

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: P596568

Luminaire Tested: **MSA-SA2A-827-U-SL2**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596568  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2A-827-U-SL2  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5804 lumens  
Efficiency: N/A  
Efficacy: 87.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G2

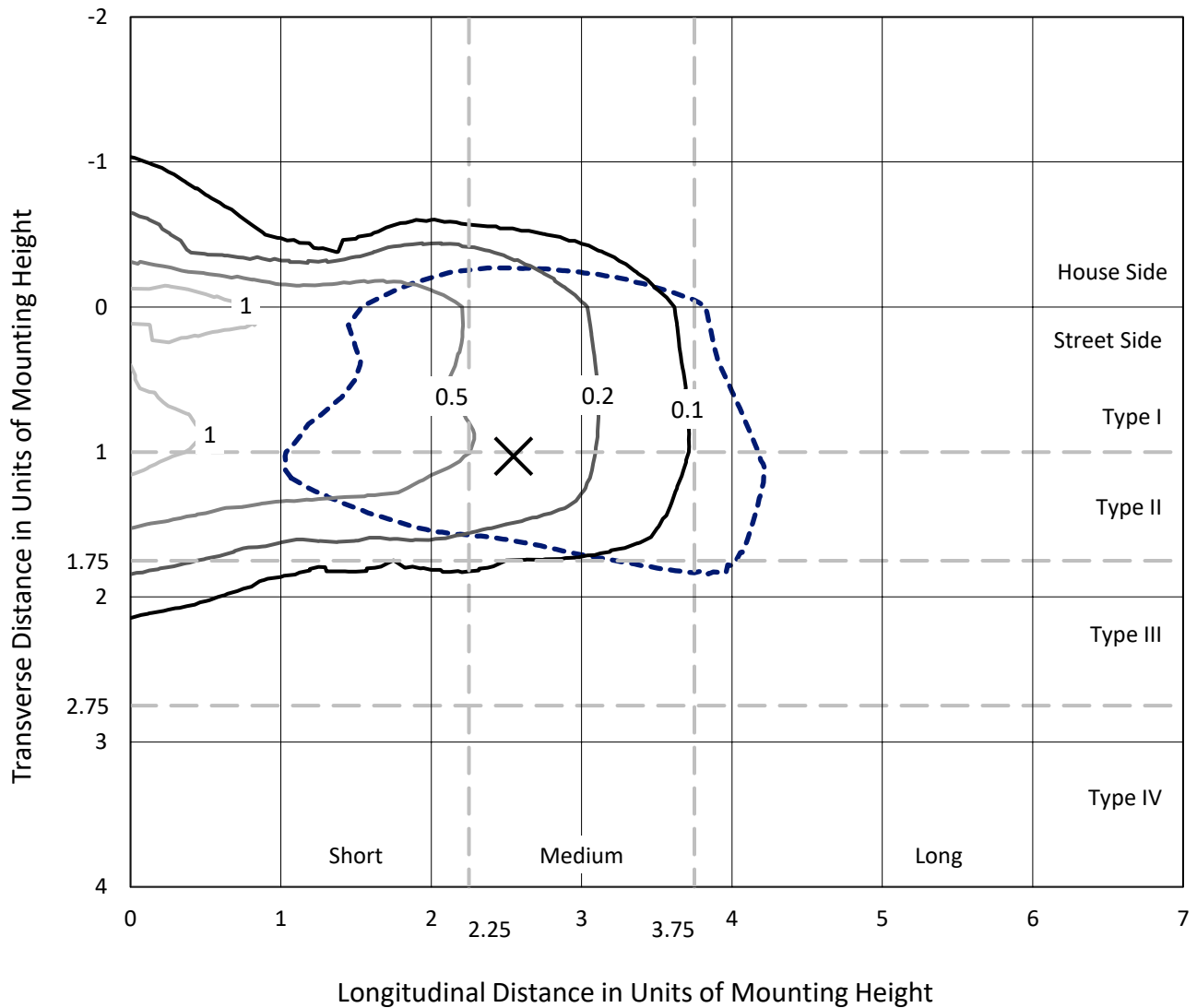
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

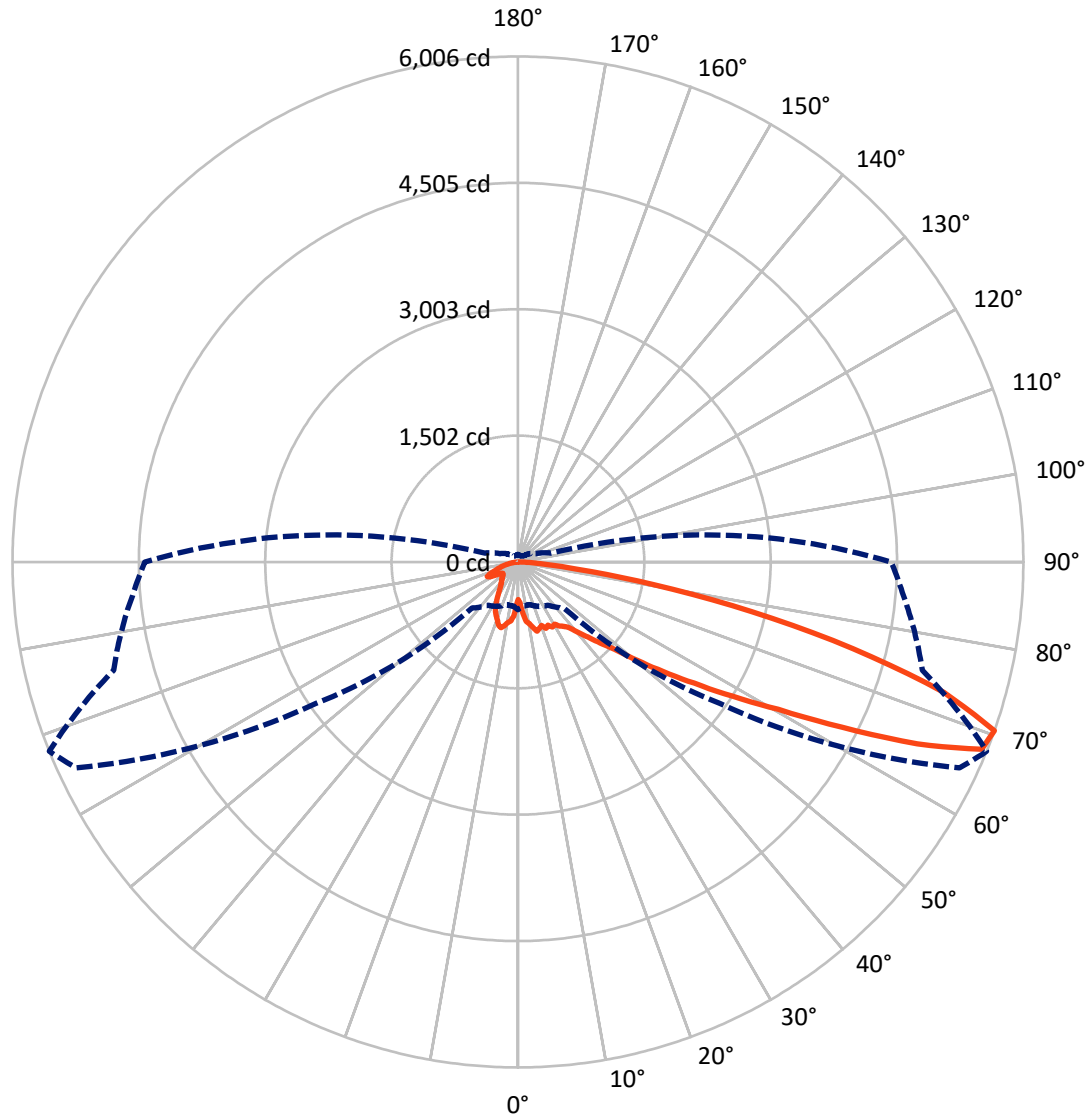
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

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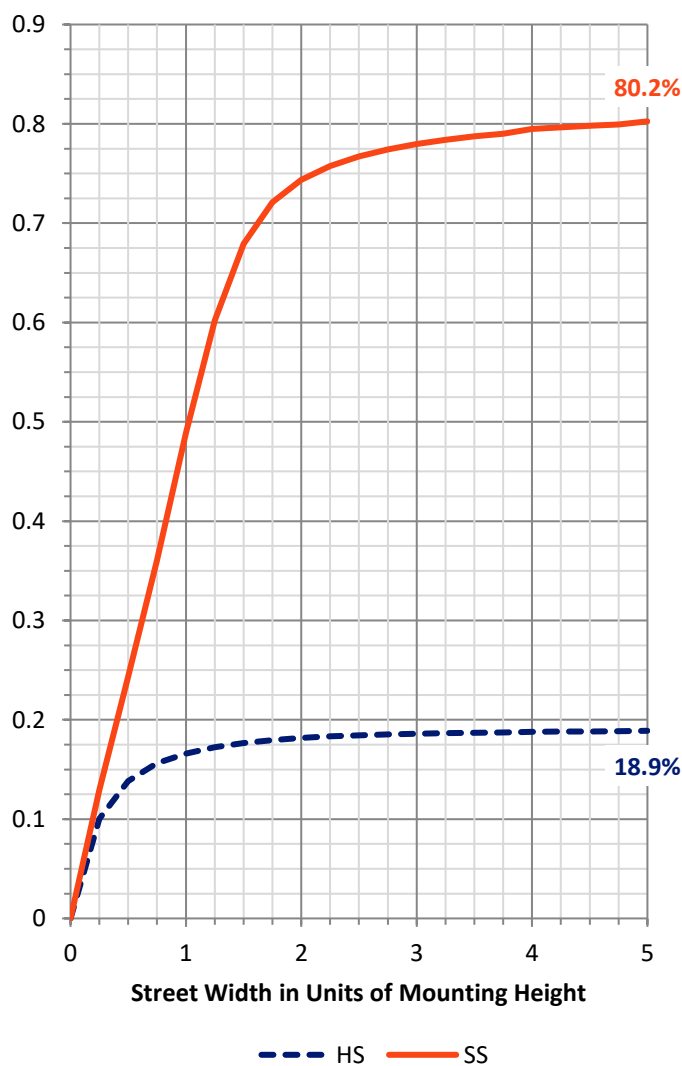
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1108.1	0.0	1108.1
	% Fixture	19.1	0.0	19.1
<b>Street Side</b>	Lumens	4695.9	0.0	4695.9
	% Fixture	80.9	0.0	80.9
<b>Total</b>	Lumens	5804.0	0.0	5804.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.4	1.0
10°-20°	193.7	3.3
20°-30°	294.7	5.1
30°-40°	450.1	7.8
40°-50°	773.9	13.3
50°-60°	1281.0	22.1
60°-70°	1579.3	27.2
70°-80°	1014.5	17.5
80°-90°	157.4	2.7
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°	5804.0	100.0
0°-180°	5804.0	100.0

