

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: P596656

Luminaire Tested: **MSA-SA3A-827-U-SL2**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596656
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3A-827-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 8566 lumens
Efficiency: N/A
Efficacy: 89.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G2

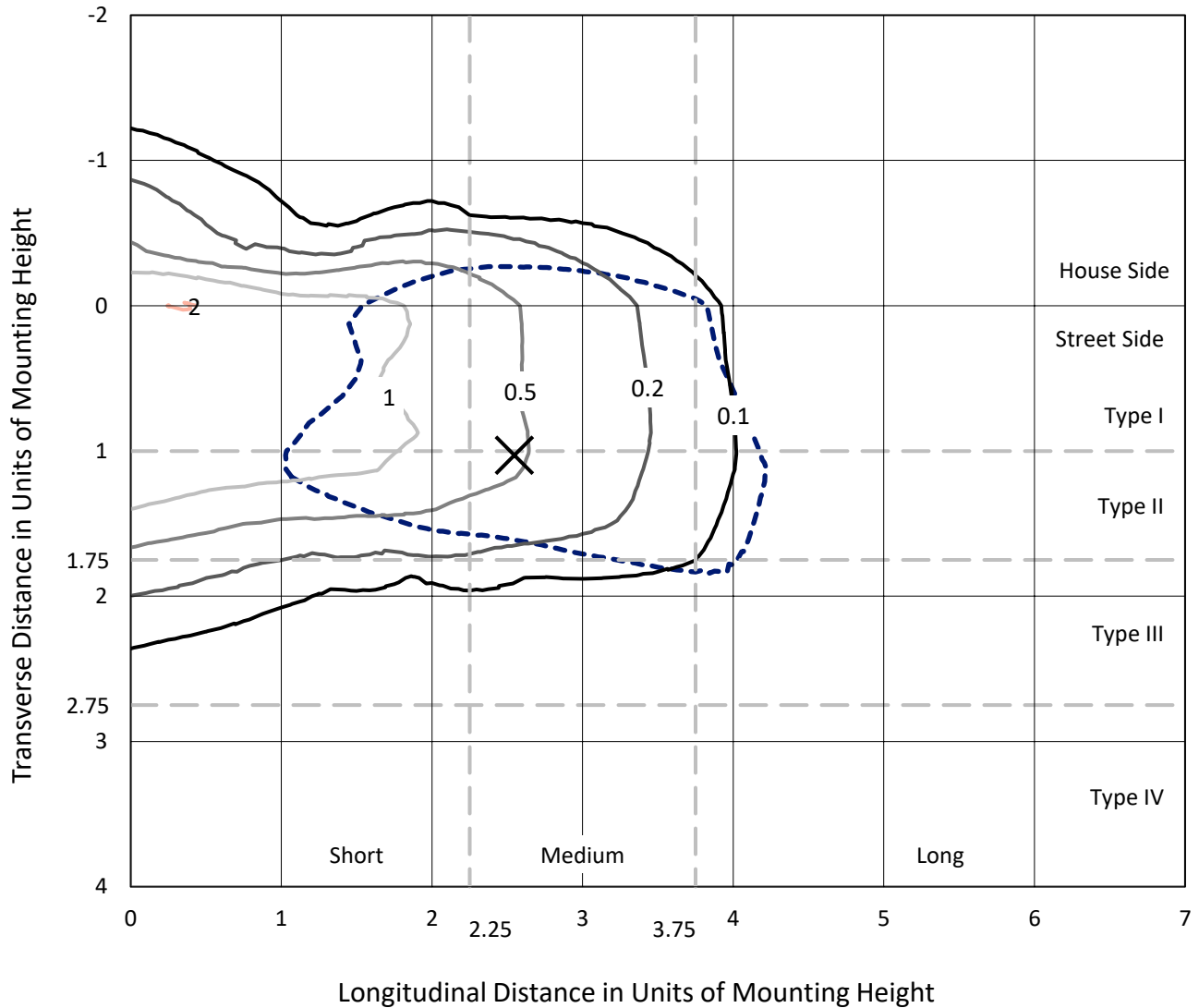
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

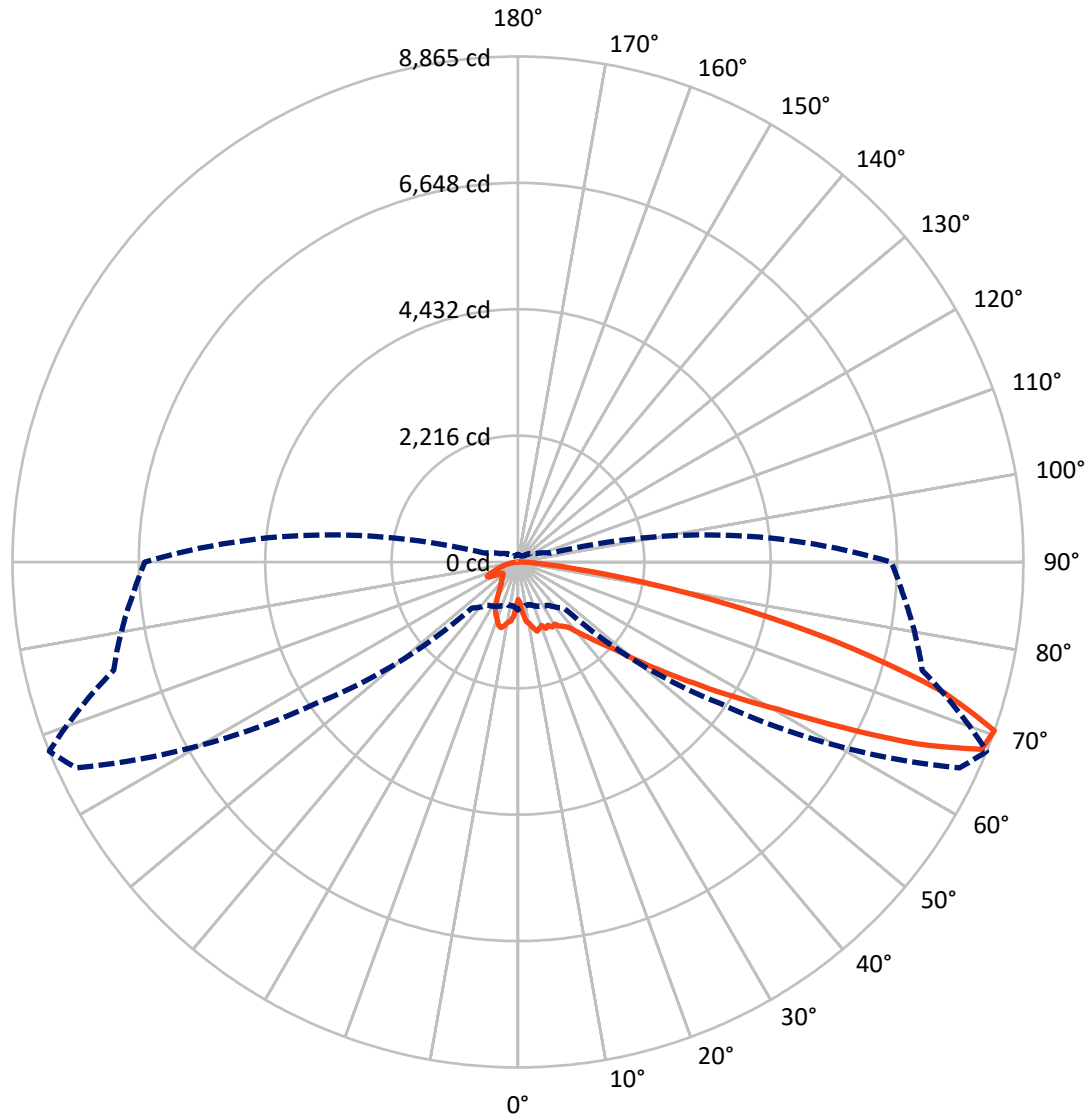
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 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	1635.5	0.0	1635.5
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	6930.5	0.0	6930.5
	% Fixture	80.9	0.0	80.9
Total	Lumens	8566.0	0.0	8566.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.7	1.0
10°-20°	285.9	3.3
20°-30°	434.9	5.1
30°-40°	664.3	7.8
40°-50°	1142.2	13.3
50°-60°	1890.6	22.1
60°-70°	2330.8	27.2
70°-80°	1497.3	17.5
80°-90°	232.3	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°	8566.0	100.0
0°-180°	8566.0	100.0

Coefficient of Utilization



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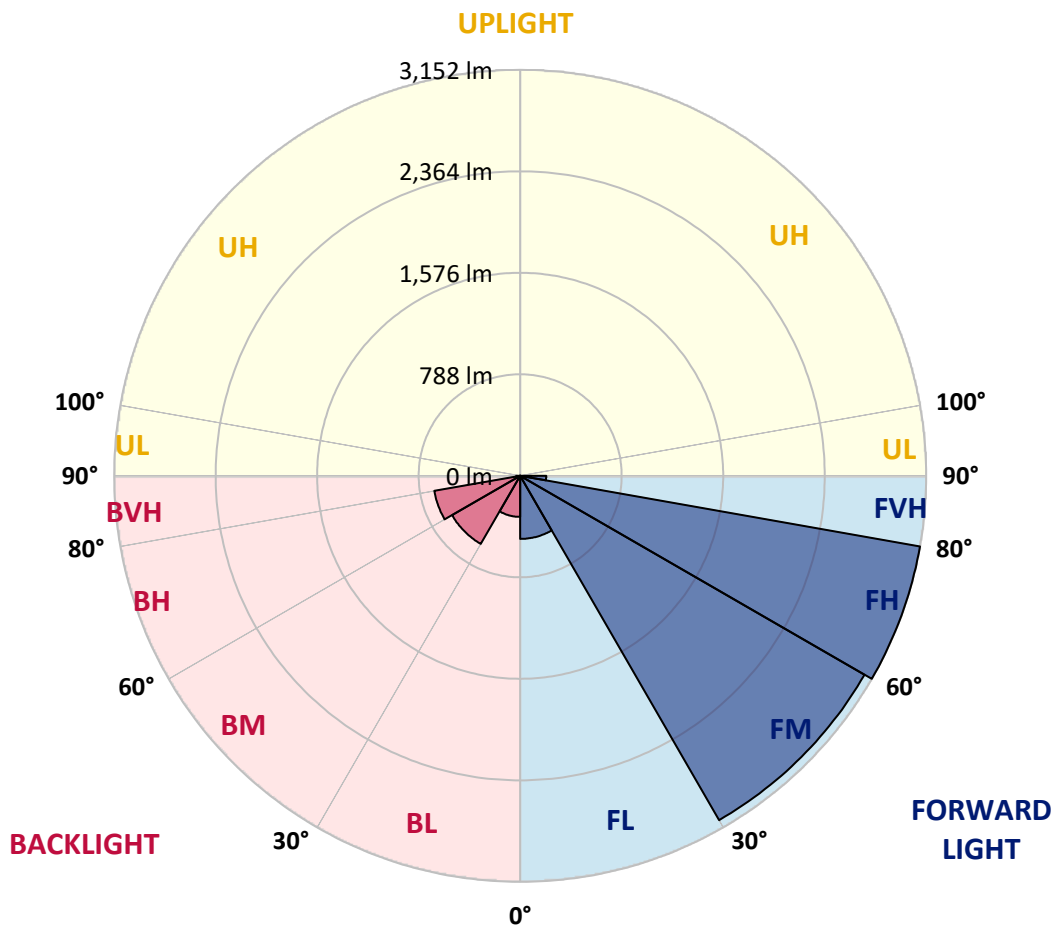
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	489.8	5.7			
FM (30°-60°)	3086.7	36.0			
FH (60°-80°)	3151.6	36.8			G2/5000
FVH (80°-90°)	202.4	2.4			G2/225
BL (0°-30°)	318.7	3.7	B1/500		
BM (30°-60°)	610.4	7.1	B1/1000		
