

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: P367229

Luminaire Tested: **MSA-SA2A-760-U-T2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367229
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-SA2A-760-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 5995 lumens
Efficiency: N/A
Efficacy: 90.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

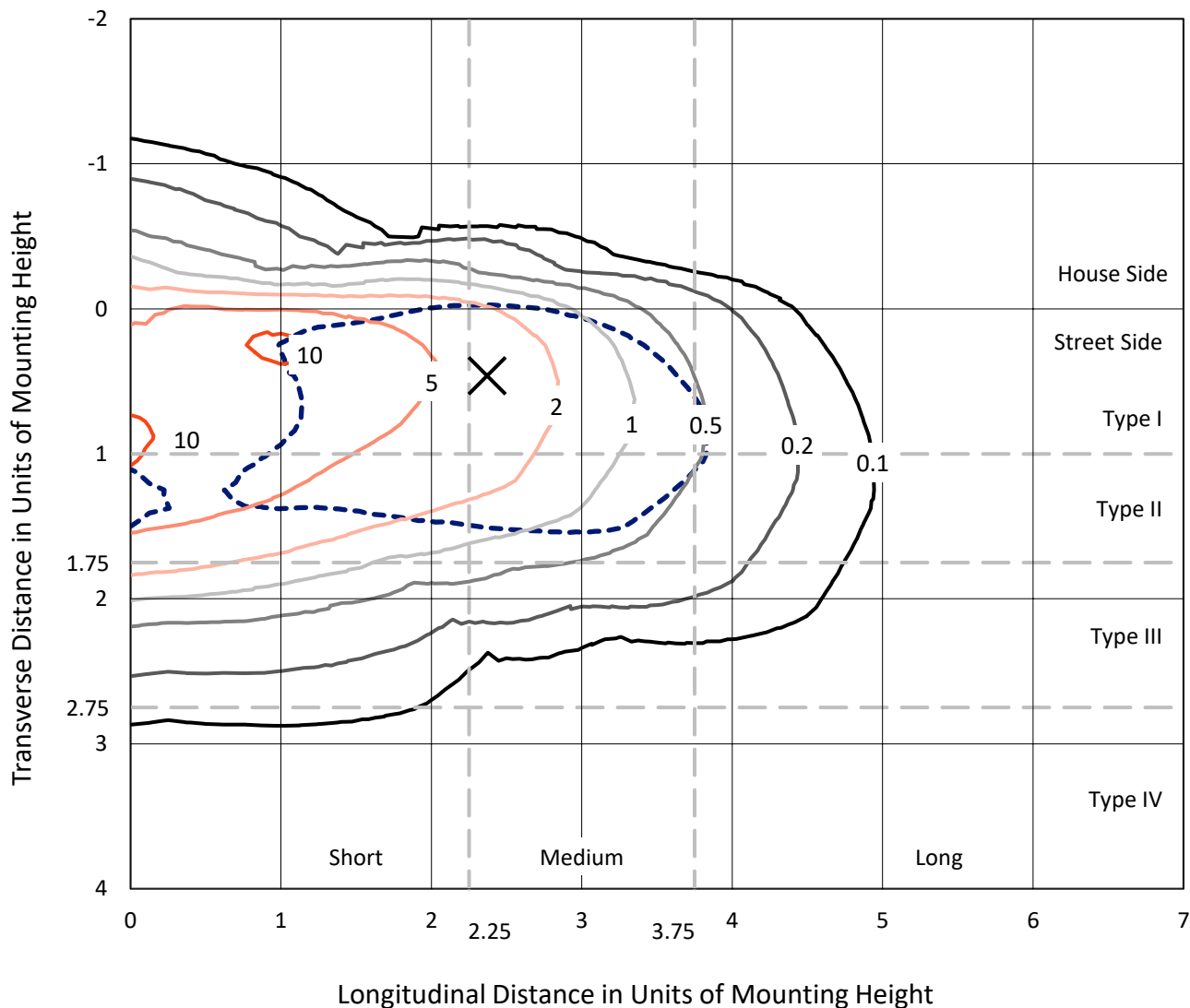
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

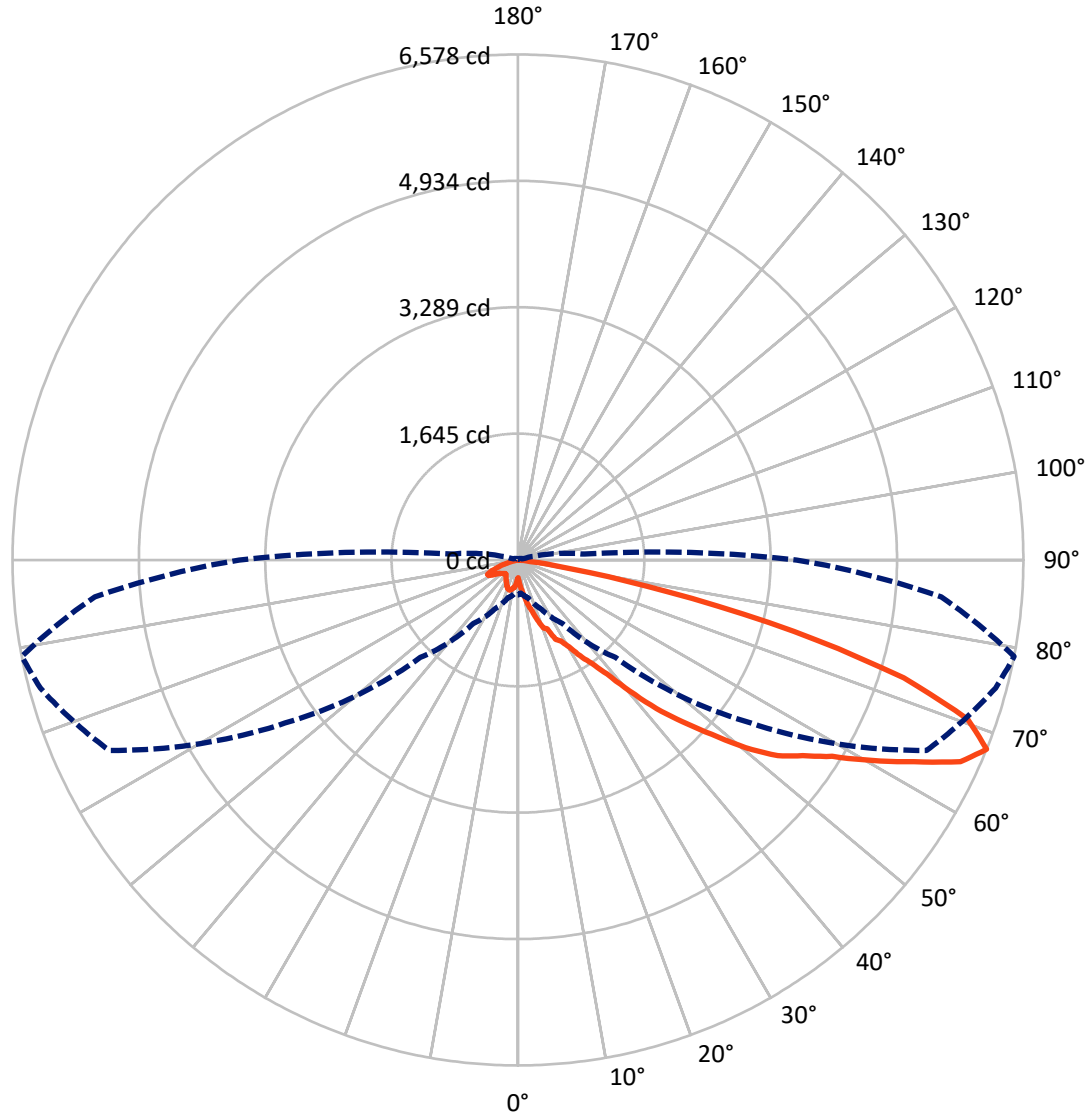
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.3 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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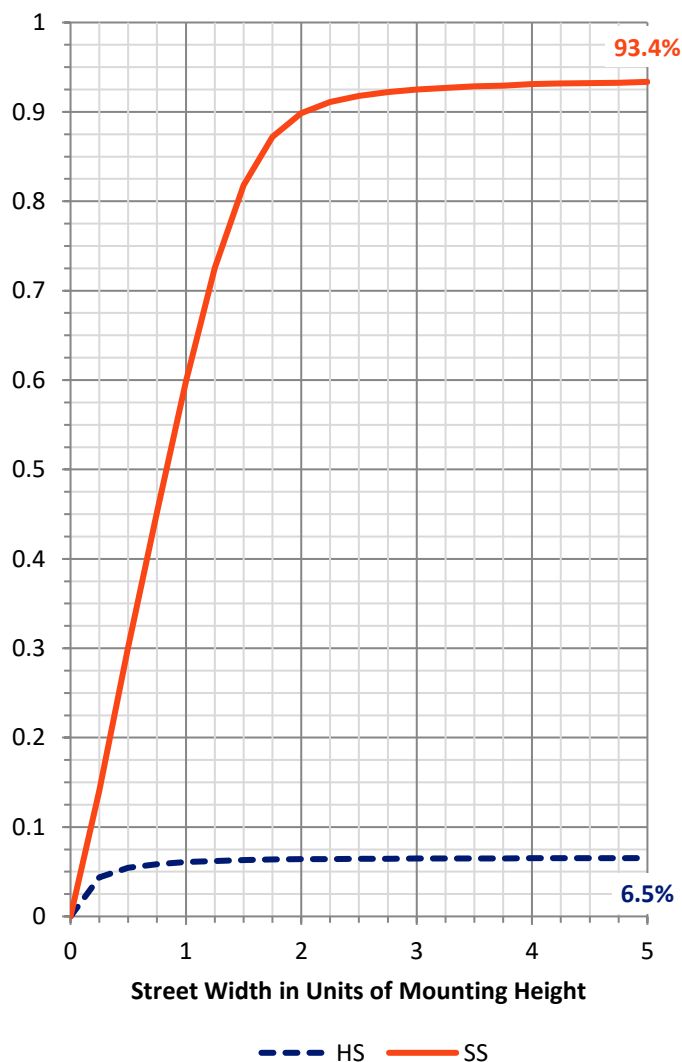
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	393.9	0.0	393.9
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	5601.1	0.0	5601.1
	% Fixture	93.4	0.0	93.4
Total	Lumens	5995.0	0.0	5995.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.6	0.6
10°-20°	134.0	2.2
20°-30°	258.4	4.3
30°-40°	507.6	8.5
40°-50°	1017.0	17.0
50°-60°	1625.5	27.1
60°-70°	1635.5	27.3
70°-80°	737.8	12.3
