

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: P367779

Luminaire Tested: **MSA-SA3A-830-U-T2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367779
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-SA3A-830-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: 7030 lumens
Efficiency: N/A
Efficacy: 73.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

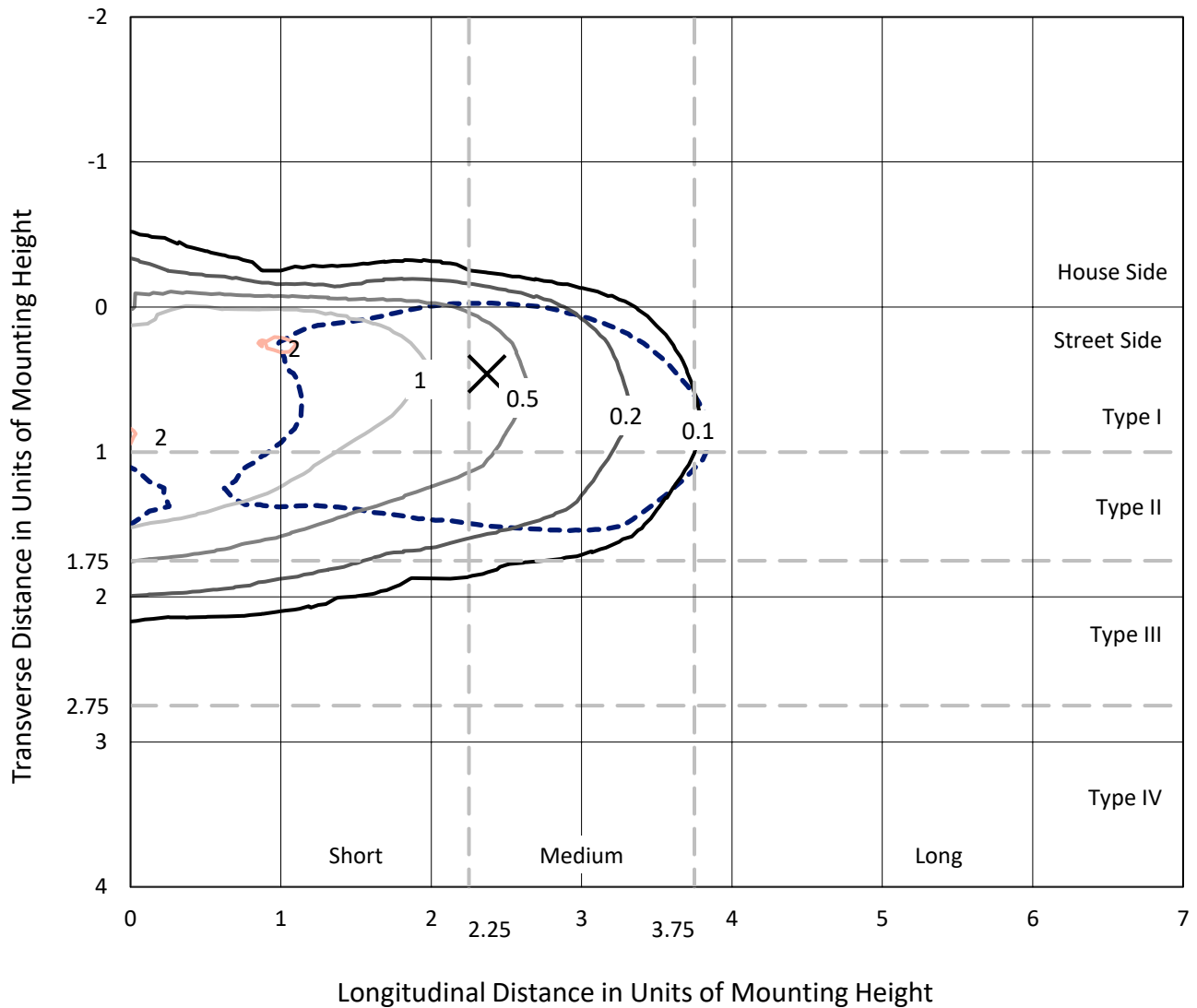
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

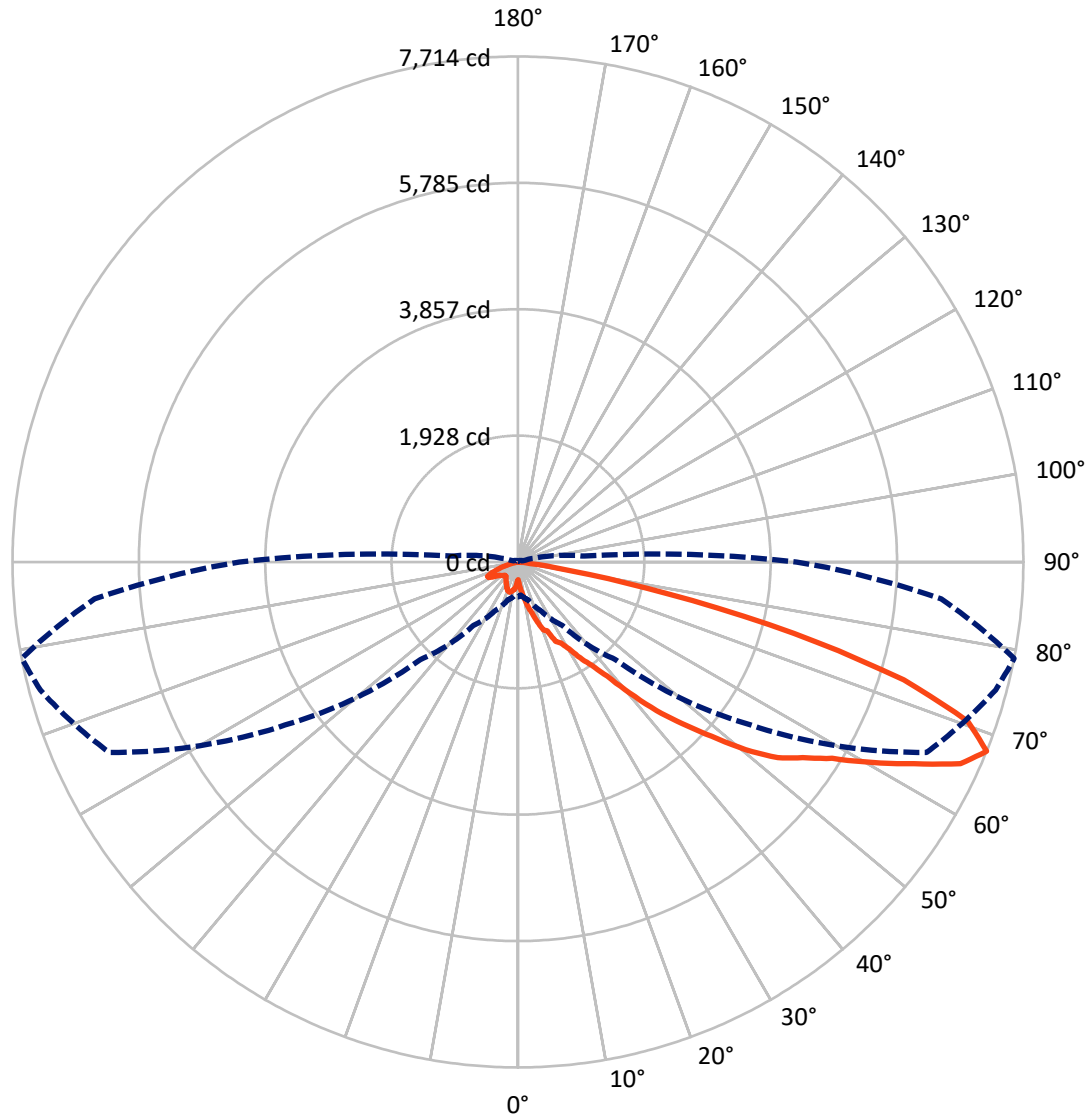
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 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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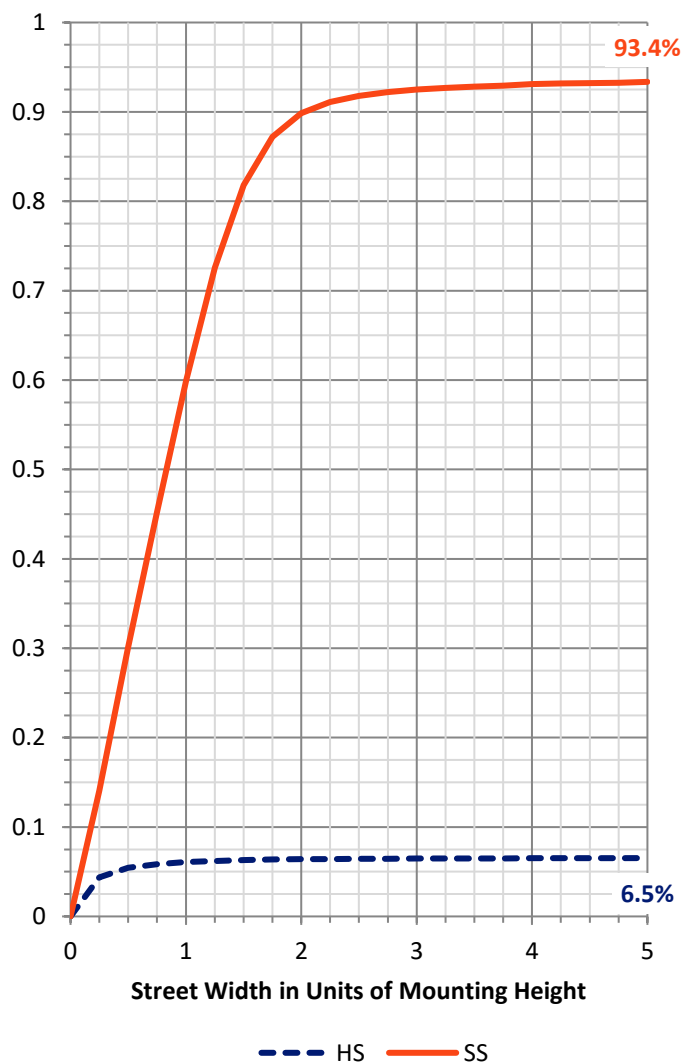
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	461.9	0.0	461.9
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	6568.1	0.0	6568.1
	% Fixture	93.4	0.0	93.4
Total	Lumens	7030.0	0.0	7030.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.4	0.6
10°-20°	157.1	2.2
20°-30°	303.1	4.3
30°-40°	595.3	8.5
40°-50°	1192.5	17.0
50°-60°	1906.1	27.1
60°-70°	1917.9	27.3
70°-80°	865.2	12.3