BH (60°-80°)	676.5	7.9	B2/1000		G2/1000
BVH (80°-90°)	29.8	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°	656.8	656.8	656.8	656.8	656.8	656.8	656.8	656.8	656.8	656.8	656.8
2.5°	754.7	724.2	693.4	708.4	732.4	753.6	749.3	751.8	722.8	718.8	795.2
5°	889.1	836.8	835.7	836.4	838.5	814.2	873.7	904.5	911.3	942.9	1017.8
7.5°	935.7	914.6	893.0	903.8	876.6	879.1	952.2	1032.5	1051.5	1074.4	1177.0
10°	926.0	905.9	912.4	914.2	919.2	959.7	1006.7	1083.8	1099.9	1173.0	1199.6
12.5°	927.5	923.9	954.0	955.1	1008.8	1081.6	1100.3	1171.2	1177.7	1231.5	1342.3
15°	976.6	1001.3	984.5	993.4	1003.8	1090.9	1117.8	1219.6	1258.4	1327.6	1410.7
17.5°	1072.3	1079.5	1028.9	1015.7	1049.7	1076.2	1137.5	1181.6	1222.2	1415.4	1530.1
20°	1094.5	1113.9	1053.7	985.2	1057.2	1094.2	1136.8	1156.9	1188.5	1428.3	1591.1
22.5°	1189.9	1149.7	1077.0	1017.4	1041.1	1077.0	1107.8	1183.4	1266.2	1391.4	1652.0
25°	1244.0	1220.7	1155.8	1092.0	1071.9	1073.0	1132.5	1200.3	1229.0	1445.5	1664.2
27.5°	1374.9	1337.6	1191.7	1179.5	1103.8	1045.0	1136.5	1241.9	1292.1	1403.2	1723.7
30°	1538.7	1510.4	1318.9	1302.8	1187.4	1084.8	1186.7	1272.7	1265.5	1430.8	1764.9
32.5°	1671.4	1718.7	1525.4	1398.2	1316.1	1217.8	1170.9	1267.3	1338.7	1495.0	1834.8
35°	1860.7	1905.1	1686.4	1600.4	1422.2	1279.5	1280.9	1341.2	1385.3	1569.9	1913.0
37.5°	2188.3	2149.3	1973.2	1837.4	1723.3	1510.4	1446.6	1425.4	1460.9	1661.7	2066.1
