

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: P597010

Luminaire Tested: **MSA-SA3A-835-U-SL3**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597010  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3A-835-U-SL3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9489 lumens  
Efficiency: N/A  
Efficacy: 98.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

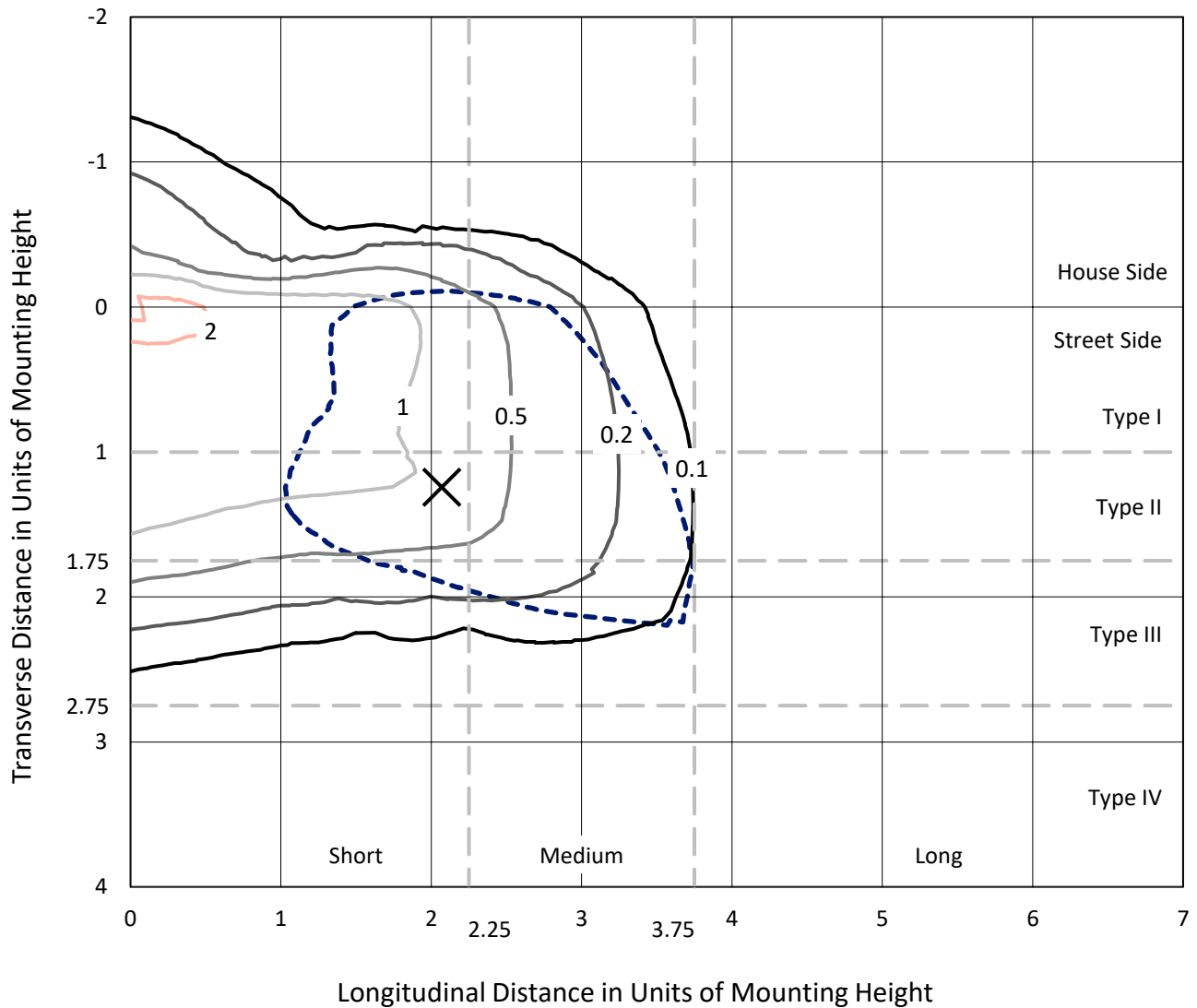
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

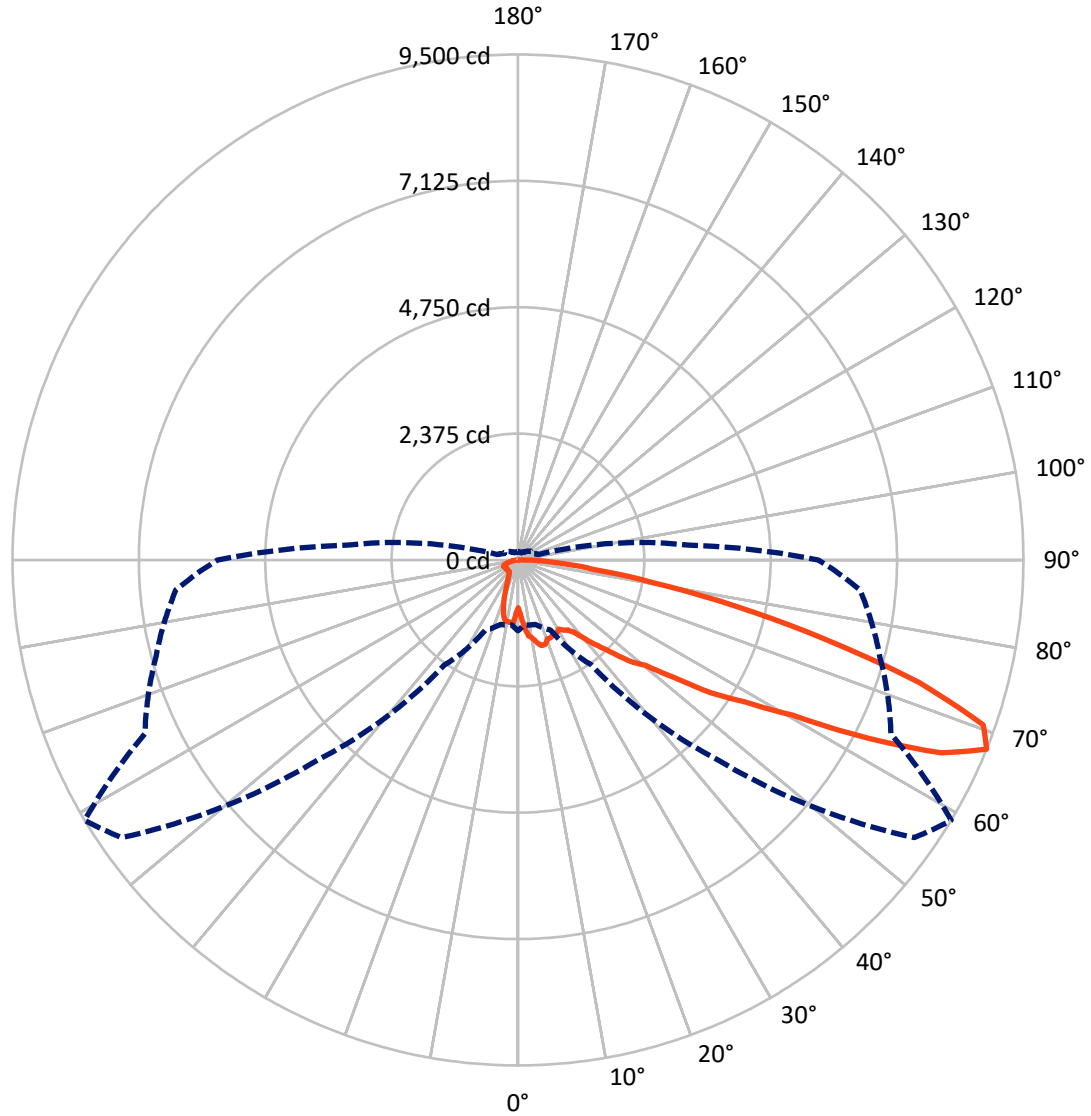
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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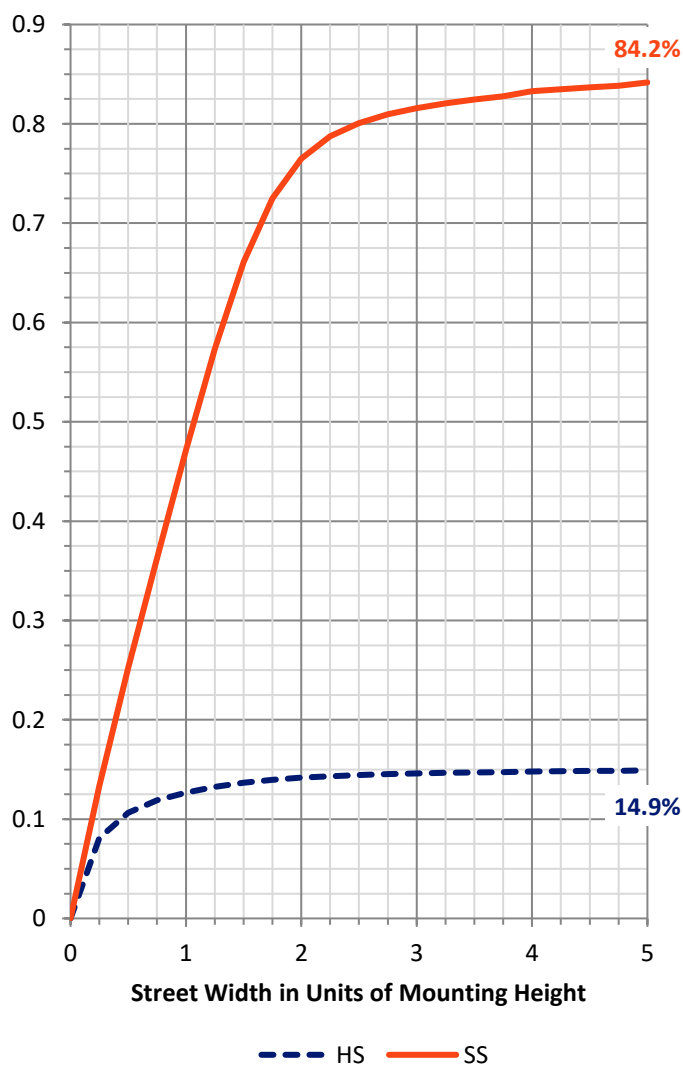
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1428.3	0.0	1428.3
	% Fixture	15.1	0.0	15.1
<b>Street Side</b>	Lumens	8060.7	0.0	8060.7
	% Fixture	84.9	0.0	84.9
<b>Total</b>	Lumens	9489.0	0.0	9489.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.3	1.2
10°-20°	347.0	3.7
20°-30°	495.6	5.2
30°-40°	730.3	7.7
40°-50°	1233.8	13.0
50°-60°	2147.1	22.6
60°-70°	2736.1	28.8
70°-80°	1448.8	15.3
80°-90°	233.1	2.5
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°	9489.0	100.0
0°-180°	9489.0	100.0

