

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: P596512

Luminaire Tested: **MSA-SA1B-827-U-T2**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596512
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-827-U-T2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3713 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G1

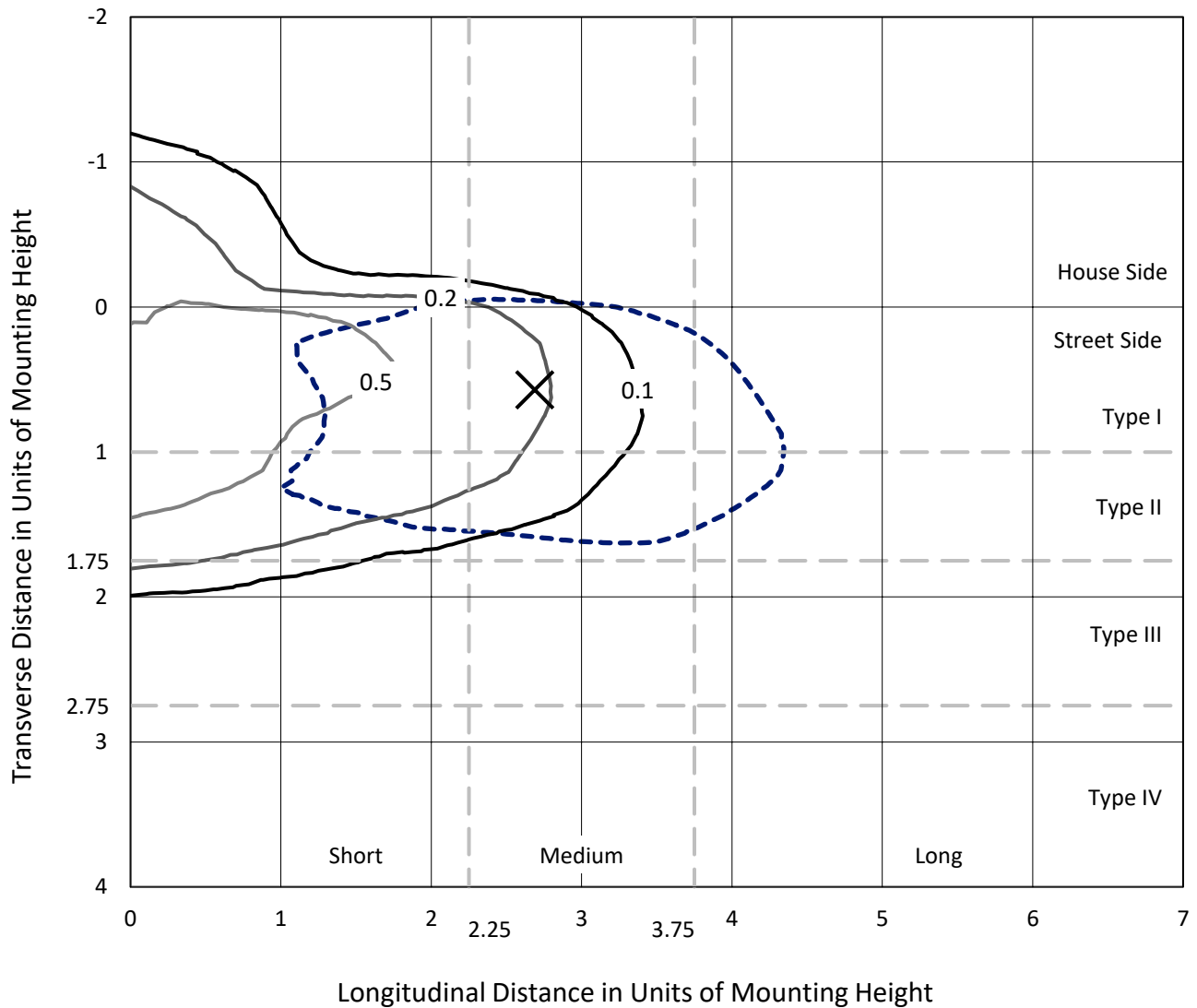
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

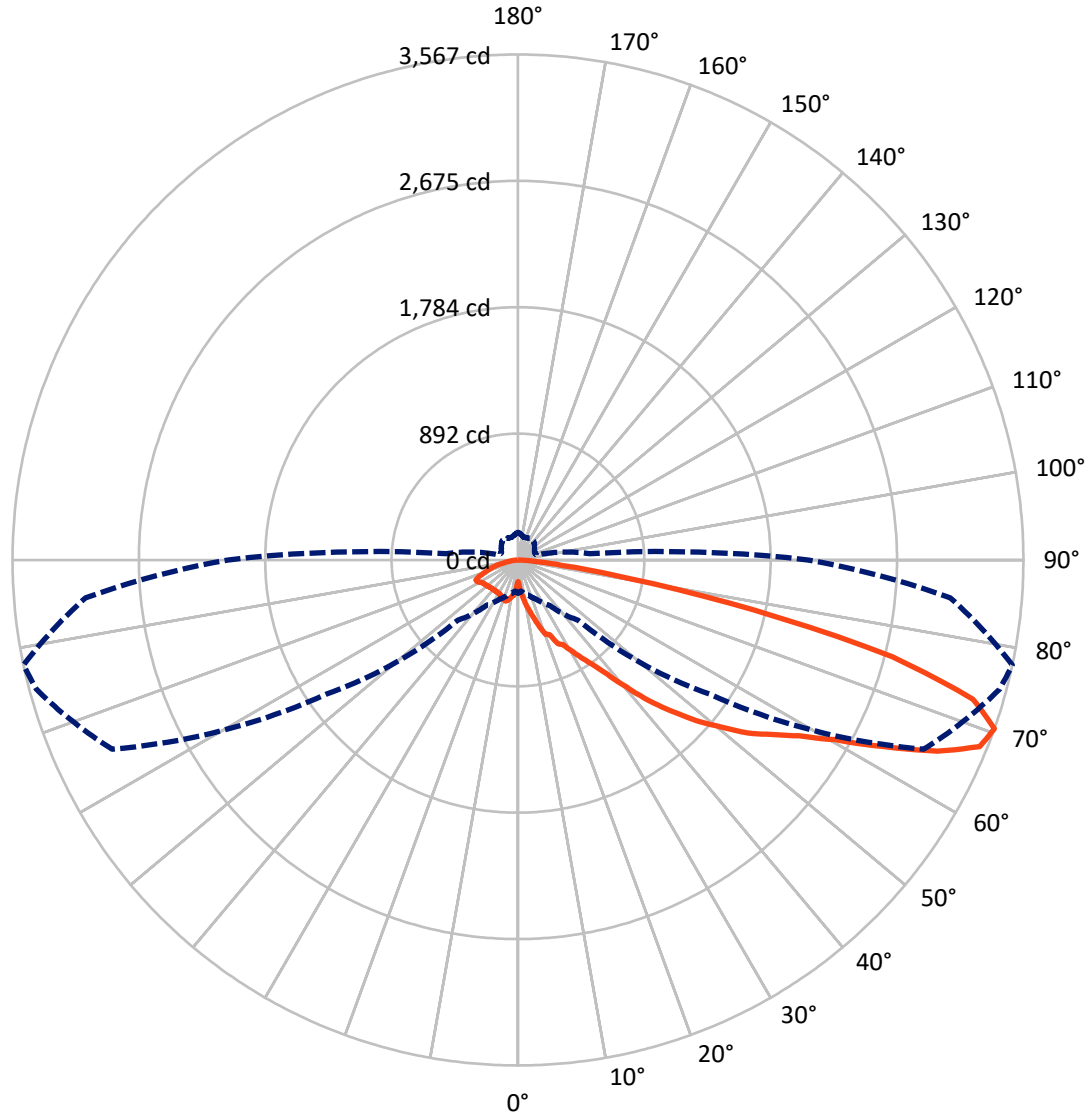
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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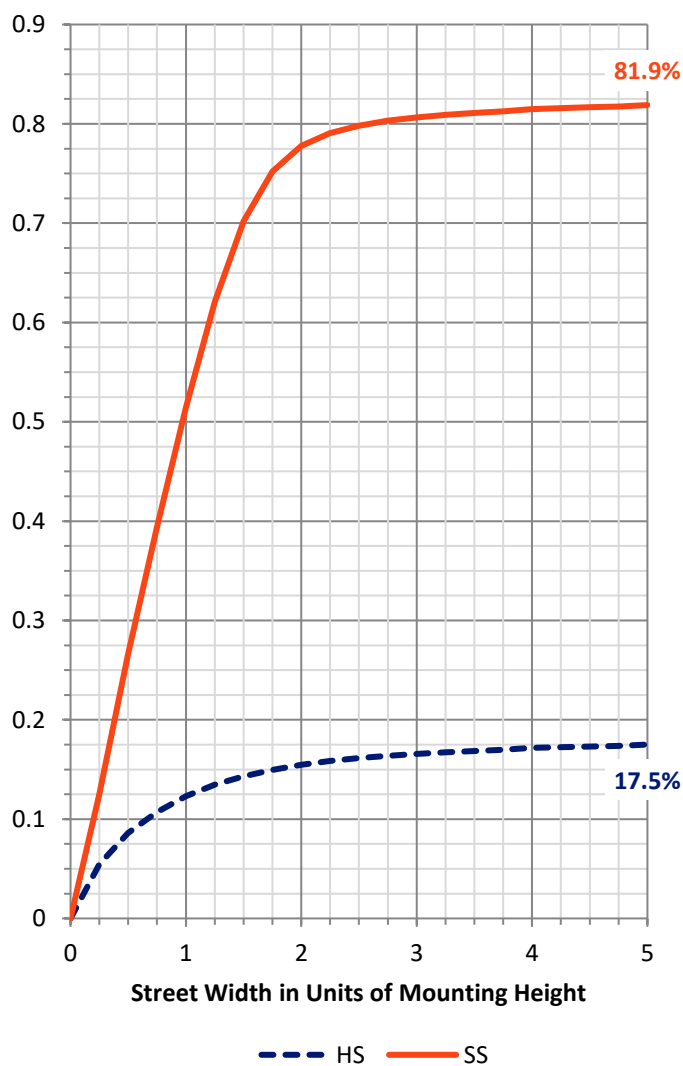
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	662.7	0.0	662.7
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	3050.3	0.0	3050.3
	% Fixture	82.2	0.0	82.2
Total	Lumens	3713.0	0.0	3713.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.4	0.6
10°-20°	103.1	2.8
20°-30°	198.4	5.3
30°-40°	334.2	9.0
40°-50°	578.2	15.6
50°-60°	873.0	23.5
60°-70°	967.0	26.0
70°-80°	557.5	15.0
80°-90°	78.2	2.1
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°	3713.0	100.0
0°-180°	3713.0	100.0

Coefficient of Utilization



