

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: P367235

Luminaire Tested: **MSA-SA2A-760-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367235
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-760-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5992 lumens
Efficiency: N/A
Efficacy: 90.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

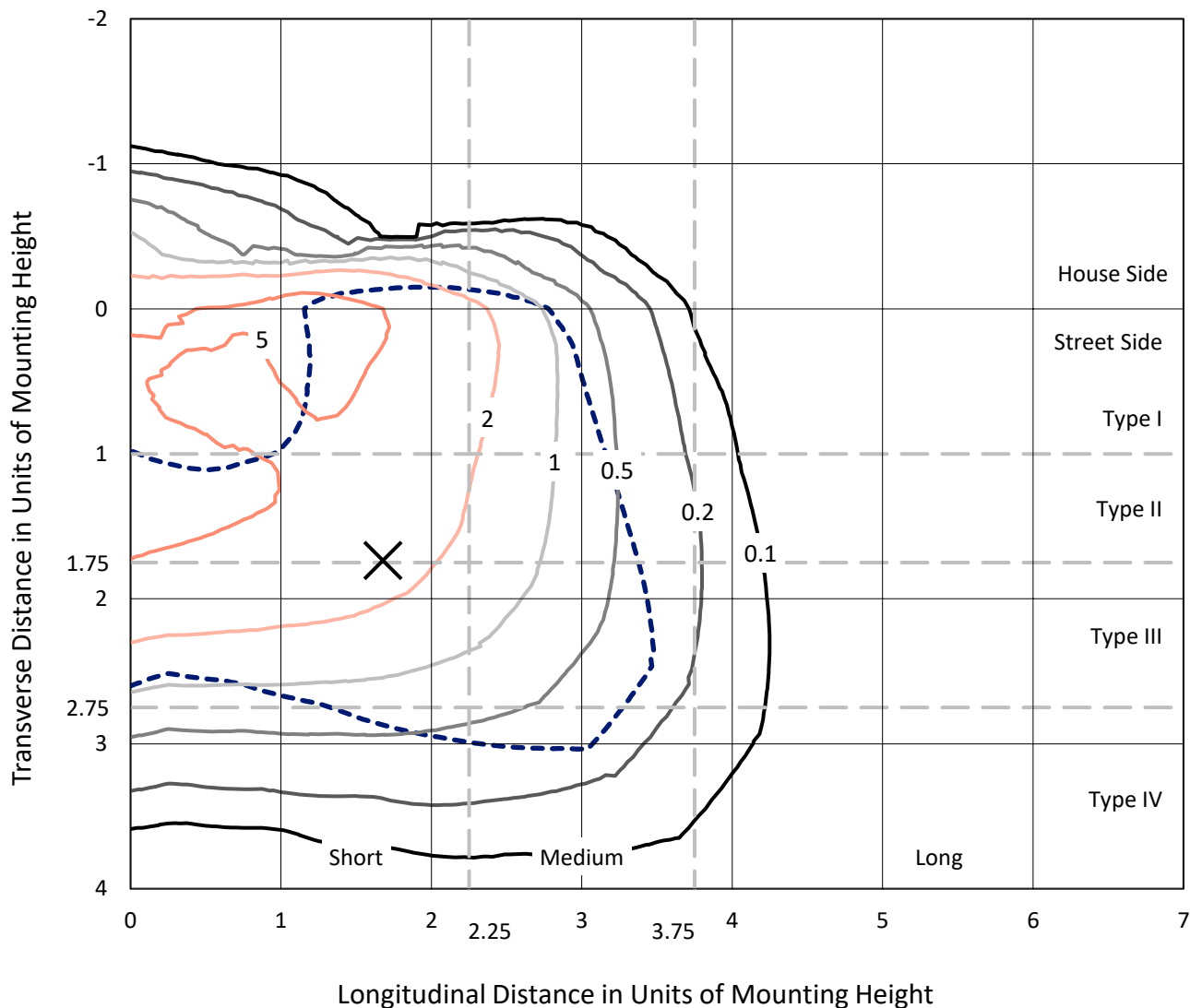
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

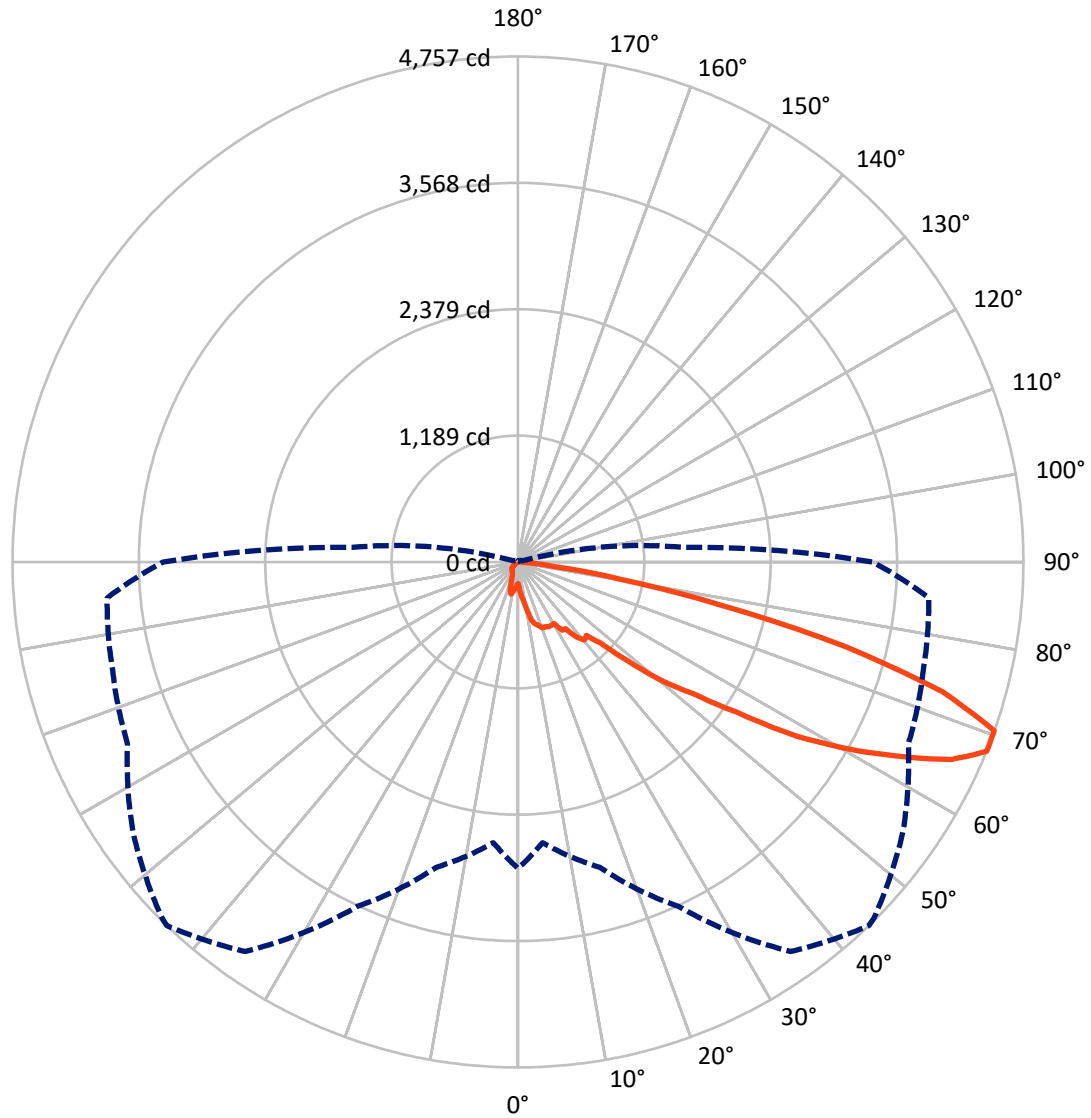
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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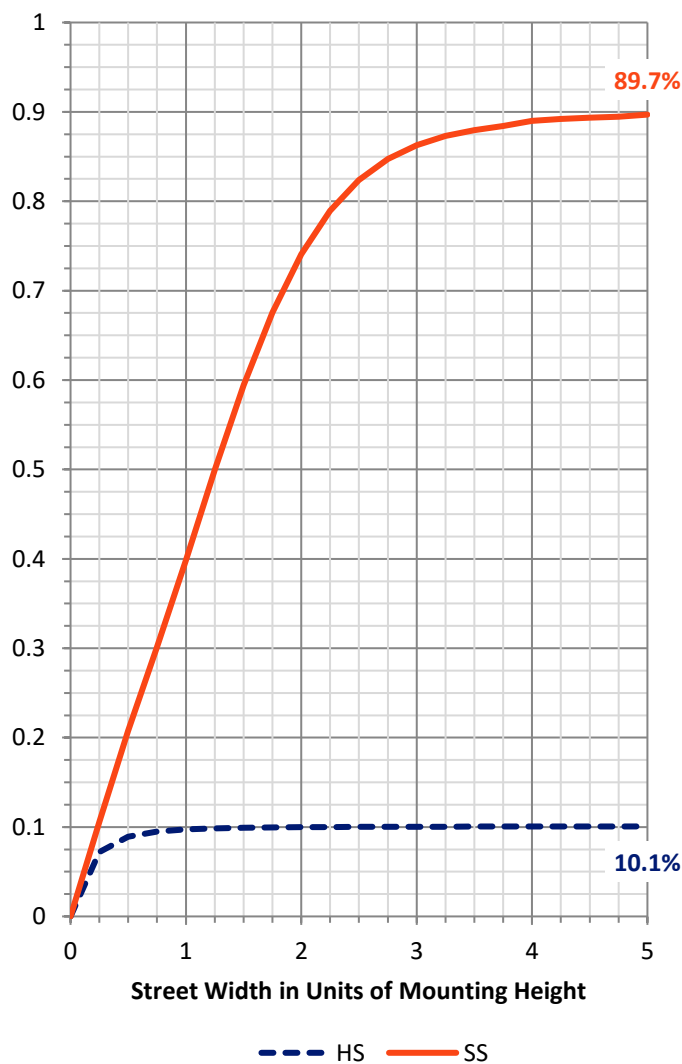
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	608.7	0.0	608.7
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	5383.3	0.0	5383.3
	% Fixture	89.8	0.0	89.8
Total	Lumens	5992.0	0.0	5992.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.9	0.5
10°-20°	125.3	2.1
20°-30°	221.9	3.7
30°-40°	360.7	6.0
40°-50°	721.8	12.0
50°-60°	1480.8	24.7
60°-70°	2034.2	33.9
70°-80°	956.1	16.0
80°-90°	61.2	1.0
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°	5992.0	100.0
