

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: P367014

Luminaire Tested: **MSA-SA1D-727-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367014
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-727-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: 5748 lumens
Efficiency: N/A
Efficacy: 85.8 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

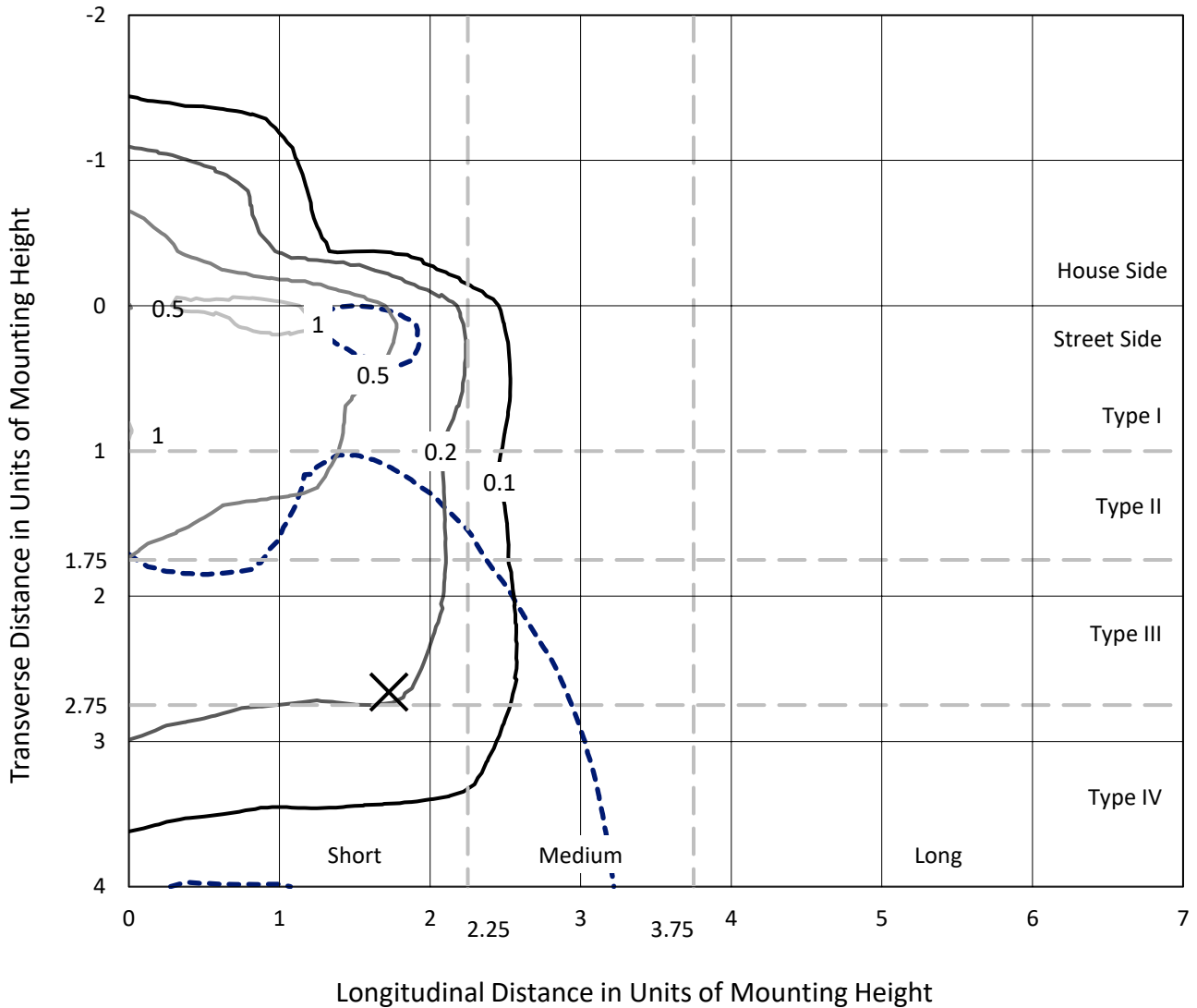
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

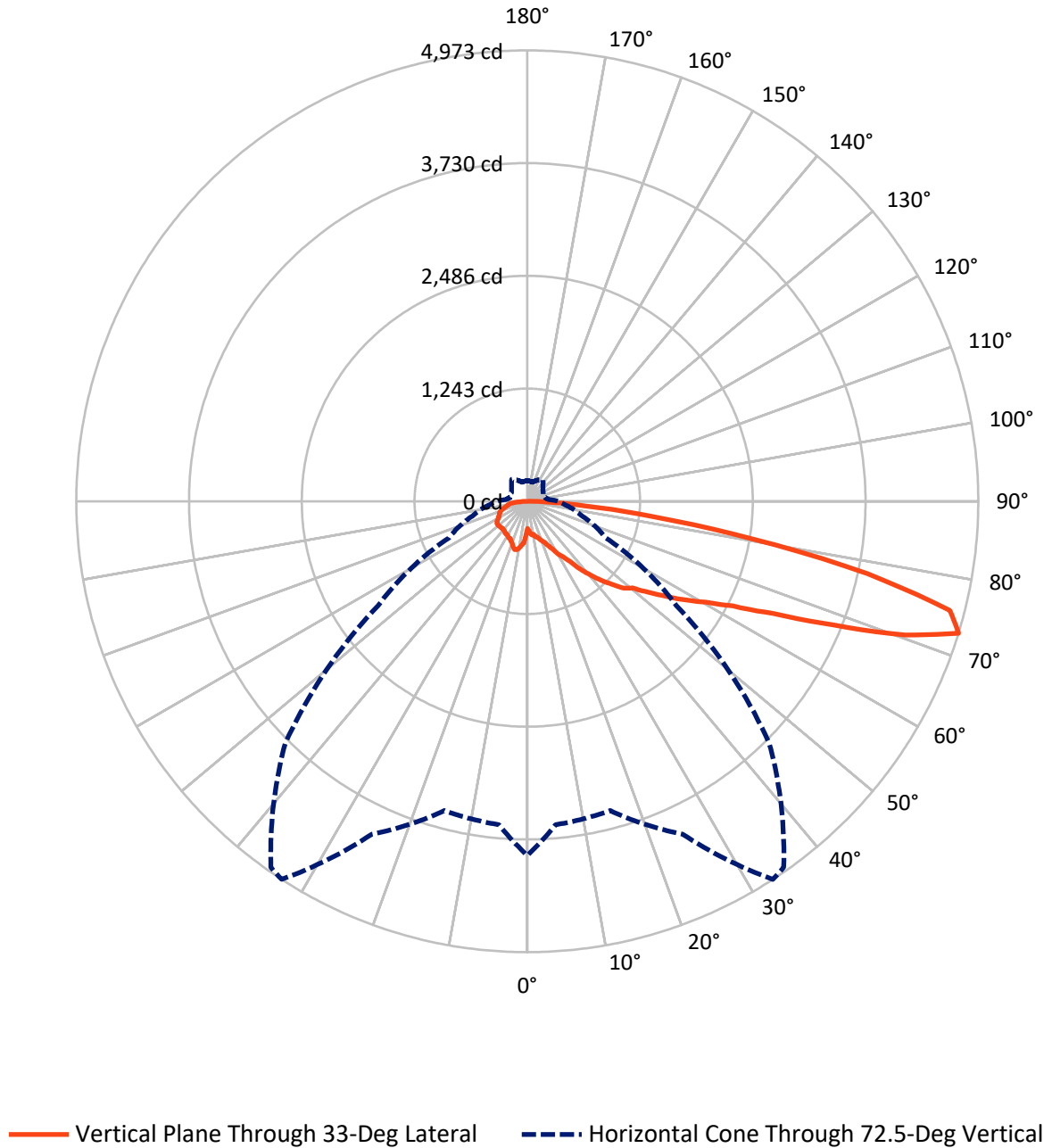
✕ Max cd
 - - - 1/2 Max cd



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



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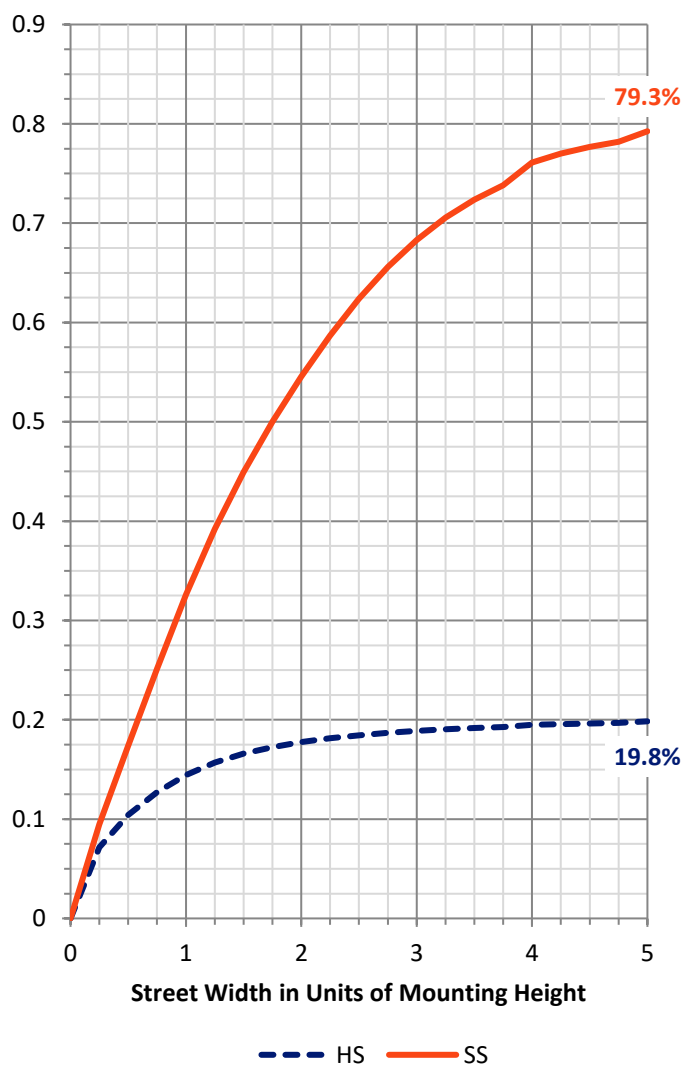
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1162.8	0.0	1162.8
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	4585.2	0.0	4585.2
	% Fixture	79.8	0.0	79.8
Total	Lumens	5748.0	0.0	5748.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.4	0.7
10°-20°	153.2	2.7
20°-30°	279.3	4.9
30°-40°	472.5	8.2
40°-50°	786.0	13.7
50°-60°	1153.5	20.1
60°-70°	1475.6	25.7
70°-80°	1200.6	20.9
80°-90°	186.0	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°	5748.0	100.0
