

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: P596555

Luminaire Tested: **MSA-SA1D-827-U-T2-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596555
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1D-827-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3802 lumens
Efficiency: N/A
Efficacy: 56.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B0 - U0 - G1

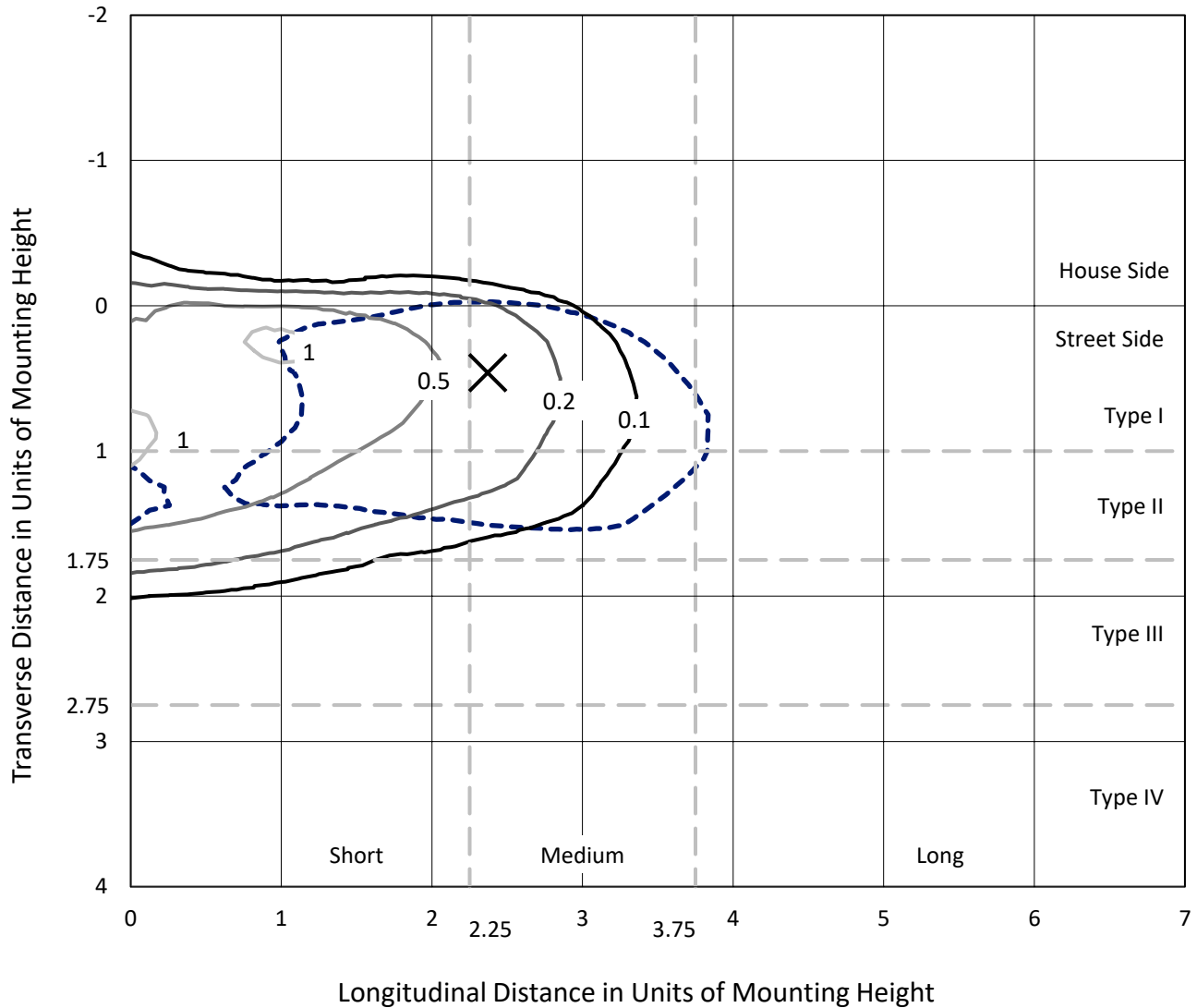
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

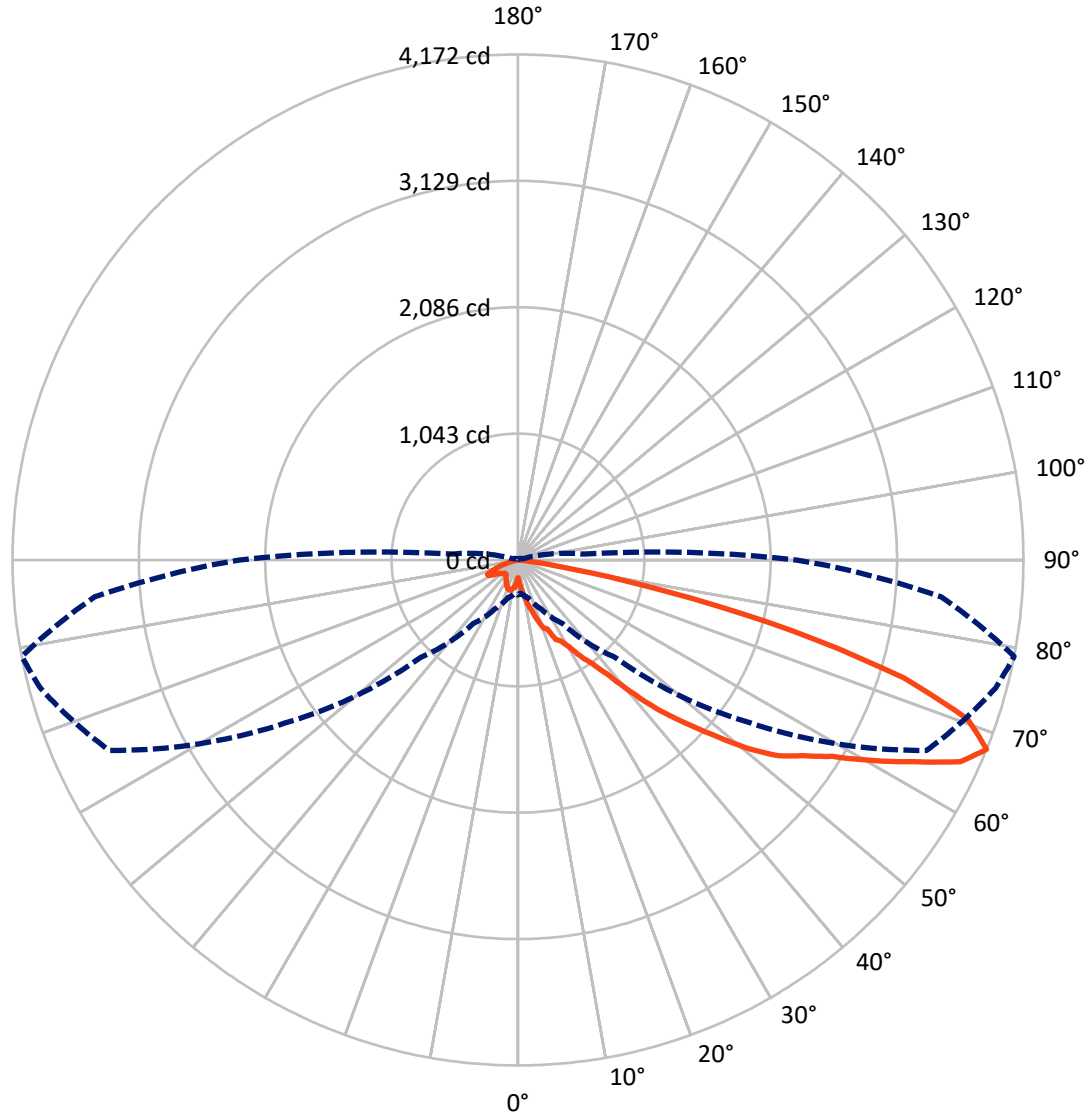
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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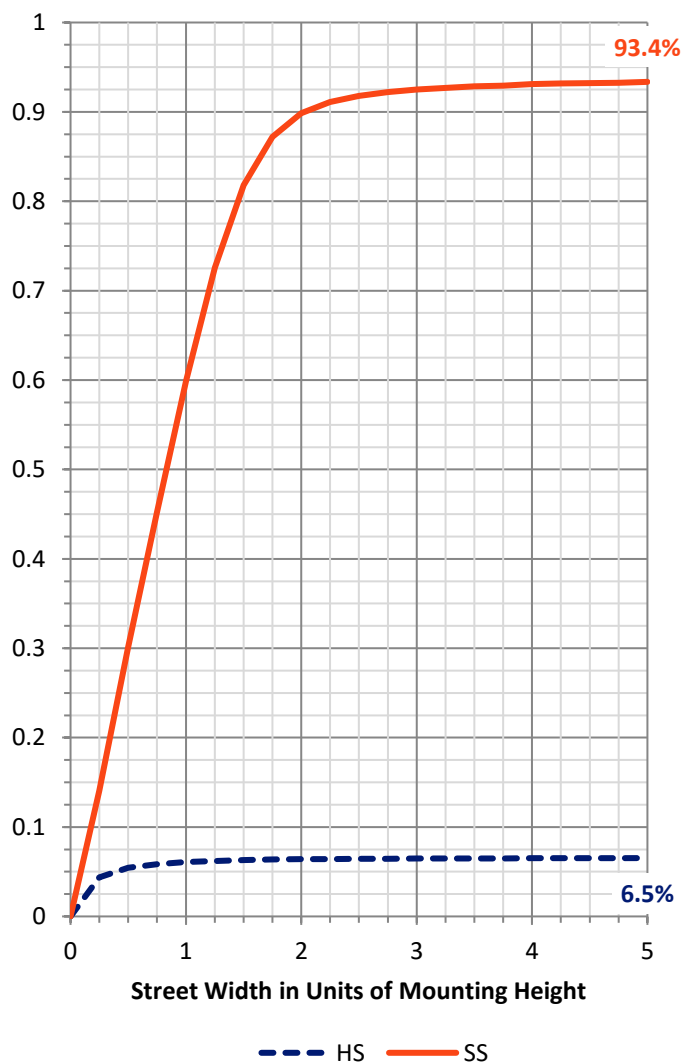
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	249.8	0.0	249.8
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	3552.2	0.0	3552.2
	% Fixture	93.4	0.0	93.4
Total	Lumens	3802.0	0.0	3802.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	21.3	0.6
10°-20°	85.0	2.2
20°-30°	163.9	4.3
30°-40°	321.9	8.5
40°-50°	644.9	17.0
50°-60°	1030.9	27.1
60°-70°	1037.2	27.3
70°-80°	467.9	12.3
80°-90°	28.9	0.8
