

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: P367312

Luminaire Tested: **MSA-SA2B-740-U-SL4**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367312
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2B-740-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9703 lumens
Efficiency: N/A
Efficacy: 114.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

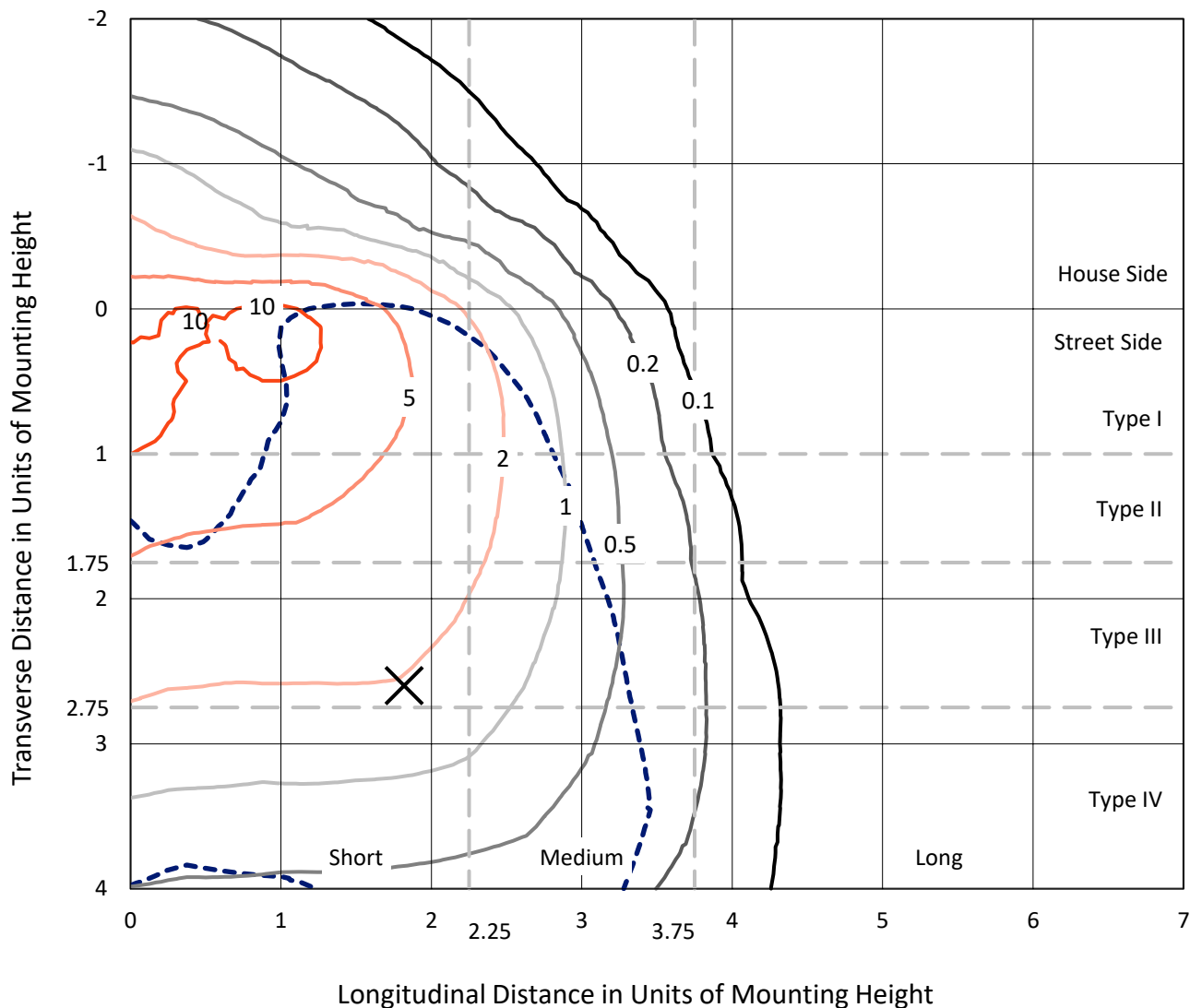
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

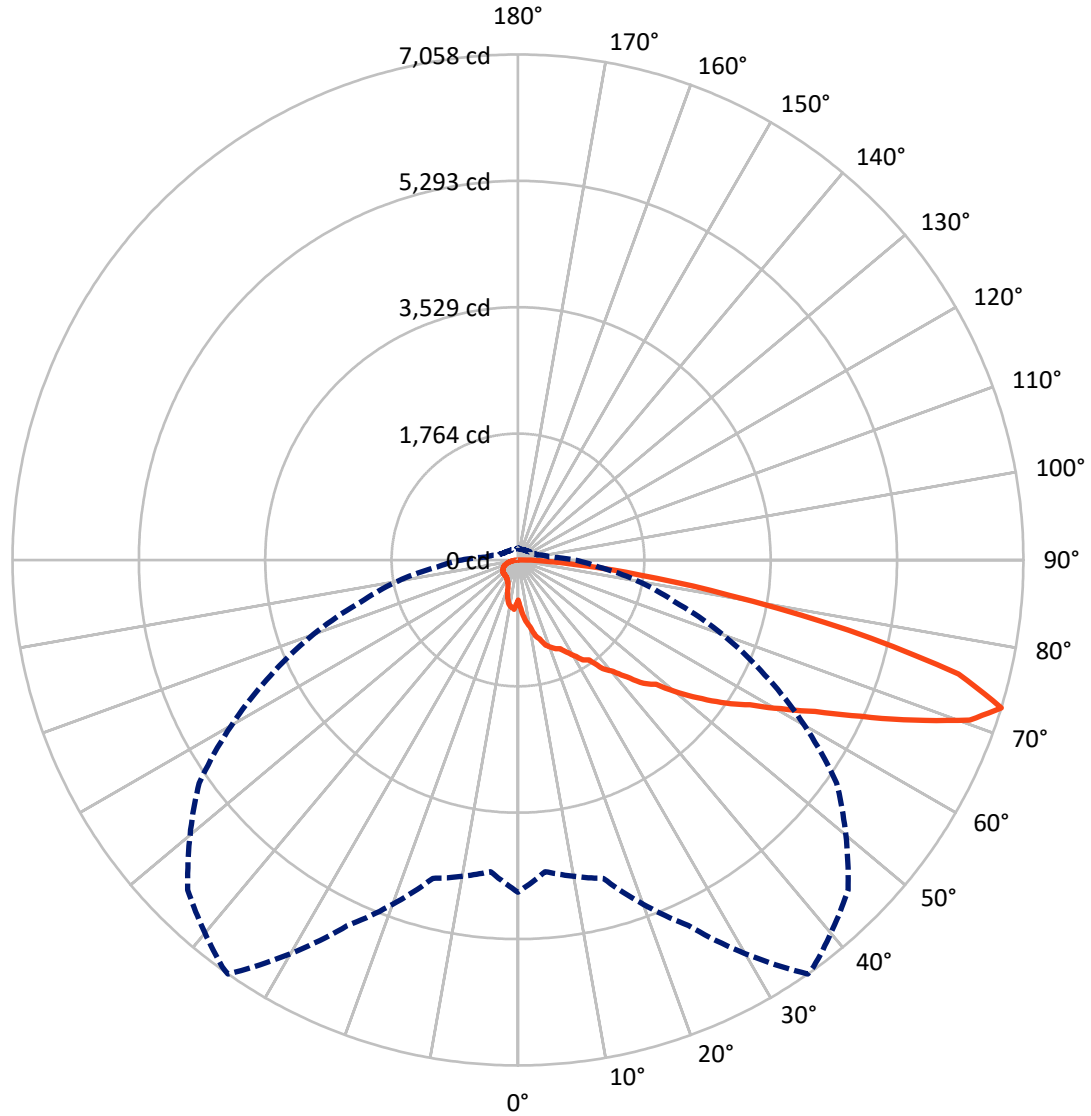
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 12.2 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1302.1	0.0	1302.1
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	8400.9	0.0	8400.9
	% Fixture	86.6	0.0	86.6
Total	Lumens	9703.0	0.0	9703.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.5	0.8
10°-20°	262.5	2.7
20°-30°	456.1	4.7
30°-40°	762.4	7.9
40°-50°	1323.2	13.6
50°-60°	2000.3	20.6
60°-70°	2591.4	26.7
70°-80°	1912.1	19.7
80°-90°	320.5	3.3
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°	9703.0	100.0
0°-180°	9703.0	100.0

Coefficient of Utilization



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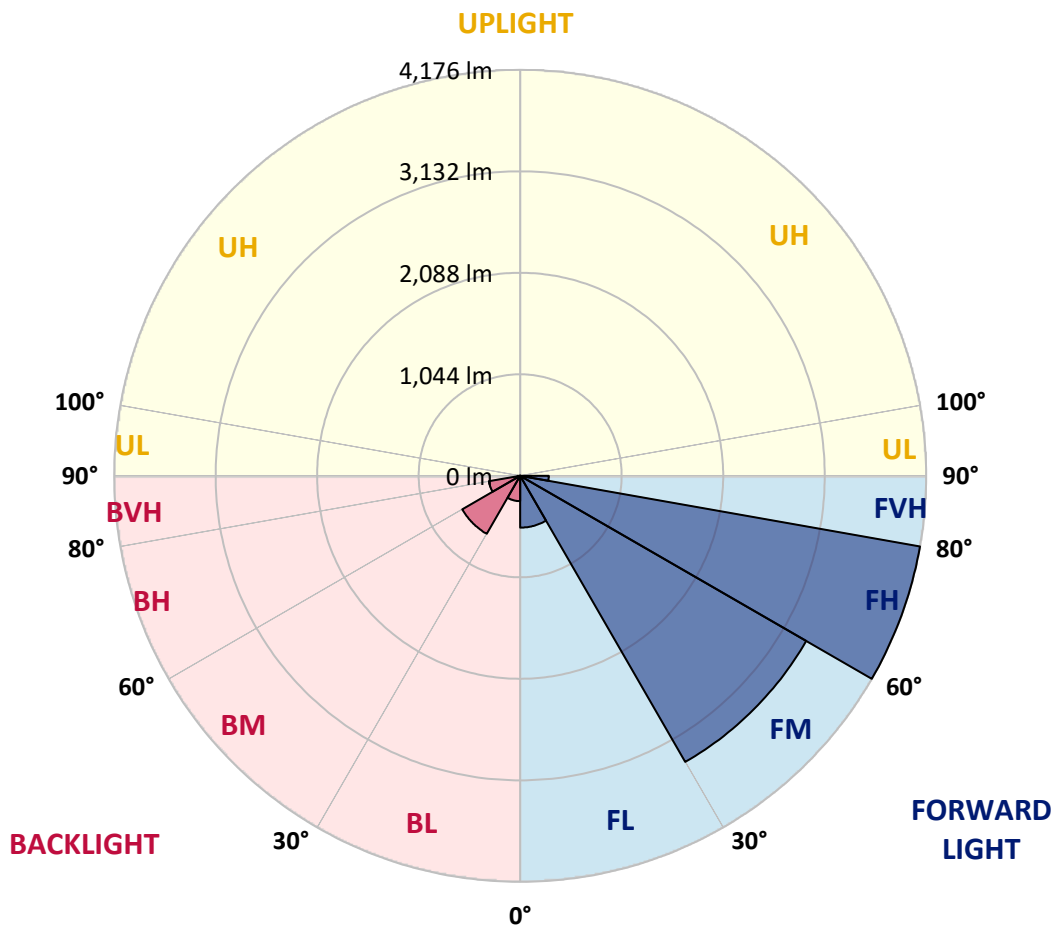
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	532.9	5.5			
FM (30°-60°)	3397.6	35.0			
FH (60°-80°)	4176.1	43.0			G2/5000
FVH (80°-90°)	294.2	3.0			G3/500
BL (0°-30°)	260.3	2.7	B1/500		
BM (30°-60°)	688.2	7.1	B1/1000		
