

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: P366892

Luminaire Tested: **MSA-SA1C-730-U-SL3**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366892  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1C-730-U-SL3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

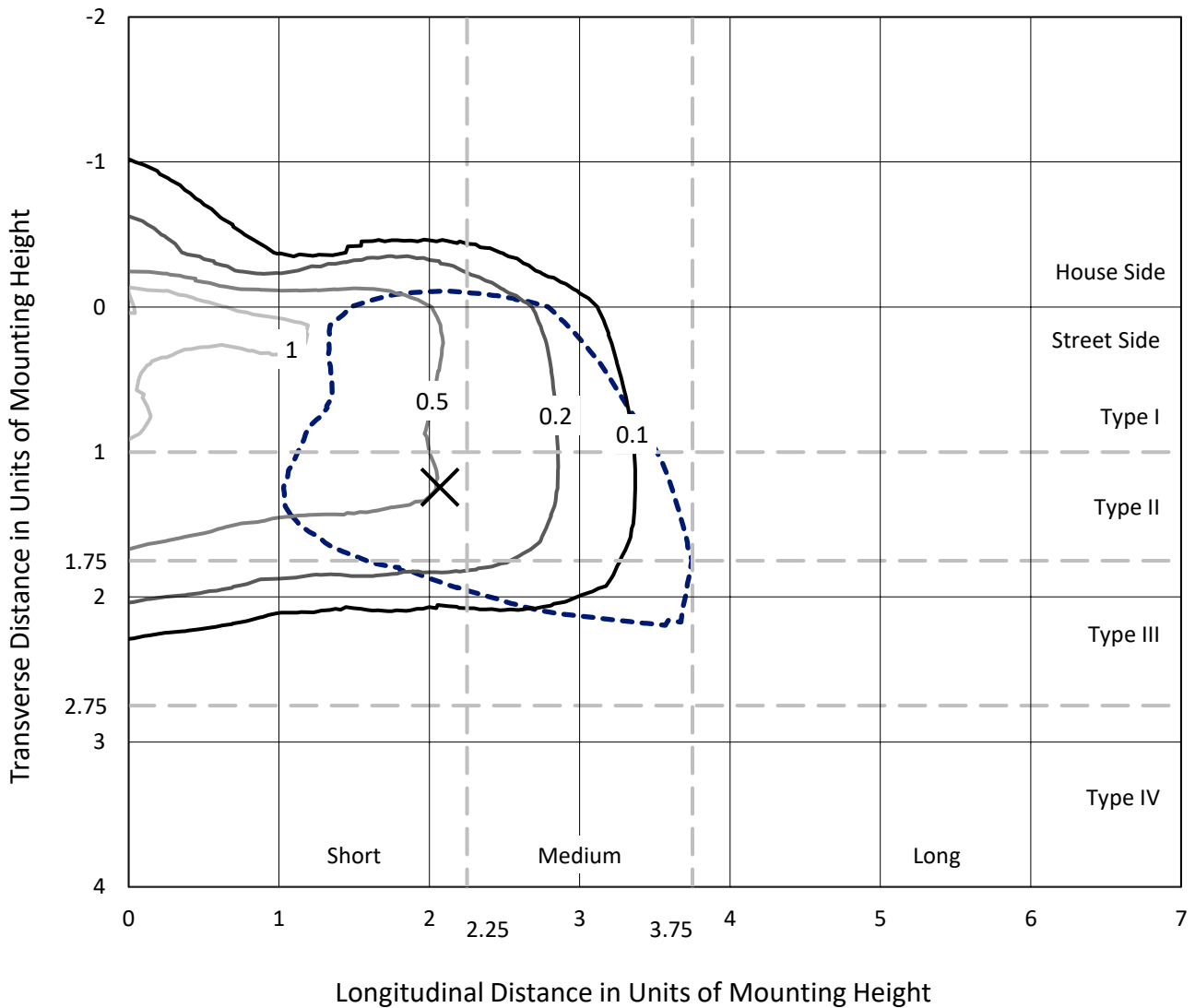
Lumens per Lamp: N/A  
Luminaire Lumens: 5605 lumens  
Efficiency: N/A  
Efficacy: 95.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