0°-180°	5992.0	100.0

Coefficient of Utilization

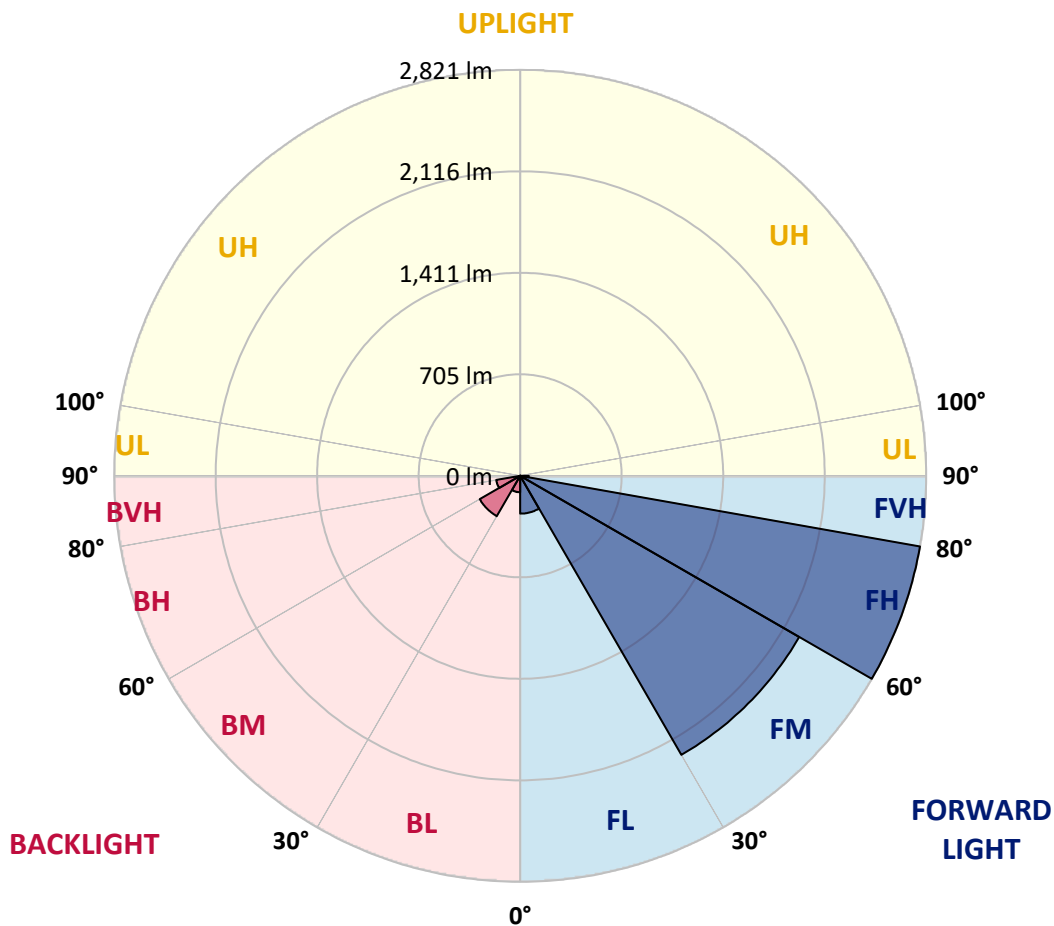


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	262.8	4.4			
FM (30°-60°)	2239.1	37.4			
FH (60°-80°)	2821.4	47.1			G2/5000
FVH (80°-90°)	60.0	1.0			G1/100
BL (0°-30°)	114.3	1.9	B1/500		
BM (30°-60°)	324.2	5.4	B1/1000		
BH (60°-80°)	168.9	2.8	B1/500		G1/500
BVH (80°-90°)	1.2	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	201.9	201.9	201.9	201.9	201.9	201.9	201.9	201.9	201.9	201.9	201.9
2.5°	256.7	248.5	236.6	239.2	240.5	244.2	244.5	239.9	226.7	223.0	239.2
5°	359.8	339.7	336.0	328.4	313.2	305.0	303.0	311.2	300.7	297.4	301.7
7.5°	459.6	442.4	423.6	413.3	381.6	362.1	361.1	364.4	366.4	354.9	360.8
10°	526.0	507.2	503.2	479.1	451.7	447.0	445.1	432.5	422.3	413.7	384.9
12.5°	586.2	585.8	593.1	558.4	554.1	558.7	557.1	512.1	501.9	465.9	457.6
15°	666.1	685.9	654.5	625.5	588.5	604.3	600.0	571.3	564.3	539.9	504.5
17.5°	749.0	754.3	701.8	657.2	647.6	626.8	631.1	620.8	585.8	605.3	570.3
20°	751.0	762.6	706.4	632.7	662.1	661.2	661.5	651.6	605.3	650.9	618.9