**Coefficient of Utilization**



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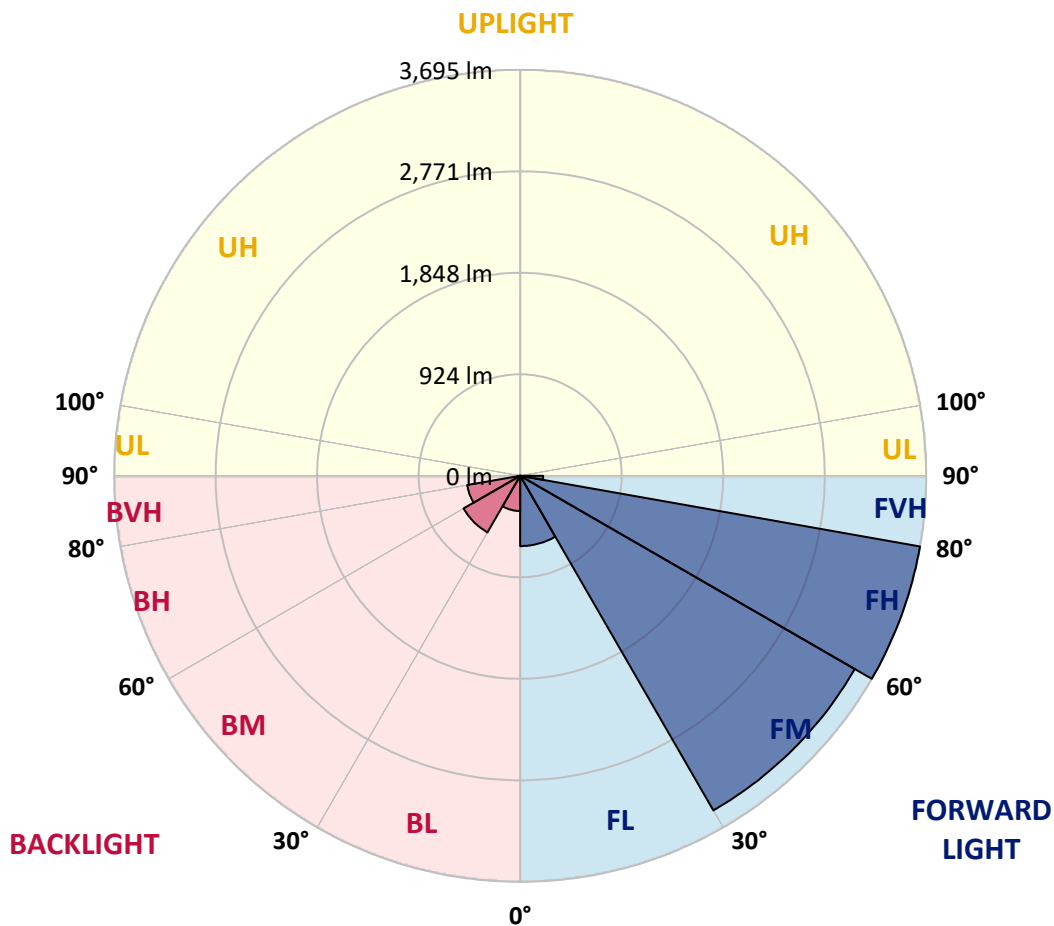
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	639.6	6.7			
FM (30°-60°)	3516.5	37.1			
FH (60°-80°)	3695.3	38.9			G2/5000
FVH (80°-90°)	209.3	2.2			G2/225
BL (0°-30°)	320.3	3.4	B1/500		
BM (30°-60°)	594.7	6.3	B1/1000		
BH (60°-80°)	489.5	5.2	B1/500		G1/500
BVH (80°-90°)	23.7	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-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	897.9	897.9	897.9	897.9	897.9	897.9	897.9	897.9	897.9	897.9	897.9
2.5°	1121.1	1068.8	1013.3	1029.0	1060.8	1075.2	1059.6	1044.3	1024.6	1001.3	1080.9
5°	1359.5	1281.9	1270.7	1270.3	1259.0	1214.0	1271.9	1267.8	1291.2	1315.3	1377.2
7.5°	1427.5	1398.5	1367.2	1382.0	1325.4	1322.9	1413.0	1438.7	1483.8	1468.9	1552.1
10°	1392.5	1359.9	1376.4	1370.4	1375.6	1435.1	1490.2	1491.8	1540.1	1587.5	1534.0
12.5°	1331.0	1333.4	1398.9	1396.5	1481.0	1591.5	1608.0	1595.2	1674.0	1641.8	1687.7
15°	1374.8	1404.2	1387.7	1401.8	1435.1	1575.9	1621.7	1668.4	1743.1	1772.1	1726.3
17.5°	1444.8	1460.5	1386.5	1378.8	1447.6	1514.3	1628.1	1667.9	1679.6	1885.9	1821.2
20°	1415.0	1446.8	1374.4	1281.5	1395.7	1484.2	1596.4	1584.3	1641.0	1894.7	1840.9