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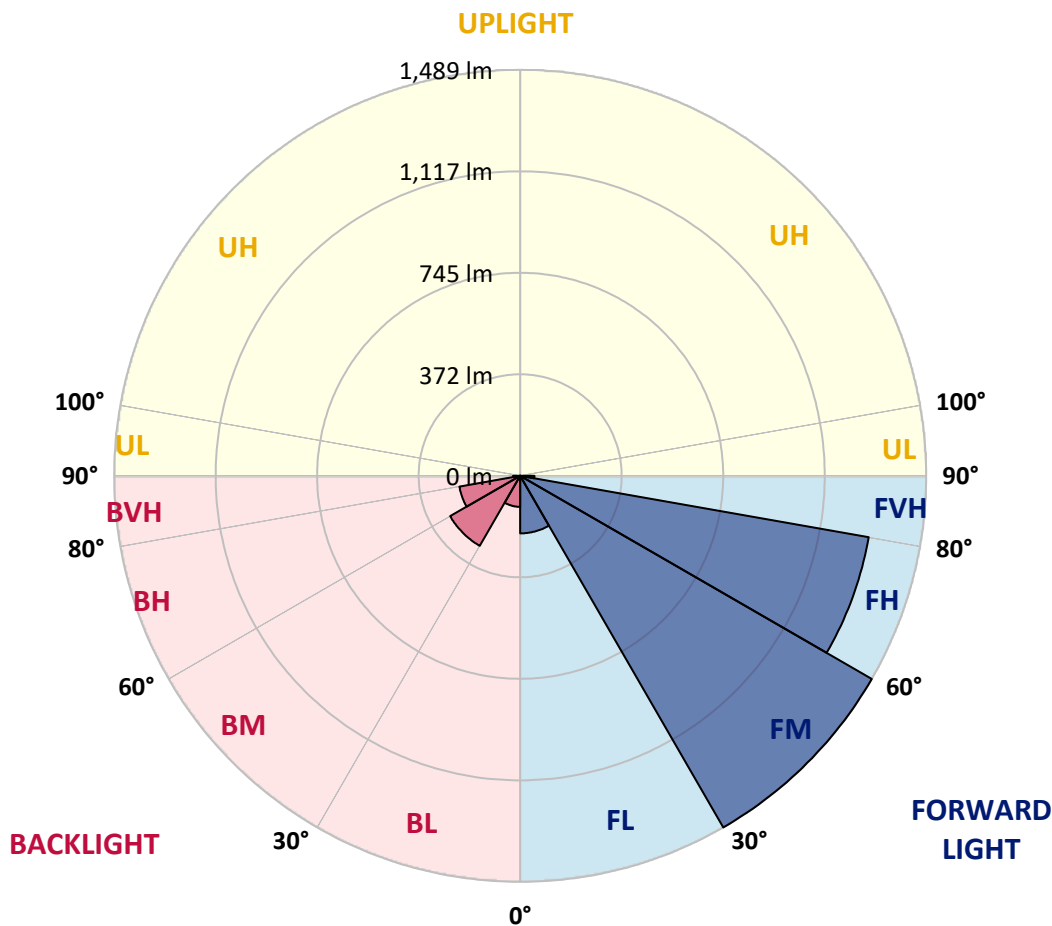
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	211.1	5.7			
FM (30°-60°)	1489.0	40.1			
FH (60°-80°)	1298.0	35.0			G1/1800
FVH (80°-90°)	52.2	1.4			G1/100
BL (0°-30°)	113.8	3.1	B1/500		
BM (30°-60°)	296.4	8.0	B1/1000		
BH (60°-80°)	226.5	6.1	B1/500		G1/500
BVH (80°-90°)	26.0	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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	151.4	151.4	151.4	151.4	151.4	151.4	151.4	151.4	151.4	151.4	151.4
2.5°	194.9	187.9	177.4	181.7	187.0	187.6	185.9	176.3	173.1	180.3	182.5
5°	273.0	261.3	254.2	251.8	243.9	227.5	239.3	233.3	234.5	230.9	237.9
7.5°	338.8	330.9	320.4	317.5	299.4	286.5	294.6	291.9	279.2	274.3	282.2
10°	372.3	363.6	364.1	357.7	352.9	354.2	350.1	338.5	329.1	322.4	303.4
12.5°	392.4	394.5	406.2	402.9	421.0	435.9	424.6	407.4	377.5	371.5	352.6
15°	440.2	448.3	437.4	442.4	450.1	478.6	474.0	470.2	438.7	426.9	392.1
17.5°	489.4	491.0	474.6	471.9	490.5	504.9	523.0	502.1	506.0	497.8	441.4
20°	500.0	510.6	487.1	470.9	509.1	537.6	560.0	537.9	558.3	560.5	482.2
22.5°	538.5	525.7	494.7	478.8	512.2	547.2	583.7	596.1	589.6	571.3	521.5
