

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: P367399

Luminaire Tested: **MSA-SA2C-727-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367399
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-SA2C-727-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: 8532 lumens
Efficiency: N/A
Efficacy: 75.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

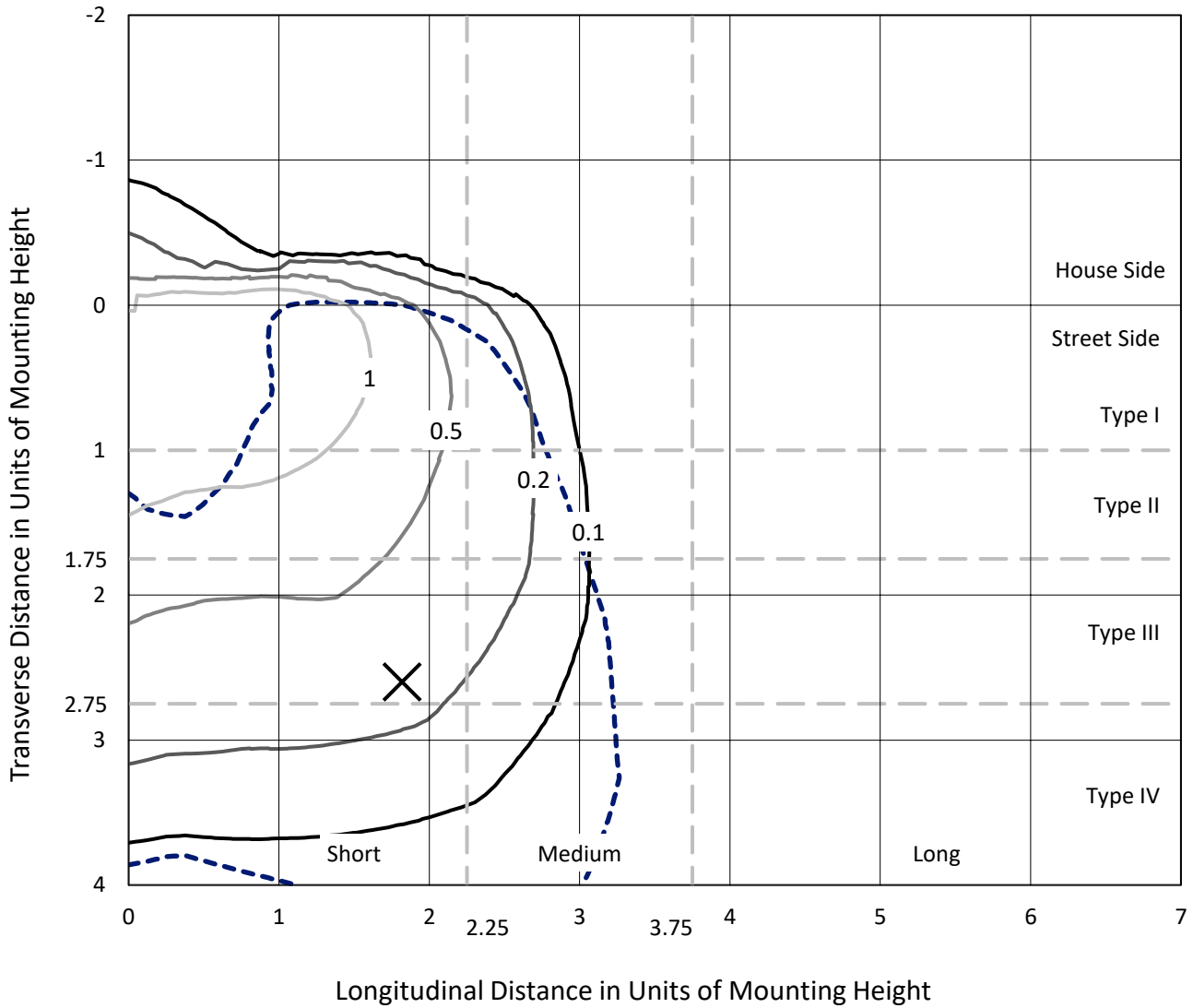
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

