

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: P367166

Luminaire Tested: **MSA-SA2A-730-U-T3**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367166  
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-SA2A-730-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: 7228 lumens  
Efficiency: N/A  
Efficacy: 109.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

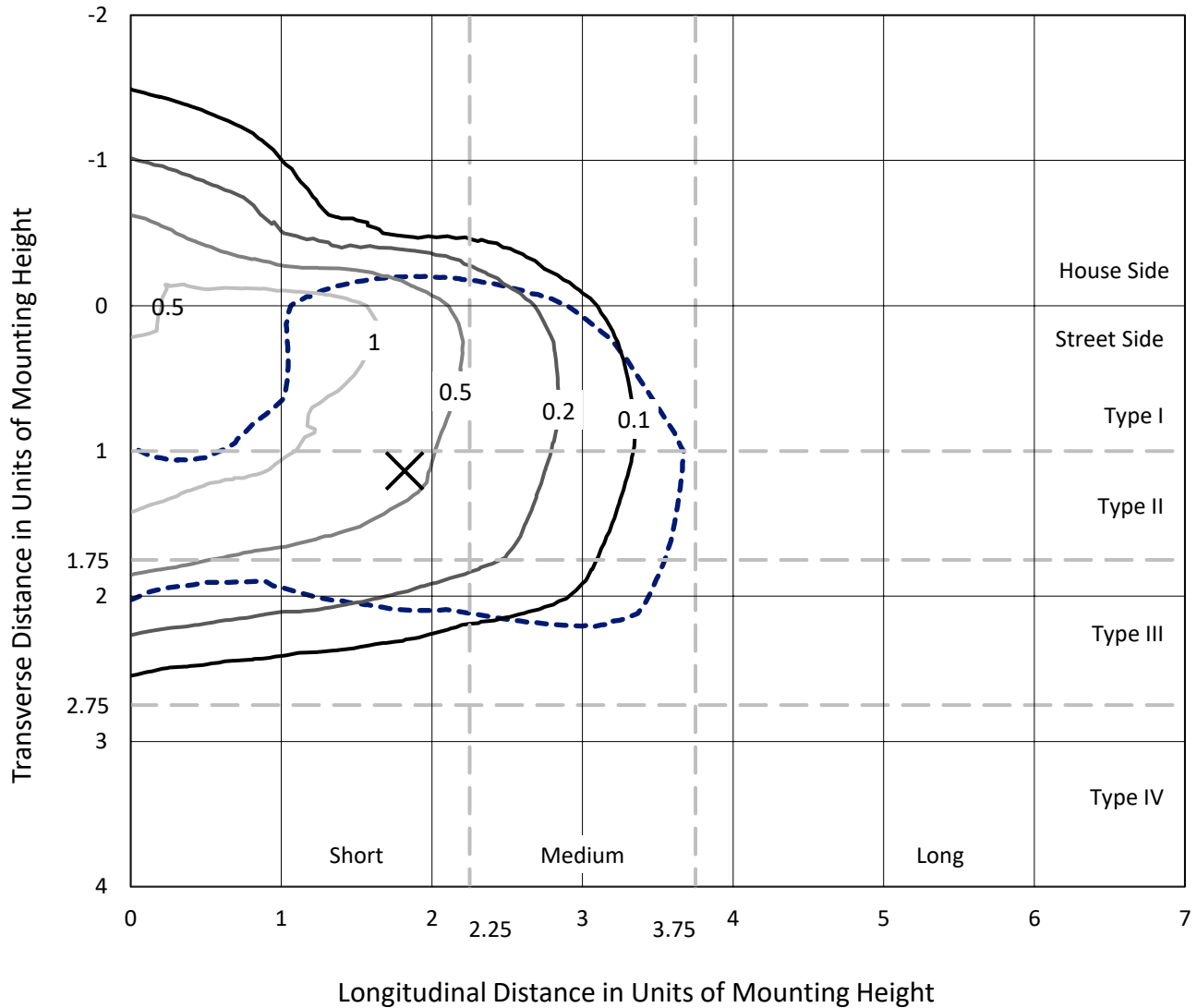
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

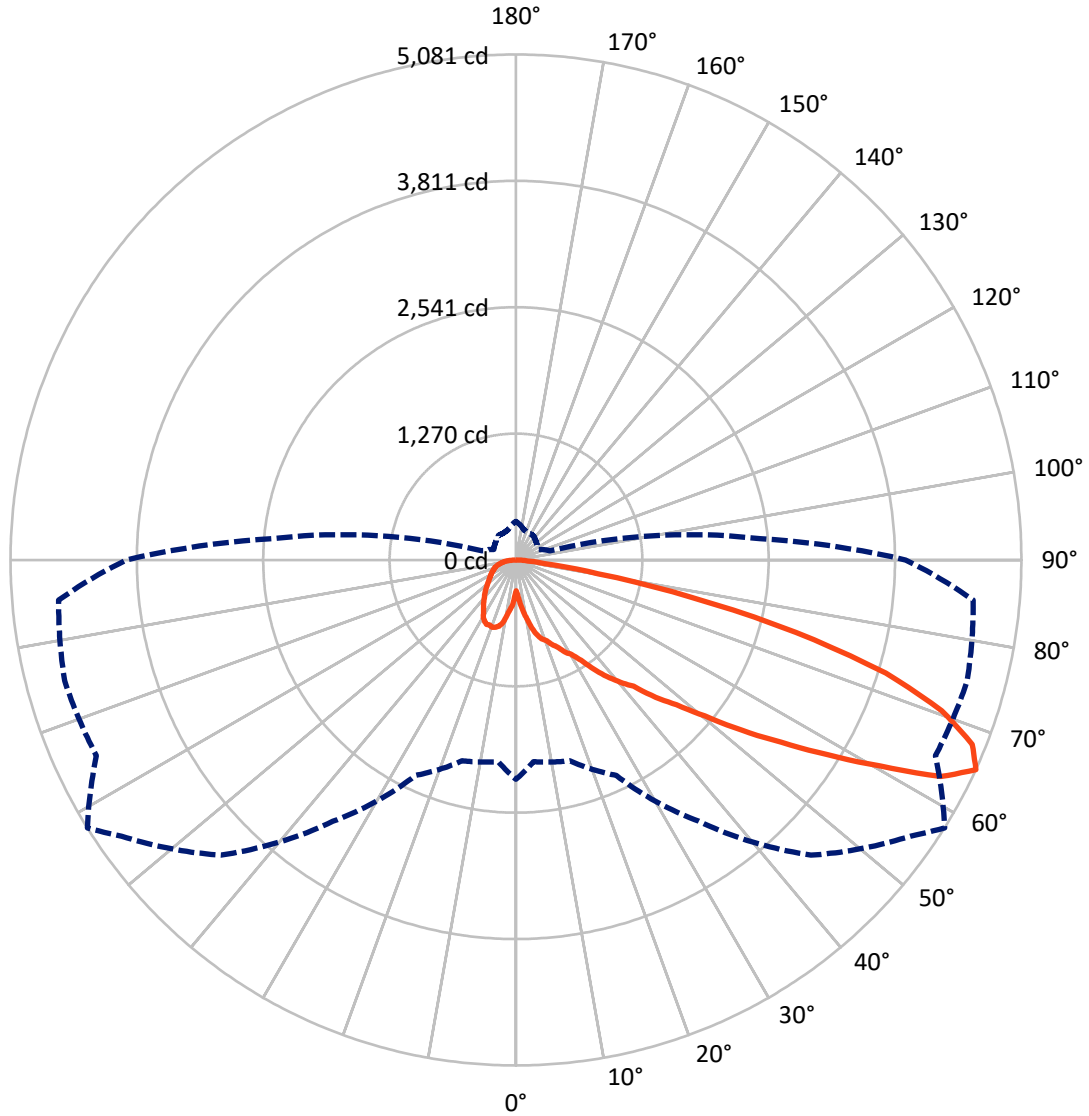
✕ Max cd  
 - - - 1/2 Max cd



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

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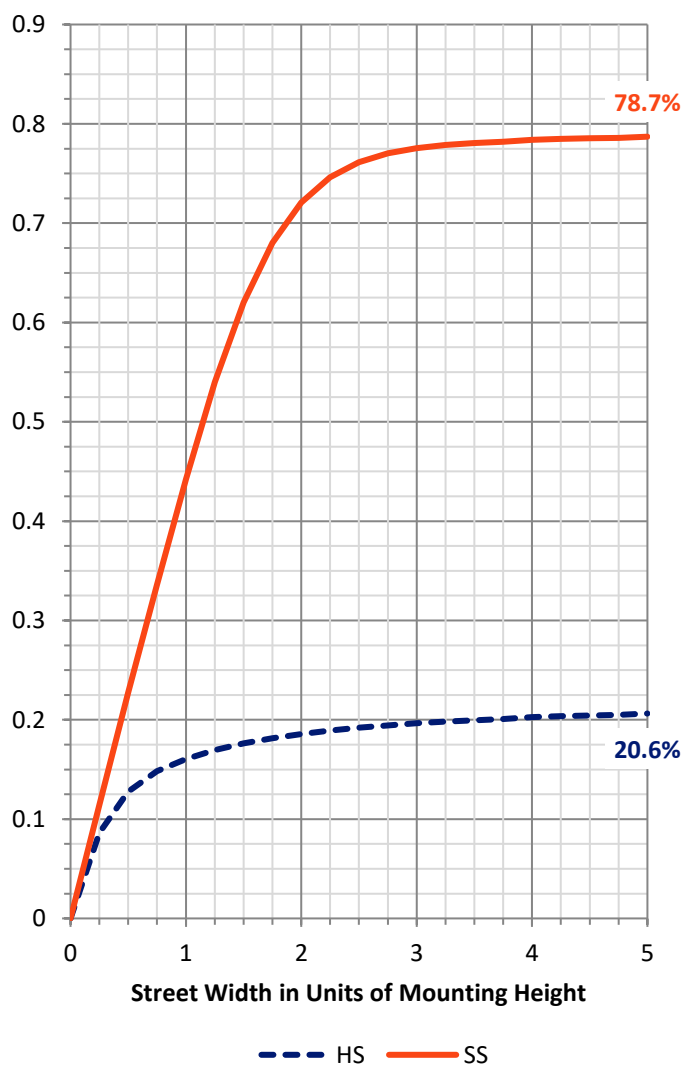
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1522.4	0.0	1522.4
	% Fixture	21.1	0.0	21.1
<b>Street Side</b>	Lumens	5705.6	0.0	5705.6
	% Fixture	78.9	0.0	78.9
<b>Total</b>	Lumens	7228.0	0.0	7228.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	47.3	0.7
10°-20°	206.3	2.9
20°-30°	395.8	5.5
30°-40°	653.5	9.0
40°-50°	1086.2	15.0
50°-60°	1793.8	24.8
60°-70°	2012.3	27.8
70°-80°	914.9	12.7
80°-90°	118.0	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°	7228.0	100.0
