

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: P366770

Luminaire Tested: **MSA-SA1B-730-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366770
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-730-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: 4606 lumens
Efficiency: N/A
Efficacy: 104.7 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

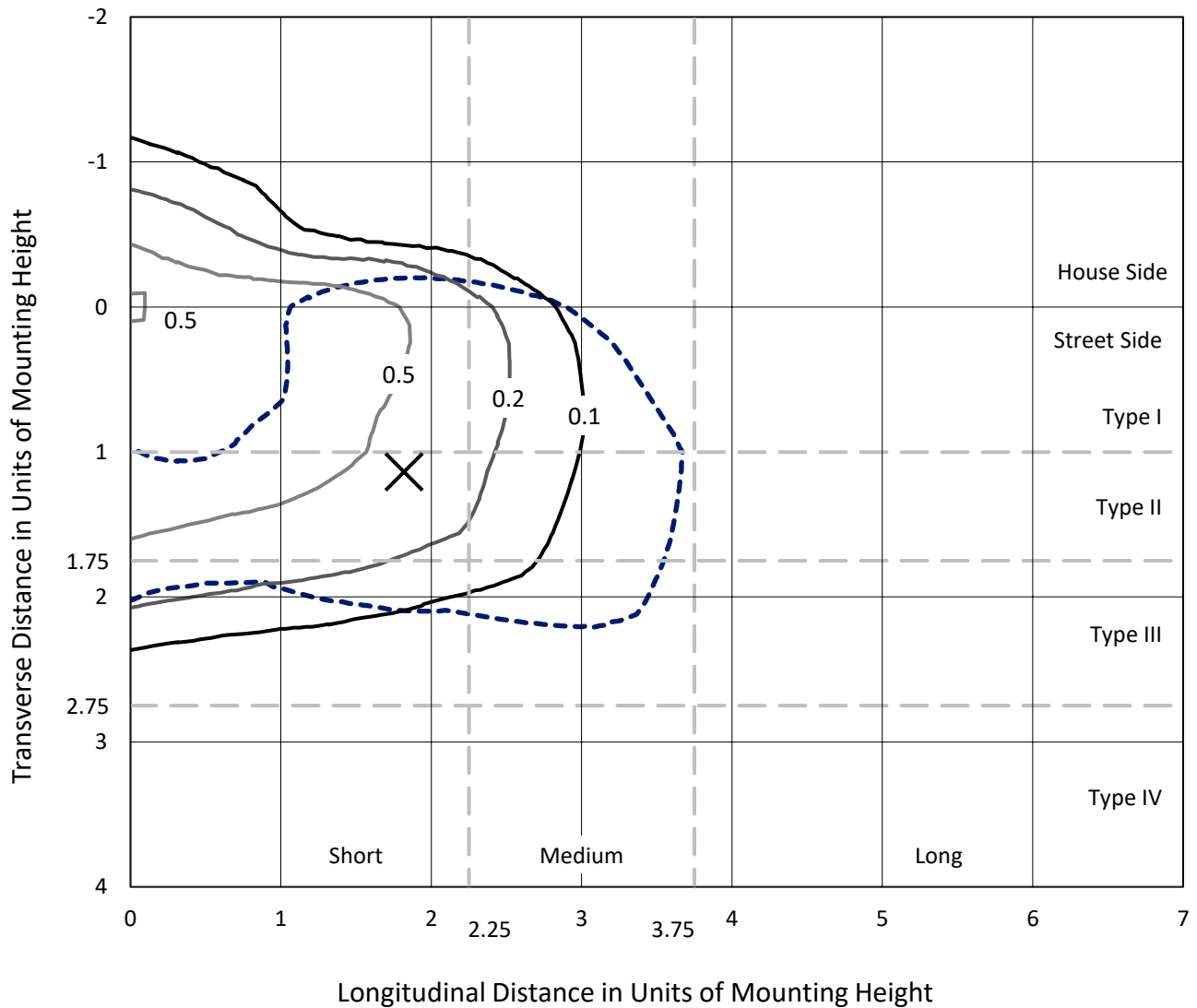
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

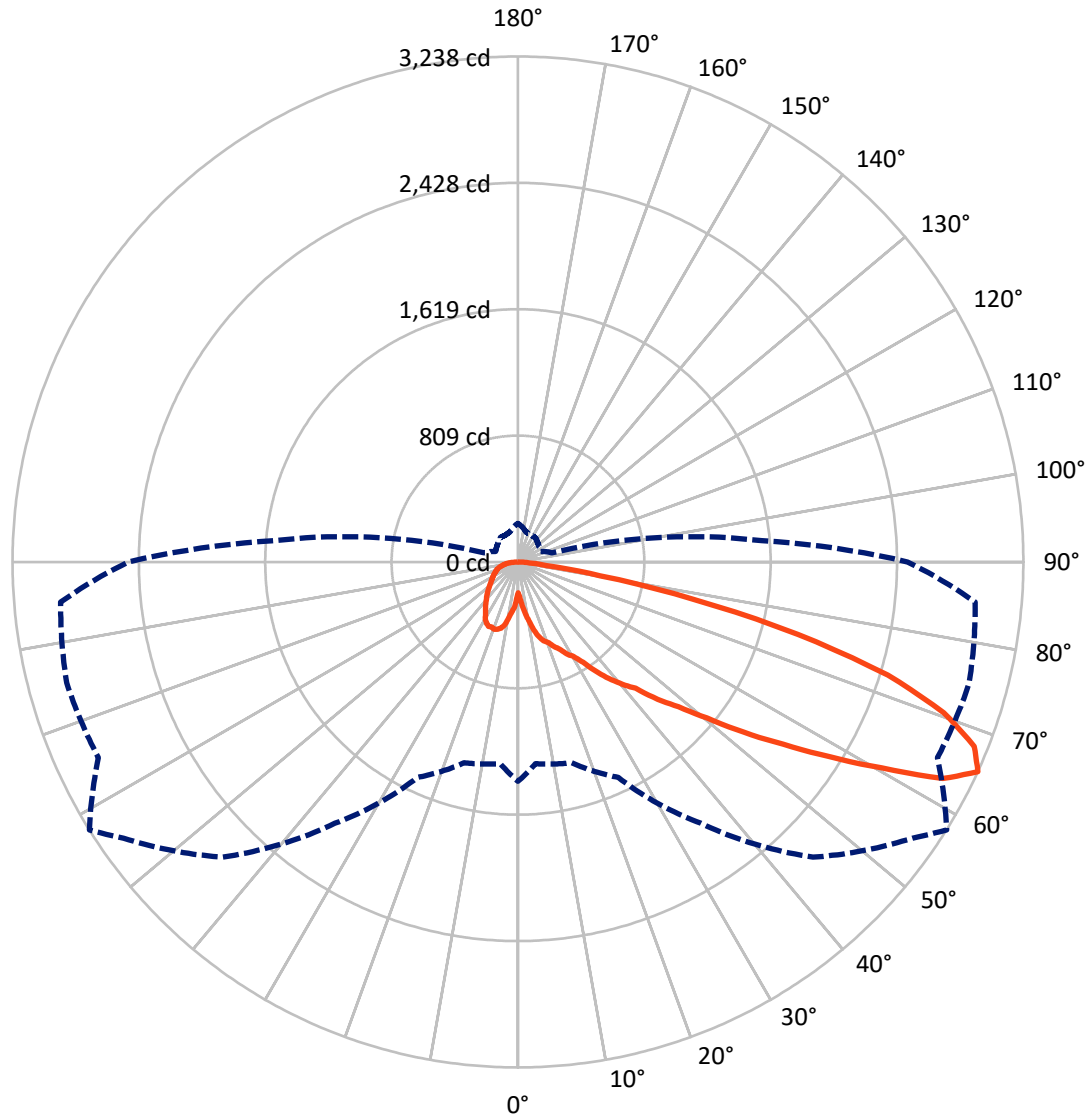
× Max cd
 - - - 1/2 Max cd



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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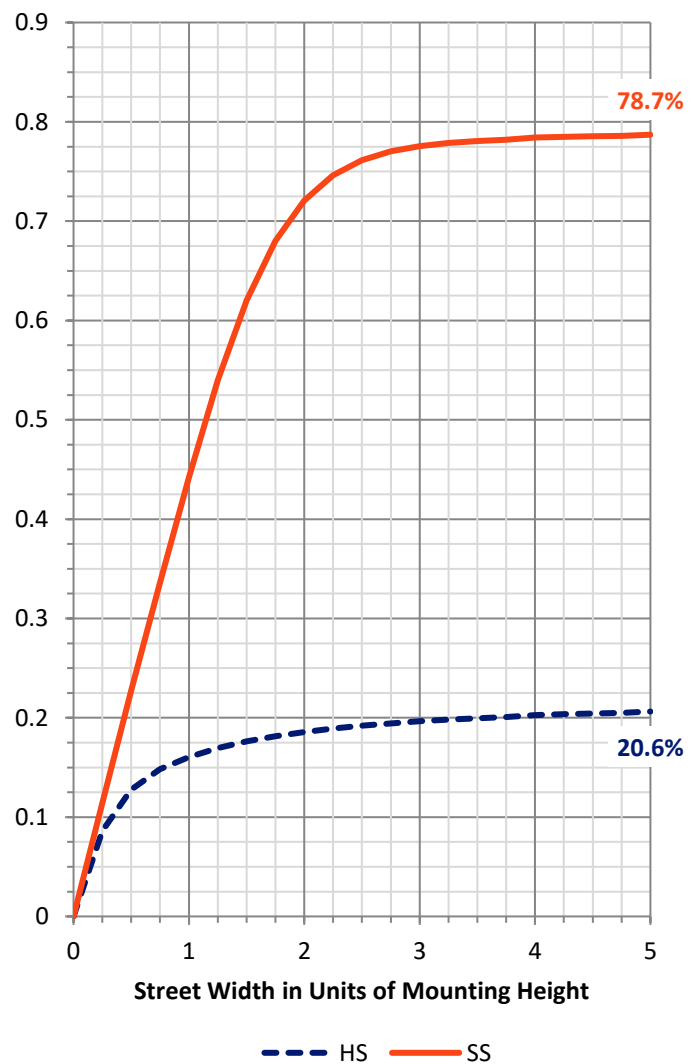
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	970.1	0.0	970.1
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	3635.8	0.0	3635.8
	% Fixture	78.9	0.0	78.9
Total	Lumens	4606.0	0.0	4606.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.1	0.7
10°-20°	131.4	2.9
20°-30°	252.2	5.5
30°-40°	416.4	9.0
40°-50°	692.1	15.0
50°-60°	1143.1	24.8
60°-70°	1282.3	27.8
70°-80°	583.0	12.7
80°-90°	75.2	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°	4606.0	100.0