40°	2424.6	2391.6	2184.4	2106.9	1885.0	1761.3	1586.4	1566.3	1629.1	1756.3	2191.2
42.5°	2704.6	2645.8	2452.9	2389.1	2157.1	1934.1	1757.8	1769.2	1799.7	1934.9	2360.4
45°	2989.6	2846.9	2737.6	2732.5	2577.7	2269.7	2032.7	2023.4	2024.5	2197.7	2550.4
47.5°	3215.8	3087.5	2962.3	2902.8	2824.7	2850.1	2432.1	2322.8	2289.8	2462.2	2835.4
50°	3368.9	3221.2	3079.6	3065.6	3274.2	3411.6	2807.1	2690.2	2710.7	2840.8	3215.5
52.5°	3372.1	3196.8	3049.1	3147.0	3638.5	3835.0	3453.1	3126.5	3191.8	3280.3	3711.3
55°	3137.7	2955.9	2859.8	3082.8	3780.8	4337.2	4360.9	3825.6	3750.3	3783.0	4303.9
57.5°	2643.3	2459.7	2403.8	2670.9	3510.9	4821.6	5457.2	4661.0	4440.1	4303.9	4911.2
60°	1989.7	1830.9	1796.1	1966.4	2910.7	4679.2	6344.9	5700.6	5250.7	4885.7	5520.3
62.5°	1492.1	1378.1	1325.8	1350.1	2014.1	4216.4	6927.8	7014.2	6377.1	5521.0	6115.4
65°	1212.5	1120.3	1073.7	1042.2	1252.6	3260.3	6822.4	8119.8	7692.9	6188.2	6578.6
67.5°	1012.8	931.0	909.5	940.4	990.2	1891.5	5997.8	8738.3	8767.3	6846.4	6849.3
70°	840.7	780.1	772.2	859.7	925.3	1141.5	4332.2	8543.9	8864.5	7340.1	6785.8
72.5°	649.6	617.0	615.9	753.2	919.2	973.0	2579.8	7381.0	7811.5	7182.3	6164.9
75°	450.6	428.1	445.3	619.1	898.1	987.0	1472.4	5749.0	6071.3	6111.8	4938.4
77.5°	310.1	291.1	309.8	447.8	802.0	1010.6	1030.0	4156.9	4192.7	4098.5	2828.6
80°	215.8	202.6	216.9	316.9	624.2	1000.2	876.9	2617.1	2401.3	1829.1	905.6
82.5°	133.7	129.8	145.6	225.9	439.5	909.9	831.0	1350.5	1031.1	504.8	323.4
