

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: P368043

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

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368043
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
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-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10911 lumens
Efficiency: N/A
Efficacy: 65.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G2

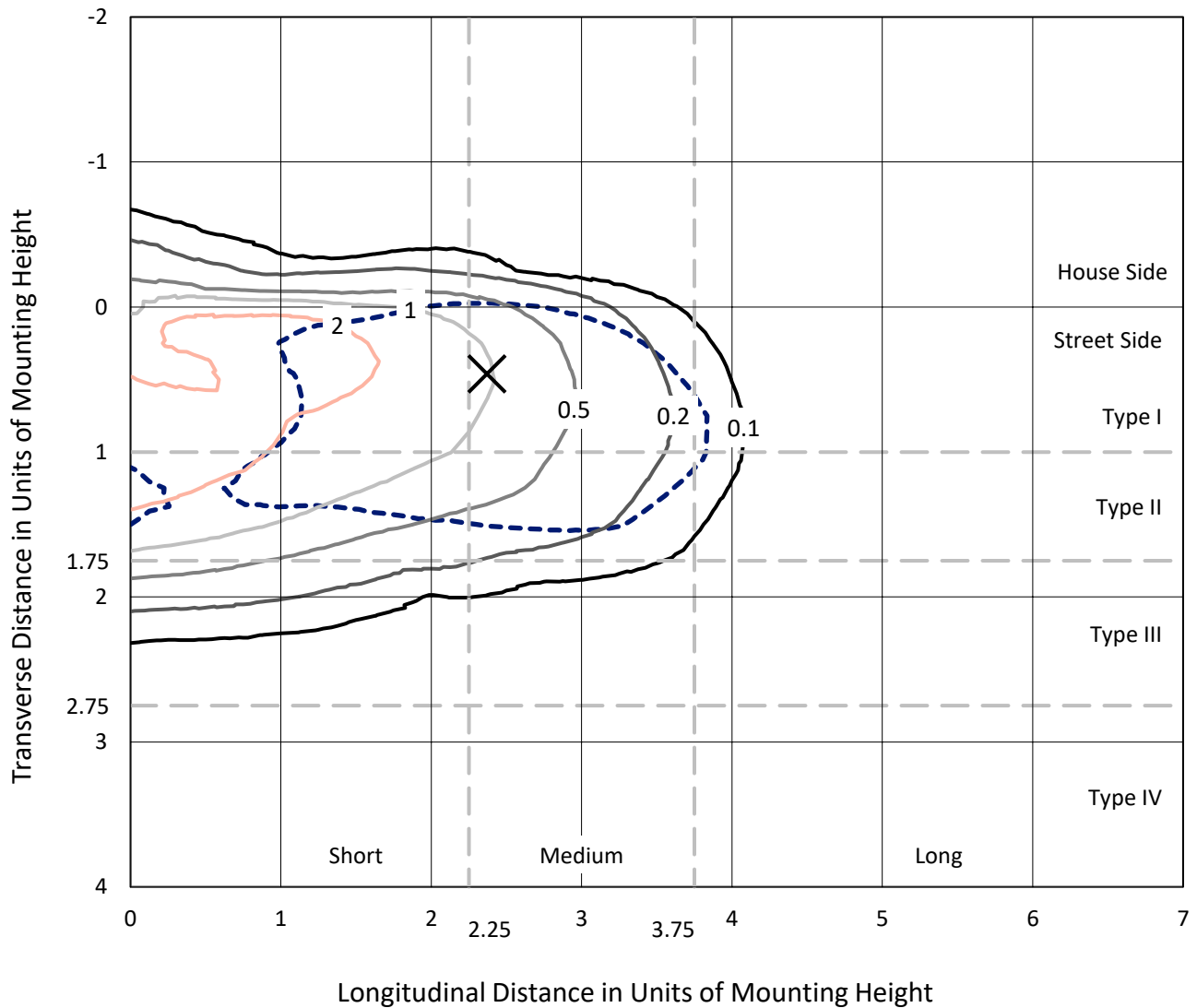
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

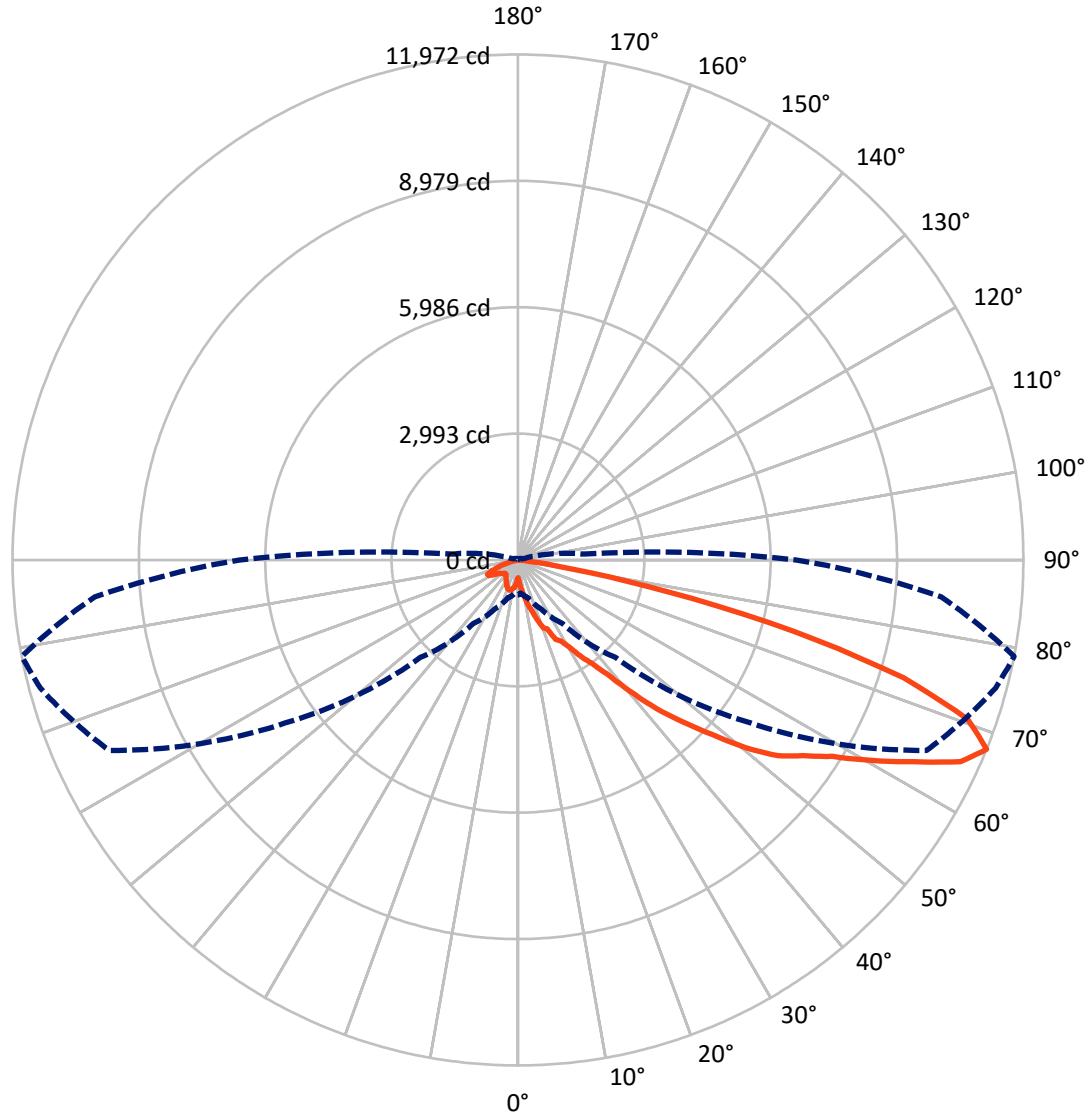
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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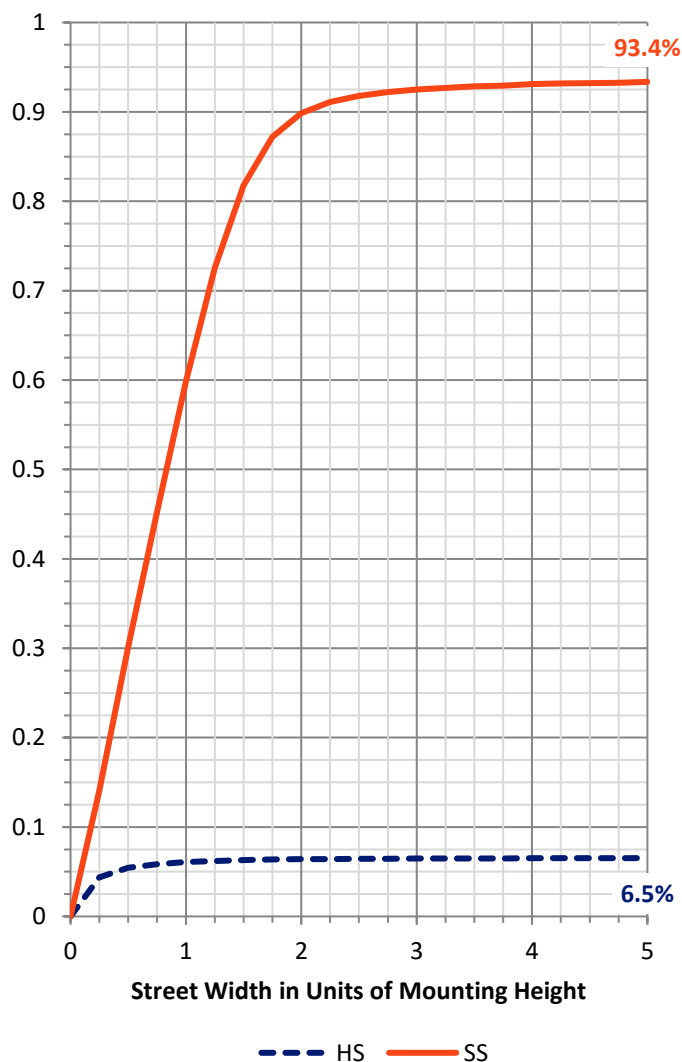
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	716.9	0.0	716.9
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	10194.1	0.0	10194.1
	% Fixture	93.4	0.0	93.4
Total	Lumens	10911.0	0.0	10911.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.1	0.6
10°-20°	243.8	2.2
20°-30°	470.4	4.3
30°-40°	923.9	8.5
40°-50°	1850.9	17.0
50°-60°	2958.4	27.1
60°-70°	2976.6	27.3
70°-80°	1342.8	12.3
80°-90°	83.1	0.8
