

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: P596820

Luminaire Tested: **MSA-SA4D-827-U-T2**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596820
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4D-827-U-T2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19289 lumens
Efficiency: N/A
Efficacy: 74.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G3

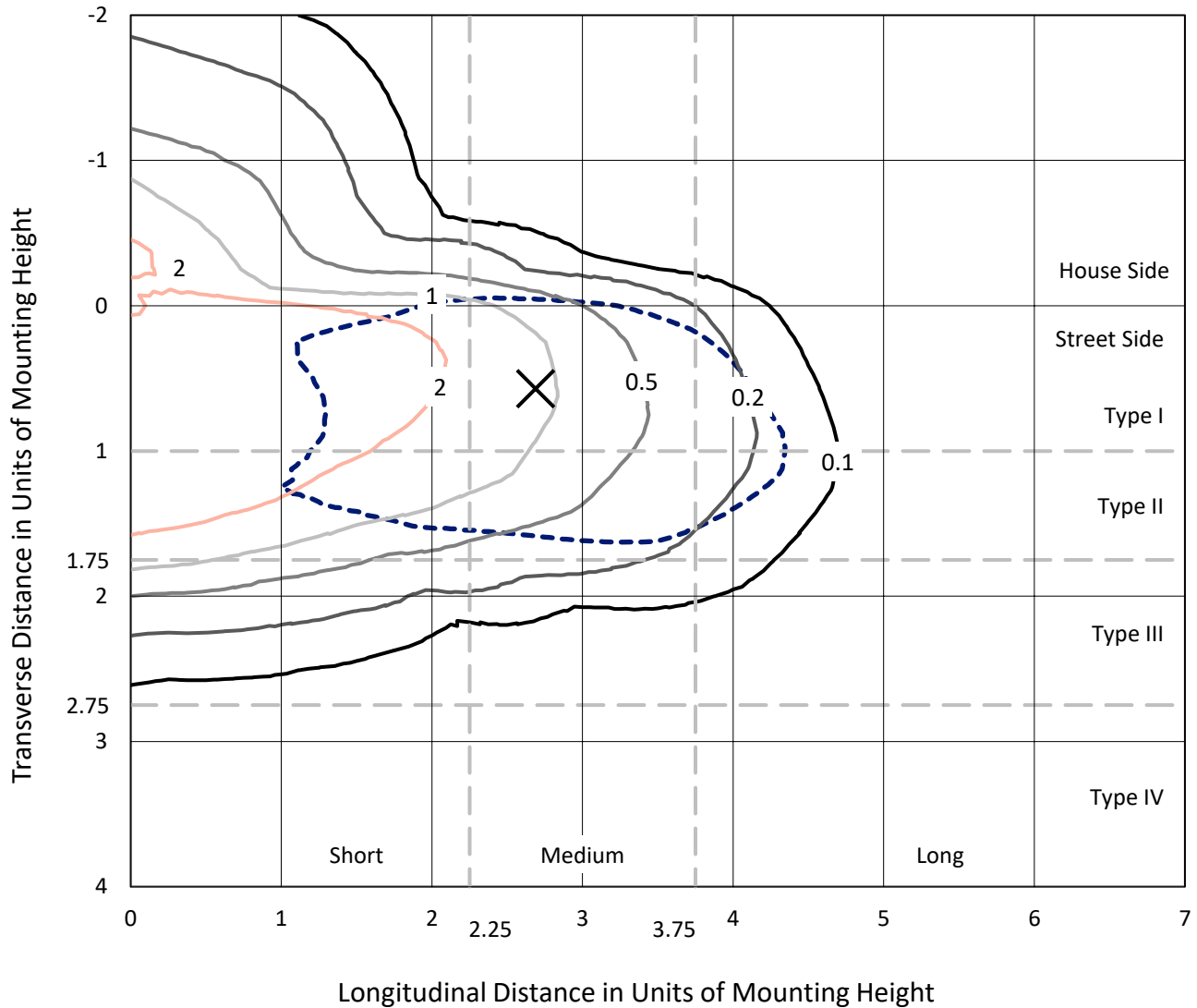
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

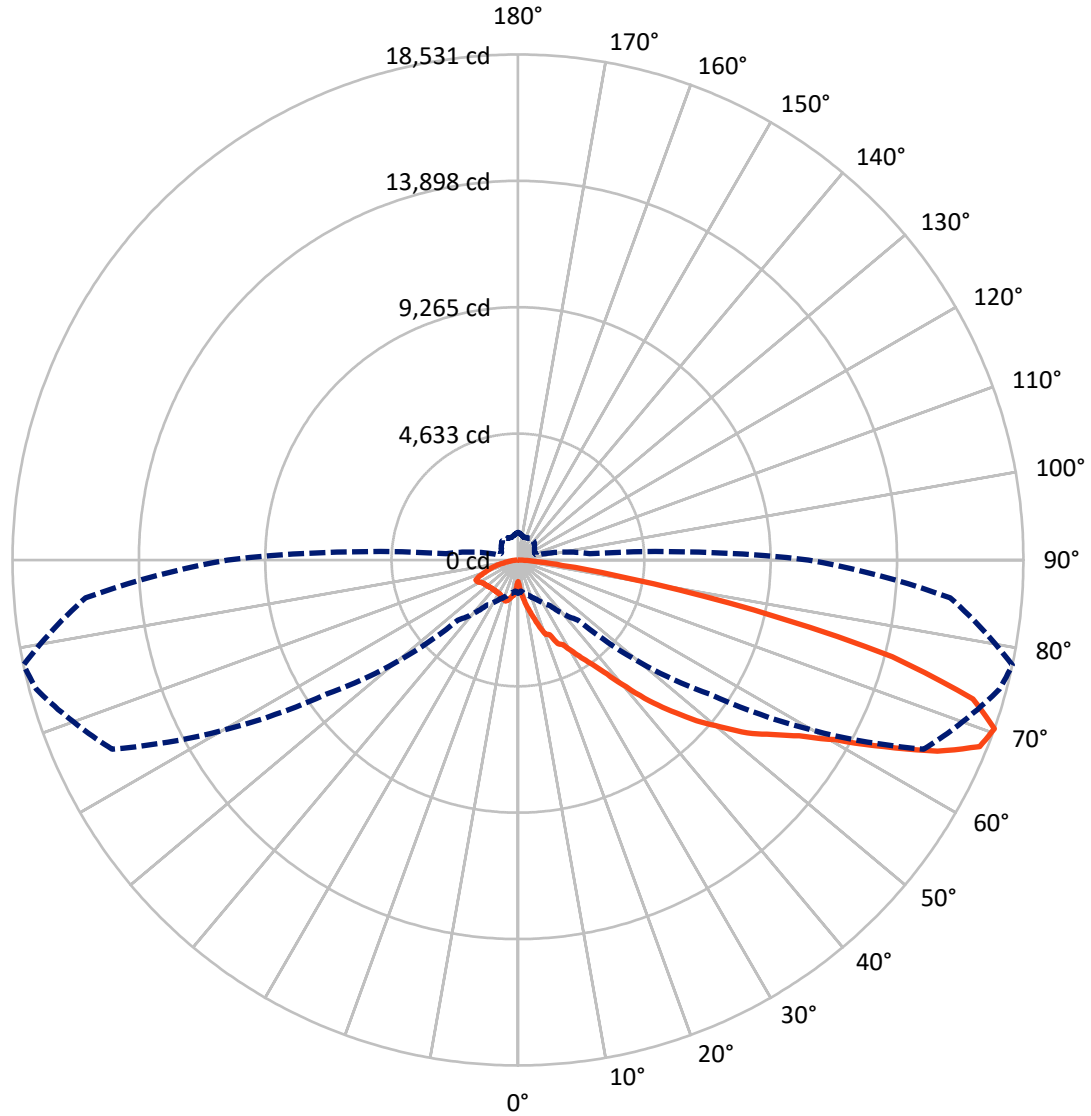
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.6 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



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

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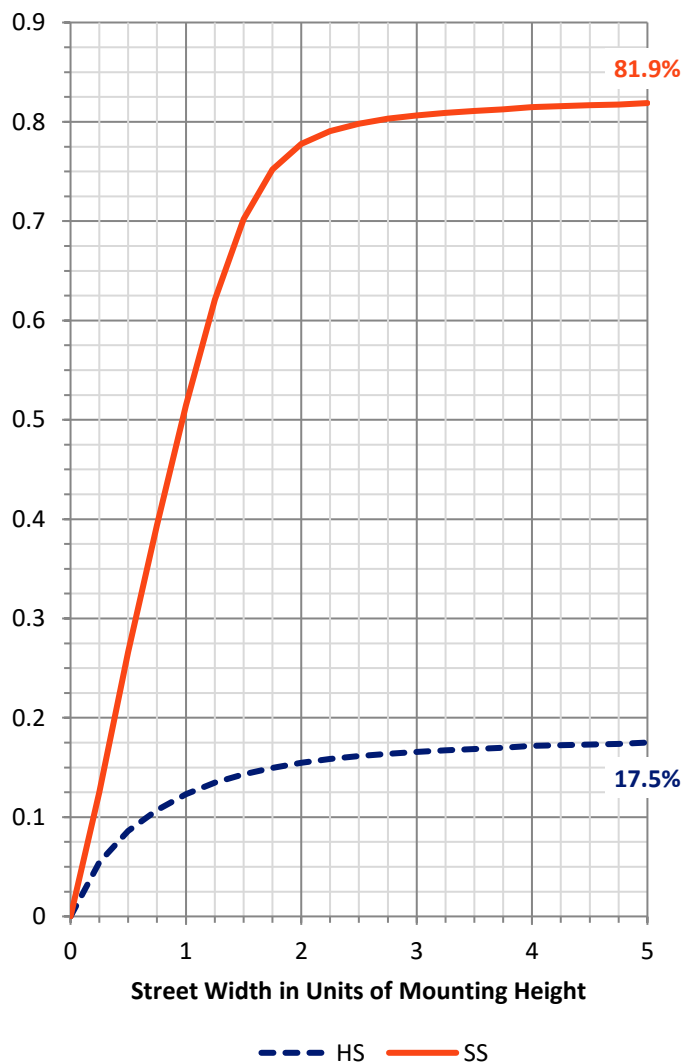
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3442.8	0.0	3442.8
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	15846.2	0.0	15846.2
	% Fixture	82.2	0.0	82.2
Total	Lumens	19289.0	0.0	19289.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.5	0.6
10°-20°	535.5	2.8
20°-30°	1030.7	5.3
30°-40°	1736.1	9.0
40°-50°	3003.8	15.6
50°-60°	4535.4	23.5
60°-70°	5023.5	26.0
70°-80°	2896.3	15.0
80°-90°	406.2	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°	19289.0	100.0
