

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: P366750

Luminaire Tested: **MSA-SA1B-727-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366750
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-SA1B-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: 4245 lumens
Efficiency: N/A
Efficacy: 96.5 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

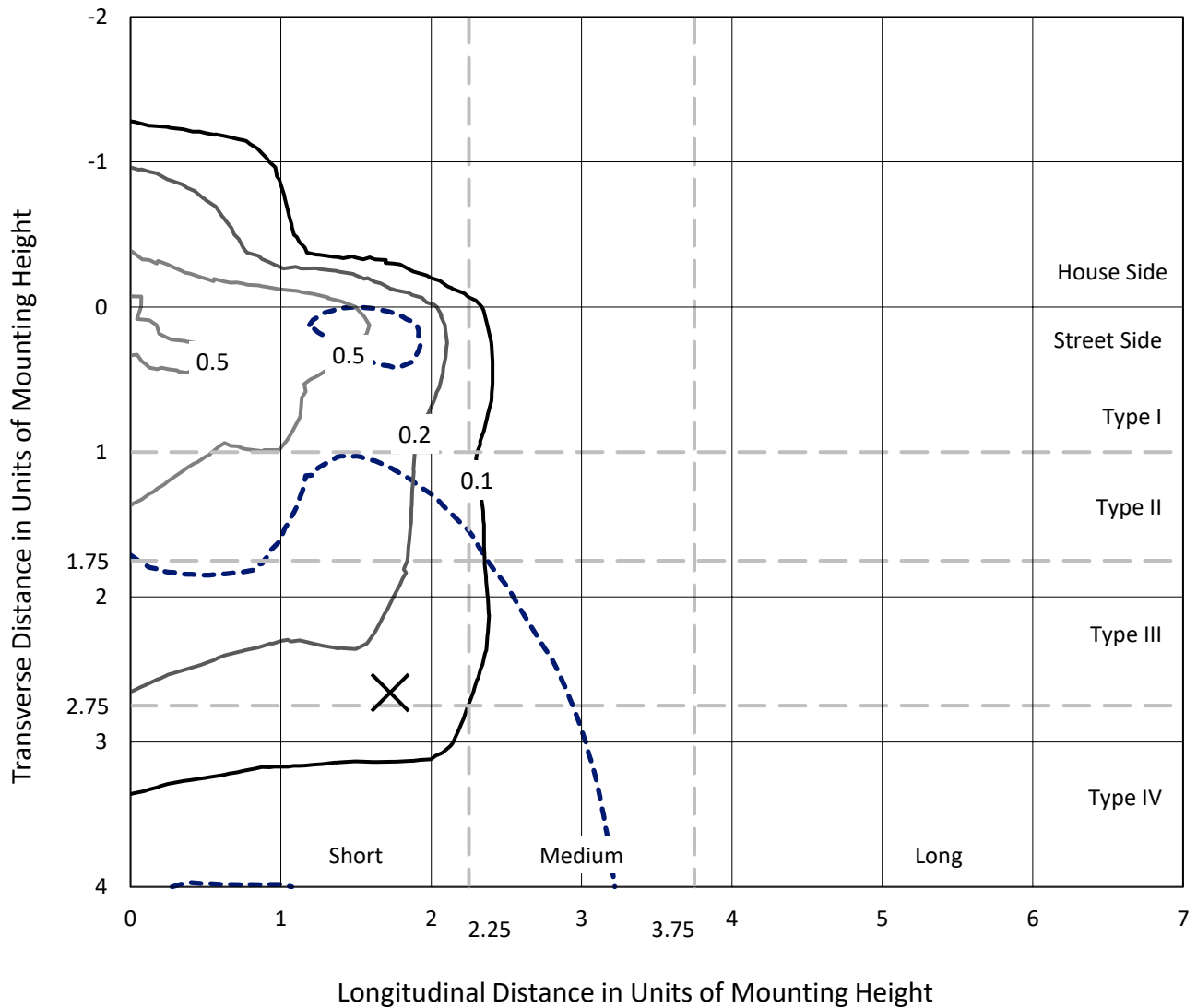
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

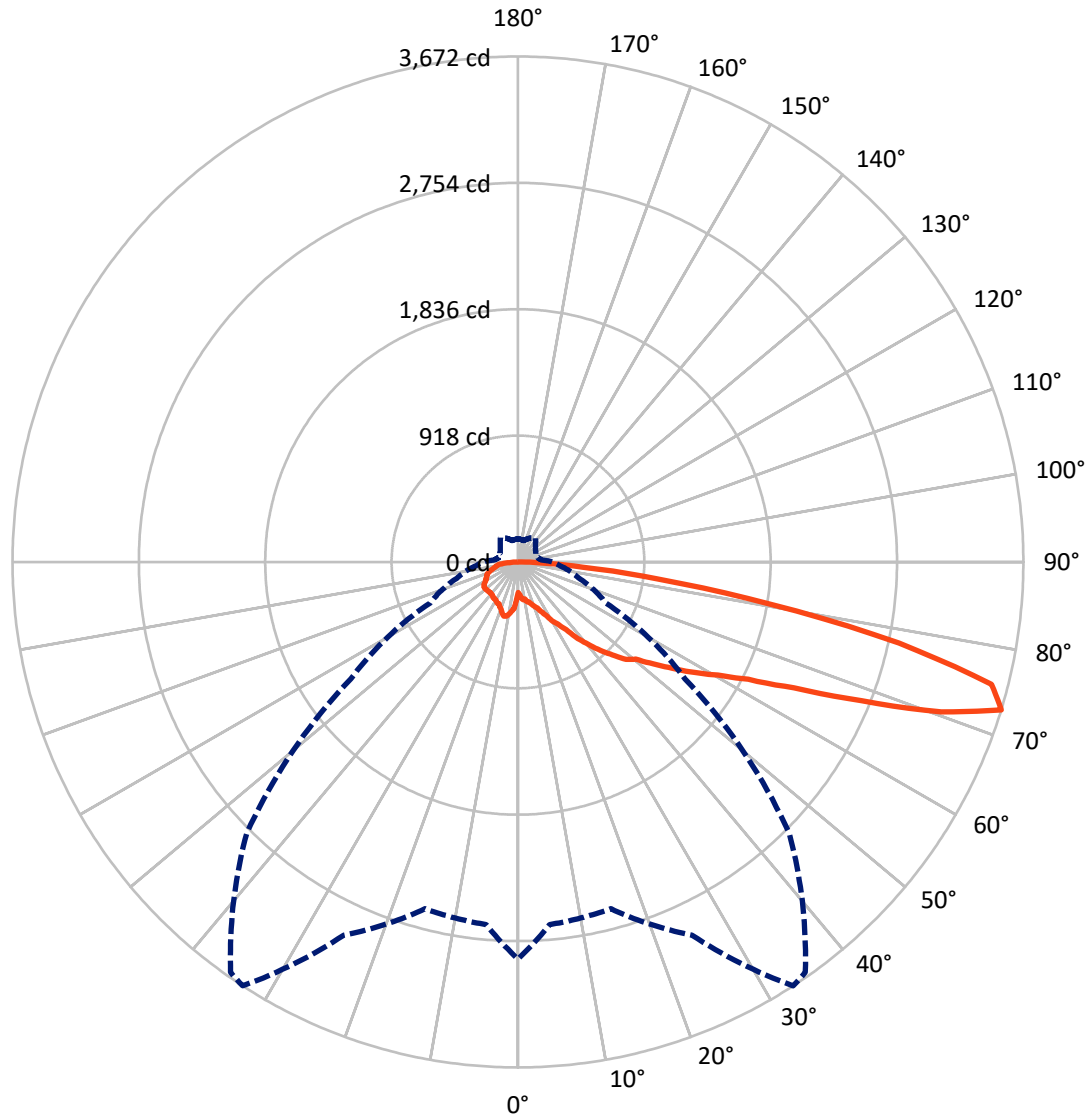
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 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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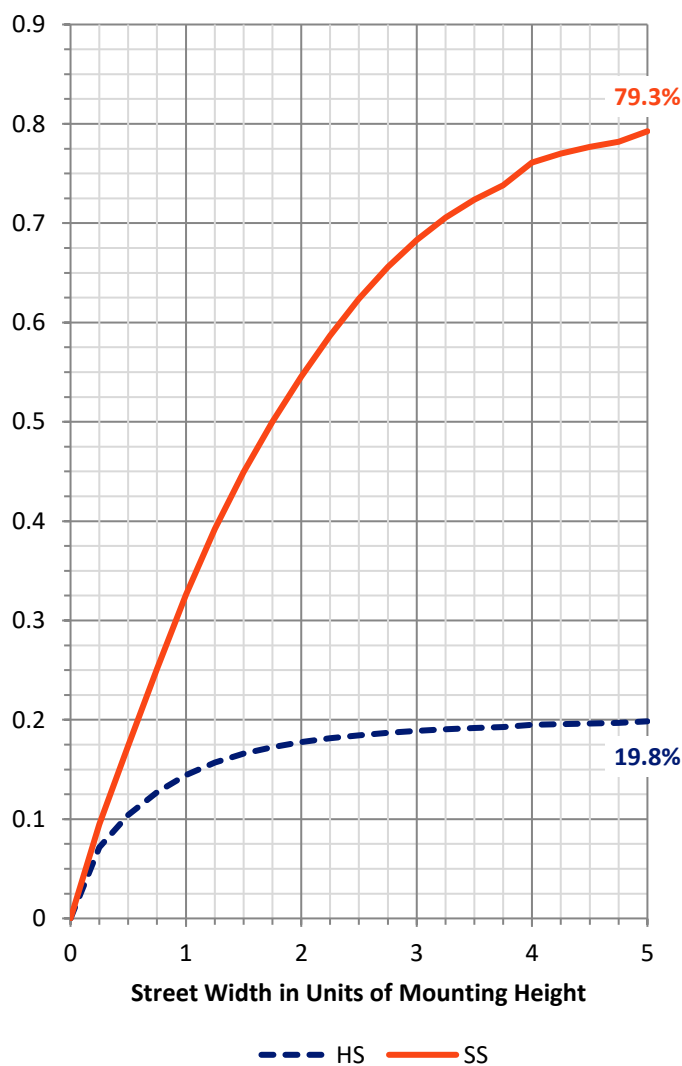
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	858.8	0.0	858.8
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	3386.2	0.0	3386.2
	% Fixture	79.8	0.0	79.8
Total	Lumens	4245.0	0.0	4245.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.6	0.7
10°-20°	113.1	2.7
20°-30°	206.2	4.9
30°-40°	348.9	8.2
40°-50°	580.5	13.7
50°-60°	851.9	20.1
60°-70°	1089.8	25.7
70°-80°	886.6	20.9
80°-90°	137.3	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°	4245.0	100.0
