

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: P367408

Luminaire Tested: **MSA-SA2C-727-U-T3**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367408  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2C-727-U-T3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10302 lumens  
Efficiency: N/A  
Efficacy: 91.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G2

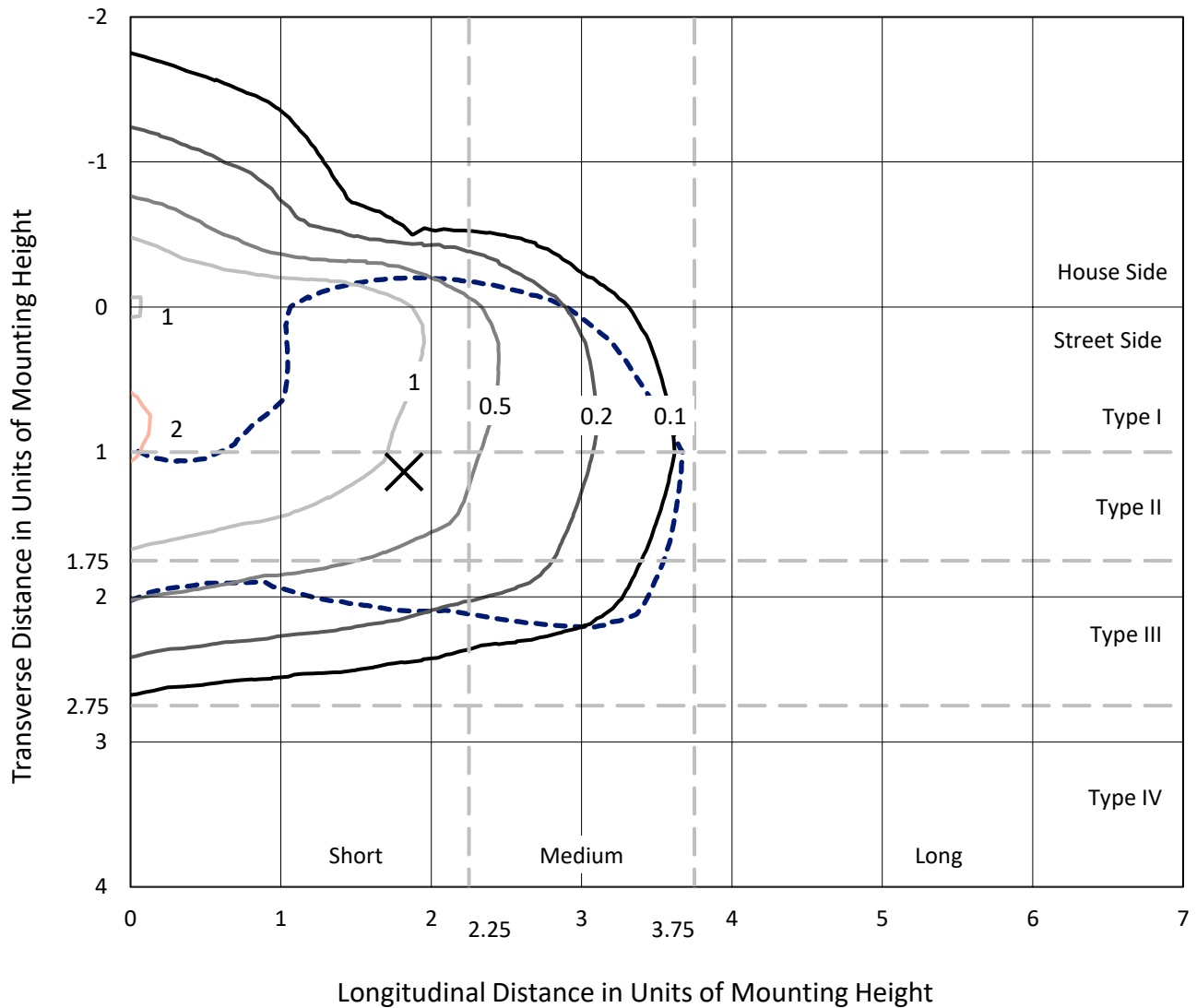
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

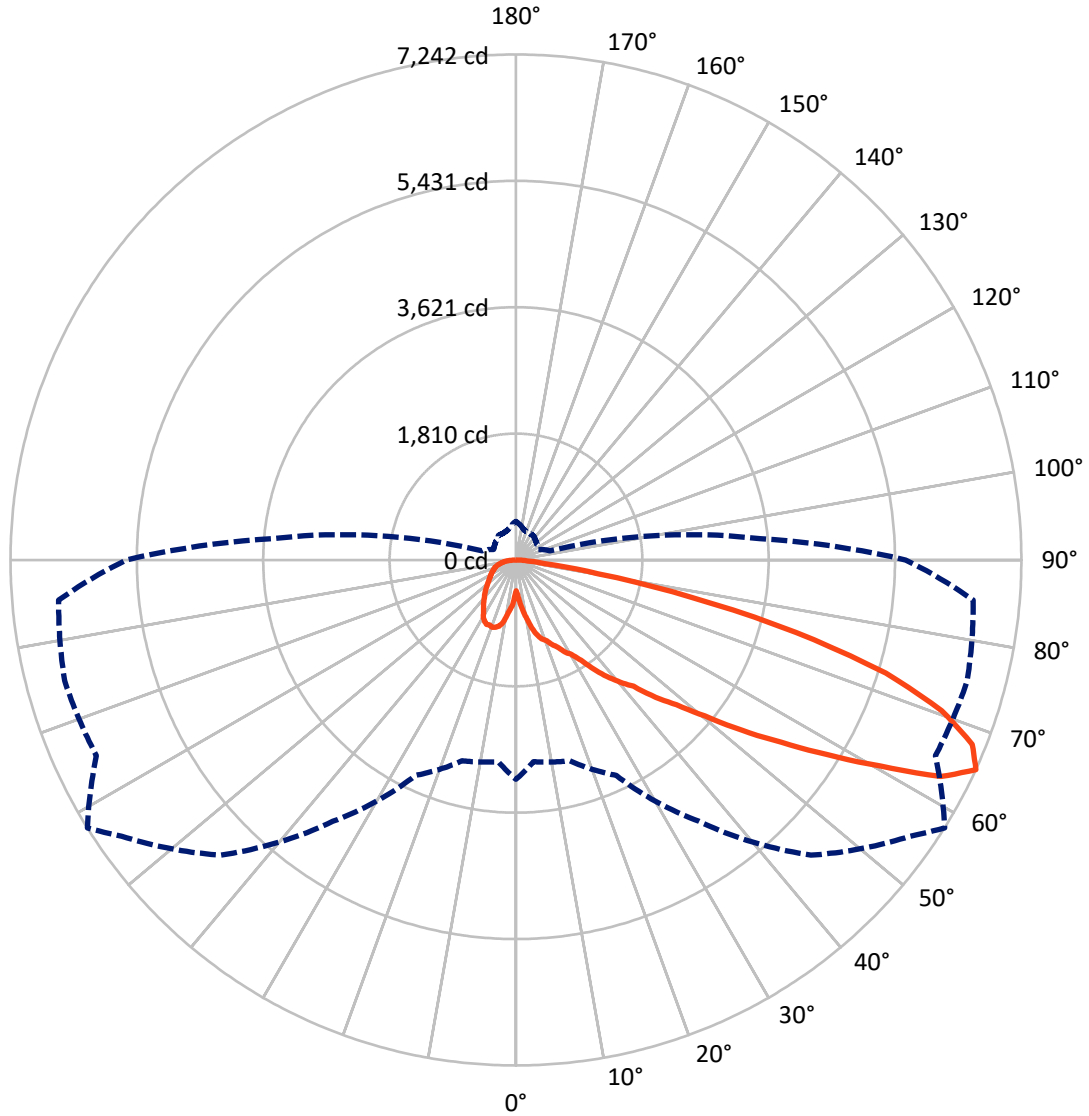
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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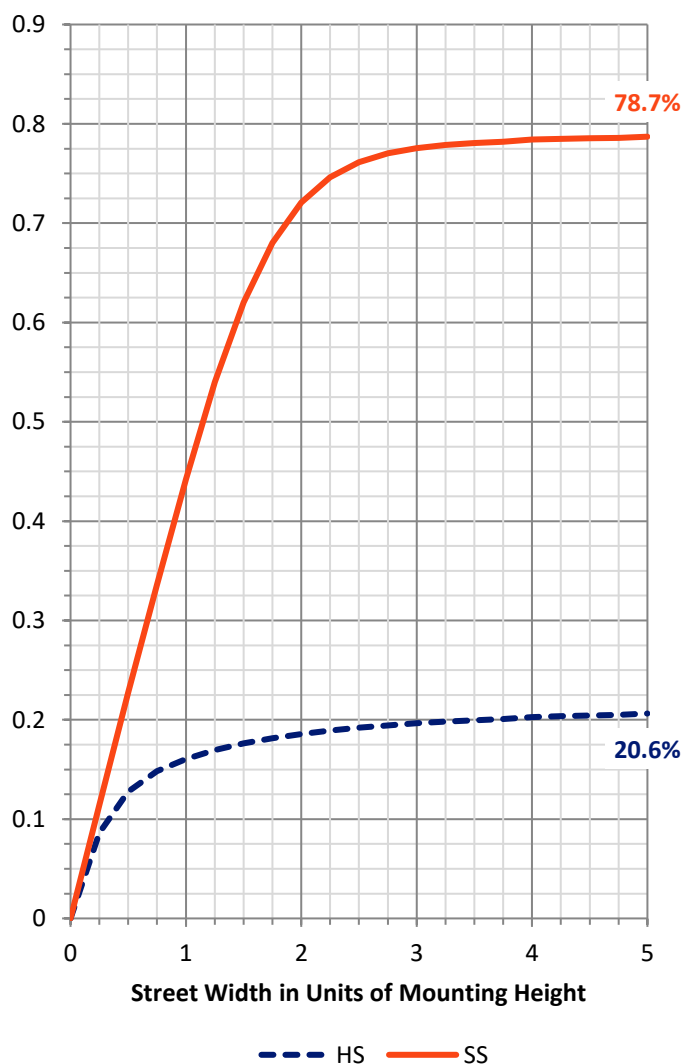
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2169.9	0.0	2169.9
	% Fixture	21.1	0.0	21.1
<b>Street Side</b>	Lumens	8132.1	0.0	8132.1
	% Fixture	78.9	0.0	78.9
<b>Total</b>	Lumens	10302.0	0.0	10302.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	67.4	0.7
10°-20°	294.0	2.9
20°-30°	564.2	5.5
30°-40°	931.4	9.0
40°-50°	1548.1	15.0
50°-60°	2556.7	24.8
60°-70°	2868.1	27.8
70°-80°	1304.1	12.7
80°-90°	168.2	1.6
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°	10302.0	100.0
0°-180°	10302.0	100.0

