

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: P597090

Luminaire Tested: **MSA-SA3D-835-U-T4W**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597090  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3D-835-U-T4W  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 16638 lumens  
Efficiency: N/A  
Efficacy: 86.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G3

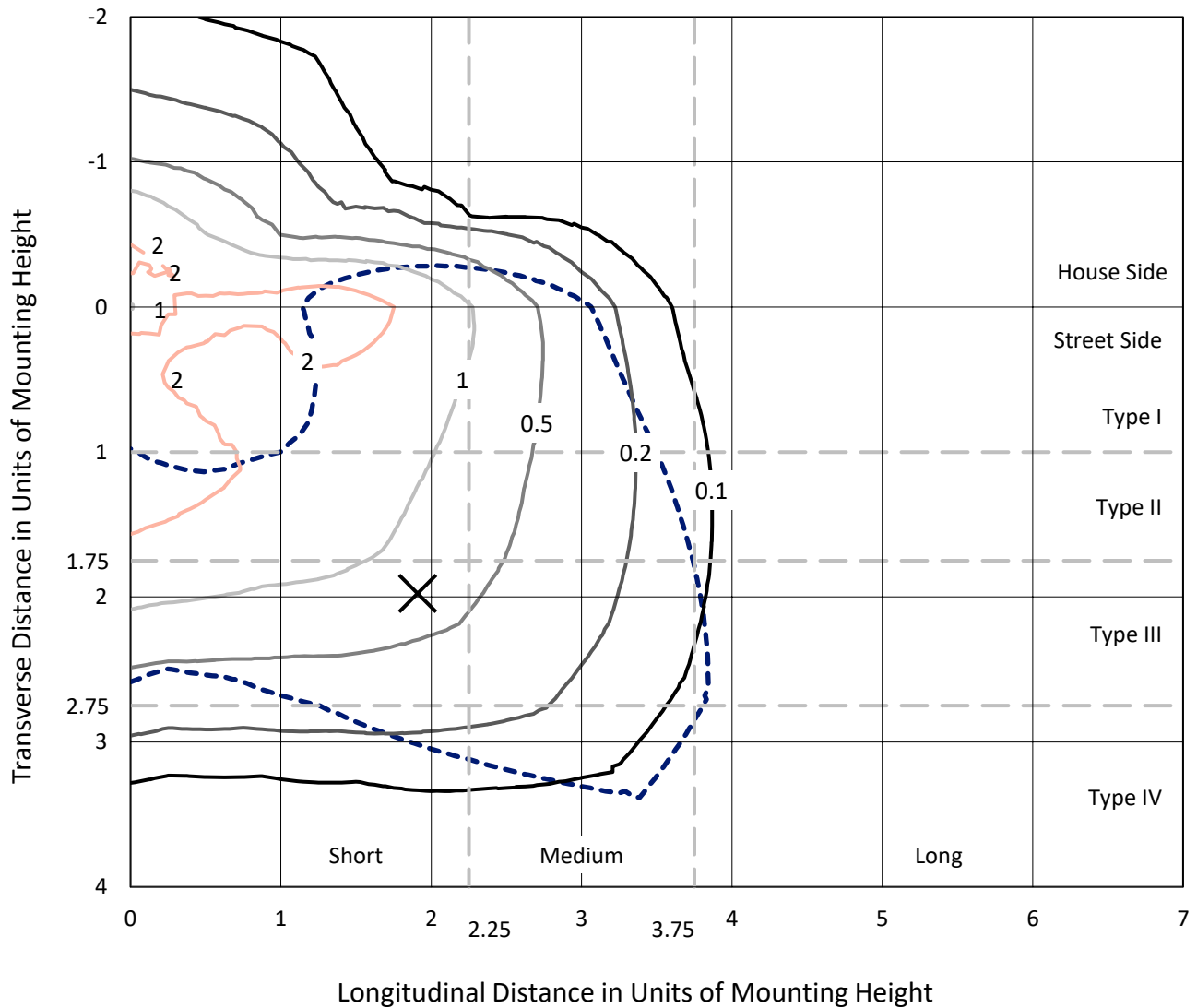
Input Watts (W): 192  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

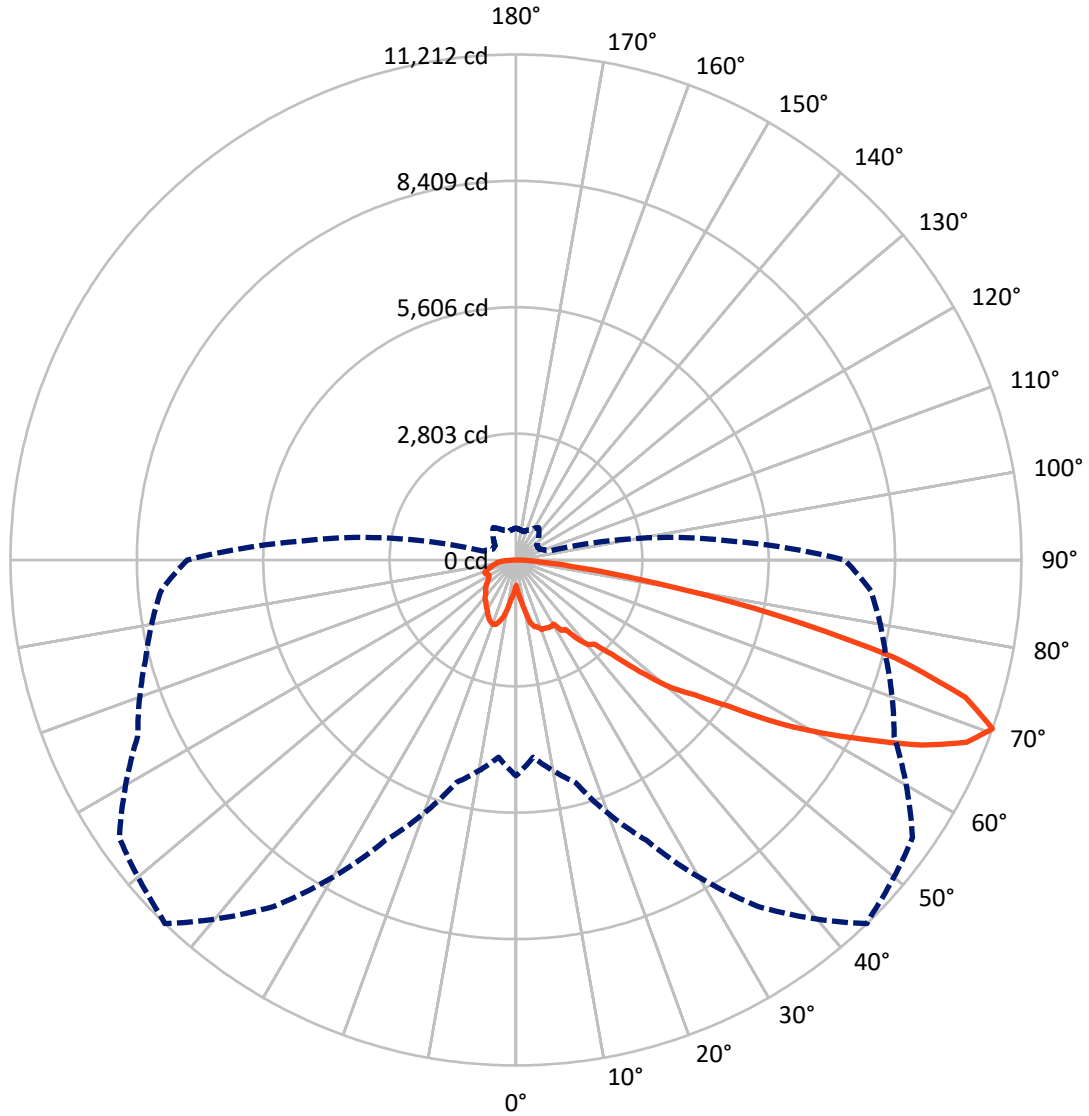
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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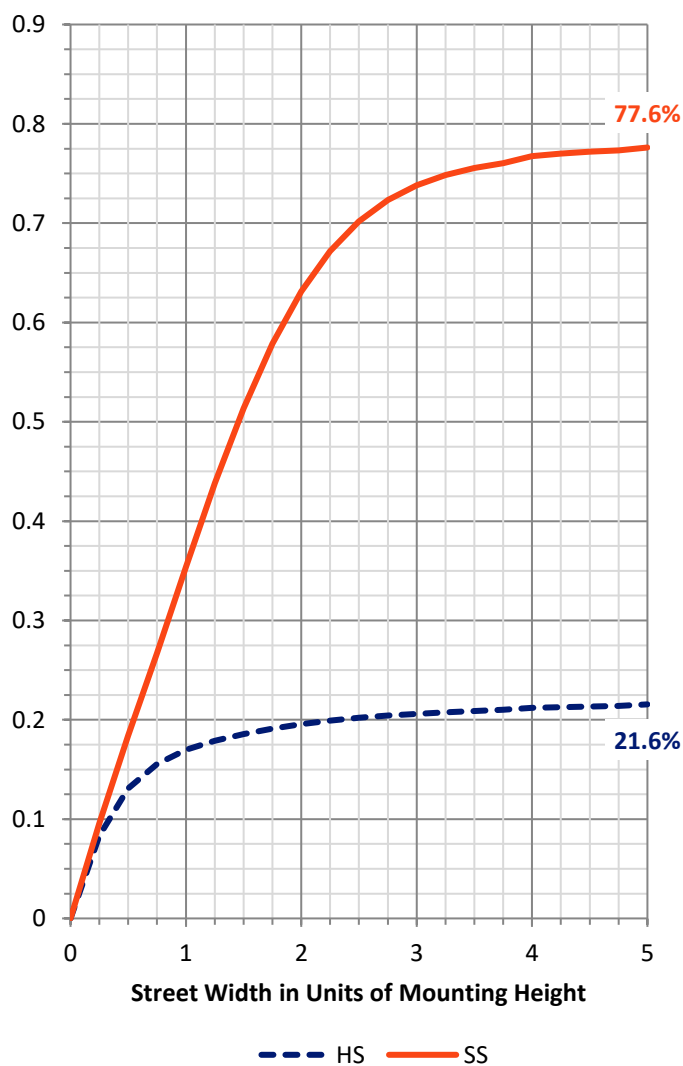
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3671.0	0.0	3671.0
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	12967.0	0.0	12967.0
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	16638.0	0.0	16638.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.7	0.5
10°-20°	408.3	2.5
20°-30°	763.1	4.6
30°-40°	1224.8	7.4
40°-50°	2067.4	12.4
50°-60°	3684.1	22.1
60°-70°	5039.3	30.3
70°-80°	2963.4	17.8
80°-90°	399.0	2.4
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°	16638.0	100.0
0°-180°	16638.0	100.0

