

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: P367823

Luminaire Tested: **MSA-SA3B-730-U-T2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367823
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-730-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: 10097 lumens
Efficiency: N/A
Efficacy: 80.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

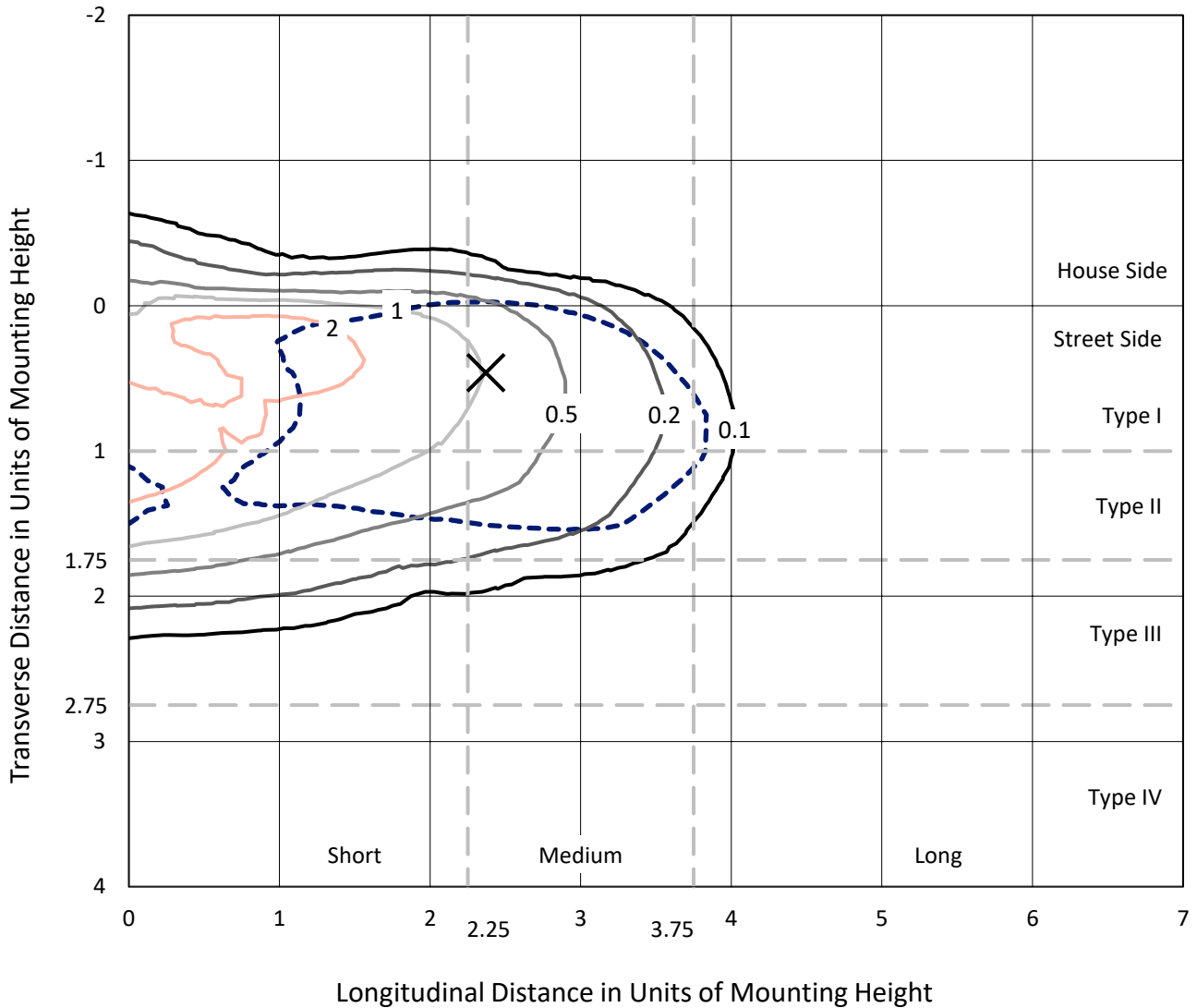
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

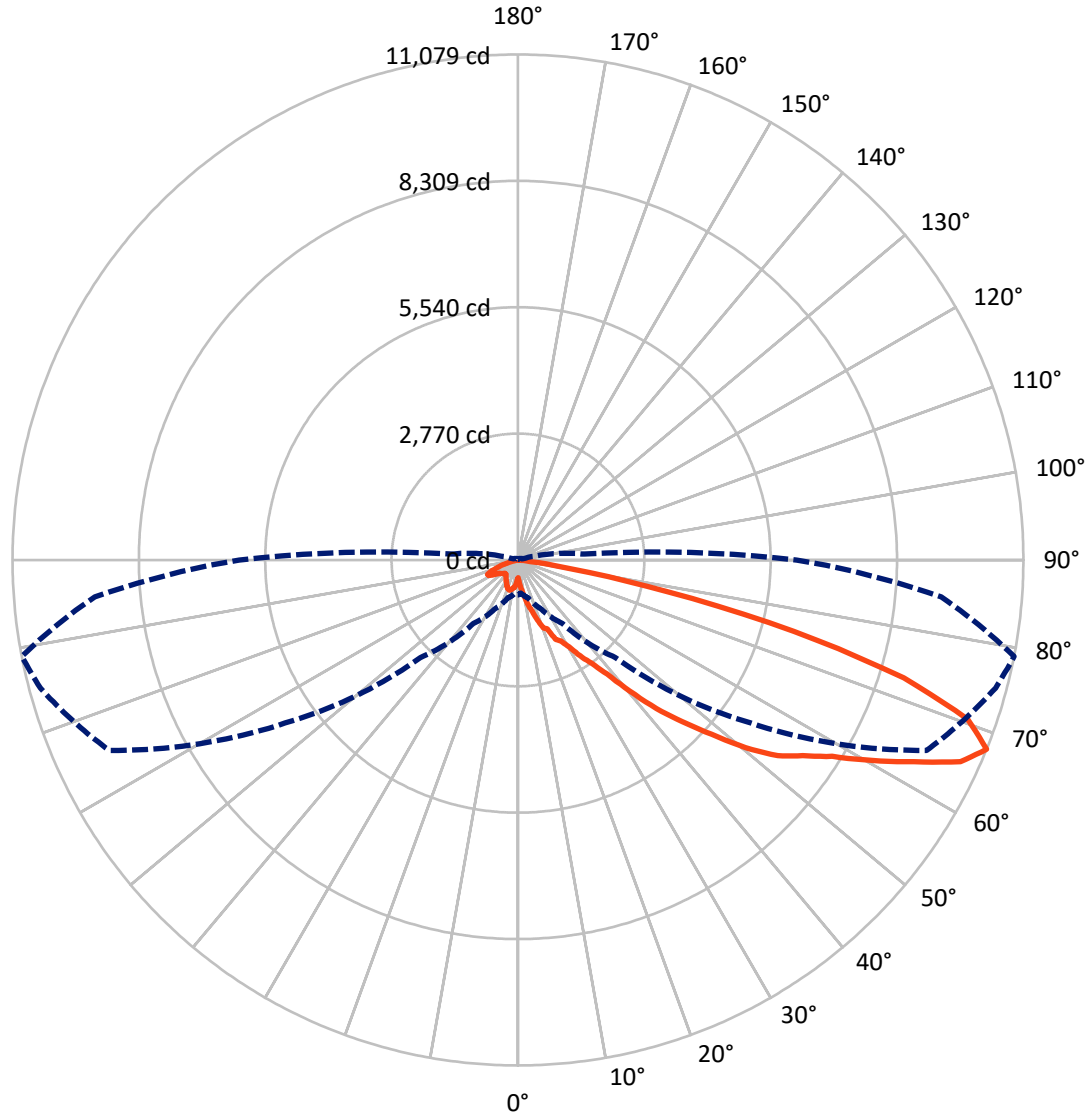
× Max cd
 - - - 1/2 Max cd



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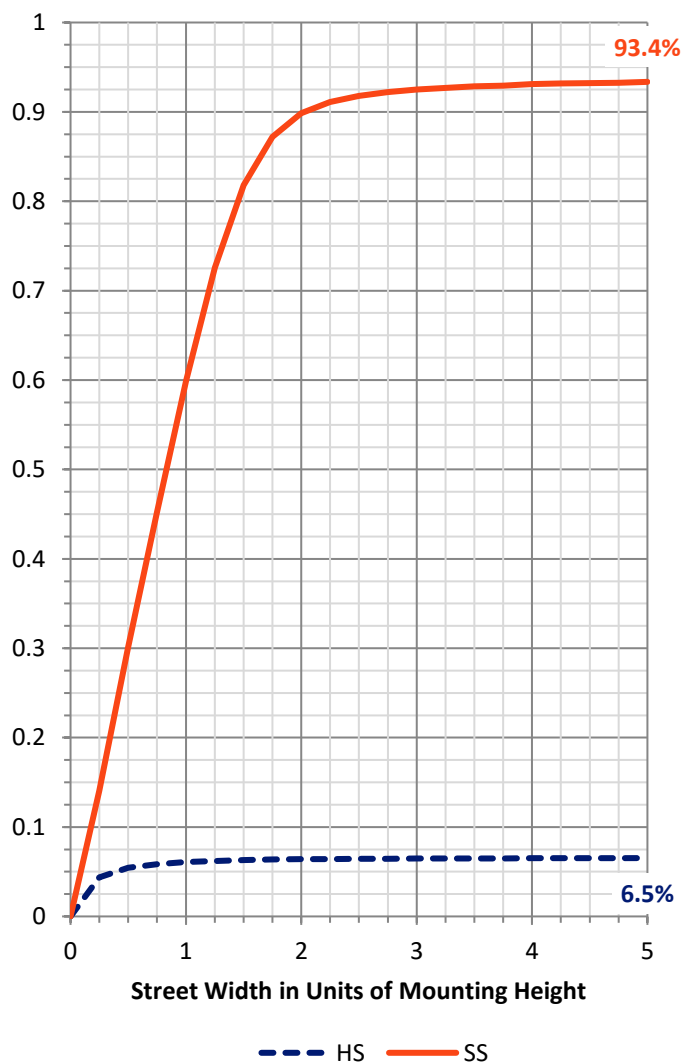
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	663.4	0.0	663.4
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	9433.6	0.0	9433.6
	% Fixture	93.4	0.0	93.4
Total	Lumens	10097.0	0.0	10097.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.6	0.6
10°-20°	225.6	2.2
20°-30°	435.3	4.3
30°-40°	855.0	8.5
40°-50°	1712.8	17.0
50°-60°	2737.7	27.1
60°-70°	2754.6	27.3
70°-80°	1242.7	12.3
80°-90°	76.9	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°	10097.0	100.0
0°-180°	10097.0	100.0