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°	3802.0	100.0
0°-180°	3802.0	100.0

Coefficient of Utilization

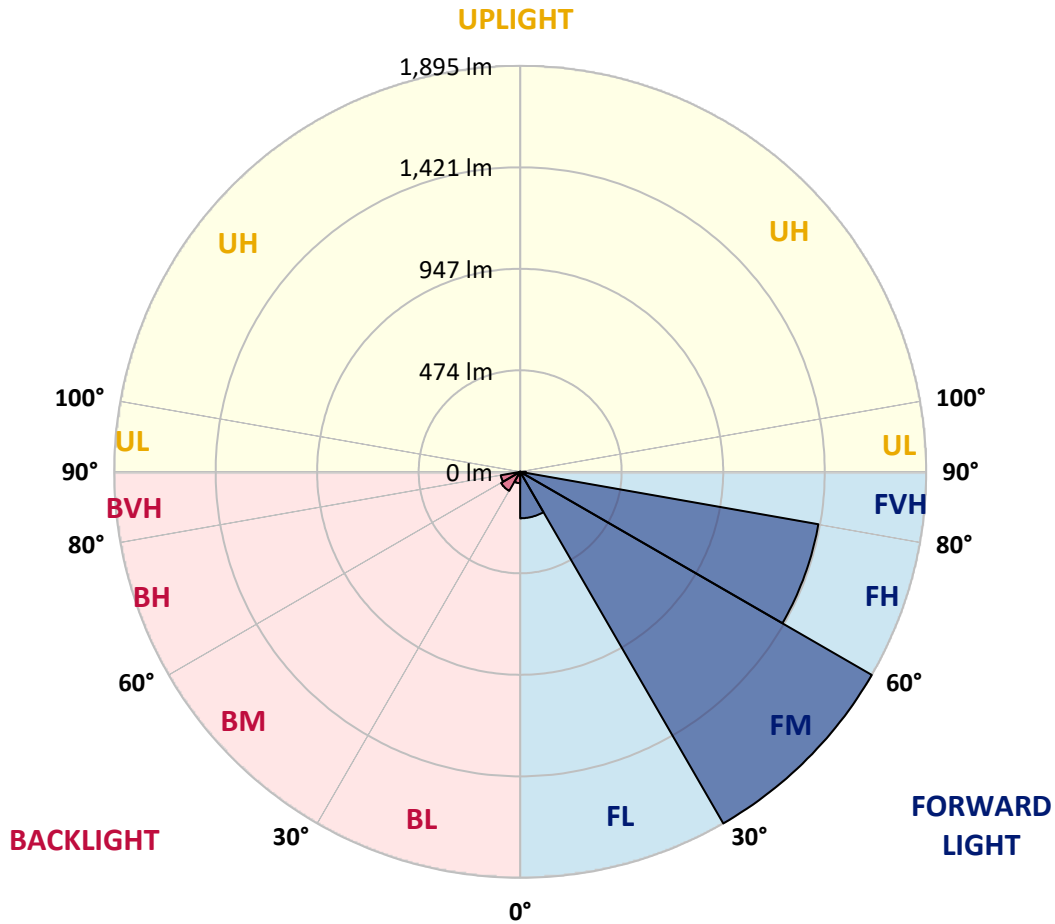


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	217.1	5.7			
FM (30°-60°)	1895.0	49.8			
FH (60°-80°)	1413.0	37.2			G1/1800
FVH (80°-90°)	27.1	0.7			G1/100
BL (0°-30°)	53.1	1.4	B0/110		
BM (30°-60°)	102.8	2.7	B0/220		
BH (60°-80°)	92.1	2.4	B0/110		G0/110
BVH (80°-90°)	1.8	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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	146.5	146.5	146.5	146.5	146.5	146.5	146.5	146.5	146.5	146.5	146.5
2.5°	197.8	190.7	179.2	185.7	185.3	188.6	182.3	175.4	164.3	175.4	176.3
5°	284.8	271.6	263.2	261.6	252.3	243.7	241.9	234.7	229.3	219.4	228.2
7.5°	354.8	348.8	333.9	332.2	309.6	297.0	301.0	297.8	277.1	266.8	275.4
10°	384.6	374.1	376.2	374.1	364.5	368.0	359.9	350.4	333.9	316.9	295.5
12.5°	396.1	394.4	411.8	409.7	432.4	459.6	441.4	425.7	387.3	383.1	354.0
15°	420.8	431.3	428.8	437.6	452.1	498.4	498.0	501.8	461.1	439.3	397.2
17.5°	442.9	450.6	438.0	448.1	487.5	515.6	553.1	538.4	543.0	520.8	455.6