**Coefficient of Utilization**

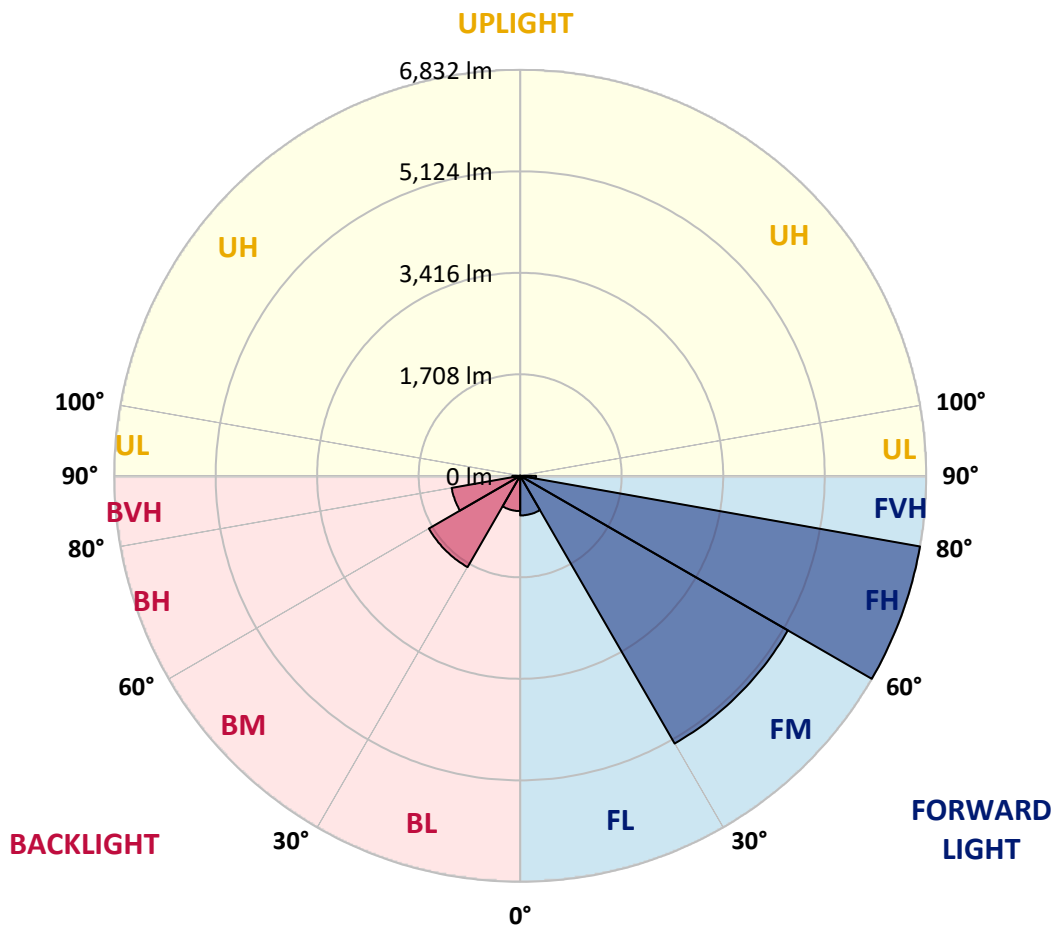


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	666.8	4.0			
FM (30°-60°)	5202.2	31.3			
FH (60°-80°)	6832.1	41.1			G3/7500
FVH (80°-90°)	265.9	1.6			G3/500
BL (0°-30°)	593.3	3.6	B2/1000		
BM (30°-60°)	1774.0	10.7	B2/2500		
BH (60°-80°)	1170.6	7.0	B3/2500		G3/2500
BVH (80°-90°)	133.1	0.8			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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	565.5	565.5	565.5	565.5	565.5	565.5	565.5	565.5	565.5	565.5	565.5
2.5°	686.3	672.7	639.9	650.8	664.5	669.9	668.6	667.2	646.0	638.5	676.1
5°	932.6	902.6	878.7	869.1	837.7	813.2	798.2	837.7	831.6	841.8	867.8
7.5°	1164.5	1145.4	1091.5	1072.4	1008.3	966.0	961.2	992.6	1000.8	984.4	1028.8
10°	1313.9	1281.2	1270.3	1224.6	1180.2	1173.4	1169.3	1155.0	1135.2	1133.8	1094.3
12.5°	1429.9	1447.0	1455.8	1403.3	1404.7	1429.2	1416.3	1358.3	1324.8	1266.2	1270.9
15°	1638.0	1662.5	1592.3	1558.8	1494.7	1531.5	1526.8	1478.3	1473.6	1435.4	1391.0
17.5°	1819.4	1830.4	1713.0	1636.6	1614.8	1561.6	1575.9	1577.3	1514.5	1582.7	1543.1
20°	1834.4	1873.3	1738.3	1586.1	1651.6	1644.8	1646.8	1633.2	1550.7	1663.2	1648.2
22.5°	1908.1	1848.8	1727.3	1616.1	1633.2	1643.4	1653.0	1636.6	1631.8	1694.6	1740.3
