

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: P367156

Luminaire Tested: **MSA-SA2A-730-U-SL3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367156
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-730-U-SL3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7103 lumens
Efficiency: N/A
Efficacy: 107.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

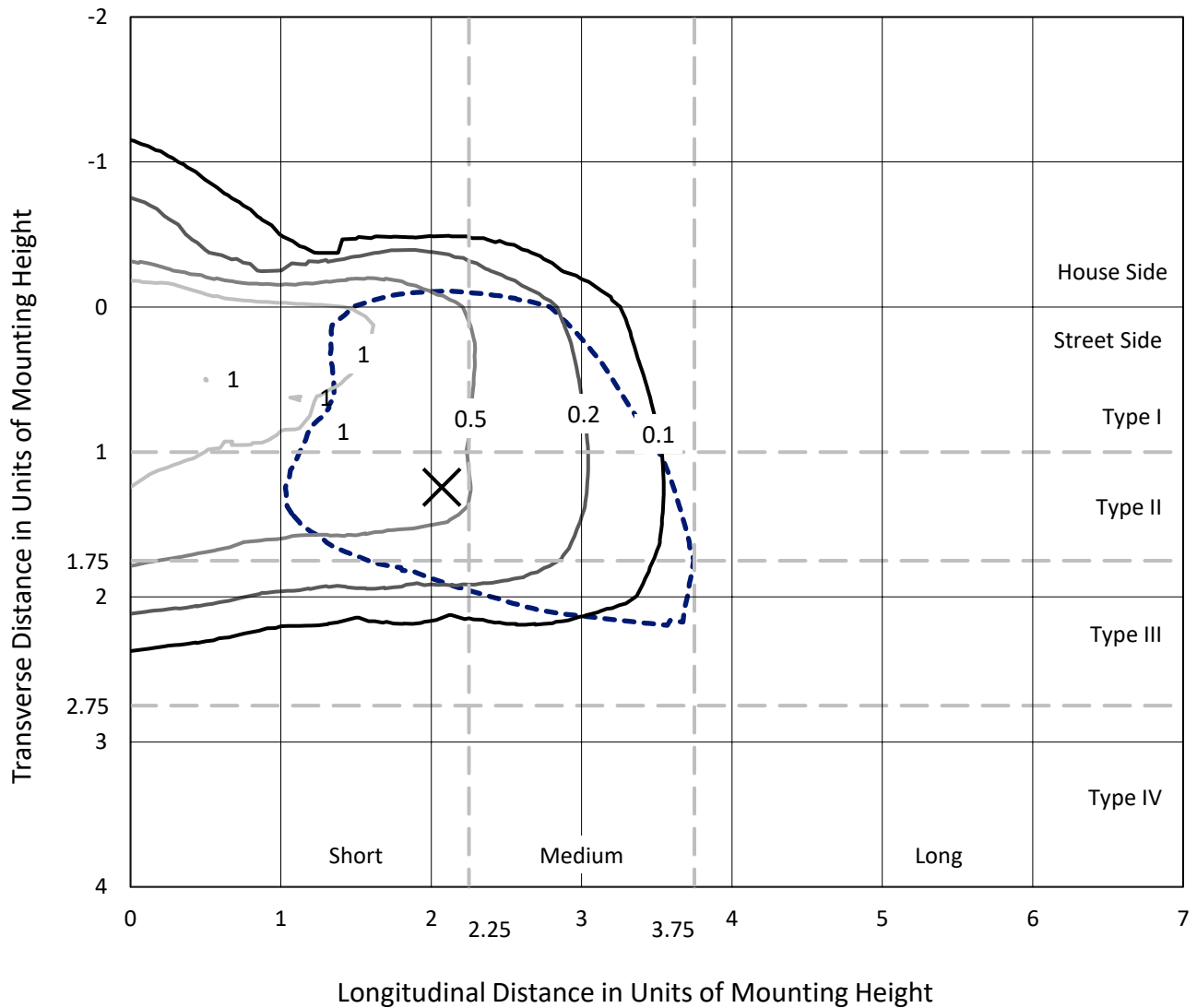
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

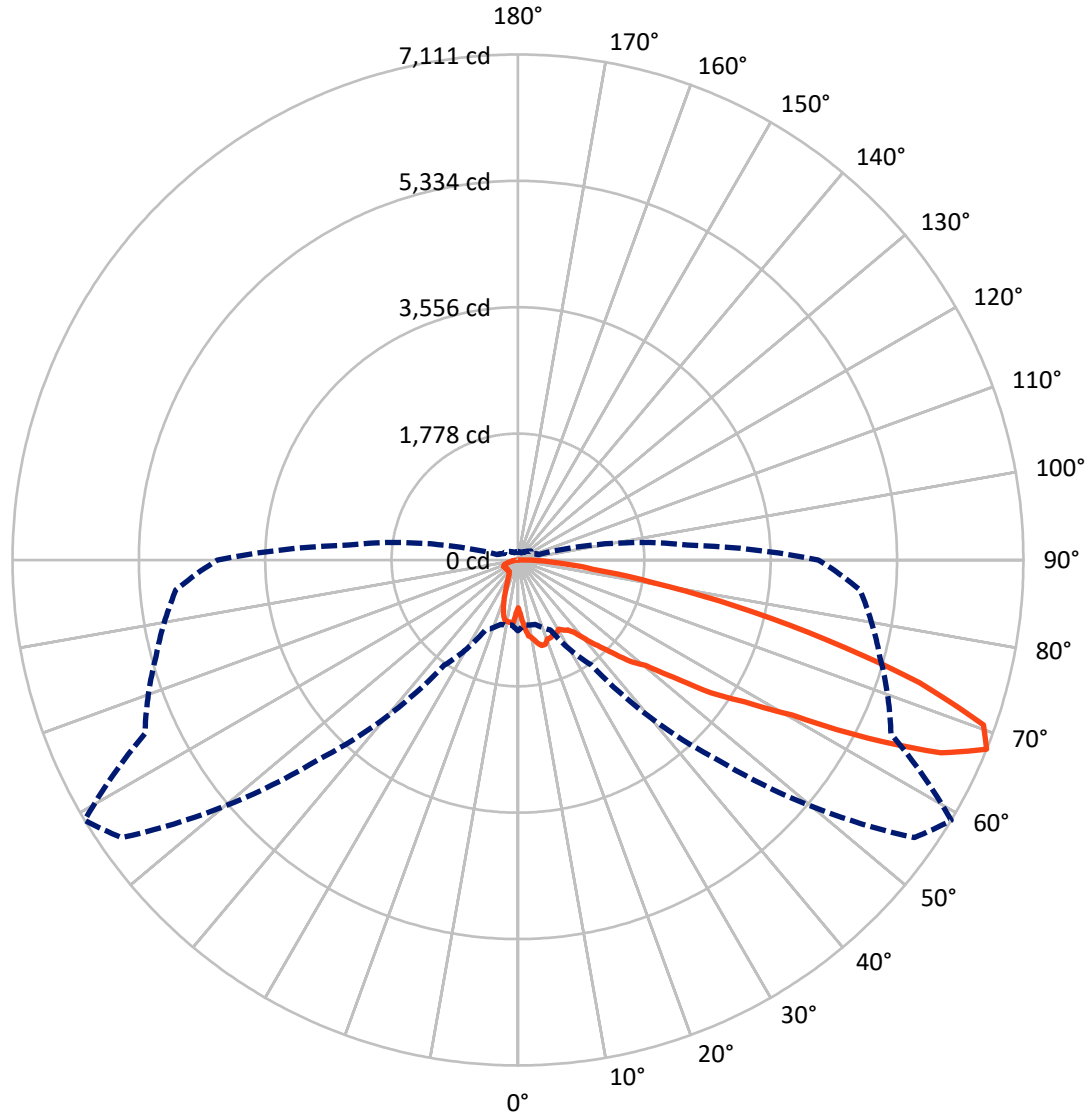
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.8 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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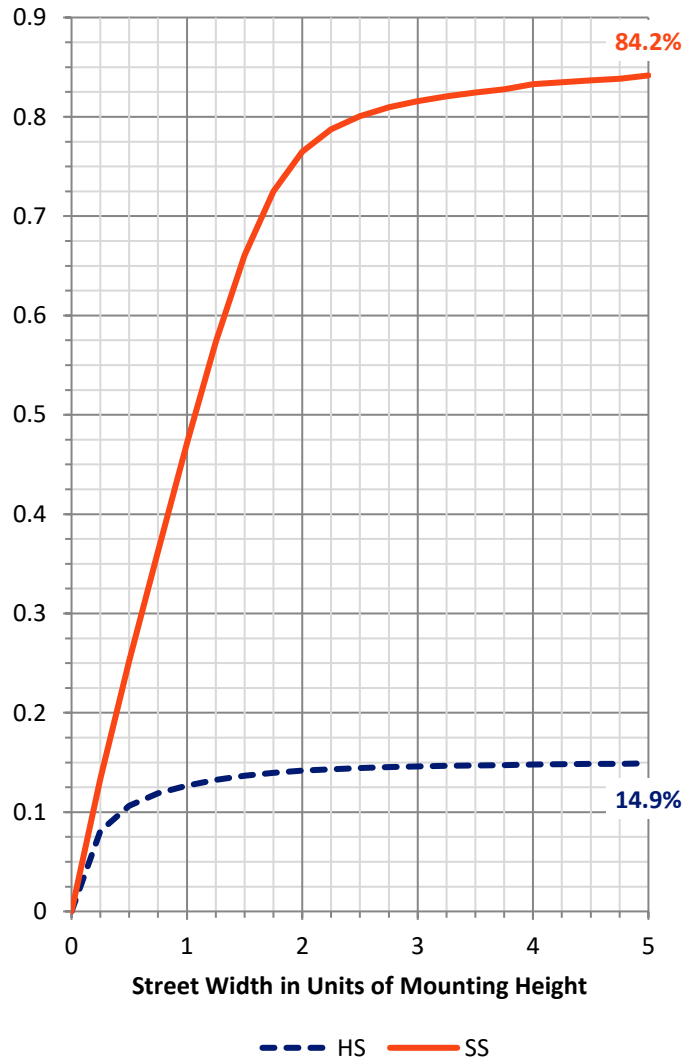
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1069.1	0.0	1069.1
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	6033.9	0.0	6033.9
	% Fixture	84.9	0.0	84.9
Total	Lumens	7103.0	0.0	7103.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.8	1.2
10°-20°	259.8	3.7
20°-30°	371.0	5.2
30°-40°	546.7	7.7
40°-50°	923.6	13.0
50°-60°	1607.2	22.6
60°-70°	2048.1	28.8
70°-80°	1084.5	15.3
80°-90°	174.5	2.5
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°	7103.0	100.0
