

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: P367278

Luminaire Tested: **MSA-SA2B-727-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367278
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2B-727-U-T4FT
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8350 lumens
Efficiency: N/A
Efficacy: 98.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

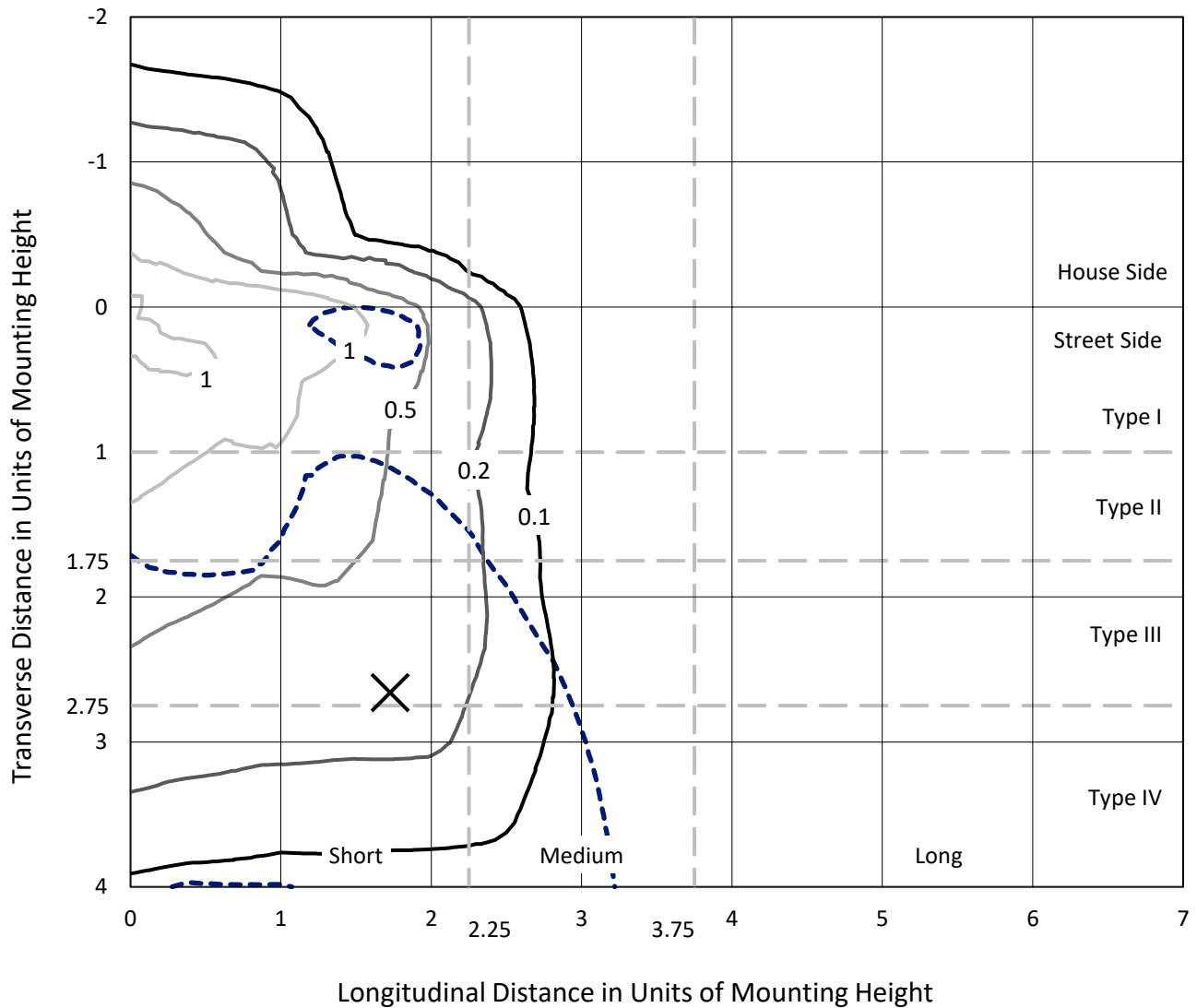
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

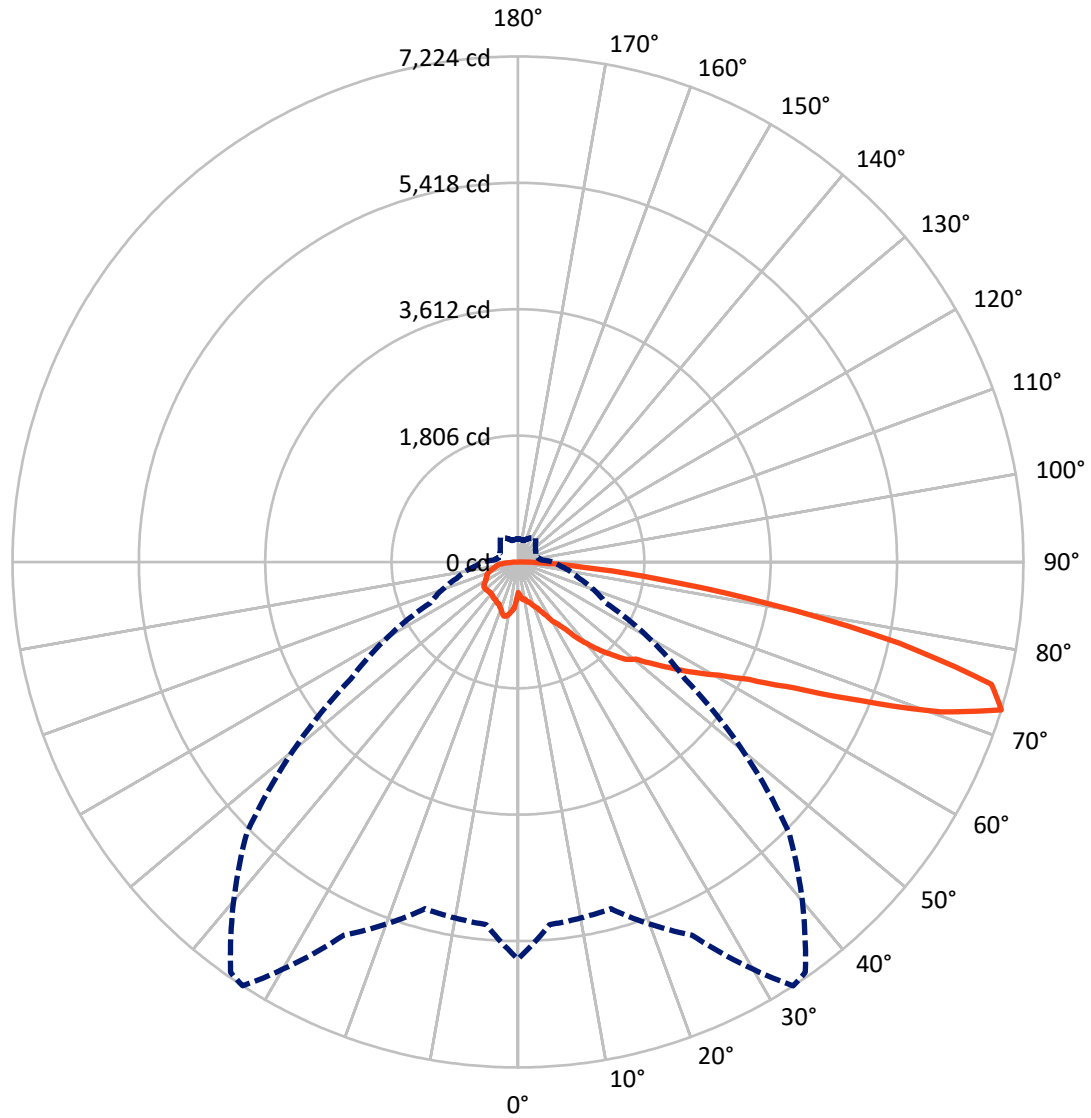
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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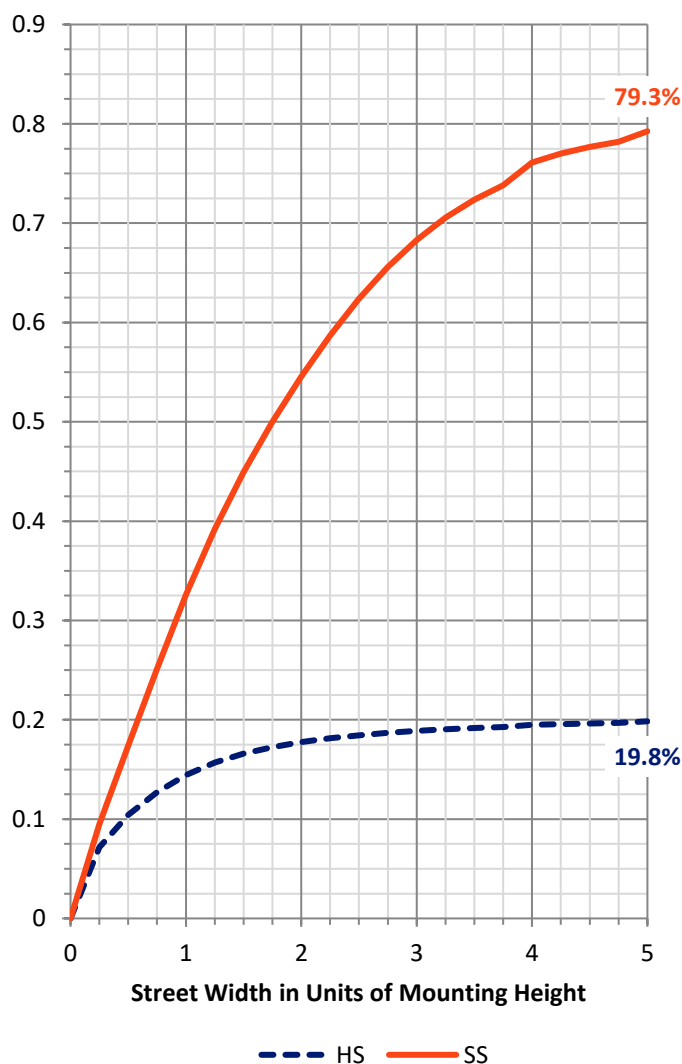
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1689.2	0.0	1689.2
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	6660.8	0.0	6660.8
	% Fixture	79.8	0.0	79.8
Total	Lumens	8350.0	0.0	8350.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.2	0.7
10°-20°	222.5	2.7
20°-30°	405.7	4.9
30°-40°	686.3	8.2
40°-50°	1141.8	13.7
50°-60°	1675.7	20.1
60°-70°	2143.6	25.7
70°-80°	1744.0	20.9
80°-90°	270.1	3.2
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°	8350.0	100.0
0°-180°	8350.0	100.0