25°	565.3	558.5	526.9	509.2	521.9	554.1	618.2	650.6	656.3	653.8	558.9
27.5°	615.0	618.4	553.4	558.3	540.7	543.6	639.0	722.9	687.1	677.2	605.4
30°	693.4	678.3	605.4	609.4	580.1	575.2	682.8	785.2	753.2	741.3	643.6
32.5°	775.3	776.7	688.2	653.8	638.2	633.2	674.1	817.9	836.8	821.3	701.3
35°	890.8	882.7	778.0	732.8	676.3	667.6	735.9	912.6	947.3	904.0	769.9
37.5°	1066.6	1042.3	920.4	815.9	774.1	764.2	824.1	997.6	1075.6	1021.7	882.0
40°	1207.8	1158.4	1047.6	920.4	849.6	861.8	886.8	1100.7	1208.7	1178.4	985.7
42.5°	1320.3	1276.5	1137.7	1048.2	952.1	936.9	964.2	1228.4	1389.8	1360.1	1115.1
45°	1428.2	1339.1	1238.9	1158.4	1066.0	1084.4	1080.4	1358.7	1611.9	1520.5	1229.5
47.5°	1534.7	1451.0	1346.2	1238.0	1145.0	1259.6	1216.8	1455.6	1761.8	1694.0	1349.9
50°	1671.5	1579.4	1460.1	1351.3	1295.6	1379.5	1307.5	1537.6	1929.6	1850.0	1463.5
52.5°	1762.4	1672.8	1568.1	1490.4	1485.3	1453.0	1434.6	1641.5	2076.6	2028.3	1583.9
55°	1751.7	1665.3	1618.0	1626.5	1689.6	1580.5	1565.5	1795.2	2230.0	2174.1	1713.9
57.5°	1617.8	1523.6	1533.6	1584.1	1753.7	1804.5	1779.0	1959.4	2366.8	2341.4	1874.8
60°	1260.3	1211.8	1293.7	1386.0	1668.0	1870.1	2049.7	2159.7	2535.2	2575.8	2127.4
