

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: P367038

Luminaire Tested: **MSA-SA1D-730-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367038
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1D-730-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6332 lumens
Efficiency: N/A
Efficacy: 94.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

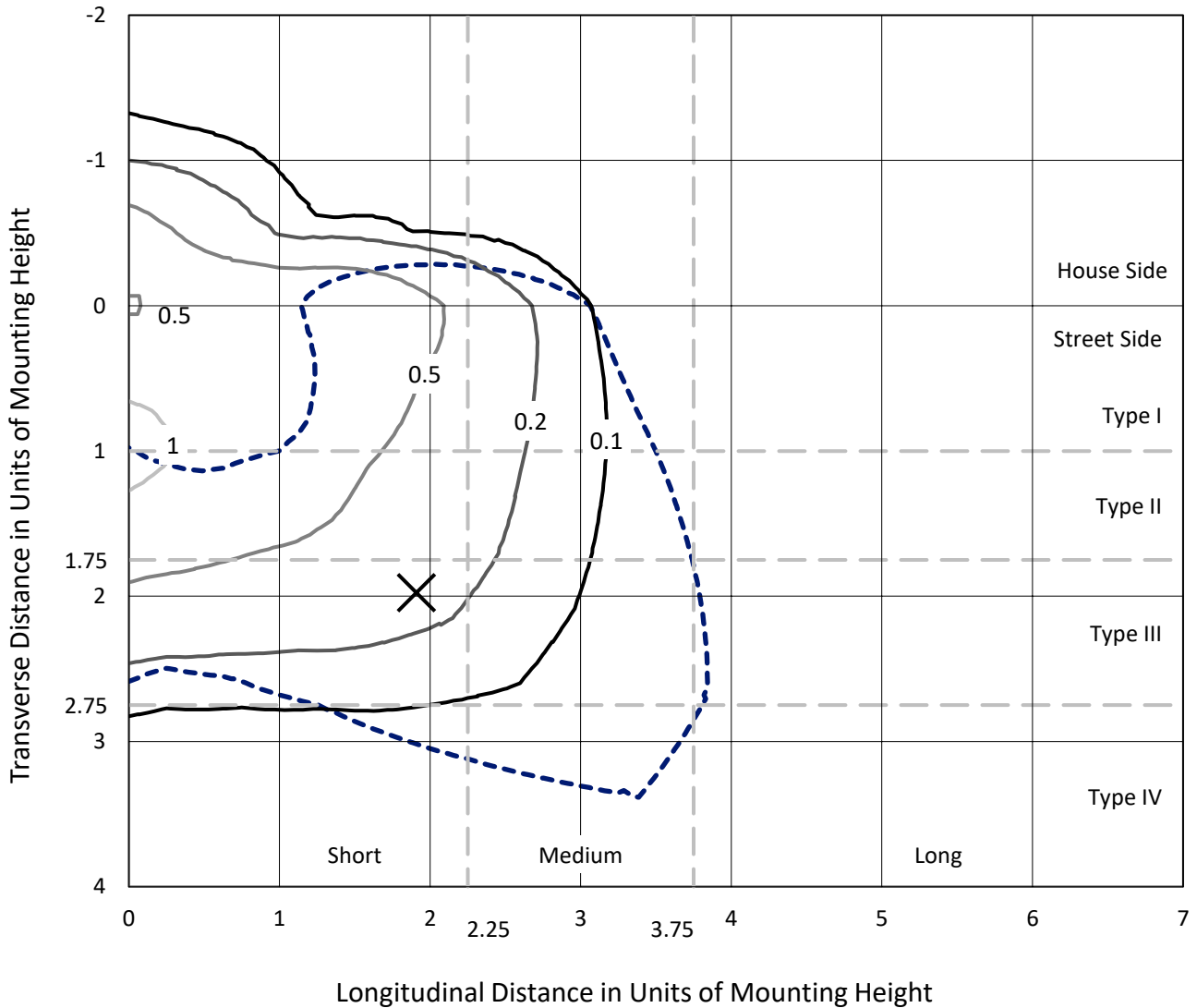
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

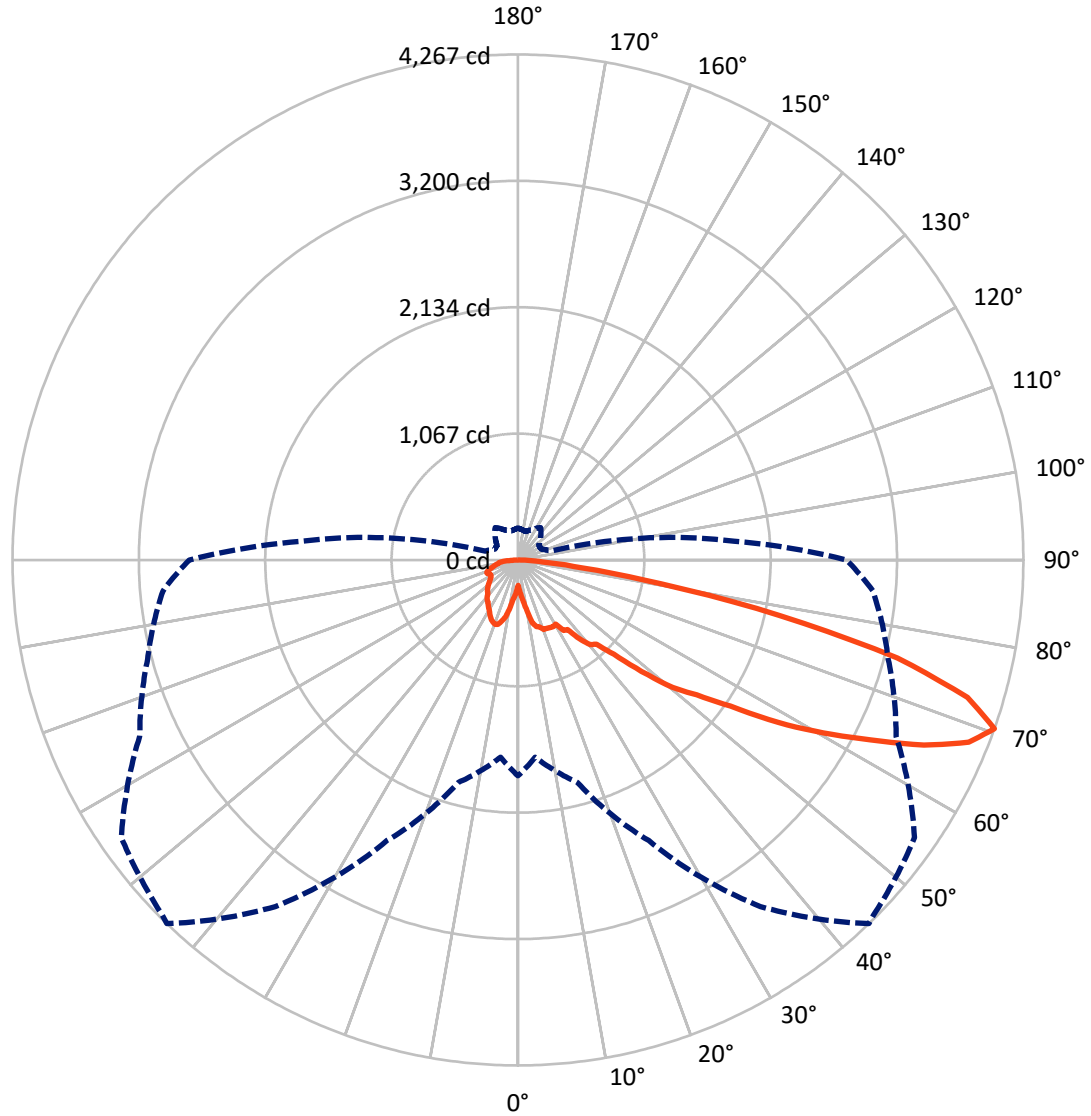
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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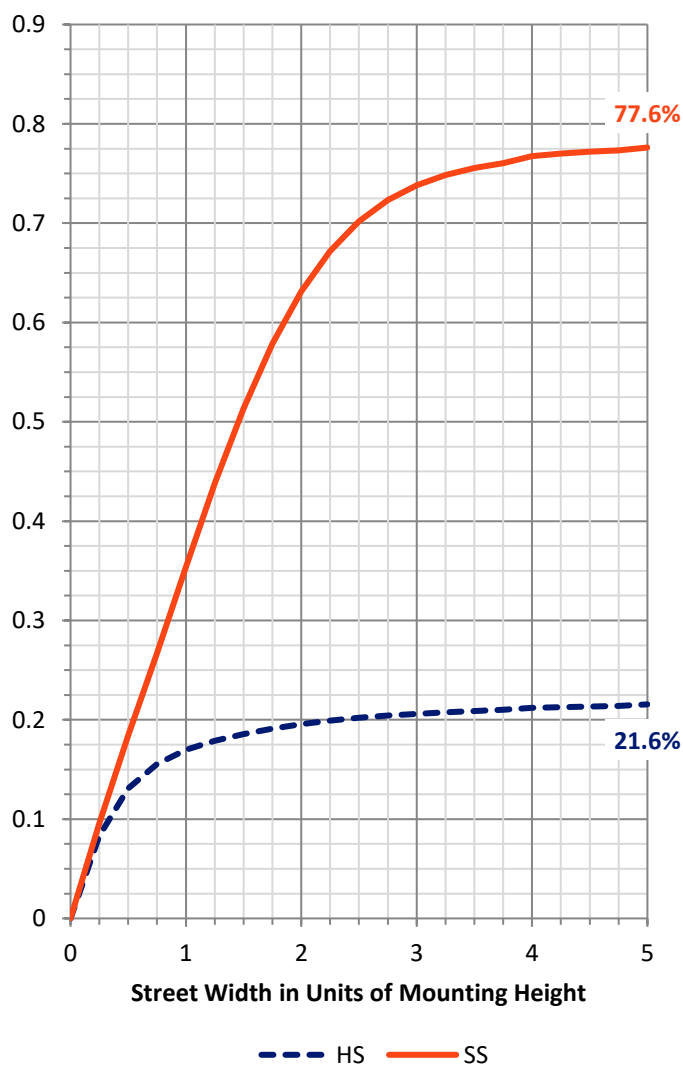
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1397.1	0.0	1397.1
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	4934.9	0.0	4934.9
	% Fixture	77.9	0.0	77.9
Total	Lumens	6332.0	0.0	6332.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.7	0.5
10°-20°	155.4	2.5
20°-30°	290.4	4.6
30°-40°	466.1	7.4
40°-50°	786.8	12.4
50°-60°	1402.1	22.1
60°-70°	1917.8	30.3
70°-80°	1127.8	17.8
80°-90°	151.9	2.4
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°	6332.0	100.0
0°-180°	6332.0	100.0

Coefficient of Utilization