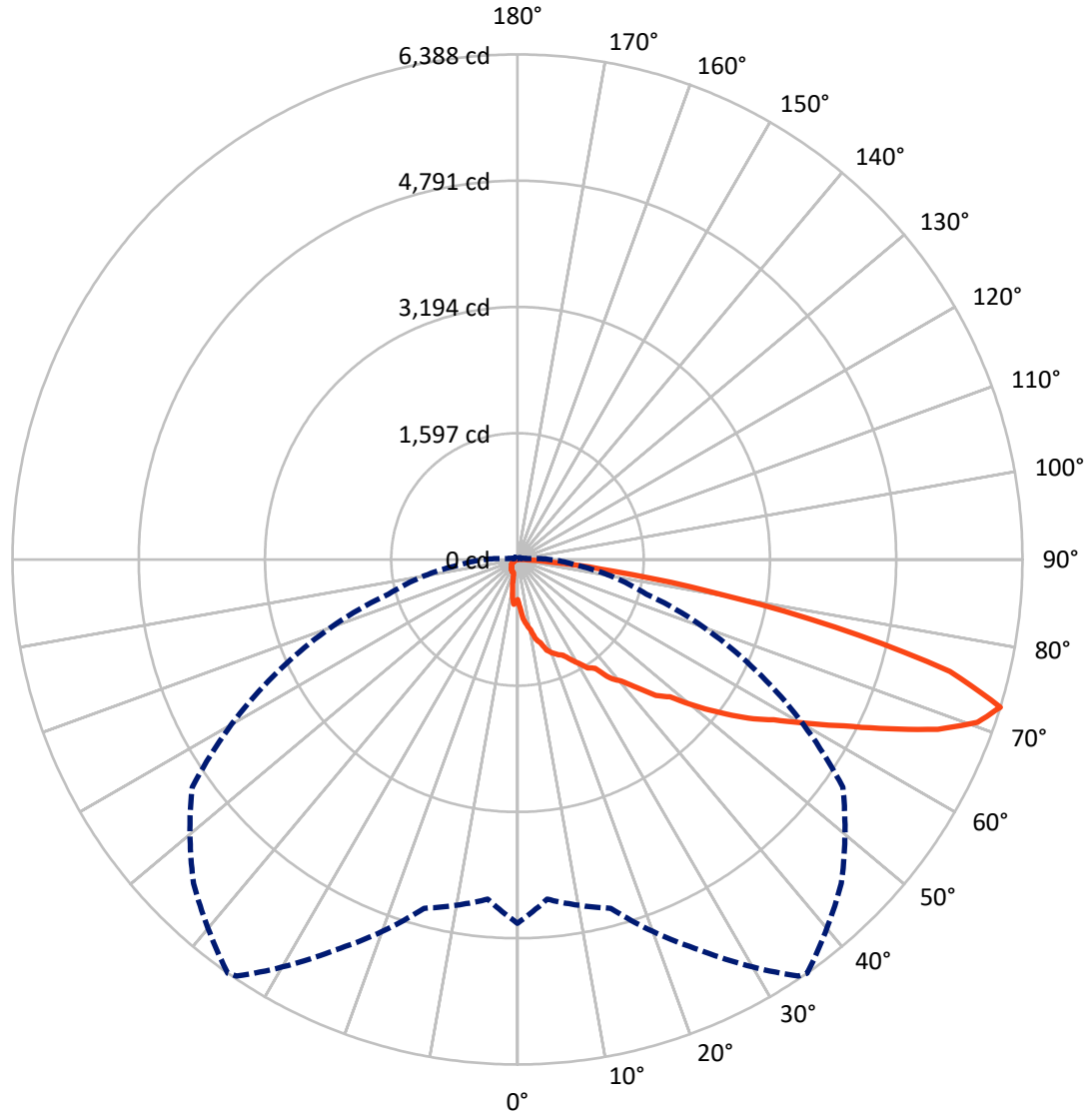
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 fc
 Type IV - Short - N/A

REPORT NUMBER: P367399
CATALOG NUMBER: MSA-SA2C-727-U-SL4-HSS

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	665.5	0.0	665.5
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	7866.5	0.0	7866.5
	% Fixture	92.2	0.0	92.2
Total	Lumens	8532.0	0.0	8532.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.8	0.8
10°-20°	218.4	2.6
20°-30°	397.6	4.7
30°-40°	685.9	8.0
40°-50°	1219.2	14.3
50°-60°	1819.4	21.3
60°-70°	2324.5	27.2
70°-80°	1617.2	19.0
80°-90°	185.0	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°	8532.0	100.0
0°-180°	8532.0	100.0

