

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: P366860

Luminaire Tested: **MSA-SA1B-830-U-T4FT**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366860
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-SA1B-830-U-T4FT
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) 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: 4034 lumens
Efficiency: N/A
Efficacy: 91.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

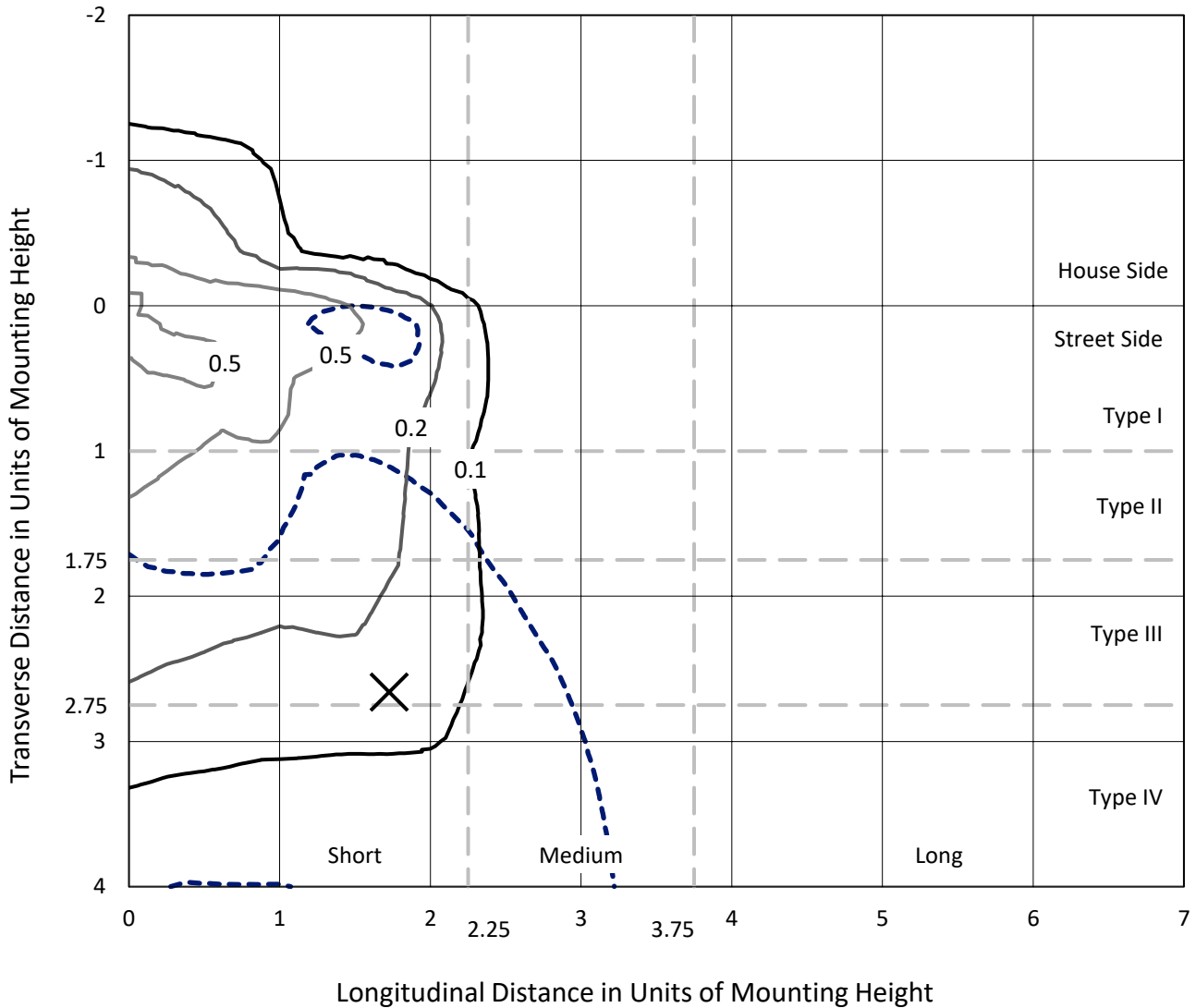
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

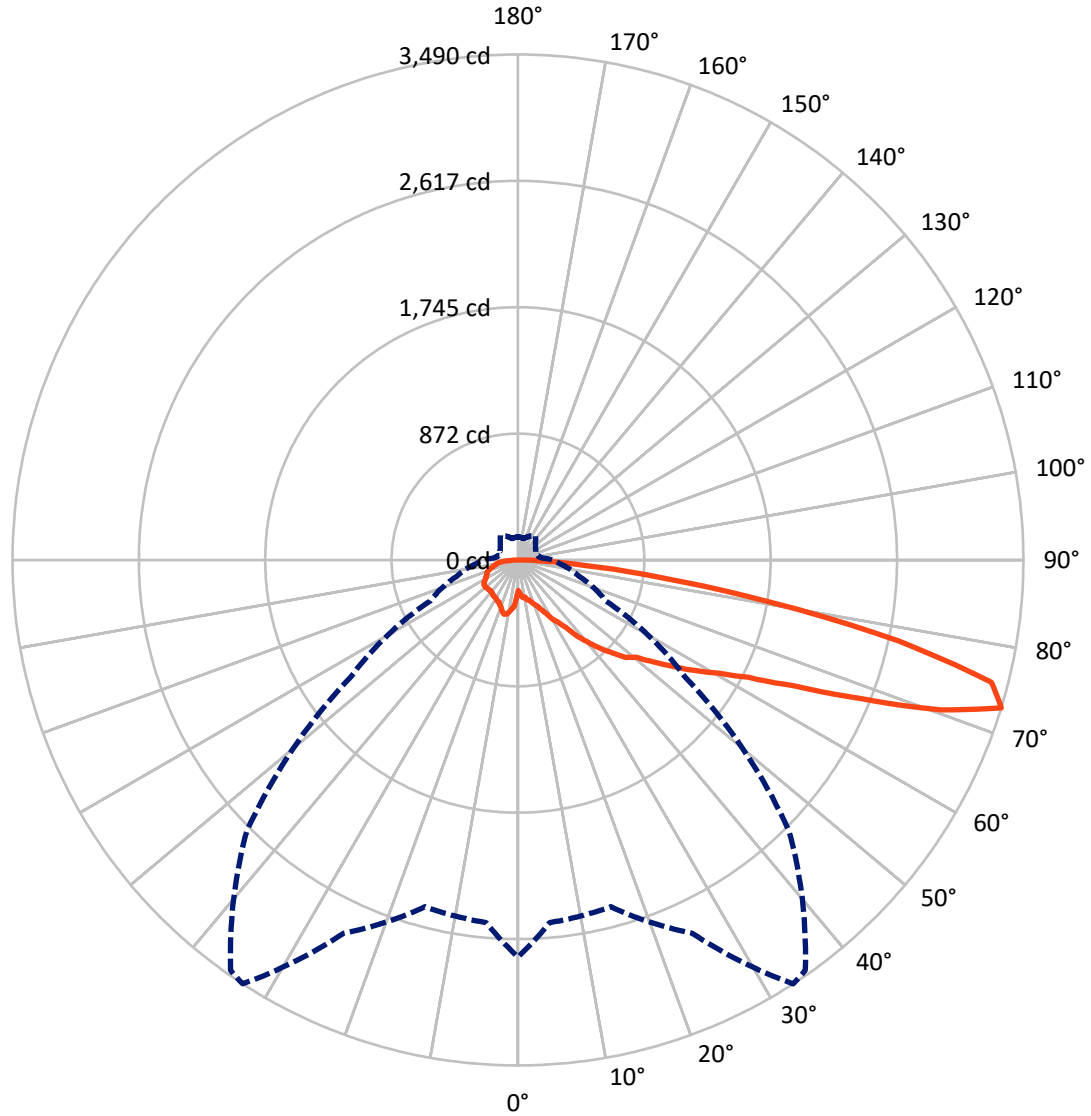
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 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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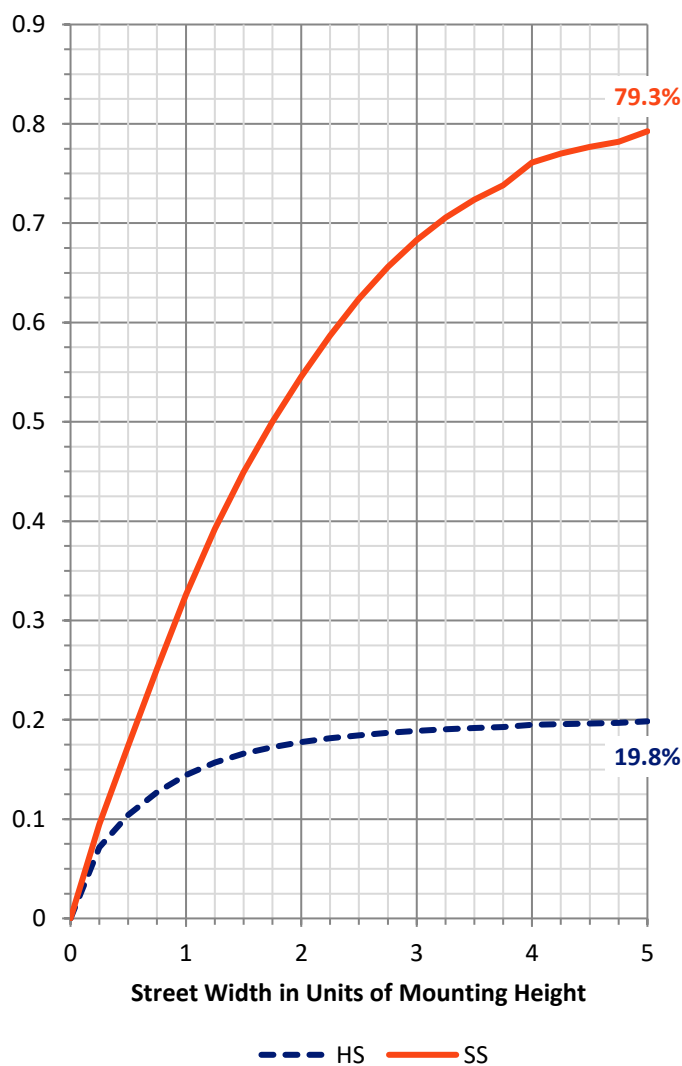
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	816.1	0.0	816.1
	% Fixture	20.2	0.0	20.2
Street Side	Lumens	3217.9	0.0	3217.9
	% Fixture	79.8	0.0	79.8
Total	Lumens	4034.0	0.0	4034.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.1	0.7
10°-20°	107.5	2.7
20°-30°	196.0	4.9
30°-40°	331.6	8.2
40°-50°	551.6	13.7
50°-60°	809.6	20.1
60°-70°	1035.6	25.7
70°-80°	842.6	20.9