0°-180°	19289.0	100.0

Coefficient of Utilization



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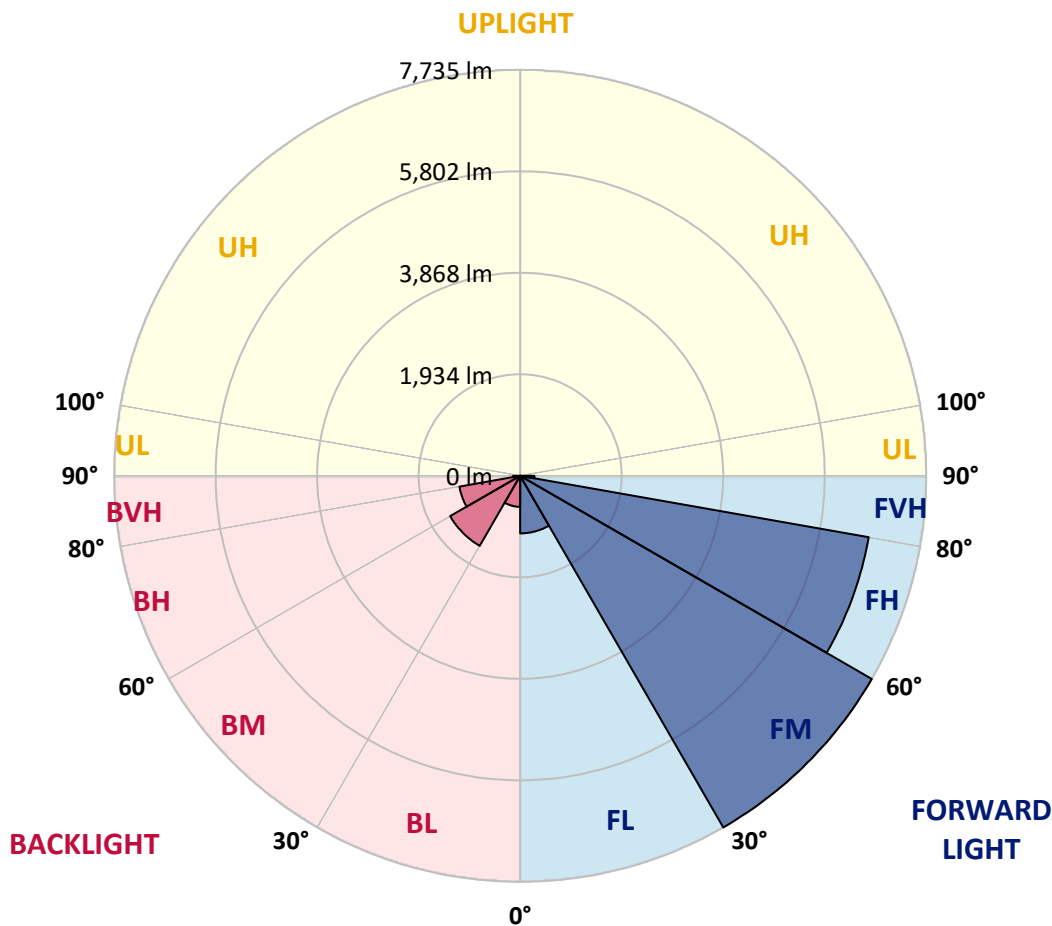
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1096.5	5.7			
FM (30°-60°)	7735.5	40.1			
FH (60°-80°)	6743.2	35.0			G3/7500
FVH (80°-90°)	271.0	1.4			G3/500
BL (0°-30°)	591.2	3.1	B2/1000		
BM (30°-60°)	1539.8	8.0	B2/2500		
BH (60°-80°)	1176.6	6.1	B3/2500		G3/2500
BVH (80°-90°)	135.2	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	786.4	786.4	786.4	786.4	786.4	786.4	786.4	786.4	786.4	786.4	786.4
2.5°	1012.4	976.2	921.5	944.0	971.4	974.6	965.7	915.9	899.0	936.8	948.0
5°	1418.5	1357.3	1320.4	1308.3	1267.3	1182.0	1243.2	1211.8	1218.2	1199.7	1235.9
7.5°	1760.2	1719.2	1664.5	1649.2	1555.2	1488.4	1530.2	1516.6	1450.6	1424.9	1465.9
10°	1933.9	1888.9	1891.3	1858.3	1833.4	1839.8	1818.9	1758.6	1709.5	1675.0	1576.1
12.5°	2038.4	2049.7	2110.0	2093.1	2187.2	2264.4	2205.7	2116.4	1961.2	1929.9	1831.8
15°	2286.9	2328.7	2272.4	2298.2	2338.4	2486.3	2462.2	2442.9	2278.9	2217.7	2036.8
17.5°	2542.6	2550.6	2465.4	2451.7	2548.2	2623.0	2717.1	2608.5	2628.6	2586.0	2293.3
20°	2597.3	2652.8	2530.5	2446.1	2644.7	2792.7	2909.3	2794.3	2900.4	2911.7	2504.8
22.5°	2797.5	2730.8	2569.9	2487.1	2660.8	2842.5	3032.3	3096.6	3062.9	2968.0	2709.1
