

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: P367801

Luminaire Tested: **MSA-SA3B-727-U-T2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367801
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3B-727-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 9272 lumens
Efficiency: N/A
Efficacy: 73.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

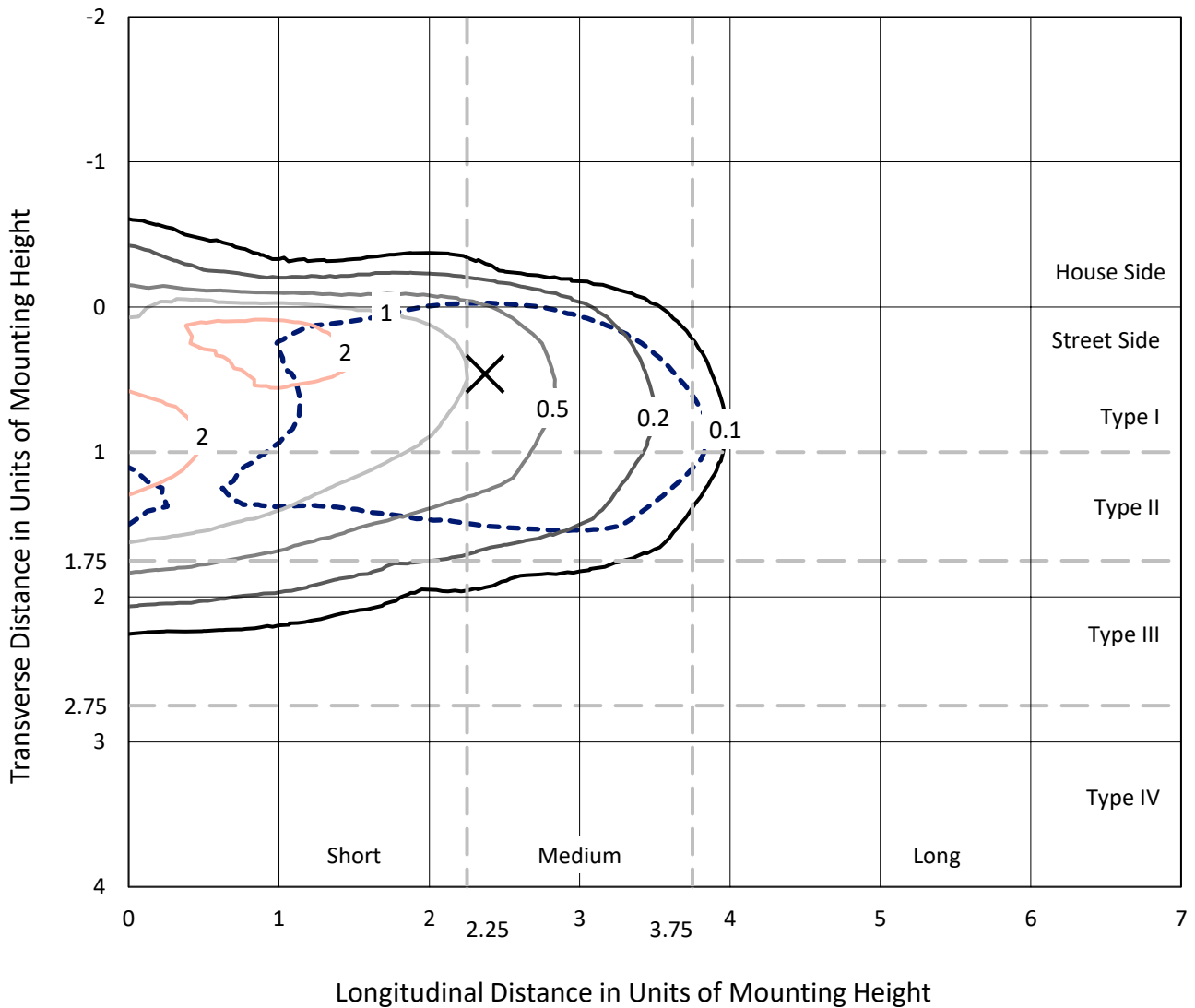
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

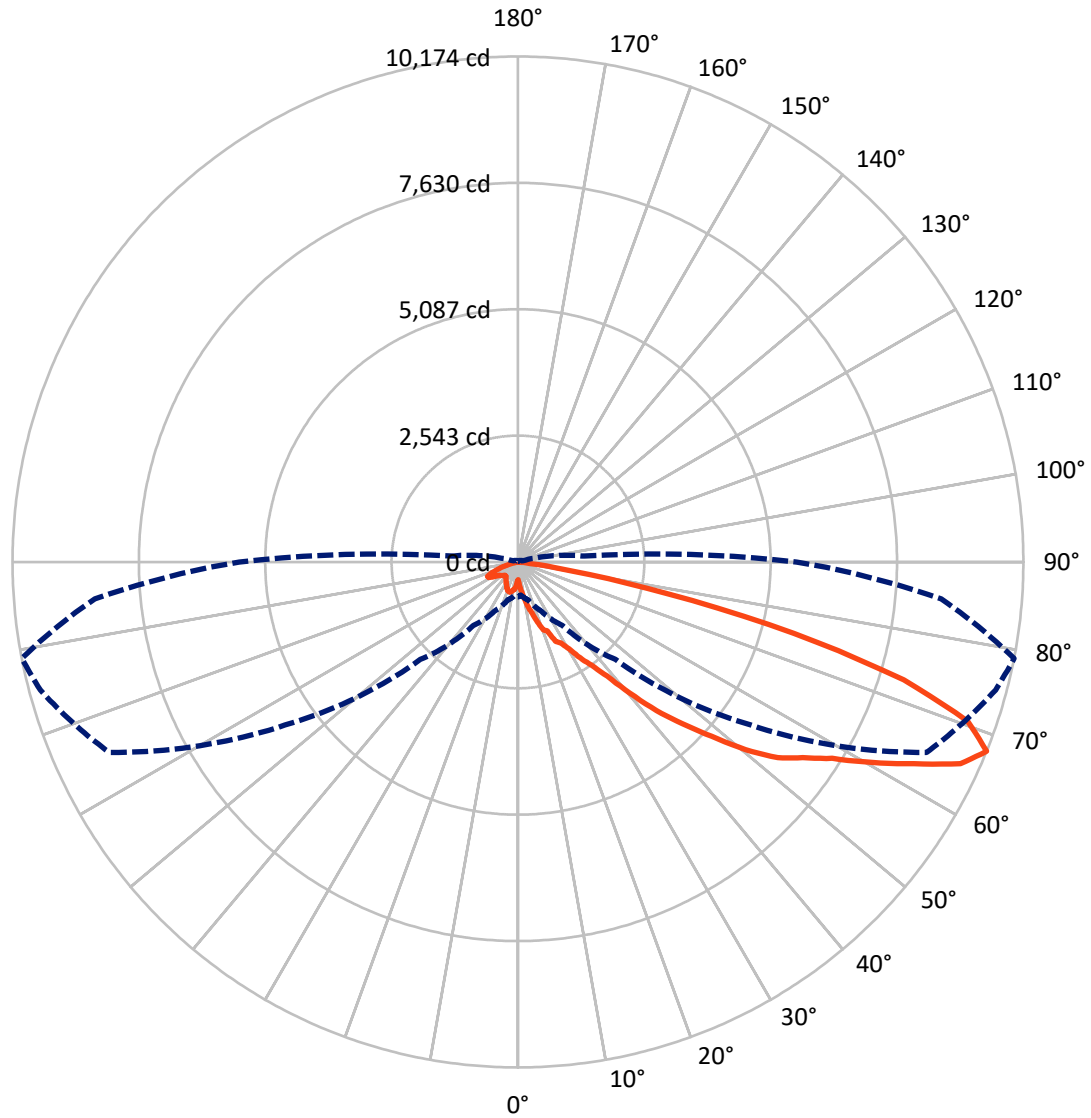
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 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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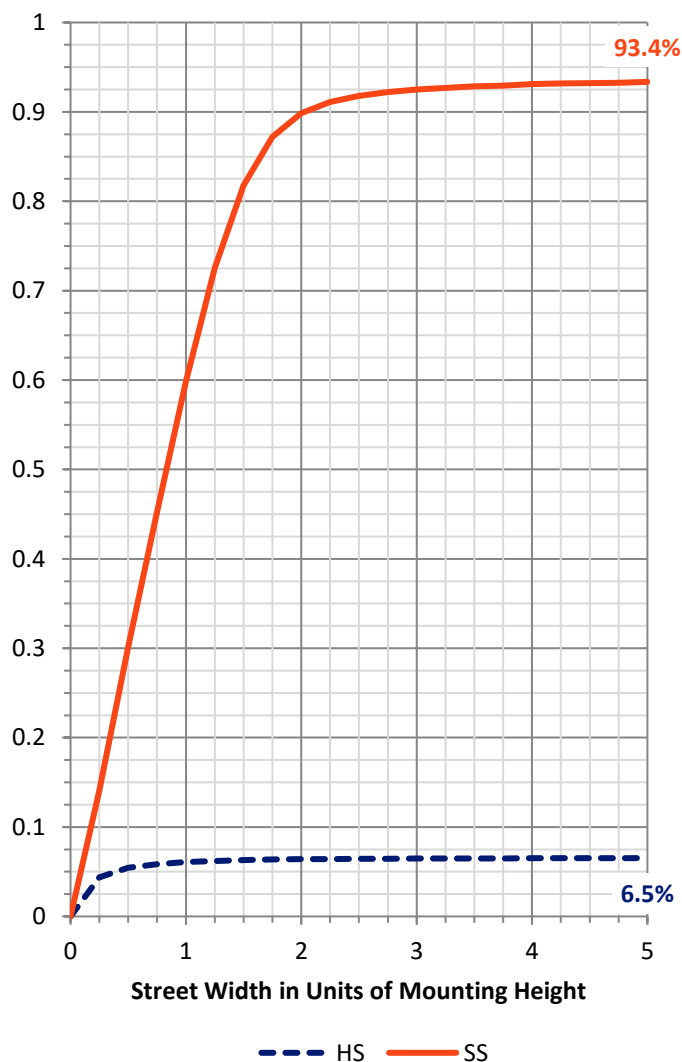
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	609.2	0.0	609.2
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	8662.8	0.0	8662.8
	% Fixture	93.4	0.0	93.4
Total	Lumens	9272.0	0.0	9272.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.0	0.6
10°-20°	207.2	2.2
20°-30°	399.7	4.3
30°-40°	785.1	8.5
40°-50°	1572.8	17.0
50°-60°	2514.0	27.1
60°-70°	2529.5	27.3
70°-80°	1141.1	12.3
80°-90°	70.6	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°	9272.0	100.0
