

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: P366845

Luminaire Tested: **MSA-SA1B-830-U-SL2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366845
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1B-830-U-SL2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3298 lumens
Efficiency: N/A
Efficacy: 75.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G1

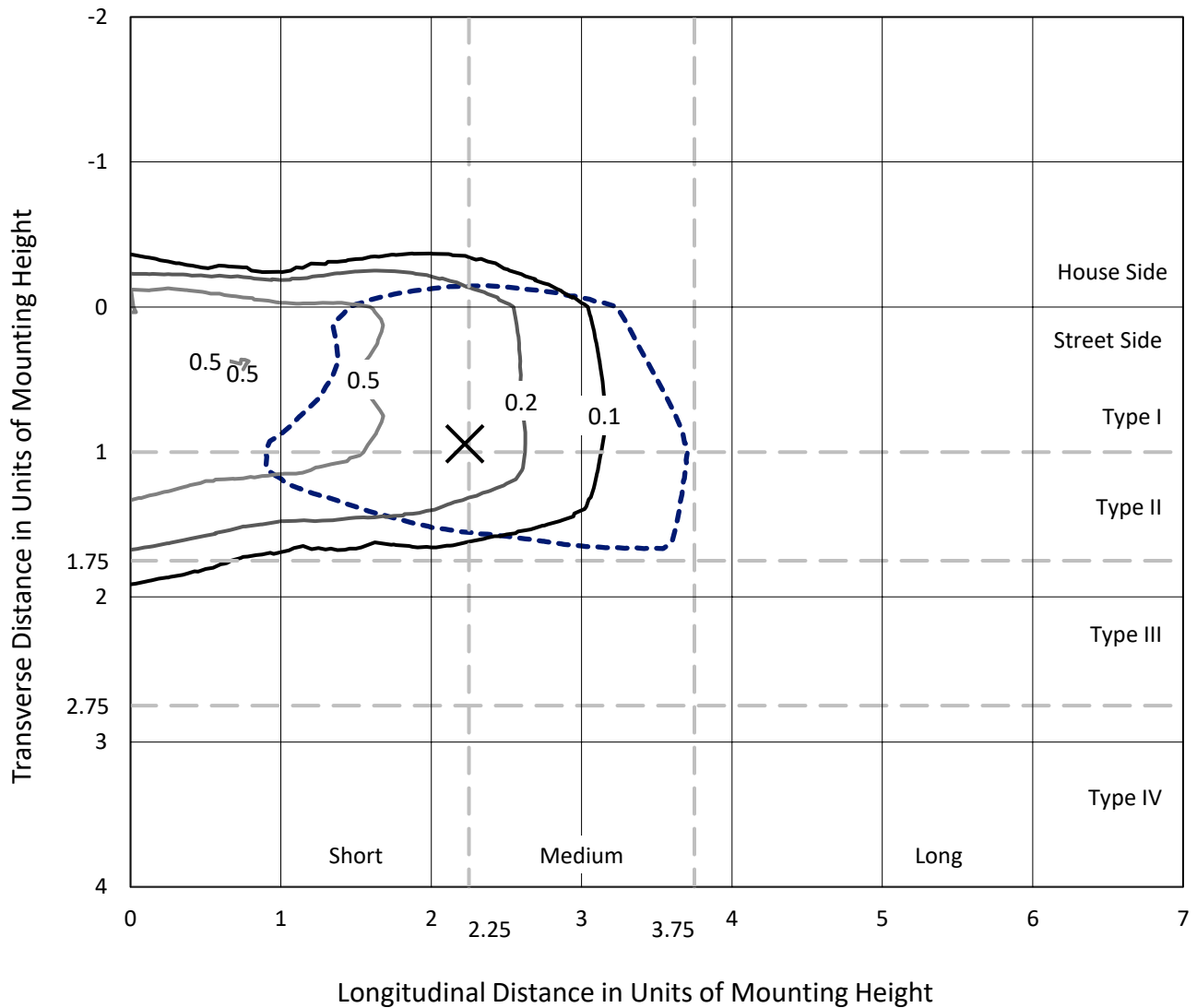
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

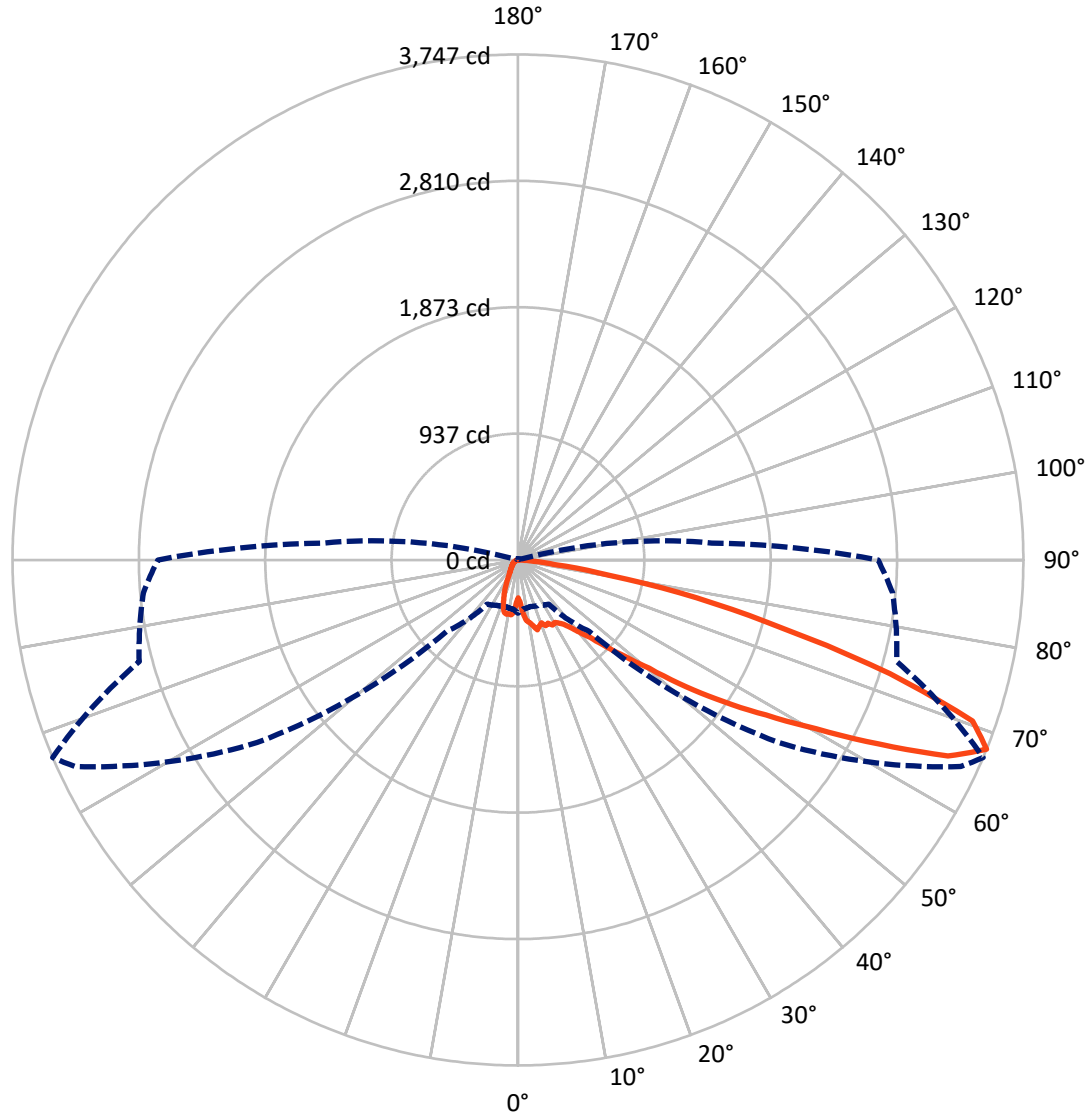
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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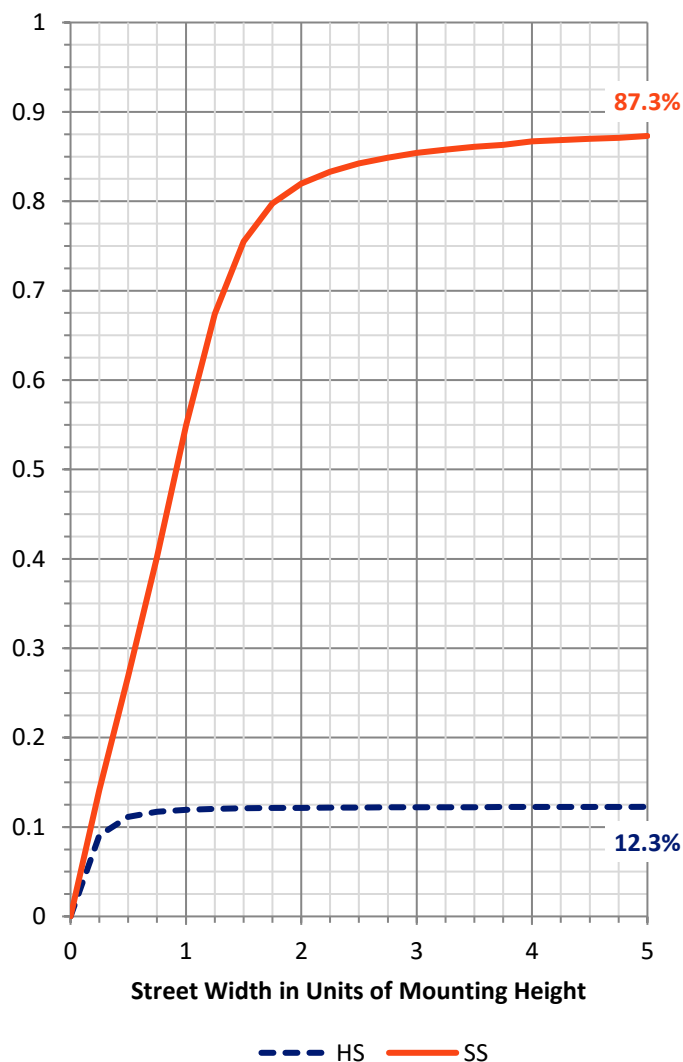
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	407.9	0.0	407.9
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	2890.1	0.0	2890.1
	% Fixture	87.6	0.0	87.6
Total	Lumens	3298.0	0.0	3298.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.3	1.1
10°-20°	104.3	3.2
20°-30°	163.5	5.0
30°-40°	263.6	8.0
40°-50°	484.4	14.7
50°-60°	818.1	24.8
60°-70°	904.5	27.4
70°-80°	473.4	14.4
80°-90°	50.8	1.5
