

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: P367716

Luminaire Tested: **MSA-SA3A-740-U-T3**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367716  
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-SA3A-740-U-T3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11713 lumens  
Efficiency: N/A  
Efficacy: 122.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G2

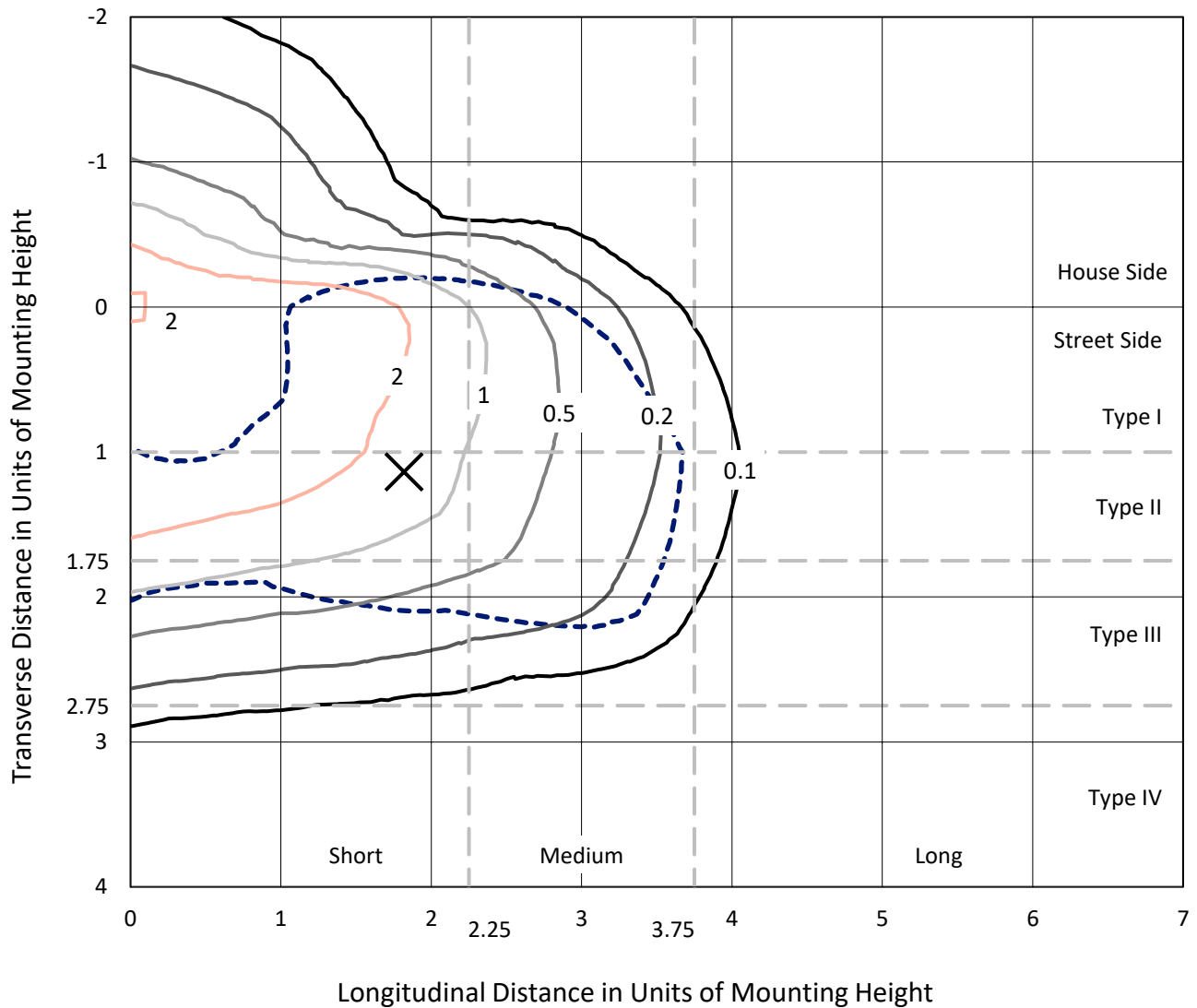
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

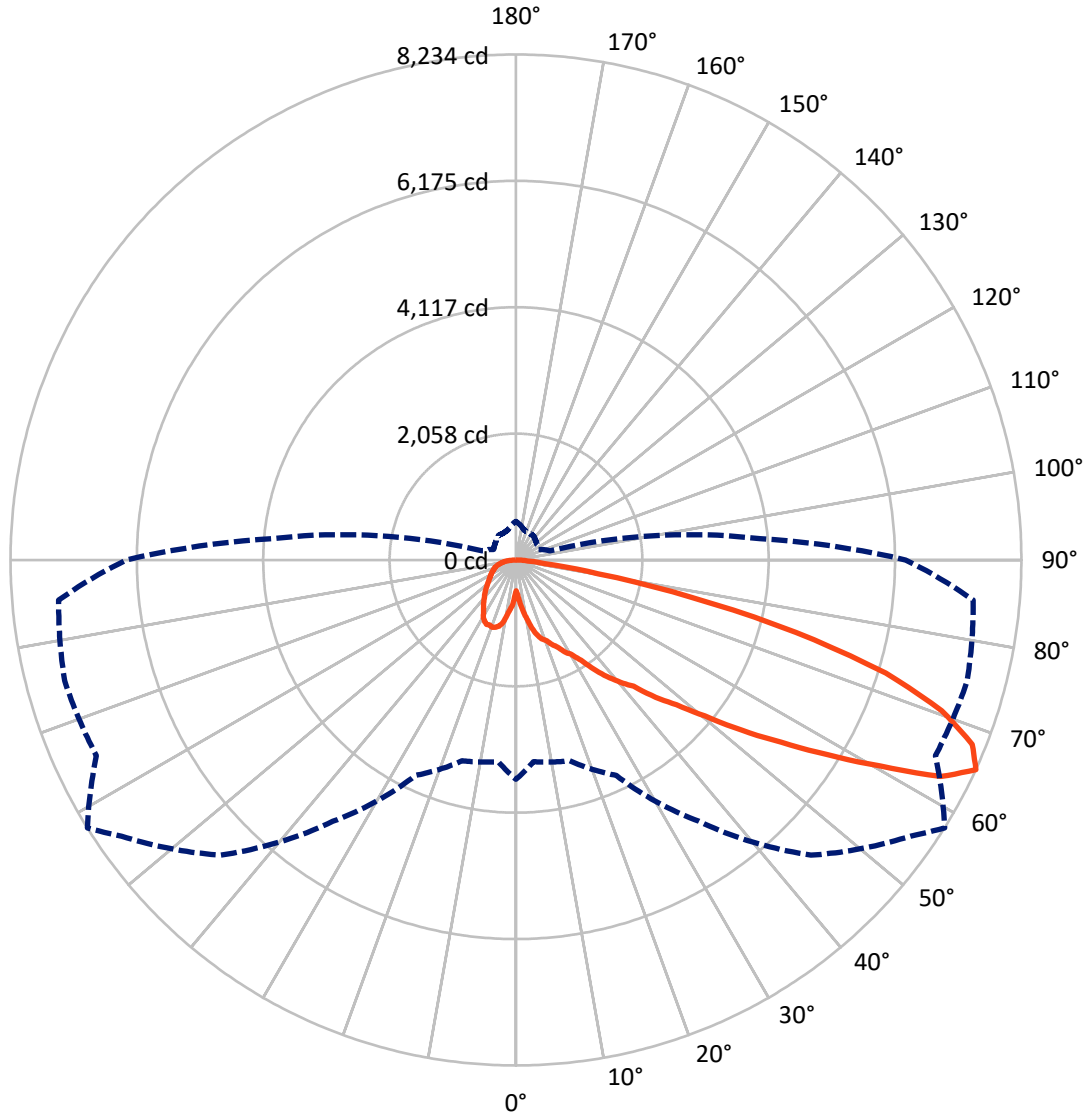
✕ Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.8 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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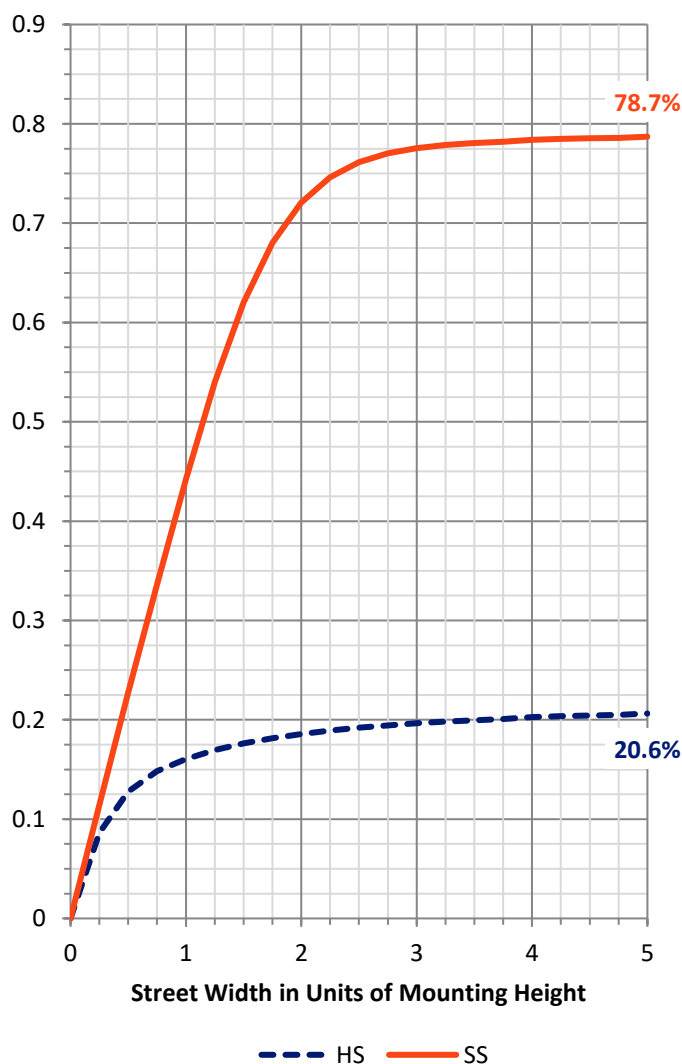
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2467.1	0.0	2467.1
	% Fixture	21.1	0.0	21.1
<b>Street Side</b>	Lumens	9245.9	0.0	9245.9
	% Fixture	78.9	0.0	78.9
<b>Total</b>	Lumens	11713.0	0.0	11713.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.6	0.7
10°-20°	334.3	2.9
20°-30°	641.4	5.5
30°-40°	1059.0	9.0
40°-50°	1760.1	15.0
50°-60°	2906.8	24.8
60°-70°	3260.9	27.8
70°-80°	1482.7	12.7
80°-90°	191.2	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°	11713.0	100.0