25°	2936.6	2901.2	2737.2	2645.5	2711.5	2878.7	3211.6	3379.7	3409.4	3396.6	2903.6
27.5°	3194.7	3212.4	2874.7	2900.4	2808.8	2824.0	3319.4	3755.2	3569.5	3518.0	3144.9
30°	3602.4	3523.6	3144.9	3165.8	3013.8	2988.1	3546.9	4079.3	3912.8	3850.9	3343.5
32.5°	4027.8	4035.0	3575.1	3396.6	3315.4	3289.6	3501.9	4248.9	4347.0	4266.6	3643.4
35°	4627.7	4585.8	4041.5	3806.7	3513.2	3468.1	3822.7	4741.0	4921.2	4696.0	3999.7
37.5°	5541.1	5414.9	4781.2	4238.5	4021.4	3969.9	4281.1	5182.5	5587.8	5307.9	4581.8
40°	6274.5	6018.0	5442.2	4781.2	4413.8	4477.3	4606.8	5718.0	6279.3	6121.7	5120.6
42.5°	6859.1	6631.5	5910.2	5445.4	4946.1	4867.3	5008.8	6381.4	7220.1	7065.7	5792.8
45°	7419.5	6956.4	6436.1	6018.0	5537.9	5633.6	5612.7	7058.5	8374.0	7898.8	6387.1
47.5°	7972.8	7537.7	6993.4	6431.3	5948.0	6543.9	6321.1	7561.9	9152.4	8800.2	7012.7
50°	8683.6	8205.2	7585.2	7019.9	6730.4	7166.2	6792.3	7988.0	10024.1	9610.7	7602.9
52.5°	9155.6	8690.0	8146.5	7742.8	7716.3	7548.2	7452.5	8527.6	10788.0	10537.1	8228.5
55°	9100.1	8651.4	8405.4	8449.6	8777.7	8210.8	8132.8	9326.1	11584.8	11294.6	8903.9
57.5°	8404.6	7914.9	7967.1	8229.3	9110.6	9374.3	9241.7	10179.3	12295.7	12163.8	9739.4
60°	6547.1	6295.4	6720.8	7200.0	8665.1	9715.3	10648.0	11219.8	13170.5	13381.2	11051.7
