

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: P368462

Luminaire Tested: **MSA-SA4C-727-U-T2**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368462  
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-SA4C-727-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: 20071 lumens  
Efficiency: N/A  
Efficacy: 89.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B3 - U0 - G3

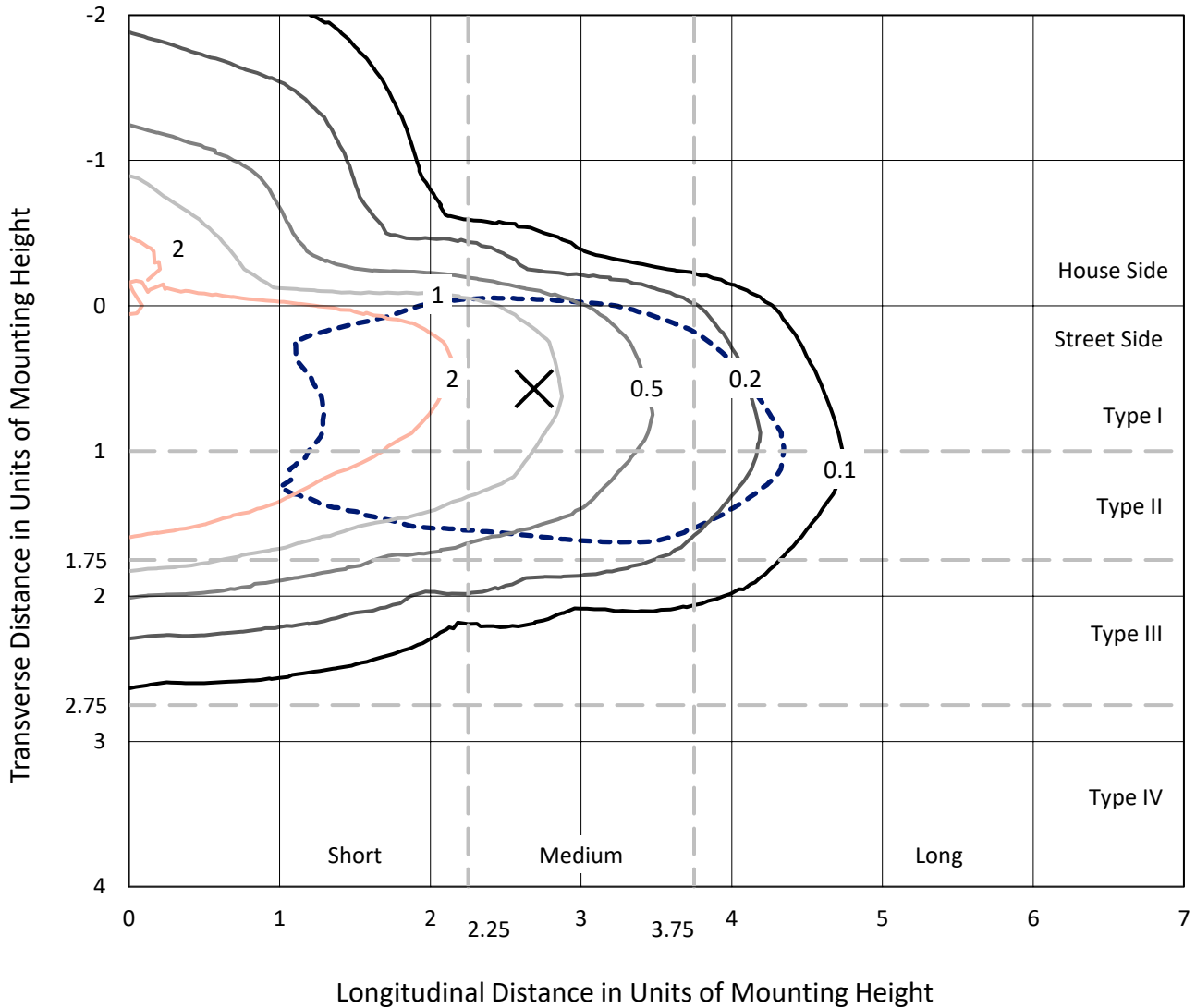
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

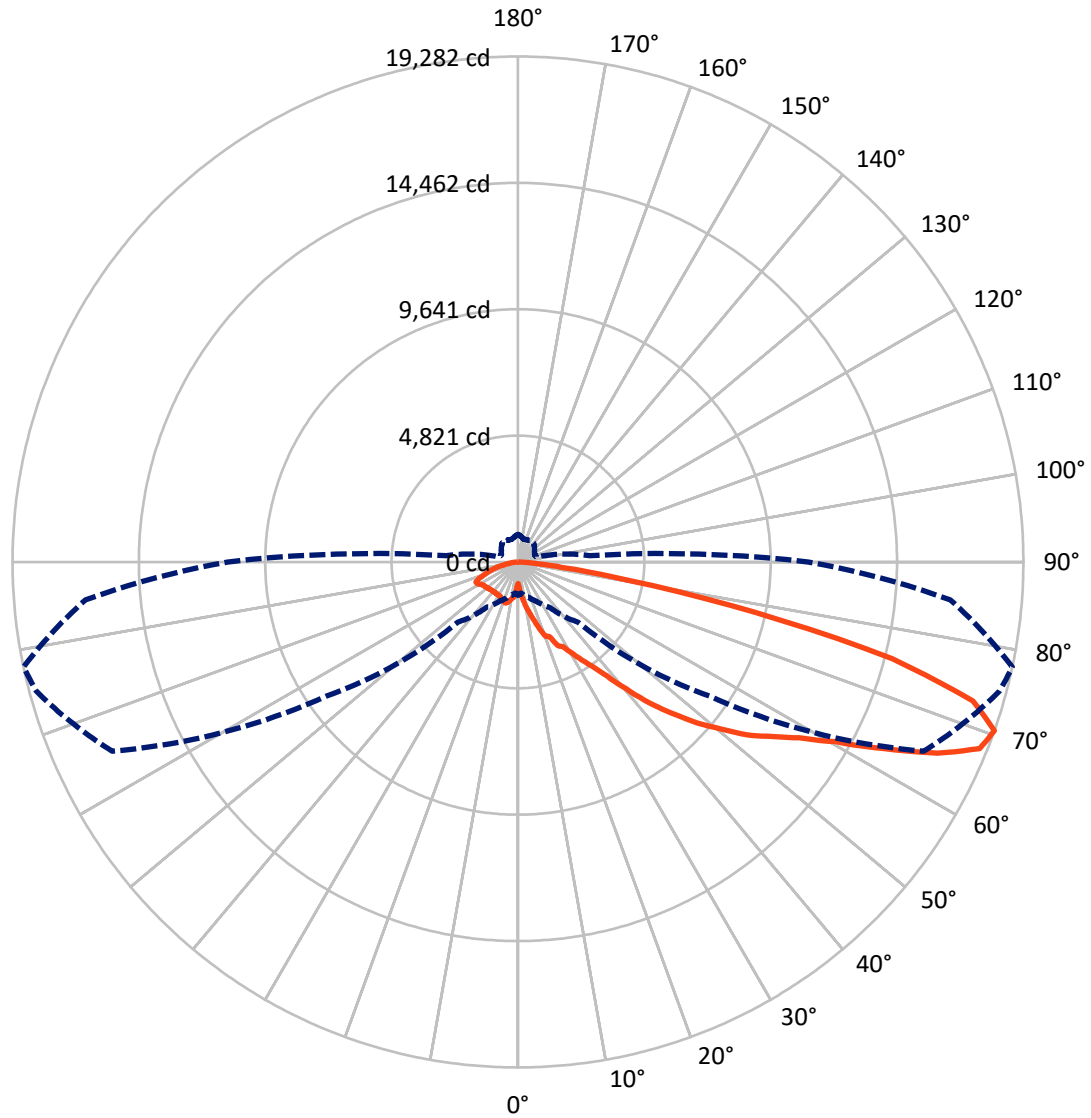
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.8 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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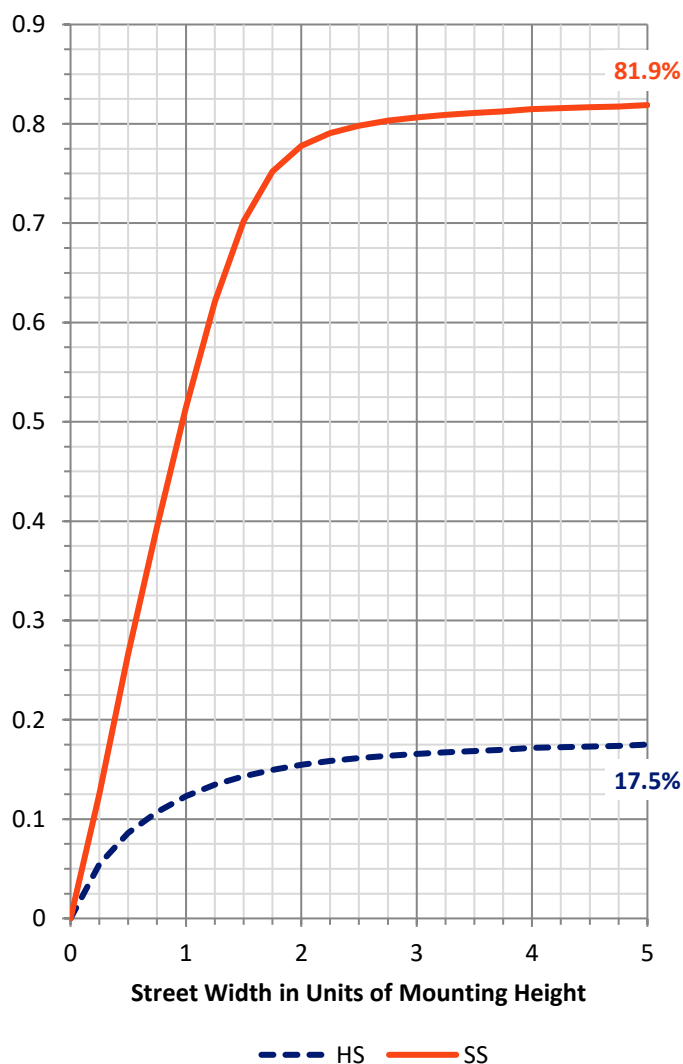
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3582.4	0.0	3582.4
	% Fixture	17.8	0.0	17.8
<b>Street Side</b>	Lumens	16488.6	0.0	16488.6
	% Fixture	82.2	0.0	82.2
<b>Total</b>	Lumens	20071.0	0.0	20071.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	126.5	0.6
10°-20°	557.2	2.8
20°-30°	1072.5	5.3
30°-40°	1806.4	9.0
40°-50°	3125.6	15.6
50°-60°	4719.3	23.5
60°-70°	5227.2	26.0
70°-80°	3013.7	15.0
80°-90°	422.7	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°	20071.0	100.0
0°-180°	20071.0	100.0

