

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: P367784

Luminaire Tested: **MSA-SA3A-830-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367784
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-SA3A-830-U-T4FT
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 9343 lumens
Efficiency: N/A
Efficacy: 97.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

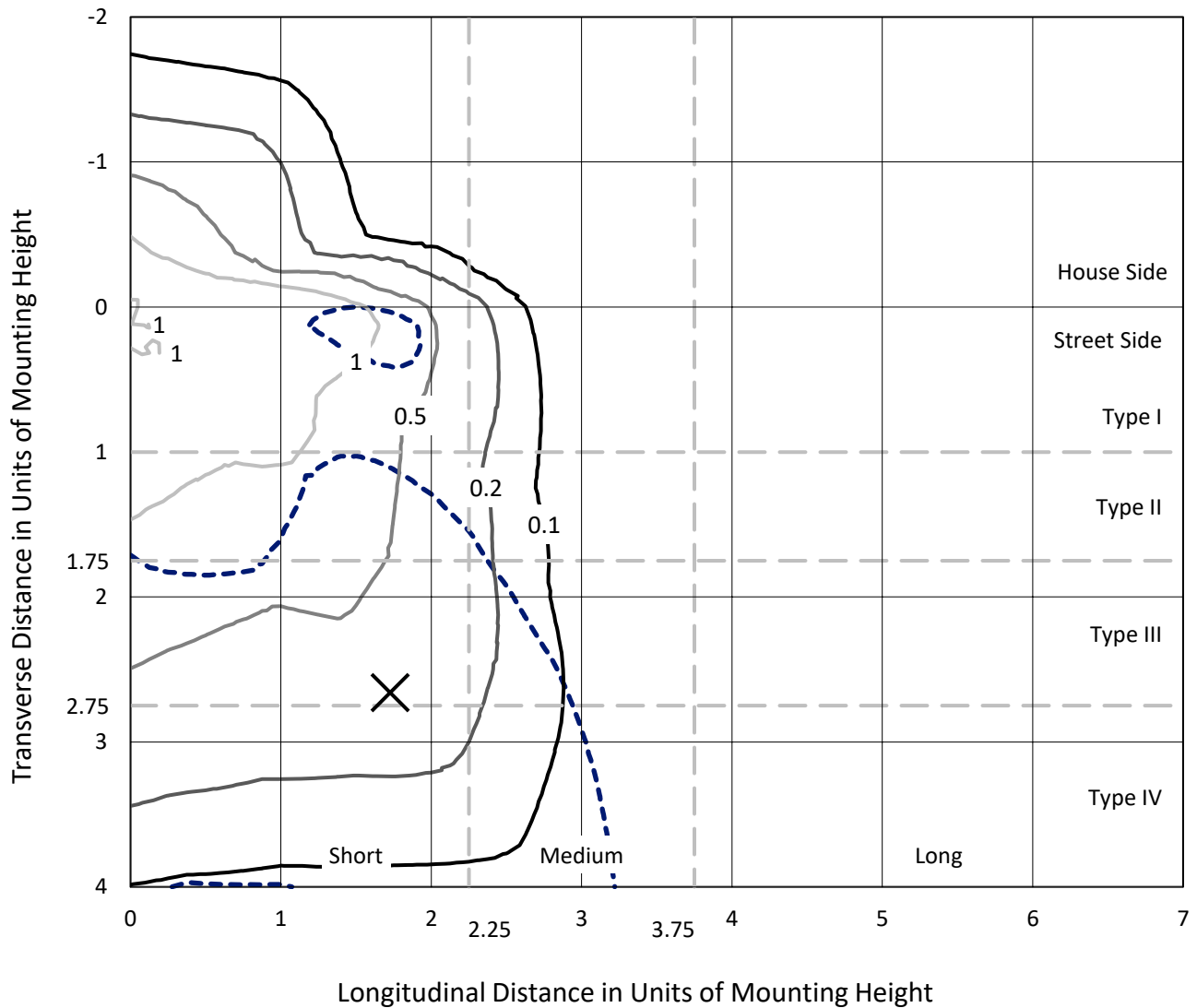
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

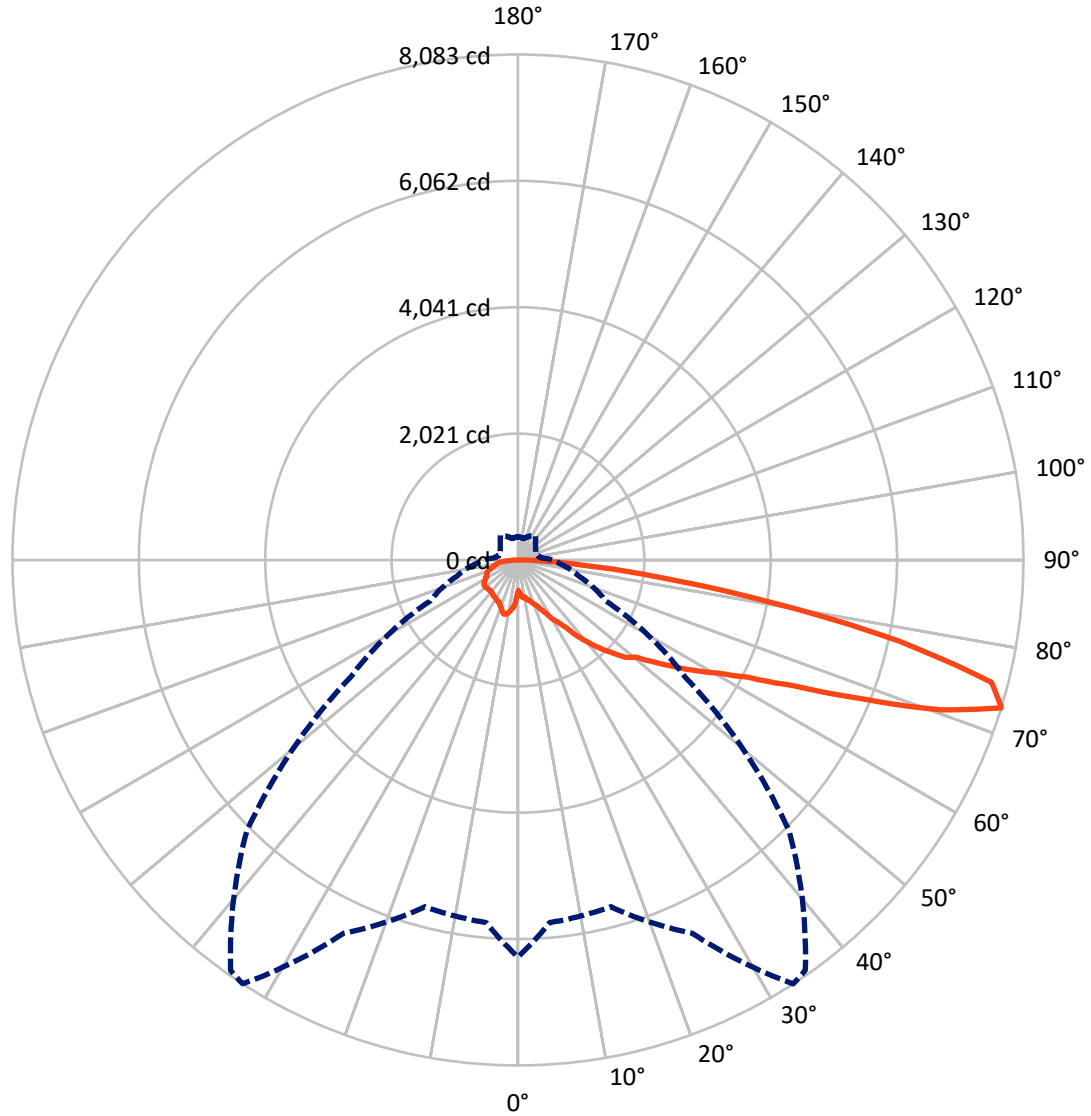
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 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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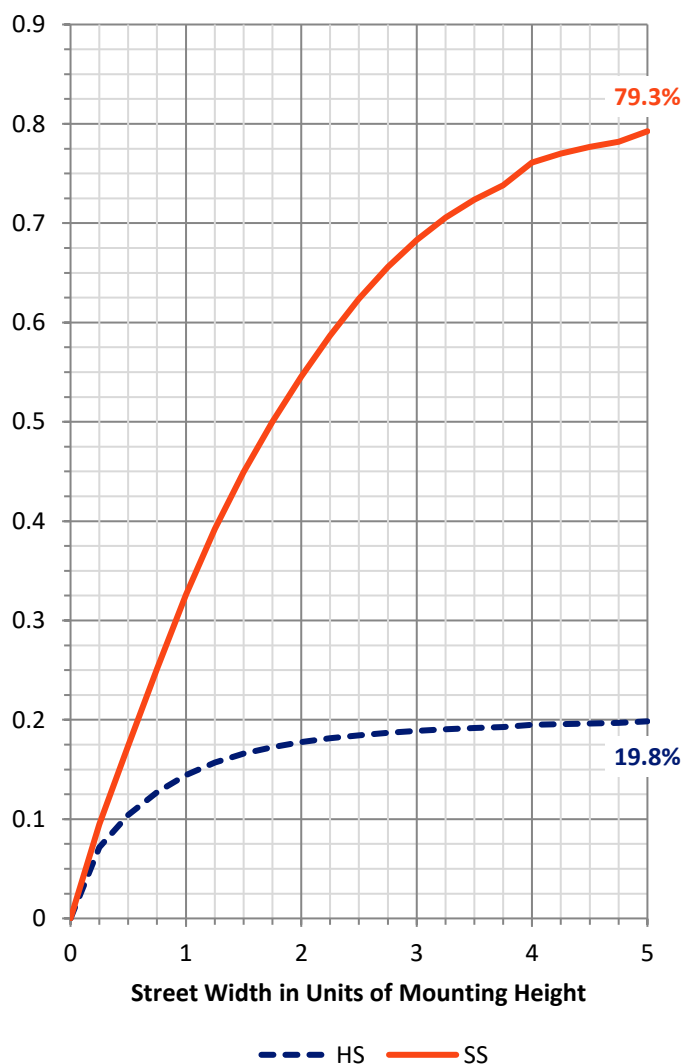
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1890.1	0.0	1890.1
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	7452.9	0.0	7452.9
	% Fixture	79.8	0.0	79.8
Total	Lumens	9343.0	0.0	9343.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.4	0.7
10°-20°	248.9	2.7
20°-30°	453.9	4.9
30°-40°	768.0	8.2
40°-50°	1277.6	13.7
50°-60°	1875.0	20.1
60°-70°	2398.5	25.7
70°-80°	1951.4	20.9
80°-90°	302.2	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°	9343.0	100.0
0°-180°	9343.0	100.0

