

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: P366999

Luminaire Tested: **MSA-SA1D-727-U-SL2-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366999  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1D-727-U-SL2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) 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: 4700 lumens  
Efficiency: N/A  
Efficacy: 70.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G1

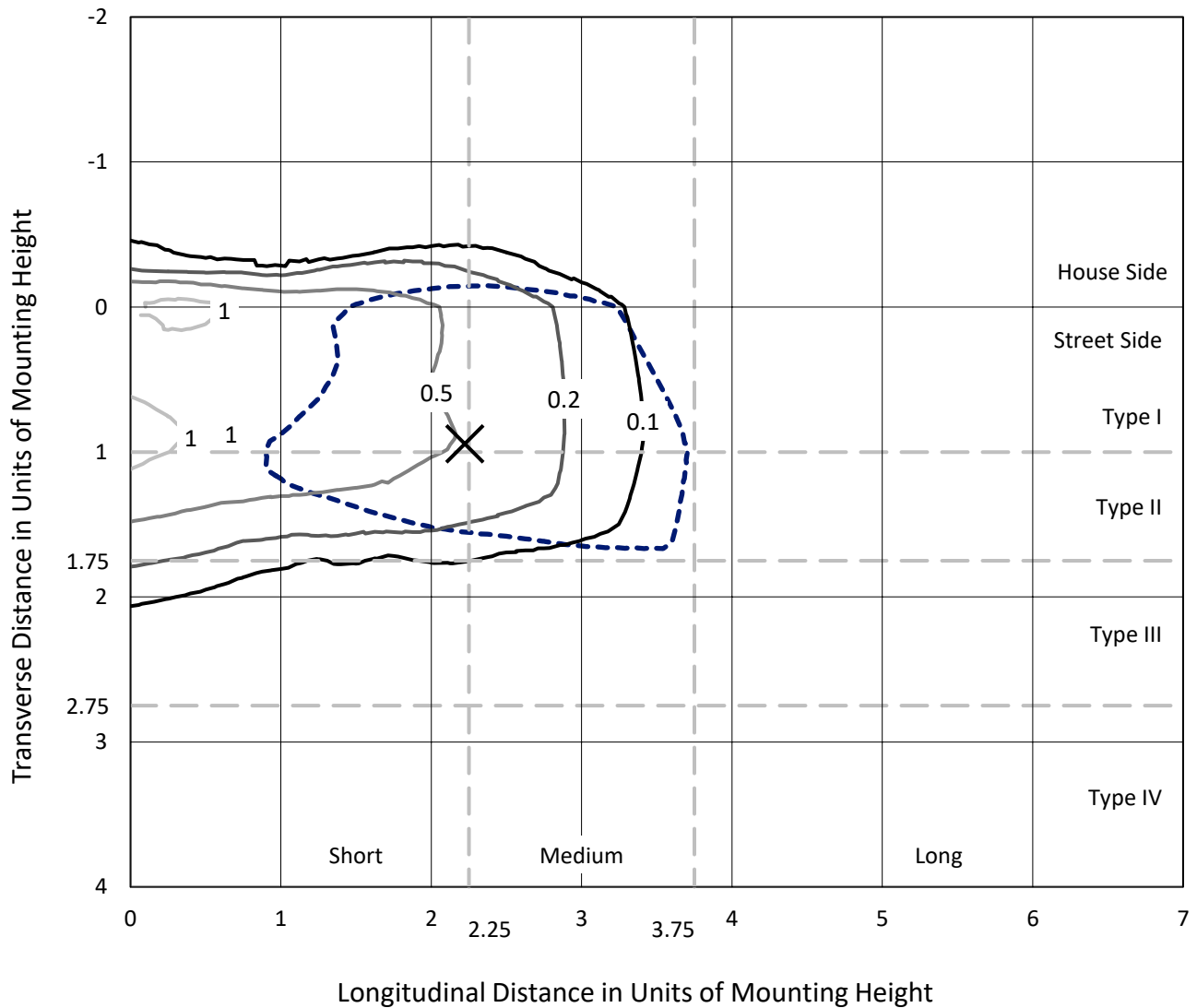
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P366999  
 CATALOG NUMBER: MSA-SA1D-727-U-SL2-HSS