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°	10911.0	100.0
0°-180°	10911.0	100.0

Coefficient of Utilization



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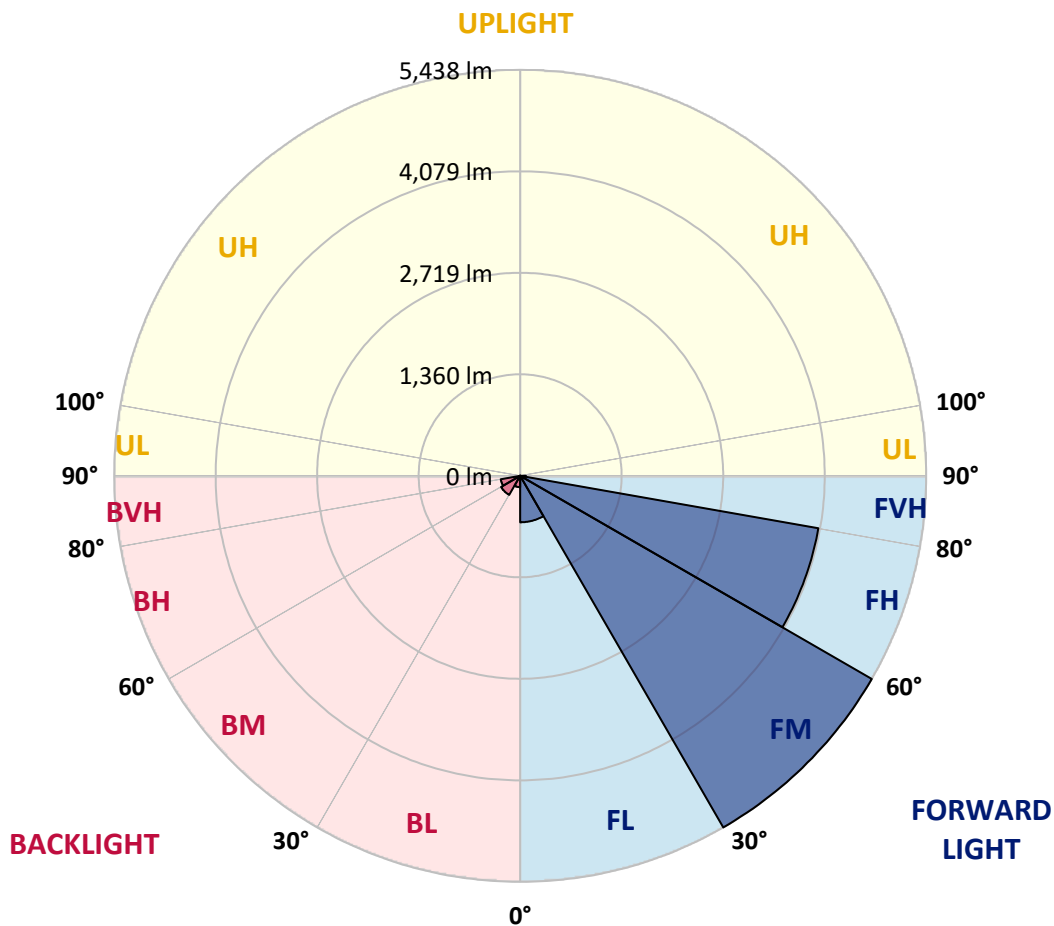
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	622.9	5.7			
FM (30°-60°)	5438.2	49.8			
FH (60°-80°)	4055.2	37.2			G2/5000
FVH (80°-90°)	77.8	0.7			G1/100
BL (0°-30°)	152.4	1.4	B1/500		
BM (30°-60°)	295.0	2.7	B1/1000		
BH (60°-80°)	264.3	2.4	B1/500		G1/500
BVH (80°-90°)	5.3	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	420.4	420.4	420.4	420.4	420.4	420.4	420.4	420.4	420.4	420.4	420.4
2.5°	567.8	547.3	514.3	532.9	531.7	541.3	523.3	503.4	471.6	503.4	505.8
5°	817.4	779.5	755.4	750.6	724.2	699.5	694.1	673.6	658.0	629.7	655.0
7.5°	1018.3	1000.9	958.1	953.3	888.4	852.3	863.7	854.7	795.1	765.7	790.3
10°	1103.7	1073.6	1079.6	1073.6	1046.0	1056.2	1032.7	1005.7	958.1	909.4	848.1
12.5°	1136.8	1132.0	1181.9	1175.9	1240.8	1319.0	1266.7	1221.6	1111.5	1099.5	1015.9
15°	1207.8	1237.8	1230.6	1255.9	1297.4	1430.3	1429.1	1439.9	1323.2	1260.7	1139.8
17.5°	1270.9	1293.2	1257.1	1285.9	1399.0	1479.6	1587.3	1545.2	1558.4	1494.7	1307.6
20°	1243.8	1269.1	1233.0	1215.6	1414.7	1567.4	1711.2	1680.5	1759.9	1720.2	1462.2