80°-90°	53.5	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°	7030.0	100.0
0°-180°	7030.0	100.0

Coefficient of Utilization



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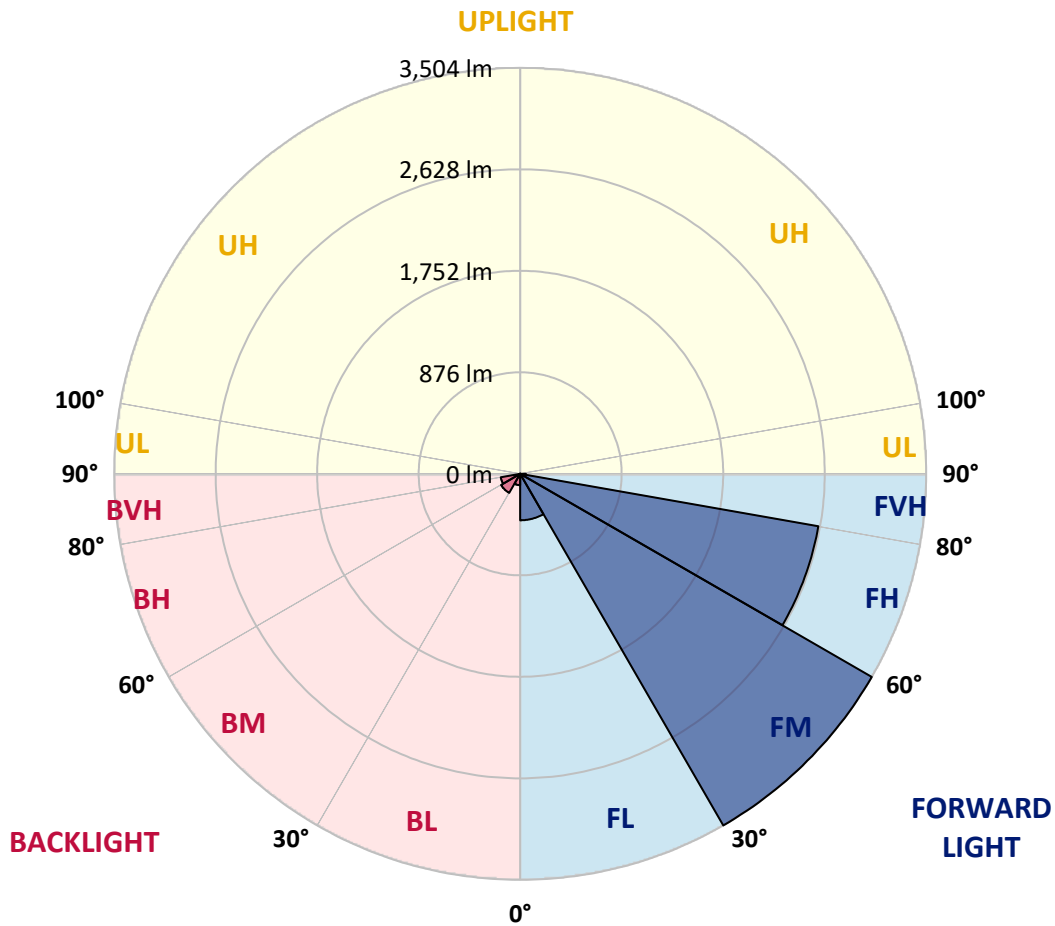
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	401.3	5.7			
FM (30°-60°)	3503.9	49.8			
FH (60°-80°)	2612.8	37.2			G2/5000
FVH (80°-90°)	50.1	0.7			G1/100
BL (0°-30°)	98.2	1.4	B0/110		
BM (30°-60°)	190.0	2.7	B0/220		
BH (60°-80°)	170.3	2.4	B1/500		G1/500
BVH (80°-90°)	3.4	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°	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9
2.5°	365.8	352.7	331.3	343.4	342.6	348.8	337.2	324.4	303.8	324.4	325.9
5°	526.7	502.2	486.7	483.6	466.6	450.7	447.2	434.0	424.0	405.7	422.0
7.5°	656.1	644.9	617.3	614.2	572.4	549.1	556.5	550.7	512.3	493.3	509.2
10°	711.1	691.7	695.6	691.7	673.9	680.5	665.4	648.0	617.3	585.9	546.4
12.5°	732.4	729.3	761.5	757.6	799.5	849.9	816.1	787.1	716.2	708.4	654.5
15°	778.2	797.5	792.9	809.2	835.9	921.5	920.8	927.7	852.6	812.3	734.4
17.5°	818.9	833.2	809.9	828.5	901.4	953.3	1022.7	995.6	1004.1	963.0	842.5
20°	801.4	817.7	794.4	783.2	911.5	1009.9	1102.5	1082.8	1133.9	1108.3	942.1