0°-180°	9272.0	100.0

Coefficient of Utilization



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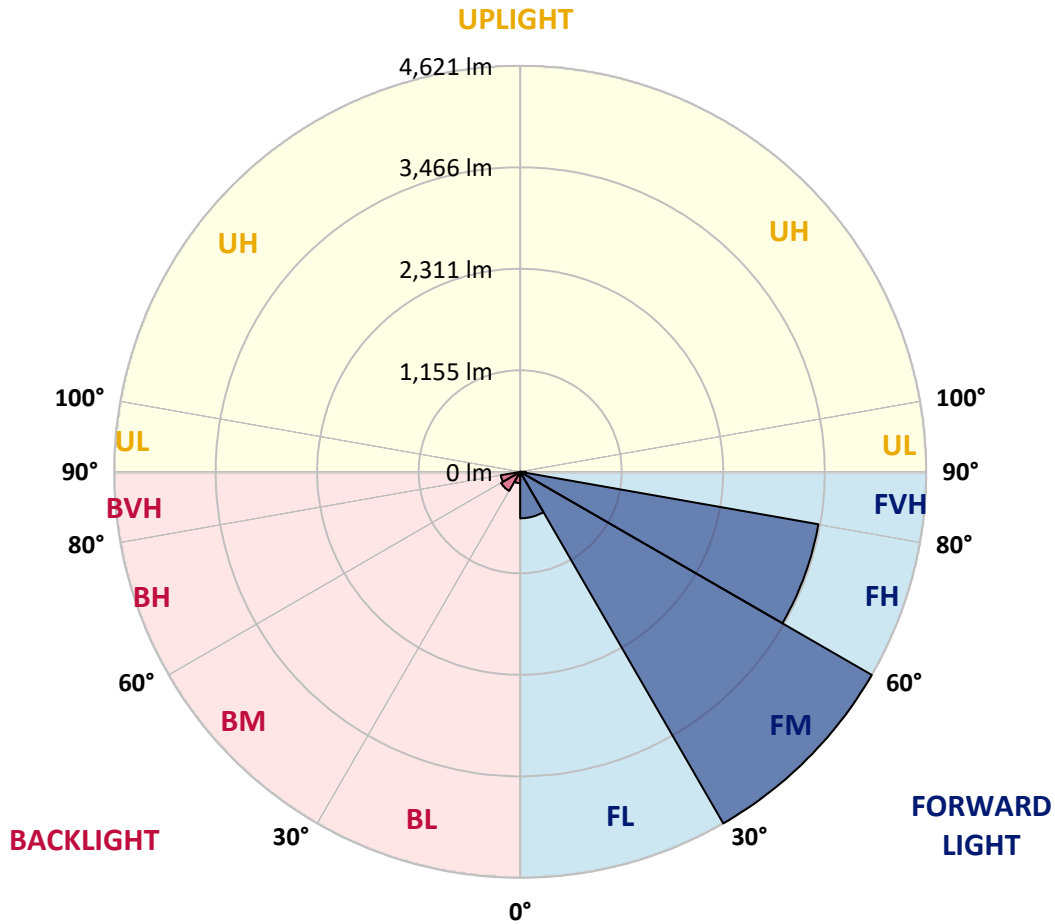
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	529.3	5.7			
FM (30°-60°)	4621.3	49.8			
FH (60°-80°)	3446.0	37.2			G2/5000
FVH (80°-90°)	66.1	0.7			G1/100
BL (0°-30°)	129.5	1.4	B1/500		
BM (30°-60°)	250.6	2.7	B1/1000		
BH (60°-80°)	224.6	2.4	B1/500		G1/500
BVH (80°-90°)	4.5	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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	357.3	357.3	357.3	357.3	357.3	357.3	357.3	357.3	357.3	357.3	357.3
2.5°	482.5	465.1	437.0	452.9	451.8	460.0	444.7	427.8	400.7	427.8	429.9
5°	694.6	662.4	642.0	637.9	615.4	594.4	589.8	572.5	559.2	535.1	556.6
7.5°	865.3	850.5	814.2	810.1	754.9	724.3	734.0	726.3	675.7	650.7	671.6
10°	937.9	912.4	917.5	912.4	888.8	897.5	877.6	854.6	814.2	772.8	720.7
12.5°	966.0	961.9	1004.4	999.2	1054.4	1120.9	1076.4	1038.1	944.6	934.3	863.3
15°	1026.3	1051.9	1045.8	1067.2	1102.5	1215.4	1214.4	1223.6	1124.5	1071.3	968.6
17.5°	1080.0	1098.9	1068.2	1092.8	1188.9	1257.4	1348.9	1313.1	1324.3	1270.1	1111.2
