

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: P596848

Luminaire Tested: **MSA-SA1A-835-U-T4W**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596848
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1A-835-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3378 lumens
Efficiency: N/A
Efficacy: 99.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G1

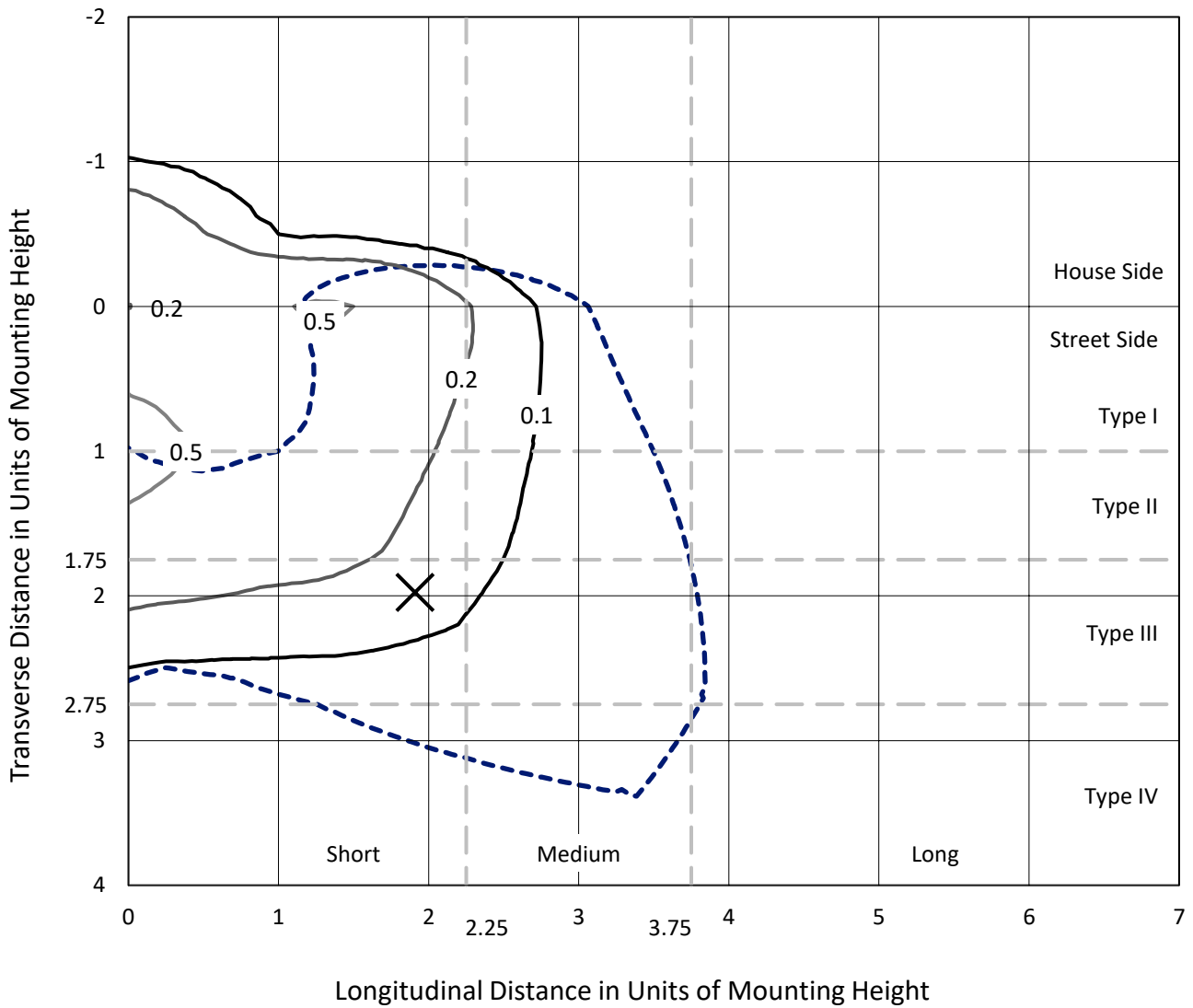
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

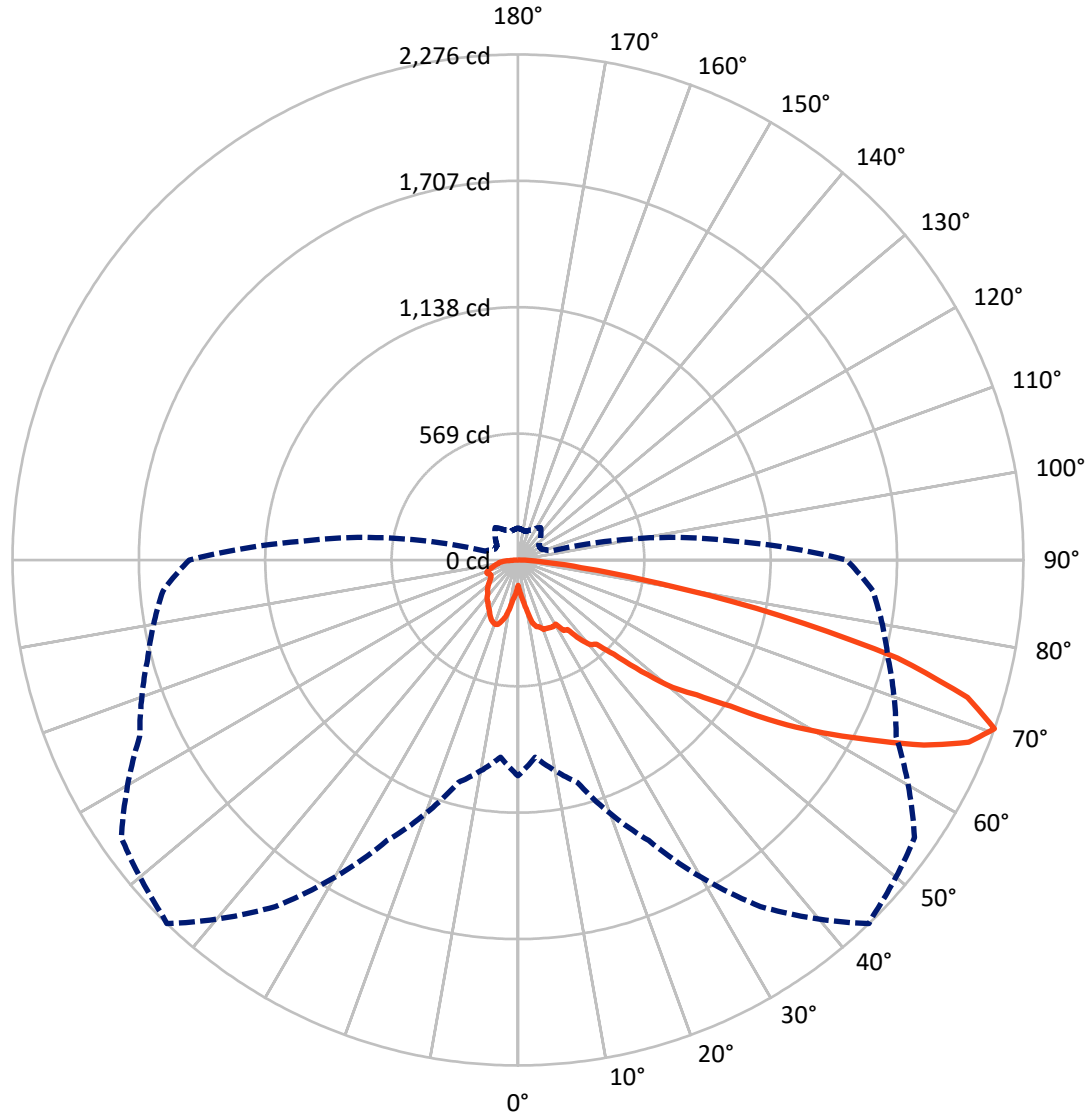
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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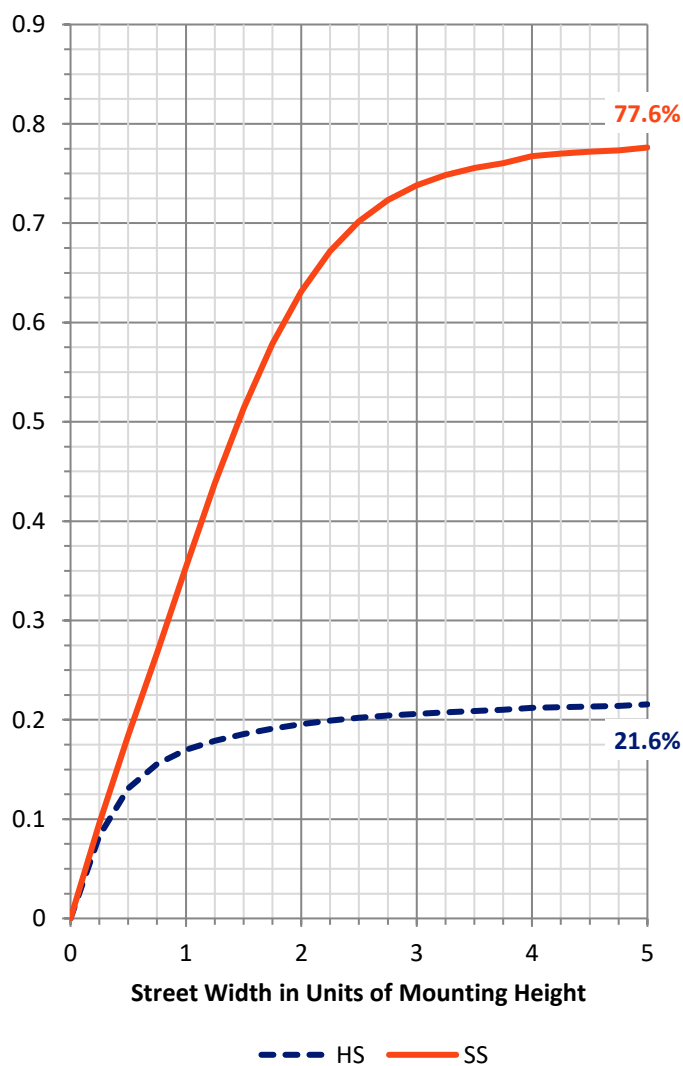
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	745.3	0.0	745.3
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	2632.7	0.0	2632.7
	% Fixture	77.9	0.0	77.9
Total	Lumens	3378.0	0.0	3378.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	18.0	0.5
10°-20°	82.9	2.5
20°-30°	154.9	4.6
30°-40°	248.7	7.4
40°-50°	419.7	12.4
50°-60°	748.0	22.1
60°-70°	1023.1	30.3
70°-80°	601.7	17.8
80°-90°	81.0	2.4
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°	3378.0	100.0