0°-180°	5748.0	100.0

Coefficient of Utilization



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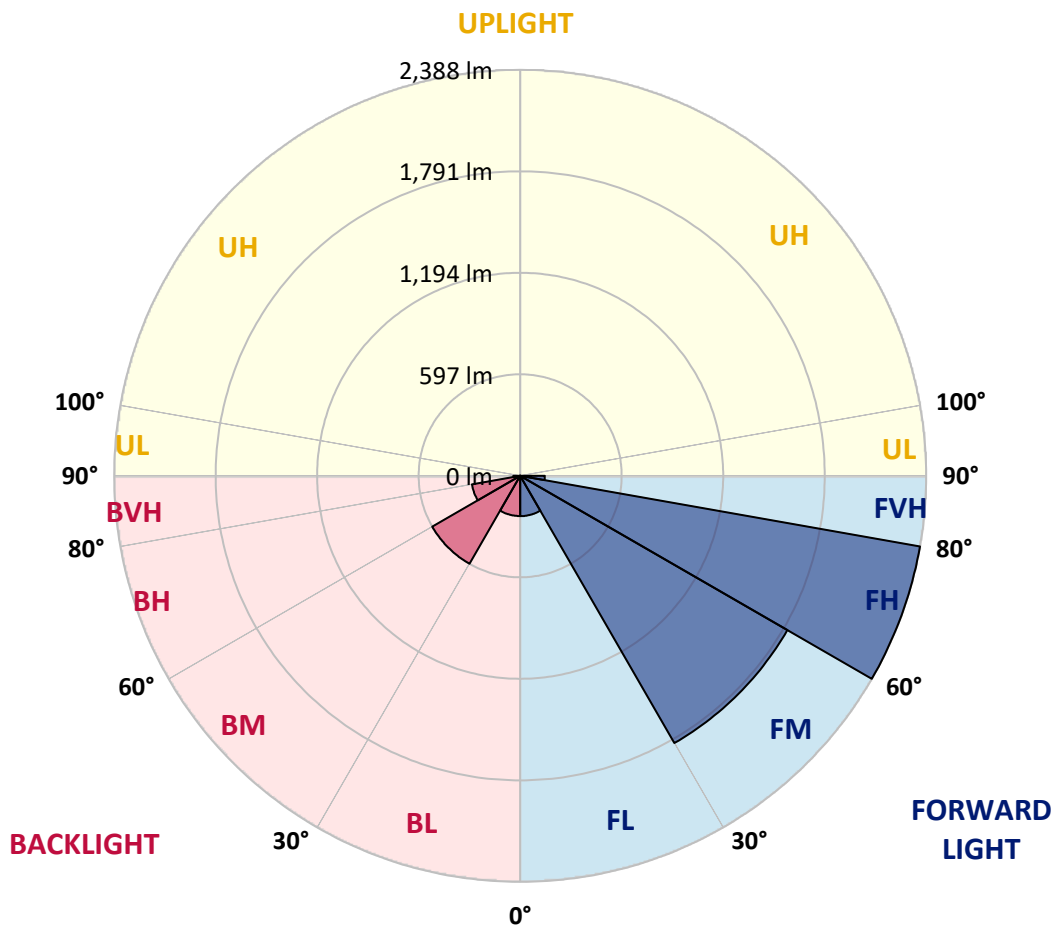
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	237.2	4.1			
FM (30°-60°)	1814.8	31.6			
FH (60°-80°)	2388.1	41.5			G2/5000
FVH (80°-90°)	145.1	2.5			G2/225
BL (0°-30°)	236.7	4.1	B1/500		
BM (30°-60°)	597.2	10.4	B1/1000		
BH (60°-80°)	288.1	5.0	B1/500		G1/500
BVH (80°-90°)	40.8	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°	301.4	301.4	301.4	301.4	301.4	301.4	301.4	301.4	301.4	301.4	301.4
2.5°	341.7	331.0	313.3	312.8	322.6	324.8	331.2	331.7	334.1	330.3	357.4
5°	377.0	365.5	358.6	361.0	356.5	362.0	362.0	377.7	398.7	423.0	457.6
7.5°	385.3	377.0	369.1	375.1	376.0	370.8	375.8	412.8	450.7	475.0	530.3
10°	368.6	360.3	366.3	368.2	367.9	379.9	405.8	435.4	477.6	522.4	552.3
12.5°	365.5	371.5	374.4	377.7	400.4	403.9	443.3	473.8	516.2	555.6	633.1
15°	411.6	419.4	401.8	400.6	408.0	411.3	452.1	482.9	544.9	610.9	680.5
17.5°	477.1	480.0	448.3	432.1	437.6	440.2	458.1	496.7	534.8	656.9	743.7
20°	540.6	542.5	482.9	446.6	465.9	468.8	485.5	507.7	537.7	682.7	786.4
22.5°	607.1	594.9	529.6	483.8	495.0	495.7	505.5	517.7	560.4	678.6	838.4
