

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: P367653

Luminaire Tested: **MSA-SA2D-830-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367653
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-830-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8080 lumens
Efficiency: N/A
Efficacy: 62.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

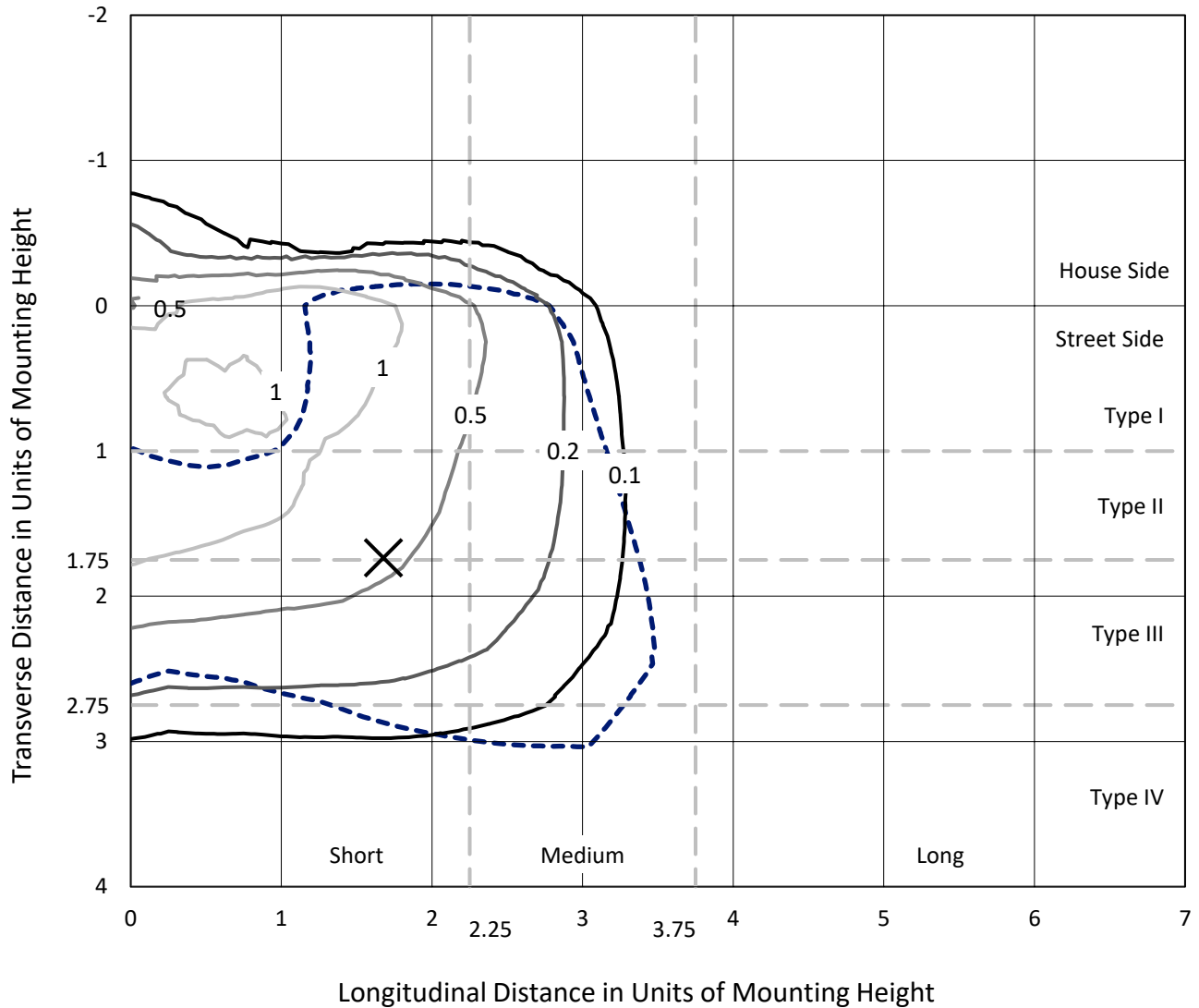
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

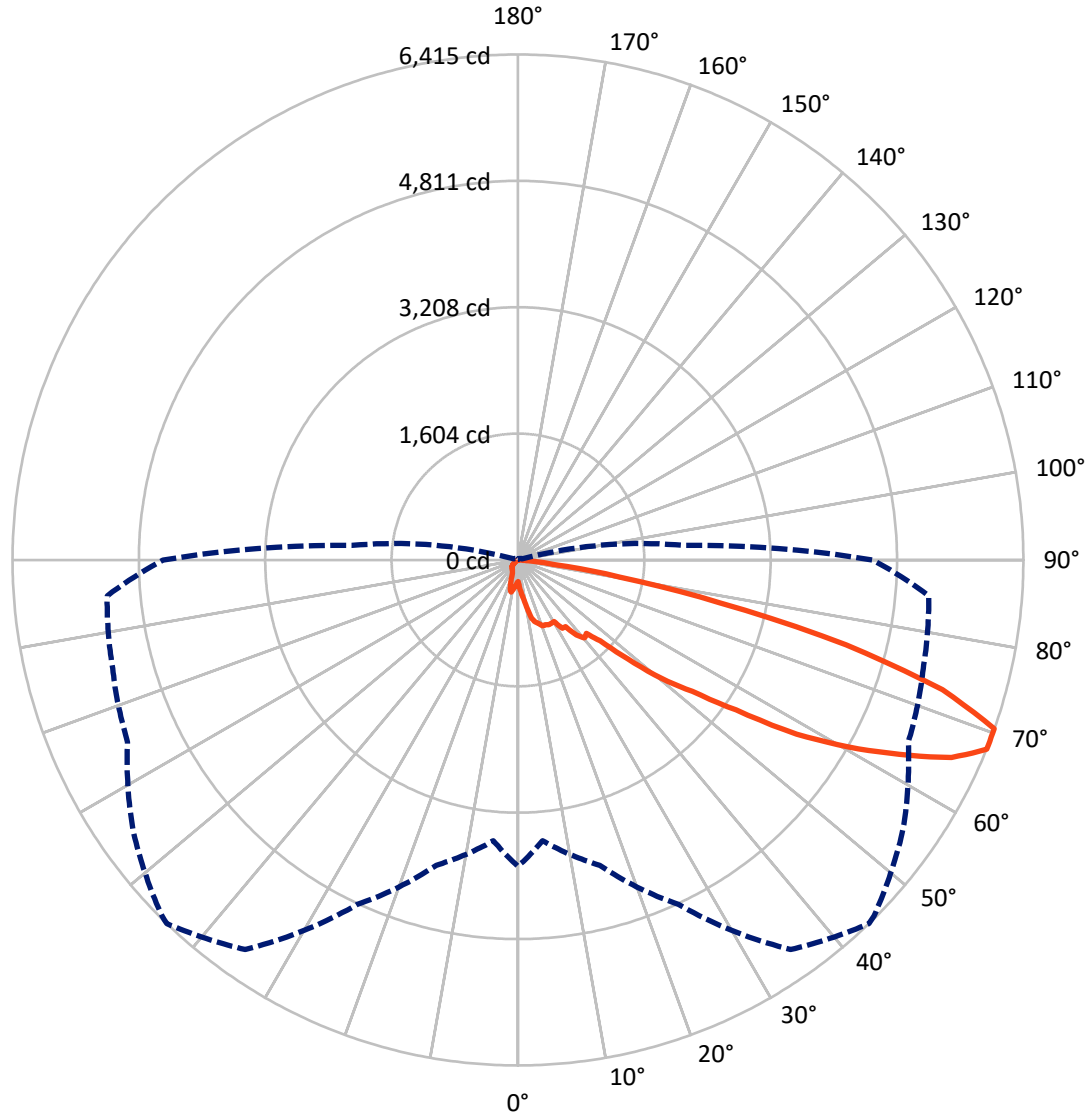
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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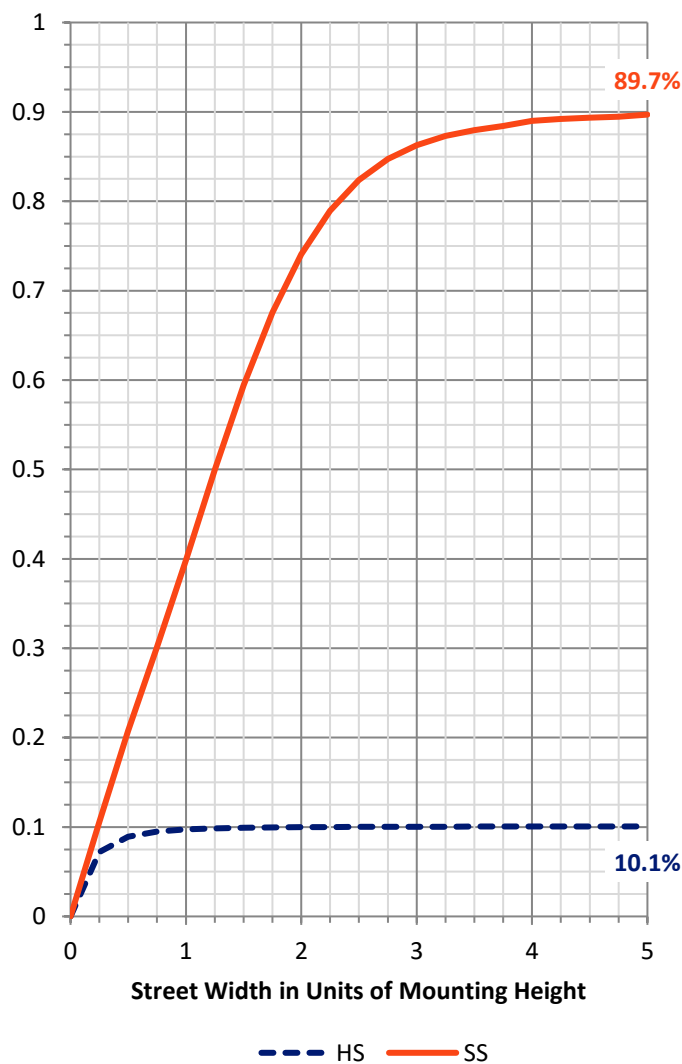
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	820.8	0.0	820.8
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	7259.2	0.0	7259.2
	% Fixture	89.8	0.0	89.8
Total	Lumens	8080.0	0.0	8080.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.3	0.5
10°-20°	168.9	2.1
20°-30°	299.3	3.7
30°-40°	486.4	6.0
40°-50°	973.3	12.0
50°-60°	1996.8	24.7
60°-70°	2743.1	33.9
70°-80°	1289.3	16.0
80°-90°	82.6	1.0
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°	8080.0	100.0
