

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: P596968

Luminaire Tested: **MSA-SA2C-835-U-SL4**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596968  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2C-835-U-SL4  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9906 lumens  
Efficiency: N/A  
Efficacy: 87.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3

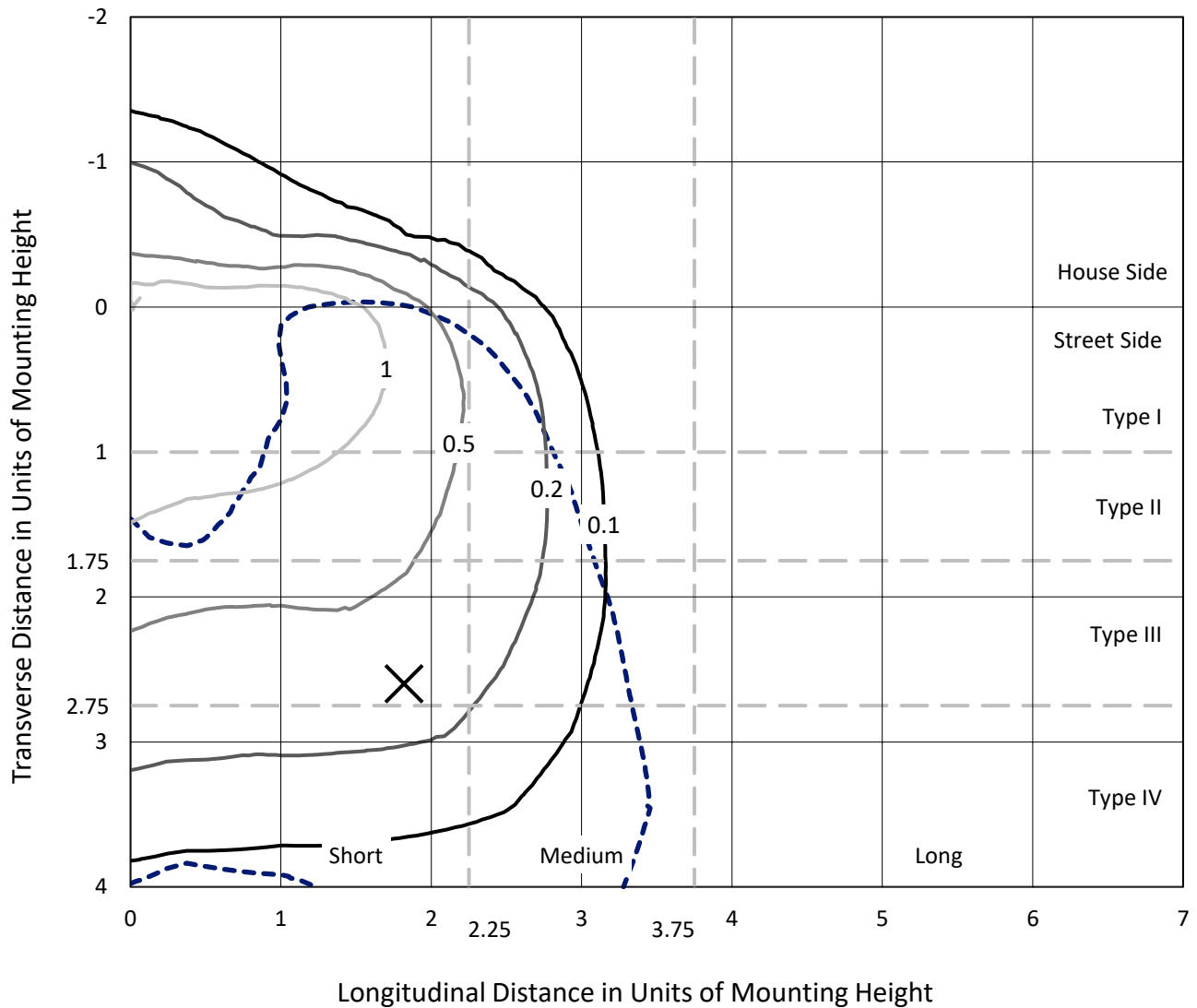
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

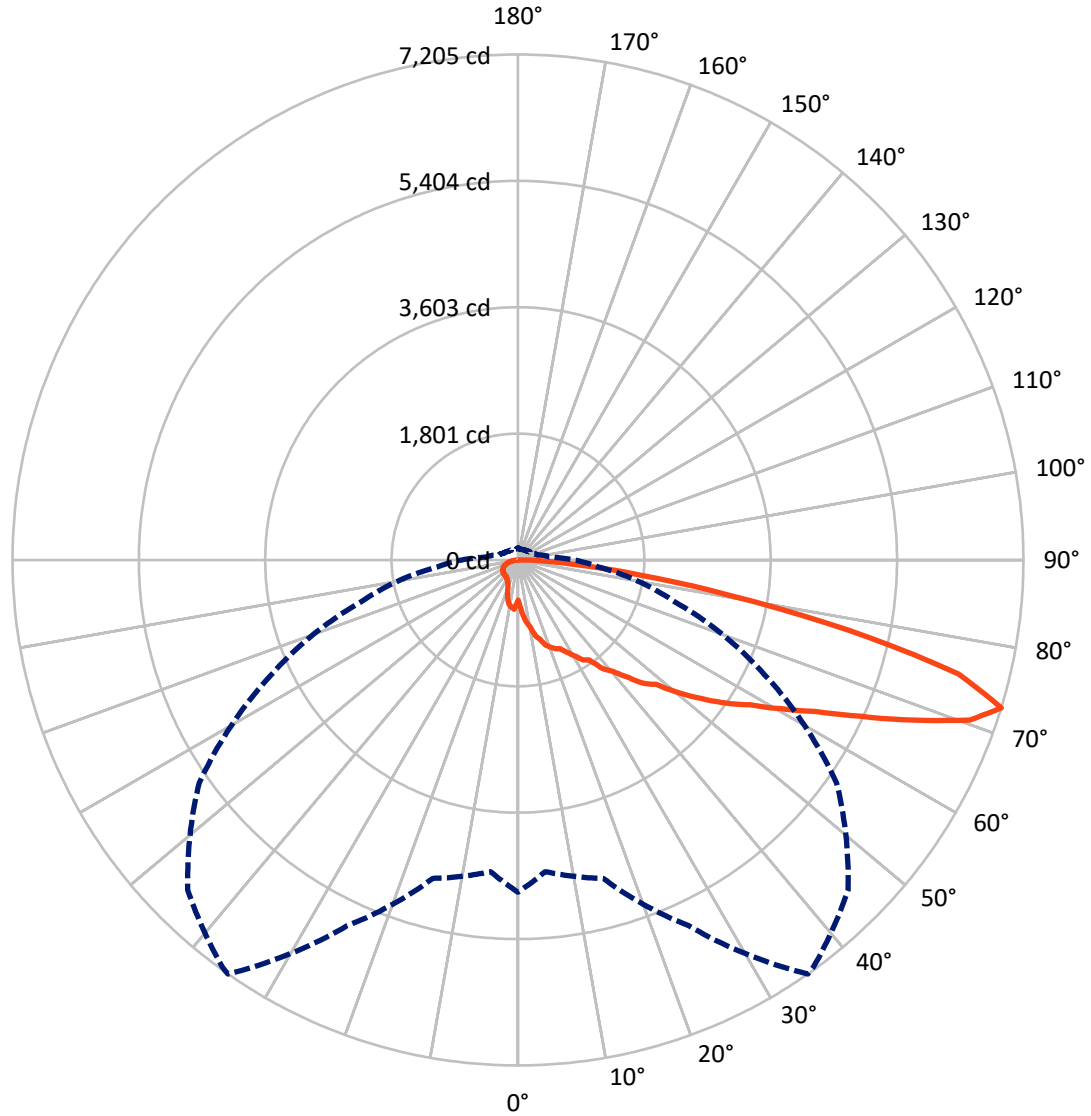
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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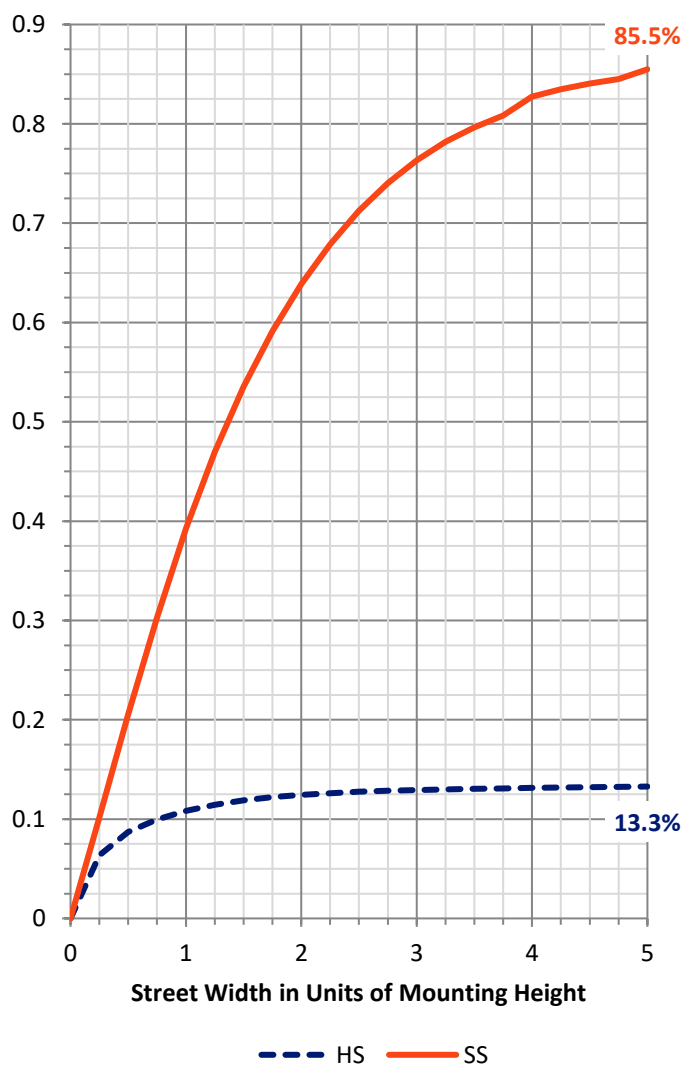
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1329.4	0.0	1329.4
	% Fixture	13.4	0.0	13.4
<b>Street Side</b>	Lumens	8576.6	0.0	8576.6
	% Fixture	86.6	0.0	86.6
<b>Total</b>	Lumens	9906.0	0.0	9906.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.1	0.8
10°-20°	268.0	2.7
20°-30°	465.7	4.7
30°-40°	778.3	7.9
40°-50°	1350.9	13.6
50°-60°	2042.2	20.6
60°-70°	2645.6	26.7
70°-80°	1952.1	19.7
80°-90°	327.2	3.3
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°	9906.0	100.0
0°-180°	9906.0	100.0