25°	1894.5	1875.4	1752.6	1658.4	1660.5	1662.5	1667.3	1716.4	1711.0	1796.2	1820.1
27.5°	2022.1	1992.7	1760.1	1736.9	1683.7	1672.1	1639.3	1741.7	1821.5	1819.4	1951.1
30°	2264.9	2234.9	1934.7	1867.2	1771.0	1652.3	1715.1	1851.5	1914.3	1935.4	2102.6
32.5°	2644.2	2693.3	2278.6	2006.4	1887.0	1861.1	1854.2	1840.6	1996.1	2100.5	2252.6
35°	3188.6	3149.7	2683.8	2304.5	2009.1	1897.9	1912.9	1996.1	2181.0	2248.5	2389.1
37.5°	3812.2	3731.7	3203.0	2642.2	2361.1	2221.9	2172.1	2252.6	2293.6	2346.8	2634.0
40°	4445.9	4249.5	3712.6	3086.3	2572.6	2467.5	2423.9	2325.0	2421.1	2528.9	2893.9
42.5°	5057.9	4905.7	4267.2	3616.4	2928.7	2554.2	2530.3	2433.4	2731.5	2845.5	3269.1
45°	5699.1	5346.4	4835.5	4214.7	3449.2	2979.2	2943.7	2769.8	3151.8	3389.2	3798.5
47.5°	6130.3	5803.5	5356.0	4700.4	3885.2	3690.0	3622.5	3325.1	3671.6	3980.0	4616.5
50°	6538.2	6201.9	5731.9	5231.8	4674.5	4450.0	4306.1	3810.8	4319.0	4821.1	5665.0
52.5°	7122.2	6821.4	6168.5	5767.4	5522.4	4970.5	4863.4	4591.2	5076.3	5753.7	6811.1
55°	7746.4	7336.4	6745.0	6522.6	6423.6	5716.9	5629.6	5456.3	6084.6	6708.1	7925.2
57.5°	8022.0	7594.3	7268.2	7135.2	7127.0	6801.6	6701.3	6580.5	7115.4	7526.8	8973.7
60°	8241.0	7781.9	7651.6	7726.0	7996.1	7781.9	7651.6	7545.2	7954.5	8335.9	9829.2