0°-180°	8080.0	100.0

Coefficient of Utilization

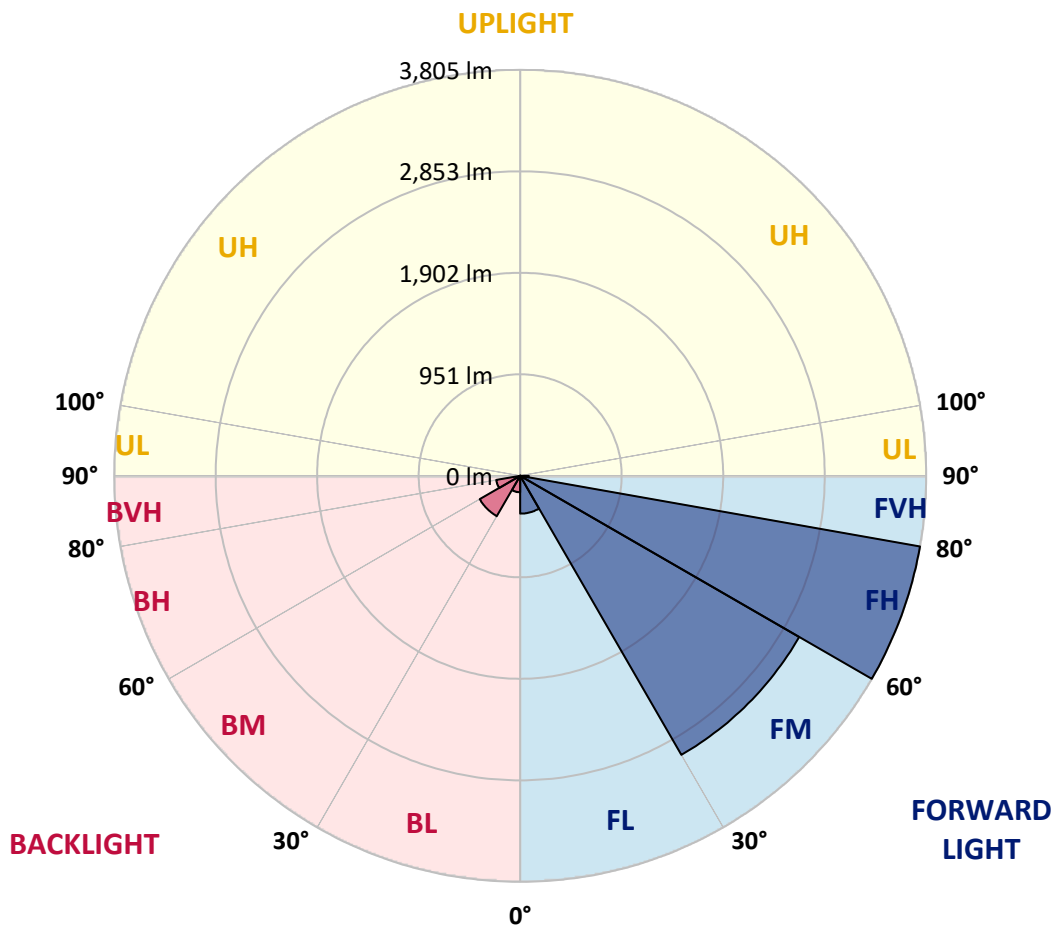


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	354.4	4.4			
FM (30°-60°)	3019.4	37.4			
FH (60°-80°)	3804.6	47.1			G2/5000
FVH (80°-90°)	80.9	1.0			G1/100
BL (0°-30°)	154.1	1.9	B1/500		
BM (30°-60°)	437.2	5.4	B1/1000		
BH (60°-80°)	227.8	2.8	B1/500		G1/500
BVH (80°-90°)	1.7	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	272.2	272.2	272.2	272.2	272.2	272.2	272.2	272.2	272.2	272.2	272.2
2.5°	346.2	335.1	319.0	322.6	324.4	329.3	329.7	323.5	305.6	300.7	322.6
5°	485.2	458.0	453.1	442.9	422.4	411.2	408.6	419.7	405.5	401.0	406.8
7.5°	619.8	596.6	571.2	557.4	514.6	488.3	487.0	491.4	494.1	478.5	486.5
10°	709.3	683.9	678.6	646.0	609.1	602.8	600.2	583.2	569.4	557.8	519.1
12.5°	790.4	790.0	799.8	753.0	747.2	753.4	751.2	690.6	676.8	628.2	617.1
15°	898.2	925.0	882.6	843.4	793.5	814.9	809.1	770.4	761.0	728.0	680.4
17.5°	1010.1	1017.2	946.3	886.2	873.3	845.2	851.0	837.2	790.0	816.2	769.0
20°	1012.7	1028.3	952.6	853.2	892.9	891.5	892.0	878.6	816.2	877.7	834.5
22.5°	1050.2	1011.8	941.4	878.2	885.3	892.0	899.1	882.6	869.3	884.4	892.4