**Coefficient of Utilization**



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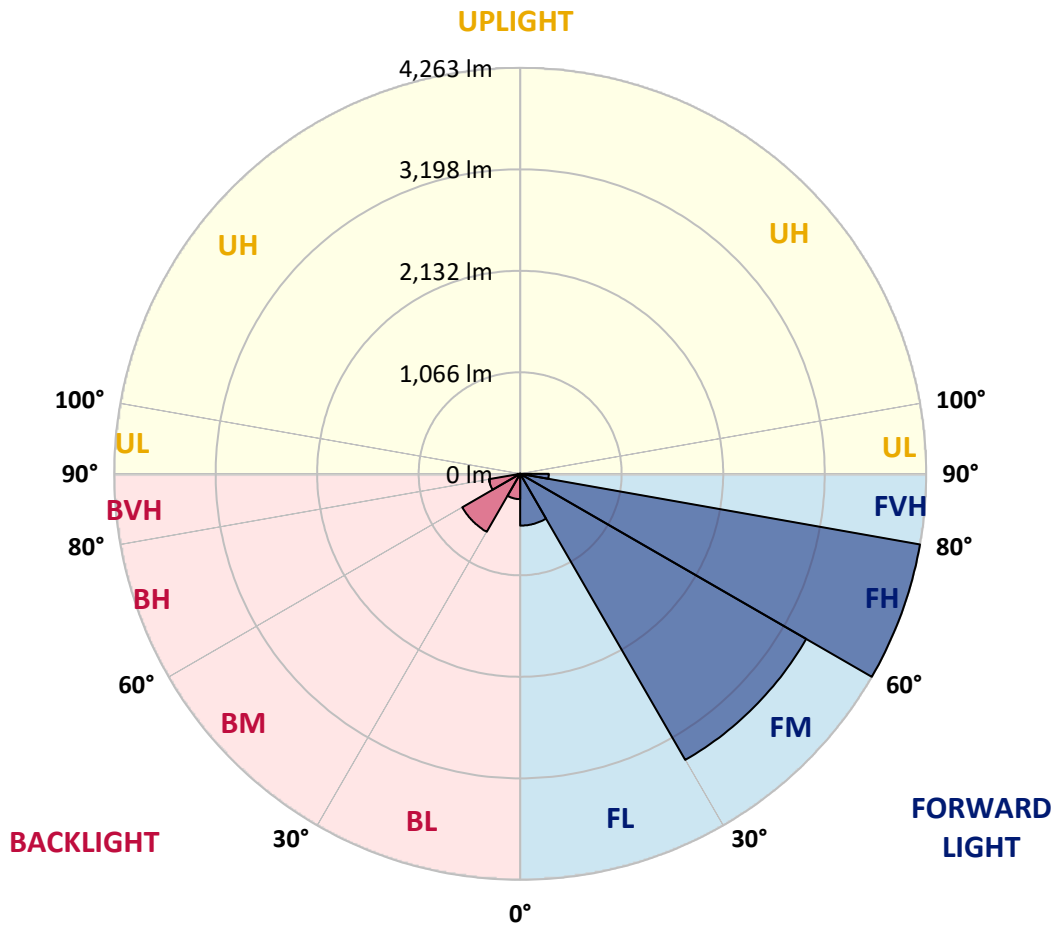
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	544.1	5.5			
FM (30°-60°)	3468.7	35.0			
FH (60°-80°)	4263.5	43.0			G2/5000
FVH (80°-90°)	300.4	3.0			G3/500
BL (0°-30°)	265.7	2.7	B1/500		
BM (30°-60°)	702.6	7.1	B1/1000		
BH (60°-80°)	334.3	3.4	B1/500		G1/500
BVH (80°-90°)	26.8	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	572.5	572.5	572.5	572.5	572.5	572.5	572.5	572.5	572.5	572.5	572.5
2.5°	714.1	679.9	650.3	649.0	676.5	687.1	682.8	673.5	662.5	639.3	690.0
5°	894.6	845.6	836.3	825.3	800.4	807.1	766.5	797.4	807.1	829.5	863.4
7.5°	1001.2	972.4	950.0	940.7	897.6	892.5	862.5	906.5	925.1	922.1	972.4
10°	1043.0	1016.8	1018.5	988.1	974.1	980.1	983.4	984.3	995.7	1005.0	979.6
12.5°	1064.6	1074.8	1112.0	1091.2	1109.0	1116.2	1151.7	1115.3	1116.6	1068.8	1095.1
15°	1173.3	1198.6	1177.1	1176.2	1170.7	1182.6	1213.0	1188.5	1207.5	1192.3	1158.5
17.5°	1304.3	1312.0	1270.5	1253.6	1275.6	1271.8	1264.2	1268.0	1220.6	1308.6	1267.1
20°	1344.5	1374.5	1320.0	1253.6	1326.3	1336.0	1334.4	1317.9	1236.7	1363.5	1323.4
22.5°	1461.2	1420.6	1377.5	1335.2	1372.4	1377.9	1368.6	1329.3	1302.2	1350.4	1382.1
