

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: P596570

Luminaire Tested: **MSA-SA2A-827-U-SL3**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596570  
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-SA2A-827-U-SL3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

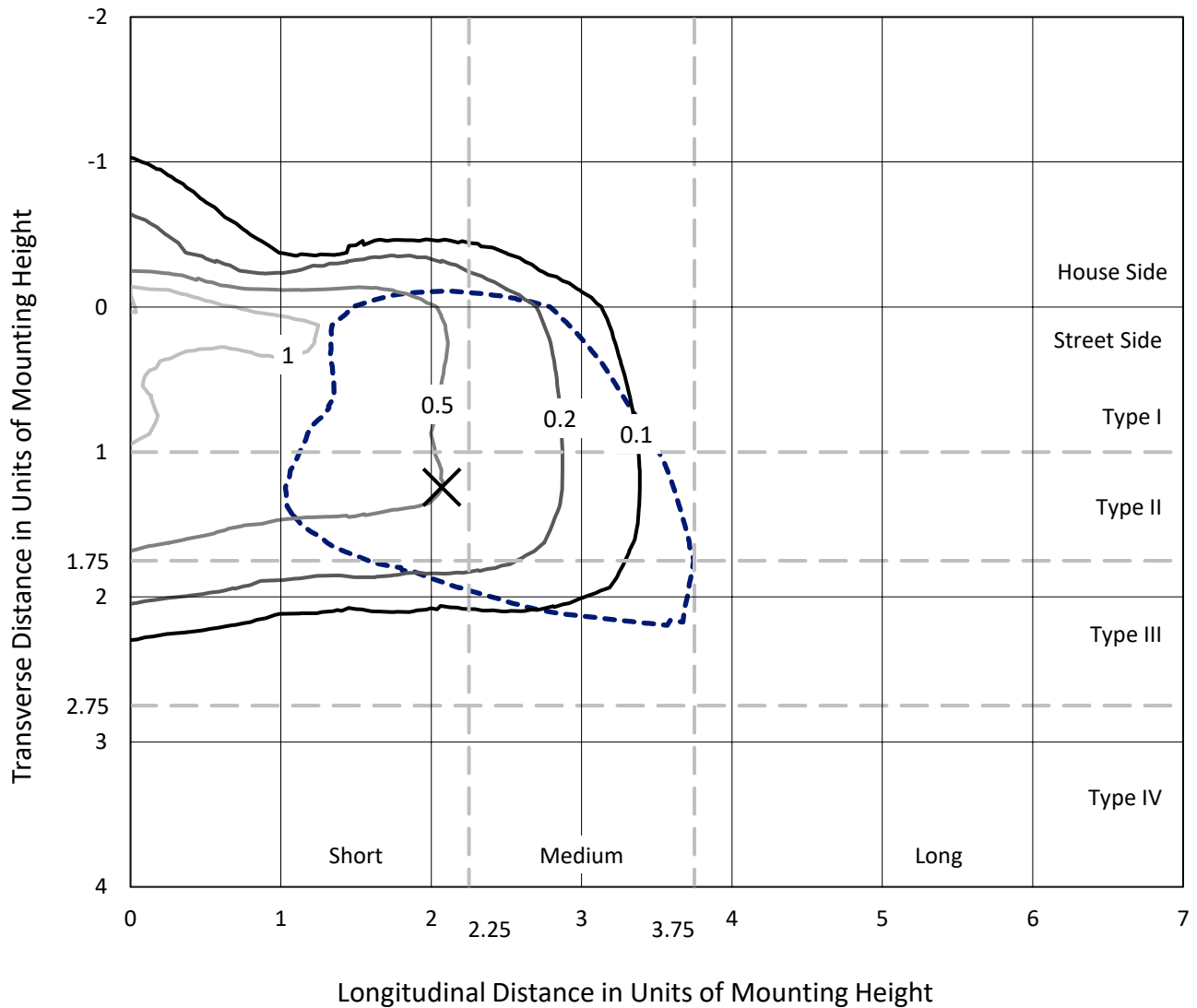
Lumens per Lamp: N/A  
Luminaire Lumens: 5733 lumens  
Efficiency: N/A  
Efficacy: 86.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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

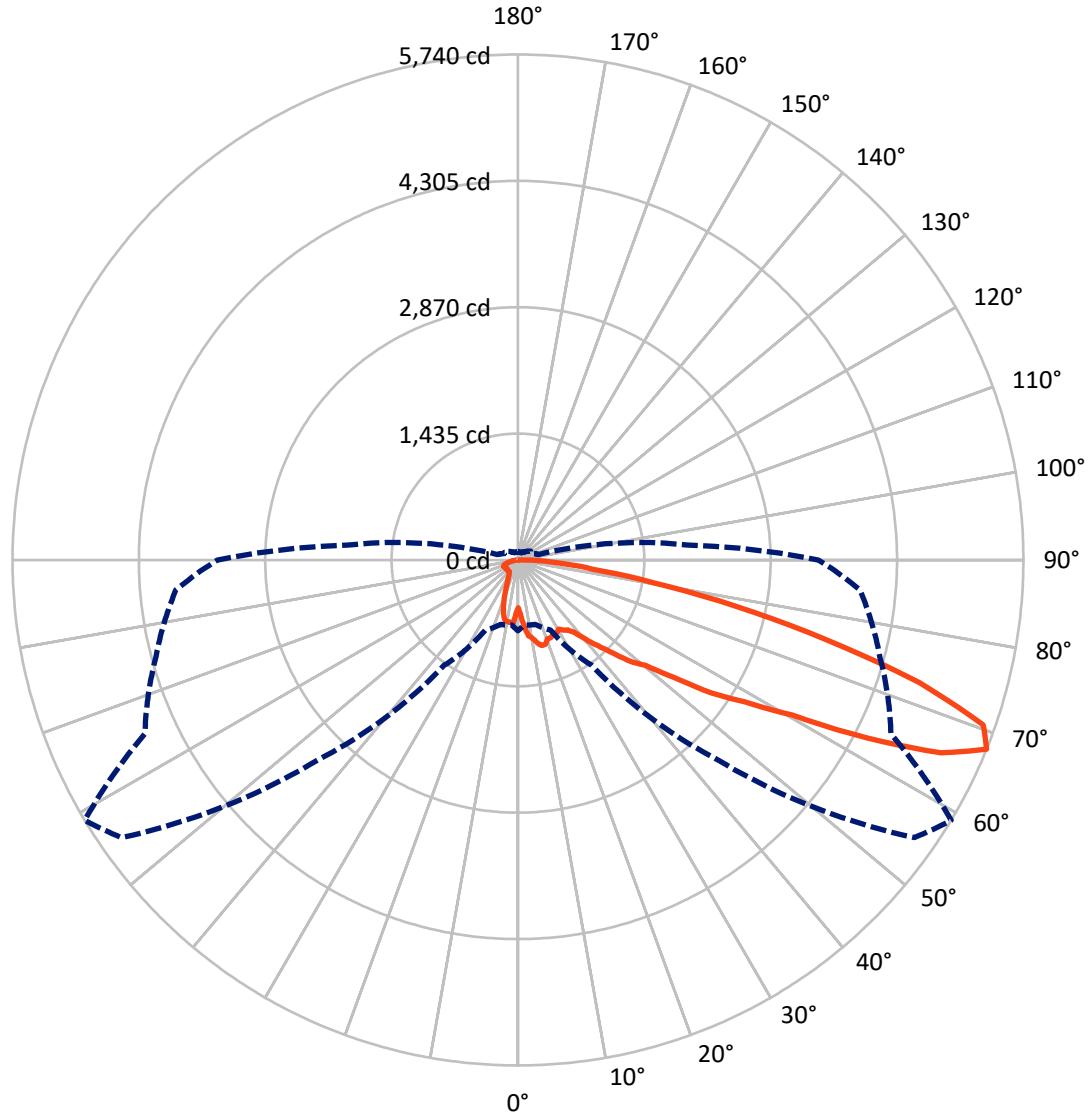
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.5 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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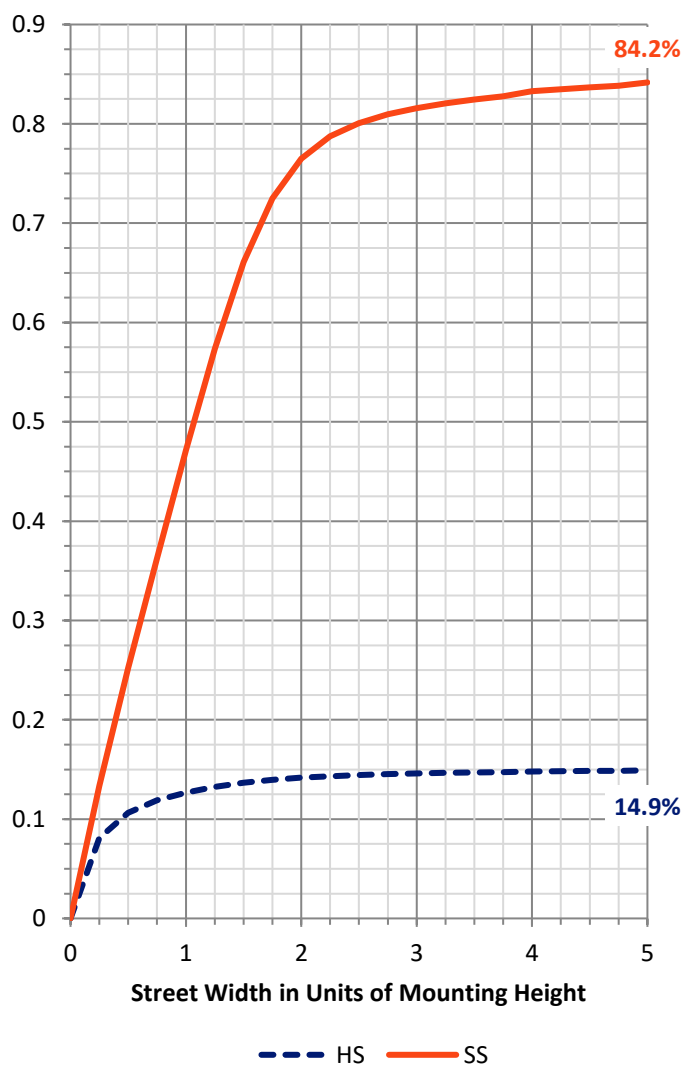
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	862.9	0.0	862.9
	% Fixture	15.1	0.0	15.1
<b>Street Side</b>	Lumens	4870.1	0.0	4870.1
	% Fixture	84.9	0.0	84.9
<b>Total</b>	Lumens	5733.0	0.0	5733.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.9	1.2
10°-20°	209.7	3.7
20°-30°	299.4	5.2
30°-40°	441.2	7.7
40°-50°	745.4	13.0
50°-60°	1297.2	22.6
60°-70°	1653.1	28.8
70°-80°	875.3	15.3
