

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: P366607

Luminaire Tested: **MSA-SA1A-727-U-SL4-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366607  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1A-727-U-SL4-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS  
EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2795 lumens  
Efficiency: N/A  
Efficacy: 82.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G1

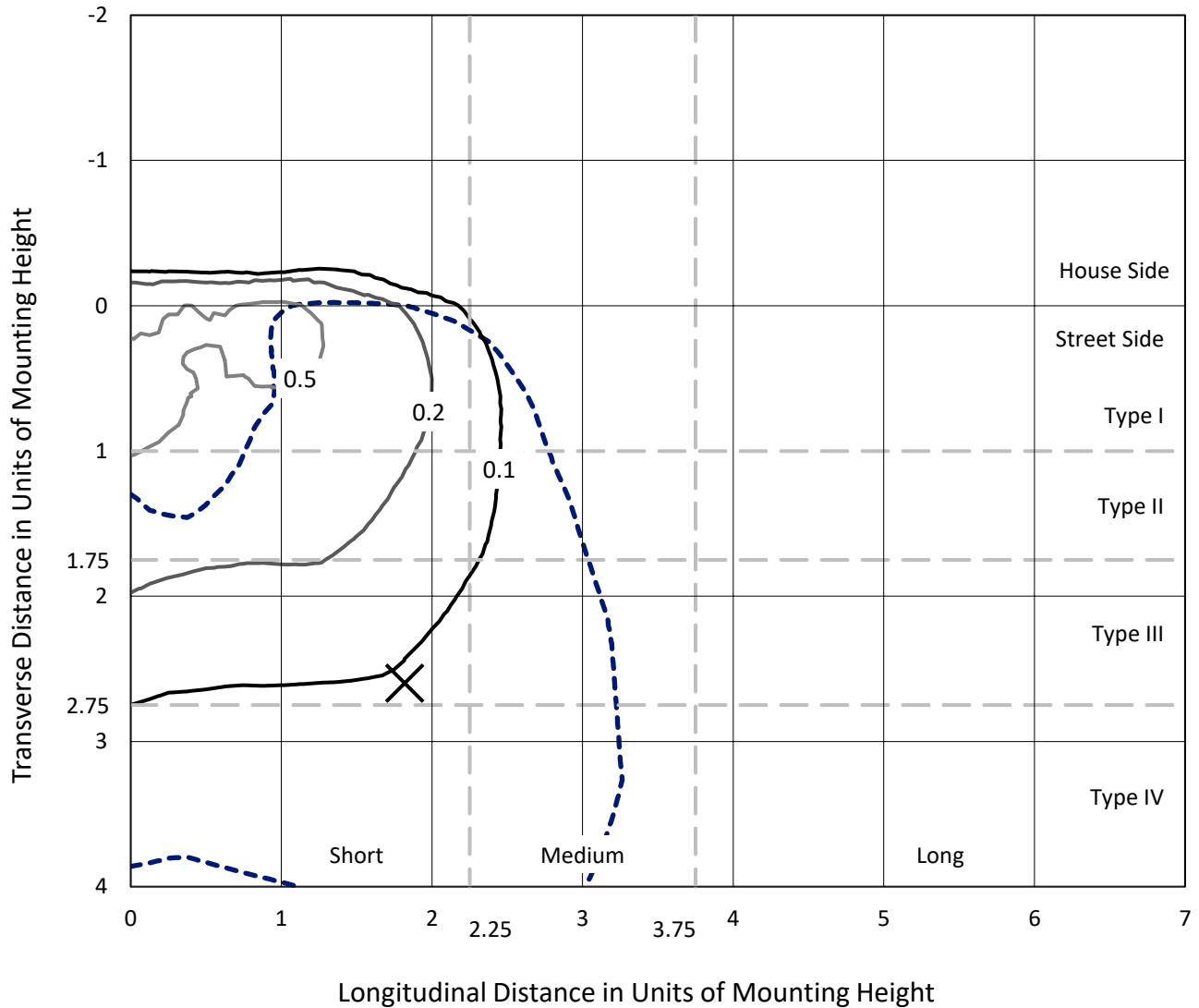
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P366607  
 CATALOG NUMBER: MSA-SA1A-727-U-SL4-HSS

