

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: P367527

Luminaire Tested: **MSA-SA2D-727-U-SL2-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367527  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2D-727-U-SL2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 9245 lumens  
Efficiency: N/A  
Efficacy: 71.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2

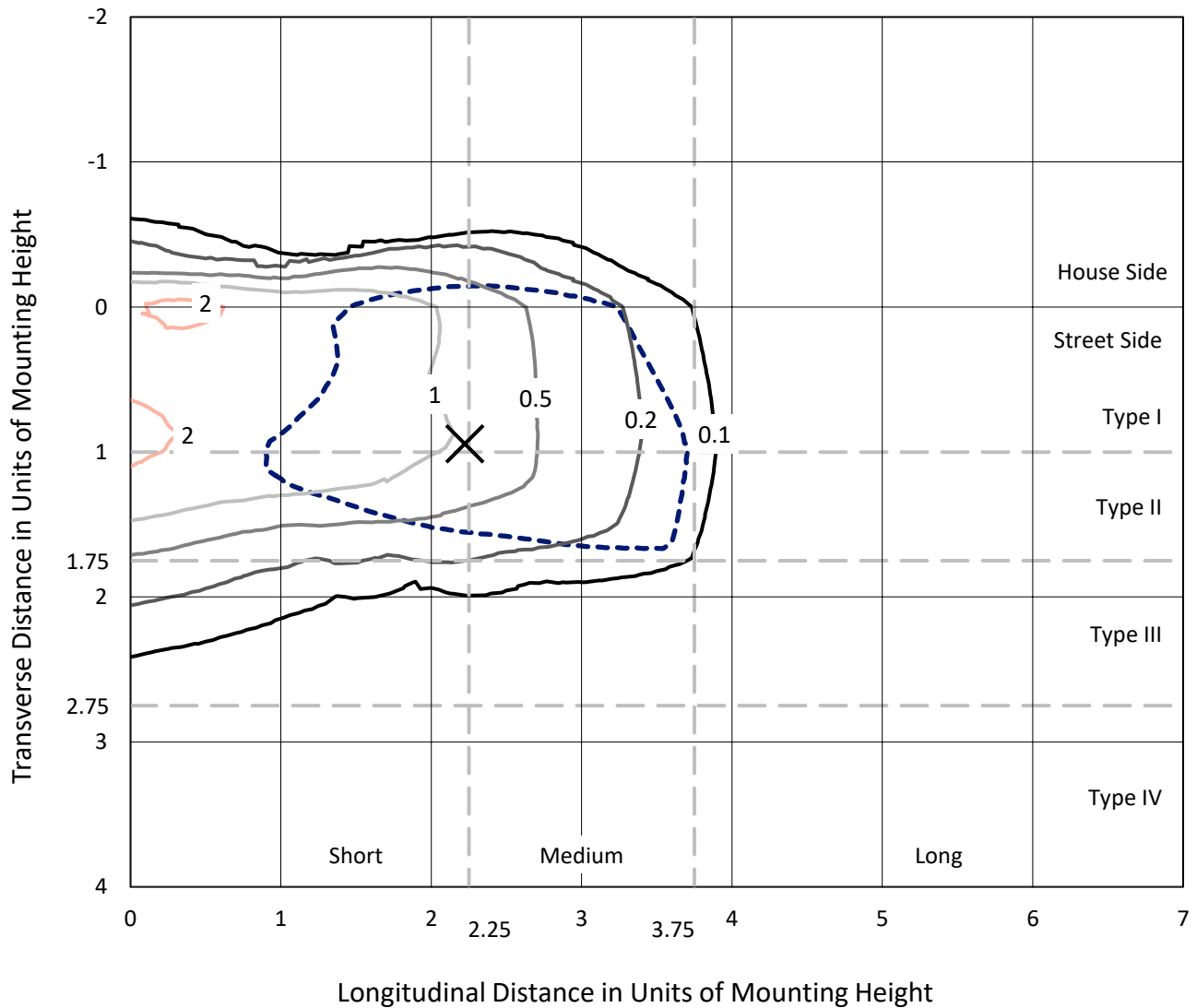
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

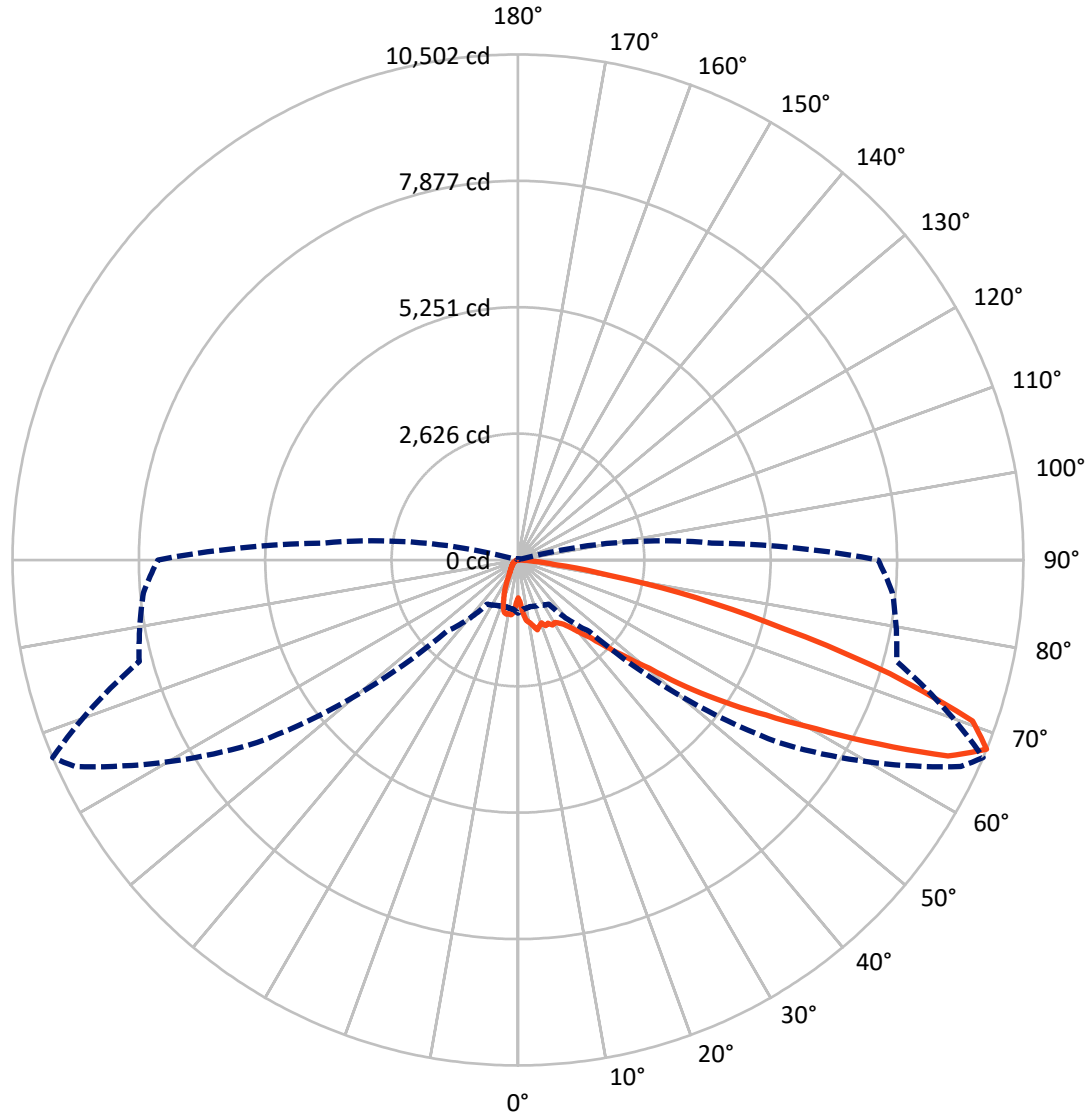
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 fc  
 Type 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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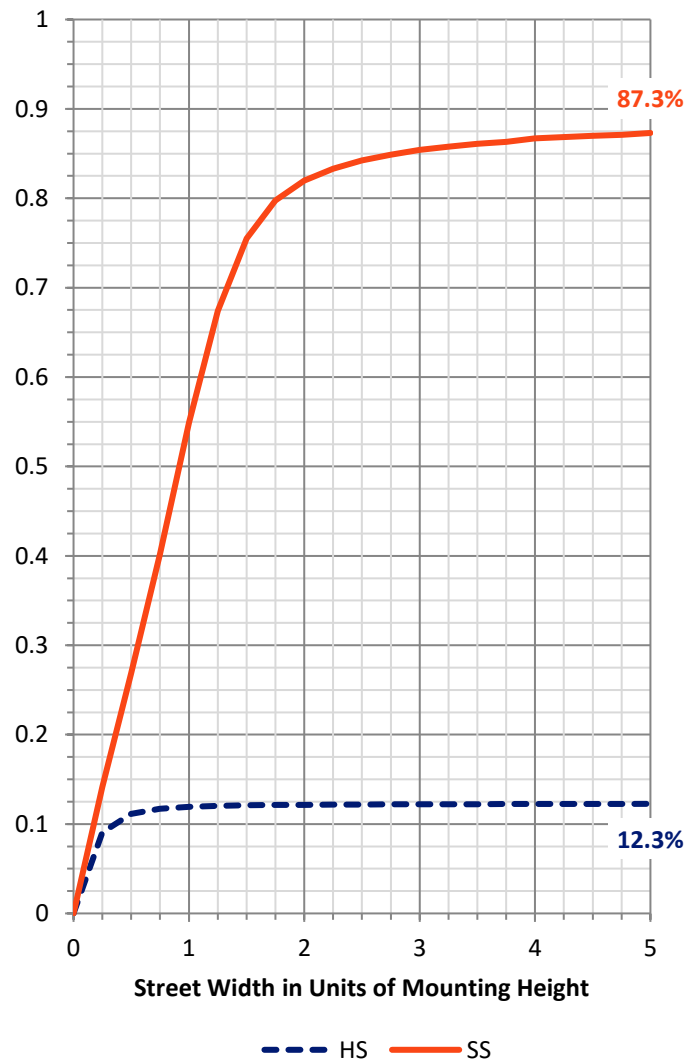
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1143.3	0.0	1143.3
	% Fixture	12.4	0.0	12.4
<b>Street Side</b>	Lumens	8101.7	0.0	8101.7
	% Fixture	87.6	0.0	87.6
<b>Total</b>	Lumens	9245.0	0.0	9245.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.8	1.1
10°-20°	292.5	3.2
20°-30°	458.3	5.0
30°-40°	739.0	8.0
40°-50°	1358.0	14.7
50°-60°	2293.4	24.8
60°-70°	2535.5	27.4
70°-80°	1327.0	14.4