62.5°	8200.8	7740.3	7807.1	8033.6	8723.3	8786.1	8685.8	8428.0	8786.1	8999.0	10319.7
65°	7551.3	7125.6	7515.2	8052.7	9399.4	9900.8	9895.4	9220.7	9344.8	9344.8	10267.9
67.5°	6413.4	5972.7	6610.6	7884.2	9866.7	10784.3	10785.7	10061.2	9396.0	9310.0	9465.6
70°	4789.1	4390.0	5107.0	6866.4	9384.4	11212.0	11150.0	10739.3	9255.5	8504.4	7906.8
72.5°	2860.5	2602.6	3262.3	4998.5	8005.0	10425.4	10590.5	9958.1	8473.0	7072.4	5652.1
75°	1298.9	1187.0	1532.9	2871.4	5714.8	8696.1	8875.5	8404.1	6729.9	5086.5	3266.4
77.5°	556.0	526.0	669.2	1273.7	3151.1	5946.8	6314.5	6006.1	4559.9	2956.0	1444.9
80°	357.5	338.4	411.4	612.6	1463.3	3213.2	3529.7	3414.4	2322.9	1149.5	508.9
82.5°	213.5	207.4	274.9	384.8	798.2	1414.2	1593.6	1635.9	964.6	515.7	291.3
85°	116.7	118.0	150.8	233.3	478.9	550.5	589.4	641.3	454.3	298.8	141.2
87.5°	38.9	45.0	60.7	94.8	170.6	155.5	156.2	181.5	191.7	124.2	45.0
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°	565.5	565.5	565.5	565.5	565.5	565.5	565.5	565.5	565.5	565.5	565.5
2.5°	682.2	669.9	638.5	640.6	652.2	654.9	658.3	638.5	634.5	672.0	675.4
5°	871.9	831.6	813.2	807.0	789.3	783.2	815.9	830.9	845.9	875.3	889.6
7.5°	1024.0	979.0	945.5	914.8	888.9	873.9	929.2	971.5	997.4	1057.4	1084.7