Coefficient of Utilization



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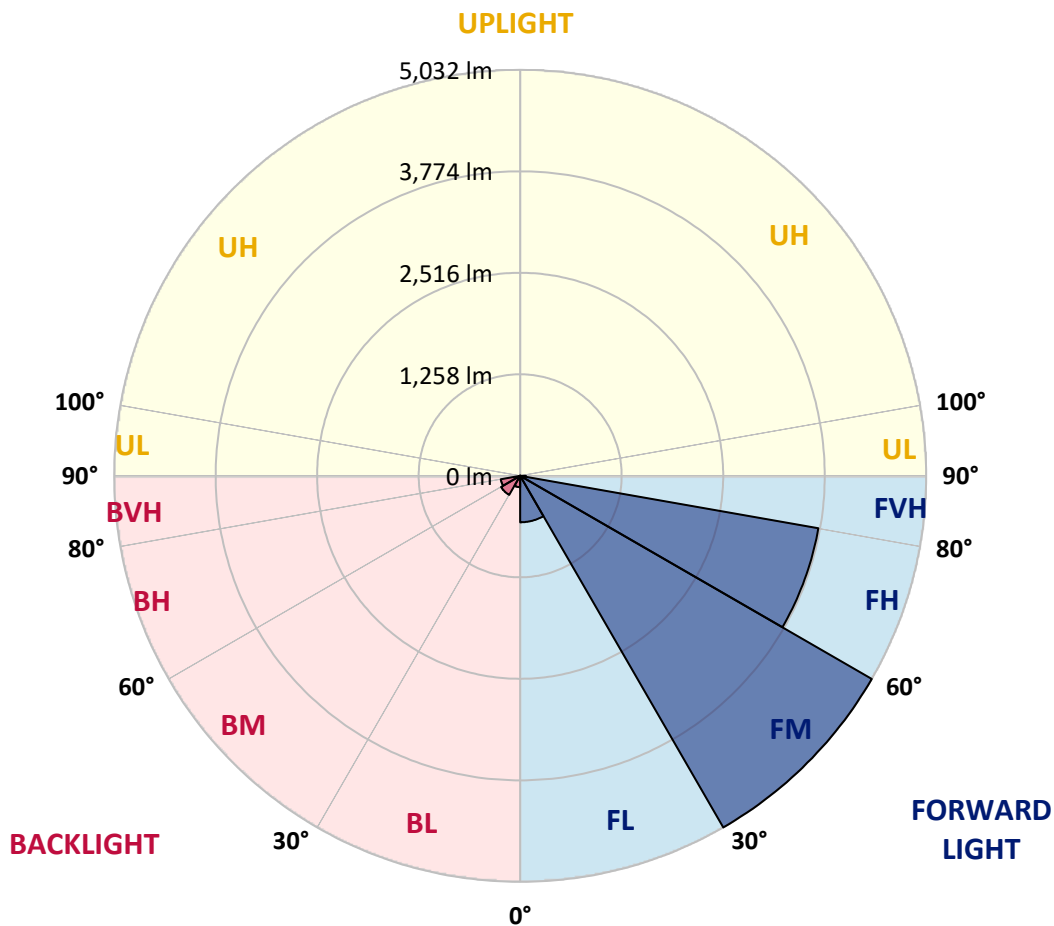
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	576.4	5.7			
FM (30°-60°)	5032.5	49.8			
FH (60°-80°)	3752.6	37.2			G2/5000
FVH (80°-90°)	72.0	0.7			G1/100
BL (0°-30°)	141.0	1.4	B1/500		
BM (30°-60°)	273.0	2.7	B1/1000		
BH (60°-80°)	244.6	2.4	B1/500		G1/500
BVH (80°-90°)	4.9	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°	389.1	389.1	389.1	389.1	389.1	389.1	389.1	389.1	389.1	389.1	389.1
2.5°	525.4	506.5	475.9	493.1	492.0	500.9	484.2	465.9	436.4	465.9	468.1
5°	756.4	721.4	699.1	694.6	670.1	647.3	642.3	623.4	608.9	582.8	606.1
7.5°	942.3	926.2	886.7	882.2	822.1	788.7	799.3	790.9	735.8	708.6	731.4
10°	1021.4	993.5	999.1	993.5	967.9	977.4	955.7	930.6	886.7	841.6	784.8
12.5°	1052.0	1047.5	1093.7	1088.2	1148.3	1220.6	1172.2	1130.5	1028.6	1017.5	940.1
15°	1117.7	1145.5	1138.8	1162.2	1200.6	1323.6	1322.5	1332.5	1224.5	1166.6	1054.8
17.5°	1176.1	1196.7	1163.3	1190.0	1294.7	1369.2	1468.9	1429.9	1442.2	1383.2	1210.0
20°	1151.0	1174.4	1141.0	1124.9	1309.1	1450.5	1583.5	1555.1	1628.6	1591.9	1353.1