22.5°	1499.5	1446.8	1354.7	1288.8	1329.0	1410.2	1505.5	1584.7	1651.9	1842.9	1869.4
25°	1515.5	1490.6	1404.6	1339.0	1325.4	1354.3	1490.2	1542.1	1655.5	1913.6	1854.1
27.5°	1613.7	1576.3	1400.9	1403.0	1335.0	1283.9	1442.0	1550.9	1696.5	1869.8	1891.5
30°	1735.5	1707.0	1487.0	1495.0	1400.9	1306.9	1474.9	1507.9	1720.2	1938.2	1938.6
32.5°	1826.8	1877.0	1656.3	1546.9	1513.5	1443.2	1424.3	1572.6	1692.5	2062.0	2019.0
35°	1991.2	2030.2	1786.6	1698.9	1585.9	1506.7	1561.8	1615.3	1807.9	2224.9	2138.4
37.5°	2295.6	2250.6	2028.6	1890.7	1848.5	1734.3	1764.9	1727.5	1933.3	2407.8	2372.4
40°	2471.8	2432.8	2199.1	2122.7	1955.5	1969.9	1931.7	1959.1	2101.0	2602.4	2591.2
42.5°	2645.5	2593.2	2395.8	2342.7	2175.8	2105.0	2111.9	2200.3	2359.6	2916.9	2879.5
45°	2817.2	2683.3	2596.8	2610.9	2530.5	2385.3	2395.4	2478.6	2641.9	3276.4	3190.3
47.5°	2948.7	2838.1	2770.5	2753.2	2713.4	2907.7	2820.8	2854.6	2926.5	3596.5	3563.9
50°	3197.6	3068.5	2980.4	2955.5	3090.6	3360.8	3183.9	3111.1	3264.3	4010.2	3993.3
52.5°	3596.1	3435.2	3288.4	3286.8	3482.3	3657.6	3782.2	3656.8	3713.1	4434.1	4482.3
55°	3943.9	3757.7	3625.8	3698.6	3976.9	4084.2	4507.6	4409.5	4362.1	4861.9	4999.8
57.5°	4073.8	3856.2	3770.2	3877.5	4287.7	4839.4	5286.9	5028.8	4982.5	5346.0	5635.2