### Iso-Footcandle Lines of Horizontal Illumination

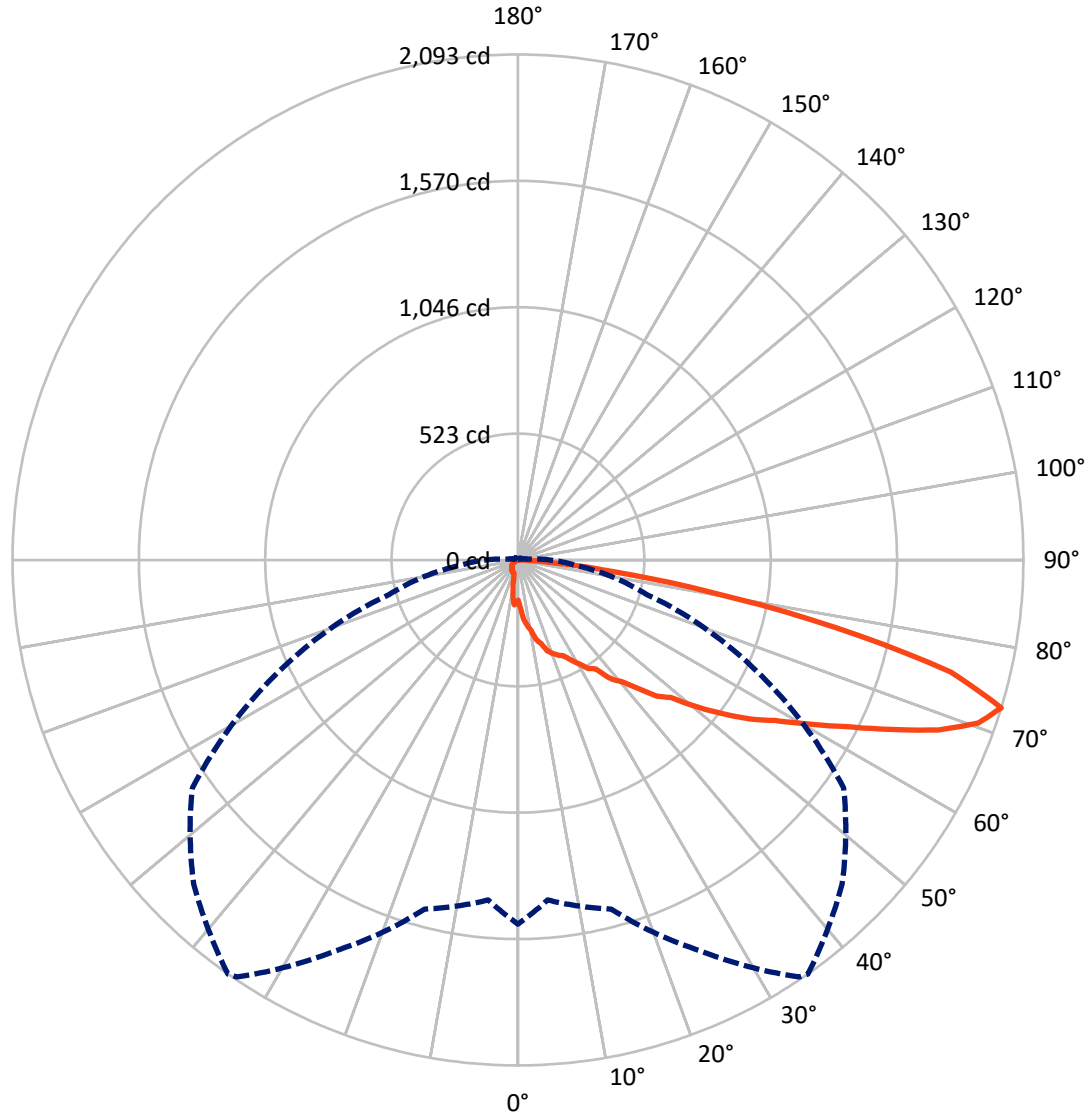
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.6 fc  
 Type IV - Short - N/A

