

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: P367693

Luminaire Tested: **MSA-SA3A-730-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367693
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3A-730-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7889 lumens
Efficiency: N/A
Efficacy: 82.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

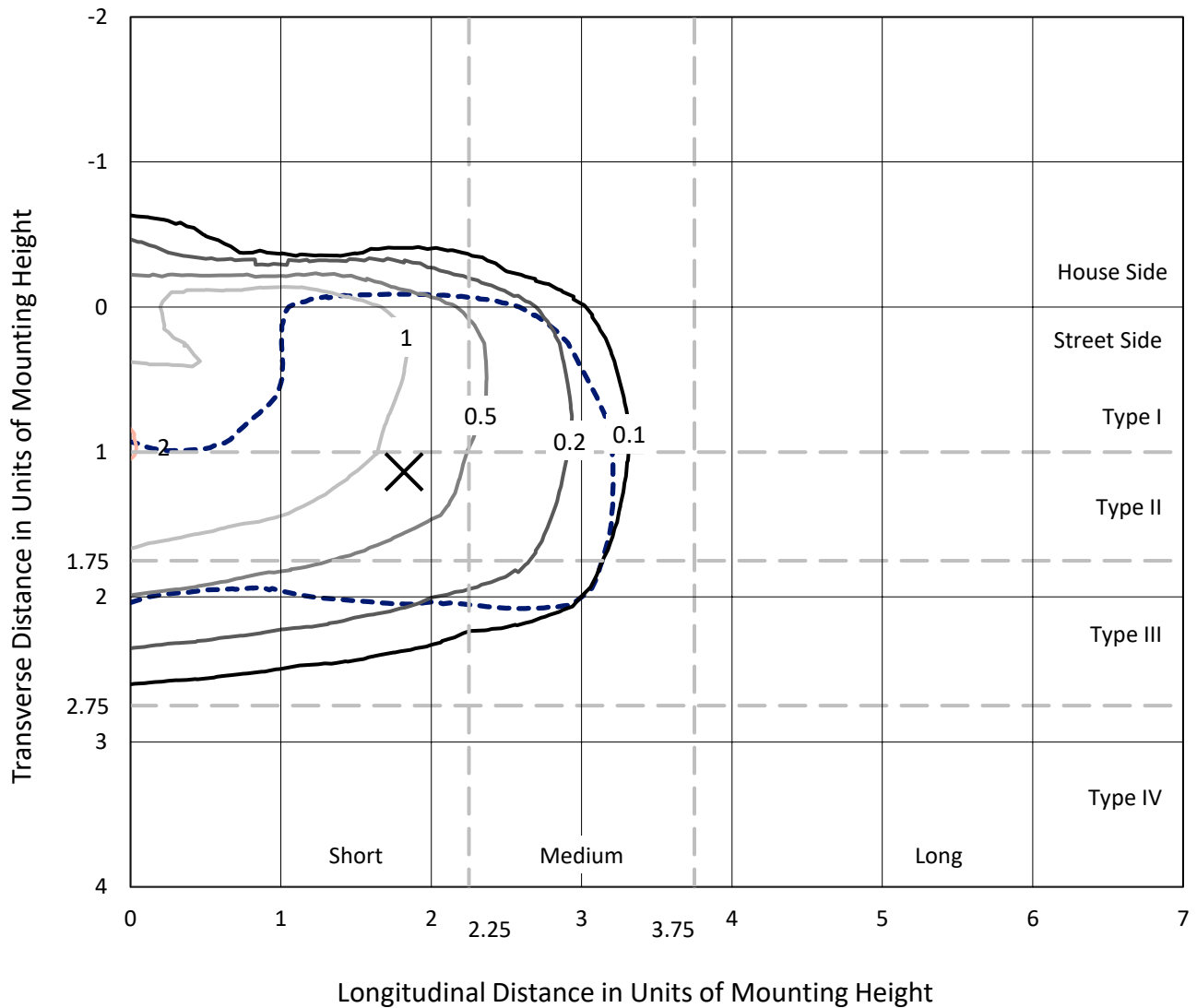
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

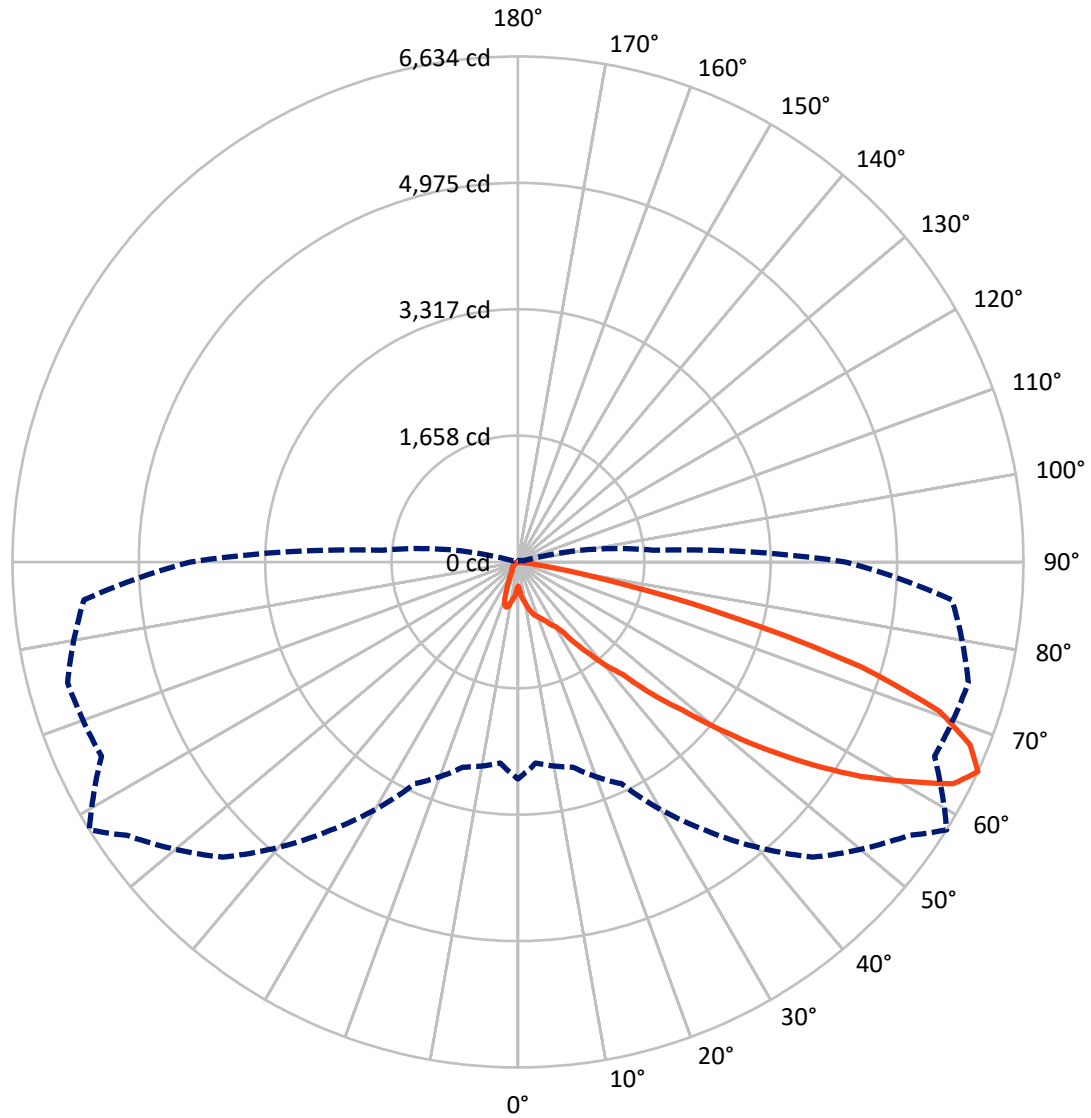
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 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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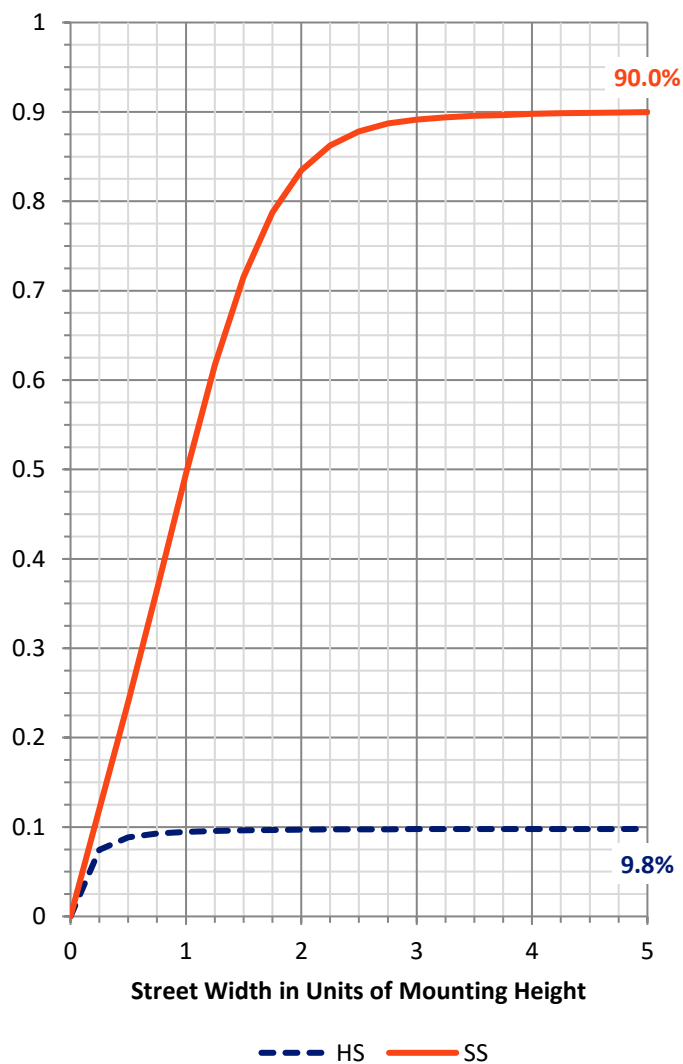
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	778.4	0.0	778.4
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	7110.6	0.0	7110.6
	% Fixture	90.1	0.0	90.1
Total	Lumens	7889.0	0.0	7889.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.4	0.6
10°-20°	161.9	2.1
20°-30°	313.5	4.0
30°-40°	625.4	7.9
40°-50°	1278.5	16.2
50°-60°	2267.7	28.7
60°-70°	2390.8	30.3
70°-80°	775.1	9.8
80°-90°	31.7	0.4
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°	7889.0	100.0