20°	433.4	442.2	429.7	423.6	492.9	546.2	596.3	585.6	613.3	599.4	509.5
22.5°	492.3	475.8	444.1	424.4	476.2	545.6	611.6	656.2	651.4	617.4	559.6
25°	565.0	555.0	517.0	482.3	486.9	541.8	659.8	725.4	739.6	725.2	607.2
27.5°	663.1	660.8	583.3	568.2	523.3	525.2	667.3	812.6	780.1	757.4	662.7
30°	791.2	773.0	680.9	661.2	595.0	562.5	713.4	887.8	863.9	833.1	714.9
32.5°	928.9	931.6	814.2	749.3	696.0	657.5	695.2	923.0	967.7	942.7	780.1
35°	1085.2	1097.4	953.8	877.5	774.0	717.2	773.6	1031.2	1111.2	1045.6	867.5
37.5°	1326.1	1325.6	1158.0	1006.0	930.8	869.2	904.2	1129.5	1287.7	1195.5	1024.2
40°	1537.9	1491.8	1335.9	1161.3	1044.0	1027.2	1001.8	1264.0	1476.1	1420.6	1163.6
42.5°	1696.2	1663.7	1475.3	1339.5	1194.0	1140.8	1131.8	1461.2	1754.2	1676.5	1362.5
45°	1885.4	1779.0	1640.2	1517.8	1369.6	1354.1	1333.0	1661.4	2077.8	1902.6	1535.4
47.5°	2055.0	1954.8	1823.6	1666.4	1496.2	1624.1	1542.8	1837.2	2313.2	2148.7	1726.2
50°	2197.7	2091.3	1944.3	1824.7	1751.7	1838.5	1702.9	1982.1	2567.4	2434.1	1904.5
52.5°	2270.5	2149.9	2036.3	1962.4	2007.0	1987.5	1920.0	2157.5	2784.1	2684.4	2062.5
55°	2210.7	2092.9	2045.4	2082.0	2217.6	2161.3	2166.7	2429.3	2988.7	2851.2	2200.0