22.5°	778.8	750.4	698.2	651.2	656.5	661.5	666.8	654.5	644.6	655.9	661.8
25°	767.5	756.3	706.1	675.0	670.1	674.0	675.4	690.9	684.6	711.7	696.8
27.5°	796.6	780.4	690.6	696.2	678.7	674.0	666.1	718.0	736.5	715.0	754.7
30°	846.5	844.2	717.3	725.6	712.0	671.4	692.5	760.3	783.4	770.2	818.4
32.5°	924.5	932.4	795.6	742.1	749.0	767.2	759.3	760.3	818.8	848.2	886.5
35°	1035.2	1030.9	872.0	804.9	768.5	771.5	782.7	836.6	912.3	910.3	950.9
37.5°	1252.6	1205.7	1007.1	869.0	879.9	894.8	886.5	958.9	966.1	968.8	1065.9
40°	1573.1	1510.6	1220.2	1004.1	899.1	964.8	960.8	978.7	1027.3	1045.4	1187.2
42.5°	1995.4	1911.4	1595.2	1252.6	991.6	946.3	970.8	1004.5	1167.7	1219.6	1374.8
45°	2461.9	2292.1	1969.3	1606.8	1223.5	1083.1	1101.6	1164.4	1390.7	1476.6	1648.1
47.5°	2764.2	2614.9	2339.7	1920.7	1465.4	1391.7	1393.4	1406.9	1652.7	1812.0	2042.0
50°	3026.9	2868.0	2612.6	2248.8	1893.3	1753.8	1722.1	1659.7	1986.4	2204.2	2459.3
52.5°	3397.6	3211.9	2885.5	2633.7	2381.3	2052.9	2041.6	2062.8	2380.0	2608.9	2887.1
55°	3732.0	3506.3	3194.8	3036.2	2937.7	2492.3	2501.9	2537.2	2885.2	3006.4	3267.8
57.5°	3879.7	3635.2	3475.0	3403.6	3351.0	3092.7	3060.3	3039.1	3283.6	3329.9	3666.6
