

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: P367102

Luminaire Tested: **MSA-SA1D-760-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367102
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-SA1D-760-U-T4FT
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) 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: 6873 lumens
Efficiency: N/A
Efficacy: 102.6 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

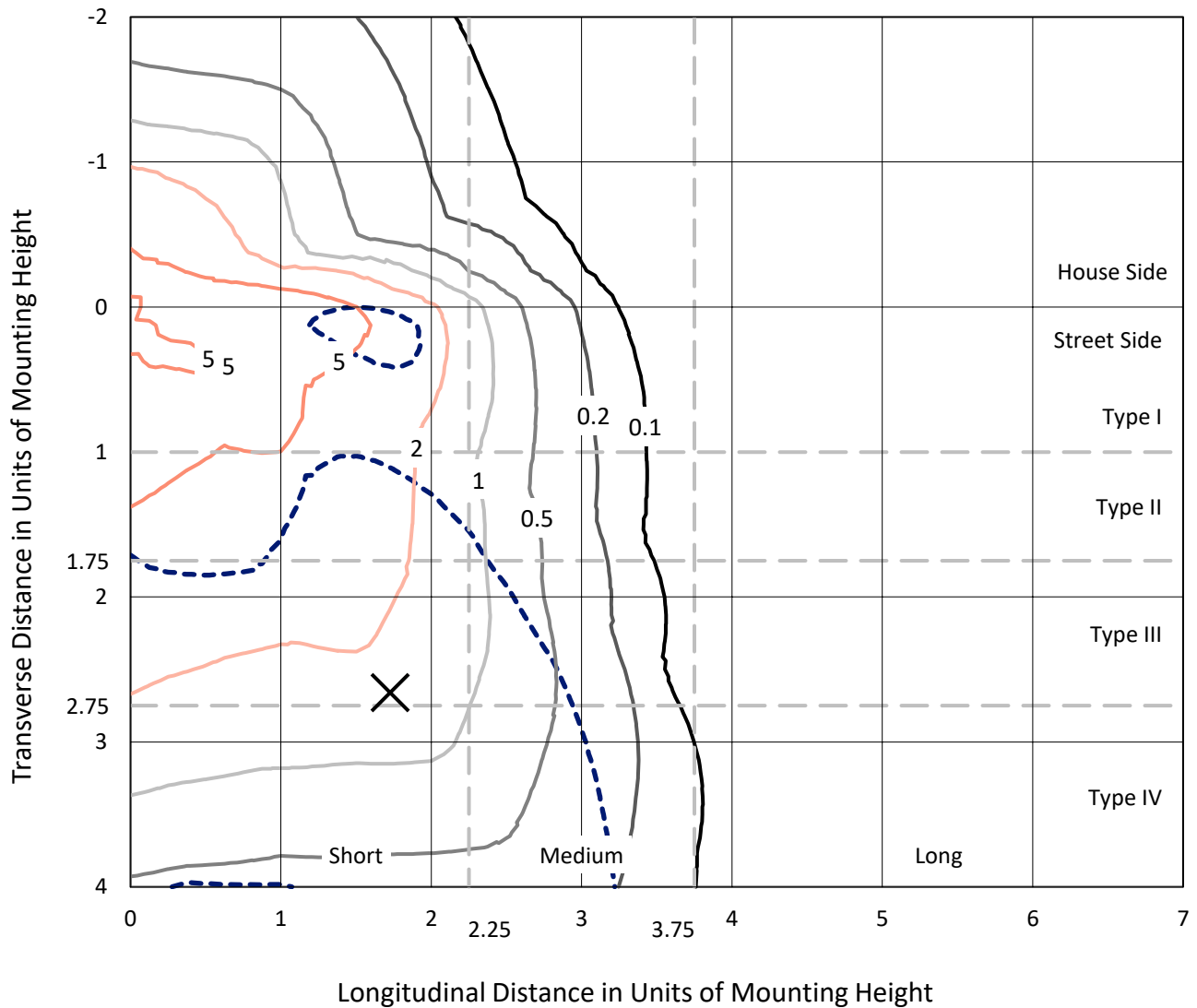
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

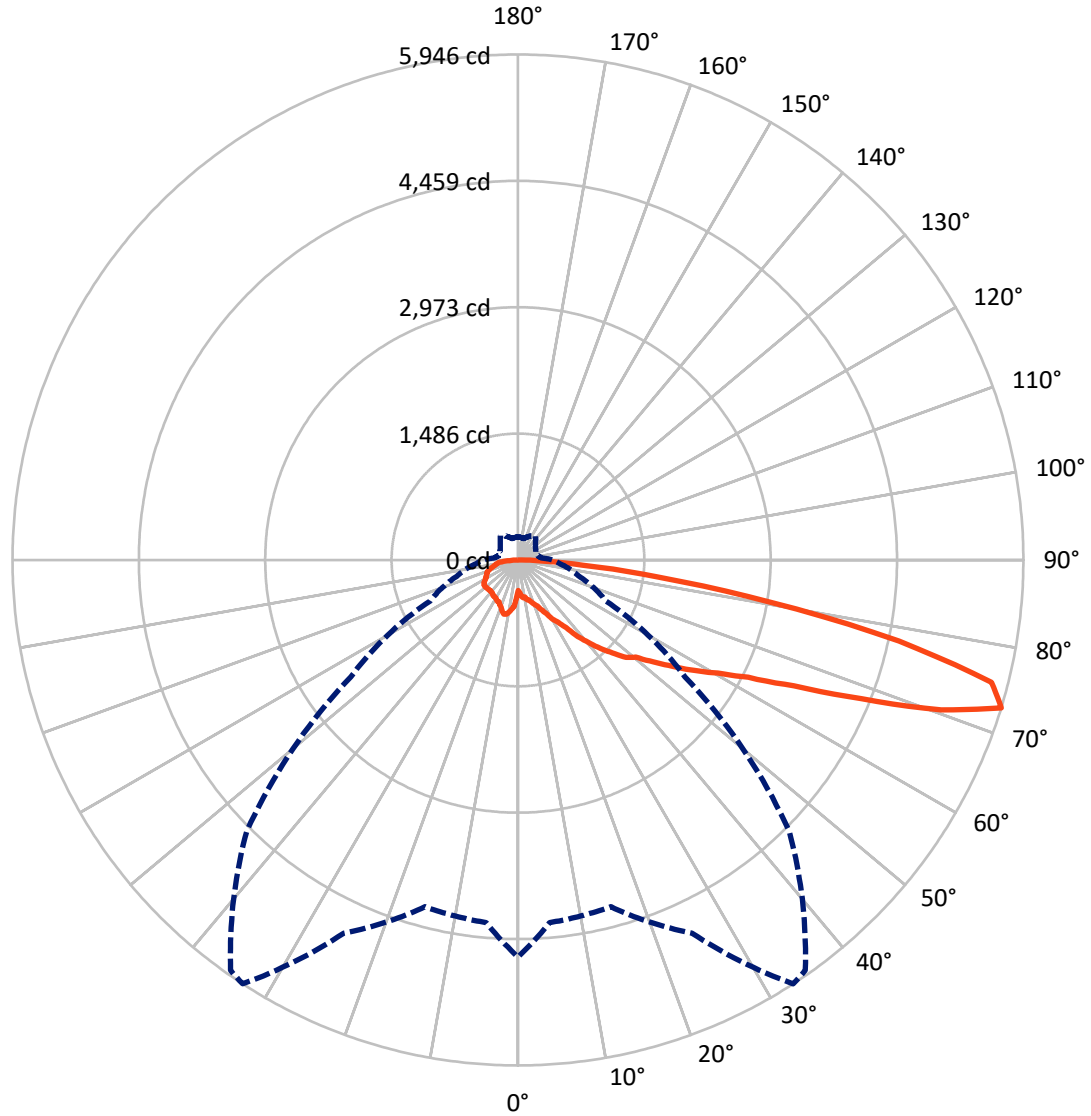
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.8 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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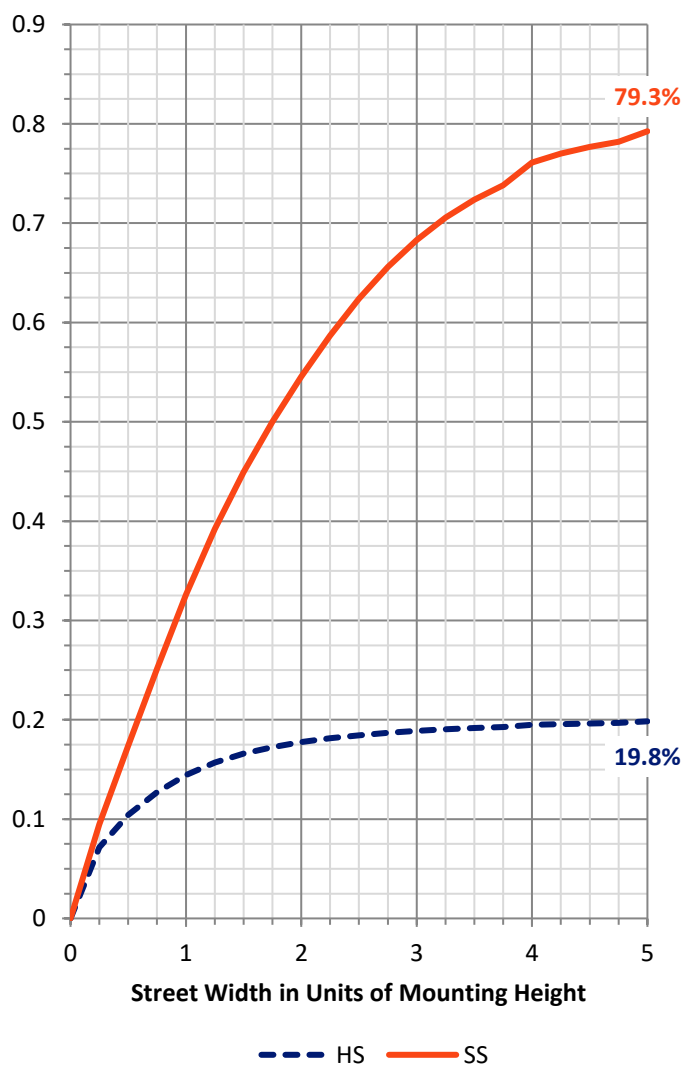
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1390.4	0.0	1390.4
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	5482.6	0.0	5482.6
	% Fixture	79.8	0.0	79.8
Total	Lumens	6873.0	0.0	6873.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.6	0.7
10°-20°	183.1	2.7
20°-30°	333.9	4.9
30°-40°	564.9	8.2
40°-50°	939.8	13.7
50°-60°	1379.3	20.1
60°-70°	1764.4	25.7
70°-80°	1435.5	20.9
