

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: P596844

Luminaire Tested: **MSA-SA1A-835-U-T3**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596844  
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-SA1A-835-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: 3327 lumens  
Efficiency: N/A  
Efficacy: 97.9 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

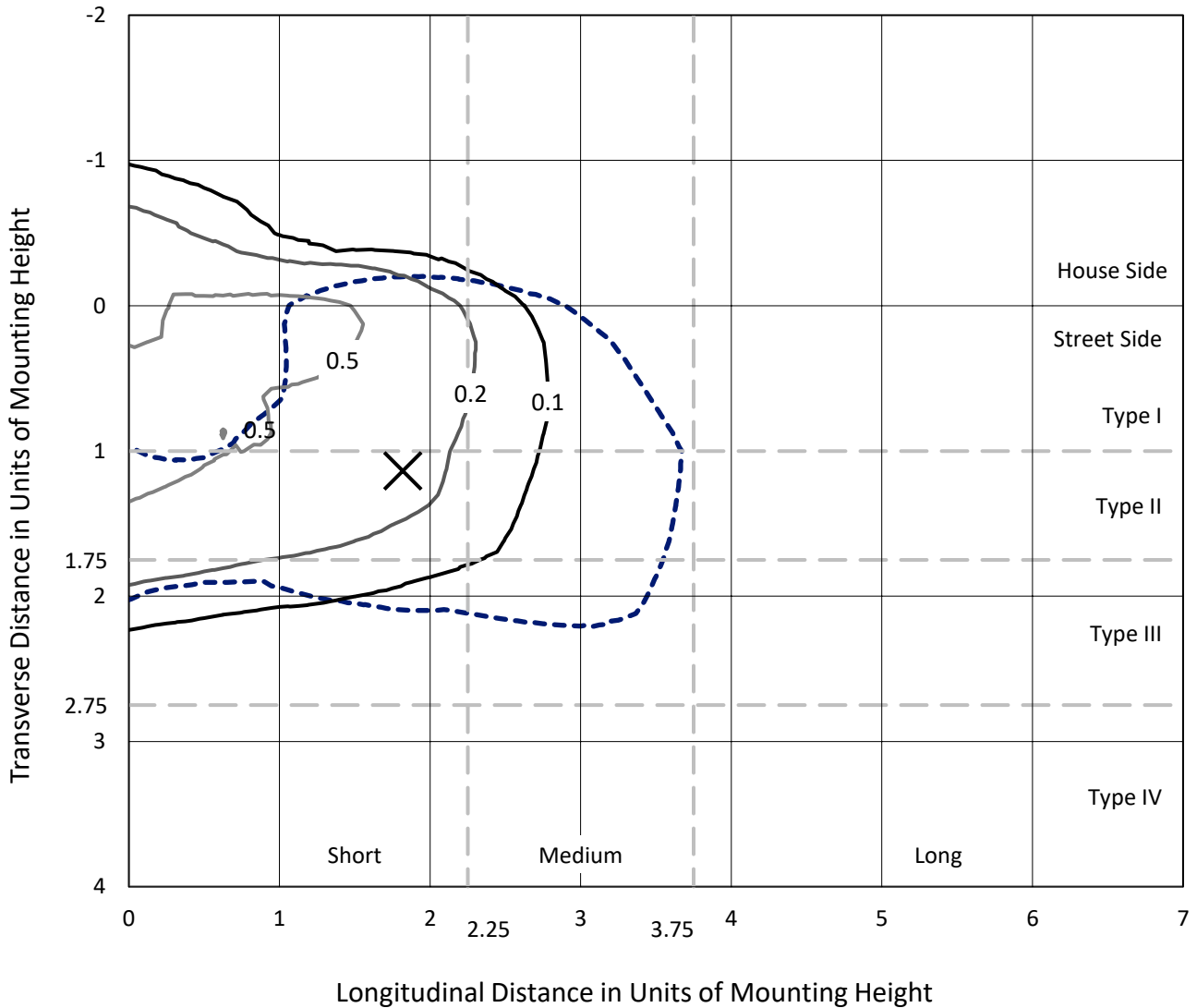
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

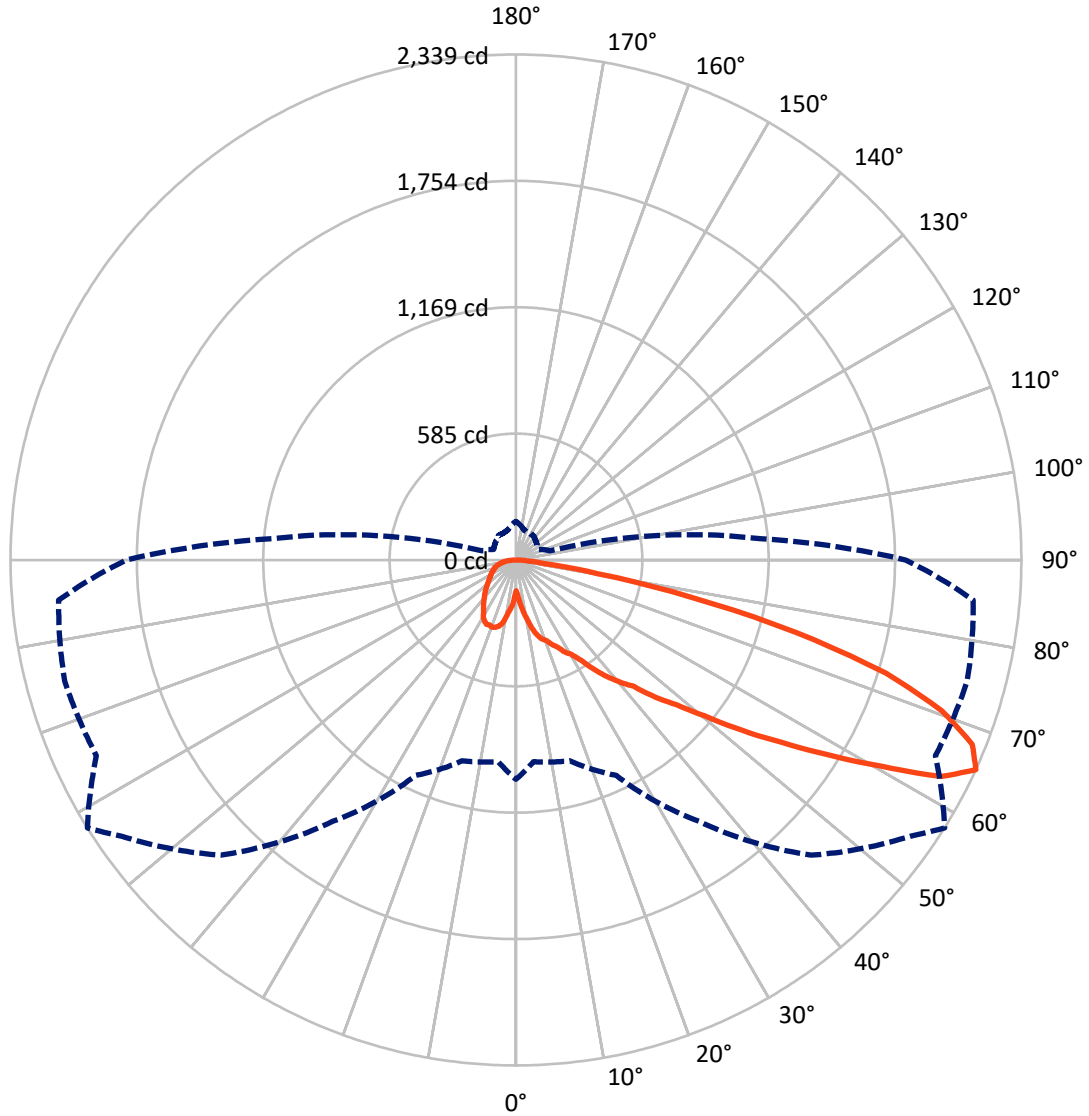
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.7 fc  
 Type 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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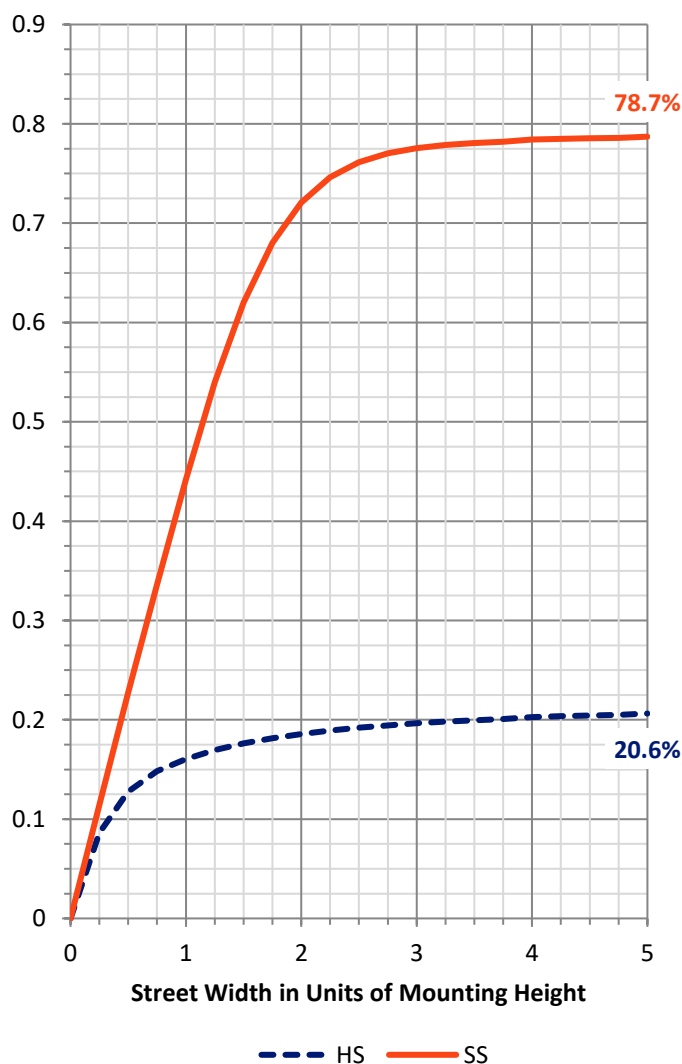
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	700.8	0.0	700.8
	% Fixture	21.1	0.0	21.1
<b>Street Side</b>	Lumens	2626.2	0.0	2626.2
	% Fixture	78.9	0.0	78.9
<b>Total</b>	Lumens	3327.0	0.0	3327.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	21.8	0.7
10°-20°	94.9	2.9
20°-30°	182.2	5.5
30°-40°	300.8	9.0
40°-50°	500.0	15.0
50°-60°	825.7	24.8
60°-70°	926.2	27.8
70°-80°	421.1	12.7