22.5°	1307.5	1263.5	1179.4	1127.1	1264.6	1448.8	1624.2	1742.7	1729.9	1639.7	1486.1
25°	1500.6	1473.9	1373.1	1280.7	1293.0	1438.8	1752.2	1926.4	1964.2	1925.8	1612.5
27.5°	1761.1	1755.0	1549.0	1508.9	1389.8	1394.8	1772.2	2157.9	2071.7	2011.6	1760.0
30°	2101.2	2052.7	1808.4	1756.1	1580.2	1493.9	1894.7	2357.8	2294.3	2212.5	1898.6
32.5°	2466.9	2474.1	2162.4	1989.8	1848.5	1746.1	1846.2	2451.3	2569.8	2503.6	2071.7
35°	2882.1	2914.4	2533.1	2330.5	2055.5	1904.7	2054.4	2738.5	2951.1	2776.9	2303.8
37.5°	3521.6	3520.5	3075.2	2671.7	2471.9	2308.2	2401.2	2999.5	3419.8	3174.8	2720.1
40°	4084.3	3961.9	3547.8	3084.1	2772.4	2727.9	2660.6	3356.9	3920.1	3772.6	3090.2
42.5°	4504.6	4418.3	3917.9	3557.2	3171.0	3029.6	3005.6	3880.6	4658.7	4452.2	3618.5
45°	5007.2	4724.4	4356.0	4030.9	3637.4	3596.2	3540.0	4412.2	5518.1	5052.8	4077.7
47.5°	5457.5	5191.4	4843.0	4425.5	3973.6	4313.1	4097.1	4879.2	6143.2	5706.3	4584.2
50°	5836.5	5553.8	5163.6	4845.8	4652.1	4882.5	4522.4	5263.8	6818.4	6464.4	5057.8
52.5°	6029.7	5709.6	5407.9	5211.4	5330.0	5278.2	5099.0	5729.6	7393.9	7128.9	5477.5
55°	5871.0	5558.2	5431.9	5529.3	5889.4	5739.7	5754.1	6451.6	7937.1	7572.0	5842.6
