

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: P596658

Luminaire Tested: **MSA-SA3A-827-U-SL3**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596658  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3A-827-U-SL3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8461 lumens  
Efficiency: N/A  
Efficacy: 88.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

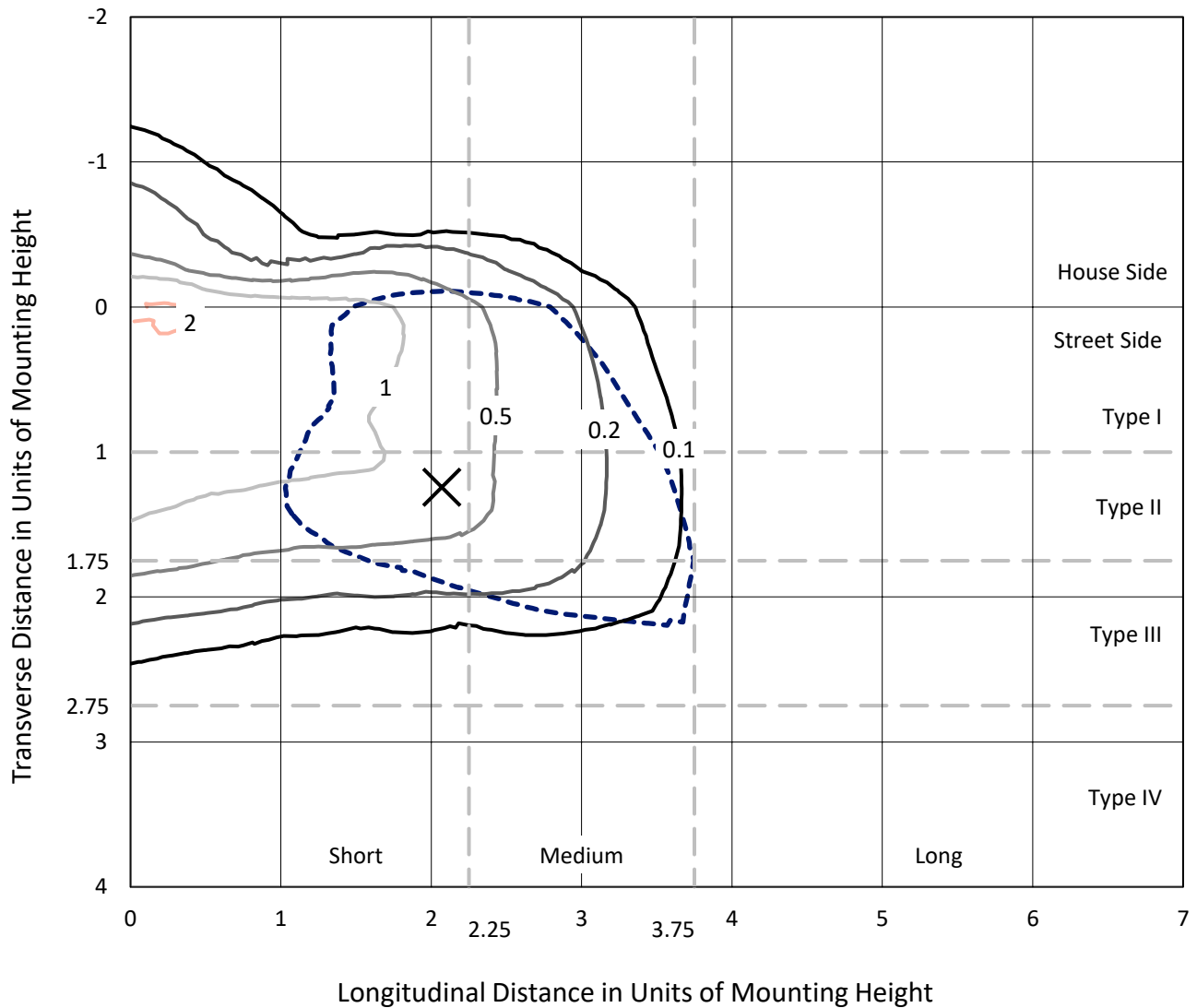
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

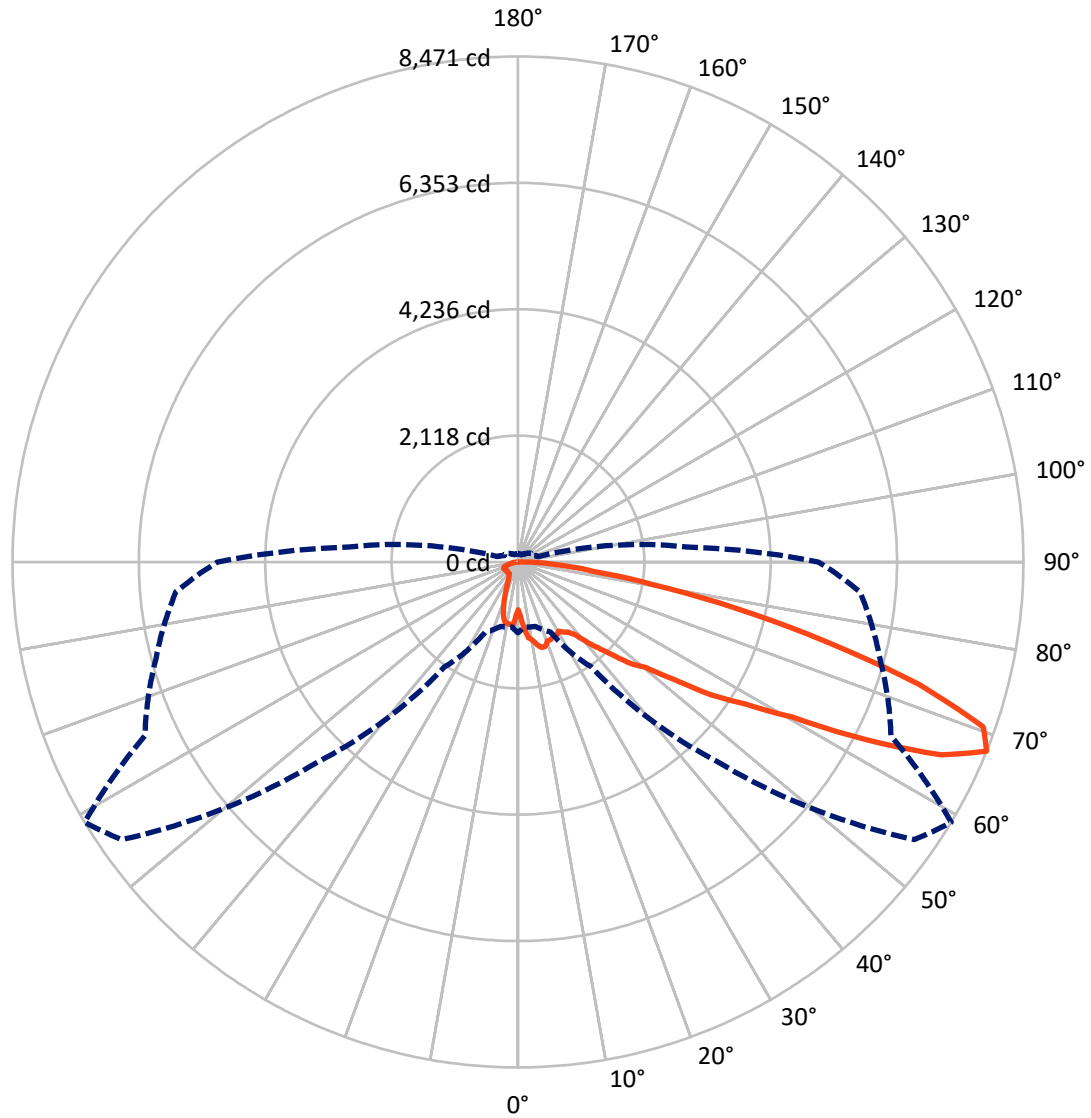
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1273.6	0.0	1273.6
	% Fixture	15.1	0.0	15.1
<b>Street Side</b>	Lumens	7187.4	0.0	7187.4
	% Fixture	84.9	0.0	84.9
<b>Total</b>	Lumens	8461.0	0.0	8461.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.6	1.2
10°-20°	309.4	3.7
20°-30°	441.9	5.2
30°-40°	651.2	7.7
40°-50°	1100.2	13.0
50°-60°	1914.5	22.6
60°-70°	2439.6	28.8
70°-80°	1291.8	15.3
80°-90°	207.8	2.5
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°	8461.0	100.0
0°-180°	8461.0	100.0

**Coefficient of Utilization**



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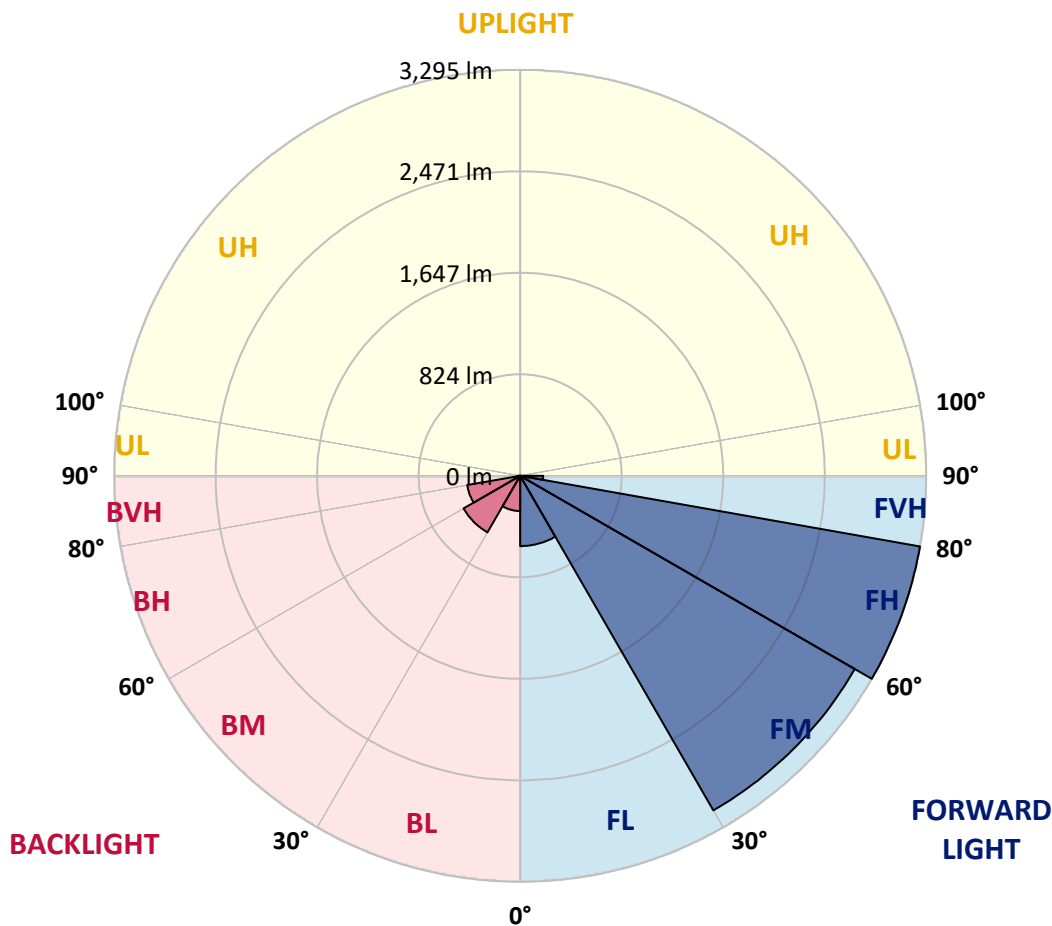
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	570.3	6.7			
FM (30°-60°)	3135.5	37.1			
FH (60°-80°)	3295.0	38.9			G2/5000
FVH (80°-90°)	186.7	2.2			G2/225
BL (0°-30°)	285.6	3.4	B1/500		
BM (30°-60°)	530.3	6.3	B1/1000		
BH (60°-80°)	436.5	5.2	B1/500		G1/500
