

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: P597172

Luminaire Tested: **MSA-SA4D-835-U-T2**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597172
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-835-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: 21632 lumens
Efficiency: N/A
Efficacy: 83.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B3 - U0 - G4

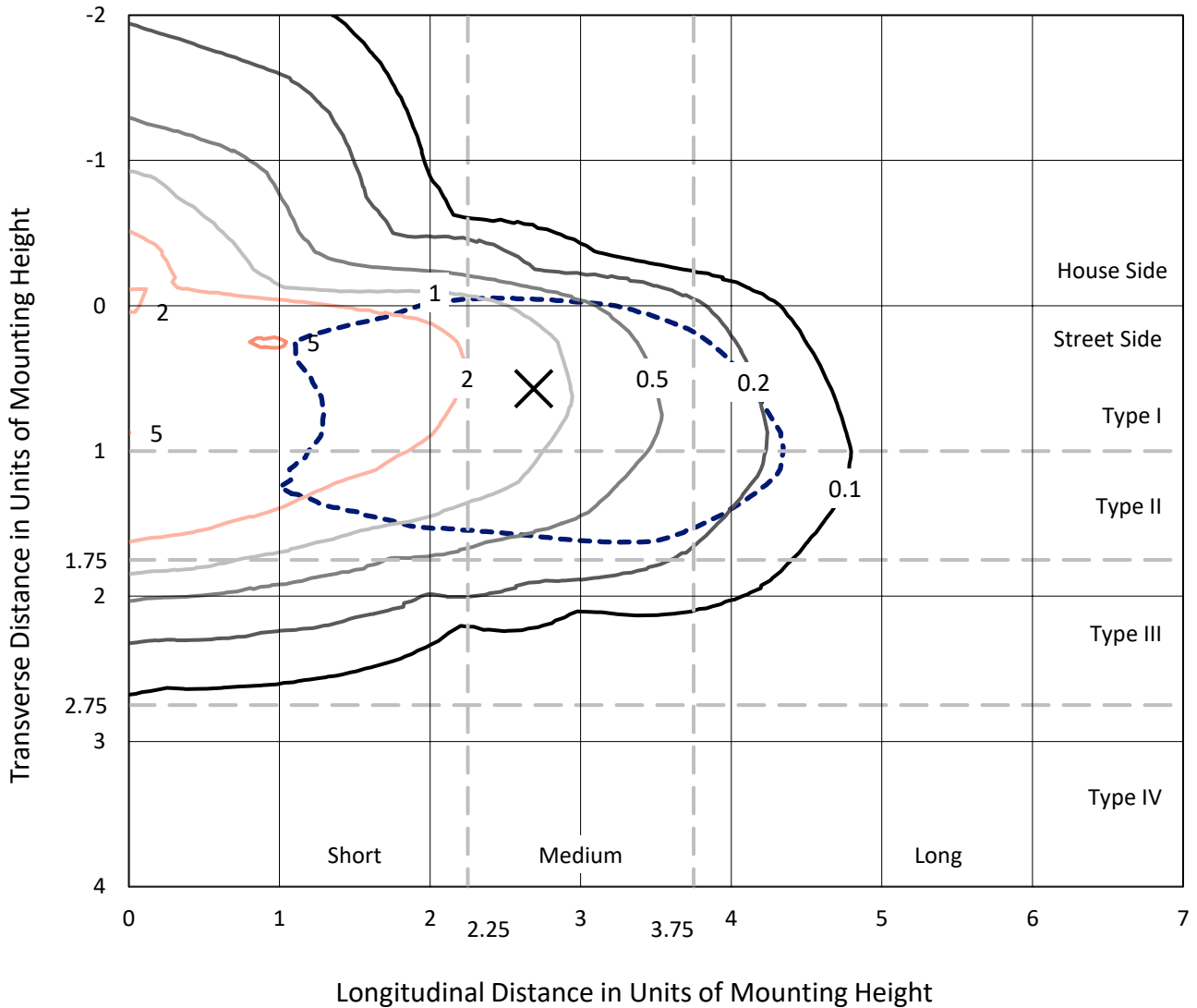
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

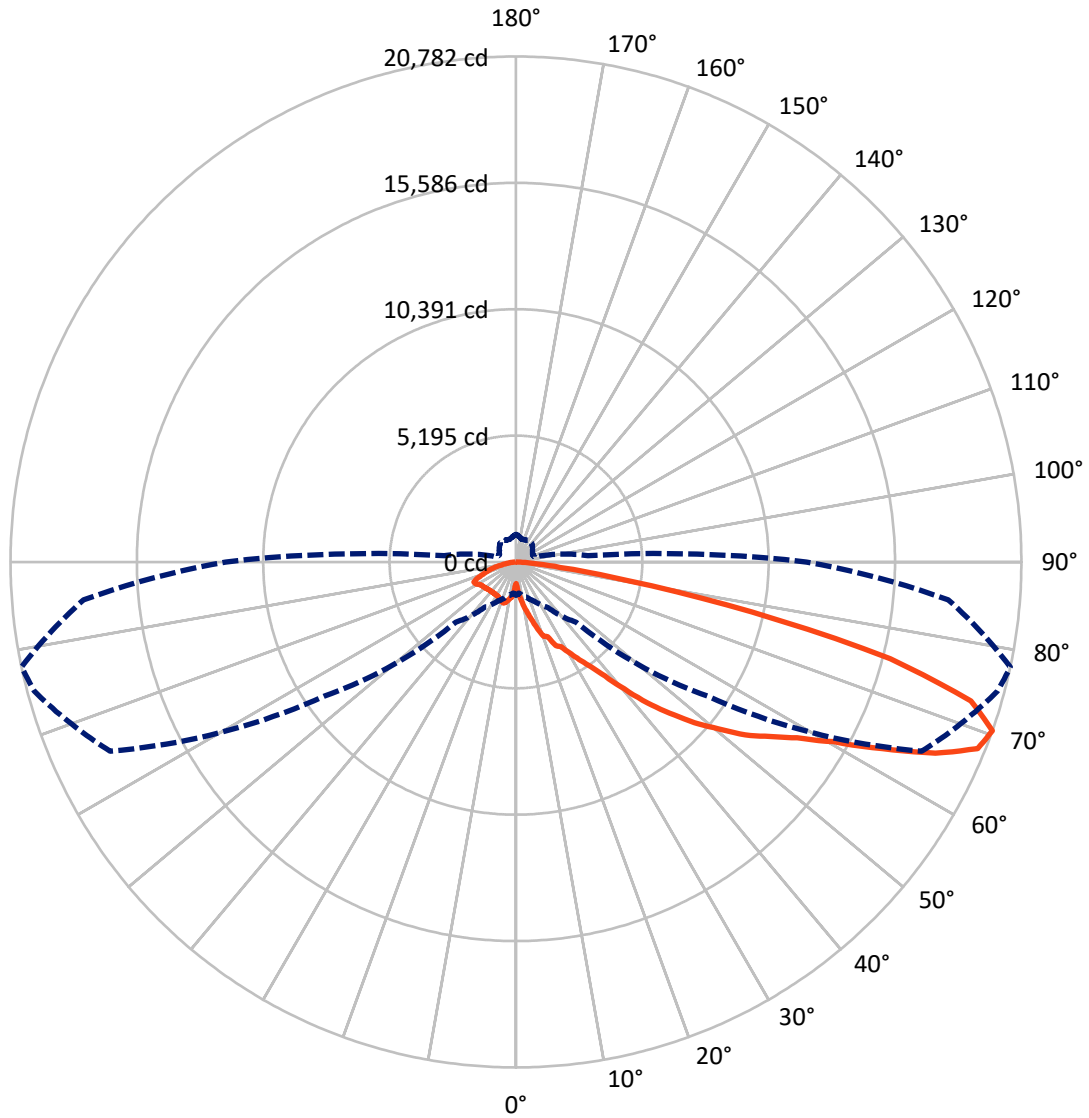
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 5.2 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	3861.0	0.0	3861.0
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	17771.0	0.0	17771.0
	% Fixture	82.2	0.0	82.2
Total	Lumens	21632.0	0.0	21632.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.3	0.6
10°-20°	600.5	2.8
20°-30°	1155.9	5.3
30°-40°	1946.9	9.0
40°-50°	3368.7	15.6
50°-60°	5086.3	23.5
60°-70°	5633.7	26.0
70°-80°	3248.1	15.0
80°-90°	455.5	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°	21632.0	100.0
0°-180°	21632.0	100.0

Coefficient of Utilization



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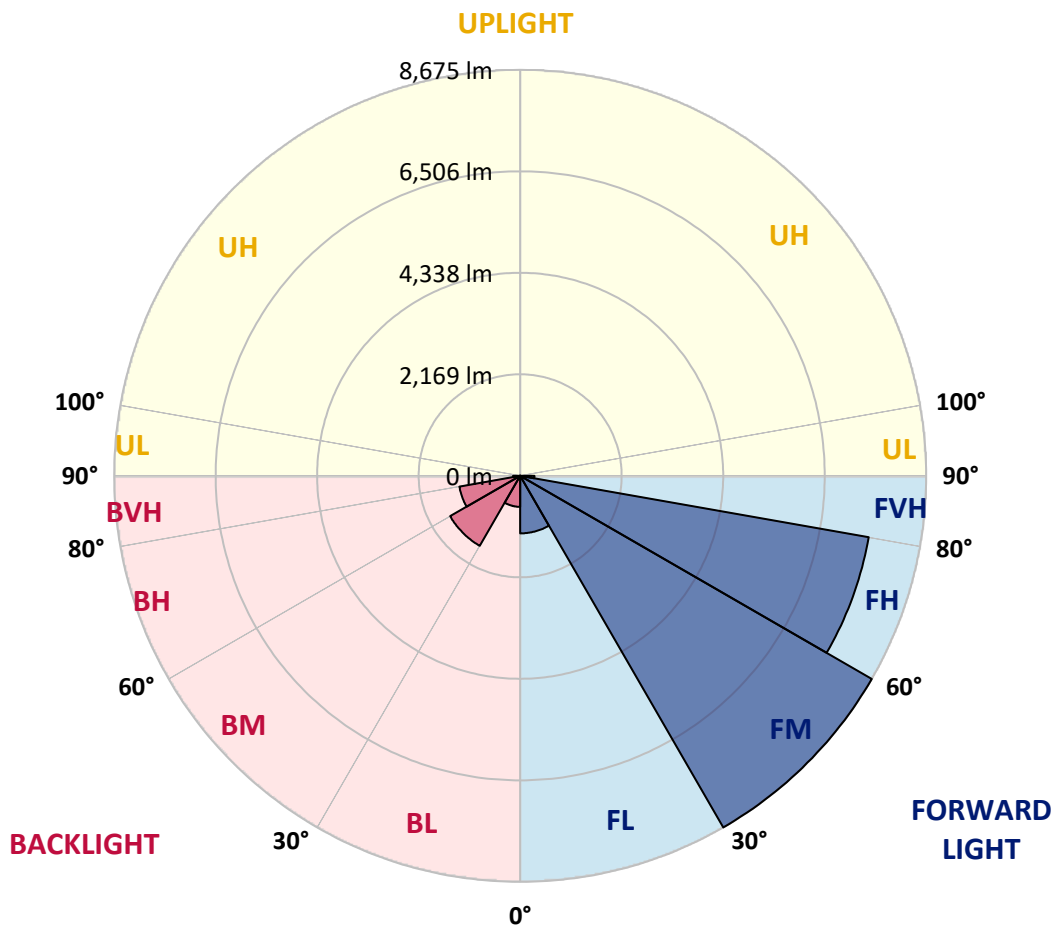
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1229.7	5.7			
FM (30°-60°)	8675.1	40.1			
FH (60°-80°)	7562.3	35.0			G4/12000
FVH (80°-90°)	303.9	1.4			G3/500
BL (0°-30°)	663.0	3.1	B2/1000		
BM (30°-60°)	1726.9	8.0	B2/2500		
BH (60°-80°)	1319.5	6.1	B3/2500		G3/2500
