

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: P367934

Luminaire Tested: **MSA-SA3C-727-U-T2**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367934  
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-SA3C-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: 15186 lumens  
Efficiency: N/A  
Efficacy: 91.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B2 - U0 - G3

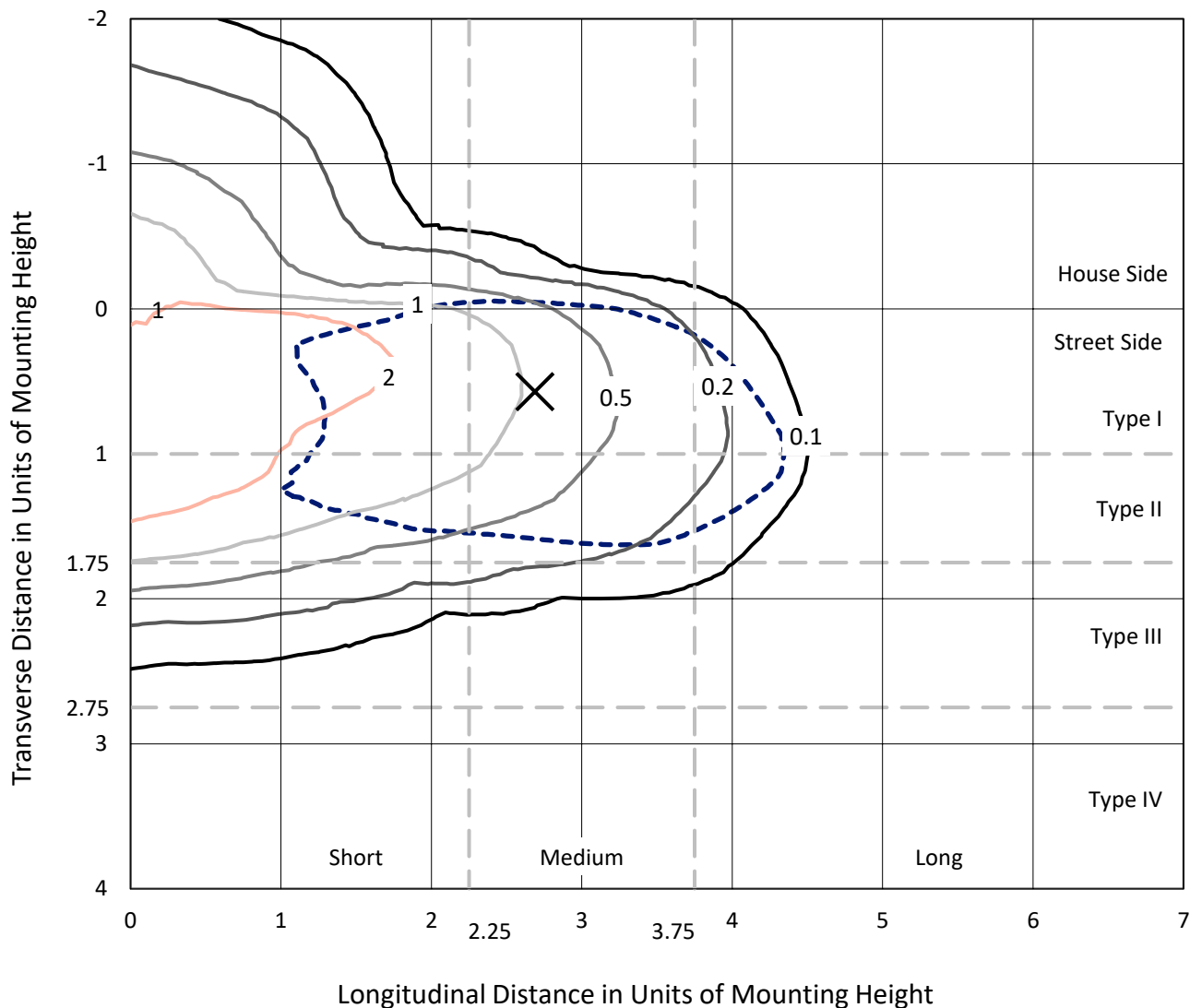
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

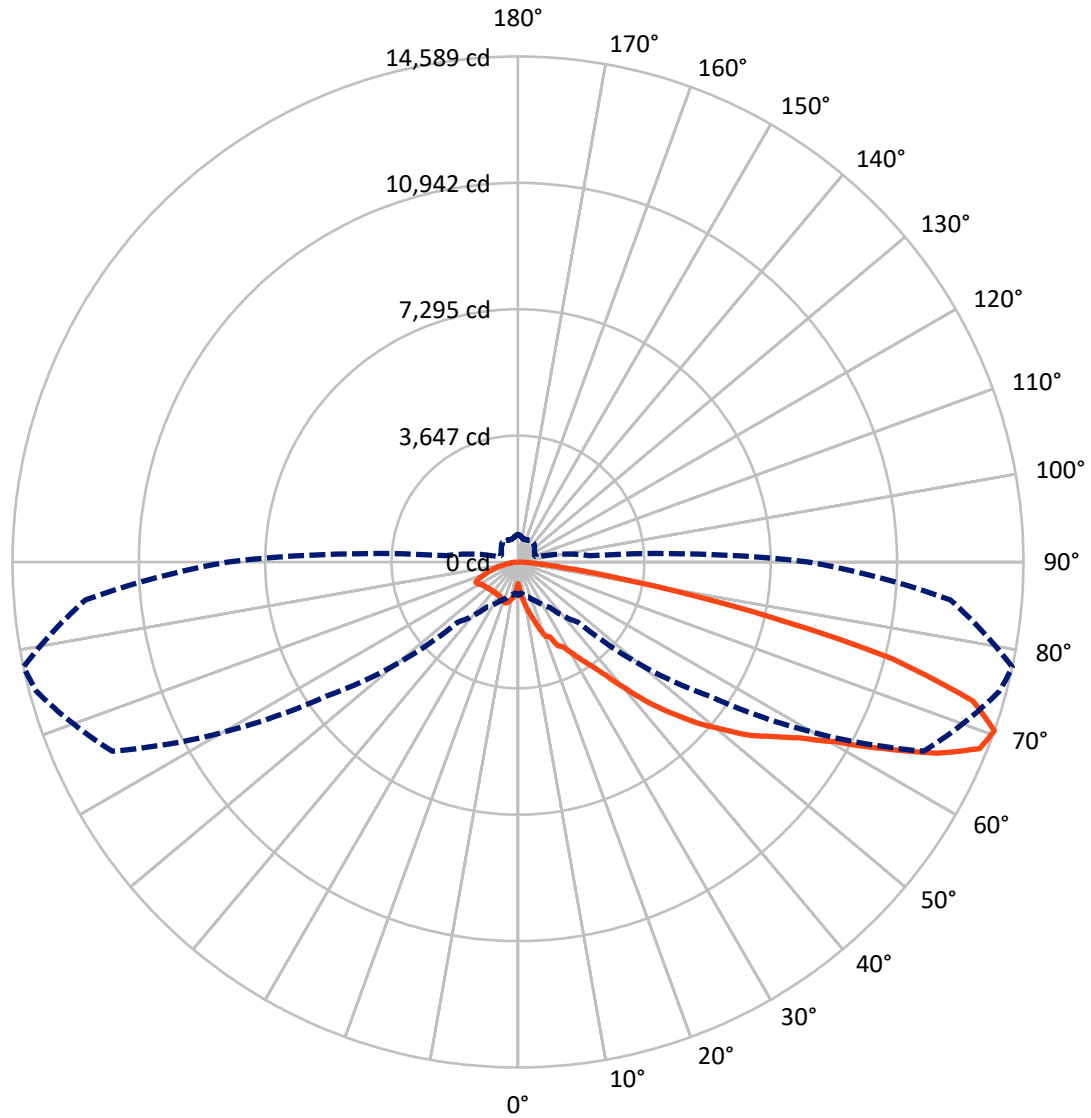
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.6 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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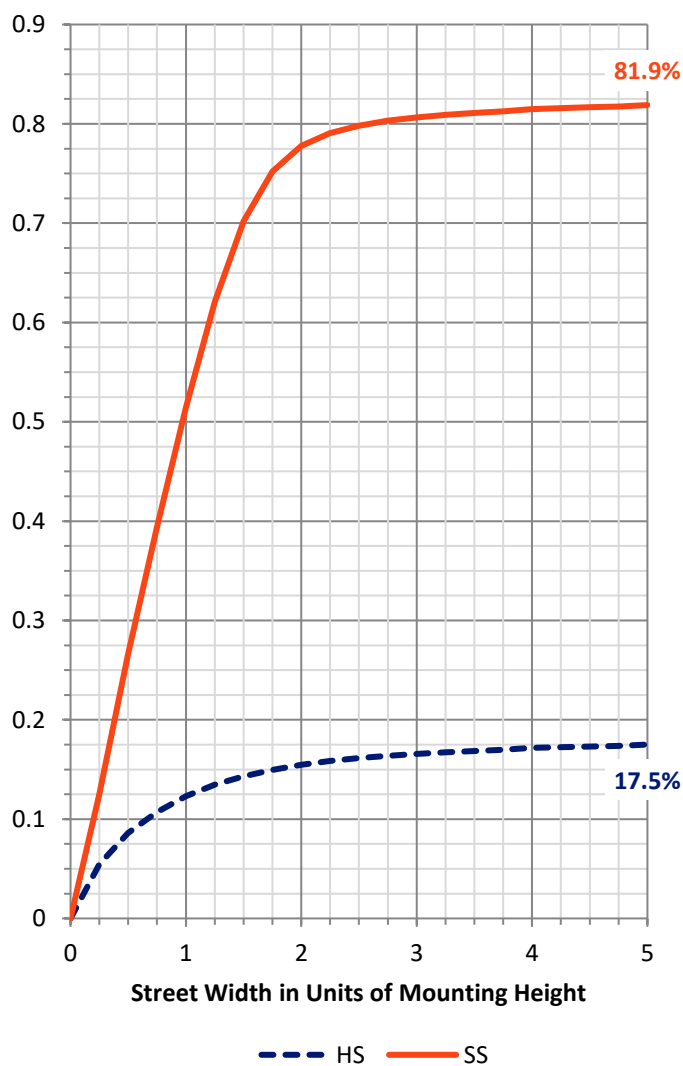
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2710.5	0.0	2710.5
	% Fixture	17.8	0.0	17.8
<b>Street Side</b>	Lumens	12475.5	0.0	12475.5
	% Fixture	82.2	0.0	82.2
<b>Total</b>	Lumens	15186.0	0.0	15186.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.7	0.6
10°-20°	421.6	2.8
20°-30°	811.4	5.3
30°-40°	1366.8	9.0
40°-50°	2364.9	15.6
50°-60°	3570.7	23.5
60°-70°	3955.0	26.0
70°-80°	2280.2	15.0
80°-90°	319.8	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°	15186.0	100.0
0°-180°	15186.0	100.0