**Coefficient of Utilization**



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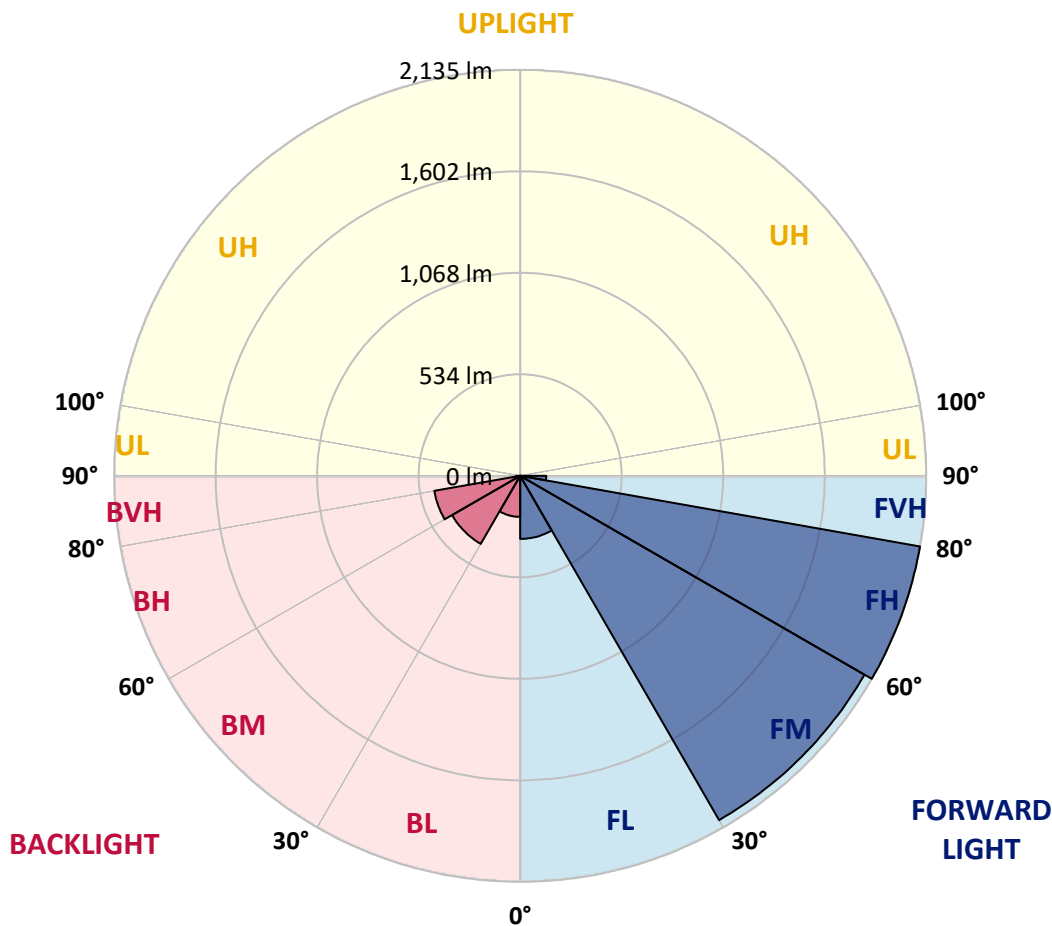
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	331.9	5.7			
FM (30°-60°)	2091.4	36.0			
FH (60°-80°)	2135.4	36.8			G2/5000
FVH (80°-90°)	137.2	2.4			G2/225
BL (0°-30°)	215.9	3.7	B1/500		
BM (30°-60°)	413.6	7.1	B1/1000		
BH (60°-80°)	458.4	7.9	B1/500		G1/500
BVH (80°-90°)	20.2	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 Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	445.0	445.0	445.0	445.0	445.0	445.0	445.0	445.0	445.0	445.0	445.0
2.5°	511.3	490.7	469.8	480.0	496.3	510.6	507.7	509.4	489.7	487.0	538.8
5°	602.4	567.0	566.2	566.7	568.2	551.7	592.0	612.9	617.5	638.9	689.6
7.5°	634.0	619.7	605.1	612.4	593.9	595.6	645.2	699.6	712.5	728.0	797.5
10°	627.4	613.8	618.2	619.4	622.8	650.3	682.1	734.3	745.3	794.8	812.8
12.5°	628.4	626.0	646.4	647.1	683.6	732.9	745.5	793.6	798.0	834.4	909.5
15°	661.7	678.5	667.0	673.1	680.2	739.2	757.4	826.4	852.6	899.5	955.9
17.5°	726.5	731.4	697.2	688.2	711.2	729.2	770.8	800.6	828.1	959.0	1036.7
20°	741.6	754.7	713.9	667.5	716.3	741.4	770.3	783.9	805.3	967.8	1078.0