62.5°	4252.9	3916.8	4589.1	5402.8	7335.9	9490.1	12080.2	13193.1	14603.5	15081.9	13045.9
65°	2203.3	2149.4	2619.8	3367.6	5106.9	8091.8	12585.2	15262.8	16345.2	16902.4	14950.9
67.5°	1601.8	1502.1	1720.0	2159.8	3117.5	5517.8	11628.3	16846.1	17743.5	18254.1	16058.1
70°	1219.8	1145.9	1312.3	1584.9	2036.0	3116.7	8583.9	16414.3	18283.1	18530.8	15911.0
72.5°	913.5	849.9	995.5	1249.6	1568.8	1754.6	5073.9	13496.2	17362.4	17446.8	14280.2
75°	729.3	680.3	743.0	986.6	1278.5	1194.1	2695.4	9778.0	14106.5	14178.9	10907.8
77.5°	598.3	556.4	582.2	739.8	994.7	898.2	1337.2	6219.8	8956.2	8845.2	6137.0
80°	488.1	451.9	464.0	534.7	757.5	670.6	751.0	3244.6	4272.2	4100.2	2552.3
82.5°	375.5	345.0	369.1	393.2	548.4	481.7	438.2	1476.3	1749.7	1629.9	936.0
85°	251.7	223.5	320.8	295.1	358.6	295.9	239.6	587.8	652.1	607.9	328.9
87.5°	69.2	65.1	107.8	147.2	147.2	111.8	87.6	142.3	181.7	159.2	77.2
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°	786.4	786.4	786.4	786.4	786.4	786.4	786.4	786.4	786.4	786.4	786.4
2.5°	952.9	935.2	888.5	884.5	895.8	897.4	890.2	873.3	864.4	912.7	905.4
5°	1227.1	1164.4	1126.6	1092.0	1043.7	1009.2	1018.0	1042.1	1050.2	1086.4	1090.4
7.5°	1440.2	1357.3	1274.5	1163.5	1090.4	1043.7	1079.1	1104.8	1125.0	1176.4	1197.3
10°	1532.6	1442.6	1325.2	1208.6	1188.5	1196.5	1176.4	1182.8	1214.2	1216.6	1227.1