REPORT NUMBER: P366607  
CATALOG NUMBER: MSA-SA1A-727-U-SL4-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

REPORT NUMBER: P366607  
 CATALOG NUMBER: MSA-SA1A-727-U-SL4-HSS

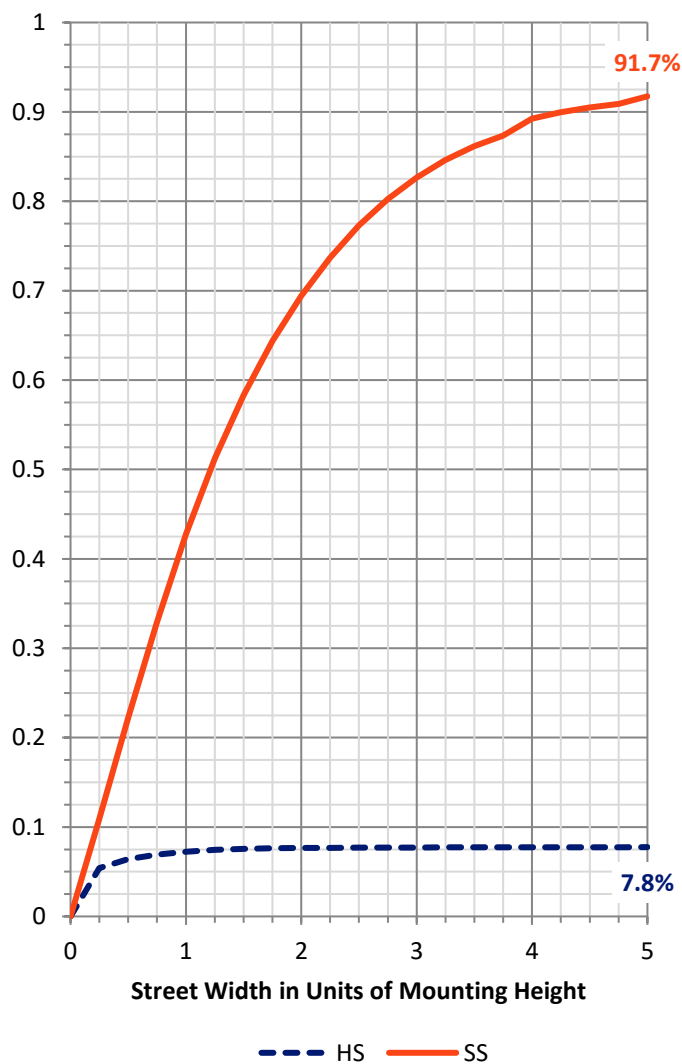
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	218.0	0.0	218.0
	% Fixture	7.8	0.0	7.8
<b>Street Side</b>	Lumens	2577.0	0.0	2577.0
	% Fixture	92.2	0.0	92.2
<b>Total</b>	Lumens	2795.0	0.0	2795.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	21.2	0.8
10°-20°	71.5	2.6
20°-30°	130.3	4.7
30°-40°	224.7	8.0
40°-50°	399.4	14.3
50°-60°	596.0	21.3
60°-70°	761.5	27.2
70°-80°	529.8	19.0
80°-90°	60.6	2.2
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°	2795.0	100.0
0°-180°	2795.0	100.0

