

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: P368066

Luminaire Tested: **MSA-SA3D-727-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368066
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-727-U-T2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16603 lumens
Efficiency: N/A
Efficacy: 86.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G3

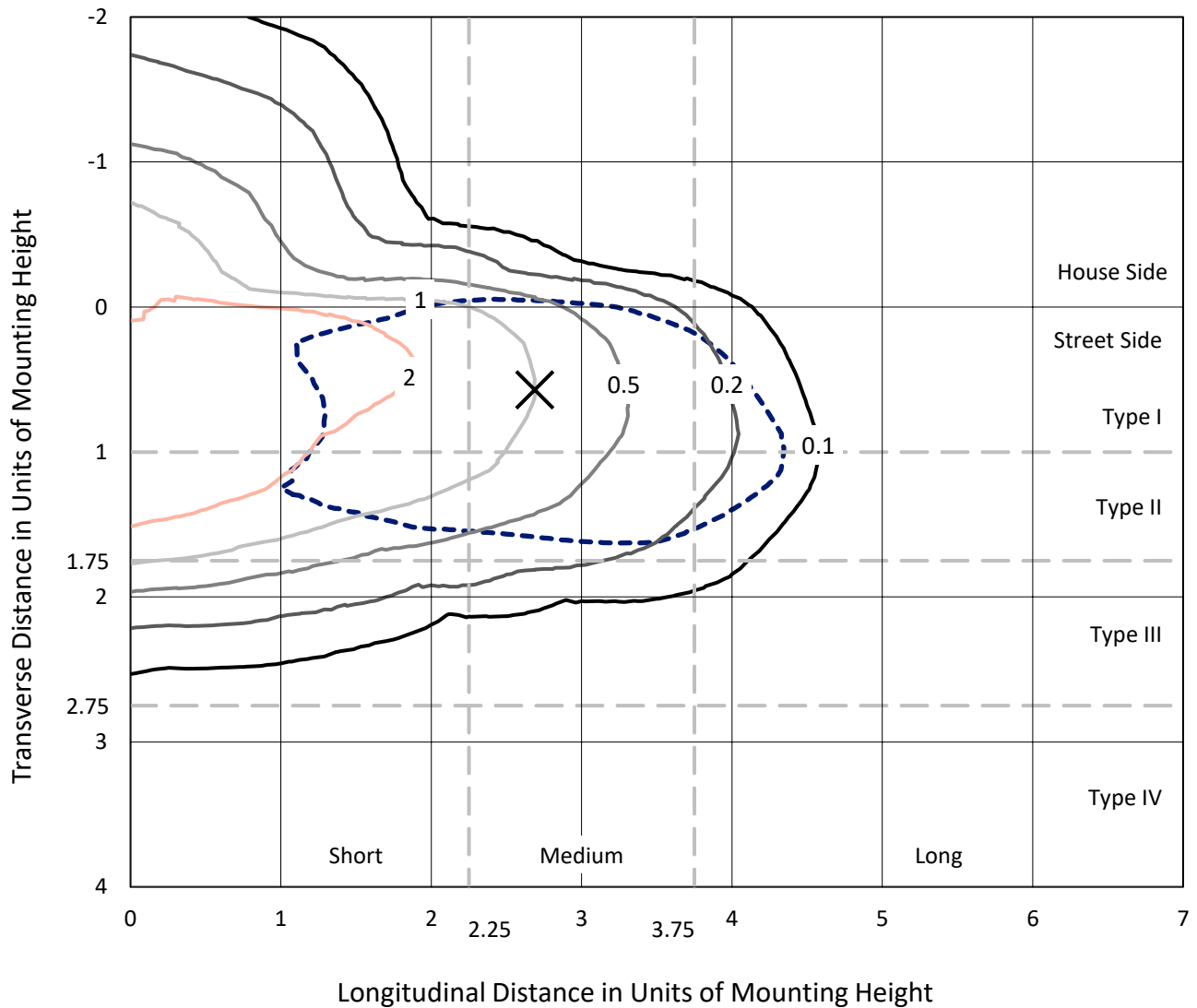
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P368066
 CATALOG NUMBER: MSA-SA3D-727-U-T2