0°-180°	11713.0	100.0

**Coefficient of Utilization**



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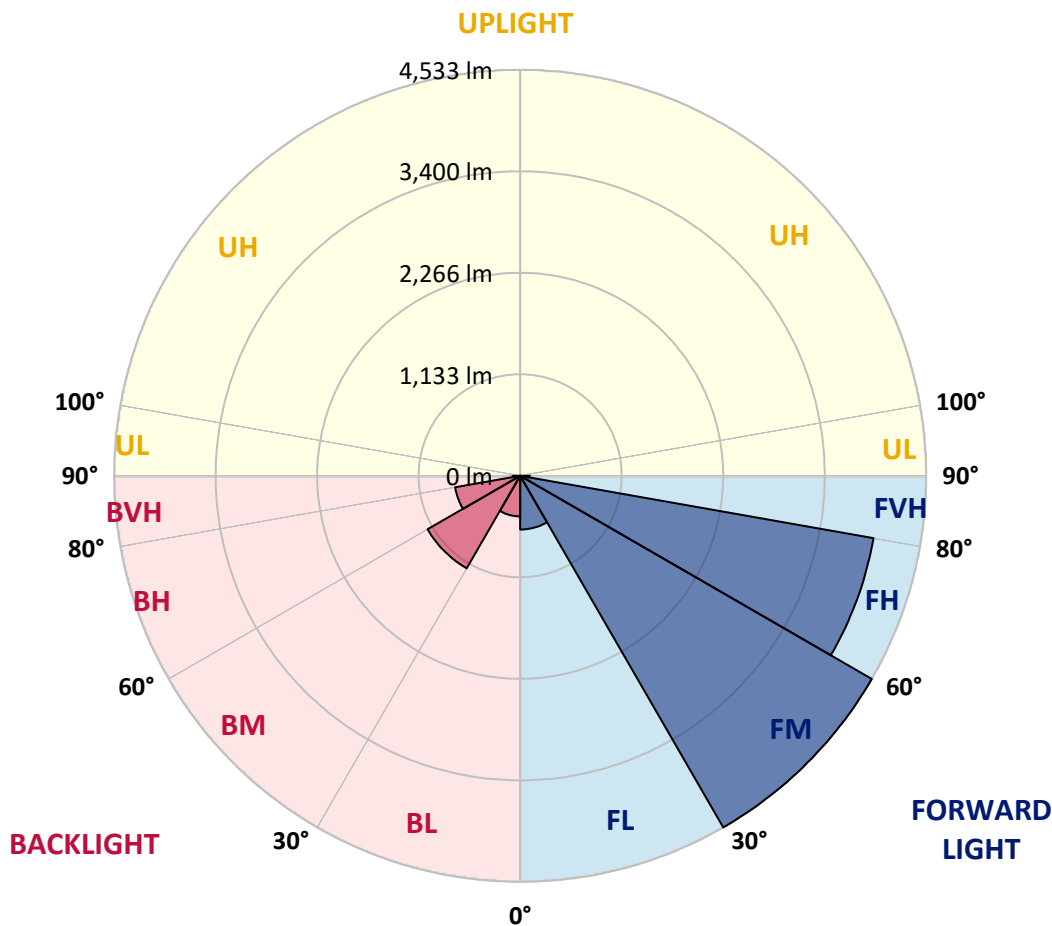
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	599.4	5.1			
FM (30°-60°)	4532.7	38.7			
FH (60°-80°)	4006.1	34.2			G2/5000
FVH (80°-90°)	107.7	0.9			G2/225
BL (0°-30°)	452.9	3.9	B1/500		
BM (30°-60°)	1193.2	10.2	B2/2500		
BH (60°-80°)	737.5	6.3	B2/1000		G2/1000
BVH (80°-90°)	83.5	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°	502.9	502.9	502.9	502.9	502.9	502.9	502.9	502.9	502.9	502.9	502.9
2.5°	600.5	582.4	552.2	559.5	577.0	586.8	580.9	573.1	562.9	560.9	605.8
5°	777.5	742.9	728.7	722.9	701.4	688.7	710.7	707.8	719.5	740.9	784.8
7.5°	906.8	882.4	859.0	856.5	815.1	800.4	829.7	845.3	866.3	866.8	926.3
10°	976.1	955.1	954.6	932.6	929.2	957.0	957.5	969.2	971.7	996.5	984.8
12.5°	1051.2	1049.7	1076.5	1076.0	1107.3	1153.1	1130.2	1130.2	1137.0	1106.8	1143.8
15°	1230.2	1245.8	1195.6	1203.8	1203.8	1248.7	1247.3	1256.0	1277.0	1269.2	1252.6
17.5°	1416.5	1426.3	1370.7	1319.0	1322.9	1313.1	1348.2	1351.6	1331.6	1422.4	1402.4
20°	1536.5	1574.6	1457.5	1392.6	1405.3	1416.5	1418.0	1397.0	1386.8	1526.3	1499.0
22.5°	1684.8	1652.6	1545.3	1473.6	1492.6	1477.5	1474.6	1490.7	1504.8	1557.5	1601.9