12.5°	1704.7	1602.6	1391.1	1285.8	1280.1	1297.0	1289.8	1319.5	1341.3	1400.0	1375.0
15°	1869.6	1739.3	1441.0	1333.2	1309.9	1343.7	1383.1	1432.9	1479.6	1535.0	1506.9
17.5°	2069.8	1873.6	1443.4	1311.5	1315.5	1387.9	1428.9	1456.2	1595.4	1671.7	1633.2
20°	2196.0	1887.3	1389.5	1257.6	1315.5	1380.7	1437.8	1467.5	1623.5	1738.5	1765.0
22.5°	2310.2	1892.1	1347.7	1228.7	1265.7	1351.7	1437.8	1503.7	1603.4	1713.6	1717.6
25°	2372.9	1888.1	1293.8	1231.1	1264.9	1307.5	1383.9	1444.2	1518.2	1671.7	1675.8
27.5°	2533.8	1835.8	1240.7	1240.7	1258.4	1260.0	1357.3	1392.7	1403.2	1543.1	1568.0
30°	2580.4	1847.0	1234.3	1239.1	1248.0	1231.9	1274.5	1297.8	1313.1	1433.7	1437.8
32.5°	2655.2	1757.0	1253.6	1224.7	1213.4	1211.0	1221.4	1242.4	1248.8	1322.8	1336.4
35°	2746.0	1720.8	1260.0	1220.6	1198.1	1186.1	1217.4	1191.7	1211.8	1298.6	1308.3
37.5°	3042.0	1670.9	1293.0	1220.6	1191.7	1178.0	1162.7	1174.8	1246.4	1330.0	1381.5
40°	3230.9	1686.2	1285.0	1232.7	1170.0	1157.1	1131.4	1175.6	1286.6	1434.5	1473.1
42.5°	3562.2	1695.1	1294.6	1227.1	1177.2	1127.4	1144.3	1192.5	1309.1	1393.5	1453.0
45°	3904.8	1722.4	1288.2	1210.2	1161.1	1184.5	1161.1	1204.6	1260.0	1262.5	1307.5
47.5°	4240.9	1832.6	1274.5	1175.6	1157.1	1218.2	1158.7	1166.0	1170.0	1184.5	1237.5