57.5°	1945.8	1838.3	1859.5	1959.8	2219.7	2367.3	2448.0	2693.4	3152.8	3059.1	2412.1
60°	1471.9	1385.4	1463.8	1641.9	2011.0	2326.2	2647.5	2957.5	3387.3	3358.0	2733.2
62.5°	898.9	852.0	963.0	1185.2	1602.5	2124.8	2763.8	3309.6	3638.2	3669.4	3073.8
65°	458.6	437.4	530.0	725.4	1082.7	1745.4	2679.8	3528.4	3897.5	4012.7	3398.4
67.5°	288.8	275.2	324.6	442.4	638.8	1138.5	2346.3	3719.7	4080.6	4171.8	3506.8
70°	200.2	191.6	234.3	303.7	403.0	613.3	1742.1	3541.2	3935.4	3939.6	3244.6
72.5°	127.0	120.3	162.0	224.9	297.4	316.7	998.7	2778.7	3368.7	3329.9	2627.6
75°	82.4	79.0	102.9	164.7	228.4	195.3	493.6	1875.0	2415.5	2354.7	1745.2
77.5°	59.1	57.0	69.0	110.0	162.6	136.7	221.3	1117.5	1384.9	1252.1	847.1
80°	35.6	35.4	49.9	69.0	115.7	96.4	102.3	507.4	537.0	437.8	258.8
82.5°	17.8	18.4	27.9	44.4	74.4	63.1	46.7	168.9	144.2	106.3	52.4
85°	4.2	5.2	14.7	30.6	37.3	25.2	22.2	44.2	39.6	30.0	15.3
87.5°	0.0	0.0	4.6	7.3	10.1	4.2	7.5	8.4	10.7	8.4	3.1
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°	146.5	146.5	146.5	146.5	146.5	146.5	146.5	146.5	146.5	146.5	146.5