80°-90°	142.5	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°	9245.0	100.0
0°-180°	9245.0	100.0

**Coefficient of Utilization**

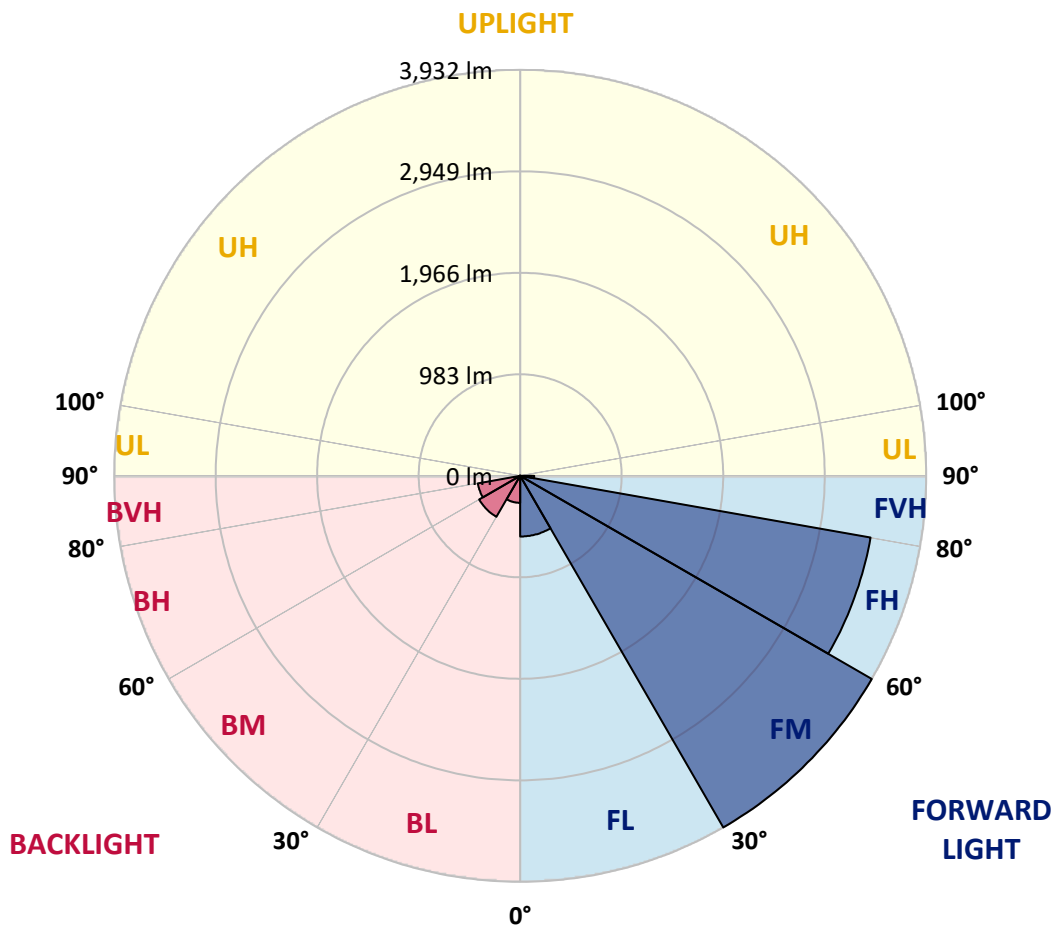


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	587.8	6.4			
FM (30°-60°)	3931.9	42.5			
FH (60°-80°)	3445.5	37.3			G2/5000
FVH (80°-90°)	136.4	1.5			G2/225
BL (0°-30°)	261.8	2.8	B1/500		
BM (30°-60°)	458.4	5.0	B1/1000		
BH (60°-80°)	417.0	4.5	B1/500		G1/500
BVH (80°-90°)	6.1	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°	787.4	787.4	787.4	787.4	787.4	787.4	787.4	787.4	787.4	787.4	787.4
2.5°	929.5	898.1	844.6	860.1	891.1	916.9	904.7	880.7	881.2	856.8	944.5
5°	1081.5	1039.3	1008.3	1019.1	1017.7	1016.7	1074.4	1096.5	1105.9	1146.2	1205.7
7.5°	1125.1	1110.1	1077.7	1087.6	1055.2	1057.5	1158.8	1254.5	1269.5	1294.4	1400.4
10°	1108.2	1079.1	1090.8	1090.8	1091.3	1143.8	1211.8	1303.3	1321.6	1417.3	1428.5
12.5°	1089.9	1091.3	1137.7	1129.3	1193.1	1287.3	1310.3	1413.0	1404.1	1487.1	1610.5
15°	1157.9	1193.5	1163.5	1175.3	1181.4	1292.0	1329.1	1465.6	1505.0	1610.0	1690.2
17.5°	1274.7	1279.4	1217.0	1200.1	1244.2	1275.6	1350.2	1415.8	1442.1	1717.9	1831.4
20°	1295.8	1325.8	1262.5	1164.9	1258.3	1301.4	1353.5	1384.9	1396.1	1751.2	1911.1
