

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: P367374

Luminaire Tested: **MSA-SA2B-830-U-SL2**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367374
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2B-830-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7863 lumens
Efficiency: N/A
Efficacy: 92.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G2

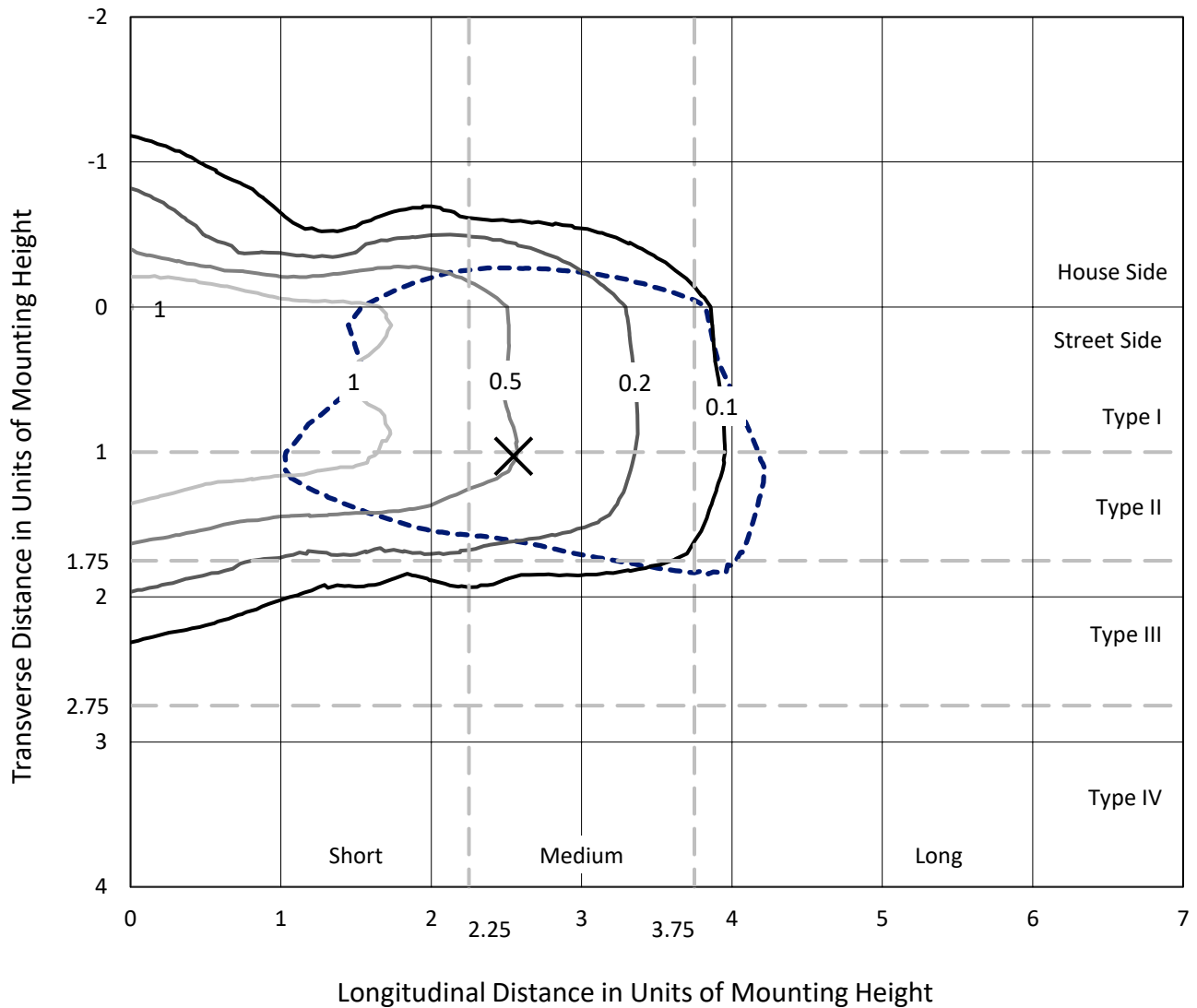
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

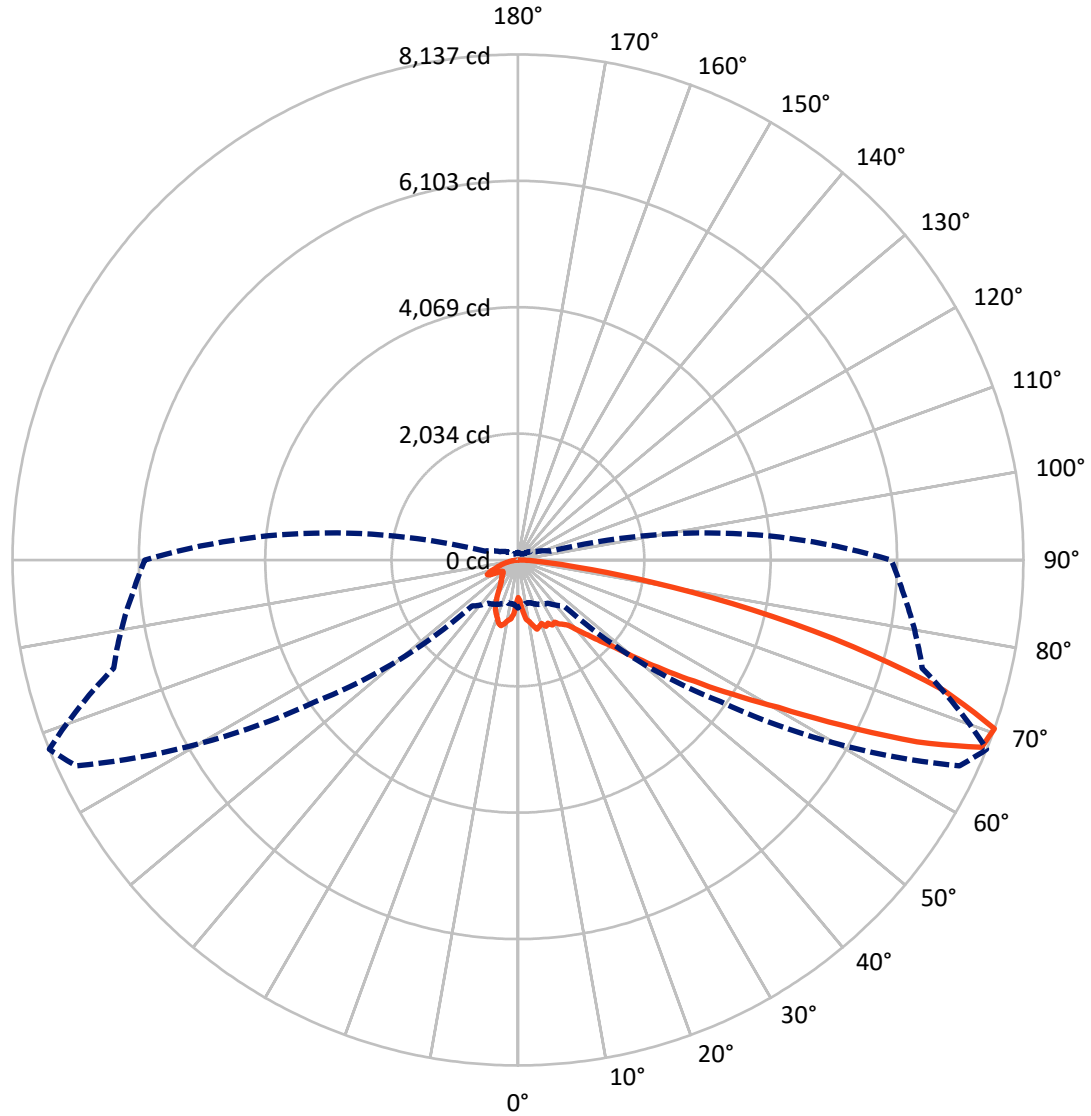
✕ Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1501.2	0.0	1501.2
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	6361.8	0.0	6361.8
	% Fixture	80.9	0.0	80.9
Total	Lumens	7863.0	0.0	7863.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.5	1.0
10°-20°	262.4	3.3
20°-30°	399.2	5.1
30°-40°	609.8	7.8
40°-50°	1048.5	13.3
50°-60°	1735.4	22.1
60°-70°	2139.6	27.2
70°-80°	1374.4	17.5
80°-90°	213.2	2.7
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°	7863.0	100.0
0°-180°	7863.0	100.0

Coefficient of Utilization



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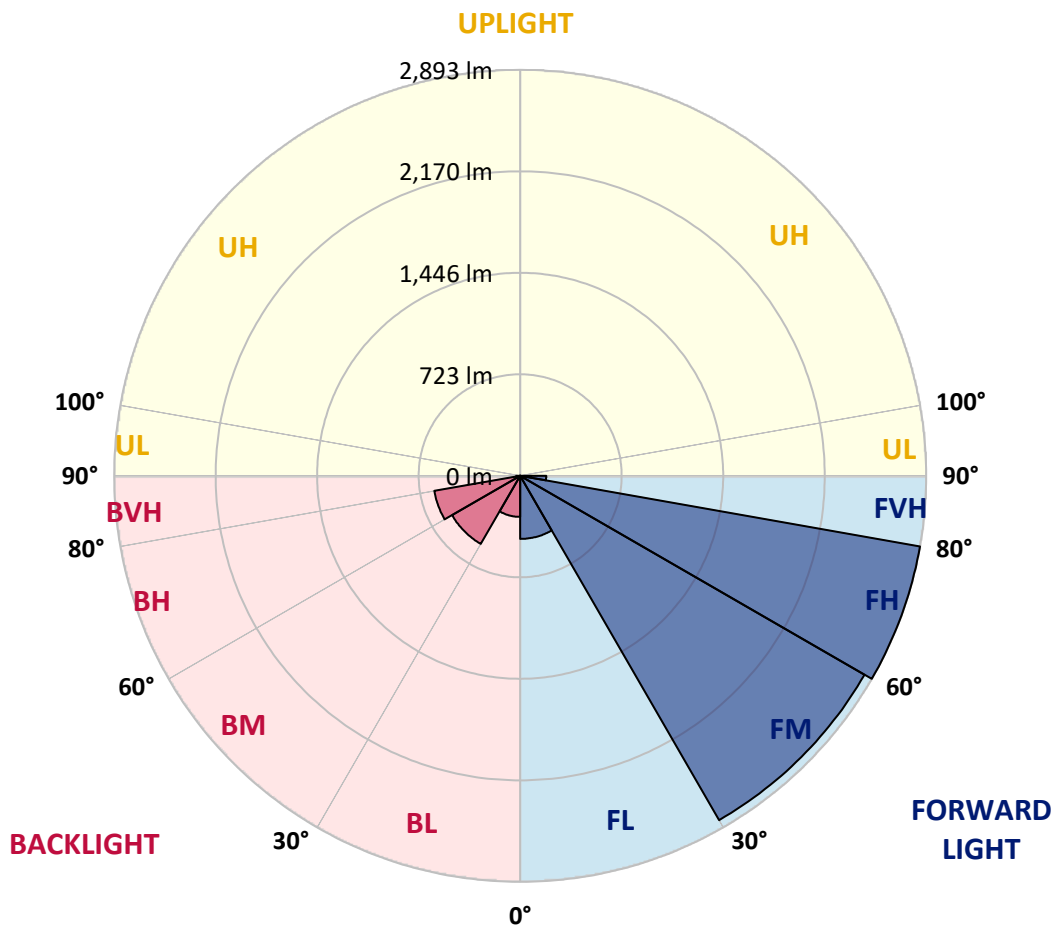
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	449.6	5.7			
FM (30°-60°)	2833.3	36.0			
FH (60°-80°)	2893.0	36.8			G2/5000
FVH (80°-90°)	185.8	2.4			G2/225
BL (0°-30°)	292.5	3.7	B1/500		
BM (30°-60°)	560.3	7.1	B1/1000		
BH (60°-80°)	621.0	7.9	B2/1000		G2/1000