Coefficient of Utilization



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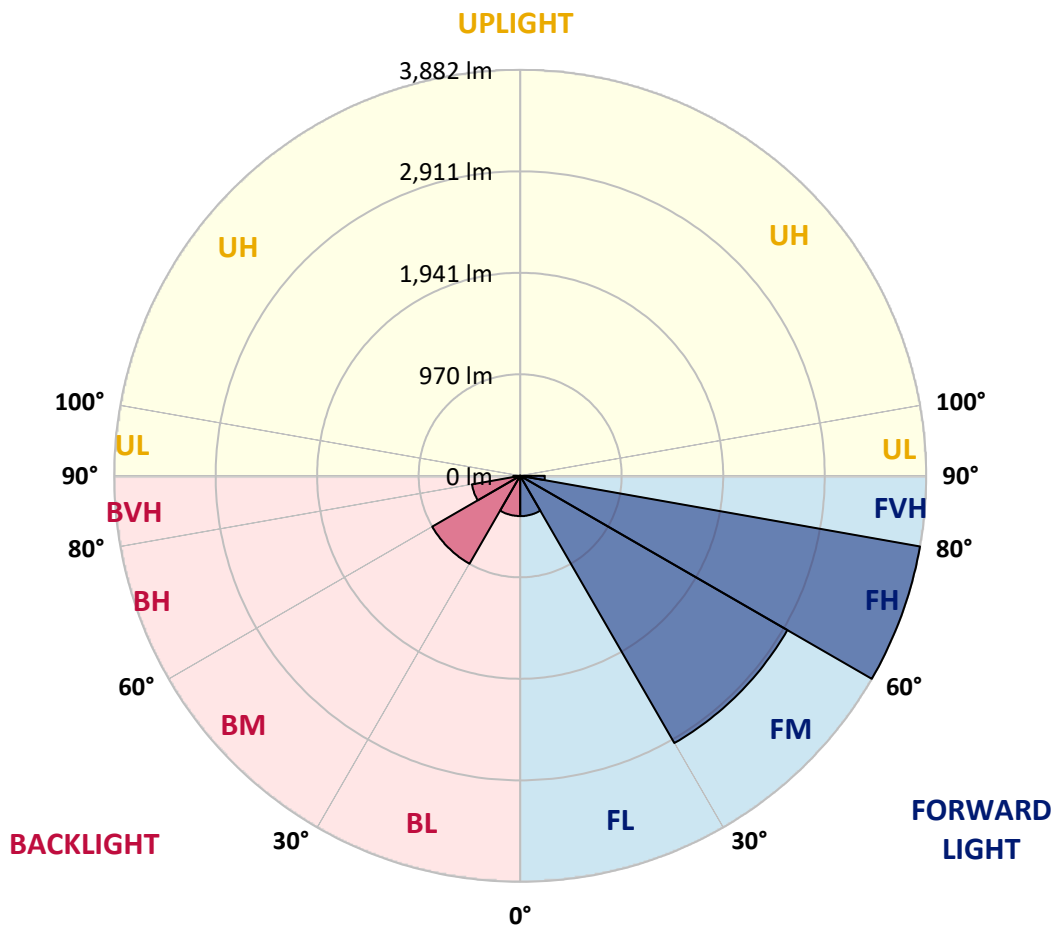
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	385.6	4.1			
FM (30°-60°)	2949.8	31.6			
FH (60°-80°)	3881.7	41.5			G2/5000
FVH (80°-90°)	235.9	2.5			G3/500
BL (0°-30°)	384.7	4.1	B1/500		
BM (30°-60°)	970.7	10.4	B1/1000		
BH (60°-80°)	468.3	5.0	B1/500		G1/500
BVH (80°-90°)	66.3	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-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	489.9	489.9	489.9	489.9	489.9	489.9	489.9	489.9	489.9	489.9	489.9
2.5°	555.4	538.0	509.3	508.5	524.4	527.9	538.4	539.1	543.0	536.8	581.0
5°	612.8	594.2	582.9	586.8	579.4	588.4	588.4	613.9	648.0	687.6	743.8
7.5°	626.3	612.8	600.0	609.7	611.2	602.7	610.8	670.9	732.5	772.1	862.0
10°	599.2	585.6	595.3	598.4	598.0	617.4	659.7	707.7	776.3	849.2	897.7
12.5°	594.2	603.9	608.5	613.9	650.8	656.6	720.5	770.1	839.1	903.1	1029.0
15°	669.0	681.8	653.1	651.1	663.2	668.6	734.9	784.9	885.6	993.0	1106.2
17.5°	775.6	780.2	728.7	702.3	711.2	715.5	744.6	807.3	869.4	1067.8	1208.9
20°	878.7	881.8	784.9	726.0	757.3	762.0	789.1	825.2	874.0	1109.7	1278.3
22.5°	986.8	967.0	860.8	786.4	804.6	805.8	821.7	841.5	910.8	1103.1	1362.8