0°-180°	7228.0	100.0

**Coefficient of Utilization**

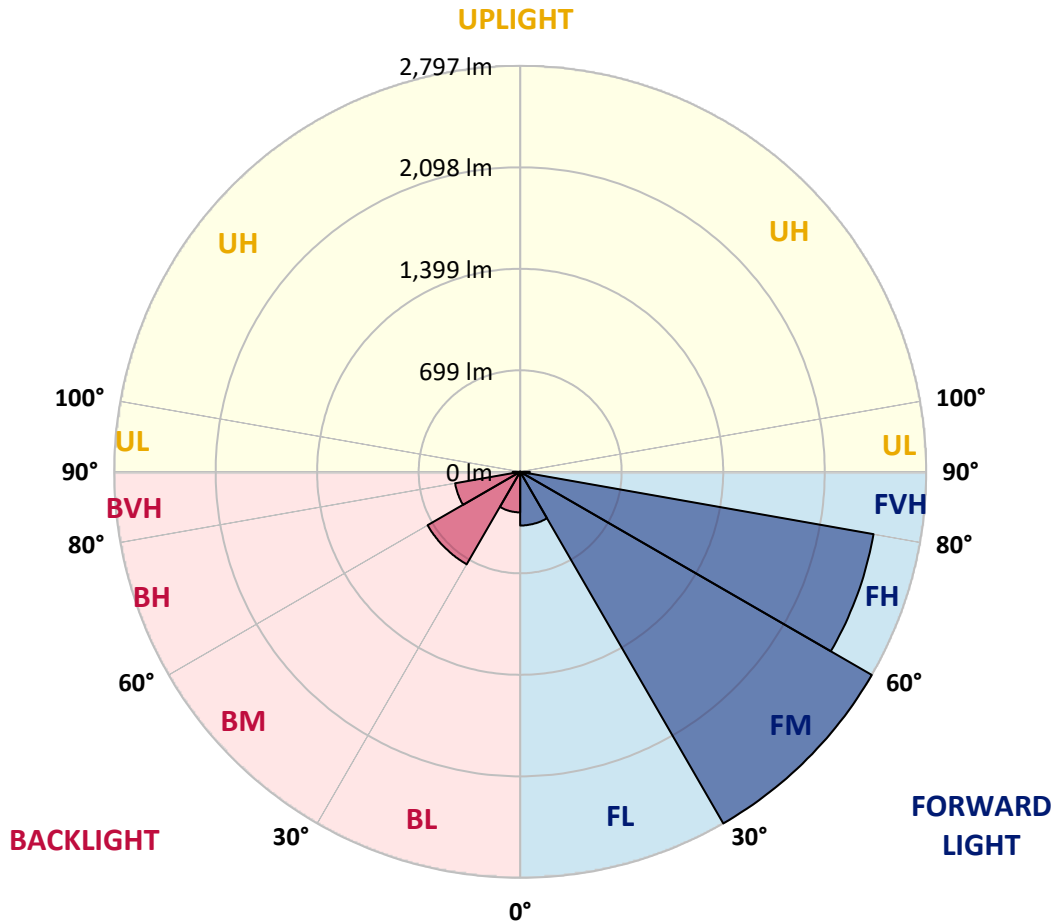


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	369.9	5.1			
FM (30°-60°)	2797.1	38.7			
FH (60°-80°)	2472.1	34.2			G2/5000
FVH (80°-90°)	66.4	0.9			G1/100
BL (0°-30°)	279.5	3.9	B1/500		
BM (30°-60°)	736.3	10.2	B1/1000		
BH (60°-80°)	455.1	6.3	B1/500		G1/500
BVH (80°-90°)	51.6	0.7			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°	58°	65°	75°	85°
0°	310.3	310.3	310.3	310.3	310.3	310.3	310.3	310.3	310.3	310.3	310.3
2.5°	370.5	359.4	340.7	345.3	356.1	362.1	358.5	353.7	347.4	346.2	373.8
5°	479.8	458.4	449.7	446.1	432.8	425.0	438.6	436.8	444.0	457.2	484.3
7.5°	559.6	544.5	530.1	528.6	503.0	494.0	512.0	521.6	534.6	534.9	571.6
10°	602.3	589.4	589.1	575.5	573.4	590.6	590.9	598.1	599.6	615.0	607.7
12.5°	648.7	647.8	664.3	664.0	683.3	711.6	697.4	697.4	701.6	683.0	705.9
15°	759.1	768.8	737.8	742.9	742.9	770.6	769.7	775.1	788.0	783.2	773.0
17.5°	874.1	880.1	845.8	813.9	816.3	810.3	832.0	834.1	821.7	877.7	865.4
20°	948.2	971.6	899.4	859.4	867.2	874.1	875.0	862.1	855.8	941.8	925.0
22.5°	1039.7	1019.8	953.6	909.3	921.1	911.7	909.9	919.9	928.6	961.1	988.5