**Coefficient of Utilization**

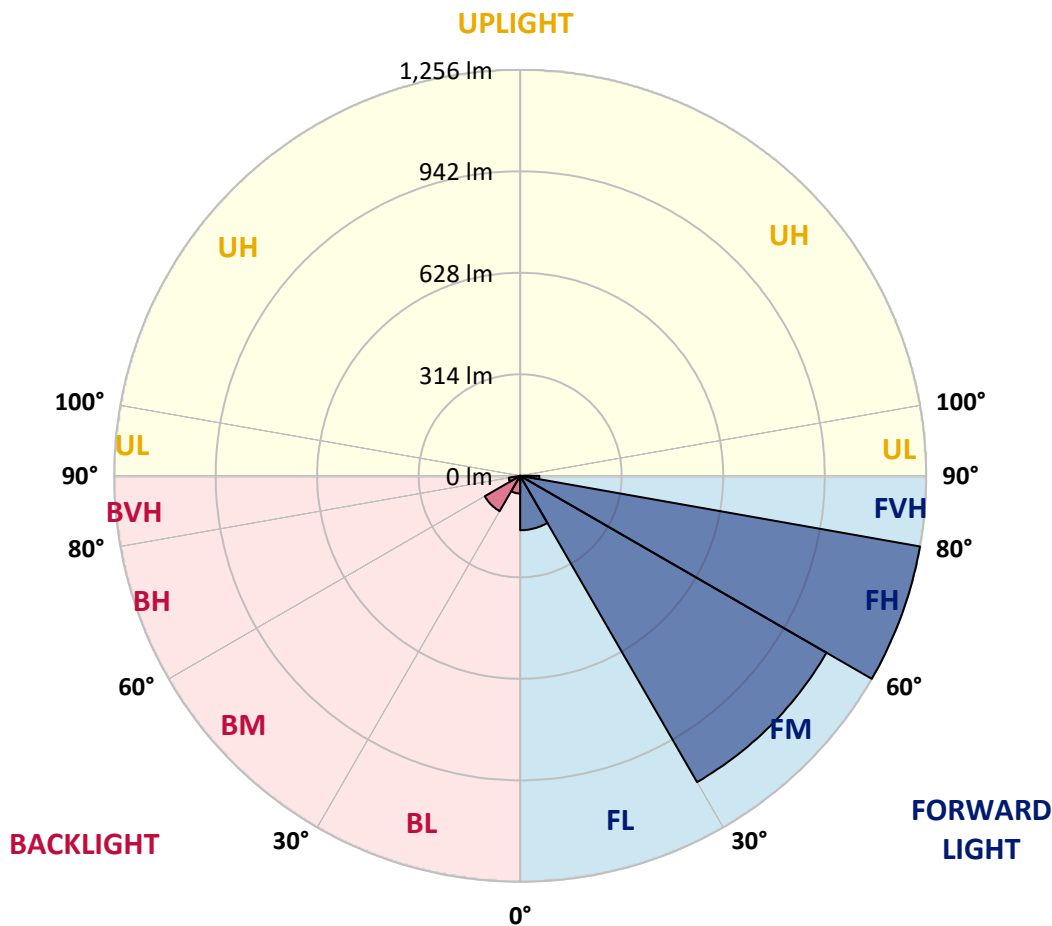


REPORT NUMBER: P366607  
 CATALOG NUMBER: MSA-SA1A-727-U-SL4-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	168.2	6.0			
FM (30°-60°)	1093.7	39.1			
FH (60°-80°)	1255.5	44.9			G1/1800
FVH (80°-90°)	59.6	2.1			G1/100
BL (0°-30°)	54.8	2.0	B0/110		
BM (30°-60°)	126.4	4.5	B0/220		
BH (60°-80°)	35.7	1.3	B0/110		G0/110
BVH (80°-90°)	1.0	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**  
 Type IV Short