Iso-Footcandle Lines of Horizontal Illumination

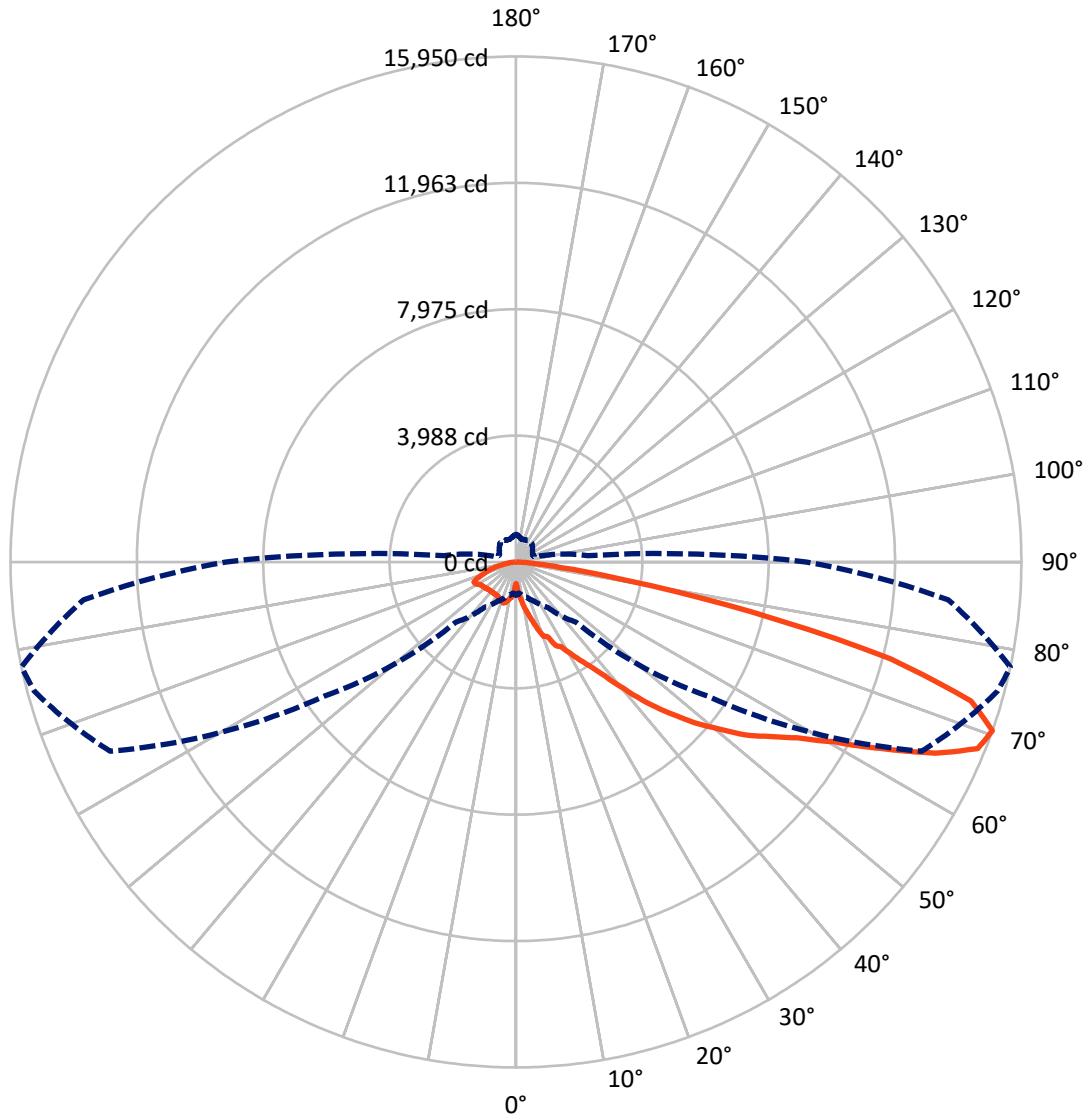
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4 fc
 Type II - Medium - N/A

REPORT NUMBER: P368066
CATALOG NUMBER: MSA-SA3D-727-U-T2

Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P368066
 CATALOG NUMBER: MSA-SA3D-727-U-T2

