

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: P596677

Luminaire Tested: **MSA-SA3B-827-U-SL2-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596677  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3B-827-U-SL2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8857 lumens  
Efficiency: N/A  
Efficacy: 70.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2

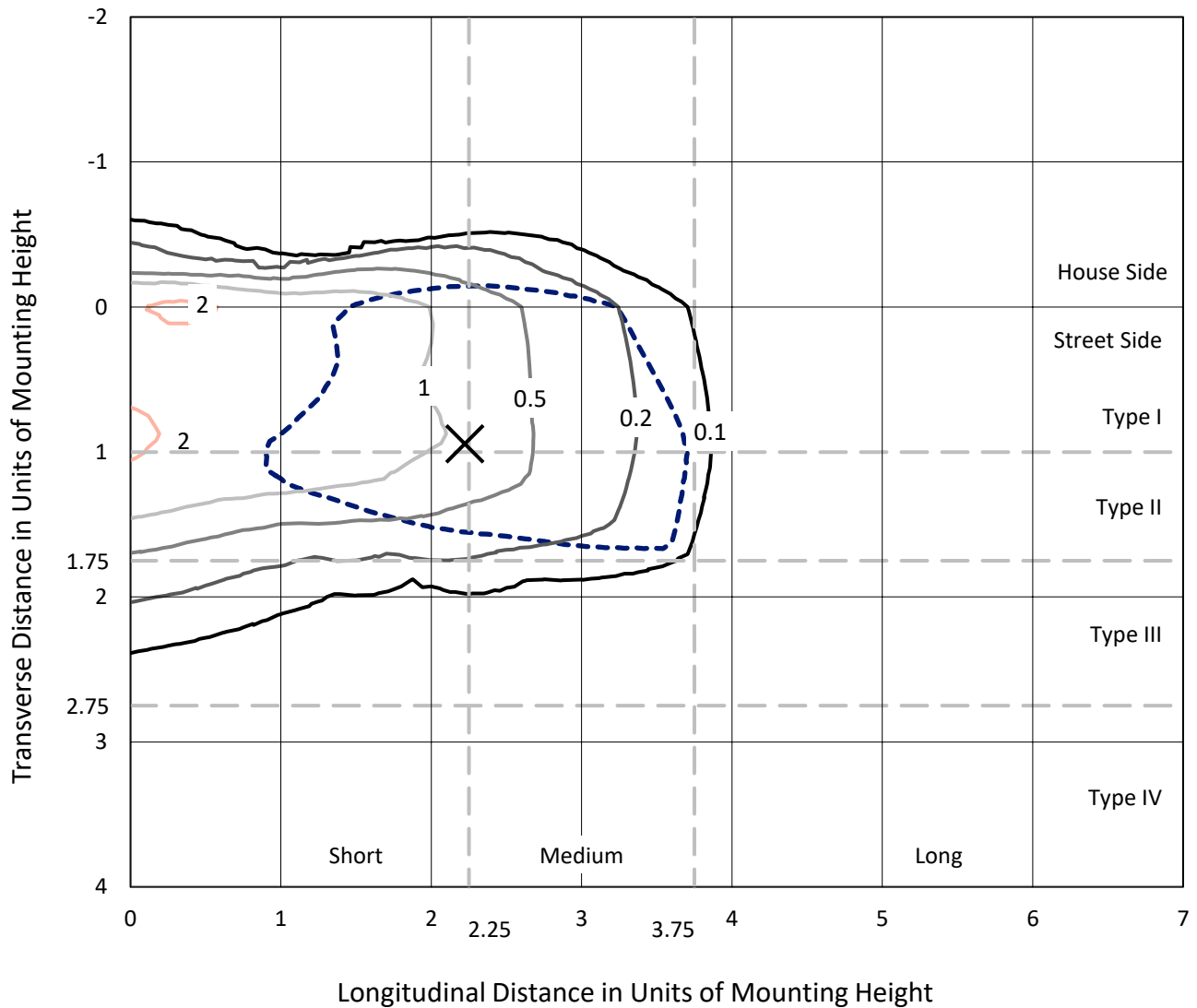
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

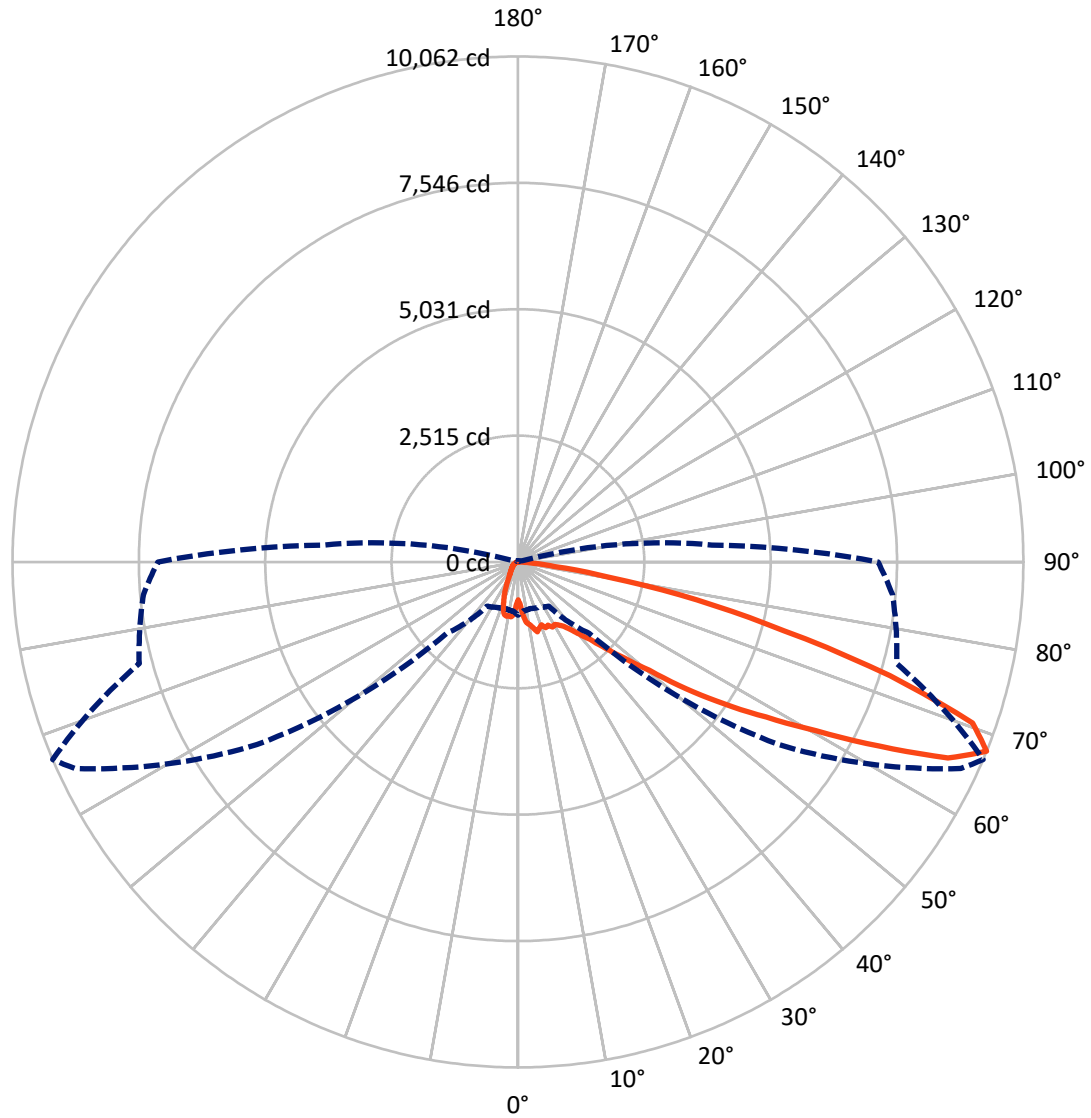
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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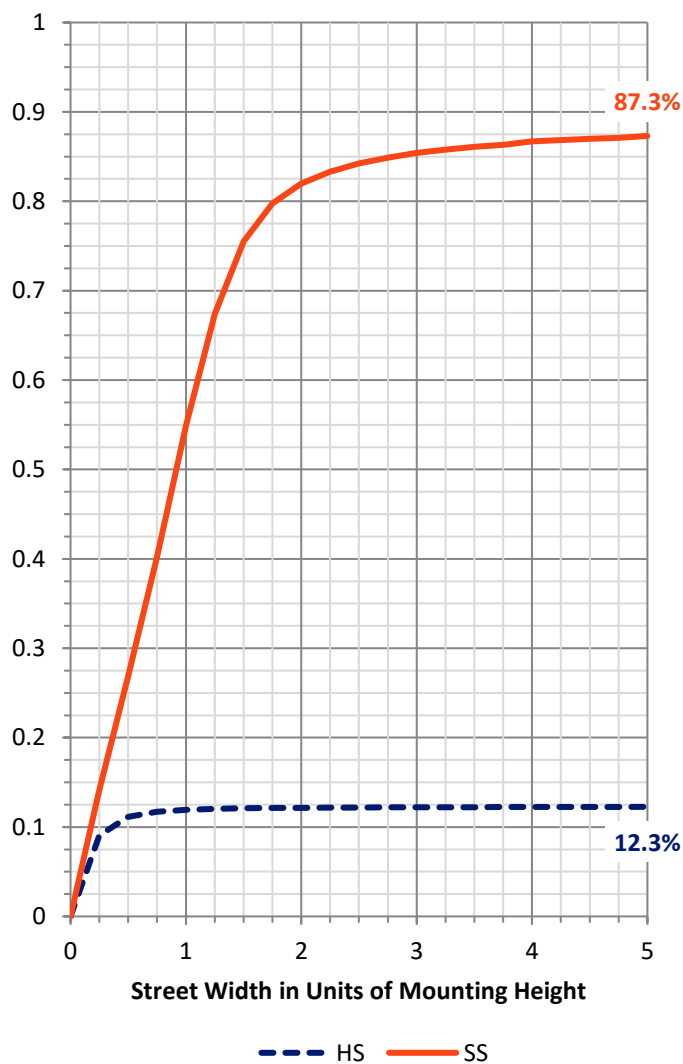
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1095.4	0.0	1095.4
	% Fixture	12.4	0.0	12.4
<b>Street Side</b>	Lumens	7761.6	0.0	7761.6
	% Fixture	87.6	0.0	87.6
<b>Total</b>	Lumens	8857.0	0.0	8857.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	94.7	1.1
10°-20°	280.2	3.2
20°-30°	439.1	5.0
30°-40°	708.0	8.0
40°-50°	1301.0	14.7
50°-60°	2197.2	24.8
60°-70°	2429.0	27.4
70°-80°	1271.3	14.4
80°-90°	136.5	1.5
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°	8857.0	100.0
0°-180°	8857.0	100.0

