

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: P596535

Luminaire Tested: **MSA-SA1C-827-U-T3-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596535  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1C-827-U-T3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS  
EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3405 lumens  
Efficiency: N/A  
Efficacy: 57.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B0 - U0 - G1

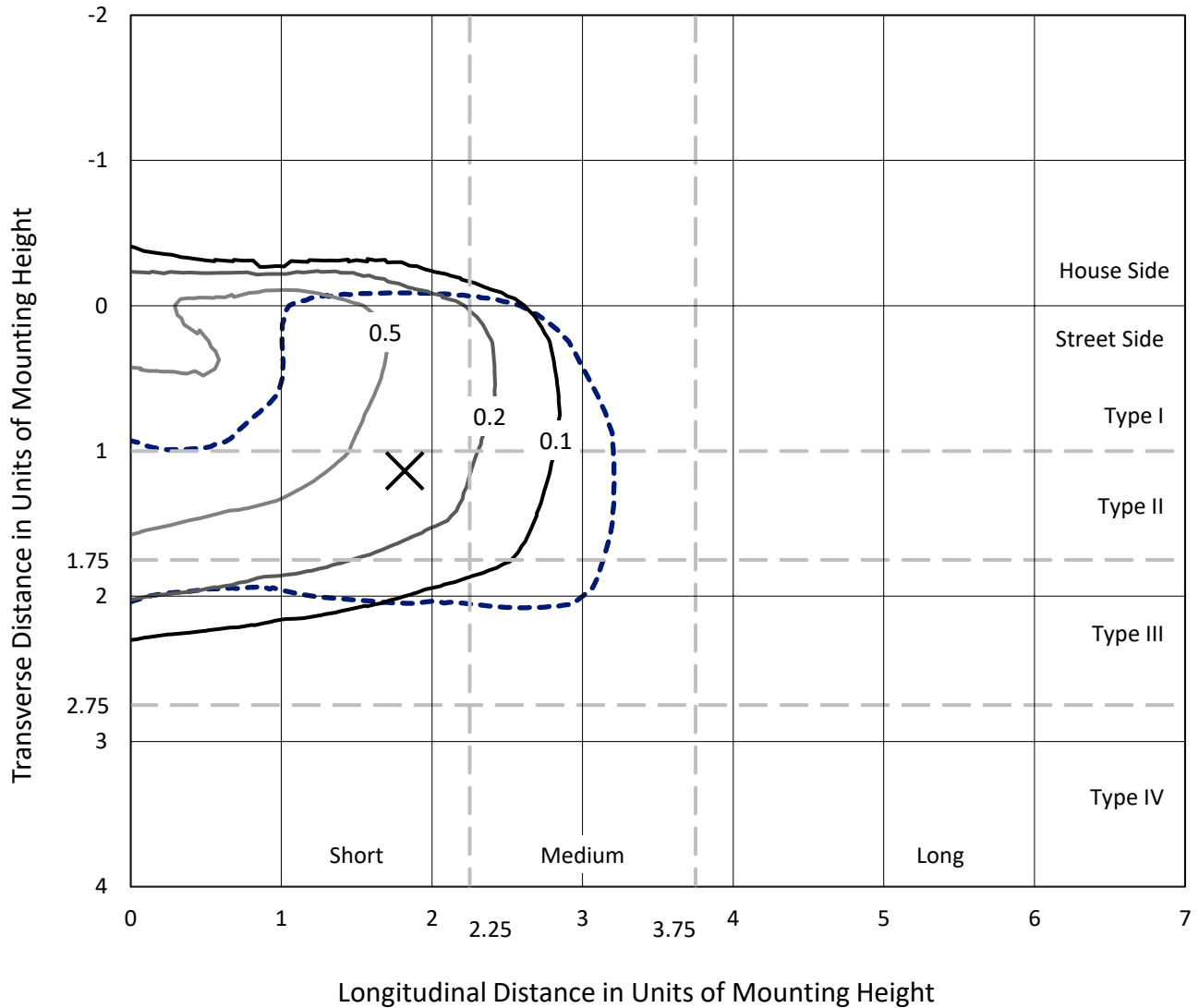
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

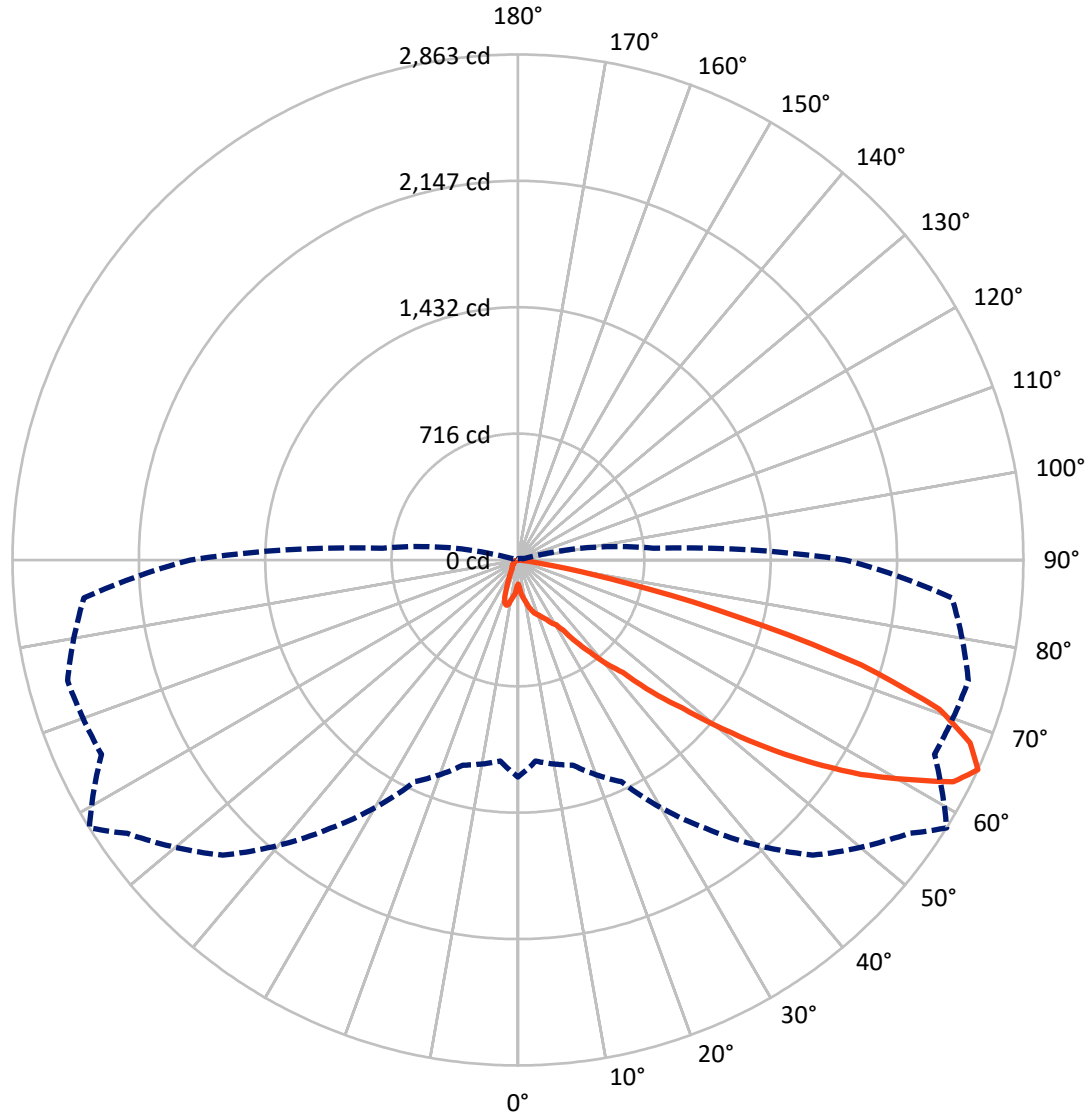
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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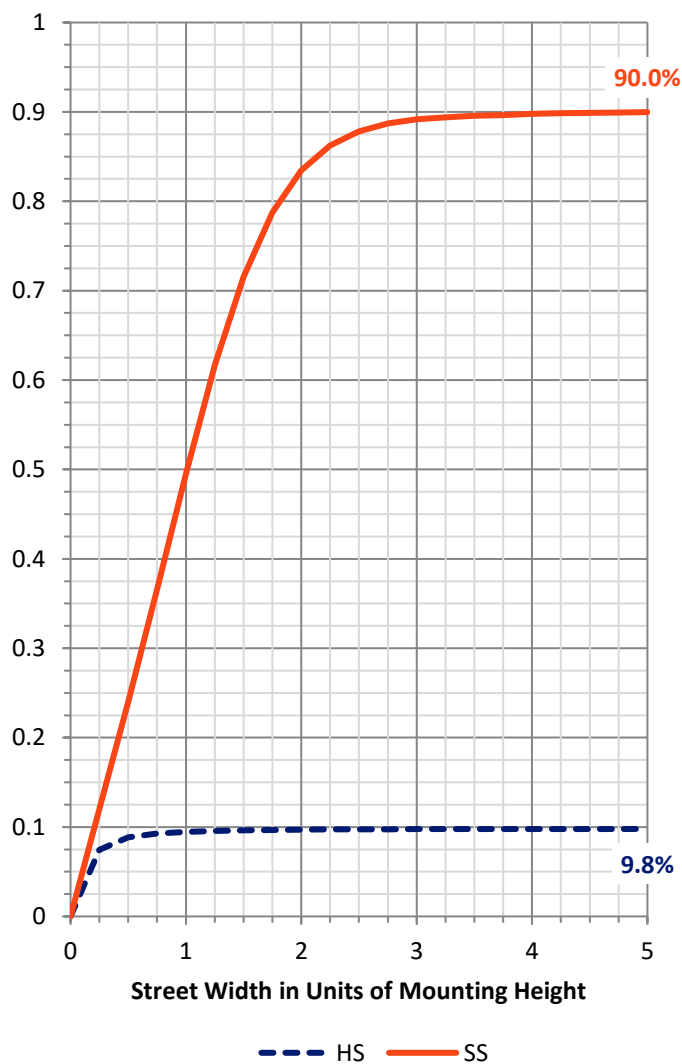
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	336.0	0.0	336.0
	% Fixture	9.9	0.0	9.9
<b>Street Side</b>	Lumens	3069.0	0.0	3069.0
	% Fixture	90.1	0.0	90.1
<b>Total</b>	Lumens	3405.0	0.0	3405.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	19.2	0.6
10°-20°	69.9	2.1
20°-30°	135.3	4.0
30°-40°	269.9	7.9
40°-50°	551.8	16.2
50°-60°	978.8	28.7
60°-70°	1031.9	30.3
