

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: P368199

Luminaire Tested: **MSA-SA4A-727-U-T3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368199
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-SA4A-727-U-T3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 9575 lumens
Efficiency: N/A
Efficacy: 74.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

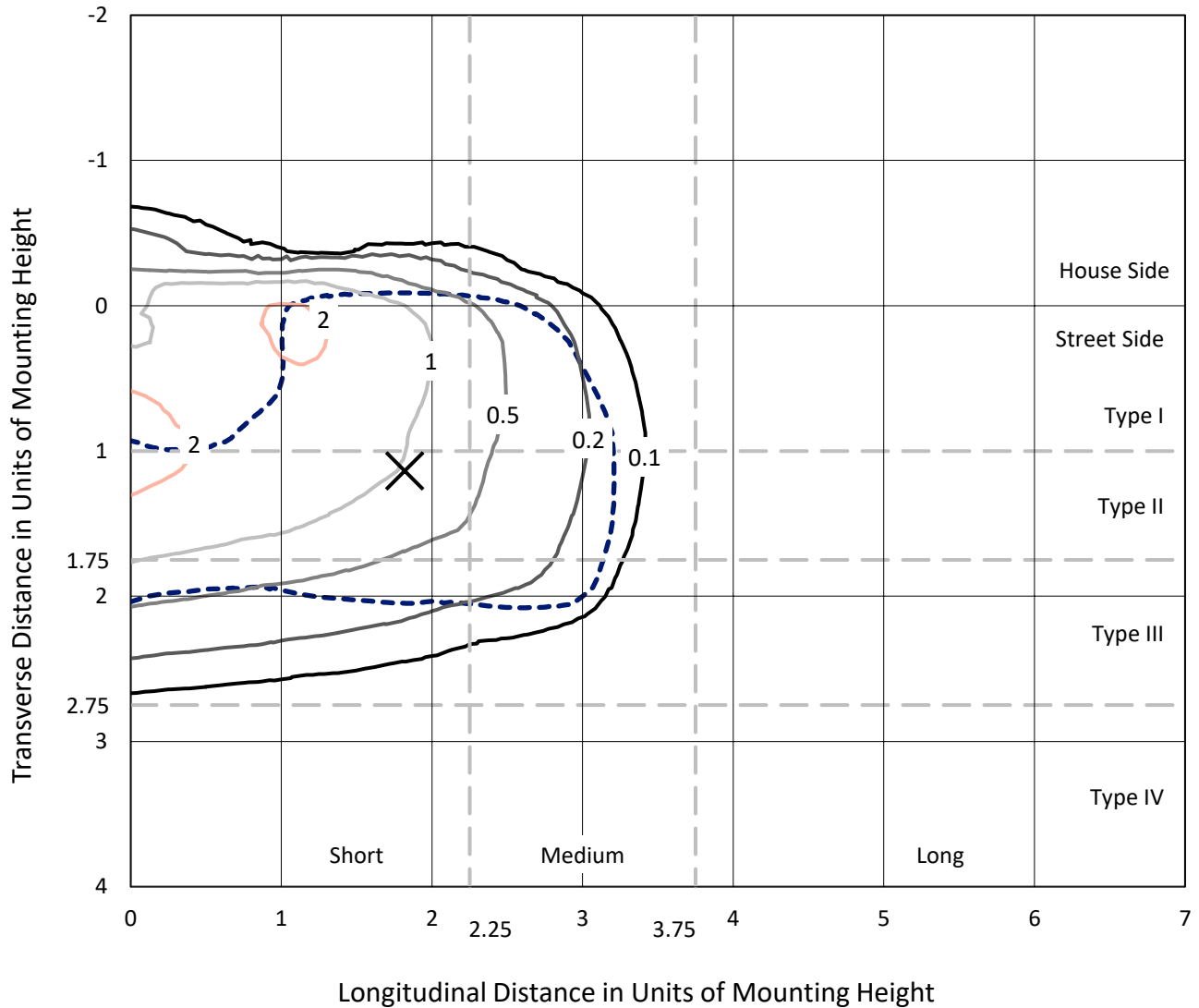
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

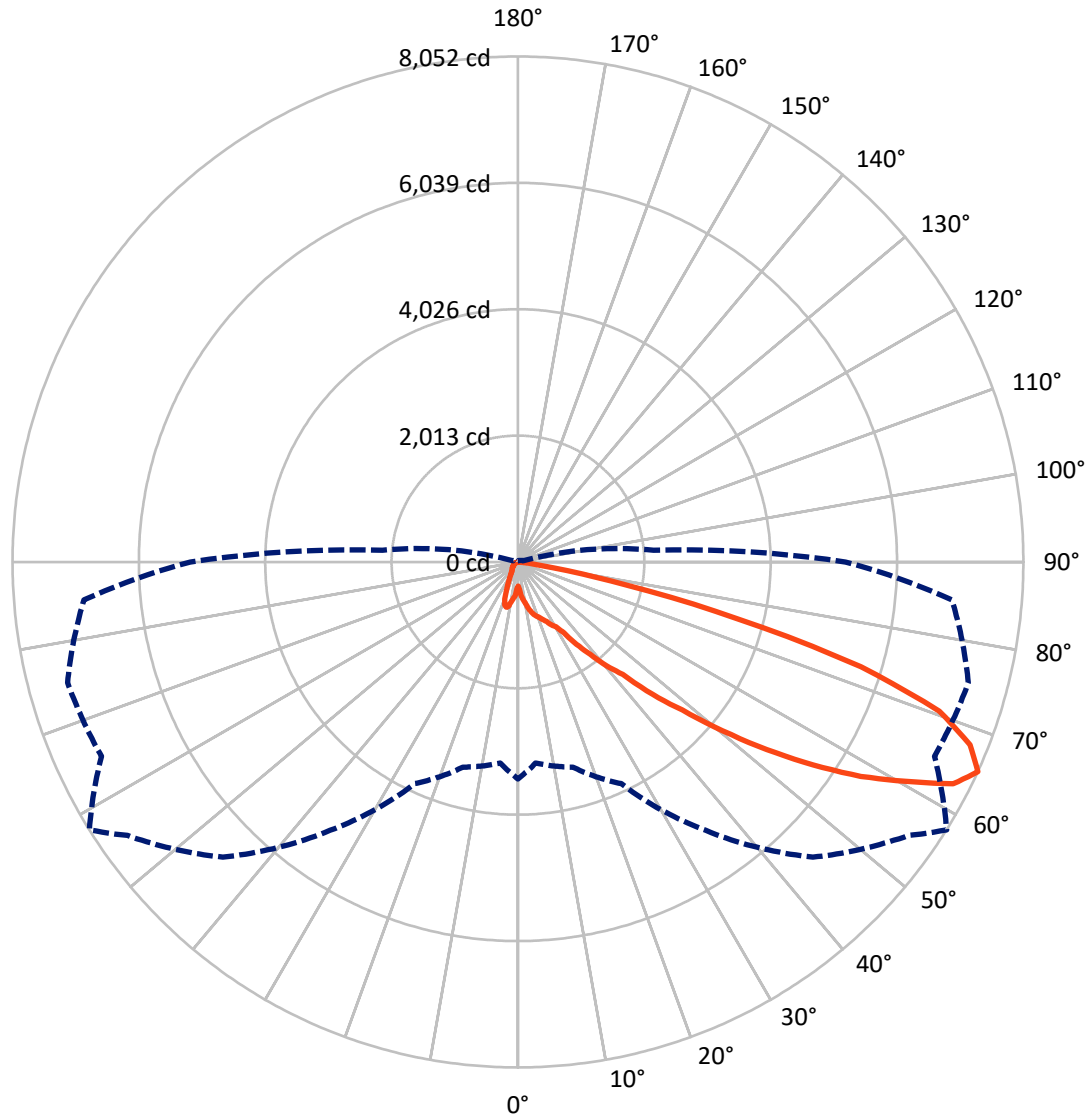
✕ Max cd
 - - - 1/2 Max cd



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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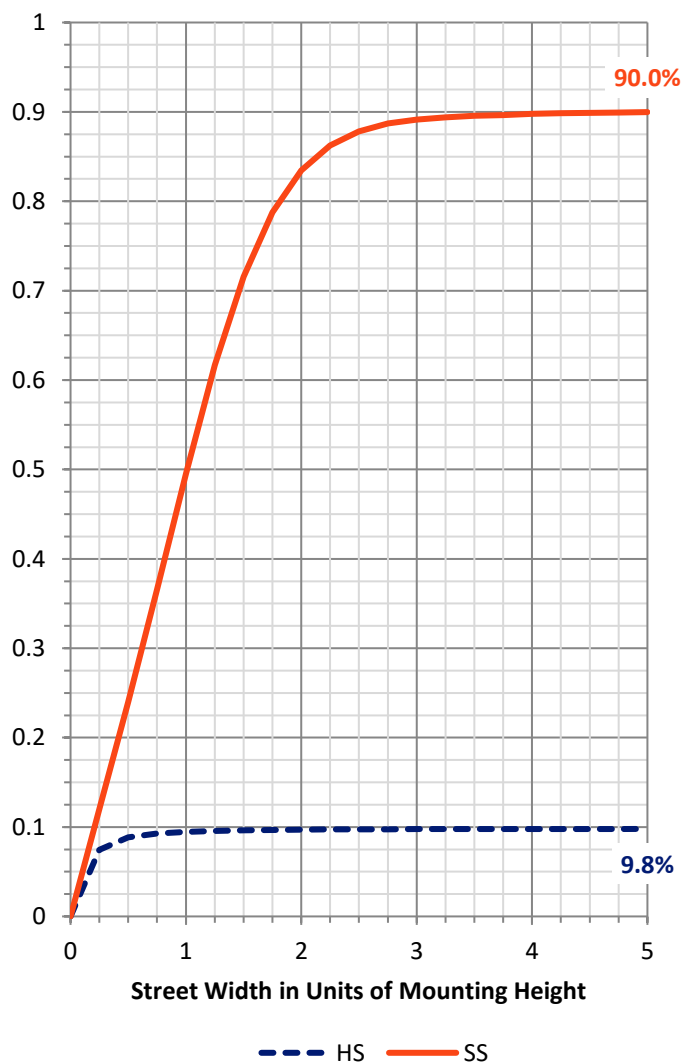
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	944.8	0.0	944.8
	% Fixture	9.9	0.0	9.9
Street Side	Lumens	8630.2	0.0	8630.2
	% Fixture	90.1	0.0	90.1
Total	Lumens	9575.0	0.0	9575.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.9	0.6
10°-20°	196.5	2.1
20°-30°	380.4	4.0
30°-40°	759.0	7.9
40°-50°	1551.8	16.2
50°-60°	2752.4	28.7
60°-70°	2901.7	30.3
70°-80°	940.8	9.8
80°-90°	38.5	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°	9575.0	100.0