REPORT NUMBER: P366607

CATALOG NUMBER: MSA-SA1A-727-U-SL4-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5
2.5°	211.9	203.6	190.1	191.1	197.1	198.4	200.2	195.4	191.2	183.8	198.3
5°	271.5	259.5	251.9	249.5	246.0	246.3	237.7	240.8	240.0	245.5	252.1
7.5°	305.0	298.4	288.9	286.2	273.3	271.9	261.3	275.5	276.9	275.0	285.8
10°	318.4	309.7	310.8	300.8	294.4	296.0	297.7	298.9	300.7	302.5	289.3
12.5°	326.3	327.8	343.1	332.7	339.2	339.2	350.6	338.5	338.9	325.7	327.9
15°	361.7	370.2	363.3	363.2	356.2	358.0	371.2	361.7	366.6	362.6	347.5
17.5°	406.1	407.7	394.7	388.9	395.2	395.4	389.8	389.3	372.2	401.1	382.7
20°	420.2	429.8	411.3	388.8	415.1	413.8	413.4	406.8	378.2	418.4	403.2
22.5°	458.9	445.3	432.6	417.9	428.1	428.1	426.6	412.1	401.0	416.9	423.3
25°	471.0	472.7	456.2	451.4	451.7	439.1	438.0	431.8	421.1	448.2	435.3
27.5°	512.6	511.9	472.4	485.7	468.7	468.9	437.8	451.7	453.5	449.8	464.2
30°	553.4	564.8	505.3	522.1	504.3	498.9	468.6	480.9	484.2	479.8	498.1
32.5°	605.6	622.3	564.4	547.8	520.6	535.7	514.8	485.6	501.6	540.5	550.8
35°	660.8	668.9	607.3	584.1	553.3	553.2	552.5	554.9	572.6	616.4	625.1
37.5°	760.0	740.7	685.0	631.8	638.7	623.4	612.7	624.0	642.4	714.6	751.8
40°	815.3	801.4	722.9	691.4	657.3	662.9	691.8	690.6	739.6	815.2	871.0
42.5°	869.2	856.0	778.7	753.2	709.4	724.7	737.4	753.4	853.8	975.8	1006.4
45°	917.1	878.3	823.8	824.8	802.0	803.8	826.2	840.9	986.2	1111.2	1132.7
47.5°	946.0	914.1	861.9	860.9	859.5	850.9	956.1	969.6	1091.7	1240.2	1242.2
50°	986.8	946.9	901.1	901.9	934.4	952.5	1078.1	1076.7	1193.6	1347.9	1302.5
52.5°	1037.5	988.7	938.3	975.8	1026.0	1055.5	1157.5	1199.1	1303.0	1415.4	1326.1
55°	1102.4	1041.4	992.8	1040.9	1150.3	1161.7	1235.2	1323.0	1422.3	1484.4	1333.7
57.5°	1178.6	1105.8	1066.4	1143.8	1253.0	1253.3	1348.3	1455.1	1495.5	1512.5	1325.1
60°	1260.6	1175.7	1136.1	1205.8	1366.3	1377.8	1474.0	1528.0	1569.9	1526.7	1309.8
62.5°	1332.8	1239.1	1208.3	1290.3	1490.5	1517.7	1583.6	1575.9	1623.5	1544.6	1270.9
65°	1418.8	1321.2	1300.9	1421.9	1652.6	1690.1	1706.7	1660.9	1641.5	1530.8	1169.6
67.5°	1504.0	1412.6	1412.1	1567.9	1865.2	1878.1	1860.7	1780.8	1620.6	1409.4	984.0
70°	1564.0	1465.9	1502.8	1727.8	2058.4	2022.1	1948.8	1837.4	1469.4	1080.2	642.8
72.5°	1507.6	1413.1	1496.4	1784.7	2082.3	2092.7	1897.8	1645.9	1091.7	552.5	232.7
75°	1145.7	1087.8	1299.2	1583.3	1848.8	1851.1	1584.0	1160.8	537.6	150.1	64.4
77.5°	577.1	558.6	822.4	1124.0	1348.8	1344.9	1088.3	621.9	173.0	49.9	32.5
80°	292.1	277.4	350.0	606.4	801.0	806.9	621.5	278.5	87.3	27.1	22.5