0°-180°	4245.0	100.0

Coefficient of Utilization

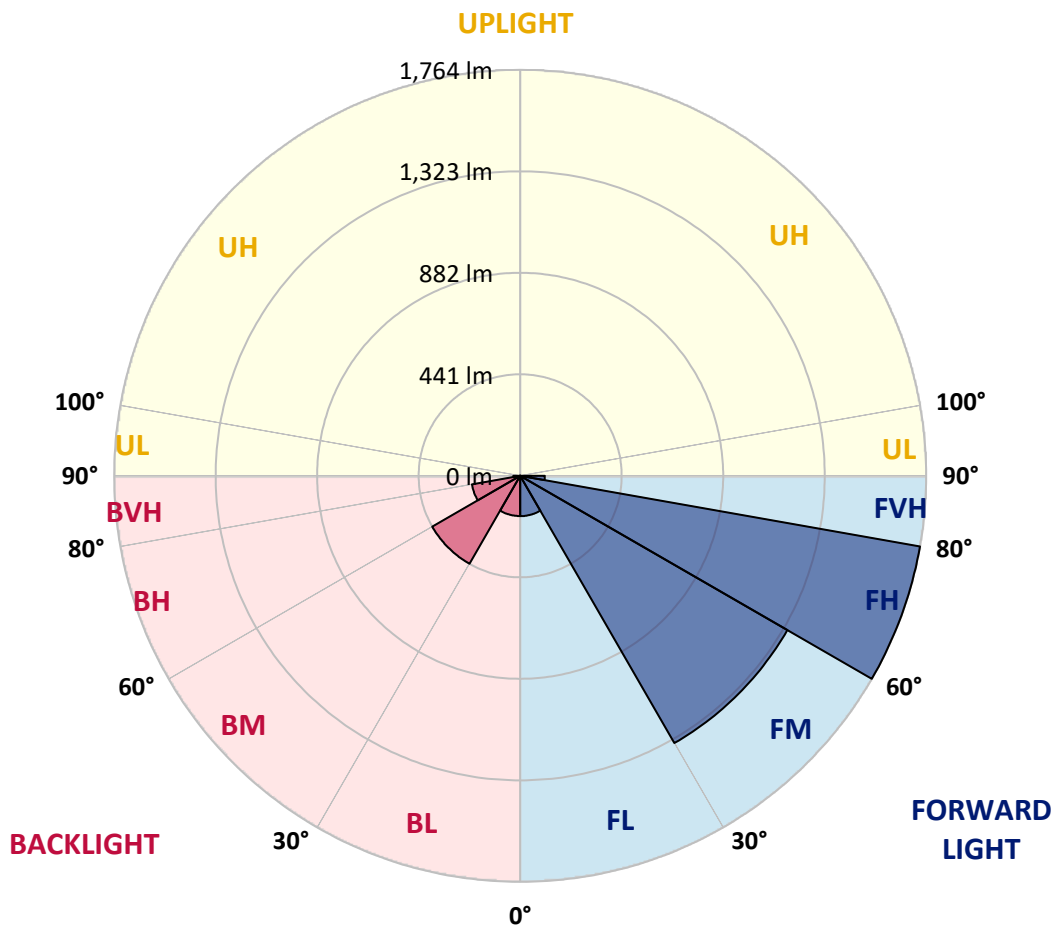


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	175.2	4.1			
FM (30°-60°)	1340.2	31.6			
FH (60°-80°)	1763.6	41.5			G1/1800
FVH (80°-90°)	107.2	2.5			G2/225
BL (0°-30°)	174.8	4.1	B1/500		
BM (30°-60°)	441.1	10.4	B1/1000		
BH (60°-80°)	212.8	5.0	B1/500		G1/500
BVH (80°-90°)	30.1	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°	222.6	222.6	222.6	222.6	222.6	222.6	222.6	222.6	222.6	222.6	222.6
2.5°	252.4	244.4	231.4	231.0	238.3	239.8	244.6	245.0	246.7	243.9	264.0
5°	278.4	270.0	264.9	266.6	263.3	267.3	267.3	278.9	294.4	312.4	337.9
7.5°	284.6	278.4	272.6	277.0	277.7	273.8	277.5	304.8	332.8	350.8	391.6
10°	272.3	266.1	270.5	271.9	271.7	280.5	299.7	321.6	352.7	385.8	407.8
12.5°	270.0	274.4	276.5	278.9	295.7	298.3	327.4	349.9	381.3	410.3	467.5
15°	303.9	309.8	296.7	295.8	301.3	303.8	333.9	356.6	402.4	451.2	502.6
17.5°	352.4	354.5	331.1	319.1	323.1	325.1	338.3	366.8	395.0	485.2	549.3
20°	399.2	400.6	356.6	329.8	344.1	346.2	358.5	374.9	397.1	504.2	580.8
22.5°	448.4	439.4	391.1	357.3	365.6	366.1	373.3	382.3	413.8	501.2	619.2