85°	70.3	64.5	84.6	147.3	275.0	714.1	778.7	616.3	397.9	179.3	129.8
87.5°	20.8	18.6	32.6	59.5	116.5	320.1	445.6	261.4	148.4	52.7	40.5
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°	656.8	656.8	656.8	656.8	656.8	656.8	656.8	656.8	656.8	656.8	656.8
2.5°	800.5	796.6	743.5	750.4	761.8	764.7	764.3	745.0	724.5	781.5	779.8
5°	1019.6	984.1	957.6	951.8	919.2	886.6	898.1	894.1	889.1	914.9	918.1
7.5°	1177.3	1128.2	1097.4	1018.2	942.9	877.6	898.4	904.9	892.0	938.6	952.6
10°	1218.9	1180.2	1146.9	1045.0	1003.5	965.5	909.2	845.0	836.4	809.5	812.7
12.5°	1326.1	1320.7	1207.1	1117.5	1063.3	987.7	866.2	788.4	721.7	724.9	705.5
15°	1410.7	1413.6	1277.0	1151.5	1006.3	890.9	747.8	651.0	582.6	569.0	555.0
17.5°	1524.4	1518.6	1282.7	1110.7	926.7	757.5	582.2	486.1	474.7	482.6	470.4
20°	1573.8	1523.3	1246.2	1009.2	802.3	575.4	439.9	389.0	411.2	442.8	443.5
22.5°	1618.3	1531.9	1227.2	927.5	636.7	418.4	353.1	343.8	370.0	412.6	416.2
25°	1616.5	1571.7	1193.1	845.0	493.7	326.6	306.9	313.7	344.9	389.3	391.8
27.5°	1697.9	1541.2	1104.6	736.7	371.8	279.6	284.7	297.2	311.9	354.2	362.5
30°	1697.2	1597.9	1060.1	605.2	298.6	256.3	269.2	280.0	292.2	330.9	335.6
32.5°	1737.3	1560.9	1033.2	470.7	267.8	250.6	253.8	264.6	282.1	308.3	311.5
35°	1785.7	1602.9	947.2	373.9	256.3	245.6	248.1	254.2	270.3	294.3	297.6
37.5°	1941.0	1610.8	913.1	315.1	255.6	243.4	243.1	246.3	264.6	286.4	296.1
40°	2001.5	1682.8	813.8	294.3	253.1	243.4	238.4	240.2	255.3	283.2	290.7