22.5°	1412.9	1365.3	1274.5	1218.0	1366.5	1565.6	1755.1	1883.2	1869.4	1771.9	1605.9
25°	1621.6	1592.7	1483.8	1384.0	1397.2	1554.8	1893.4	2081.7	2122.6	2081.1	1742.5
27.5°	1903.1	1896.4	1673.9	1630.6	1501.9	1507.3	1915.1	2331.9	2238.7	2173.7	1901.9
30°	2270.6	2218.2	1954.2	1897.6	1707.6	1614.4	2047.4	2547.8	2479.3	2390.9	2051.6
32.5°	2665.7	2673.5	2336.7	2150.3	1997.5	1886.8	1995.1	2648.9	2777.0	2705.4	2238.7
35°	3114.4	3149.3	2737.3	2518.4	2221.2	2058.2	2220.0	2959.2	3189.0	3000.7	2489.5
37.5°	3805.5	3804.3	3323.1	2887.1	2671.1	2494.3	2594.8	3241.3	3695.4	3430.8	2939.4
40°	4413.6	4281.3	3833.8	3332.8	2995.9	2947.8	2875.0	3627.5	4236.2	4076.8	3339.4
42.5°	4867.7	4774.5	4233.8	3844.0	3426.6	3273.8	3248.0	4193.5	5034.3	4811.2	3910.2
45°	5410.8	5105.3	4707.1	4355.9	3930.6	3886.1	3825.4	4767.9	5963.0	5460.2	4406.4
47.5°	5897.4	5609.9	5233.4	4782.3	4293.9	4660.8	4427.4	5272.5	6638.5	6166.3	4953.7
50°	6307.0	6001.5	5579.9	5236.4	5027.1	5276.1	4887.0	5688.1	7368.0	6985.5	5465.6
52.5°	6515.8	6169.9	5843.9	5631.6	5759.7	5703.8	5510.1	6191.6	7990.0	7703.7	5919.1
55°	6344.3	6006.3	5869.8	5975.0	6364.2	6202.4	6218.0	6971.7	8577.0	8182.4	6313.7