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°	3298.0	100.0
0°-180°	3298.0	100.0

Coefficient of Utilization



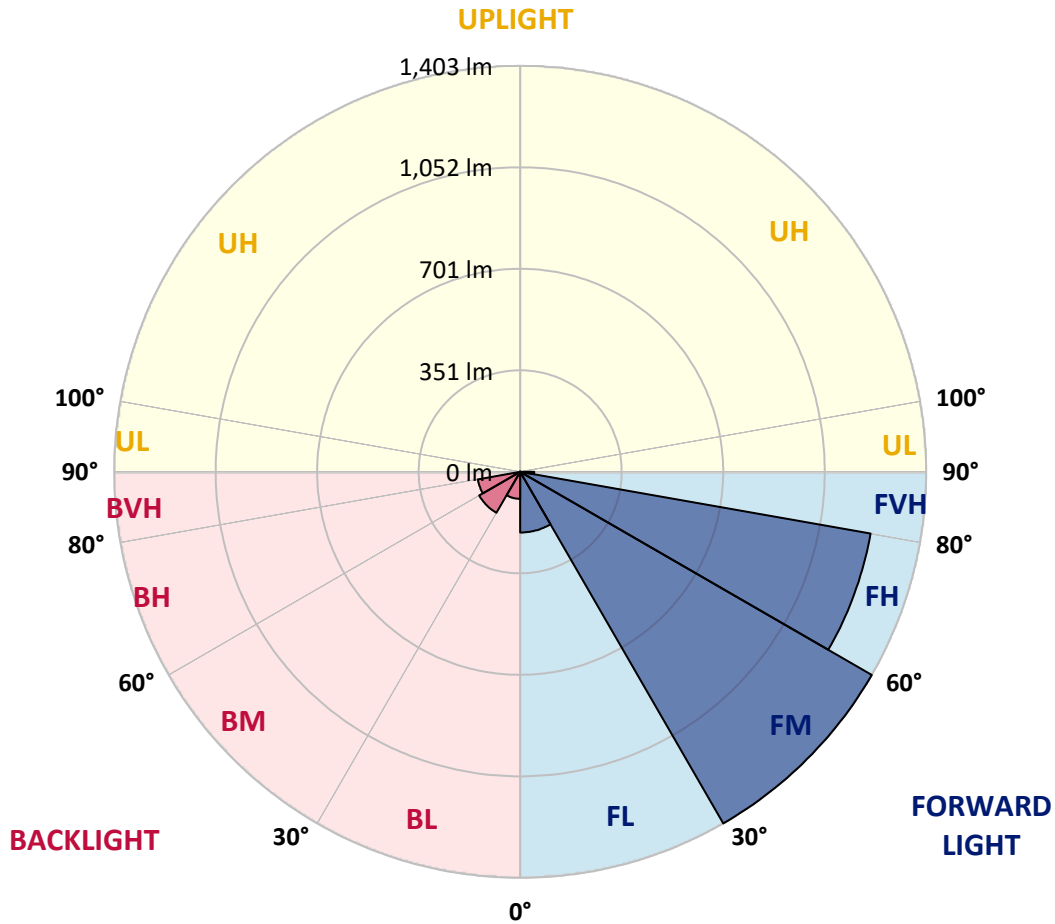
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	209.7	6.4			
FM (30°-60°)	1402.7	42.5			
FH (60°-80°)	1229.1	37.3			G1/1800
FVH (80°-90°)	48.7	1.5			G1/100
BL (0°-30°)	93.4	2.8	B0/110		
BM (30°-60°)	163.5	5.0	B0/220		
BH (60°-80°)	148.8	4.5	B1/500		G1/500
BVH (80°-90°)	2.2	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	280.9	280.9	280.9	280.9	280.9	280.9	280.9	280.9	280.9	280.9	280.9
2.5°	331.6	320.4	301.3	306.8	317.9	327.1	322.7	314.2	314.4	305.7	336.9
5°	385.8	370.7	359.7	363.5	363.0	362.7	383.3	391.1	394.5	408.9	430.1
7.5°	401.4	396.0	384.5	388.0	376.4	377.3	413.4	447.5	452.9	461.7	499.6
10°	395.3	385.0	389.1	389.1	389.3	408.0	432.3	464.9	471.5	505.6	509.6
12.5°	388.8	389.3	405.9	402.9	425.6	459.2	467.4	504.1	500.9	530.5	574.5
15°	413.1	425.8	415.1	419.3	421.4	460.9	474.1	522.8	536.9	574.3	603.0
17.5°	454.7	456.4	434.1	428.1	443.8	455.1	481.7	505.1	514.4	612.8	653.3
20°	462.3	473.0	450.4	415.6	448.9	464.3	482.8	494.0	498.1	624.7	681.7
