

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: P596558

Luminaire Tested: **MSA-SA1D-827-U-T3**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596558
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1D-827-U-T3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5034 lumens
Efficiency: N/A
Efficacy: 75.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G1

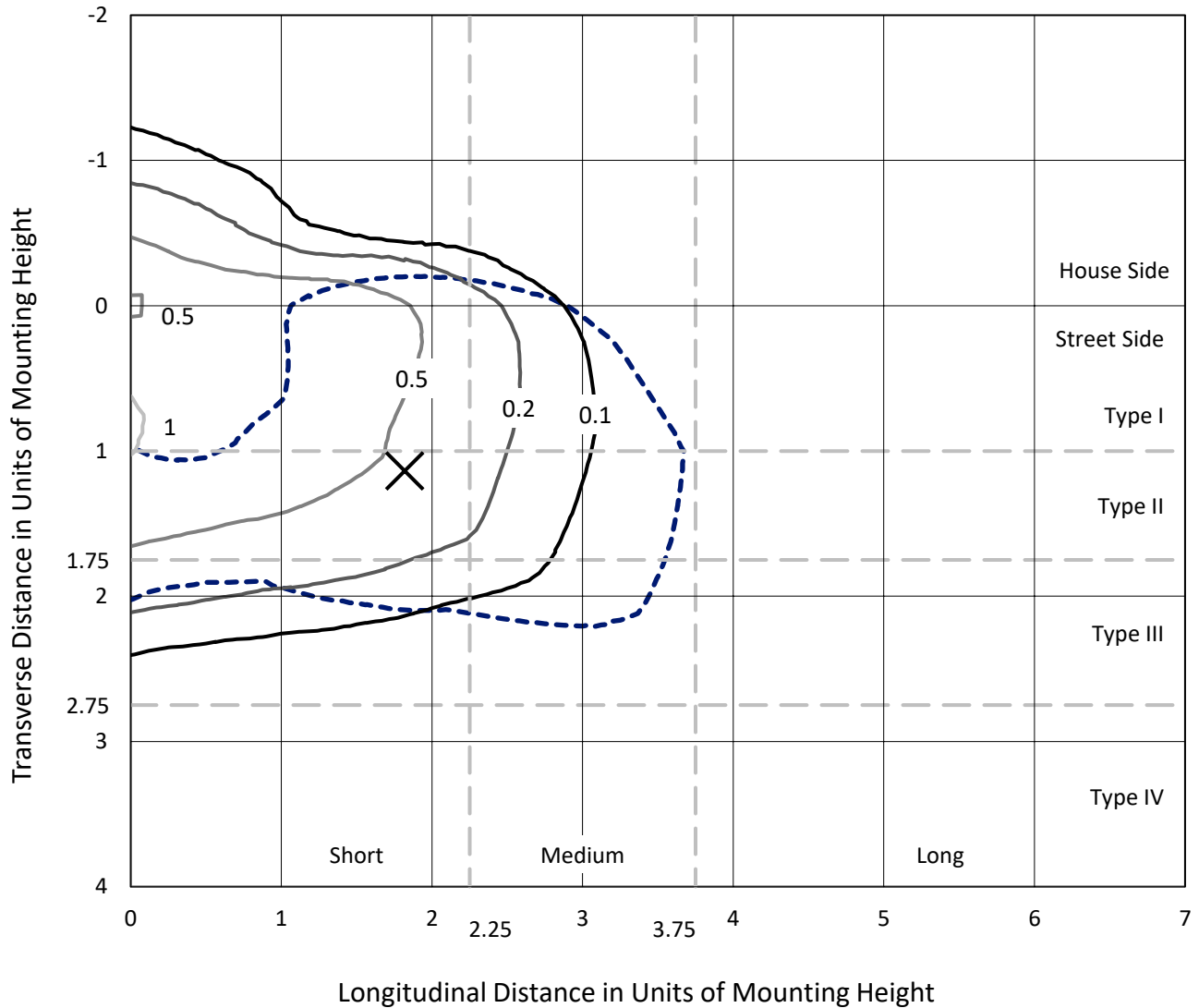
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

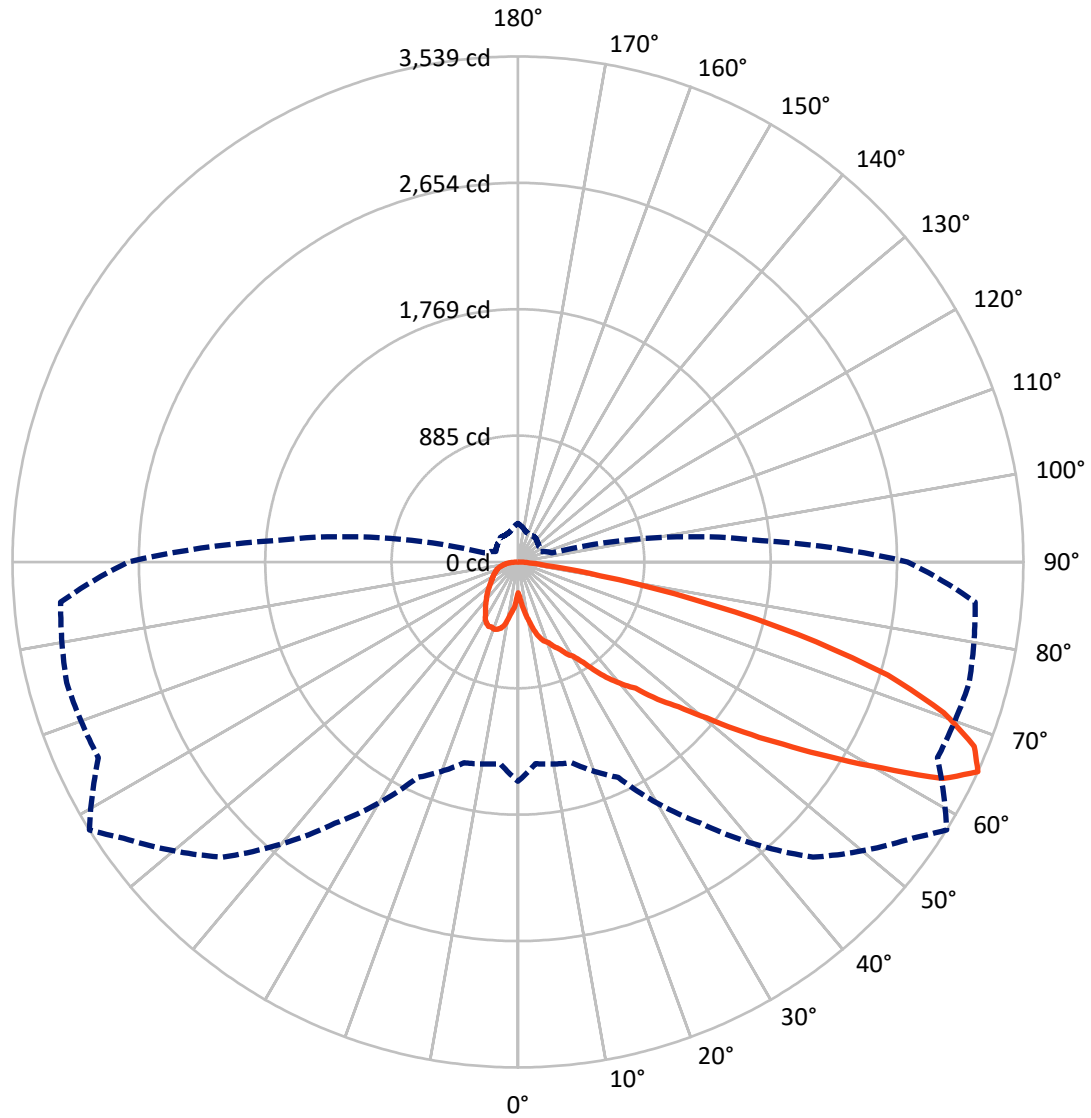
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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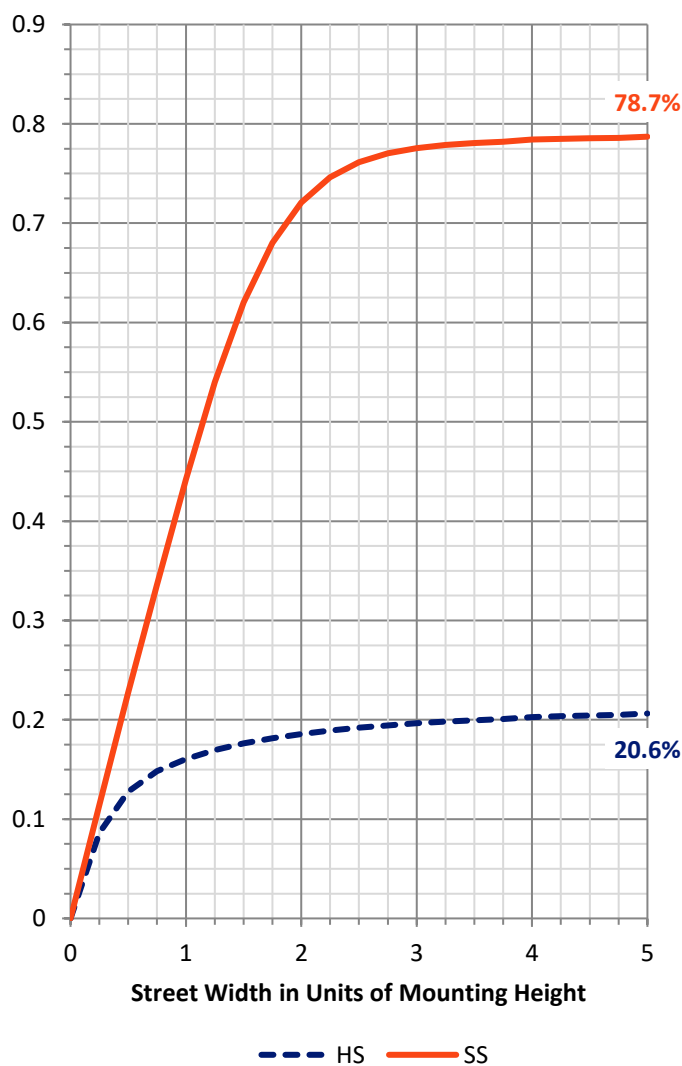
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1060.3	0.0	1060.3
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	3973.7	0.0	3973.7
	% Fixture	78.9	0.0	78.9
Total	Lumens	5034.0	0.0	5034.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.9	0.7
10°-20°	143.7	2.9
20°-30°	275.7	5.5
30°-40°	455.1	9.0
40°-50°	756.5	15.0
50°-60°	1249.3	24.8
60°-70°	1401.5	27.8
70°-80°	637.2	12.7
80°-90°	82.2	1.6
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°	5034.0	100.0
0°-180°	5034.0	100.0