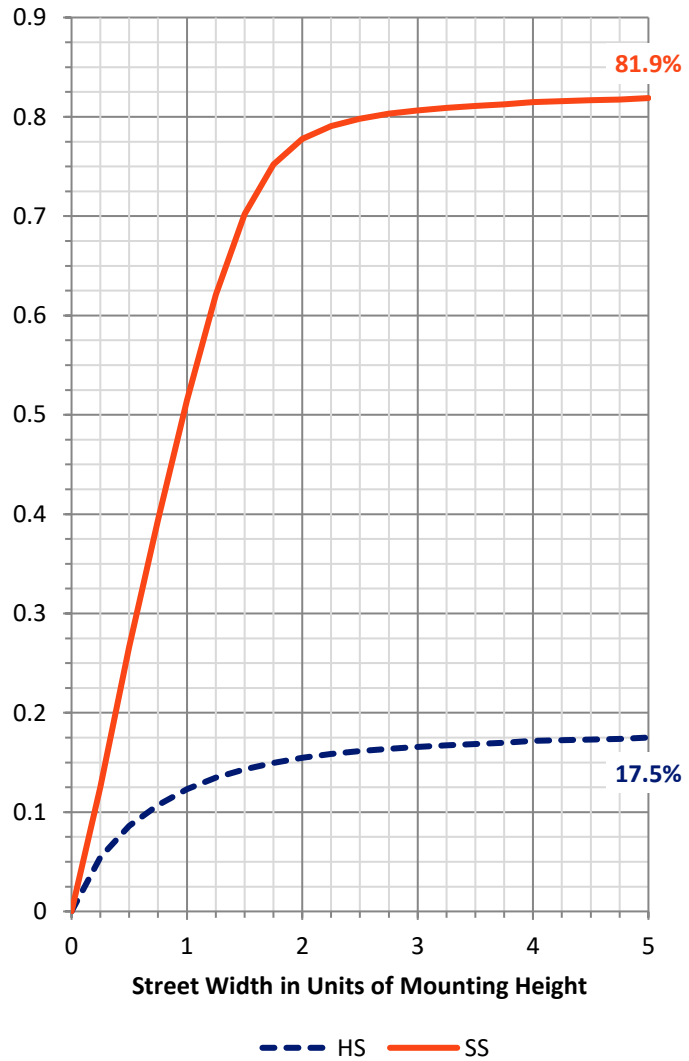
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2963.4	0.0	2963.4
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	13639.6	0.0	13639.6
	% Fixture	82.2	0.0	82.2
Total	Lumens	16603.0	0.0	16603.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.6	0.6
10°-20°	460.9	2.8
20°-30°	887.2	5.3
30°-40°	1494.3	9.0
40°-50°	2585.6	15.6
50°-60°	3903.9	23.5
60°-70°	4324.0	26.0
70°-80°	2493.0	15.0
80°-90°	349.6	2.1
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°	16603.0	100.0
0°-180°	16603.0	100.0

