

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: P596869

Luminaire Tested: **MSA-SA1B-835-U-T4W-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596869  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1B-835-U-T4W-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3148 lumens  
Efficiency: N/A  
Efficacy: 71.5 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

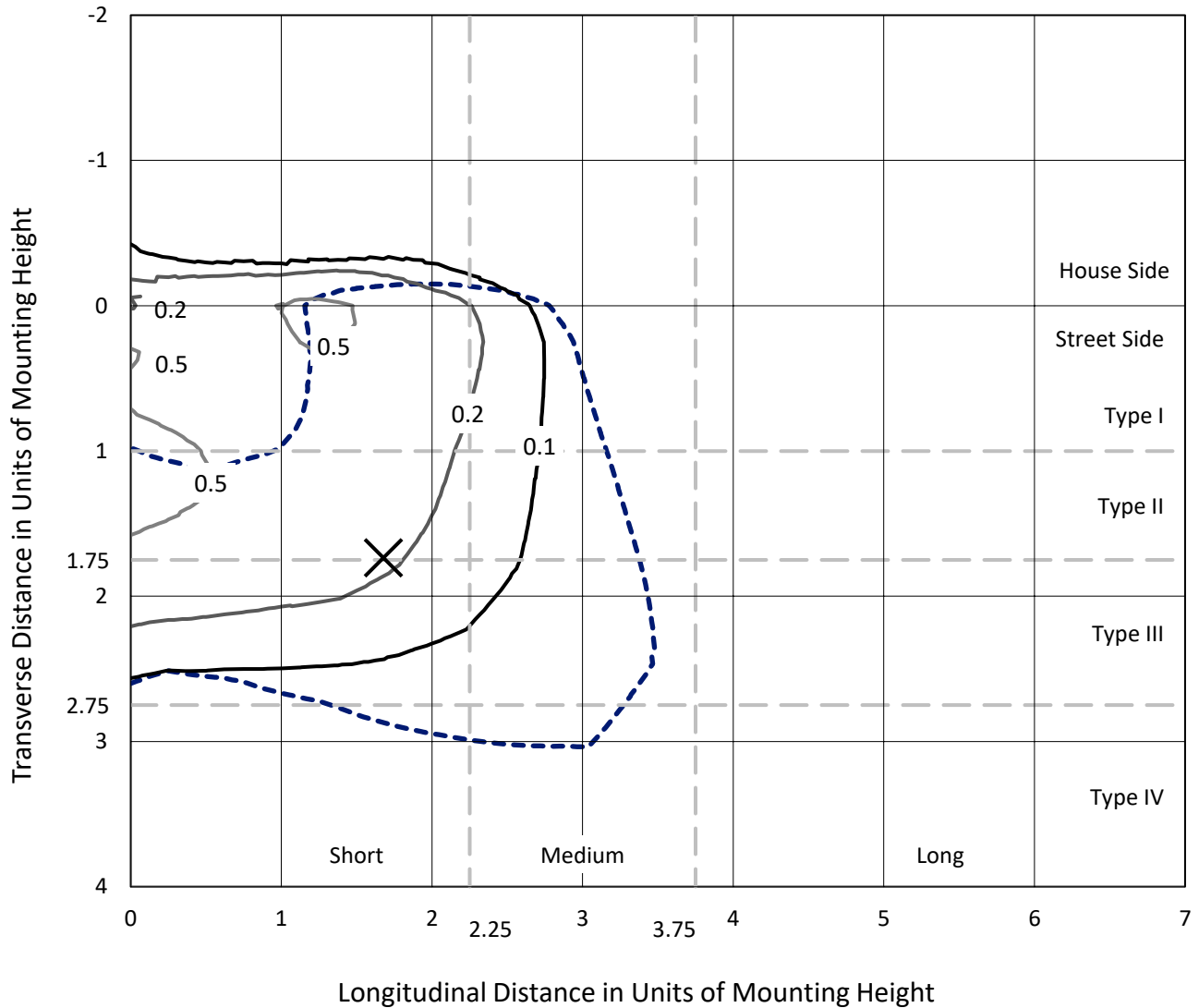
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

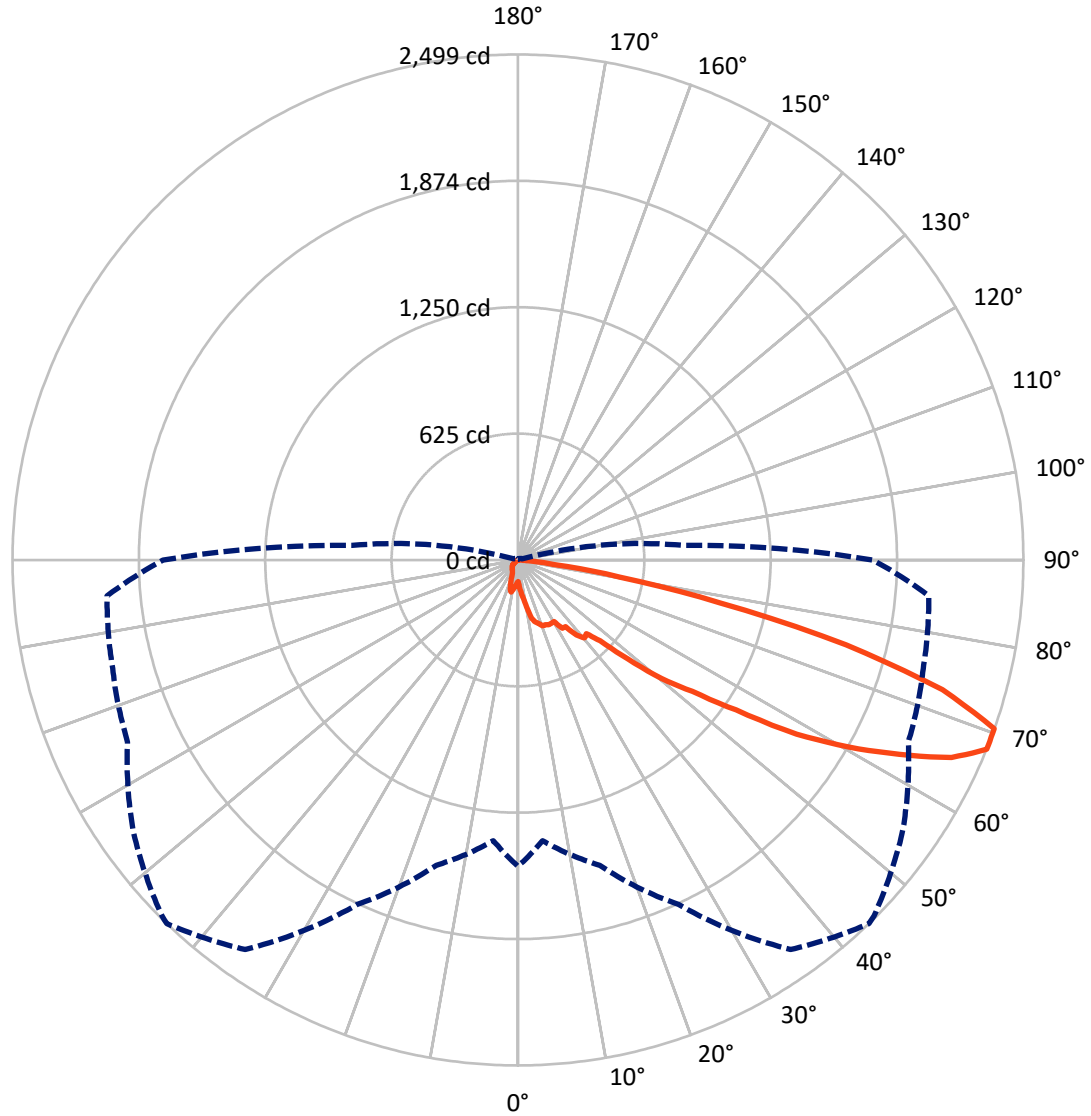
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.7 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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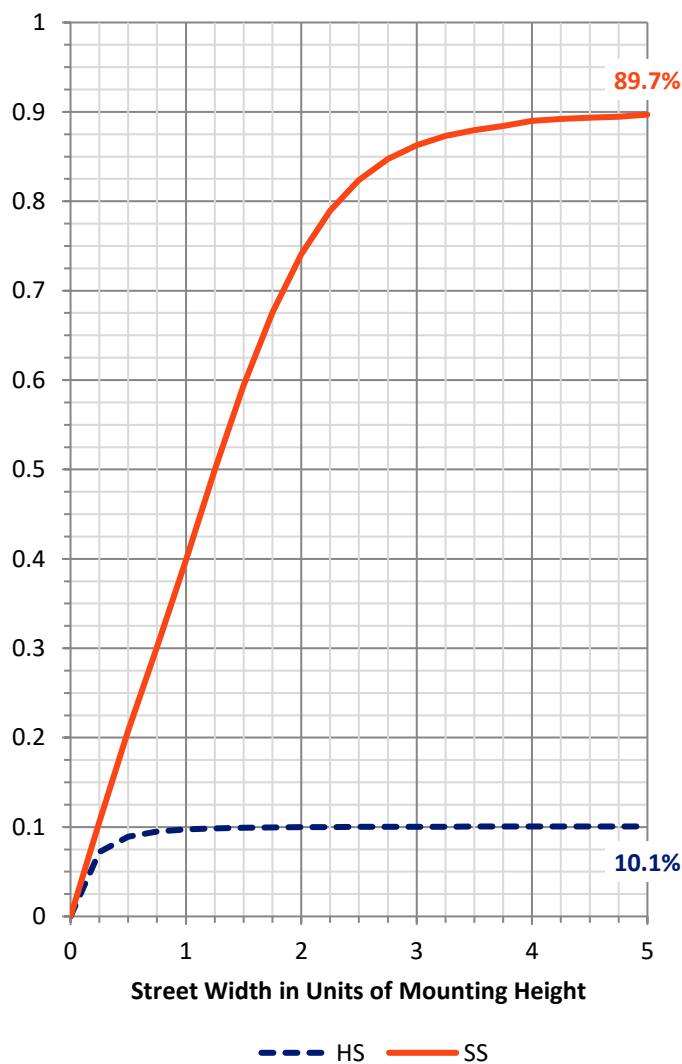
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	319.8	0.0	319.8
	% Fixture	10.2	0.0	10.2
<b>Street Side</b>	Lumens	2828.2	0.0	2828.2
	% Fixture	89.8	0.0	89.8
<b>Total</b>	Lumens	3148.0	0.0	3148.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	15.7	0.5
10°-20°	65.8	2.1
20°-30°	116.6	3.7
30°-40°	189.5	6.0
40°-50°	379.2	12.0
50°-60°	778.0	24.7
60°-70°	1068.7	33.9
