

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: P367782

Luminaire Tested: **MSA-SA3A-830-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367782
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-830-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: 9308 lumens
Efficiency: N/A
Efficacy: 97.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

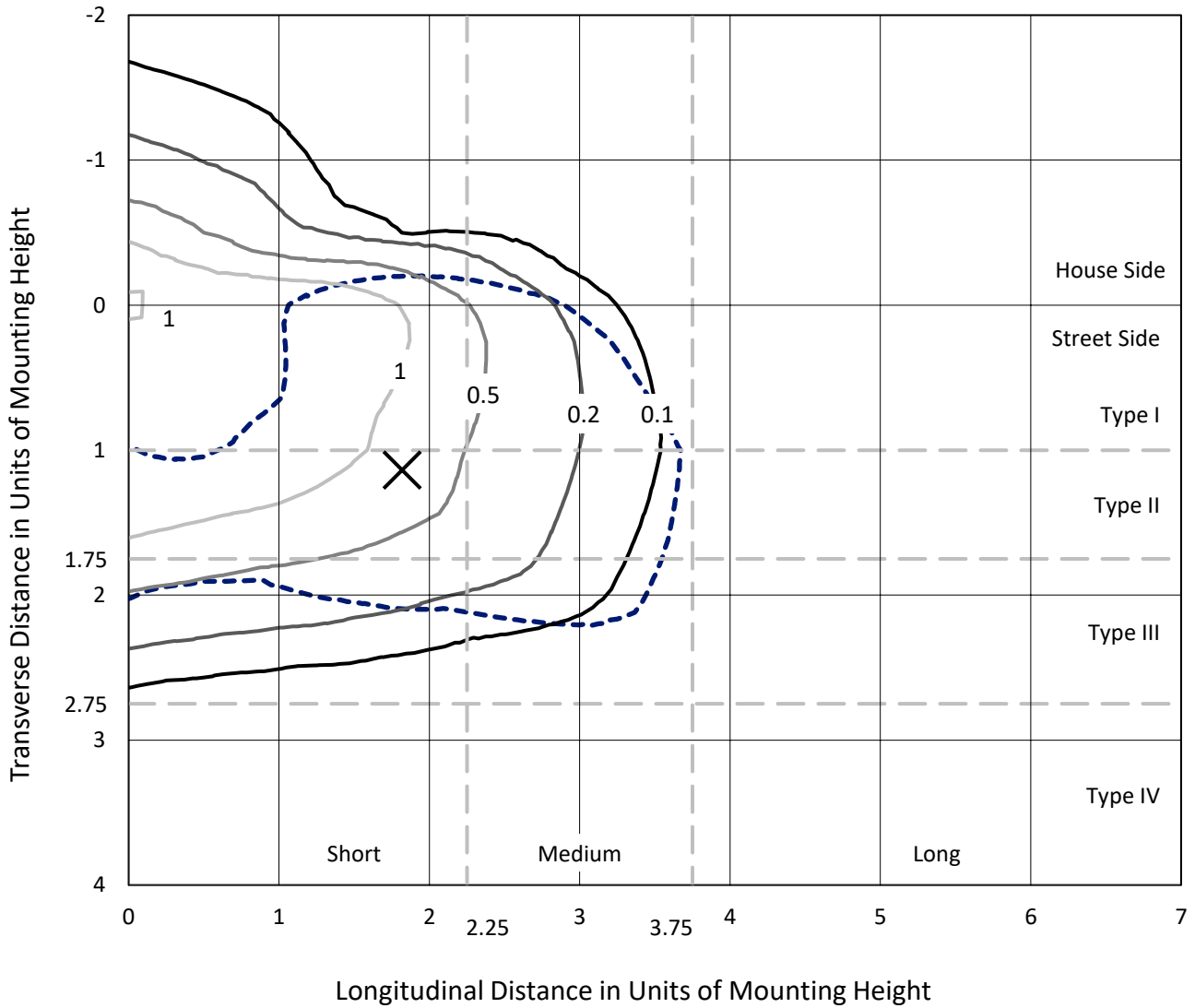
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

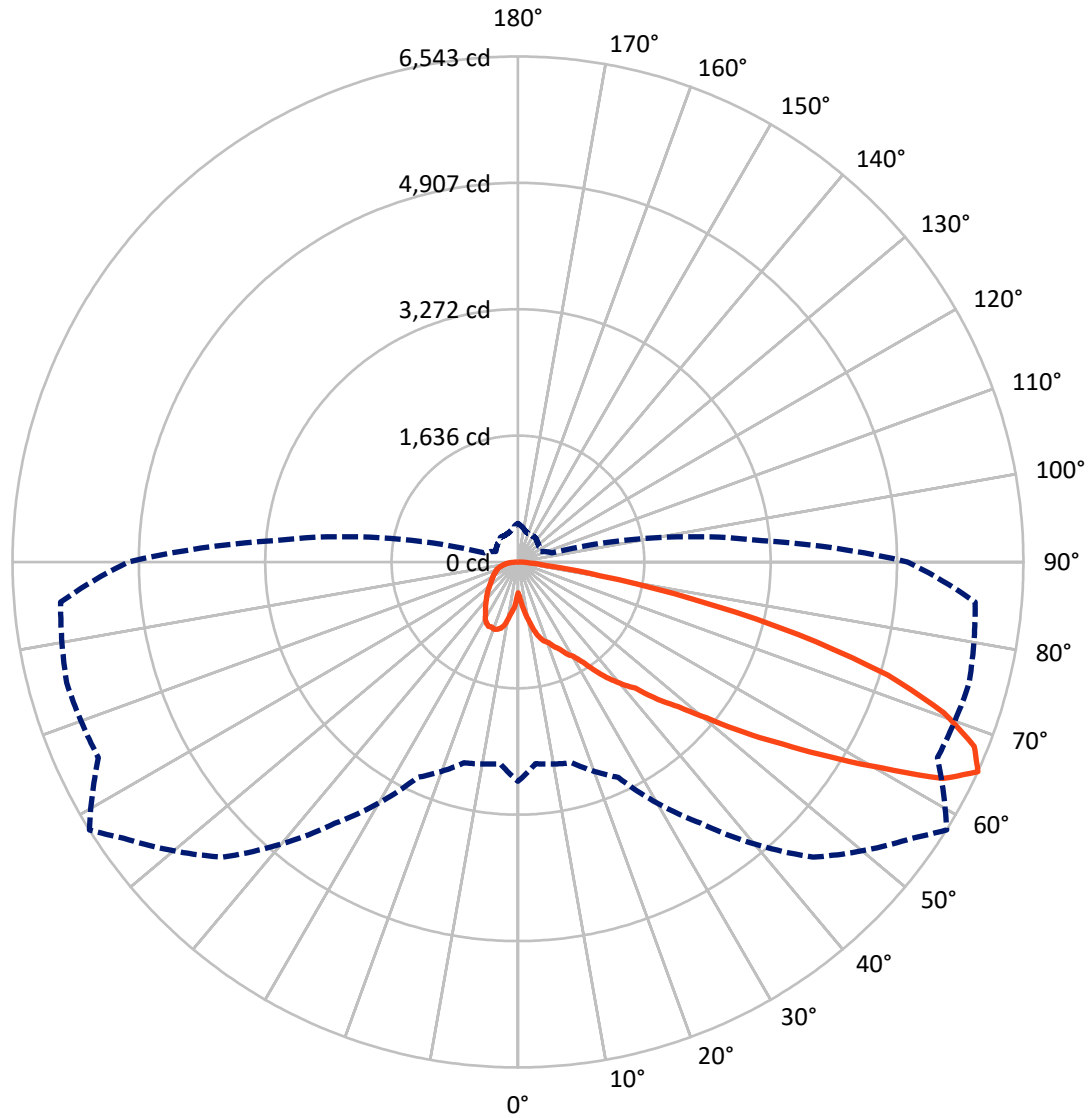
✕ Max cd
 - - - 1/2 Max cd



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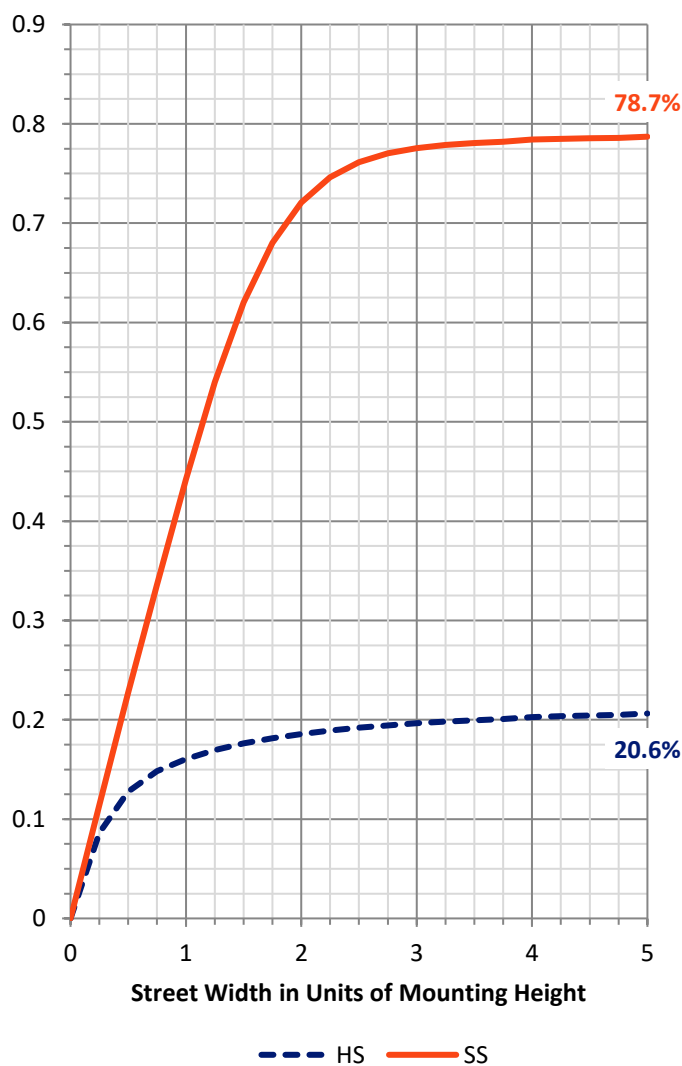
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1960.5	0.0	1960.5
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	7347.5	0.0	7347.5
	% Fixture	78.9	0.0	78.9
Total	Lumens	9308.0	0.0	9308.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.9	0.7
10°-20°	265.6	2.9
20°-30°	509.7	5.5
30°-40°	841.5	9.0
40°-50°	1398.7	15.0
50°-60°	2310.0	24.8
60°-70°	2591.3	27.8
70°-80°	1178.2	12.7
80°-90°	152.0	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°	9308.0	100.0
0°-180°	9308.0	100.0

Coefficient of Utilization