22.5°	507.6	495.7	459.6	433.1	442.7	459.4	471.0	504.7	528.8	602.3	709.0
25°	530.8	527.7	493.2	470.6	460.9	459.6	486.0	511.6	519.3	625.5	715.7
27.5°	586.6	579.4	512.6	509.8	477.8	449.7	486.5	532.5	546.9	603.6	740.8
30°	662.3	659.7	570.8	569.0	518.1	467.6	513.6	545.4	536.7	614.8	757.5
32.5°	738.6	760.4	669.5	617.7	579.5	533.4	505.9	541.4	556.9	642.1	788.3
35°	830.8	846.5	754.0	716.4	631.6	564.1	556.9	579.7	586.4	674.6	823.3
37.5°	992.1	968.3	889.5	825.5	781.0	674.1	638.6	620.5	636.1	718.6	894.7
40°	1111.2	1096.2	999.1	960.8	858.4	795.8	703.2	686.3	703.7	763.7	944.4
42.5°	1254.9	1223.6	1132.3	1106.4	1001.0	880.3	786.3	792.2	781.3	852.9	1031.6
45°	1384.9	1314.3	1263.5	1269.3	1213.1	1050.1	925.0	922.2	913.1	982.1	1123.3
47.5°	1472.4	1410.7	1361.2	1344.9	1338.2	1348.8	1125.4	1074.9	1068.2	1117.7	1267.6
50°	1519.4	1451.8	1390.6	1393.9	1529.8	1632.0	1332.2	1260.4	1262.9	1314.6	1465.0
52.5°	1487.8	1411.3	1346.8	1409.5	1678.4	1820.9	1674.5	1502.9	1561.1	1547.9	1729.9
55°	1341.7	1275.3	1229.5	1341.7	1694.6	2024.2	2095.9	1867.7	1854.7	1824.6	1999.9