70°-80°	502.3	16.0
80°-90°	32.2	1.0
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°	3148.0	100.0
0°-180°	3148.0	100.0

**Coefficient of Utilization**



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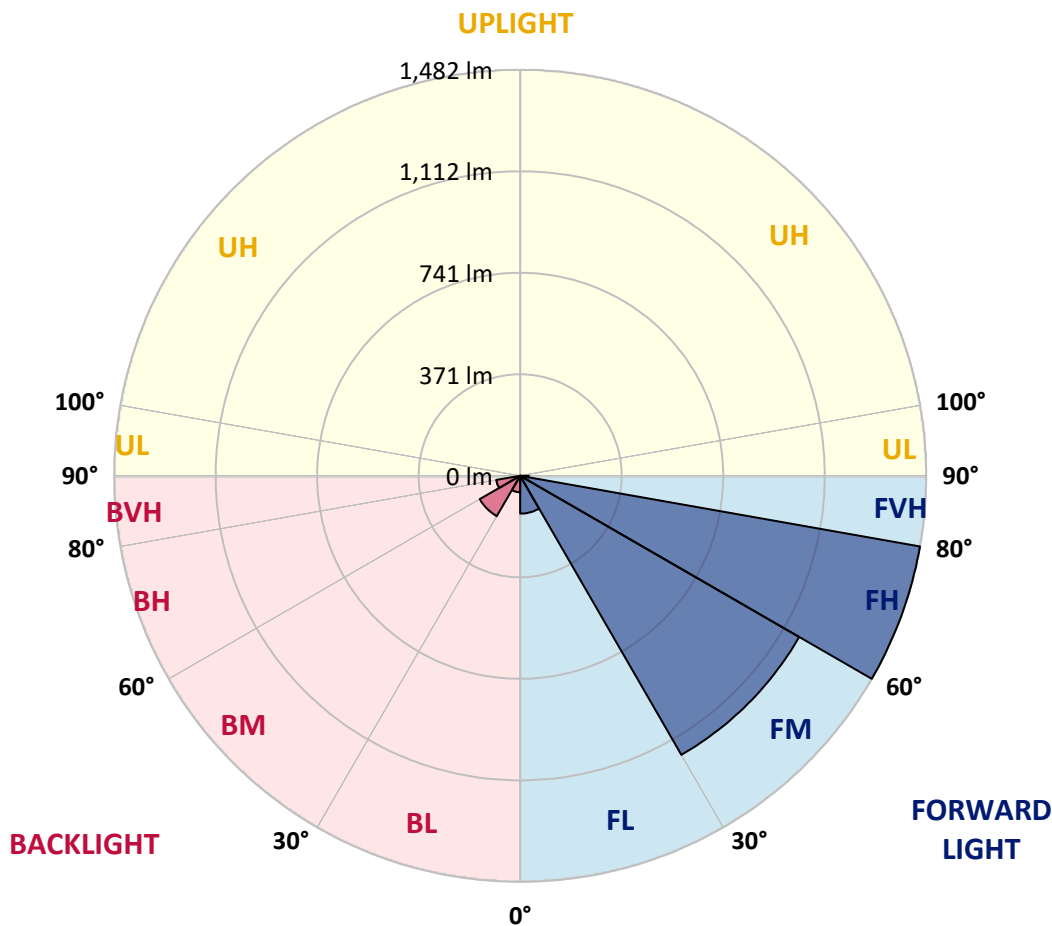
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	138.1	4.4			
FM (30°-60°)	1176.4	37.4			
FH (60°-80°)	1482.3	47.1			G1/1800
FVH (80°-90°)	31.5	1.0			G1/100
BL (0°-30°)	60.0	1.9	B0/110		
BM (30°-60°)	170.3	5.4	B0/220		
BH (60°-80°)	88.7	2.8	B0/110		G0/110
BVH (80°-90°)	0.7	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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1
2.5°	134.9	130.5	124.3	125.7	126.4	128.3	128.5	126.0	119.1	117.2	125.7
5°	189.0	178.4	176.5	172.5	164.6	160.2	159.2	163.5	158.0	156.2	158.5
7.5°	241.5	232.4	222.5	217.2	200.5	190.3	189.7	191.5	192.5	186.4	189.6
10°	276.4	266.5	264.4	251.7	237.3	234.9	233.8	227.2	221.8	217.3	202.2
12.5°	307.9	307.8	311.6	293.4	291.1	293.5	292.7	269.1	263.7	244.8	240.4
15°	350.0	360.4	343.9	328.6	309.2	317.5	315.2	300.1	296.5	283.6	265.1