80°-90°	130.5	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°	4034.0	100.0
0°-180°	4034.0	100.0

Coefficient of Utilization

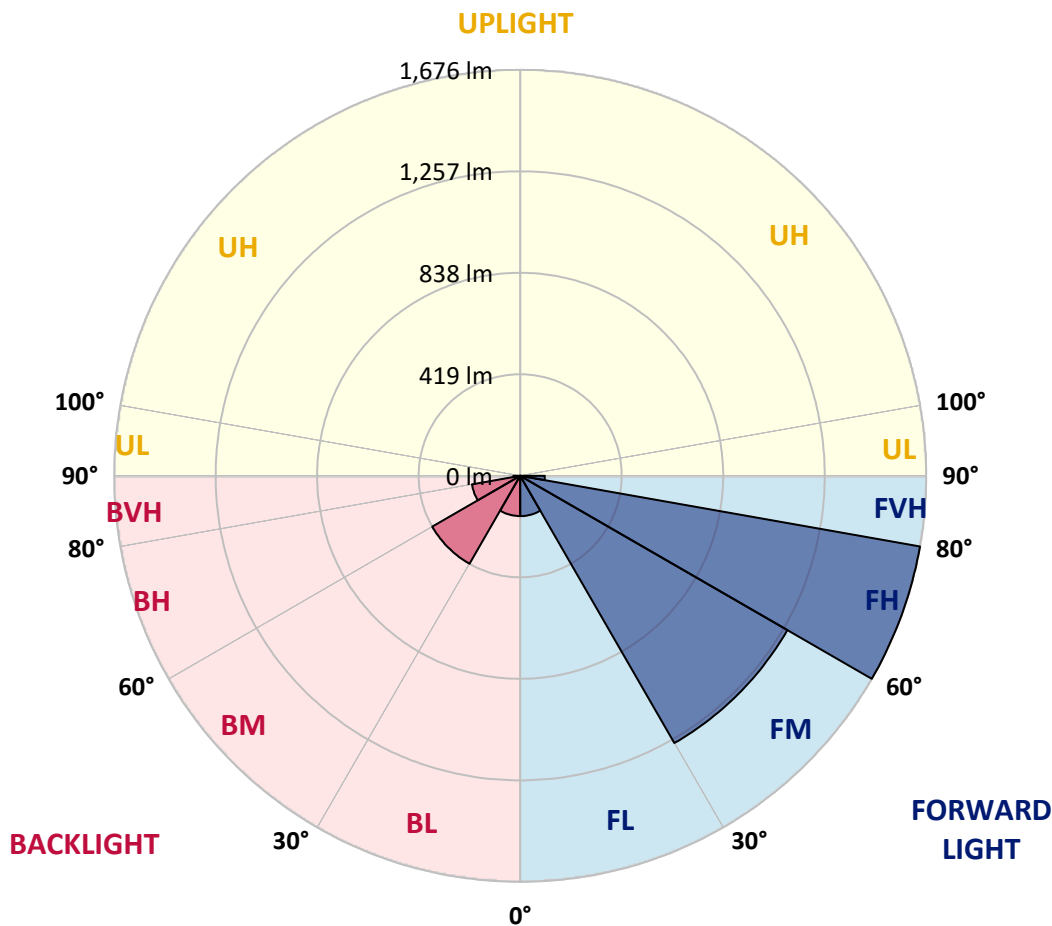


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	166.5	4.1			
FM (30°-60°)	1273.6	31.6			
FH (60°-80°)	1676.0	41.5			G1/1800
FVH (80°-90°)	101.8	2.5			G2/225
BL (0°-30°)	166.1	4.1	B1/500		
BM (30°-60°)	419.1	10.4	B1/1000		
BH (60°-80°)	202.2	5.0	B1/500		G1/500
BVH (80°-90°)	28.6	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-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	211.5	211.5	211.5	211.5	211.5	211.5	211.5	211.5	211.5	211.5	211.5
2.5°	239.8	232.3	219.9	219.6	226.4	227.9	232.4	232.8	234.5	231.8	250.9
5°	264.6	256.5	251.7	253.4	250.2	254.0	254.0	265.1	279.8	296.9	321.1
7.5°	270.4	264.6	259.1	263.2	263.9	260.2	263.7	289.7	316.3	333.4	372.2
10°	258.7	252.9	257.0	258.4	258.2	266.6	284.8	305.6	335.2	366.7	387.6
12.5°	256.5	260.7	262.7	265.1	281.0	283.5	311.1	332.5	362.3	389.9	444.3
15°	288.8	294.4	282.0	281.1	286.3	288.7	317.3	338.9	382.4	428.7	477.6
17.5°	334.9	336.9	314.6	303.2	307.1	308.9	321.5	348.6	375.4	461.0	522.0
20°	379.4	380.7	338.9	313.4	327.0	329.0	340.7	356.3	377.4	479.1	551.9