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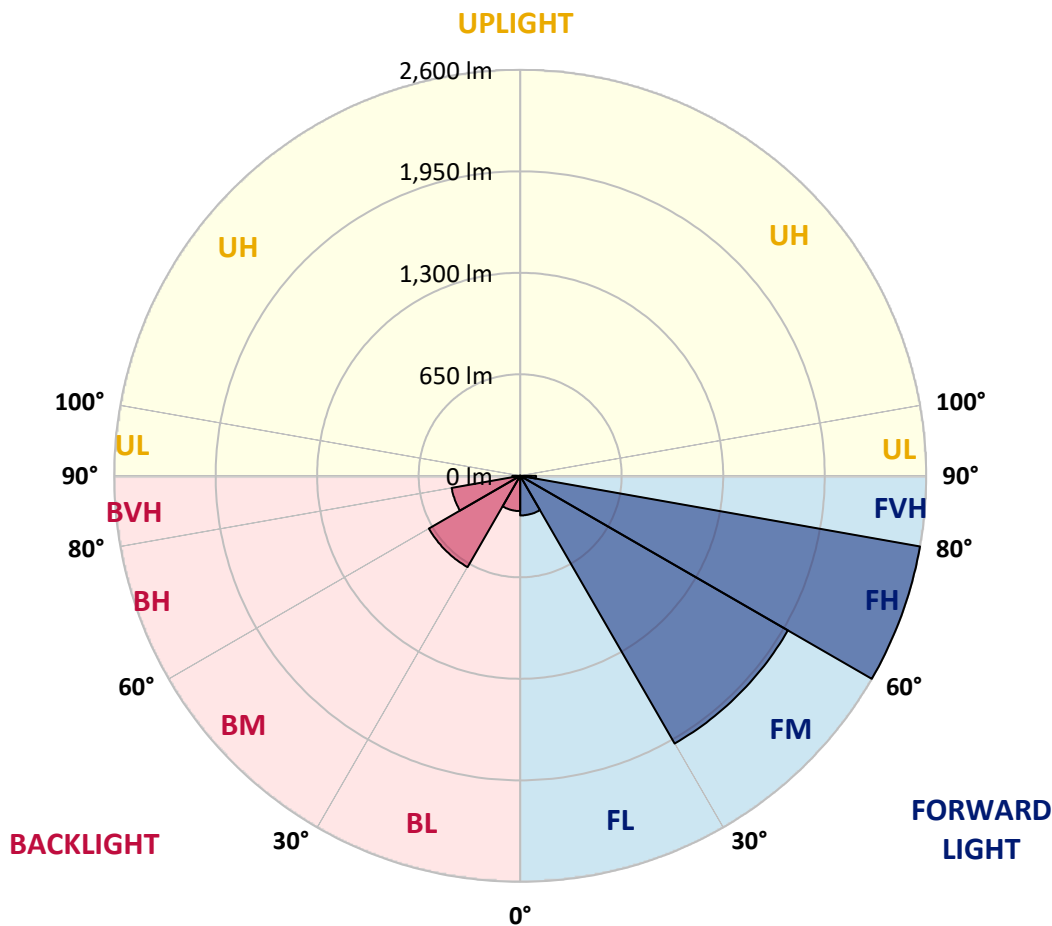
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	253.8	4.0			
FM (30°-60°)	1979.8	31.3			
FH (60°-80°)	2600.1	41.1			G2/5000
FVH (80°-90°)	101.2	1.6			G2/225
BL (0°-30°)	225.8	3.6	B1/500		
BM (30°-60°)	675.1	10.7	B1/1000		
BH (60°-80°)	445.5	7.0	B1/500		G1/500
BVH (80°-90°)	50.6	0.8			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°	35°	44°	45°	55°	65°	75°	85°
0°	215.2	215.2	215.2	215.2	215.2	215.2	215.2	215.2	215.2	215.2	215.2
2.5°	261.2	256.0	243.5	247.7	252.9	255.0	254.4	253.9	245.9	243.0	257.3
5°	354.9	343.5	334.4	330.8	318.8	309.5	303.8	318.8	316.5	320.4	330.2
7.5°	443.2	435.9	415.4	408.1	383.7	367.6	365.8	377.8	380.9	374.6	391.5
10°	500.0	487.6	483.4	466.0	449.2	446.6	445.0	439.6	432.0	431.5	416.4
12.5°	544.2	550.7	554.0	534.1	534.6	543.9	539.0	516.9	504.2	481.9	483.7
15°	623.4	632.7	606.0	593.3	568.8	582.9	581.1	562.6	560.8	546.3	529.4
17.5°	692.4	696.6	651.9	622.9	614.5	594.3	599.7	600.3	576.4	602.3	587.3
20°	698.1	712.9	661.5	603.6	628.6	626.0	626.7	621.6	590.1	633.0	627.3
22.5°	726.2	703.6	657.4	615.1	621.6	625.4	629.1	622.9	621.0	644.9	662.3