80°-90°	140.8	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°	5733.0	100.0
0°-180°	5733.0	100.0

**Coefficient of Utilization**



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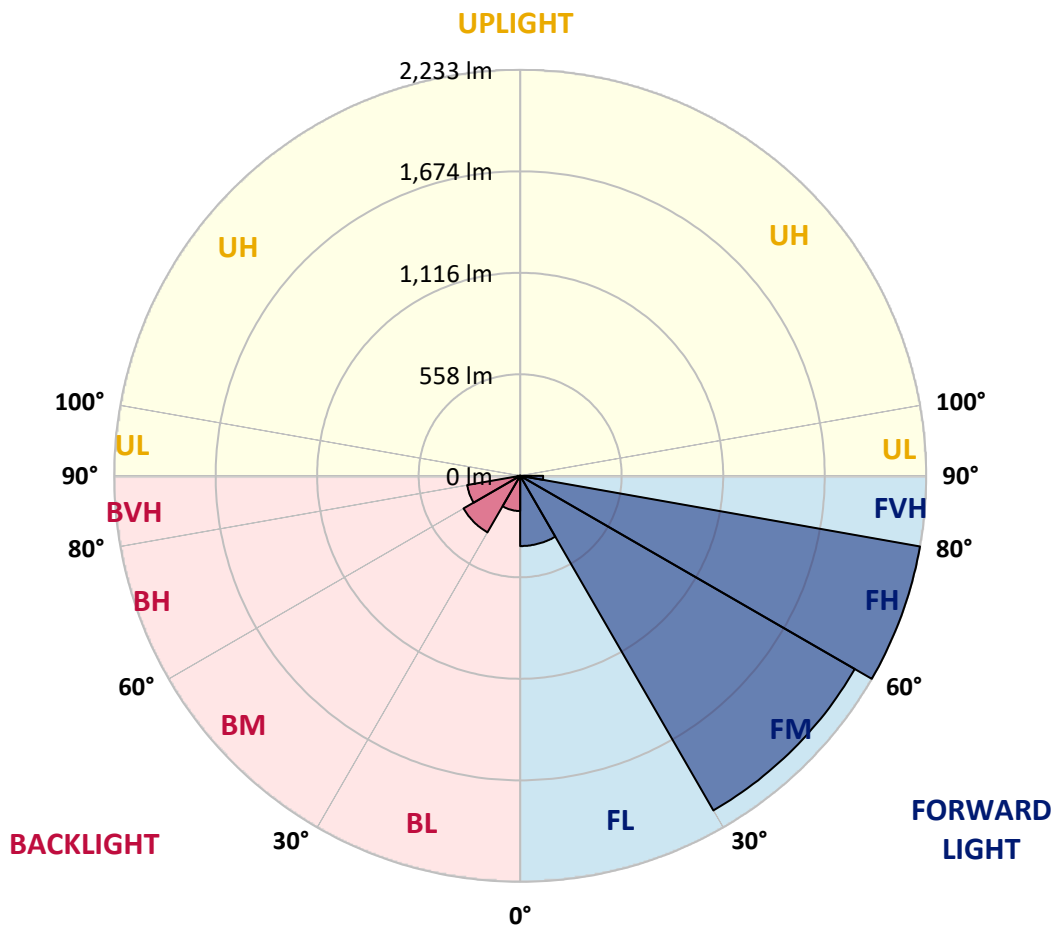
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	386.4	6.7			
FM (30°-60°)	2124.6	37.1			
FH (60°-80°)	2232.6	38.9			G2/5000
FVH (80°-90°)	126.5	2.2			G2/225
BL (0°-30°)	193.5	3.4	B1/500		
BM (30°-60°)	359.3	6.3	B1/1000		
BH (60°-80°)	295.8	5.2	B1/500		G1/500
BVH (80°-90°)	14.3	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°	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5
2.5°	677.3	645.7	612.2	621.7	640.9	649.6	640.2	630.9	619.0	604.9	653.0
5°	821.4	774.5	767.7	767.5	760.7	733.4	768.4	766.0	780.1	794.7	832.1
7.5°	862.4	845.0	826.0	835.0	800.7	799.3	853.7	869.3	896.5	887.5	937.8
10°	841.3	821.6	831.6	828.0	831.1	867.1	900.3	901.3	930.5	959.1	926.8
12.5°	804.1	805.6	845.2	843.7	894.8	961.6	971.5	963.8	1011.4	991.9	1019.6
15°	830.6	848.4	838.4	846.9	867.1	952.1	979.8	1008.0	1053.2	1070.7	1043.0
17.5°	872.9	882.4	837.7	833.1	874.6	914.9	983.7	1007.7	1014.8	1139.4	1100.3
20°	854.9	874.1	830.4	774.3	843.3	896.7	964.5	957.2	991.5	1144.7	1112.2
