

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: P368044

Luminaire Tested: **MSA-SA3C-830-U-T2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368044
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3C-830-U-T2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14429 lumens
Efficiency: N/A
Efficacy: 86.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B2 - U0 - G3

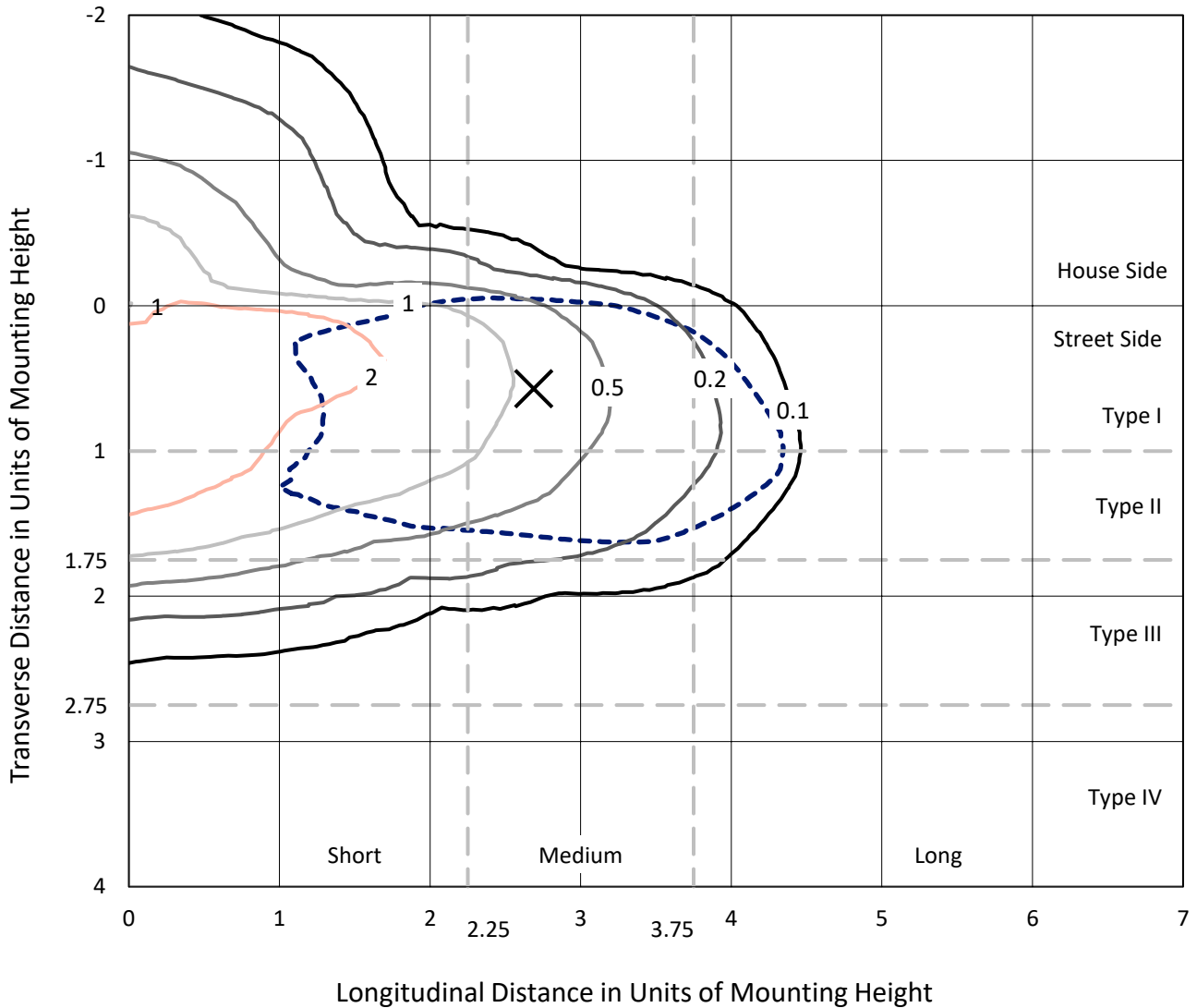
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

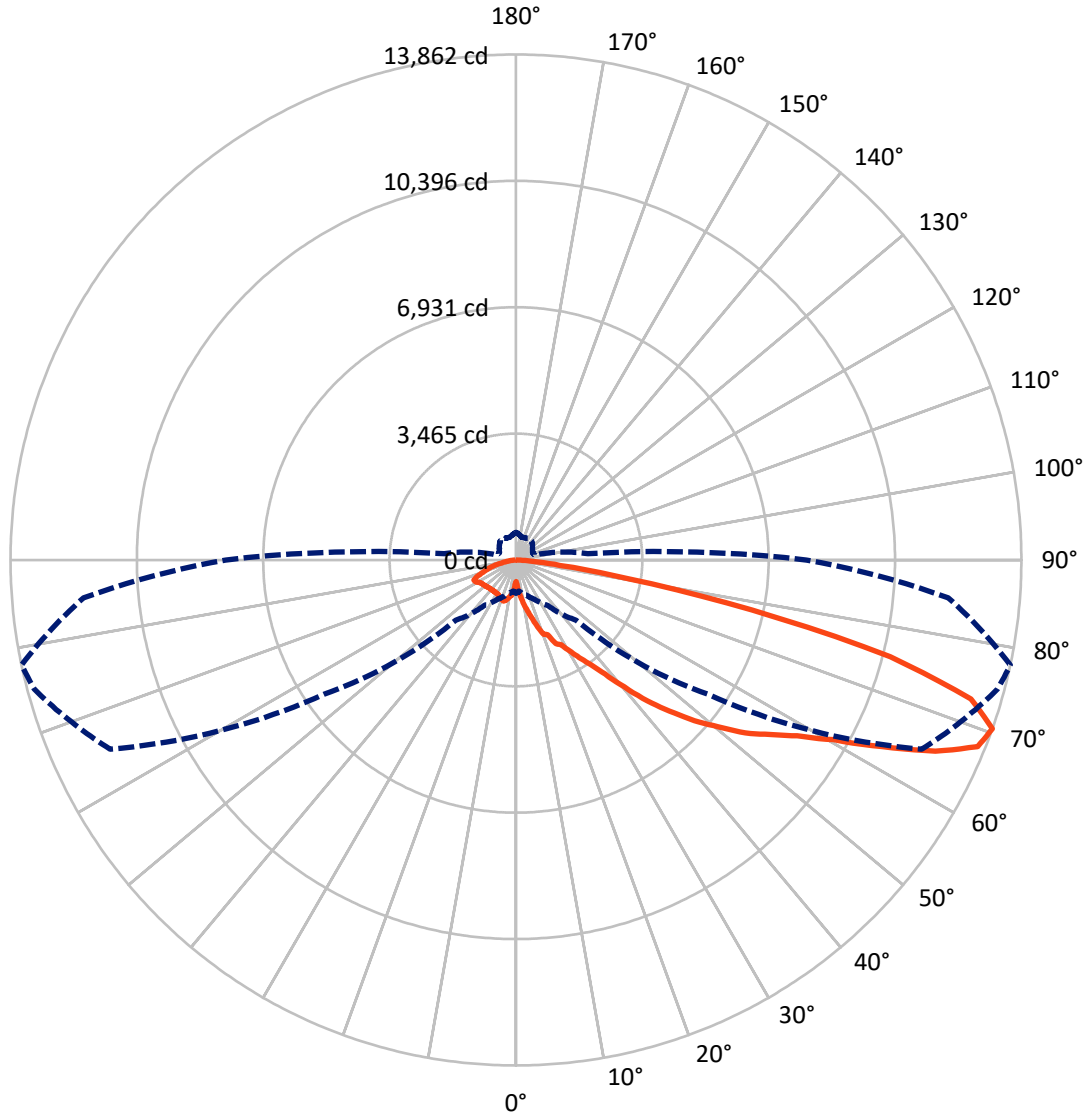
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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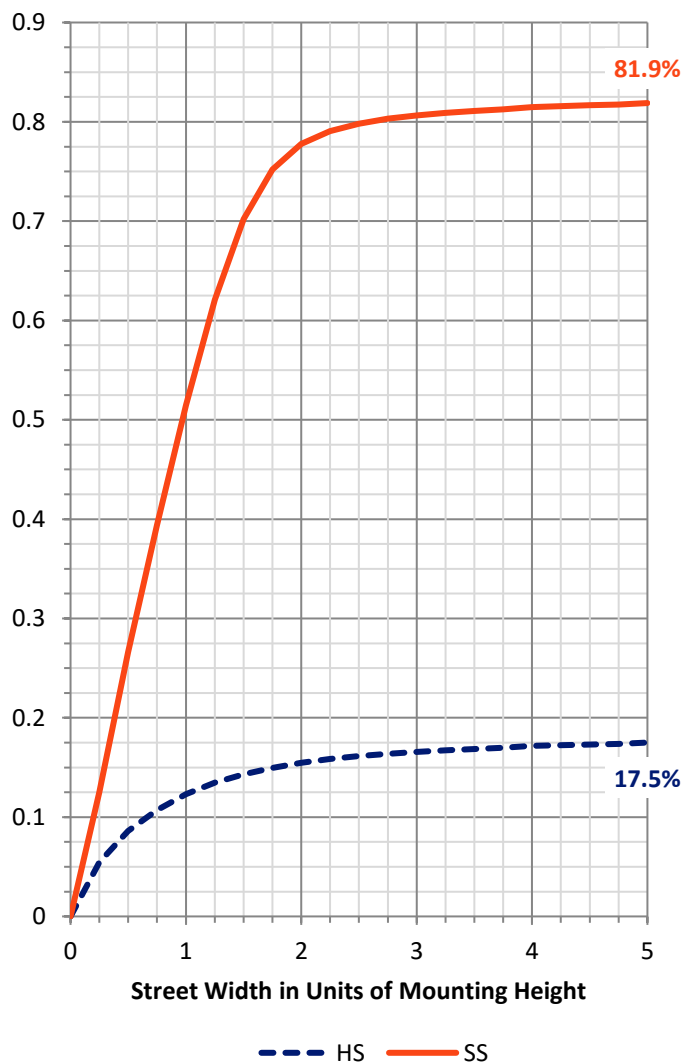
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2575.4	0.0	2575.4
	% Fixture	17.8	0.0	17.8
Street Side	Lumens	11853.6	0.0	11853.6
	% Fixture	82.2	0.0	82.2
Total	Lumens	14429.0	0.0	14429.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.9	0.6
10°-20°	400.5	2.8
20°-30°	771.0	5.3
30°-40°	1298.6	9.0
40°-50°	2247.0	15.6
50°-60°	3392.7	23.5
60°-70°	3757.8	26.0
70°-80°	2166.5	15.0
80°-90°	303.9	2.1
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°	14429.0	100.0
0°-180°	14429.0	100.0

Coefficient of Utilization