20°	1057.0	1078.5	1047.8	1033.0	1202.2	1332.0	1454.1	1428.1	1495.5	1461.8	1242.5
22.5°	1200.6	1160.2	1083.1	1035.0	1161.3	1330.5	1491.5	1600.3	1588.6	1505.8	1364.7
25°	1378.0	1353.5	1260.9	1176.1	1187.3	1321.3	1609.0	1769.0	1803.7	1768.5	1480.7
27.5°	1617.2	1611.6	1422.5	1385.7	1276.3	1280.9	1627.4	1981.6	1902.4	1847.2	1616.2
30°	1929.5	1885.0	1660.6	1612.6	1451.1	1371.9	1739.9	2165.1	2106.8	2031.7	1743.4
32.5°	2265.3	2271.9	1985.7	1827.3	1697.4	1603.4	1695.4	2251.0	2359.9	2299.0	1902.4
35°	2646.6	2676.2	2326.1	2140.1	1887.6	1749.1	1886.6	2514.7	2710.0	2550.0	2115.5
37.5°	3233.9	3232.8	2823.9	2453.4	2269.9	2119.6	2205.0	2754.4	3140.3	2915.4	2497.9
40°	3750.6	3638.2	3257.9	2832.1	2545.9	2505.0	2443.2	3082.6	3599.8	3464.4	2837.7
42.5°	4136.5	4057.3	3597.8	3266.6	2911.9	2782.0	2760.1	3563.5	4278.1	4088.5	3322.8
45°	4598.1	4338.4	4000.0	3701.5	3340.2	3302.4	3250.7	4051.7	5067.3	4640.0	3744.5
47.5°	5011.6	4767.2	4447.3	4063.9	3648.9	3960.7	3762.4	4480.5	5641.3	5240.0	4209.6
50°	5359.6	5100.0	4741.7	4449.8	4272.0	4483.6	4152.9	4833.7	6261.2	5936.2	4644.6
52.5°	5537.0	5243.1	4966.1	4785.6	4894.5	4847.0	4682.4	5261.5	6789.7	6546.5	5030.0