25°	721.0	713.7	667.0	631.2	631.9	632.7	634.5	653.2	651.2	683.6	692.7
27.5°	769.5	758.4	669.8	661.0	640.8	636.4	623.9	662.8	693.2	692.4	742.5
30°	862.0	850.5	736.3	710.6	674.0	628.8	652.7	704.6	728.5	736.6	800.2
32.5°	1006.3	1025.0	867.2	763.6	718.1	708.3	705.7	700.5	759.7	799.4	857.3
35°	1213.5	1198.7	1021.4	877.0	764.6	722.3	728.0	759.7	830.0	855.7	909.2
37.5°	1450.8	1420.2	1219.0	1005.5	898.6	845.6	826.7	857.3	872.9	893.1	1002.4
40°	1692.0	1617.2	1412.9	1174.6	979.1	939.1	922.5	884.8	921.4	962.4	1101.3
42.5°	1924.9	1867.0	1624.0	1376.3	1114.6	972.1	963.0	926.1	1039.6	1082.9	1244.1
45°	2168.9	2034.7	1840.3	1604.0	1312.7	1133.8	1120.3	1054.1	1199.5	1289.8	1445.6
47.5°	2333.0	2208.7	2038.4	1788.8	1478.6	1404.3	1378.6	1265.4	1397.3	1514.7	1756.9
50°	2488.3	2360.3	2181.4	1991.1	1779.0	1693.6	1638.8	1450.3	1643.7	1834.8	2156.0
52.5°	2710.5	2596.0	2347.6	2194.9	2101.7	1891.7	1850.9	1747.3	1931.9	2189.7	2592.1
55°	2948.1	2792.1	2567.0	2482.3	2444.7	2175.7	2142.5	2076.5	2315.6	2552.9	3016.1
57.5°	3053.0	2890.2	2766.1	2715.5	2712.4	2588.5	2550.3	2504.4	2707.9	2864.5	3415.2
60°	3136.3	2961.6	2912.0	2940.3	3043.1	2961.6	2912.0	2871.5	3027.3	3172.4	3740.7