**Coefficient of Utilization**



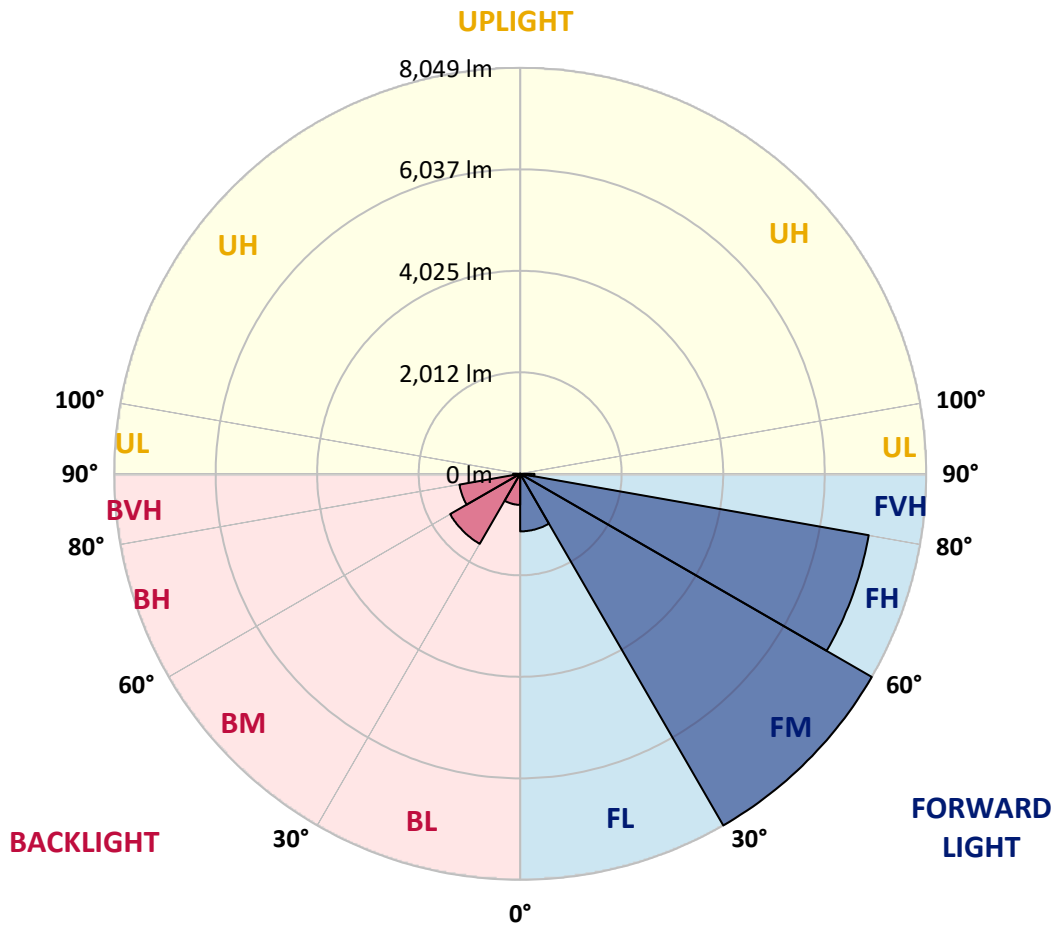
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1141.0	5.7			
FM (30°-60°)	8049.1	40.1			
FH (60°-80°)	7016.6	35.0			G3/7500
FVH (80°-90°)	282.0	1.4			G3/500
BL (0°-30°)	615.1	3.1	B2/1000		
BM (30°-60°)	1602.3	8.0	B2/2500		
BH (60°-80°)	1224.3	6.1	B3/2500		G3/2500
BVH (80°-90°)	140.7	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-G3**

Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	818.3	818.3	818.3	818.3	818.3	818.3	818.3	818.3	818.3	818.3	818.3
2.5°	1053.4	1015.8	958.9	982.3	1010.7	1014.1	1004.9	953.0	935.4	974.8	986.5
5°	1476.0	1412.4	1373.9	1361.3	1318.7	1230.0	1293.6	1260.9	1267.6	1248.4	1286.0
7.5°	1831.6	1788.9	1732.0	1716.1	1618.2	1548.8	1592.3	1578.0	1509.4	1482.7	1525.3
10°	2012.3	1965.4	1967.9	1933.6	1907.7	1914.4	1892.6	1829.9	1778.8	1742.9	1640.0
12.5°	2121.1	2132.8	2195.5	2178.0	2275.9	2356.2	2295.1	2202.2	2040.7	2008.1	1906.0
15°	2379.6	2423.1	2364.5	2391.3	2433.2	2587.1	2562.0	2541.9	2371.2	2307.7	2119.4
17.5°	2645.7	2654.0	2565.4	2551.1	2651.5	2729.4	2827.2	2714.3	2735.2	2690.9	2386.3
20°	2702.6	2760.3	2633.1	2545.3	2751.9	2905.9	3027.2	2907.6	3018.0	3029.7	2606.4
22.5°	2910.9	2841.5	2674.1	2587.9	2768.7	2957.8	3155.2	3222.2	3187.0	3088.3	2818.9