Coefficient of Utilization



REPORT NUMBER: P368066

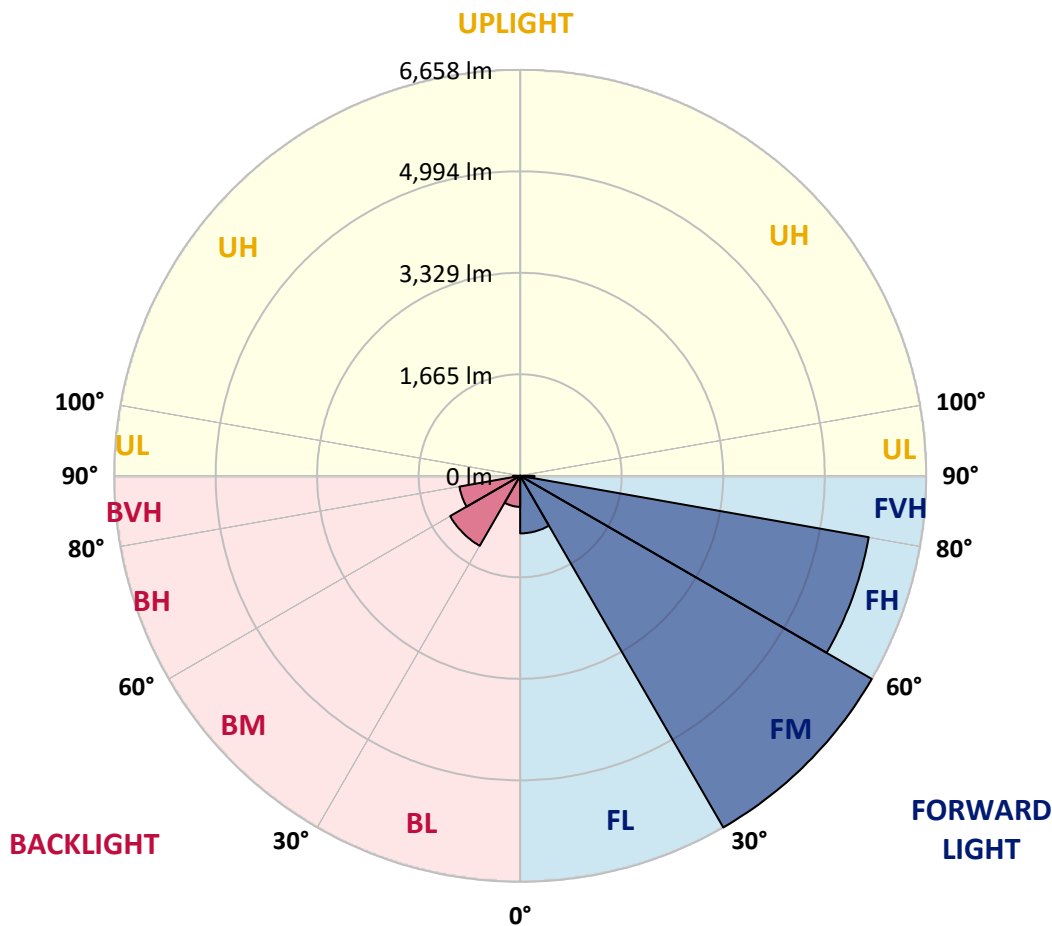
CATALOG NUMBER: MSA-SA3D-727-U-T2

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	943.8	5.7			
FM (30°-60°)	6658.3	40.1			
FH (60°-80°)	5804.2	35.0			G3/7500
FVH (80°-90°)	233.2	1.4			G3/500
BL (0°-30°)	508.8	3.1	B2/1000		
BM (30°-60°)	1325.4	8.0	B2/2500		
BH (60°-80°)	1012.7	6.1	B3/2500		G3/2500
BVH (80°-90°)	116.4	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type II Medium





