

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: P596846

Luminaire Tested: **MSA-SA1A-835-U-T4FT**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596846  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1A-835-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**

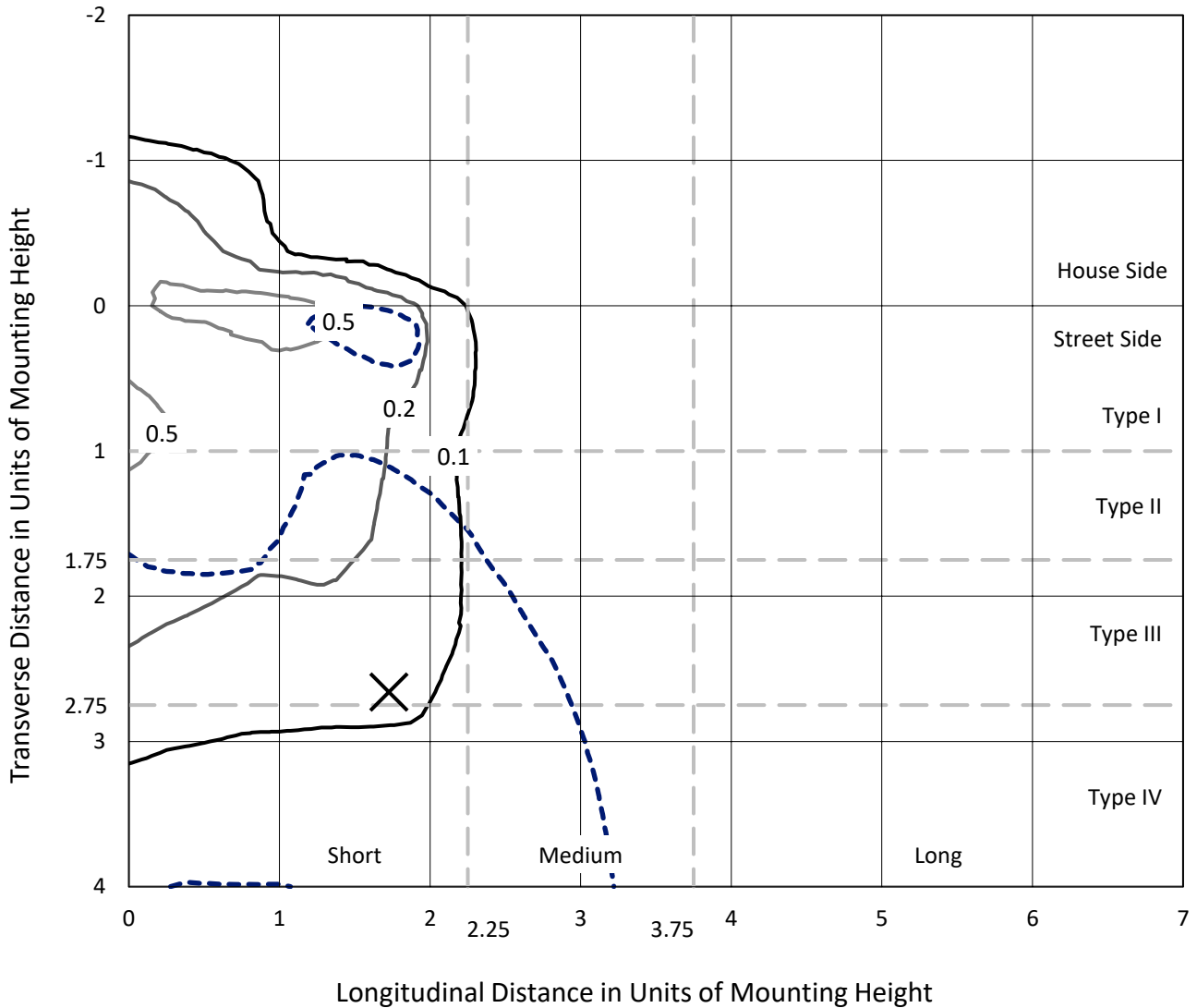
Lumens per Lamp: N/A  
Luminaire Lumens: 3339 lumens  
Efficiency: N/A  
Efficacy: 98.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

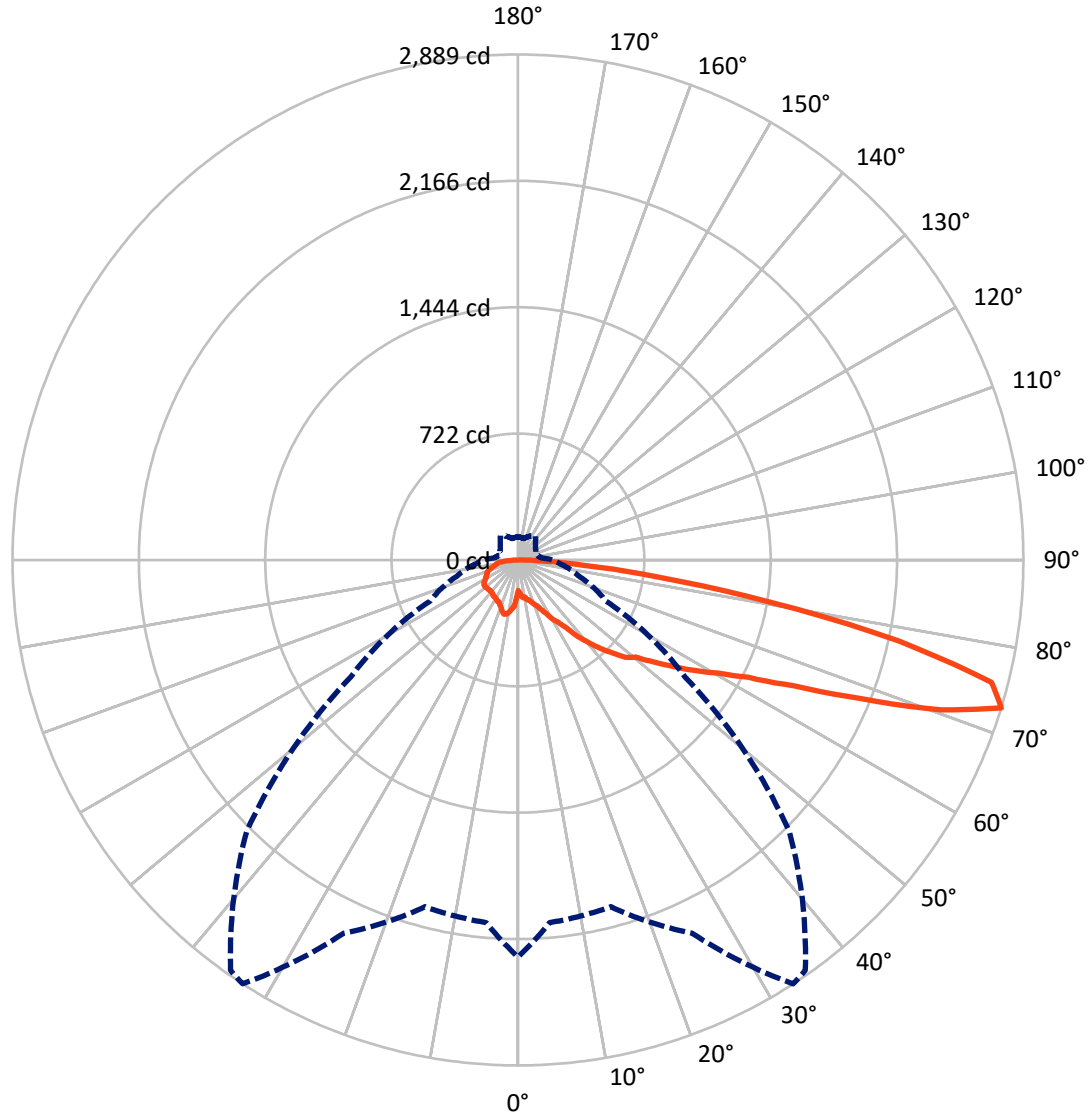
× Max cd  
 - - - 1/2 Max cd



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 33-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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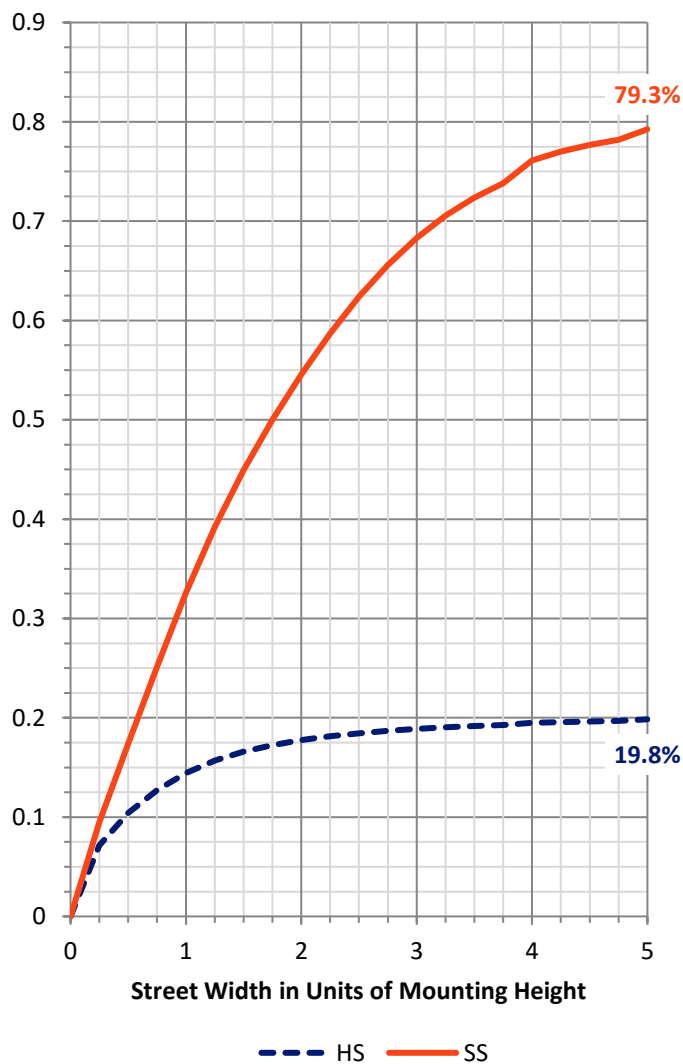
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	675.5	0.0	675.5
	% Fixture	20.2	0.0	20.2
<b>Street Side</b>	Lumens	2663.5	0.0	2663.5
	% Fixture	79.8	0.0	79.8
<b>Total</b>	Lumens	3339.0	0.0	3339.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.1	0.7
10°-20°	89.0	2.7
20°-30°	162.2	4.9
30°-40°	274.5	8.2
40°-50°	456.6	13.7
50°-60°	670.1	20.1
60°-70°	857.2	25.7
70°-80°	697.4	20.9