**Coefficient of Utilization**

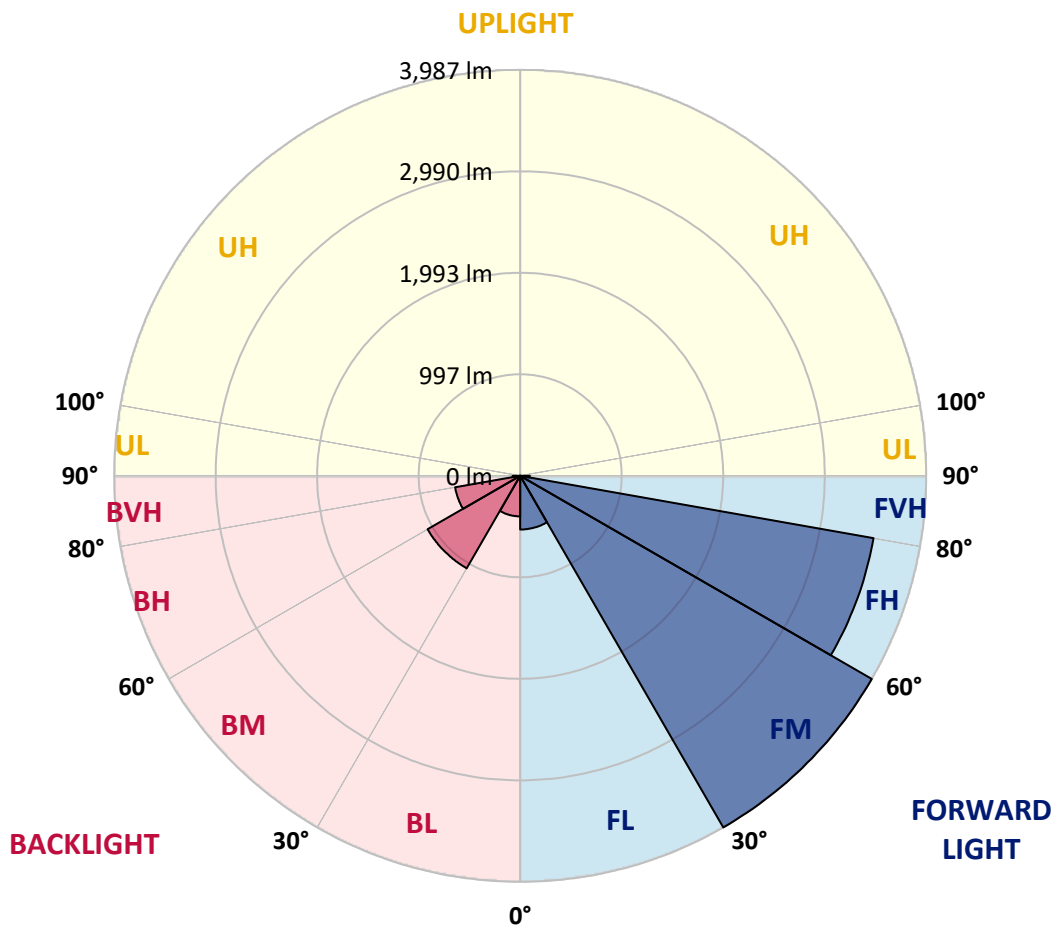


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	527.2	5.1			
FM (30°-60°)	3986.7	38.7			
FH (60°-80°)	3523.5	34.2			G2/5000
FVH (80°-90°)	94.7	0.9			G1/100
BL (0°-30°)	398.4	3.9	B1/500		
BM (30°-60°)	1049.4	10.2	B2/2500		
BH (60°-80°)	648.6	6.3	B2/1000		G2/1000
BVH (80°-90°)	73.5	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**  
 Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	442.3	442.3	442.3	442.3	442.3	442.3	442.3	442.3	442.3	442.3	442.3
2.5°	528.1	512.3	485.7	492.1	507.5	516.1	511.0	504.1	495.1	493.4	532.8
5°	683.9	653.4	641.0	635.8	616.9	605.8	625.1	622.5	632.8	651.7	690.3
7.5°	797.6	776.1	755.5	753.4	716.9	704.0	729.8	743.5	761.9	762.4	814.7
10°	858.5	840.0	839.6	820.3	817.3	841.7	842.2	852.5	854.6	876.5	866.2
12.5°	924.5	923.3	946.8	946.4	973.9	1014.2	994.0	994.0	1000.0	973.4	1006.1
15°	1082.0	1095.7	1051.5	1058.8	1058.8	1098.3	1097.0	1104.7	1123.2	1116.3	1101.7
17.5°	1245.9	1254.5	1205.5	1160.1	1163.5	1154.9	1185.8	1188.8	1171.2	1251.0	1233.4
20°	1351.4	1384.9	1281.9	1224.9	1236.0	1245.9	1247.2	1228.7	1219.7	1342.4	1318.4
22.5°	1481.8	1453.5	1359.1	1296.1	1312.8	1299.5	1296.9	1311.1	1323.5	1369.9	1408.9