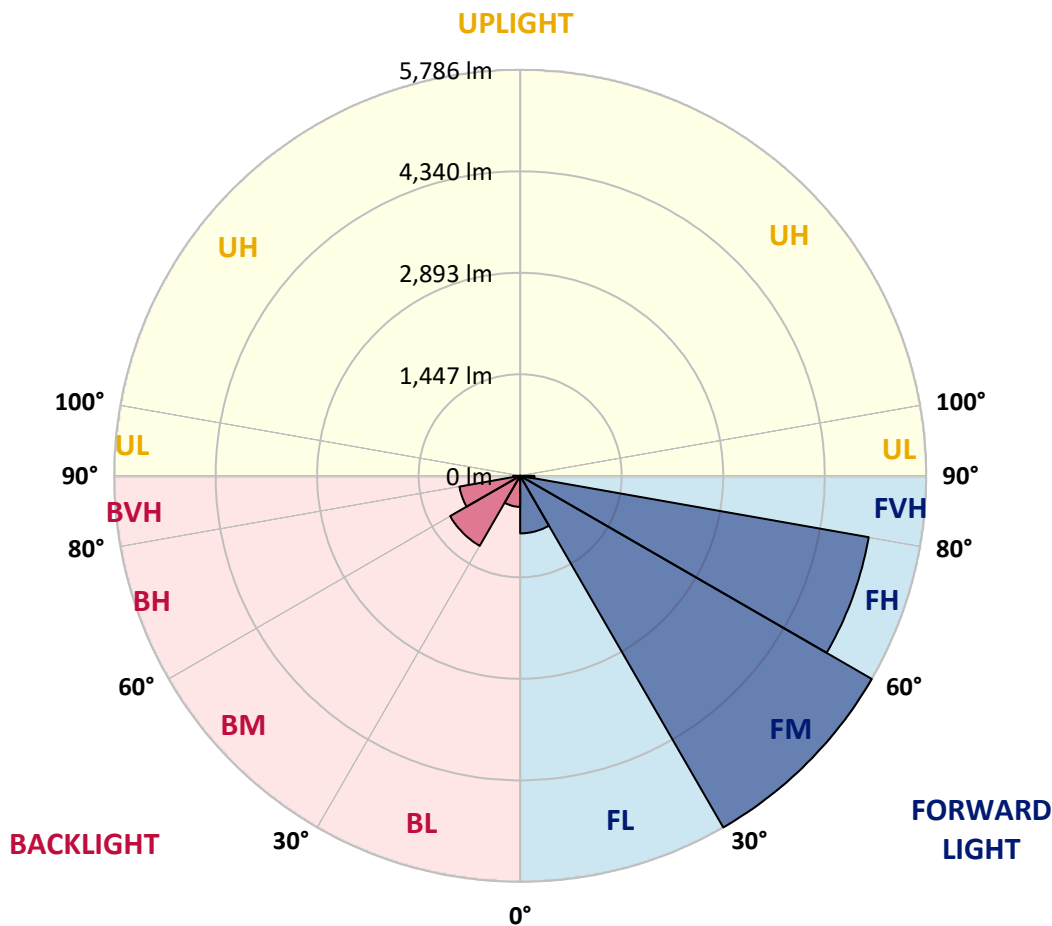


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	820.2	5.7			
FM (30°-60°)	5786.5	40.1			
FH (60°-80°)	5044.2	35.0			G3/7500
FVH (80°-90°)	202.7	1.4			G2/225
BL (0°-30°)	442.2	3.1	B1/500		
BM (30°-60°)	1151.9	8.0	B2/2500		
BH (60°-80°)	880.1	6.1	B2/1000		G2/1000
BVH (80°-90°)	101.2	0.7			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3
 Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	588.3	588.3	588.3	588.3	588.3	588.3	588.3	588.3	588.3	588.3	588.3
2.5°	757.3	730.2	689.3	706.2	726.6	729.0	722.4	685.1	672.5	700.8	709.2
5°	1061.1	1015.3	987.7	978.7	948.0	884.2	929.9	906.5	911.3	897.5	924.5
7.5°	1316.7	1286.0	1245.1	1233.7	1163.3	1113.4	1144.7	1134.4	1085.1	1065.9	1096.6
10°	1446.6	1412.9	1414.8	1390.1	1371.4	1376.3	1360.6	1315.5	1278.8	1252.9	1179.0
12.5°	1524.8	1533.2	1578.4	1565.7	1636.1	1693.9	1649.9	1583.2	1467.1	1443.6	1370.2
15°	1710.7	1742.0	1699.9	1719.1	1749.2	1859.9	1841.8	1827.4	1704.7	1659.0	1523.6
17.5°	1902.0	1908.0	1844.2	1834.0	1906.2	1962.1	2032.5	1951.3	1966.3	1934.5	1715.5
20°	1942.9	1984.4	1893.0	1829.8	1978.4	2089.0	2176.3	2090.2	2169.6	2178.1	1873.7
22.5°	2092.7	2042.7	1922.4	1860.5	1990.4	2126.3	2268.3	2316.4	2291.2	2220.2	2026.5