22.5°	426.1	417.5	371.7	339.5	347.4	347.9	354.8	363.3	393.3	476.3	588.4
25°	477.1	471.8	414.0	383.2	382.9	376.0	376.4	388.6	410.2	506.7	612.3
27.5°	544.9	545.6	461.7	445.1	419.2	414.7	392.1	414.9	439.5	507.1	664.0
30°	632.7	616.5	528.1	501.4	475.8	466.2	435.6	455.0	465.7	536.0	720.3
32.5°	704.2	699.5	597.4	556.9	515.1	526.1	492.3	475.3	494.5	585.9	805.4
35°	772.6	757.2	670.7	618.0	574.0	567.3	545.4	548.2	559.9	649.0	916.7
37.5°	874.7	866.4	774.5	690.1	669.6	642.3	628.4	637.3	628.1	729.8	1083.6
40°	988.9	940.3	861.2	786.0	747.5	728.3	733.1	724.8	717.8	820.5	1233.2
42.5°	1098.1	1054.0	918.7	884.9	834.7	842.8	816.2	822.0	841.9	949.2	1371.6
45°	1217.1	1121.6	979.8	950.0	914.1	924.3	945.5	939.2	971.8	1101.0	1501.9
47.5°	1276.5	1185.7	1054.8	1006.3	1005.8	984.5	1113.9	1127.9	1076.9	1213.4	1634.3
50°	1333.8	1244.4	1110.5	1077.7	1054.0	1099.5	1275.4	1243.1	1171.9	1342.5	1779.9
52.5°	1413.4	1311.5	1174.4	1139.5	1168.9	1211.1	1404.2	1397.9	1265.1	1475.2	1906.4
55°	1474.2	1371.2	1270.7	1238.2	1294.4	1335.8	1535.4	1497.1	1345.0	1572.6	1986.6
57.5°	1580.6	1475.0	1412.7	1340.6	1441.7	1441.0	1661.9	1632.3	1430.3	1652.6	2018.9