60°	3788.7	3558.7	3563.9	3766.2	4476.7	5393.9	6139.0	5919.8	5648.8	5948.8	6231.1
62.5°	2976.4	2768.5	2904.0	3211.6	4318.2	5932.7	7281.0	7373.5	6410.0	6448.6	6561.6
65°	2023.0	1879.1	2001.3	2302.5	3502.4	6226.7	8368.7	8739.4	7103.3	6775.9	6704.4
67.5°	1331.4	1229.6	1253.4	1453.6	2411.0	5308.2	9096.1	9500.2	7737.0	7044.5	6452.6
70°	1031.0	949.0	938.5	1043.5	1429.9	3687.7	8665.0	9279.5	8123.0	6792.8	5624.3
72.5°	809.0	746.7	752.3	853.3	1107.4	2045.9	6705.2	7891.0	7541.6	5858.3	4321.1
75°	630.9	579.8	608.4	723.8	1024.2	1271.5	4626.3	5989.0	5830.6	4338.0	2464.5
77.5°	458.0	425.0	465.6	616.4	962.6	1090.9	2879.9	4178.3	3735.2	2227.3	845.6
80°	300.4	281.9	315.3	502.6	873.0	1049.9	1779.7	2560.2	1845.7	625.7	320.1
82.5°	176.9	168.9	196.6	340.2	701.7	984.0	1187.0	1422.7	755.2	264.6	170.1
85°	92.9	86.9	116.6	195.4	483.7	898.3	934.5	851.7	364.7	115.0	81.2
87.5°	31.0	30.2	49.5	75.6	183.0	476.9	498.6	404.5	150.4	33.4	17.7
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°	897.9	897.9	897.9	897.9	897.9	897.9	897.9	897.9	897.9	897.9	897.9
2.5°	1091.7	1075.6	983.2	996.0	1008.1	1002.1	998.4	956.6	952.6	1012.1	1007.3
5°	1375.6	1308.9	1230.1	1226.4	1174.6	1121.5	1131.9	1115.0	1119.9	1144.4	1146.8