**Coefficient of Utilization**



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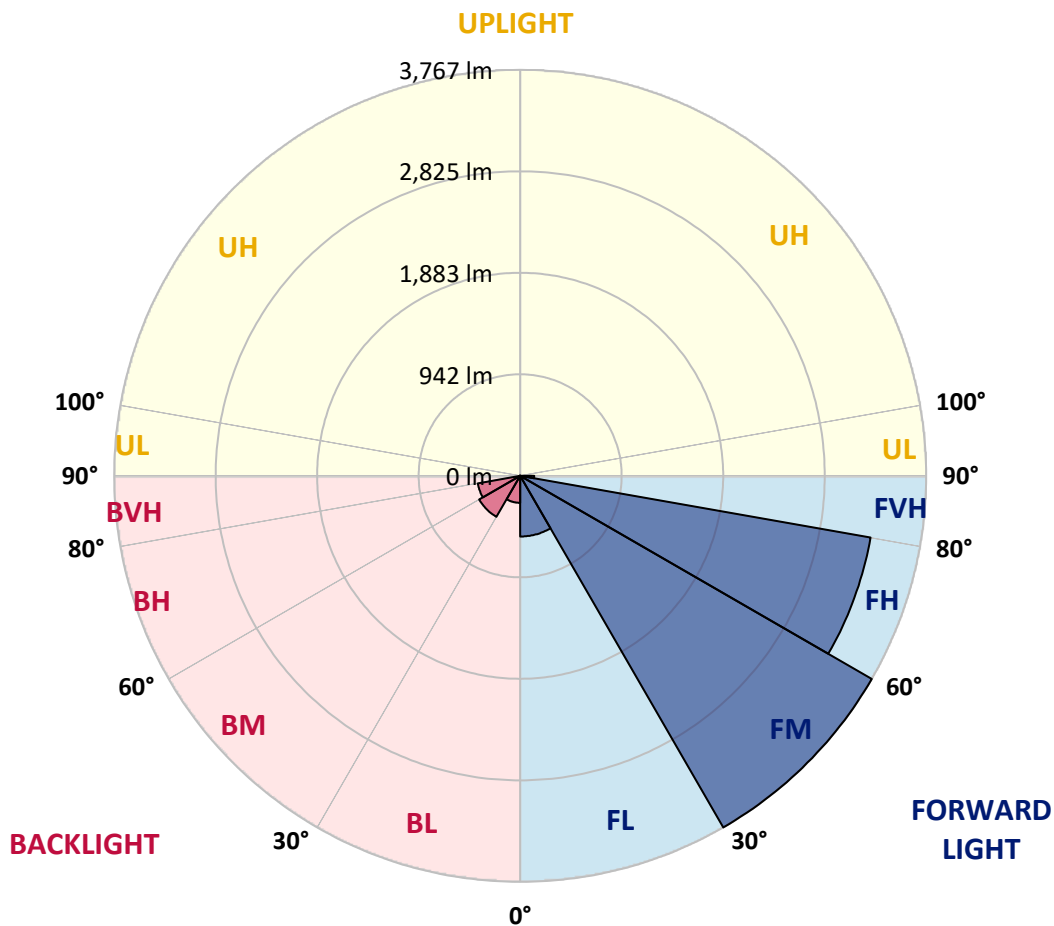
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	563.2	6.4			
FM (30°-60°)	3766.9	42.5			
FH (60°-80°)	3300.9	37.3			G2/5000
FVH (80°-90°)	130.7	1.5			G2/225
BL (0°-30°)	250.8	2.8	B1/500		
BM (30°-60°)	439.2	5.0	B1/1000		
BH (60°-80°)	399.5	4.5	B1/500		G1/500
BVH (80°-90°)	5.8	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	754.4	754.4	754.4	754.4	754.4	754.4	754.4	754.4	754.4	754.4	754.4
2.5°	890.5	860.4	809.2	824.0	853.7	878.4	866.7	843.8	844.2	820.9	904.9
5°	1036.1	995.6	966.0	976.3	975.0	974.1	1029.3	1050.5	1059.4	1098.1	1155.1
7.5°	1077.9	1063.5	1032.5	1041.9	1010.9	1013.2	1110.2	1201.9	1216.2	1240.1	1341.6
10°	1061.7	1033.8	1045.1	1045.1	1045.5	1095.8	1161.0	1248.6	1266.1	1357.8	1368.6
12.5°	1044.2	1045.5	1090.0	1081.9	1143.0	1233.3	1255.3	1353.7	1345.2	1424.7	1542.9
15°	1109.3	1143.5	1114.7	1125.9	1131.8	1237.8	1273.3	1404.0	1441.8	1542.4	1619.3
17.5°	1221.2	1225.7	1165.9	1149.7	1192.0	1222.1	1293.5	1356.4	1381.6	1645.8	1754.5
20°	1241.4	1270.2	1209.5	1116.1	1205.5	1246.8	1296.7	1326.8	1337.6	1677.7	1830.9