22.5°	806.2	779.0	729.7	689.4	705.4	729.7	750.6	801.8	858.0	942.7	1119.3
25°	842.9	827.1	783.1	739.9	726.3	727.0	767.4	813.3	832.7	979.4	1127.6
27.5°	931.6	906.3	807.4	799.2	747.9	708.1	770.0	841.4	875.5	950.8	1167.9
30°	1042.6	1023.4	893.7	882.7	804.5	735.0	804.0	862.3	857.5	969.5	1195.9
32.5°	1132.5	1164.5	1033.6	947.4	891.7	825.2	793.3	858.7	907.0	1012.9	1243.2
35°	1260.7	1290.8	1142.7	1084.4	963.6	866.9	867.9	908.7	938.6	1063.7	1296.2
37.5°	1482.7	1456.3	1337.0	1244.9	1167.7	1023.4	980.1	965.8	989.9	1125.9	1399.9
40°	1642.8	1620.5	1480.1	1427.6	1277.2	1193.4	1074.9	1061.3	1103.8	1190.0	1484.7
42.5°	1832.5	1792.7	1662.0	1618.8	1461.6	1310.5	1191.0	1198.8	1219.4	1311.0	1599.3
45°	2025.6	1929.0	1854.9	1851.5	1746.5	1537.9	1377.3	1371.0	1371.7	1489.0	1728.1
47.5°	2178.9	2092.0	2007.2	1966.9	1913.9	1931.1	1647.9	1573.8	1551.5	1668.3	1921.2
50°	2282.6	2182.6	2086.6	2077.1	2218.5	2311.5	1902.0	1822.8	1836.7	1924.8	2178.7
52.5°	2284.8	2166.0	2066.0	2132.3	2465.3	2598.4	2339.7	2118.4	2162.6	2222.6	2514.6
55°	2126.0	2002.8	1937.7	2088.8	2561.7	2938.7	2954.8	2592.1	2541.1	2563.2	2916.1
57.5°	1791.0	1666.6	1628.7	1809.7	2378.8	3266.9	3697.6	3158.1	3008.5	2916.1	3327.6