80°-90°	45.7	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°	5995.0	100.0
0°-180°	5995.0	100.0

Coefficient of Utilization

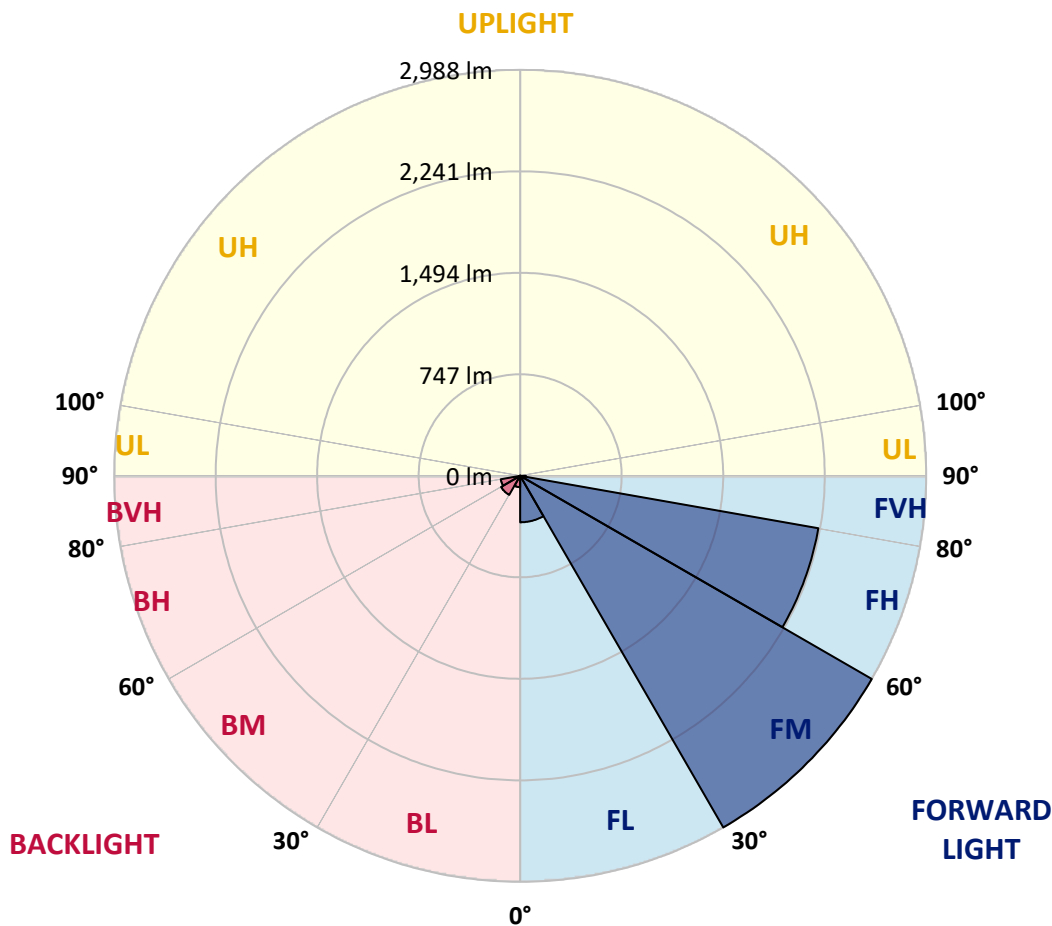


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	342.3	5.7			
FM (30°-60°)	2988.0	49.8			
FH (60°-80°)	2228.1	37.2			G2/5000
FVH (80°-90°)	42.7	0.7			G1/100
BL (0°-30°)	83.7	1.4	B0/110		
BM (30°-60°)	162.1	2.7	B0/220		
BH (60°-80°)	145.2	2.4	B1/500		G1/500
BVH (80°-90°)	2.9	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°	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0
2.5°	312.0	300.7	282.6	292.8	292.1	297.4	287.5	276.6	259.1	276.6	277.9
5°	449.1	428.3	415.1	412.4	397.9	384.3	381.4	370.1	361.5	346.0	359.9
7.5°	559.5	549.9	526.4	523.8	488.1	468.3	474.6	469.6	436.9	420.7	434.2
10°	606.4	589.9	593.2	589.9	574.7	580.3	567.4	552.6	526.4	499.7	466.0
12.5°	624.6	622.0	649.4	646.1	681.8	724.7	696.0	671.2	610.7	604.1	558.2
15°	663.6	680.1	676.2	690.0	712.8	785.9	785.2	791.2	727.0	692.7	626.3
17.5°	698.3	710.5	690.7	706.6	768.7	813.0	872.1	849.0	856.3	821.2	718.5
20°	683.4	697.3	677.5	667.9	777.3	861.2	940.2	923.4	967.0	945.2	803.4