25°	1783.8	1781.4	1652.6	1574.1	1553.1	1548.7	1578.5	1572.1	1605.8	1701.4	1673.6
27.5°	1927.7	1972.6	1744.3	1763.8	1671.6	1574.6	1670.2	1698.9	1759.4	1743.8	1805.8
30°	2206.7	2173.1	1934.5	1929.2	1824.8	1743.3	1809.7	1785.3	1894.1	1890.6	1936.5
32.5°	2434.5	2457.9	2157.9	2101.9	2024.3	1926.2	1882.3	1950.2	2008.7	2104.8	2130.6
35°	2675.5	2670.1	2386.7	2273.5	2145.3	2104.8	2158.9	2187.2	2311.6	2399.9	2338.4
37.5°	3050.1	3007.7	2683.3	2469.2	2373.1	2358.4	2451.1	2410.1	2544.8	2565.7	2600.4
40°	3398.4	3270.6	2954.5	2709.1	2556.5	2611.1	2614.0	2619.4	2691.6	2748.6	2919.9
42.5°	3729.6	3639.8	3230.1	3045.7	2820.8	2767.7	2800.8	2812.1	2994.5	3111.1	3348.1
45°	4182.2	3941.8	3626.2	3436.9	3185.2	3117.4	3094.0	3190.6	3366.7	3632.0	3835.4
47.5°	4565.1	4348.1	4047.1	3797.9	3516.4	3710.1	3577.4	3523.2	3759.8	4088.6	4412.5
50°	4882.7	4643.7	4348.6	4204.7	4159.8	4332.5	3988.1	3994.4	4211.0	4674.9	5046.1
52.5°	5128.5	4873.4	4612.0	4538.8	4789.5	4889.0	4640.3	4602.7	4760.7	5309.0	5754.8
55°	5358.3	5087.6	4885.6	5034.9	5457.3	5468.5	5451.0	5242.7	5432.9	5988.5	6488.5
57.5°	5417.3	5125.6	4991.5	5205.6	5776.8	6221.2	6395.8	5987.0	6180.7	6606.5	7116.7
