

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: P597012

Luminaire Tested: **MSA-SA3A-835-U-SL4**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597012  
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-SA3A-835-U-SL4  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 9420 lumens  
Efficiency: N/A  
Efficacy: 98.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3

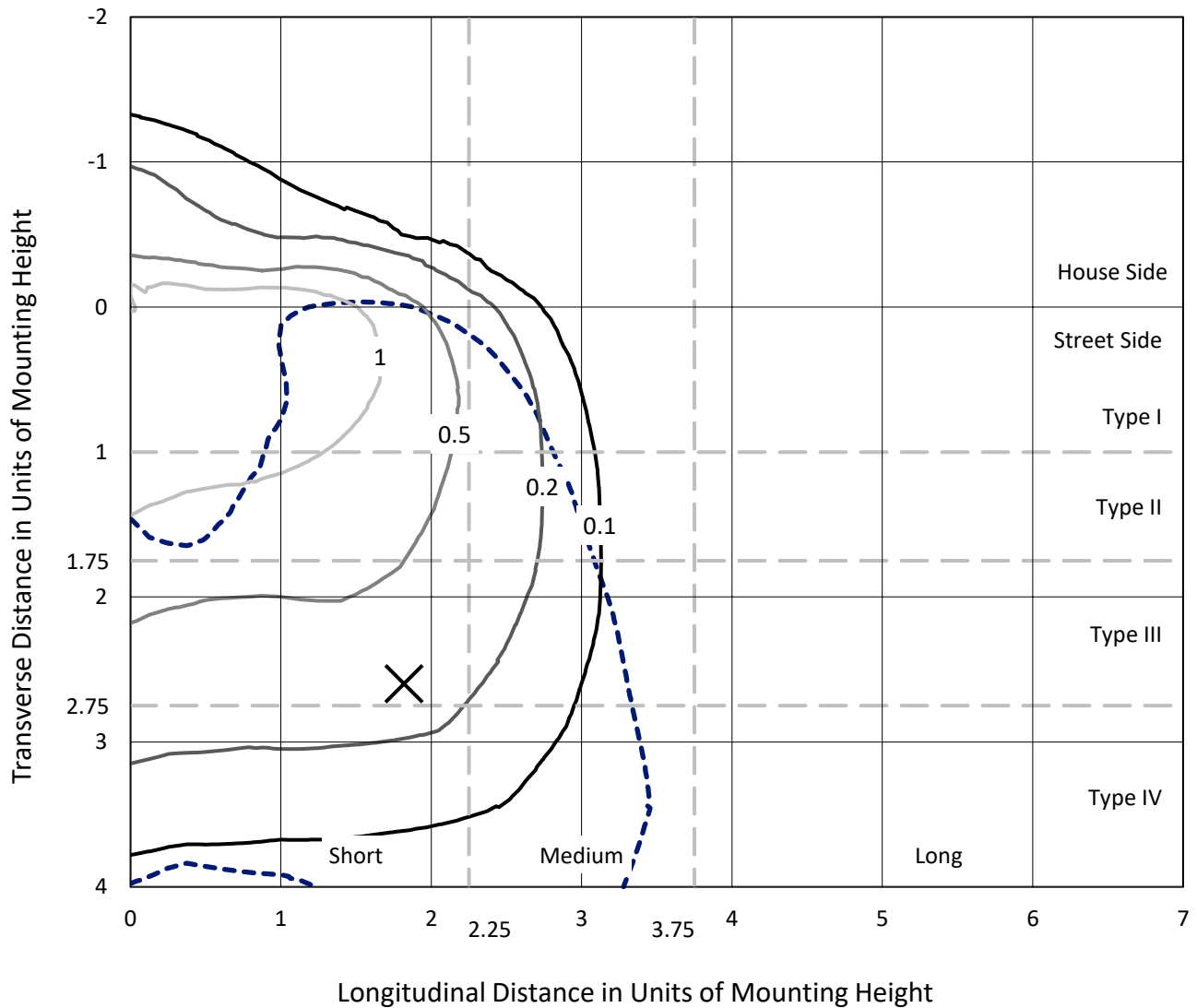
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

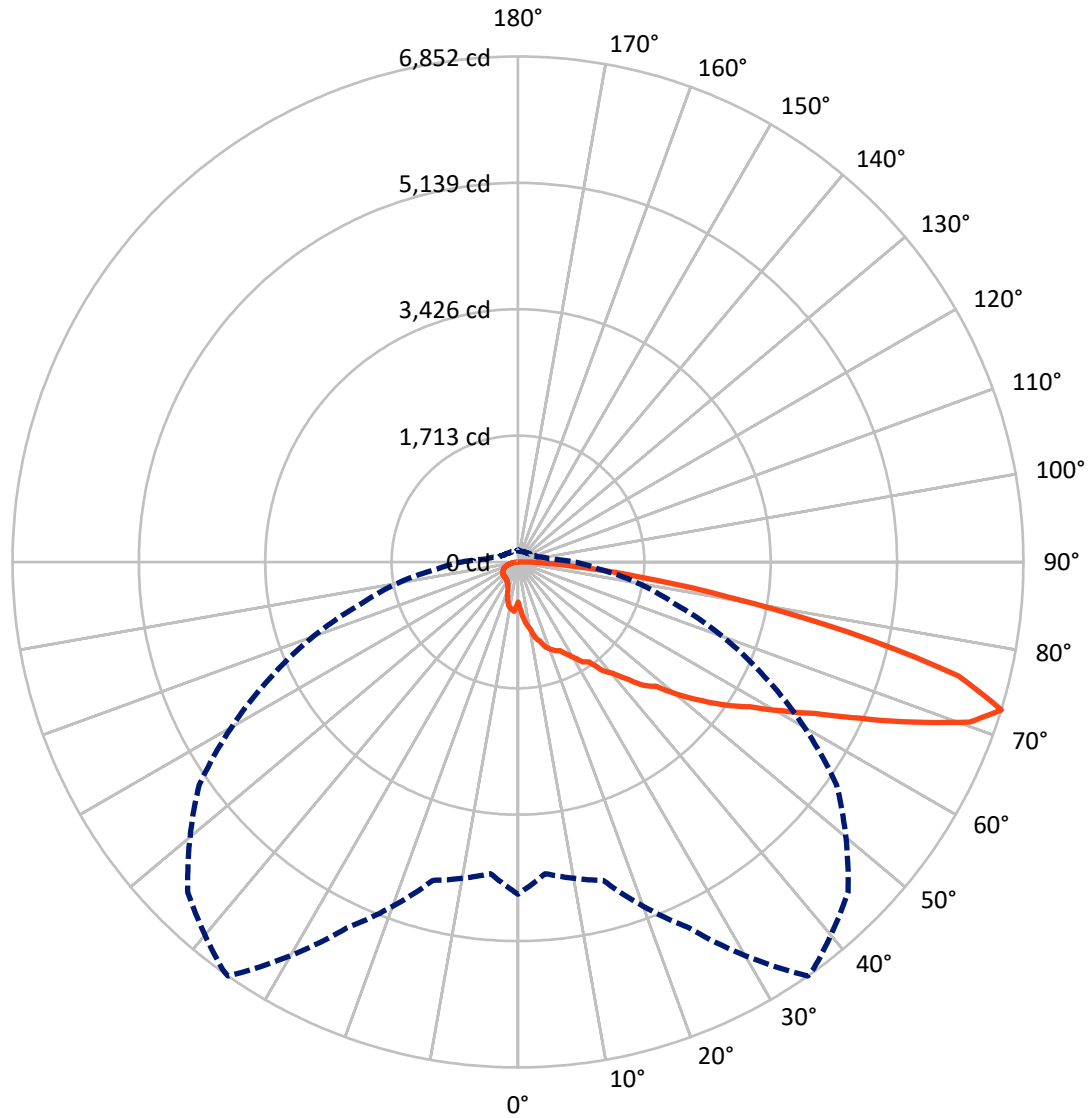
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 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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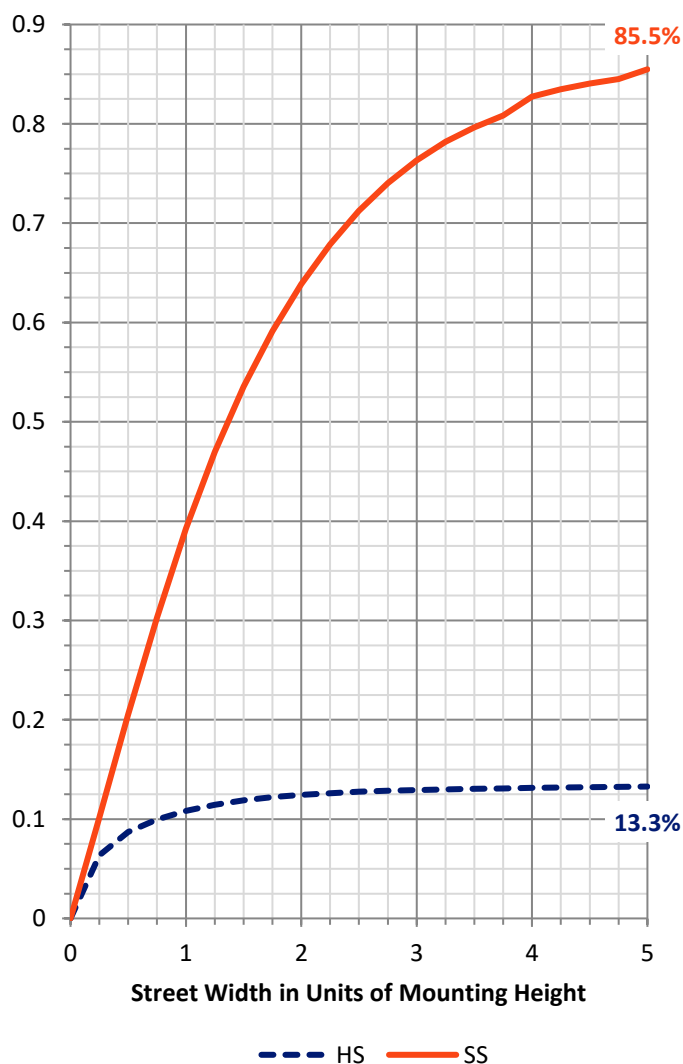
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1264.1	0.0	1264.1
	% Fixture	13.4	0.0	13.4
<b>Street Side</b>	Lumens	8155.9	0.0	8155.9
	% Fixture	86.6	0.0	86.6
<b>Total</b>	Lumens	9420.0	0.0	9420.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	72.4	0.8
10°-20°	254.9	2.7
20°-30°	442.8	4.7
30°-40°	740.1	7.9
40°-50°	1284.6	13.6
50°-60°	1942.0	20.6
60°-70°	2515.8	26.7
70°-80°	1856.4	19.7
80°-90°	311.1	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°	9420.0	100.0