25°	1514.0	1504.3	1449.4	1444.3	1403.3	1383.8	1399.9	1388.5	1361.8	1447.7	1412.6
27.5°	1635.0	1623.6	1497.1	1549.1	1489.5	1484.5	1399.5	1437.5	1464.2	1457.8	1510.2
30°	1772.0	1785.1	1600.3	1652.3	1583.4	1574.1	1488.7	1536.9	1555.1	1561.0	1626.5
32.5°	1924.2	1960.1	1776.6	1733.9	1697.1	1703.5	1631.2	1543.2	1613.8	1752.1	1780.4
35°	2089.1	2103.9	1911.5	1847.2	1751.2	1744.5	1745.7	1756.7	1828.2	1985.9	2007.9
37.5°	2393.9	2325.4	2156.7	1993.9	1961.8	1898.8	1941.5	1975.3	2046.8	2288.6	2380.8
40°	2581.6	2530.9	2273.8	2179.5	2090.7	2096.7	2176.6	2176.2	2344.9	2594.3	2735.1
42.5°	2755.4	2700.0	2457.7	2363.0	2278.9	2299.6	2322.4	2362.6	2686.1	3088.1	3152.4
45°	2895.3	2774.0	2599.8	2578.7	2509.3	2481.8	2578.7	2642.9	3094.1	3487.7	3524.9
47.5°	2990.5	2890.7	2720.3	2701.7	2650.5	2717.8	2982.0	3023.4	3410.3	3888.9	3886.0
50°	3135.1	2998.5	2844.6	2834.9	2979.1	3015.0	3337.2	3332.9	3718.1	4222.1	4152.3
52.5°	3301.6	3129.6	2962.6	3067.0	3286.9	3304.6	3584.1	3697.8	4054.2	4543.4	4361.2
55°	3493.2	3300.8	3139.3	3278.8	3606.1	3553.6	3836.5	4114.3	4474.9	4882.1	4512.1
57.5°	3730.4	3497.0	3366.3	3578.6	3897.4	3943.9	4198.0	4547.6	4813.6	5092.6	4622.1