25°	3055.7	3018.9	2848.2	2752.8	2821.4	2995.4	3341.8	3516.7	3547.7	3534.3	3021.4
27.5°	3324.3	3342.7	2991.2	3018.0	2922.6	2938.5	3453.9	3907.4	3714.2	3660.6	3272.4
30°	3748.5	3666.5	3272.4	3294.1	3136.0	3109.2	3690.7	4244.6	4071.4	4007.0	3479.0
32.5°	4191.1	4198.6	3720.0	3534.3	3449.8	3423.0	3643.9	4421.2	4523.3	4439.6	3791.1
35°	4815.3	4771.8	4205.3	3961.0	3655.6	3608.7	3977.7	4933.3	5120.7	4886.4	4161.8
37.5°	5765.8	5634.4	4975.1	4410.3	4184.4	4130.8	4454.7	5392.6	5814.3	5523.1	4767.6
40°	6528.9	6261.9	5662.9	4975.1	4592.7	4658.8	4793.5	5949.9	6533.9	6369.9	5328.2
42.5°	7137.1	6900.4	6149.8	5666.2	5146.6	5064.6	5211.9	6640.1	7512.8	7352.2	6027.7
45°	7720.3	7238.4	6697.0	6261.9	5762.4	5862.0	5840.2	7344.7	8713.5	8219.0	6646.0
47.5°	8296.0	7843.3	7276.9	6692.0	6189.2	6809.2	6577.4	7868.4	9523.5	9157.0	7297.0
50°	9035.6	8537.8	7892.7	7304.5	7003.3	7456.8	7067.7	8311.9	10430.4	10000.4	7911.1
52.5°	9526.8	9042.3	8476.7	8056.7	8029.1	7854.2	7754.6	8873.3	11225.3	10964.3	8562.1
55°	9469.1	9002.2	8746.1	8792.2	9133.5	8543.7	8462.5	9704.2	12054.5	11752.4	9264.9
57.5°	8745.3	8235.8	8290.1	8562.9	9479.9	9754.4	9616.3	10591.9	12794.2	12656.9	10134.2
60°	6812.5	6550.6	6993.2	7491.9	9016.4	10109.1	11079.7	11674.6	13704.5	13923.7	11499.8
