

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: P368310

Luminaire Tested: **MSA-SA4A-830-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368310
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-SA4A-830-U-T3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12302 lumens
Efficiency: N/A
Efficacy: 95.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

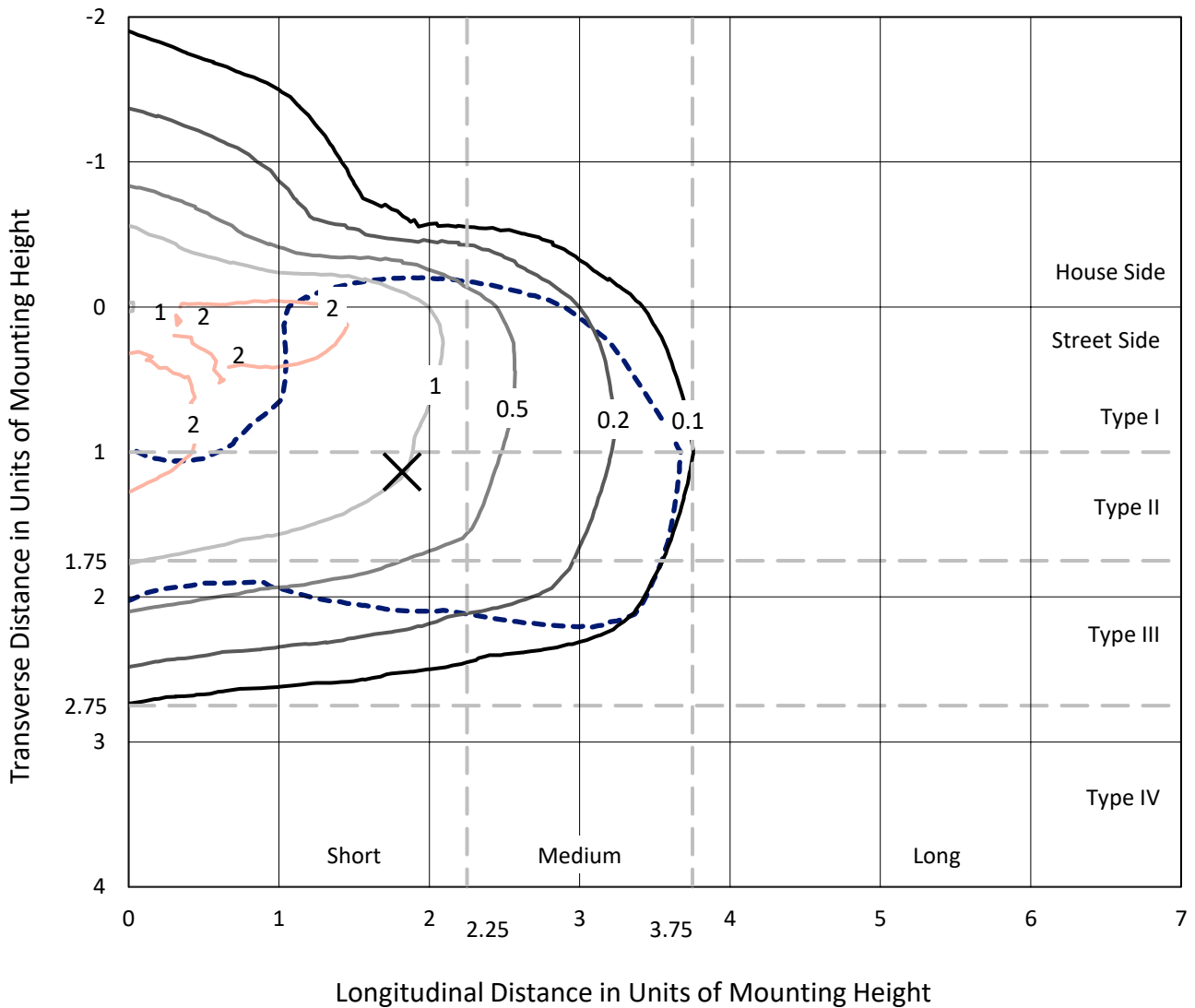
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

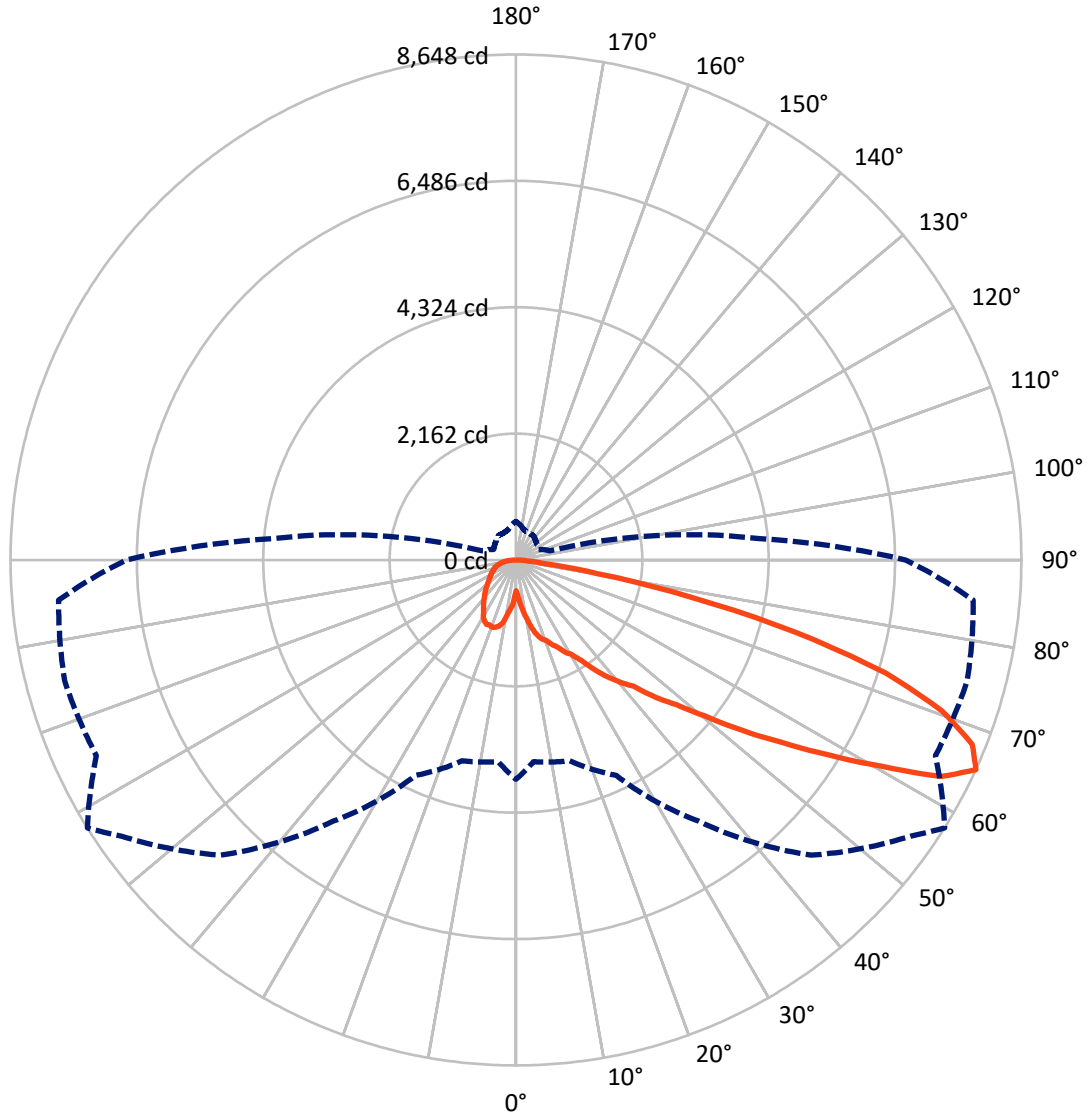
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 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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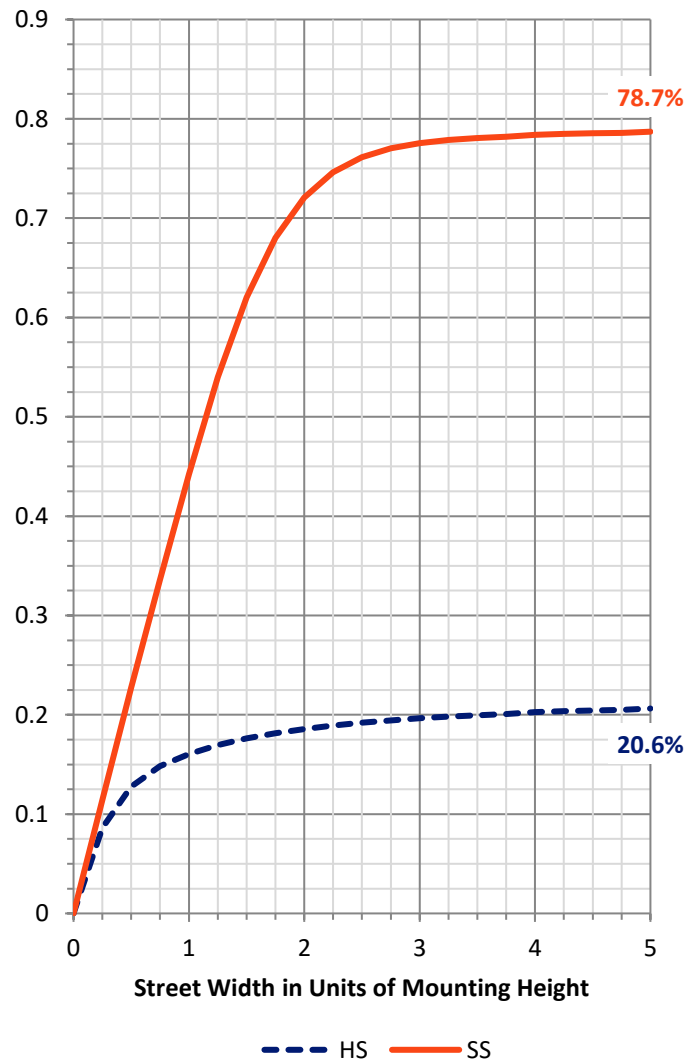
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2591.2	0.0	2591.2
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	9710.8	0.0	9710.8
	% Fixture	78.9	0.0	78.9
Total	Lumens	12302.0	0.0	12302.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.5	0.7
10°-20°	351.1	2.9
20°-30°	673.7	5.5
30°-40°	1112.2	9.0
40°-50°	1848.6	15.0
50°-60°	3053.0	24.8
60°-70°	3424.9	27.8
70°-80°	1557.2	12.7
80°-90°	200.8	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°	12302.0	100.0