22.5°	910.3	879.7	821.2	784.8	880.5	1008.7	1130.8	1213.4	1204.4	1141.7	1034.7
25°	1044.8	1026.2	956.0	891.7	900.2	1001.8	1219.9	1341.2	1367.6	1340.9	1122.7
27.5°	1226.1	1221.9	1078.5	1050.6	967.7	971.2	1233.9	1502.5	1442.4	1400.5	1225.4
30°	1462.9	1429.2	1259.1	1222.7	1100.2	1040.1	1319.2	1641.6	1597.4	1540.4	1321.9
32.5°	1717.5	1722.6	1505.6	1385.4	1287.0	1215.7	1285.4	1706.7	1789.2	1743.1	1442.4
35°	2006.6	2029.1	1763.7	1622.6	1431.2	1326.1	1430.4	1906.7	2054.7	1933.4	1604.0
37.5°	2451.9	2451.1	2141.1	1860.1	1721.0	1607.1	1671.8	2088.4	2381.0	2210.5	1893.9
40°	2843.7	2758.4	2470.1	2147.3	1930.3	1899.3	1852.4	2337.2	2729.4	2626.7	2151.6
42.5°	3136.3	3076.2	2727.8	2476.7	2207.8	2109.3	2092.7	2701.9	3243.6	3099.9	2519.3
45°	3486.2	3289.4	3032.8	2806.5	2532.5	2503.8	2464.7	3072.0	3842.0	3518.0	2839.1
47.5°	3799.7	3614.5	3371.9	3081.3	2766.6	3003.0	2852.6	3397.1	4277.2	3973.0	3191.7
50°	4063.7	3866.8	3595.1	3373.8	3239.0	3399.4	3148.7	3664.9	4747.3	4500.8	3521.5
52.5°	4198.1	3975.3	3765.3	3628.5	3711.0	3675.0	3550.2	3989.2	5148.0	4963.5	3813.7
55°	4087.7	3869.9	3781.9	3849.7	4100.5	3996.2	4006.3	4491.9	5526.2	5272.0	4067.9
