

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: P597099

Luminaire Tested: **MSA-SA4A-835-U-SL4-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597099  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4A-835-U-SL4-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 10570 lumens  
Efficiency: N/A  
Efficacy: 81.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3

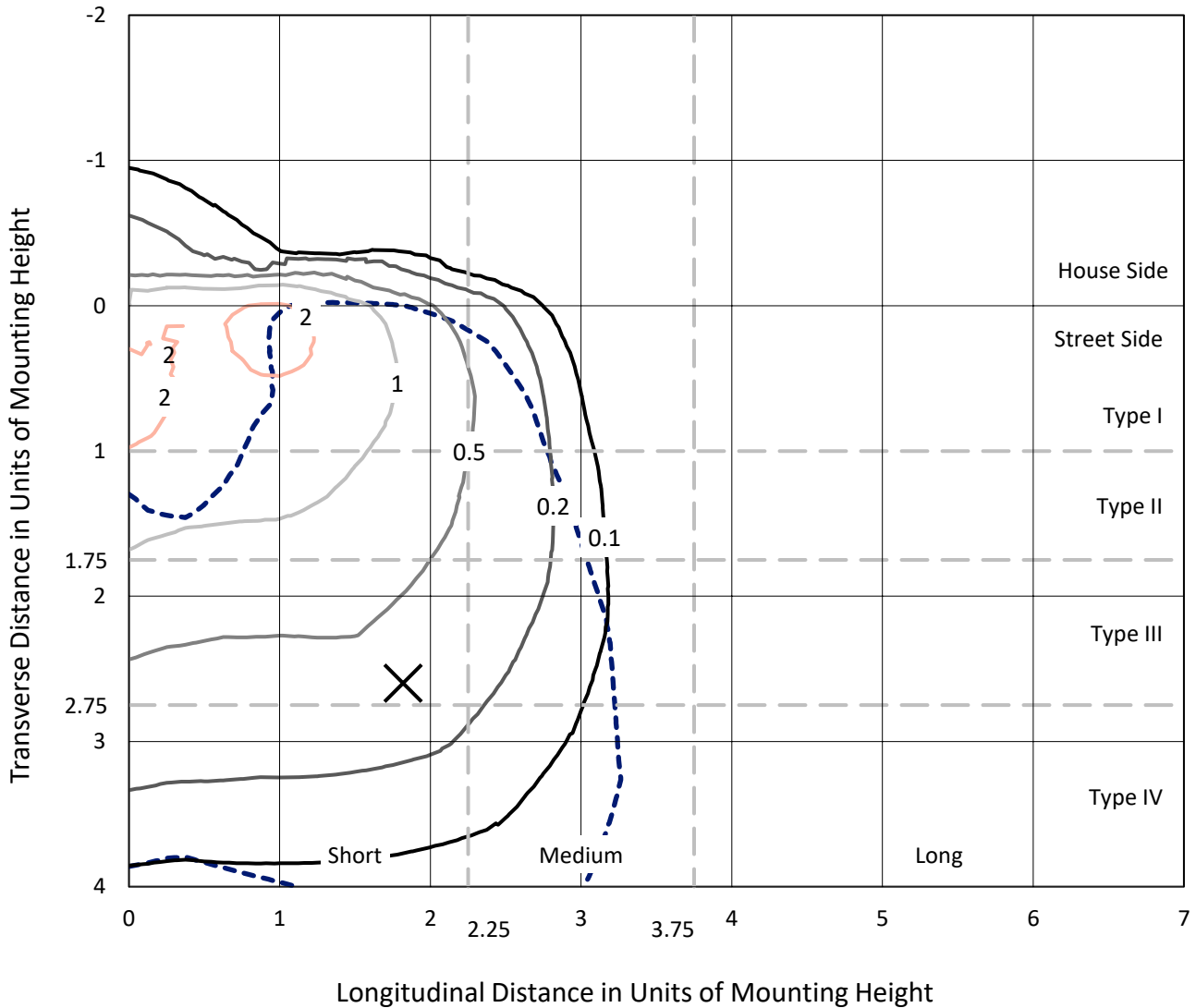
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

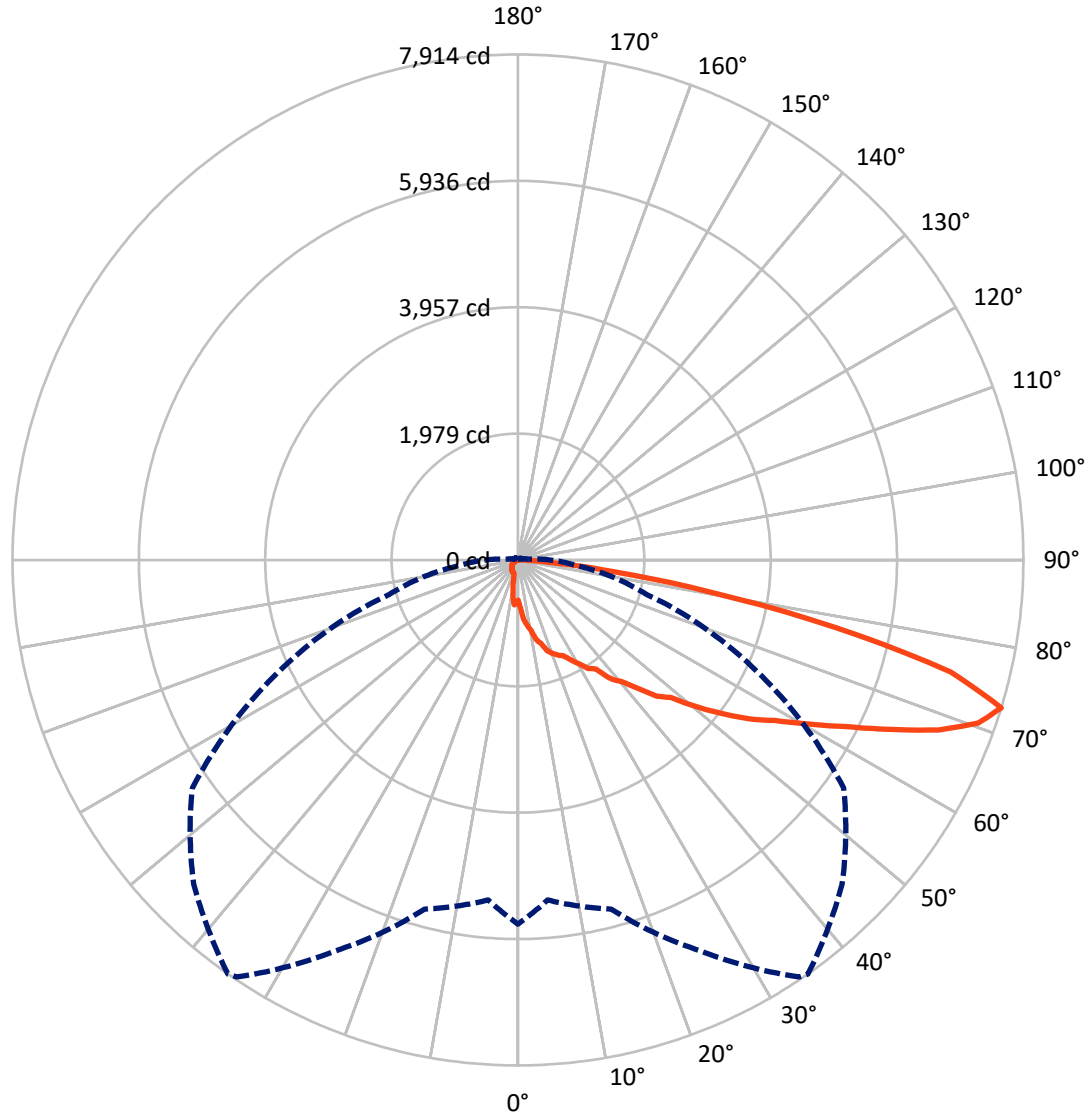
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 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	824.4	0.0	824.4
	% Fixture	7.8	0.0	7.8
<b>Street Side</b>	Lumens	9745.6	0.0	9745.6
	% Fixture	92.2	0.0	92.2
<b>Total</b>	Lumens	10570.0	0.0	10570.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.3	0.8
10°-20°	270.5	2.6
20°-30°	492.6	4.7
30°-40°	849.7	8.0
40°-50°	1510.5	14.3
50°-60°	2254.0	21.3
60°-70°	2879.7	27.2
70°-80°	2003.5	19.0
80°-90°	229.2	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°	10570.0	100.0
0°-180°	10570.0	100.0

**Coefficient of Utilization**



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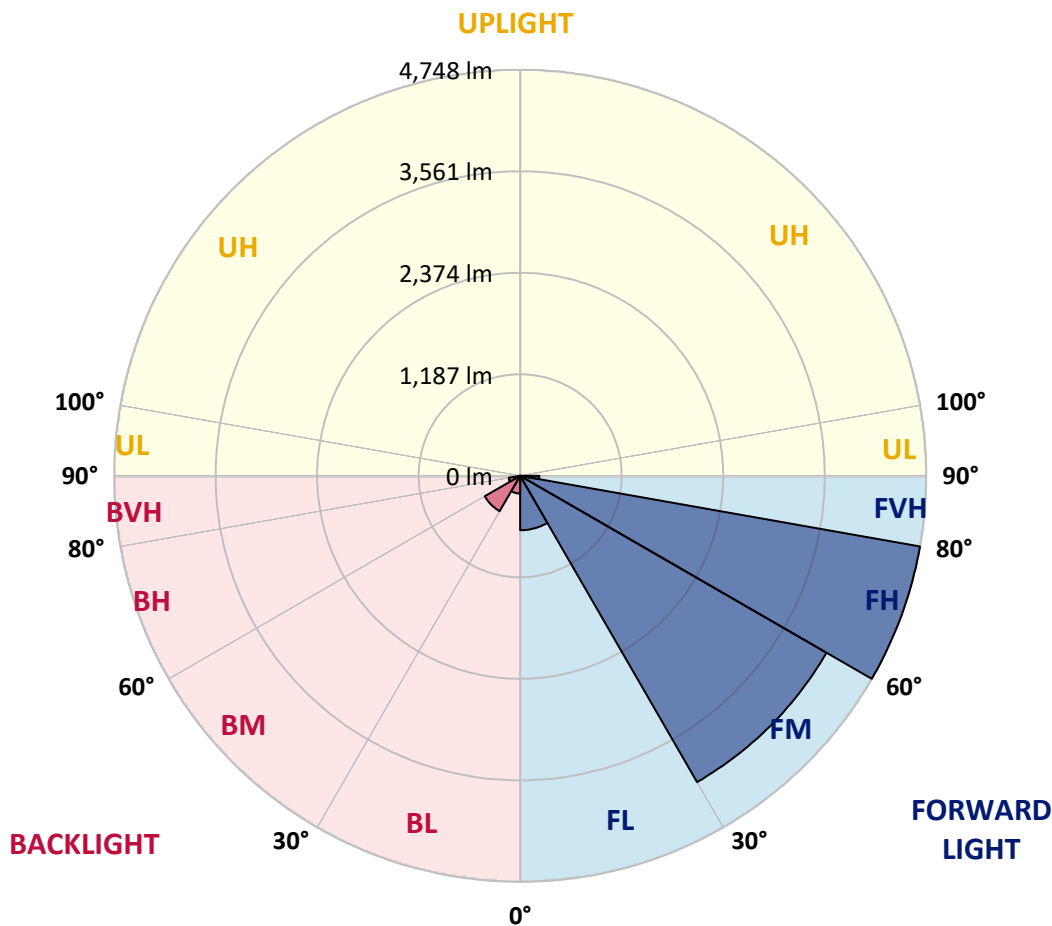
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	636.1	6.0			
FM (30°-60°)	4136.1	39.1			
FH (60°-80°)	4748.1	44.9			G2/5000
FVH (80°-90°)	225.3	2.1			G3/500
BL (0°-30°)	207.4	2.0	B1/500		