62.5°	4425.4	4075.6	4775.1	5621.9	7633.3	9874.9	12569.9	13727.9	15195.5	15693.4	13574.8
65°	2292.6	2236.5	2726.0	3504.1	5314.0	8419.8	13095.4	15881.6	17007.8	17587.7	15557.0
67.5°	1666.7	1563.0	1789.7	2247.4	3243.9	5741.5	12099.7	17529.1	18462.9	18994.2	16709.1
70°	1269.3	1192.3	1365.5	1649.2	2118.6	3243.1	8931.9	17079.8	19024.3	19282.0	16556.0
72.5°	950.5	884.4	1035.8	1300.2	1632.4	1825.7	5279.6	14043.4	18066.3	18154.1	14859.2
75°	758.9	707.9	773.1	1026.6	1330.4	1242.5	2804.7	10174.4	14678.4	14753.7	11350.0
77.5°	622.5	579.0	605.8	769.8	1035.0	934.6	1391.5	6472.0	9319.3	9203.8	6385.8
80°	507.9	470.2	482.8	556.4	788.2	697.8	781.5	3376.1	4445.4	4266.4	2655.7
82.5°	390.7	358.9	384.1	409.2	570.6	501.2	456.0	1536.2	1820.7	1696.0	973.9
85°	261.9	232.6	333.8	307.1	373.2	307.9	249.3	611.6	678.6	632.6	342.2
87.5°	72.0	67.8	112.1	153.1	153.1	116.3	91.2	148.1	189.1	165.7	80.3
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°	818.3	818.3	818.3	818.3	818.3	818.3	818.3	818.3	818.3	818.3	818.3
2.5°	991.5	973.1	924.6	920.4	932.1	933.8	926.2	908.7	899.5	949.7	942.1
5°	1276.8	1211.6	1172.2	1136.3	1086.1	1050.1	1059.3	1084.4	1092.7	1130.4	1134.6
7.5°	1498.6	1412.4	1326.2	1210.7	1134.6	1086.1	1122.9	1149.6	1170.6	1224.1	1245.9
10°	1594.8	1501.1	1378.9	1257.6	1236.7	1245.0	1224.1	1230.8	1263.4	1265.9	1276.8