Coefficient of Utilization



REPORT NUMBER: P367399

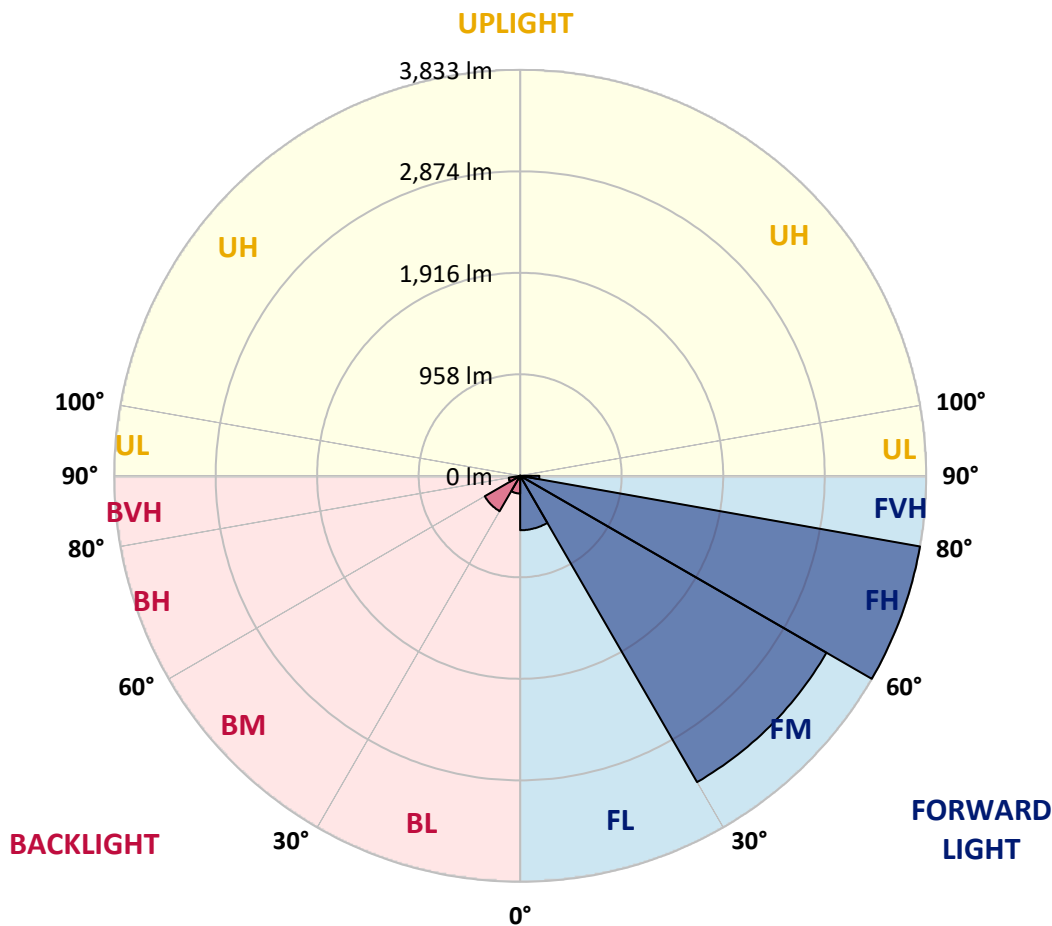
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	513.4	6.0			
FM (30°-60°)	3338.6	39.1			
FH (60°-80°)	3832.6	44.9			G2/5000
FVH (80°-90°)	181.9	2.1			G2/225
BL (0°-30°)	167.4	2.0	B1/500		
BM (30°-60°)	385.9	4.5	B1/1000		
BH (60°-80°)	109.1	1.3	B0/110		G0/110
BVH (80°-90°)	3.1	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-G2