42.5°	2146.7	1706.9	740.3	287.2	253.1	239.1	231.2	234.1	251.7	276.4	288.2
45°	2296.2	1740.9	652.8	285.7	252.7	238.8	223.7	230.2	244.5	265.3	278.2
47.5°	2509.2	1863.5	565.4	281.4	249.9	240.6	221.9	221.6	234.1	252.0	264.2
50°	2856.6	2055.0	497.6	276.1	250.2	239.1	218.3	213.3	221.6	237.3	249.2
52.5°	3340.2	2381.2	471.1	273.2	247.4	233.4	212.2	204.3	209.0	221.6	233.0
55°	3901.6	2821.8	497.2	273.2	241.6	224.4	203.6	194.3	196.8	205.4	216.5
57.5°	4557.7	3369.3	623.8	269.2	234.5	213.7	193.2	182.5	183.2	190.7	200.8
60°	5242.8	3980.9	907.4	266.0	229.4	201.8	181.0	169.9	168.9	176.0	185.0
62.5°	5929.0	4545.2	1205.7	273.5	228.0	191.8	168.1	157.0	156.7	163.1	170.6
65°	6474.6	4930.9	1279.9	304.0	237.3	180.3	154.9	144.5	143.8	149.1	157.4
67.5°	6742.4	4986.8	972.3	342.0	257.0	169.6	142.0	132.3	131.6	137.3	144.5
70°	6544.2	4604.7	600.1	346.0	256.0	157.0	128.7	120.5	119.0	125.1	130.5
72.5°	5810.7	4027.8	456.0	306.2	221.6	139.1	115.4	108.3	106.1	111.5	116.5
75°	4663.8	3197.9	365.3	247.0	174.6	117.2	102.2	95.4	92.9	97.9	102.2
77.5°	2716.8	1799.0	267.1	192.9	131.9	95.7	87.1	81.0	78.2	83.5	86.8
80°	883.4	599.4	167.8	138.4	96.4	74.9	70.6	66.3	63.5	67.0	68.1
82.5°	317.3	223.0	92.9	85.0	64.2	53.8	53.4	50.9	47.3	48.8	48.8
85°	140.5	101.8	55.2	45.5	38.4	28.7	33.7	31.9	28.3	27.6	26.5
87.5°	39.4	33.7	20.1	15.4	12.5	4.7	10.8	9.7	7.9	7.2	5.0
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)