57.5°	5584.1	5275.5	5336.3	5624.4	6370.2	6793.6	7025.2	7729.5	9047.9	8779.1	6922.3
60°	4224.1	3975.7	4200.7	4711.9	5771.1	6675.7	7597.8	8487.4	9721.0	9636.8	7843.8
62.5°	2579.7	2445.0	2763.8	3401.3	4598.9	6097.7	7931.6	9497.9	10441.0	10530.6	8821.2
65°	1316.0	1255.3	1521.1	2081.7	3107.2	5009.1	7690.4	10125.8	11185.0	11515.8	9752.9
67.5°	828.8	789.7	931.7	1269.7	1833.3	3267.2	6733.5	10674.9	11710.7	11972.3	10063.8
70°	574.4	549.7	672.4	871.5	1156.6	1759.9	4999.4	10162.5	11293.8	11305.9	9311.4
72.5°	364.5	345.2	464.9	645.4	853.5	908.8	2866.0	7974.3	9667.5	9556.2	7540.7
75°	236.4	226.8	295.3	472.8	655.6	560.6	1416.5	5380.8	6932.0	6757.5	5008.5
77.5°	169.6	163.6	197.9	315.8	466.7	392.2	635.2	3207.1	3974.5	3593.2	2431.2
80°	102.3	101.6	143.2	197.9	332.0	276.7	293.5	1456.2	1541.0	1256.5	742.8
82.5°	51.1	52.9	80.0	127.5	213.5	181.0	134.1	484.8	413.8	304.9	150.4
85°	12.0	15.0	42.1	87.8	107.1	72.2	63.8	126.9	113.7	86.0	43.9
87.5°	0.0	0.0	13.2	21.1	28.9	12.0	21.7	24.1	30.7	24.1	9.0
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°	420.4	420.4	420.4	420.4	420.4	420.4	420.4	420.4	420.4	420.4	420.4
2.5°	506.4	499.2	455.3	443.9	442.7	430.1	433.1	421.0	421.6	448.7	448.7