50°	4635.7	1950.0	1255.2	1127.4	1162.7	1219.8	1167.6	1132.2	1128.2	1175.6	1235.1
52.5°	5084.4	2082.6	1230.3	1080.7	1129.8	1204.6	1198.1	1134.6	1100.0	1145.9	1205.4
55°	5612.7	2233.8	1201.3	1034.1	1093.6	1206.2	1215.0	1117.7	1100.8	1150.7	1214.2
57.5°	6314.7	2452.5	1145.1	966.5	1049.4	1181.2	1171.6	1098.4	1082.3	1135.4	1201.3
60°	7512.8	2873.1	1064.6	899.8	1001.9	1120.1	1136.2	1063.8	1047.8	1106.5	1175.6
62.5°	9117.0	3378.9	967.3	834.7	944.0	1054.2	1092.0	1014.0	1012.4	1087.2	1159.5
65°	10610.3	3665.9	866.8	775.2	884.5	993.1	1042.1	967.3	970.6	1064.6	1137.0
67.5°	11231.0	3328.2	776.8	722.1	816.2	923.1	1001.1	931.2	920.7	1034.1	1100.8
70°	10648.0	2643.9	698.8	665.8	739.0	847.5	944.0	882.9	858.8	961.7	1014.0
72.5°	9421.8	2204.1	625.6	599.9	671.4	767.9	866.8	817.8	786.4	865.2	911.9
75°	7364.9	1808.4	542.0	534.7	594.2	695.6	786.4	752.6	712.4	762.3	808.9
77.5°	4193.4	1144.3	455.1	460.0	502.6	609.5	689.9	663.4	622.4	643.3	697.2
80°	1678.2	577.4	365.9	369.1	405.3	501.0	571.7	562.1	519.5	536.3	573.3
82.5°	627.2	316.8	270.2	271.8	308.0	396.4	488.1	483.3	443.1	431.0	451.9
85°	249.3	156.8	165.6	172.9	207.5	285.5	391.6	347.4	299.9	262.9	275.8
87.5°	59.5	49.9	57.9	61.1	67.5	89.3	143.1	115.0	118.2	94.9	70.8
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)