

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: P596777

Luminaire Tested: **MSA-SA4B-827-U-T3-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596777
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-SA4B-827-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 10547 lumens
Efficiency: N/A
Efficacy: 61.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

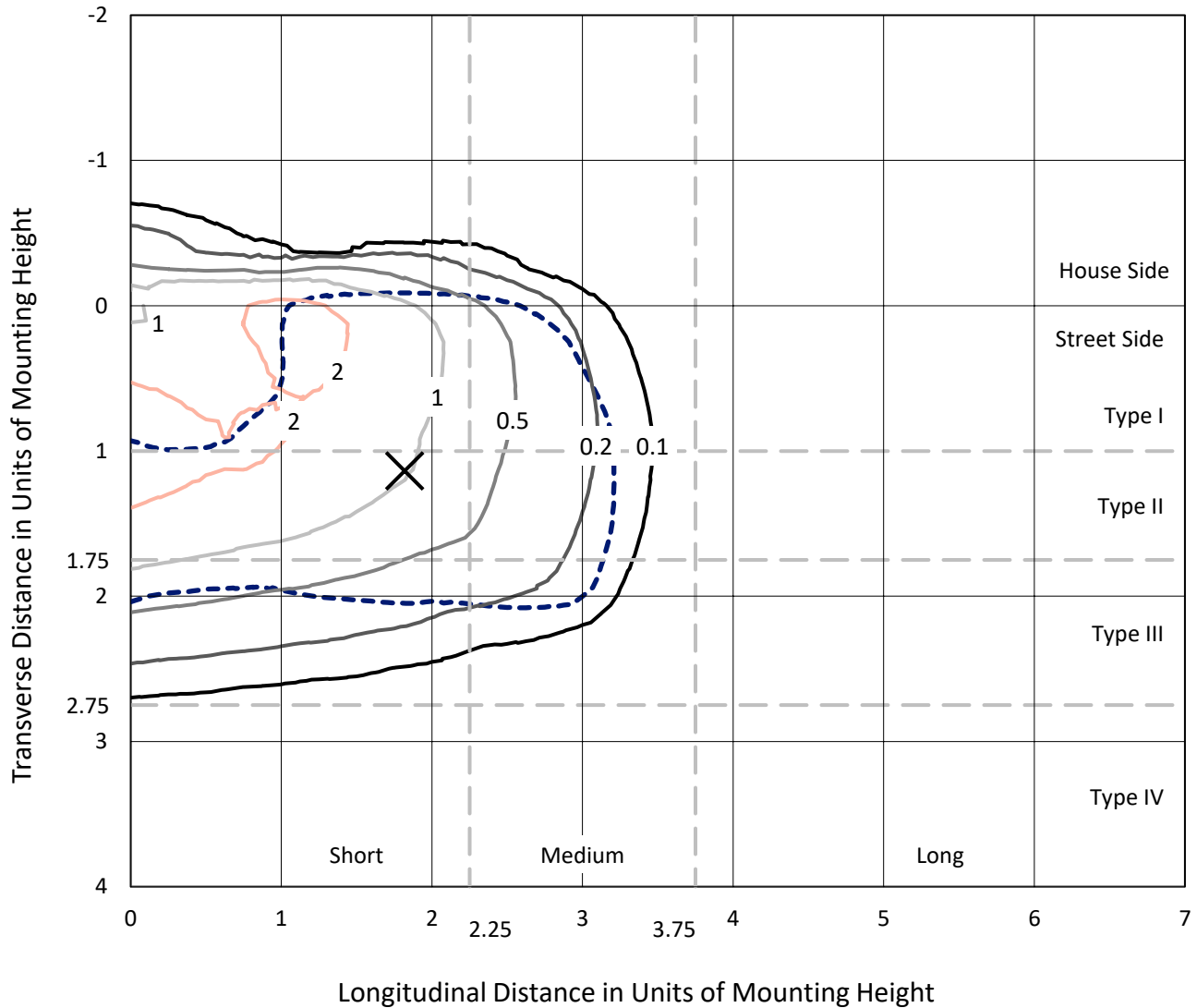
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

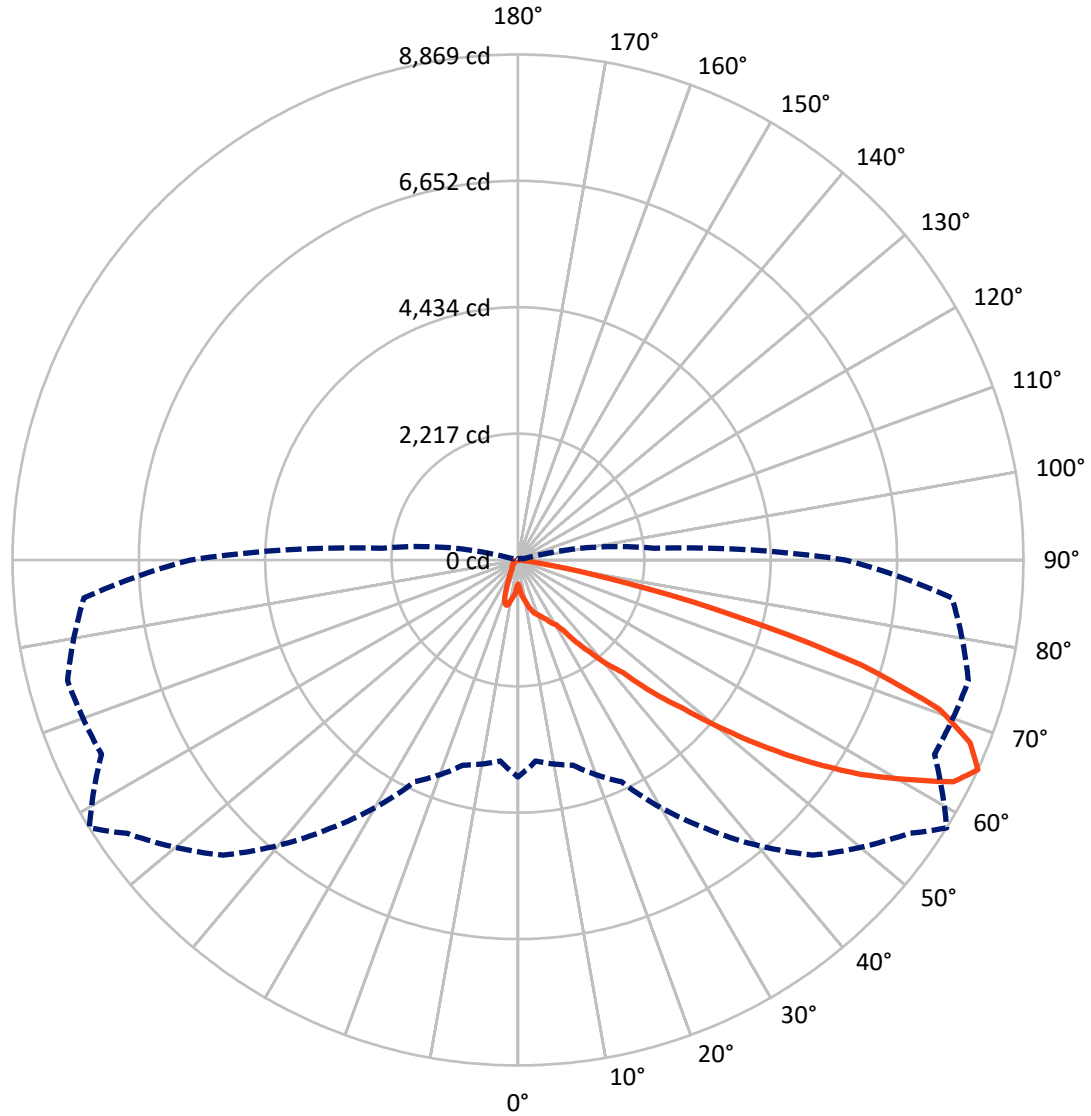
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 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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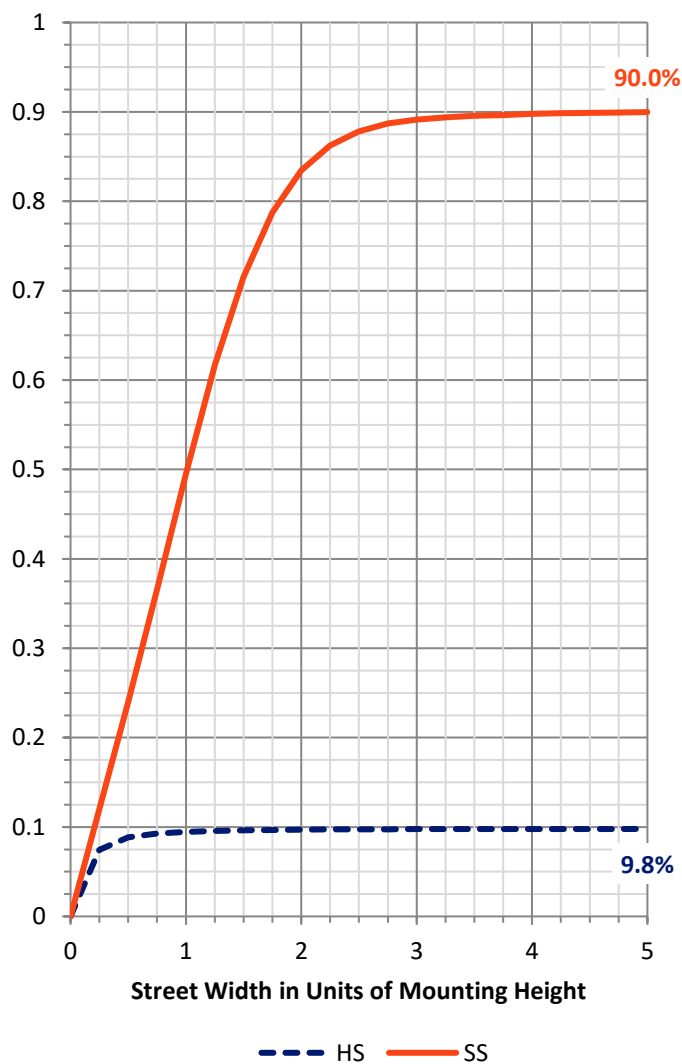
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1040.7	0.0	1040.7
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	9506.3	0.0	9506.3
	% Fixture	90.1	0.0	90.1
Total	Lumens	10547.0	0.0	10547.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.3	0.6
10°-20°	216.5	2.1
20°-30°	419.1	4.0
30°-40°	836.1	7.9
40°-50°	1709.3	16.2
50°-60°	3031.8	28.7
60°-70°	3196.3	30.3
70°-80°	1036.3	9.8
80°-90°	42.4	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°	10547.0	100.0
