

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: P367001

Luminaire Tested: **MSA-SA1D-727-U-SL3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367001  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1D-727-U-SL3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

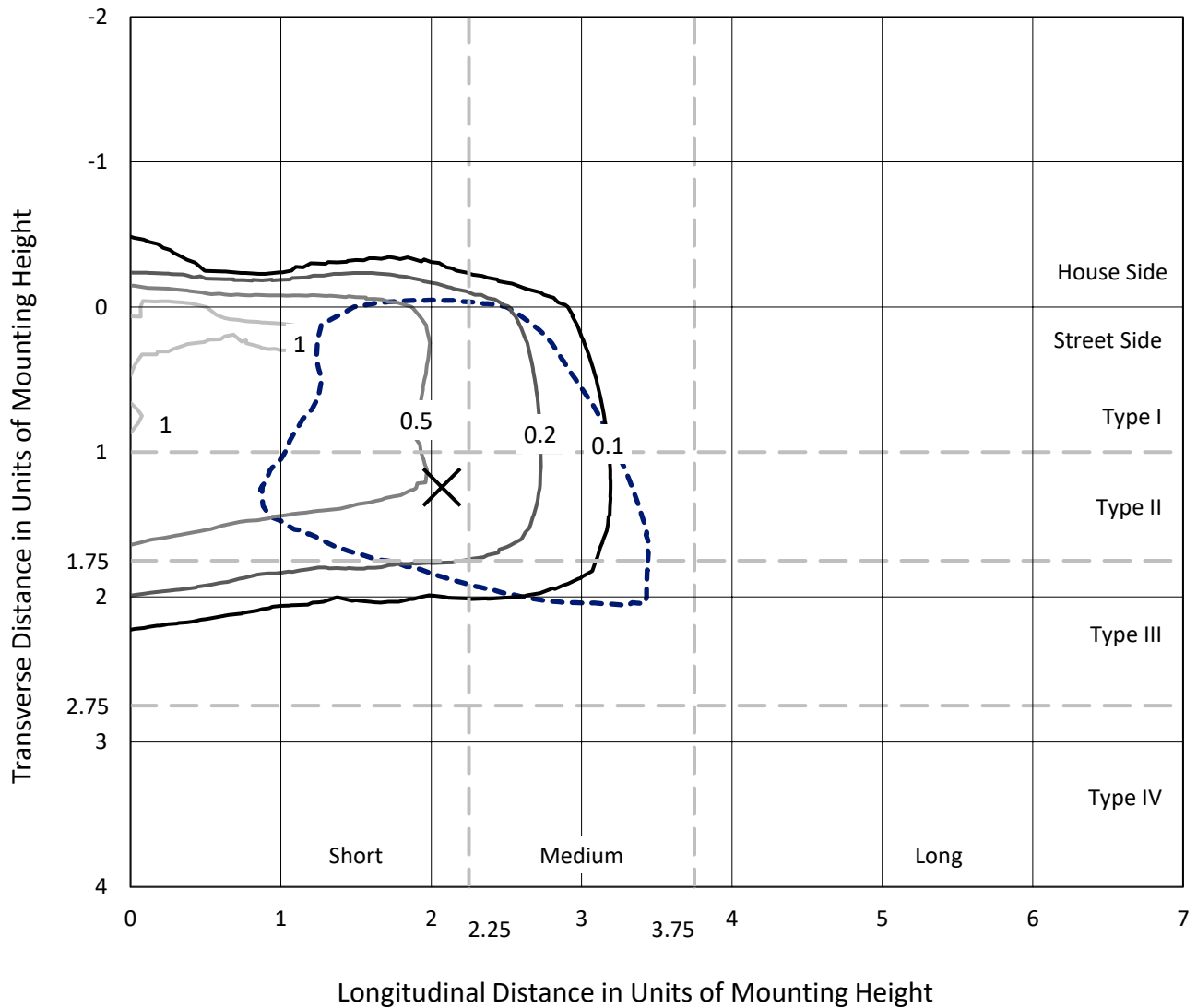
Lumens per Lamp: N/A  
Luminaire Lumens: 4709 lumens  
Efficiency: N/A  
Efficacy: 70.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

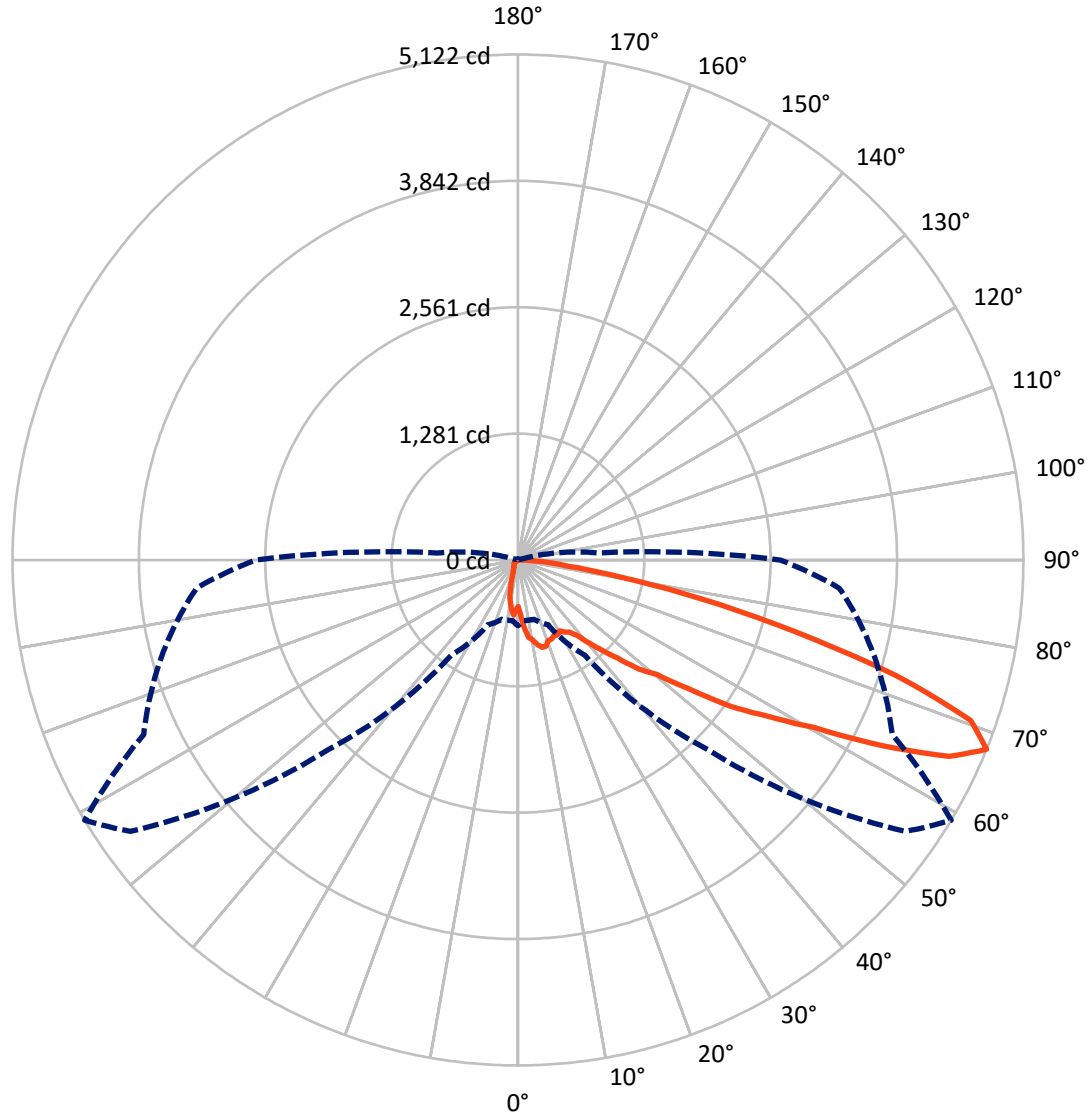
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.3 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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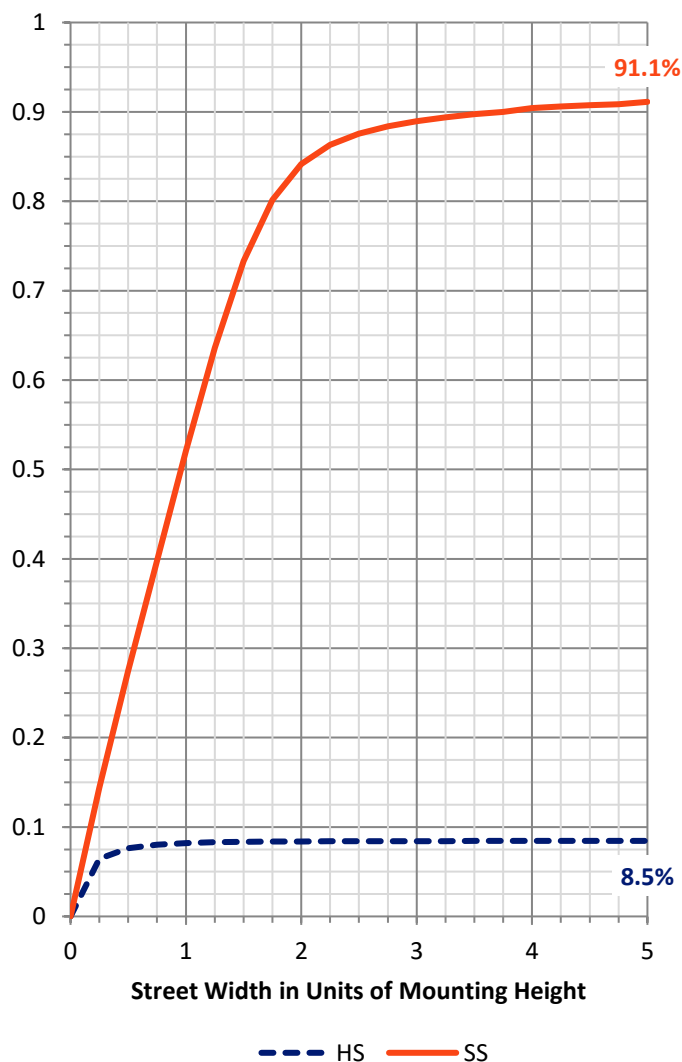
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	400.5	0.0	400.5
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	4308.5	0.0	4308.5
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	4709.0	0.0	4709.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.3	1.2
10°-20°	161.3	3.4
20°-30°	239.9	5.1
30°-40°	370.2	7.9
40°-50°	660.6	14.0
50°-60°	1175.6	25.0
60°-70°	1369.1	29.1
70°-80°	608.9	12.9
80°-90°	66.1	1.4
