

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: P367520

Luminaire Tested: **MSA-SA2C-830-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367520
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-12)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2C-830-U-T4FT
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9826 lumens
Efficiency: N/A
Efficacy: 87.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G3

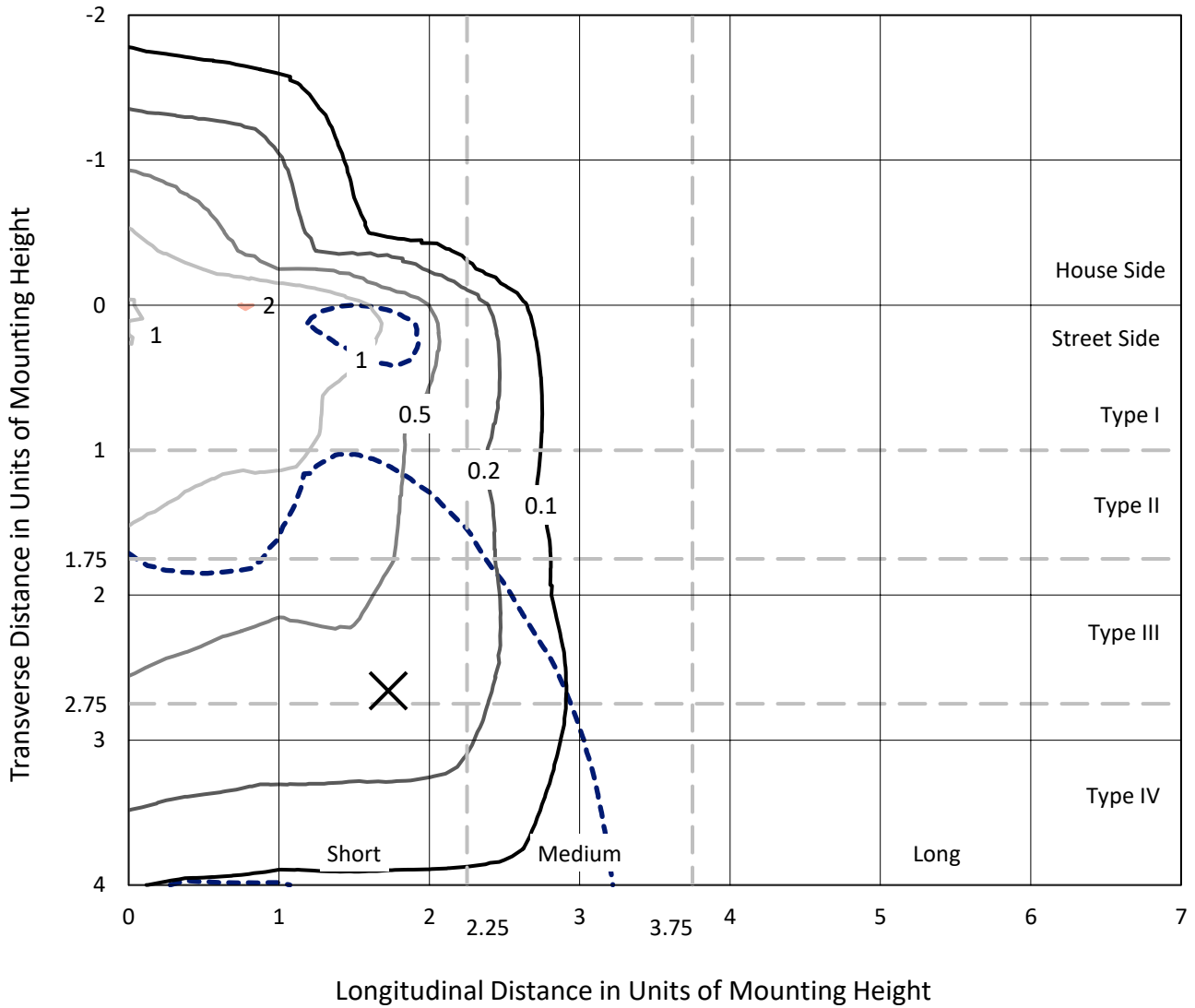
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

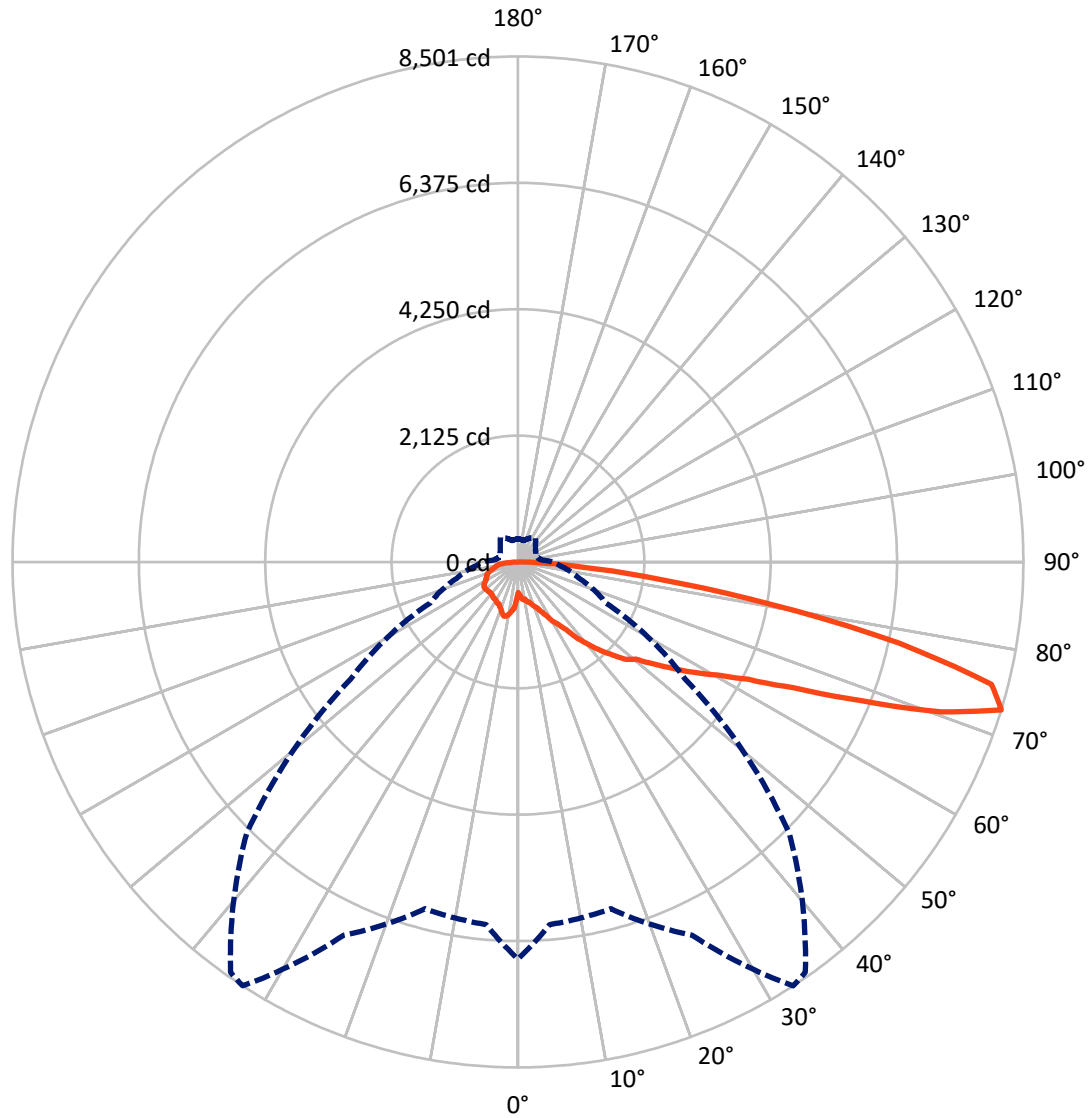
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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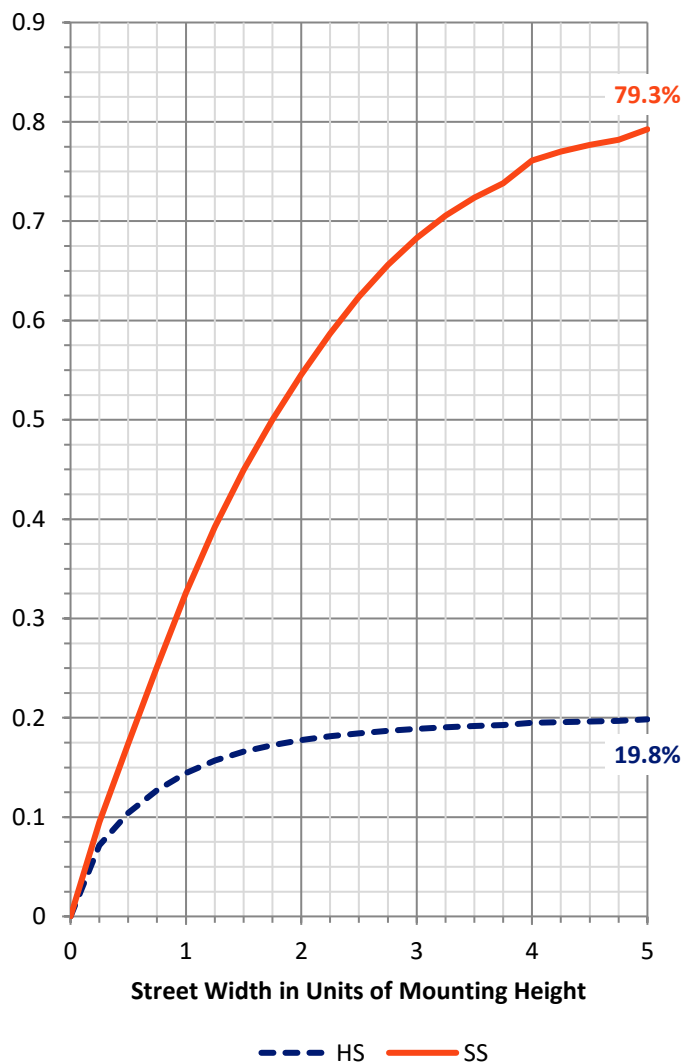
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1987.8	0.0	1987.8
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	7838.2	0.0	7838.2
	% Fixture	79.8	0.0	79.8
Total	Lumens	9826.0	0.0	9826.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.9	0.7
10°-20°	261.8	2.7
20°-30°	477.4	4.9
30°-40°	807.7	8.2
40°-50°	1343.7	13.7
50°-60°	1971.9	20.1
60°-70°	2522.5	25.7
70°-80°	2052.3	20.9
80°-90°	317.9	3.2
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°	9826.0	100.0
0°-180°	9826.0	100.0