60°	1749.8	1625.8	1560.7	1477.5	1585.8	1624.4	1806.5	1721.2	1490.7	1703.1	1960.6
62.5°	1987.3	1840.0	1734.4	1652.1	1784.1	1854.0	1985.1	1785.9	1494.6	1688.7	1807.5
65°	2280.9	2101.9	1963.5	1876.5	2094.4	2194.3	2201.0	1825.9	1459.1	1539.9	1485.5
67.5°	2567.4	2366.1	2221.7	2238.3	2556.4	2603.8	2434.9	1859.4	1268.5	1236.5	1031.5
70°	2756.0	2537.8	2441.6	2617.3	3100.6	3052.1	2624.5	1771.2	998.9	801.6	580.9
72.5°	2741.8	2513.4	2478.8	2842.6	3489.9	3459.6	2647.6	1408.6	669.1	438.3	289.7
75°	2233.8	2056.2	2134.9	2690.9	3377.7	3376.2	2298.7	871.9	343.2	225.1	183.1
77.5°	1235.0	1166.1	1397.2	2037.5	2689.4	2703.2	1553.2	395.4	185.1	159.5	137.9
80°	432.6	426.2	605.5	1099.5	1769.2	1772.5	722.3	180.9	134.5	120.7	101.2
82.5°	158.1	156.8	251.0	510.7	974.1	972.0	273.9	112.6	99.7	85.3	66.8
85°	63.1	61.8	114.8	226.8	447.5	440.3	106.4	63.9	65.3	50.9	32.8
87.5°	17.4	18.1	39.0	71.0	137.1	127.0	26.8	21.6	26.4	20.8	10.4
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°	211.5	211.5	211.5	211.5	211.5	211.5	211.5	211.5	211.5	211.5	211.5
2.5°	254.2	255.9	239.3	245.2	252.7	256.7	258.7	250.2	253.0	265.1	264.6
5°	326.2	319.5	313.1	319.6	315.3	309.1	319.1	318.6	325.2	331.7	333.2