BVH (80°-90°)	21.2	0.3			G1/100
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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	800.6	800.6	800.6	800.6	800.6	800.6	800.6	800.6	800.6	800.6	800.6
2.5°	999.6	953.0	903.5	917.5	945.8	958.8	944.8	931.1	913.6	892.8	963.8
5°	1212.2	1143.0	1133.0	1132.6	1122.6	1082.5	1134.1	1130.5	1151.3	1172.8	1228.0
7.5°	1272.8	1247.0	1219.1	1232.3	1181.8	1179.6	1259.9	1282.9	1323.0	1309.8	1384.0
10°	1241.6	1212.6	1227.3	1221.9	1226.6	1279.7	1328.8	1330.2	1373.2	1415.5	1367.9
12.5°	1186.8	1188.9	1247.4	1245.2	1320.5	1419.1	1433.8	1422.4	1492.6	1463.9	1504.8
15°	1225.9	1252.0	1237.3	1249.9	1279.7	1405.1	1446.0	1487.6	1554.3	1580.1	1539.2
17.5°	1288.3	1302.2	1236.3	1229.5	1290.8	1350.3	1451.8	1487.2	1497.6	1681.6	1623.9
20°	1261.7	1290.0	1225.5	1142.7	1244.5	1323.4	1423.4	1412.7	1463.2	1689.5	1641.4
22.5°	1337.0	1290.0	1207.9	1149.1	1185.0	1257.4	1342.4	1413.0	1472.9	1643.2	1666.9
25°	1351.4	1329.1	1252.4	1194.0	1181.8	1207.6	1328.8	1375.0	1476.1	1706.3	1653.3
27.5°	1438.8	1405.5	1249.2	1251.0	1190.4	1144.8	1285.7	1382.9	1512.7	1667.2	1686.6
30°	1547.5	1522.0	1325.9	1333.1	1249.2	1165.3	1315.1	1344.5	1533.9	1728.2	1728.6
32.5°	1628.9	1673.7	1476.9	1379.3	1349.6	1286.8	1270.0	1402.3	1509.1	1838.6	1800.3
35°	1775.5	1810.3	1593.0	1514.9	1414.1	1343.5	1392.6	1440.3	1612.0	1983.8	1906.7
37.5°	2046.9	2006.8	1808.9	1685.9	1648.2	1546.4	1573.7	1540.3	1723.9	2147.0	2115.4