0°-180°	9420.0	100.0

**Coefficient of Utilization**



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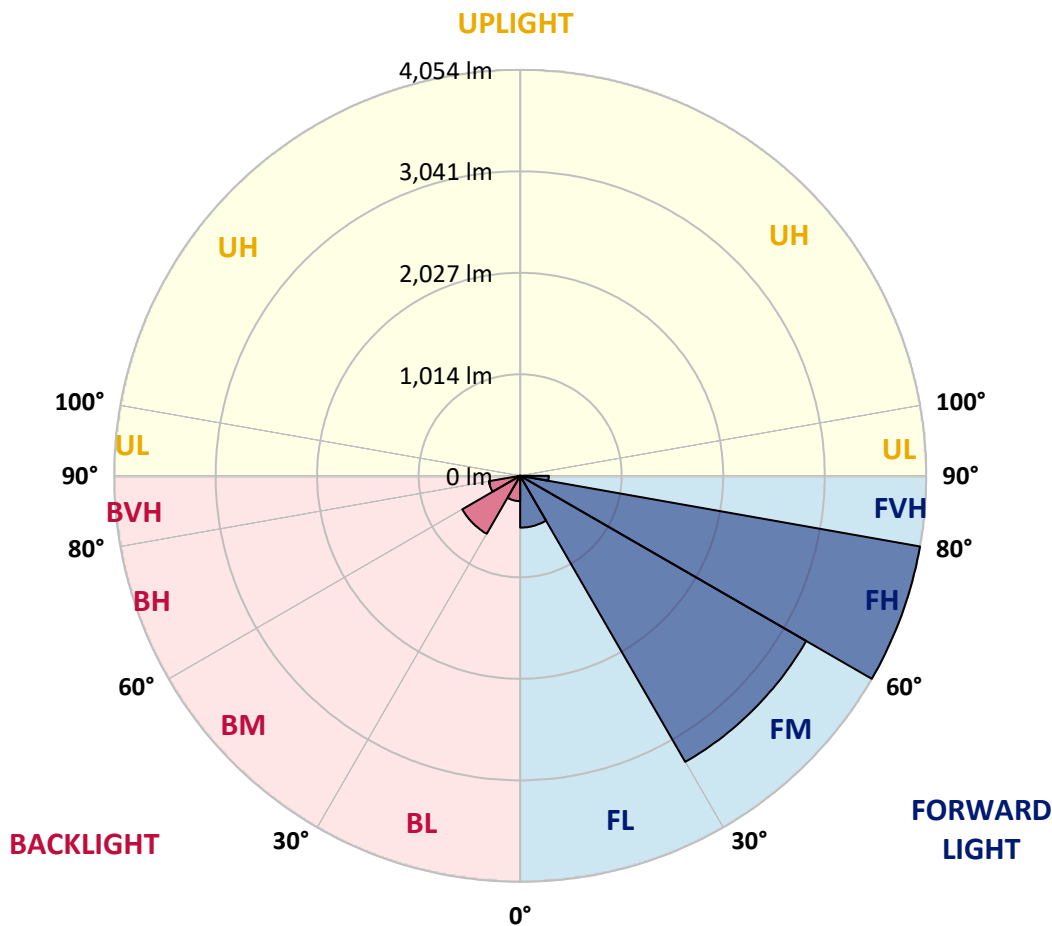
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	517.4	5.5			
FM (30°-60°)	3298.5	35.0			
FH (60°-80°)	4054.3	43.0			G2/5000
FVH (80°-90°)	285.7	3.0			G3/500
BL (0°-30°)	252.7	2.7	B1/500		
BM (30°-60°)	668.1	7.1	B1/1000		
BH (60°-80°)	317.9	3.4	B1/500		G1/500
BVH (80°-90°)	25.5	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°	544.4	544.4	544.4	544.4	544.4	544.4	544.4	544.4	544.4	544.4	544.4
2.5°	679.1	646.5	618.4	617.2	643.3	653.3	649.3	640.5	630.0	607.9	656.2
5°	850.8	804.1	795.3	784.8	761.1	767.5	728.9	758.3	767.5	788.8	821.0
7.5°	952.1	924.7	903.4	894.6	853.6	848.7	820.2	862.0	879.7	876.9	924.7
10°	991.9	966.9	968.6	939.6	926.3	932.0	935.2	936.0	946.8	955.7	931.6
12.5°	1012.4	1022.0	1057.4	1037.7	1054.6	1061.4	1095.2	1060.6	1061.8	1016.4	1041.3
15°	1115.7	1139.8	1119.3	1118.5	1113.3	1124.6	1153.5	1130.2	1148.3	1133.8	1101.6
17.5°	1240.3	1247.6	1208.2	1192.1	1213.0	1209.4	1202.2	1205.8	1160.7	1244.4	1205.0
20°	1278.5	1307.1	1255.2	1192.1	1261.3	1270.5	1268.9	1253.2	1176.0	1296.6	1258.4
