

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: P596987

Luminaire Tested: **MSA-SA2D-835-U-SL3-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596987
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2D-835-U-SL3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9131 lumens
Efficiency: N/A
Efficacy: 70.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G2

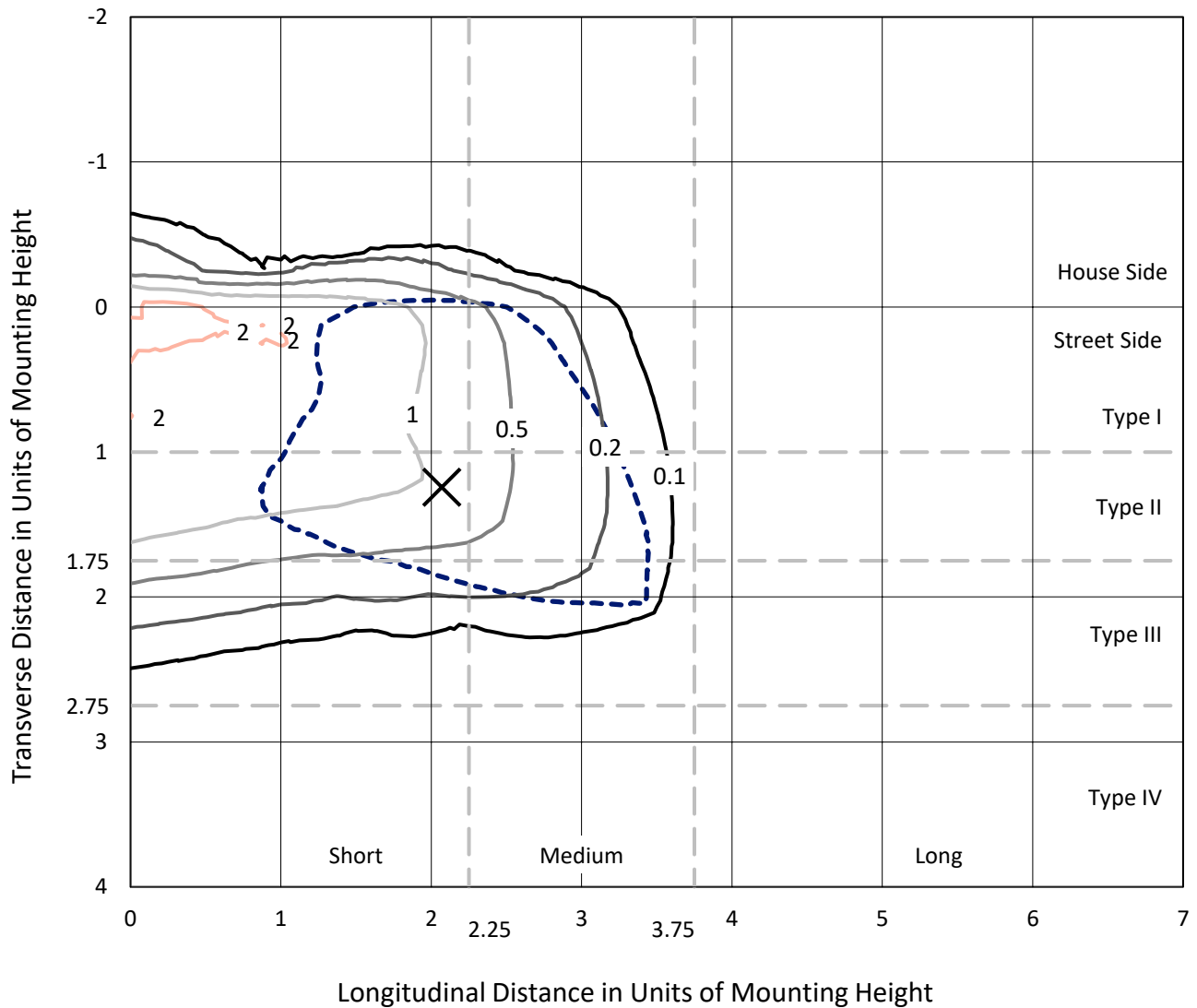
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P596987
 CATALOG NUMBER: MSA-SA2D-835-U-SL3-HSS