Coefficient of Utilization

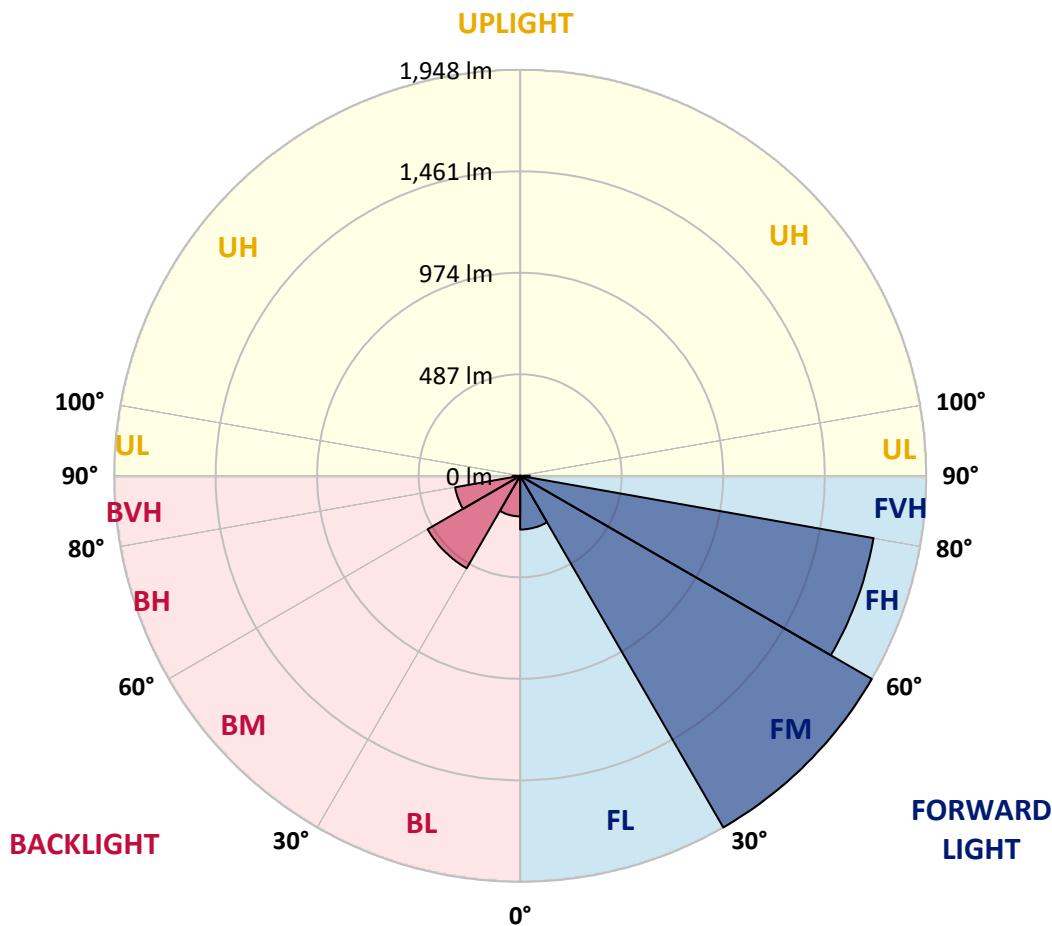


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	257.6	5.1			
FM (30°-60°)	1948.1	38.7			
FH (60°-80°)	1721.7	34.2			G1/1800
FVH (80°-90°)	46.3	0.9			G1/100
BL (0°-30°)	194.7	3.9	B1/500		
BM (30°-60°)	512.8	10.2	B1/1000		
BH (60°-80°)	317.0	6.3	B1/500		G1/500
BVH (80°-90°)	35.9	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-G1
 Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	216.1	216.1	216.1	216.1	216.1	216.1	216.1	216.1	216.1	216.1	216.1
2.5°	258.1	250.3	237.3	240.5	248.0	252.2	249.7	246.3	241.9	241.1	260.4
5°	334.2	319.3	313.2	310.7	301.5	296.0	305.4	304.2	309.2	318.4	337.3
7.5°	389.7	379.2	369.2	368.1	350.3	344.0	356.6	363.3	372.3	372.5	398.1
10°	419.5	410.5	410.3	400.8	399.4	411.3	411.5	416.6	417.6	428.3	423.3
12.5°	451.8	451.1	462.7	462.5	475.9	495.6	485.7	485.7	488.7	475.7	491.6
15°	528.7	535.4	513.8	517.4	517.4	536.7	536.0	539.8	548.8	545.5	538.4
17.5°	608.8	613.0	589.1	566.9	568.5	564.3	579.4	580.9	572.3	611.3	602.7
20°	660.4	676.7	626.4	598.5	604.0	608.8	609.4	600.4	596.0	656.0	644.2
22.5°	724.1	710.3	664.1	633.3	641.5	635.0	633.7	640.7	646.7	669.4	688.5
