

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: P366646

Luminaire Tested: **MSA-SA1A-740-U-RW**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366646
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-740-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: 4150 lumens
Efficiency: N/A
Efficacy: 122.1 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

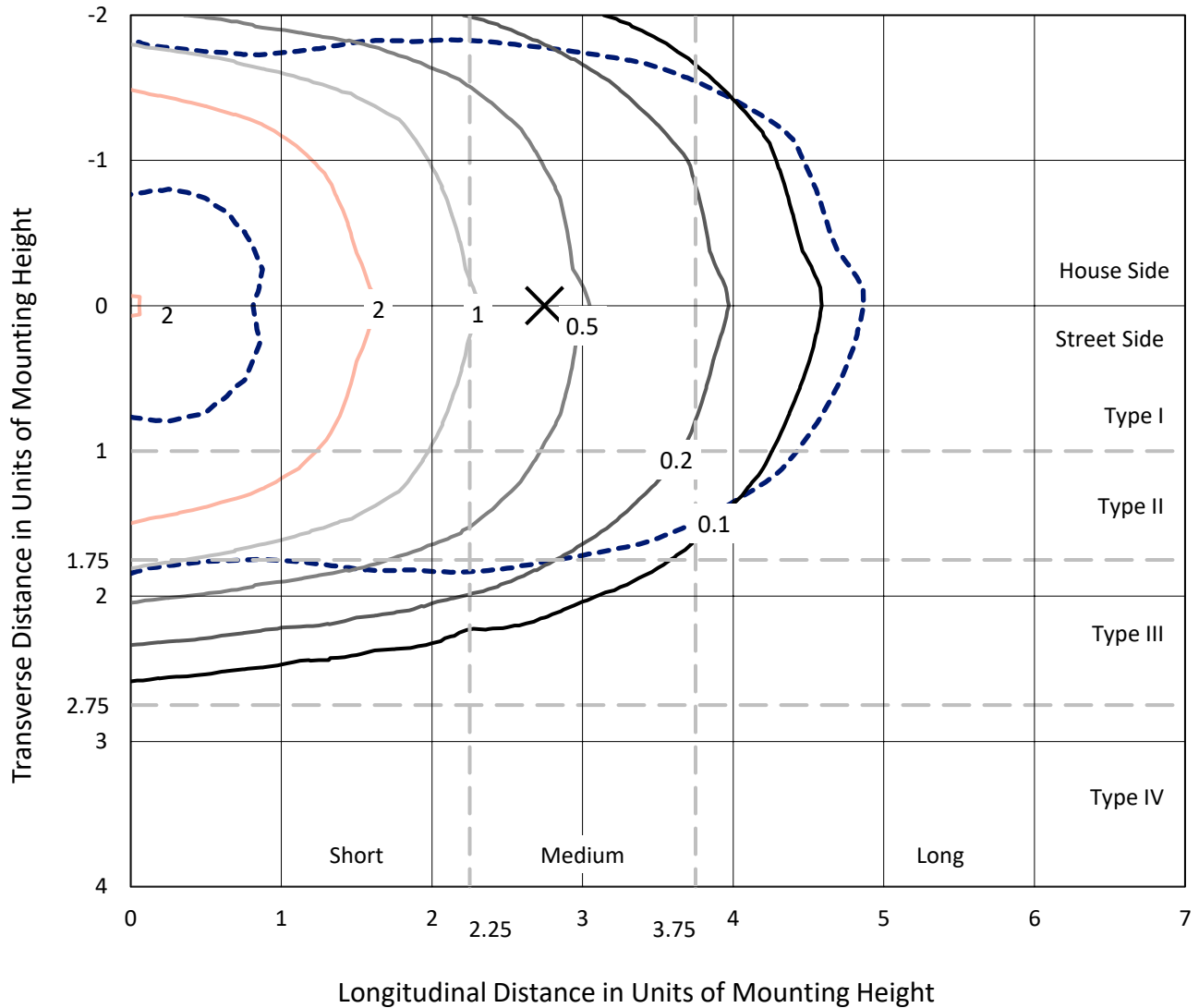
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

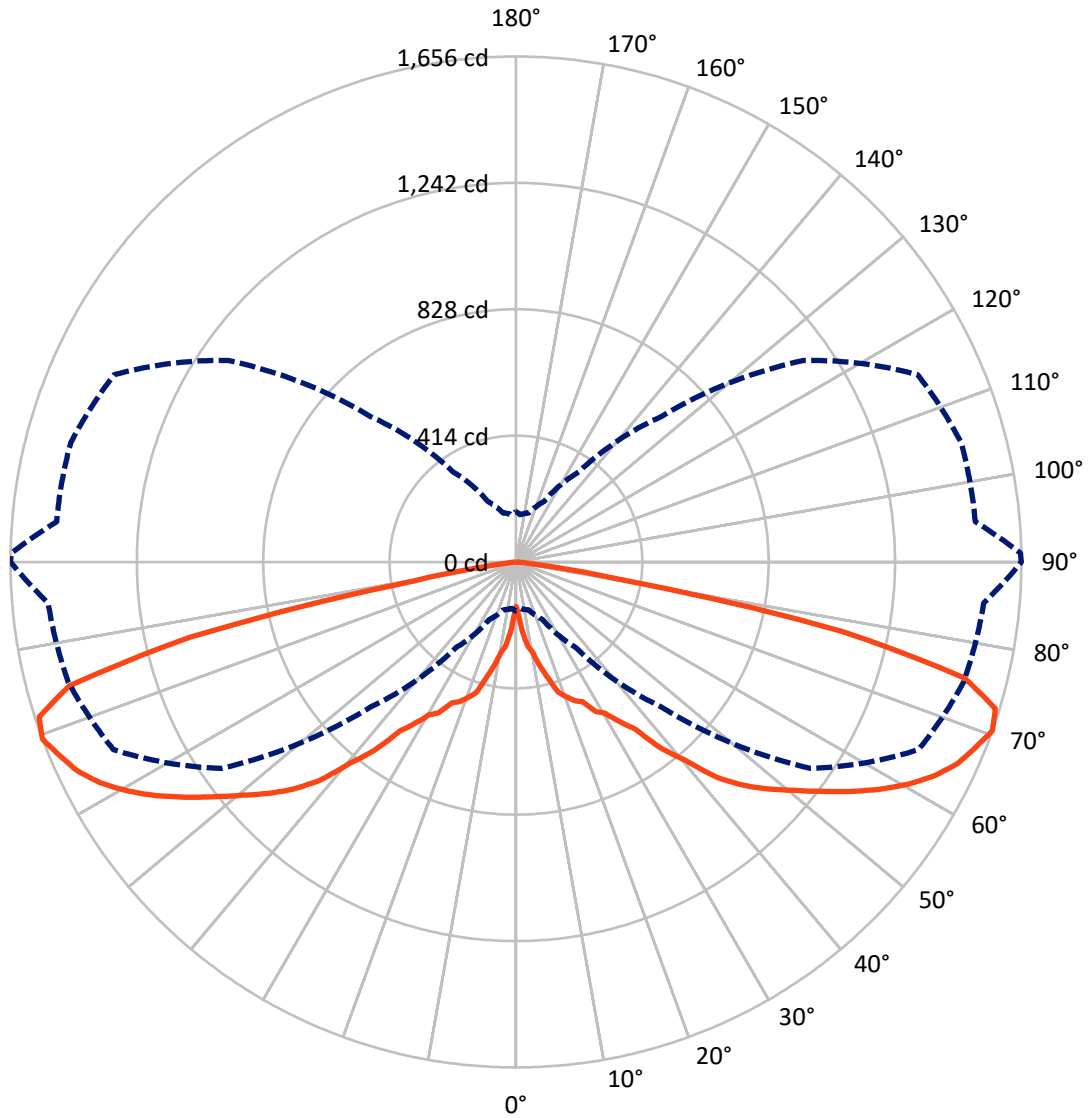
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.2 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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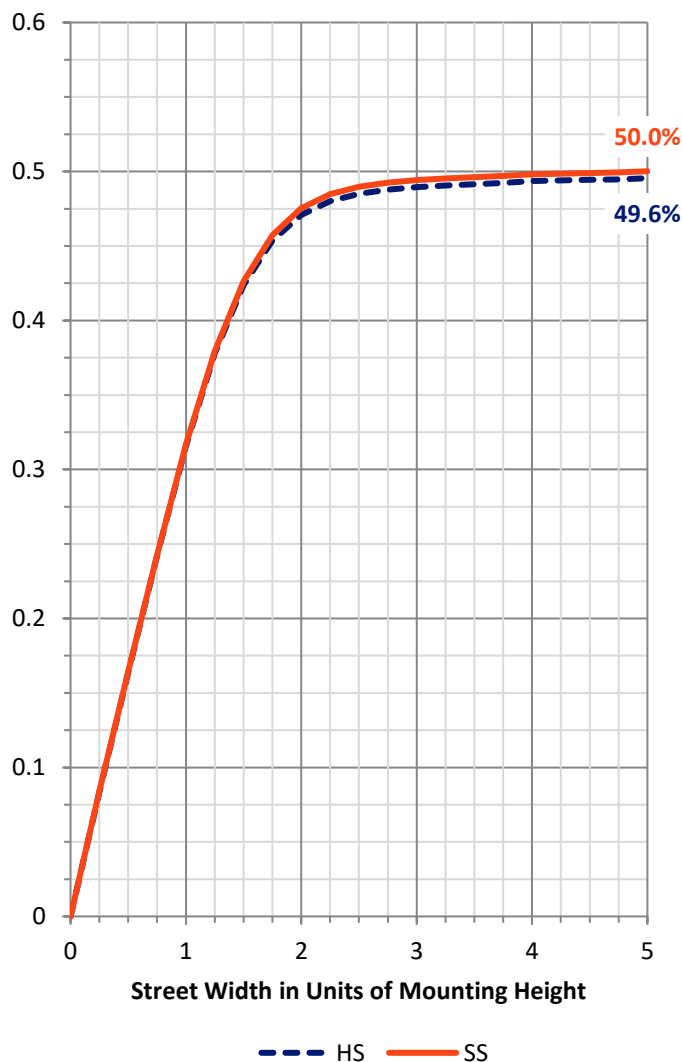
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2067.3	0.0	2067.3
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	2082.7	0.0	2082.7
	% Fixture	50.2	0.0	50.2
Total	Lumens	4150.0	0.0	4150.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.0	0.5
10°-20°	100.7	2.4
20°-30°	217.7	5.2
30°-40°	415.4	10.0
40°-50°	754.7	18.2
50°-60°	1060.2	25.5
60°-70°	1012.2	24.4
70°-80°	519.5	12.5
80°-90°	47.6	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°	4150.0	100.0