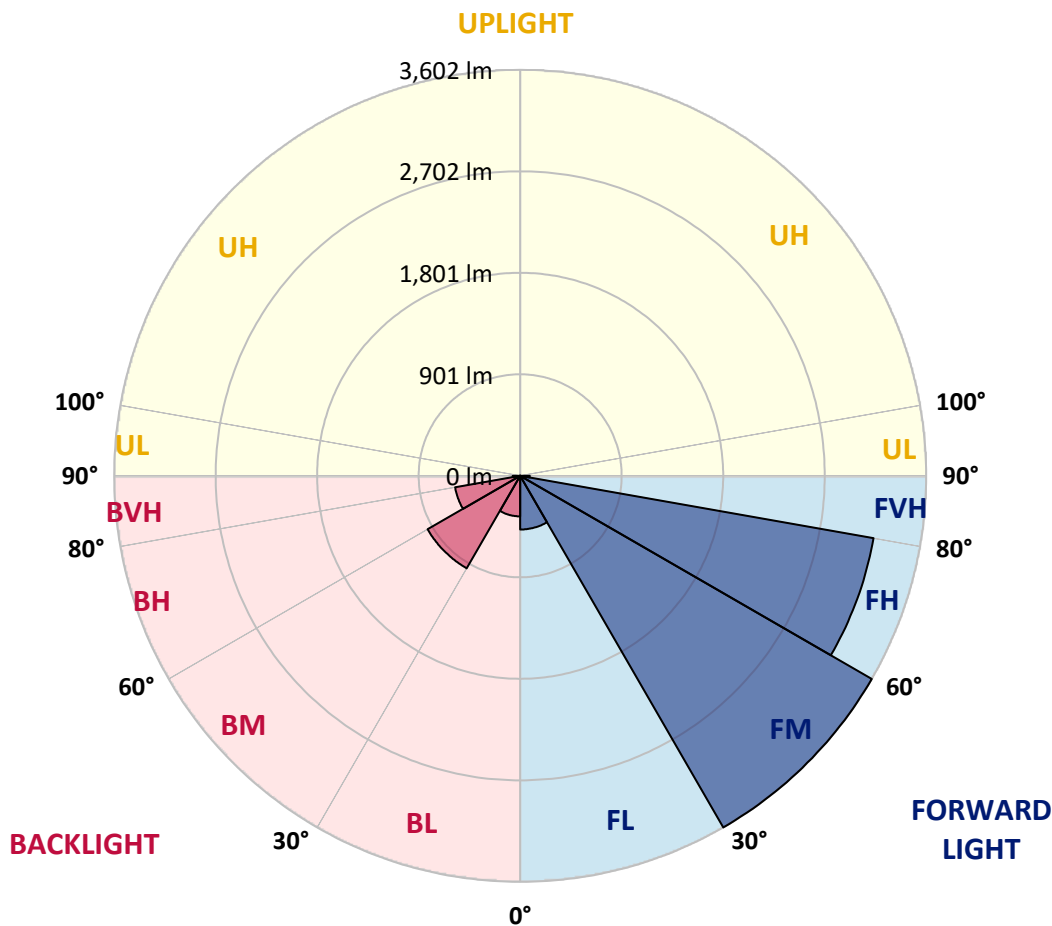


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	476.3	5.1			
FM (30°-60°)	3602.0	38.7			
FH (60°-80°)	3183.5	34.2			G2/5000
FVH (80°-90°)	85.6	0.9			G1/100
BL (0°-30°)	359.9	3.9	B1/500		
BM (30°-60°)	948.2	10.2	B1/1000		
BH (60°-80°)	586.1	6.3	B2/1000		G2/1000
BVH (80°-90°)	66.4	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°	399.6	399.6	399.6	399.6	399.6	399.6	399.6	399.6	399.6	399.6	399.6
2.5°	477.2	462.8	438.8	444.6	458.6	466.3	461.7	455.5	447.3	445.8	481.4
5°	617.9	590.4	579.1	574.5	557.4	547.3	564.8	562.4	571.7	588.8	623.7
7.5°	720.6	701.2	682.6	680.7	647.7	636.1	659.4	671.8	688.4	688.8	736.1
10°	775.6	759.0	758.6	741.1	738.4	760.5	760.9	770.2	772.2	791.9	782.6
12.5°	835.3	834.2	855.5	855.1	879.9	916.3	898.1	898.1	903.6	879.5	909.0
15°	977.6	990.0	950.1	956.7	956.7	992.3	991.2	998.1	1014.8	1008.6	995.4
17.5°	1125.7	1133.4	1089.2	1048.1	1051.2	1043.5	1071.4	1074.1	1058.2	1130.3	1114.4
20°	1221.0	1251.3	1158.2	1106.7	1116.8	1125.7	1126.8	1110.2	1102.0	1212.9	1191.2
22.5°	1338.9	1313.3	1228.0	1171.0	1186.1	1174.1	1171.8	1184.6	1195.8	1237.7	1273.0
25°	1417.6	1415.6	1313.3	1250.9	1234.2	1230.7	1254.4	1249.3	1276.1	1352.0	1329.9
