

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: P367221

Luminaire Tested: **MSA-SA2A-760-U-SL3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367221
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-760-U-SL3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6527 lumens
Efficiency: N/A
Efficacy: 98.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

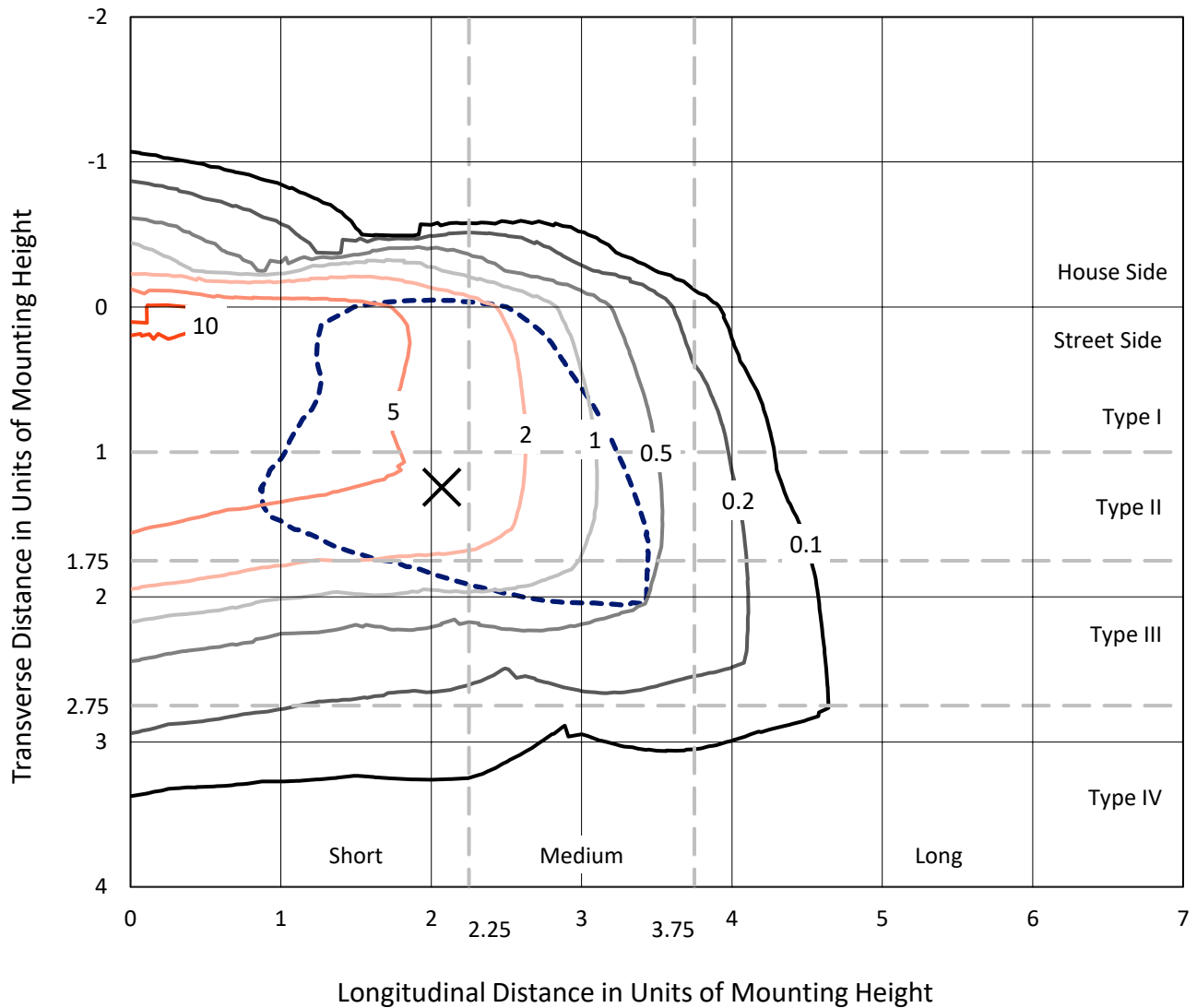
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

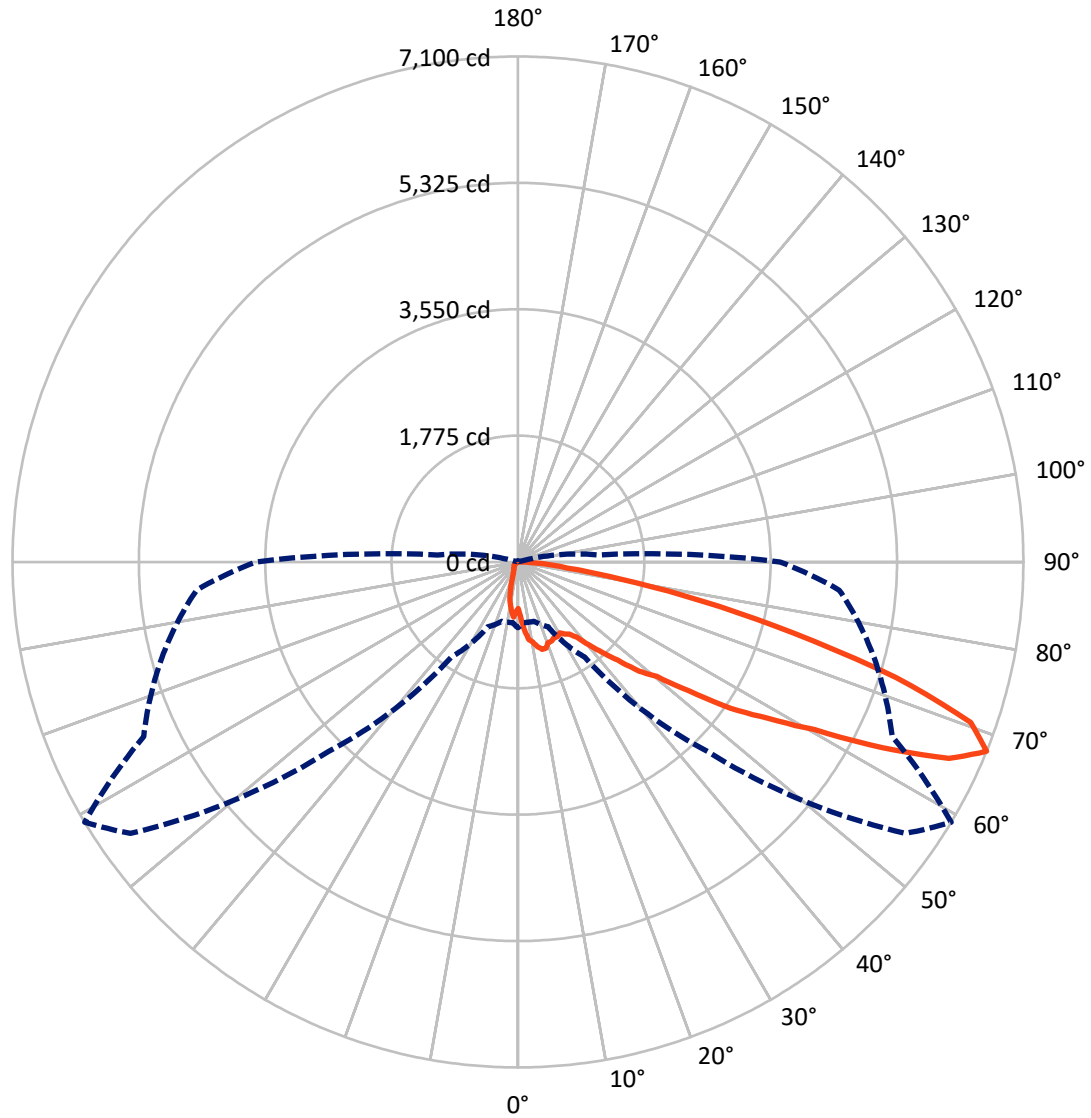
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.7 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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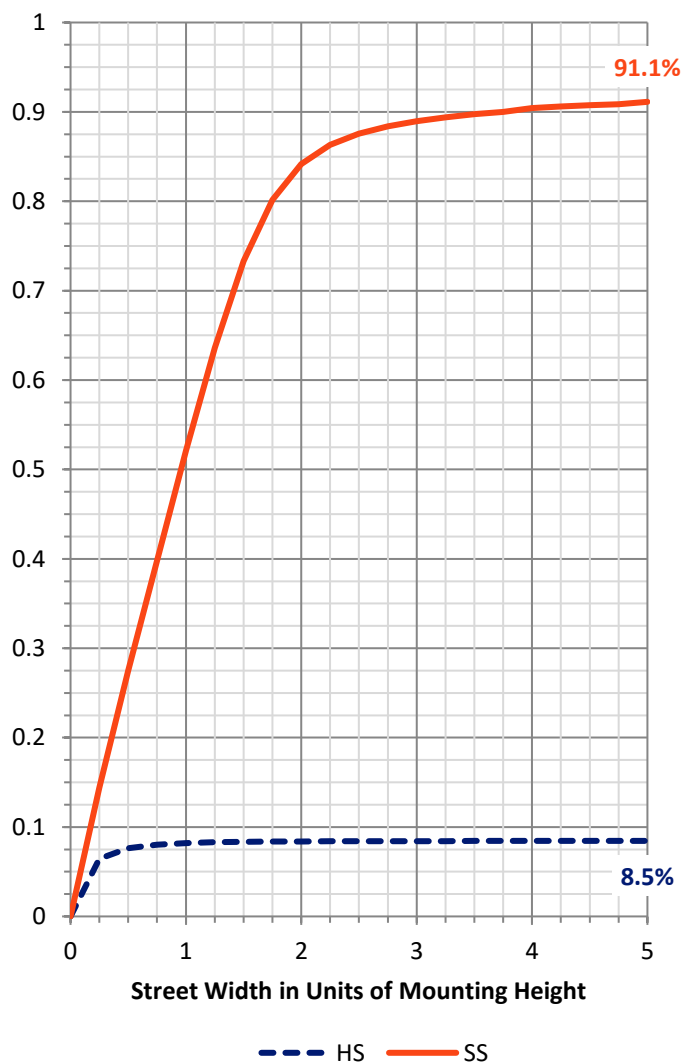
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	555.1	0.0	555.1
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	5971.9	0.0	5971.9
	% Fixture	91.5	0.0	91.5
Total	Lumens	6527.0	0.0	6527.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.4	1.2
10°-20°	223.6	3.4
20°-30°	332.6	5.1
30°-40°	513.1	7.9
40°-50°	915.7	14.0
50°-60°	1629.4	25.0
60°-70°	1897.7	29.1
70°-80°	843.9	12.9
80°-90°	91.7	1.4