Type IV Short





REPORT NUMBER: P367399

CATALOG NUMBER: MSA-SA2C-727-U-SL4-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	508.3	508.3	508.3	508.3	508.3	508.3	508.3	508.3	508.3	508.3	508.3
2.5°	646.8	621.5	580.3	583.3	601.8	605.6	611.2	596.6	583.7	561.0	605.2
5°	828.6	792.2	769.0	761.7	751.0	751.9	725.7	735.1	732.6	749.3	769.5
7.5°	931.1	911.0	881.8	873.7	834.2	829.9	797.8	841.1	845.4	839.4	872.4
10°	971.9	945.3	948.7	918.3	898.6	903.7	908.8	912.3	917.9	923.4	883.1
12.5°	995.9	1000.6	1047.4	1015.6	1035.4	1035.4	1070.1	1033.2	1034.5	994.2	1001.1
15°	1104.0	1130.2	1109.1	1108.7	1087.3	1092.8	1133.2	1104.0	1119.0	1107.0	1060.7
17.5°	1239.5	1244.7	1204.8	1187.2	1206.5	1206.9	1189.8	1188.5	1136.2	1224.5	1168.3
20°	1282.8	1312.0	1255.4	1186.8	1267.0	1263.1	1261.8	1241.7	1154.6	1277.3	1231.0
22.5°	1400.8	1359.2	1320.6	1275.6	1306.9	1306.9	1302.1	1258.0	1224.1	1272.6	1292.3
25°	1437.7	1442.8	1392.6	1378.1	1378.9	1340.3	1336.9	1318.0	1285.4	1368.2	1328.7
27.5°	1564.6	1562.5	1442.0	1482.7	1430.8	1431.2	1336.5	1378.9	1384.5	1372.9	1417.1
30°	1689.4	1724.2	1542.3	1593.8	1539.3	1523.0	1430.4	1468.1	1478.0	1464.7	1520.5
32.5°	1848.6	1899.6	1722.9	1672.3	1589.1	1635.4	1571.5	1482.3	1531.2	1650.0	1681.3
35°	2017.1	2042.0	1853.7	1782.9	1689.0	1688.6	1686.4	1693.7	1747.8	1881.6	1908.2
37.5°	2319.9	2261.2	2090.9	1928.8	1949.8	1903.0	1870.4	1904.8	1960.9	2181.4	2295.1
40°	2488.9	2446.5	2206.7	2110.6	2006.4	2023.6	2111.9	2108.1	2257.7	2488.5	2658.8
42.5°	2653.2	2612.9	2377.0	2299.3	2165.5	2212.3	2250.9	2299.8	2606.4	2978.7	3072.2
45°	2799.4	2681.1	2514.7	2517.7	2448.2	2453.8	2521.9	2567.0	3010.5	3392.2	3457.8
47.5°	2887.8	2790.4	2630.9	2627.9	2623.6	2597.4	2918.7	2959.9	3332.6	3785.9	3791.9
50°	3012.2	2890.4	2750.6	2753.1	2852.2	2907.5	3291.0	3286.7	3643.5	4114.5	3975.9
52.5°	3167.0	3018.2	2864.2	2978.7	3131.8	3221.9	3533.3	3660.3	3977.6	4320.8	4048.0
55°	3365.2	3179.0	3030.6	3177.3	3511.4	3546.2	3770.5	4038.6	4341.8	4531.4	4071.1
57.5°	3597.6	3375.5	3255.4	3491.7	3825.0	3825.8	4115.8	4441.7	4565.2	4617.1	4045.0
60°	3848.1	3589.1	3468.1	3680.8	4170.7	4205.8	4499.6	4664.3	4792.1	4660.5	3998.2
62.5°	4068.6	3782.5	3688.6	3938.6	4549.8	4633.0	4834.2	4810.6	4956.0	4714.9	3879.4
65°	4331.1	4033.0	3971.2	4340.5	5044.8	5159.3	5209.9	5070.1	5010.9	4672.9	3570.2
67.5°	4591.0	4312.2	4310.5	4786.1	5693.7	5733.1	5680.0	5435.9	4947.0	4302.3	3003.6
70°	4774.1	4474.7	4587.5	5274.2	6283.4	6172.8	5948.9	5608.8	4485.5	3297.4	1962.2
72.5°	4602.1	4313.5	4567.8	5447.9	6356.3	6388.1	5793.2	5024.2	3332.6	1686.4	710.3
75°	3497.3	3320.6	3966.1	4833.3	5643.5	5650.8	4835.5	3543.6	1641.0	458.1	196.4
77.5°	1761.5	1705.3	2510.4	3431.2	4117.5	4105.5	3322.3	1898.3	528.0	152.3	99.1
80°	891.7	846.7	1068.4	1851.1	2445.2	2463.2	1897.0	850.1	266.3	82.8	68.6
82.5°	547.7	519.8	584.6	837.6	1186.8	1215.5	719.7	538.3	165.1	48.9	62.6