62.5°	818.7	754.0	883.4	1040.0	1412.1	1826.8	2325.4	2539.6	2811.1	2903.2	2511.2
65°	424.1	413.7	504.3	648.2	983.0	1557.6	2422.6	2938.0	3146.3	3253.6	2877.9
67.5°	308.3	289.1	331.1	415.8	600.1	1062.1	2238.4	3242.8	3415.5	3513.8	3091.1
70°	234.8	220.6	252.6	305.1	391.9	600.0	1652.3	3159.6	3519.4	3567.0	3062.8
72.5°	175.8	163.6	191.6	240.5	302.0	337.7	976.7	2597.9	3342.1	3358.4	2748.8
75°	140.4	130.9	143.0	189.9	246.1	229.9	518.8	1882.2	2715.4	2729.3	2099.7
77.5°	115.2	107.1	112.1	142.4	191.5	172.9	257.4	1197.3	1724.0	1702.6	1181.3
80°	94.0	87.0	89.3	102.9	145.8	129.1	144.6	624.6	822.4	789.3	491.3
82.5°	72.3	66.4	71.0	75.7	105.6	92.7	84.4	284.2	336.8	313.8	180.2
85°	48.4	43.0	61.8	56.8	69.0	57.0	46.1	113.1	125.5	117.0	63.3
87.5°	13.3	12.5	20.7	28.3	28.3	21.5	16.9	27.4	35.0	30.6	14.9
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°	151.4	151.4	151.4	151.4	151.4	151.4	151.4	151.4	151.4	151.4	151.4
2.5°	183.4	180.0	171.0	170.3	172.4	172.7	171.3	168.1	166.4	175.7	174.3
5°	236.2	224.1	216.9	210.2	200.9	194.3	196.0	200.6	202.2	209.1	209.9
7.5°	277.2	261.3	245.3	224.0	209.9	200.9	207.7	212.7	216.5	226.5	230.5