22.5°	1422.9	1389.6	1288.3	1214.2	1240.9	1287.8	1320.2	1414.9	1482.4	1688.3	1987.5
25°	1488.1	1479.2	1382.5	1319.2	1292.0	1288.3	1362.4	1434.1	1455.7	1753.5	2006.3
27.5°	1644.2	1624.1	1436.9	1429.0	1339.4	1260.6	1363.8	1492.8	1533.1	1692.1	2076.6
30°	1856.7	1849.2	1600.2	1595.0	1452.4	1310.8	1439.8	1528.9	1504.5	1723.5	2123.5
32.5°	2070.5	2131.5	1876.9	1731.5	1624.5	1495.1	1418.2	1517.6	1561.2	1799.9	2209.8
35°	2328.9	2373.0	2113.7	2008.2	1770.4	1581.4	1561.2	1625.0	1643.8	1890.9	2307.8
37.5°	2781.0	2714.4	2493.6	2313.9	2189.2	1889.5	1790.1	1739.4	1783.1	2014.3	2508.1
40°	3115.0	3072.7	2800.7	2693.3	2406.3	2230.9	1971.1	1923.7	1972.5	2140.9	2647.4
42.5°	3517.8	3430.1	3174.0	3101.4	2805.9	2467.8	2204.2	2220.6	2190.1	2390.9	2891.7
45°	3882.2	3684.3	3541.7	3558.1	3400.6	2943.8	2593.0	2585.0	2559.7	2752.9	3148.7
47.5°	4127.5	3954.4	3815.6	3770.1	3751.4	3780.9	3154.8	3013.2	2994.4	3133.2	3553.4
50°	4259.3	4069.8	3898.1	3907.5	4288.3	4574.9	3734.5	3533.3	3540.3	3685.2	4106.8
52.5°	4170.6	3956.3	3775.3	3951.1	4704.8	5104.4	4694.0	4212.8	4376.0	4339.0	4849.2
55°	3761.2	3575.0	3446.5	3761.2	4750.3	5674.2	5875.4	5235.7	5199.1	5114.7	5606.2