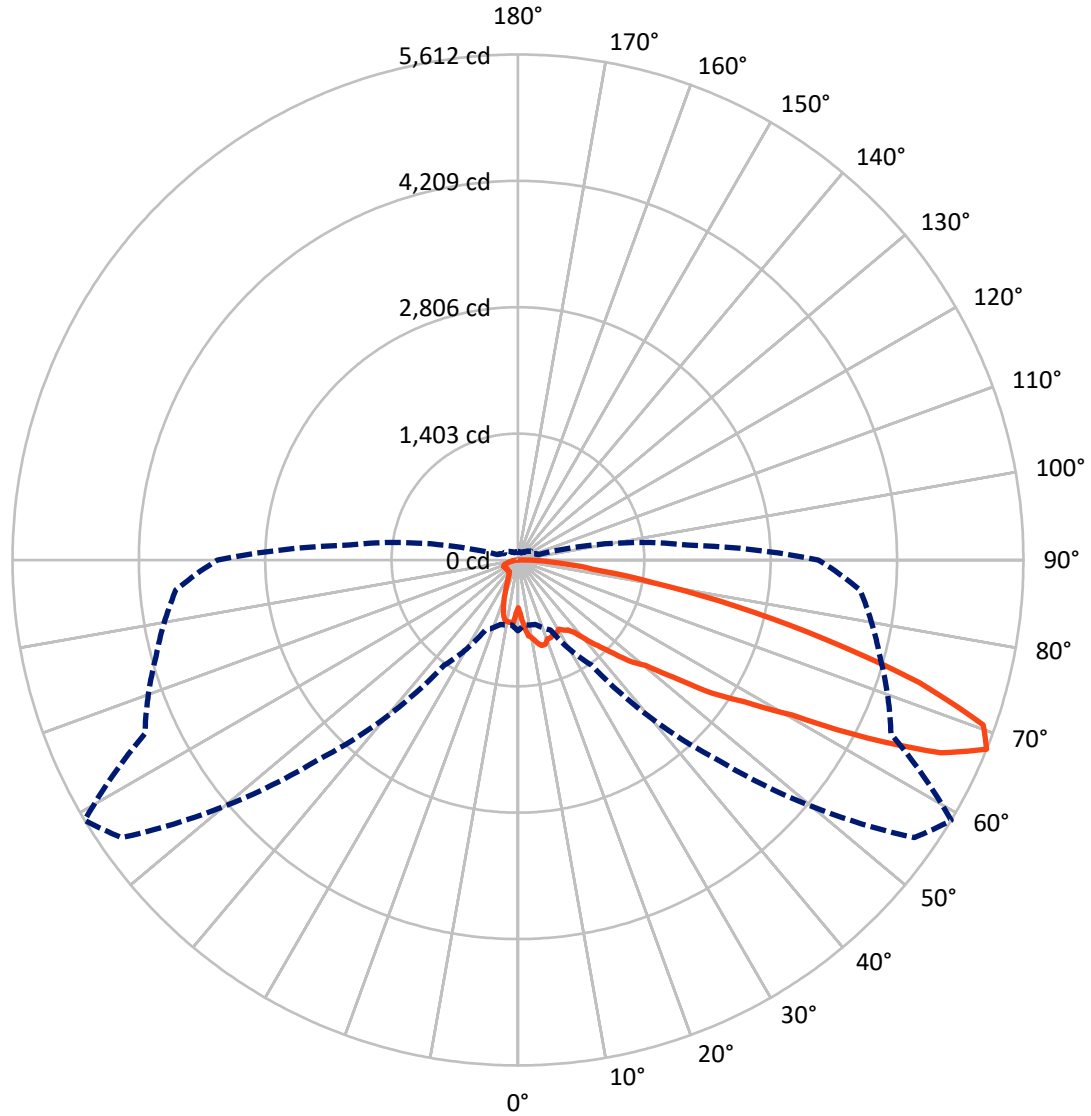
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 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	843.7	0.0	843.7
	% Fixture	15.1	0.0	15.1
<b>Street Side</b>	Lumens	4761.3	0.0	4761.3
	% Fixture	84.9	0.0	84.9
<b>Total</b>	Lumens	5605.0	0.0	5605.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.3	1.2
10°-20°	205.0	3.7
20°-30°	292.7	5.2
30°-40°	431.4	7.7
40°-50°	728.8	13.0
50°-60°	1268.3	22.6
60°-70°	1616.1	28.8
70°-80°	855.8	15.3
80°-90°	137.7	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°	5605.0	100.0
0°-180°	5605.0	100.0

