

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: P596501

Luminaire Tested: **MSA-SA1B-827-U-SL2-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596501  
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-SA1B-827-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: 3051 lumens  
Efficiency: N/A  
Efficacy: 69.3 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

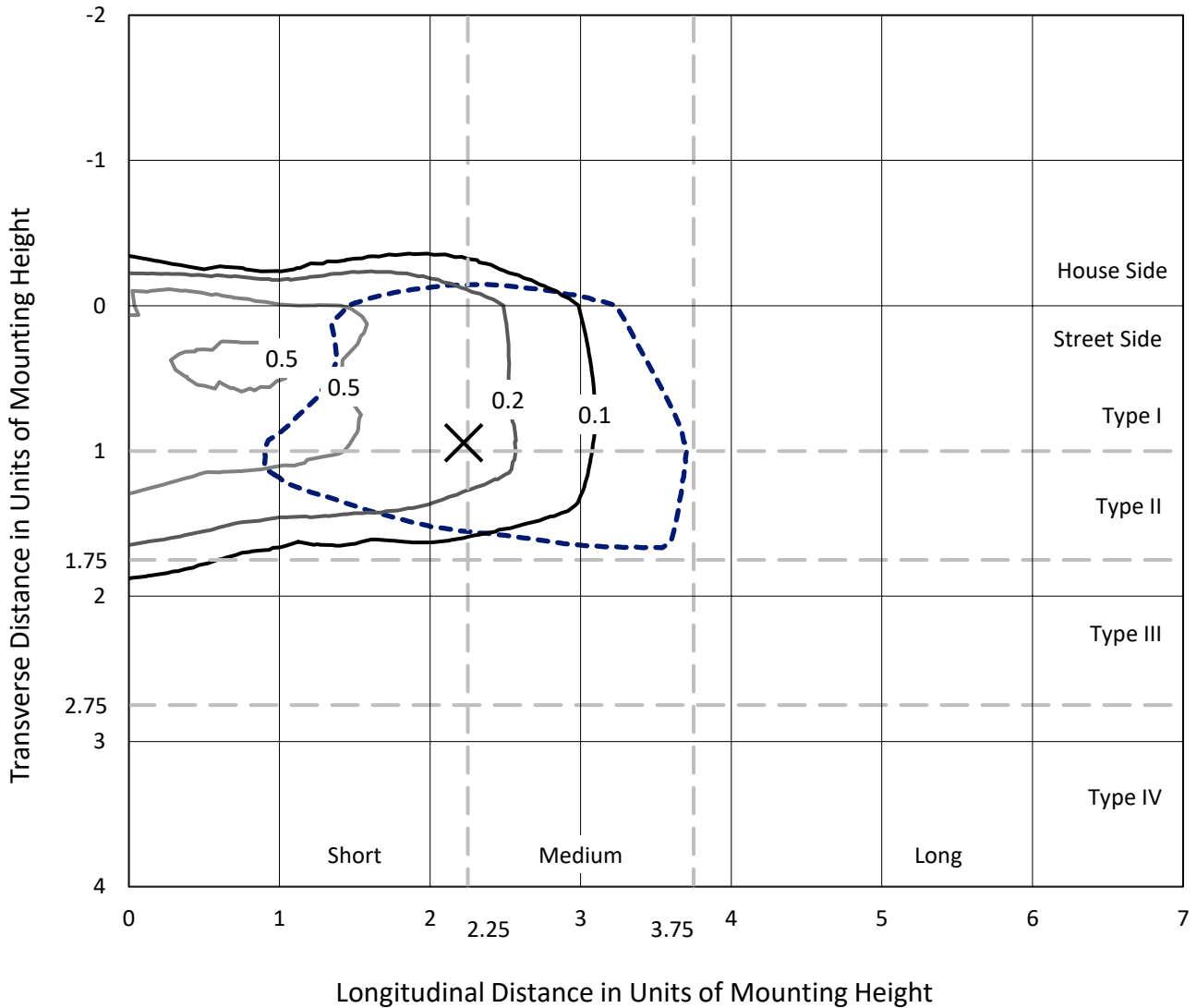
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

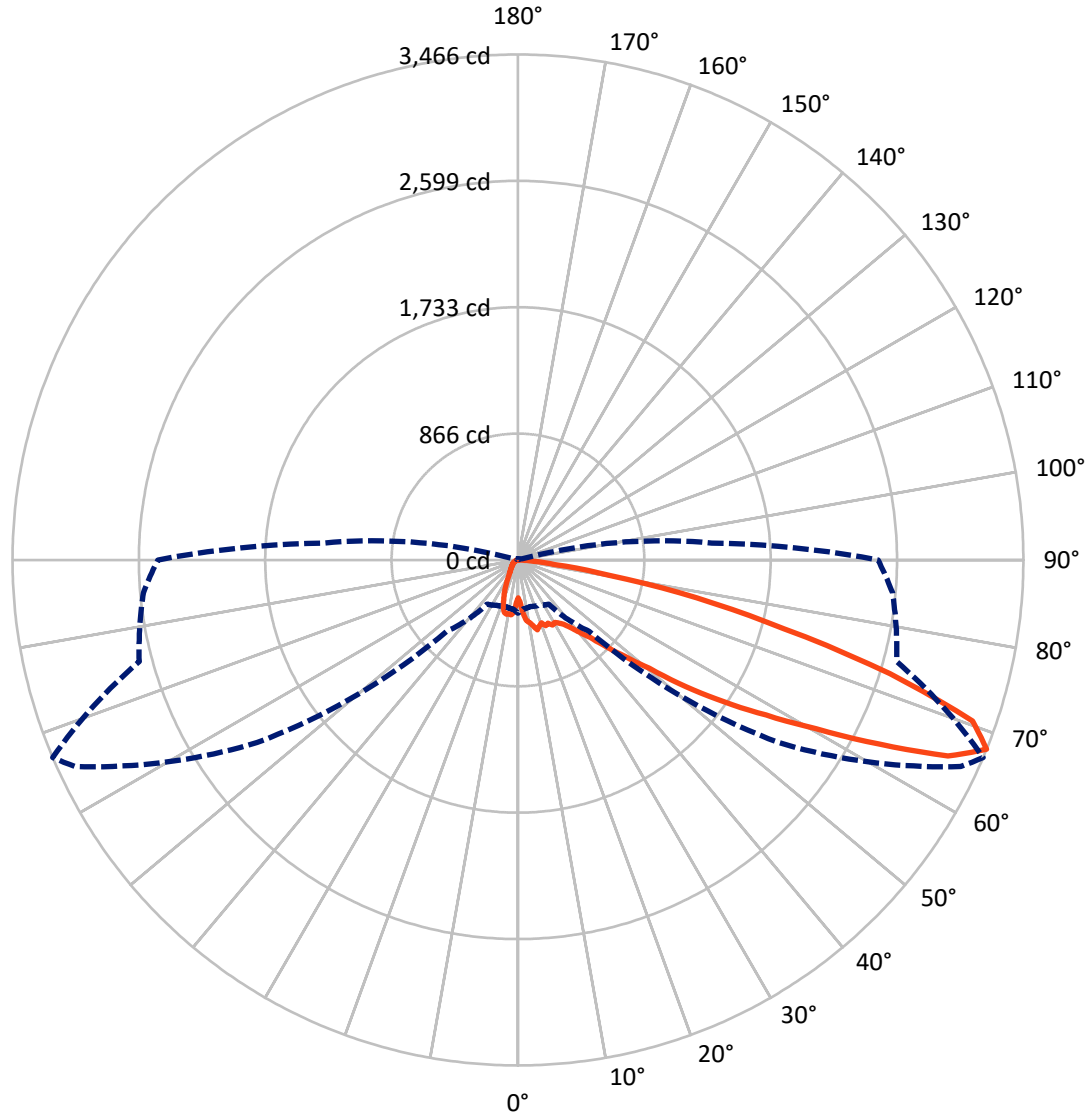
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 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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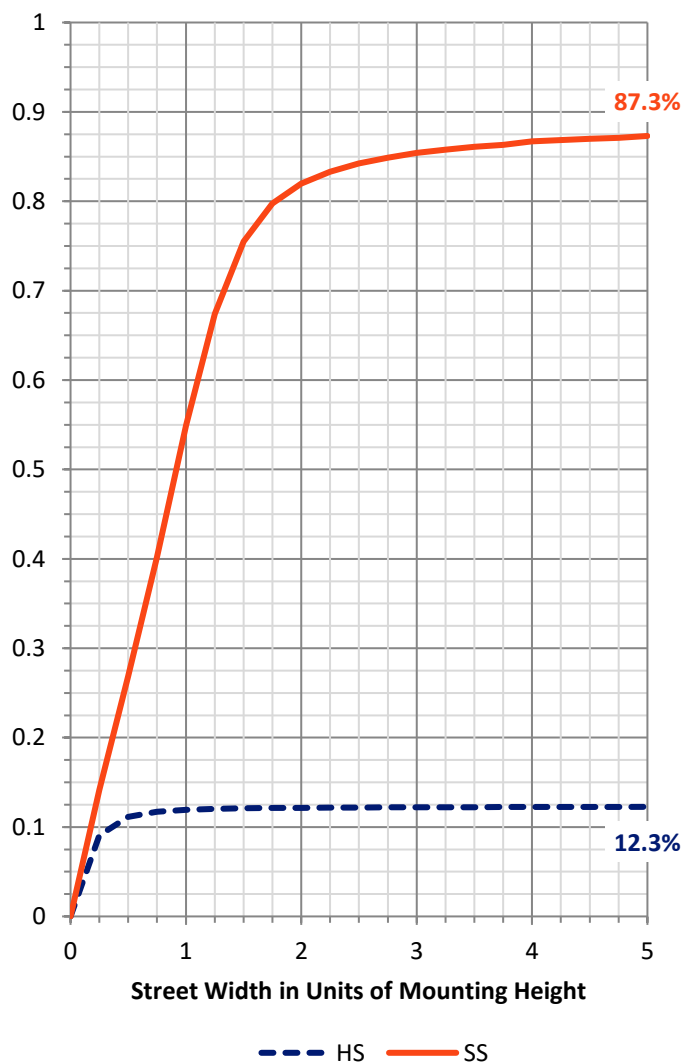
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	377.3	0.0	377.3
	% Fixture	12.4	0.0	12.4
<b>Street Side</b>	Lumens	2673.7	0.0	2673.7
	% Fixture	87.6	0.0	87.6
<b>Total</b>	Lumens	3051.0	0.0	3051.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.6	1.1
10°-20°	96.5	3.2
20°-30°	151.3	5.0
30°-40°	243.9	8.0
40°-50°	448.1	14.7
50°-60°	756.9	24.8
60°-70°	836.7	27.4