0°-180°	4606.0	100.0

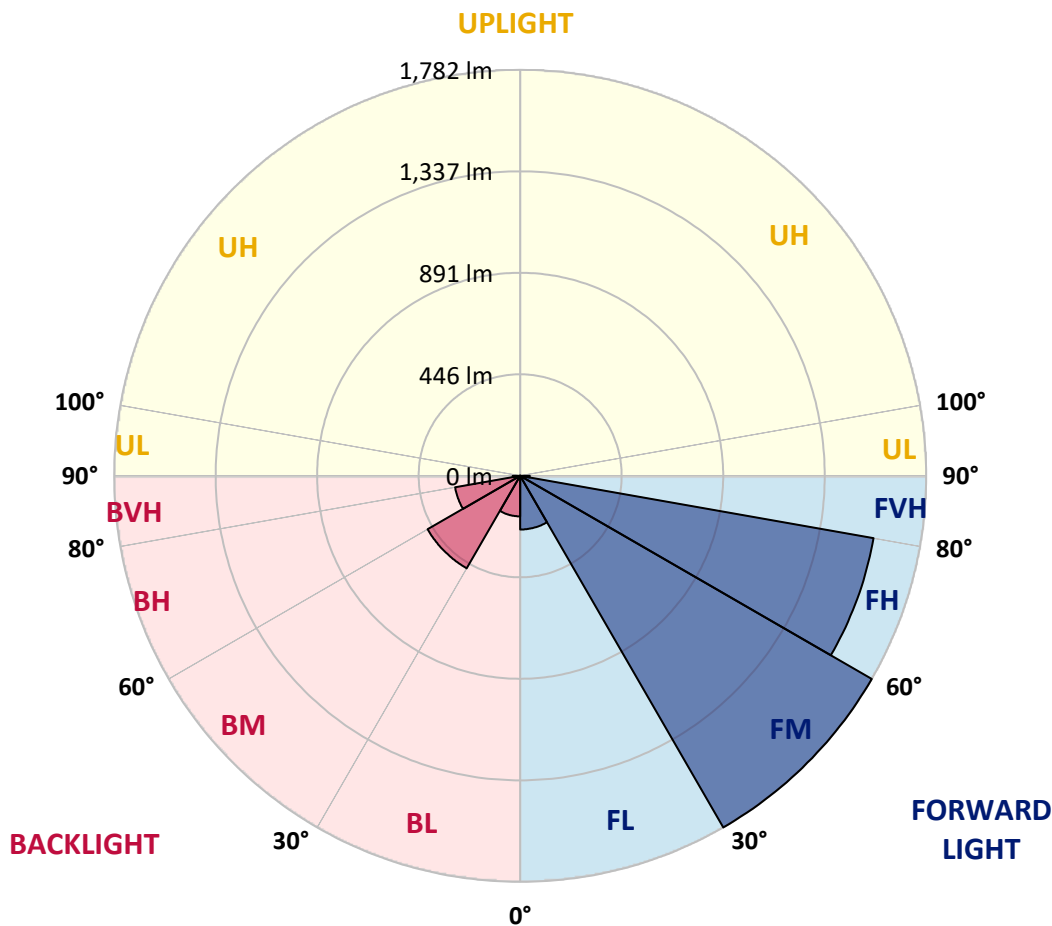


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	235.7	5.1			
FM (30°-60°)	1782.4	38.7			
FH (60°-80°)	1575.3	34.2			G1/1800
FVH (80°-90°)	42.3	0.9			G1/100
BL (0°-30°)	178.1	3.9	B1/500		
BM (30°-60°)	469.2	10.2	B1/1000		
BH (60°-80°)	290.0	6.3	B1/500		G1/500
BVH (80°-90°)	32.8	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-G1
 Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	197.8	197.8	197.8	197.8	197.8	197.8	197.8	197.8	197.8	197.8	197.8
2.5°	236.1	229.0	217.1	220.0	226.9	230.8	228.5	225.4	221.4	220.6	238.2
5°	305.8	292.1	286.6	284.3	275.8	270.8	279.5	278.3	282.9	291.4	308.6
7.5°	356.6	347.0	337.8	336.8	320.5	314.8	326.3	332.4	340.7	340.9	364.3
10°	383.8	375.6	375.4	366.7	365.4	376.3	376.5	381.1	382.1	391.9	387.3
12.5°	413.4	412.8	423.3	423.1	435.4	453.4	444.4	444.4	447.1	435.2	449.8
15°	483.8	489.9	470.1	473.4	473.4	491.0	490.5	493.9	502.2	499.1	492.6
17.5°	557.0	560.9	539.0	518.7	520.2	516.4	530.2	531.5	523.7	559.3	551.5
20°	604.2	619.2	573.1	547.6	552.6	557.0	557.6	549.4	545.3	600.2	589.4
22.5°	662.5	649.9	607.7	579.5	587.0	581.0	579.9	586.2	591.7	612.5	629.9