80°-90°	54.3	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°	3327.0	100.0
0°-180°	3327.0	100.0

**Coefficient of Utilization**



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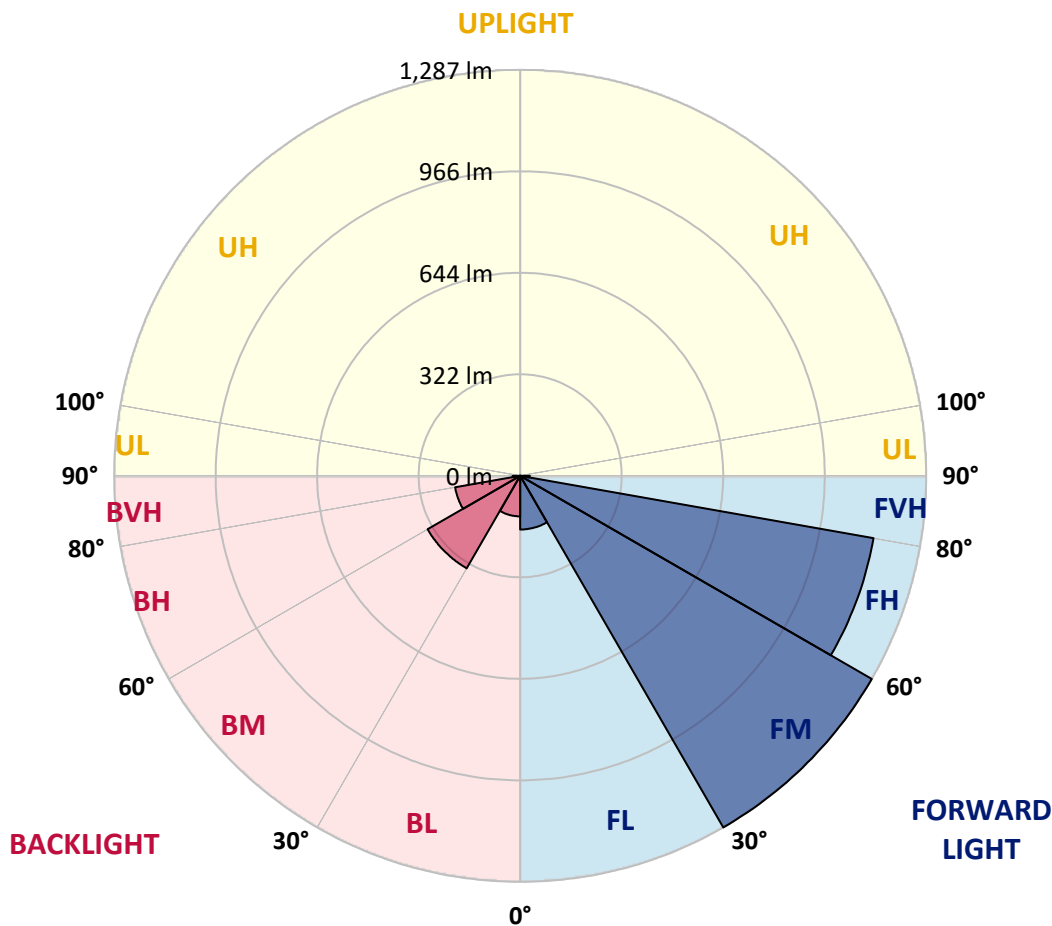
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	170.3	5.1			
FM (30°-60°)	1287.5	38.7			
FH (60°-80°)	1137.9	34.2			G1/1800
FVH (80°-90°)	30.6	0.9			G1/100
BL (0°-30°)	128.6	3.9	B1/500		
BM (30°-60°)	338.9	10.2	B1/1000		
BH (60°-80°)	209.5	6.3	B1/500		G1/500
BVH (80°-90°)	23.7	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°	142.8	142.8	142.8	142.8	142.8	142.8	142.8	142.8	142.8	142.8	142.8
2.5°	170.6	165.4	156.8	158.9	163.9	166.7	165.0	162.8	159.9	159.3	172.1
5°	220.9	211.0	207.0	205.3	199.2	195.6	201.9	201.0	204.4	210.5	222.9
7.5°	257.6	250.6	244.0	243.3	231.5	227.4	235.7	240.1	246.1	246.2	263.1
10°	277.2	271.3	271.1	264.9	263.9	271.8	272.0	275.3	276.0	283.1	279.7
12.5°	298.6	298.2	305.8	305.6	314.5	327.5	321.0	321.0	323.0	314.4	324.9
15°	349.4	353.9	339.6	341.9	341.9	354.7	354.3	356.8	362.7	360.5	355.8
17.5°	402.4	405.1	389.3	374.6	375.8	373.0	383.0	383.9	378.2	404.0	398.3
20°	436.4	447.2	414.0	395.6	399.2	402.4	402.8	396.8	393.9	433.5	425.8
