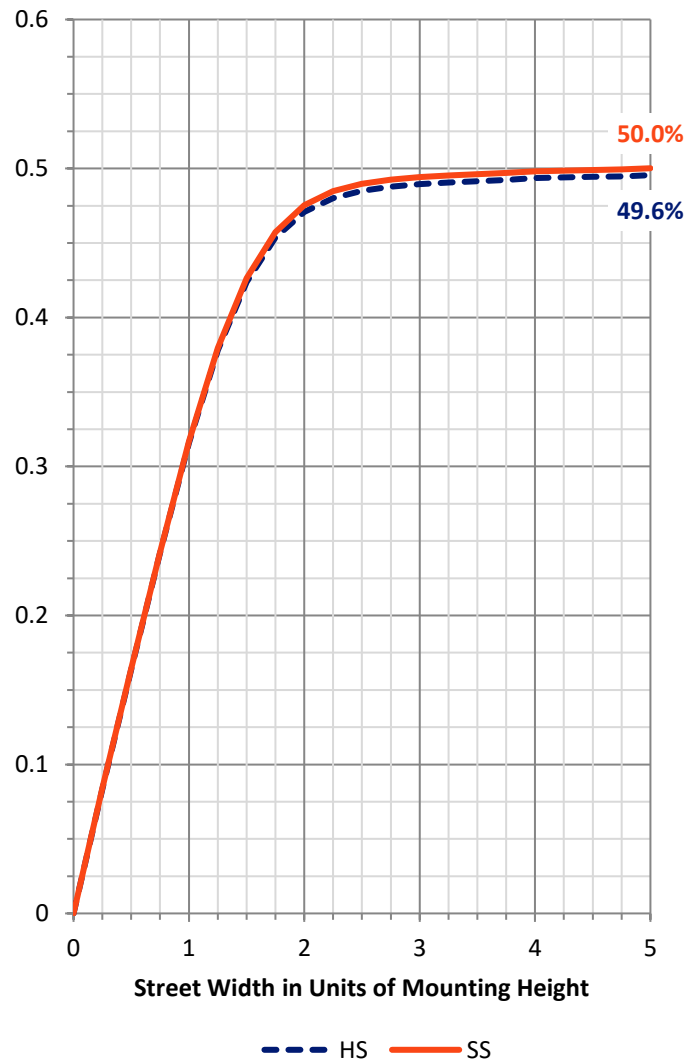
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1883.0	0.0	1883.0
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	1897.0	0.0	1897.0
	% Fixture	50.2	0.0	50.2
Total	Lumens	3780.0	0.0	3780.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	20.0	0.5
10°-20°	91.7	2.4
20°-30°	198.3	5.2
30°-40°	378.4	10.0
40°-50°	687.4	18.2
50°-60°	965.6	25.5
60°-70°	922.0	24.4
70°-80°	473.2	12.5
80°-90°	43.4	1.1
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°	3780.0	100.0
0°-180°	3780.0	100.0



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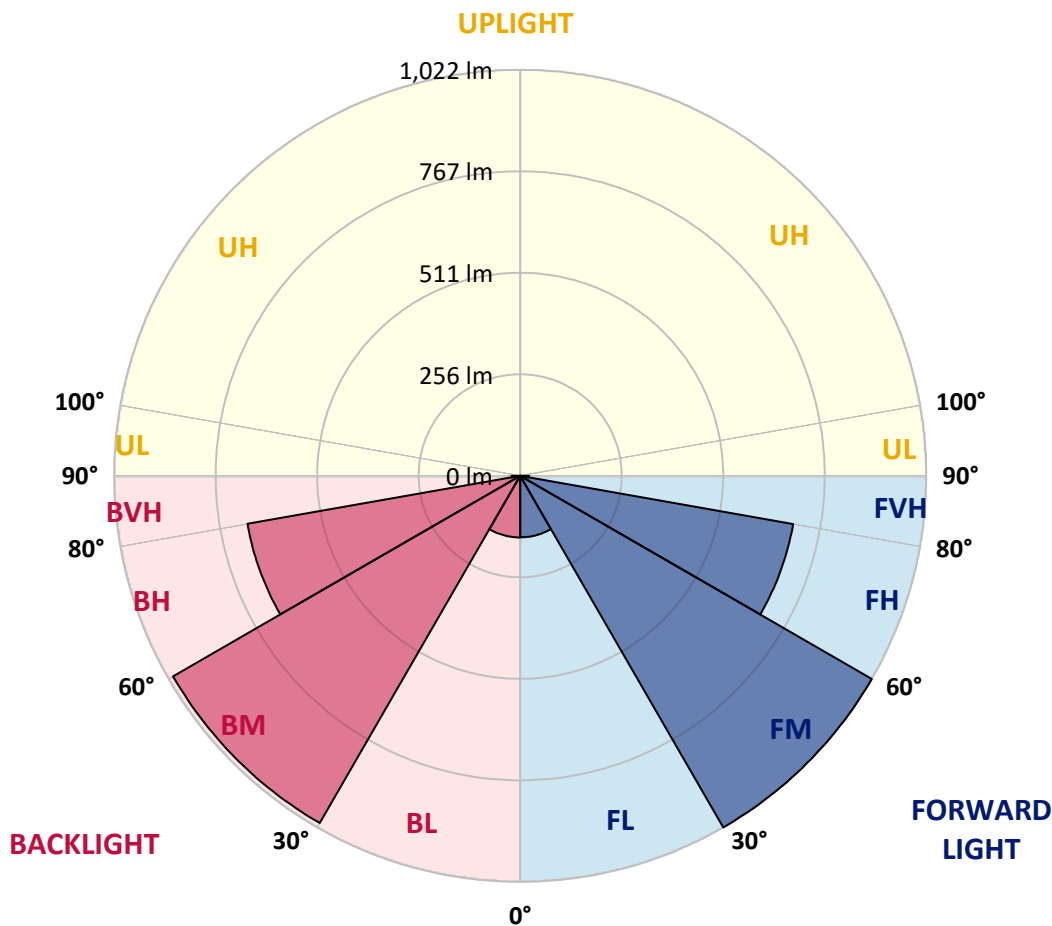
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	154.9	4.1			
FM (30°-60°)	1022.2	27.0			
FH (60°-80°)	698.0	18.5			G1/1800
FVH (80°-90°)	22.0	0.6			G1/100
BL (0°-30°)	155.2	4.1	B1/500		
BM (30°-60°)	1009.3	26.7	B2/2500		
BH (60°-80°)	697.2	18.4	B2/1000		G2/1000
BVH (80°-90°)	21.4	0.6			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	132.7	132.7	132.7	132.7	132.7	132.7	132.7	132.7	132.7	132.7	132.7
2.5°	160.7	154.7	147.2	151.7	153.5	156.7	156.3	154.7	148.1	159.2	160.4
5°	201.1	191.7	188.1	187.5	188.4	185.4	195.3	192.4	197.8	207.7	210.0
7.5°	229.0	222.0	214.5	216.8	207.3	205.9	218.8	230.3	233.2	251.4	252.6
10°	242.2	235.3	237.3	235.9	234.9	243.7	249.7	258.1	270.2	271.9	274.5
12.5°	253.4	256.1	264.9	264.6	279.0	294.8	292.5	301.2	303.2	324.3	317.9
15°	281.7	287.4	286.8	292.1	298.4	324.3	324.5	339.3	353.0	361.2	359.1
17.5°	323.2	325.2	317.0	317.3	335.5	346.1	357.9	355.3	390.8	407.0	408.1