25°	1035.0	1019.9	952.1	910.3	903.6	908.9	910.7	931.6	923.2	959.7	939.7
27.5°	1074.2	1052.4	931.2	938.8	915.2	908.9	898.2	968.2	993.1	964.2	1017.6
30°	1141.5	1138.4	967.3	978.4	960.2	905.4	933.9	1025.2	1056.4	1038.6	1103.6
32.5°	1246.6	1257.3	1072.9	1000.7	1010.1	1034.6	1023.9	1025.2	1104.1	1143.7	1195.4
35°	1395.9	1390.1	1175.8	1085.4	1036.3	1040.4	1055.5	1128.1	1230.2	1227.5	1282.3
37.5°	1689.1	1625.8	1358.0	1171.8	1186.5	1206.5	1195.4	1293.0	1302.8	1306.4	1437.3
40°	2121.3	2037.1	1645.4	1354.0	1212.3	1301.0	1295.7	1319.7	1385.2	1409.7	1600.9
42.5°	2690.7	2577.5	2151.1	1689.1	1337.1	1276.1	1309.0	1354.5	1574.6	1644.5	1853.9
45°	3319.8	3090.8	2655.5	2166.7	1649.9	1460.5	1485.5	1570.1	1875.3	1991.2	2222.4
47.5°	3727.5	3526.1	3154.9	2590.0	1976.0	1876.7	1878.9	1897.2	2228.6	2443.4	2753.5
50°	4081.7	3867.4	3523.0	3032.4	2553.0	2365.0	2322.2	2238.0	2678.6	2972.3	3316.2
52.5°	4581.6	4331.2	3891.0	3551.5	3211.1	2768.2	2753.1	2781.6	3209.3	3518.1	3893.2
55°	5032.5	4728.2	4308.0	4094.2	3961.4	3360.8	3373.7	3421.4	3890.5	4054.1	4406.5
57.5°	5231.6	4901.9	4685.9	4589.6	4518.8	4170.3	4126.7	4098.2	4427.9	4490.3	4944.3
