

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: P367938

Luminaire Tested: **MSA-SA3C-727-U-T4FT**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367938  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3C-727-U-T4FT  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15261 lumens  
Efficiency: N/A  
Efficacy: 91.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G3

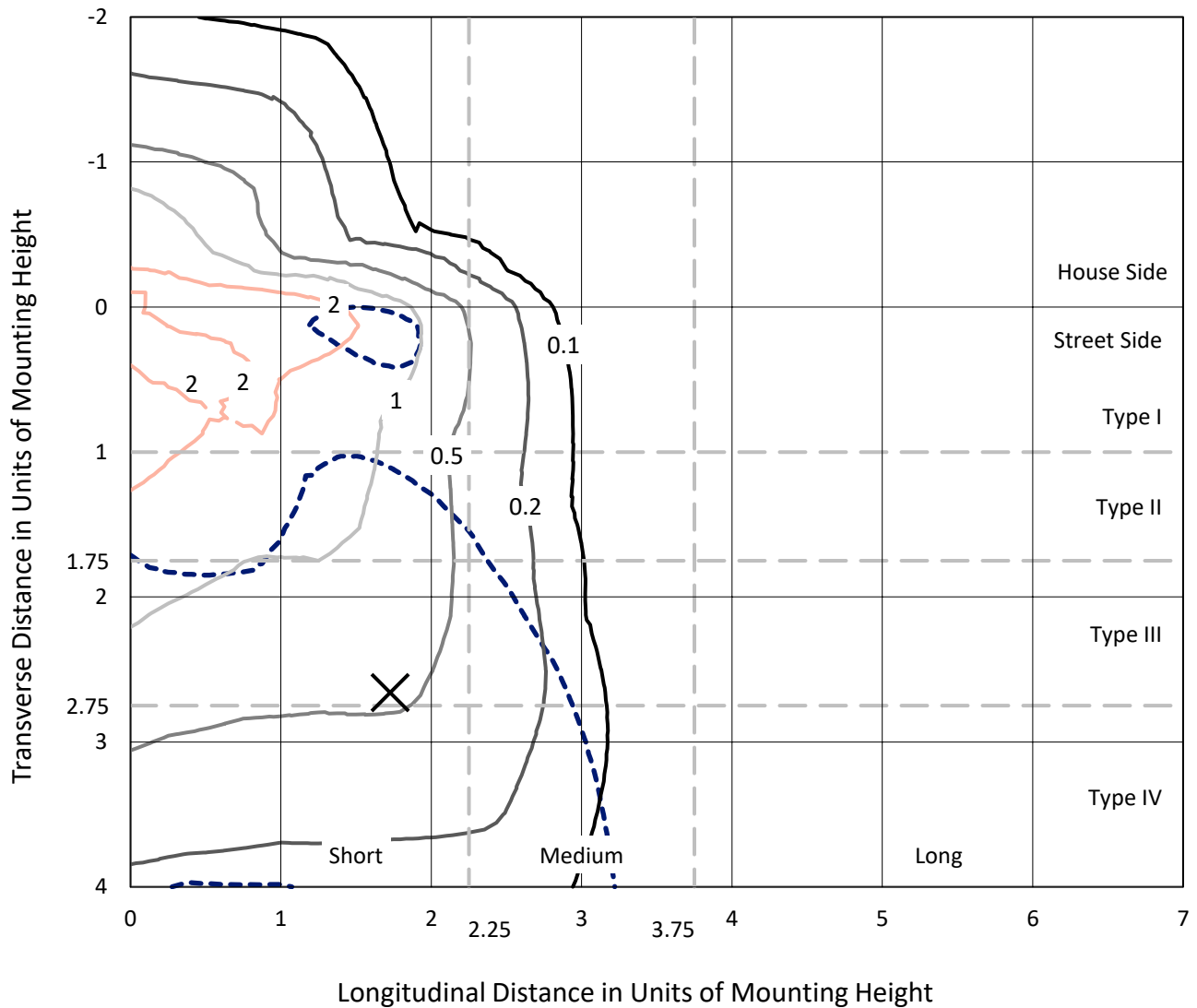
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

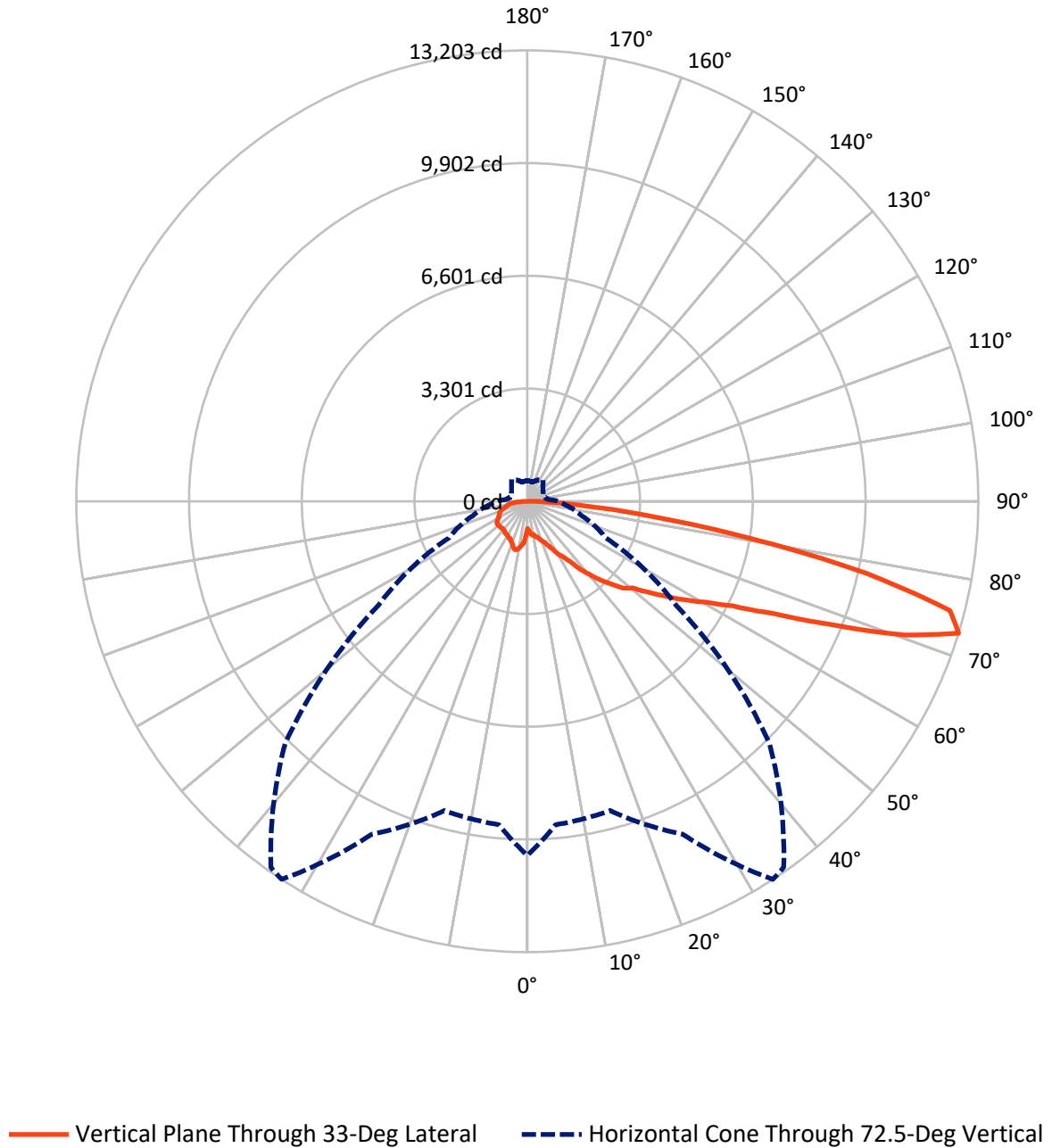
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



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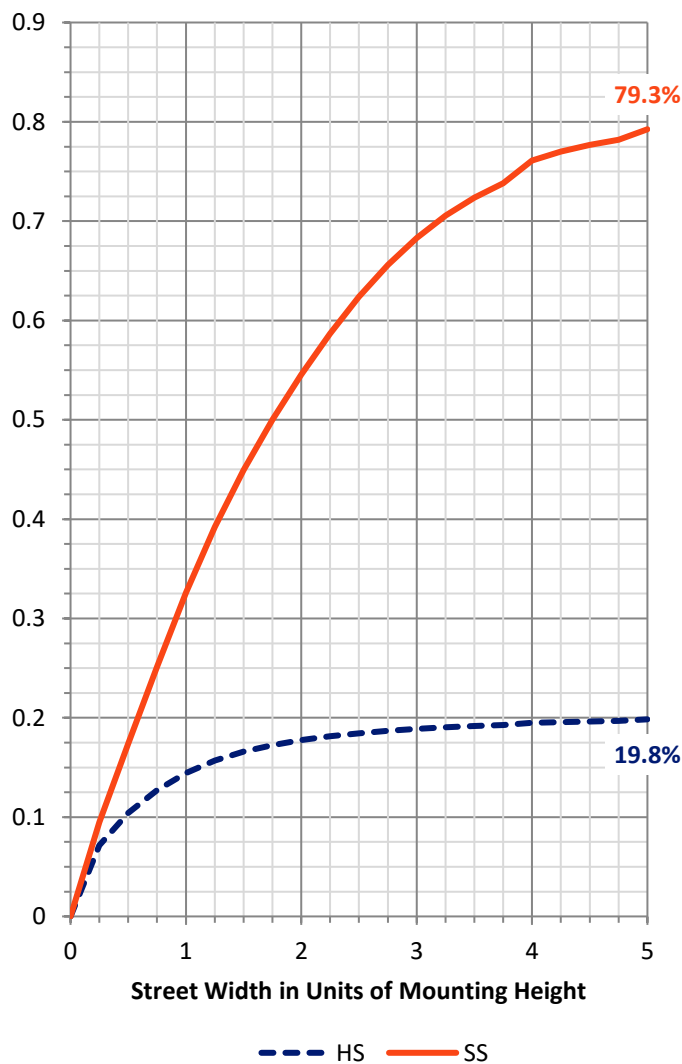
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3087.3	0.0	3087.3
	% Fixture	20.2	0.0	20.2
<b>Street Side</b>	Lumens	12173.7	0.0	12173.7
	% Fixture	79.8	0.0	79.8
<b>Total</b>	Lumens	15261.0	0.0	15261.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.0	0.7
10°-20°	406.6	2.7
20°-30°	741.5	4.9
30°-40°	1254.4	8.2
40°-50°	2086.9	13.7
50°-60°	3062.6	20.1
60°-70°	3917.8	25.7
70°-80°	3187.5	20.9
80°-90°	493.7	3.2
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°	15261.0	100.0
0°-180°	15261.0	100.0