40°	2204.0	2169.2	1960.9	1892.8	1743.6	1756.5	1722.5	1746.8	1873.4	2320.5	2310.5
42.5°	2358.9	2312.3	2136.2	2088.9	1940.1	1877.0	1883.1	1962.0	2103.9	2600.9	2567.5
45°	2512.0	2392.6	2315.5	2328.0	2256.3	2126.9	2135.9	2210.1	2355.6	2921.4	2844.7
47.5°	2629.2	2530.6	2470.4	2455.0	2419.5	2592.6	2515.2	2545.3	2609.5	3206.8	3177.8
50°	2851.2	2736.1	2657.5	2635.3	2755.8	2996.7	2839.0	2774.1	2910.7	3575.8	3560.7
52.5°	3206.5	3063.1	2932.2	2930.8	3105.0	3261.3	3372.5	3260.6	3310.8	3953.7	3996.7
55°	3516.6	3350.6	3233.0	3297.9	3546.0	3641.8	4019.3	3931.8	3889.5	4335.2	4458.2
57.5°	3632.4	3438.5	3361.7	3457.5	3823.2	4315.1	4714.2	4484.0	4442.7	4766.9	5024.7
60°	3378.2	3173.1	3177.8	3358.1	3991.7	4809.5	5473.9	5278.5	5036.9	5304.3	5556.0
62.5°	2654.0	2468.6	2589.4	2863.7	3850.4	5290.0	6492.2	6574.7	5715.6	5750.0	5850.8
65°	1803.8	1675.5	1784.5	2053.0	3122.9	5552.1	7462.1	7792.6	6333.7	6041.9	5978.0
67.5°	1187.1	1096.4	1117.6	1296.1	2149.8	4733.2	8110.7	8471.0	6898.8	6281.4	5753.6
70°	919.3	846.2	836.8	930.4	1275.0	3288.2	7726.3	8274.2	7243.0	6056.9	5015.0
72.5°	721.4	665.8	670.8	760.8	987.4	1824.3	5978.8	7036.1	6724.5	5223.7	3852.9
75°	562.6	517.0	542.5	645.4	913.2	1133.7	4125.1	5340.2	5198.9	3868.0	2197.5
77.5°	408.4	379.0	415.2	549.7	858.4	972.7	2567.9	3725.7	3330.5	1986.0	754.0
80°	267.8	251.3	281.1	448.2	778.4	936.2	1586.9	2282.9	1645.7	557.9	285.4
82.5°	157.8	150.6	175.3	303.3	625.7	877.4	1058.4	1268.5	673.3	235.9	151.7