27.5°	1531.9	1567.6	1386.2	1401.7	1328.4	1251.3	1327.2	1350.1	1398.2	1385.8	1435.0
30°	1753.6	1726.9	1537.3	1533.1	1450.1	1385.4	1438.1	1418.7	1505.2	1502.4	1538.9
32.5°	1934.6	1953.3	1714.9	1670.3	1608.7	1530.7	1495.9	1549.7	1596.2	1672.6	1693.2
35°	2126.1	2121.9	1896.7	1806.7	1704.8	1672.6	1715.6	1738.1	1837.0	1907.1	1858.3
37.5°	2423.8	2390.1	2132.3	1962.2	1885.8	1874.2	1947.8	1915.3	2022.2	2038.9	2066.4
40°	2700.6	2599.0	2347.9	2152.9	2031.6	2075.0	2077.3	2081.6	2138.9	2184.3	2320.3
42.5°	2963.8	2892.5	2566.9	2420.3	2241.6	2199.4	2225.8	2234.7	2379.6	2472.3	2660.7
45°	3323.5	3132.4	2881.6	2731.2	2531.2	2477.3	2458.7	2535.5	2675.4	2886.3	3047.9
47.5°	3627.8	3455.3	3216.1	3018.1	2794.4	2948.3	2842.9	2799.8	2987.8	3249.1	3506.5
50°	3880.1	3690.2	3455.7	3341.3	3305.7	3442.9	3169.2	3174.3	3346.4	3715.0	4010.0
52.5°	4075.5	3872.8	3665.0	3606.9	3806.1	3885.2	3687.5	3657.6	3783.2	4218.9	4573.2
55°	4258.1	4042.9	3882.5	4001.1	4336.8	4345.7	4331.7	4166.2	4317.4	4758.9	5156.2
57.5°	4305.0	4073.2	3966.6	4136.8	4590.7	4943.8	5082.6	4757.7	4911.6	5250.0	5655.5
60°	4063.5	3865.0	3822.4	4053.4	4727.9	5244.2	5606.6	5412.4	5354.7	5644.2	6005.1