Coefficient of Utilization



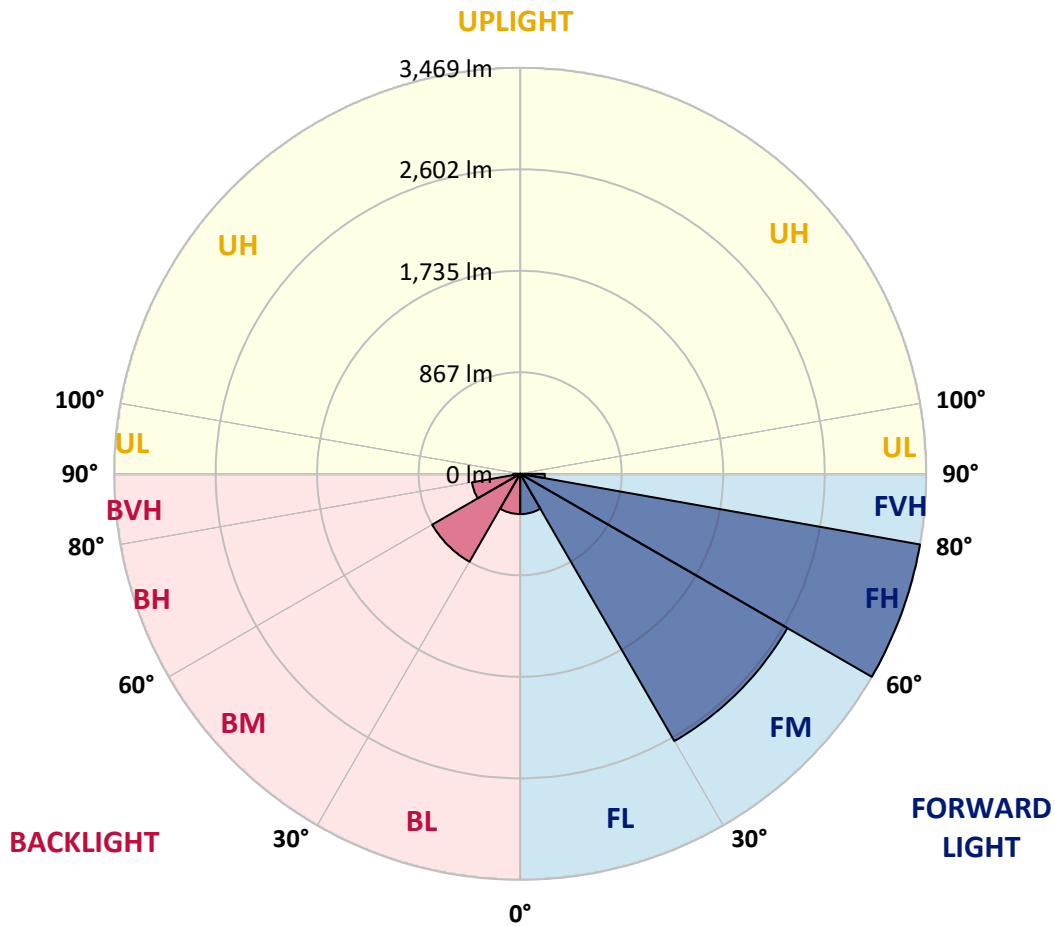
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	344.6	4.1			
FM (30°-60°)	2636.3	31.6			
FH (60°-80°)	3469.1	41.5			G2/5000
FVH (80°-90°)	210.8	2.5			G2/225
BL (0°-30°)	343.8	4.1	B1/500		
BM (30°-60°)	867.6	10.4	B1/1000		
BH (60°-80°)	418.6	5.0	B1/500		G1/500
BVH (80°-90°)	59.3	0.7			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	437.8	437.8	437.8	437.8	437.8	437.8	437.8	437.8	437.8	437.8	437.8
2.5°	496.4	480.8	455.2	454.5	468.7	471.8	481.1	481.8	485.3	479.8	519.2
5°	547.6	531.0	521.0	524.4	517.9	525.8	525.8	548.7	579.2	614.5	664.7
7.5°	559.8	547.6	536.2	544.9	546.3	538.6	545.9	599.6	654.7	690.0	770.4
10°	535.5	523.4	532.1	534.8	534.5	551.8	589.6	632.5	693.8	758.9	802.2
12.5°	531.0	539.7	543.8	548.7	581.6	586.8	643.9	688.3	749.9	807.1	919.7
15°	597.9	609.3	583.7	581.9	592.7	597.5	656.8	701.4	791.5	887.5	988.6
17.5°	693.1	697.3	651.2	627.7	635.6	639.4	665.4	721.5	777.0	954.3	1080.4
20°	785.3	788.0	701.4	648.8	676.9	681.0	705.3	737.5	781.1	991.7	1142.4
22.5°	881.9	864.3	769.3	702.8	719.1	720.2	734.4	752.0	814.0	985.8	1217.9
25°	987.6	976.5	857.0	793.2	792.5	778.3	779.0	804.3	849.0	1048.9	1267.5