70°-80°	334.5	9.8
80°-90°	13.7	0.4
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°	3405.0	100.0
0°-180°	3405.0	100.0

**Coefficient of Utilization**



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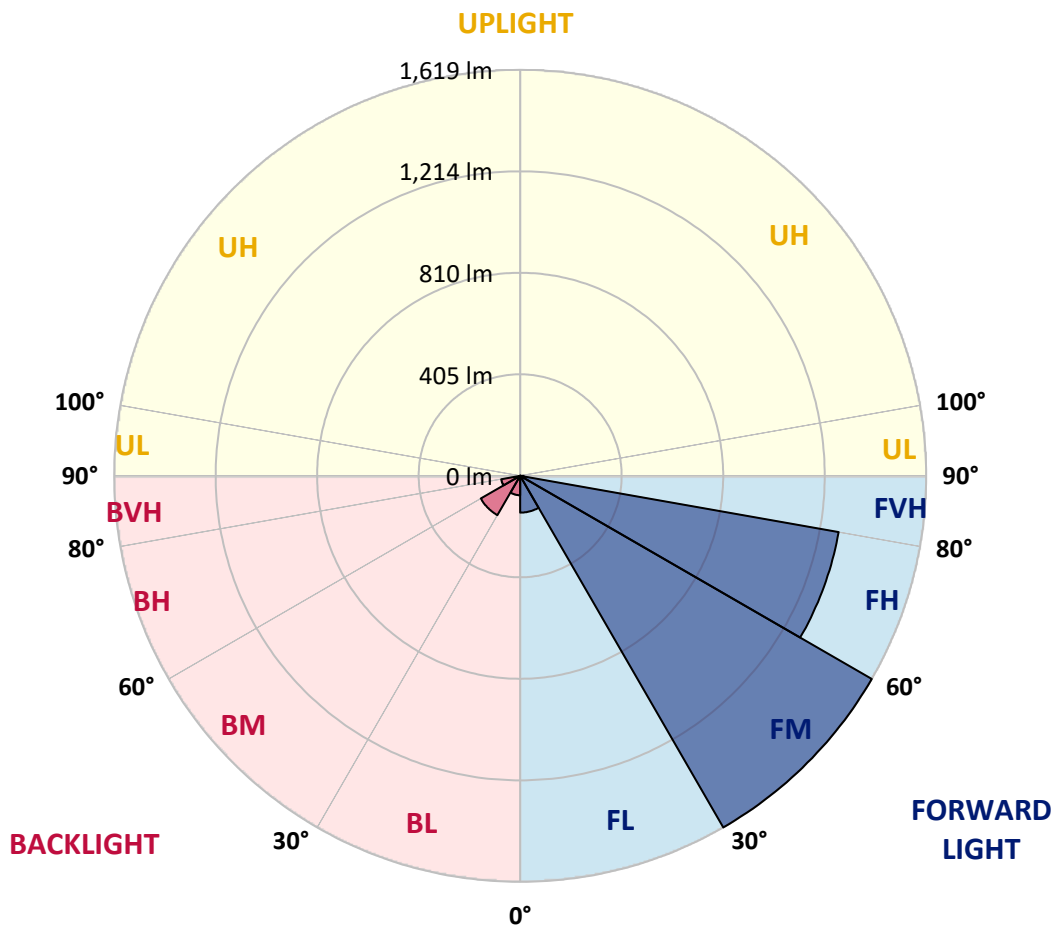
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	146.9	4.3			
FM (30°-60°)	1619.3	47.6			
FH (60°-80°)	1289.8	37.9			G1/1800
FVH (80°-90°)	13.1	0.4			G1/100
BL (0°-30°)	77.4	2.3	B0/110		
BM (30°-60°)	181.3	5.3	B0/220		
BH (60°-80°)	76.7	2.3	B0/110		G0/110
BVH (80°-90°)	0.6	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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3
2.5°	166.4	161.4	153.6	154.9	156.4	159.5	157.0	154.7	152.2	149.0	161.4
5°	200.9	192.7	191.9	190.2	188.8	188.6	191.7	190.8	192.1	198.2	204.6
7.5°	213.6	210.1	203.6	206.3	202.1	198.8	212.4	216.8	225.3	228.1	244.6
10°	212.2	207.2	209.9	211.3	214.1	226.0	234.7	239.4	246.7	262.5	259.2
12.5°	218.4	222.8	225.6	225.8	240.6	262.5	268.6	272.6	285.7	291.8	307.9
15°	238.9	246.2	241.6	243.5	248.3	274.9	289.3	298.1	316.5	336.5	340.5
17.5°	268.2	272.8	263.2	256.3	269.5	284.1	310.2	319.4	331.1	377.7	386.3