25°	2196.7	2170.2	2047.5	1979.0	2028.3	2153.4	2402.4	2528.1	2550.4	2540.8	2172.1
27.5°	2389.8	2403.0	2150.4	2169.6	2101.1	2112.5	2483.0	2809.1	2670.1	2631.6	2352.5
30°	2694.8	2635.8	2352.5	2368.1	2254.5	2235.2	2653.3	3051.5	2926.9	2880.6	2501.1
32.5°	3013.0	3018.4	2674.3	2540.8	2480.0	2460.8	2619.6	3178.4	3251.8	3191.6	2725.4
35°	3461.7	3430.4	3023.2	2847.5	2628.0	2594.3	2859.6	3546.5	3681.2	3512.8	2991.9
37.5°	4145.0	4050.6	3576.6	3170.6	3008.2	2969.7	3202.4	3876.7	4179.9	3970.6	3427.4
40°	4693.6	4501.7	4071.0	3576.6	3301.7	3349.2	3446.1	4277.3	4697.2	4579.3	3830.4
42.5°	5130.9	4960.7	4421.1	4073.4	3699.9	3640.9	3746.8	4773.6	5401.0	5285.5	4333.3
45°	5550.1	5203.7	4814.5	4501.7	4142.6	4214.2	4198.5	5280.1	6264.1	5908.6	4777.8
47.5°	5964.0	5638.6	5231.3	4810.9	4449.4	4895.1	4728.5	5656.6	6846.4	6582.9	5245.8
50°	6495.7	6137.8	5674.0	5251.2	5034.6	5360.7	5081.0	5975.4	7498.4	7189.2	5687.3
52.5°	6848.8	6500.5	6093.9	5791.9	5772.1	5646.4	5574.8	6379.0	8069.9	7882.2	6155.3
55°	6807.3	6471.6	6287.6	6320.7	6566.1	6142.0	6083.7	6976.3	8666.0	8448.8	6660.5
57.5°	6287.0	5920.7	5959.8	6155.9	6815.1	7012.4	6913.2	7614.5	9197.7	9099.0	7285.5
60°	4897.5	4709.2	5027.4	5385.9	6481.9	7267.4	7965.2	8392.9	9852.1	10009.7	8267.2