0°-180°	4150.0	100.0

Coefficient of Utilization



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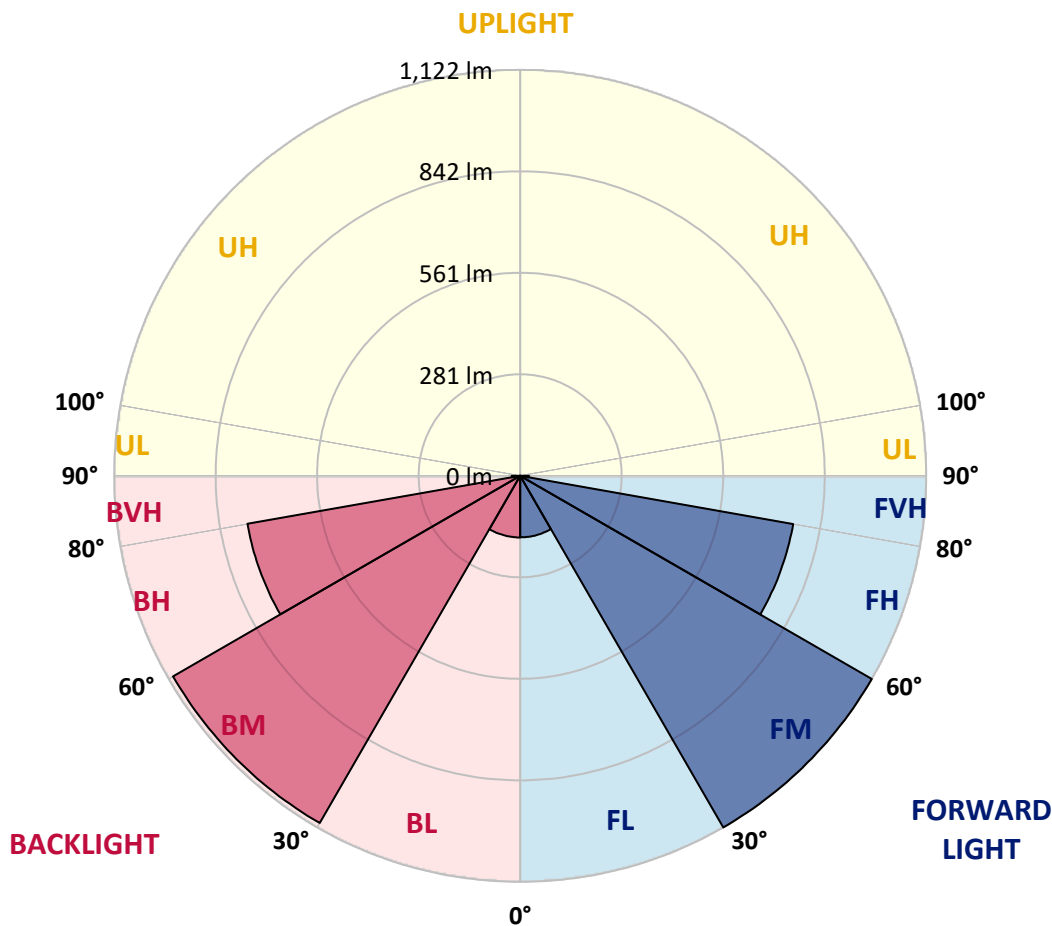
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	170.0	4.1			
FM (30°-60°)	1122.2	27.0			
FH (60°-80°)	766.3	18.5			G1/1800
FVH (80°-90°)	24.2	0.6			G1/100
BL (0°-30°)	170.4	4.1	B1/500		
BM (30°-60°)	1108.0	26.7	B2/2500		
BH (60°-80°)	765.4	18.4	B2/1000		G2/1000
BVH (80°-90°)	23.5	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°	145.7	145.7	145.7	145.7	145.7	145.7	145.7	145.7	145.7	145.7	145.7
2.5°	176.4	169.9	161.6	166.5	168.5	172.1	171.6	169.9	162.6	174.8	176.1
5°	220.8	210.4	206.5	205.9	206.9	203.5	214.4	211.3	217.1	228.1	230.6
7.5°	251.4	243.7	235.5	238.0	227.6	226.1	240.2	252.8	256.0	276.0	277.4
10°	265.9	258.3	260.5	259.0	257.8	267.6	274.2	283.4	296.7	298.5	301.4
12.5°	278.2	281.2	290.8	290.5	306.3	323.6	321.1	330.7	332.9	356.1	349.0
15°	309.3	315.5	314.9	320.7	327.6	356.1	356.2	372.5	387.5	396.6	394.2
17.5°	354.9	357.1	348.0	348.3	368.3	379.9	392.9	390.0	429.1	446.9	448.1
20°	382.1	387.7	377.3	363.5	399.0	414.9	422.2	405.5	447.2	471.3	471.3
