

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: P367153

Luminaire Tested: **MSA-SA2A-730-U-SL2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367153
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-730-U-SL2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5933 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G2

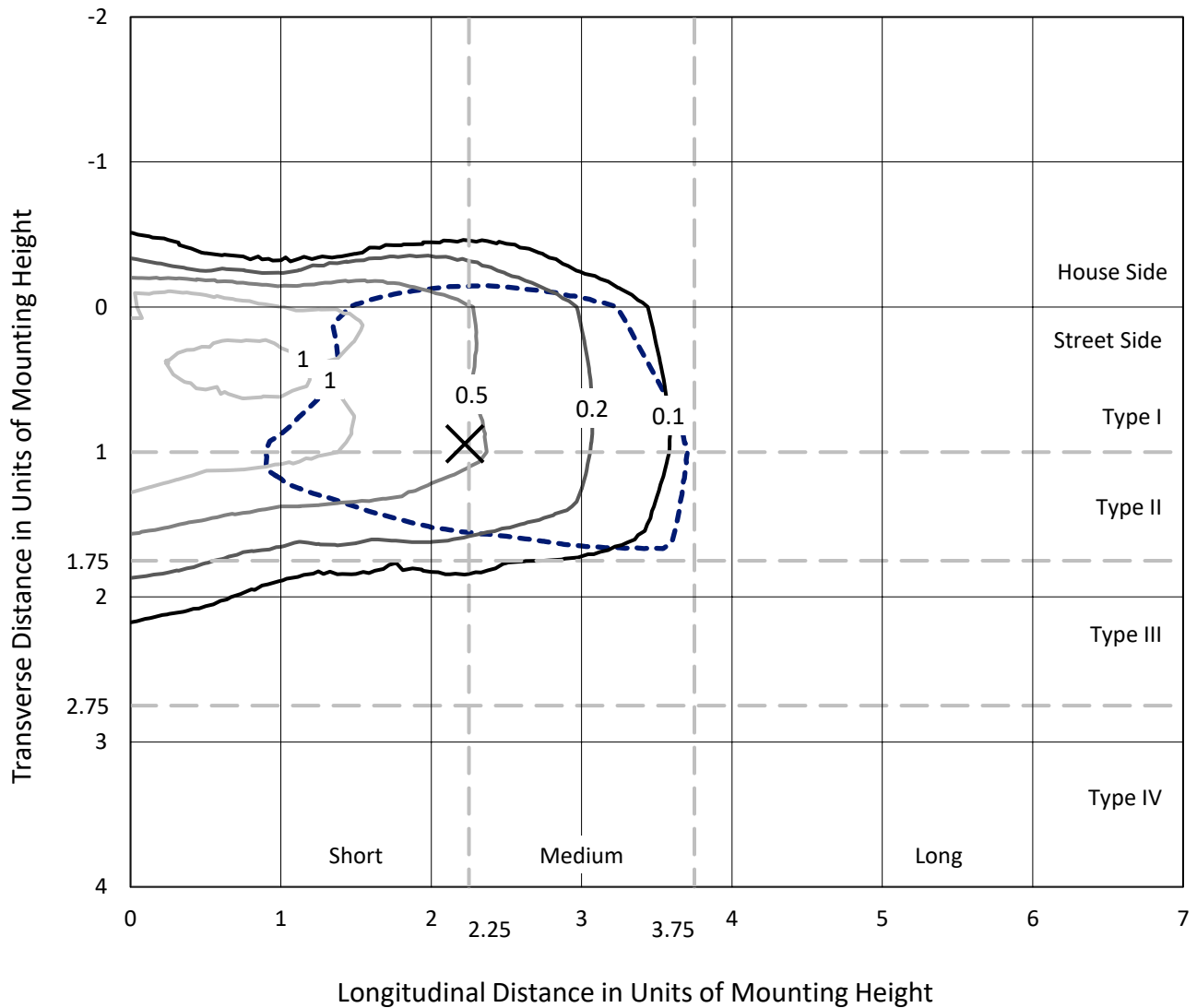
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

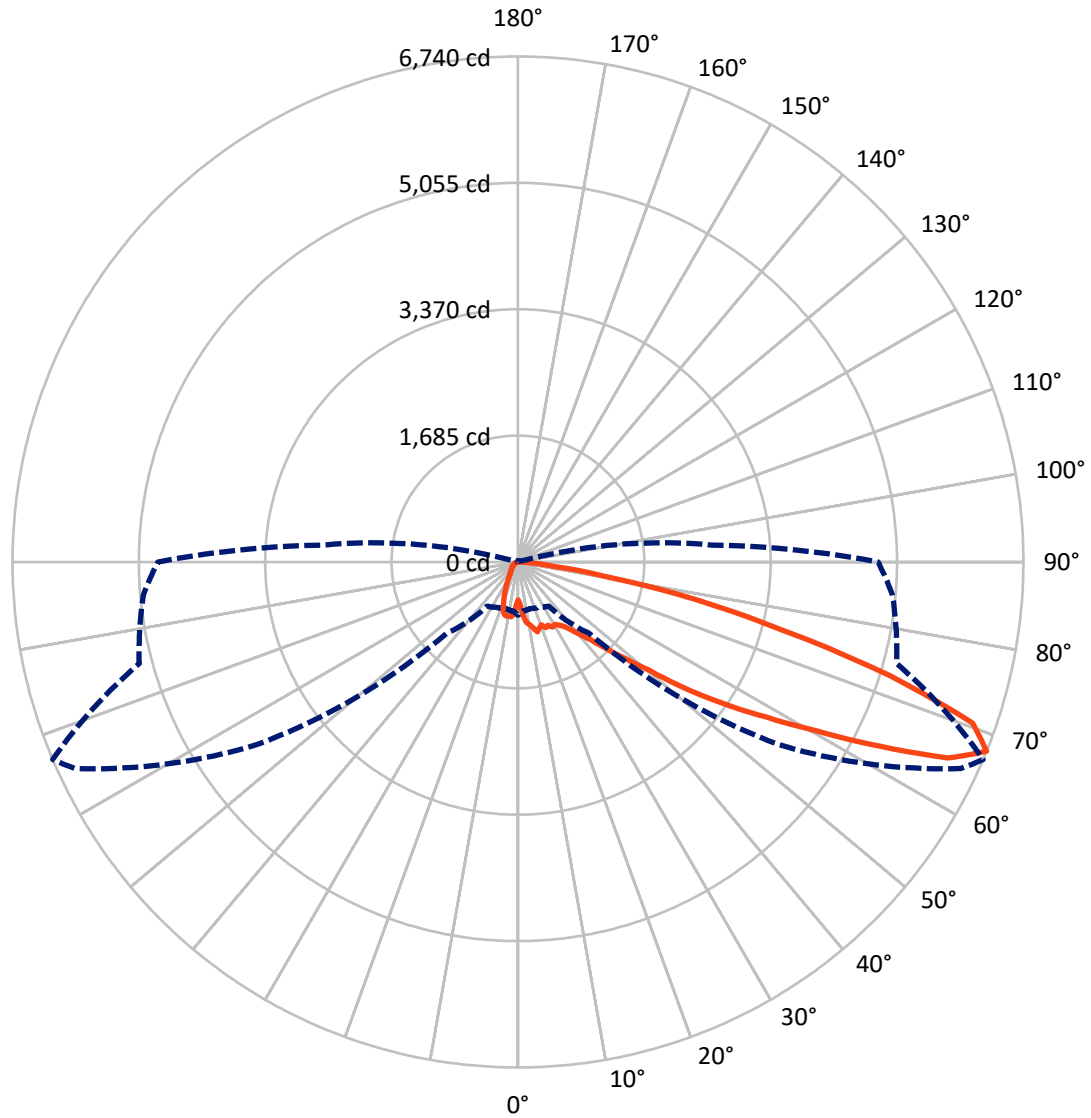
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.6 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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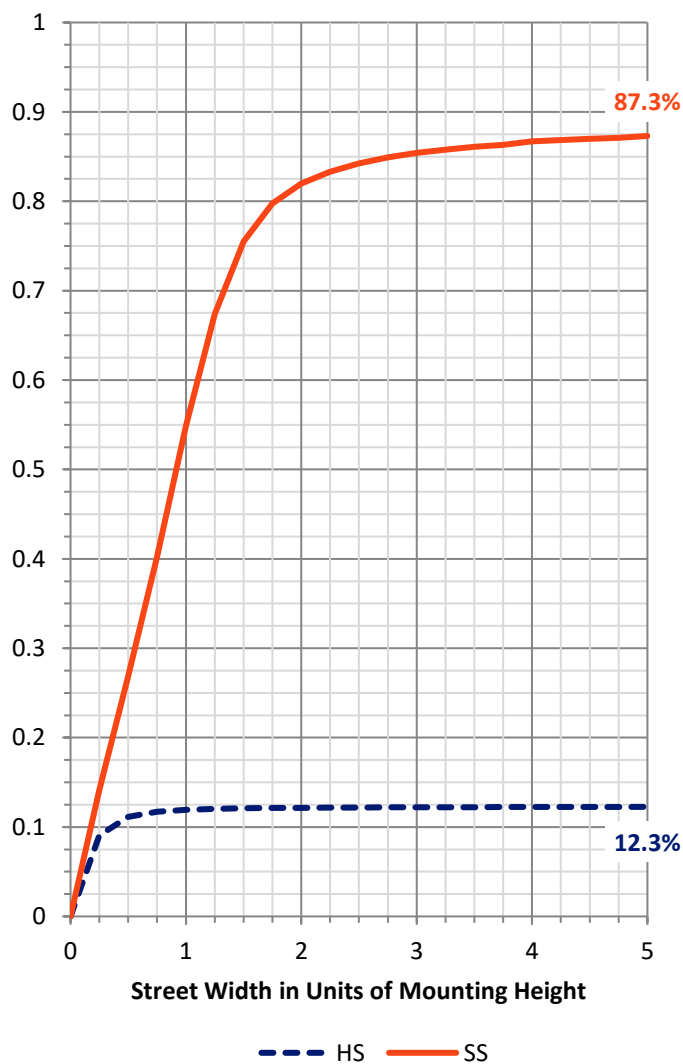
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	733.7	0.0	733.7
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	5199.3	0.0	5199.3
	% Fixture	87.6	0.0	87.6
Total	Lumens	5933.0	0.0	5933.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.4	1.1
10°-20°	187.7	3.2
20°-30°	294.1	5.0
30°-40°	474.3	8.0
40°-50°	871.5	14.7
50°-60°	1471.8	24.8
60°-70°	1627.1	27.4
70°-80°	851.6	14.4
80°-90°	91.5	1.5
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°	5933.0	100.0