5°	645.4	603.3	561.2	523.9	498.6	462.5	449.3	443.9	439.1	449.9	456.5
7.5°	757.9	695.9	620.1	538.9	463.7	412.0	404.8	391.6	386.7	397.6	406.0
10°	807.8	730.8	626.7	508.2	437.9	395.8	360.9	342.2	338.6	338.0	341.0
12.5°	913.6	818.0	634.0	496.8	420.4	374.1	334.4	303.1	274.3	277.3	274.3
15°	998.4	885.4	634.0	469.1	378.3	332.0	262.2	246.6	242.4	249.0	243.6
17.5°	1126.6	952.1	602.1	419.8	342.2	258.0	231.6	230.4	238.8	248.4	242.4
20°	1203.5	961.2	548.5	363.3	280.9	223.7	214.1	204.5	216.5	224.3	221.3
22.5°	1283.5	961.8	495.0	333.2	226.2	203.9	188.3	180.4	182.2	189.5	190.7
25°	1317.8	938.3	445.1	293.5	205.1	182.2	166.0	157.6	154.6	158.2	157.0
27.5°	1411.1	893.2	391.0	250.2	194.9	161.8	146.8	136.5	127.5	133.5	134.7
30°	1424.3	878.8	361.5	222.5	181.6	143.2	129.9	119.1	112.5	120.9	120.9
32.5°	1466.4	799.4	346.4	211.1	167.8	132.3	114.3	106.5	105.3	110.7	111.3
35°	1531.3	764.5	324.2	202.1	155.2	119.7	102.9	99.2	98.0	102.3	102.3
37.5°	1751.5	721.2	299.5	194.3	144.4	113.1	99.8	93.8	94.4	98.0	100.4
40°	1897.6	726.6	262.8	184.7	131.7	107.1	93.8	89.6	89.0	90.8	92.6
42.5°	2168.9	730.8	246.6	174.4	122.1	99.8	87.8	84.8	82.4	84.2	86.0