80°-90°	222.3	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°	6873.0	100.0
0°-180°	6873.0	100.0

Coefficient of Utilization



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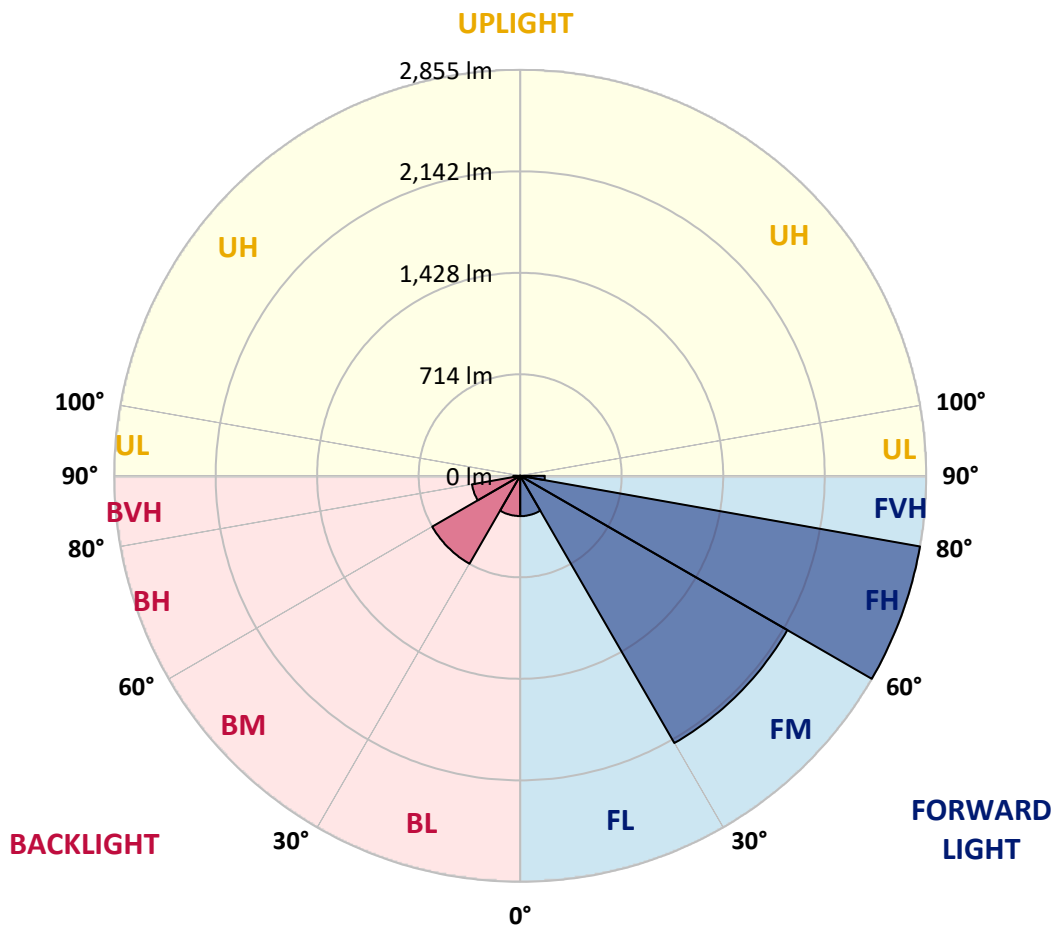
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	283.6	4.1			
FM (30°-60°)	2170.0	31.6			
FH (60°-80°)	2855.5	41.5			G2/5000
FVH (80°-90°)	173.5	2.5			G2/225
BL (0°-30°)	283.0	4.1	B1/500		
BM (30°-60°)	714.1	10.4	B1/1000		
BH (60°-80°)	344.5	5.0	B1/500		G1/500
BVH (80°-90°)	48.8	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°	360.4	360.4	360.4	360.4	360.4	360.4	360.4	360.4	360.4	360.4	360.4
2.5°	408.6	395.7	374.6	374.1	385.8	388.3	396.0	396.6	399.5	394.9	427.4
5°	450.8	437.1	428.8	431.7	426.3	432.8	432.8	451.6	476.7	505.8	547.1
7.5°	460.8	450.8	441.4	448.5	449.6	443.4	449.4	493.5	538.9	568.0	634.1
10°	440.8	430.8	437.9	440.2	439.9	454.2	485.3	520.6	571.1	624.7	660.3
12.5°	437.1	444.2	447.6	451.6	478.7	483.0	530.0	566.5	617.3	664.3	757.0
15°	492.1	501.5	480.4	479.0	487.8	491.8	540.6	577.4	651.5	730.5	813.7
17.5°	570.5	573.9	536.0	516.6	523.2	526.3	547.7	593.9	639.5	785.5	889.3
20°	646.4	648.7	577.4	534.0	557.1	560.5	580.5	607.0	642.9	816.3	940.3