25°	1568.9	1566.8	1453.5	1384.5	1366.0	1362.1	1388.3	1382.7	1412.3	1496.4	1472.0
27.5°	1695.5	1735.0	1534.2	1551.3	1470.3	1384.9	1469.0	1494.3	1547.5	1533.8	1588.2
30°	1940.9	1911.3	1701.5	1696.8	1605.0	1533.3	1591.7	1570.2	1665.9	1662.9	1703.2
32.5°	2141.2	2161.8	1898.0	1848.7	1780.4	1694.2	1655.6	1715.2	1766.7	1851.2	1874.0
35°	2353.2	2348.5	2099.2	1999.7	1886.8	1851.2	1898.8	1923.7	2033.1	2110.8	2056.7
37.5°	2682.7	2645.3	2360.0	2171.7	2087.2	2074.3	2155.8	2119.8	2238.2	2256.7	2287.1
40°	2989.0	2876.6	2598.6	2382.8	2248.5	2296.6	2299.1	2303.8	2367.3	2417.5	2568.1
42.5°	3280.3	3201.4	2841.0	2678.8	2481.0	2434.3	2463.4	2473.3	2633.8	2736.3	2944.8
45°	3678.4	3466.9	3189.3	3022.9	2801.5	2741.9	2721.3	2806.2	2961.1	3194.5	3373.4
47.5°	4015.2	3824.3	3559.6	3340.4	3092.8	3263.1	3146.4	3098.8	3306.9	3596.1	3880.9
50°	4294.5	4084.3	3824.7	3698.2	3658.7	3810.6	3507.7	3513.3	3703.7	4111.7	4438.2
52.5°	4510.7	4286.4	4056.4	3992.0	4212.6	4300.1	4081.3	4048.2	4187.2	4669.5	5061.6
55°	4712.8	4474.7	4297.1	4428.4	4799.9	4809.8	4794.3	4611.1	4778.4	5267.1	5706.8
57.5°	4764.7	4508.2	4390.2	4578.5	5080.9	5471.7	5625.3	5265.8	5436.1	5810.7	6259.4
60°	4497.4	4277.8	4230.6	4486.3	5232.8	5804.2	6205.4	5990.4	5926.5	6247.0	6646.4