22.5°	776.3	750.2	700.3	669.2	750.8	860.2	964.3	1034.7	1027.1	973.6	882.4
25°	891.0	875.1	815.3	760.4	767.7	854.3	1040.3	1143.8	1166.3	1143.4	957.4
27.5°	1045.6	1042.0	919.7	895.9	825.2	828.2	1052.2	1281.3	1230.0	1194.3	1045.0
30°	1247.5	1218.8	1073.7	1042.7	938.2	887.0	1124.9	1399.9	1362.2	1313.6	1127.3
32.5°	1464.7	1469.0	1283.9	1181.5	1097.5	1036.7	1096.2	1455.4	1525.8	1486.5	1230.0
35°	1711.2	1730.4	1504.0	1383.7	1220.4	1130.9	1219.8	1625.9	1752.2	1648.7	1367.8
37.5°	2090.9	2090.3	1825.9	1586.3	1467.6	1370.5	1425.7	1780.9	2030.4	1885.0	1615.0
40°	2425.0	2352.3	2106.5	1831.2	1646.1	1619.7	1579.7	1993.1	2327.5	2240.0	1834.8
42.5°	2674.5	2623.3	2326.2	2112.1	1882.7	1798.8	1784.6	2304.1	2766.1	2643.5	2148.4
45°	2973.0	2805.1	2586.3	2393.3	2159.7	2135.2	2101.8	2619.7	3276.3	3000.1	2421.1
47.5°	3240.3	3082.4	2875.5	2627.6	2359.3	2560.9	2432.6	2897.0	3647.5	3388.0	2721.8
50°	3465.4	3297.5	3065.8	2877.1	2762.1	2898.9	2685.1	3125.3	4048.3	3838.2	3003.0
52.5°	3580.1	3390.0	3210.9	3094.2	3164.6	3133.9	3027.5	3401.9	4390.0	4232.7	3252.2
55°	3485.9	3300.1	3225.1	3283.0	3496.8	3407.9	3416.5	3830.6	4712.6	4495.8	3469.0