**Coefficient of Utilization**



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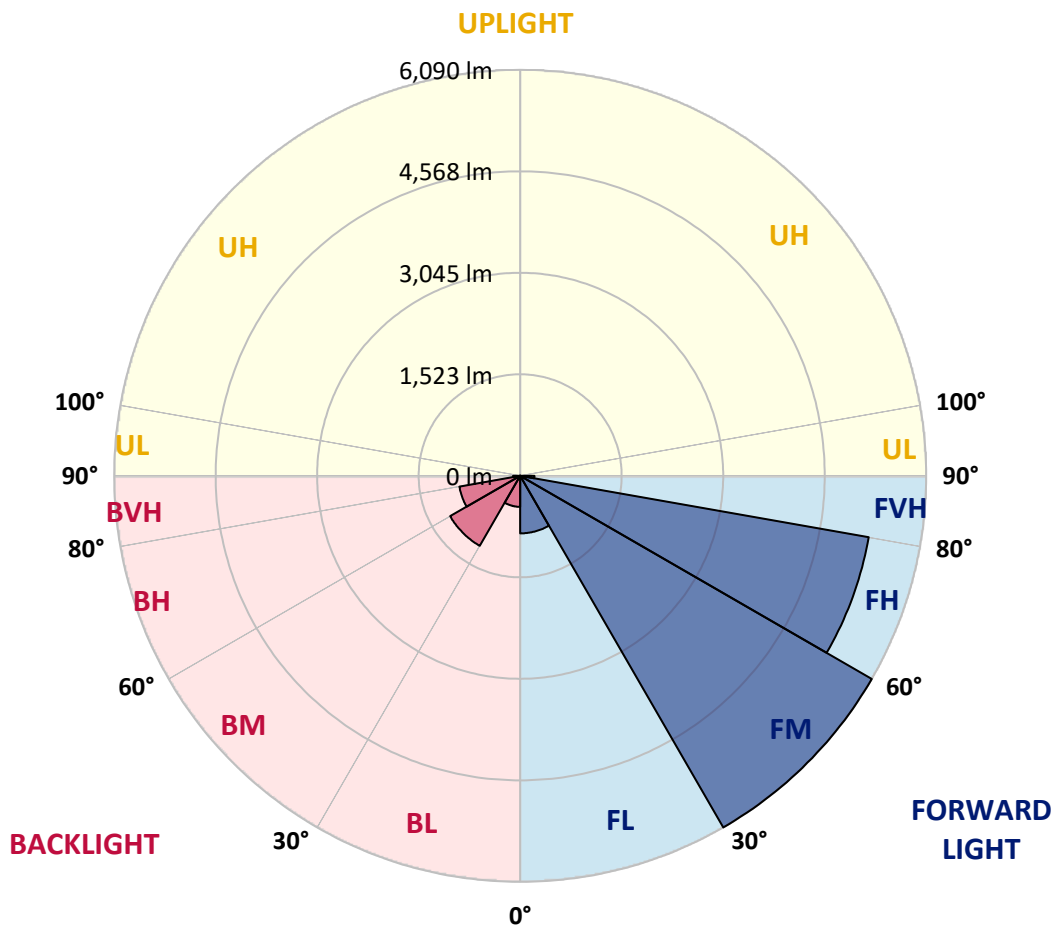
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	863.3	5.7			
FM (30°-60°)	6090.0	40.1			
FH (60°-80°)	5308.9	35.0			G3/7500
FVH (80°-90°)	213.3	1.4			G2/225
BL (0°-30°)	465.4	3.1	B1/500		
BM (30°-60°)	1212.3	8.0	B2/2500		
BH (60°-80°)	926.3	6.1	B2/1000		G2/1000
BVH (80°-90°)	106.5	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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	619.1	619.1	619.1	619.1	619.1	619.1	619.1	619.1	619.1	619.1	619.1
2.5°	797.0	768.5	725.5	743.2	764.7	767.3	760.3	721.1	707.8	737.5	746.4
5°	1116.7	1068.6	1039.5	1030.0	997.7	930.6	978.7	954.0	959.1	944.5	973.0
7.5°	1385.8	1353.5	1310.5	1298.4	1224.4	1171.8	1204.7	1194.0	1142.1	1121.8	1154.1
10°	1522.5	1487.1	1489.0	1463.0	1443.4	1448.5	1432.0	1384.5	1345.9	1318.7	1240.8
12.5°	1604.8	1613.7	1661.2	1647.9	1721.9	1782.7	1736.5	1666.2	1544.1	1519.4	1442.1
15°	1800.4	1833.4	1789.0	1809.3	1841.0	1957.4	1938.5	1923.3	1794.1	1746.0	1603.6
17.5°	2001.8	2008.1	1941.0	1930.2	2006.2	2065.1	2139.1	2053.7	2069.5	2035.9	1805.5
20°	2044.8	2088.5	1992.3	1925.8	2082.2	2198.6	2290.4	2199.9	2283.5	2292.3	1972.0