20°	305.2	313.1	292.4	264.9	282.4	299.6	328.0	332.4	344.9	405.7	419.3
22.5°	391.7	380.0	348.3	305.6	300.4	308.1	335.1	352.4	373.5	421.4	453.0
25°	477.0	473.0	426.4	378.6	344.1	326.9	362.7	372.3	406.8	458.8	476.2
27.5°	571.9	579.9	502.1	473.1	405.5	349.1	380.0	403.9	444.8	472.4	514.4
30°	697.1	684.2	593.0	564.0	486.8	410.3	424.6	426.2	486.2	517.2	557.1
32.5°	795.2	803.5	688.8	644.3	582.6	504.4	458.2	478.1	521.1	590.3	628.0
35°	901.4	900.7	788.9	729.1	648.4	581.3	557.7	572.3	626.1	704.5	714.5
37.5°	1060.2	1046.6	914.7	827.0	758.4	701.1	683.1	663.7	719.3	794.1	831.5
40°	1209.9	1162.9	1041.0	937.1	849.3	825.9	760.7	772.6	789.1	887.8	991.2
42.5°	1361.2	1332.0	1169.1	1082.0	974.1	918.5	875.9	870.4	948.8	1065.7	1172.5
45°	1560.7	1471.6	1341.2	1264.7	1139.7	1083.9	1049.6	1070.1	1140.7	1311.5	1382.6
47.5°	1728.3	1646.2	1534.3	1418.1	1287.0	1349.7	1285.2	1252.8	1349.7	1526.2	1620.7
50°	1872.3	1780.8	1667.5	1581.4	1560.2	1620.4	1490.0	1501.9	1564.8	1772.2	1825.5
52.5°	1976.9	1880.7	1781.8	1740.2	1827.4	1857.7	1792.3	1766.1	1823.2	1981.9	2007.8