25°	766.6	765.6	710.3	676.5	667.5	665.6	678.4	675.7	690.1	731.2	719.3
27.5°	828.5	847.8	749.7	758.1	718.4	676.7	717.8	730.2	756.2	749.5	776.1
30°	948.4	933.9	831.4	829.1	784.3	749.2	777.8	767.3	814.0	812.6	832.3
32.5°	1046.3	1056.4	927.4	903.3	870.0	827.9	809.0	838.1	863.3	904.6	915.7
35°	1149.9	1147.6	1025.8	977.1	922.0	904.6	927.9	940.0	993.5	1031.4	1005.0
37.5°	1310.9	1292.6	1153.2	1061.2	1019.9	1013.6	1053.4	1035.8	1093.7	1102.7	1117.6
40°	1460.5	1405.6	1269.8	1164.3	1098.7	1122.2	1123.5	1125.8	1156.8	1181.3	1254.9
42.5°	1602.9	1564.3	1388.2	1309.0	1212.3	1189.5	1203.7	1208.6	1287.0	1337.1	1439.0
45°	1797.4	1694.1	1558.5	1477.1	1368.9	1339.8	1329.7	1371.2	1446.9	1561.0	1648.4
47.5°	1962.0	1868.7	1739.4	1632.2	1511.3	1594.5	1537.5	1514.2	1615.9	1757.2	1896.4
50°	2098.5	1995.8	1868.9	1807.1	1787.8	1862.0	1714.0	1716.7	1809.8	2009.2	2168.7
52.5°	2204.1	2094.5	1982.1	1950.7	2058.4	2101.2	1994.3	1978.1	2046.1	2281.7	2473.3
55°	2302.9	2186.5	2099.7	2163.9	2345.4	2350.3	2342.7	2253.2	2335.0	2573.7	2788.6
57.5°	2328.2	2202.9	2145.2	2237.3	2482.7	2673.7	2748.8	2573.1	2656.3	2839.3	3058.6
60°	2197.6	2090.3	2067.2	2192.2	2557.0	2836.2	3032.2	2927.2	2895.9	3052.5	3247.7