0°-180°	3378.0	100.0

Coefficient of Utilization



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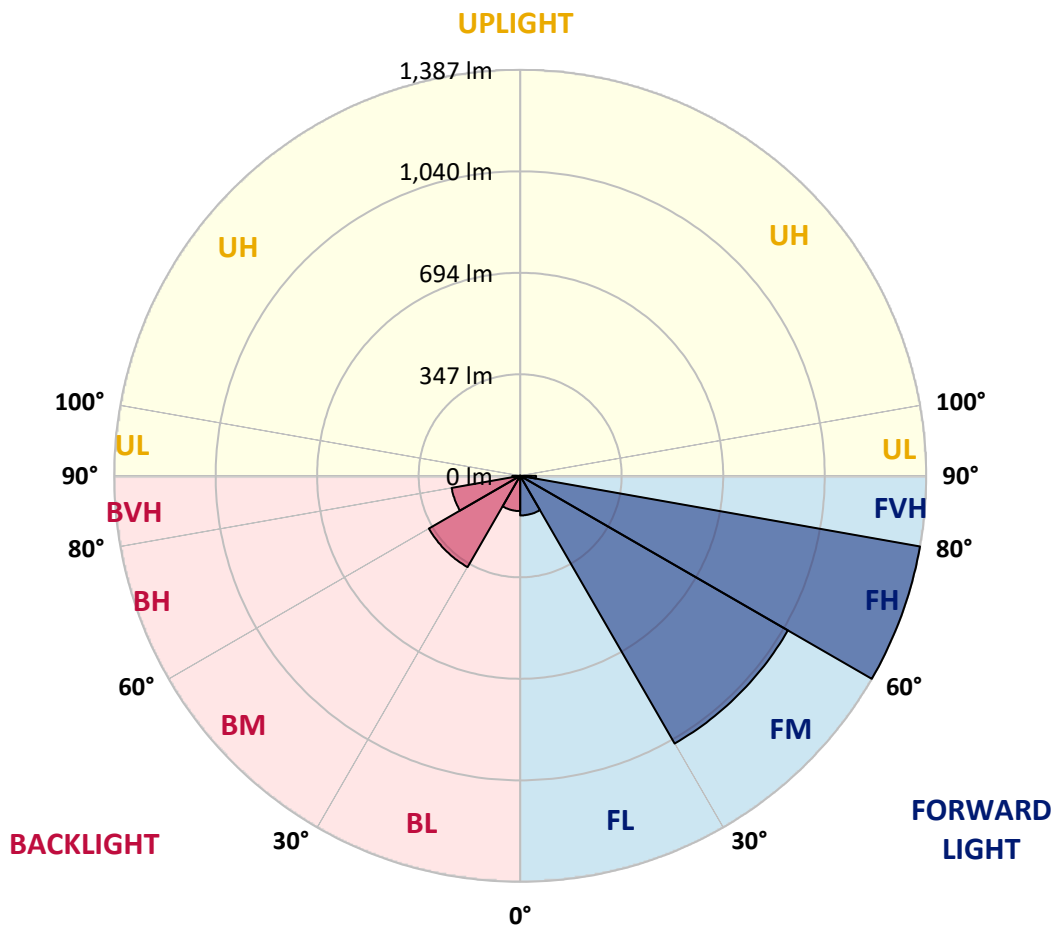
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	135.4	4.0			
FM (30°-60°)	1056.2	31.3			
FH (60°-80°)	1387.1	41.1			G1/1800
FVH (80°-90°)	54.0	1.6			G1/100
BL (0°-30°)	120.5	3.6	B1/500		
BM (30°-60°)	360.2	10.7	B1/1000		
BH (60°-80°)	237.7	7.0	B1/500		G1/500
BVH (80°-90°)	27.0	0.8			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8
2.5°	139.3	136.6	129.9	132.1	134.9	136.0	135.7	135.5	131.2	129.6	137.3
5°	189.3	183.2	178.4	176.5	170.1	165.1	162.1	170.1	168.8	170.9	176.2
7.5°	236.4	232.6	221.6	217.7	204.7	196.1	195.2	201.5	203.2	199.9	208.9
10°	266.8	260.1	257.9	248.6	239.6	238.2	237.4	234.5	230.5	230.2	222.2
12.5°	290.3	293.8	295.6	284.9	285.2	290.2	287.5	275.8	269.0	257.1	258.0
15°	332.6	337.5	323.3	316.5	303.5	310.9	310.0	300.1	299.2	291.4	282.4
17.5°	369.4	371.6	347.8	332.3	327.8	317.0	320.0	320.2	307.5	321.3	313.3
20°	372.4	380.3	352.9	322.0	335.3	333.9	334.4	331.6	314.8	337.7	334.6
22.5°	387.4	375.4	350.7	328.1	331.6	333.7	335.6	332.3	331.3	344.1	353.3