62.5°	3950.0	3695.2	3733.3	4088.6	5072.7	5935.9	6663.6	6831.3	6444.3	6594.1	6815.4
65°	3143.9	2900.6	2977.8	3405.1	4570.4	5979.7	6897.8	7241.9	6631.4	6692.3	6576.0
67.5°	2217.2	1996.2	2093.6	2646.2	3802.0	5419.4	6938.1	7050.5	6432.3	6412.2	5922.2
70°	1256.2	1117.6	1223.1	1683.9	2683.5	4317.2	6621.9	6473.9	6075.4	5789.6	4955.2
72.5°	576.2	528.6	579.2	857.2	1544.9	2872.7	5406.1	5540.4	5234.9	4877.5	3769.8
75°	306.3	289.6	311.0	428.2	722.9	1562.9	3841.0	4143.1	3980.5	3699.5	2459.1
77.5°	227.8	214.9	225.2	277.6	386.1	611.4	2182.4	2563.4	2625.2	2366.5	1365.6
80°	174.6	164.3	174.6	209.8	267.3	290.4	933.1	1194.8	1360.9	1099.6	542.7
82.5°	129.6	122.7	138.6	157.5	187.9	181.5	331.2	412.3	531.6	363.4	211.5
85°	103.0	94.4	100.4	106.8	120.1	99.5	151.4	169.5	179.3	150.2	78.1
87.5°	40.3	37.3	72.9	57.5	48.9	30.0	45.5	51.5	52.8	50.6	22.7
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°	442.3	442.3	442.3	442.3	442.3	442.3	442.3	442.3	442.3	442.3	442.3
2.5°	537.1	532.8	507.5	515.7	529.0	531.6	537.1	521.7	514.0	542.3	543.6
5°	693.7	670.6	658.5	659.8	651.3	638.0	658.1	671.4	676.6	697.6	705.3
7.5°	815.1	787.3	767.1	743.9	711.3	690.3	725.5	751.2	764.9	808.7	825.9