Coefficient of Utilization



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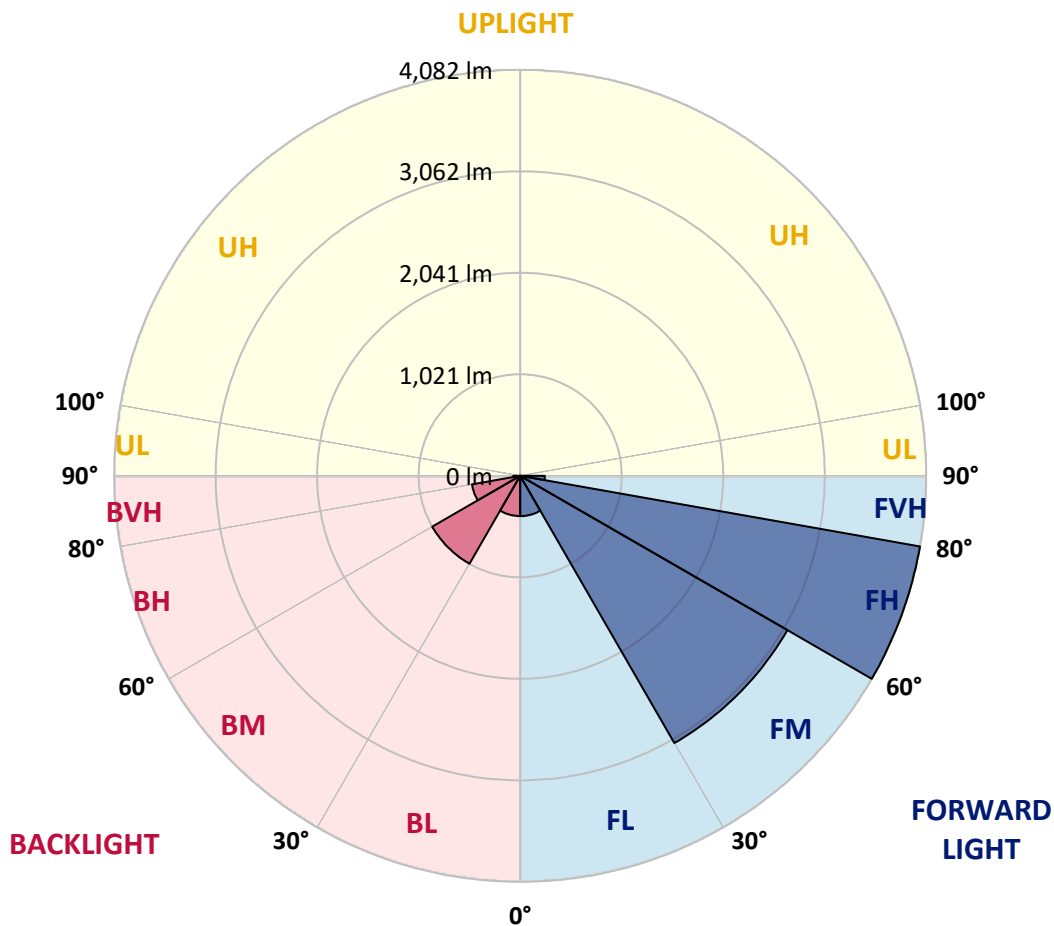
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	405.5	4.1			
FM (30°-60°)	3102.3	31.6			
FH (60°-80°)	4082.3	41.5			G2/5000
FVH (80°-90°)	248.1	2.5			G3/500
BL (0°-30°)	404.6	4.1	B1/500		
BM (30°-60°)	1020.9	10.4	B2/2500		
BH (60°-80°)	492.5	5.0	B1/500		G1/500
BVH (80°-90°)	69.8	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-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	515.2	515.2	515.2	515.2	515.2	515.2	515.2	515.2	515.2	515.2	515.2
2.5°	584.1	565.8	535.6	534.8	551.5	555.2	566.2	567.0	571.1	564.6	611.0
5°	644.5	624.9	613.1	617.1	609.4	618.8	618.8	645.7	681.5	723.1	782.2
7.5°	658.7	644.5	631.0	641.2	642.8	633.9	642.4	705.6	770.4	812.0	906.6
10°	630.2	615.9	626.1	629.4	629.0	649.3	693.8	744.3	816.5	893.1	944.1
12.5°	624.9	635.1	640.0	645.7	684.4	690.5	757.8	809.9	882.5	949.8	1082.2
15°	703.6	717.0	686.8	684.8	697.4	703.2	772.9	825.4	931.4	1044.3	1163.4
17.5°	815.7	820.5	766.3	738.6	748.0	752.5	783.0	849.1	914.3	1123.0	1271.4
20°	924.1	927.3	825.4	763.5	796.5	801.4	829.9	867.8	919.2	1167.0	1344.3
22.5°	1037.8	1017.0	905.3	827.1	846.2	847.5	864.2	885.0	957.9	1160.1	1433.2