60°	3980.7	3706.7	3587.0	3789.1	4305.4	4358.7	4607.3	4907.9	5193.3	5290.9	4601.3
62.5°	4219.6	3923.2	3814.9	4064.4	4757.8	4889.7	5073.2	5264.7	5509.1	5339.1	4350.6
65°	4485.5	4188.7	4120.6	4494.8	5371.3	5502.3	5742.1	5684.6	5617.3	5168.3	3935.9
67.5°	4767.1	4465.6	4478.3	4994.1	6094.7	6117.1	6485.3	6103.1	5490.1	4715.9	3239.5
70°	4918.4	4609.8	4740.4	5526.4	6830.8	6798.6	6873.9	6215.6	4971.3	3727.8	2232.8
72.5°	4734.9	4459.7	4699.0	5750.5	7205.4	7170.7	6655.7	5548.0	3886.8	2318.2	1157.6
75°	4009.0	3743.5	4109.6	5126.0	6486.6	6518.7	5664.3	4125.7	2225.2	932.3	480.7
77.5°	2724.1	2587.1	2900.8	3820.8	4818.2	4929.4	4202.6	2412.5	934.4	386.0	290.9
80°	1439.6	1374.5	1606.2	2201.1	3050.9	3133.8	2471.3	1201.6	478.6	249.9	207.6
82.5°	782.2	754.7	879.0	1131.8	1733.5	1805.8	1281.5	798.2	322.6	156.4	126.8
85°	525.5	515.0	597.4	608.0	819.8	843.5	671.4	614.8	193.6	76.5	83.7
87.5°	263.0	252.4	314.6	277.8	312.9	313.3	307.8	392.4	49.0	25.4	15.2
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°	572.5	572.5	572.5	572.5	572.5	572.5	572.5	572.5	572.5	572.5	572.5
2.5°	690.9	676.1	624.9	624.5	632.1	627.0	630.8	610.1	601.2	641.8	639.7
5°	858.7	814.3	771.6	756.8	739.5	701.8	704.0	704.4	698.0	722.1	723.8