82.5°	179.4	170.3	191.5	274.4	388.8	398.2	235.8	176.3	54.1	16.0	20.5
85°	34.7	36.5	110.0	137.4	155.3	151.6	69.8	145.1	16.3	9.6	14.9
87.5°	0.0	0.6	25.4	44.8	45.0	39.9	15.9	32.2	2.2	2.7	1.8
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: P366607  
 CATALOG NUMBER: MSA-SA1A-727-U-SL4-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5	166.5
2.5°	200.6	198.5	181.0	179.0	179.4	176.5	175.5	169.3	167.8	177.3	179.0
5°	249.3	235.2	218.9	213.0	203.9	188.4	186.2	182.2	177.9	179.6	178.3
7.5°	279.0	260.4	242.9	211.9	186.2	163.7	160.0	153.3	146.5	146.7	151.0
10°	283.8	268.1	244.1	206.3	176.9	148.8	124.3	106.6	98.6	91.5	93.6
12.5°	311.5	296.9	252.6	204.6	163.4	119.6	87.5	70.3	62.7	60.1	59.9
15°	333.7	322.2	267.2	199.4	133.5	84.2	62.7	57.6	56.2	58.6	57.9
17.5°	366.7	345.9	265.7	177.9	101.7	63.9	57.7	57.0	58.7	60.1	60.6
20°	381.2	351.3	255.2	144.2	76.2	58.6	56.3	54.9	58.0	62.2	61.4
22.5°	395.8	360.4	242.8	118.0	61.3	56.1	54.8	53.7	56.1	60.1	61.1
25°	402.4	375.0	229.0	92.2	56.9	53.1	52.3	52.7	54.7	58.3	57.9
27.5°	435.7	376.7	202.7	72.8	55.1	51.0	51.0	52.0	52.0	56.9	56.5
30°	456.5	405.2	181.4	61.3	53.0	48.1	49.7	50.2	49.5	54.8	55.2
32.5°	493.0	413.1	160.6	56.2	49.6	47.6	47.3	47.6	48.2	53.4	53.5
35°	549.2	451.9	132.2	54.2	47.9	45.5	43.6	45.1	46.5	50.3	51.0
37.5°	659.1	491.6	107.8	52.7	47.1	43.6	42.9	42.6	45.1	49.5	50.9
40°	748.0	562.0	87.7	51.4	45.4	42.4	40.6	40.7	43.0	46.2	48.3
42.5°	873.9	612.9	74.3	49.5	43.0	40.0	37.9	39.2	40.2	43.6	45.0
45°	979.0	652.4	65.5	48.2	40.6	37.8	36.1	37.5	36.5	38.2	40.2
47.5°	1062.6	686.8	58.9	45.1	39.1	36.5	34.4	34.0	32.3	32.7	34.6
50°	1108.6	681.0	53.4	42.0	37.1	35.3	32.3	29.4	27.1	27.0	28.1
52.5°	1124.9	650.3	48.9	39.3	34.7	32.5	29.1	25.0	22.8	22.1	23.0
55°	1129.4	606.0	44.8	36.4	32.5	28.9	25.4	21.1	18.7	17.6	18.5
57.5°	1114.8	537.9	40.9	33.6	29.8	25.6	21.8	17.3	15.0	13.6	14.5
60°	1078.7	451.3	37.4	30.1	27.0	22.6	18.4	13.9	11.5	10.3	10.7
62.5°	998.7	353.8	33.6	26.8	24.0	19.8	15.5	11.0	8.7	7.6	7.7
65°	877.0	263.7	29.2	23.7	21.4	17.1	12.4	8.4	6.6	5.6	5.5
67.5°	698.7	178.7	24.9	20.5	19.0	14.5	9.8	6.6	5.2	4.5	4.2
70°	410.7	90.1	20.7	17.7	16.3	12.1	7.7	5.3	4.8	4.2	3.9
72.5°	135.4	38.9	16.2	14.6	13.5	9.7	6.0	4.9	4.6	4.1	3.8
75°	47.2	22.5	11.9	11.2	10.7	7.3	5.1	4.5	4.5	3.9	3.5
77.5°	30.9	17.4	8.9	8.1	8.0	5.3	4.4	4.2	3.9	3.2	2.7
80°	25.7	9.8	6.2	5.8	5.6	3.4	3.5	3.1	2.4	1.4	0.6
82.5°	23.7	5.9	3.2	3.5	3.2	1.3	2.0	1.7	1.3	0.6	0.0
85°	13.9	2.7	1.8	1.8	1.4	0.3	1.0	1.0	0.6	0.1	0.0
87.5°	1.5	1.3	1.0	1.0	0.7	0.0	0.4	0.3	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)