BH (60°-80°)	327.4	3.4	B1/500		G1/500
BVH (80°-90°)	26.2	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	560.7	560.7	560.7	560.7	560.7	560.7	560.7	560.7	560.7	560.7	560.7
2.5°	699.5	665.9	636.9	635.7	662.6	673.0	668.8	659.7	649.0	626.2	675.9
5°	876.3	828.3	819.2	808.4	784.0	790.6	750.8	781.1	790.6	812.5	845.7
7.5°	980.7	952.5	930.6	921.5	879.2	874.2	844.8	887.9	906.1	903.2	952.5
10°	1021.7	996.0	997.7	967.8	954.2	960.0	963.3	964.1	975.3	984.4	959.6
12.5°	1042.8	1052.7	1089.2	1068.9	1086.3	1093.3	1128.1	1092.5	1093.7	1046.9	1072.6
15°	1149.2	1174.1	1153.0	1152.1	1146.7	1158.3	1188.2	1164.1	1182.8	1167.9	1134.7
17.5°	1277.6	1285.1	1244.5	1227.9	1249.4	1245.7	1238.3	1242.0	1195.6	1281.8	1241.2
20°	1317.0	1346.4	1292.9	1227.9	1299.1	1308.7	1307.0	1290.9	1211.3	1335.6	1296.2
22.5°	1431.3	1391.5	1349.3	1307.8	1344.3	1349.7	1340.6	1302.0	1275.5	1322.8	1353.8
25°	1483.0	1473.5	1419.7	1414.7	1374.5	1355.5	1371.2	1360.0	1333.9	1418.0	1383.6
27.5°	1601.5	1590.3	1466.5	1517.4	1459.0	1454.0	1370.8	1408.1	1434.2	1427.9	1479.3
30°	1735.6	1748.5	1567.5	1618.4	1550.9	1541.8	1458.2	1505.4	1523.2	1529.0	1593.2
32.5°	1884.7	1919.9	1740.2	1698.4	1662.3	1668.6	1597.7	1511.6	1580.8	1716.2	1743.9
35°	2046.2	2060.7	1872.3	1809.4	1715.4	1708.7	1710.0	1720.7	1790.7	1945.2	1966.7
37.5°	2344.8	2277.7	2112.5	1953.1	1921.6	1859.9	1901.7	1934.8	2004.8	2241.7	2332.0