7.5°	957.2	903.9	864.6	786.0	724.3	676.1	682.4	689.6	682.4	714.5	726.4
10°	971.6	929.3	882.4	794.9	753.9	710.3	666.3	627.4	622.8	608.0	612.6
12.5°	1057.0	1021.9	923.8	827.8	780.1	713.3	632.9	588.5	551.3	557.7	545.8
15°	1127.2	1102.2	984.7	859.1	745.0	662.1	576.7	515.8	482.4	478.6	466.8
17.5°	1222.3	1186.8	990.2	837.6	699.7	600.4	504.0	435.1	420.7	414.8	408.8
20°	1268.0	1204.1	970.3	769.9	646.9	526.8	432.1	372.9	368.7	379.3	377.1
22.5°	1307.7	1218.5	952.6	728.9	564.4	452.4	383.1	344.2	339.5	353.0	355.6
25°	1331.0	1259.5	933.1	687.1	513.3	397.0	346.3	324.3	325.1	342.9	340.8
27.5°	1435.8	1273.9	884.1	637.6	454.5	356.0	328.5	317.1	312.4	337.0	339.1
30°	1501.8	1367.8	873.1	585.2	411.0	326.0	312.4	307.8	307.0	336.5	338.7
32.5°	1624.4	1399.0	878.2	528.1	371.6	316.7	300.6	300.2	308.6	337.0	340.4
35°	1794.4	1531.0	853.6	495.5	350.1	302.3	291.3	294.7	309.1	339.9	344.6
37.5°	2125.8	1655.3	861.2	465.1	342.9	297.7	288.8	290.9	314.1	347.5	360.2
40°	2388.4	1880.6	849.4	449.9	333.2	296.8	283.3	291.7	313.7	351.8	363.2
42.5°	2768.9	2060.3	850.7	434.6	332.7	293.4	282.4	292.6	312.9	348.0	363.6
45°	3095.3	2221.4	868.9	425.8	328.5	298.9	281.2	293.8	307.4	334.4	351.8
47.5°	3363.0	2401.1	887.5	417.3	326.8	304.0	279.9	285.0	298.1	319.2	334.9