0°-180°	9575.0	100.0

Coefficient of Utilization



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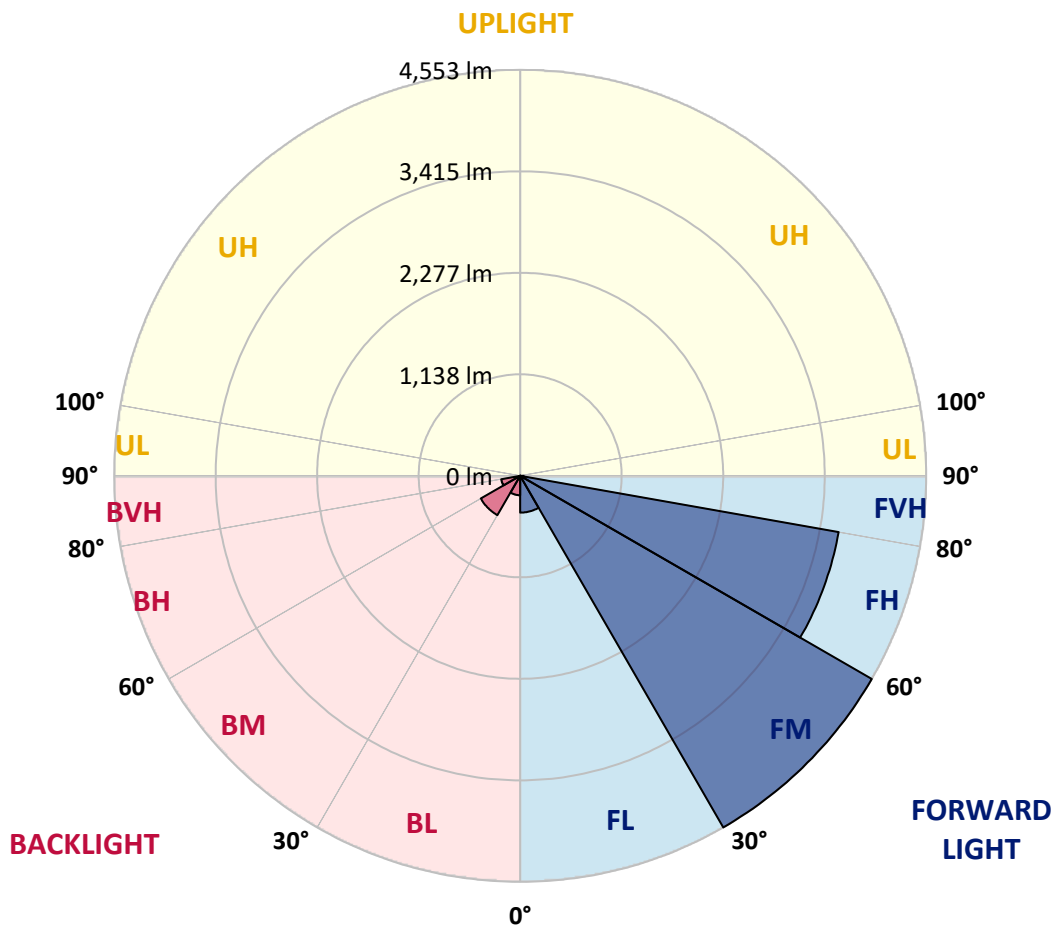
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	413.1	4.3			
FM (30°-60°)	4553.4	47.6			
FH (60°-80°)	3626.9	37.9			G2/5000
FVH (80°-90°)	36.8	0.4			G1/100
BL (0°-30°)	217.8	2.3	B1/500		
BM (30°-60°)	509.8	5.3	B1/1000		
BH (60°-80°)	215.6	2.3	B1/500		G1/500
BVH (80°-90°)	1.6	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°	383.3	383.3	383.3	383.3	383.3	383.3	383.3	383.3	383.3	383.3	383.3
2.5°	467.9	453.9	431.8	435.6	439.9	448.5	441.5	435.1	428.0	418.9	453.9
5°	565.0	541.8	539.6	534.8	531.0	530.5	539.1	536.4	540.2	557.4	575.2
7.5°	600.6	590.9	572.5	580.1	568.2	559.0	597.3	609.7	633.4	641.5	687.9
10°	596.8	582.8	590.3	594.1	602.2	635.6	659.9	673.3	693.8	738.0	728.9
12.5°	614.0	626.4	634.5	635.1	676.6	738.0	755.3	766.6	803.3	820.5	865.8
15°	671.7	692.2	679.3	684.7	698.1	773.1	813.5	838.3	890.1	946.1	957.4
17.5°	754.2	767.1	740.2	720.8	758.0	799.0	872.3	898.1	931.0	1062.0	1086.3
20°	858.3	880.4	822.1	745.0	794.1	842.6	922.4	934.8	969.8	1140.7	1179.0