7.5°	1525.6	1442.4	1367.2	1244.9	1141.2	1057.1	1070.4	1066.4	1055.5	1111.0	1125.9
10°	1522.8	1448.8	1364.0	1216.0	1146.0	1077.7	995.6	918.0	895.1	867.8	870.2
12.5°	1623.3	1557.8	1372.8	1222.0	1127.1	1009.3	855.7	770.8	689.6	688.0	667.5
15°	1654.7	1606.4	1391.7	1187.4	994.8	825.9	667.1	575.0	516.3	504.6	487.4
17.5°	1733.9	1658.3	1334.2	1075.6	841.2	645.8	501.4	437.1	432.3	440.3	431.5
20°	1739.1	1616.5	1230.5	910.4	675.9	489.4	408.9	376.8	394.1	413.8	413.0
22.5°	1734.7	1563.8	1140.8	769.6	507.9	393.3	358.3	351.0	367.1	396.5	400.1
25°	1689.7	1546.5	1028.6	632.1	412.2	337.0	327.3	331.7	351.8	386.4	386.4
27.5°	1736.7	1476.1	887.9	514.3	346.6	300.0	306.8	318.1	332.9	372.4	379.6
30°	1721.4	1499.5	774.5	414.2	305.6	274.2	289.5	300.8	317.7	358.7	362.3
32.5°	1762.4	1437.1	679.2	348.2	278.7	264.2	267.8	283.1	305.2	337.4	343.8
35°	1825.2	1460.1	569.8	313.2	265.4	252.5	259.4	271.4	293.5	324.9	330.1
37.5°	2025.4	1458.9	494.2	293.9	263.0	250.1	253.3	261.8	287.5	316.1	328.1
40°	2154.1	1542.5	425.4	289.5	260.2	248.9	246.1	255.3	275.8	309.6	318.1
42.5°	2395.8	1593.6	395.7	287.9	259.8	242.1	239.3	250.1	270.2	301.6	314.4
45°	2651.1	1666.3	372.0	287.1	258.6	240.9	232.4	246.1	263.0	293.1	308.0
