

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: P368455

Luminaire Tested: **MSA-SA4C-727-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368455
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-SA4C-727-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: 16643 lumens
Efficiency: N/A
Efficacy: 74.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

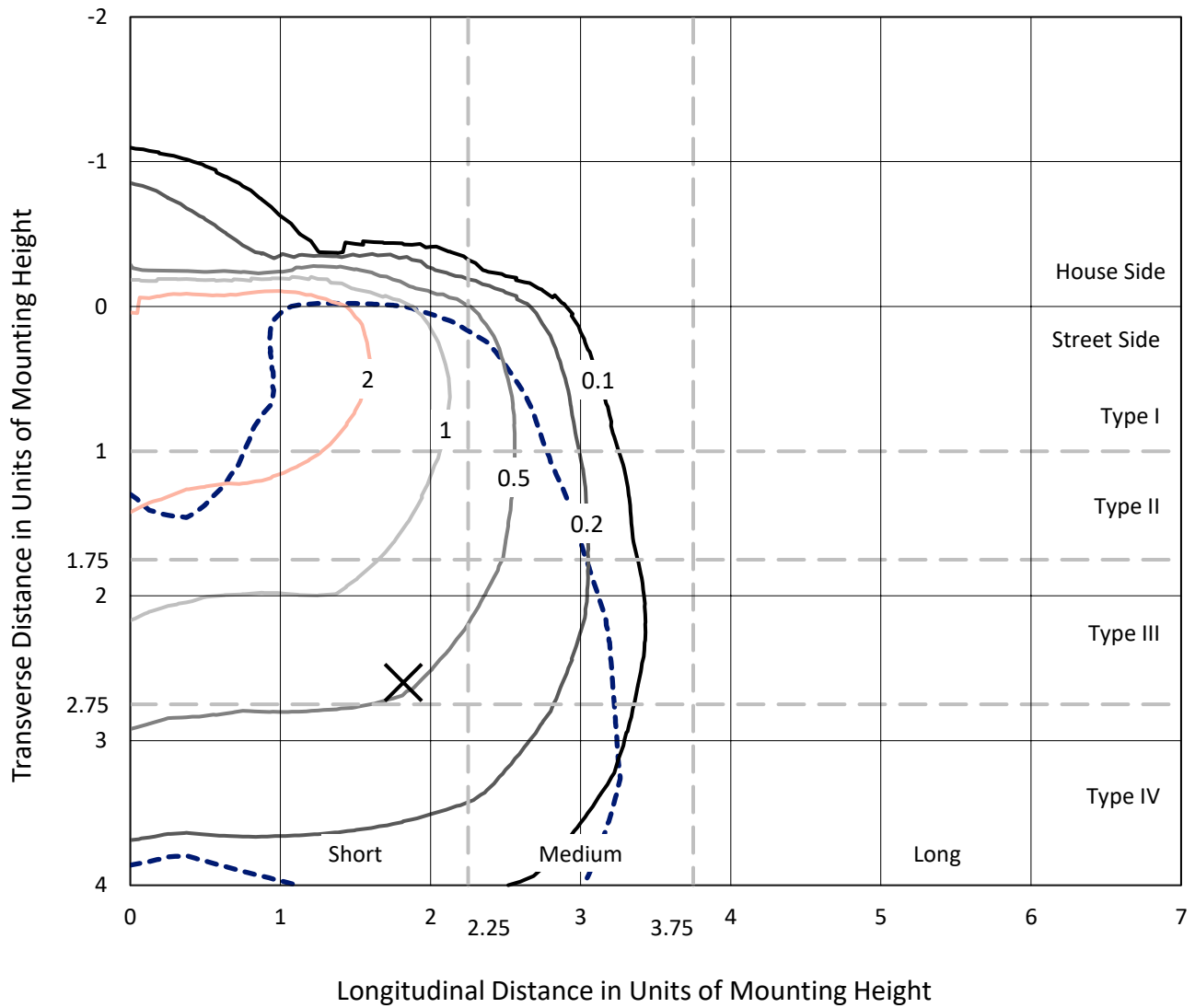
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

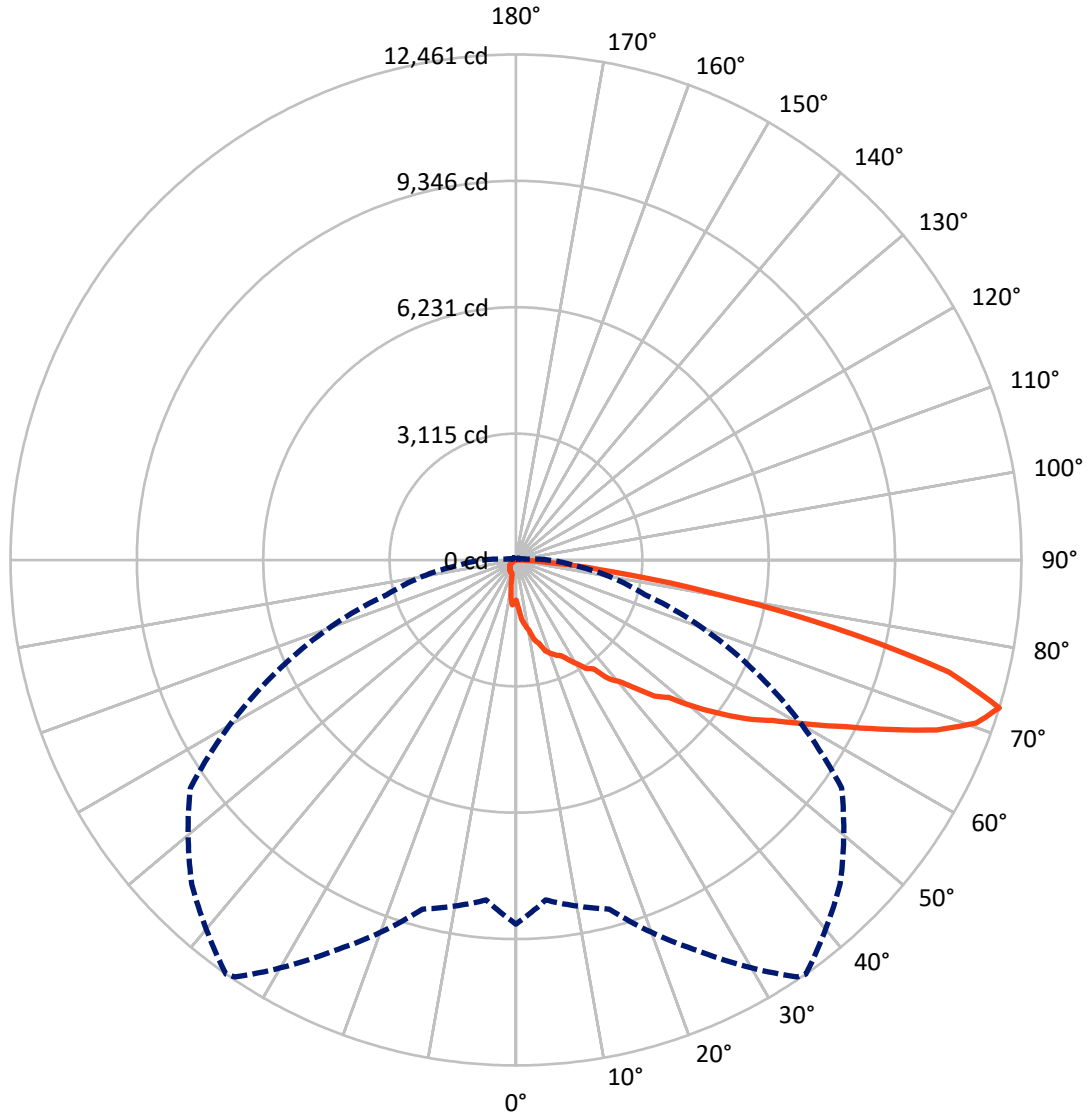
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.8 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	1298.1	0.0	1298.1
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	15344.9	0.0	15344.9
	% Fixture	92.2	0.0	92.2
Total	Lumens	16643.0	0.0	16643.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.4	0.8
10°-20°	425.9	2.6
20°-30°	775.6	4.7
30°-40°	1337.9	8.0
40°-50°	2378.3	14.3
50°-60°	3549.0	21.3
60°-70°	4534.3	27.2
70°-80°	3154.6	19.0
80°-90°	360.9	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°	16643.0	100.0
0°-180°	16643.0	100.0

Coefficient of Utilization

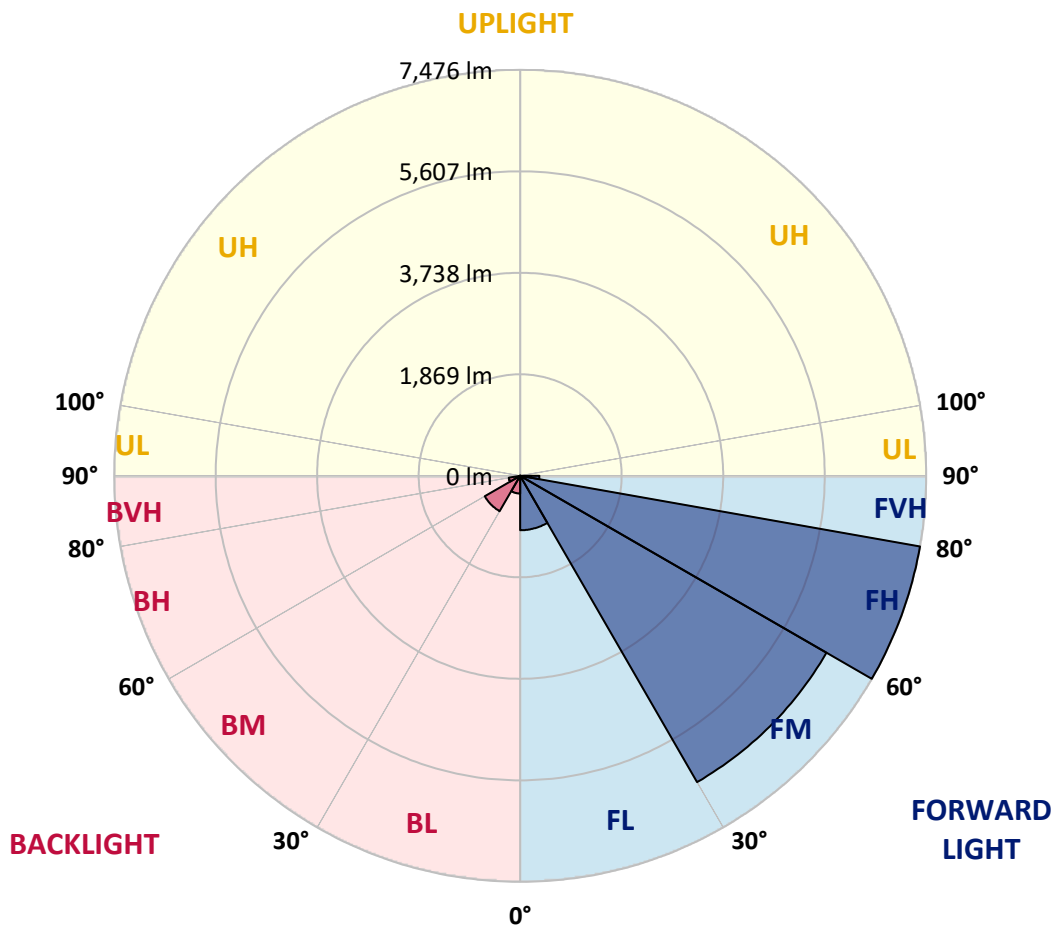


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1001.5	6.0			
FM (30°-60°)	6512.5	39.1			
FH (60°-80°)	7476.1	44.9			G3/7500
FVH (80°-90°)	354.8	2.1			G3/500
BL (0°-30°)	326.5	2.0	B1/500		
BM (30°-60°)	752.8	4.5	B1/1000		
BH (60°-80°)	212.8	1.3	B1/500		G1/500