25°	1100.8	1099.3	1019.8	971.3	958.4	955.7	974.1	970.1	990.9	1049.9	1032.8
27.5°	1189.6	1217.3	1076.4	1088.4	1031.5	971.6	1030.6	1048.4	1085.7	1076.1	1114.3
30°	1361.8	1341.0	1193.8	1190.5	1126.1	1075.8	1116.7	1101.7	1168.8	1166.7	1195.0
32.5°	1502.3	1516.8	1331.7	1297.0	1249.2	1188.7	1161.6	1203.4	1239.5	1298.8	1314.8
35°	1651.0	1647.7	1472.8	1403.0	1323.8	1298.8	1332.3	1349.7	1426.5	1481.0	1443.0
37.5°	1882.2	1856.0	1655.8	1523.7	1464.4	1455.4	1512.6	1487.3	1570.3	1583.3	1604.7
40°	2097.1	2018.2	1823.2	1671.8	1577.6	1611.3	1613.1	1616.4	1661.0	1696.2	1801.8
42.5°	2301.5	2246.1	1993.3	1879.5	1740.7	1707.9	1728.4	1735.3	1847.9	1919.8	2066.1
45°	2580.8	2432.4	2237.7	2120.9	1965.6	1923.7	1909.3	1968.9	2077.5	2241.3	2366.8
47.5°	2817.1	2683.2	2497.4	2343.6	2170.0	2289.5	2207.6	2174.2	2320.2	2523.0	2722.9
50°	3013.1	2865.6	2683.5	2594.7	2567.0	2673.5	2461.0	2464.9	2598.6	2884.8	3113.9
52.5°	3164.8	3007.4	2846.0	2800.9	2955.6	3017.0	2863.5	2840.3	2937.8	3276.2	3551.3
55°	3306.6	3139.5	3014.9	3107.0	3367.7	3374.6	3363.7	3235.2	3352.6	3695.5	4004.0
57.5°	3343.0	3163.0	3080.2	3212.3	3564.8	3839.0	3946.8	3694.5	3814.0	4076.8	4391.7
60°	3155.4	3001.3	2968.2	3147.6	3671.4	4072.3	4353.8	4202.9	4158.1	4383.0	4663.2