80°-90°	108.0	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°	3339.0	100.0
0°-180°	3339.0	100.0

**Coefficient of Utilization**

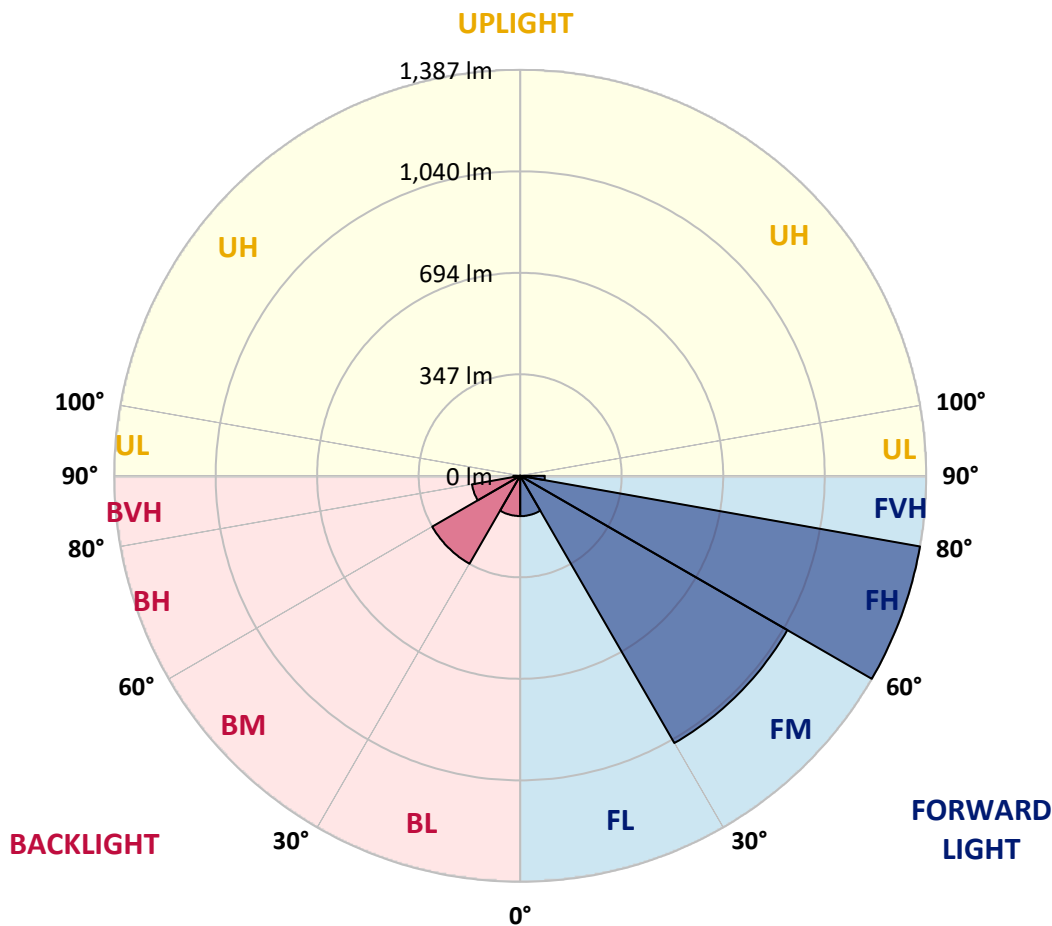


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	137.8	4.1			
FM (30°-60°)	1054.2	31.6			
FH (60°-80°)	1387.2	41.5			G1/1800
FVH (80°-90°)	84.3	2.5			G1/100
BL (0°-30°)	137.5	4.1	B1/500		
BM (30°-60°)	346.9	10.4	B1/1000		
BH (60°-80°)	167.4	5.0	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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	175.1	175.1	175.1	175.1	175.1	175.1	175.1	175.1	175.1	175.1	175.1
2.5°	198.5	192.3	182.0	181.7	187.4	188.7	192.4	192.7	194.1	191.8	207.6
5°	219.0	212.3	208.3	209.7	207.1	210.3	210.3	219.4	231.6	245.7	265.8
7.5°	223.8	219.0	214.4	217.9	218.4	215.4	218.3	239.8	261.8	275.9	308.1
10°	214.1	209.3	212.8	213.9	213.7	220.7	235.8	252.9	277.4	303.5	320.8
12.5°	212.3	215.8	217.5	219.4	232.6	234.6	257.5	275.2	299.9	322.7	367.8
15°	239.1	243.6	233.4	232.7	237.0	238.9	262.6	280.5	316.5	354.9	395.3
17.5°	277.2	278.8	260.4	251.0	254.2	255.7	266.1	288.5	310.7	381.6	432.0
20°	314.0	315.1	280.5	259.4	270.7	272.3	282.0	294.9	312.4	396.6	456.8