BM (30°-60°)	478.1	4.5	B1/1000		
BH (60°-80°)	135.2	1.3	B1/500		G1/500
BVH (80°-90°)	3.9	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°	34°	35°	45°	55°	65°	75°	85°
0°	629.7	629.7	629.7	629.7	629.7	629.7	629.7	629.7	629.7	629.7	629.7
2.5°	801.3	769.9	718.9	722.6	745.5	750.3	757.2	739.1	723.2	695.0	749.7
5°	1026.6	981.4	952.7	943.7	930.4	931.5	899.0	910.7	907.6	928.3	953.2
7.5°	1153.6	1128.6	1092.5	1082.4	1033.5	1028.2	988.3	1042.0	1047.3	1039.9	1080.8
10°	1204.0	1171.1	1175.4	1137.6	1113.2	1119.6	1125.9	1130.2	1137.1	1144.0	1094.1
12.5°	1233.8	1239.6	1297.6	1258.2	1282.7	1282.7	1325.7	1280.0	1281.6	1231.7	1240.2
15°	1367.7	1400.1	1374.1	1373.5	1347.0	1353.9	1403.8	1367.7	1386.3	1371.4	1314.0
17.5°	1535.6	1542.0	1492.6	1470.8	1494.7	1495.2	1474.0	1472.4	1407.6	1517.0	1447.4
20°	1589.3	1625.4	1555.3	1470.3	1569.6	1564.8	1563.2	1538.3	1430.4	1582.4	1525.0
22.5°	1735.4	1683.9	1636.0	1580.2	1619.0	1619.0	1613.2	1558.5	1516.5	1576.5	1601.0
25°	1781.1	1787.5	1725.3	1707.2	1708.3	1660.5	1656.2	1632.8	1592.5	1695.0	1646.1
27.5°	1938.4	1935.7	1786.4	1836.9	1772.6	1773.1	1655.7	1708.3	1715.2	1700.9	1755.6
30°	2093.0	2136.0	1910.7	1974.5	1907.0	1886.8	1772.1	1818.8	1831.0	1814.6	1883.6
32.5°	2290.1	2353.4	2134.4	2071.7	1968.7	2026.0	1946.9	1836.4	1896.9	2044.1	2082.9
35°	2499.0	2529.8	2296.5	2208.8	2092.5	2091.9	2089.3	2098.3	2165.3	2331.0	2364.0