0°-180°	10547.0	100.0

Coefficient of Utilization



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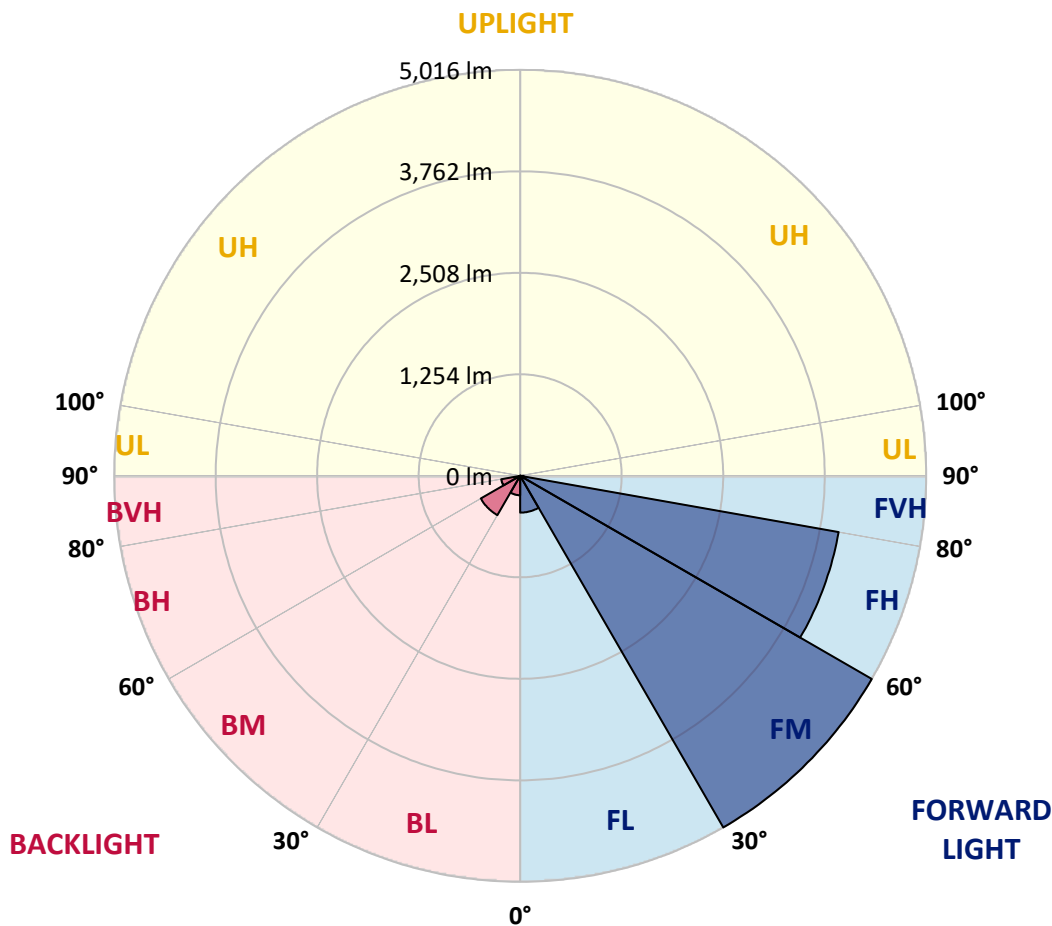
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	455.0	4.3			
FM (30°-60°)	5015.6	47.6			
FH (60°-80°)	3995.1	37.9			G2/5000
FVH (80°-90°)	40.6	0.4			G1/100
BL (0°-30°)	239.9	2.3	B1/500		
BM (30°-60°)	561.5	5.3	B1/1000		
BH (60°-80°)	237.5	2.3	B1/500		G1/500
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: B1-U0-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	422.2	422.2	422.2	422.2	422.2	422.2	422.2	422.2	422.2	422.2	422.2
2.5°	515.4	500.0	475.7	479.8	484.6	494.1	486.3	479.2	471.5	461.4	500.0
5°	622.3	596.8	594.4	589.1	584.9	584.3	593.8	590.9	595.0	614.0	633.6
7.5°	661.5	650.8	630.6	639.0	625.9	615.8	658.0	671.6	697.7	706.7	757.7
10°	657.4	641.9	650.2	654.4	663.3	700.1	726.8	741.7	764.3	813.0	802.9
12.5°	676.4	690.0	698.9	699.5	745.3	813.0	832.0	844.4	884.8	903.8	953.7
15°	739.9	762.5	748.2	754.2	769.0	851.6	896.1	923.4	980.4	1042.2	1054.6
17.5°	830.8	845.0	815.3	793.9	834.9	880.1	960.8	989.3	1025.5	1169.8	1196.6
20°	945.4	969.7	905.6	820.7	874.7	928.2	1016.0	1029.7	1068.3	1256.5	1298.7