0°-180°	7889.0	100.0

Coefficient of Utilization



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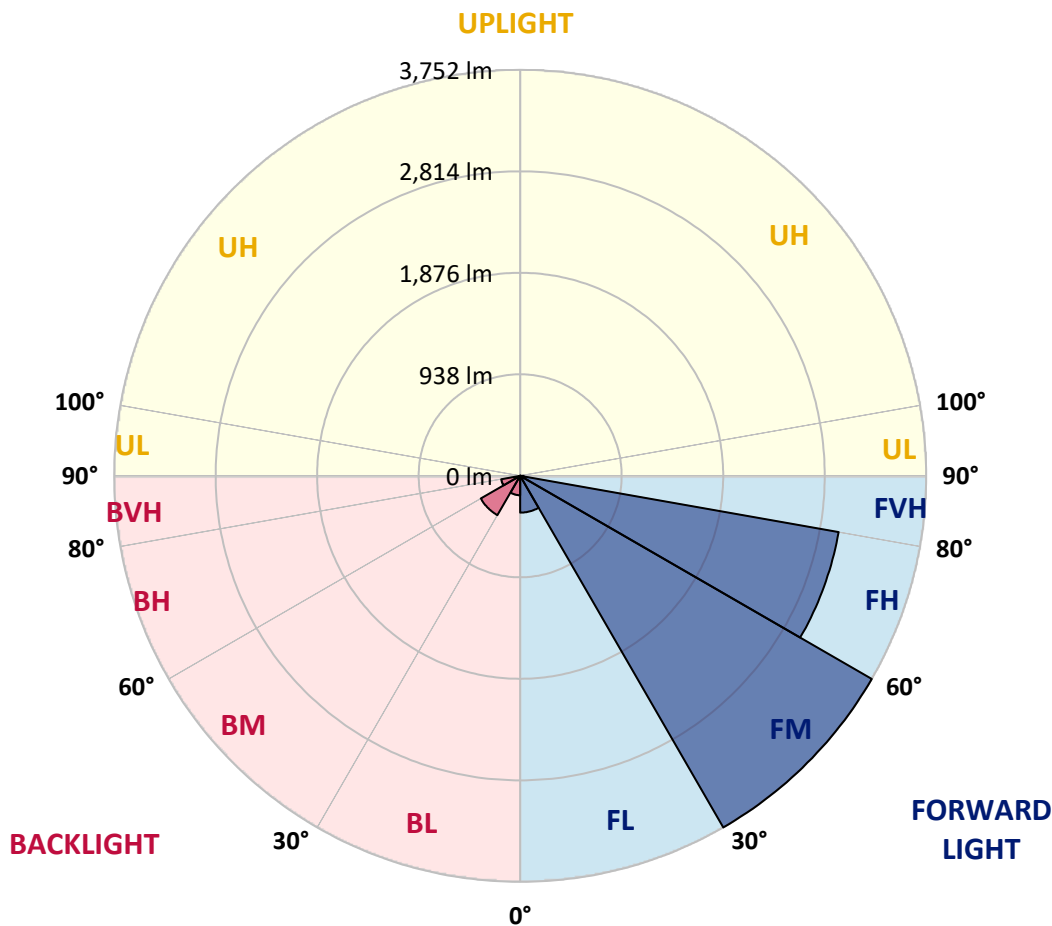
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	340.3	4.3			
FM (30°-60°)	3751.6	47.6			
FH (60°-80°)	2988.2	37.9			G2/5000
FVH (80°-90°)	30.4	0.4			G1/100
BL (0°-30°)	179.4	2.3	B1/500		
BM (30°-60°)	420.0	5.3	B1/1000		
BH (60°-80°)	177.7	2.3	B1/500		G1/500
BVH (80°-90°)	1.3	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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	315.8	315.8	315.8	315.8	315.8	315.8	315.8	315.8	315.8	315.8	315.8
2.5°	385.5	374.0	355.8	358.9	362.4	369.6	363.8	358.4	352.7	345.1	374.0
5°	465.5	446.4	444.6	440.6	437.5	437.1	444.2	442.0	445.1	459.3	473.9
7.5°	494.8	486.8	471.7	477.9	468.2	460.6	492.1	502.4	521.9	528.6	566.8
10°	491.7	480.2	486.4	489.5	496.1	523.7	543.7	554.8	571.7	608.1	600.5
12.5°	505.9	516.1	522.8	523.2	557.4	608.1	622.3	631.6	661.8	676.0	713.3
15°	553.4	570.3	559.7	564.1	575.2	636.9	670.3	690.7	733.3	779.5	788.9
17.5°	621.4	632.1	609.9	593.9	624.5	658.3	718.7	740.0	767.1	875.0	895.0