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°	6527.0	100.0
0°-180°	6527.0	100.0

Coefficient of Utilization



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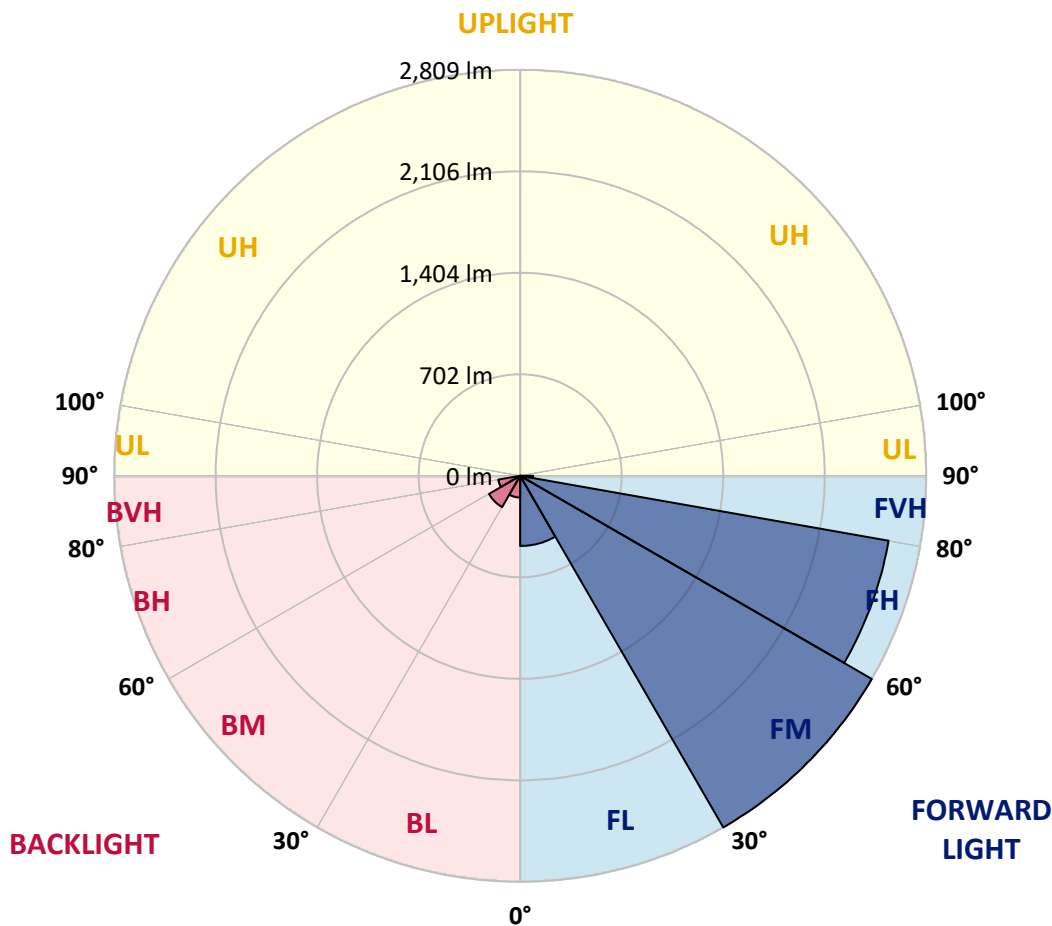
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	485.4	7.4			
FM (30°-60°)	2808.6	43.0			
FH (60°-80°)	2587.9	39.6			G2/5000
FVH (80°-90°)	90.0	1.4			G1/100
BL (0°-30°)	150.1	2.3	B1/500		
BM (30°-60°)	249.6	3.8	B1/1000		
BH (60°-80°)	153.8	2.4	B1/500		G1/500
BVH (80°-90°)	1.6	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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0
2.5°	851.3	819.3	773.7	787.2	799.5	811.0	791.9	780.9	775.7	728.7	787.6
5°	1045.3	1005.3	984.5	979.2	966.0	936.6	985.5	963.7	971.0	980.2	999.4
7.5°	1104.5	1086.3	1056.2	1067.5	1017.2	1013.0	1080.7	1099.5	1124.3	1107.5	1130.6
10°	1074.1	1042.7	1056.9	1052.9	1051.0	1095.2	1142.8	1143.8	1180.8	1198.7	1120.4
12.5°	1013.9	1017.6	1068.5	1064.5	1130.6	1219.2	1230.1	1218.5	1279.0	1247.9	1236.0
15°	1053.9	1083.7	1055.6	1065.2	1088.6	1199.3	1238.0	1273.7	1330.9	1349.4	1269.1
17.5°	1102.2	1105.2	1053.9	1042.0	1101.2	1152.7	1244.0	1273.4	1279.0	1441.3	1343.4