55°	2055.7	1957.2	1879.9	1937.3	2106.0	2096.0	2119.0	2029.3	2083.9	2200.7	2188.4
57.5°	2060.5	1943.8	1898.5	1990.7	2222.3	2376.7	2443.9	2291.3	2322.4	2371.7	2344.1
60°	1909.8	1793.7	1790.0	1921.0	2256.1	2449.3	2596.6	2522.2	2480.6	2517.2	2464.8
62.5°	1609.6	1528.3	1566.3	1711.0	2130.5	2409.2	2677.8	2767.4	2605.4	2613.6	2539.2
65°	1229.1	1143.8	1203.2	1385.5	1856.0	2364.4	2700.8	2863.2	2603.1	2641.0	2467.9
67.5°	814.0	764.5	831.8	1032.8	1475.6	2087.2	2689.0	2762.6	2520.4	2533.9	2203.2
70°	420.2	408.2	462.6	621.1	992.1	1603.5	2572.2	2531.9	2352.7	2182.8	1699.3
72.5°	134.6	135.2	187.5	283.7	534.9	976.2	1977.1	2032.3	1882.6	1596.8	1037.5
75°	59.6	58.7	78.4	119.1	223.0	437.7	1228.3	1287.9	1172.1	878.4	436.1
77.5°	42.9	41.6	50.2	69.6	110.4	148.4	575.9	621.5	531.4	304.4	99.9
80°	30.3	30.1	36.4	48.9	69.0	65.9	181.9	204.0	163.3	73.8	29.3
82.5°	17.1	17.6	25.3	34.5	42.0	33.0	51.2	56.4	55.0	39.3	12.8
85°	8.2	9.2	16.5	24.9	22.0	12.8	18.2	19.7	23.0	22.8	6.5
87.5°	0.0	0.0	6.7	11.3	5.9	1.9	5.6	6.3	6.1	7.3	1.5
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°	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3	136.3