22.5°	1101.4	1068.5	979.5	859.3	844.8	866.3	942.4	990.9	1050.2	1184.9	1273.9
25°	1341.3	1330.0	1199.0	1064.7	967.7	919.2	1020.0	1046.9	1144.0	1290.1	1339.1
27.5°	1608.1	1630.8	1411.9	1330.5	1140.2	981.7	1068.5	1135.9	1250.7	1328.3	1446.4
30°	1960.2	1924.1	1667.4	1586.0	1368.8	1153.7	1194.1	1198.4	1367.2	1454.5	1566.6
32.5°	2236.2	2259.4	1937.0	1811.9	1638.3	1418.4	1288.5	1344.5	1465.3	1659.9	1766.1
35°	2534.9	2532.7	2218.4	2050.2	1823.2	1634.6	1568.3	1609.2	1760.7	1981.2	2009.2
37.5°	2981.2	2943.0	2572.1	2325.7	2132.7	1971.5	1920.8	1866.4	2022.7	2233.0	2338.1
40°	3402.3	3270.2	2927.3	2635.1	2388.2	2322.5	2139.2	2172.6	2218.9	2496.6	2787.2
42.5°	3827.6	3745.7	3287.4	3042.7	2739.2	2582.8	2463.2	2447.5	2668.0	2996.9	3297.2
45°	4388.8	4138.2	3771.6	3556.5	3205.0	3048.1	2951.6	3009.3	3207.7	3688.0	3888.0
47.5°	4860.0	4629.3	4314.4	3987.7	3619.0	3795.3	3614.1	3523.0	3795.3	4291.8	4557.6
50°	5264.9	5007.7	4689.1	4447.1	4387.2	4556.5	4189.9	4223.3	4400.2	4983.5	5133.3
52.5°	5559.2	5288.6	5010.4	4893.4	5138.7	5223.9	5040.1	4966.2	5126.9	5573.2	5646.0
55°	5780.8	5503.7	5286.4	5447.6	5922.0	5894.0	5958.7	5706.4	5860.0	6188.4	6153.9
