

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: P367311

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

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367311  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)  
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-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8238 lumens  
Efficiency: N/A  
Efficacy: 96.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

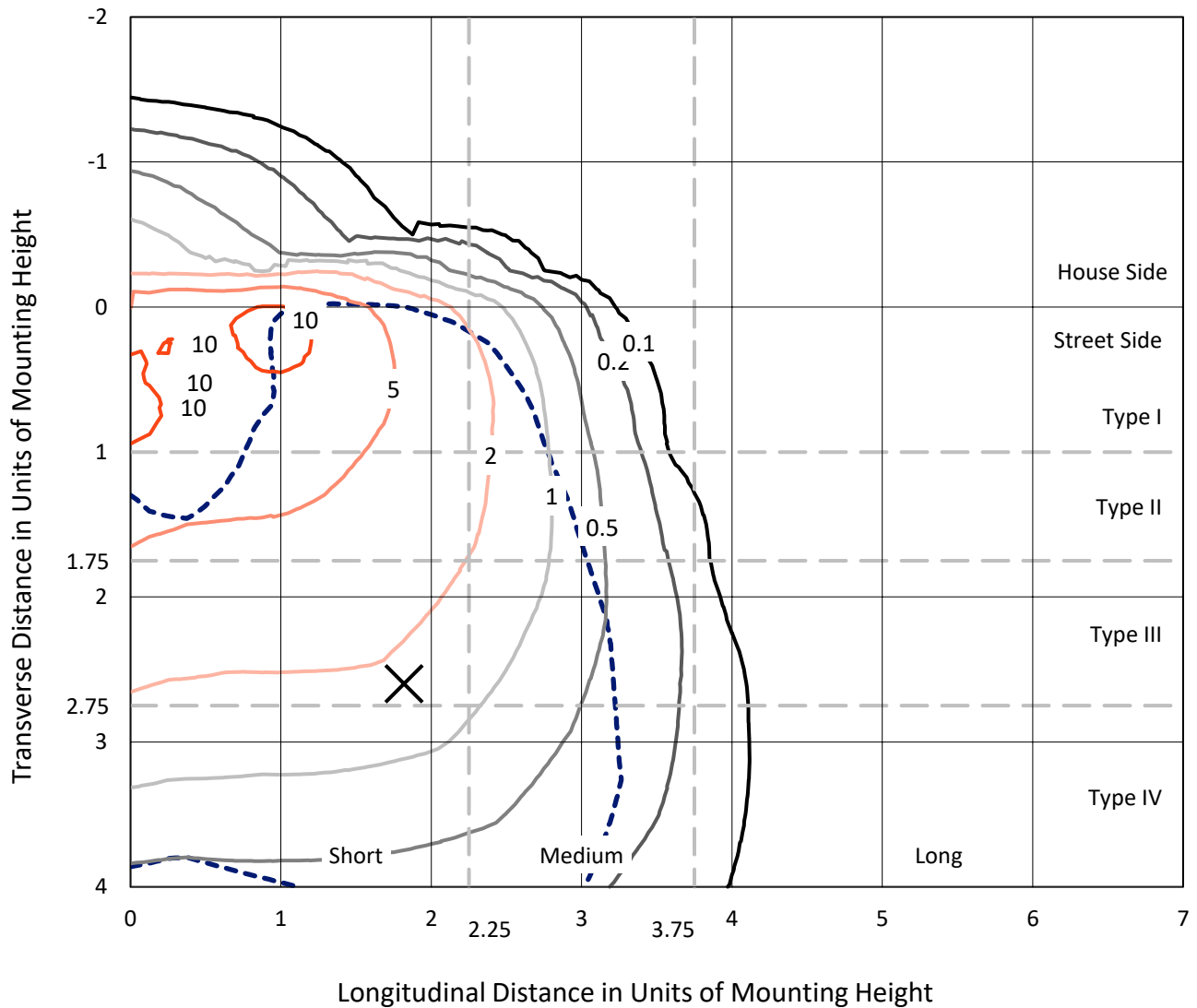
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

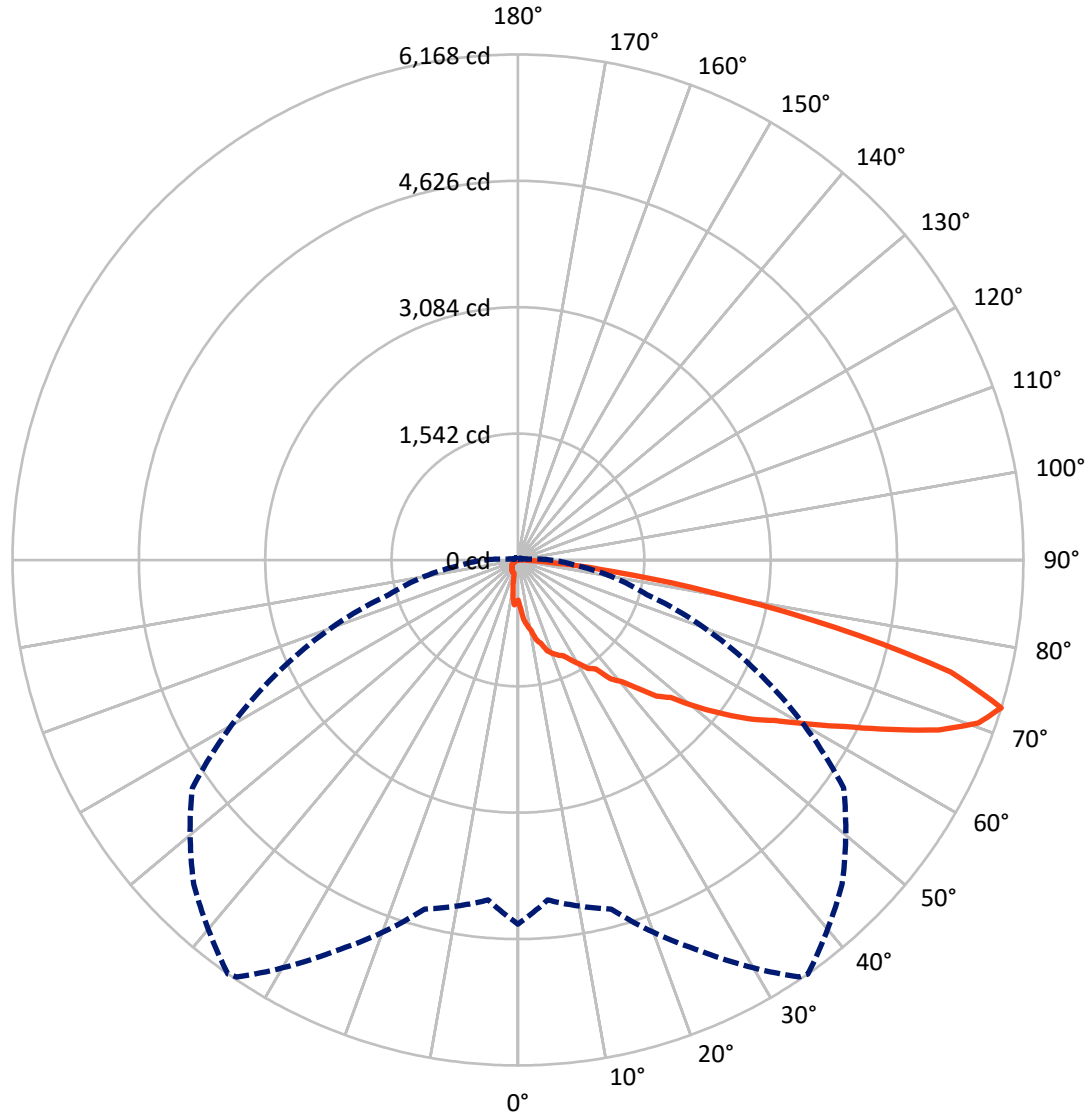
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.7 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
<b>House Side</b>	Lumens	642.6	0.0	642.6
	% Fixture	7.8	0.0	7.8
<b>Street Side</b>	Lumens	7595.5	0.0	7595.5
	% Fixture	92.2	0.0	92.2
<b>Total</b>	Lumens	8238.0	0.0	8238.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.6	0.8
10°-20°	210.8	2.6
20°-30°	383.9	4.7
30°-40°	662.2	8.0
40°-50°	1177.2	14.3
50°-60°	1756.7	21.3
60°-70°	2244.4	27.2
70°-80°	1561.5	19.0
80°-90°	178.6	2.2
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°	8238.0	100.0
0°-180°	8238.0	100.0

**Coefficient of Utilization**



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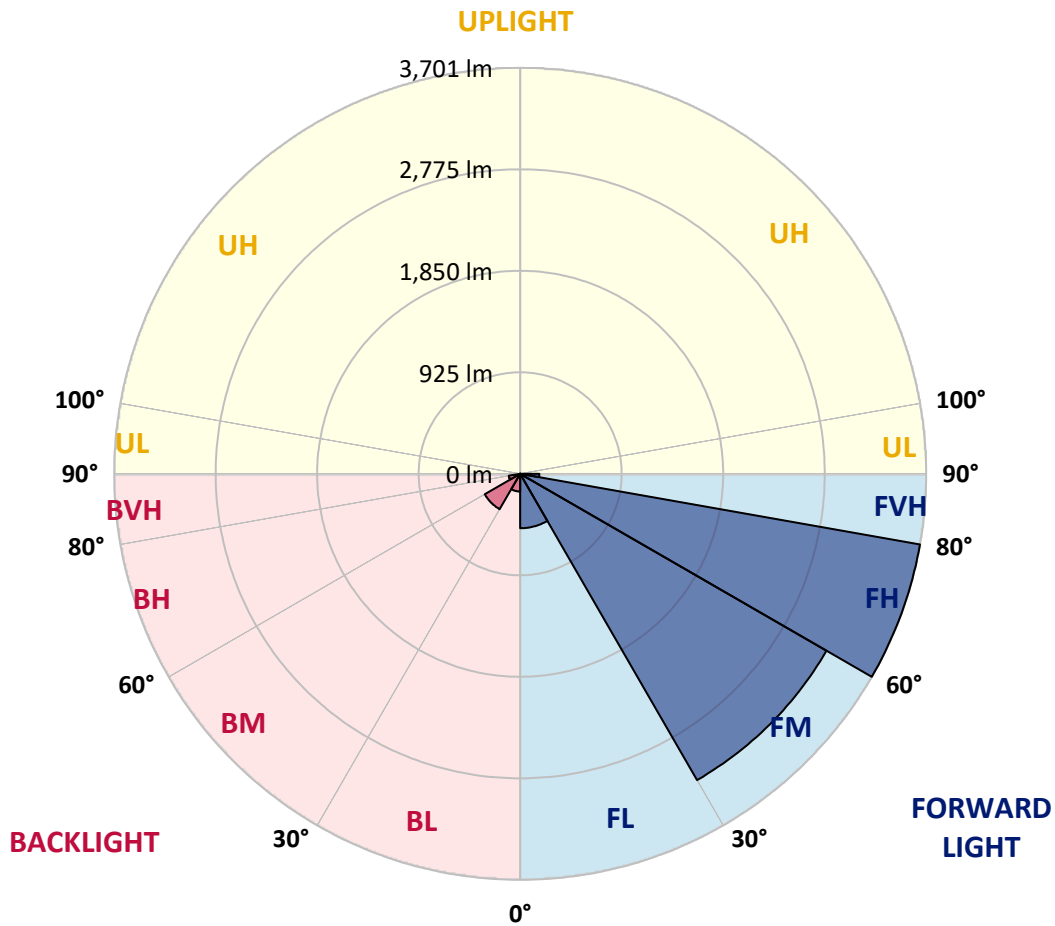
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	495.7	6.0			
FM (30°-60°)	3223.6	39.1			