27.5°	1127.9	1129.2	955.7	921.4	867.7	858.4	811.6	858.7	909.6	1049.6	1374.5
30°	1309.7	1276.1	1093.2	1037.8	984.8	965.1	901.7	941.8	964.0	1109.5	1490.9
32.5°	1457.6	1447.9	1236.6	1152.8	1066.2	1089.1	1019.1	983.8	1023.6	1212.7	1667.2
35°	1599.3	1567.4	1388.3	1279.2	1188.1	1174.3	1128.9	1134.8	1159.0	1343.3	1897.5
37.5°	1810.6	1793.3	1603.1	1428.5	1385.9	1329.5	1300.7	1319.1	1300.0	1510.6	2242.9
40°	2046.8	1946.4	1782.5	1627.0	1547.3	1507.5	1517.6	1500.2	1485.7	1698.4	2552.6
42.5°	2273.0	2181.6	1901.7	1831.7	1727.8	1744.4	1689.4	1701.5	1742.7	1964.7	2839.0
45°	2519.3	2321.5	2028.1	1966.5	1892.0	1913.1	1957.1	1944.0	2011.5	2278.9	3108.9
47.5°	2642.3	2454.2	2183.3	2082.9	2081.8	2037.8	2305.6	2334.7	2229.0	2511.7	3382.9
50°	2760.8	2575.8	2298.7	2230.8	2181.6	2275.8	2639.9	2573.0	2425.8	2778.8	3684.2
52.5°	2925.6	2714.7	2431.0	2358.6	2419.6	2506.9	2906.6	2893.4	2618.7	3053.5	3946.1
55°	3051.4	2838.3	2630.2	2563.0	2679.4	2764.9	3178.2	3098.8	2784.0	3255.1	4112.0
57.5°	3271.7	3053.1	2924.3	2775.0	2984.2	2982.8	3440.0	3378.7	2960.6	3420.6	4178.9
60°	3621.9	3365.2	3230.5	3058.3	3282.4	3362.4	3739.3	3562.7	3085.7	3525.2	4058.3