20°	348.1	353.1	343.6	331.1	363.4	377.9	384.5	369.4	407.4	429.3	429.3
22.5°	391.4	378.4	364.0	355.6	384.1	399.5	398.8	394.5	414.7	453.5	449.8
25°	415.3	408.0	400.8	402.9	417.3	425.3	435.8	425.9	444.9	473.7	461.6
27.5°	460.7	447.0	411.6	439.8	439.8	433.9	456.2	461.0	448.6	495.4	504.5
30°	512.0	507.2	457.1	487.0	477.8	461.0	503.9	500.8	480.0	527.8	523.6
32.5°	560.6	576.2	528.7	512.3	526.1	532.5	510.0	519.2	523.2	569.3	567.3
35°	635.0	648.2	585.2	581.1	558.1	552.1	569.3	572.3	572.7	621.2	612.3
37.5°	763.8	744.8	682.7	653.4	656.0	648.8	652.2	628.0	631.3	701.8	706.2
40°	858.1	836.6	767.4	746.4	694.9	725.7	698.4	696.0	689.2	780.5	778.1
42.5°	962.1	932.7	856.1	828.0	773.3	760.8	748.2	776.6	774.7	859.3	878.0
45°	1040.7	981.2	941.2	923.8	891.0	860.2	848.3	861.0	855.2	918.0	950.6
47.5°	1090.3	1038.7	992.7	956.0	924.5	1000.1	939.6	922.6	910.8	981.1	1012.5
50°	1129.8	1070.2	1016.0	1003.8	1028.6	1095.4	999.9	962.4	976.8	1028.6	1071.3
52.5°	1140.6	1077.4	1028.7	1020.9	1088.0	1100.1	1084.6	1021.5	1017.7	1085.6	1137.2
55°	1107.8	1047.3	1024.1	1066.9	1141.0	1130.9	1154.5	1114.2	1087.1	1143.8	1208.7
57.5°	1023.4	963.3	957.8	1019.4	1112.8	1198.9	1210.6	1178.7	1143.2	1203.2	1279.8
60°	884.7	829.9	843.8	911.8	1052.8	1175.3	1237.2	1208.1	1197.1	1256.8	1345.7
62.5°	668.9	626.1	663.3	758.2	943.1	1144.8	1274.0	1269.4	1253.5	1313.8	1403.9
65°	426.5	404.0	442.0	538.3	772.9	1089.4	1291.6	1297.7	1312.4	1357.8	1448.9
67.5°	247.9	235.9	259.1	338.0	550.4	894.5	1258.8	1346.8	1354.4	1380.5	1478.5
70°	146.6	138.8	148.3	189.8	311.6	609.4	1073.8	1325.3	1383.2	1401.3	1508.4
72.5°	111.8	104.5	100.3	112.3	162.7	314.8	726.0	1123.4	1360.1	1387.5	1495.8