57.5°	1096.0	1038.8	1010.5	1128.9	1517.1	2188.0	2519.2	2280.1	2168.9	2042.7	2224.1
60°	816.6	774.4	745.0	807.6	1195.4	2028.8	2796.4	2668.8	2540.0	2253.0	2425.5
62.5°	604.8	570.5	539.2	544.9	823.1	1744.9	2902.8	3080.5	3006.6	2475.0	2615.6
65°	482.7	451.4	429.5	416.9	509.8	1312.8	2754.8	3417.9	3503.3	2684.2	2752.8
67.5°	394.2	367.7	356.9	371.2	399.8	748.3	2359.3	3622.7	3746.5	2906.0	2786.6
70°	320.7	299.0	297.8	336.6	368.2	456.2	1735.4	3481.4	3574.5	2943.8	2584.0
72.5°	223.5	214.0	229.2	284.2	364.9	379.9	996.6	2880.9	2884.3	2600.0	2125.4
75°	126.5	125.0	149.1	226.7	355.3	376.1	555.6	2035.9	2037.4	1966.4	1472.4
77.5°	69.6	65.1	86.8	153.2	305.2	367.4	358.4	1390.1	1354.5	1094.3	672.5
80°	32.1	30.3	47.0	98.2	223.2	347.5	287.3	764.1	688.9	356.5	164.1
82.5°	13.2	12.5	21.6	63.1	141.0	279.9	242.1	339.0	272.0	67.8	50.7
85°	2.3	2.5	8.9	38.1	79.0	129.0	196.2	160.9	118.3	18.7	27.8
87.5°	0.0	0.0	1.8	9.2	19.1	35.3	79.6	45.0	31.0	5.5	8.2
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°	280.9	280.9	280.9	280.9	280.9	280.9	280.9	280.9	280.9	280.9	280.9
2.5°	343.1	340.3	311.5	312.9	314.9	313.0	312.7	304.7	297.3	321.6	321.2