22.5°	429.7	415.4	399.6	390.4	421.7	438.6	437.8	433.1	455.3	497.9	493.8
25°	456.0	447.9	440.0	442.3	458.2	466.9	478.5	467.6	488.4	520.1	506.8
27.5°	505.8	490.8	451.9	482.9	482.9	476.3	500.9	506.1	492.5	543.9	553.9
30°	562.1	556.9	501.9	534.7	524.6	506.1	553.2	549.8	527.0	579.4	574.9
32.5°	615.4	632.6	580.4	562.4	577.6	584.6	559.9	570.0	574.4	625.0	622.8
35°	697.2	711.6	642.5	638.0	612.7	606.2	625.0	628.4	628.7	682.0	672.3
37.5°	838.6	817.8	749.5	717.3	720.2	712.3	716.0	689.4	693.1	770.5	775.4
40°	942.1	918.5	842.5	819.4	762.9	796.7	766.8	764.1	756.7	856.9	854.3
42.5°	1056.3	1024.0	939.9	909.1	849.0	835.2	821.5	852.6	850.6	943.4	963.9
45°	1142.5	1077.3	1033.4	1014.2	978.2	944.4	931.3	945.2	938.9	1007.8	1043.6
47.5°	1197.0	1140.4	1089.9	1049.5	1015.0	1098.0	1031.5	1012.9	999.9	1077.1	1111.6
50°	1240.4	1175.0	1115.5	1102.0	1129.3	1202.6	1097.8	1056.6	1072.4	1129.3	1176.2
52.5°	1252.2	1182.9	1129.4	1120.8	1194.5	1207.8	1190.8	1121.5	1117.3	1191.8	1248.5
55°	1216.2	1149.8	1124.4	1171.3	1252.7	1241.6	1267.5	1223.3	1193.5	1255.7	1327.0
57.5°	1123.5	1057.6	1051.5	1119.2	1221.8	1316.3	1329.1	1294.1	1255.1	1321.0	1405.1
60°	971.3	911.1	926.4	1001.1	1155.8	1290.4	1358.3	1326.4	1314.3	1379.9	1477.4