22.5°	905.9	874.1	818.5	778.6	802.9	852.0	909.6	957.4	998.0	1113.4	1129.4
25°	915.7	900.6	848.6	809.0	800.7	818.2	900.3	931.7	1000.2	1156.2	1120.2
27.5°	974.9	952.3	846.4	847.6	806.6	775.7	871.2	937.0	1025.0	1129.7	1142.8
30°	1048.5	1031.3	898.4	903.3	846.4	789.6	891.1	911.0	1039.3	1171.0	1171.2
32.5°	1103.7	1134.1	1000.7	934.6	914.4	871.9	860.5	950.2	1022.5	1245.8	1219.8
35°	1203.1	1226.6	1079.4	1026.4	958.2	910.3	943.6	975.9	1092.3	1344.2	1292.0
37.5°	1387.0	1359.8	1225.7	1142.3	1116.8	1047.8	1066.3	1043.7	1168.1	1454.7	1433.4
40°	1493.4	1469.8	1328.7	1282.5	1181.4	1190.2	1167.1	1183.6	1269.4	1572.3	1565.5
42.5°	1598.3	1566.7	1447.5	1415.4	1314.6	1271.8	1275.9	1329.4	1425.6	1762.3	1739.7
45°	1702.1	1621.2	1568.9	1577.4	1528.8	1441.1	1447.2	1497.5	1596.1	1979.5	1927.5
47.5°	1781.5	1714.7	1673.9	1663.4	1639.4	1756.7	1704.2	1724.7	1768.1	2172.9	2153.2
50°	1931.9	1853.9	1800.7	1785.6	1867.3	2030.5	1923.6	1879.7	1972.2	2422.9	2412.7
52.5°	2172.6	2075.5	1986.8	1985.8	2103.9	2209.8	2285.1	2209.3	2243.3	2678.9	2708.1
55°	2382.8	2270.3	2190.6	2234.6	2402.7	2467.6	2723.4	2664.1	2635.5	2937.4	3020.8
57.5°	2461.3	2329.8	2277.8	2342.7	2590.5	2923.8	3194.2	3038.3	3010.3	3229.9	3404.6