55°	5391.3	5104.1	4988.0	5077.5	5408.2	5270.7	5284.0	5924.4	7288.6	6953.3	5365.2
57.5°	4745.3	4483.1	4534.7	4779.5	5413.3	5773.1	5969.9	6568.4	7688.8	7460.3	5882.5
60°	3589.6	3378.5	3569.7	4004.1	4904.2	5672.9	6456.5	7212.4	8260.8	8189.2	6665.5
62.5°	2192.2	2077.7	2348.6	2890.4	3908.0	5181.8	6740.2	8071.1	8872.6	8948.7	7496.1
65°	1118.3	1066.7	1292.6	1769.0	2640.5	4256.6	6535.2	8604.7	9504.8	9785.9	8287.8
67.5°	704.3	671.1	791.7	1079.0	1557.9	2776.4	5722.0	9071.4	9951.5	10173.9	8552.1
70°	488.1	467.2	571.4	740.6	982.9	1495.5	4248.4	8635.9	9597.3	9607.6	7912.7
72.5°	309.7	293.4	395.1	548.4	725.3	772.3	2435.5	6776.5	8215.3	8120.7	6407.9
75°	200.9	192.7	251.0	401.7	557.1	476.4	1203.7	4572.5	5890.7	5742.5	4256.1
77.5°	144.1	139.0	168.2	268.3	396.6	333.3	539.7	2725.3	3377.5	3053.4	2066.0
80°	86.9	86.4	121.6	168.2	282.1	235.1	249.4	1237.4	1309.5	1067.7	631.2
82.5°	43.4	45.0	68.0	108.4	181.4	153.8	114.0	412.0	351.7	259.1	127.8
85°	10.2	12.8	35.8	74.6	91.0	61.3	54.2	107.8	96.6	73.1	37.3
87.5°	0.0	0.0	11.2	17.9	24.5	10.2	18.4	20.4	26.1	20.4	7.7
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°	357.3	357.3	357.3	357.3	357.3	357.3	357.3	357.3	357.3	357.3	357.3