22.5°	1213.2	1177.0	1079.0	946.6	930.5	954.3	1038.0	1091.5	1156.8	1305.2	1403.2
25°	1477.4	1465.0	1320.7	1172.8	1065.9	1012.5	1123.5	1153.2	1260.1	1421.0	1475.1
27.5°	1771.4	1796.3	1555.2	1465.6	1255.9	1081.4	1177.0	1251.2	1377.7	1463.2	1593.2
30°	2159.2	2119.4	1836.7	1747.0	1507.7	1270.8	1315.3	1320.1	1506.0	1602.2	1725.7
32.5°	2463.2	2488.7	2133.6	1995.9	1804.6	1562.4	1419.3	1481.0	1614.0	1828.4	1945.4
35°	2792.2	2789.8	2443.6	2258.3	2008.3	1800.5	1727.4	1772.6	1939.4	2182.3	2213.2
37.5°	3283.9	3241.7	2833.2	2561.8	2349.2	2171.6	2115.8	2055.8	2228.0	2459.6	2575.4
40°	3747.7	3602.2	3224.5	2902.6	2630.7	2558.2	2356.3	2393.1	2444.2	2750.0	3070.1
42.5°	4216.2	4125.9	3621.2	3351.6	3017.2	2845.0	2713.2	2696.0	2938.9	3301.1	3631.9
45°	4834.4	4558.2	4154.4	3917.5	3530.3	3357.5	3251.2	3314.8	3533.3	4062.4	4282.7
47.5°	5353.4	5099.2	4752.4	4392.6	3986.4	4180.6	3981.0	3880.7	4180.6	4727.5	5020.2
50°	5799.3	5516.1	5165.1	4898.5	4832.6	5019.0	4615.2	4652.1	4846.8	5489.4	5654.4
52.5°	6123.6	5825.5	5519.1	5390.2	5660.4	5754.2	5551.7	5470.4	5647.3	6139.0	6219.2
55°	6367.6	6062.4	5823.1	6000.6	6523.2	6492.3	6563.6	6285.7	6454.9	6816.6	6778.6
