

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: P367893

Luminaire Tested: **MSA-SA3B-760-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367893
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3B-760-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11008 lumens
Efficiency: N/A
Efficacy: 87.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

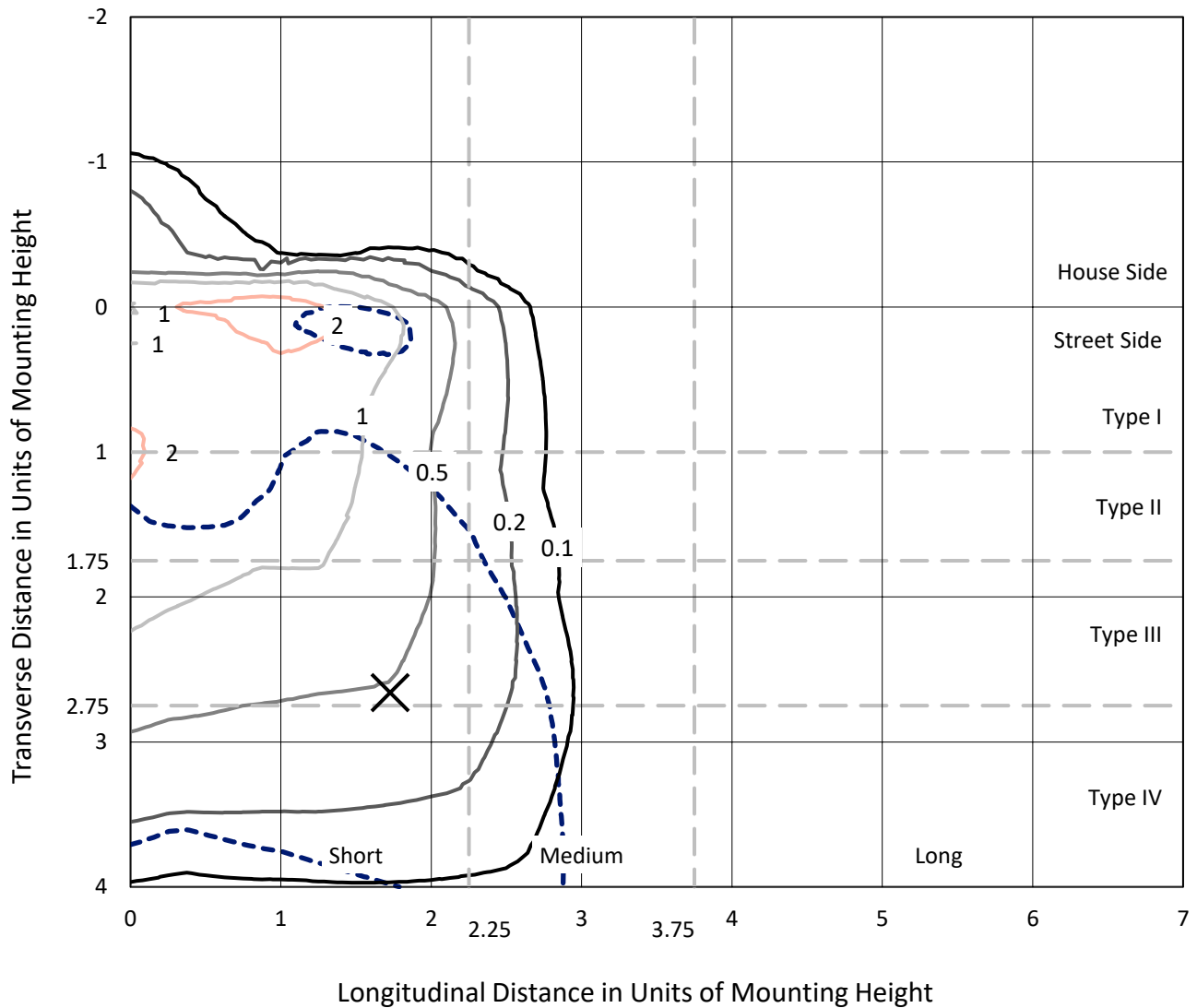
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

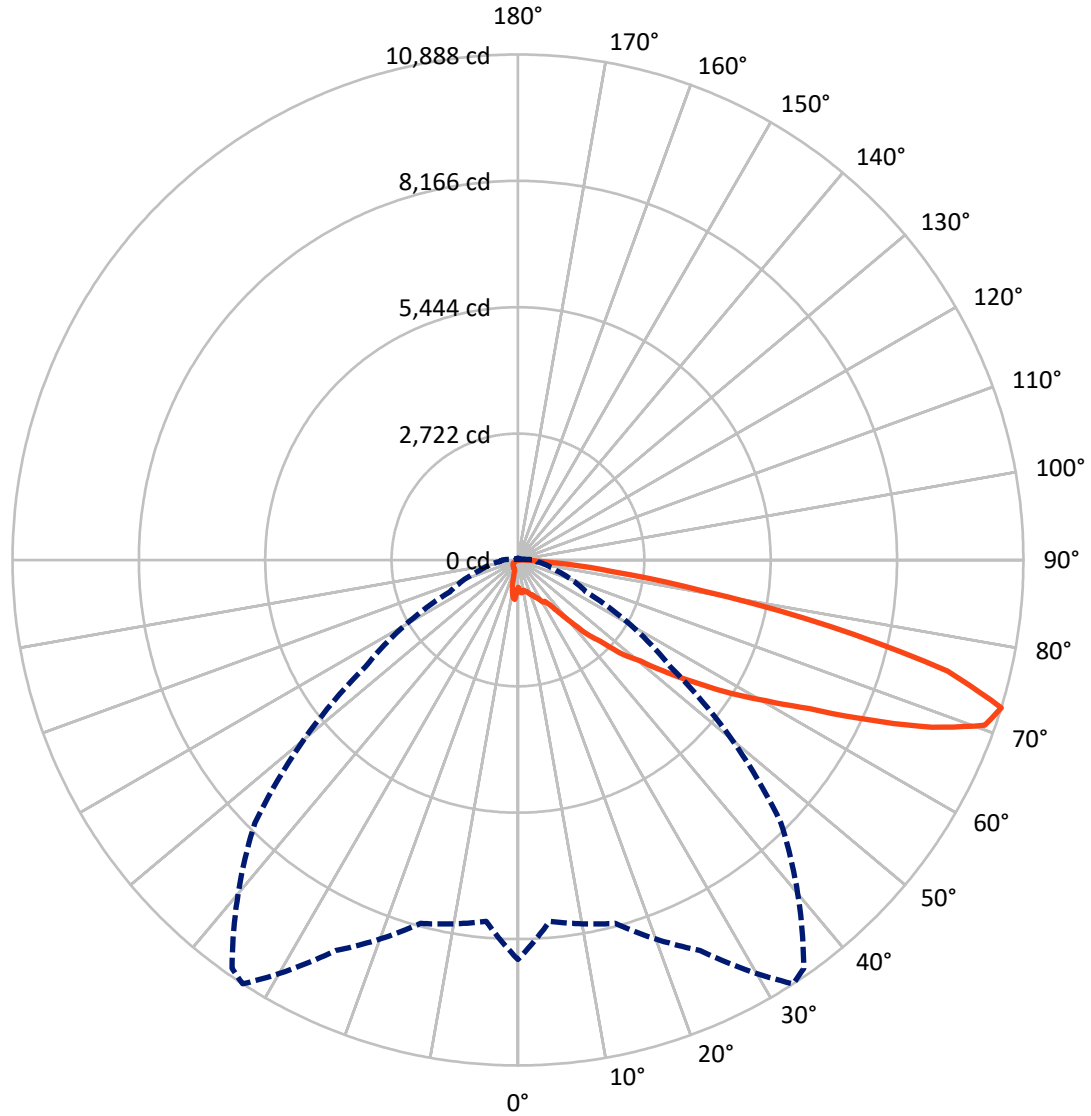
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1017.8	0.0	1017.8
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	9990.2	0.0	9990.2
	% Fixture	90.8	0.0	90.8
Total	Lumens	11008.0	0.0	11008.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.8	0.7
10°-20°	225.8	2.1
20°-30°	383.0	3.5
30°-40°	700.9	6.4
40°-50°	1479.2	13.4
50°-60°	2474.9	22.5
60°-70°	3312.7	30.1
70°-80°	2163.9	19.7
80°-90°	191.8	1.7
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°	11008.0	100.0
0°-180°	11008.0	100.0

Coefficient of Utilization



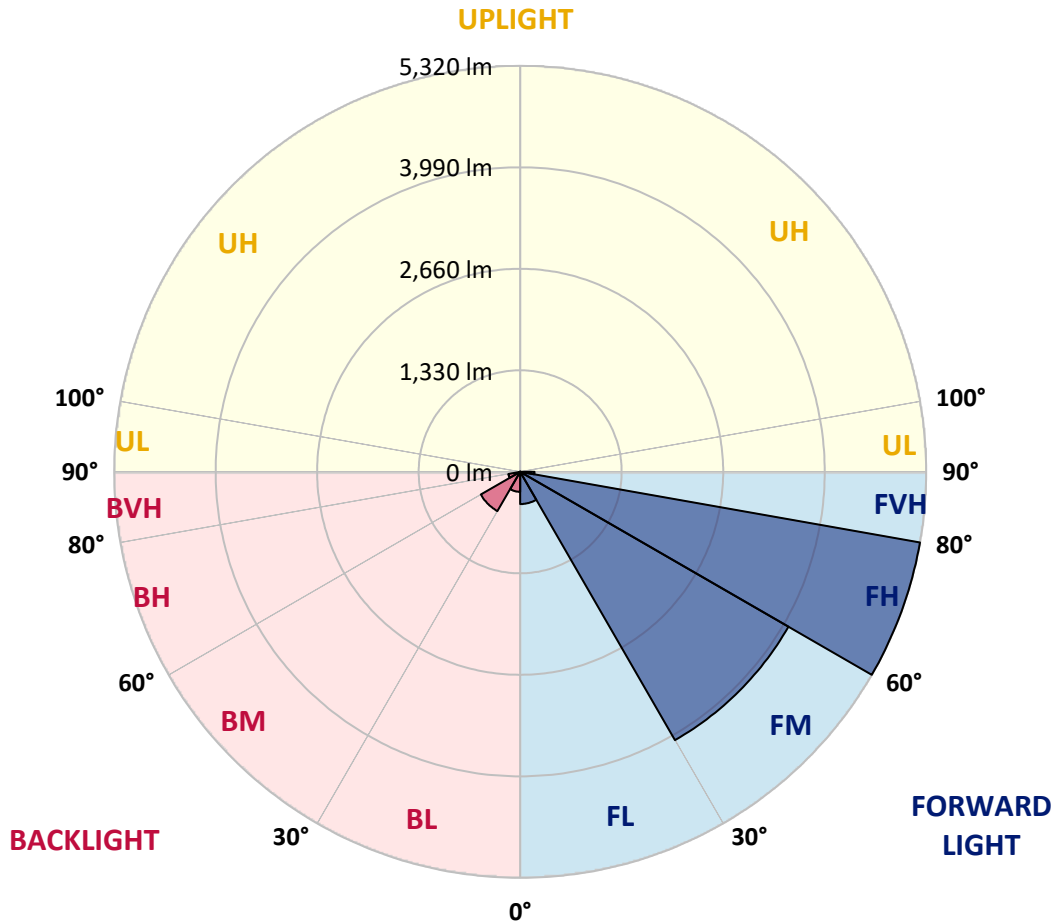
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	422.6	3.8			
FM (30°-60°)	4059.9	36.9			
FH (60°-80°)	5319.5	48.3			G3/7500
FVH (80°-90°)	188.1	1.7			G2/225
BL (0°-30°)	262.0	2.4	B1/500		
BM (30°-60°)	595.0	5.4	B1/1000		
BH (60°-80°)	157.1	1.4	B1/500		G1/500