62.5°	1930.1	1805.6	1824.3	1997.9	2478.8	2900.6	3256.1	3338.1	3149.0	3222.1	3330.3
65°	1536.2	1417.4	1455.1	1663.9	2233.3	2921.9	3370.6	3538.7	3240.4	3270.1	3213.3
67.5°	1083.4	975.4	1023.0	1293.0	1857.8	2648.1	3390.3	3445.2	3143.1	3133.3	2893.8
70°	613.8	546.1	597.7	822.8	1311.3	2109.6	3235.8	3163.4	2968.7	2829.1	2421.3
72.5°	281.5	258.3	283.0	418.9	754.9	1403.7	2641.7	2707.3	2558.0	2383.4	1842.1
75°	149.7	141.5	152.0	209.2	353.2	763.7	1876.9	2024.5	1945.0	1807.7	1201.6
77.5°	111.3	105.0	110.1	135.6	188.7	298.7	1066.4	1252.6	1282.8	1156.4	667.3
80°	85.3	80.3	85.3	102.5	130.6	141.9	456.0	583.8	665.0	537.3	265.2
82.5°	63.3	60.0	67.7	76.9	91.8	88.7	161.8	201.5	259.7	177.6	103.4
85°	50.3	46.1	49.1	52.2	58.7	48.6	74.0	82.8	87.6	73.4	38.2
87.5°	19.7	18.2	35.6	28.1	23.9	14.7	22.2	25.2	25.8	24.7	11.1
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°	216.1	216.1	216.1	216.1	216.1	216.1	216.1	216.1	216.1	216.1	216.1
2.5°	262.5	260.4	248.0	252.0	258.5	259.7	262.5	254.9	251.1	265.0	265.6
5°	339.0	327.7	321.8	322.4	318.2	311.7	321.6	328.1	330.6	340.9	344.6
7.5°	398.3	384.7	374.8	363.5	347.6	337.3	354.5	367.1	373.8	395.2	403.6