60°	1348.2	1240.5	1217.0	1332.4	1972.2	3170.5	4299.0	3862.5	3557.7	3310.4	3740.3
62.5°	1011.0	933.8	898.3	914.8	1364.7	2856.9	4694.0	4752.6	4320.9	3740.8	4143.6
65°	821.5	759.1	727.5	706.1	848.7	2209.0	4622.6	5501.7	5212.4	4192.9	4457.4
67.5°	686.2	630.8	616.3	637.2	670.9	1281.6	4063.9	5920.7	5940.4	4638.9	4640.8
70°	569.6	528.6	523.2	582.5	627.0	773.4	2935.3	5789.1	6006.2	4973.4	4597.8
72.5°	440.2	418.1	417.3	510.4	622.8	659.3	1748.0	5001.1	5292.8	4866.5	4177.1
75°	305.3	290.0	301.7	419.5	608.5	668.7	997.6	3895.3	4113.7	4141.1	3346.1
77.5°	210.1	197.2	209.9	303.4	543.4	684.8	697.9	2816.6	2840.8	2777.0	1916.6
80°	146.2	137.2	147.0	214.7	422.9	677.7	594.2	1773.3	1627.0	1239.3	613.6
82.5°	90.6	87.9	98.6	153.0	297.8	616.5	563.1	915.0	698.6	342.0	219.1
85°	47.6	43.7	57.3	99.8	186.3	483.9	527.6	417.6	269.6	121.5	87.9
87.5°	14.1	12.6	22.1	40.3	78.9	216.9	301.9	177.1	100.6	35.7	27.4
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°	445.0	445.0	445.0	445.0	445.0	445.0	445.0	445.0	445.0	445.0	445.0
2.5°	542.4	539.7	503.8	508.4	516.2	518.1	517.9	504.8	490.9	529.5	528.3
5°	690.8	666.8	648.8	644.9	622.8	600.7	608.5	605.8	602.4	619.9	622.1