22.5°	1389.5	1350.9	1309.9	1269.7	1305.1	1310.3	1301.5	1264.1	1238.3	1284.2	1314.3
25°	1439.8	1430.5	1378.3	1373.4	1334.4	1315.9	1331.2	1320.4	1295.0	1376.6	1343.3
27.5°	1554.8	1543.9	1423.7	1473.1	1416.4	1411.6	1330.8	1367.0	1392.3	1386.3	1436.1
30°	1685.0	1697.5	1521.8	1571.2	1505.7	1496.9	1415.6	1461.5	1478.8	1484.4	1546.7
32.5°	1829.8	1863.9	1689.4	1648.8	1613.9	1619.9	1551.1	1467.5	1534.7	1666.1	1693.1
35°	1986.6	2000.6	1817.7	1756.6	1665.3	1658.9	1660.1	1670.5	1738.5	1888.5	1909.4
37.5°	2276.4	2211.3	2050.9	1896.1	1865.5	1805.6	1846.2	1878.4	1946.4	2176.3	2264.0
40°	2455.0	2406.7	2162.3	2072.6	1988.2	1993.8	2069.8	2069.4	2229.8	2467.0	2600.9
42.5°	2620.2	2567.5	2337.2	2247.1	2167.1	2186.8	2208.5	2246.7	2554.3	2936.6	2997.7
45°	2753.3	2637.9	2472.3	2452.1	2386.2	2360.1	2452.1	2513.3	2942.3	3316.6	3352.0
47.5°	2843.8	2748.9	2586.8	2569.1	2520.5	2584.4	2835.7	2875.1	3243.0	3698.1	3695.3
50°	2981.3	2851.4	2705.0	2695.8	2832.9	2867.1	3173.4	3169.4	3535.7	4014.9	3948.6
52.5°	3139.7	2976.0	2817.2	2916.5	3125.6	3142.5	3408.2	3516.4	3855.3	4320.5	4147.2
55°	3321.8	3138.9	2985.3	3118.0	3429.1	3379.3	3648.3	3912.4	4255.4	4642.6	4290.8
57.5°	3547.4	3325.4	3201.2	3403.0	3706.2	3750.4	3992.0	4324.5	4577.4	4842.8	4395.3