62.5°	2771.4	2592.6	2619.4	2868.6	3559.1	4164.7	4675.2	4792.9	4521.4	4626.5	4781.8
65°	2205.8	2035.1	2089.3	2389.1	3206.6	4195.4	4839.6	5081.0	4652.7	4695.4	4613.8
67.5°	1555.6	1400.6	1468.9	1856.6	2667.5	3802.3	4867.9	4946.7	4513.0	4498.8	4155.1
70°	881.3	784.1	858.2	1181.4	1882.8	3029.0	4646.0	4542.2	4262.5	4062.1	3476.6
72.5°	404.3	370.8	406.4	601.4	1083.9	2015.5	3793.0	3887.2	3672.9	3422.1	2644.9
75°	214.9	203.2	218.2	300.4	507.2	1096.6	2694.9	2906.8	2792.7	2595.6	1725.4
77.5°	159.8	150.8	158.0	194.8	270.9	428.9	1531.2	1798.5	1841.9	1660.4	958.1
80°	122.5	115.3	122.5	147.2	187.5	203.8	654.7	838.3	954.8	771.5	380.8
82.5°	90.9	86.1	97.2	110.5	131.8	127.3	232.4	289.3	372.9	255.0	148.4
85°	72.2	66.2	70.4	75.0	84.3	69.8	106.3	118.9	125.8	105.4	54.8
87.5°	28.3	26.2	51.2	40.3	34.3	21.1	31.9	36.1	37.0	35.5	16.0
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°	310.3	310.3	310.3	310.3	310.3	310.3	310.3	310.3	310.3	310.3	310.3
2.5°	376.9	373.8	356.1	361.8	371.1	372.9	376.9	366.0	360.6	380.5	381.4
5°	486.7	470.5	462.0	462.9	456.9	447.6	461.7	471.1	474.7	489.4	494.9
7.5°	571.9	552.3	538.2	521.9	499.1	484.3	509.0	527.1	536.7	567.4	579.4