60°	3976.5	3743.9	3671.2	3687.7	3847.0	3572.8	3543.3	3420.4	3613.4	3651.4	4024.1
62.5°	3915.4	3703.3	3718.8	3856.6	4210.1	4029.7	3944.8	3739.3	3883.0	3913.7	4280.8
65°	3530.5	3309.4	3509.0	3842.4	4487.0	4482.7	4443.4	4033.7	4032.4	4071.7	4300.7
67.5°	2883.8	2651.9	2974.7	3576.1	4475.4	4757.3	4738.8	4424.2	4053.8	3948.8	3881.0
70°	2004.9	1803.7	2169.8	2953.2	4076.6	4755.3	4725.6	4686.6	3884.0	3399.0	3009.1
72.5°	1041.8	931.1	1272.1	2035.0	3249.6	4178.1	4276.2	4212.1	3316.4	2469.5	1772.0
75°	353.9	317.5	524.7	1080.1	2160.2	3190.5	3305.5	3240.4	2252.4	1325.0	700.8
77.5°	137.1	127.5	188.0	438.5	1083.8	1944.1	2069.0	2002.6	1208.0	485.4	164.9
80°	78.0	75.3	103.7	197.6	477.8	967.1	1055.0	956.9	435.5	163.6	43.0
82.5°	33.0	34.0	57.8	106.7	240.2	341.3	380.6	347.3	182.4	112.0	15.9
85°	7.3	8.9	27.4	59.5	100.8	97.5	102.1	113.3	112.0	82.3	6.9
87.5°	0.0	0.0	8.6	16.2	24.1	15.9	12.6	22.1	34.4	33.0	3.0
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°	201.9	201.9	201.9	201.9	201.9	201.9	201.9	201.9	201.9	201.9	201.9
2.5°	242.2	238.9	218.1	216.8	218.1	214.4	214.1	206.5	207.2	224.4	225.7