0°-180°	7103.0	100.0

Coefficient of Utilization



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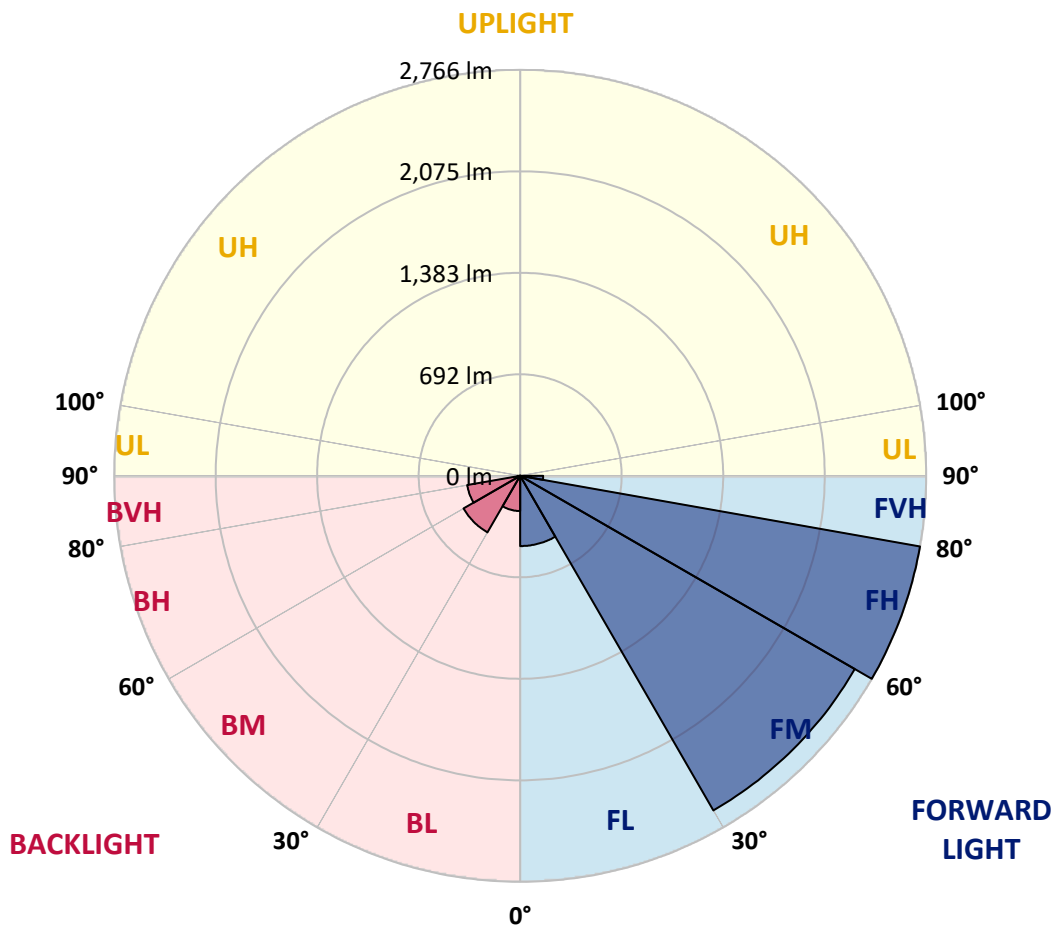
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	478.8	6.7			
FM (30°-60°)	2632.3	37.1			
FH (60°-80°)	2766.1	38.9			G2/5000
FVH (80°-90°)	156.7	2.2			G2/225
BL (0°-30°)	239.8	3.4	B1/500		
BM (30°-60°)	445.2	6.3	B1/1000		
BH (60°-80°)	366.4	5.2	B1/500		G1/500
BVH (80°-90°)	17.8	0.3			G1/100
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°	672.1	672.1	672.1	672.1	672.1	672.1	672.1	672.1	672.1	672.1	672.1
2.5°	839.2	800.1	758.5	770.3	794.0	804.9	793.1	781.7	766.9	749.5	809.1
5°	1017.7	959.6	951.2	950.9	942.4	908.7	952.1	949.1	966.5	984.6	1030.9
7.5°	1068.5	1046.9	1023.4	1034.5	992.1	990.3	1057.7	1077.0	1110.7	1099.5	1161.9
10°	1042.4	1018.0	1030.3	1025.8	1029.7	1074.3	1115.5	1116.7	1152.8	1188.3	1148.3
12.5°	996.3	998.1	1047.2	1045.4	1108.6	1191.4	1203.7	1194.1	1253.1	1229.0	1263.3
15°	1029.1	1051.1	1038.7	1049.3	1074.3	1179.6	1213.9	1248.8	1304.8	1326.5	1292.2
17.5°	1081.5	1093.2	1037.8	1032.1	1083.6	1133.6	1218.7	1248.5	1257.3	1411.7	1363.2
20°	1059.2	1083.0	1028.8	959.3	1044.8	1111.0	1195.0	1185.9	1228.4	1418.3	1378.0