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°	4709.0	100.0
0°-180°	4709.0	100.0

**Coefficient of Utilization**



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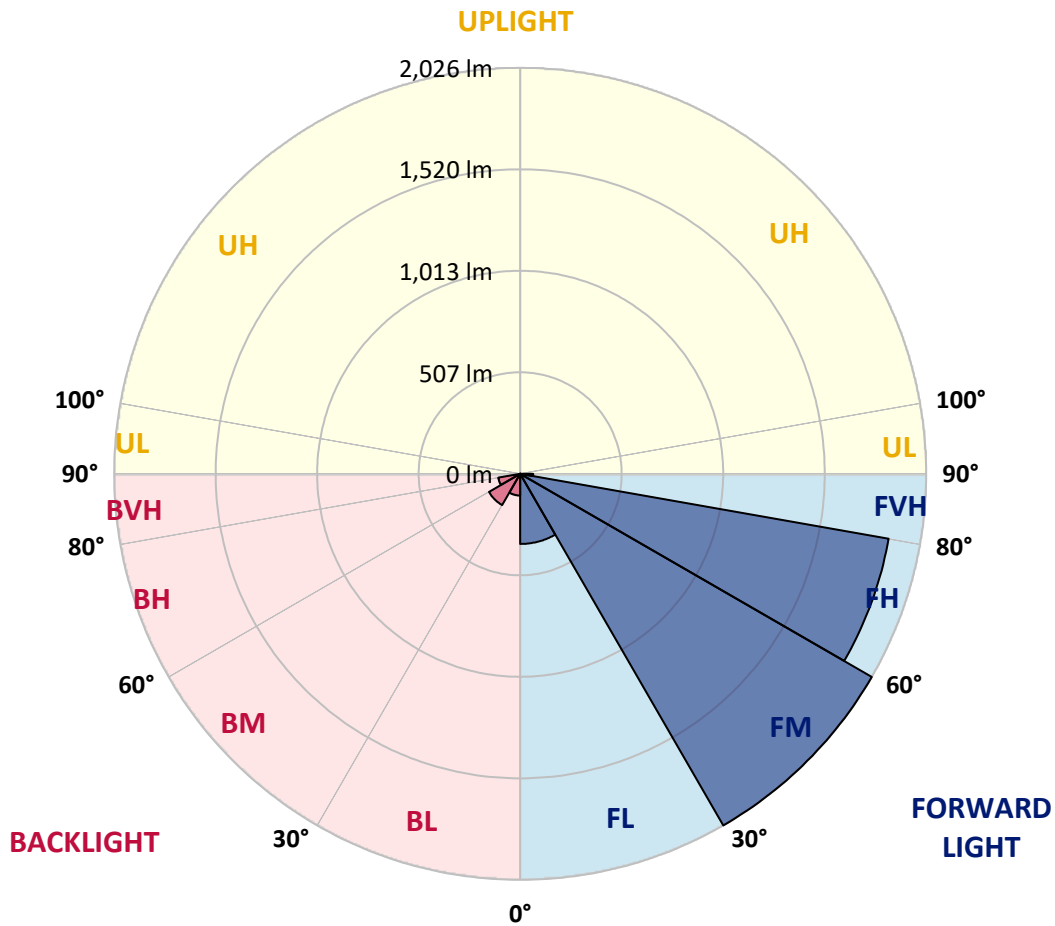
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	350.2	7.4			
FM (30°-60°)	2026.3	43.0			
FH (60°-80°)	1867.1	39.6			G2/5000
FVH (80°-90°)	64.9	1.4			G1/100
BL (0°-30°)	108.3	2.3	B0/110		
BM (30°-60°)	180.1	3.8	B0/220		
BH (60°-80°)	110.9	2.4	B1/500		G1/500
BVH (80°-90°)	1.2	0.0			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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	471.2	471.2	471.2	471.2	471.2	471.2	471.2	471.2	471.2	471.2	471.2
2.5°	614.2	591.1	558.2	568.0	576.8	585.1	571.3	563.4	559.6	525.8	568.2
5°	754.2	725.3	710.3	706.5	696.9	675.7	711.0	695.3	700.5	707.2	721.0
7.5°	796.9	783.7	762.0	770.1	733.9	730.8	779.7	793.3	811.2	799.0	815.7
10°	774.9	752.3	762.5	759.7	758.2	790.2	824.5	825.2	851.9	864.8	808.3
12.5°	731.5	734.1	770.9	768.0	815.7	879.6	887.5	879.1	922.7	900.3	891.8
15°	760.4	781.8	761.6	768.5	785.4	865.3	893.2	918.9	960.2	973.5	915.6