BVH (80°-90°)	3.7	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-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5
2.5°	698.0	671.1	631.9	634.4	641.1	646.6	661.3	655.2	643.6	642.9	698.0
5°	739.5	709.6	707.1	710.8	709.0	718.7	706.5	746.2	779.8	820.2	885.0
7.5°	719.3	705.3	687.6	705.9	705.3	700.4	708.3	789.0	870.3	921.6	1028.6
10°	661.3	645.4	658.8	664.9	660.7	682.1	735.2	801.2	898.4	1006.0	1057.9
12.5°	644.8	654.6	659.4	659.4	700.4	711.4	792.7	855.0	970.5	1055.5	1206.4
15°	709.0	727.9	694.3	687.0	699.8	705.9	796.4	871.5	1019.4	1174.7	1301.2
17.5°	811.0	809.8	757.8	729.1	749.3	764.0	814.1	902.1	988.9	1268.2	1451.5
20°	881.3	882.5	789.0	729.1	795.7	804.3	859.9	930.2	998.6	1315.2	1549.9
22.5°	971.8	939.4	836.1	778.0	823.2	831.2	892.3	947.9	1048.8	1309.7	1675.8
25°	1045.7	1024.9	894.7	854.4	894.7	883.7	939.4	1023.1	1102.5	1397.1	1749.8
27.5°	1160.6	1125.2	936.3	943.6	941.2	949.1	962.0	1090.3	1197.3	1401.4	1920.9
30°	1267.6	1246.8	1029.2	1029.2	1053.0	1037.8	1046.9	1202.2	1289.0	1500.4	2113.4
32.5°	1378.2	1379.4	1138.6	1080.5	1061.6	1124.5	1186.3	1256.6	1399.6	1670.3	2408.0
35°	1670.9	1646.5	1348.2	1203.4	1188.1	1184.4	1283.5	1473.5	1595.8	1891.6	2804.6
37.5°	2260.7	2175.8	1799.3	1482.1	1424.6	1405.1	1517.5	1712.5	1834.1	2216.7	3460.4
40°	2865.8	2709.9	2291.9	1934.3	1747.9	1663.6	1794.4	1960.0	2176.4	2576.1	4067.3