22.5°	352.7	345.6	307.6	281.0	287.6	288.0	293.7	300.7	325.5	394.2	487.0
25°	394.9	390.5	342.7	317.2	316.9	311.2	311.5	321.6	339.5	419.4	506.8
27.5°	451.0	451.6	382.2	368.5	347.0	343.2	324.5	343.4	363.7	419.7	549.6
30°	523.7	510.3	437.2	415.0	393.8	385.9	360.6	376.6	385.5	443.7	596.2
32.5°	582.9	579.0	494.5	461.0	426.4	435.5	407.5	393.4	409.3	484.9	666.7
35°	639.5	626.8	555.2	511.5	475.1	469.6	451.4	453.8	463.5	537.2	758.8
37.5°	724.0	717.1	641.1	571.2	554.2	531.6	520.1	527.5	519.9	604.1	896.9
40°	818.5	778.3	712.8	650.6	618.8	602.8	606.8	599.9	594.1	679.1	1020.7
42.5°	908.9	872.4	760.5	732.5	690.9	697.6	675.5	680.4	696.9	785.7	1135.3
45°	1007.4	928.3	811.0	786.4	756.6	765.0	782.6	777.4	804.4	911.3	1243.2
47.5°	1056.6	981.4	873.1	832.9	832.5	814.9	922.0	933.6	891.4	1004.4	1352.7
50°	1104.0	1030.0	919.2	892.0	872.4	910.0	1055.6	1028.9	970.0	1111.2	1473.3
52.5°	1169.9	1085.5	972.1	943.2	967.5	1002.4	1162.3	1157.0	1047.2	1221.0	1578.0
55°	1220.2	1135.0	1051.8	1024.9	1071.4	1105.6	1270.9	1239.2	1113.3	1301.6	1644.3
57.5°	1308.3	1220.9	1169.4	1109.7	1193.3	1192.8	1375.6	1351.1	1183.9	1367.8	1671.1
60°	1448.3	1345.7	1291.8	1223.0	1312.6	1344.6	1495.3	1424.6	1233.9	1409.7	1622.9