60°	5113.4	4863.7	4810.0	5100.7	5949.5	6599.2	7055.3	6810.9	6738.2	7102.6	7556.7
62.5°	4491.0	4201.3	4244.7	4648.6	5767.5	6748.9	7576.2	7766.9	7327.0	7497.2	7748.9
65°	3574.5	3297.9	3385.7	3871.5	5196.3	6798.7	7842.6	8233.8	7539.6	7608.9	7476.7
67.5°	2520.9	2269.6	2380.4	3008.6	4322.7	6161.7	7888.4	8016.2	7313.3	7290.4	6733.3
70°	1428.2	1270.7	1390.7	1914.5	3051.1	4908.5	7528.9	7360.6	6907.5	6582.6	5633.9
72.5°	655.1	600.9	658.5	974.6	1756.5	3266.2	6146.5	6299.2	5951.9	5545.6	4286.1
75°	348.3	329.3	353.6	486.8	821.9	1777.0	4367.1	4710.5	4525.6	4206.1	2796.0
77.5°	259.0	244.4	256.1	315.6	439.0	695.1	2481.3	2914.5	2984.7	2690.6	1552.6
80°	198.5	186.8	198.5	238.5	303.9	330.2	1060.9	1358.5	1547.2	1250.2	617.0
82.5°	147.3	139.5	157.6	179.0	213.6	206.3	376.6	468.8	604.4	413.2	240.5
85°	117.1	107.3	114.1	121.5	136.6	113.2	172.2	192.7	203.9	170.7	88.8
87.5°	45.9	42.4	82.9	65.4	55.6	34.1	51.7	58.5	60.0	57.6	25.9
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°	502.9	502.9	502.9	502.9	502.9	502.9	502.9	502.9	502.9	502.9	502.9
2.5°	610.7	605.8	577.0	586.3	601.4	604.4	610.7	593.1	584.4	616.6	618.0
5°	788.7	762.4	748.7	750.2	740.5	725.3	748.3	763.4	769.2	793.1	801.9
7.5°	926.8	895.1	872.2	845.8	808.7	784.8	824.8	854.1	869.7	919.5	939.0