60°	2289.0	2150.1	2153.2	2275.4	2704.7	3258.8	3709.0	3576.6	3412.9	3594.1	3764.7
62.5°	1798.3	1672.7	1754.5	1940.4	2609.0	3584.4	4399.0	4454.9	3872.8	3896.1	3964.4
65°	1222.2	1135.3	1209.1	1391.1	2116.0	3762.0	5056.1	5280.1	4291.6	4093.8	4050.6
67.5°	804.4	742.9	757.3	878.2	1456.7	3207.1	5495.6	5739.8	4674.5	4256.1	3898.5
70°	622.9	573.3	567.0	630.4	863.9	2228.0	5235.2	5606.4	4907.7	4104.0	3398.1
72.5°	488.8	451.1	454.5	515.5	669.1	1236.1	4051.1	4767.5	4556.4	3539.4	2610.7
75°	381.2	350.3	367.6	437.3	618.8	768.2	2795.1	3618.4	3522.7	2620.9	1489.0
77.5°	276.7	256.8	281.3	372.4	581.6	659.1	1740.0	2524.4	2256.7	1345.7	510.9
80°	181.5	170.3	190.5	303.7	527.4	634.3	1075.3	1546.8	1115.1	378.0	193.4
82.5°	106.9	102.0	118.8	205.5	423.9	594.5	717.2	859.5	456.2	159.9	102.8
85°	56.1	52.5	70.5	118.1	292.3	542.7	564.6	514.6	220.3	69.5	49.1
87.5°	18.7	18.2	29.9	45.7	110.5	288.1	301.2	244.4	90.9	20.2	10.7
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°	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5	542.5
2.5°	659.6	649.9	594.0	601.8	609.1	605.4	603.2	578.0	575.5	611.5	608.6
5°	831.1	790.8	743.2	741.0	709.6	677.6	683.9	673.7	676.6	691.4	692.9