FH (60°-80°)	3700.5	44.9			G2/5000
FVH (80°-90°)	175.6	2.1			G2/225
BL (0°-30°)	161.6	2.0	B1/500		
BM (30°-60°)	372.6	4.5	B1/1000		
BH (60°-80°)	105.3	1.3	B0/110		G0/110
BVH (80°-90°)	3.0	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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	490.7	490.7	490.7	490.7	490.7	490.7	490.7	490.7	490.7	490.7	490.7
2.5°	624.5	600.1	560.3	563.2	581.0	584.7	590.1	576.0	563.6	541.7	584.3
5°	800.1	764.9	742.5	735.5	725.1	726.0	700.7	709.8	707.3	723.5	742.9
7.5°	899.1	879.6	851.4	843.6	805.5	801.3	770.3	812.1	816.2	810.4	842.3
10°	938.4	912.7	916.0	886.6	867.6	872.6	877.5	880.8	886.2	891.6	852.7
12.5°	961.6	966.2	1011.3	980.6	999.7	999.7	1033.2	997.6	998.9	959.9	966.6
15°	1066.0	1091.2	1070.9	1070.5	1049.8	1055.2	1094.1	1066.0	1080.4	1068.9	1024.1
17.5°	1196.8	1201.8	1163.3	1146.3	1164.9	1165.3	1148.8	1147.5	1097.0	1182.3	1128.1
20°	1238.6	1266.8	1212.1	1145.9	1223.3	1219.6	1218.4	1198.9	1114.8	1233.3	1188.5
22.5°	1352.5	1312.4	1275.1	1231.6	1261.8	1261.8	1257.3	1214.6	1181.9	1228.7	1247.8
25°	1388.1	1393.1	1344.7	1330.6	1331.4	1294.1	1290.8	1272.6	1241.1	1321.1	1283.0
27.5°	1510.7	1508.7	1392.3	1431.6	1381.5	1381.9	1290.4	1331.4	1336.8	1325.6	1368.3
30°	1631.2	1664.8	1489.2	1538.9	1486.3	1470.6	1381.1	1417.5	1427.1	1414.2	1468.1
32.5°	1784.9	1834.2	1663.5	1614.7	1534.3	1579.1	1517.3	1431.2	1478.4	1593.1	1623.4
35°	1947.6	1971.6	1789.8	1721.5	1630.8	1630.4	1628.3	1635.4	1687.6	1816.8	1842.4