57.5°	3597.8	3399.0	3438.2	3623.8	4104.3	4377.2	4526.4	4980.2	5829.6	5656.4	4460.1
60°	2721.6	2561.6	2706.5	3035.9	3718.4	4301.2	4895.3	5468.5	6263.3	6209.0	5053.8
62.5°	1662.1	1575.3	1780.7	2191.5	2963.1	3928.8	5110.4	6119.5	6727.2	6784.9	5683.5
65°	847.9	808.8	980.1	1341.2	2002.0	3227.4	4955.0	6524.1	7206.5	7419.7	6283.8
67.5°	534.0	508.8	600.3	818.1	1181.2	2105.1	4338.4	6877.9	7545.2	7713.8	6484.2
70°	370.1	354.2	433.3	561.5	745.2	1133.9	3221.2	6547.7	7276.7	7284.4	5999.4
72.5°	234.8	222.4	299.6	415.8	549.9	585.6	1846.6	5137.9	6228.8	6157.1	4858.5
75°	152.3	146.1	190.3	304.6	422.4	361.2	912.6	3466.9	4466.3	4353.9	3227.0
77.5°	109.3	105.4	127.5	203.5	300.7	252.7	409.2	2066.3	2560.8	2315.1	1566.4
80°	65.9	65.5	92.2	127.5	213.9	178.3	189.1	938.2	992.9	809.6	478.6
82.5°	32.9	34.1	51.5	82.2	137.6	116.6	86.4	312.4	266.6	196.5	96.9
85°	7.8	9.7	27.1	56.6	69.0	46.5	41.1	81.8	73.2	55.4	28.3
87.5°	0.0	0.0	8.5	13.6	18.6	7.8	14.0	15.5	19.8	15.5	5.8
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°	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9	270.9
2.5°	326.3	321.7	293.4	286.0	285.2	277.1	279.0	271.3	271.7	289.1	289.1
