

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: P596682

Luminaire Tested: **MSA-SA3B-827-U-SL4**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596682  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3B-827-U-SL4  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10526 lumens  
Efficiency: N/A  
Efficacy: 83.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3

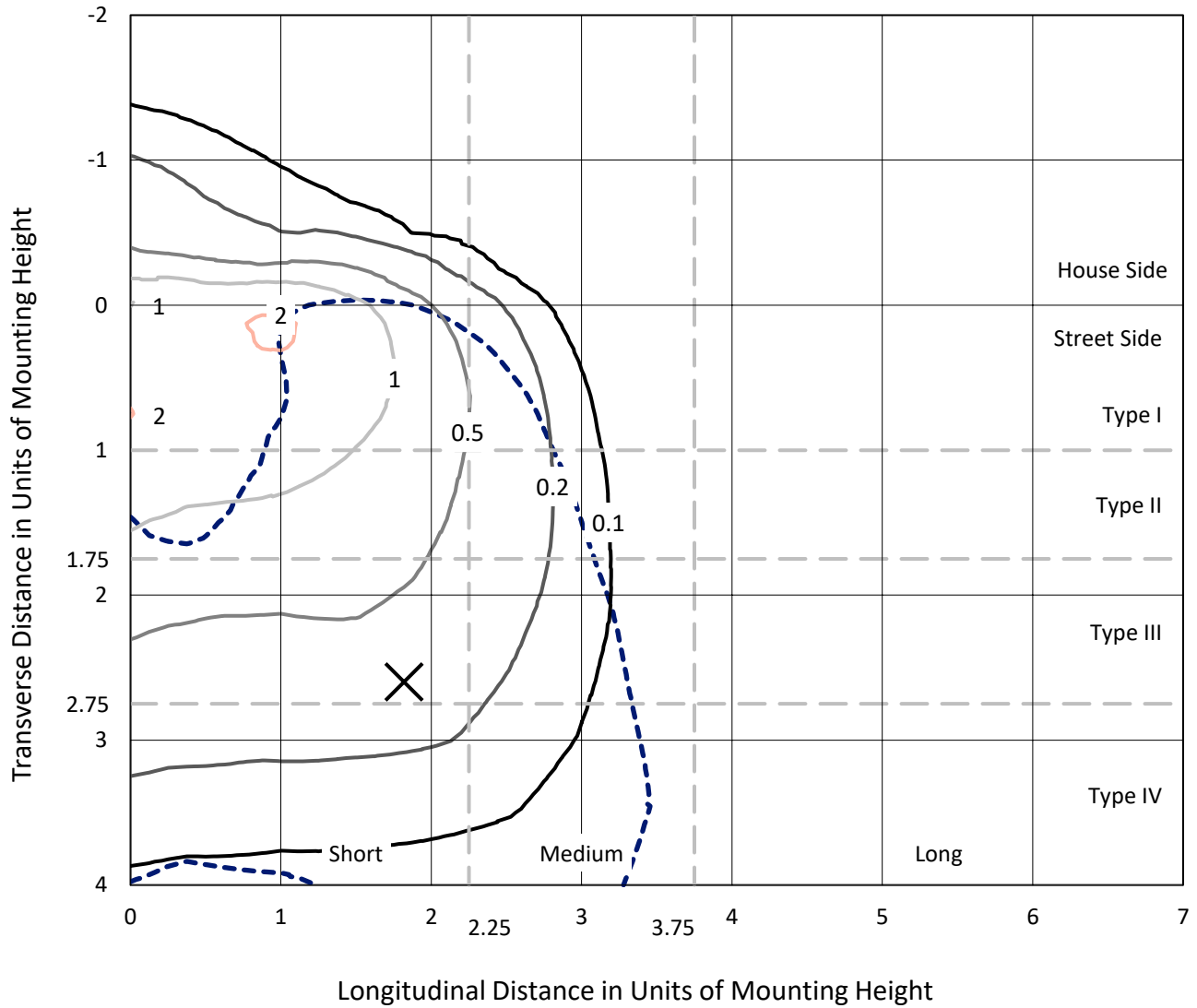
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

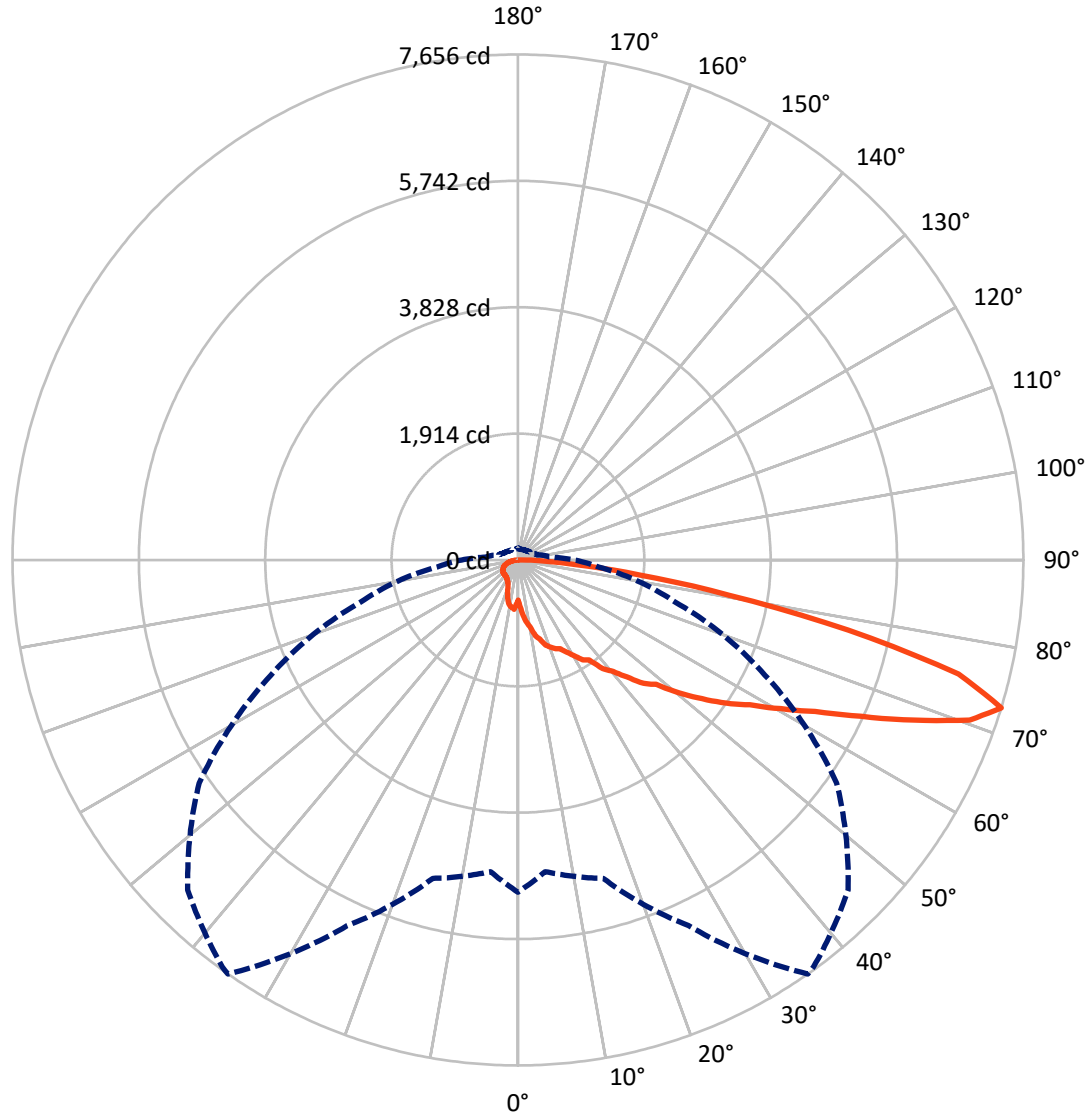
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 fc  
 Type IV - Short - N/A

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### 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
<b>House Side</b>	Lumens	1412.6	0.0	1412.6
	% Fixture	13.4	0.0	13.4
<b>Street Side</b>	Lumens	9113.4	0.0	9113.4
	% Fixture	86.6	0.0	86.6
<b>Total</b>	Lumens	10526.0	0.0	10526.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.8	0.8
10°-20°	284.8	2.7
20°-30°	494.8	4.7
30°-40°	827.0	7.9
40°-50°	1435.4	13.6
50°-60°	2170.0	20.6
60°-70°	2811.2	26.7
70°-80°	2074.3	19.7
80°-90°	347.7	3.3
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°	10526.0	100.0
0°-180°	10526.0	100.0

**Coefficient of Utilization**



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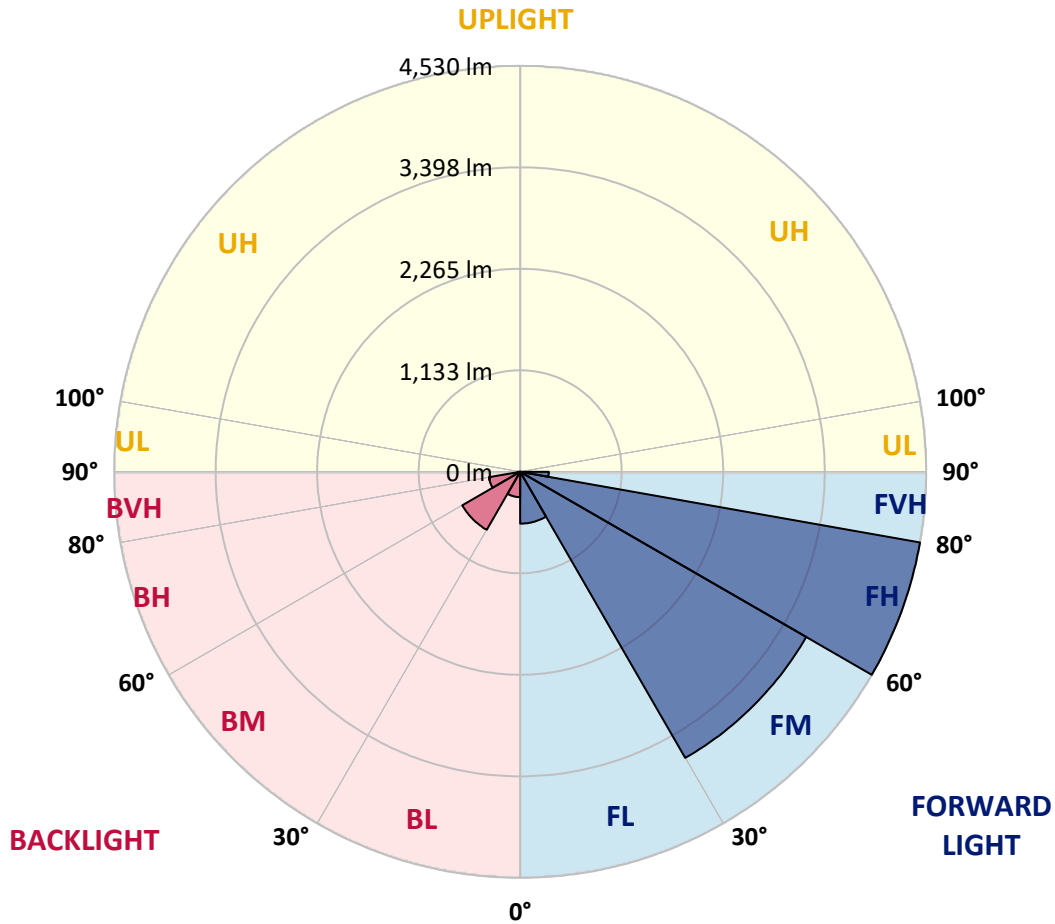
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	578.1	5.5			
FM (30°-60°)	3685.8	35.0			
FH (60°-80°)	4530.3	43.0			G2/5000
