

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: P596655

Luminaire Tested: **MSA-SA3A-827-U-SL2-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596655  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3A-827-U-SL2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7067 lumens  
Efficiency: N/A  
Efficacy: 73.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2

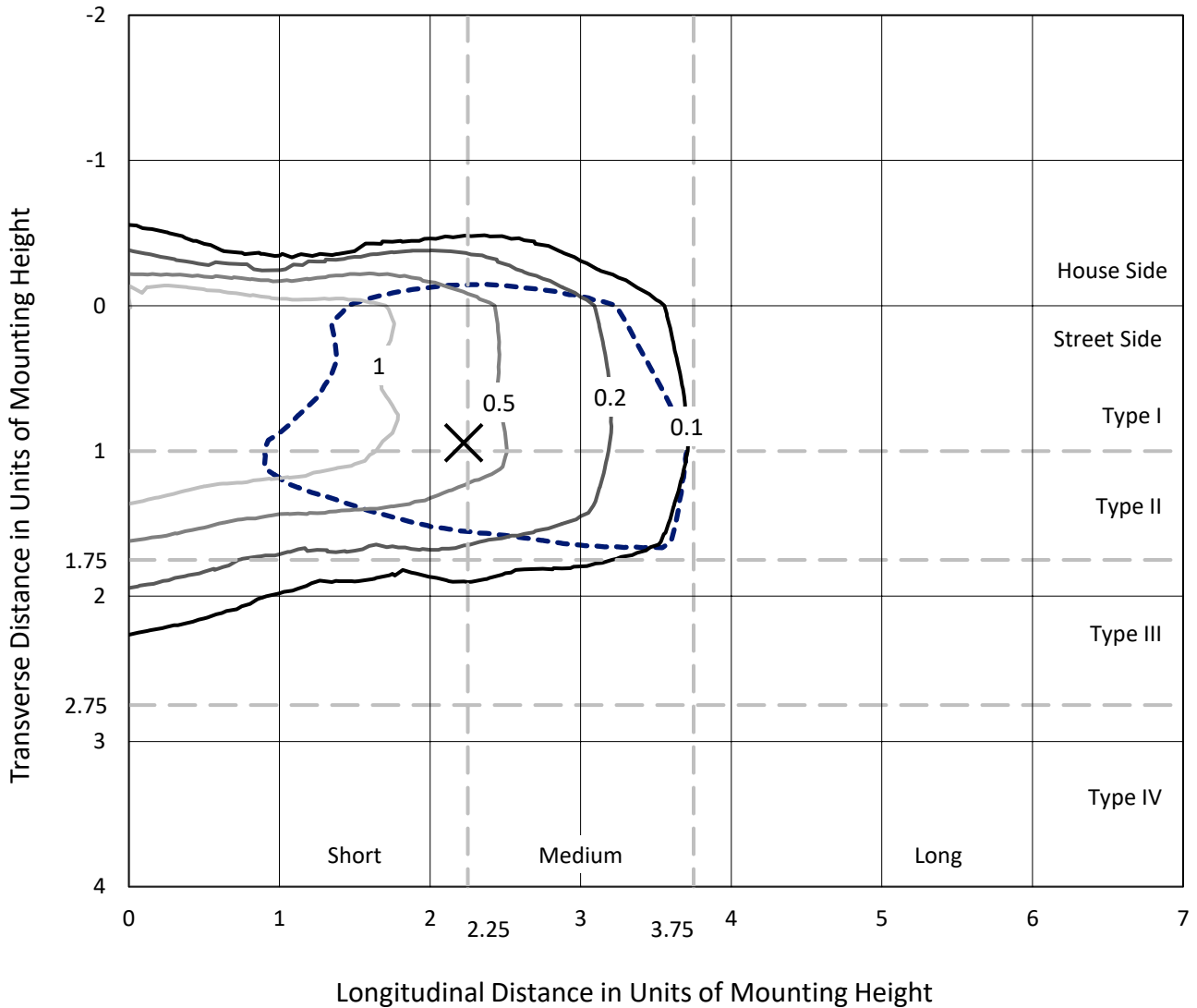
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

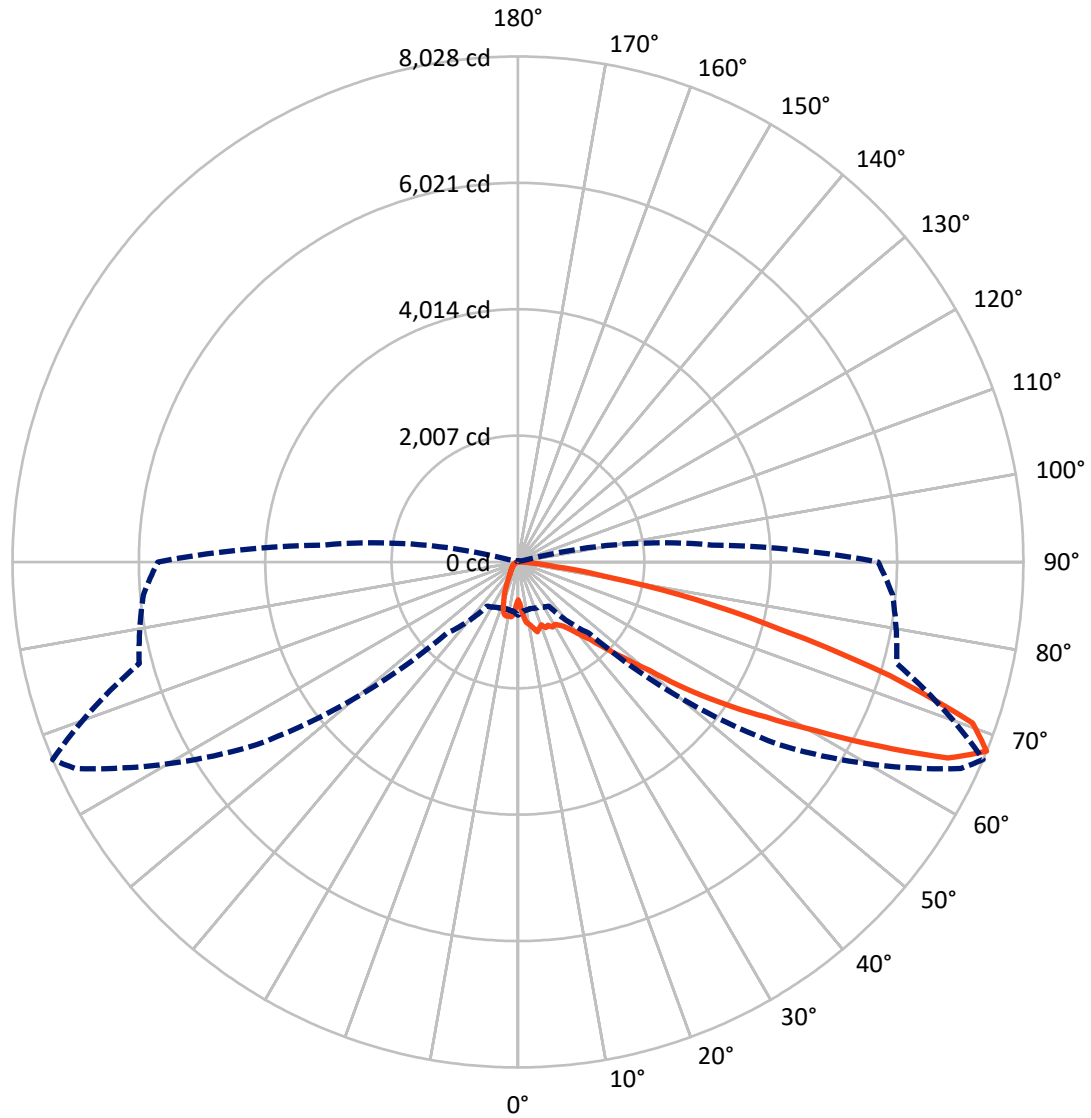
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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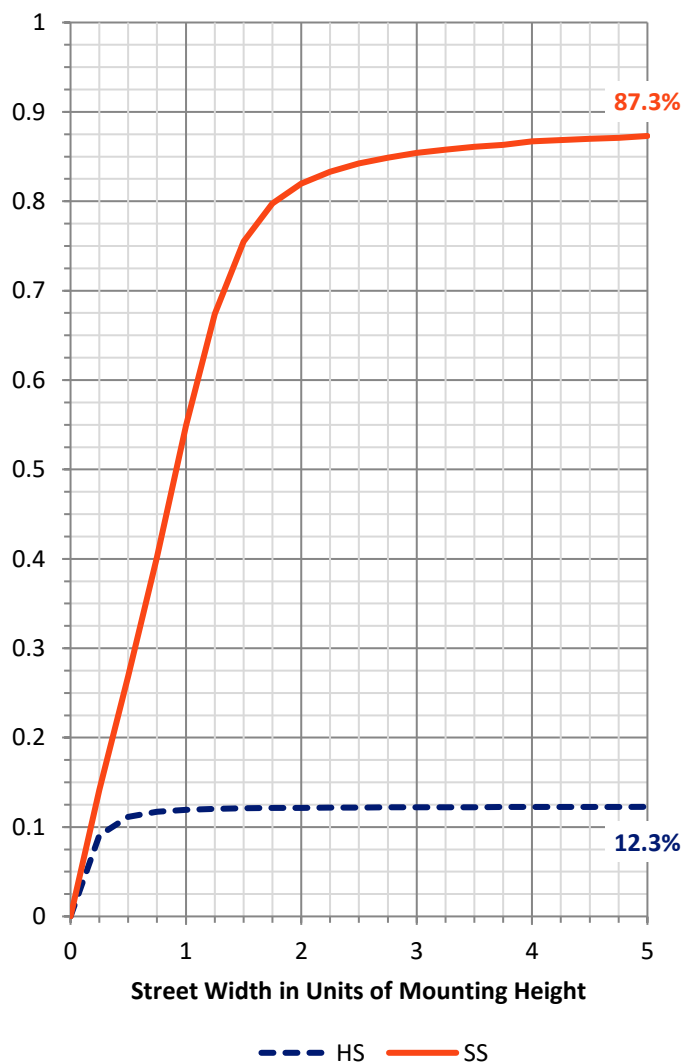
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	874.0	0.0	874.0
	% Fixture	12.4	0.0	12.4
<b>Street Side</b>	Lumens	6193.0	0.0	6193.0
	% Fixture	87.6	0.0	87.6
<b>Total</b>	Lumens	7067.0	0.0	7067.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.6	1.1
10°-20°	223.6	3.2
20°-30°	350.4	5.0
30°-40°	564.9	8.0
40°-50°	1038.0	14.7
50°-60°	1753.1	24.8
60°-70°	1938.1	27.4
70°-80°	1014.4	14.4
80°-90°	108.9	1.5
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°	7067.0	100.0