37.5°	2240.0	2183.3	2018.9	1862.3	1882.6	1837.5	1806.0	1839.1	1893.4	2106.2	2216.0
40°	2403.2	2362.2	2130.7	2037.9	1937.3	1953.8	2039.1	2035.4	2179.9	2402.7	2567.2
42.5°	2561.8	2522.8	2295.1	2220.1	2090.9	2136.0	2173.3	2220.5	2516.6	2876.1	2966.4
45°	2703.0	2588.7	2428.0	2430.9	2363.8	2369.2	2435.0	2478.5	2906.7	3275.3	3338.7
47.5°	2788.3	2694.3	2540.2	2537.3	2533.2	2507.9	2818.1	2857.9	3217.7	3655.5	3661.3
50°	2908.4	2790.8	2655.8	2658.3	2753.9	2807.3	3177.6	3173.4	3518.0	3972.7	3838.9
52.5°	3057.9	2914.2	2765.5	2876.1	3023.9	3110.9	3411.6	3534.1	3840.6	4171.9	3908.5
55°	3249.2	3069.5	2926.2	3067.8	3390.4	3424.0	3640.6	3899.4	4192.2	4375.2	3930.9
57.5°	3473.7	3259.2	3143.2	3371.4	3693.2	3694.0	3973.9	4288.7	4407.9	4458.0	3905.6
60°	3715.5	3465.4	3348.6	3554.0	4026.9	4060.9	4344.6	4503.6	4627.0	4499.9	3860.5
62.5°	3928.4	3652.2	3561.5	3802.9	4393.0	4473.4	4667.6	4644.8	4785.2	4552.5	3745.7
65°	4181.8	3894.0	3834.4	4190.9	4870.9	4981.5	5030.4	4895.4	4838.2	4511.9	3447.2
67.5°	4432.8	4163.6	4161.9	4621.2	5497.5	5535.6	5484.2	5248.6	4776.5	4154.1	2900.1
70°	4609.6	4320.6	4429.5	5092.5	6066.9	5960.1	5743.9	5415.5	4330.9	3183.8	1894.6
72.5°	4443.5	4164.8	4410.4	5260.2	6137.3	6168.0	5593.6	4851.0	3217.7	1628.3	685.8
75°	3376.8	3206.1	3829.4	4666.8	5449.0	5456.1	4668.8	3421.5	1584.4	442.3	189.7
77.5°	1700.8	1646.6	2423.9	3313.0	3975.6	3964.0	3207.8	1832.9	509.8	147.0	95.7