20°	1076.1	1101.5	1040.4	965.4	1057.2	1127.3	1219.8	1210.6	1248.3	1468.4	1360.3
22.5°	1145.5	1109.1	1030.8	974.3	1005.3	1069.1	1147.5	1207.9	1264.5	1403.6	1382.1
25°	1152.1	1138.9	1069.1	1018.9	1013.6	1029.8	1138.9	1177.9	1266.4	1461.8	1363.6
27.5°	1226.4	1211.2	1068.5	1073.4	1023.9	974.0	1097.2	1188.8	1302.5	1426.4	1402.9
30°	1322.3	1323.6	1139.5	1155.1	1084.3	1004.0	1131.3	1156.4	1326.9	1482.9	1432.0
32.5°	1419.5	1459.4	1280.0	1197.7	1175.6	1118.0	1089.0	1205.0	1300.1	1579.4	1504.7
35°	1567.2	1594.3	1395.7	1322.0	1235.0	1169.6	1204.0	1245.6	1396.3	1707.3	1600.2
37.5°	1817.4	1768.4	1603.2	1475.0	1454.2	1357.7	1374.8	1337.5	1494.5	1858.0	1789.3
40°	1958.2	1913.9	1742.0	1679.5	1546.7	1561.6	1507.4	1529.2	1636.9	2015.0	1961.5
42.5°	2104.9	2062.6	1911.9	1867.6	1741.0	1679.5	1655.1	1733.4	1855.4	2276.4	2208.3
45°	2252.3	2144.9	2081.1	2103.2	2046.4	1924.8	1896.3	1966.1	2094.0	2597.6	2468.8
47.5°	2376.6	2286.0	2238.1	2227.8	2205.7	2374.6	2258.9	2289.6	2346.1	2881.9	2793.3
50°	2600.6	2511.4	2436.4	2415.5	2523.3	2762.9	2584.4	2524.9	2638.0	3225.2	3169.4
52.5°	2924.2	2810.5	2691.2	2691.5	2894.8	3026.3	3110.9	3006.5	3027.6	3603.0	3578.2