57.5°	5167.5	4881.9	4938.2	5204.8	5895.0	6286.8	6501.1	7152.9	8372.9	8124.1	6405.9
60°	3909.0	3679.1	3887.3	4360.4	5340.6	6177.7	7031.0	7854.2	8995.8	8917.9	7258.6
62.5°	2387.3	2262.6	2557.6	3147.6	4255.8	5642.8	7339.9	8789.3	9662.0	9745.0	8163.1
65°	1217.8	1161.6	1407.6	1926.4	2875.4	4635.4	7116.7	9370.4	10350.5	10656.7	9025.3
67.5°	767.0	730.8	862.2	1175.0	1696.5	3023.5	6231.1	9878.5	10837.0	11079.1	9313.0
70°	531.6	508.7	622.3	806.5	1070.3	1628.6	4626.5	9404.3	10451.3	10462.4	8616.7
72.5°	337.3	319.5	430.3	597.2	789.8	841.0	2652.2	7379.4	8946.2	8843.3	6978.1
75°	218.7	209.8	273.3	437.5	606.7	518.8	1310.8	4979.3	6414.8	6253.4	4634.8
77.5°	157.0	151.4	183.1	292.2	431.9	362.9	587.8	2967.8	3678.0	3325.1	2249.8
80°	94.6	94.1	132.5	183.1	307.2	256.0	271.6	1347.5	1426.0	1162.7	687.4
82.5°	47.3	49.0	74.0	118.0	197.6	167.5	124.1	448.6	382.9	282.2	139.2
85°	11.1	13.9	39.0	81.3	99.1	66.8	59.0	117.4	105.2	79.6	40.6
87.5°	0.0	0.0	12.2	19.5	26.7	11.1	20.0	22.3	28.4	22.3	8.3
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°	389.1	389.1	389.1	389.1	389.1	389.1	389.1	389.1	389.1	389.1	389.1
2.5°	468.7	462.0	421.3	410.8	409.7	398.0	400.8	389.6	390.2	415.2	415.2