2.5°	163.9	162.8	148.2	149.3	152.6	151.3	152.4	149.7	146.7	159.1	158.9
5°	207.2	198.6	194.0	189.8	190.6	181.9	186.9	189.2	188.8	195.9	197.8
7.5°	245.2	233.7	224.5	215.7	202.3	190.2	197.7	202.4	205.7	218.0	222.8
10°	263.0	253.6	250.0	232.7	223.2	215.7	206.7	200.1	202.8	199.6	202.8
12.5°	302.1	295.8	281.8	264.4	252.9	237.5	204.0	176.0	158.7	158.9	157.8
15°	337.8	337.4	316.5	287.6	254.2	210.5	158.2	122.9	106.6	102.0	100.5
17.5°	384.4	378.6	340.5	297.7	237.7	163.0	107.7	84.2	82.6	85.3	84.2
20°	414.1	405.7	352.4	283.0	195.9	110.2	81.3	74.6	79.2	83.0	82.1
22.5°	443.8	431.2	361.4	264.9	139.4	80.7	73.4	72.3	75.2	79.9	80.7
25°	460.1	457.6	379.0	231.2	95.5	70.7	70.7	70.4	71.3	74.8	74.2
27.5°	507.5	473.7	365.8	180.4	73.8	65.0	65.9	65.6	62.1	65.6	65.8
30°	537.0	521.5	366.7	128.4	65.0	57.5	60.0	56.9	51.8	54.6	54.1
32.5°	596.4	557.7	363.9	86.7	59.2	54.8	51.0	46.6	42.8	43.9	42.9
35°	665.6	636.1	325.0	69.6	55.2	48.5	42.4	38.0	33.9	34.9	34.7
37.5°	803.3	709.5	292.7	62.7	52.5	44.5	37.4	31.2	29.1	29.7	30.3
40°	930.8	832.0	232.7	59.6	47.9	39.7	30.9	26.5	25.1	25.5	26.1
42.5°	1121.3	929.4	175.8	56.6	43.3	33.5	25.7	22.8	21.5	22.2	22.6