75°	96.7	89.6	84.7	85.8	96.8	149.5	393.6	803.5	1158.9	1263.4	1381.7
77.5°	83.0	76.8	73.2	72.9	74.3	82.1	164.5	435.7	725.9	908.2	996.1
80°	66.5	61.6	60.8	60.8	58.8	58.2	81.8	165.8	276.2	327.5	314.1
82.5°	48.6	43.7	48.6	48.0	44.9	42.4	52.1	71.7	85.2	67.3	53.2
85°	32.8	28.3	32.0	32.6	29.7	22.1	31.3	35.8	36.8	23.0	19.0
87.5°	11.5	11.2	18.1	15.8	12.9	7.5	11.5	12.4	13.0	8.1	5.5
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):

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	132.7	132.7	132.7	132.7	132.7	132.7	132.7	132.7	132.7	132.7	132.7
2.5°	160.9	159.0	149.8	151.2	154.7	156.4	158.1	151.2	147.8	158.6	157.5
5°	210.6	203.9	196.4	195.3	195.8	189.2	193.0	191.3	192.1	199.0	200.4
7.5°	252.3	244.2	234.2	226.4	212.9	202.2	211.3	215.9	217.2	229.5	234.1
10°	274.8	267.9	265.0	250.3	245.9	244.5	242.4	235.0	243.1	240.2	242.5
12.5°	319.0	317.6	302.4	292.8	293.7	296.3	282.8	275.4	264.9	281.4	275.4
15°	356.5	362.5	347.3	329.7	320.9	325.4	315.1	304.4	294.9	300.0	293.5
17.5°	404.4	404.3	374.7	355.9	355.1	354.8	339.6	316.0	327.4	323.9	324.2
20°	429.9	425.7	389.0	367.2	385.8	379.2	365.5	335.2	348.4	352.7	355.4
22.5°	451.2	448.9	404.3	388.4	400.3	400.5	386.8	370.9	369.2	382.5	375.3
25°	466.0	475.2	433.2	429.4	434.6	429.4	416.1	405.7	398.9	418.8	398.9
27.5°	501.3	488.2	437.7	459.4	462.7	436.5	453.2	440.9	422.2	446.9	455.0
30°	526.4	534.0	468.9	501.7	497.9	473.7	480.6	480.1	457.8	505.9	500.2
32.5°	569.6	560.4	520.0	517.3	526.5	525.5	513.8	519.5	525.0	559.9	568.4
35°	613.9	623.7	552.6	570.2	567.6	551.1	581.5	578.0	594.4	666.1	642.4