57.5°	3072.3	2911.9	2832.6	3164.7	4252.7	6133.3	7061.9	6391.7	6079.8	5726.2	6234.6
60°	2289.1	2170.9	2088.4	2263.8	3350.9	5687.3	7839.0	7481.1	7120.0	6315.7	6799.2
62.5°	1695.4	1599.2	1511.5	1527.5	2307.4	4891.4	8137.2	8635.3	8428.0	6938.1	7332.0
65°	1353.0	1265.3	1203.9	1168.7	1429.0	3680.1	7722.2	9581.2	9820.4	7524.3	7716.6
67.5°	1104.9	1030.8	1000.3	1040.7	1120.9	2097.7	6613.5	10155.3	10502.3	8146.2	7811.3
70°	899.0	838.1	834.8	943.6	1032.2	1278.9	4864.7	9759.0	10020.2	8252.1	7243.4
72.5°	626.6	599.8	642.5	796.8	1022.8	1065.0	2793.7	8075.8	8085.2	7288.4	5957.9
75°	354.5	350.3	417.9	635.5	996.1	1054.3	1557.5	5707.0	5711.2	5512.4	4127.5
77.5°	195.1	182.4	243.4	429.6	855.4	1029.9	1004.6	3896.7	3796.8	3067.6	1885.3
80°	90.0	84.9	131.8	275.3	625.6	974.1	805.2	2141.8	1931.3	999.4	460.1
82.5°	37.0	35.2	60.5	176.8	395.3	784.6	678.6	950.2	762.6	189.9	142.1
85°	6.6	7.0	24.9	106.9	221.4	361.6	550.1	451.2	331.6	52.5	77.9
87.5°	0.0	0.0	5.2	25.8	53.5	99.0	223.2	126.2	86.8	15.5	23.0
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°	787.4	787.4	787.4	787.4	787.4	787.4	787.4	787.4	787.4	787.4	787.4
2.5°	961.9	953.9	873.2	877.0	882.6	877.5	876.5	854.0	833.4	901.4	900.4