17.5°	795.2	797.3	760.4	751.8	794.5	831.7	897.5	918.7	922.7	1039.8	969.2
20°	776.3	794.7	750.6	696.5	762.8	813.3	880.1	873.4	900.6	1059.4	981.4
22.5°	826.4	800.2	743.7	702.9	725.3	771.3	827.9	871.5	912.3	1012.6	997.1
25°	831.2	821.7	771.3	735.1	731.3	743.0	821.7	849.8	913.7	1054.6	983.8
27.5°	884.8	873.9	770.9	774.4	738.7	702.7	791.6	857.7	939.7	1029.1	1012.2
30°	954.0	954.9	822.1	833.3	782.3	724.4	816.2	834.3	957.3	1069.9	1033.1
32.5°	1024.1	1052.9	923.5	864.1	848.1	806.6	785.6	869.3	938.0	1139.5	1085.6
35°	1130.7	1150.2	1006.9	953.7	891.0	843.8	868.6	898.7	1007.4	1231.8	1154.5
37.5°	1311.2	1275.9	1156.7	1064.1	1049.1	979.5	991.9	965.0	1078.2	1340.5	1290.9
40°	1412.7	1380.8	1256.8	1211.7	1115.9	1126.6	1087.5	1103.2	1181.0	1453.7	1415.1
42.5°	1518.6	1488.1	1379.4	1347.4	1256.1	1211.7	1194.1	1250.6	1338.6	1642.4	1593.2
45°	1624.9	1547.5	1501.4	1517.4	1476.4	1388.7	1368.1	1418.5	1510.7	1874.1	1781.1
47.5°	1714.6	1649.3	1614.7	1607.3	1591.3	1713.2	1629.7	1651.9	1692.7	2079.2	2015.3
50°	1876.3	1811.9	1757.8	1742.7	1820.5	1993.3	1864.6	1821.7	1903.2	2326.9	2286.6
52.5°	2109.7	2027.7	1941.6	1941.8	2088.5	2183.4	2244.4	2169.1	2184.3	2599.4	2581.6