25°	502.1	496.4	435.7	403.3	402.9	395.7	396.1	408.9	431.6	533.2	644.4
27.5°	573.4	574.1	485.9	468.4	441.1	436.4	412.6	436.6	462.4	533.6	698.8
30°	665.8	648.8	555.8	527.6	500.7	490.6	458.4	478.8	490.1	564.1	757.9
32.5°	741.0	736.1	628.7	586.1	542.0	553.7	518.1	500.1	520.4	616.5	847.6
35°	813.1	796.9	705.8	650.3	604.0	597.0	573.9	576.9	589.2	682.9	964.7
37.5°	920.5	911.7	815.0	726.2	704.6	675.9	661.3	670.6	660.9	768.0	1140.3
40°	1040.6	989.5	906.2	827.1	786.6	766.4	771.5	762.7	755.3	863.4	1297.7
42.5°	1155.6	1109.1	966.8	931.2	878.4	886.8	858.8	865.0	886.0	998.8	1443.3
45°	1280.8	1180.2	1031.1	999.7	961.9	972.6	995.0	988.3	1022.6	1158.6	1580.5
47.5°	1343.3	1247.7	1110.0	1058.9	1058.4	1036.0	1172.1	1186.9	1133.2	1276.9	1719.8
50°	1403.5	1309.5	1168.6	1134.1	1109.1	1157.0	1342.1	1308.1	1233.2	1412.7	1873.0
52.5°	1487.3	1380.1	1235.9	1199.1	1230.1	1274.4	1477.7	1471.0	1331.3	1552.3	2006.1
55°	1551.3	1443.0	1337.1	1303.0	1362.1	1405.6	1615.7	1575.4	1415.3	1654.8	2090.5
57.5°	1663.3	1552.2	1486.6	1410.7	1517.1	1516.4	1748.9	1717.7	1505.1	1739.0	2124.5
60°	1841.3	1710.8	1642.3	1554.8	1668.7	1709.4	1901.0	1811.2	1568.7	1792.2	2063.2