5°	434.0	413.7	393.8	386.1	369.6	347.8	348.0	341.1	334.1	344.0	344.0
7.5°	498.7	470.8	445.5	400.5	356.7	317.0	313.5	304.2	293.4	306.3	308.8
10°	513.8	489.5	456.9	390.8	349.3	310.7	268.2	233.2	217.0	209.5	208.1
12.5°	560.1	542.1	469.1	396.0	336.3	270.9	201.3	159.8	131.5	129.3	126.3
15°	591.1	578.4	481.2	383.1	281.1	194.7	126.5	97.0	85.7	84.7	83.1
17.5°	639.1	617.0	469.6	342.1	219.8	128.5	85.0	76.6	78.0	81.0	78.6
20°	658.7	615.5	444.5	282.7	154.4	86.2	73.8	69.3	72.8	75.6	74.3
22.5°	678.7	619.8	422.3	233.0	100.9	71.3	65.7	63.4	63.7	66.6	66.8
25°	678.6	631.9	396.5	181.5	75.1	63.4	59.4	56.4	55.2	57.2	56.7
27.5°	711.5	618.0	349.5	134.7	66.1	56.7	52.9	49.2	45.0	47.0	47.0
30°	711.7	640.6	316.7	96.7	60.6	50.5	47.2	41.5	36.6	38.3	38.5
32.5°	730.6	621.0	286.4	73.9	56.2	46.8	39.5	34.3	31.5	32.5	32.5
35°	752.2	637.7	239.9	65.2	51.9	41.7	33.8	29.6	27.4	28.3	28.3
37.5°	823.5	634.2	207.6	60.7	49.0	37.6	30.8	26.1	25.1	25.6	26.3
40°	849.2	659.2	163.8	58.1	44.3	34.0	27.1	23.6	22.3	22.6	22.8
42.5°	914.8	664.7	130.8	55.9	40.2	29.4	24.1	21.6	19.9	19.9	20.4