62.5°	1644.9	1523.0	1435.6	1367.4	1476.7	1534.6	1643.1	1478.2	1237.1	1397.8	1496.1
65°	1888.0	1739.8	1625.2	1553.2	1733.5	1816.2	1821.8	1511.3	1207.7	1274.6	1229.6
67.5°	2125.1	1958.5	1838.9	1852.7	2116.0	2155.2	2015.4	1539.1	1050.0	1023.5	853.8
70°	2281.2	2100.6	2020.9	2166.4	2566.4	2526.3	2172.3	1466.1	826.8	663.5	480.8
72.5°	2269.4	2080.4	2051.7	2352.8	2888.6	2863.5	2191.5	1165.9	553.8	362.8	239.8
75°	1848.9	1701.9	1767.0	2227.3	2795.8	2794.6	1902.7	721.7	284.1	186.3	151.5
77.5°	1022.2	965.2	1156.5	1686.4	2226.1	2237.4	1285.6	327.3	153.2	132.0	114.1
80°	358.1	352.8	501.2	910.0	1464.4	1467.2	597.8	149.7	111.4	99.9	83.8
82.5°	130.9	129.8	207.8	422.8	806.3	804.5	226.8	93.2	82.6	70.6	55.3
85°	52.2	51.1	95.0	187.7	370.4	364.4	88.1	52.9	54.0	42.1	27.1
87.5°	14.4	15.0	32.3	58.7	113.4	105.1	22.2	17.9	21.9	17.2	8.6
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°	175.1	175.1	175.1	175.1	175.1	175.1	175.1	175.1	175.1	175.1	175.1
2.5°	210.4	211.8	198.1	202.9	209.2	212.5	214.1	207.1	209.4	219.4	219.0
5°	270.0	264.4	259.2	264.6	261.0	255.8	264.1	263.7	269.1	274.5	275.8
7.5°	314.4	307.2	304.7	292.5	280.4	268.0	278.7	285.3	286.7	300.2	305.8