25°	679.8	672.2	589.9	546.1	545.6	535.8	536.3	553.7	584.4	722.0	872.5
27.5°	776.4	777.4	657.9	634.3	597.3	590.9	558.7	591.1	626.2	722.5	946.2
30°	901.6	878.5	752.6	714.4	677.9	664.3	620.7	648.3	663.6	763.8	1026.3
32.5°	1003.4	996.7	851.3	793.6	734.0	749.7	701.5	677.2	704.6	834.8	1147.7
35°	1100.9	1079.0	955.7	880.6	817.9	808.4	777.1	781.2	797.9	924.7	1306.2
37.5°	1246.4	1234.5	1103.6	983.4	954.0	915.2	895.4	908.0	894.9	1039.9	1544.0
40°	1409.0	1339.9	1227.1	1120.0	1065.2	1037.7	1044.7	1032.7	1022.7	1169.1	1757.1
42.5°	1564.7	1501.8	1309.1	1260.9	1189.4	1200.8	1162.9	1171.3	1199.6	1352.5	1954.3
45°	1734.3	1598.1	1396.1	1353.7	1302.4	1317.0	1347.3	1338.2	1384.7	1568.8	2140.1
47.5°	1818.9	1689.4	1503.0	1433.8	1433.1	1402.8	1587.1	1607.2	1534.4	1729.0	2328.7
50°	1900.5	1773.1	1582.4	1535.6	1501.8	1566.6	1817.2	1771.2	1669.9	1912.9	2536.2
52.5°	2014.0	1868.7	1673.5	1623.6	1665.6	1725.7	2000.8	1991.8	1802.7	2102.0	2716.4
55°	2100.5	1953.9	1810.6	1764.3	1844.4	1903.3	2187.8	2133.2	1916.4	2240.7	2830.7
57.5°	2252.2	2101.7	2013.0	1910.2	2054.3	2053.3	2368.1	2325.9	2038.0	2354.7	2876.7
60°	2493.2	2316.6	2223.8	2105.3	2259.6	2314.6	2574.1	2452.5	2124.1	2426.7	2793.7