22.5°	2202.4	2149.9	2023.3	1958.1	2094.8	2237.9	2387.3	2437.9	2411.4	2336.7	2132.8
25°	2312.0	2284.1	2155.0	2082.8	2134.7	2266.4	2528.5	2660.8	2684.2	2674.1	2286.0
27.5°	2515.2	2529.1	2263.2	2283.5	2211.3	2223.3	2613.3	2956.4	2810.2	2769.7	2475.9
30°	2836.1	2774.1	2475.9	2492.4	2372.7	2352.5	2792.5	3211.6	3080.5	3031.8	2632.3
32.5°	3171.0	3176.7	2814.6	2674.1	2610.1	2589.9	2757.0	3345.1	3422.4	3359.1	2868.4
35°	3643.3	3610.4	3181.8	2996.9	2765.9	2730.4	3009.6	3732.6	3874.4	3697.1	3148.9
37.5°	4362.5	4263.1	3764.2	3336.9	3166.0	3125.5	3370.5	4080.1	4399.2	4178.9	3607.2
40°	4939.8	4737.9	4284.6	3764.2	3474.9	3524.9	3626.8	4501.7	4943.6	4819.5	4031.4
42.5°	5400.1	5220.9	4653.0	4287.1	3894.0	3832.0	3943.4	5024.0	5684.3	5562.8	4560.6
45°	5841.3	5476.7	5067.1	4737.9	4359.9	4435.3	4418.8	5557.1	6592.8	6218.6	5028.5
47.5°	6276.9	5934.4	5505.8	5063.3	4682.8	5151.9	4976.5	5953.4	7205.6	6928.3	5521.0
50°	6836.5	6459.8	5971.7	5526.7	5298.8	5641.9	5347.5	6288.9	7891.8	7566.4	5985.7
52.5°	7208.1	6841.6	6413.6	6095.8	6074.9	5942.6	5867.3	6713.7	8493.2	8295.7	6478.2
55°	7164.4	6811.2	6617.5	6652.3	6910.6	6464.3	6402.8	7342.3	9120.6	8892.1	7010.0
57.5°	6616.8	6231.3	6272.4	6478.8	7172.7	7380.3	7275.8	8014.0	9680.2	9576.4	7667.7