Iso-Footcandle Lines of Horizontal Illumination

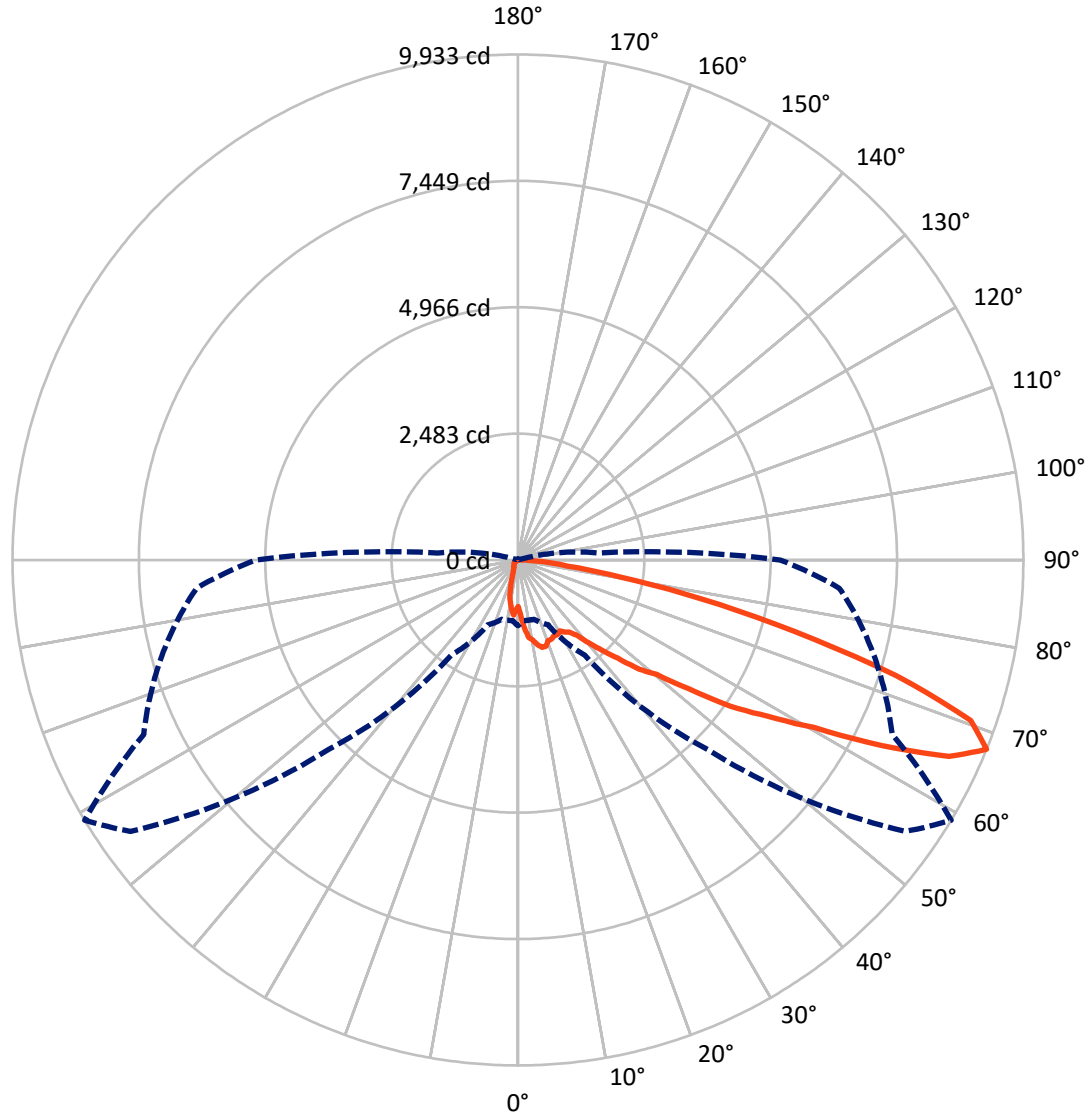
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.6 fc
 Type III - Short - N/A

REPORT NUMBER: P596987
CATALOG NUMBER: MSA-SA2D-835-U-SL3-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P596987
 CATALOG NUMBER: MSA-SA2D-835-U-SL3-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	776.5	0.0	776.5
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	8354.5	0.0	8354.5
	% Fixture	91.5	0.0	91.5
Total	Lumens	9131.0	0.0	9131.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.1	1.2
10°-20°	312.8	3.4
20°-30°	465.2	5.1
30°-40°	717.8	7.9
40°-50°	1281.0	14.0
50°-60°	2279.5	25.0
60°-70°	2654.8	29.1
70°-80°	1180.6	12.9
80°-90°	128.2	1.4
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°	9131.0	100.0
0°-180°	9131.0	100.0