22.5°	478.6	469.4	438.9	418.6	424.0	419.7	418.8	423.4	427.4	442.4	455.0
25°	506.7	506.0	469.4	447.1	441.1	439.9	448.4	446.6	456.1	483.3	475.4
27.5°	547.6	560.3	495.5	501.0	474.8	447.2	474.4	482.6	499.8	495.3	512.9
30°	626.8	617.2	549.5	548.0	518.3	495.2	514.0	507.1	538.0	537.0	550.0
32.5°	691.5	698.2	613.0	597.0	575.0	547.1	534.7	553.9	570.6	597.8	605.2
35°	760.0	758.4	677.9	645.8	609.3	597.8	613.2	621.3	656.6	681.7	664.2
37.5°	866.4	854.3	762.2	701.3	674.1	669.9	696.2	684.6	722.8	728.8	738.6
40°	965.3	929.0	839.2	769.5	726.1	741.7	742.5	744.0	764.5	780.7	829.4
42.5°	1059.4	1033.9	917.5	865.1	801.2	786.1	795.6	798.7	850.6	883.7	951.0
45°	1187.9	1119.6	1030.0	976.2	904.7	885.5	878.8	906.3	956.3	1031.7	1089.4
47.5°	1296.7	1235.0	1149.6	1078.8	998.8	1053.8	1016.1	1000.8	1068.0	1161.3	1253.3
50°	1386.9	1319.0	1235.2	1194.3	1181.6	1230.6	1132.8	1134.6	1196.1	1327.9	1433.3
52.5°	1456.7	1384.3	1310.0	1289.2	1360.4	1388.7	1318.0	1307.4	1352.3	1508.0	1634.6
55°	1522.0	1445.1	1387.7	1430.1	1550.1	1553.3	1548.3	1489.1	1543.2	1701.0	1843.0
57.5°	1538.7	1455.9	1417.8	1478.6	1640.9	1767.1	1816.7	1700.6	1755.6	1876.5	2021.5