0°-180°	7067.0	100.0

**Coefficient of Utilization**

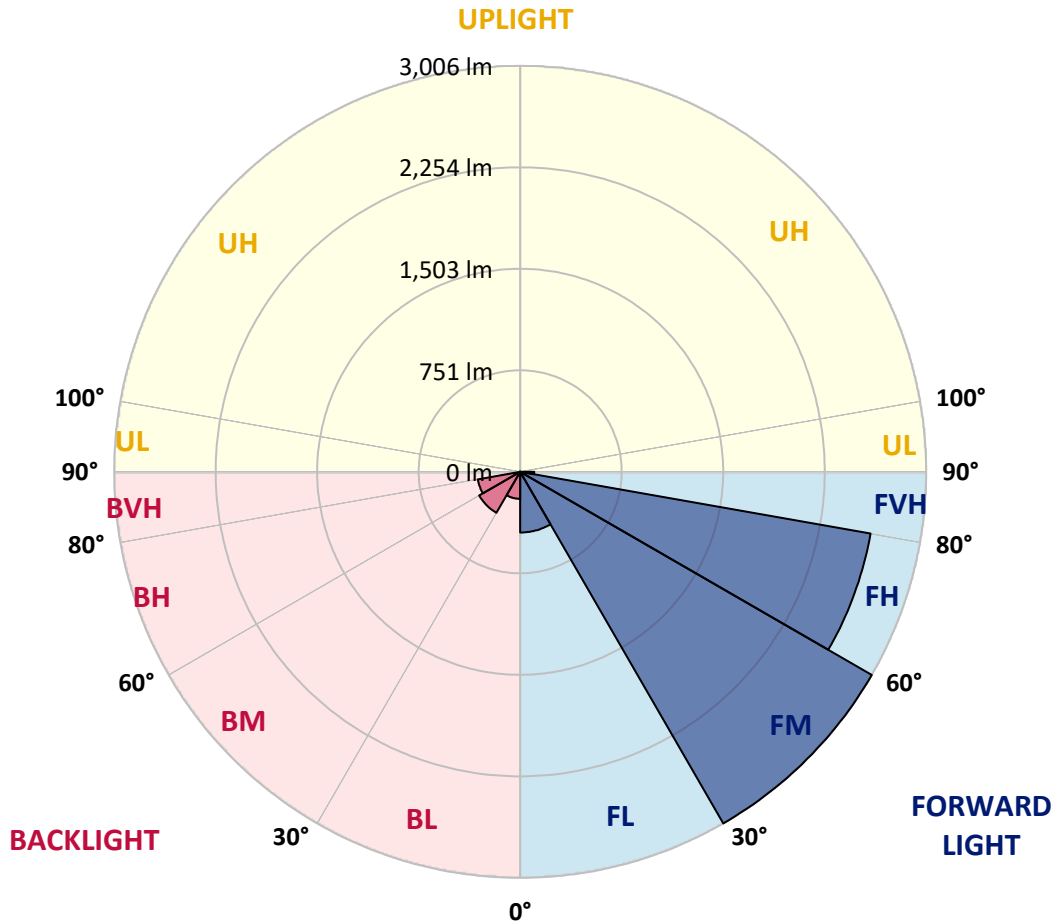


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	449.3	6.4			
FM (30°-60°)	3005.6	42.5			
FH (60°-80°)	2633.7	37.3			G2/5000
FVH (80°-90°)	104.3	1.5			G2/225
BL (0°-30°)	200.1	2.8	B1/500		
BM (30°-60°)	350.4	5.0	B1/1000		
BH (60°-80°)	318.8	4.5	B1/500		G1/500
BVH (80°-90°)	4.6	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**  
 Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	601.9	601.9	601.9	601.9	601.9	601.9	601.9	601.9	601.9	601.9	601.9
2.5°	710.5	686.5	645.6	657.5	681.1	700.9	691.5	673.3	673.6	655.0	722.0
5°	826.7	794.4	770.8	779.0	777.9	777.2	821.3	838.2	845.3	876.2	921.7
7.5°	860.0	848.6	823.8	831.3	806.6	808.4	885.8	959.0	970.4	989.4	1070.5
10°	847.1	824.9	833.9	833.9	834.2	874.4	926.3	996.3	1010.2	1083.4	1092.0
12.5°	833.1	834.2	869.7	863.3	912.0	984.1	1001.6	1080.1	1073.3	1136.8	1231.1
15°	885.1	912.4	889.4	898.4	903.0	987.6	1016.0	1120.3	1150.4	1230.7	1292.0
17.5°	974.4	978.0	930.3	917.4	951.1	975.1	1032.1	1082.3	1102.4	1313.2	1399.9
20°	990.5	1013.5	965.1	890.5	961.8	994.8	1034.6	1058.6	1067.2	1338.6	1460.9