45°	2472.1	753.0	238.2	166.0	116.7	95.6	82.4	80.6	75.2	76.4	78.8
47.5°	2764.4	834.2	228.0	154.0	111.9	93.2	77.0	72.8	69.2	68.6	71.0
50°	3096.4	913.0	216.5	140.7	107.1	89.6	71.6	65.0	62.6	62.6	64.4
52.5°	3393.5	988.2	205.7	131.7	103.5	83.0	66.8	60.1	58.3	58.3	60.7
55°	3706.3	1067.0	196.1	123.3	98.6	76.4	62.6	56.5	55.9	54.7	56.5
57.5°	4258.4	1239.0	184.1	116.1	92.0	71.0	58.9	52.9	51.7	49.9	51.7
60°	5062.6	1503.1	168.4	108.9	84.2	67.4	55.9	48.7	46.9	43.9	44.5
62.5°	5848.7	1716.6	150.4	99.8	77.0	63.8	51.1	43.9	40.9	37.3	37.9
65°	6522.4	1800.8	131.1	89.0	69.8	55.3	44.5	38.5	34.3	29.5	28.9
67.5°	6601.8	1590.3	112.5	78.8	62.6	46.9	37.9	34.3	27.7	23.5	22.3
70°	5941.3	1184.9	93.8	69.8	54.1	39.7	32.5	30.1	25.9	22.3	20.5
72.5°	4731.2	874.5	78.8	62.0	47.5	33.7	27.7	28.3	25.9	21.7	19.2
75°	3128.9	500.4	64.4	51.7	39.7	27.1	25.3	25.3	24.7	20.5	18.0
77.5°	1505.5	215.9	49.3	40.9	31.9	20.5	22.9	22.9	23.5	18.6	15.0
80°	427.0	65.0	30.7	27.7	23.5	13.8	18.0	17.4	15.6	10.8	6.6
82.5°	76.4	25.3	13.8	14.4	13.2	5.4	10.2	9.6	7.8	4.2	0.6
85°	21.1	9.6	7.8	8.4	6.6	1.8	4.2	5.4	4.2	2.4	0.0
87.5°	5.4	4.2	5.4	6.0	4.8	0.6	1.8	0.6	1.8	0.6	0.0
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)