62.5°	734.3	687.4	728.3	832.4	1035.4	1256.9	1398.7	1393.7	1376.2	1442.4	1541.3
65°	468.3	443.5	485.2	591.0	848.5	1196.0	1418.0	1424.8	1440.9	1490.7	1590.8
67.5°	272.1	259.0	284.4	371.0	604.3	982.1	1382.0	1478.6	1487.0	1515.6	1623.2
70°	161.0	152.4	162.8	208.4	342.1	669.1	1178.9	1455.0	1518.6	1538.5	1656.0
72.5°	122.8	114.7	110.2	123.3	178.6	345.6	797.1	1233.4	1493.2	1523.3	1642.2
75°	106.1	98.4	93.0	94.2	106.3	164.2	432.1	882.2	1272.4	1387.1	1516.9
77.5°	91.2	84.3	80.4	80.1	81.6	90.2	180.6	478.3	796.9	997.1	1093.6
80°	73.0	67.6	66.8	66.8	64.6	63.9	89.8	182.0	303.3	359.6	344.8
82.5°	53.3	47.9	53.3	52.6	49.3	46.6	57.2	78.7	93.5	73.8	58.4
85°	36.0	31.1	35.2	35.8	32.6	24.2	34.3	39.4	40.4	25.2	20.9
87.5°	12.6	12.3	19.8	17.3	14.1	8.2	12.6	13.6	14.3	8.9	6.1
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°	145.7	145.7	145.7	145.7	145.7	145.7	145.7	145.7	145.7	145.7	145.7
2.5°	176.6	174.6	164.5	166.0	169.9	171.7	173.6	166.0	162.3	174.1	172.9
5°	231.3	223.9	215.6	214.4	215.0	207.7	211.9	210.1	210.9	218.5	220.0
7.5°	277.0	268.1	257.2	248.6	233.8	222.0	231.9	237.0	238.5	252.0	257.0
10°	301.7	294.2	291.0	274.8	270.0	268.4	266.1	258.0	266.9	263.7	266.3