10°	424.7	413.8	411.7	397.5	397.1	396.8	396.0	391.6	406.1	404.0	409.8
12.5°	479.2	476.9	457.0	451.4	452.0	451.4	433.7	432.9	433.1	452.4	445.5
15°	530.0	530.4	512.1	491.6	473.2	467.5	460.6	457.4	462.0	472.9	466.2
17.5°	592.6	594.7	542.5	510.0	485.7	485.1	468.5	449.0	477.1	483.8	476.5
20°	633.1	624.3	560.2	505.6	498.7	479.9	459.3	432.5	456.8	473.2	477.8
22.5°	671.5	656.2	576.5	513.4	480.3	457.8	437.9	420.5	428.3	446.5	443.6
25°	697.5	693.3	599.1	532.1	479.7	429.8	402.9	391.8	395.8	424.1	421.4
27.5°	759.5	714.2	595.2	536.9	459.5	391.4	378.0	366.0	362.0	392.7	401.0
30°	801.0	782.4	621.8	529.3	434.2	359.9	340.2	337.7	339.0	373.8	376.1
32.5°	871.5	823.0	665.4	500.4	397.3	336.7	314.0	315.1	320.7	346.1	351.4
35°	944.8	915.9	671.3	479.7	367.3	311.9	302.7	295.4	298.5	320.7	321.8
37.5°	1081.1	981.1	707.3	447.6	345.3	302.5	284.9	278.4	280.1	292.7	301.7
40°	1201.0	1112.1	690.5	416.6	318.0	289.9	267.9	263.1	258.1	270.4	276.1
42.5°	1393.3	1205.6	684.9	382.4	305.2	272.9	257.9	245.1	240.2	250.7	261.0
45°	1585.5	1304.8	654.1	347.8	287.2	271.7	243.2	231.0	232.3	241.7	252.2
47.5°	1799.7	1437.9	601.9	314.2	267.5	265.6	228.5	223.3	227.0	237.5	248.0