60°	5154.4	4956.3	5291.2	5668.5	6821.9	7648.7	8383.1	8833.2	10369.0	10534.9	8700.9
62.5°	3348.3	3083.7	3612.9	4253.6	5775.5	7471.5	9510.6	10386.7	11497.1	11873.8	10270.9
65°	1734.6	1692.2	2062.5	2651.3	4020.6	6370.6	9908.1	12016.3	12868.4	13307.1	11770.6
67.5°	1261.1	1182.6	1354.1	1700.4	2454.4	4344.1	9154.8	13262.8	13969.3	14371.3	12642.4
70°	960.4	902.1	1033.2	1247.8	1602.9	2453.8	6758.0	12922.8	14394.1	14589.0	12526.5
72.5°	719.2	669.2	783.7	983.8	1235.1	1381.4	3994.7	10625.4	13669.2	13735.7	11242.6
75°	574.2	535.6	585.0	776.8	1006.6	940.1	2122.0	7698.1	11105.9	11162.9	8587.6
77.5°	471.0	438.1	458.3	582.4	783.1	707.1	1052.8	4896.8	7051.1	6963.7	4831.6
80°	384.3	355.8	365.3	421.0	596.3	528.0	591.3	2554.4	3363.5	3228.0	2009.4
82.5°	295.6	271.6	290.6	309.6	431.8	379.2	345.0	1162.3	1377.6	1283.2	736.9
85°	198.2	176.0	252.6	232.3	282.3	233.0	188.7	462.8	513.4	478.6	258.9
87.5°	54.4	51.3	84.8	115.9	115.9	88.0	69.0	112.1	143.1	125.3	60.8
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°	619.1	619.1	619.1	619.1	619.1	619.1	619.1	619.1	619.1	619.1	619.1
2.5°	750.2	736.3	699.5	696.4	705.2	706.5	700.8	687.5	680.5	718.5	712.8
5°	966.1	916.7	886.9	859.7	821.7	794.5	801.5	820.5	826.8	855.3	858.4
7.5°	1133.8	1068.6	1003.4	916.0	858.4	821.7	849.6	869.8	885.7	926.2	942.6