0°-180°	5933.0	100.0

Coefficient of Utilization



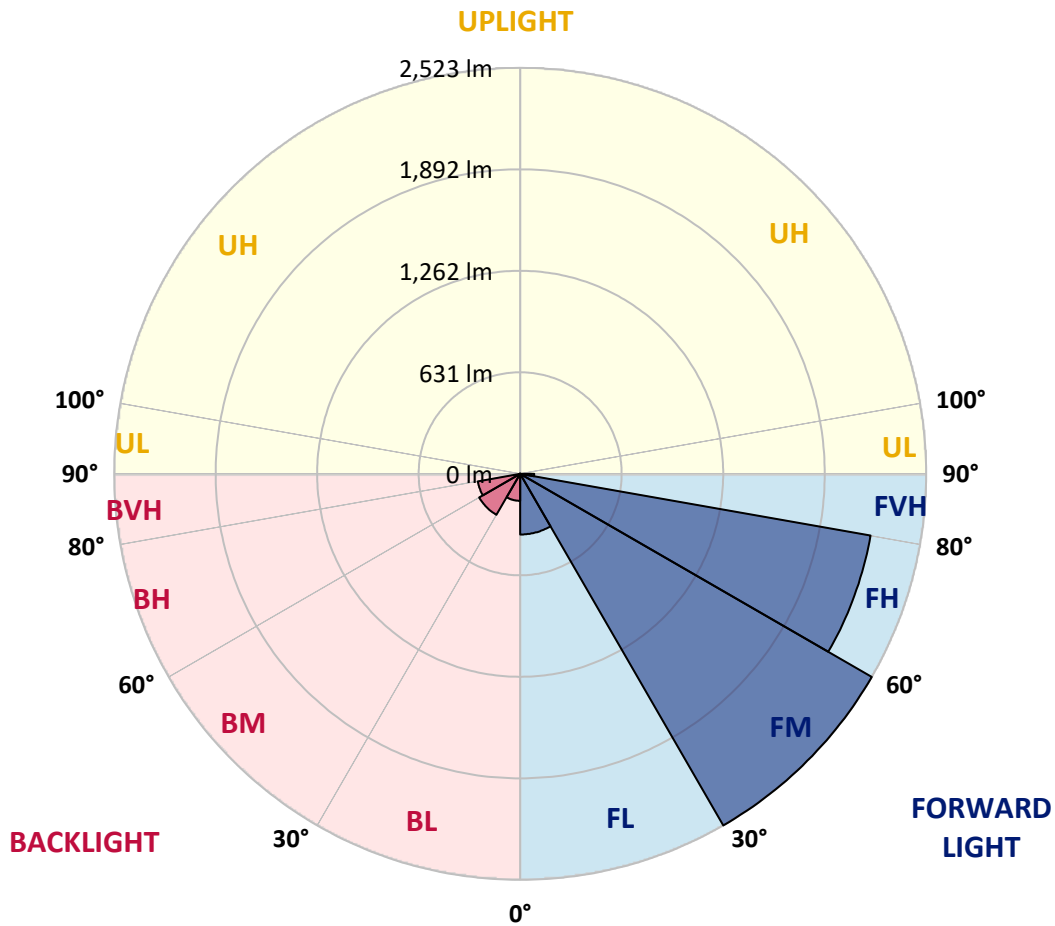
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	377.2	6.4			
FM (30°-60°)	2523.3	42.5			
FH (60°-80°)	2211.1	37.3			G2/5000
FVH (80°-90°)	87.6	1.5			G1/100
BL (0°-30°)	168.0	2.8	B1/500		
BM (30°-60°)	294.2	5.0	B1/1000		
BH (60°-80°)	267.6	4.5	B1/500		G1/500
BVH (80°-90°)	3.9	0.1			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 Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3
2.5°	596.5	576.4	542.0	552.0	571.8	588.4	580.6	565.2	565.5	549.9	606.1
5°	694.0	666.9	647.1	654.0	653.1	652.5	689.5	703.7	709.7	735.6	773.8
7.5°	722.0	712.4	691.6	697.9	677.2	678.7	743.7	805.1	814.7	830.7	898.7
10°	711.2	692.5	700.1	700.1	700.4	734.1	777.7	836.4	848.1	909.5	916.7
12.5°	699.4	700.4	730.1	724.7	765.7	826.2	840.9	906.8	901.1	954.4	1033.5
15°	743.1	766.0	746.7	754.2	758.1	829.2	852.9	940.5	965.8	1033.2	1084.7
17.5°	818.0	821.0	781.0	770.2	798.5	818.6	866.5	908.6	925.5	1102.4	1175.3
20°	831.6	850.8	810.2	747.6	807.5	835.2	868.6	888.8	896.0	1123.8	1226.4