60°	1452.4	1381.5	1366.3	1448.8	1689.9	1874.5	2004.0	1934.6	1913.9	2017.4	2146.4
62.5°	1275.6	1193.3	1205.7	1320.4	1638.2	1917.0	2152.0	2206.1	2081.2	2129.5	2201.0
65°	1015.3	936.7	961.7	1099.7	1476.0	1931.1	2227.6	2338.7	2141.6	2161.3	2123.7
67.5°	716.0	644.7	676.1	854.6	1227.8	1750.2	2240.6	2276.9	2077.3	2070.8	1912.6
70°	405.7	360.9	395.0	543.8	866.6	1394.2	2138.5	2090.7	1962.0	1869.7	1600.3
72.5°	186.1	170.7	187.0	276.8	498.9	927.7	1745.9	1789.2	1690.6	1575.2	1217.4
75°	98.9	93.5	100.4	138.3	233.5	504.7	1240.4	1338.0	1285.5	1194.7	794.2
77.5°	73.6	69.4	72.7	89.6	124.7	197.4	704.8	827.8	847.8	764.2	441.0
80°	56.4	53.1	56.4	67.8	86.3	93.8	301.3	385.9	439.5	355.1	175.3
82.5°	41.8	39.6	44.8	50.8	60.7	58.6	107.0	133.1	171.7	117.4	68.3
85°	33.3	30.5	32.4	34.5	38.8	32.1	48.9	54.7	57.9	48.5	25.2
87.5°	13.0	12.1	23.6	18.6	15.8	9.7	14.7	16.6	17.0	16.3	7.3
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°	142.8	142.8	142.8	142.8	142.8	142.8	142.8	142.8	142.8	142.8	142.8
2.5°	173.5	172.1	163.9	166.5	170.8	171.7	173.5	168.5	166.0	175.1	175.5
5°	224.0	216.6	212.7	213.1	210.3	206.0	212.5	216.8	218.5	225.3	227.8
7.5°	263.2	254.2	247.7	240.2	229.7	222.9	234.3	242.6	247.0	261.2	266.7