60°	3785.4	3524.8	3411.1	3603.2	4094.2	4144.8	4381.2	4667.1	4938.5	5031.3	4375.6
62.5°	4012.5	3730.7	3627.8	3865.0	4524.4	4649.8	4824.3	5006.4	5238.8	5077.2	4137.2
65°	4265.4	3983.2	3918.5	4274.3	5107.7	5232.4	5460.3	5405.7	5341.7	4914.8	3742.8
67.5°	4533.2	4246.5	4258.6	4749.1	5795.7	5817.0	6167.2	5803.7	5220.7	4484.5	3080.6
70°	4677.1	4383.6	4507.9	5255.3	6495.6	6465.1	6536.7	5910.6	4727.4	3544.9	2123.3
72.5°	4502.6	4240.9	4468.5	5468.4	6851.9	6818.9	6329.2	5275.8	3696.1	2204.5	1100.8
75°	3812.3	3559.8	3908.0	4874.5	6168.4	6198.9	5386.4	3923.3	2116.0	886.5	457.1
77.5°	2590.5	2460.2	2758.5	3633.4	4581.8	4687.6	3996.5	2294.1	888.5	367.1	276.6
80°	1369.0	1307.1	1527.4	2093.1	2901.2	2980.1	2350.0	1142.6	455.1	237.6	197.4
82.5°	743.8	717.7	835.9	1076.3	1648.4	1717.2	1218.6	759.1	306.8	148.8	120.6
85°	499.8	489.7	568.1	578.2	779.6	802.1	638.5	584.6	184.1	72.8	79.6
87.5°	250.1	240.0	299.1	264.2	297.5	297.9	292.7	373.1	46.6	24.1	14.5
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°	544.4	544.4	544.4	544.4	544.4	544.4	544.4	544.4	544.4	544.4	544.4
2.5°	657.0	642.9	594.2	593.8	601.1	596.3	599.9	580.2	571.7	610.3	608.3
5°	816.6	774.4	733.8	719.7	703.2	667.4	669.4	669.8	663.8	686.7	688.3