BVH (80°-90°)	6.1	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°	991.4	991.4	991.4	991.4	991.4	991.4	991.4	991.4	991.4	991.4	991.4
2.5°	1261.7	1212.3	1132.0	1137.8	1173.8	1181.3	1192.2	1163.8	1138.7	1094.3	1180.5
5°	1616.4	1545.3	1500.1	1485.9	1465.0	1466.6	1415.6	1434.0	1429.0	1461.6	1500.9
7.5°	1816.4	1777.0	1720.1	1704.2	1627.3	1618.9	1556.2	1640.7	1649.0	1637.3	1701.7
10°	1895.8	1844.0	1850.7	1791.3	1752.8	1762.8	1772.8	1779.5	1790.4	1801.3	1722.6
12.5°	1942.7	1951.9	2043.1	1981.2	2019.7	2019.7	2087.4	2015.5	2018.0	1939.3	1952.7
15°	2153.5	2204.6	2163.6	2162.7	2120.9	2131.8	2210.4	2153.5	2182.8	2159.4	2069.0
17.5°	2417.9	2427.9	2350.1	2315.8	2353.5	2354.3	2320.8	2318.3	2216.3	2388.6	2279.0
20°	2502.4	2559.3	2448.9	2315.0	2471.4	2463.9	2461.4	2422.1	2252.2	2491.5	2401.2
22.5°	2732.5	2651.3	2576.0	2488.2	2549.2	2549.2	2540.0	2453.9	2387.8	2482.3	2520.8
25°	2804.4	2814.5	2716.6	2688.1	2689.8	2614.5	2607.8	2571.0	2507.4	2668.9	2591.9
27.5°	3052.1	3047.9	2812.8	2892.3	2791.0	2791.9	2607.0	2689.8	2700.7	2678.1	2764.3
30°	3295.5	3363.3	3008.6	3109.0	3002.7	2970.9	2790.2	2863.8	2883.1	2857.1	2965.9
32.5°	3605.9	3705.5	3360.8	3262.1	3099.8	3190.1	3065.5	2891.4	2986.8	3218.6	3279.6
35°	3934.7	3983.3	3616.0	3477.9	3294.7	3293.9	3289.7	3303.9	3409.3	3670.4	3722.2
37.5°	4525.4	4410.8	4078.6	3762.4	3803.4	3712.2	3648.6	3715.5	3825.1	4255.2	4476.9