10°	330.5	327.7	328.7	312.6	311.1	312.4	302.5	291.9	298.4	292.8	297.0
12.5°	367.6	374.5	357.4	346.4	345.5	337.8	318.2	311.2	303.9	311.5	307.6
15°	397.4	410.3	391.9	372.6	350.9	339.1	322.3	311.8	307.0	308.6	303.9
17.5°	441.0	453.1	406.3	376.8	354.3	337.0	311.4	288.9	300.9	301.8	296.4
20°	470.0	470.8	411.1	366.5	346.3	316.2	291.3	271.6	285.3	299.3	305.4
22.5°	498.2	492.0	417.1	358.3	317.1	288.0	275.8	274.5	284.8	296.6	297.9
25°	519.4	520.4	420.5	355.3	299.9	260.3	260.3	269.3	278.3	306.3	304.9
27.5°	570.8	533.0	407.1	341.3	276.1	244.1	260.4	272.5	276.8	307.1	310.1
30°	608.2	583.6	409.9	317.3	252.0	236.4	249.9	265.0	276.9	311.9	310.8
32.5°	671.0	604.6	416.4	283.7	234.0	233.5	245.5	261.4	275.6	306.7	308.3
35°	740.4	666.7	398.2	258.1	229.7	231.9	247.3	253.6	270.4	304.6	306.1
37.5°	868.8	699.1	386.7	238.2	226.9	233.3	239.1	248.9	265.8	294.2	304.2
40°	944.1	765.9	344.1	226.8	221.1	232.2	235.1	243.4	252.5	281.7	288.1
42.5°	1043.3	786.9	307.6	214.0	218.2	227.6	236.3	238.4	244.5	262.1	273.7
45°	1126.0	802.7	269.0	203.8	208.3	237.7	238.2	237.3	236.2	242.7	252.2
47.5°	1211.6	845.1	233.4	192.4	204.6	246.0	239.2	230.4	225.8	226.6	235.5