5°	1216.5	1159.8	1104.0	1082.4	1036.0	975.0	975.5	956.2	936.5	964.2	964.2
7.5°	1398.0	1319.7	1248.9	1122.7	999.9	888.7	878.9	852.6	822.6	858.7	865.7
10°	1440.2	1372.2	1280.8	1095.5	979.2	870.9	751.8	653.8	608.3	587.2	583.4
12.5°	1570.1	1519.5	1315.0	1110.1	942.6	759.3	564.2	447.9	368.6	362.5	354.1
15°	1656.9	1621.3	1348.8	1074.0	787.9	545.9	354.5	272.0	240.1	237.3	233.1
17.5°	1791.5	1729.6	1316.4	959.1	616.2	360.2	238.2	214.8	218.5	227.0	220.4
20°	1846.4	1725.4	1246.1	792.6	432.9	241.5	206.8	194.2	204.0	212.0	208.2
22.5°	1902.6	1737.6	1183.7	653.3	282.8	199.8	184.3	177.7	178.7	186.7	187.1
25°	1902.2	1771.3	1111.5	508.8	210.6	177.7	166.5	158.0	154.8	160.4	159.0
27.5°	1994.6	1732.4	979.7	377.5	185.2	159.0	148.2	137.9	126.2	131.8	131.8
30°	1995.0	1795.7	887.8	271.1	169.8	141.6	132.3	116.3	102.7	107.4	107.9
32.5°	2048.0	1740.8	802.9	207.3	157.6	131.3	110.7	96.1	88.2	91.0	91.0
35°	2108.5	1787.7	672.5	182.9	145.4	116.8	94.7	83.0	76.9	79.3	79.3
37.5°	2308.3	1777.9	582.0	170.2	137.4	105.5	86.3	73.2	70.3	71.8	73.6
40°	2380.5	1847.8	459.1	162.7	124.3	95.2	76.0	66.1	62.4	63.3	63.8
42.5°	2564.4	1863.3	366.7	156.6	112.6	82.5	67.5	60.5	55.8	55.8	57.2