FVH (80°-90°)	319.2	3.0			G3/500
BL (0°-30°)	282.3	2.7	B1/500		
BM (30°-60°)	746.6	7.1	B1/1000		
BH (60°-80°)	355.2	3.4	B1/500		G1/500
BVH (80°-90°)	28.5	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-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	608.3	608.3	608.3	608.3	608.3	608.3	608.3	608.3	608.3	608.3	608.3
2.5°	758.8	722.4	691.0	689.6	718.8	730.1	725.6	715.7	704.0	679.3	733.2
5°	950.6	898.5	888.6	877.0	850.5	857.6	814.5	847.3	857.6	881.5	917.4
7.5°	1063.9	1033.3	1009.5	999.6	953.8	948.4	916.5	963.2	983.0	979.8	1033.3
10°	1108.3	1080.5	1082.3	1049.9	1035.1	1041.4	1045.0	1045.9	1058.0	1067.9	1040.9
12.5°	1131.2	1142.0	1181.6	1159.5	1178.4	1186.1	1223.8	1185.2	1186.5	1135.7	1163.6
15°	1246.7	1273.7	1250.7	1249.8	1244.0	1256.6	1288.9	1262.9	1283.1	1266.9	1231.0
17.5°	1386.0	1394.1	1350.0	1332.1	1355.4	1351.4	1343.3	1347.3	1297.0	1390.5	1346.4
20°	1428.7	1460.6	1402.6	1332.1	1409.3	1419.7	1417.9	1400.4	1314.1	1448.9	1406.2
22.5°	1552.7	1509.5	1463.7	1418.8	1458.3	1464.1	1454.3	1412.5	1383.7	1434.9	1468.6
25°	1608.8	1598.5	1540.1	1534.7	1491.1	1470.4	1487.5	1475.4	1447.1	1538.3	1501.0
27.5°	1737.3	1725.2	1590.8	1646.1	1582.8	1577.4	1487.1	1527.5	1555.8	1549.1	1604.8
30°	1882.9	1896.8	1700.5	1755.7	1682.5	1672.6	1581.9	1633.1	1652.4	1658.7	1728.3
32.5°	2044.6	2082.8	1887.8	1842.4	1803.3	1810.1	1733.3	1639.8	1714.8	1861.7	1891.8
35°	2219.8	2235.5	2031.1	1962.8	1860.8	1853.7	1855.0	1866.7	1942.6	2110.2	2133.5