80°	861.0	817.5	1031.6	1787.4	2360.9	2378.3	1831.7	820.8	257.2	79.9	66.3
82.5°	528.8	501.9	564.5	808.8	1145.9	1173.6	694.9	519.7	159.4	47.2	60.5
85°	102.3	107.7	324.3	405.0	457.6	446.8	205.8	427.8	48.0	28.2	43.9
87.5°	0.0	1.7	75.0	132.1	132.5	117.6	46.8	94.8	6.6	7.9	5.4
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°	490.7	490.7	490.7	490.7	490.7	490.7	490.7	490.7	490.7	490.7	490.7
2.5°	591.4	585.2	533.4	527.6	528.8	520.1	517.2	499.0	494.5	522.6	527.6
5°	734.7	693.2	645.2	627.8	600.9	555.3	548.7	537.1	524.3	529.3	525.5
7.5°	822.4	767.4	716.0	624.5	548.7	482.5	471.7	451.8	431.9	432.3	445.2
10°	836.5	790.1	719.3	607.9	521.4	438.6	366.5	314.3	290.7	269.6	275.8
12.5°	918.1	875.0	744.6	603.0	481.6	352.4	258.0	207.1	184.7	177.2	176.4
15°	983.5	949.6	787.7	587.6	393.4	248.1	184.7	169.8	165.6	172.7	170.6
17.5°	1080.9	1019.6	783.1	524.3	299.8	188.4	170.2	168.1	173.1	177.2	178.5
20°	1123.5	1035.3	752.0	424.9	224.5	172.7	166.1	161.9	171.0	183.5	181.0
22.5°	1166.6	1062.2	715.6	347.9	180.6	165.2	161.5	158.2	165.2	177.2	180.1
25°	1186.1	1105.3	675.0	271.7	167.7	156.5	154.1	155.3	161.1	171.9	170.6
27.5°	1284.2	1110.3	597.6	214.5	162.3	150.3	150.3	153.2	153.2	167.7	166.5
30°	1345.5	1194.3	534.6	180.6	156.1	141.6	146.6	147.8	145.8	161.5	162.8
32.5°	1453.2	1217.5	473.3	165.6	146.2	140.4	139.6	140.4	142.0	157.4	157.8
35°	1618.8	1331.8	389.7	159.9	141.2	134.2	128.4	132.9	137.1	148.3	150.3