5°	597.2	558.3	519.3	484.8	461.4	428.0	415.8	410.8	406.3	416.3	422.5
7.5°	701.3	644.0	573.9	498.7	429.1	381.3	374.6	362.3	357.9	367.9	375.7
10°	747.5	676.3	580.0	470.3	405.2	366.2	334.0	316.7	313.4	312.8	315.6
12.5°	845.5	757.0	586.7	459.8	389.1	346.2	309.5	280.5	253.8	256.6	253.8
15°	924.0	819.3	586.7	434.1	350.1	307.2	242.7	228.2	224.3	230.4	225.4
17.5°	1042.5	881.1	557.2	388.5	316.7	238.8	214.3	213.2	221.0	229.9	224.3
20°	1113.8	889.4	507.6	336.2	259.9	207.1	198.1	189.2	200.4	207.6	204.8
22.5°	1187.8	890.0	458.1	308.4	209.3	188.7	174.2	167.0	168.6	175.3	176.4
25°	1219.5	868.3	411.9	271.6	189.8	168.6	153.6	145.8	143.0	146.4	145.3
27.5°	1305.8	826.6	361.8	231.5	180.3	149.7	135.8	126.3	118.0	123.6	124.7
30°	1318.0	813.2	334.5	205.9	168.1	132.5	120.2	110.2	104.1	111.9	111.9
32.5°	1357.0	739.7	320.6	195.4	155.3	122.5	105.8	98.5	97.4	102.4	103.0
35°	1417.1	707.4	300.0	187.0	143.6	110.8	95.2	91.8	90.7	94.6	94.6
37.5°	1620.8	667.4	277.2	179.8	133.6	104.6	92.4	86.8	87.4	90.7	93.0
40°	1756.1	672.4	243.2	170.9	121.9	99.1	86.8	82.9	82.4	84.0	85.7
42.5°	2007.1	676.3	228.2	161.4	113.0	92.4	81.3	78.5	76.3	77.9	79.6