5°	415.8	388.7	361.6	337.5	321.3	298.0	289.5	286.0	282.9	289.9	294.1
7.5°	488.3	448.4	399.5	347.2	298.8	265.5	260.8	252.3	249.2	256.2	261.6
10°	520.5	470.9	403.8	327.5	282.1	255.0	232.5	220.5	218.2	217.8	219.7
12.5°	588.7	527.0	408.5	320.1	270.9	241.0	215.5	195.3	176.7	178.7	176.7
15°	643.3	570.4	408.5	302.3	243.8	213.9	169.0	158.9	156.2	160.4	157.0
17.5°	725.8	613.5	387.9	270.5	220.5	166.3	149.2	148.4	153.8	160.1	156.2
20°	775.4	619.3	353.4	234.1	181.0	144.2	138.0	131.8	139.5	144.5	142.6
22.5°	827.0	619.7	318.9	214.7	145.7	131.4	121.3	116.3	117.4	122.1	122.8
25°	849.1	604.5	286.8	189.1	132.1	117.4	107.0	101.5	99.6	101.9	101.1
27.5°	909.1	575.5	251.9	161.2	125.6	104.2	94.6	88.0	82.2	86.0	86.8
30°	917.7	566.2	232.9	143.4	117.0	92.2	83.7	76.7	72.5	77.9	77.9
32.5°	944.8	515.0	223.2	136.0	108.1	85.3	73.6	68.6	67.8	71.3	71.7
35°	986.7	492.6	208.9	130.2	100.0	77.1	66.3	63.9	63.2	65.9	65.9
37.5°	1128.5	464.6	193.0	125.2	93.0	72.9	64.3	60.5	60.8	63.2	64.7
40°	1222.7	468.1	169.4	119.0	84.9	69.0	60.5	57.7	57.4	58.5	59.7
42.5°	1397.4	470.9	158.9	112.4	78.7	64.3	56.6	54.6	53.1	54.3	55.4