10°	869.2	846.9	842.6	813.4	812.6	812.1	810.4	801.4	831.0	826.7	838.7
12.5°	980.7	976.0	935.3	923.7	925.0	923.7	887.6	885.9	886.4	925.8	911.7
15°	1084.6	1085.4	1048.1	1006.1	968.3	956.7	942.6	936.1	945.6	967.9	954.1
17.5°	1212.8	1217.1	1110.3	1043.8	994.0	992.8	958.9	919.0	976.5	990.2	975.2
20°	1295.6	1277.6	1146.3	1034.8	1020.6	982.0	940.0	885.1	934.8	968.3	977.7
22.5°	1374.2	1342.8	1179.8	1050.7	982.9	937.0	896.2	860.6	876.5	913.8	907.8
25°	1427.4	1418.8	1226.1	1088.9	981.6	879.5	824.6	801.8	810.0	867.9	862.3
27.5°	1554.3	1461.7	1218.0	1098.7	940.4	801.0	773.5	749.1	740.9	803.6	820.7
30°	1639.3	1601.1	1272.5	1083.3	888.5	736.6	696.3	691.2	693.7	764.9	769.7
32.5°	1783.4	1684.3	1361.7	1024.1	813.0	689.0	642.7	644.8	656.4	708.3	719.0
35°	1933.6	1874.4	1373.7	981.6	751.6	638.4	619.5	604.5	610.9	656.4	658.5
37.5°	2212.5	2007.8	1447.5	916.0	706.6	619.1	583.0	569.7	573.2	598.9	617.4
40°	2457.9	2276.0	1413.2	852.5	650.8	593.3	548.3	538.4	528.1	553.4	565.0
42.5°	2851.3	2467.3	1401.6	782.5	624.7	558.6	527.7	501.5	491.7	513.1	534.1
45°	3244.7	2670.2	1338.5	711.7	587.8	556.0	497.7	472.8	475.4	494.7	516.1
47.5°	3683.1	2942.7	1231.7	643.1	547.4	543.6	467.6	456.9	464.6	486.1	507.5