25°	1105.0	1092.6	958.9	887.6	886.8	870.9	871.7	900.0	950.0	1173.6	1418.2
27.5°	1262.0	1263.5	1069.4	1031.0	970.9	960.4	908.1	960.8	1017.8	1174.4	1537.9
30°	1465.5	1427.9	1223.2	1161.2	1101.9	1079.8	1008.9	1053.9	1078.7	1241.4	1668.2
32.5°	1631.0	1620.1	1383.7	1289.9	1193.0	1218.6	1140.3	1100.7	1145.3	1356.9	1865.5
35°	1789.5	1753.8	1553.5	1431.4	1329.4	1313.9	1263.1	1269.7	1296.9	1503.1	2123.2
37.5°	2025.9	2006.5	1793.8	1598.4	1550.7	1487.6	1455.4	1475.9	1454.6	1690.3	2509.6
40°	2290.3	2177.9	1994.5	1820.5	1731.4	1686.8	1698.0	1678.6	1662.4	1900.3	2856.1
42.5°	2543.3	2441.0	2127.9	2049.6	1933.3	1951.9	1890.3	1903.8	1950.0	2198.4	3176.7
45°	2818.9	2597.6	2269.3	2200.3	2117.0	2140.6	2189.9	2175.1	2250.7	2549.9	3478.6
47.5°	2956.5	2746.1	2443.0	2330.6	2329.4	2280.2	2579.8	2612.3	2494.1	2810.4	3785.2
50°	3089.1	2882.1	2572.0	2496.1	2441.0	2546.4	2953.8	2879.0	2714.3	3109.2	4122.4
52.5°	3273.6	3037.5	2720.1	2639.1	2707.3	2805.0	3252.2	3237.5	2930.2	3416.6	4415.4
55°	3414.3	3175.9	2943.0	2867.8	2998.0	3093.7	3556.1	3467.4	3115.0	3642.2	4601.1
57.5°	3660.8	3416.2	3272.0	3105.0	3339.1	3337.5	3849.1	3780.5	3312.7	3827.4	4675.9