7.5°	910.3	859.6	822.2	747.4	688.7	642.9	648.9	655.8	648.9	679.5	690.7
10°	923.9	883.7	839.1	755.9	716.9	675.5	633.6	596.7	592.2	578.2	582.6
12.5°	1005.1	971.8	878.5	787.2	741.8	678.3	601.9	559.7	524.3	530.3	519.1
15°	1071.9	1048.2	936.4	817.0	708.4	629.6	548.4	490.5	458.7	455.1	443.9
17.5°	1162.3	1128.6	941.6	796.5	665.4	570.9	479.3	413.7	400.0	394.4	388.8
20°	1205.8	1145.1	922.7	732.1	615.1	501.0	410.9	354.6	350.6	360.6	358.6
22.5°	1243.6	1158.7	905.8	693.1	536.7	430.2	364.3	327.3	322.9	335.7	338.1
25°	1265.7	1197.7	887.3	653.3	488.1	377.5	329.3	308.4	309.2	326.1	324.1
27.5°	1365.4	1211.4	840.7	606.3	432.2	338.5	312.4	301.5	297.1	320.4	322.5
30°	1428.1	1300.7	830.2	556.4	390.8	310.0	297.1	292.7	291.9	320.0	322.0
32.5°	1544.7	1330.4	835.1	502.2	353.4	301.1	285.9	285.5	293.5	320.4	323.7
35°	1706.3	1455.9	811.8	471.2	332.9	287.5	277.0	280.2	293.9	323.3	327.7
37.5°	2021.5	1574.1	819.0	442.3	326.1	283.0	274.6	276.6	298.7	330.5	342.6
40°	2271.2	1788.4	807.7	427.8	316.8	282.2	269.4	277.4	298.3	334.5	345.4
42.5°	2633.1	1959.2	808.9	413.3	316.4	279.0	268.6	278.2	297.5	330.9	345.8
45°	2943.5	2112.4	826.2	404.9	312.4	284.3	267.4	279.4	292.3	318.0	334.5