22.5°	1122.4	1083.0	1014.1	964.7	994.8	1055.6	1126.9	1186.2	1236.5	1379.5	1399.3
25°	1134.5	1115.8	1051.4	1002.3	992.1	1013.8	1115.5	1154.3	1239.2	1432.5	1387.9
27.5°	1207.9	1179.9	1048.7	1050.2	999.3	961.1	1079.4	1161.0	1269.9	1399.6	1415.9
30°	1299.1	1277.7	1113.1	1119.1	1048.7	978.2	1104.1	1128.7	1287.7	1450.8	1451.1
32.5°	1367.4	1405.1	1239.8	1157.9	1133.0	1080.3	1066.1	1177.2	1266.9	1543.5	1511.3
35°	1490.5	1519.7	1337.3	1271.7	1187.1	1127.8	1169.1	1209.1	1353.3	1665.4	1600.7
37.5°	1718.4	1684.7	1518.5	1415.3	1383.7	1298.2	1321.1	1293.1	1447.2	1802.4	1775.9
40°	1850.2	1821.0	1646.2	1589.0	1463.8	1474.6	1446.0	1466.5	1572.7	1948.1	1939.6
42.5°	1980.3	1941.1	1793.4	1753.6	1628.7	1575.7	1580.8	1647.1	1766.3	2183.4	2155.5
45°	2108.8	2008.6	1943.9	1954.4	1894.2	1785.5	1793.1	1855.4	1977.6	2452.5	2388.1
47.5°	2207.2	2124.5	2073.9	2060.9	2031.1	2176.5	2111.5	2136.8	2190.7	2692.1	2667.8
50°	2393.5	2296.9	2231.0	2212.3	2313.5	2515.8	2383.3	2328.8	2443.5	3001.9	2989.2
52.5°	2691.8	2571.4	2461.6	2460.4	2606.7	2737.9	2831.2	2737.3	2779.4	3319.1	3355.2
55°	2952.2	2812.8	2714.1	2768.6	2976.9	3057.2	3374.2	3300.8	3265.2	3639.4	3742.6
57.5°	3049.4	2886.6	2822.2	2902.5	3209.6	3622.5	3957.5	3764.3	3729.7	4001.8	4218.2