22.5°	1363.2	1331.3	1234.2	1163.2	1188.8	1233.8	1264.8	1355.5	1420.2	1617.5	1904.1
25°	1425.6	1417.1	1324.5	1263.9	1237.8	1234.2	1305.2	1373.9	1394.6	1679.9	1922.1
27.5°	1575.2	1555.9	1376.6	1369.0	1283.2	1207.7	1306.6	1430.1	1468.7	1621.1	1989.5
30°	1778.8	1771.6	1533.0	1528.1	1391.5	1255.8	1379.3	1464.7	1441.3	1651.2	2034.4
32.5°	1983.6	2042.1	1798.1	1658.8	1556.4	1432.4	1358.7	1453.9	1495.7	1724.4	2117.1
35°	2231.2	2273.4	2025.0	1923.9	1696.1	1515.0	1495.7	1556.8	1574.8	1811.6	2211.0
37.5°	2664.3	2600.5	2388.9	2216.8	2097.3	1810.2	1715.0	1666.4	1708.2	1929.7	2402.8
40°	2984.2	2943.8	2683.2	2580.3	2305.3	2137.3	1888.4	1843.0	1889.7	2051.0	2536.3
42.5°	3370.2	3286.2	3040.8	2971.2	2688.1	2364.2	2111.7	2127.4	2098.2	2290.5	2770.4
45°	3719.3	3529.7	3393.1	3408.8	3257.8	2820.2	2484.2	2476.5	2452.3	2637.4	3016.6
47.5°	3954.3	3788.5	3655.5	3611.9	3593.9	3622.2	3022.4	2886.7	2868.8	3001.7	3404.3
50°	4080.5	3899.0	3734.5	3743.5	4108.4	4382.9	3577.7	3385.0	3391.7	3530.6	3934.5
52.5°	3995.6	3790.3	3616.8	3785.3	4507.3	4890.1	4497.0	4036.0	4192.4	4156.9	4645.7
55°	3603.4	3425.0	3301.9	3603.4	4550.9	5436.0	5628.8	5015.9	4980.9	4900.0	5370.9