REPORT NUMBER: P368066

CATALOG NUMBER: MSA-SA3D-727-U-T2

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	676.9	676.9	676.9	676.9	676.9	676.9	676.9	676.9	676.9	676.9	676.9
2.5°	871.4	840.3	793.2	812.6	836.1	838.9	831.3	788.3	773.8	806.3	816.0
5°	1220.9	1168.3	1136.5	1126.1	1090.8	1017.4	1070.0	1043.1	1048.6	1032.7	1063.8
7.5°	1515.1	1479.8	1432.7	1419.6	1338.6	1281.1	1317.1	1305.4	1248.6	1226.5	1261.8
10°	1664.6	1625.8	1627.9	1599.5	1578.1	1583.6	1565.6	1513.7	1471.5	1441.7	1356.6
12.5°	1754.6	1764.3	1816.2	1801.6	1882.6	1949.1	1898.5	1821.7	1688.1	1661.1	1576.7
15°	1968.4	2004.4	1956.0	1978.1	2012.7	2140.1	2119.3	2102.7	1961.5	1908.9	1753.2
17.5°	2188.5	2195.5	2122.1	2110.3	2193.4	2257.8	2338.7	2245.3	2262.6	2225.9	1974.0
20°	2235.6	2283.4	2178.2	2105.5	2276.4	2403.8	2504.2	2405.2	2496.5	2506.2	2156.0
22.5°	2408.0	2350.5	2212.1	2140.8	2290.3	2446.7	2610.1	2665.4	2636.4	2554.7	2331.8
25°	2527.7	2497.2	2356.0	2277.1	2333.9	2477.9	2764.4	2909.1	2934.7	2923.6	2499.3
27.5°	2749.9	2765.1	2474.4	2496.5	2417.6	2430.8	2857.1	3232.3	3072.4	3028.1	2707.0
30°	3100.8	3033.0	2707.0	2725.0	2594.1	2572.0	3053.0	3511.2	3367.9	3314.7	2877.9
32.5°	3466.9	3473.2	3077.2	2923.6	2853.7	2831.5	3014.3	3657.3	3741.7	3672.5	3136.1
35°	3983.3	3947.3	3478.7	3276.6	3024.0	2985.2	3290.4	4080.9	4235.9	4042.1	3442.7
37.5°	4769.5	4660.9	4115.5	3648.3	3461.4	3417.1	3684.9	4460.8	4809.7	4568.8	3943.8
40°	5400.8	5180.0	4684.4	4115.5	3799.2	3853.8	3965.3	4921.8	5404.9	5269.3	4407.5
42.5°	5903.9	5708.1	5087.2	4687.2	4257.3	4189.5	4311.3	5492.8	6214.7	6081.8	4986.2
45°	6386.4	5987.7	5539.9	5180.0	4766.8	4849.1	4831.1	6075.6	7207.9	6798.9	5497.7
47.5°	6862.6	6488.1	6019.5	5535.7	5119.8	5632.6	5440.9	6508.9	7877.9	7574.8	6036.1
50°	7474.4	7062.6	6528.9	6042.4	5793.2	6168.3	5846.5	6875.7	8628.2	8272.4	6544.2
52.5°	7880.7	7479.9	7012.1	6664.6	6641.8	6497.1	6414.7	7340.1	9285.7	9069.8	7082.7
55°	7832.9	7446.7	7234.9	7273.0	7555.4	7067.4	7000.3	8027.4	9971.6	9721.8	7664.1
57.5°	7234.2	6812.7	6857.7	7083.3	7841.9	8069.0	7954.8	8761.8	10583.5	10470.0	8383.2
60°	5635.4	5418.8	5784.9	6197.4	7458.5	8362.4	9165.3	9657.4	11336.5	11517.9	9512.8
62.5°	3660.7	3371.4	3950.0	4650.5	6314.4	8168.6	10398.0	11355.9	12569.9	12981.8	11229.3
65°	1896.5	1850.1	2255.0	2898.7	4395.8	6965.0	10832.7	13137.5	14069.1	14548.8	12868.9
67.5°	1378.7	1292.9	1480.5	1859.1	2683.4	4749.5	10009.0	14500.3	15272.7	15712.2	13822.0
70°	1050.0	986.3	1129.6	1364.2	1752.5	2682.7	7388.6	14128.6	15737.2	15950.3	13695.4
72.5°	786.3	731.6	856.9	1075.6	1350.4	1510.2	4367.4	11616.9	14944.7	15017.3	12291.7
75°	627.8	585.5	639.5	849.3	1100.5	1027.8	2320.0	8416.4	12142.2	12204.5	9388.9
77.5°	515.0	479.0	501.1	636.8	856.2	773.1	1151.0	5353.7	7709.0	7613.5	5282.4
80°	420.1	389.0	399.4	460.3	652.0	577.2	646.5	2792.8	3677.3	3529.2	2196.8
82.5°	323.2	296.9	317.7	338.5	472.0	414.6	377.2	1270.8	1506.1	1403.0	805.6
85°	216.6	192.4	276.2	254.0	308.7	254.7	206.3	506.0	561.3	523.3	283.1
87.5°	59.5	56.1	92.7	126.7	126.7	96.2	75.4	122.5	156.4	137.0	66.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P368066
 CATALOG NUMBER: MSA-SA3D-727-U-T2