25°	701.5	700.5	649.9	619.0	610.7	609.0	620.7	618.2	631.5	669.0	658.1
27.5°	758.1	775.7	685.9	693.6	657.3	619.2	656.8	668.1	691.9	685.7	710.1
30°	867.8	854.5	760.7	758.6	717.6	685.5	711.6	702.0	744.8	743.5	761.5
32.5°	957.3	966.6	848.6	826.5	796.0	757.5	740.2	766.9	789.9	827.7	837.8
35°	1052.1	1050.0	938.5	894.0	843.6	827.7	849.0	860.1	909.0	943.7	919.6
37.5°	1199.4	1182.7	1055.2	971.0	933.2	927.4	963.9	947.8	1000.7	1008.9	1022.6
40°	1336.4	1286.1	1161.8	1065.3	1005.3	1026.8	1027.9	1030.0	1058.4	1080.9	1148.2
42.5°	1466.6	1431.3	1270.2	1197.7	1109.3	1088.4	1101.4	1105.8	1177.5	1223.4	1316.6
45°	1644.6	1550.1	1425.9	1351.5	1252.5	1225.9	1216.7	1254.7	1323.9	1428.2	1508.2
47.5°	1795.2	1709.8	1591.5	1493.5	1382.8	1458.9	1406.8	1385.5	1478.5	1607.8	1735.2
50°	1920.1	1826.1	1710.0	1653.4	1635.8	1703.7	1568.3	1570.8	1655.9	1838.3	1984.3
52.5°	2016.7	1916.4	1813.6	1784.8	1883.4	1922.6	1824.7	1810.0	1872.1	2087.7	2263.0
55°	2107.1	2000.6	1921.2	1979.9	2146.0	2150.4	2143.5	2061.6	2136.4	2354.9	2551.5
57.5°	2130.3	2015.6	1962.8	2047.0	2271.7	2446.4	2515.1	2354.3	2430.5	2597.9	2798.6
60°	2010.8	1912.6	1891.5	2005.8	2339.6	2595.1	2774.4	2678.3	2649.7	2793.0	2971.6