10°	1093.6	1054.7	1042.4	1017.8	1037.6	1082.7	1092.9	1094.3	1151.6	1150.2	1161.8
12.5°	1232.1	1206.8	1166.6	1175.4	1227.3	1273.7	1260.7	1280.5	1301.0	1350.1	1327.6
15°	1358.3	1351.4	1313.9	1320.1	1330.3	1388.3	1395.8	1415.6	1447.0	1485.8	1459.2
17.5°	1513.8	1511.1	1419.7	1411.5	1435.4	1492.0	1474.2	1439.5	1543.1	1584.8	1573.8
20°	1619.6	1599.1	1481.7	1447.0	1507.7	1515.2	1494.7	1439.5	1529.5	1620.2	1644.8
22.5°	1707.6	1683.7	1562.9	1494.7	1482.4	1485.8	1485.8	1475.6	1520.0	1594.3	1593.6
25°	1778.5	1801.0	1647.5	1582.0	1516.5	1434.7	1424.4	1433.3	1458.6	1601.8	1597.0
27.5°	1956.6	1894.5	1676.2	1627.1	1492.7	1363.7	1391.7	1405.3	1413.5	1570.4	1596.4
30°	2072.5	2091.6	1778.5	1653.7	1457.9	1284.6	1294.1	1333.7	1381.5	1567.0	1574.5
32.5°	2228.8	2187.8	1938.1	1609.3	1365.1	1236.8	1219.1	1272.3	1343.3	1511.8	1532.2
35°	2374.1	2422.5	2005.7	1601.1	1300.3	1165.2	1184.3	1202.7	1276.4	1450.4	1474.2
37.5°	2715.2	2604.7	2195.3	1561.6	1246.4	1129.0	1108.6	1136.6	1199.3	1333.7	1389.0
40°	2974.4	2981.2	2236.3	1511.8	1143.4	1077.2	1033.5	1061.5	1088.1	1195.2	1219.1
42.5°	3460.8	3312.1	2336.6	1402.6	1078.6	999.4	974.9	987.1	991.2	1036.3	1075.8
45°	4079.6	3731.0	2376.1	1255.9	993.3	967.4	917.6	911.4	888.9	895.1	929.8
47.5°	4935.7	4384.5	2347.5	1099.7	917.6	925.8	854.1	826.1	794.8	802.3	835.0