0°-180°	12302.0	100.0

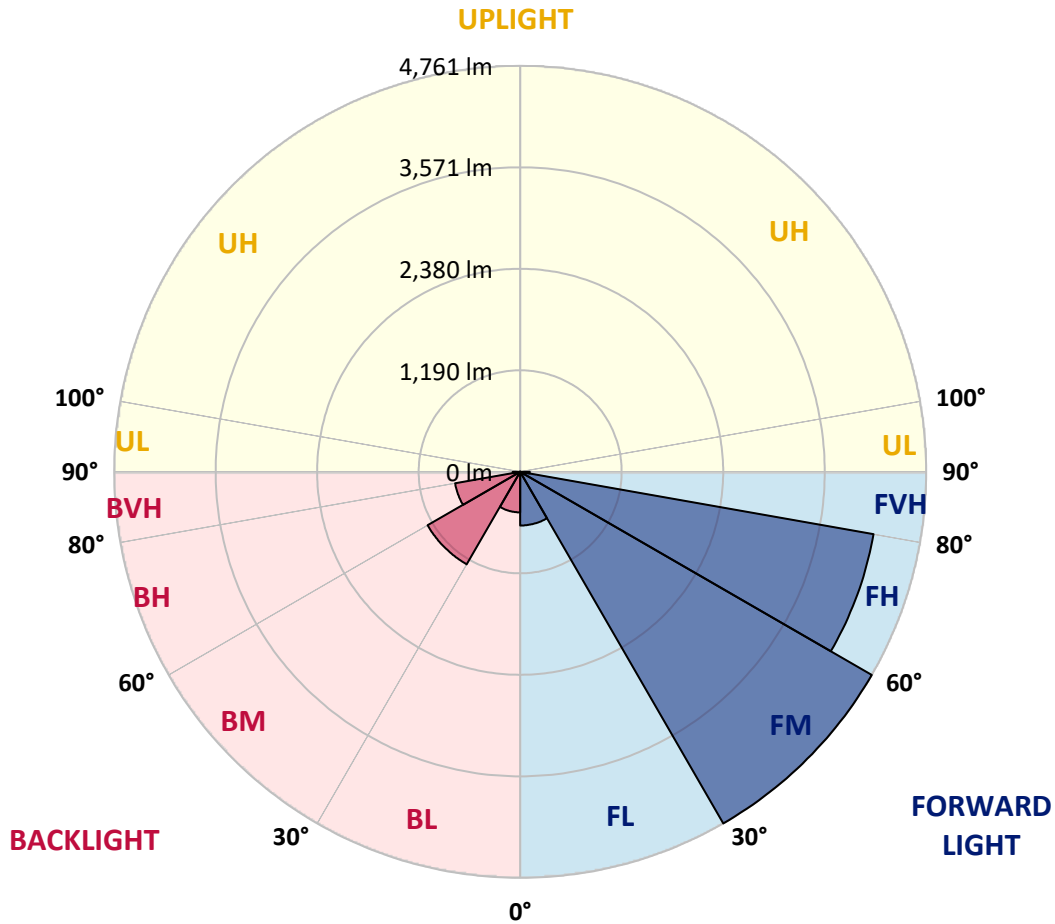


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	629.5	5.1			
FM (30°-60°)	4760.7	38.7			
FH (60°-80°)	4207.5	34.2			G2/5000
FVH (80°-90°)	113.1	0.9			G2/225
BL (0°-30°)	475.7	3.9	B1/500		
BM (30°-60°)	1253.2	10.2	B2/2500		
BH (60°-80°)	774.6	6.3	B2/1000		G2/1000
BVH (80°-90°)	87.7	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°	528.2	528.2	528.2	528.2	528.2	528.2	528.2	528.2	528.2	528.2	528.2
2.5°	630.7	611.7	579.9	587.6	606.1	616.3	610.2	602.0	591.2	589.2	636.3
5°	816.6	780.2	765.4	759.2	736.7	723.4	746.4	743.4	755.7	778.2	824.3
7.5°	952.4	926.8	902.2	899.6	856.1	840.7	871.4	887.8	909.9	910.4	972.9
10°	1025.1	1003.1	1002.6	979.5	976.0	1005.2	1005.7	1018.0	1020.5	1046.6	1034.4
12.5°	1104.0	1102.5	1130.7	1130.2	1162.9	1211.1	1187.0	1187.0	1194.2	1162.4	1201.4
15°	1292.0	1308.4	1255.7	1264.4	1264.4	1311.5	1310.0	1319.2	1341.2	1333.0	1315.6
17.5°	1487.7	1498.0	1439.6	1385.3	1389.4	1379.1	1416.0	1419.6	1398.6	1493.9	1472.9
20°	1613.8	1653.7	1530.8	1462.6	1476.0	1487.7	1489.3	1467.3	1456.5	1603.0	1574.3
22.5°	1769.5	1735.7	1623.0	1547.7	1567.7	1551.8	1548.7	1565.6	1580.5	1635.8	1682.4