55°	2297.3	2193.1	2121.8	2178.1	2396.8	2449.9	2682.9	2616.8	2597.1	2852.2	2830.2
57.5°	2323.1	2198.1	2164.3	2263.0	2562.2	2901.8	3152.4	2987.4	2957.1	3063.7	3107.3
60°	2082.7	1950.2	1975.7	2134.5	2616.1	3177.2	3583.5	3448.7	3256.3	3311.4	3341.4
62.5°	1553.4	1447.5	1519.1	1729.4	2408.4	3361.7	4082.5	4145.0	3603.5	3497.4	3490.9
65°	1007.9	941.6	988.6	1160.9	1822.6	3340.7	4528.4	4799.3	3877.0	3649.0	3537.9
67.5°	666.7	616.4	623.0	725.1	1178.6	2717.0	4795.0	5122.3	4184.6	3735.1	3268.7
70°	496.9	457.3	459.7	515.0	699.6	1791.9	4423.2	4867.4	4296.9	3436.8	2638.3
72.5°	358.4	331.9	354.1	415.6	557.5	947.5	3296.9	4008.6	3746.8	2710.8	1777.5
75°	248.2	230.8	267.0	347.6	508.8	588.2	2178.6	2885.6	2626.1	1700.8	803.5
77.5°	137.6	132.3	184.5	283.3	461.9	482.1	1334.5	1896.0	1456.6	609.7	191.2
80°	60.1	58.2	89.4	212.7	388.2	435.6	751.3	1051.3	573.0	108.7	61.8
82.5°	25.8	24.8	38.1	128.0	282.1	364.3	463.3	506.0	197.2	33.6	35.1
85°	4.5	5.0	15.3	67.5	171.7	185.0	335.5	299.5	99.2	16.0	25.0
87.5°	0.0	0.0	2.4	13.1	32.2	52.9	145.4	104.9	18.8	5.2	4.3
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°	471.2	471.2	471.2	471.2	471.2	471.2	471.2	471.2	471.2	471.2	471.2