17.5°	393.5	396.3	368.7	345.3	340.2	329.3	331.6	326.2	307.8	318.0	299.6
20°	394.6	400.6	371.1	332.4	347.9	347.3	347.5	342.3	318.0	342.0	325.1
22.5°	409.1	394.2	366.8	342.1	344.9	347.5	350.3	343.9	338.7	344.6	347.7
25°	403.2	397.3	371.0	354.6	352.0	354.1	354.8	363.0	359.7	373.9	366.1
27.5°	418.5	410.0	362.8	365.8	356.5	354.1	350.0	377.2	386.9	375.6	396.5
30°	444.7	443.5	376.9	381.2	374.1	352.7	363.8	399.4	411.6	404.6	430.0
32.5°	485.7	489.9	418.0	389.9	393.5	403.1	398.9	399.4	430.2	445.6	465.7
35°	543.9	541.6	458.1	422.9	403.8	405.3	411.2	439.5	479.3	478.2	499.6
37.5°	658.1	633.4	529.1	456.5	462.3	470.1	465.7	503.8	507.6	509.0	560.0
40°	826.5	793.6	641.1	527.5	472.3	506.9	504.8	514.2	539.7	549.2	623.7
42.5°	1048.3	1004.2	838.1	658.1	520.9	497.2	510.0	527.7	613.5	640.7	722.3
45°	1293.4	1204.2	1034.6	844.2	642.8	569.0	578.7	611.7	730.6	775.8	865.9
47.5°	1452.2	1373.8	1229.2	1009.1	769.9	731.2	732.0	739.1	868.3	952.0	1072.8
50°	1590.2	1506.7	1372.6	1181.4	994.7	921.4	904.7	871.9	1043.6	1158.0	1292.0
52.5°	1785.0	1687.4	1515.9	1383.7	1251.0	1078.5	1072.6	1083.7	1250.4	1370.7	1516.8
55°	1960.7	1842.1	1678.4	1595.1	1543.4	1309.4	1314.4	1333.0	1515.8	1579.5	1716.8