2.5°	430.4	424.2	386.9	377.2	376.2	365.5	368.0	357.8	358.3	381.3	381.3
5°	548.4	512.7	476.9	445.2	423.7	393.1	381.8	377.2	373.1	382.3	387.9
7.5°	644.0	591.4	527.0	458.0	394.1	350.1	344.0	332.7	328.7	337.9	345.0
10°	686.4	621.0	532.6	431.9	372.1	336.3	306.7	290.8	287.8	287.3	289.8
12.5°	776.4	695.1	538.7	422.2	357.3	317.9	284.2	257.6	233.1	235.6	233.1
15°	848.5	752.4	538.7	398.7	321.5	282.1	222.8	209.6	206.0	211.6	207.0
17.5°	957.3	809.1	511.6	356.8	290.8	219.3	196.8	195.8	202.9	211.1	206.0
20°	1022.8	816.8	466.1	308.7	238.7	190.1	182.0	173.8	184.0	190.6	188.1
22.5°	1090.7	817.3	420.7	283.2	192.2	173.3	160.0	153.3	154.9	161.0	162.0
25°	1119.9	797.4	378.2	249.4	174.3	154.9	141.1	133.9	131.4	134.4	133.4
27.5°	1199.1	759.0	332.2	212.6	165.6	137.5	124.7	116.0	108.4	113.5	114.5
30°	1210.3	746.7	307.2	189.1	154.4	121.6	110.4	101.2	95.6	102.7	102.7
32.5°	1246.1	679.3	294.4	179.4	142.6	112.4	97.1	90.5	89.4	94.0	94.6
35°	1301.3	649.6	275.5	171.7	131.9	101.7	87.4	84.3	83.3	86.9	86.9
37.5°	1488.4	612.8	254.5	165.1	122.7	96.1	84.8	79.7	80.2	83.3	85.4
40°	1612.6	617.4	223.4	156.9	111.9	91.0	79.7	76.2	75.6	77.2	78.7
42.5°	1843.1	621.0	209.6	148.2	103.8	84.8	74.6	72.1	70.0	71.6	73.1