62.5°	3121.0	2945.8	2971.2	3057.4	3319.9	3343.8	3305.6	3207.5	3343.8	3424.8	3927.4
65°	2873.8	2711.8	2860.1	3064.7	3577.2	3768.0	3765.9	3509.2	3556.4	3556.4	3907.7
67.5°	2440.8	2273.1	2515.8	3000.5	3755.0	4104.2	4104.7	3829.0	3575.9	3543.2	3602.4
70°	1822.6	1670.7	1943.6	2613.2	3571.5	4267.0	4243.4	4087.1	3522.4	3236.5	3009.1
72.5°	1088.6	990.5	1241.5	1902.3	3046.5	3967.7	4030.5	3789.8	3224.6	2691.6	2151.0
75°	494.3	451.8	583.4	1092.8	2174.9	3309.5	3377.8	3198.4	2561.2	1935.8	1243.1
77.5°	211.6	200.2	254.7	484.7	1199.2	2263.2	2403.1	2285.8	1735.4	1125.0	549.9
80°	136.0	128.8	156.6	233.1	556.9	1222.9	1343.3	1299.4	884.0	437.5	193.7
82.5°	81.3	78.9	104.6	146.4	303.8	538.2	606.5	622.6	367.1	196.3	110.9
85°	44.4	44.9	57.4	88.8	182.3	209.5	224.3	244.1	172.9	113.7	53.7
87.5°	14.8	17.1	23.1	36.1	64.9	59.2	59.5	69.1	73.0	47.3	17.1
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°	215.2	215.2	215.2	215.2	215.2	215.2	215.2	215.2	215.2	215.2	215.2
2.5°	259.6	255.0	243.0	243.8	248.2	249.2	250.5	243.0	241.5	255.7	257.0
5°	331.8	316.5	309.5	307.1	300.4	298.1	310.5	316.2	321.9	333.1	338.6
7.5°	389.7	372.6	359.8	348.2	338.3	332.6	353.6	369.7	379.6	402.4	412.8