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	676.9	676.9	676.9	676.9	676.9	676.9	676.9	676.9	676.9	676.9	676.9
2.5°	820.2	805.0	764.8	761.4	771.0	772.4	766.2	751.7	744.0	785.6	779.3
5°	1056.2	1002.2	969.7	939.9	898.4	868.6	876.2	897.0	903.9	935.1	938.5
7.5°	1239.6	1168.3	1097.0	1001.5	938.5	898.4	928.9	951.0	968.3	1012.6	1030.6
10°	1319.2	1241.7	1140.6	1040.3	1023.0	1029.9	1012.6	1018.1	1045.1	1047.2	1056.2
12.5°	1467.3	1379.4	1197.4	1106.7	1101.9	1116.4	1110.2	1135.8	1154.5	1205.0	1183.6
15°	1609.2	1497.1	1240.3	1147.6	1127.5	1156.6	1190.5	1233.4	1273.5	1321.3	1297.1
17.5°	1781.6	1612.7	1242.4	1128.9	1132.3	1194.6	1229.9	1253.5	1373.2	1439.0	1405.7
20°	1890.2	1624.5	1196.0	1082.5	1132.3	1188.4	1237.5	1263.2	1397.4	1496.4	1519.2
22.5°	1988.5	1628.6	1160.0	1057.6	1089.4	1163.5	1237.5	1294.3	1380.1	1474.9	1478.4
25°	2042.5	1625.1	1113.7	1059.7	1088.7	1125.4	1191.2	1243.1	1306.8	1439.0	1442.4
27.5°	2180.9	1580.2	1068.0	1068.0	1083.2	1084.6	1168.3	1198.8	1207.8	1328.2	1349.7
30°	2221.1	1589.8	1062.4	1066.6	1074.2	1060.4	1097.0	1117.1	1130.3	1234.1	1237.5
32.5°	2285.4	1512.3	1079.0	1054.1	1044.4	1042.4	1051.4	1069.4	1074.9	1138.6	1150.3
35°	2363.7	1481.2	1084.6	1050.7	1031.3	1020.9	1047.9	1025.7	1043.1	1117.8	1126.1
37.5°	2618.4	1438.3	1113.0	1050.7	1025.7	1014.0	1000.8	1011.2	1072.8	1144.8	1189.1
40°	2781.0	1451.4	1106.0	1061.0	1007.1	996.0	973.8	1011.9	1107.4	1234.8	1268.0
42.5°	3066.2	1459.0	1114.3	1056.2	1013.3	970.4	984.9	1026.4	1126.8	1199.5	1250.7
45°	3361.0	1482.6	1108.8	1041.7	999.4	1019.5	999.4	1036.8	1084.6	1086.7	1125.4
47.5°	3650.3	1577.4	1097.0	1011.9	996.0	1048.6	997.4	1003.6	1007.1	1019.5	1065.2
50°	3990.2	1678.4	1080.4	970.4	1000.8	1050.0	1005.0	974.5	971.1	1011.9	1063.1
52.5°	4376.4	1792.6	1059.0	930.2	972.5	1036.8	1031.3	976.6	946.8	986.3	1037.5
55°	4831.1	1922.8	1034.1	890.1	941.3	1038.2	1045.8	962.1	947.5	990.5	1045.1
57.5°	5435.4	2111.0	985.6	832.0	903.2	1016.8	1008.4	945.5	931.6	977.3	1034.1
60°	6466.7	2473.0	916.4	774.5	862.4	964.1	978.0	915.7	901.9	952.4	1011.9
62.5°	7847.5	2908.4	832.6	718.4	812.6	907.4	939.9	872.8	871.4	935.8	998.1
65°	9132.8	3155.5	746.1	667.2	761.4	854.8	897.0	832.6	835.4	916.4	978.7
67.5°	9667.1	2864.8	668.6	621.5	702.5	794.6	861.7	801.5	792.5	890.1	947.5
70°	9165.3	2275.8	601.5	573.1	636.1	729.5	812.6	760.0	739.2	827.8	872.8
72.5°	8109.8	1897.2	538.5	516.3	577.9	661.0	746.1	703.9	676.9	744.7	784.9
75°	6339.3	1556.6	466.5	460.3	511.5	598.7	676.9	647.8	613.2	656.1	696.3
77.5°	3609.5	984.9	391.8	395.9	432.6	524.6	593.9	571.0	535.7	553.7	600.1
80°	1444.5	497.0	314.9	317.7	348.8	431.2	492.1	483.8	447.1	461.7	493.5
82.5°	539.9	272.7	232.6	233.9	265.1	341.2	420.1	416.0	381.4	371.0	389.0
85°	214.6	135.0	142.6	148.8	178.6	245.7	337.1	299.0	258.2	226.3	237.4
87.5°	51.2	42.9	49.8	52.6	58.1	76.8	123.2	99.0	101.7	81.7	60.9
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)