62.5°	2831.6	2621.8	2471.3	2354.0	2542.1	2641.8	2828.5	2544.8	2129.6	2406.2	2575.5
65°	3250.1	2995.0	2797.8	2673.8	2984.2	3126.6	3136.1	2601.7	2079.1	2194.2	2116.7
67.5°	3658.3	3371.5	3165.7	3189.3	3642.6	3710.1	3469.5	2649.4	1807.5	1761.9	1469.8
70°	3927.1	3616.1	3479.0	3729.4	4418.0	4348.9	3739.6	2523.8	1423.3	1142.2	827.7
72.5°	3906.8	3581.3	3531.9	4050.3	4972.7	4929.5	3772.5	2007.0	953.3	624.5	412.8
75°	3182.9	2929.9	3041.9	3834.3	4812.9	4810.8	3275.4	1242.3	489.1	320.7	260.9
77.5°	1759.8	1661.5	1990.8	2903.1	3832.2	3851.7	2213.1	563.5	263.7	227.2	196.5
80°	616.4	607.3	862.7	1566.6	2520.9	2525.7	1029.2	257.8	191.7	171.9	144.3
82.5°	225.3	223.4	357.7	727.8	1388.0	1384.9	390.3	160.5	142.1	121.6	95.1
85°	89.9	88.0	163.6	323.1	637.6	627.4	151.7	91.1	93.0	72.5	46.7
87.5°	24.8	25.8	55.6	101.1	195.3	181.0	38.2	30.8	37.7	29.6	14.8
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°	301.4	301.4	301.4	301.4	301.4	301.4	301.4	301.4	301.4	301.4	301.4
2.5°	362.2	364.6	341.0	349.3	360.1	365.8	368.6	356.5	360.5	377.7	377.0
5°	464.7	455.2	446.1	455.4	449.2	440.4	454.7	454.0	463.3	472.6	474.8
7.5°	541.3	528.9	524.6	503.6	482.6	461.4	479.8	491.2	493.6	516.7	526.5