40°	2528.7	2479.0	2227.2	2134.9	2047.9	2053.7	2132.0	2131.6	2296.8	2541.1	2679.0
42.5°	2698.9	2644.7	2407.4	2314.6	2232.2	2252.5	2274.9	2314.2	2631.0	3024.9	3087.8
45°	2836.0	2717.1	2546.5	2525.8	2457.9	2431.0	2525.8	2588.8	3030.6	3416.2	3452.7
47.5°	2929.2	2831.5	2664.6	2646.3	2596.2	2662.1	2920.9	2961.5	3340.4	3809.2	3806.3
50°	3070.8	2937.1	2786.3	2776.8	2918.0	2953.2	3268.8	3264.6	3641.9	4135.6	4067.2
52.5°	3234.0	3065.4	2901.9	3004.1	3219.5	3236.9	3510.6	3622.0	3971.2	4450.3	4271.8
55°	3421.6	3233.2	3075.0	3211.6	3532.2	3480.8	3757.9	4030.0	4383.2	4782.0	4419.7
57.5°	3653.9	3425.3	3297.4	3505.2	3817.5	3863.1	4112.0	4454.5	4714.9	4988.3	4527.3
60°	3899.1	3630.7	3513.5	3711.5	4217.2	4269.3	4512.8	4807.3	5086.8	5182.5	4507.0
62.5°	4133.1	3842.8	3736.8	3981.1	4660.3	4789.5	4969.2	5156.8	5396.2	5229.7	4261.5
65°	4393.6	4102.8	4036.2	4402.7	5261.2	5389.6	5624.4	5568.1	5502.2	5062.4	3855.2
67.5°	4669.4	4374.1	4386.5	4891.8	5969.8	5991.7	6352.4	5978.1	5377.6	4619.3	3173.1
70°	4817.6	4515.3	4643.3	5413.2	6690.8	6659.3	6733.0	6088.2	4869.4	3651.4	2187.1
72.5°	4637.9	4368.3	4602.7	5632.7	7057.7	7023.8	6519.3	5434.3	3807.2	2270.7	1133.9
75°	3926.8	3666.8	4025.4	5021.0	6353.7	6385.2	5548.2	4041.1	2179.6	913.2	470.9
77.5°	2668.3	2534.1	2841.4	3742.5	4719.5	4828.4	4116.5	2363.1	915.2	378.1	284.9
80°	1410.1	1346.4	1573.3	2156.0	2988.4	3069.6	2420.6	1177.0	468.8	244.8	203.3
82.5°	766.2	739.2	861.0	1108.6	1698.0	1768.8	1255.2	781.9	316.0	153.2	124.2