62.5°	3568.9	3338.6	3373.1	3694.1	4583.3	5363.2	6020.6	6172.2	5822.5	5957.8	6157.8
65°	2840.5	2620.7	2690.5	3076.6	4129.4	5402.7	6232.3	6543.1	5991.5	6046.6	5941.5
67.5°	2003.3	1803.6	1891.6	2390.9	3435.1	4896.5	6268.7	6370.3	5811.7	5793.5	5350.8
70°	1135.0	1009.8	1105.1	1521.4	2424.6	3900.7	5983.0	5849.3	5489.2	5231.0	4477.1
72.5°	520.6	477.6	523.3	774.5	1395.8	2595.5	4884.5	5005.8	4729.8	4406.9	3406.1
75°	276.8	261.6	281.0	386.9	653.2	1412.1	3470.4	3743.3	3596.4	3342.5	2221.9
77.5°	205.8	194.2	203.5	250.8	348.9	552.4	1971.9	2316.1	2371.9	2138.1	1233.8
80°	157.8	148.5	157.8	189.5	241.5	262.4	843.1	1079.5	1229.6	993.5	490.3
82.5°	117.1	110.9	125.2	142.3	169.8	164.0	299.2	372.5	480.3	328.3	191.1
85°	93.0	85.3	90.7	96.5	108.5	89.9	136.8	153.1	162.0	135.7	70.5
87.5°	36.4	33.7	65.9	51.9	44.2	27.1	41.1	46.5	47.7	45.7	20.5
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°	399.6	399.6	399.6	399.6	399.6	399.6	399.6	399.6	399.6	399.6	399.6
2.5°	485.3	481.4	458.6	465.9	477.9	480.3	485.3	471.4	464.4	490.0	491.1
5°	626.8	605.9	595.0	596.2	588.4	576.4	594.6	606.6	611.3	630.3	637.3
7.5°	736.5	711.3	693.1	672.1	642.7	623.7	655.5	678.7	691.1	730.7	746.2