62.5°	1766.0	1652.1	1669.2	1828.0	2268.0	2653.9	2979.3	3054.3	2881.2	2948.2	3047.2
65°	1405.6	1296.9	1331.4	1522.4	2043.4	2673.5	3084.0	3237.8	2964.9	2992.1	2940.1
67.5°	991.3	892.5	936.1	1183.1	1699.9	2423.0	3102.0	3152.3	2875.9	2866.9	2647.8
70°	561.6	499.7	546.9	752.9	1199.8	1930.2	2960.7	2894.5	2716.3	2588.5	2215.5
72.5°	257.6	236.3	258.9	383.2	690.7	1284.4	2417.1	2477.1	2340.5	2180.7	1685.5
75°	137.0	129.5	139.1	191.4	323.2	698.8	1717.3	1852.4	1779.7	1654.0	1099.5
77.5°	101.9	96.1	100.7	124.1	172.6	273.3	975.8	1146.1	1173.7	1058.0	610.5
80°	78.1	73.5	78.1	93.8	119.5	129.9	417.2	534.2	608.4	491.6	242.6
82.5°	57.9	54.9	62.0	70.4	84.0	81.1	148.1	184.3	237.7	162.5	94.6
85°	46.0	42.2	44.9	47.8	53.7	44.5	67.7	75.8	80.2	67.1	34.9
87.5°	18.0	16.7	32.6	25.7	21.9	13.4	20.3	23.0	23.6	22.6	10.2
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°	197.8	197.8	197.8	197.8	197.8	197.8	197.8	197.8	197.8	197.8	197.8
2.5°	240.2	238.2	226.9	230.6	236.5	237.7	240.2	233.2	229.8	242.5	243.0
5°	310.2	299.8	294.4	295.0	291.2	285.2	294.2	300.2	302.5	311.9	315.3
7.5°	364.4	352.0	343.0	332.6	318.0	308.6	324.4	335.9	342.0	361.6	369.2