2.5°	574.2	560.8	510.0	503.6	496.7	486.4	482.6	460.7	457.8	485.9	485.9
5°	714.6	666.9	618.5	580.4	546.3	499.0	485.7	471.9	460.7	457.8	466.6
7.5°	788.7	730.6	654.5	557.5	478.8	410.3	381.7	361.7	339.3	346.0	349.5
10°	784.7	722.9	625.9	501.2	413.9	338.3	265.6	223.2	199.6	187.9	186.5
12.5°	824.5	766.3	606.6	456.4	345.0	240.6	167.1	136.9	119.5	119.7	118.3
15°	847.6	784.2	584.2	399.6	243.0	154.7	115.9	109.2	106.8	109.4	108.0
17.5°	888.4	803.1	533.4	315.0	167.1	116.8	106.6	104.0	107.1	112.5	111.1
20°	885.3	770.4	461.1	222.0	123.5	105.2	100.9	96.8	103.2	109.0	108.0
22.5°	882.5	738.4	393.2	163.8	103.2	95.9	92.3	90.6	93.9	100.6	102.1
25°	857.2	722.7	324.3	123.0	93.5	87.0	85.4	83.9	85.1	90.6	90.4
27.5°	888.2	682.9	250.4	103.2	86.6	78.9	77.5	75.1	72.7	77.5	78.2
30°	881.7	688.4	196.2	90.8	79.6	69.4	69.9	64.9	60.6	64.9	64.9
32.5°	905.1	648.3	157.1	82.5	72.7	65.3	59.4	54.1	51.0	53.6	54.1
35°	939.2	650.0	123.0	77.3	66.8	58.2	51.0	45.8	42.9	44.1	44.8
37.5°	1053.4	638.5	102.8	73.2	64.6	53.9	46.5	39.6	37.7	39.1	39.8
40°	1127.8	669.1	90.6	71.1	59.1	49.6	39.8	34.8	33.1	33.9	35.1