20°	707.1	725.3	677.4	613.9	654.3	694.2	760.0	770.2	799.1	939.9	971.4
22.5°	907.5	880.4	807.1	708.0	696.0	713.8	776.4	816.4	865.3	976.3	1049.6
25°	1105.1	1095.8	987.8	877.2	797.3	757.3	840.4	862.6	942.5	1062.9	1103.3
27.5°	1325.0	1343.6	1163.3	1096.2	939.4	808.8	880.4	935.9	1030.5	1094.4	1191.7
30°	1615.0	1585.3	1373.8	1306.8	1127.8	950.5	983.8	987.4	1126.4	1198.4	1290.8
32.5°	1842.4	1861.5	1595.9	1492.9	1349.8	1168.6	1061.6	1107.8	1207.3	1367.6	1455.1
35°	2088.5	2086.7	1827.8	1689.2	1502.2	1346.7	1292.1	1325.9	1450.7	1632.3	1655.4
37.5°	2456.3	2424.8	2119.2	1916.2	1757.2	1624.4	1582.6	1537.7	1666.5	1839.8	1926.4
40°	2803.2	2694.4	2411.9	2171.1	1967.7	1913.5	1762.5	1790.0	1828.2	2057.0	2296.4
42.5°	3153.6	3086.1	2708.6	2506.9	2256.9	2128.0	2029.4	2016.6	2198.2	2469.2	2716.6
45°	3616.0	3409.5	3107.5	2930.2	2640.6	2511.4	2431.9	2479.4	2642.8	3038.6	3203.4
47.5°	4004.2	3814.1	3554.7	3285.6	2981.8	3127.0	2977.8	2902.7	3127.0	3536.1	3755.1
50°	4337.8	4125.9	3863.4	3664.0	3614.7	3754.2	3452.1	3479.7	3625.4	4106.0	4229.4
52.5°	4580.3	4357.4	4128.2	4031.8	4233.9	4304.1	4152.6	4091.7	4224.1	4591.9	4651.9
55°	4762.9	4534.6	4355.6	4488.4	4879.3	4856.2	4909.5	4701.6	4828.2	5098.7	5070.3