**Coefficient of Utilization**

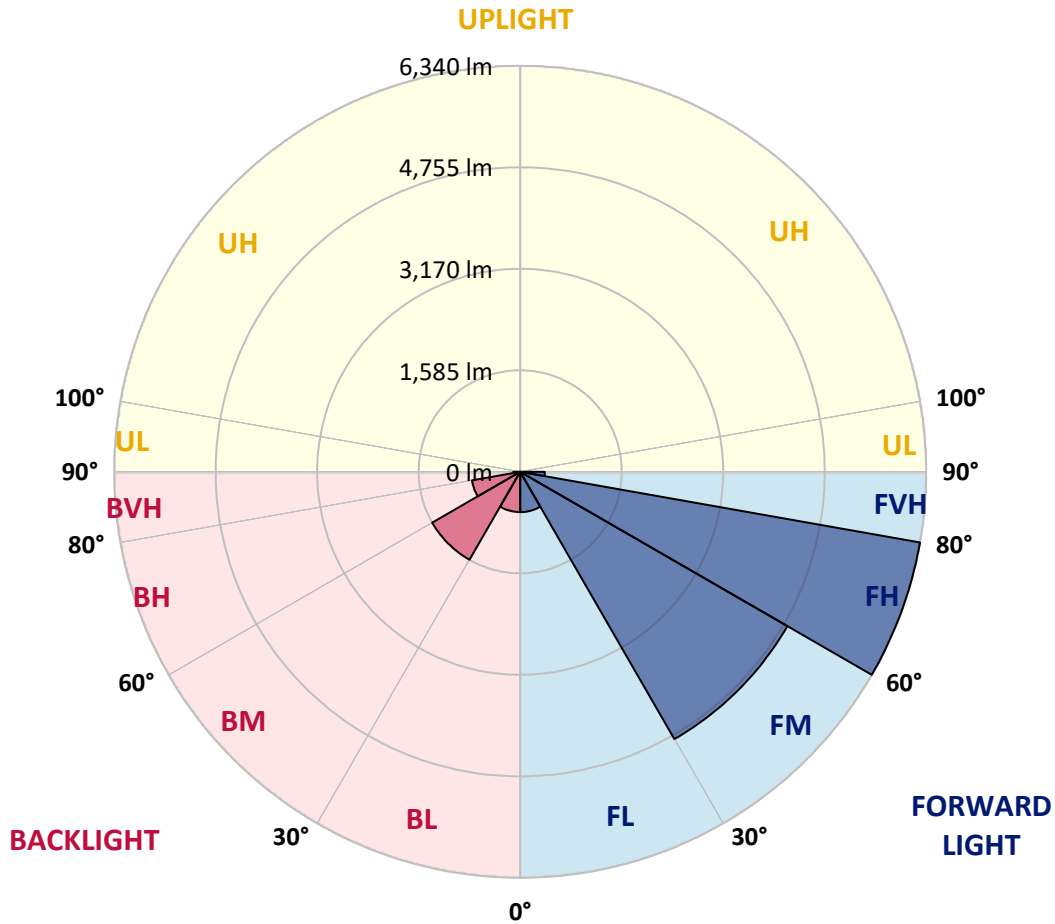


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	629.8	4.1			
FM (30°-60°)	4818.2	31.6			
FH (60°-80°)	6340.4	41.5			G3/7500
FVH (80°-90°)	385.3	2.5			G3/500
BL (0°-30°)	628.3	4.1	B2/1000		
BM (30°-60°)	1585.6	10.4	B2/2500		
BH (60°-80°)	765.0	5.0	B2/1000		G2/1000
BVH (80°-90°)	108.4	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	800.2	800.2	800.2	800.2	800.2	800.2	800.2	800.2	800.2	800.2	800.2
2.5°	907.2	878.7	831.9	830.6	856.6	862.3	879.4	880.6	887.0	876.8	949.0
5°	1000.9	970.5	952.2	958.5	946.5	961.0	961.0	1002.8	1058.5	1123.1	1214.9
7.5°	1023.1	1000.9	980.0	995.9	998.4	984.5	997.8	1095.9	1196.5	1261.1	1408.0
10°	978.8	956.6	972.4	977.5	976.9	1008.5	1077.5	1156.0	1268.1	1387.1	1466.2
12.5°	970.5	986.4	994.0	1002.8	1063.0	1072.5	1176.9	1258.0	1370.6	1475.1	1680.9
15°	1092.7	1113.6	1066.8	1063.6	1083.2	1092.1	1200.3	1282.0	1446.6	1622.0	1806.8
17.5°	1266.8	1274.4	1190.2	1147.2	1161.7	1168.7	1216.2	1318.7	1420.0	1744.2	1974.6
20°	1435.2	1440.3	1282.0	1185.8	1237.1	1244.7	1289.0	1347.9	1427.6	1812.5	2087.9
22.5°	1611.9	1579.6	1406.1	1284.5	1314.3	1316.2	1342.2	1374.4	1487.8	1801.8	2225.9
25°	1804.9	1784.7	1566.3	1449.8	1448.5	1422.6	1423.8	1470.0	1551.7	1917.0	2316.5