62.5°	4113.4	3808.6	3590.0	3419.6	3692.9	3837.7	4108.9	3696.7	3093.6	3495.5	3741.4
65°	4721.3	4350.7	4064.2	3884.1	4335.1	4541.9	4555.8	3779.5	3020.2	3187.5	3074.9
67.5°	5314.4	4897.7	4598.7	4633.0	5291.5	5389.5	5040.0	3848.8	2625.7	2559.5	2135.2
70°	5704.8	5253.1	5053.9	5417.6	6418.0	6317.5	5432.5	3666.2	2067.6	1659.2	1202.3
72.5°	5675.3	5202.5	5130.8	5883.8	7223.7	7161.0	5480.3	2915.6	1384.9	907.2	599.6
75°	4623.7	4256.1	4418.9	5570.0	6991.6	6988.5	4758.1	1804.7	710.5	465.9	379.0
77.5°	2556.4	2413.7	2892.0	4217.3	5566.9	5595.3	3214.9	818.5	383.1	330.1	285.4
80°	895.4	882.3	1253.3	2275.8	3662.1	3669.0	1495.0	374.5	278.5	249.7	209.6
82.5°	327.3	324.6	519.6	1057.2	2016.4	2011.9	567.0	233.1	206.5	176.7	138.2
85°	130.6	127.8	237.6	469.4	926.3	911.4	220.3	132.3	135.1	105.3	67.9
87.5°	36.0	37.4	80.7	146.9	283.7	262.9	55.4	44.7	54.7	43.0	21.5
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°	437.8	437.8	437.8	437.8	437.8	437.8	437.8	437.8	437.8	437.8	437.8
2.5°	526.2	529.6	495.3	507.5	523.1	531.4	535.5	517.9	523.7	548.7	547.6
5°	675.1	661.3	648.1	661.6	652.6	639.8	660.6	659.5	673.0	686.6	689.7
7.5°	786.3	768.3	762.1	731.6	701.1	670.3	696.9	713.6	717.0	750.6	764.8