42.5°	3396.9	3204.3	2662.9	2422.1	2179.4	2142.8	2019.9	2289.4	2665.3	3099.2	4662.0
45°	3914.5	3535.6	2992.9	2802.2	2507.6	2528.4	2486.8	2720.3	3173.2	3672.5	5189.4
47.5°	4270.8	3930.4	3397.5	3150.0	3032.0	2910.4	3240.4	3483.0	3625.4	4036.8	5645.3
50°	4654.6	4309.9	3745.2	3572.3	3417.0	3539.9	3968.3	4000.7	3989.1	4376.6	5955.8
52.5°	5150.3	4743.9	4144.3	3948.7	4036.8	4159.0	4653.4	4659.5	4312.4	4662.6	6179.5
55°	5608.7	5158.2	4676.0	4491.5	4675.4	4778.7	5326.9	5125.9	4500.6	4856.9	6289.5
57.5°	6254.7	5733.4	5383.2	5058.0	5430.8	5331.8	5919.1	5620.3	4712.1	4985.9	6249.2
60°	7071.2	6457.6	6106.8	5762.7	6162.4	6229.6	6497.3	5867.2	4794.0	5028.1	6006.5
62.5°	7901.8	7284.5	6823.1	6589.6	7043.1	7264.3	7032.7	5990.0	4695.6	4945.6	5457.1
65°	8932.2	8142.0	7602.9	7466.0	8306.4	8631.5	7665.9	6020.0	4505.5	4491.5	4387.6
67.5°	9638.1	8868.6	8374.2	8603.4	9618.5	9644.8	8234.2	6029.2	3865.6	3516.7	2879.8
70°	9805.6	8981.7	8760.5	9435.2	10665.5	10334.8	8417.6	5564.7	2867.0	2087.1	1316.5
72.5°	8607.7	7814.4	8102.2	9278.1	10887.9	10736.4	8012.4	4014.8	1614.1	834.9	404.0
75°	5279.9	4800.1	6078.1	7866.3	9557.4	9459.6	6251.0	2074.3	650.3	333.7	151.0
77.5°	2296.2	2132.4	3172.0	5219.4	6867.7	6780.3	3662.7	764.0	336.1	234.7	76.4
80°	759.7	737.1	1201.6	2471.6	4022.7	3945.7	1543.2	317.8	239.6	188.2	42.8
82.5°	180.3	179.1	419.3	1137.4	2049.2	1985.1	473.7	175.4	173.6	148.5	22.6