27.5°	2061.3	2063.9	1746.7	1684.0	1585.9	1568.8	1483.3	1569.4	1662.5	1918.3	2512.1
30°	2393.7	2332.3	1998.0	1896.7	1799.9	1763.8	1647.9	1721.4	1761.9	2027.8	2724.8
32.5°	2664.0	2646.3	2260.1	2106.9	1948.7	1990.4	1862.6	1798.0	1870.8	2216.5	3047.1
35°	2923.0	2864.7	2537.4	2338.0	2171.5	2146.2	2063.2	2074.0	2118.3	2455.1	3468.1
37.5°	3309.2	3277.5	2929.9	2610.9	2533.0	2429.8	2377.3	2410.8	2376.0	2760.9	4099.3
40°	3740.9	3557.3	3257.9	2973.6	2828.0	2755.2	2773.6	2741.9	2715.3	3104.0	4665.2
42.5°	4154.3	3987.2	3475.7	3347.8	3157.9	3188.2	3087.6	3109.7	3185.1	3590.9	5188.8
45°	4604.5	4243.0	3706.7	3594.1	3457.9	3496.6	3577.0	3552.9	3676.4	4165.1	5682.0
47.5°	4829.2	4485.5	3990.4	3806.8	3804.9	3724.5	4213.9	4267.0	4073.9	4590.5	6182.8
50°	5045.7	4707.7	4201.2	4077.1	3987.2	4159.4	4824.8	4702.6	4433.5	5078.7	6733.6
52.5°	5347.1	4961.5	4443.0	4310.7	4422.1	4581.7	5312.3	5288.2	4786.2	5580.7	7212.2
55°	5576.9	5187.6	4807.1	4684.2	4897.0	5053.3	5808.6	5663.6	5088.2	5949.2	7515.4
57.5°	5979.5	5580.1	5344.6	5071.7	5454.1	5451.5	6287.2	6175.2	5411.0	6251.8	7637.6
60°	6619.6	6150.5	5904.2	5589.6	5999.2	6145.4	6834.2	6511.3	5639.6	6443.0	7417.3
62.5°	7518.0	6960.8	6561.4	6249.9	6749.4	7014.0	7509.7	6756.4	5654.1	6388.5	6838.0