60°	4052.6	3765.4	3614.6	3422.0	3672.8	3762.3	4184.0	3986.3	3452.6	3944.5	4541.0
62.5°	4602.6	4261.5	4017.0	3826.3	4132.1	4294.1	4597.6	4136.3	3461.5	3911.1	4186.3
65°	5282.8	4868.1	4547.6	4346.0	4850.7	5082.0	5097.6	4229.0	3379.4	3566.6	3440.6
67.5°	5946.4	5480.1	5145.6	5184.0	5920.8	6030.5	5639.4	4306.5	2937.9	2863.9	2389.1
70°	6383.2	5877.8	5654.9	6061.9	7181.2	7068.8	6078.5	4102.2	2313.5	1856.5	1345.3
72.5°	6350.2	5821.2	5740.9	6583.6	8082.7	8012.6	6132.0	3262.3	1549.6	1015.1	670.9
75°	5173.5	4762.3	4944.5	6232.4	7823.1	7819.6	5323.9	2019.3	794.9	521.3	424.0
77.5°	2860.4	2700.7	3236.0	4718.9	6228.9	6260.7	3597.2	915.9	428.7	369.4	319.4
80°	1001.9	987.2	1402.3	2546.4	4097.6	4105.3	1672.8	419.0	311.6	279.5	234.5
82.5°	366.3	363.2	581.4	1182.9	2256.1	2251.1	634.5	260.8	231.0	197.7	154.6
85°	146.1	143.0	265.9	525.2	1036.4	1019.7	246.5	148.1	151.2	117.8	76.0
87.5°	40.3	41.9	90.3	164.3	317.4	294.2	62.0	50.0	61.2	48.1	24.0
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°	489.9	489.9	489.9	489.9	489.9	489.9	489.9	489.9	489.9	489.9	489.9
2.5°	588.7	592.6	554.3	567.8	585.3	594.6	599.2	579.4	586.0	613.9	612.8
5°	755.4	739.9	725.2	740.3	730.2	715.9	739.1	738.0	753.1	768.2	771.7
7.5°	879.8	859.7	852.7	818.6	784.5	750.0	779.8	798.4	802.3	839.9	855.8