10°	568.9	564.2	565.8	538.2	535.6	537.7	520.8	502.4	513.6	504.1	511.2
12.5°	632.9	644.8	615.2	596.4	594.7	581.6	547.7	535.8	523.2	536.3	529.6
15°	684.1	706.3	674.6	641.4	604.0	583.7	554.9	536.8	528.4	531.3	523.2
17.5°	759.2	780.0	699.4	648.6	610.0	580.2	536.0	497.4	517.9	519.6	510.3
20°	809.1	810.5	707.7	630.9	596.1	544.4	501.5	467.6	491.2	515.3	525.8
22.5°	857.7	847.0	718.0	616.9	545.8	495.7	474.8	472.6	490.3	510.5	512.9
25°	894.2	895.9	723.9	611.6	516.2	448.1	448.1	463.5	479.0	527.2	524.8
27.5°	982.7	917.6	700.8	587.5	475.2	420.2	448.3	469.0	476.4	528.6	533.9
30°	1047.0	1004.6	705.6	546.3	433.7	407.0	430.2	456.2	476.7	537.0	535.1
32.5°	1155.1	1040.8	716.8	488.3	402.7	402.0	422.5	450.0	474.5	527.9	530.8
35°	1274.5	1147.7	685.5	444.2	395.4	399.2	425.6	436.6	465.5	524.4	527.0
37.5°	1495.6	1203.5	665.8	410.1	390.6	401.6	411.6	428.5	457.6	506.5	523.6
40°	1625.3	1318.4	592.3	390.3	380.6	399.6	404.7	419.0	434.7	485.0	496.0
42.5°	1796.0	1354.6	529.6	368.4	375.6	391.8	406.8	410.4	420.9	451.2	471.2
45°	1938.4	1381.8	463.1	350.8	358.6	409.2	410.1	408.5	406.6	417.8	434.2
47.5°	2085.7	1454.8	401.8	331.2	352.2	423.5	411.8	396.5	388.7	390.1	405.4