10°	826.5	819.6	822.0	781.8	778.0	781.1	756.5	729.9	746.1	732.3	742.7
12.5°	919.3	936.6	893.7	866.3	863.9	844.9	795.7	778.3	760.0	779.0	769.3
15°	993.8	1026.0	979.9	931.8	877.4	848.0	806.1	779.7	767.6	771.8	760.0
17.5°	1102.9	1133.1	1016.0	942.2	886.1	842.8	778.7	722.6	752.4	754.8	741.3
20°	1175.3	1177.4	1028.1	916.6	866.0	790.8	728.5	679.3	713.6	748.6	763.8
22.5°	1246.0	1230.4	1043.0	896.1	792.9	720.2	689.7	686.6	712.2	741.6	745.1
25°	1299.0	1301.4	1051.7	888.5	749.9	650.9	650.9	673.4	695.9	765.9	762.4
27.5°	1427.5	1332.9	1018.1	853.5	690.4	610.3	651.2	681.4	692.1	768.0	775.6
30°	1521.0	1459.4	1025.0	793.6	630.1	591.3	624.9	662.7	692.4	780.1	777.3
32.5°	1677.9	1512.0	1041.3	709.4	585.1	584.0	613.8	653.6	689.3	766.9	771.1
35°	1851.5	1667.2	995.9	645.3	574.3	579.9	618.3	634.2	676.2	761.7	765.5
37.5°	2172.6	1748.2	967.1	595.8	567.4	583.3	597.9	622.5	664.7	735.7	760.7
40°	2361.0	1915.2	860.4	567.0	552.8	580.6	587.8	608.6	631.5	704.6	720.5
42.5°	2609.0	1967.9	769.3	535.2	545.6	569.1	590.9	596.1	611.4	655.4	684.5
45°	2815.8	2007.4	672.7	509.5	521.0	594.4	595.8	593.4	590.6	606.9	630.8
47.5°	3029.9	2113.3	583.7	481.1	511.6	615.2	598.2	576.1	564.6	566.7	588.9