57.5°	2943.3	2789.7	2713.7	3031.8	4074.2	5875.9	6765.5	6123.5	5824.7	5485.9	5972.9
60°	2193.0	2079.8	2000.7	2168.8	3210.2	5448.6	7510.0	7167.2	6821.2	6050.7	6513.9
62.5°	1624.2	1532.1	1448.1	1463.4	2210.5	4686.2	7795.7	8272.9	8074.3	6646.9	7024.3
65°	1296.2	1212.2	1153.3	1119.6	1369.0	3525.6	7398.1	9179.1	9408.3	7208.5	7392.7
67.5°	1058.5	987.6	958.3	997.0	1073.8	2009.7	6336.0	9729.1	10061.5	7804.3	7483.5
70°	861.3	802.9	799.7	904.0	988.9	1225.2	4660.5	9349.4	9599.7	7905.8	6939.4
72.5°	600.3	574.6	615.5	763.4	979.9	1020.4	2676.5	7736.9	7745.9	6982.5	5707.9
75°	339.7	335.6	400.3	608.8	954.3	1010.0	1492.1	5467.5	5471.5	5281.0	3954.3
77.5°	186.9	174.8	233.2	411.6	819.5	986.7	962.4	3733.2	3637.5	2938.8	1806.2
80°	86.3	81.3	126.3	263.7	599.4	933.2	771.4	2051.9	1850.2	957.4	440.8
82.5°	35.5	33.7	58.0	169.4	378.8	751.7	650.1	910.3	730.6	182.0	136.1
85°	6.3	6.7	23.8	102.4	212.1	346.4	527.0	432.2	317.7	50.3	74.6
87.5°	0.0	0.0	4.9	24.7	51.2	94.8	213.9	120.9	83.1	14.8	22.0
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°	754.4	754.4	754.4	754.4	754.4	754.4	754.4	754.4	754.4	754.4	754.4
2.5°	921.5	913.9	836.6	840.2	845.6	840.6	839.7	818.2	798.4	863.5	862.6