37.5°	1942.7	1449.0	317.6	155.3	138.7	128.4	126.3	125.5	132.9	145.8	149.9
40°	2204.8	1656.5	258.4	151.6	133.8	125.1	119.7	120.1	126.7	136.2	142.5
42.5°	2575.8	1806.4	219.1	145.8	126.7	118.0	111.8	115.5	118.4	128.4	132.5
45°	2885.6	1922.8	193.0	142.0	119.7	111.4	106.4	110.6	107.7	112.6	118.4
47.5°	3132.0	2024.2	173.5	132.9	115.1	107.7	101.5	100.2	95.2	96.5	101.9
50°	3267.4	2007.3	157.4	123.8	109.3	103.9	95.2	86.6	79.9	79.5	82.8
52.5°	3315.5	1916.6	144.1	116.0	102.3	95.7	85.7	73.7	67.1	65.0	67.9
55°	3328.7	1786.1	132.1	107.3	95.7	85.3	75.0	62.1	55.1	51.8	54.7
57.5°	3285.7	1585.3	120.5	99.0	87.8	75.4	64.2	50.9	44.3	40.2	42.7
60°	3179.2	1330.2	110.2	88.6	79.5	66.7	54.3	41.0	34.0	30.2	31.5
62.5°	2943.6	1042.8	99.0	79.1	70.8	58.4	45.6	32.3	25.7	22.4	22.8
65°	2585.0	777.3	86.1	70.0	62.9	50.5	36.4	24.8	19.5	16.6	16.2
67.5°	2059.4	526.8	73.3	60.5	55.9	42.7	29.0	19.5	15.3	13.3	12.4
70°	1210.5	265.5	60.9	52.2	48.0	35.6	22.8	15.7	14.1	12.4	11.6
72.5°	399.2	114.7	47.6	43.1	39.8	28.6	17.8	14.5	13.7	12.0	11.2
75°	139.1	66.3	35.2	33.1	31.5	21.5	14.9	13.3	13.3	11.6	10.4
77.5°	91.1	51.4	26.1	24.0	23.6	15.7	12.8	12.4	11.6	9.5	7.9
80°	75.8	29.0	18.2	17.0	16.6	9.9	10.4	9.1	7.0	4.1	1.7
82.5°	70.0	17.4	9.5	10.4	9.5	3.7	5.8	5.0	3.7	1.7	0.0
85°	41.0	7.9	5.4	5.4	4.1	0.8	2.9	2.9	1.7	0.4	0.0
87.5°	4.6	3.7	2.9	2.9	2.1	0.0	1.2	0.8	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)