57.5°	4774.0	4503.5	4398.7	4612.3	5148.9	5506.4	5662.4	5308.8	5380.7	5494.9	5430.9
60°	4424.9	4155.7	4147.3	4450.6	5227.1	5674.8	6015.9	5843.6	5747.2	5832.0	5710.8
62.5°	3729.3	3541.0	3628.9	3964.3	4936.1	5582.0	6204.2	6411.7	6036.3	6055.4	5883.1
65°	2847.6	2650.0	2787.6	3210.1	4300.1	5478.0	6257.5	6633.8	6031.0	6119.0	5717.9
67.5°	1886.0	1771.4	1927.3	2392.8	3418.8	4835.7	6230.0	6400.6	5839.6	5870.7	5104.5
70°	973.6	945.6	1071.8	1439.1	2298.6	3715.1	5959.5	5866.2	5450.9	5057.4	3937.2
72.5°	311.8	313.1	434.4	657.4	1239.3	2261.7	4580.8	4708.7	4361.8	3699.5	2403.9
75°	138.1	135.9	181.7	275.8	516.6	1014.1	2845.8	2984.0	2715.7	2035.2	1010.5
77.5°	99.5	96.4	116.4	161.2	255.8	343.8	1334.3	1440.0	1231.3	705.4	231.4
80°	70.2	69.7	84.4	113.3	159.9	152.8	421.5	472.6	378.4	171.0	68.0
82.5°	39.5	40.9	58.6	80.0	97.3	76.4	118.6	130.6	127.5	91.1	29.8
85°	19.1	21.3	38.2	57.7	51.1	29.8	42.2	45.8	53.3	52.9	15.1
87.5°	0.0	0.0	15.5	26.2	13.8	4.4	12.9	14.7	14.2	16.9	3.6
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°	315.8	315.8	315.8	315.8	315.8	315.8	315.8	315.8	315.8	315.8	315.8
2.5°	379.8	377.1	343.3	346.0	353.6	350.5	353.1	346.9	339.8	368.7	368.2