### Iso-Footcandle Lines of Horizontal Illumination

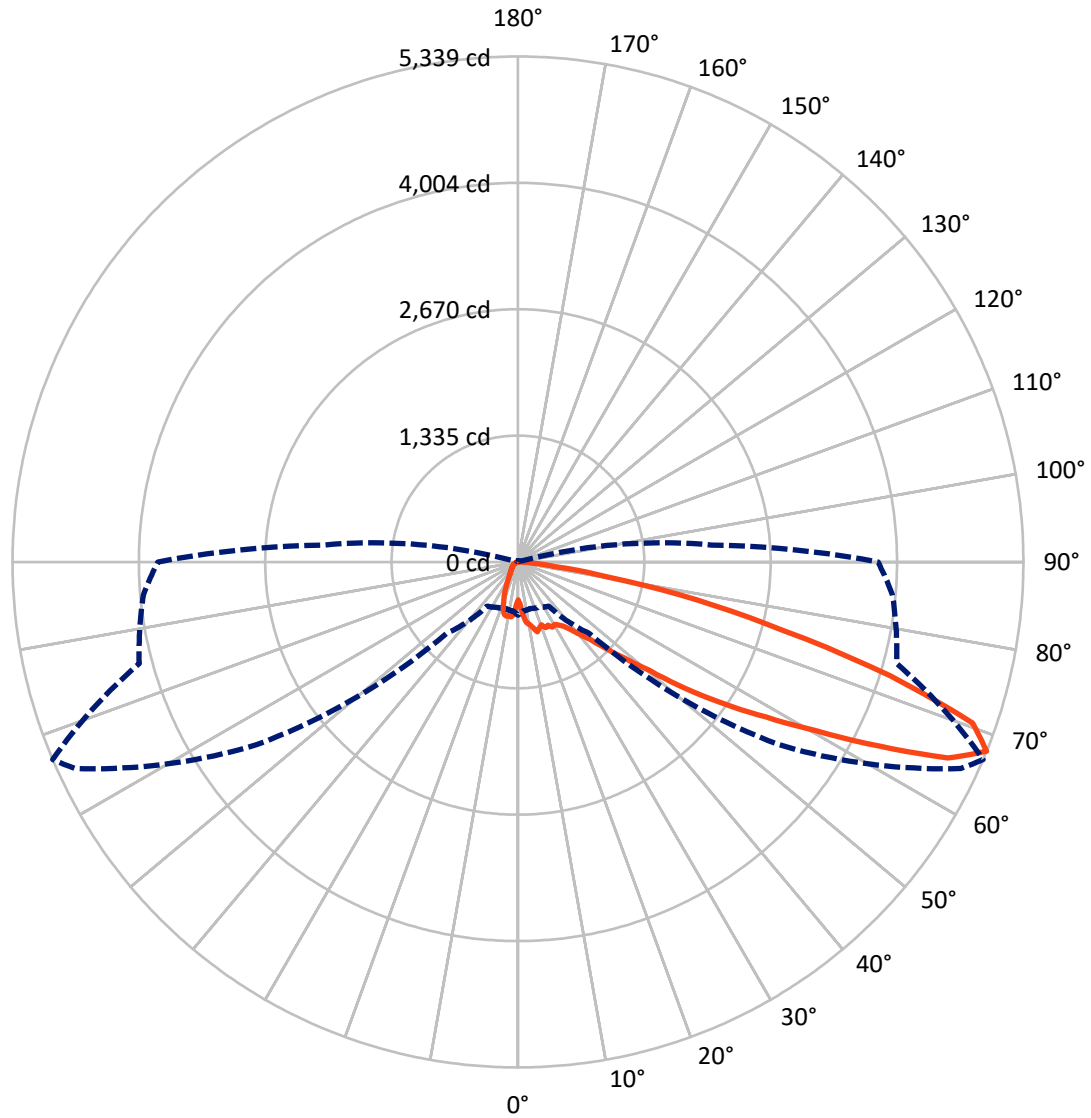
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc  
 Type II - Short - N/A