50°	3266.1	2190.2	520.6	457.9	513.7	615.2	610.0	558.4	535.5	529.6	552.8
52.5°	3474.0	2199.3	472.8	439.2	505.0	594.1	618.0	547.3	508.9	494.7	516.5
55°	3587.3	2085.3	438.2	422.3	482.9	575.0	613.8	541.1	476.6	465.9	485.3
57.5°	3584.8	1896.2	408.7	398.7	457.6	548.3	590.6	507.1	456.9	450.7	469.7
60°	3455.6	1674.5	386.2	379.3	431.6	509.5	549.0	485.0	437.8	434.7	455.5
62.5°	3162.6	1445.5	364.4	358.9	407.4	482.2	529.3	460.4	418.1	417.8	437.5
65°	2590.0	1160.4	344.0	342.6	384.8	455.2	510.6	439.6	397.7	404.6	424.7
67.5°	1784.6	815.4	322.1	326.3	364.1	429.2	496.4	425.7	376.2	390.4	408.4
70°	979.3	504.3	297.9	306.2	337.7	399.0	474.2	403.2	348.1	369.9	382.4
72.5°	498.1	336.3	267.8	280.9	305.5	354.7	432.6	370.6	318.0	326.3	332.9
75°	334.6	253.2	234.2	248.7	266.4	312.4	383.8	340.2	289.2	288.2	295.5
77.5°	252.9	197.8	198.8	215.5	226.9	274.7	345.0	314.5	265.0	262.6	273.3
80°	185.0	150.0	160.0	177.4	187.7	246.6	319.7	286.1	232.1	222.4	231.4
82.5°	122.6	106.3	118.5	135.8	144.1	206.1	290.3	242.8	189.1	164.5	165.9
85°	57.8	55.8	70.7	79.0	89.7	127.8	217.2	168.0	120.5	99.8	104.3
87.5°	13.2	17.7	23.2	22.9	26.7	34.3	67.5	47.1	35.0	23.9	15.9
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)