10°	295.0	277.7	255.1	232.6	228.8	230.3	226.5	227.7	233.7	234.2	236.2
12.5°	328.1	308.5	267.8	247.5	246.4	249.7	248.3	254.0	258.2	269.5	264.7
15°	359.9	334.8	277.4	256.6	252.1	258.6	266.2	275.8	284.8	295.5	290.1
17.5°	398.4	360.7	277.8	252.5	253.2	267.2	275.1	280.3	307.1	321.8	314.4
20°	422.7	363.3	267.5	242.1	253.2	265.8	276.8	282.5	312.5	334.6	339.8
22.5°	444.7	364.2	259.4	236.5	243.6	260.2	276.8	289.4	308.6	329.8	330.6
25°	456.8	363.4	249.1	237.0	243.5	251.7	266.4	278.0	292.2	321.8	322.6
27.5°	487.7	353.4	238.8	238.8	242.2	242.5	261.3	268.1	270.1	297.0	301.8
30°	496.7	355.5	237.6	238.5	240.2	237.1	245.3	249.8	252.8	276.0	276.8
32.5°	511.1	338.2	241.3	235.7	233.6	233.1	235.1	239.1	240.4	254.6	257.3
35°	528.6	331.2	242.5	235.0	230.6	228.3	234.3	229.4	233.3	250.0	251.8
37.5°	585.6	321.6	248.9	235.0	229.4	226.8	223.8	226.1	239.9	256.0	265.9
40°	621.9	324.6	247.3	237.3	225.2	222.7	217.8	226.3	247.7	276.1	283.6
42.5°	685.7	326.3	249.2	236.2	226.6	217.0	220.3	229.5	252.0	268.2	279.7
45°	751.6	331.6	248.0	233.0	223.5	228.0	223.5	231.9	242.5	243.0	251.7
47.5°	816.3	352.8	245.3	226.3	222.7	234.5	223.0	224.4	225.2	228.0	238.2