37.5°	2543.7	2470.9	2291.7	2118.7	2084.6	2017.6	2063.0	2099.0	2174.9	2431.9	2529.8
40°	2743.2	2689.3	2416.1	2316.0	2221.6	2227.9	2312.8	2312.4	2491.6	2756.7	2906.3
42.5°	2927.8	2869.0	2611.6	2510.9	2421.5	2443.5	2467.8	2510.5	2854.2	3281.4	3349.7
45°	3076.6	2947.6	2762.5	2740.1	2666.4	2637.2	2740.1	2808.3	3287.7	3706.0	3745.5
47.5°	3177.6	3071.6	2890.6	2870.8	2816.4	2887.9	3168.7	3212.7	3623.8	4132.3	4129.2
50°	3331.3	3186.2	3022.6	3012.3	3165.5	3203.7	3546.0	3541.5	3950.8	4486.3	4412.2
52.5°	3508.3	3325.4	3148.0	3259.0	3492.6	3511.4	3808.4	3929.3	4308.0	4827.8	4634.1
55°	3711.8	3507.4	3335.8	3484.0	3831.8	3776.1	4076.6	4371.8	4755.0	5187.6	4794.5
57.5°	3963.8	3715.9	3577.0	3802.6	4141.3	4190.7	4460.7	4832.3	5114.9	5411.4	4911.3
60°	4229.8	3938.7	3811.5	4026.3	4574.8	4631.5	4895.6	5215.0	5518.3	5622.1	4889.3
62.5°	4483.6	4168.7	4053.7	4318.8	5055.6	5195.7	5390.7	5594.2	5853.9	5673.3	4622.9
65°	4766.2	4450.8	4378.5	4776.1	5707.4	5846.7	6101.4	6040.3	5968.9	5491.8	4182.2
67.5°	5065.4	4745.1	4758.6	5306.7	6476.1	6499.9	6891.2	6485.1	5833.7	5011.1	3442.3
70°	5226.3	4898.3	5037.1	5872.3	7258.3	7224.1	7304.1	6604.6	5282.4	3961.2	2372.6
72.5°	5031.3	4738.8	4993.1	6110.4	7656.3	7619.5	7072.3	5895.2	4130.1	2463.3	1230.1
75°	4259.9	3977.8	4366.8	5446.9	6892.6	6926.7	6018.8	4383.9	2364.5	990.6	510.8
77.5°	2894.6	2749.0	3082.4	4060.0	5119.8	5238.0	4465.7	2563.5	992.9	410.2	309.1
80°	1529.7	1460.6	1706.8	2338.9	3241.9	3329.9	2625.9	1276.8	508.6	265.5	220.6