22.5°	725.9	711.4	633.3	578.5	591.9	592.8	604.5	619.0	670.0	811.5	1002.5
25°	812.9	803.8	705.4	652.9	652.4	640.7	641.2	662.1	698.8	863.3	1043.3
27.5°	928.4	929.5	786.6	758.4	714.2	706.5	668.0	706.8	748.7	863.9	1131.4
30°	1078.0	1050.4	899.8	854.2	810.6	794.3	742.2	775.2	793.5	913.2	1227.2
32.5°	1199.8	1191.8	1017.9	948.9	877.6	896.4	838.8	809.7	842.5	998.2	1372.3
35°	1316.4	1290.2	1142.8	1053.0	978.0	966.6	929.2	934.1	954.0	1105.7	1561.9
37.5°	1490.3	1476.1	1319.5	1175.8	1140.8	1094.3	1070.6	1085.7	1070.1	1243.4	1846.2
40°	1684.8	1602.1	1467.2	1339.2	1273.6	1240.8	1249.1	1234.9	1222.9	1397.9	2101.1
42.5°	1871.0	1795.7	1565.3	1507.7	1422.2	1435.9	1390.5	1400.5	1434.4	1617.2	2336.9
45°	2073.7	1910.9	1669.4	1618.6	1557.3	1574.7	1610.9	1600.1	1655.7	1875.8	2559.0
47.5°	2174.9	2020.1	1797.1	1714.4	1713.6	1677.4	1897.8	1921.7	1834.8	2067.4	2784.5
50°	2272.4	2120.2	1892.1	1836.2	1795.7	1873.2	2172.9	2117.9	1996.7	2287.2	3032.6
52.5°	2408.1	2234.5	2001.0	1941.4	1991.6	2063.4	2392.5	2381.6	2155.5	2513.3	3248.1
55°	2511.6	2336.3	2164.9	2109.6	2205.4	2275.8	2616.0	2550.7	2291.5	2679.3	3384.7
57.5°	2693.0	2513.1	2407.0	2284.1	2456.3	2455.2	2831.5	2781.1	2436.9	2815.6	3439.7