10°	988.2	962.9	958.0	924.8	923.9	923.4	921.4	911.2	944.8	940.0	953.6
12.5°	1115.1	1109.7	1063.4	1050.2	1051.7	1050.2	1009.2	1007.3	1007.8	1052.6	1036.5
15°	1233.1	1234.1	1191.7	1143.8	1100.9	1087.8	1071.7	1064.3	1075.1	1100.4	1084.8
17.5°	1379.0	1383.8	1262.4	1186.8	1130.2	1128.7	1090.2	1044.8	1110.2	1125.8	1108.7
20°	1473.1	1452.6	1303.4	1176.5	1160.4	1116.5	1068.7	1006.3	1062.9	1100.9	1111.7
22.5°	1562.4	1526.8	1341.4	1194.6	1117.5	1065.3	1019.0	978.5	996.5	1039.0	1032.1
25°	1622.8	1613.1	1394.1	1238.0	1116.0	1000.0	937.5	911.7	920.9	986.8	980.4
27.5°	1767.2	1661.9	1384.8	1249.2	1069.2	910.7	879.5	851.7	842.4	913.6	933.1
30°	1863.8	1820.4	1446.8	1231.6	1010.2	837.5	791.7	785.8	788.7	869.7	875.1
32.5°	2027.7	1915.0	1548.2	1164.3	924.3	783.4	730.7	733.1	746.3	805.3	817.5
35°	2198.4	2131.1	1561.9	1116.0	854.6	725.8	704.4	687.3	694.6	746.3	748.7
37.5°	2515.5	2282.8	1645.8	1041.4	803.4	703.9	662.9	647.8	651.7	680.9	701.9
40°	2794.5	2587.7	1606.8	969.2	740.0	674.6	623.4	612.2	600.5	629.2	642.4
42.5°	3241.8	2805.2	1593.6	889.7	710.2	635.1	600.0	570.2	559.0	583.4	607.3
45°	3689.1	3036.0	1521.9	809.2	668.3	632.2	565.8	537.5	540.5	562.4	586.8
47.5°	4187.6	3345.7	1400.4	731.2	622.4	618.0	531.7	519.5	528.3	552.7	577.0