22.5°	913.1	891.8	826.8	779.2	796.4	826.5	847.2	908.0	951.4	1083.5	1275.5
25°	955.0	949.3	887.3	846.6	829.2	826.8	874.3	920.4	934.2	1125.3	1287.5
27.5°	1055.2	1042.3	922.2	917.0	859.6	809.0	875.2	958.0	983.9	1085.9	1332.7
30°	1191.5	1186.7	1026.9	1023.6	932.1	841.2	924.0	981.2	965.5	1106.1	1362.8
32.5°	1328.8	1367.9	1204.5	1111.2	1042.6	959.5	910.1	973.9	1001.9	1155.1	1418.2
35°	1494.6	1522.9	1356.5	1288.7	1136.2	1014.9	1001.9	1042.9	1054.9	1213.5	1481.1
37.5°	1784.7	1742.0	1600.2	1485.0	1404.9	1212.6	1148.8	1116.3	1144.3	1292.7	1609.6
40°	1999.0	1971.9	1797.4	1728.5	1544.3	1431.7	1265.0	1234.6	1265.9	1373.9	1699.0
42.5°	2257.6	2201.3	2037.0	1990.3	1800.7	1583.7	1414.5	1425.1	1405.5	1534.3	1855.8
45°	2491.4	2364.4	2272.9	2283.4	2182.3	1889.2	1664.1	1658.9	1642.7	1766.7	2020.7
47.5°	2648.8	2537.8	2448.7	2419.5	2407.4	2426.4	2024.6	1933.7	1921.7	2010.8	2280.4
50°	2733.4	2611.8	2501.6	2507.7	2752.1	2935.9	2396.6	2267.5	2272.0	2365.0	2635.6
52.5°	2676.5	2539.0	2422.8	2535.7	3019.3	3275.7	3012.4	2703.6	2808.3	2784.6	3112.0
55°	2413.8	2294.3	2211.8	2413.8	3048.5	3641.4	3770.5	3360.0	3336.5	3282.4	3597.8