BVH (80°-90°)	151.7	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-G4

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	881.9	881.9	881.9	881.9	881.9	881.9	881.9	881.9	881.9	881.9	881.9
2.5°	1135.3	1094.8	1033.4	1058.7	1089.4	1093.0	1083.0	1027.1	1008.2	1050.6	1063.2
5°	1590.8	1522.2	1480.7	1467.2	1421.2	1325.6	1394.2	1359.0	1366.2	1345.5	1386.0
7.5°	1974.0	1928.0	1866.7	1849.6	1744.1	1669.2	1716.1	1700.8	1626.8	1598.0	1644.0
10°	2168.8	2118.3	2121.0	2084.0	2056.1	2063.3	2039.8	1972.2	1917.2	1878.4	1767.5
12.5°	2286.0	2298.7	2366.3	2347.3	2452.9	2539.4	2473.6	2373.5	2199.5	2164.3	2054.3
15°	2564.7	2611.6	2548.4	2577.3	2622.4	2788.3	2761.3	2739.6	2555.7	2487.1	2284.2
17.5°	2851.4	2860.5	2764.9	2749.5	2857.8	2941.6	3047.1	2925.4	2947.9	2900.1	2571.9
20°	2912.8	2975.0	2837.9	2743.2	2966.0	3131.9	3262.7	3133.7	3252.7	3265.4	2809.1
22.5°	3137.3	3062.5	2882.1	2789.2	2984.0	3187.8	3400.6	3472.8	3434.9	3328.5	3038.1
25°	3293.3	3253.6	3069.7	2966.9	3040.8	3228.4	3601.7	3790.2	3823.6	3809.1	3256.3
27.5°	3582.8	3602.6	3223.9	3252.7	3149.9	3167.1	3722.6	4211.3	4003.0	3945.3	3526.9
30°	4040.0	3951.6	3526.9	3550.3	3379.9	3351.0	3977.8	4574.8	4388.1	4318.7	3749.6
32.5°	4517.0	4525.2	4009.3	3809.1	3718.1	3689.2	3927.3	4765.0	4875.1	4784.9	4086.0
35°	5189.8	5142.9	4532.4	4269.1	3939.9	3889.4	4287.1	5316.9	5518.9	5266.4	4485.5
37.5°	6214.2	6072.6	5362.0	4753.3	4509.8	4452.1	4801.1	5812.0	6266.5	5952.7	5138.4
40°	7036.6	6749.0	6103.3	5362.0	4949.9	5021.1	5166.3	6412.6	7042.0	6865.3	5742.6