57.5°	3068.1	2898.6	2932.0	3090.3	3500.1	3732.7	3860.0	4247.0	4971.4	4823.6	3803.5
60°	2320.9	2184.4	2308.0	2589.0	3170.9	3668.0	4174.6	4663.4	5341.2	5294.9	4309.7
62.5°	1417.4	1343.4	1518.5	1868.8	2526.8	3350.4	4358.0	5218.6	5736.7	5786.0	4846.8
65°	723.1	689.7	835.8	1143.8	1707.2	2752.2	4225.5	5563.6	6145.5	6327.3	5358.7
67.5°	455.4	433.9	511.9	697.6	1007.3	1795.1	3699.7	5865.3	6434.4	6578.1	5529.5
70°	315.6	302.1	369.5	478.9	635.5	967.0	2746.9	5583.7	6205.4	6212.0	5116.1
72.5°	200.3	189.7	255.5	354.6	468.9	499.3	1574.7	4381.5	5311.7	5250.6	4143.2
75°	129.9	124.6	162.3	259.8	360.2	308.0	778.3	2956.4	3808.7	3712.9	2751.9
77.5°	93.2	89.9	108.7	173.5	256.4	215.5	349.0	1762.1	2183.8	1974.3	1335.8
80°	56.2	55.9	78.7	108.7	182.4	152.0	161.3	800.1	846.7	690.4	408.1
82.5°	28.1	29.1	44.0	70.1	117.3	99.5	73.7	266.4	227.4	167.6	82.6
85°	6.6	8.3	23.1	48.2	58.8	39.7	35.0	69.7	62.5	47.3	24.1
87.5°	0.0	0.0	7.3	11.6	15.9	6.6	11.9	13.2	16.9	13.2	5.0
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°	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0	231.0
2.5°	278.3	274.3	250.2	243.9	243.2	236.3	237.9	231.3	231.7	246.5	246.5