12.5°	1773.8	1667.6	1447.5	1337.9	1332.0	1349.6	1342.1	1373.0	1395.6	1456.7	1430.8
15°	1945.4	1809.8	1499.4	1387.3	1363.0	1398.1	1439.1	1491.0	1539.5	1597.3	1568.0
17.5°	2153.7	1949.5	1501.9	1364.7	1368.9	1444.2	1486.8	1515.3	1660.0	1739.5	1699.4
20°	2285.1	1963.8	1445.8	1308.6	1368.9	1436.6	1496.0	1527.0	1689.3	1809.0	1836.6
22.5°	2403.9	1968.8	1402.3	1278.5	1317.0	1406.5	1496.0	1564.7	1668.4	1783.0	1787.2
25°	2469.1	1964.6	1346.3	1281.0	1316.1	1360.5	1440.0	1502.7	1579.7	1739.5	1743.7
27.5°	2636.5	1910.2	1291.0	1291.0	1309.5	1311.1	1412.4	1449.2	1460.1	1605.6	1631.6
30°	2685.0	1921.9	1284.4	1289.4	1298.6	1281.8	1326.2	1350.5	1366.3	1491.9	1496.0
32.5°	2762.8	1828.2	1304.4	1274.3	1262.6	1260.1	1271.0	1292.7	1299.4	1376.4	1390.6
35°	2857.4	1790.6	1311.1	1270.1	1246.7	1234.1	1266.8	1240.0	1260.9	1351.3	1361.3
37.5°	3165.3	1738.7	1345.4	1270.1	1240.0	1225.8	1209.9	1222.4	1296.9	1383.9	1437.5
40°	3361.9	1754.6	1337.1	1282.7	1217.4	1204.0	1177.3	1223.3	1338.7	1492.7	1532.9
42.5°	3706.6	1763.8	1347.1	1276.8	1224.9	1173.1	1190.6	1240.8	1362.2	1450.0	1511.9
45°	4063.1	1792.2	1340.4	1259.3	1208.2	1232.5	1208.2	1253.4	1311.1	1313.6	1360.5
47.5°	4412.8	1906.9	1326.2	1223.3	1204.0	1267.6	1205.7	1213.2	1217.4	1232.5	1287.7