25°	1873.5	1871.0	1735.7	1653.2	1631.2	1626.6	1657.8	1651.2	1686.5	1786.9	1757.7
27.5°	2024.6	2071.8	1832.0	1852.5	1755.7	1653.7	1754.2	1784.4	1847.9	1831.5	1896.6
30°	2317.7	2282.3	2031.8	2026.2	1916.6	1831.0	1900.7	1875.1	1989.3	1985.7	2033.9
32.5°	2556.9	2581.5	2266.5	2207.5	2126.1	2023.1	1977.0	2048.2	2109.7	2210.6	2237.8
35°	2810.0	2804.4	2506.7	2387.9	2253.1	2210.6	2267.5	2297.2	2427.8	2520.6	2456.0
37.5°	3203.5	3158.9	2818.2	2593.3	2492.4	2477.0	2574.4	2531.3	2672.7	2694.8	2731.1
40°	3569.3	3435.0	3103.1	2845.4	2685.0	2742.4	2745.5	2751.1	2826.9	2886.9	3066.7
42.5°	3917.1	3822.9	3392.5	3198.9	2962.7	2906.8	2941.7	2953.5	3145.1	3267.5	3516.5
45°	4392.5	4140.0	3808.5	3609.7	3345.4	3274.2	3249.6	3351.0	3536.0	3814.7	4028.3
47.5°	4794.7	4566.7	4250.6	3988.8	3693.2	3896.6	3757.3	3700.4	3948.9	4294.2	4634.4
50°	5128.2	4877.2	4567.2	4416.1	4369.0	4550.3	4188.6	4195.3	4422.8	4910.0	5299.8
52.5°	5386.4	5118.5	4843.9	4767.0	5030.4	5134.9	4873.6	4834.2	5000.1	5576.0	6044.2
55°	5627.7	5343.4	5131.3	5288.1	5731.7	5743.5	5725.1	5506.3	5706.1	6289.6	6814.7
57.5°	5689.7	5383.4	5242.5	5467.4	6067.3	6534.0	6717.4	6288.1	6491.5	6938.7	7474.6
60°	5370.5	5108.2	5051.9	5357.2	6248.6	6931.0	7410.1	7153.4	7077.1	7459.7	7936.7