10°	280.7	273.5	272.1	262.7	262.4	262.3	261.7	258.8	268.4	267.0	270.9
12.5°	316.7	315.2	302.0	298.3	298.7	298.3	286.7	286.1	286.2	299.0	294.4
15°	350.3	350.5	338.5	324.9	312.7	309.0	304.4	302.3	305.4	312.6	308.1
17.5°	391.7	393.1	358.6	337.1	321.0	320.6	309.7	296.8	315.3	319.8	314.9
20°	418.4	412.6	370.2	334.2	329.6	317.1	303.6	285.8	301.9	312.7	315.8
22.5°	443.8	433.7	381.0	339.3	317.4	302.6	289.4	277.9	283.1	295.1	293.2
25°	461.0	458.2	396.0	351.6	317.0	284.0	266.3	259.0	261.6	280.3	278.5
27.5°	502.0	472.0	393.3	354.8	303.7	258.7	249.8	241.9	239.3	259.5	265.0
30°	529.4	517.1	410.9	349.8	286.9	237.9	224.9	223.2	224.0	247.0	248.6
32.5°	576.0	544.0	439.8	330.7	262.6	222.5	207.5	208.2	212.0	228.7	232.2
35°	624.4	605.3	443.6	317.0	242.7	206.2	200.1	195.2	197.3	212.0	212.7
37.5°	714.5	648.4	467.5	295.8	228.2	199.9	188.3	184.0	185.1	193.4	199.4
40°	793.8	735.0	456.4	275.3	210.2	191.6	177.1	173.9	170.6	178.7	182.5
42.5°	920.8	796.8	452.6	252.7	201.7	180.4	170.4	162.0	158.8	165.7	172.5
45°	1047.9	862.3	432.3	229.9	189.8	179.6	160.7	152.7	153.5	159.7	166.7
47.5°	1189.5	950.3	397.8	207.7	176.8	175.5	151.0	147.6	150.1	157.0	163.9