25°	384.6	380.8	355.8	336.7	337.1	337.5	338.5	348.5	347.4	364.7	369.5
27.5°	410.5	404.6	357.3	352.6	341.8	339.5	332.8	353.6	369.8	369.4	396.1
30°	459.8	453.8	392.8	379.1	359.6	335.5	348.2	375.9	388.7	392.9	426.9
32.5°	536.9	546.8	462.6	407.4	383.1	377.8	376.5	373.7	405.3	426.5	457.4
35°	647.4	639.5	544.9	467.9	407.9	385.3	388.4	405.3	442.8	456.5	485.1
37.5°	774.0	757.6	650.3	536.4	479.4	451.1	441.0	457.4	465.7	476.5	534.8
40°	902.7	862.8	753.8	626.6	522.3	501.0	492.1	472.0	491.6	513.4	587.5
42.5°	1026.9	996.0	866.4	734.2	594.6	518.6	513.7	494.1	554.6	577.7	663.7
45°	1157.1	1085.5	981.7	855.7	700.3	604.9	597.7	562.3	639.9	688.1	771.2
47.5°	1244.6	1178.3	1087.4	954.3	788.8	749.2	735.5	675.1	745.4	808.1	937.3
50°	1327.5	1259.2	1163.7	1062.2	949.1	903.5	874.3	773.7	876.9	978.8	1150.2
52.5°	1446.0	1384.9	1252.4	1170.9	1121.2	1009.2	987.4	932.2	1030.6	1168.2	1382.9
55°	1572.8	1489.5	1369.4	1324.3	1304.2	1160.7	1143.0	1107.8	1235.3	1361.9	1609.0
57.5°	1628.7	1541.9	1475.7	1448.6	1447.0	1380.9	1360.6	1336.0	1444.6	1528.2	1821.9
60°	1673.2	1580.0	1553.5	1568.6	1623.4	1580.0	1553.5	1531.9	1615.0	1692.4	1995.6