5°	354.6	331.5	308.3	287.8	274.0	254.1	246.9	243.9	241.2	247.2	250.8
7.5°	416.4	382.4	340.7	296.1	254.8	226.4	222.4	215.1	212.5	218.4	223.1
10°	443.8	401.5	344.4	279.3	240.6	217.5	198.3	188.0	186.1	185.7	187.4
12.5°	502.0	449.4	348.3	273.0	231.0	205.6	183.7	166.6	150.7	152.3	150.7
15°	548.6	486.5	348.3	257.8	207.9	182.4	144.1	135.5	133.2	136.8	133.8
17.5°	619.0	523.1	330.8	230.7	188.0	141.8	127.2	126.6	131.2	136.5	133.2
20°	661.3	528.1	301.4	199.6	154.3	122.9	117.6	112.4	119.0	123.3	121.6
22.5°	705.2	528.4	272.0	183.1	124.3	112.0	103.4	99.1	100.1	104.1	104.8
25°	724.1	515.5	244.6	161.3	112.7	100.1	91.2	86.6	84.9	86.9	86.3
27.5°	775.3	490.8	214.8	137.5	107.1	88.9	80.6	75.0	70.1	73.4	74.0
30°	782.6	482.8	198.6	122.3	99.8	78.7	71.4	65.4	61.8	66.4	66.4
32.5°	805.7	439.2	190.4	116.0	92.2	72.7	62.8	58.5	57.8	60.8	61.1
35°	841.4	420.0	178.1	111.0	85.3	65.8	56.5	54.5	53.9	56.2	56.2
37.5°	962.3	396.2	164.6	106.7	79.3	62.1	54.9	51.6	51.9	53.9	55.2
40°	1042.7	399.2	144.4	101.5	72.4	58.8	51.6	49.2	48.9	49.9	50.9
42.5°	1191.7	401.5	135.5	95.8	67.1	54.9	48.2	46.6	45.3	46.3	47.3