7.5°	379.9	371.2	368.2	353.4	338.7	323.8	336.7	344.7	346.4	362.6	369.5
10°	399.3	395.9	397.1	377.7	375.9	377.4	365.5	352.6	360.5	353.8	358.8
12.5°	444.1	452.5	431.8	418.5	417.4	408.2	384.4	376.0	367.2	376.4	371.7
15°	480.1	495.7	473.4	450.2	423.9	409.7	389.4	376.7	370.8	372.9	367.2
17.5°	532.8	547.4	490.8	455.2	428.1	407.2	376.2	349.1	363.5	364.7	358.1
20°	567.8	568.8	496.7	442.8	418.4	382.1	351.9	328.2	344.7	361.6	369.0
22.5°	601.9	594.4	503.9	432.9	383.1	347.9	333.2	331.7	344.1	358.3	360.0
25°	627.6	628.7	508.1	429.2	362.3	314.4	314.4	325.3	336.2	370.0	368.3
27.5°	689.6	644.0	491.8	412.3	333.5	294.9	314.6	329.2	334.4	371.0	374.7
30°	734.8	705.0	495.2	383.4	304.4	285.7	301.9	320.1	334.5	376.9	375.5
32.5°	810.6	730.5	503.0	342.7	282.6	282.1	296.5	315.8	333.0	370.5	372.5
35°	894.5	805.4	481.1	311.8	277.5	280.1	298.7	306.4	326.7	368.0	369.8
37.5°	1049.6	844.6	467.2	287.8	274.1	281.8	288.8	300.7	321.1	355.4	367.5
40°	1140.6	925.3	415.7	273.9	267.1	280.5	284.0	294.0	305.1	340.4	348.1
42.5°	1260.5	950.7	371.7	258.6	263.6	275.0	285.5	288.0	295.4	316.6	330.7
45°	1360.4	969.8	325.0	246.2	251.7	287.2	287.8	286.7	285.3	293.2	304.7
47.5°	1463.8	1021.0	282.0	232.4	247.2	297.2	289.0	278.3	272.8	273.8	284.5