5°	1165.5	1111.1	1057.6	1037.0	992.5	934.1	934.5	916.1	897.2	923.8	923.8
7.5°	1339.4	1264.3	1196.5	1075.6	957.9	851.4	842.0	816.8	788.1	822.7	829.4
10°	1379.8	1314.6	1227.0	1049.6	938.1	834.3	720.2	626.3	582.7	562.5	558.9
12.5°	1504.2	1455.7	1259.8	1063.5	903.1	727.4	540.5	429.1	353.1	347.3	339.2
15°	1587.4	1553.2	1292.2	1028.9	754.8	523.0	339.7	260.6	230.0	227.3	223.3
17.5°	1716.3	1657.0	1261.2	918.8	590.4	345.1	228.2	205.8	209.4	217.5	211.2
20°	1768.9	1653.0	1193.8	759.3	414.7	231.4	198.1	186.0	195.4	203.1	199.5
22.5°	1822.8	1664.6	1134.0	625.9	270.9	191.4	176.6	170.3	171.2	178.8	179.3
25°	1822.3	1697.0	1064.8	487.5	201.7	170.3	159.5	151.4	148.3	153.7	152.3
27.5°	1910.9	1659.7	938.6	361.7	177.5	152.3	142.0	132.1	120.9	126.3	126.3
30°	1911.3	1720.4	850.5	259.7	162.6	135.7	126.7	111.4	98.4	102.9	103.3
32.5°	1962.1	1667.8	769.2	198.6	151.0	125.8	106.0	92.1	84.5	87.2	87.2
35°	2020.0	1712.7	644.3	175.2	139.3	111.9	90.8	79.5	73.7	75.9	75.9
37.5°	2211.4	1703.3	557.6	163.1	131.6	101.1	82.7	70.1	67.4	68.7	70.5
40°	2280.6	1770.2	439.9	155.9	119.1	91.2	72.8	63.4	59.8	60.7	61.1
42.5°	2456.8	1785.1	351.3	150.1	107.8	79.1	64.7	58.0	53.5	53.5	54.8