45°	1305.8	1012.2	131.3	53.9	39.5	28.9	21.7	19.7	18.2	18.8	19.6
47.5°	1490.0	1104.3	98.0	49.7	35.3	24.9	18.6	17.3	16.3	16.5	17.4
50°	1654.9	1147.2	77.1	44.5	31.8	21.7	16.9	15.5	15.1	15.3	16.1
52.5°	1776.0	1147.6	65.0	39.9	28.6	19.2	15.9	14.4	14.2	14.6	15.3
55°	1885.5	1116.9	56.4	35.9	25.7	17.4	15.1	13.8	13.8	14.2	15.0
57.5°	1958.1	1060.6	48.9	31.6	23.2	16.5	14.6	13.2	13.0	12.8	13.4
60°	1993.6	983.7	41.4	27.8	20.9	15.9	14.2	11.7	11.5	11.1	11.5
62.5°	1971.2	887.4	34.7	24.0	18.6	15.1	12.5	10.2	9.8	9.0	9.6
65°	1856.5	770.5	29.3	20.5	16.1	12.8	10.5	8.6	7.7	6.7	6.5
67.5°	1622.1	625.9	24.5	17.6	13.8	10.5	8.6	7.7	5.9	5.2	5.0
70°	1215.6	427.3	20.3	15.1	11.5	9.0	7.3	6.9	5.6	5.0	4.6
72.5°	713.2	230.6	17.1	13.2	9.8	7.5	5.9	6.3	5.6	4.6	4.2
75°	284.9	76.7	13.6	10.5	7.9	5.4	5.0	5.2	5.0	4.2	3.5
77.5°	65.0	24.2	10.5	8.2	6.1	3.5	4.0	4.4	4.4	3.5	2.5
80°	20.3	9.6	6.1	5.2	4.4	1.9	2.9	3.1	2.1	1.0	0.0
82.5°	6.5	2.7	2.1	2.1	1.9	0.4	0.6	0.4	0.0	0.0	0.0
85°	2.5	1.7	1.3	1.3	0.8	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.0	0.8	0.6	0.8	0.4	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)