42.5°	1268.0	686.0	84.6	68.7	54.1	42.4	34.1	31.2	28.9	29.8	30.8
45°	1418.0	714.8	80.1	66.0	50.3	37.2	30.0	27.7	24.6	24.8	25.8
47.5°	1602.3	783.5	74.9	61.5	45.1	33.9	26.7	23.1	20.3	20.0	21.2
50°	1849.8	875.3	70.1	55.8	41.7	31.0	23.4	18.8	16.5	15.7	16.7
52.5°	2114.0	994.0	65.1	51.7	37.7	27.2	20.0	15.3	13.1	12.6	13.4
55°	2375.8	1108.0	60.3	49.1	33.4	23.4	16.9	12.6	10.7	10.3	10.7
57.5°	2674.1	1231.3	54.1	43.9	29.3	20.3	14.1	10.5	8.8	8.3	8.6
60°	2898.7	1274.7	48.9	38.1	25.5	17.9	11.9	8.3	7.2	6.7	6.9
62.5°	3005.3	1203.9	43.9	33.1	22.4	15.5	10.0	6.9	6.0	5.5	5.5
65°	2977.6	1047.0	38.9	28.4	19.3	12.9	7.9	6.0	5.2	4.5	4.3
67.5°	2658.1	819.3	33.1	23.8	16.2	10.5	6.7	5.7	4.8	4.3	3.6
70°	2108.0	593.2	26.9	19.8	13.6	8.6	5.2	5.2	4.5	4.3	3.3
72.5°	1381.7	373.4	21.9	16.0	11.2	6.7	4.1	4.8	4.3	4.3	3.1
75°	598.7	133.5	17.6	12.9	9.3	4.5	3.6	4.3	4.5	4.3	3.6
77.5°	140.2	41.5	13.8	10.3	7.6	3.1	3.6	4.3	4.5	4.1	3.1
80°	52.7	17.6	9.1	6.7	6.0	1.9	3.1	2.6	2.4	1.7	0.5
82.5°	32.0	7.4	4.8	3.3	2.9	0.5	1.4	1.0	0.5	0.5	0.0
85°	22.7	3.6	2.6	2.4	1.4	0.0	0.2	0.0	0.0	0.2	0.0
87.5°	3.1	1.0	1.2	1.2	1.0	0.0	0.0	0.0	0.0	0.0	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)