2.5°	176.5	174.0	158.7	154.7	154.3	149.9	150.9	146.7	146.9	156.4	156.4
5°	224.9	210.2	195.5	182.5	173.7	161.2	156.6	154.7	153.0	156.8	159.1
7.5°	264.1	242.5	216.1	187.8	161.6	143.6	141.1	136.4	134.8	138.5	141.5
10°	281.5	254.6	218.4	177.1	152.6	137.9	125.8	119.3	118.0	117.8	118.8
12.5°	318.4	285.0	220.9	173.1	146.5	130.4	116.5	105.6	95.6	96.6	95.6
15°	347.9	308.5	220.9	163.5	131.8	115.7	91.4	85.9	84.5	86.8	84.9
17.5°	392.6	331.8	209.8	146.3	119.3	89.9	80.7	80.3	83.2	86.6	84.5
20°	419.4	334.9	191.1	126.6	97.9	78.0	74.6	71.3	75.5	78.2	77.1
22.5°	447.3	335.1	172.5	116.1	78.8	71.0	65.6	62.9	63.5	66.0	66.4
25°	459.2	327.0	155.1	102.3	71.5	63.5	57.8	54.9	53.9	55.1	54.7
27.5°	491.7	311.2	136.2	87.2	67.9	56.4	51.1	47.6	44.4	46.5	46.9
30°	496.3	306.2	126.0	77.5	63.3	49.9	45.3	41.5	39.2	42.1	42.1
32.5°	511.0	278.5	120.7	73.6	58.5	46.1	39.8	37.1	36.7	38.6	38.8
35°	533.6	266.4	113.0	70.4	54.1	41.7	35.8	34.6	34.2	35.6	35.6
37.5°	610.3	251.3	104.4	67.7	50.3	39.4	34.8	32.7	32.9	34.2	35.0
40°	661.2	253.2	91.6	64.3	45.9	37.3	32.7	31.2	31.0	31.6	32.3
42.5°	755.8	254.6	85.9	60.8	42.5	34.8	30.6	29.6	28.7	29.3	30.0