40°	4855.0	4772.2	4304.5	4117.1	3913.8	3947.3	4119.6	4112.1	4404.1	4854.2	5186.3
42.5°	5175.5	5096.8	4636.7	4485.2	4224.2	4315.4	4390.7	4486.1	5084.3	5810.5	5992.9
45°	5460.8	5229.9	4905.2	4911.1	4775.6	4786.4	4919.5	5007.3	5872.4	6617.0	6745.0
47.5°	5633.1	5443.2	5132.0	5126.1	5117.7	5066.7	5693.4	5773.7	6500.7	7385.0	7396.8
50°	5875.7	5638.1	5365.4	5370.4	5563.7	5671.6	6419.6	6411.2	7107.3	8025.9	7755.7
52.5°	6177.8	5887.5	5587.1	5810.5	6109.2	6284.9	6892.3	7139.9	7759.0	8428.3	7896.2
55°	6564.3	6201.2	5911.7	6197.8	6849.6	6917.4	7354.9	7877.8	8469.3	8839.1	7941.4
57.5°	7017.8	6584.4	6350.1	6811.1	7461.2	7462.9	8028.4	8664.3	8905.2	9006.5	7890.4
60°	7506.4	7001.0	6765.1	7180.1	8135.5	8204.1	8777.2	9098.5	9347.8	9091.0	7799.2
62.5°	7936.4	7378.3	7195.1	7682.9	8875.1	9037.4	9429.8	9383.8	9667.4	9197.2	7567.4
65°	8448.4	7866.9	7746.5	8466.8	9840.6	10064.0	10162.7	9889.9	9774.5	9115.2	6964.2
67.5°	8955.4	8411.6	8408.3	9336.1	11106.4	11183.4	11079.7	10603.6	9649.8	8392.4	5859.0
70°	9312.7	8728.7	8948.7	10288.2	12256.8	12041.0	11604.2	10940.8	8749.6	6432.1	3827.6
72.5°	8977.2	8414.1	8910.2	10627.0	12399.0	12461.0	11300.5	9800.4	6500.7	3289.7	1385.5
75°	6822.0	6477.3	7736.4	9428.1	11008.5	11022.8	9432.3	6912.3	3201.0	893.5	383.2
77.5°	3436.1	3326.5	4896.9	6693.1	8031.8	8008.3	6480.6	3703.0	1029.9	297.0	193.3
80°	1739.4	1651.5	2084.1	3610.9	4769.7	4804.8	3700.5	1658.2	519.6	161.5	133.9