7.5°	921.7	871.4	826.0	752.2	689.5	638.7	646.7	644.3	637.7	671.3	680.2
10°	920.0	875.3	824.1	734.7	692.4	651.1	601.5	554.6	540.8	524.3	525.7
12.5°	980.8	941.2	829.4	738.3	681.0	609.8	517.0	465.7	416.6	415.7	403.3
15°	999.7	970.6	840.8	717.4	601.0	499.0	403.0	347.4	311.9	304.9	294.4
17.5°	1047.6	1001.9	806.1	649.9	508.2	390.2	303.0	264.1	261.2	266.0	260.7
20°	1050.7	976.6	743.4	550.0	408.4	295.7	247.1	227.6	238.1	250.0	249.5
22.5°	1048.1	944.8	689.2	465.0	306.8	237.6	216.5	212.1	221.8	239.5	241.7
25°	1020.8	934.4	621.4	381.9	249.0	203.6	197.8	200.4	212.6	233.5	233.5
27.5°	1049.3	891.8	536.4	310.7	209.4	181.2	185.4	192.2	201.2	225.0	229.3
30°	1040.0	905.9	467.9	250.2	184.6	165.7	174.9	181.7	191.9	216.7	218.9
32.5°	1064.8	868.3	410.3	210.4	168.4	159.6	161.8	171.0	184.4	203.8	207.7
35°	1102.7	882.1	344.3	189.3	160.3	152.6	156.7	164.0	177.3	196.3	199.5
37.5°	1223.7	881.4	298.6	177.6	158.9	151.1	153.1	158.2	173.7	191.0	198.2
40°	1301.4	931.9	257.0	174.9	157.2	150.4	148.7	154.3	166.7	187.1	192.2
42.5°	1447.5	962.8	239.1	173.9	156.9	146.3	144.6	151.1	163.3	182.2	190.0
45°	1601.7	1006.8	224.7	173.5	156.2	145.5	140.4	148.7	158.9	177.1	186.1