50°	2053.0	1579.2	558.7	284.1	253.5	247.4	226.6	220.3	223.9	236.3	246.5
52.5°	2329.9	1734.1	527.2	256.2	237.5	232.9	229.1	223.1	227.2	237.9	248.6
55°	2605.2	1875.6	505.9	237.1	223.9	226.8	234.4	230.0	232.1	240.0	250.7
57.5°	2809.4	1950.3	462.9	216.8	212.8	223.3	235.0	227.7	228.9	240.0	251.6
60°	2928.0	1964.5	392.2	200.2	204.0	216.1	228.5	219.1	218.2	236.5	250.9
62.5°	2915.0	1881.7	311.1	185.1	193.9	205.4	218.7	209.6	211.9	236.9	252.2
65°	2728.9	1712.5	247.4	172.3	181.8	193.7	210.5	206.9	218.0	253.7	270.2
67.5°	2401.8	1465.4	198.7	160.4	170.4	185.7	216.1	225.6	230.4	270.9	287.8
70°	1946.5	1138.5	165.6	149.9	161.4	189.5	232.5	230.6	226.6	262.7	276.1
72.5°	1406.3	780.5	145.7	139.6	150.3	178.2	232.9	222.8	217.8	239.8	249.5
75°	879.9	465.6	127.3	126.6	133.3	159.7	222.4	213.4	199.8	210.7	223.3
77.5°	502.5	238.4	107.1	112.8	116.8	138.6	199.2	191.0	178.8	183.4	195.8
80°	191.8	115.3	90.4	100.2	99.2	117.4	168.8	166.9	153.0	154.5	162.1
82.5°	90.4	64.6	75.1	86.2	80.5	93.5	137.1	136.5	124.3	112.6	118.7
85°	33.5	34.4	54.9	65.6	56.0	60.4	99.2	96.4	84.7	71.5	79.0
87.5°	7.5	12.4	27.0	34.2	19.5	18.7	40.0	34.8	33.5	19.9	21.0
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)