25°	1162.1	1149.1	1008.5	933.5	932.6	915.9	916.7	946.5	999.1	1234.3	1491.5
27.5°	1327.2	1328.9	1124.6	1084.3	1021.1	1010.1	955.1	1010.5	1070.4	1235.1	1617.5
30°	1541.2	1501.7	1286.5	1221.2	1158.9	1135.6	1061.0	1108.3	1134.4	1305.6	1754.4
32.5°	1715.3	1703.9	1455.2	1356.6	1254.7	1281.6	1199.2	1157.7	1204.5	1427.1	1961.9
35°	1882.0	1844.5	1633.8	1505.4	1398.2	1381.8	1328.4	1335.4	1363.9	1580.8	2233.0
37.5°	2130.7	2110.3	1886.5	1681.0	1630.9	1564.5	1530.6	1552.2	1529.8	1777.6	2639.4
40°	2408.7	2290.4	2097.6	1914.6	1820.9	1774.0	1785.8	1765.4	1748.3	1998.6	3003.8
42.5°	2674.8	2567.2	2237.9	2155.5	2033.2	2052.8	1988.0	2002.3	2050.8	2312.0	3340.9
45°	2964.7	2731.9	2386.6	2314.1	2226.4	2251.3	2303.1	2287.6	2367.1	2681.8	3658.4
47.5°	3109.4	2888.0	2569.3	2451.0	2449.8	2398.1	2713.1	2747.4	2623.1	2955.7	3980.9
50°	3248.8	3031.1	2705.0	2625.1	2567.2	2678.1	3106.5	3027.8	2854.6	3270.0	4335.5
52.5°	3442.8	3194.6	2860.7	2775.5	2847.3	2950.0	3420.4	3404.9	3081.6	3593.2	4643.7
55°	3590.8	3340.1	3095.1	3016.0	3153.0	3253.7	3740.0	3646.6	3276.1	3830.4	4838.9
57.5°	3850.0	3592.8	3441.2	3265.5	3511.7	3510.1	4048.1	3976.0	3484.0	4025.3	4917.6