62.5°	4716.8	4412.5	4458.1	4882.3	6057.6	7088.3	7957.2	8157.5	7695.4	7874.2	8138.6
65°	3754.2	3463.7	3555.9	4066.2	5457.6	7140.6	8236.9	8647.8	7918.8	7991.5	7852.7
67.5°	2647.6	2383.8	2500.1	3159.9	4540.1	6471.5	8285.1	8419.3	7681.1	7657.0	7071.9
70°	1500.0	1334.6	1460.6	2010.8	3204.5	5155.4	7907.5	7730.8	7254.8	6913.6	5917.2
72.5°	688.0	631.2	691.6	1023.6	1844.8	3430.4	6455.6	6616.0	6251.2	5824.5	4501.7
75°	365.8	345.8	371.4	511.3	863.2	1866.3	4586.7	4947.4	4753.2	4417.7	2936.6
77.5°	272.0	256.7	269.0	331.5	461.1	730.0	2606.1	3061.1	3134.8	2825.9	1630.7
80°	208.5	196.2	208.5	250.5	319.2	346.8	1114.3	1426.8	1625.0	1313.1	648.1
82.5°	154.7	146.5	165.5	188.0	224.4	216.7	395.5	492.3	634.8	433.9	252.6
85°	123.0	112.7	119.9	127.6	143.4	118.9	180.8	202.4	214.1	179.3	93.2
87.5°	48.2	44.6	87.1	68.6	58.4	35.9	54.3	61.5	63.0	60.5	27.2
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°	528.2	528.2	528.2	528.2	528.2	528.2	528.2	528.2	528.2	528.2	528.2
2.5°	641.4	636.3	606.1	615.8	631.7	634.8	641.4	623.0	613.7	647.6	649.1
5°	828.4	800.7	786.4	787.9	777.7	761.8	785.9	801.8	807.9	833.0	842.2
7.5°	973.4	940.1	916.0	888.3	849.4	824.3	866.3	897.1	913.4	965.7	986.2
10°	1037.9	1011.3	1006.2	971.3	970.3	969.8	967.8	957.0	992.3	987.2	1001.6