5°	480.2	460.2	449.5	439.7	441.5	421.5	433.1	438.4	437.5	453.9	458.4
7.5°	568.1	541.5	520.1	499.7	468.6	440.6	457.9	469.0	476.6	505.0	516.1
10°	609.4	587.6	579.2	539.2	517.0	499.7	478.8	463.7	469.9	462.4	469.9
12.5°	700.0	685.4	652.9	612.5	585.9	550.3	472.6	407.8	367.8	368.2	365.6
15°	782.6	781.7	733.3	666.3	589.0	487.7	366.4	284.7	247.0	236.3	232.7
17.5°	890.6	877.2	788.9	689.8	550.8	377.5	249.6	195.0	191.4	197.7	195.0
20°	959.4	939.9	816.4	655.6	453.9	255.4	188.3	172.8	183.4	192.3	190.1
22.5°	1028.3	999.0	837.3	613.9	322.9	187.0	170.1	167.5	174.1	185.2	187.0
25°	1066.0	1060.2	878.1	535.7	221.2	163.9	163.9	163.0	165.2	173.2	171.9
27.5°	1175.7	1097.6	847.5	418.0	171.0	150.6	152.8	151.9	143.9	151.9	152.4
30°	1244.1	1208.2	849.7	297.6	150.6	133.3	139.0	131.9	119.9	126.6	125.3
32.5°	1381.8	1292.1	843.0	200.8	137.3	127.0	118.2	107.9	99.1	101.7	99.5
35°	1542.2	1473.8	752.9	161.2	127.9	112.4	98.2	87.9	78.6	80.8	80.4
37.5°	1861.1	1643.9	678.3	145.2	121.7	103.0	86.6	72.4	67.5	68.8	70.2
40°	2156.5	1927.7	539.2	138.1	111.0	91.9	71.5	61.3	58.2	59.1	60.4
42.5°	2598.0	2153.4	407.3	131.0	100.4	77.7	59.5	52.9	49.7	51.5	52.4