70°-80°	437.9	14.4
80°-90°	47.0	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°	3051.0	100.0
0°-180°	3051.0	100.0

**Coefficient of Utilization**

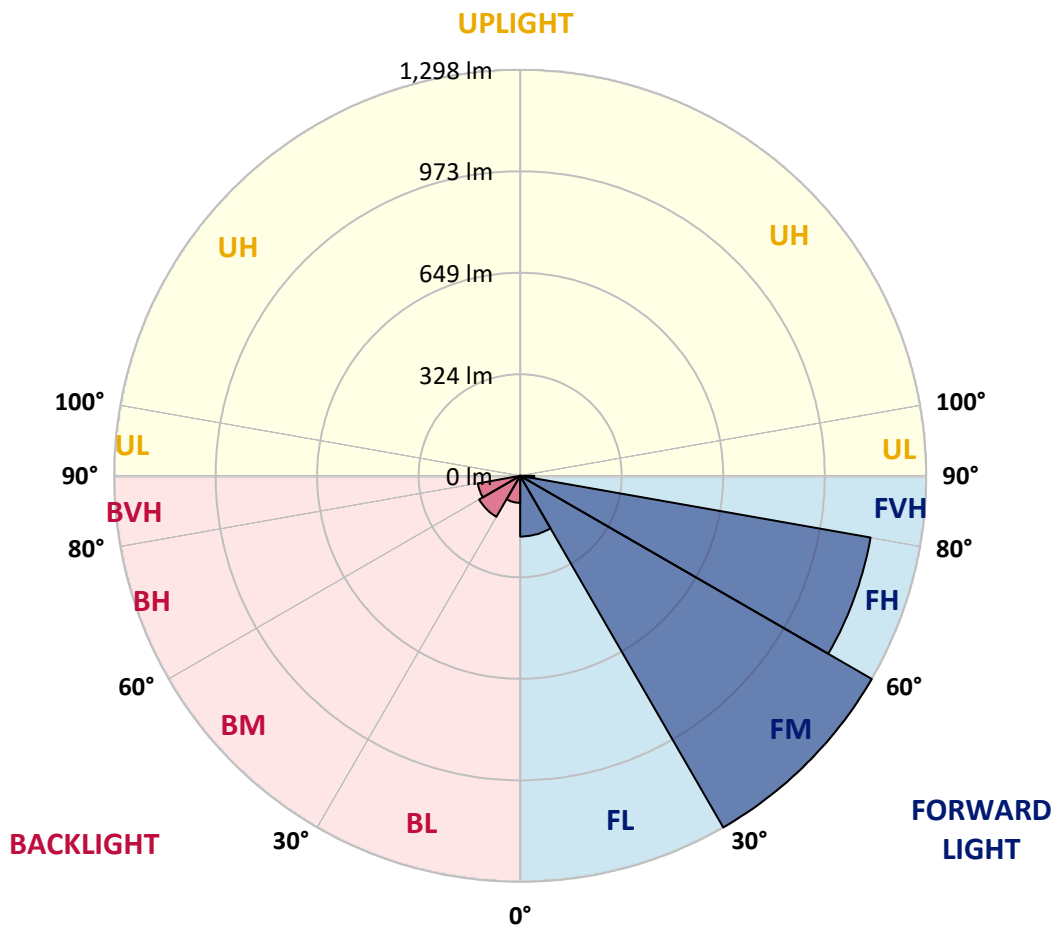


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	194.0	6.4			
FM (30°-60°)	1297.6	42.5			
FH (60°-80°)	1137.1	37.3			G1/1800
FVH (80°-90°)	45.0	1.5			G1/100
BL (0°-30°)	86.4	2.8	B0/110		
BM (30°-60°)	151.3	5.0	B0/220		
BH (60°-80°)	137.6	4.5	B1/500		G1/500
BVH (80°-90°)	2.0	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	259.9	259.9	259.9	259.9	259.9	259.9	259.9	259.9	259.9	259.9	259.9
2.5°	306.8	296.4	278.7	283.8	294.1	302.6	298.6	290.7	290.8	282.8	311.7
5°	356.9	343.0	332.8	336.3	335.9	335.5	354.6	361.9	364.9	378.3	397.9
7.5°	371.3	366.3	355.7	358.9	348.2	349.0	382.4	414.0	419.0	427.2	462.1
10°	365.7	356.1	360.0	360.0	360.2	377.5	399.9	430.1	436.1	467.7	471.4
12.5°	359.7	360.2	375.5	372.7	393.7	424.8	432.4	466.3	463.4	490.8	531.5
15°	382.1	393.9	384.0	387.9	389.9	426.4	438.6	483.7	496.7	531.3	557.8
17.5°	420.7	422.2	401.6	396.1	410.6	421.0	445.6	467.3	475.9	566.9	604.4