5°	301.7	285.1	267.3	261.7	256.4	244.5	251.1	251.1	251.1	262.0	265.3
7.5°	355.5	333.4	308.3	287.1	266.6	251.8	262.0	269.3	273.6	287.8	294.4
10°	380.0	358.2	335.7	305.6	289.8	284.2	272.3	266.0	273.6	270.6	274.2
12.5°	432.2	412.4	373.7	342.6	330.7	311.6	276.6	252.1	235.9	233.3	232.6
15°	483.1	470.8	419.0	377.3	336.0	291.8	231.9	199.6	182.4	179.4	179.7
17.5°	547.5	530.0	453.7	393.9	323.8	244.2	179.1	151.3	150.0	157.3	157.9
20°	590.4	561.7	471.2	380.3	283.5	184.7	140.1	133.5	144.1	157.3	156.0
22.5°	631.4	600.4	494.3	368.4	219.7	140.1	128.9	129.5	138.4	152.7	156.3
25°	658.5	647.3	522.7	340.7	167.5	121.3	123.2	128.2	135.8	149.3	149.3
27.5°	740.1	687.6	519.4	286.8	128.9	113.0	117.6	123.9	127.9	144.1	145.7
30°	789.7	772.5	536.6	231.9	113.0	102.4	111.3	117.0	119.6	138.1	138.8
32.5°	850.5	812.5	557.4	171.2	105.1	101.8	99.8	104.1	111.7	127.9	128.9
35°	924.5	913.3	527.7	134.5	102.4	95.2	91.2	93.5	98.5	109.4	111.7
37.5°	1075.5	1008.8	509.8	115.3	102.4	92.8	88.6	82.6	83.3	90.9	95.2
40°	1202.7	1182.2	459.9	112.0	97.8	89.5	79.0	71.7	66.7	69.1	70.7
42.5°	1436.3	1341.5	395.5	110.4	93.5	81.0	67.1	59.5	51.9	52.5	55.2