62.5°	1665.0	1571.5	1585.1	1631.1	1771.1	1783.8	1763.5	1711.1	1783.8	1827.1	2095.2
65°	1533.1	1446.7	1525.8	1634.9	1908.4	2010.2	2009.1	1872.1	1897.3	1897.3	2084.7
67.5°	1302.1	1212.6	1342.1	1600.7	2003.2	2189.5	2189.8	2042.7	1907.7	1890.2	1921.8
70°	972.3	891.3	1036.9	1394.1	1905.3	2276.4	2263.8	2180.4	1879.1	1726.6	1605.3
72.5°	580.8	528.4	662.3	1014.8	1625.2	2116.7	2150.2	2021.8	1720.3	1435.9	1147.5
75°	263.7	241.0	311.2	583.0	1160.3	1765.6	1802.0	1706.3	1366.4	1032.7	663.2
77.5°	112.9	106.8	135.9	258.6	639.8	1207.4	1282.0	1219.4	925.8	600.2	293.4
80°	72.6	68.7	83.5	124.4	297.1	652.4	716.6	693.2	471.6	233.4	103.3
82.5°	43.4	42.1	55.8	78.1	162.1	287.1	323.6	332.1	195.8	104.7	59.1
85°	23.7	24.0	30.6	47.4	97.2	111.8	119.7	130.2	92.2	60.7	28.7
87.5°	7.9	9.1	12.3	19.3	34.6	31.6	31.7	36.8	38.9	25.2	9.1
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°	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8	114.8
2.5°	138.5	136.0	129.6	130.1	132.4	133.0	133.7	129.6	128.8	136.4	137.1
5°	177.0	168.8	165.1	163.9	160.3	159.0	165.7	168.7	171.7	177.7	180.6
7.5°	207.9	198.8	192.0	185.7	180.5	177.4	188.6	197.2	202.5	214.7	220.2