42.5°	7692.2	7437.0	6628.1	6106.9	5546.9	5458.5	5617.2	7156.6	8097.1	7924.0	6496.5
45°	8320.8	7801.3	7217.9	6749.0	6210.6	6317.9	6294.5	7915.9	9391.2	8858.2	7162.9
47.5°	8941.2	8453.3	7842.8	7212.5	6670.5	7338.7	7088.9	8480.4	10264.1	9869.1	7864.5
50°	9738.4	9201.8	8506.5	7872.6	7547.9	8036.7	7617.4	8958.3	11241.7	10778.1	8526.4
52.5°	10267.7	9745.6	9136.0	8683.3	8653.5	8465.1	8357.8	9563.4	12098.4	11817.0	9228.0
55°	10205.5	9702.3	9426.4	9476.0	9843.9	9208.1	9120.7	10458.9	12992.0	12666.5	9985.5
57.5°	9425.5	8876.3	8934.9	9228.9	10217.2	10513.0	10364.2	11415.7	13789.2	13641.3	10922.4
60°	7342.3	7060.1	7537.1	8074.6	9717.6	10895.4	11941.4	12582.6	14770.3	15006.6	12394.1
62.5°	4769.5	4392.6	5146.5	6059.1	8227.0	10642.9	13547.5	14795.6	16377.3	16913.9	14630.6
65°	2470.9	2410.5	2938.0	3776.7	5727.2	9074.7	14113.8	17116.8	18330.6	18955.5	16766.9
67.5°	1796.4	1684.5	1928.9	2422.2	3496.2	6188.1	13040.7	18892.4	19898.8	20471.4	18008.7
70°	1368.0	1285.0	1471.7	1777.4	2283.3	3495.3	9626.6	18408.2	20503.9	20781.7	17843.6
72.5°	1024.4	953.2	1116.4	1401.4	1759.4	1967.7	5690.3	15135.6	19471.4	19566.0	16014.8
75°	817.9	762.9	833.3	1106.5	1433.8	1339.2	3022.8	10965.7	15820.0	15901.2	12232.7
77.5°	670.9	624.0	652.9	829.6	1115.5	1007.3	1499.7	6975.3	10044.1	9919.6	6882.4
80°	547.4	506.8	520.3	599.7	849.5	752.1	842.3	3638.7	4791.2	4598.2	2862.3
82.5°	421.1	386.9	413.9	441.0	615.0	540.2	491.5	1655.7	1962.3	1827.9	1049.7
85°	282.3	250.7	359.8	331.0	402.2	331.9	268.7	659.2	731.3	681.8	368.8