57.5°	5794.3	5466.0	5338.7	5598.0	6249.3	6683.3	6872.5	6443.4	6530.7	6669.2	6591.6
60°	5370.5	5043.8	5033.6	5401.8	6344.2	6887.6	7301.6	7092.4	6975.5	7078.4	6931.2
62.5°	4526.3	4297.7	4404.5	4811.5	5991.0	6774.9	7530.2	7781.9	7326.4	7349.6	7140.4
65°	3456.2	3216.3	3383.4	3896.1	5219.1	6648.8	7594.9	8051.5	7319.9	7426.7	6939.9
67.5°	2289.0	2149.9	2339.2	2904.1	4149.5	5869.2	7561.5	7768.5	7087.6	7125.3	6195.4
70°	1181.7	1147.7	1300.9	1746.7	2789.9	4509.1	7233.1	7119.9	6615.9	6138.2	4778.6
72.5°	378.5	380.1	527.2	797.9	1504.1	2745.1	5559.8	5715.0	5294.0	4490.2	2917.6
75°	167.7	165.0	220.5	334.8	627.0	1230.8	3454.0	3621.7	3296.1	2470.2	1226.5
77.5°	120.8	117.0	141.2	195.7	310.5	417.3	1619.5	1747.8	1494.4	856.1	280.9
80°	85.2	84.6	102.4	137.5	194.1	185.5	511.6	573.6	459.3	207.6	82.5
82.5°	48.0	49.6	71.2	97.0	118.1	92.7	143.9	158.5	154.7	110.5	36.1
85°	23.2	25.9	46.4	70.1	62.0	36.1	51.2	55.5	64.7	64.2	18.3
87.5°	0.0	0.0	18.9	31.8	16.7	5.4	15.6	17.8	17.3	20.5	4.3
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°	383.3	383.3	383.3	383.3	383.3	383.3	383.3	383.3	383.3	383.3	383.3
2.5°	460.9	457.7	416.7	420.0	429.1	425.4	428.6	421.0	412.4	447.5	446.9