REPORT NUMBER: P366999  
CATALOG NUMBER: MSA-SA1D-727-U-SL2-HSS

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P366999  
 CATALOG NUMBER: MSA-SA1D-727-U-SL2-HSS

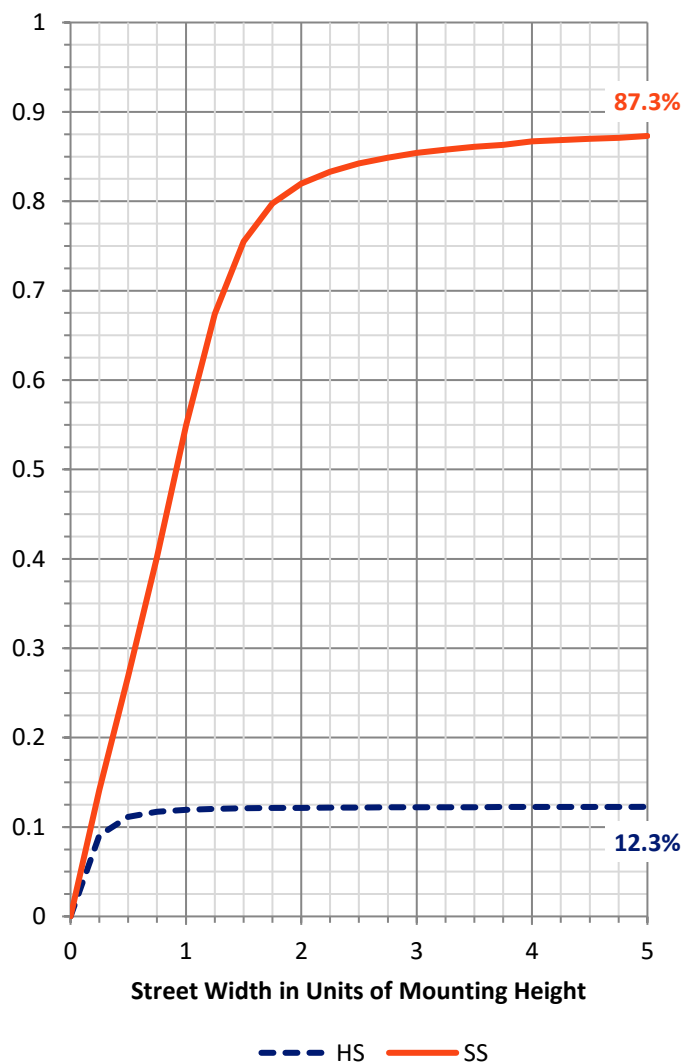
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	581.3	0.0	581.3
	% Fixture	12.4	0.0	12.4
<b>Street Side</b>	Lumens	4118.8	0.0	4118.8
	% Fixture	87.6	0.0	87.6
<b>Total</b>	Lumens	4700.0	0.0	4700.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.2	1.1
10°-20°	148.7	3.2
20°-30°	233.0	5.0
30°-40°	375.7	8.0
40°-50°	690.4	14.7
50°-60°	1165.9	24.8
60°-70°	1289.0	27.4
70°-80°	674.6	14.4
80°-90°	72.5	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°	4700.0	100.0
0°-180°	4700.0	100.0