BVH (80°-90°)	27.4	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	602.9	602.9	602.9	602.9	602.9	602.9	602.9	602.9	602.9	602.9	602.9
2.5°	692.7	664.8	636.5	650.3	672.3	691.7	687.8	690.1	663.4	659.8	729.9
5°	816.1	768.1	767.1	767.8	769.7	747.4	802.0	830.3	836.5	865.5	934.3
7.5°	858.9	839.5	819.8	829.6	804.6	806.9	874.1	947.8	965.2	986.3	1080.4
10°	850.0	831.6	837.5	839.2	843.8	881.0	924.1	994.8	1009.6	1076.8	1101.1
12.5°	851.3	848.1	875.7	876.7	926.0	992.9	1010.0	1075.1	1081.0	1130.4	1232.1
15°	896.4	919.1	903.7	911.9	921.4	1001.4	1026.1	1119.5	1155.1	1218.6	1295.0
17.5°	984.3	990.9	944.5	932.3	963.6	987.9	1044.2	1084.7	1121.9	1299.2	1404.5
20°	1004.7	1022.5	967.2	904.3	970.5	1004.4	1043.5	1062.0	1090.9	1311.1	1460.5
22.5°	1092.2	1055.4	988.6	933.9	955.7	988.6	1016.9	1086.3	1162.3	1277.2	1516.4
25°	1141.9	1120.5	1061.0	1002.4	984.0	985.0	1039.6	1101.8	1128.1	1326.9	1527.6
27.5°	1262.0	1227.8	1093.9	1082.7	1013.3	959.3	1043.2	1140.0	1186.0	1288.0	1582.2
30°	1412.4	1386.4	1210.7	1195.9	1089.9	995.8	1089.3	1168.3	1161.7	1313.4	1620.1
32.5°	1534.2	1577.6	1400.3	1283.4	1208.1	1117.9	1074.8	1163.3	1228.8	1372.3	1684.3
35°	1708.0	1748.8	1548.0	1469.0	1305.5	1174.5	1175.8	1231.1	1271.6	1441.1	1756.0
37.5°	2008.7	1972.9	1811.3	1686.6	1581.9	1386.4	1327.9	1308.4	1341.0	1525.3	1896.5
40°	2225.6	2195.3	2005.1	1934.0	1730.3	1616.8	1456.2	1437.8	1495.4	1612.2	2011.4