60°	2981.2	2770.0	2659.0	2517.3	2701.8	2767.7	3077.9	2932.5	2539.9	2901.7	3340.5
62.5°	3385.8	3134.9	2955.0	2814.7	3039.7	3158.9	3382.1	3042.8	2546.4	2877.2	3079.6
65°	3886.2	3581.1	3345.3	3197.1	3568.3	3738.5	3749.9	3111.0	2486.0	2623.7	2531.0
67.5°	4374.3	4031.3	3785.3	3813.5	4355.5	4436.2	4148.5	3168.0	2161.2	2106.8	1757.5
70°	4695.7	4323.9	4159.9	4459.3	5282.7	5200.0	4471.6	3017.7	1701.9	1365.7	989.7
72.5°	4671.4	4282.2	4223.2	4843.1	5945.9	5894.3	4510.9	2399.9	1139.9	746.7	493.5
75°	3805.8	3503.3	3637.3	4584.8	5754.9	5752.3	3916.4	1485.5	584.8	383.5	311.9
77.5°	2104.2	1986.7	2380.5	3471.4	4582.2	4605.6	2646.2	673.7	315.3	271.7	234.9
80°	737.0	726.2	1031.6	1873.2	3014.3	3020.0	1230.6	308.2	229.2	205.6	172.5
82.5°	269.4	267.2	427.7	870.2	1659.7	1656.0	466.7	191.9	169.9	145.4	113.8
85°	107.5	105.2	195.6	386.3	762.4	750.2	181.3	108.9	111.2	86.7	55.9
87.5°	29.7	30.8	66.4	120.9	233.5	216.4	45.6	36.8	45.0	35.4	17.7
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°	360.4	360.4	360.4	360.4	360.4	360.4	360.4	360.4	360.4	360.4	360.4
2.5°	433.1	436.0	407.7	417.7	430.5	437.4	440.8	426.3	431.1	451.6	450.8
5°	555.7	544.3	533.5	544.6	537.2	526.6	543.7	542.9	554.0	565.1	567.7