45°	861.4	262.4	83.0	57.8	40.7	33.3	28.7	28.1	26.2	26.6	27.5
47.5°	963.3	290.7	79.4	53.7	39.0	32.5	26.8	25.4	24.1	23.9	24.7
50°	1079.0	318.2	75.5	49.0	37.3	31.2	24.9	22.6	21.8	21.8	22.4
52.5°	1182.5	344.4	71.7	45.9	36.0	28.9	23.3	21.0	20.3	20.3	21.2
55°	1291.5	371.8	68.3	43.0	34.4	26.6	21.8	19.7	19.5	19.1	19.7
57.5°	1483.9	431.7	64.1	40.5	32.1	24.7	20.5	18.4	18.0	17.4	18.0
60°	1764.1	523.8	58.7	37.9	29.3	23.5	19.5	17.0	16.3	15.3	15.5
62.5°	2038.0	598.2	52.4	34.8	26.8	22.2	17.8	15.3	14.3	13.0	13.2
65°	2272.8	627.5	45.7	31.0	24.3	19.3	15.5	13.4	11.9	10.3	10.1
67.5°	2300.4	554.1	39.2	27.5	21.8	16.3	13.2	11.9	9.6	8.2	7.8
70°	2070.3	412.9	32.7	24.3	18.9	13.8	11.3	10.5	9.0	7.8	7.1
72.5°	1648.6	304.7	27.5	21.6	16.6	11.7	9.6	9.9	9.0	7.5	6.7
75°	1090.3	174.4	22.4	18.0	13.8	9.4	8.8	8.8	8.6	7.1	6.3
77.5°	524.6	75.2	17.2	14.3	11.1	7.1	8.0	8.0	8.2	6.5	5.2
80°	148.8	22.6	10.7	9.6	8.2	4.8	6.3	6.1	5.4	3.8	2.3
82.5°	26.6	8.8	4.8	5.0	4.6	1.9	3.6	3.4	2.7	1.5	0.2
85°	7.3	3.4	2.7	2.9	2.3	0.6	1.5	1.9	1.5	0.8	0.0
87.5°	1.9	1.5	1.9	2.1	1.7	0.2	0.6	0.2	0.6	0.2	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)