10°	388.6	378.6	376.7	363.7	363.3	363.1	362.3	358.3	371.5	369.6	375.0
12.5°	438.5	436.4	418.2	413.0	413.6	413.0	396.9	396.1	396.3	413.9	407.6
15°	484.9	485.3	468.6	449.8	432.9	427.7	421.4	418.5	422.8	432.7	426.6
17.5°	542.3	544.2	496.4	466.7	444.4	443.9	428.7	410.9	436.6	442.7	436.0
20°	579.3	571.2	512.5	462.7	456.3	439.1	420.3	395.7	418.0	432.9	437.1
22.5°	614.4	600.4	527.5	469.8	439.4	418.9	400.7	384.8	391.9	408.6	405.9
25°	638.2	634.3	548.2	486.8	438.9	393.2	368.7	358.5	362.1	388.0	385.5
27.5°	694.9	653.5	544.6	491.2	420.5	358.1	345.8	334.9	331.3	359.3	366.9
30°	732.9	715.9	568.9	484.3	397.2	329.3	311.3	309.0	310.2	342.0	344.1
32.5°	797.4	753.1	608.8	457.9	363.5	308.1	287.3	288.3	293.5	316.7	321.5
35°	864.5	838.0	614.2	438.9	336.1	285.4	277.0	270.3	273.1	293.5	294.4
37.5°	989.2	897.7	647.2	409.5	315.9	276.8	260.7	254.7	256.3	267.8	276.0
40°	1098.9	1017.6	631.8	381.1	291.0	265.3	245.1	240.7	236.1	247.4	252.6
42.5°	1274.8	1103.1	626.7	349.9	279.3	249.7	235.9	224.2	219.8	229.4	238.8
45°	1450.7	1193.9	598.5	318.2	262.8	248.6	222.5	211.4	212.5	221.2	230.8
47.5°	1646.7	1315.7	550.7	287.5	244.8	243.0	209.1	204.3	207.7	217.3	226.9