10°	416.2	401.4	396.7	387.4	394.9	412.0	415.9	416.4	438.3	437.7	442.1
12.5°	468.9	459.3	444.0	447.3	467.1	484.7	479.8	487.3	495.1	513.8	505.2
15°	516.9	514.3	500.0	502.4	506.3	528.3	531.2	538.7	550.7	565.5	555.3
17.5°	576.1	575.1	540.3	537.2	546.3	567.8	561.1	547.8	587.3	603.1	599.0
20°	616.4	608.6	563.9	550.7	573.8	576.6	568.8	547.8	582.1	616.6	626.0
22.5°	649.9	640.8	594.8	568.8	564.2	565.5	565.5	561.6	578.5	606.8	606.5
25°	676.9	685.4	627.0	602.1	577.2	546.0	542.1	545.5	555.1	609.6	607.8
27.5°	744.6	721.0	637.9	619.2	568.1	519.0	529.6	534.8	538.0	597.7	607.5
30°	788.8	796.0	676.9	629.3	554.8	488.9	492.5	507.6	525.8	596.4	599.2
32.5°	848.2	832.6	737.6	612.5	519.5	470.7	464.0	484.2	511.2	575.3	583.1
35°	903.5	921.9	763.3	609.4	494.9	443.4	450.7	457.7	485.8	552.0	561.1
37.5°	1033.3	991.3	835.5	594.3	474.3	429.7	421.9	432.5	456.4	507.6	528.6
40°	1132.0	1134.6	851.1	575.3	435.1	410.0	393.3	404.0	414.1	454.9	464.0
42.5°	1317.1	1260.5	889.2	533.8	410.5	380.4	371.0	375.7	377.2	394.4	409.4
45°	1552.6	1419.9	904.3	478.0	378.0	368.2	349.2	346.9	338.3	340.6	353.9
47.5°	1878.4	1668.6	893.4	418.5	349.2	352.3	325.1	314.4	302.5	305.3	317.8