10°	609.8	594.2	591.2	570.7	570.1	569.8	568.6	562.3	583.0	580.0	588.5
12.5°	688.1	684.8	656.2	648.1	649.0	648.1	622.8	621.6	621.9	649.6	639.6
15°	760.9	761.5	735.4	705.9	679.4	671.2	661.3	656.8	663.4	679.1	669.4
17.5°	850.9	854.0	779.0	732.3	697.4	696.5	672.7	644.8	685.1	694.7	684.2
20°	909.0	896.4	804.3	726.0	716.1	689.0	659.5	621.0	655.9	679.4	686.0
22.5°	964.1	942.1	827.8	737.2	689.6	657.4	628.8	603.8	615.0	641.1	636.9
25°	1001.4	995.4	860.3	764.0	688.7	617.1	578.5	562.6	568.3	608.9	605.0
27.5°	1090.5	1025.5	854.6	770.9	659.8	562.0	542.7	525.6	519.8	563.8	575.8
30°	1150.1	1123.4	892.8	760.0	623.4	516.8	488.5	484.9	486.7	536.7	540.0
32.5°	1251.3	1181.8	955.4	718.5	570.4	483.4	450.9	452.4	460.5	497.0	504.5
35°	1356.6	1315.1	963.8	688.7	527.4	447.9	434.7	424.1	428.6	460.5	462.0
37.5°	1552.3	1408.7	1015.6	642.6	495.8	434.4	409.1	399.7	402.1	420.2	433.1
40°	1724.5	1596.8	991.5	598.1	456.6	416.3	384.7	377.8	370.5	388.3	396.4
42.5°	2000.5	1731.1	983.4	549.0	438.3	391.9	370.2	351.9	345.0	360.0	374.8
45°	2276.5	1873.5	939.1	499.4	412.4	390.1	349.2	331.7	333.5	347.1	362.1
47.5°	2584.1	2064.6	864.2	451.2	384.1	381.4	328.1	320.6	326.0	341.0	356.1