65°	8629.0	7951.6	7428.1	7098.9	7923.1	8301.1	8326.4	6907.7	5519.9	5825.7	5620.0
67.5°	9712.9	8951.3	8404.9	8467.6	9671.1	9850.3	9211.5	7034.3	4798.8	4677.9	3902.4
70°	10426.4	9600.8	9236.8	9901.5	11729.9	11546.3	9928.8	6700.6	3778.9	3032.5	2197.5
72.5°	10372.6	9508.4	9377.3	10753.7	13202.5	13087.9	10016.1	5328.7	2531.1	1658.1	1095.9
75°	8450.5	7778.8	8076.3	10180.1	12778.3	12772.6	8696.1	3298.4	1298.5	851.5	692.6
77.5°	4672.2	4411.4	5285.7	7707.9	10174.4	10226.3	5875.7	1496.0	700.2	603.3	521.7
80°	1636.5	1612.5	2290.5	4159.4	6693.0	6705.7	2732.4	684.4	509.0	456.5	383.0
82.5°	598.3	593.2	949.6	1932.2	3685.2	3677.0	1036.4	426.1	377.3	322.9	252.6
85°	238.7	233.6	434.3	857.8	1692.9	1665.7	402.6	241.8	246.9	192.5	124.1
87.5°	65.8	68.4	147.5	268.4	518.5	480.5	101.3	81.7	100.0	78.5	39.3
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°	800.2	800.2	800.2	800.2	800.2	800.2	800.2	800.2	800.2	800.2	800.2
2.5°	961.7	968.0	905.3	927.5	956.0	971.2	978.8	946.5	957.2	1002.8	1000.9
5°	1233.9	1208.6	1184.5	1209.2	1192.7	1169.3	1207.3	1205.4	1230.1	1254.8	1260.5
7.5°	1437.1	1404.2	1392.8	1337.1	1281.4	1225.0	1273.8	1304.2	1310.5	1371.9	1397.9
10°	1510.6	1497.9	1502.3	1428.9	1421.9	1427.6	1382.7	1333.9	1363.7	1338.4	1357.3