60°	5362.2	5048.5	4950.5	4972.8	5187.5	4817.7	4778.1	4612.3	4872.5	4923.8	5426.4
62.5°	5279.8	4993.7	5014.7	5200.5	5677.2	5433.9	5319.4	5042.3	5236.1	5277.5	5772.5
65°	4760.7	4462.6	4731.7	5181.3	6050.6	6044.8	5991.8	5439.3	5437.5	5490.5	5799.3
67.5°	3888.8	3576.0	4011.3	4822.2	6035.0	6415.0	6390.1	5965.9	5466.5	5324.8	5233.4
70°	2703.6	2432.3	2925.9	3982.3	5497.2	6412.4	6372.3	6319.7	5237.4	4583.4	4057.6
72.5°	1404.8	1255.6	1715.4	2744.1	4382.0	5634.0	5766.3	5679.9	4472.0	3330.0	2389.5
75°	477.2	428.2	707.5	1456.5	2913.0	4302.2	4457.3	4369.5	3037.3	1786.7	945.0
77.5°	184.9	172.0	253.5	591.2	1461.4	2621.6	2790.0	2700.5	1628.9	654.5	222.3
80°	105.1	101.6	139.9	266.4	644.3	1304.1	1422.6	1290.3	587.2	220.5	57.9
82.5°	44.6	45.9	78.0	143.9	323.9	460.3	513.3	468.3	245.9	151.0	21.4
85°	9.8	12.0	37.0	80.2	135.9	131.4	137.7	152.8	151.0	110.9	9.4
87.5°	0.0	0.0	11.6	21.8	32.5	21.4	16.9	29.9	46.3	44.6	4.0
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°	272.2	272.2	272.2	272.2	272.2	272.2	272.2	272.2	272.2	272.2	272.2
2.5°	326.6	322.1	294.1	292.3	294.1	289.2	288.7	278.5	279.4	302.5	304.3