55°	3184.3	3039.8	2941.0	3019.0	3322.1	3395.8	3718.7	3627.1	3599.7	3953.3	3922.9
57.5°	3220.0	3046.8	2999.9	3136.7	3551.4	4022.1	4369.4	4140.7	4098.7	4246.5	4306.9
60°	2886.8	2703.1	2738.4	2958.5	3626.1	4403.8	4966.9	4780.2	4513.5	4589.8	4631.5
62.5°	2153.1	2006.4	2105.5	2397.0	3338.3	4659.6	5658.6	5745.2	4994.7	4847.6	4838.7
65°	1397.0	1305.1	1370.2	1609.2	2526.3	4630.5	6276.7	6652.1	5373.8	5057.8	4903.8
67.5°	924.0	854.3	863.6	1005.0	1633.6	3765.9	6646.1	7099.9	5800.1	5177.1	4530.7
70°	688.7	633.9	637.2	713.9	969.7	2483.6	6130.9	6746.6	5955.8	4763.7	3656.9
72.5°	496.7	460.0	490.8	576.0	772.7	1313.4	4569.7	5556.2	5193.3	3757.3	2463.8
75°	344.0	319.9	370.1	481.9	705.3	815.3	3019.7	3999.6	3640.0	2357.4	1113.7
77.5°	190.7	183.4	255.8	392.6	640.2	668.2	1849.7	2628.1	2019.0	845.1	265.1
80°	83.3	80.6	123.9	294.8	538.0	603.8	1041.4	1457.1	794.2	150.7	85.6
82.5°	35.7	34.4	52.9	177.5	391.0	505.0	642.1	701.3	273.3	46.6	48.6
85°	6.3	6.9	21.2	93.5	238.0	256.5	465.0	415.1	137.5	22.1	34.7
87.5°	0.0	0.0	3.3	18.2	44.6	73.4	201.6	145.4	26.1	7.3	5.9
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°	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0	653.0