50°	1577.9	1058.1	251.5	221.2	248.2	297.2	294.7	269.8	258.7	255.9	267.1
52.5°	1678.3	1062.5	228.4	212.2	244.0	287.0	298.5	264.4	245.8	239.0	249.5
55°	1733.1	1007.4	211.7	204.0	233.3	277.8	296.5	261.4	230.3	225.1	234.5
57.5°	1731.9	916.1	197.5	192.6	221.1	264.9	285.3	245.0	220.7	217.7	226.9
60°	1669.5	809.0	186.6	183.2	208.5	246.2	265.2	234.3	211.5	210.0	220.1
62.5°	1527.9	698.3	176.0	173.4	196.8	232.9	255.7	222.4	202.0	201.8	211.4
65°	1251.3	560.6	166.2	165.5	185.9	219.9	246.7	212.4	192.1	195.5	205.2
67.5°	862.2	393.9	155.6	157.6	175.9	207.3	239.8	205.7	181.7	188.6	197.3
70°	473.1	243.7	143.9	147.9	163.2	192.8	229.1	194.8	168.2	178.7	184.8
72.5°	240.6	162.5	129.4	135.7	147.6	171.4	209.0	179.1	153.6	157.6	160.8
75°	161.7	122.3	113.1	120.2	128.7	150.9	185.4	164.3	139.7	139.2	142.7
77.5°	122.2	95.6	96.1	104.1	109.6	132.7	166.7	152.0	128.0	126.8	132.0
80°	89.4	72.5	77.3	85.7	90.7	119.2	154.5	138.2	112.1	107.4	111.8
82.5°	59.2	51.4	57.2	65.6	69.6	99.6	140.2	117.3	91.4	79.5	80.2
85°	27.9	26.9	34.1	38.2	43.3	61.8	104.9	81.2	58.2	48.2	50.4
87.5°	6.4	8.5	11.2	11.0	12.9	16.6	32.6	22.8	16.9	11.5	7.7
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)