57.5°	2038.3	1909.8	1825.6	1788.1	1760.5	1624.8	1607.8	1596.7	1725.1	1749.4	1926.3
60°	2089.1	1966.9	1928.7	1937.4	2021.1	1877.0	1861.6	1797.0	1898.4	1918.3	2114.1
62.5°	2057.0	1945.6	1953.7	2026.1	2211.9	2117.1	2072.5	1964.5	2040.0	2056.2	2249.0
65°	1854.8	1738.7	1843.5	2018.7	2357.3	2355.1	2334.4	2119.2	2118.5	2139.1	2259.4
67.5°	1515.1	1393.2	1562.8	1878.7	2351.3	2499.3	2489.6	2324.3	2129.8	2074.6	2039.0
70°	1053.3	947.6	1140.0	1551.5	2141.7	2498.3	2482.7	2462.2	2040.5	1785.7	1580.9
72.5°	547.3	489.2	668.3	1069.1	1707.2	2195.0	2246.6	2212.9	1742.3	1297.4	931.0
75°	185.9	166.8	275.7	567.5	1134.9	1676.2	1736.6	1702.4	1183.3	696.1	368.2
77.5°	72.0	67.0	98.8	230.4	569.4	1021.4	1087.0	1052.1	634.6	255.0	86.6
80°	41.0	39.6	54.5	103.8	251.0	508.1	554.3	502.7	228.8	85.9	22.6
82.5°	17.4	17.9	30.4	56.1	126.2	179.3	200.0	182.4	95.8	58.8	8.3
85°	3.8	4.7	14.4	31.2	52.9	51.2	53.6	59.5	58.8	43.2	3.6
87.5°	0.0	0.0	4.5	8.5	12.7	8.3	6.6	11.6	18.1	17.4	1.6
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°	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1	106.1