57.5°	1971.6	1868.7	1817.8	2030.9	2729.2	3936.1	4532.0	4101.9	3901.7	3674.8	4001.1
60°	1469.0	1393.2	1340.2	1452.8	2150.4	3649.8	5030.7	4801.0	4569.3	4053.1	4363.4
62.5°	1088.0	1026.3	970.0	980.3	1480.8	3139.1	5222.1	5541.7	5408.7	4452.5	4705.3
65°	868.3	812.0	772.6	750.0	917.0	2361.7	4955.7	6148.8	6302.3	4828.7	4952.1
67.5°	709.1	661.5	642.0	667.8	719.3	1346.2	4244.2	6517.2	6739.9	5227.8	5012.9
70°	577.0	537.8	535.7	605.5	662.4	820.7	3121.9	6262.8	6430.5	5295.8	4648.4
72.5°	402.1	384.9	412.3	511.3	656.4	683.5	1792.9	5182.7	5188.7	4677.3	3823.5
75°	227.5	224.8	268.2	407.8	639.3	676.6	999.5	3662.5	3665.2	3537.6	2648.8
77.5°	125.2	117.1	156.2	275.7	549.0	660.9	644.7	2500.7	2436.6	1968.6	1209.9
80°	57.8	54.5	84.6	176.7	401.5	625.1	516.8	1374.5	1239.4	641.4	295.2
82.5°	23.8	22.6	38.8	113.5	253.7	503.5	435.5	609.8	489.4	121.9	91.2
85°	4.2	4.5	16.0	68.6	142.1	232.0	353.0	289.5	212.8	33.7	50.0
87.5°	0.0	0.0	3.3	16.6	34.3	63.5	143.3	81.0	55.7	9.9	14.7
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°	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3	505.3
2.5°	617.3	612.2	560.4	562.8	566.4	563.1	562.5	548.1	534.8	578.5	577.9