60°	2836.0	2663.8	2667.8	2819.2	3351.0	4037.6	4595.4	4431.3	4228.4	4453.0	4664.3
62.5°	2228.0	2072.4	2173.8	2404.1	3232.4	4440.9	5450.2	5519.4	4798.2	4827.1	4911.7
65°	1514.3	1406.6	1498.1	1723.5	2621.7	4661.0	6264.4	6541.9	5317.1	5072.1	5018.6
67.5°	996.6	920.5	938.2	1088.1	1804.8	3973.5	6808.9	7111.4	5791.5	5273.2	4830.1
70°	771.8	710.4	702.5	781.1	1070.4	2760.5	6486.2	6946.2	6080.5	5084.8	4210.1
72.5°	605.6	559.0	563.2	638.7	829.0	1531.5	5019.2	5906.8	5645.2	4385.3	3234.5
75°	472.3	434.0	455.4	541.8	766.6	951.8	3463.0	4483.1	4364.5	3247.2	1844.8
77.5°	342.8	318.2	348.6	461.4	720.6	816.6	2155.8	3127.7	2796.0	1667.2	633.0
80°	224.8	211.0	236.0	376.2	653.5	785.9	1332.2	1916.5	1381.6	468.4	239.6
82.5°	132.4	126.4	147.2	254.6	525.2	736.5	888.5	1064.9	565.3	198.1	127.3
85°	69.5	65.0	87.3	146.3	362.1	672.4	699.5	637.5	273.0	86.1	60.8
87.5°	23.2	22.6	37.0	56.6	137.0	357.0	373.2	302.8	112.6	25.0	13.2
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°	672.1	672.1	672.1	672.1	672.1	672.1	672.1	672.1	672.1	672.1	672.1
2.5°	817.2	805.2	735.9	745.6	754.6	750.1	747.4	716.1	713.1	757.6	754.0
5°	1029.7	979.8	920.8	918.0	879.2	839.5	847.3	834.7	838.3	856.6	858.4