50°	1878.4	1444.9	511.2	259.9	231.9	226.3	207.4	201.6	204.9	216.2	225.6
52.5°	2131.8	1586.7	482.4	234.4	217.3	213.1	209.7	204.1	207.9	217.7	227.5
55°	2383.7	1716.2	462.8	216.9	204.9	207.5	214.4	210.4	212.3	219.6	229.4
57.5°	2570.5	1784.4	423.5	198.3	194.7	204.3	215.0	208.3	209.5	219.6	230.2
60°	2679.1	1797.5	358.9	183.2	186.6	197.8	209.1	200.4	199.7	216.4	229.6
62.5°	2667.2	1721.7	284.7	169.4	177.4	188.0	200.1	191.8	193.9	216.8	230.8
65°	2496.8	1566.9	226.3	157.7	166.3	177.2	192.6	189.3	199.5	232.1	247.2
67.5°	2197.6	1340.8	181.8	146.7	155.9	169.9	197.8	206.4	210.8	247.8	263.4
70°	1781.0	1041.7	151.5	137.1	147.7	173.4	212.7	211.0	207.4	240.3	252.6
72.5°	1286.7	714.1	133.3	127.7	137.5	163.0	213.1	203.9	199.3	219.4	228.3
75°	805.0	426.0	116.4	115.9	122.0	146.2	203.5	195.3	182.8	192.8	204.3
77.5°	459.8	218.1	98.0	103.2	106.8	126.8	182.2	174.7	163.6	167.8	179.2
80°	175.5	105.5	82.7	91.7	90.7	107.4	154.4	152.7	140.0	141.4	148.3
82.5°	82.7	59.1	68.7	78.8	73.7	85.5	125.4	124.9	113.7	103.0	108.6
85°	30.7	31.5	50.3	60.0	51.2	55.2	90.7	88.2	77.5	65.4	72.3
87.5°	6.9	11.3	24.7	31.3	17.8	17.1	36.6	31.8	30.7	18.2	19.2
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)