10°	222.0	214.1	211.6	206.7	210.7	219.8	221.9	222.2	233.8	233.5	235.9
12.5°	250.1	245.0	236.8	238.6	249.2	258.6	256.0	260.0	264.1	274.1	269.5
15°	275.8	274.4	266.8	268.0	270.1	281.9	283.4	287.4	293.8	301.7	296.3
17.5°	307.3	306.8	288.2	286.6	291.4	302.9	299.3	292.3	313.3	321.8	319.5
20°	328.8	324.7	300.8	293.8	306.1	307.6	303.5	292.3	310.5	329.0	333.9
22.5°	346.7	341.8	317.3	303.5	301.0	301.7	301.7	299.6	308.6	323.7	323.6
25°	361.1	365.7	334.5	321.2	307.9	291.3	289.2	291.0	296.1	325.2	324.2
27.5°	397.2	384.6	340.3	330.3	303.1	276.9	282.6	285.3	287.0	318.8	324.1
30°	420.8	424.7	361.1	335.7	296.0	260.8	262.7	270.8	280.5	318.2	319.7
32.5°	452.5	444.2	393.5	326.7	277.2	251.1	247.5	258.3	272.7	306.9	311.1
35°	482.0	491.8	407.2	325.1	264.0	236.6	240.4	244.2	259.1	294.5	299.3
37.5°	551.3	528.8	445.7	317.0	253.1	229.2	225.1	230.8	243.5	270.8	282.0
40°	603.9	605.3	454.0	306.9	232.1	218.7	209.8	215.5	220.9	242.7	247.5
42.5°	702.6	672.5	474.4	284.8	219.0	202.9	197.9	200.4	201.3	210.4	218.4
45°	828.3	757.5	482.4	255.0	201.7	196.4	186.3	185.0	180.5	181.7	188.8
47.5°	1002.1	890.2	476.6	223.3	186.3	188.0	173.4	167.7	161.4	162.9	169.5