45°	1358.3	413.8	130.9	91.2	64.1	52.5	45.3	44.3	41.3	42.0	43.3
47.5°	1518.9	458.4	125.3	84.6	61.5	51.2	42.3	40.0	38.0	37.7	39.0
50°	1701.3	501.7	119.0	77.3	58.8	49.2	39.3	35.7	34.4	34.4	35.4
52.5°	1864.5	543.0	113.0	72.4	56.8	45.6	36.7	33.0	32.1	32.1	33.4
55°	2036.4	586.3	107.7	67.7	54.2	42.0	34.4	31.1	30.7	30.1	31.1
57.5°	2339.8	680.8	101.1	63.8	50.6	39.0	32.4	29.1	28.4	27.4	28.4
60°	2781.6	825.9	92.5	59.8	46.3	37.0	30.7	26.8	25.8	24.1	24.5
62.5°	3213.6	943.2	82.6	54.9	42.3	35.0	28.1	24.1	22.5	20.5	20.8
65°	3583.7	989.4	72.0	48.9	38.3	30.4	24.5	21.2	18.8	16.2	15.9
67.5°	3627.3	873.8	61.8	43.3	34.4	25.8	20.8	18.8	15.2	12.9	12.2
70°	3264.4	651.0	51.6	38.3	29.7	21.8	17.8	16.5	14.2	12.2	11.2
72.5°	2599.5	480.5	43.3	34.0	26.1	18.5	15.2	15.5	14.2	11.9	10.6
75°	1719.1	275.0	35.4	28.4	21.8	14.9	13.9	13.9	13.5	11.2	9.9
77.5°	827.2	118.6	27.1	22.5	17.5	11.2	12.6	12.6	12.9	10.2	8.3
80°	234.6	35.7	16.9	15.2	12.9	7.6	9.9	9.6	8.6	5.9	3.6
82.5°	42.0	13.9	7.6	7.9	7.3	3.0	5.6	5.3	4.3	2.3	0.3
85°	11.6	5.3	4.3	4.6	3.6	1.0	2.3	3.0	2.3	1.3	0.0
87.5°	3.0	2.3	3.0	3.3	2.6	0.3	1.0	0.3	1.0	0.3	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)