82.5°	1068.4	1014.0	1140.3	1634.0	2315.0	2371.0	1403.9	1050.0	322.1	95.4	122.1
85°	206.7	217.5	655.1	818.2	924.5	902.7	415.8	864.3	97.1	56.9	88.7
87.5°	0.0	3.3	151.4	266.9	267.7	237.6	94.5	191.6	13.4	15.9	10.9
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°	991.4	991.4	991.4	991.4	991.4	991.4	991.4	991.4	991.4	991.4	991.4
2.5°	1194.7	1182.2	1077.6	1065.9	1068.4	1050.8	1045.0	1008.2	999.0	1055.8	1065.9
5°	1484.2	1400.5	1303.5	1268.3	1214.0	1121.9	1108.6	1085.1	1059.2	1069.2	1061.7
7.5°	1661.6	1550.3	1446.6	1261.7	1108.6	974.7	952.9	912.8	872.6	873.5	899.4
10°	1690.0	1596.3	1453.2	1228.2	1053.3	886.0	740.4	635.0	587.3	544.7	557.2
12.5°	1854.8	1767.8	1504.3	1218.2	973.0	712.0	521.2	418.3	373.1	358.1	356.4
15°	1987.0	1918.4	1591.3	1187.2	794.8	501.1	373.1	343.0	334.7	348.9	344.7
17.5°	2183.6	2059.8	1582.1	1059.2	605.7	380.7	343.9	339.7	349.7	358.1	360.6
20°	2269.8	2091.6	1519.3	858.4	453.5	348.9	335.5	327.1	345.5	370.6	365.6
22.5°	2356.8	2146.0	1445.7	702.8	364.8	333.8	326.3	319.6	333.8	358.1	363.9
25°	2396.1	2233.0	1363.7	548.8	338.8	316.3	311.2	313.7	325.5	347.2	344.7
27.5°	2594.4	2243.0	1207.3	433.4	328.0	303.7	303.7	309.6	309.6	338.8	336.3
30°	2718.3	2412.9	1080.1	364.8	315.4	286.1	296.2	298.7	294.5	326.3	328.8
32.5°	2935.8	2459.7	956.3	334.7	295.3	283.6	281.9	283.6	287.0	317.9	318.8
35°	3270.4	2690.6	787.3	322.9	285.3	271.1	259.4	268.6	276.9	299.5	303.7
37.5°	3924.7	2927.4	641.7	313.7	280.3	259.4	255.2	253.5	268.6	294.5	302.9