5°	582.8	558.5	545.6	533.7	535.9	511.6	525.6	532.1	531.0	551.0	556.4
7.5°	689.5	657.2	631.3	606.5	568.8	534.8	555.8	569.3	578.5	613.0	626.4
10°	739.6	713.2	703.0	654.5	627.5	606.5	581.2	562.8	570.4	561.2	570.4
12.5°	849.6	831.8	792.5	743.4	711.1	667.9	573.6	494.9	446.4	446.9	443.7
15°	949.9	948.8	890.1	808.7	714.9	591.9	444.8	345.6	299.7	286.8	282.5
17.5°	1080.9	1064.7	957.4	837.2	668.5	458.2	303.0	236.7	232.4	239.9	236.7
20°	1164.5	1140.7	990.9	795.7	551.0	310.0	228.6	209.7	222.6	233.4	230.7
22.5°	1248.0	1212.4	1016.2	745.0	391.9	227.0	206.5	203.2	211.3	224.8	227.0
25°	1293.8	1286.8	1065.8	650.2	268.5	198.9	198.9	197.9	200.5	210.3	208.6
27.5°	1427.0	1332.1	1028.6	507.3	207.6	182.8	185.5	184.4	174.7	184.4	184.9
30°	1510.0	1466.4	1031.3	361.2	182.8	161.7	168.7	160.1	145.6	153.6	152.0
32.5°	1677.1	1568.3	1023.2	243.7	166.6	154.2	143.4	131.0	120.2	123.5	120.8
35°	1871.8	1788.7	913.8	195.7	155.3	136.4	119.1	106.7	95.4	98.1	97.6
37.5°	2258.8	1995.2	823.2	176.3	147.7	125.1	105.1	87.9	81.9	83.6	85.2
40°	2617.3	2339.7	654.5	167.7	134.8	111.6	86.8	74.4	70.6	71.7	73.3
42.5°	3153.2	2613.6	494.4	159.0	121.8	94.3	72.2	64.2	60.4	62.5	63.6