37.5°	2874.1	2801.3	2590.3	2389.5	2415.5	2357.6	2317.2	2359.7	2429.3	2702.5	2843.3
40°	3083.4	3030.8	2733.8	2614.8	2485.7	2506.9	2616.4	2611.6	2797.0	3082.9	3293.9
42.5°	3287.0	3237.0	2944.8	2848.6	2682.8	2740.7	2788.5	2849.1	3229.0	3690.2	3806.1
45°	3468.1	3321.5	3115.3	3119.0	3033.0	3039.9	3124.4	3180.1	3729.6	4202.5	4283.8
47.5°	3577.6	3457.0	3259.3	3255.6	3250.3	3217.9	3615.9	3666.9	4128.6	4690.3	4697.7
50°	3731.7	3580.8	3407.6	3410.8	3533.5	3602.0	4077.1	4071.8	4513.8	5097.3	4925.6
52.5°	3923.5	3739.1	3548.4	3690.2	3879.9	3991.5	4377.3	4534.6	4927.8	5352.9	5014.9
55°	4169.0	3938.4	3754.5	3936.3	4350.2	4393.2	4671.1	5003.2	5378.9	5613.7	5043.6
57.5°	4457.0	4181.7	4033.0	4325.7	4738.6	4739.7	5098.9	5502.7	5655.7	5720.0	5011.2
60°	4767.3	4446.4	4296.5	4560.1	5166.9	5210.4	5574.4	5778.5	5936.8	5773.7	4953.3
62.5°	5040.4	4686.0	4569.6	4879.4	5636.6	5739.7	5988.9	5959.7	6139.8	5841.2	4806.1
65°	5365.6	4996.3	4919.8	5377.3	6249.8	6391.6	6454.3	6281.1	6207.8	5789.1	4423.0
67.5°	5687.6	5342.2	5340.1	5929.4	7053.7	7102.6	7036.7	6734.4	6128.6	5330.0	3721.1
70°	5914.5	5543.6	5683.4	6534.0	7784.3	7647.2	7369.9	6948.5	5556.9	4085.0	2430.9
72.5°	5701.4	5343.8	5658.9	6749.2	7874.7	7914.0	7177.0	6224.3	4128.6	2089.3	879.9
75°	4332.7	4113.7	4913.4	5987.8	6991.5	7000.6	5990.5	4390.0	2033.0	567.5	243.4
77.5°	2182.3	2112.7	3110.0	4250.8	5101.0	5086.1	4115.9	2351.8	654.1	188.6	122.7