45°	2287.6	696.9	220.4	153.6	108.0	88.5	76.3	74.6	69.6	70.7	72.9
47.5°	2558.1	772.0	211.0	142.5	103.5	86.3	71.2	67.3	64.0	63.5	65.7
50°	2865.4	844.9	200.4	130.2	99.1	82.9	66.2	60.1	57.9	57.9	59.6
52.5°	3140.3	914.5	190.4	121.9	95.7	76.8	61.8	55.7	54.0	54.0	56.2
55°	3429.8	987.4	181.5	114.1	91.3	70.7	57.9	52.3	51.8	50.7	52.3
57.5°	3940.7	1146.6	170.3	107.4	85.2	65.7	54.5	49.0	47.9	46.2	47.9
60°	4684.9	1390.9	155.8	100.7	77.9	62.3	51.8	45.1	43.4	40.6	41.2
62.5°	5412.4	1588.5	139.2	92.4	71.2	59.0	47.3	40.6	37.8	34.5	35.1
65°	6035.8	1666.5	121.3	82.4	64.6	51.2	41.2	35.6	31.7	27.3	26.7
67.5°	6109.2	1471.7	104.1	72.9	57.9	43.4	35.1	31.7	25.6	21.7	20.6
70°	5498.1	1096.5	86.8	64.6	50.1	36.7	30.1	27.8	23.9	20.6	18.9
72.5°	4378.2	809.3	72.9	57.3	44.0	31.2	25.6	26.2	23.9	20.0	17.8
75°	2895.4	463.1	59.6	47.9	36.7	25.0	23.4	23.4	22.8	18.9	16.7
77.5°	1393.2	199.8	45.6	37.8	29.5	18.9	21.2	21.2	21.7	17.3	13.9
80°	395.2	60.1	28.4	25.6	21.7	12.8	16.7	16.1	14.5	10.0	6.1
82.5°	70.7	23.4	12.8	13.4	12.2	5.0	9.5	8.9	7.2	3.9	0.6
85°	19.5	8.9	7.2	7.8	6.1	1.7	3.9	5.0	3.9	2.2	0.0
87.5°	5.0	3.9	5.0	5.6	4.5	0.6	1.7	0.6	1.7	0.6	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)