47.5°	2951.5	1820.3	358.7	284.3	256.1	242.5	230.0	236.8	255.7	285.9	300.8
50°	3344.7	2024.2	361.5	280.3	259.8	242.9	226.4	229.6	246.9	276.2	291.5
52.5°	3822.9	2339.9	379.6	281.9	262.2	240.9	224.8	223.2	238.0	263.8	279.1
55°	4399.1	2787.8	433.9	289.5	262.2	240.5	222.4	215.1	226.4	247.3	262.2
57.5°	5094.3	3306.5	540.0	293.1	260.2	238.0	217.1	204.3	211.1	228.4	242.5
60°	5691.5	3725.1	649.4	295.6	264.2	232.4	206.7	190.6	195.0	208.3	220.8
62.5°	5995.8	3842.6	682.4	293.5	275.0	228.8	194.2	176.1	176.5	187.8	199.0
65°	6052.9	3686.1	550.1	291.5	289.1	228.4	185.4	163.7	160.8	168.9	178.5
67.5°	5646.0	3199.6	396.9	287.1	290.7	226.0	179.3	153.6	146.4	152.0	160.0
70°	4793.9	2576.7	333.3	278.3	271.4	213.9	168.9	143.2	133.5	137.5	143.6
72.5°	3573.9	1906.4	290.7	259.4	236.4	183.0	152.8	131.5	121.4	124.3	128.7
75°	1985.6	1016.9	243.3	225.6	193.0	148.0	130.3	116.6	107.8	109.0	113.8
77.5°	659.5	375.2	178.5	178.9	146.0	114.2	107.4	99.7	92.9	93.3	97.3
80°	298.8	207.5	127.9	128.7	101.7	82.8	82.4	80.0	75.6	74.4	77.2
82.5°	173.3	125.9	87.7	83.6	65.5	53.9	59.9	58.7	57.5	53.1	53.9
85°	85.2	67.6	45.8	43.4	36.2	26.9	32.2	33.4	32.2	27.3	26.9
87.5°	20.9	22.1	11.3	10.5	6.0	2.8	4.8	4.8	6.0	4.0	2.0
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)