87.5°	77.6	73.0	120.8	165.0	165.0	125.3	98.3	159.6	203.8	178.6	86.6
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°	881.9	881.9	881.9	881.9	881.9	881.9	881.9	881.9	881.9	881.9	881.9
2.5°	1068.6	1048.8	996.5	992.0	1004.6	1006.4	998.3	979.3	969.4	1023.5	1015.4
5°	1376.1	1305.8	1263.4	1224.6	1170.5	1131.7	1141.7	1168.7	1177.7	1218.3	1222.8
7.5°	1615.1	1522.2	1429.3	1304.9	1222.8	1170.5	1210.2	1239.1	1261.6	1319.3	1342.8
10°	1718.8	1617.8	1486.1	1355.4	1332.8	1341.9	1319.3	1326.5	1361.7	1364.4	1376.1
12.5°	1911.8	1797.3	1560.1	1442.0	1435.6	1454.6	1446.5	1479.8	1504.2	1570.0	1542.1
15°	2096.7	1950.6	1616.0	1495.2	1469.0	1506.9	1551.1	1607.0	1659.3	1721.5	1689.9
17.5°	2321.2	2101.2	1618.7	1470.8	1475.3	1556.5	1602.5	1633.1	1789.1	1874.8	1831.5
20°	2462.8	2116.5	1558.3	1410.4	1475.3	1548.4	1612.4	1645.8	1820.7	1949.7	1979.4
22.5°	2590.8	2121.9	1511.4	1377.9	1419.4	1515.9	1612.4	1686.3	1798.2	1921.7	1926.2
25°	2661.2	2117.4	1451.0	1380.6	1418.5	1466.3	1552.0	1619.6	1702.6	1874.8	1879.3
27.5°	2841.5	2058.8	1391.5	1391.5	1411.3	1413.1	1522.2	1561.9	1573.6	1730.5	1758.5
30°	2893.8	2071.4	1384.2	1389.7	1399.6	1381.5	1429.3	1455.5	1472.6	1607.9	1612.4
32.5°	2977.7	1970.4	1405.9	1373.4	1360.8	1358.1	1369.8	1393.3	1400.5	1483.4	1498.8
35°	3079.6	1929.8	1413.1	1368.9	1343.7	1330.1	1365.3	1336.4	1359.0	1456.4	1467.2
37.5°	3411.5	1873.9	1450.1	1368.9	1336.4	1321.1	1304.0	1317.5	1397.8	1491.6	1549.3
40°	3623.4	1891.0	1441.1	1382.4	1312.1	1297.7	1268.8	1318.4	1442.9	1608.8	1652.1