85°	82.8	77.4	104.0	174.3	431.3	801.0	833.3	759.4	325.2	102.5	72.4
87.5°	27.6	26.9	44.1	67.4	163.1	425.2	444.6	360.7	134.1	29.8	15.8
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°	800.6	800.6	800.6	800.6	800.6	800.6	800.6	800.6	800.6	800.6	800.6
2.5°	973.5	959.1	876.6	888.1	898.9	893.5	890.3	853.0	849.4	902.5	898.2
5°	1226.6	1167.1	1096.8	1093.6	1047.3	1000.0	1009.3	994.2	998.6	1020.4	1022.6
7.5°	1360.3	1286.1	1219.1	1110.1	1017.6	942.6	954.4	950.9	941.2	990.7	1003.9
10°	1357.8	1291.8	1216.2	1084.2	1021.9	960.9	887.8	818.6	798.1	773.7	775.9
12.5°	1447.5	1389.0	1224.1	1089.6	1005.0	900.0	763.0	687.3	614.9	613.5	595.2
15°	1475.4	1432.4	1240.9	1058.8	887.0	736.5	594.8	512.7	460.4	450.0	434.6
17.5°	1546.1	1478.6	1189.7	959.1	750.1	575.8	447.1	389.7	385.4	392.6	384.7
20°	1550.7	1441.4	1097.2	811.7	602.7	436.4	364.6	336.0	351.4	368.9	368.2
22.5°	1546.8	1394.4	1017.2	686.3	452.8	350.7	319.5	313.0	327.4	353.5	356.8
25°	1506.6	1379.0	917.2	563.6	367.5	300.5	291.9	295.8	313.7	344.6	344.6
27.5°	1548.6	1316.2	791.7	458.6	309.1	267.5	273.6	283.6	296.9	332.0	338.5
30°	1534.9	1337.0	690.6	369.3	272.5	244.5	258.2	268.2	283.3	319.8	323.1
32.5°	1571.5	1281.4	605.6	310.5	248.5	235.6	238.8	252.4	272.1	300.8	306.6
35°	1627.4	1301.9	508.1	279.3	236.6	225.2	231.3	242.0	261.7	289.7	294.4
37.5°	1806.0	1300.8	440.7	262.1	234.5	223.0	225.9	233.4	256.4	281.8	292.6