7.5°	1142.0	1079.7	1023.4	931.9	854.2	791.3	801.3	798.2	790.1	831.7	842.8
10°	1139.9	1084.5	1021.0	910.2	857.8	806.7	745.3	687.2	670.0	649.6	651.4
12.5°	1215.1	1166.1	1027.6	914.7	843.7	755.5	640.5	577.0	516.2	515.0	499.7
15°	1238.6	1202.5	1041.8	888.9	744.7	618.3	499.4	430.4	386.5	377.8	364.8
17.5°	1297.9	1241.3	998.7	805.2	629.7	483.4	375.3	327.2	323.6	329.6	323.0
20°	1301.8	1210.0	921.1	681.5	506.0	366.3	306.1	282.0	295.0	309.7	309.1
22.5°	1298.5	1170.6	853.9	576.1	380.2	294.4	268.2	262.8	274.8	296.8	299.5
25°	1264.8	1157.6	770.0	473.2	308.5	252.2	245.0	248.3	263.4	289.3	289.3
27.5°	1300.0	1105.0	664.6	385.0	259.5	224.5	229.7	238.1	249.2	278.7	284.1
30°	1288.6	1122.4	579.7	310.0	228.8	205.3	216.7	225.1	237.8	268.5	271.2
32.5°	1319.3	1075.8	508.4	260.7	208.6	197.8	200.5	211.9	228.5	252.5	257.4
35°	1366.2	1092.9	426.5	234.5	198.7	189.0	194.1	203.2	219.7	243.2	247.1
37.5°	1516.1	1092.0	369.9	220.0	196.9	187.2	189.6	196.0	215.2	236.6	245.6
40°	1612.5	1154.6	318.5	216.7	194.7	186.3	184.2	191.1	206.5	231.8	238.1
42.5°	1793.4	1192.9	296.2	215.5	194.4	181.2	179.1	187.2	202.3	225.7	235.4
45°	1984.5	1247.3	278.4	214.9	193.5	180.3	174.0	184.2	196.9	219.4	230.6