5°	780.7	744.3	708.5	694.6	664.8	625.7	626.0	613.7	601.0	618.8	618.8
7.5°	897.2	846.9	801.5	720.5	641.7	570.3	564.0	547.2	527.9	551.1	555.6
10°	924.3	880.6	821.9	703.1	628.4	558.9	482.5	419.5	390.4	376.8	374.4
12.5°	1007.6	975.1	843.9	712.4	604.9	487.3	362.1	287.4	236.6	232.6	227.2
15°	1063.3	1040.4	865.6	689.2	505.6	350.3	227.5	174.6	154.1	152.3	149.6
17.5°	1149.7	1110.0	844.8	615.5	395.5	231.1	152.9	137.8	140.3	145.7	141.5
20°	1184.9	1107.3	799.7	508.6	277.8	155.0	132.7	124.6	130.9	136.0	133.6
22.5°	1221.0	1115.1	759.6	419.2	181.5	128.2	118.3	114.1	114.7	119.8	120.1
25°	1220.7	1136.8	713.3	326.6	135.1	114.1	106.8	101.4	99.3	102.9	102.0
27.5°	1280.0	1111.8	628.7	242.3	118.9	102.0	95.1	88.5	81.0	84.6	84.6
30°	1280.3	1152.4	569.7	174.0	109.0	90.9	84.9	74.6	65.9	68.9	69.2
32.5°	1314.3	1117.2	515.3	133.0	101.1	84.3	71.0	61.7	56.6	58.4	58.4
35°	1353.2	1147.3	431.6	117.4	93.3	74.9	60.8	53.3	49.4	50.9	50.9
37.5°	1481.4	1141.0	373.5	109.3	88.2	67.7	55.4	47.0	45.1	46.0	47.3
40°	1527.7	1185.8	294.6	104.4	79.8	61.1	48.8	42.4	40.0	40.6	40.9
42.5°	1645.7	1195.7	235.4	100.5	72.2	53.0	43.3	38.8	35.8	35.8	36.7