7.5°	647.2	632.4	627.3	602.2	577.1	551.7	573.7	587.3	590.2	617.9	629.5
10°	680.3	674.6	676.6	643.5	640.4	642.9	622.7	600.8	614.2	602.7	611.3
12.5°	756.7	771.0	735.6	713.1	711.1	695.4	654.9	640.7	625.6	641.2	633.3
15°	818.0	844.5	806.6	767.0	722.2	698.0	663.5	641.8	631.8	635.3	625.6
17.5°	907.8	932.6	836.3	775.5	729.3	693.7	641.0	594.8	619.3	621.3	610.2
20°	967.4	969.1	846.2	754.4	712.8	650.9	599.6	559.1	587.3	616.1	628.7
22.5°	1025.6	1012.8	858.5	737.6	652.6	592.8	567.7	565.1	586.2	610.4	613.3
25°	1069.2	1071.2	865.6	731.3	617.3	535.7	535.7	554.3	572.8	630.4	627.6
27.5°	1175.0	1097.1	838.0	702.5	568.2	502.4	536.0	560.8	569.7	632.1	638.4
30°	1252.0	1201.2	843.7	653.2	518.6	486.7	514.4	545.4	570.0	642.1	639.8
32.5°	1381.1	1244.6	857.1	583.9	481.6	480.7	505.2	538.0	567.4	631.3	634.7
35°	1524.0	1372.3	819.7	531.2	472.7	477.3	508.9	522.1	556.6	627.0	630.1
37.5°	1788.3	1439.0	796.1	490.4	467.0	480.1	492.1	512.4	547.1	605.6	626.1
40°	1943.4	1576.4	708.2	466.7	455.1	477.9	483.9	501.0	519.8	579.9	593.1
42.5°	2147.5	1619.8	633.3	440.5	449.1	468.5	486.4	490.7	503.2	539.4	563.4
45°	2317.8	1652.3	553.7	419.4	428.8	489.3	490.4	488.4	486.1	499.5	519.2
47.5°	2494.0	1739.5	480.4	396.0	421.1	506.4	492.4	474.2	464.7	466.5	484.7