50°	1306.1	875.8	208.2	183.1	205.4	246.0	243.9	223.3	214.1	211.8	221.1
52.5°	1389.2	879.4	189.1	175.6	202.0	237.6	247.1	218.9	203.5	197.8	206.5
55°	1434.5	833.9	175.2	168.9	193.1	229.9	245.5	216.4	190.6	186.3	194.1
57.5°	1433.5	758.2	163.4	159.4	183.0	219.3	236.2	202.8	182.7	180.2	187.8
60°	1381.8	669.6	154.4	151.7	172.6	203.8	219.5	193.9	175.1	173.8	182.1
62.5°	1264.7	578.0	145.7	143.5	162.9	192.8	211.7	184.1	167.2	167.1	174.9
65°	1035.7	464.0	137.5	137.0	153.9	182.0	204.2	175.8	159.0	161.8	169.8
67.5°	713.6	326.1	128.8	130.5	145.6	171.6	198.5	170.2	150.4	156.1	163.3
70°	391.6	201.7	119.1	122.4	135.1	159.6	189.6	161.2	139.2	147.9	152.9
72.5°	199.2	134.5	107.1	112.3	122.2	141.8	173.0	148.2	127.2	130.5	133.1
75°	133.8	101.3	93.6	99.5	106.5	124.9	153.5	136.0	115.7	115.2	118.2
77.5°	101.1	79.1	79.5	86.2	90.7	109.8	138.0	125.8	106.0	105.0	109.3
80°	74.0	60.0	64.0	70.9	75.1	98.6	127.9	114.4	92.8	88.9	92.5
82.5°	49.0	42.5	47.4	54.3	57.6	82.4	116.1	97.1	75.6	65.8	66.3
85°	23.1	22.3	28.3	31.6	35.9	51.1	86.8	67.2	48.2	39.9	41.7
87.5°	5.3	7.1	9.3	9.1	10.7	13.7	27.0	18.8	14.0	9.6	6.4
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)