60°	4262.1	3960.1	3801.5	3598.9	3862.6	3956.8	4400.3	4192.4	3631.1	4148.4	4775.7
62.5°	4840.5	4481.8	4224.6	4024.1	4345.7	4516.1	4835.2	4350.2	3640.5	4113.3	4402.8
65°	5555.9	5119.8	4782.7	4570.7	5101.4	5344.8	5361.1	4447.6	3554.1	3751.0	3618.5
67.5°	6253.8	5763.4	5411.6	5452.0	6226.9	6342.2	5930.9	4529.1	3089.8	3011.9	2512.6
70°	6713.2	6181.6	5947.2	6375.2	7552.5	7434.3	6392.8	4314.3	2433.1	1952.5	1414.9
72.5°	6678.5	6122.1	6037.7	6923.9	8500.6	8426.8	6449.0	3431.0	1629.7	1067.6	705.6
75°	5441.0	5008.5	5200.1	6554.6	8227.5	8223.8	5599.1	2123.7	836.0	548.3	445.9
77.5°	3008.3	2840.3	3403.3	4962.8	6550.9	6584.4	3783.2	963.2	450.8	388.5	335.9
80°	1053.7	1038.2	1474.8	2678.1	4309.4	4317.6	1759.3	440.6	327.7	293.9	246.6
82.5°	385.2	381.9	611.4	1244.1	2372.8	2367.5	667.3	274.3	242.9	207.9	162.6
85°	153.7	150.4	279.6	552.3	1090.0	1072.5	259.2	155.7	159.0	123.9	79.9
87.5°	42.4	44.0	95.0	172.8	333.8	309.4	65.2	52.6	64.4	50.5	25.3
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°	515.2	515.2	515.2	515.2	515.2	515.2	515.2	515.2	515.2	515.2	515.2
2.5°	619.2	623.3	582.9	597.2	615.5	625.3	630.2	609.4	616.3	645.7	644.5
5°	794.5	778.2	762.7	778.6	768.0	752.9	777.3	776.1	792.0	807.9	811.6
7.5°	925.3	904.1	896.8	860.9	825.0	788.8	820.1	839.7	843.8	883.3	900.0