47.5°	2209.3	1362.6	268.5	212.8	191.7	181.5	172.2	177.3	191.4	214.0	225.1
50°	2503.7	1515.2	270.6	209.8	194.4	181.8	169.5	171.9	184.8	206.8	218.2
52.5°	2861.6	1751.5	284.1	211.0	196.3	180.3	168.3	167.1	178.2	197.5	208.9
55°	3292.9	2086.8	324.8	216.7	196.3	180.0	166.5	161.0	169.5	185.1	196.3
57.5°	3813.4	2475.1	404.2	219.4	194.7	178.2	162.5	152.9	158.0	171.0	181.5
60°	4260.3	2788.5	486.1	221.2	197.8	174.0	154.7	142.7	146.0	155.9	165.2
62.5°	4488.2	2876.3	510.8	219.7	205.9	171.3	145.4	131.8	132.1	140.6	149.0
65°	4530.9	2759.3	411.8	218.2	216.4	171.0	138.8	122.5	120.4	126.4	133.6
67.5°	4226.3	2395.1	297.1	214.9	217.6	169.2	134.2	115.0	109.6	113.8	119.8
70°	3588.5	1928.8	249.5	208.3	203.2	160.1	126.4	107.2	99.9	102.9	107.5
72.5°	2675.3	1427.0	217.6	194.1	177.0	137.0	114.4	98.4	90.9	93.0	96.3
75°	1486.3	761.2	182.1	168.9	144.5	110.8	97.5	87.3	80.7	81.6	85.2
77.5°	493.6	280.8	133.6	133.9	109.3	85.5	80.4	74.6	69.5	69.8	72.8
80°	223.6	155.3	95.7	96.3	76.2	62.0	61.7	59.9	56.6	55.7	57.8
82.5°	129.7	94.2	65.6	62.6	49.1	40.3	44.8	43.9	43.0	39.7	40.3
85°	63.8	50.6	34.3	32.5	27.1	20.2	24.1	25.0	24.1	20.5	20.2
87.5°	15.7	16.6	8.4	7.8	4.5	2.1	3.6	3.6	4.5	3.0	1.5
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)