62.5°	3181.4	2930.0	3432.8	4041.5	5487.6	7099.0	9036.5	9869.0	10924.0	11281.9	9758.9
65°	1648.1	1607.8	1959.7	2519.1	3820.2	6053.0	9414.2	11417.3	12226.9	12643.7	11183.9
67.5°	1198.2	1123.6	1286.6	1615.7	2332.1	4127.6	8698.4	12601.6	13272.9	13654.9	12012.2
70°	912.5	857.2	981.7	1185.6	1523.0	2331.5	6421.1	12278.6	13676.5	13861.8	11902.1
72.5°	683.3	635.8	744.7	934.7	1173.5	1312.5	3795.5	10095.7	12987.8	13051.0	10682.2
75°	545.6	508.9	555.8	738.1	956.4	893.2	2016.3	7314.4	10552.3	10606.4	8159.5
77.5°	447.5	416.2	435.5	553.4	744.1	671.9	1000.3	4652.7	6699.6	6616.6	4590.7
80°	365.1	338.0	347.1	400.0	566.6	501.7	561.8	2427.1	3195.8	3067.1	1909.2
82.5°	280.9	258.0	276.1	294.1	410.2	360.3	327.8	1104.4	1308.9	1219.3	700.2
85°	188.3	167.2	240.0	220.8	268.3	221.4	179.3	439.7	487.8	454.7	246.0
87.5°	51.7	48.7	80.6	110.1	110.1	83.6	65.6	106.5	135.9	119.1	57.7
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°	588.3	588.3	588.3	588.3	588.3	588.3	588.3	588.3	588.3	588.3	588.3
2.5°	712.8	699.6	664.7	661.7	670.1	671.3	665.9	653.2	646.6	682.7	677.3
5°	917.9	871.0	842.7	816.9	780.8	754.9	761.5	779.6	785.6	812.6	815.6
7.5°	1077.3	1015.3	953.4	870.4	815.6	780.8	807.2	826.5	841.5	880.0	895.6