42.5°	3994.9	1901.0	1451.9	1376.1	1320.2	1264.3	1283.2	1337.3	1468.1	1562.8	1629.5
45°	4379.1	1931.6	1444.7	1357.2	1302.2	1328.3	1302.2	1350.9	1413.1	1415.8	1466.3
47.5°	4756.0	2055.2	1429.3	1318.4	1297.7	1366.2	1299.5	1307.6	1312.1	1328.3	1387.8
50°	5198.8	2186.8	1407.7	1264.3	1304.0	1368.0	1309.4	1269.7	1265.2	1318.4	1385.1
52.5°	5702.0	2335.6	1379.7	1212.0	1267.0	1350.9	1343.7	1272.4	1233.6	1285.0	1351.8
55°	6294.5	2505.2	1347.3	1159.7	1226.4	1352.7	1362.6	1253.5	1234.5	1290.5	1361.7
57.5°	7081.7	2750.4	1284.1	1083.9	1176.8	1324.7	1313.9	1231.8	1213.8	1273.3	1347.3
60°	8425.4	3222.1	1194.0	1009.1	1123.6	1256.2	1274.2	1193.1	1175.0	1240.9	1318.4
62.5°	10224.4	3789.3	1084.8	936.1	1058.7	1182.2	1224.6	1137.2	1135.3	1219.2	1300.4
65°	11899.1	4111.2	972.1	869.3	992.0	1113.7	1168.7	1084.8	1088.5	1194.0	1275.1
67.5°	12595.2	3732.5	871.1	809.8	915.3	1035.3	1122.7	1044.3	1032.5	1159.7	1234.5
70°	11941.4	2965.1	783.7	746.7	828.7	950.5	1058.7	990.2	963.1	1078.5	1137.2
72.5°	10566.2	2471.8	701.6	672.7	753.0	861.2	972.1	917.1	881.9	970.3	1022.6
75°	8259.5	2028.1	607.8	599.7	666.4	780.0	881.9	844.1	799.0	854.9	907.2
77.5°	4702.8	1283.2	510.4	515.8	563.6	683.6	773.7	744.0	698.0	721.4	781.8
80°	1882.0	647.5	410.3	413.9	454.5	561.8	641.2	630.3	582.6	601.5	643.0
82.5°	703.4	355.3	303.0	304.8	345.4	444.6	547.4	542.0	496.9	483.4	506.8
85°	279.6	175.8	185.8	193.9	232.7	320.1	439.2	389.6	336.4	294.9	309.3
87.5°	66.7	55.9	64.9	68.5	75.8	100.1	160.5	129.0	132.6	106.4	79.4
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)