62.5°	2091.2	1936.2	1825.1	1738.5	1877.4	1951.0	2088.9	1879.3	1572.8	1777.0	1902.1
65°	2400.3	2211.8	2066.2	1974.6	2203.9	2309.0	2316.1	1921.4	1535.4	1620.5	1563.2
67.5°	2701.7	2489.9	2337.9	2355.3	2690.1	2740.0	2562.3	1956.7	1334.8	1301.2	1085.5
70°	2900.2	2670.6	2569.3	2754.2	3262.8	3211.7	2761.8	1863.8	1051.1	843.5	611.2
72.5°	2885.2	2644.9	2608.4	2991.2	3672.4	3640.5	2786.1	1482.2	704.1	461.2	304.8
75°	2350.6	2163.7	2246.5	2831.7	3554.4	3552.8	2418.9	917.5	361.2	236.9	192.7
77.5°	1299.6	1227.1	1470.3	2144.0	2830.1	2844.6	1634.4	416.1	194.8	167.8	145.1
80°	455.2	448.5	637.1	1157.0	1861.7	1865.3	760.1	190.4	141.6	127.0	106.5
82.5°	166.4	165.0	264.2	537.5	1025.1	1022.8	288.3	118.5	105.0	89.8	70.3
85°	66.4	65.0	120.8	238.6	470.9	463.3	112.0	67.3	68.7	53.5	34.5
87.5°	18.3	19.0	41.0	74.7	144.2	133.7	28.2	22.7	27.8	21.8	10.9
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°	222.6	222.6	222.6	222.6	222.6	222.6	222.6	222.6	222.6	222.6	222.6
2.5°	267.5	269.3	251.8	258.0	265.9	270.1	272.3	263.3	266.3	278.9	278.4
5°	343.2	336.2	329.5	336.4	331.8	325.3	335.8	335.3	342.2	349.0	350.6
7.5°	399.7	390.6	387.4	371.9	356.4	340.8	354.3	362.8	364.5	381.6	388.8