10°	1146.5	1079.1	991.3	904.1	889.0	895.0	880.0	884.8	908.3	910.1	917.9
12.5°	1275.2	1198.8	1040.6	961.8	957.6	970.2	964.8	987.1	1003.3	1047.2	1028.6
15°	1398.5	1301.1	1077.9	997.3	979.9	1005.1	1034.6	1071.9	1106.8	1148.3	1127.2
17.5°	1548.3	1401.5	1079.7	981.1	984.1	1038.2	1068.9	1089.3	1193.4	1250.5	1221.7
20°	1642.7	1411.7	1039.4	940.8	984.1	1032.8	1075.5	1097.8	1214.4	1300.5	1320.3
22.5°	1728.1	1415.4	1008.1	919.1	946.8	1011.1	1075.5	1124.8	1199.4	1281.8	1284.8
25°	1775.1	1412.3	967.8	920.9	946.2	978.1	1035.2	1080.3	1135.7	1250.5	1253.5
27.5°	1895.4	1373.2	928.1	928.1	941.4	942.6	1015.3	1041.8	1049.6	1154.3	1172.9
30°	1930.2	1381.7	923.3	926.9	933.5	921.5	953.4	970.8	982.3	1072.5	1075.5
32.5°	1986.2	1314.3	937.8	916.1	907.7	905.9	913.7	929.3	934.1	989.5	999.7
35°	2054.2	1287.2	942.6	913.1	896.3	887.2	910.7	891.4	906.5	971.4	978.7
37.5°	2275.5	1249.9	967.2	913.1	891.4	881.2	869.8	878.8	932.3	994.9	1033.4
40°	2416.9	1261.4	961.2	922.1	875.2	865.6	846.3	879.4	962.4	1073.1	1102.0
42.5°	2664.7	1268.0	968.4	917.9	880.6	843.3	855.9	892.0	979.3	1042.4	1086.9
45°	2920.9	1288.4	963.6	905.3	868.6	886.0	868.6	901.1	942.6	944.4	978.1
47.5°	3172.4	1370.8	953.4	879.4	865.6	911.3	866.8	872.2	875.2	886.0	925.7