7.5°	797.7	764.4	743.6	689.9	638.9	594.6	608.7	613.1	604.4	635.9	645.4
10°	825.9	799.7	777.1	708.1	679.9	654.2	616.0	572.5	566.7	548.5	550.7
12.5°	898.5	894.9	817.9	757.2	720.5	669.2	586.9	534.2	489.0	491.2	478.0
15°	955.9	957.8	865.2	780.2	681.9	603.6	506.7	441.1	394.7	385.5	376.0
17.5°	1032.9	1029.0	869.1	752.5	627.9	513.3	394.5	329.4	321.6	327.0	318.7
20°	1066.4	1032.1	844.4	683.8	543.6	389.9	298.1	263.6	278.6	300.0	300.5
22.5°	1096.5	1038.0	831.5	628.4	431.4	283.5	239.3	233.0	250.7	279.6	282.0
25°	1095.3	1064.9	808.4	572.5	334.5	221.3	207.9	212.5	233.7	263.8	265.5
27.5°	1150.4	1044.3	748.4	499.2	251.9	189.5	192.9	201.4	211.3	240.0	245.6
30°	1149.9	1082.7	718.3	410.0	202.3	173.7	182.4	189.7	198.0	224.2	227.4
32.5°	1177.1	1057.6	700.1	318.9	181.5	169.8	172.0	179.3	191.2	208.9	211.1
35°	1209.9	1086.1	641.8	253.4	173.7	166.4	168.1	172.2	183.2	199.4	201.6
37.5°	1315.1	1091.4	618.7	213.5	173.2	164.9	164.7	166.9	179.3	194.1	200.6
40°	1356.2	1140.2	551.4	199.4	171.5	164.9	161.5	162.8	173.0	191.9	197.0
42.5°	1454.6	1156.5	501.6	194.6	171.5	162.0	156.7	158.6	170.5	187.3	195.3
45°	1555.8	1179.6	442.3	193.6	171.3	161.8	151.6	155.9	165.7	179.8	188.5