50°	1356.8	1043.7	369.2	187.7	167.5	163.5	149.8	145.6	148.0	156.1	162.9
52.5°	1539.9	1146.1	348.5	169.3	157.0	153.9	151.4	147.4	150.2	157.3	164.3
55°	1721.8	1239.6	334.3	156.7	148.0	149.9	154.9	152.0	153.4	158.6	165.7
57.5°	1856.7	1288.9	305.9	143.3	140.6	147.6	155.3	150.5	151.3	158.6	166.3
60°	1935.1	1298.4	259.2	132.3	134.8	142.8	151.0	144.8	144.2	156.3	165.8
62.5°	1926.6	1243.6	205.6	122.3	128.2	135.8	144.5	138.6	140.1	156.6	166.7
65°	1803.5	1131.8	163.5	113.9	120.1	128.0	139.1	136.7	144.1	167.6	178.6
67.5°	1587.4	968.5	131.3	106.0	112.6	122.8	142.8	149.1	152.3	179.0	190.2
70°	1286.4	752.5	109.5	99.1	106.7	125.3	153.7	152.4	149.8	173.6	182.5
72.5°	929.4	515.8	96.3	92.3	99.3	117.8	153.9	147.3	144.0	158.5	164.9
75°	581.5	307.7	84.1	83.7	88.1	105.6	147.0	141.0	132.0	139.2	147.6
77.5°	332.1	157.5	70.8	74.5	77.2	91.6	131.6	126.2	118.2	121.2	129.4
80°	126.8	76.2	59.7	66.2	65.5	77.6	111.5	110.3	101.1	102.1	107.1
82.5°	59.7	42.7	49.6	56.9	53.2	61.8	90.6	90.2	82.2	74.4	78.4
85°	22.2	22.7	36.3	43.4	37.0	39.9	65.5	63.7	56.0	47.2	52.2
87.5°	5.0	8.2	17.9	22.6	12.9	12.3	26.5	23.0	22.2	13.2	13.9
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)