22.5°	1087.7	1062.2	984.8	928.1	948.6	984.4	1009.2	1081.6	1133.2	1290.6	1519.3
25°	1137.5	1130.7	1056.8	1008.4	987.6	984.8	1041.4	1096.3	1112.8	1340.4	1533.6
27.5°	1256.9	1241.5	1098.4	1092.3	1023.9	963.6	1042.5	1141.1	1171.9	1293.4	1587.4
30°	1419.3	1413.5	1223.2	1219.2	1110.3	1002.0	1100.6	1168.7	1150.0	1317.5	1623.3
32.5°	1582.7	1629.4	1434.7	1323.6	1241.8	1142.9	1084.1	1160.1	1193.4	1375.9	1689.2
35°	1780.3	1814.0	1615.7	1535.1	1353.3	1208.8	1193.4	1242.2	1256.5	1445.4	1764.1
37.5°	2125.9	2075.0	1906.1	1768.8	1673.4	1444.4	1368.4	1329.7	1363.0	1539.7	1917.2
40°	2381.1	2348.8	2140.9	2058.8	1839.4	1705.4	1506.7	1470.5	1507.8	1636.5	2023.7
42.5°	2689.1	2622.0	2426.3	2370.7	2144.9	1886.4	1684.9	1697.5	1674.2	1827.6	2210.5
45°	2967.6	2816.3	2707.3	2719.9	2599.4	2250.3	1982.1	1976.0	1956.7	2104.4	2406.9
47.5°	3155.1	3022.8	2916.7	2881.9	2867.6	2890.2	2411.6	2303.3	2289.0	2395.1	2716.3
50°	3255.8	3111.0	2979.8	2987.0	3278.1	3497.1	2854.7	2700.9	2706.3	2817.0	3139.3
52.5°	3188.1	3024.2	2885.9	3020.3	3596.4	3901.8	3588.2	3220.3	3345.1	3316.8	3706.8
55°	2875.1	2732.8	2634.6	2875.1	3631.2	4337.4	4491.2	4002.2	3974.3	3909.7	4285.4