12.5°	1171.1	1165.5	1116.8	1103.0	1104.5	1103.0	1060.0	1057.9	1058.4	1105.6	1088.7
15°	1295.1	1296.1	1251.6	1201.4	1156.3	1142.5	1125.5	1117.9	1129.1	1155.8	1139.4
17.5°	1448.3	1453.4	1325.9	1246.5	1187.0	1185.5	1145.0	1097.4	1166.0	1182.4	1164.5
20°	1547.2	1525.7	1368.9	1235.7	1218.8	1172.7	1122.5	1056.9	1116.3	1156.3	1167.6
22.5°	1640.9	1603.5	1408.9	1254.6	1173.7	1118.9	1070.2	1027.7	1046.6	1091.2	1084.0
25°	1704.5	1694.2	1464.2	1300.2	1172.2	1050.2	984.7	957.5	967.2	1036.4	1029.7
27.5°	1856.1	1745.4	1454.4	1312.0	1123.0	956.5	923.7	894.5	884.8	959.6	980.0
30°	1957.5	1911.9	1519.5	1293.6	1061.0	879.6	831.5	825.3	828.4	913.4	919.1
32.5°	2129.7	2011.3	1626.1	1222.9	970.8	822.8	767.4	770.0	783.8	845.8	858.6
35°	2309.0	2238.3	1640.4	1172.2	897.6	762.3	739.8	721.8	729.5	783.8	786.4
37.5°	2642.0	2397.6	1728.5	1093.8	843.8	739.3	696.2	680.3	684.4	715.2	737.2
40°	2935.0	2717.8	1687.5	1018.0	777.2	708.5	654.7	642.9	630.7	660.9	674.7
42.5°	3404.8	2946.3	1673.7	934.5	745.9	667.0	630.1	598.9	587.1	612.7	637.8
45°	3874.6	3188.6	1598.4	849.9	701.9	664.0	594.3	564.6	567.6	590.7	616.3
47.5°	4398.2	3513.9	1470.8	768.0	653.7	649.1	558.4	545.6	554.8	580.4	606.1