47.5°	3198.0	2283.3	843.9	396.8	310.8	289.1	266.2	271.0	283.5	303.6	318.4
50°	3405.4	2403.5	866.4	395.2	310.8	286.7	262.9	262.5	273.0	289.1	303.2
52.5°	3567.1	2488.3	881.7	397.2	310.8	277.4	258.9	255.7	262.1	273.8	287.9
55°	3684.1	2514.5	869.2	402.5	310.4	269.0	251.7	248.9	252.1	260.1	273.4
57.5°	3731.1	2445.7	794.9	393.2	310.4	262.9	242.8	239.6	242.8	248.9	262.1
60°	3613.3	2224.6	687.5	369.5	304.4	254.9	232.8	230.8	235.6	240.8	253.7
62.5°	3317.8	1930.7	572.9	341.3	291.9	248.1	223.1	223.5	231.2	238.4	251.3
65°	2858.6	1575.3	477.6	312.8	276.2	237.2	213.1	215.9	226.8	236.4	249.3
67.5°	2249.5	1167.2	402.1	285.1	254.1	219.5	201.8	202.6	210.3	219.5	232.0
70°	1503.7	742.6	330.5	252.5	225.2	196.6	184.5	181.7	179.7	187.8	198.6
72.5°	762.7	438.6	271.4	215.9	193.8	171.7	162.4	155.2	149.6	154.4	162.8
75°	399.6	306.8	219.1	179.3	160.0	145.9	139.1	129.5	125.4	128.3	134.3
77.5°	282.6	240.0	177.3	141.9	130.3	115.8	117.0	106.9	103.7	105.3	111.8
80°	217.1	190.2	136.3	107.3	100.5	86.4	90.5	84.4	80.4	79.6	84.4
82.5°	148.0	143.1	96.9	75.2	70.4	60.3	65.9	63.5	58.3	55.1	57.5
85°	99.7	94.9	59.1	43.4	41.4	31.4	40.2	38.6	34.2	29.4	29.8
87.5°	17.3	31.8	16.9	10.9	10.1	3.6	9.2	8.8	8.0	4.0	3.2
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)