20°	427.6	437.5	416.6	384.4	415.2	429.5	446.7	457.0	460.8	577.9	630.7
22.5°	469.6	458.6	425.2	400.7	409.5	425.0	435.7	466.9	489.2	557.2	655.9
25°	491.1	488.1	456.3	435.4	426.4	425.2	449.6	473.3	480.4	578.7	662.1
27.5°	542.6	536.0	474.2	471.6	442.0	416.0	450.1	492.6	505.9	558.4	685.3
30°	612.7	610.3	528.1	526.4	479.3	432.6	475.1	504.6	496.5	568.8	700.8
32.5°	683.3	703.4	619.4	571.4	536.1	493.4	468.0	500.8	515.2	594.0	729.3
35°	768.6	783.1	697.6	662.7	584.3	521.9	515.2	536.3	542.5	624.0	761.6
37.5°	917.8	895.8	822.9	763.6	722.5	623.6	590.8	574.0	588.4	664.7	827.7
40°	1028.0	1014.1	924.3	888.8	794.1	736.2	650.5	634.9	651.0	706.5	873.7
42.5°	1160.9	1132.0	1047.5	1023.5	926.0	814.4	727.4	732.8	722.8	789.0	954.3
45°	1281.2	1215.9	1168.8	1174.2	1122.2	971.5	855.7	853.1	844.7	908.5	1039.1
47.5°	1362.1	1305.0	1259.2	1244.2	1238.0	1247.8	1041.1	994.4	988.2	1034.0	1172.7
50°	1405.6	1343.1	1286.5	1289.5	1415.2	1509.8	1232.4	1166.0	1168.4	1216.2	1355.3
52.5°	1376.4	1305.6	1245.9	1303.9	1552.7	1684.5	1549.1	1390.3	1444.2	1431.9	1600.3
55°	1241.3	1179.8	1137.4	1241.3	1567.7	1872.6	1939.0	1727.9	1715.8	1687.9	1850.1