45°	1776.0	1220.7	187.2	97.2	65.9	47.6	39.1	35.5	31.0	30.4	31.6
47.5°	1964.7	1316.4	152.6	90.6	58.4	44.2	36.1	30.7	27.1	25.9	27.1
50°	2280.4	1479.0	134.8	82.5	53.0	41.5	31.9	26.2	23.5	22.0	22.9
52.5°	2725.9	1759.8	125.5	74.9	48.2	37.3	28.6	22.9	20.2	19.0	19.6
55°	3220.7	2081.8	121.0	67.4	43.9	32.8	25.0	20.2	17.8	16.3	16.6
57.5°	3678.1	2384.6	116.5	60.2	39.7	29.2	22.0	17.8	15.3	13.8	14.1
60°	4129.0	2626.2	105.6	51.8	35.8	26.2	19.3	15.3	13.8	12.0	12.0
62.5°	4527.8	2770.7	90.0	44.8	32.2	23.2	17.2	13.8	12.6	10.8	10.8
65°	4799.2	2777.3	72.5	38.5	28.3	19.9	15.0	12.9	11.7	9.6	9.3
67.5°	4803.1	2596.8	58.1	34.3	25.0	17.5	13.5	12.3	10.8	9.0	8.4
70°	4299.0	2145.3	48.5	30.1	21.7	15.3	11.7	11.7	10.5	8.7	7.8
72.5°	3438.9	1639.4	40.6	26.2	19.3	13.2	10.8	11.1	10.2	8.7	7.8
75°	2311.4	940.2	33.7	22.3	16.9	11.1	10.5	10.8	10.5	8.7	7.5
77.5°	1064.5	299.5	26.2	18.4	14.4	9.3	10.2	10.2	9.6	7.8	6.6
80°	239.9	73.7	19.0	13.5	11.7	6.9	9.3	8.4	7.5	5.4	3.9
82.5°	87.3	22.6	11.4	8.4	7.2	2.7	6.0	6.0	5.4	3.9	2.4
85°	50.0	11.7	6.3	5.4	3.9	1.2	3.3	3.6	3.0	2.7	1.2
87.5°	16.3	2.7	3.0	3.3	3.0	0.6	1.2	1.2	0.9	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)