80°	1104.7	1048.9	1323.6	2293.3	3029.2	3051.6	2350.2	1053.1	330.0	102.6	85.0
82.5°	678.5	644.0	724.2	1037.7	1470.3	1505.9	891.6	666.8	204.6	60.6	77.6
85°	131.2	138.2	416.0	519.7	587.1	573.3	264.1	548.9	61.6	36.1	56.3
87.5°	0.0	2.1	96.2	169.5	170.0	150.9	60.0	121.7	8.5	10.1	6.9
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°	629.7	629.7	629.7	629.7	629.7	629.7	629.7	629.7	629.7	629.7	629.7
2.5°	758.8	750.8	684.4	676.9	678.5	667.4	663.7	640.3	634.4	670.6	676.9
5°	942.6	889.5	827.8	805.5	771.0	712.5	704.0	689.2	672.7	679.1	674.3
7.5°	1055.3	984.6	918.7	801.3	704.0	619.0	605.2	579.7	554.2	554.7	571.2
10°	1073.3	1013.8	923.0	780.0	669.0	562.7	470.2	403.3	373.0	345.9	353.9
12.5°	1178.0	1122.7	955.4	773.7	618.0	452.2	331.0	265.7	237.0	227.4	226.4
15°	1262.0	1218.4	1010.6	754.0	504.8	318.3	237.0	217.9	212.5	221.6	218.9
17.5°	1386.8	1308.2	1004.8	672.7	384.7	241.8	218.4	215.7	222.1	227.4	229.0
20°	1441.6	1328.4	964.9	545.2	288.0	221.6	213.1	207.8	219.4	235.4	232.2
22.5°	1496.8	1362.9	918.2	446.3	231.7	212.0	207.2	203.0	212.0	227.4	231.1
25°	1521.8	1418.2	866.1	348.6	215.2	200.9	197.7	199.3	206.7	220.5	218.9
27.5°	1647.7	1424.6	766.7	275.2	208.3	192.9	192.9	196.6	196.6	215.2	213.6
30°	1726.4	1532.4	686.0	231.7	200.3	181.7	188.1	189.7	187.0	207.2	208.8
32.5°	1864.5	1562.2	607.3	212.5	187.6	180.1	179.1	180.1	182.3	201.9	202.4
35°	2077.1	1708.8	500.0	205.1	181.2	172.2	164.7	170.6	175.9	190.2	192.9