10°	924.8	917.0	919.7	874.8	870.5	874.0	846.5	816.6	834.9	819.4	831.0
12.5°	1028.7	1048.0	1000.0	969.4	966.6	945.3	890.3	870.9	850.4	871.7	860.8
15°	1112.0	1148.0	1096.5	1042.6	981.8	948.8	901.9	872.5	858.9	863.5	850.4
17.5°	1234.1	1267.8	1136.8	1054.2	991.4	943.0	871.3	808.5	841.8	844.6	829.4
20°	1315.1	1317.4	1150.4	1025.6	969.0	884.9	815.1	760.1	798.4	837.6	854.6
22.5°	1394.2	1376.7	1167.0	1002.7	887.2	805.8	771.7	768.2	796.9	829.8	833.7
25°	1453.5	1456.2	1176.7	994.2	839.1	728.3	728.3	753.5	778.7	857.0	853.1
27.5°	1597.2	1491.4	1139.1	955.0	772.5	682.9	728.7	762.4	774.4	859.3	867.8
30°	1701.9	1632.9	1146.9	888.0	705.0	661.6	699.2	741.5	774.8	872.8	869.7
32.5°	1877.5	1691.8	1165.1	793.8	654.6	653.5	686.8	731.4	771.3	858.1	862.8
35°	2071.7	1865.5	1114.3	722.1	642.6	648.8	691.8	709.7	756.6	852.3	856.6
37.5°	2430.9	1956.2	1082.1	666.7	634.9	652.7	669.0	696.5	743.8	823.2	851.1
40°	2641.8	2143.0	962.8	634.5	618.6	649.6	657.7	681.0	706.6	788.4	806.2
42.5°	2919.3	2201.9	860.8	598.8	610.5	636.8	661.2	667.0	684.1	733.3	765.9
45°	3150.7	2246.1	752.7	570.1	582.9	665.1	666.7	663.9	660.8	679.1	705.8
47.5°	3390.2	2364.7	653.1	538.4	572.5	688.4	669.4	644.6	631.8	634.1	658.9