57.5°	6382.5	6020.8	5880.7	6166.3	6883.7	7361.7	7570.1	7097.4	7193.7	7346.3	7260.8
60°	5915.7	5555.9	5544.6	5950.2	6988.2	7586.8	8042.8	7812.4	7683.6	7797.0	7634.9
62.5°	4985.8	4734.0	4851.6	5299.9	6599.2	7462.7	8294.6	8571.9	8070.1	8095.7	7865.3
65°	3807.0	3542.8	3726.9	4291.6	5748.9	7323.7	8365.9	8868.8	8063.0	8180.6	7644.4
67.5°	2521.4	2368.2	2576.6	3199.0	4570.7	6465.0	8329.1	8557.1	7807.1	7848.6	6824.3
70°	1301.7	1264.3	1432.9	1924.0	3073.1	4966.8	7967.4	7842.7	7287.5	6761.3	5263.7
72.5°	416.9	418.6	580.8	878.9	1656.8	3023.8	6124.2	6295.2	5831.4	4946.0	3213.8
75°	184.7	181.7	242.9	368.8	690.6	1355.7	3804.7	3989.3	3630.7	2720.9	1351.0
77.5°	133.0	128.9	155.6	215.6	342.0	459.6	1783.9	1925.2	1646.1	943.0	309.4
80°	93.8	93.2	112.8	151.4	213.8	204.3	563.5	631.8	505.9	228.6	90.9
82.5°	52.9	54.6	78.4	106.9	130.0	102.1	158.6	174.6	170.4	121.7	39.8
85°	25.5	28.5	51.1	77.2	68.3	39.8	56.4	61.2	71.3	70.7	20.2
87.5°	0.0	0.0	20.8	35.0	18.4	5.9	17.2	19.6	19.0	22.6	4.8
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°	422.2	422.2	422.2	422.2	422.2	422.2	422.2	422.2	422.2	422.2	422.2
2.5°	507.7	504.2	459.0	462.6	472.7	468.5	472.1	463.8	454.3	492.9	492.3