45°	1719.8	1515.3	338.0	108.7	90.5	72.4	56.5	47.6	39.6	40.0	42.6
47.5°	2098.5	1768.7	268.3	103.7	85.2	64.4	45.6	36.3	31.7	32.7	35.0
50°	2528.6	1991.1	212.1	96.2	79.0	56.8	37.0	29.4	27.8	28.7	31.4
52.5°	2912.9	2155.0	175.1	89.2	70.0	46.3	31.1	26.1	25.4	26.1	28.1
55°	3254.6	2250.1	146.4	81.3	60.1	37.3	28.1	24.1	23.8	23.5	24.8
57.5°	3575.1	2277.5	114.3	68.7	48.9	32.4	26.1	22.5	21.8	20.8	21.8
60°	3808.7	2230.6	83.9	55.2	40.0	29.4	24.5	20.2	19.2	17.5	18.2
62.5°	3921.3	2102.1	63.4	44.3	34.0	26.8	21.8	17.5	16.2	14.2	14.5
65°	3814.3	1890.3	49.9	37.3	29.1	22.5	18.5	14.9	13.2	11.2	11.2
67.5°	3340.1	1568.1	42.3	32.4	24.5	19.2	15.2	13.5	10.9	9.3	8.9
70°	2451.7	1128.0	36.3	28.4	21.1	16.5	12.9	12.2	10.6	8.9	8.3
72.5°	1383.8	638.4	31.1	25.1	17.8	13.9	10.9	11.2	10.2	8.3	7.6
75°	528.0	215.1	25.8	20.8	14.5	10.6	9.3	9.3	9.3	6.9	5.9
77.5°	130.8	54.8	20.5	16.9	11.6	6.9	7.6	7.9	7.9	5.9	4.3
80°	36.0	18.5	12.2	12.2	8.3	4.0	5.3	5.3	4.3	2.0	0.0
82.5°	13.2	6.9	4.3	5.3	3.6	1.3	2.0	1.3	1.0	0.0	0.0
85°	5.6	3.6	2.6	3.0	1.7	0.0	0.3	0.7	0.0	0.0	0.0
87.5°	2.3	1.7	1.3	1.3	0.7	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)