50°	2248.4	1507.7	358.4	315.2	353.6	423.5	419.9	384.4	368.6	364.6	380.6
52.5°	2391.4	1513.9	325.5	302.4	347.7	408.9	425.4	376.8	350.3	340.5	355.5
55°	2469.4	1435.5	301.6	290.7	332.4	395.8	422.5	372.5	328.1	320.7	334.1
57.5°	2467.7	1305.3	281.4	274.5	315.0	377.5	406.6	349.1	314.5	310.2	323.3
60°	2378.8	1152.7	265.9	261.1	297.1	350.8	377.9	333.8	301.4	299.3	313.6
62.5°	2177.1	995.1	250.9	247.0	280.4	331.9	364.4	316.9	287.8	287.6	301.2
65°	1782.9	798.8	236.8	235.8	264.9	313.3	351.5	302.6	273.7	278.5	292.3
67.5°	1228.5	561.3	221.8	224.6	250.6	295.4	341.7	293.1	259.0	268.7	281.1
70°	674.1	347.2	205.1	210.8	232.5	274.7	326.4	277.6	239.6	254.7	263.3
72.5°	342.9	231.5	184.3	193.4	210.3	244.2	297.8	255.1	218.9	224.6	229.2
75°	230.3	174.3	161.2	171.2	183.4	215.1	264.2	234.2	199.1	198.4	203.4
77.5°	174.1	136.2	136.9	148.3	156.2	189.1	237.5	216.5	182.4	180.7	188.1
80°	127.3	103.2	110.2	122.1	129.2	169.8	220.1	197.0	159.8	153.1	159.3
82.5°	84.4	73.2	81.6	93.5	99.2	141.9	199.8	167.2	130.2	113.3	114.2
85°	39.8	38.4	48.6	54.4	61.8	88.0	149.5	115.6	83.0	68.7	71.8
87.5°	9.1	12.2	16.0	15.7	18.4	23.6	46.5	32.4	24.1	16.5	11.0
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)