85°	45.2	46.4	116.1	465.1	832.4	734.0	123.5	87.4	122.2	100.8	11.6
87.5°	0.0	0.0	29.9	66.6	125.9	78.8	13.4	23.2	34.2	36.1	6.1
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°	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5	585.5
2.5°	710.2	703.5	648.4	661.9	682.7	680.8	694.3	683.9	674.7	720.0	715.7
5°	903.3	866.6	849.5	873.4	860.5	830.6	855.6	851.4	844.0	859.3	870.9
7.5°	1048.2	1014.5	999.3	949.1	876.4	819.0	828.1	806.7	786.6	810.4	834.9
10°	1095.8	1077.5	1075.7	977.9	909.4	826.3	727.9	642.9	620.3	590.4	603.8
12.5°	1225.4	1236.4	1167.3	1053.0	921.0	761.5	586.7	466.3	417.4	385.6	387.5
15°	1331.7	1370.2	1270.0	1064.7	810.4	580.6	390.5	282.4	251.8	243.9	241.4
17.5°	1490.0	1527.3	1301.8	982.1	653.3	393.6	251.2	220.0	221.9	227.4	226.1
20°	1607.4	1601.9	1274.3	836.1	481.6	257.9	210.2	206.0	215.7	231.6	228.0
22.5°	1720.4	1682.5	1257.2	701.0	311.7	207.2	202.9	202.3	211.5	226.7	231.0
25°	1801.1	1807.2	1228.4	548.8	226.7	192.5	196.2	201.7	210.9	227.4	224.9
27.5°	2032.1	1861.0	1108.7	398.5	191.3	184.6	193.7	204.7	207.8	228.6	229.2
30°	2181.9	2063.9	1030.4	268.3	176.6	170.5	188.9	203.5	207.2	234.1	235.9
32.5°	2442.8	2151.3	940.0	199.2	164.4	166.2	177.8	197.4	214.5	243.2	244.5
35°	2767.4	2431.8	776.2	179.1	160.1	157.1	162.6	185.2	213.3	244.5	250.6
37.5°	3385.3	2599.9	615.4	173.6	160.1	154.6	160.1	173.6	209.6	256.7	269.5