57.5°	1013.9	961.0	934.8	1044.4	1403.5	2024.1	2330.5	2109.4	2006.4	1889.7	2057.5
60°	755.4	716.4	689.2	747.1	1105.8	1876.9	2587.0	2468.9	2349.7	2084.3	2243.9
62.5°	559.5	527.8	498.8	504.1	761.5	1614.3	2685.4	2849.8	2781.4	2289.7	2419.7
65°	446.5	417.6	397.3	385.7	471.6	1214.5	2548.5	3162.0	3240.9	2483.1	2546.6
67.5°	364.6	340.2	330.1	343.4	369.9	692.3	2182.6	3351.4	3465.9	2688.4	2577.9
70°	296.7	276.6	275.5	311.4	340.6	422.1	1605.4	3220.6	3306.8	2723.3	2390.4
72.5°	206.8	198.0	212.0	263.0	337.6	351.5	922.0	2665.1	2668.2	2405.3	1966.2
75°	117.0	115.6	137.9	209.7	328.7	347.9	514.0	1883.4	1884.8	1819.2	1362.1
77.5°	64.4	60.2	80.3	141.8	282.3	339.9	331.5	1286.0	1253.0	1012.4	622.2
80°	29.7	28.0	43.5	90.9	206.5	321.5	265.7	706.8	637.3	329.8	151.8
82.5°	12.2	11.6	20.0	58.3	130.5	258.9	224.0	313.6	251.7	62.7	46.9
85°	2.2	2.3	8.2	35.3	73.1	119.3	181.5	148.9	109.4	17.3	25.7
87.5°	0.0	0.0	1.7	8.5	17.6	32.7	73.7	41.6	28.6	5.1	7.6
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°	259.9	259.9	259.9	259.9	259.9	259.9	259.9	259.9	259.9	259.9	259.9