**Coefficient of Utilization**



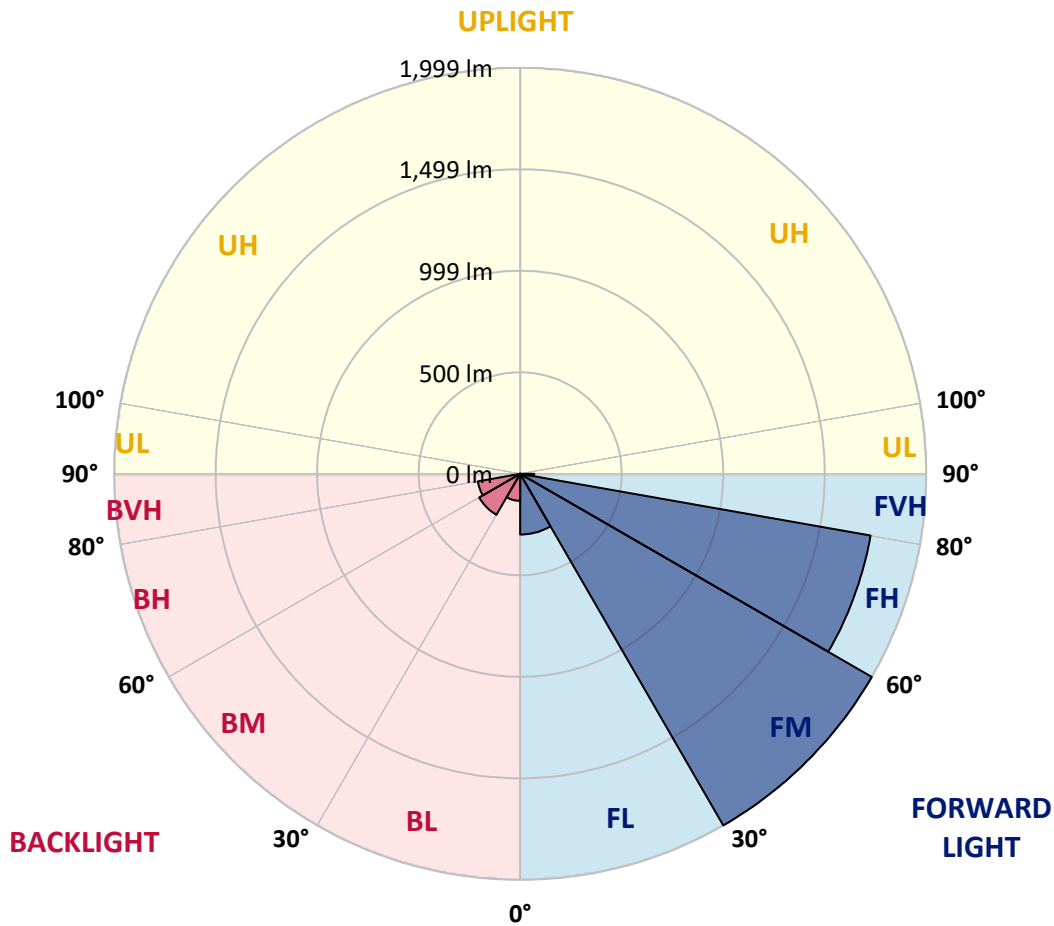
REPORT NUMBER: P366999  
 CATALOG NUMBER: MSA-SA1D-727-U-SL2-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	298.8	6.4			
FM (30°-60°)	1998.9	42.5			
FH (60°-80°)	1751.6	37.3			G1/1800
FVH (80°-90°)	69.4	1.5			G1/100
BL (0°-30°)	133.1	2.8	B1/500		
BM (30°-60°)	233.1	5.0	B1/1000		
BH (60°-80°)	212.0	4.5	B1/500		G1/500
BVH (80°-90°)	3.1	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-G1**