57.5°	2348.5	2225.9	2165.3	2419.1	3250.8	4688.4	5398.2	4885.9	4647.5	4377.2	4765.8
60°	1749.8	1659.5	1596.4	1730.4	2561.4	4347.4	5992.2	5718.7	5442.6	4827.8	5197.4
62.5°	1296.0	1222.5	1155.4	1167.6	1763.8	3739.1	6220.2	6600.9	6442.5	5303.5	5604.7
65°	1034.3	967.2	920.3	893.4	1092.3	2813.1	5902.9	7324.0	7506.8	5751.7	5898.6
67.5°	844.6	788.0	764.7	795.5	856.8	1603.5	5055.5	7762.8	8028.1	6227.0	5971.1
70°	687.2	640.6	638.1	721.3	789.0	977.6	3718.7	7459.9	7659.6	6308.0	5536.9
72.5°	478.9	458.5	491.1	609.1	781.9	814.1	2135.5	6173.3	6180.4	5571.3	4554.3
75°	271.0	267.8	319.4	485.8	761.4	805.9	1190.6	4362.5	4365.7	4213.7	3155.1
77.5°	149.1	139.5	186.1	328.4	653.9	787.3	767.9	2978.7	2902.4	2344.9	1441.1
80°	68.8	64.9	100.7	210.4	478.2	744.6	615.5	1637.2	1476.3	763.9	351.7
82.5°	28.3	26.9	46.2	135.2	302.2	599.8	518.7	726.3	582.9	145.2	108.6
85°	5.0	5.4	19.0	81.7	169.2	276.4	420.5	344.9	253.5	40.2	59.5
87.5°	0.0	0.0	3.9	19.7	40.9	75.6	170.6	96.4	66.3	11.8	17.6
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°	601.9	601.9	601.9	601.9	601.9	601.9	601.9	601.9	601.9	601.9	601.9
2.5°	735.3	729.2	667.5	670.4	674.7	670.7	670.0	652.8	637.0	689.0	688.3