2.5°	317.4	314.8	288.2	289.4	291.3	289.6	289.3	281.8	275.0	297.5	297.2
5°	401.5	382.7	364.3	357.2	341.9	321.8	321.9	315.6	309.1	318.2	318.2
7.5°	461.4	435.5	412.2	370.5	330.0	293.3	290.0	281.4	271.5	283.4	285.7
10°	475.3	452.9	422.7	361.5	323.2	287.4	248.1	215.8	200.7	193.8	192.5
12.5°	518.2	501.5	434.0	366.3	311.1	250.6	186.2	147.8	121.6	119.6	116.9
15°	546.8	535.0	445.1	354.4	260.0	180.2	117.0	89.8	79.2	78.3	76.9
17.5°	591.2	570.8	434.4	316.5	203.4	118.9	78.6	70.9	72.1	74.9	72.7
20°	609.3	569.4	411.2	261.6	142.9	79.7	68.3	64.1	67.3	70.0	68.7
22.5°	627.9	573.4	390.6	215.6	93.3	65.9	60.8	58.7	59.0	61.6	61.8
25°	627.7	584.6	366.8	167.9	69.5	58.7	54.9	52.2	51.1	52.9	52.5
27.5°	658.2	571.7	323.3	124.6	61.1	52.5	48.9	45.5	41.6	43.5	43.5
30°	658.4	592.6	293.0	89.5	56.0	46.7	43.6	38.4	33.9	35.4	35.6
32.5°	675.9	574.5	265.0	68.4	52.0	43.3	36.5	31.7	29.1	30.0	30.0
35°	695.8	590.0	221.9	60.4	48.0	38.5	31.3	27.4	25.4	26.2	26.2
37.5°	761.8	586.7	192.1	56.2	45.3	34.8	28.5	24.1	23.2	23.7	24.3
40°	785.6	609.8	151.5	53.7	41.0	31.4	25.1	21.8	20.6	20.9	21.0
42.5°	846.3	614.9	121.0	51.7	37.1	27.2	22.3	20.0	18.4	18.4	18.9