Coefficient of Utilization

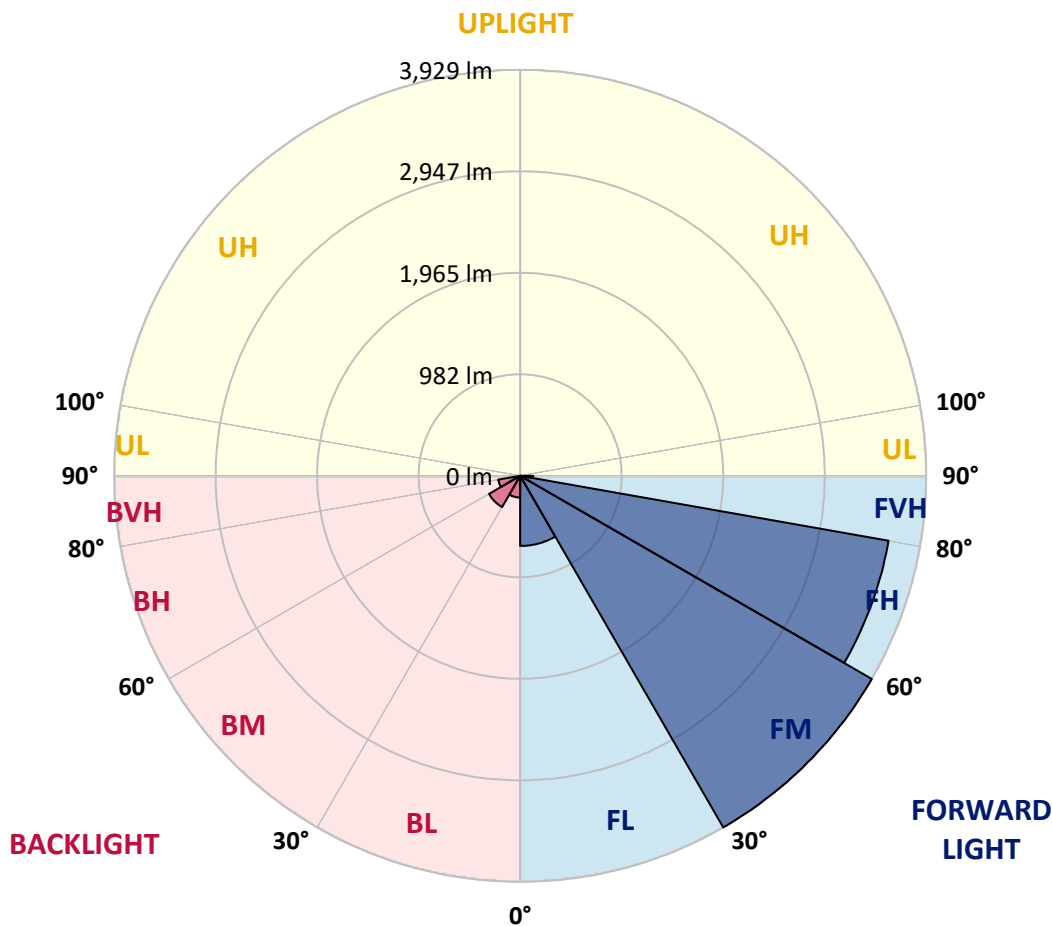


REPORT NUMBER: P596987
 CATALOG NUMBER: MSA-SA2D-835-U-SL3-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	679.1	7.4			
FM (30°-60°)	3929.1	43.0			
FH (60°-80°)	3620.4	39.6			G2/5000
FVH (80°-90°)	125.9	1.4			G2/225
BL (0°-30°)	210.0	2.3	B1/500		
BM (30°-60°)	349.1	3.8	B1/1000		
BH (60°-80°)	215.1	2.4	B1/500		G1/500
BVH (80°-90°)	2.3	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 III Short