50°	4776.8	3674.5	1299.9	660.9	589.7	575.6	527.3	512.7	521.0	549.7	573.6
52.5°	5421.2	4034.9	1226.8	596.1	552.7	541.9	533.1	519.0	528.8	553.6	578.5
55°	6061.7	4364.2	1177.0	551.7	521.0	527.8	545.3	535.1	540.0	558.5	583.4
57.5°	6536.8	4537.8	1077.0	504.4	495.1	519.5	546.8	529.7	532.7	558.5	585.3
60°	6812.8	4571.0	912.6	465.8	474.6	502.9	531.7	509.7	507.8	550.2	583.9
62.5°	6782.6	4378.3	723.9	430.7	451.2	478.0	508.8	487.8	493.1	551.2	586.8
65°	6349.5	3984.7	575.6	401.0	422.9	450.7	489.7	481.4	507.3	590.2	628.8
67.5°	5588.5	3409.6	462.4	373.2	396.6	432.2	502.9	524.9	536.1	630.2	669.7
70°	4529.1	2649.1	385.3	348.8	375.6	441.0	540.9	536.6	527.3	611.2	642.4
72.5°	3272.0	1816.0	339.0	324.9	349.7	414.6	541.9	518.5	506.8	558.0	580.5
75°	2047.2	1083.4	296.1	294.6	310.2	371.7	517.5	496.6	464.9	490.2	519.5
77.5°	1169.2	554.6	249.3	262.4	271.7	322.4	463.4	444.4	416.1	426.8	455.6
80°	446.3	268.3	210.2	233.2	230.7	273.2	392.7	388.3	356.1	359.5	377.1
82.5°	210.2	150.2	174.6	200.5	187.3	217.6	319.0	317.5	289.3	261.9	276.1
85°	78.0	80.0	127.8	152.7	130.2	140.5	230.7	224.4	197.1	166.3	183.9
87.5°	17.6	28.8	62.9	79.5	45.4	43.4	93.2	81.0	78.0	46.3	48.8
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)