45°	913.3	627.7	96.3	50.0	33.9	24.5	20.1	18.3	15.9	15.6	16.3
47.5°	1010.3	677.0	78.5	46.6	30.0	22.8	18.6	15.8	13.9	13.3	13.9
50°	1172.7	760.5	69.3	42.4	27.2	21.4	16.4	13.5	12.1	11.3	11.8
52.5°	1401.8	904.9	64.5	38.5	24.8	19.2	14.7	11.8	10.4	9.8	10.1
55°	1656.2	1070.5	62.2	34.7	22.6	16.9	12.8	10.4	9.1	8.4	8.5
57.5°	1891.4	1226.2	59.9	31.0	20.4	15.0	11.3	9.1	7.9	7.1	7.3
60°	2123.3	1350.5	54.3	26.6	18.4	13.5	9.9	7.9	7.1	6.2	6.2
62.5°	2328.4	1424.8	46.3	23.1	16.6	11.9	8.8	7.1	6.5	5.6	5.6
65°	2468.0	1428.2	37.3	19.8	14.5	10.2	7.7	6.7	6.0	5.0	4.8
67.5°	2470.0	1335.4	29.9	17.6	12.8	9.0	7.0	6.3	5.6	4.6	4.3
70°	2210.7	1103.2	24.9	15.5	11.1	7.9	6.0	6.0	5.4	4.5	4.0
72.5°	1768.4	843.0	20.9	13.5	9.9	6.8	5.6	5.7	5.3	4.5	4.0
75°	1188.6	483.5	17.3	11.5	8.7	5.7	5.4	5.6	5.4	4.5	3.9
77.5°	547.4	154.0	13.5	9.4	7.4	4.8	5.3	5.3	5.0	4.0	3.4
80°	123.4	37.9	9.8	7.0	6.0	3.6	4.8	4.3	3.9	2.8	2.0
82.5°	44.9	11.6	5.9	4.3	3.7	1.4	3.1	3.1	2.8	2.0	1.2
85°	25.7	6.0	3.3	2.8	2.0	0.6	1.7	1.9	1.5	1.4	0.6
87.5°	8.4	1.4	1.5	1.7	1.5	0.3	0.6	0.6	0.5	0.3	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)