50°	3467.7	1458.7	939.0	843.3	869.8	912.5	873.4	846.9	843.9	879.4	923.9
52.5°	3803.3	1557.9	920.3	808.4	845.1	901.1	896.3	848.7	822.9	857.2	901.7
55°	4198.5	1671.0	898.7	773.5	818.1	902.3	908.9	836.1	823.5	860.8	908.3
57.5°	4723.7	1834.6	856.6	723.0	785.0	883.6	876.4	821.7	809.6	849.3	898.7
60°	5619.9	2149.2	796.4	673.1	749.5	837.9	849.9	795.8	783.8	827.7	879.4
62.5°	6819.9	2527.5	723.6	624.4	706.2	788.6	816.9	758.5	757.3	813.2	867.4
65°	7936.9	2742.3	648.4	579.9	661.7	742.9	779.6	723.6	726.0	796.4	850.5
67.5°	8401.3	2489.7	581.1	540.2	610.5	690.5	748.9	696.5	688.7	773.5	823.5
70°	7965.2	1977.8	522.7	498.1	552.8	634.0	706.2	660.5	642.4	719.4	758.5
72.5°	7047.9	1648.7	468.0	448.7	502.3	574.4	648.4	611.7	588.3	647.2	682.1
75°	5509.2	1352.8	405.4	400.0	444.5	520.3	588.3	563.0	532.9	570.2	605.1
77.5°	3136.9	855.9	340.5	344.1	375.9	455.9	516.1	496.2	465.6	481.2	521.5
80°	1255.4	431.9	273.7	276.1	303.2	374.7	427.7	420.5	388.6	401.2	428.9
82.5°	469.2	237.0	202.1	203.3	230.4	296.5	365.1	361.5	331.4	322.4	338.0
85°	186.5	117.3	123.9	129.3	155.2	213.5	292.9	259.9	224.4	196.7	206.3
87.5°	44.5	37.3	43.3	45.7	50.5	66.8	107.1	86.0	88.4	71.0	52.9
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)