12.5°	1680.2	1711.9	1633.4	1583.4	1578.9	1544.1	1454.2	1422.6	1389.0	1423.8	1406.1
15°	1816.3	1875.2	1791.0	1703.0	1603.6	1549.8	1473.2	1425.1	1402.9	1410.5	1389.0
17.5°	2015.8	2070.8	1856.9	1722.0	1619.4	1540.3	1423.2	1320.6	1375.1	1379.5	1354.8
20°	2148.1	2151.9	1879.0	1675.2	1582.7	1445.3	1331.4	1241.5	1304.2	1368.1	1396.0
22.5°	2277.2	2248.7	1906.2	1637.8	1449.1	1316.2	1260.5	1254.8	1301.6	1355.4	1361.8
25°	2374.1	2378.5	1922.1	1623.9	1370.6	1189.6	1189.6	1230.7	1271.9	1399.8	1393.4
27.5°	2609.0	2436.1	1860.7	1559.9	1261.8	1115.5	1190.2	1245.3	1264.9	1403.6	1417.5
30°	2779.9	2667.2	1873.3	1450.4	1151.6	1080.7	1142.1	1211.1	1265.5	1425.7	1420.7
32.5°	3066.7	2763.4	1903.1	1296.6	1069.3	1067.4	1121.8	1194.6	1259.9	1401.7	1409.3
35°	3383.9	3047.1	1820.1	1179.4	1049.7	1059.8	1130.1	1159.2	1235.8	1392.2	1399.1
37.5°	3970.7	3195.2	1767.6	1088.9	1037.0	1066.1	1092.7	1137.7	1214.9	1344.7	1390.3
40°	4315.2	3500.4	1572.6	1036.4	1010.4	1061.1	1074.4	1112.3	1154.1	1287.7	1316.8
42.5°	4768.4	3596.6	1406.1	978.1	997.1	1040.2	1080.1	1089.6	1117.4	1197.8	1251.0
45°	5146.4	3668.8	1229.5	931.3	952.2	1086.4	1088.9	1084.5	1079.4	1109.2	1152.9
47.5°	5537.6	3862.5	1066.8	879.4	935.1	1124.4	1093.3	1052.8	1031.9	1035.7	1076.3