10°	972.6	964.4	967.3	920.0	915.5	919.2	890.3	858.9	878.0	861.7	873.9
12.5°	1081.8	1102.2	1051.7	1019.5	1016.6	994.2	936.3	915.9	894.3	916.7	905.3
15°	1169.5	1207.4	1153.2	1096.5	1032.5	997.9	948.5	917.6	903.3	908.2	894.3
17.5°	1297.9	1333.3	1195.6	1108.7	1042.7	991.8	916.3	850.3	885.4	888.2	872.3
20°	1383.1	1385.5	1209.8	1078.6	1019.1	930.6	857.2	799.4	839.7	880.9	898.8
22.5°	1466.2	1447.9	1227.4	1054.5	933.1	847.5	811.6	807.9	838.1	872.7	876.8
25°	1528.6	1531.4	1237.5	1045.6	882.5	765.9	765.9	792.4	818.9	901.3	897.2
27.5°	1679.8	1568.5	1198.0	1004.4	812.4	718.2	766.3	801.8	814.4	903.7	912.7
30°	1789.9	1717.3	1206.2	933.9	741.5	695.8	735.4	779.8	814.8	918.0	914.7
32.5°	1974.5	1779.3	1225.3	834.8	688.5	687.3	722.3	769.2	811.2	902.5	907.4
35°	2178.8	1961.9	1171.9	759.4	675.8	682.4	727.6	746.4	795.7	896.4	900.8
37.5°	2556.6	2057.3	1138.1	701.1	667.7	686.4	703.6	732.5	782.2	865.8	895.1
40°	2778.4	2253.8	1012.5	667.3	650.6	683.2	691.7	716.2	743.1	829.1	847.9
42.5°	3070.2	2315.7	905.3	629.8	642.0	669.7	695.4	701.5	719.5	771.2	805.5
45°	3313.6	2362.2	791.6	599.6	613.1	699.5	701.1	698.3	695.0	714.2	742.3
47.5°	3565.5	2486.9	686.8	566.2	602.1	723.9	704.0	677.9	664.4	666.9	693.0