2.5°	127.2	125.5	114.6	113.9	114.6	112.7	112.5	108.5	108.8	117.9	118.6
5°	158.5	149.8	140.4	137.5	134.7	128.5	131.9	131.9	131.9	137.7	139.4
7.5°	186.8	175.2	162.0	150.8	140.1	132.3	137.7	141.5	143.7	151.2	154.7
10°	199.6	188.2	176.4	160.6	152.2	149.3	143.0	139.7	143.7	142.2	144.1
12.5°	227.1	216.6	196.3	180.0	173.8	163.7	145.3	132.4	123.9	122.6	122.2
15°	253.8	247.4	220.1	198.2	176.5	153.3	121.9	104.8	95.8	94.3	94.4
17.5°	287.6	278.4	238.3	206.9	170.1	128.3	94.1	79.5	78.8	82.6	83.0
20°	310.2	295.1	247.5	199.8	148.9	97.0	73.6	70.1	75.7	82.6	81.9
22.5°	331.7	315.4	259.7	193.6	115.4	73.6	67.7	68.0	72.7	80.2	82.1
25°	346.0	340.1	274.6	179.0	88.0	63.7	64.7	67.4	71.3	78.5	78.5
27.5°	388.8	361.2	272.9	150.7	67.7	59.4	61.8	65.1	67.2	75.7	76.6
30°	414.9	405.8	281.9	121.9	59.4	53.8	58.5	61.5	62.8	72.6	72.9
32.5°	446.8	426.9	292.8	89.9	55.2	53.5	52.4	54.7	58.7	67.2	67.7
35°	485.7	479.8	277.2	70.7	53.8	50.0	47.9	49.1	51.7	57.5	58.7
37.5°	565.0	530.0	267.8	60.6	53.8	48.8	46.5	43.4	43.7	47.7	50.0
40°	631.9	621.1	241.6	58.8	51.4	47.0	41.5	37.7	35.1	36.3	37.1