50°	4201.4	3231.8	1143.3	581.3	518.7	506.2	463.8	450.9	458.2	483.5	504.5
52.5°	4768.1	3548.9	1079.0	524.3	486.1	476.6	468.9	456.5	465.1	486.9	508.8
55°	5331.4	3838.5	1035.2	485.2	458.2	464.2	479.6	470.6	474.9	491.2	513.1
57.5°	5749.3	3991.2	947.3	443.6	435.5	456.9	480.9	465.9	468.5	491.2	514.8
60°	5992.1	4020.4	802.7	409.7	417.4	442.3	467.6	448.3	446.6	483.9	513.5
62.5°	5965.5	3850.9	636.7	378.8	396.8	420.4	447.5	429.0	433.7	484.8	516.1
65°	5584.6	3504.7	506.2	352.7	372.0	396.4	430.7	423.4	446.2	519.1	553.0
67.5°	4915.3	2998.9	406.7	328.2	348.8	380.1	442.3	461.6	471.5	554.3	589.0
70°	3983.5	2330.0	338.9	306.8	330.3	387.8	475.8	471.9	463.8	537.6	565.0
72.5°	2877.9	1597.2	298.2	285.7	307.6	364.7	476.6	456.0	445.8	490.8	510.5
75°	1800.6	952.9	260.4	259.1	272.9	326.9	455.2	436.7	408.9	431.2	456.9
77.5°	1028.4	487.8	219.2	230.8	239.0	283.6	407.6	390.8	366.0	375.4	400.7
80°	392.6	236.0	184.9	205.1	202.9	240.3	345.4	341.5	313.2	316.2	331.6
82.5°	184.9	132.1	153.6	176.3	164.7	191.3	280.6	279.3	254.4	230.4	242.8
85°	68.6	70.4	112.4	134.3	114.5	123.6	202.9	197.3	173.3	146.3	161.7
87.5°	15.4	25.3	55.3	69.9	39.9	38.2	81.9	71.2	68.6	40.8	42.9
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)