37.5°	713.7	667.0	625.8	623.5	641.0	643.6	633.8	649.3	684.6	739.8	765.2
40°	779.2	757.9	687.9	690.6	666.4	708.1	680.5	730.3	757.3	850.2	841.2
42.5°	878.1	826.2	758.9	768.1	763.2	743.2	779.5	805.1	843.7	914.6	960.4
45°	951.8	880.6	848.7	843.0	842.4	877.4	872.8	913.7	927.5	980.8	1018.8
47.5°	1007.7	947.2	900.0	906.5	887.8	987.5	934.4	947.1	975.0	1025.2	1069.5
50°	1074.1	1006.7	953.0	969.0	1014.5	1052.8	1004.7	982.9	996.6	1055.8	1105.2
52.5°	1135.5	1064.6	1005.6	1018.9	1093.2	1075.8	1070.5	1015.5	1013.9	1061.5	1117.6
55°	1207.4	1127.4	1075.3	1117.6	1143.9	1122.3	1114.1	1047.1	1005.7	1032.2	1085.1
57.5°	1277.8	1189.6	1137.8	1146.5	1179.9	1158.5	1096.4	993.3	941.7	946.9	1000.4
60°	1343.9	1246.7	1204.0	1195.6	1222.2	1138.1	1029.5	894.8	826.3	813.8	860.1
62.5°	1400.4	1294.5	1254.1	1231.1	1256.5	1138.9	925.2	736.7	661.5	618.9	654.9
65°	1445.3	1334.2	1305.4	1293.5	1302.6	1069.6	762.6	540.9	448.7	401.5	422.5
67.5°	1475.1	1356.4	1343.2	1358.9	1236.3	890.8	565.0	346.2	260.9	235.2	248.3
70°	1506.1	1376.0	1375.6	1322.4	1048.3	614.2	330.0	199.6	151.8	141.9	150.1
72.5°	1495.7	1352.7	1359.6	1156.5	726.5	328.3	174.2	112.9	102.8	106.3	113.7
75°	1385.1	1229.9	1196.6	831.4	412.1	152.6	100.3	85.5	84.9	90.2	97.4
77.5°	1004.7	856.5	768.6	471.2	176.6	82.6	73.8	71.4	71.4	75.7	82.1
80°	331.2	286.6	298.7	182.3	83.5	57.0	57.6	58.7	58.4	59.4	64.8
82.5°	54.4	56.4	87.2	74.5	50.4	38.9	43.5	45.7	46.3	41.4	47.0
85°	19.3	21.8	37.1	34.5	29.1	19.6	28.6	32.0	31.6	27.6	30.5
87.5°	6.0	7.7	13.5	10.4	8.7	5.4	10.7	12.6	15.8	6.4	5.8
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)