50°	1226.9	1059.7	476.2	196.4	175.8	176.9	165.0	154.7	148.3	151.5	157.3
52.5°	1479.1	1229.8	478.1	178.0	164.3	163.7	159.4	147.0	141.8	145.2	151.8
55°	1720.4	1376.1	492.5	166.3	152.4	153.3	155.0	144.5	138.8	141.8	148.8
57.5°	1930.4	1491.6	487.1	154.0	141.3	145.7	150.1	141.0	136.7	141.1	148.1
60°	2077.2	1545.2	444.5	142.2	133.1	139.2	147.8	140.6	140.0	149.6	157.9
62.5°	2130.8	1525.4	361.4	133.0	128.3	138.4	153.2	149.7	150.3	162.1	173.5
65°	2052.5	1421.2	269.5	127.0	124.5	142.4	165.7	155.1	147.5	157.2	167.7
67.5°	1830.0	1236.0	197.0	121.9	120.2	148.8	177.2	154.6	140.4	150.3	158.9
70°	1480.5	975.6	152.5	115.4	114.5	144.5	178.3	150.4	132.8	139.2	144.0
72.5°	1014.4	668.0	126.3	109.1	104.7	128.0	169.3	141.1	123.7	127.4	131.4
75°	566.9	374.9	106.2	101.4	91.7	114.0	158.7	135.6	116.9	118.0	123.5
77.5°	254.4	162.2	90.2	91.1	79.9	100.8	145.0	126.7	106.5	104.0	109.6
80°	96.3	79.1	73.1	77.0	67.2	87.4	130.8	118.7	95.6	92.4	95.6
82.5°	55.8	47.9	54.3	59.3	53.3	80.3	124.8	111.4	84.2	76.2	78.9
85°	25.9	24.8	32.5	38.5	37.3	62.6	106.8	83.8	60.0	50.7	56.1
87.5°	6.8	7.6	11.5	13.6	13.9	21.5	41.1	31.2	23.4	17.7	17.0
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)