10°	420.2	416.7	417.9	397.5	395.5	397.1	384.6	371.0	379.3	372.3	377.6
12.5°	467.4	476.2	454.3	440.4	439.2	429.5	404.5	395.7	386.4	396.1	391.1
15°	505.2	521.6	498.2	473.7	446.1	431.1	409.8	396.4	390.2	392.4	386.4
17.5°	560.7	576.0	516.5	479.0	450.5	428.5	395.9	367.3	382.5	383.7	376.9
20°	597.5	598.6	522.7	466.0	440.3	402.0	370.3	345.3	362.8	380.6	388.3
22.5°	633.4	625.5	530.2	455.6	403.1	366.1	350.6	349.0	362.1	377.0	378.8
25°	660.4	661.6	534.6	451.7	381.3	330.9	330.9	342.3	353.8	389.4	387.6
27.5°	725.7	677.6	517.6	433.9	351.0	310.3	331.1	346.4	351.8	390.4	394.3
30°	773.3	741.9	521.1	403.4	320.3	300.6	317.7	336.9	352.0	396.6	395.2
32.5°	853.0	768.7	529.4	360.7	297.4	296.9	312.1	332.3	350.4	389.9	392.0
35°	941.3	847.6	506.3	328.1	292.0	294.8	314.3	322.4	343.7	387.2	389.2
37.5°	1104.5	888.8	491.7	302.9	288.5	296.6	303.9	316.5	337.9	374.0	386.7
40°	1200.3	973.7	437.4	288.3	281.1	295.1	298.8	309.4	321.0	358.2	366.3
42.5°	1326.4	1000.4	391.1	272.1	277.4	289.3	300.4	303.1	310.8	333.2	348.0
45°	1431.5	1020.5	342.0	259.0	264.9	302.2	302.9	301.7	300.3	308.5	320.7
47.5°	1540.4	1074.4	296.7	244.6	260.1	312.8	304.1	292.9	287.0	288.1	299.4