10°	785.3	765.2	761.3	734.9	734.2	733.8	732.2	724.1	750.8	747.0	757.8
12.5°	886.1	881.9	845.0	834.6	835.7	834.6	802.0	800.4	800.8	836.5	823.7
15°	979.9	980.7	947.0	909.0	874.9	864.4	851.6	845.8	854.3	874.5	862.1
17.5°	1095.8	1099.7	1003.2	943.1	898.1	897.0	866.3	830.3	882.2	894.6	881.1
20°	1170.6	1154.4	1035.7	935.0	922.2	887.3	849.3	799.7	844.6	874.9	883.4
22.5°	1241.6	1213.3	1066.0	949.3	888.1	846.6	809.8	777.6	791.9	825.6	820.2
25°	1289.6	1281.9	1107.8	983.8	886.9	794.6	745.0	724.5	731.8	784.2	779.1
27.5°	1404.4	1320.6	1100.5	992.7	849.7	723.7	698.9	676.8	669.4	726.0	741.5
30°	1481.1	1446.6	1149.7	978.8	802.8	665.6	629.1	624.5	626.8	691.1	695.4
32.5°	1611.4	1521.8	1230.3	925.3	734.6	622.5	580.7	582.6	593.1	640.0	649.7
35°	1747.0	1693.5	1241.2	886.9	679.1	576.8	559.7	546.2	552.0	593.1	595.0
37.5°	1999.0	1814.1	1307.9	827.6	638.4	559.3	526.8	514.8	517.9	541.1	557.8
40°	2220.7	2056.4	1276.8	770.2	588.0	536.1	495.4	486.5	477.2	500.0	510.5
42.5°	2576.2	2229.2	1266.4	707.0	564.4	504.7	476.8	453.1	444.2	463.6	482.6
45°	2931.6	2412.6	1209.4	643.1	531.0	502.4	449.6	427.2	429.5	446.9	466.3
47.5°	3327.8	2658.7	1112.9	581.1	494.6	491.1	422.5	412.8	419.8	439.2	458.6