45°	3025.3	2345.2	304.3	124.8	91.5	67.1	50.2	45.8	42.2	43.5	45.3
47.5°	3452.1	2558.5	227.0	115.0	81.7	57.7	43.1	40.0	37.8	38.2	40.4
50°	3834.1	2657.9	178.6	103.0	73.7	50.2	39.1	36.0	35.1	35.5	37.3
52.5°	4114.8	2658.8	150.6	92.4	66.2	44.4	36.9	33.3	32.9	33.8	35.5
55°	4368.5	2587.8	130.6	83.1	59.5	40.4	35.1	32.0	32.0	32.9	34.6
57.5°	4536.8	2457.2	113.3	73.3	53.7	38.2	33.8	30.6	30.2	29.8	31.1
60°	4619.0	2279.1	95.9	64.4	48.4	36.9	32.9	27.1	26.7	25.8	26.7
62.5°	4567.0	2056.1	80.4	55.5	43.1	35.1	28.9	23.5	22.7	20.9	22.2
65°	4301.4	1785.1	68.0	47.5	37.3	29.8	24.4	20.0	17.8	15.5	15.1
67.5°	3758.2	1450.2	56.9	40.9	32.0	24.4	20.0	17.8	13.8	12.0	11.5
70°	2816.5	990.1	47.1	35.1	26.7	20.9	16.9	16.0	12.9	11.5	10.7
72.5°	1652.3	534.3	39.5	30.6	22.7	17.3	13.8	14.7	12.9	10.7	9.8
75°	660.0	177.7	31.5	24.4	18.2	12.4	11.5	12.0	11.5	9.8	8.0
77.5°	150.6	56.0	24.4	19.1	14.2	8.0	9.3	10.2	10.2	8.0	5.8
80°	47.1	22.2	14.2	12.0	10.2	4.4	6.7	7.1	4.9	2.2	0.0
82.5°	15.1	6.2	4.9	4.9	4.4	0.9	1.3	0.9	0.0	0.0	0.0
85°	5.8	4.0	3.1	3.1	1.8	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.2	1.8	1.3	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)