50°	892.3	375.4	241.6	217.0	223.8	234.8	224.7	217.9	217.2	226.3	237.8
52.5°	978.7	400.9	236.8	208.0	217.5	231.9	230.6	218.4	211.7	220.6	232.0
55°	1080.4	430.0	231.3	199.1	210.5	232.2	233.9	215.2	211.9	221.5	233.7
57.5°	1215.5	472.1	220.4	186.1	202.0	227.4	225.5	211.4	208.3	218.6	231.3
60°	1446.2	553.1	204.9	173.2	192.9	215.6	218.7	204.8	201.7	213.0	226.3
62.5°	1755.0	650.4	186.2	160.7	181.7	202.9	210.2	195.2	194.9	209.3	223.2
65°	2042.4	705.7	166.9	149.2	170.3	191.2	200.6	186.2	186.8	204.9	218.9
67.5°	2161.9	640.7	149.5	139.0	157.1	177.7	192.7	179.2	177.2	199.1	211.9
70°	2049.7	508.9	134.5	128.2	142.2	163.1	181.7	170.0	165.3	185.1	195.2
72.5°	1813.6	424.3	120.4	115.5	129.2	147.8	166.9	157.4	151.4	166.5	175.5
75°	1417.7	348.1	104.3	102.9	114.4	133.9	151.4	144.9	137.1	146.7	155.7
77.5°	807.2	220.3	87.6	88.5	96.7	117.3	132.8	127.7	119.8	123.8	134.2
80°	323.0	111.1	70.4	71.0	78.0	96.4	110.1	108.2	100.0	103.2	110.4
82.5°	120.7	61.0	52.0	52.3	59.3	76.3	94.0	93.0	85.3	83.0	87.0
85°	48.0	30.2	31.9	33.3	39.9	54.9	75.4	66.9	57.7	50.6	53.1
87.5°	11.5	9.6	11.1	11.8	13.0	17.2	27.6	22.1	22.8	18.3	13.6
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)