85°	514.8	504.4	585.2	595.5	803.0	826.2	657.6	602.2	189.7	75.0	82.0
87.5°	257.6	247.2	308.1	272.1	306.5	306.9	301.5	384.3	48.0	24.8	14.9
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°	560.7	560.7	560.7	560.7	560.7	560.7	560.7	560.7	560.7	560.7	560.7
2.5°	676.7	662.2	612.1	611.7	619.1	614.2	617.9	597.6	588.9	628.7	626.6
5°	841.1	797.6	755.8	741.3	724.3	687.5	689.5	690.0	683.7	707.3	709.0
7.5°	937.6	885.4	846.9	769.9	709.4	662.2	668.4	675.5	668.4	699.9	711.5
10°	951.7	910.3	864.3	778.6	738.4	695.7	652.7	614.6	610.0	595.5	600.1
12.5°	1035.3	1001.0	904.9	810.9	764.1	698.6	620.0	576.5	540.0	546.2	534.6
15°	1104.1	1079.7	964.5	841.5	729.7	648.5	564.9	505.2	472.5	468.8	457.2
17.5°	1197.3	1162.5	969.9	820.4	685.4	588.1	493.7	426.1	412.1	406.3	400.5
20°	1242.0	1179.5	950.4	754.1	633.6	516.0	423.2	365.3	361.1	371.5	369.4
22.5°	1280.9	1193.5	933.0	714.0	552.9	443.1	375.2	337.1	332.6	345.8	348.3
25°	1303.7	1233.7	914.0	673.0	502.8	388.9	339.2	317.6	318.5	335.9	333.8
27.5°	1406.4	1247.8	866.0	624.5	445.2	348.7	321.8	310.6	306.0	330.1	332.1
30°	1471.0	1339.7	855.2	573.2	402.5	319.3	306.0	301.5	300.7	329.7	331.7
32.5°	1591.1	1370.4	860.2	517.3	364.0	310.2	294.5	294.0	302.3	330.1	333.4
35°	1757.6	1499.6	836.1	485.4	342.9	296.1	285.3	288.7	302.7	333.0	337.5
37.5°	2082.3	1621.3	843.6	455.5	335.9	291.6	282.9	284.9	307.7	340.4	352.8
40°	2339.5	1842.1	832.0	440.6	326.3	290.7	277.5	285.8	307.3	344.6	355.7