42.5°	754.6	704.8	207.8	58.0	49.1	42.5	35.2	31.2	27.3	27.6	29.0
45°	903.5	796.1	177.6	57.1	47.6	38.0	29.7	25.0	20.8	21.0	22.4
47.5°	1102.5	929.2	141.0	54.5	44.8	33.8	24.0	19.1	16.7	17.2	18.4
50°	1328.5	1046.0	111.4	50.5	41.5	29.9	19.4	15.4	14.6	15.1	16.5
52.5°	1530.4	1132.1	92.0	46.9	36.8	24.3	16.3	13.7	13.4	13.7	14.8
55°	1709.8	1182.1	76.9	42.7	31.6	19.6	14.8	12.7	12.5	12.3	13.0
57.5°	1878.2	1196.5	60.1	36.1	25.7	17.0	13.7	11.8	11.5	10.9	11.5
60°	2000.9	1171.9	44.1	29.0	21.0	15.4	12.8	10.6	10.1	9.2	9.5
62.5°	2060.1	1104.4	33.3	23.3	17.9	14.1	11.5	9.2	8.5	7.5	7.6
65°	2003.9	993.1	26.2	19.6	15.3	11.8	9.7	7.8	6.9	5.9	5.9
67.5°	1754.8	823.8	22.2	17.0	12.8	10.1	8.0	7.1	5.7	4.9	4.7
70°	1288.0	592.6	19.1	14.9	11.1	8.7	6.8	6.4	5.6	4.7	4.3
72.5°	727.0	335.4	16.3	13.2	9.4	7.3	5.7	5.9	5.4	4.3	4.0
75°	277.4	113.0	13.5	10.9	7.6	5.6	4.9	4.9	4.9	3.6	3.1
77.5°	68.7	28.8	10.8	8.9	6.1	3.6	4.0	4.2	4.2	3.1	2.3
80°	18.9	9.7	6.4	6.4	4.3	2.1	2.8	2.8	2.3	1.0	0.0
82.5°	6.9	3.6	2.3	2.8	1.9	0.7	1.0	0.7	0.5	0.0	0.0
85°	3.0	1.9	1.4	1.6	0.9	0.0	0.2	0.3	0.0	0.0	0.0
87.5°	1.2	0.9	0.7	0.7	0.3	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)