50°	3654.6	2450.7	582.5	512.4	574.8	688.4	682.5	624.8	599.2	592.6	618.6
52.5°	3887.1	2460.8	529.1	491.5	565.1	664.7	691.5	612.4	569.4	553.5	577.9
55°	4013.9	2333.3	490.3	472.5	540.3	643.4	686.8	605.4	533.3	521.3	543.0
57.5°	4011.1	2121.7	457.4	446.1	512.0	613.6	660.8	567.4	511.2	504.3	525.6
60°	3866.6	1873.6	432.2	424.4	482.9	570.1	614.3	542.6	489.9	486.4	509.7
62.5°	3538.7	1617.4	407.7	401.5	455.8	539.5	592.2	515.1	467.8	467.4	489.5
65°	2898.0	1298.4	384.9	383.3	430.6	509.3	571.3	491.8	445.0	452.7	475.2
67.5°	1996.9	912.4	360.5	365.1	407.4	480.2	555.4	476.3	420.9	436.8	457.0
70°	1095.7	564.3	333.3	342.6	377.9	446.5	530.6	451.2	389.5	413.9	427.9
72.5°	557.4	376.3	299.6	314.3	341.9	396.9	484.1	414.7	355.8	365.1	372.5
75°	374.4	283.3	262.0	278.3	298.1	349.6	429.4	380.6	323.6	322.5	330.6
77.5°	282.9	221.3	222.5	241.1	253.9	307.4	386.0	351.9	296.5	293.8	305.8
80°	207.0	167.8	179.1	198.4	210.1	276.0	357.7	320.1	259.7	248.8	258.9
82.5°	137.2	119.0	132.6	151.9	161.2	230.6	324.8	271.7	211.6	184.1	185.7
85°	64.7	62.4	79.1	88.4	100.4	143.0	243.0	188.0	134.9	111.6	116.7
87.5°	14.7	19.8	26.0	25.6	29.8	38.4	75.6	52.7	39.1	26.7	17.8
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)