42.5°	2712.2	2018.1	833.2	425.7	325.9	287.4	276.6	286.6	306.5	340.8	356.2
45°	3031.9	2175.9	851.1	417.0	321.8	292.8	275.4	287.8	301.1	327.6	344.6
47.5°	3294.0	2351.9	869.3	408.8	320.1	297.8	274.2	279.1	292.0	312.7	328.0
50°	3507.7	2475.7	892.5	407.1	320.1	295.3	270.8	270.4	281.2	297.8	312.3
52.5°	3674.2	2563.1	908.2	409.2	320.1	285.8	266.7	263.4	270.0	282.0	296.5
55°	3794.7	2590.0	895.4	414.6	319.7	277.1	259.2	256.4	259.7	267.9	281.6
57.5°	3843.2	2519.2	818.7	405.0	319.7	270.8	250.1	246.8	250.1	256.4	270.0
60°	3721.8	2291.4	708.2	380.6	313.5	262.6	239.8	237.7	242.7	248.1	261.3
62.5°	3417.5	1988.7	590.1	351.6	300.7	255.5	229.8	230.3	238.1	245.6	258.8
65°	2944.5	1622.6	492.0	322.2	284.5	244.3	219.5	222.4	233.6	243.5	256.8
67.5°	2317.1	1202.2	414.1	293.6	261.7	226.1	207.9	208.7	216.6	226.1	239.0
70°	1548.9	764.9	340.4	260.1	231.9	202.5	190.1	187.2	185.1	193.4	204.6
72.5°	785.6	451.8	279.5	222.4	199.6	176.8	167.3	159.9	154.1	159.0	167.7
75°	411.7	316.0	225.7	184.7	164.8	150.3	143.3	133.4	129.2	132.1	138.3
77.5°	291.1	247.2	182.6	146.2	134.2	119.3	120.5	110.2	106.8	108.5	115.1
80°	223.6	195.9	140.4	110.6	103.5	89.0	93.2	87.0	82.8	82.0	87.0
82.5°	152.4	147.4	99.8	77.4	72.5	62.1	67.9	65.4	60.0	56.7	59.2
85°	102.7	97.7	60.9	44.7	42.7	32.3	41.4	39.8	35.2	30.2	30.6
87.5°	17.8	32.7	17.4	11.2	10.4	3.7	9.5	9.1	8.3	4.1	3.3
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)