2.5°	795.8	777.3	706.9	698.0	688.4	674.2	668.9	638.5	634.5	673.5	673.5
5°	990.5	924.4	857.3	804.4	757.2	691.7	673.2	654.0	638.5	634.5	646.8
7.5°	1093.3	1012.6	907.2	772.7	663.6	568.8	529.1	501.4	470.3	479.5	484.5
10°	1087.6	1002.0	867.5	694.7	573.7	469.0	368.2	309.3	276.6	260.4	258.4
12.5°	1142.8	1062.2	840.8	632.6	478.2	333.5	231.7	189.7	165.6	165.9	163.9
15°	1174.9	1087.0	809.7	553.9	336.8	214.5	160.6	151.4	148.1	151.7	149.7
17.5°	1231.4	1113.1	739.3	436.6	231.7	161.9	147.7	144.1	148.4	156.0	154.0
20°	1227.1	1067.8	639.2	307.7	171.2	145.7	139.8	134.2	143.1	151.0	149.7
22.5°	1223.1	1023.5	545.0	227.0	143.1	132.9	127.9	125.6	130.2	139.5	141.4
25°	1188.1	1001.7	449.5	170.5	129.6	120.6	118.3	116.3	118.0	125.6	125.3
27.5°	1231.1	946.5	347.0	143.1	120.0	109.4	107.4	104.1	100.8	107.4	108.4
30°	1222.2	954.1	272.0	125.9	110.4	96.2	96.8	89.9	83.9	89.9	89.9
32.5°	1254.5	898.6	217.8	114.3	100.8	90.6	82.3	75.0	70.7	74.4	75.0
35°	1301.8	900.9	170.5	107.1	92.5	80.6	70.7	63.5	59.5	61.1	62.1
37.5°	1460.1	885.1	142.4	101.5	89.6	74.7	64.4	54.9	52.2	54.2	55.2
40°	1563.2	927.4	125.6	98.5	82.0	68.7	55.2	48.3	45.9	46.9	48.6