5°	929.9	886.6	843.9	827.4	791.9	745.3	745.7	731.0	715.9	737.1	737.1
7.5°	1068.7	1008.8	954.7	858.2	764.3	679.3	671.8	651.7	628.8	656.4	661.8
10°	1100.9	1049.0	979.0	837.4	748.5	665.7	574.7	499.7	465.0	448.8	446.0
12.5°	1200.2	1161.5	1005.2	848.6	720.6	580.4	431.3	342.4	281.8	277.1	270.7
15°	1266.6	1239.3	1031.0	820.9	602.3	417.3	271.0	207.9	183.5	181.4	178.2
17.5°	1369.4	1322.1	1006.3	733.1	471.1	275.3	182.1	164.2	167.1	173.5	168.5
20°	1411.4	1318.9	952.5	605.9	330.9	184.6	158.1	148.4	155.9	162.0	159.2
22.5°	1454.4	1328.2	904.8	499.4	216.2	152.7	140.9	135.9	136.6	142.7	143.0
25°	1454.0	1354.0	849.6	389.0	161.0	135.9	127.3	120.8	118.3	122.6	121.5
27.5°	1524.7	1324.3	748.9	288.6	141.6	121.5	113.3	105.4	96.4	100.7	100.7
30°	1525.0	1372.7	678.6	207.2	129.8	108.3	101.1	88.9	78.5	82.1	82.5
32.5°	1565.5	1330.7	613.7	158.5	120.5	100.4	84.6	73.5	67.4	69.5	69.5
35°	1611.8	1366.6	514.1	139.8	111.1	89.3	72.4	63.5	58.8	60.6	60.6
37.5°	1764.5	1359.0	444.9	130.1	105.0	80.7	66.0	55.9	53.8	54.8	56.3
40°	1819.7	1412.5	351.0	124.4	95.0	72.8	58.1	50.5	47.7	48.4	48.8
42.5°	1960.2	1424.3	280.3	119.7	86.0	63.1	51.6	46.2	42.7	42.7	43.7