47.5°	1700.1	1262.7	383.1	190.7	169.3	163.0	150.4	150.1	158.6	170.8	179.0
50°	1935.5	1392.4	337.2	187.0	169.6	162.0	147.9	144.5	150.1	160.8	168.8
52.5°	2263.2	1613.4	319.2	185.1	167.6	158.1	143.8	138.5	141.6	150.1	157.9
55°	2643.6	1912.0	336.9	185.1	163.7	152.1	138.0	131.7	133.4	139.2	146.7
57.5°	3088.1	2282.9	422.7	182.4	158.9	144.8	130.9	123.6	124.1	129.2	136.0
60°	3552.3	2697.3	614.8	180.2	155.5	136.8	122.7	115.1	114.4	119.3	125.3
62.5°	4017.3	3079.6	816.9	185.3	154.5	130.0	113.9	106.4	106.2	110.5	115.6
65°	4387.0	3341.0	867.2	206.0	160.8	122.2	104.9	97.9	97.4	101.1	106.6
67.5°	4568.4	3378.9	658.8	231.7	174.2	114.9	96.2	89.6	89.1	93.0	97.9
70°	4434.1	3120.0	406.6	234.4	173.4	106.4	87.2	81.6	80.6	84.8	88.4
72.5°	3937.1	2729.1	309.0	207.4	150.1	94.2	78.2	73.4	71.9	75.5	78.9
75°	3160.0	2166.8	247.5	167.4	118.3	79.4	69.2	64.6	62.9	66.3	69.2
77.5°	1840.8	1218.9	181.0	130.7	89.4	64.9	59.0	54.9	53.0	56.6	58.8
80°	598.5	406.1	113.7	93.8	65.3	50.8	47.9	44.9	43.0	45.4	46.2
82.5°	215.0	151.1	62.9	57.6	43.5	36.4	36.2	34.5	32.1	33.0	33.0
85°	95.2	69.0	37.4	30.8	26.0	19.4	22.8	21.6	19.2	18.7	18.0
87.5°	26.7	22.8	13.6	10.4	8.5	3.2	7.3	6.6	5.3	4.9	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)