40°	1920.7	1375.4	379.3	258.2	232.0	221.9	219.4	227.7	246.0	276.1	283.6
42.5°	2136.2	1420.9	352.8	256.7	231.6	215.8	213.3	223.0	240.9	268.9	280.4
45°	2363.9	1485.8	331.7	256.0	230.5	214.8	207.2	219.4	234.5	261.4	274.6
47.5°	2631.7	1623.1	319.8	253.5	228.4	216.2	205.1	211.2	228.0	254.9	268.2
50°	2982.4	1804.9	322.3	249.9	231.6	216.6	201.9	204.7	220.1	246.3	259.9
52.5°	3408.7	2086.4	338.5	251.3	233.8	214.8	200.4	199.0	212.3	235.2	248.8
55°	3922.5	2485.8	386.9	258.2	233.8	214.4	198.3	191.8	201.9	220.5	233.8
57.5°	4542.4	2948.3	481.5	261.4	232.0	212.3	193.6	182.1	188.2	203.7	216.2
60°	5074.9	3321.6	579.1	263.5	235.6	207.2	184.3	170.0	173.9	185.7	196.8
62.5°	5346.3	3426.3	608.5	261.7	245.2	204.0	173.2	157.0	157.4	167.4	177.5
65°	5397.2	3286.8	490.5	259.9	257.8	203.7	165.3	145.9	143.4	150.6	159.2
67.5°	5034.3	2853.0	353.9	256.0	259.2	201.5	159.9	137.0	130.5	135.5	142.7
70°	4274.6	2297.6	297.2	248.1	242.0	190.7	150.6	127.6	119.0	122.6	128.0
72.5°	3186.8	1699.9	259.2	231.3	210.8	163.1	136.2	117.2	108.3	110.8	114.7
75°	1770.5	906.8	216.9	201.1	172.1	131.9	116.2	104.0	96.1	97.2	101.5
77.5°	588.0	334.5	159.2	159.6	130.2	101.8	95.7	88.9	82.8	83.2	86.8
80°	266.4	185.0	114.0	114.7	90.7	73.9	73.5	71.4	67.4	66.3	68.8
82.5°	154.5	112.2	78.2	74.6	58.4	48.0	53.4	52.3	51.3	47.3	48.0
85°	76.0	60.2	40.9	38.7	32.3	24.0	28.7	29.8	28.7	24.4	24.0
87.5°	18.6	19.7	10.0	9.3	5.4	2.5	4.3	4.3	5.4	3.6	1.8
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)