5°	641.9	615.2	601.0	587.9	590.3	563.5	579.0	586.1	584.9	606.9	612.8
7.5°	759.5	723.9	695.4	668.1	626.5	589.1	612.2	627.1	637.2	675.2	690.0
10°	814.7	785.6	774.4	720.9	691.2	668.1	640.1	620.0	628.3	618.2	628.3
12.5°	935.9	916.3	872.9	818.9	783.3	735.8	631.8	545.1	491.7	492.3	488.7
15°	1046.3	1045.1	980.4	890.7	787.4	652.0	489.9	380.6	330.2	315.9	311.2
17.5°	1190.6	1172.8	1054.6	922.2	736.3	504.8	333.7	260.7	255.9	264.3	260.7
20°	1282.7	1256.5	1091.5	876.5	606.9	341.5	251.8	231.0	245.3	257.1	254.2
22.5°	1374.7	1335.5	1119.4	820.7	431.7	250.0	227.4	223.9	232.8	247.6	250.0
25°	1425.2	1417.5	1174.0	716.2	295.7	219.1	219.1	217.9	220.9	231.6	229.8
27.5°	1571.9	1467.4	1133.0	558.8	228.6	201.3	204.3	203.1	192.4	203.1	203.7
30°	1663.3	1615.2	1136.0	397.9	201.3	178.1	185.9	176.4	160.3	169.2	167.5
32.5°	1847.4	1727.4	1127.1	268.4	183.5	169.8	158.0	144.3	132.4	136.0	133.0
35°	2061.8	1970.3	1006.5	215.6	171.0	150.2	131.2	117.6	105.1	108.1	107.5
37.5°	2488.1	2197.8	906.8	194.2	162.7	137.8	115.8	96.8	90.3	92.0	93.8
40°	2883.0	2577.2	720.9	184.7	148.5	122.9	95.6	81.9	77.8	79.0	80.8
42.5°	3473.3	2878.9	544.5	175.2	134.2	103.9	79.6	70.7	66.5	68.9	70.1