10°	1206.6	1135.7	1043.3	951.5	935.7	942.0	926.2	931.2	955.9	957.8	966.1
12.5°	1342.1	1261.7	1095.2	1012.3	1007.8	1021.1	1015.4	1038.9	1056.0	1102.2	1082.5
15°	1471.9	1369.3	1134.5	1049.6	1031.3	1057.9	1088.9	1128.1	1164.8	1208.5	1186.4
17.5°	1629.5	1475.0	1136.4	1032.5	1035.7	1092.7	1125.0	1146.5	1256.0	1316.1	1285.8
20°	1728.9	1485.8	1093.9	990.1	1035.7	1087.0	1131.9	1155.3	1278.2	1368.7	1389.6
22.5°	1818.8	1489.6	1061.0	967.3	996.4	1064.2	1131.9	1183.8	1262.3	1349.1	1352.2
25°	1868.2	1486.4	1018.6	969.2	995.8	1029.4	1089.5	1137.0	1195.2	1316.1	1319.3
27.5°	1994.8	1445.3	976.8	976.8	990.8	992.0	1068.6	1096.5	1104.7	1214.9	1234.5
30°	2031.5	1454.2	971.8	975.6	982.5	969.9	1003.4	1021.8	1033.8	1128.8	1131.9
32.5°	2090.4	1383.3	987.0	964.2	955.3	953.4	961.6	978.1	983.2	1041.4	1052.2
35°	2161.9	1354.8	992.0	961.0	943.3	933.8	958.5	938.2	954.0	1022.4	1030.0
37.5°	2394.9	1315.5	1018.0	961.0	938.2	927.4	915.4	924.9	981.3	1047.1	1087.6
40°	2543.7	1327.5	1011.6	970.5	921.1	911.0	890.7	925.5	1012.9	1129.4	1159.8
42.5°	2804.5	1334.5	1019.2	966.1	926.8	887.6	900.9	938.8	1030.6	1097.1	1144.0
45°	3074.2	1356.0	1014.2	952.8	914.1	932.5	914.1	948.3	992.0	993.9	1029.4
47.5°	3338.8	1442.8	1003.4	925.5	911.0	959.1	912.3	917.9	921.1	932.5	974.3