12.5°	350.2	348.7	332.0	321.4	322.4	325.3	310.5	302.4	290.8	309.0	302.4
15°	391.4	397.9	381.3	362.0	352.4	357.2	346.0	334.2	323.8	329.3	322.3
17.5°	444.0	443.9	411.4	390.7	389.9	389.5	372.9	347.0	359.4	355.6	355.9
20°	472.0	467.4	427.0	403.2	423.5	416.3	401.3	368.0	382.5	387.2	390.2
22.5°	495.3	492.8	443.9	426.4	439.5	439.7	424.7	407.2	405.3	420.0	412.1
25°	511.6	521.7	475.7	471.4	477.2	471.4	456.8	445.4	438.0	459.8	438.0
27.5°	550.3	536.0	480.5	504.4	507.9	479.2	497.5	484.1	463.5	490.6	499.5
30°	577.9	586.3	514.8	550.8	546.6	520.1	527.6	527.1	502.6	555.4	549.2
32.5°	625.3	615.3	570.8	568.0	578.1	576.9	564.1	570.3	576.4	614.7	624.0
35°	674.0	684.7	606.7	626.0	623.2	605.0	638.5	634.6	652.6	731.3	705.2
37.5°	783.6	732.3	687.1	684.5	703.7	706.6	695.8	712.8	751.7	812.2	840.1
40°	855.4	832.1	755.2	758.2	731.6	777.4	747.1	801.8	831.4	933.5	923.6
42.5°	964.1	907.1	833.2	843.3	837.9	815.9	855.8	883.9	926.2	1004.1	1054.4
45°	1045.0	966.8	931.8	925.6	924.9	963.2	958.2	1003.1	1018.2	1076.8	1118.5
47.5°	1106.4	1039.9	988.1	995.2	974.7	1084.2	1025.8	1039.8	1070.4	1125.6	1174.2
50°	1179.2	1105.2	1046.3	1063.8	1113.8	1155.8	1103.0	1079.1	1094.1	1159.2	1213.3