45°	2100.7	639.9	202.4	141.1	99.2	81.3	70.0	68.5	63.9	64.9	67.0
47.5°	2349.1	708.9	193.7	130.8	95.1	79.2	65.4	61.8	58.8	58.3	60.3
50°	2631.3	775.9	184.0	119.6	91.0	76.2	60.8	55.2	53.2	53.2	54.7
52.5°	2883.8	839.8	174.8	111.9	87.9	70.5	56.7	51.1	49.6	49.6	51.6
55°	3149.5	906.7	166.6	104.8	83.8	64.9	53.2	48.0	47.5	46.5	48.0
57.5°	3618.7	1052.9	156.4	98.6	78.2	60.3	50.1	45.0	44.0	42.4	44.0
60°	4302.1	1277.3	143.1	92.5	71.6	57.2	47.5	41.4	39.9	37.3	37.8
62.5°	4970.2	1458.7	127.8	84.8	65.4	54.2	43.4	37.3	34.8	31.7	32.2
65°	5542.6	1530.3	111.4	75.6	59.3	47.0	37.8	32.7	29.1	25.0	24.5
67.5°	5610.1	1351.4	95.6	67.0	53.2	39.9	32.2	29.1	23.5	19.9	18.9
70°	5048.9	1006.9	79.7	59.3	46.0	33.7	27.6	25.6	22.0	18.9	17.4
72.5°	4020.5	743.2	67.0	52.6	40.4	28.6	23.5	24.0	22.0	18.4	16.4
75°	2658.9	425.3	54.7	44.0	33.7	23.0	21.5	21.5	21.0	17.4	15.3
77.5°	1279.3	183.5	41.9	34.8	27.1	17.4	19.4	19.4	19.9	15.8	12.8
80°	362.9	55.2	26.1	23.5	19.9	11.8	15.3	14.8	13.3	9.2	5.6
82.5°	64.9	21.5	11.8	12.3	11.2	4.6	8.7	8.2	6.6	3.6	0.5
85°	17.9	8.2	6.6	7.2	5.6	1.5	3.6	4.6	3.6	2.0	0.0
87.5°	4.6	3.6	4.6	5.1	4.1	0.5	1.5	0.5	1.5	0.5	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)