42.5°	2482.6	2428.6	2251.6	2193.0	1980.1	1775.4	1613.5	1624.0	1652.0	1776.1	2166.7
45°	2744.2	2613.3	2512.9	2508.3	2366.1	2083.4	1865.9	1857.4	1858.3	2017.3	2341.1
47.5°	2951.9	2834.1	2719.2	2664.6	2592.9	2616.2	2232.5	2132.1	2101.9	2260.2	2602.7
50°	3092.4	2956.8	2826.8	2814.0	3005.5	3131.6	2576.7	2469.5	2488.2	2607.7	2951.6
52.5°	3095.4	2934.5	2798.9	2888.7	3339.9	3520.2	3169.7	2870.0	2929.8	3011.1	3406.7
55°	2880.2	2713.3	2625.1	2829.8	3470.5	3981.3	4003.0	3511.7	3442.6	3472.5	3950.7
57.5°	2426.3	2257.9	2206.5	2451.7	3222.7	4425.9	5009.3	4278.4	4075.7	3950.7	4508.1
60°	1826.4	1680.6	1648.7	1805.0	2671.8	4295.2	5824.1	5232.8	4819.8	4484.8	5067.3
62.5°	1369.7	1265.0	1217.0	1239.3	1848.8	3870.4	6359.2	6438.6	5853.8	5067.9	5613.5
65°	1113.0	1028.4	985.6	956.7	1149.8	2992.7	6262.5	7453.5	7061.5	5680.3	6038.7
67.5°	929.7	854.6	834.9	863.2	908.9	1736.3	5505.6	8021.1	8047.8	6284.5	6287.2
70°	771.7	716.1	708.8	789.1	849.4	1047.8	3976.7	7842.8	8137.0	6737.7	6228.9
72.5°	596.3	566.4	565.4	691.4	843.8	893.1	2368.1	6775.2	7170.4	6592.9	5658.9
75°	413.7	392.9	408.7	568.3	824.4	906.0	1351.6	5277.2	5573.1	5610.2	4533.1
77.5°	284.7	267.2	284.3	411.0	736.2	927.7	945.5	3815.7	3848.7	3762.1	2596.5
80°	198.1	185.9	199.1	290.9	572.9	918.1	804.9	2402.3	2204.2	1679.0	831.3
82.5°	122.7	119.1	133.6	207.3	403.5	835.2	762.8	1239.7	946.4	463.4	296.8