82.5°	831.1	801.9	934.0	1202.7	1842.0	1918.8	1361.7	848.2	342.8	166.2	134.8
85°	558.4	547.2	634.8	646.0	871.1	896.3	713.4	653.2	205.8	81.3	89.0
87.5°	279.4	268.2	334.3	295.2	332.5	332.9	327.1	416.9	52.1	27.0	16.2
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°	608.3	608.3	608.3	608.3	608.3	608.3	608.3	608.3	608.3	608.3	608.3
2.5°	734.1	718.4	664.0	663.6	671.6	666.3	670.3	648.3	638.9	682.0	679.7
5°	912.5	865.3	819.9	804.2	785.8	745.8	748.0	748.5	741.7	767.3	769.1
7.5°	1017.1	960.5	918.7	835.2	769.6	718.4	725.1	732.7	725.1	759.3	771.8
10°	1032.4	987.5	937.6	844.6	801.0	754.8	708.0	666.7	661.8	646.0	651.0
12.5°	1123.2	1085.9	981.6	879.7	828.9	757.9	672.5	625.4	585.8	592.6	580.0
15°	1197.7	1171.2	1046.3	912.9	791.6	703.5	612.8	548.1	512.6	508.6	496.0
17.5°	1298.8	1261.1	1052.2	890.0	743.5	638.0	535.5	462.3	447.0	440.7	434.4
20°	1347.3	1279.5	1031.1	818.1	687.4	559.8	459.1	396.2	391.8	403.0	400.7
22.5°	1389.6	1294.8	1012.2	774.5	599.8	480.7	407.0	365.7	360.8	375.1	377.8
25°	1414.3	1338.4	991.5	730.1	545.4	421.9	367.9	344.6	345.5	364.4	362.1
27.5°	1525.7	1353.6	939.4	677.5	483.0	378.3	349.1	336.9	332.0	358.1	360.3
30°	1595.8	1453.4	927.7	621.8	436.7	346.4	332.0	327.1	326.2	357.6	359.9
32.5°	1726.1	1486.6	933.1	561.1	394.9	336.5	319.4	319.0	328.0	358.1	361.7
35°	1906.7	1626.8	907.1	526.5	372.0	321.2	309.5	313.1	328.4	361.2	366.1
37.5°	2258.9	1758.9	915.1	494.2	364.4	316.3	306.8	309.1	333.8	369.3	382.8