50°	2299.8	1986.4	892.6	368.2	329.5	331.5	309.2	290.0	278.1	284.0	294.9
52.5°	2772.6	2305.3	896.2	333.6	307.9	306.9	298.8	275.5	265.9	272.1	284.6
55°	3224.9	2579.4	923.2	311.8	285.6	287.4	290.5	270.8	260.1	265.9	278.8
57.5°	3618.5	2796.0	913.1	288.7	264.8	273.1	281.4	264.3	256.3	264.6	277.5
60°	3893.7	2896.4	833.2	266.6	249.5	260.9	277.0	263.5	262.5	280.4	296.0
62.5°	3994.1	2859.3	677.4	249.2	240.4	259.4	287.2	280.7	281.7	303.8	325.3
65°	3847.5	2664.1	505.2	238.1	233.4	266.9	310.5	290.8	276.5	294.7	314.4
67.5°	3430.2	2316.9	369.2	228.5	225.4	278.8	332.1	289.7	263.3	281.7	297.8
70°	2775.2	1828.8	285.9	216.3	214.7	270.8	334.1	282.0	249.0	260.9	270.0
72.5°	1901.5	1252.2	236.8	204.6	196.3	239.9	317.3	264.6	231.8	238.9	246.4
75°	1062.7	702.8	199.1	190.0	171.9	213.7	297.5	254.2	219.1	221.2	231.6
77.5°	476.9	304.0	169.0	170.8	149.8	189.0	271.8	237.6	199.7	195.0	205.4
80°	180.4	148.2	137.1	144.4	125.9	163.8	245.1	222.5	179.1	173.2	179.1
82.5°	104.6	89.8	101.8	111.1	100.0	150.6	233.9	208.7	157.9	142.8	148.0
85°	48.6	46.5	61.0	72.2	69.8	117.4	200.2	157.1	112.4	95.0	105.2
87.5°	12.7	14.3	21.5	25.4	26.0	40.2	77.1	58.4	43.9	33.2	31.9
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)