85°	64.5	59.2	77.7	135.3	252.4	655.5	714.8	565.7	365.3	164.5	119.1
87.5°	19.1	17.1	29.9	54.6	107.0	293.9	409.1	239.9	136.2	48.4	37.2
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°	602.9	602.9	602.9	602.9	602.9	602.9	602.9	602.9	602.9	602.9	602.9
2.5°	734.8	731.2	682.5	688.8	699.3	701.9	701.6	683.8	665.1	717.4	715.8
5°	935.9	903.3	879.0	873.7	843.8	813.8	824.4	820.7	816.1	839.8	842.8
7.5°	1080.7	1035.6	1007.3	934.6	865.5	805.6	824.7	830.6	818.8	861.5	874.4
10°	1118.9	1083.3	1052.7	959.3	921.1	886.2	834.6	775.7	767.8	743.1	746.0
12.5°	1217.3	1212.3	1108.0	1025.8	976.1	906.6	795.1	723.7	662.4	665.4	647.6
15°	1295.0	1297.6	1172.2	1057.0	923.7	817.8	686.5	597.6	534.8	522.3	509.4
17.5°	1399.3	1394.0	1177.5	1019.5	850.7	695.4	534.4	446.2	435.7	442.9	431.8
20°	1444.7	1398.3	1143.9	926.4	736.5	528.2	403.8	357.1	377.5	406.4	407.1
22.5°	1485.5	1406.2	1126.5	851.3	584.5	384.0	324.1	315.6	339.6	378.8	382.1
25°	1483.8	1442.7	1095.2	775.7	453.2	299.8	281.7	287.9	316.6	357.4	359.7
27.5°	1558.5	1414.7	1013.9	676.3	341.3	256.7	261.3	272.8	286.3	325.1	332.7
30°	1557.9	1466.7	973.1	555.5	274.1	235.3	247.1	257.0	268.2	303.7	308.0
32.5°	1594.7	1432.8	948.4	432.1	245.8	230.0	233.0	242.9	259.0	283.0	286.0
35°	1639.2	1471.3	869.4	343.2	235.3	225.4	227.7	233.3	248.1	270.2	273.1
37.5°	1781.7	1478.6	838.2	289.3	234.6	223.4	223.1	226.1	242.9	262.9	271.8
40°	1837.3	1544.7	747.0	270.2	232.3	223.4	218.8	220.5	234.3	260.0	266.9