50°	3843.5	2577.4	612.7	538.9	604.5	723.9	717.8	657.1	630.2	623.3	650.6
52.5°	4088.1	2588.0	556.4	516.9	594.3	699.1	727.2	644.0	598.8	582.1	607.8
55°	4221.4	2453.9	515.6	496.9	568.2	676.7	722.3	636.7	560.9	548.3	571.1
57.5°	4218.5	2231.3	481.0	469.2	538.5	645.3	695.0	596.8	537.7	530.3	552.7
60°	4066.5	1970.5	454.5	446.3	507.9	599.6	646.1	570.7	515.2	511.6	536.0
62.5°	3721.6	1701.0	428.8	422.3	479.4	567.4	622.9	541.7	492.0	491.6	514.8
65°	3047.8	1365.5	404.8	403.1	452.9	535.6	600.8	517.3	468.0	476.1	499.7
67.5°	2100.1	959.5	379.1	384.0	428.4	505.0	584.1	501.0	442.7	459.4	480.6
70°	1152.4	593.5	350.6	360.3	397.4	469.6	558.0	474.5	409.7	435.3	450.0
72.5°	586.2	395.8	315.1	330.6	359.5	417.4	509.1	436.2	374.2	384.0	391.7
75°	393.8	298.0	275.6	292.7	313.5	367.7	451.6	400.3	340.4	339.1	347.7
77.5°	297.6	232.8	234.0	253.5	267.0	323.2	406.0	370.1	311.8	309.0	321.6
80°	217.7	176.5	188.3	208.7	220.9	290.2	376.2	336.7	273.1	261.7	272.3
82.5°	144.3	125.1	139.4	159.8	169.6	242.5	341.6	285.7	222.6	193.6	195.3
85°	68.1	65.6	83.2	92.9	105.6	150.4	255.6	197.7	141.9	117.4	122.7
87.5°	15.5	20.8	27.3	26.9	31.4	40.4	79.5	55.4	41.2	28.1	18.8
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)