40°	2537.9	1998.3	902.6	478.0	354.0	315.4	301.0	310.0	333.4	373.8	385.9
42.5°	2942.2	2189.3	903.9	461.8	353.6	311.8	300.1	310.9	332.5	369.7	386.4
45°	3289.1	2360.4	923.2	452.4	349.1	317.6	298.8	312.2	326.6	355.4	373.8
47.5°	3573.4	2551.4	943.0	443.4	347.3	323.0	297.4	302.8	316.7	339.2	355.8
50°	3805.3	2685.7	968.2	441.6	347.3	320.3	293.8	293.4	305.0	323.0	338.7
52.5°	3985.9	2780.5	985.2	443.9	347.3	310.0	289.3	285.7	292.9	305.9	321.7
55°	4116.6	2809.7	971.3	449.7	346.8	300.6	281.2	278.1	281.7	290.7	305.5
57.5°	4169.2	2732.9	888.2	439.4	346.8	293.8	271.4	267.8	271.4	278.1	292.9
60°	4037.5	2485.8	768.2	412.9	340.1	284.8	260.1	257.9	263.3	269.1	283.5
62.5°	3707.3	2157.4	640.2	381.4	326.2	277.2	249.3	249.8	258.3	266.4	280.8
65°	3194.3	1760.2	533.7	349.5	308.6	265.1	238.1	241.3	253.4	264.2	278.5
67.5°	2513.6	1304.2	449.3	318.5	283.9	245.3	225.5	226.4	235.0	245.3	259.2
70°	1680.2	829.8	369.3	282.1	251.6	219.7	206.2	203.1	200.8	209.8	221.9
72.5°	852.3	490.1	303.3	241.3	216.5	191.8	181.5	173.4	167.1	172.5	182.0
75°	446.6	342.8	244.8	200.4	178.8	163.1	155.4	144.7	140.2	143.3	150.1
77.5°	315.8	268.2	198.1	158.6	145.6	129.4	130.7	119.5	115.9	117.7	124.9
80°	242.6	212.5	152.3	120.0	112.3	96.6	101.1	94.3	89.9	89.0	94.3
82.5°	165.3	159.9	108.3	84.0	78.6	67.4	73.7	71.0	65.1	61.5	64.2
85°	111.4	106.0	66.0	48.5	46.3	35.0	44.9	43.1	38.2	32.8	33.2
87.5°	19.3	35.5	18.9	12.1	11.2	4.0	10.3	9.9	9.0	4.5	3.6
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)