REPORT NUMBER: P596987
 CATALOG NUMBER: MSA-SA2D-835-U-SL3-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	913.6	913.6	913.6	913.6	913.6	913.6	913.6	913.6	913.6	913.6	913.6
2.5°	1191.0	1146.1	1082.3	1101.3	1118.4	1134.6	1107.8	1092.5	1085.1	1019.5	1101.8
5°	1462.4	1406.4	1377.3	1369.9	1351.4	1310.3	1378.7	1348.2	1358.4	1371.3	1398.1
7.5°	1545.1	1519.7	1477.6	1493.4	1423.1	1417.1	1511.9	1538.2	1572.9	1549.3	1581.7
10°	1502.6	1458.7	1478.6	1473.0	1470.2	1532.2	1598.8	1600.2	1651.9	1676.9	1567.3
12.5°	1418.5	1423.5	1494.7	1489.2	1581.7	1705.6	1720.8	1704.7	1789.3	1745.8	1729.2
15°	1474.4	1516.0	1476.7	1490.1	1523.0	1677.8	1731.9	1781.9	1861.8	1887.7	1775.4
17.5°	1541.9	1546.1	1474.4	1457.8	1540.5	1612.6	1740.3	1781.4	1789.3	2016.3	1879.4
20°	1505.4	1541.0	1455.4	1350.5	1479.0	1577.0	1706.5	1693.6	1746.3	2054.2	1903.0
22.5°	1602.5	1551.6	1442.0	1363.0	1406.4	1495.7	1605.2	1689.9	1768.9	1963.6	1933.5
25°	1611.7	1593.2	1495.7	1425.4	1418.0	1440.7	1593.2	1647.8	1771.7	2044.9	1907.6
27.5°	1715.7	1694.5	1494.7	1501.7	1432.3	1362.5	1535.0	1663.0	1822.1	1995.5	1962.6
30°	1849.8	1851.7	1594.2	1615.9	1516.9	1404.6	1582.6	1617.7	1856.3	2074.5	2003.3
32.5°	1985.8	2041.7	1790.6	1675.5	1644.5	1564.1	1523.4	1685.7	1818.8	2209.5	2105.0
35°	2192.4	2230.3	1952.5	1849.4	1727.8	1636.2	1684.3	1742.6	1953.4	2388.5	2238.7
37.5°	2542.4	2474.0	2242.8	2063.4	2034.3	1899.3	1923.3	1871.1	2090.7	2599.3	2503.1
40°	2739.4	2677.4	2437.0	2349.6	2163.8	2184.6	2108.7	2139.3	2290.0	2818.9	2744.0
42.5°	2944.6	2885.5	2674.6	2612.7	2435.6	2349.6	2315.4	2425.0	2595.6	3184.6	3089.4
45°	3150.9	3000.6	2911.4	2942.3	2862.8	2692.7	2652.9	2750.5	2929.4	3634.0	3453.7
47.5°	3324.7	3198.0	3131.0	3116.6	3085.7	3321.9	3160.1	3203.1	3282.2	4031.6	3907.7
50°	3638.2	3513.3	3408.4	3379.3	3530.0	3865.2	3615.5	3532.3	3690.4	4512.0	4433.9
52.5°	4090.8	3931.7	3764.8	3765.3	4049.6	4233.7	4352.0	4205.9	4235.5	5040.4	5005.8
55°	4454.7	4252.6	4114.4	4223.5	4647.5	4750.6	5202.3	5074.2	5035.8	5530.5	5488.0
57.5°	4504.6	4262.3	4196.7	4388.1	4968.3	5626.7	6112.6	5792.7	5734.0	5940.6	6025.2
60°	4038.5	3781.5	3831.0	4138.9	5072.8	6160.7	6948.5	6687.3	6314.2	6421.0	6479.2
62.5°	3012.2	2806.9	2945.6	3353.4	4670.1	6518.5	7916.2	8037.3	6987.4	6781.6	6769.1
65°	1954.3	1825.8	1916.9	2251.1	3534.1	6477.9	8780.8	9306.0	7517.7	7075.7	6860.2
67.5°	1292.7	1195.2	1208.1	1406.0	2285.4	5268.4	9297.7	9932.5	8114.1	7242.6	6338.2
70°	963.5	886.8	891.4	998.7	1356.5	3474.5	8576.9	9438.2	8331.8	6664.2	5115.8
72.5°	694.9	643.6	686.6	805.9	1081.0	1837.3	6392.8	7772.9	7265.2	5256.4	3446.8
75°	481.3	447.5	517.8	674.1	986.6	1140.6	4224.4	5595.3	5092.2	3297.9	1558.1
77.5°	266.8	256.6	357.9	549.3	895.6	934.9	2587.7	3676.5	2824.4	1182.2	370.8
80°	116.5	112.8	173.4	412.4	752.7	844.7	1456.8	2038.5	1111.0	210.8	119.7