50°	2688.4	1802.8	428.5	376.9	422.8	506.4	502.1	459.6	440.8	436.0	455.1
52.5°	2859.5	1810.2	389.2	361.5	415.7	489.0	508.7	450.5	418.8	407.2	425.1
55°	2952.7	1716.4	360.7	347.6	397.5	473.3	505.2	445.4	392.3	383.5	399.5
57.5°	2950.7	1560.8	336.4	328.2	376.6	451.3	486.1	417.4	376.1	370.9	386.6
60°	2844.4	1378.3	317.9	312.2	355.3	419.4	451.9	399.2	360.4	357.8	374.9
62.5°	2603.2	1189.8	299.9	295.4	335.3	396.9	435.7	378.9	344.1	343.9	360.1
65°	2131.9	955.2	283.1	282.0	316.8	374.6	420.3	361.8	327.3	333.0	349.6
67.5°	1468.9	671.2	265.2	268.6	299.7	353.3	408.6	350.4	309.6	321.3	336.2
70°	806.0	415.1	245.2	252.0	278.0	328.5	390.3	331.9	286.5	304.5	314.8
72.5°	410.0	276.9	220.4	231.2	251.5	292.0	356.1	305.1	261.7	268.6	274.0
75°	275.4	208.4	192.7	204.7	219.3	257.2	315.9	280.0	238.1	237.2	243.2
77.5°	208.1	162.8	163.7	177.3	186.8	226.1	284.0	258.9	218.1	216.1	225.0
80°	152.3	123.5	131.7	146.0	154.5	203.0	263.2	235.5	191.0	183.0	190.5
82.5°	100.9	87.5	97.5	111.8	118.6	169.6	238.9	199.9	155.7	135.4	136.6
85°	47.6	45.9	58.2	65.0	73.8	105.2	178.8	138.3	99.2	82.1	85.8
87.5°	10.8	14.5	19.1	18.8	22.0	28.2	55.6	38.8	28.8	19.7	13.1
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)