40°	3799.0	2942.2	443.7	172.3	157.1	152.2	154.0	167.5	199.2	249.4	268.3
42.5°	4308.7	3086.4	327.0	169.3	154.0	146.7	147.9	165.0	188.9	234.1	248.1
45°	4726.2	3191.5	257.3	168.1	146.7	144.2	146.7	163.2	179.1	201.1	213.9
47.5°	5043.3	3313.7	206.6	160.1	144.8	144.2	141.2	152.8	162.6	168.1	176.6
50°	5275.6	3286.2	171.1	147.9	138.7	142.4	136.9	138.7	141.2	138.1	147.9
52.5°	5418.0	3187.2	142.4	133.2	131.4	134.5	127.7	122.2	118.0	115.5	121.6
55°	5469.9	2988.6	121.0	114.3	118.6	119.8	114.3	104.5	97.2	93.5	98.4
57.5°	5371.5	2686.1	105.1	94.7	104.5	104.5	97.2	86.8	78.2	72.1	77.0
60°	5122.2	2351.8	93.5	78.8	89.2	89.8	81.3	70.3	63.6	57.4	60.5
62.5°	4657.7	1987.5	81.9	68.5	77.0	77.6	67.2	56.8	51.9	45.2	47.7
65°	3728.7	1520.0	69.7	60.5	66.6	64.8	55.6	48.3	42.2	36.1	37.3
67.5°	2420.2	938.1	60.5	55.0	56.2	54.4	47.1	42.2	35.4	30.6	31.2
70°	1083.6	404.0	53.2	49.5	48.9	45.8	39.7	39.1	34.8	30.6	30.6
72.5°	334.3	152.2	45.8	44.6	42.2	38.5	34.8	37.3	34.2	29.3	28.7
75°	132.0	69.7	37.9	37.9	36.7	31.8	31.2	33.6	31.8	26.9	25.7
77.5°	69.1	44.0	31.2	32.4	31.8	24.4	28.1	30.6	29.3	22.6	18.9
80°	40.9	26.9	23.2	26.3	25.7	17.1	21.4	19.6	14.1	6.7	1.8
82.5°	22.6	12.2	10.4	15.3	15.3	6.1	11.0	9.8	5.5	0.0	0.0
85°	11.0	8.6	7.9	8.6	6.1	1.8	5.5	5.5	3.1	0.0	0.0
87.5°	5.5	4.9	3.7	3.1	2.4	0.0	1.8	2.4	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)