45°	987.2	678.6	104.1	54.0	36.6	26.4	21.7	19.7	17.2	16.9	17.6
47.5°	1092.1	731.8	84.8	50.4	32.5	24.6	20.1	17.1	15.1	14.4	15.1
50°	1267.6	822.1	75.0	45.8	29.4	23.1	17.7	14.6	13.0	12.2	12.7
52.5°	1515.2	978.2	69.8	41.7	26.8	20.7	15.9	12.7	11.2	10.5	10.9
55°	1790.3	1157.2	67.3	37.5	24.4	18.2	13.9	11.2	9.9	9.0	9.2
57.5°	2044.6	1325.5	64.7	33.5	22.1	16.2	12.2	9.9	8.5	7.7	7.9
60°	2295.2	1459.9	58.7	28.8	19.9	14.6	10.7	8.5	7.7	6.7	6.7
62.5°	2516.9	1540.2	50.0	24.9	17.9	12.9	9.5	7.7	7.0	6.0	6.0
65°	2667.8	1543.8	40.3	21.4	15.7	11.0	8.4	7.2	6.5	5.4	5.2
67.5°	2669.9	1443.5	32.3	19.1	13.9	9.7	7.5	6.9	6.0	5.0	4.7
70°	2389.7	1192.5	26.9	16.7	12.0	8.5	6.5	6.5	5.9	4.9	4.3
72.5°	1911.6	911.3	22.6	14.6	10.7	7.4	6.0	6.2	5.7	4.9	4.3
75°	1284.9	522.6	18.7	12.4	9.4	6.2	5.9	6.0	5.9	4.9	4.2
77.5°	591.7	166.5	14.6	10.2	8.0	5.2	5.7	5.7	5.4	4.3	3.7
80°	133.3	41.0	10.5	7.5	6.5	3.8	5.2	4.7	4.2	3.0	2.2
82.5°	48.5	12.5	6.4	4.7	4.0	1.5	3.3	3.3	3.0	2.2	1.3
85°	27.8	6.5	3.5	3.0	2.2	0.7	1.8	2.0	1.7	1.5	0.7
87.5°	9.0	1.5	1.7	1.8	1.7	0.3	0.7	0.7	0.5	0.3	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)