5°	406.8	384.5	360.5	352.9	345.7	329.7	338.6	338.6	338.6	353.3	357.8
7.5°	479.4	449.6	415.7	387.2	359.6	339.5	353.3	363.1	368.9	388.1	397.0
10°	512.4	483.0	452.7	412.1	390.7	383.2	367.1	358.7	368.9	364.9	369.8
12.5°	582.8	556.0	503.9	462.0	446.0	420.2	372.9	340.0	318.1	314.6	313.7
15°	651.4	634.9	565.0	508.8	453.1	393.4	312.8	269.1	245.9	241.9	242.4
17.5°	738.3	714.7	611.7	531.1	436.6	329.3	241.5	204.1	202.3	212.1	213.0
20°	796.2	757.4	635.4	512.8	382.3	249.1	188.9	180.0	194.3	212.1	210.3
22.5°	851.4	809.6	666.5	496.8	296.3	188.9	173.8	174.7	186.7	205.8	210.7
25°	888.0	872.8	704.9	459.4	225.9	163.5	166.2	172.9	183.1	201.4	201.4
27.5°	998.0	927.2	700.4	386.7	173.8	152.4	158.6	167.1	172.4	194.3	196.5
30°	1064.9	1041.7	723.6	312.8	152.4	138.1	150.2	157.7	161.3	186.2	187.1
32.5°	1146.8	1095.6	751.6	230.8	141.7	137.2	134.6	140.3	150.6	172.4	173.8
35°	1246.6	1231.5	711.5	181.3	138.1	128.3	123.0	126.1	132.8	147.5	150.6
37.5°	1450.3	1360.3	687.5	155.5	138.1	125.2	119.4	111.4	112.3	122.5	128.3
40°	1621.8	1594.2	620.2	151.0	131.9	120.7	106.5	96.7	90.0	93.1	95.3
42.5°	1936.8	1808.9	533.3	148.8	126.1	109.2	90.4	80.2	70.0	70.8	74.4