42.5°	1970.6	1566.8	679.6	263.6	232.3	219.5	212.3	214.9	231.0	253.7	264.6
45°	2107.8	1598.0	599.3	262.3	232.0	219.2	205.3	211.3	224.4	243.5	255.4
47.5°	2303.3	1710.6	519.0	258.3	229.4	220.8	203.7	203.4	214.9	231.3	242.5
50°	2622.2	1886.3	456.8	253.4	229.7	219.5	200.4	195.8	203.4	217.9	228.7
52.5°	3066.1	2185.8	432.4	250.8	227.1	214.2	194.8	187.6	191.9	203.4	213.9
55°	3581.4	2590.2	456.4	250.8	221.8	206.0	186.9	178.4	180.7	188.6	198.8
57.5°	4183.7	3092.7	572.6	247.1	215.2	196.1	177.4	167.5	168.2	175.1	184.3
60°	4812.5	3654.2	832.9	244.2	210.6	185.3	166.2	156.0	155.0	161.6	169.8
62.5°	5442.4	4172.1	1106.7	251.1	209.3	176.1	154.3	144.1	143.8	149.7	156.6
65°	5943.3	4526.2	1174.8	279.1	217.9	165.5	142.2	132.6	132.0	136.9	144.5
67.5°	6189.1	4577.6	892.5	313.9	236.0	155.7	130.3	121.4	120.8	126.0	132.6
70°	6007.1	4226.8	550.9	317.6	235.0	144.1	118.1	110.6	109.3	114.9	119.8
72.5°	5333.8	3697.3	418.6	281.0	203.4	127.7	106.0	99.4	97.4	102.3	107.0
75°	4281.1	2935.4	335.3	226.7	160.3	107.6	93.8	87.5	85.2	89.8	93.8
77.5°	2493.8	1651.3	245.2	177.0	121.1	87.9	80.0	74.4	71.7	76.7	79.6
80°	810.9	550.2	154.0	127.0	88.5	68.8	64.8	60.9	58.2	61.5	62.5
82.5°	291.2	204.7	85.2	78.0	58.9	49.4	49.0	46.7	43.4	44.8	44.8
85°	129.0	93.5	50.7	41.8	35.2	26.3	30.9	29.3	26.0	25.3	24.4
87.5°	36.2	30.9	18.4	14.2	11.5	4.3	9.9	8.9	7.2	6.6	4.6
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)