50°	1660.5	1113.5	264.7	232.8	261.2	312.8	310.1	283.9	272.3	269.3	281.1
52.5°	1766.1	1118.1	240.4	223.3	256.8	302.0	314.2	278.2	258.7	251.5	262.6
55°	1823.7	1060.1	222.8	214.7	245.5	292.3	312.1	275.1	242.3	236.9	246.7
57.5°	1822.5	964.0	207.8	202.7	232.6	278.8	300.3	257.8	232.3	229.1	238.8
60°	1756.8	851.3	196.4	192.8	219.4	259.0	279.1	246.5	222.6	221.0	231.6
62.5°	1607.8	734.9	185.3	182.4	207.1	245.1	269.1	234.0	212.6	212.4	222.4
65°	1316.7	589.9	174.9	174.2	195.6	231.4	259.6	223.5	202.2	205.7	215.9
67.5°	907.3	414.5	163.8	165.9	185.1	218.2	252.4	216.4	191.2	198.5	207.6
70°	497.8	256.4	151.4	155.7	171.7	202.9	241.1	205.0	177.0	188.1	194.4
72.5°	253.2	171.0	136.1	142.8	155.3	180.3	219.9	188.4	161.7	165.9	169.2
75°	170.1	128.7	119.0	126.4	135.4	158.8	195.1	172.9	147.0	146.5	150.2
77.5°	128.6	100.6	101.1	109.5	115.3	139.6	175.4	159.9	134.7	133.5	138.9
80°	94.0	76.3	81.4	90.2	95.4	125.4	162.5	145.5	118.0	113.1	117.6
82.5°	62.3	54.1	60.2	69.0	73.3	104.8	147.6	123.4	96.2	83.6	84.4
85°	29.4	28.4	35.9	40.2	45.6	65.0	110.4	85.4	61.3	50.7	53.0
87.5°	6.7	9.0	11.8	11.6	13.6	17.4	34.3	23.9	17.8	12.2	8.1
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)