85°	105.9	111.5	335.8	419.5	473.9	462.8	213.2	443.1	49.8	29.2	45.5
87.5°	0.0	1.7	77.6	136.8	137.2	121.8	48.5	98.2	6.9	8.1	5.6
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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 CATALOG NUMBER: MSA-SA2C-727-U-SL4-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	508.3	508.3	508.3	508.3	508.3	508.3	508.3	508.3	508.3	508.3	508.3
2.5°	612.5	606.0	552.4	546.4	547.7	538.7	535.7	516.8	512.1	541.3	546.4
5°	760.9	718.0	668.2	650.2	622.3	575.2	568.3	556.3	543.0	548.1	544.3
7.5°	851.8	794.8	741.6	646.8	568.3	499.7	488.5	467.9	447.3	447.8	461.1
10°	866.4	818.3	745.0	629.6	540.0	454.2	379.6	325.5	301.1	279.2	285.6
12.5°	950.9	906.3	771.2	624.5	498.8	365.0	267.2	214.5	191.3	183.6	182.7
15°	1018.6	983.5	815.8	608.6	407.5	256.9	191.3	175.9	171.6	178.9	176.7
17.5°	1119.4	1056.0	811.1	543.0	310.5	195.2	176.3	174.1	179.3	183.6	184.9
20°	1163.6	1072.3	778.9	440.1	232.5	178.9	172.0	167.7	177.1	190.0	187.4
22.5°	1208.2	1100.1	741.1	360.3	187.0	171.1	167.3	163.8	171.1	183.6	186.6
25°	1228.4	1144.7	699.1	281.4	173.7	162.1	159.6	160.8	166.8	178.0	176.7
27.5°	1330.0	1149.9	618.9	222.2	168.1	155.7	155.7	158.7	158.7	173.7	172.4
30°	1393.5	1237.0	553.7	187.0	161.7	146.7	151.8	153.1	151.0	167.3	168.6
32.5°	1505.0	1261.0	490.2	171.6	151.4	145.4	144.5	145.4	147.1	163.0	163.4
35°	1676.6	1379.4	403.6	165.6	146.3	139.0	133.0	137.7	142.0	153.5	155.7
37.5°	2012.0	1500.7	329.0	160.8	143.7	133.0	130.8	130.0	137.7	151.0	155.3
40°	2283.5	1715.6	267.6	157.0	138.5	129.5	124.0	124.4	131.2	141.1	147.5
42.5°	2667.8	1870.9	226.9	151.0	131.2	122.2	115.8	119.7	122.7	133.0	137.2
45°	2988.6	1991.4	199.9	147.1	124.0	115.4	110.2	114.5	111.5	116.7	122.7
47.5°	3243.8	2096.5	179.7	137.7	119.2	111.5	105.1	103.8	98.6	99.9	105.5
50°	3384.0	2078.9	163.0	128.2	113.2	107.7	98.6	89.6	82.8	82.3	85.8
52.5°	3433.8	1985.0	149.3	120.1	105.9	99.1	88.8	76.3	69.5	67.3	70.3
55°	3447.5	1849.9	136.8	111.1	99.1	88.4	77.6	64.3	57.0	53.6	56.6
57.5°	3402.9	1641.8	124.8	102.5	90.9	78.1	66.5	52.8	45.9	41.6	44.2
60°	3292.7	1377.6	114.1	91.8	82.3	69.1	56.2	42.5	35.2	31.3	32.6
62.5°	3048.6	1080.0	102.5	81.9	73.3	60.5	47.2	33.5	26.6	23.2	23.6
65°	2677.2	805.1	89.2	72.5	65.2	52.3	37.7	25.7	20.2	17.2	16.7
67.5°	2132.9	545.6	75.9	62.6	57.9	44.2	30.0	20.2	15.9	13.7	12.9
70°	1253.7	274.9	63.0	54.0	49.8	36.9	23.6	16.3	14.6	12.9	12.0
72.5°	413.5	118.8	49.3	44.6	41.2	29.6	18.4	15.0	14.2	12.4	11.6
75°	144.1	68.6	36.5	34.3	32.6	22.3	15.4	13.7	13.7	12.0	10.7
77.5°	94.4	53.2	27.0	24.9	24.4	16.3	13.3	12.9	12.0	9.9	8.1
80°	78.5	30.0	18.9	17.6	17.2	10.3	10.7	9.4	7.3	4.3	1.7
82.5°	72.5	18.0	9.9	10.7	9.9	3.9	6.0	5.1	3.9	1.7	0.0
85°	42.5	8.1	5.6	5.6	4.3	0.9	3.0	3.0	1.7	0.4	0.0
87.5°	4.7	3.9	3.0	3.0	2.1	0.0	1.3	0.9	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)