52.5°	1246.7	1168.8	1104.0	1118.7	1200.2	1181.1	1175.3	1115.0	1113.1	1165.4	1227.0
55°	1325.5	1237.7	1180.6	1227.0	1255.9	1232.2	1223.1	1149.6	1104.2	1133.3	1191.3
57.5°	1402.9	1306.0	1249.2	1258.8	1295.4	1271.9	1203.8	1090.6	1033.9	1039.6	1098.3
60°	1475.4	1368.8	1321.8	1312.6	1341.8	1249.5	1130.3	982.4	907.2	893.4	944.2
62.5°	1537.5	1421.2	1376.8	1351.6	1379.5	1250.4	1015.7	808.8	726.3	679.5	719.0
65°	1586.7	1464.8	1433.2	1420.1	1430.1	1174.3	837.3	593.9	492.6	440.8	463.9
67.5°	1619.5	1489.2	1474.7	1491.9	1357.3	978.0	620.3	380.1	286.4	258.2	272.6
70°	1653.5	1510.7	1510.2	1451.8	1150.9	674.3	362.3	219.2	166.7	155.7	164.8
72.5°	1642.1	1485.1	1492.7	1269.7	797.6	360.4	191.2	124.0	112.9	116.7	124.8
75°	1520.6	1350.3	1313.8	912.8	452.4	167.5	110.2	93.9	93.2	99.1	107.0
77.5°	1103.0	940.4	843.8	517.4	193.9	90.7	81.1	78.4	78.4	83.1	90.2
80°	363.6	314.7	328.0	200.2	91.7	62.6	63.2	64.4	64.1	65.3	71.1
82.5°	59.7	61.9	95.7	81.7	55.3	42.7	47.8	50.1	50.8	45.4	51.6
85°	21.2	23.9	40.7	37.8	32.0	21.5	31.5	35.2	34.6	30.3	33.5
87.5°	6.6	8.4	14.8	11.4	9.6	5.9	11.8	13.8	17.3	7.1	6.4
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)