Type II Short





REPORT NUMBER: P366999

CATALOG NUMBER: MSA-SA1D-727-U-SL2-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	400.3	400.3	400.3	400.3	400.3	400.3	400.3	400.3	400.3	400.3	400.3
2.5°	472.5	456.6	429.4	437.3	453.0	466.1	459.9	447.8	448.0	435.6	480.2
5°	549.8	528.3	512.6	518.1	517.4	516.9	546.2	557.4	562.2	582.7	613.0
7.5°	572.0	564.3	547.9	552.9	536.4	537.6	589.1	637.8	645.4	658.0	711.9
10°	563.4	548.6	554.6	554.6	554.8	581.5	616.1	662.6	671.9	720.5	726.2
12.5°	554.1	554.8	578.4	574.1	606.5	654.5	666.1	718.4	713.8	756.0	818.7
15°	588.7	606.8	591.5	597.5	600.6	656.8	675.7	745.1	765.1	818.5	859.3
17.5°	648.0	650.4	618.7	610.1	632.5	648.5	686.4	719.8	733.1	873.3	931.0
20°	658.8	674.0	641.8	592.2	639.7	661.6	688.1	704.1	709.8	890.3	971.6
22.5°	723.4	706.4	654.9	617.3	630.9	654.7	671.2	719.3	753.6	858.3	1010.4
25°	756.5	752.0	702.9	670.7	656.8	654.9	692.6	729.1	740.1	891.5	1020.0
27.5°	835.9	825.7	730.5	726.5	680.9	640.9	693.3	758.9	779.4	860.2	1055.7
30°	943.9	940.1	813.5	810.9	738.4	666.4	732.0	777.3	764.9	876.2	1079.6
32.5°	1052.6	1083.6	954.2	880.2	825.9	760.1	721.0	771.5	793.7	915.1	1123.4
35°	1184.0	1206.4	1074.6	1020.9	900.0	804.0	793.7	826.1	835.7	961.3	1173.3
37.5°	1413.8	1380.0	1267.7	1176.4	1112.9	960.6	910.1	884.3	906.5	1024.0	1275.1
40°	1583.6	1562.1	1423.8	1369.2	1223.3	1134.2	1002.1	978.0	1002.8	1088.4	1345.9
42.5°	1788.4	1743.8	1613.6	1576.7	1426.5	1254.6	1120.6	1128.9	1113.4	1215.5	1470.1
45°	1973.6	1873.0	1800.6	1808.9	1728.8	1496.6	1318.2	1314.2	1301.3	1399.5	1600.8
47.5°	2098.3	2010.4	1939.8	1916.7	1907.1	1922.1	1603.9	1531.9	1522.3	1592.9	1806.5
50°	2165.3	2069.0	1981.8	1986.5	2180.1	2325.8	1898.5	1796.3	1799.8	1873.5	2087.8
52.5°	2120.3	2011.3	1919.3	2008.7	2391.8	2595.0	2386.4	2141.7	2224.7	2205.9	2465.3
55°	1912.1	1817.5	1752.2	1912.1	2415.0	2884.7	2986.9	2661.7	2643.1	2600.2	2850.1
57.5°	1561.9	1480.4	1440.1	1608.9	2162.0	3118.1	3590.1	3249.4	3090.9	2911.1	3169.6
60°	1163.7	1103.6	1061.7	1150.9	1703.5	2891.3	3985.2	3803.3	3619.7	3210.8	3456.6
62.5°	861.9	813.0	768.4	776.5	1173.0	2486.7	4136.8	4390.0	4284.7	3527.2	3727.5
65°	687.8	643.3	612.0	594.1	726.5	1870.9	3925.8	4870.9	4992.5	3825.2	3923.0
67.5°	561.7	524.0	508.6	529.1	569.8	1066.5	3362.2	5162.8	5339.2	4141.4	3971.1
70°	457.1	426.1	424.4	479.7	524.8	650.2	2473.1	4961.3	5094.1	4195.2	3682.4
72.5°	318.5	304.9	326.6	405.1	520.0	541.5	1420.3	4105.6	4110.4	3705.3	3028.9
75°	180.2	178.1	212.4	323.1	506.4	536.0	791.8	2901.3	2903.5	2802.4	2098.3
77.5°	99.2	92.7	123.7	218.4	434.9	523.6	510.7	1981.0	1930.3	1559.5	958.5
80°	45.8	43.2	67.0	140.0	318.1	495.2	409.4	1088.9	981.8	508.1	233.9