45°	2767.4	1902.2	291.7	151.5	102.7	74.1	61.0	55.3	48.3	47.4	49.2
47.5°	3061.5	2051.3	237.8	141.2	91.0	68.9	56.3	47.8	42.2	40.3	42.2
50°	3553.4	2304.6	210.1	128.5	82.5	64.7	49.7	40.8	36.6	34.2	35.6
52.5°	4247.5	2742.1	195.6	116.8	75.0	58.2	44.6	35.6	31.4	29.5	30.5
55°	5018.5	3243.9	188.5	105.1	68.5	51.1	38.9	31.4	27.7	25.3	25.8
57.5°	5731.4	3715.7	181.5	93.8	61.9	45.5	34.2	27.7	23.9	21.6	22.0
60°	6433.9	4092.3	164.6	80.7	55.8	40.8	30.0	23.9	21.6	18.8	18.8
62.5°	7055.3	4317.4	140.2	69.9	50.2	36.1	26.7	21.6	19.7	16.9	16.9
65°	7478.3	4327.7	113.0	60.0	44.1	31.0	23.4	20.2	18.3	15.0	14.5
67.5°	7484.4	4046.3	90.5	53.5	38.9	27.2	21.1	19.2	16.9	14.1	13.1
70°	6698.9	3342.9	75.5	46.9	33.8	23.9	18.3	18.3	16.4	13.6	12.2
72.5°	5358.5	2554.5	63.3	40.8	30.0	20.6	16.9	17.4	15.9	13.6	12.2
75°	3601.8	1465.1	52.5	34.7	26.3	17.4	16.4	16.9	16.4	13.6	11.7
77.5°	1658.8	466.6	40.8	28.6	22.5	14.5	15.9	15.9	15.0	12.2	10.3
80°	373.8	114.9	29.5	21.1	18.3	10.8	14.5	13.1	11.7	8.4	6.1
82.5°	136.0	35.2	17.8	13.1	11.3	4.2	9.4	9.4	8.4	6.1	3.8
85°	77.9	18.3	9.8	8.4	6.1	1.9	5.2	5.6	4.7	4.2	1.9
87.5°	25.3	4.2	4.7	5.2	4.7	0.9	1.9	1.9	1.4	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)