45°	3671.8	2846.5	369.3	151.5	111.1	81.4	60.9	55.5	51.2	52.8	55.0
47.5°	4189.9	3105.2	275.5	139.6	99.2	70.1	52.3	48.5	45.8	46.4	49.1
50°	4653.5	3226.0	216.7	125.1	89.5	60.9	47.4	43.7	42.6	43.1	45.3
52.5°	4994.2	3227.1	182.8	112.1	80.3	53.9	44.7	40.4	39.9	41.0	43.1
55°	5302.1	3140.8	158.5	100.8	72.2	49.1	42.6	38.8	38.8	39.9	42.1
57.5°	5506.4	2982.3	137.5	89.0	65.2	46.4	41.0	37.2	36.7	36.1	37.7
60°	5606.1	2766.1	116.4	78.2	58.8	44.7	39.9	32.9	32.3	31.3	32.3
62.5°	5543.1	2495.5	97.6	67.4	52.3	42.6	35.0	28.6	27.5	25.3	27.0
65°	5220.7	2166.7	82.5	57.7	45.3	36.1	29.7	24.3	21.6	18.9	18.3
67.5°	4561.3	1760.2	69.0	49.6	38.8	29.7	24.3	21.6	16.7	14.6	14.0
70°	3418.5	1201.7	57.1	42.6	32.3	25.3	20.5	19.4	15.6	14.0	12.9
72.5°	2005.5	648.5	48.0	37.2	27.5	21.0	16.7	17.8	15.6	12.9	11.9
75°	801.1	215.6	38.3	29.7	22.1	15.1	14.0	14.6	14.0	11.9	9.7
77.5°	182.8	67.9	29.7	23.2	17.3	9.7	11.3	12.4	12.4	9.7	7.0
80°	57.1	27.0	17.3	14.6	12.4	5.4	8.1	8.6	5.9	2.7	0.0
82.5°	18.3	7.5	5.9	5.9	5.4	1.1	1.6	1.1	0.0	0.0	0.0
85°	7.0	4.9	3.8	3.8	2.2	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	2.7	2.2	1.6	2.2	1.1	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)