82.5°	18.8	17.9	30.8	89.9	201.0	398.9	345.0	483.0	387.7	96.6	72.2
85°	3.3	3.6	12.6	54.4	112.5	183.8	279.7	229.4	168.6	26.7	39.6
87.5°	0.0	0.0	2.6	13.1	27.2	50.3	113.5	64.1	44.1	7.9	11.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P366999  
 CATALOG NUMBER: MSA-SA1D-727-U-SL2-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	400.3	400.3	400.3	400.3	400.3	400.3	400.3	400.3	400.3	400.3	400.3
2.5°	489.0	484.9	443.9	445.8	448.7	446.1	445.6	434.2	423.7	458.2	457.8
5°	618.5	589.6	561.2	550.3	526.7	495.7	495.9	486.1	476.1	490.2	490.2
7.5°	710.7	670.9	634.9	570.8	508.3	451.8	446.8	433.4	418.2	436.5	440.1
10°	732.2	697.6	651.1	557.0	497.8	442.7	382.2	332.4	309.2	298.5	296.6
12.5°	798.2	772.5	668.5	564.3	479.2	386.0	286.8	227.7	187.4	184.3	180.0
15°	842.3	824.2	685.7	546.0	400.5	277.5	180.2	138.3	122.1	120.6	118.5
17.5°	910.8	879.3	669.2	487.6	313.3	183.1	121.1	109.2	111.1	115.4	112.1
20°	938.7	877.1	633.5	402.9	220.1	122.8	105.1	98.7	103.7	107.8	105.9
22.5°	967.3	883.3	601.8	332.1	143.8	101.6	93.7	90.4	90.8	94.9	95.1
25°	967.0	900.5	565.1	258.7	107.1	90.4	84.6	80.3	78.7	81.5	80.8
27.5°	1014.0	880.7	498.1	191.9	94.2	80.8	75.3	70.1	64.1	67.0	67.0
30°	1014.2	912.9	451.3	137.8	86.3	72.0	67.2	59.1	52.2	54.6	54.8
32.5°	1041.2	885.0	408.2	105.4	80.1	66.8	56.3	48.9	44.8	46.3	46.3
35°	1071.9	908.9	341.9	93.0	73.9	59.4	48.2	42.2	39.1	40.3	40.3
37.5°	1173.5	903.9	295.9	86.5	69.9	53.6	43.9	37.2	35.8	36.5	37.4
40°	1210.2	939.4	233.4	82.7	63.2	48.4	38.6	33.6	31.7	32.2	32.4
42.5°	1303.7	947.2	186.4	79.6	57.2	42.0	34.3	30.8	28.4	28.4	29.1
45°	1406.9	967.0	148.3	77.0	52.2	37.7	31.0	28.1	24.6	24.1	25.0
47.5°	1556.4	1042.9	120.9	71.8	46.3	35.0	28.6	24.3	21.5	20.5	21.5
50°	1806.5	1171.6	106.8	65.3	42.0	32.9	25.3	20.7	18.6	17.4	18.1
52.5°	2159.4	1394.0	99.4	59.4	38.1	29.6	22.6	18.1	16.0	15.0	15.5
55°	2551.3	1649.2	95.8	53.4	34.8	26.0	19.8	16.0	14.1	12.9	13.1
57.5°	2913.7	1889.0	92.3	47.7	31.5	23.1	17.4	14.1	12.2	11.0	11.2
60°	3270.9	2080.5	83.7	41.0	28.4	20.7	15.3	12.2	11.0	9.5	9.5
62.5°	3586.8	2194.9	71.3	35.5	25.5	18.4	13.6	11.0	10.0	8.6	8.6
65°	3801.9	2200.1	57.5	30.5	22.4	15.7	11.9	10.3	9.3	7.6	7.4
67.5°	3805.0	2057.1	46.0	27.2	19.8	13.8	10.7	9.8	8.6	7.2	6.7
70°	3405.6	1699.5	38.4	23.8	17.2	12.2	9.3	9.3	8.3	6.9	6.2
72.5°	2724.2	1298.7	32.2	20.7	15.3	10.5	8.6	8.8	8.1	6.9	6.2
75°	1831.1	744.8	26.7	17.6	13.4	8.8	8.3	8.6	8.3	6.9	6.0
77.5°	843.3	237.2	20.7	14.5	11.4	7.4	8.1	8.1	7.6	6.2	5.2
80°	190.0	58.4	15.0	10.7	9.3	5.5	7.4	6.7	6.0	4.3	3.1
82.5°	69.1	17.9	9.1	6.7	5.7	2.1	4.8	4.8	4.3	3.1	1.9
85°	39.6	9.3	5.0	4.3	3.1	1.0	2.6	2.9	2.4	2.1	1.0
87.5°	12.9	2.1	2.4	2.6	2.4	0.5	1.0	1.0	0.7	0.5	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)