50°	3796.0	2920.0	1033.0	525.2	468.6	457.4	419.0	407.4	414.0	436.9	455.8
52.5°	4308.1	3206.4	974.9	473.7	439.2	430.7	423.7	412.4	420.2	440.0	459.7
55°	4817.0	3468.1	935.3	438.4	414.0	419.4	433.4	425.2	429.1	443.8	463.6
57.5°	5194.6	3606.1	855.9	400.8	393.4	412.8	434.5	421.0	423.3	443.8	465.2
60°	5414.0	3632.4	725.2	370.2	377.2	399.6	422.5	405.1	403.5	437.2	464.0
62.5°	5389.9	3479.3	575.2	342.3	358.6	379.9	404.3	387.6	391.9	438.0	466.3
65°	5045.7	3166.5	457.4	318.6	336.1	358.2	389.2	382.6	403.1	469.0	499.7
67.5°	4441.0	2709.5	367.5	296.5	315.1	343.4	399.6	417.1	426.0	500.8	532.2
70°	3599.1	2105.2	306.2	277.2	298.5	350.4	429.9	426.4	419.0	485.7	510.5
72.5°	2600.2	1443.1	269.4	258.2	277.9	329.5	430.7	412.0	402.7	443.4	461.3
75°	1626.9	860.9	235.3	234.1	246.5	295.4	411.3	394.6	369.4	389.6	412.8
77.5°	929.1	440.7	198.1	208.5	215.9	256.2	368.2	353.1	330.6	339.2	362.0
80°	354.7	213.2	167.1	185.3	183.3	217.1	312.0	308.6	283.0	285.7	299.6
82.5°	167.1	119.4	138.8	159.3	148.8	172.9	253.5	252.3	229.9	208.2	219.4
85°	62.0	63.6	101.6	121.3	103.5	111.6	183.3	178.3	156.6	132.2	146.1
87.5°	14.0	22.9	50.0	63.2	36.0	34.5	74.0	64.3	62.0	36.8	38.8
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)