50°	2947.8	2267.5	802.2	407.9	363.9	355.2	325.4	316.4	321.5	339.2	354.0
52.5°	3345.4	2489.9	757.0	367.8	341.0	334.4	329.0	320.3	326.3	341.6	357.0
55°	3740.6	2693.1	726.3	340.4	321.5	325.7	336.5	330.2	333.2	344.7	360.0
57.5°	4033.8	2800.3	664.6	311.2	305.5	320.6	337.4	326.9	328.7	344.7	361.2
60°	4204.2	2820.7	563.2	287.5	292.9	310.3	328.1	314.6	313.3	339.5	360.3
62.5°	4185.5	2701.8	446.7	265.8	278.4	295.0	313.9	301.0	304.3	340.1	362.1
65°	3918.2	2458.9	355.2	247.4	261.0	278.1	302.2	297.1	313.0	364.2	388.0
67.5°	3448.6	2104.0	285.4	230.3	244.7	266.7	310.3	323.9	330.8	388.9	413.3
70°	2794.8	1634.8	237.8	215.2	231.8	272.1	333.8	331.1	325.4	377.2	396.4
72.5°	2019.1	1120.6	209.2	200.5	215.8	255.9	334.4	320.0	312.7	344.4	358.2
75°	1263.3	668.5	182.7	181.8	191.4	229.4	319.4	306.4	286.9	302.5	320.6
77.5°	721.5	342.2	153.8	161.9	167.7	199.0	286.0	274.2	256.8	263.4	281.1
80°	275.4	165.6	129.7	143.9	142.4	168.6	242.3	239.6	219.7	221.8	232.7
82.5°	129.7	92.7	107.8	123.7	115.6	134.2	196.9	196.0	178.5	161.6	170.4
85°	48.2	49.4	78.9	94.2	80.4	86.7	142.4	138.5	121.6	102.6	113.5
87.5°	10.8	17.8	38.8	49.1	28.0	26.8	57.5	50.0	48.2	28.6	30.1
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)