50°	5969.4	4003.0	951.5	836.9	938.9	1124.4	1114.9	1020.5	978.8	968.0	1010.4
52.5°	6349.3	4019.5	864.2	802.8	923.0	1085.8	1129.4	1000.3	930.0	904.1	943.9
55°	6556.3	3811.2	800.9	771.7	882.5	1050.9	1121.8	988.9	871.1	851.5	887.0
57.5°	6551.9	3465.5	747.0	728.7	836.3	1002.2	1079.4	926.8	835.0	823.7	858.5
60°	6315.7	3060.4	705.9	693.2	788.8	931.3	1003.4	886.3	800.2	794.5	832.5
62.5°	5780.1	2641.9	666.0	655.9	744.5	881.3	967.4	841.4	764.1	763.5	799.6
65°	4733.6	2120.9	628.7	626.1	703.4	831.9	933.2	803.4	726.8	739.5	776.2
67.5°	3261.7	1490.3	588.8	596.4	665.4	784.4	907.2	778.1	687.5	713.5	746.4
70°	1789.7	921.8	544.5	559.7	617.3	729.3	866.7	736.9	636.3	676.1	698.9
72.5°	910.4	614.7	489.4	513.4	558.4	648.3	790.7	677.4	581.2	596.4	608.4
75°	611.6	462.8	428.0	454.6	486.8	571.0	701.5	621.7	528.6	526.7	540.0
77.5°	462.2	361.5	363.4	393.8	414.7	502.0	630.6	574.8	484.3	479.9	499.5
80°	338.1	274.1	292.5	324.1	343.1	450.8	584.3	522.9	424.2	406.4	422.9
82.5°	224.1	194.4	216.5	248.2	263.4	376.7	530.5	443.8	345.7	300.7	303.3
85°	105.7	101.9	129.2	144.3	164.0	233.6	396.9	307.0	220.3	182.3	190.6
87.5°	24.1	32.3	42.4	41.8	48.7	62.7	123.5	86.1	63.9	43.7	29.1
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)