50°	4823.6	2029.0	1306.1	1173.1	1209.9	1269.3	1214.9	1178.1	1173.9	1223.3	1285.2
52.5°	5290.5	2167.1	1280.2	1124.5	1175.6	1253.4	1246.7	1180.6	1144.6	1192.3	1254.2
55°	5840.2	2324.4	1250.0	1076.0	1137.9	1255.1	1264.3	1163.0	1145.5	1197.3	1263.4
57.5°	6570.7	2552.0	1191.5	1005.7	1091.9	1229.1	1219.1	1142.9	1126.2	1181.4	1250.0
60°	7817.4	2989.6	1107.8	936.3	1042.5	1165.5	1182.3	1107.0	1090.2	1151.3	1223.3
62.5°	9486.6	3515.9	1006.6	868.5	982.3	1096.9	1136.3	1055.1	1053.4	1131.2	1206.5
65°	11040.4	3814.6	902.0	806.6	920.4	1033.3	1084.4	1006.6	1009.9	1107.8	1183.1
67.5°	11686.3	3463.1	808.3	751.4	849.3	960.5	1041.7	968.9	958.0	1076.0	1145.5
70°	11079.7	2751.1	727.1	692.8	768.9	881.9	982.3	918.7	893.6	1000.7	1055.1
72.5°	9803.7	2293.4	651.0	624.2	698.7	799.1	902.0	850.9	818.3	900.3	948.8
75°	7663.4	1881.8	563.9	556.4	618.3	723.8	818.3	783.2	741.3	793.2	841.7
77.5°	4363.5	1190.6	473.6	478.6	522.9	634.2	717.9	690.3	647.6	669.4	725.4
80°	1746.2	600.8	380.7	384.1	421.7	521.3	594.9	584.9	540.5	558.1	596.6
82.5°	652.6	329.7	281.1	282.8	320.5	412.5	507.9	502.9	461.0	448.5	470.2
85°	259.4	163.2	172.4	179.9	215.9	297.0	407.5	361.5	312.1	273.6	287.0
87.5°	61.9	51.9	60.2	63.6	70.3	92.9	148.9	119.6	123.0	98.7	73.6
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)