50°	6043.0	5219.5	2345.4	967.4	865.7	871.2	812.5	762.0	730.6	746.3	775.0
52.5°	7285.3	6057.3	2355.0	876.6	809.1	806.4	785.2	723.8	698.6	715.0	747.7
55°	8473.7	6777.7	2425.9	819.3	750.4	755.2	763.4	711.5	683.6	698.6	732.7
57.5°	9507.9	7346.7	2399.3	758.6	695.8	717.7	739.5	694.5	673.3	695.2	729.3
60°	10231.0	7610.7	2189.2	700.6	655.6	685.6	727.9	692.4	689.7	736.8	777.7
62.5°	10495.0	7513.1	1779.9	654.9	631.7	681.5	754.5	737.5	740.2	798.2	854.8
65°	10109.6	7000.1	1327.6	625.6	613.3	701.3	815.9	764.1	726.5	774.3	826.1
67.5°	9013.3	6088.0	970.1	600.3	592.2	732.7	872.5	761.3	691.8	740.2	782.5
70°	7292.1	4805.4	751.1	568.3	564.2	711.5	878.0	740.9	654.2	685.6	709.5
72.5°	4996.5	3290.3	622.2	537.6	515.7	630.4	833.7	695.2	609.2	627.6	647.4
75°	2792.3	1846.7	523.3	499.4	451.6	561.5	781.8	667.9	575.8	581.2	608.5
77.5°	1253.2	798.9	444.1	448.9	393.6	496.6	714.3	624.2	524.6	512.3	539.6
80°	474.1	389.5	360.2	379.3	330.9	430.5	644.0	584.6	470.7	455.0	470.7
82.5°	274.9	236.0	267.4	292.0	262.6	395.7	614.7	548.5	414.8	375.2	388.9
85°	127.6	122.1	160.3	189.7	183.5	308.4	526.0	412.7	295.4	249.7	276.3
87.5°	33.4	37.5	56.6	66.9	68.2	105.7	202.6	153.5	115.3	87.3	83.9
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)