42.5°	1757.5	950.8	117.3	95.2	75.0	58.8	47.3	43.3	40.0	41.3	42.6
45°	1965.4	990.8	111.0	91.5	69.7	51.6	41.6	38.3	34.0	34.4	35.7
47.5°	2220.9	1086.0	103.8	85.3	62.5	46.9	37.0	32.1	28.1	27.8	29.4
50°	2563.9	1213.2	97.2	77.3	57.8	43.0	32.4	26.1	22.8	21.8	23.1
52.5°	2930.1	1377.8	90.2	71.7	52.2	37.7	27.8	21.2	18.2	17.5	18.5
55°	3293.0	1535.8	83.6	68.1	46.3	32.4	23.5	17.5	14.9	14.2	14.9
57.5°	3706.4	1706.6	75.0	60.8	40.7	28.1	19.5	14.5	12.2	11.6	11.9
60°	4017.8	1766.8	67.8	52.9	35.4	24.8	16.5	11.6	9.9	9.3	9.6
62.5°	4165.5	1668.6	60.8	45.9	31.1	21.5	13.9	9.6	8.3	7.6	7.6
65°	4127.2	1451.2	53.9	39.3	26.8	17.8	10.9	8.3	7.3	6.3	5.9
67.5°	3684.3	1135.6	45.9	33.0	22.5	14.5	9.3	7.9	6.6	5.9	5.0
70°	2921.9	822.3	37.3	27.4	18.8	11.9	7.3	7.3	6.3	5.9	4.6
72.5°	1915.2	517.5	30.4	22.1	15.5	9.3	5.6	6.6	5.9	5.9	4.3
75°	829.9	185.1	24.5	17.8	12.9	6.3	5.0	5.9	6.3	5.9	5.0
77.5°	194.3	57.5	19.2	14.2	10.6	4.3	5.0	5.9	6.3	5.6	4.3
80°	73.0	24.5	12.6	9.3	8.3	2.6	4.3	3.6	3.3	2.3	0.7
82.5°	44.3	10.2	6.6	4.6	4.0	0.7	2.0	1.3	0.7	0.7	0.0
85°	31.4	5.0	3.6	3.3	2.0	0.0	0.3	0.0	0.0	0.3	0.0
87.5°	4.3	1.3	1.7	1.7	1.3	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)