50°	3649.6	1535.2	988.2	887.6	915.4	960.4	919.2	891.4	888.2	925.5	972.4
52.5°	4002.9	1639.6	968.6	850.8	889.5	948.3	943.3	893.3	866.0	902.1	949.0
55°	4418.8	1758.7	945.8	814.1	861.0	949.6	956.6	880.0	866.7	905.9	955.9
57.5°	4971.5	1930.9	901.5	760.9	826.2	930.0	922.4	864.8	852.1	893.9	945.8
60°	5914.8	2262.0	838.2	708.4	788.8	881.9	894.5	837.5	824.9	871.1	925.5
62.5°	7177.7	2660.2	761.6	657.1	743.2	830.0	859.7	798.3	797.0	855.9	912.9
65°	8353.3	2886.2	682.4	610.3	696.4	781.8	820.5	761.6	764.1	838.2	895.2
67.5°	8842.1	2620.3	611.5	568.5	642.6	726.8	788.2	733.1	724.9	814.1	866.7
70°	8383.1	2081.5	550.1	524.2	581.8	667.3	743.2	695.1	676.1	757.1	798.3
72.5°	7417.7	1735.2	492.5	472.3	528.6	604.6	682.4	643.8	619.1	681.2	717.9
75°	5798.3	1423.8	426.7	421.0	467.8	547.6	619.1	592.6	560.9	600.1	636.9
77.5°	3301.4	900.9	358.3	362.1	395.7	479.9	543.2	522.3	490.0	506.5	548.9
80°	1321.2	454.5	288.0	290.6	319.1	394.4	450.1	442.5	409.0	422.3	451.4
82.5°	493.8	249.4	212.7	214.0	242.5	312.1	384.3	380.5	348.8	339.3	355.8
85°	196.3	123.4	130.4	136.1	163.3	224.7	308.3	273.5	236.1	207.0	217.1
87.5°	46.8	39.3	45.6	48.1	53.2	70.3	112.7	90.5	93.1	74.7	55.7
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)