45°	1592.8	485.2	153.5	107.0	75.2	61.6	53.1	51.9	48.4	49.2	50.8
47.5°	1781.1	537.5	146.9	99.2	72.1	60.1	49.6	46.9	44.6	44.2	45.7
50°	1995.0	588.3	139.5	90.7	69.0	57.7	46.1	41.9	40.3	40.3	41.5
52.5°	2186.5	636.7	132.5	84.9	66.7	53.5	43.0	38.8	37.6	37.6	39.1
55°	2388.0	687.5	126.3	79.4	63.6	49.2	40.3	36.4	36.0	35.3	36.4
57.5°	2743.7	798.3	118.6	74.8	59.3	45.7	38.0	34.1	33.3	32.2	33.3
60°	3261.8	968.4	108.5	70.1	54.3	43.4	36.0	31.4	30.2	28.3	28.7
62.5°	3768.4	1106.0	96.9	64.3	49.6	41.1	32.9	28.3	26.4	24.0	24.4
65°	4202.4	1160.3	84.5	57.4	45.0	35.7	28.7	24.8	22.1	19.0	18.6
67.5°	4253.5	1024.6	72.5	50.8	40.3	30.2	24.4	22.1	17.8	15.1	14.3
70°	3828.0	763.4	60.5	45.0	34.9	25.6	20.9	19.4	16.7	14.3	13.2
72.5°	3048.3	563.5	50.8	39.9	30.6	21.7	17.8	18.2	16.7	14.0	12.4
75°	2015.9	322.4	41.5	33.3	25.6	17.4	16.3	16.3	15.9	13.2	11.6
77.5°	970.0	139.1	31.8	26.4	20.5	13.2	14.7	14.7	15.1	12.0	9.7
80°	275.1	41.9	19.8	17.8	15.1	8.9	11.6	11.2	10.1	7.0	4.3
82.5°	49.2	16.3	8.9	9.3	8.5	3.5	6.6	6.2	5.0	2.7	0.4
85°	13.6	6.2	5.0	5.4	4.3	1.2	2.7	3.5	2.7	1.6	0.0
87.5°	3.5	2.7	3.5	3.9	3.1	0.4	1.2	0.4	1.2	0.4	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)