45°	2115.5	1454.0	223.0	115.8	78.5	56.6	46.6	42.3	36.9	36.2	37.6
47.5°	2340.2	1568.0	181.8	107.9	69.5	52.7	43.0	36.6	32.3	30.8	32.3
50°	2716.3	1761.6	160.6	98.2	63.1	49.5	38.0	31.2	28.0	26.2	27.2
52.5°	3246.9	2096.1	149.5	89.3	57.4	44.5	34.1	27.2	24.0	22.6	23.3
55°	3836.2	2479.7	144.1	80.3	52.3	39.1	29.8	24.0	21.2	19.4	19.7
57.5°	4381.1	2840.3	138.7	71.7	47.3	34.8	26.2	21.2	18.3	16.5	16.8
60°	4918.2	3128.2	125.8	61.7	42.7	31.2	22.9	18.3	16.5	14.3	14.3
62.5°	5393.2	3300.3	107.2	53.4	38.4	27.6	20.4	16.5	15.1	12.9	12.9
65°	5716.5	3308.2	86.4	45.9	33.7	23.7	17.9	15.4	14.0	11.5	11.1
67.5°	5721.2	3093.1	69.2	40.9	29.8	20.8	16.1	14.7	12.9	10.8	10.0
70°	5120.7	2555.3	57.7	35.8	25.8	18.3	14.0	14.0	12.5	10.4	9.3
72.5°	4096.1	1952.7	48.4	31.2	22.9	15.8	12.9	13.3	12.2	10.4	9.3
75°	2753.2	1119.9	40.2	26.5	20.1	13.3	12.5	12.9	12.5	10.4	9.0
77.5°	1268.0	356.7	31.2	21.9	17.2	11.1	12.2	12.2	11.5	9.3	7.9
80°	285.7	87.8	22.6	16.1	14.0	8.2	11.1	10.0	9.0	6.5	4.7
82.5°	104.0	26.9	13.6	10.0	8.6	3.2	7.2	7.2	6.5	4.7	2.9
85°	59.5	14.0	7.5	6.5	4.7	1.4	3.9	4.3	3.6	3.2	1.4
87.5°	19.4	3.2	3.6	3.9	3.6	0.7	1.4	1.4	1.1	0.7	0.0
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)