47.5°	1783.2	1099.8	216.7	171.8	154.8	146.5	139.0	143.1	154.5	172.7	181.7
50°	2020.8	1223.0	218.4	169.3	156.9	146.7	136.8	138.7	149.2	166.9	176.1
52.5°	2309.7	1413.7	229.3	170.3	158.4	145.5	135.8	134.8	143.8	159.4	168.6
55°	2657.8	1684.3	262.1	174.9	158.4	145.3	134.3	130.0	136.8	149.4	158.4
57.5°	3077.9	1997.7	326.3	177.1	157.2	143.8	131.2	123.4	127.5	138.0	146.5
60°	3438.6	2250.6	392.4	178.6	159.6	140.4	124.9	115.2	117.8	125.8	133.4
62.5°	3622.5	2321.6	412.3	177.3	166.2	138.2	117.3	106.4	106.7	113.5	120.3
65°	3657.0	2227.1	332.3	176.1	174.7	138.0	112.0	98.9	97.2	102.0	107.9
67.5°	3411.2	1933.1	239.8	173.5	175.6	136.5	108.4	92.8	88.4	91.8	96.7
70°	2896.4	1556.8	201.4	168.1	164.0	129.2	102.0	86.5	80.7	83.1	86.7
72.5°	2159.3	1151.8	175.6	156.7	142.9	110.5	92.3	79.4	73.4	75.1	77.7
75°	1199.7	614.4	147.0	136.3	116.6	89.4	78.7	70.5	65.1	65.8	68.8
77.5°	398.4	226.7	107.9	108.1	88.2	69.0	64.9	60.2	56.1	56.4	58.8
80°	180.5	125.4	77.3	77.7	61.5	50.0	49.8	48.3	45.7	44.9	46.6
82.5°	104.7	76.0	53.0	50.5	39.6	32.6	36.2	35.5	34.7	32.1	32.6
85°	51.5	40.8	27.7	26.2	21.9	16.3	19.4	20.2	19.4	16.5	16.3
87.5°	12.6	13.4	6.8	6.3	3.6	1.7	2.9	2.9	3.6	2.4	1.2
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)