45°	4044.6	3135.4	406.8	166.9	122.3	89.7	67.1	61.2	56.4	58.2	60.6
47.5°	4615.2	3420.5	303.4	153.8	109.3	77.2	57.6	53.4	50.5	51.1	54.0
50°	5125.9	3553.5	238.7	137.8	98.6	67.1	52.3	48.1	46.9	47.5	49.9
52.5°	5501.2	3554.7	201.3	123.5	88.5	59.4	49.3	44.5	43.9	45.1	47.5
55°	5840.3	3459.7	174.6	111.0	79.6	54.0	46.9	42.8	42.8	43.9	46.3
57.5°	6065.4	3285.1	151.4	98.0	71.9	51.1	45.1	41.0	40.4	39.8	41.6
60°	6175.2	3046.9	128.3	86.1	64.7	49.3	43.9	36.2	35.6	34.4	35.6
62.5°	6105.8	2748.8	107.5	74.2	57.6	46.9	38.6	31.5	30.3	27.9	29.7
65°	5750.6	2386.6	90.9	63.5	49.9	39.8	32.7	26.7	23.8	20.8	20.2
67.5°	5024.4	1938.9	76.0	54.6	42.8	32.7	26.7	23.8	18.4	16.0	15.4
70°	3765.5	1323.6	62.9	46.9	35.6	27.9	22.6	21.4	17.2	15.4	14.3
72.5°	2209.0	714.4	52.9	41.0	30.3	23.2	18.4	19.6	17.2	14.3	13.1
75°	882.4	237.5	42.2	32.7	24.3	16.6	15.4	16.0	15.4	13.1	10.7
77.5°	201.3	74.8	32.7	25.5	19.0	10.7	12.5	13.7	13.7	10.7	7.7
80°	62.9	29.7	19.0	16.0	13.7	5.9	8.9	9.5	6.5	3.0	0.0
82.5°	20.2	8.3	6.5	6.5	5.9	1.2	1.8	1.2	0.0	0.0	0.0
85°	7.7	5.3	4.2	4.2	2.4	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.0	2.4	1.8	2.4	1.2	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)