50°	3581.1	2527.5	911.1	415.6	326.8	301.5	276.5	276.1	287.1	304.0	318.8
52.5°	3751.1	2616.7	927.2	417.7	326.8	291.7	272.3	268.9	275.7	287.9	302.7
55°	3874.1	2644.2	914.1	423.2	326.4	282.9	264.7	261.7	265.1	273.6	287.5
57.5°	3923.6	2571.9	835.9	413.5	326.4	276.5	255.4	252.0	255.4	261.7	275.7
60°	3799.7	2339.4	723.0	388.6	320.1	268.1	244.8	242.7	247.8	253.3	266.8
62.5°	3489.0	2030.3	602.5	359.0	307.0	260.9	234.7	235.1	243.1	250.7	264.3
65°	3006.1	1656.5	502.3	328.9	290.5	249.5	224.1	227.0	238.5	248.6	262.1
67.5°	2365.6	1227.4	422.8	299.8	267.2	230.8	212.2	213.1	221.1	230.8	244.0
70°	1581.3	780.9	347.5	265.5	236.8	206.7	194.1	191.1	189.0	197.4	208.9
72.5°	802.1	461.3	285.4	227.0	203.8	180.5	170.8	163.2	157.3	162.4	171.2
75°	420.3	322.6	230.4	188.6	168.3	153.5	146.3	136.1	131.9	134.9	141.2
77.5°	297.2	252.4	186.5	149.2	137.0	121.8	123.0	112.5	109.1	110.8	117.5
80°	228.3	200.0	143.3	112.9	105.7	90.9	95.1	88.8	84.6	83.7	88.8
82.5°	155.6	150.5	101.9	79.1	74.0	63.4	69.3	66.8	61.3	57.9	60.5
85°	104.9	99.8	62.2	45.7	43.5	33.0	42.3	40.6	35.9	30.9	31.3
87.5°	18.2	33.4	17.8	11.4	10.6	3.8	9.7	9.3	8.5	4.2	3.4
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)