40°	4454.3	3346.6	522.1	306.2	270.2	252.7	241.8	242.6	256.0	275.3	287.8
42.5°	5203.9	3649.4	442.6	294.5	256.0	238.4	225.9	233.4	239.3	259.4	267.7
45°	5829.7	3884.5	389.9	287.0	241.8	225.1	215.0	223.4	217.5	227.6	239.3
47.5°	6327.5	4089.5	350.6	268.6	232.6	217.5	205.0	202.5	192.4	194.9	205.8
50°	6601.1	4055.2	317.9	250.2	220.9	210.0	192.4	174.9	161.5	160.6	167.3
52.5°	6698.2	3872.0	291.2	234.3	206.7	193.3	173.2	148.9	135.5	131.4	137.2
55°	6724.9	3608.4	266.9	216.7	193.3	172.3	151.4	125.5	111.3	104.6	110.4
57.5°	6637.9	3202.7	243.5	200.0	177.4	152.3	129.7	102.9	89.5	81.2	86.2
60°	6422.9	2687.3	222.5	179.0	160.6	134.7	109.6	82.8	68.6	61.1	63.6
62.5°	5946.9	2106.7	200.0	159.8	143.1	118.0	92.0	65.3	51.9	45.2	46.0
65°	5222.3	1570.4	174.0	141.4	127.2	102.1	73.6	50.2	39.3	33.5	32.6
67.5°	4160.6	1064.2	148.1	122.1	112.9	86.2	58.6	39.3	31.0	26.8	25.1
70°	2445.5	536.3	123.0	105.4	97.1	72.0	46.0	31.8	28.4	25.1	23.4
72.5°	806.5	231.7	96.2	87.0	80.3	57.7	36.0	29.3	27.6	24.3	22.6
75°	281.1	133.9	71.1	66.9	63.6	43.5	30.1	26.8	26.8	23.4	20.9
77.5°	184.1	103.7	52.7	48.5	47.7	31.8	25.9	25.1	23.4	19.2	15.9
80°	153.1	58.6	36.8	34.3	33.5	20.1	20.9	18.4	14.2	8.4	3.3
82.5°	141.4	35.1	19.2	20.9	19.2	7.5	11.7	10.0	7.5	3.3	0.0
85°	82.8	15.9	10.9	10.9	8.4	1.7	5.9	5.9	3.3	0.8	0.0
87.5°	9.2	7.5	5.9	5.9	4.2	0.0	2.5	1.7	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)