82.5°	49.9	48.1	74.0	248.3	546.9	706.5	898.3	981.1	382.4	65.2	68.0
85°	8.8	9.7	29.6	130.8	332.9	358.8	650.5	580.7	192.3	31.0	48.5
87.5°	0.0	0.0	4.6	25.4	62.4	102.6	282.0	203.4	36.5	10.2	8.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P596987
 CATALOG NUMBER: MSA-SA2D-835-U-SL3-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	913.6	913.6	913.6	913.6	913.6	913.6	913.6	913.6	913.6	913.6	913.6
2.5°	1113.3	1087.4	988.9	976.5	963.1	943.2	935.8	893.2	887.7	942.3	942.3
5°	1385.6	1293.2	1199.3	1125.3	1059.2	967.7	941.8	915.0	893.2	887.7	904.8
7.5°	1529.4	1416.6	1269.1	1081.0	928.4	795.7	740.2	701.4	657.9	670.9	677.8
10°	1521.6	1401.8	1213.6	971.8	802.6	656.1	515.0	432.8	387.0	364.3	361.6
12.5°	1598.8	1486.0	1176.2	884.9	669.0	466.5	324.1	265.4	231.6	232.1	229.3
15°	1643.6	1520.6	1132.7	774.9	471.1	300.1	224.7	211.8	207.1	212.2	209.4
17.5°	1722.7	1557.2	1034.3	610.8	324.1	226.5	206.7	201.6	207.6	218.2	215.5
20°	1716.7	1493.8	894.2	430.4	239.5	203.9	195.6	187.7	200.2	211.3	209.4
22.5°	1711.1	1431.9	762.4	317.6	200.2	185.9	178.9	175.7	182.2	195.1	197.9
25°	1662.1	1401.4	628.8	238.6	181.2	168.8	165.5	162.7	165.1	175.7	175.2
27.5°	1722.2	1324.1	485.5	200.2	167.8	153.0	150.3	145.6	141.0	150.3	151.6
30°	1709.7	1334.8	380.5	176.2	154.4	134.5	135.5	125.8	117.4	125.8	125.8
32.5°	1755.0	1257.1	304.7	160.0	141.0	126.7	115.1	105.0	98.9	104.0	105.0
35°	1821.2	1260.3	238.6	149.8	129.5	112.8	98.9	88.8	83.2	85.5	86.9
37.5°	2042.6	1238.1	199.3	141.9	125.3	104.5	90.2	76.7	73.0	75.8	77.2
40°	2186.9	1297.3	175.7	137.8	114.7	96.2	77.2	67.5	64.3	65.7	68.0
42.5°	2458.7	1330.2	164.1	133.2	105.0	82.3	66.1	60.6	55.9	57.8	59.6
45°	2749.5	1386.1	155.3	128.1	97.6	72.1	58.3	53.6	47.6	48.1	49.9
47.5°	3106.9	1519.3	145.2	119.3	87.4	65.7	51.8	44.8	39.3	38.8	41.1
50°	3586.8	1697.3	135.9	108.2	80.9	60.1	45.3	36.5	31.9	30.5	32.4
52.5°	4099.1	1927.5	126.2	100.3	73.0	52.7	38.8	29.6	25.4	24.5	25.9
55°	4606.8	2148.5	117.0	95.2	64.7	45.3	32.8	24.5	20.8	19.9	20.8
57.5°	5185.2	2387.5	105.0	85.1	56.9	39.3	27.3	20.3	17.1	16.2	16.6
60°	5620.7	2471.7	94.8	74.0	49.5	34.7	23.1	16.2	13.9	12.9	13.4
62.5°	5827.3	2334.4	85.1	64.3	43.5	30.1	19.4	13.4	11.6	10.6	10.6
65°	5773.7	2030.1	75.4	55.0	37.4	25.0	15.3	11.6	10.2	8.8	8.3
67.5°	5154.2	1588.6	64.3	46.2	31.4	20.3	12.9	11.1	9.2	8.3	6.9
70°	4087.6	1150.3	52.2	38.4	26.4	16.6	10.2	10.2	8.8	8.3	6.5
72.5°	2679.3	724.0	42.5	31.0	21.7	12.9	7.9	9.2	8.3	8.3	6.0
75°	1160.9	258.9	34.2	25.0	18.0	8.8	6.9	8.3	8.8	8.3	6.9
77.5°	271.9	80.4	26.8	19.9	14.8	6.0	6.9	8.3	8.8	7.9	6.0
80°	102.2	34.2	17.6	12.9	11.6	3.7	6.0	5.1	4.6	3.2	0.9
82.5°	62.0	14.3	9.2	6.5	5.5	0.9	2.8	1.8	0.9	0.9	0.0
85°	43.9	6.9	5.1	4.6	2.8	0.0	0.5	0.0	0.0	0.5	0.0
87.5°	6.0	1.8	2.3	2.3	1.8	0.0	0.0	0.0	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)