45°	2319.1	2043.3	455.8	146.6	122.1	97.6	76.2	64.2	53.5	53.9	57.5
47.5°	2829.7	2385.0	361.8	139.9	115.0	86.9	61.5	49.0	42.8	44.1	47.2
50°	3409.8	2684.9	286.0	129.7	106.5	76.6	49.9	39.7	37.4	38.8	42.3
52.5°	3928.0	2905.9	236.1	120.3	94.5	62.4	41.9	35.2	34.3	35.2	37.9
55°	4388.7	3034.2	197.4	109.6	81.1	50.3	37.9	32.5	32.1	31.6	33.4
57.5°	4820.9	3071.2	154.2	92.7	65.9	43.7	35.2	30.3	29.4	28.1	29.4
60°	5135.9	3007.9	113.2	74.4	53.9	39.7	33.0	27.2	25.8	23.6	24.5
62.5°	5287.8	2834.6	85.5	59.7	45.9	36.1	29.4	23.6	21.8	19.2	19.6
65°	5143.4	2549.0	67.3	50.3	39.2	30.3	25.0	20.0	17.8	15.1	15.1
67.5°	4504.1	2114.6	57.0	43.7	33.0	25.8	20.5	18.3	14.7	12.5	12.0
70°	3306.0	1521.1	49.0	38.3	28.5	22.3	17.4	16.5	14.3	12.0	11.1
72.5°	1866.0	860.8	41.9	33.9	24.1	18.7	14.7	15.1	13.8	11.1	10.2
75°	712.0	290.1	34.8	28.1	19.6	14.3	12.5	12.5	12.5	9.4	8.0
77.5°	176.4	74.0	27.6	22.7	15.6	9.4	10.2	10.7	10.7	8.0	5.8
80°	48.6	25.0	16.5	16.5	11.1	5.3	7.1	7.1	5.8	2.7	0.0
82.5°	17.8	9.4	5.8	7.1	4.9	1.8	2.7	1.8	1.3	0.0	0.0
85°	7.6	4.9	3.6	4.0	2.2	0.0	0.4	0.9	0.0	0.0	0.0
87.5°	3.1	2.2	1.8	1.8	0.9	0.0	0.0	0.0	0.0	0.0	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)