45°	2651.3	1822.3	279.5	145.1	98.4	71.0	58.4	53.0	46.3	45.4	47.2
47.5°	2933.0	1965.2	227.8	135.2	87.2	66.0	53.9	45.8	40.4	38.6	40.4
50°	3404.3	2207.8	201.3	123.1	79.1	62.0	47.6	39.1	35.0	32.8	34.1
52.5°	4069.3	2627.0	187.4	111.9	71.9	55.7	42.7	34.1	30.1	28.3	29.2
55°	4807.9	3107.8	180.6	100.6	65.6	49.0	37.3	30.1	26.5	24.3	24.7
57.5°	5490.8	3559.8	173.9	89.9	59.3	43.6	32.8	26.5	22.9	20.7	21.1
60°	6163.9	3920.6	157.7	77.3	53.5	39.1	28.8	22.9	20.7	18.0	18.0
62.5°	6759.2	4136.2	134.3	66.9	48.1	34.6	25.6	20.7	18.9	16.2	16.2
65°	7164.5	4146.1	108.3	57.5	42.2	29.7	22.5	19.3	17.5	14.4	13.9
67.5°	7170.3	3876.5	86.7	51.2	37.3	26.1	20.2	18.4	16.2	13.5	12.6
70°	6417.7	3202.6	72.3	44.9	32.3	22.9	17.5	17.5	15.7	13.0	11.7
72.5°	5133.7	2447.3	60.7	39.1	28.8	19.8	16.2	16.6	15.3	13.0	11.7
75°	3450.6	1403.6	50.3	33.2	25.2	16.6	15.7	16.2	15.7	13.0	11.2
77.5°	1589.2	447.0	39.1	27.4	21.6	13.9	15.3	15.3	14.4	11.7	9.9
80°	358.1	110.1	28.3	20.2	17.5	10.3	13.9	12.6	11.2	8.1	5.8
82.5°	130.3	33.7	17.1	12.6	10.8	4.0	9.0	9.0	8.1	5.8	3.6
85°	74.6	17.5	9.4	8.1	5.8	1.8	4.9	5.4	4.5	4.0	1.8
87.5°	24.3	4.0	4.5	4.9	4.5	0.9	1.8	1.8	1.3	0.9	0.0
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)