37.5°	2492.6	1859.2	407.5	199.3	178.0	164.7	162.1	161.0	170.6	187.0	192.3
40°	2828.9	2125.4	331.6	194.5	171.6	160.5	153.6	154.1	162.6	174.8	182.8
42.5°	3305.0	2317.8	281.1	187.0	162.6	151.4	143.5	148.2	152.0	164.7	170.0
45°	3702.5	2467.1	247.6	182.3	153.6	142.9	136.6	141.9	138.2	144.5	152.0
47.5°	4018.6	2597.3	222.6	170.6	147.7	138.2	130.2	128.6	122.2	123.8	130.7
50°	4192.4	2575.5	201.9	158.9	140.3	133.4	122.2	111.1	102.6	102.0	106.3
52.5°	4254.0	2459.1	184.9	148.8	131.2	122.7	110.0	94.6	86.1	83.4	87.1
55°	4271.0	2291.7	169.5	137.6	122.7	109.5	96.2	79.7	70.7	66.4	70.1
57.5°	4215.8	2034.0	154.6	127.0	112.6	96.7	82.4	65.4	56.9	51.5	54.7
60°	4079.2	1706.7	141.3	113.7	102.0	85.5	69.6	52.6	43.6	38.8	40.4
62.5°	3776.9	1337.9	127.0	101.5	90.9	74.9	58.4	41.4	32.9	28.7	29.2
65°	3316.7	997.3	110.5	89.8	80.8	64.8	46.8	31.9	25.0	21.3	20.7
67.5°	2642.4	675.9	94.0	77.6	71.7	54.7	37.2	25.0	19.7	17.0	15.9
70°	1553.1	340.6	78.1	67.0	61.6	45.7	29.2	20.2	18.1	15.9	14.9
72.5°	512.2	147.2	61.1	55.3	51.0	36.7	22.8	18.6	17.5	15.4	14.3
75°	178.5	85.0	45.2	42.5	40.4	27.6	19.1	17.0	17.0	14.9	13.3
77.5°	116.9	65.9	33.5	30.8	30.3	20.2	16.5	15.9	14.9	12.2	10.1
80°	97.2	37.2	23.4	21.8	21.3	12.8	13.3	11.7	9.0	5.3	2.1
82.5°	89.8	22.3	12.2	13.3	12.2	4.8	7.4	6.4	4.8	2.1	0.0
85°	52.6	10.1	6.9	6.9	5.3	1.1	3.7	3.7	2.1	0.5	0.0
87.5°	5.8	4.8	3.7	3.7	2.7	0.0	1.6	1.1	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)