50°	5017.1	3859.2	1365.3	694.2	619.4	604.5	553.8	538.4	547.1	577.4	602.5
52.5°	5693.8	4237.8	1288.5	626.0	580.4	569.2	560.0	545.1	555.3	581.5	607.6
55°	6366.5	4583.6	1236.2	579.4	547.1	554.3	572.8	562.0	567.1	586.6	612.7
57.5°	6865.5	4766.0	1131.2	529.7	520.0	545.6	574.3	556.4	559.4	586.6	614.8
60°	7155.4	4800.9	958.5	489.3	498.5	528.2	558.4	535.4	533.3	577.9	613.2
62.5°	7123.7	4598.5	760.3	452.4	473.9	502.1	534.3	512.3	517.9	578.9	616.3
65°	6668.7	4185.1	604.5	421.1	444.2	473.4	514.4	505.7	532.8	619.9	660.4
67.5°	5869.5	3581.0	485.7	391.9	416.5	453.9	528.2	551.2	563.0	661.9	703.4
70°	4756.8	2782.4	404.7	366.3	394.5	463.1	568.2	563.5	553.8	641.9	674.7
72.5°	3436.6	1907.3	356.1	341.2	367.3	435.5	569.2	544.6	532.3	586.1	609.6
75°	2150.2	1137.8	311.0	309.4	325.8	390.4	543.6	521.5	488.2	514.9	545.6
77.5°	1228.0	582.5	261.8	275.6	285.4	338.6	486.7	466.7	437.0	448.3	478.5
80°	468.8	281.8	220.8	244.9	242.3	286.9	412.4	407.8	374.0	377.6	396.0
82.5°	220.8	157.8	183.4	210.6	196.7	228.5	335.1	333.5	303.8	275.1	290.0
85°	82.0	84.0	134.2	160.4	136.8	147.5	242.3	235.7	207.0	174.7	193.1
87.5°	18.4	30.2	66.1	83.5	47.6	45.6	97.9	85.0	82.0	48.7	51.2
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)