**Coefficient of Utilization**



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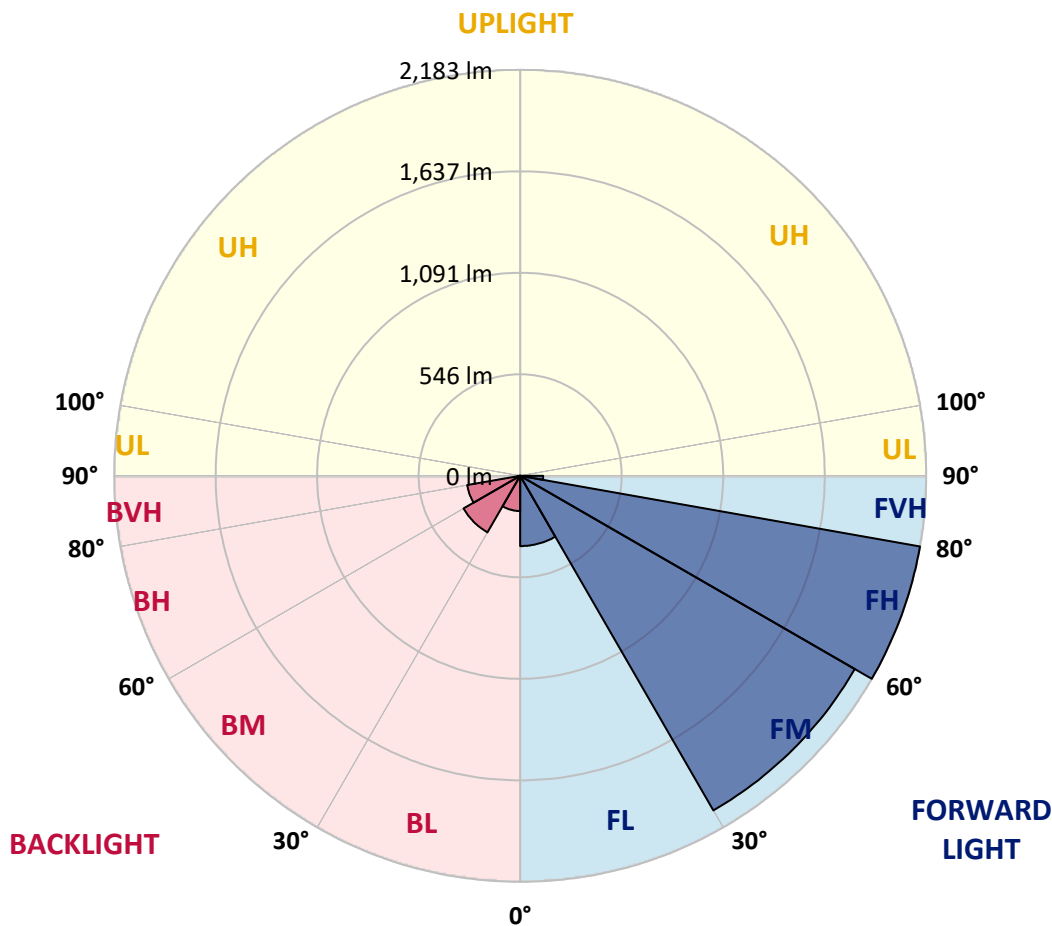
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	377.8	6.7			
FM (30°-60°)	2077.1	37.1			
FH (60°-80°)	2182.8	38.9			G2/5000
FVH (80°-90°)	123.6	2.2			G2/225
BL (0°-30°)	189.2	3.4	B1/500		
BM (30°-60°)	351.3	6.3	B1/1000		
BH (60°-80°)	289.2	5.2	B1/500		G1/500
BVH (80°-90°)	14.0	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°	530.4	530.4	530.4	530.4	530.4	530.4	530.4	530.4	530.4	530.4	530.4
2.5°	662.2	631.3	598.5	607.8	626.6	635.1	625.9	616.8	605.2	591.4	638.5
5°	803.1	757.2	750.6	750.3	743.7	717.1	751.3	748.9	762.7	776.9	813.5
7.5°	843.2	826.1	807.6	816.4	782.9	781.4	834.6	849.8	876.4	867.7	916.8
10°	822.5	803.3	813.0	809.5	812.6	847.7	880.2	881.2	909.7	937.7	906.1
12.5°	786.2	787.6	826.3	824.9	874.8	940.1	949.8	942.2	988.8	969.8	996.9
15°	812.1	829.4	819.7	828.0	847.7	930.8	957.9	985.5	1029.6	1046.7	1019.7
17.5°	853.4	862.7	819.0	814.5	855.1	894.5	961.7	985.2	992.1	1114.0	1075.7
20°	835.8	854.6	811.8	757.0	824.4	876.7	943.0	935.8	969.3	1119.2	1087.4
22.5°	885.7	854.6	800.2	761.2	785.0	833.0	889.3	936.1	975.7	1088.6	1104.2
25°	895.2	880.5	829.7	790.9	782.9	800.0	880.2	910.9	977.9	1130.4	1095.2
27.5°	953.2	931.1	827.5	828.7	788.6	758.4	851.7	916.1	1002.1	1104.5	1117.3
30°	1025.1	1008.3	878.3	883.1	827.5	771.9	871.2	890.7	1016.1	1144.8	1145.1
32.5°	1079.1	1108.7	978.3	913.7	894.0	852.5	841.3	928.9	999.7	1218.0	1192.6
35°	1176.2	1199.2	1055.3	1003.5	936.8	890.0	922.5	954.1	1067.9	1314.2	1263.1
37.5°	1356.0	1329.4	1198.3	1116.8	1091.9	1024.4	1042.5	1020.4	1142.0	1422.3	1401.4
40°	1460.0	1437.0	1299.0	1253.9	1155.1	1163.6	1141.0	1157.2	1241.0	1537.2	1530.6
42.5°	1562.6	1531.8	1415.1	1383.8	1285.2	1243.4	1247.5	1299.7	1393.8	1723.0	1700.9
45°	1664.1	1585.0	1533.9	1542.2	1494.7	1409.0	1414.9	1464.1	1560.5	1935.3	1884.5
47.5°	1741.7	1676.4	1636.5	1626.3	1602.8	1717.5	1666.2	1686.2	1728.7	2124.4	2105.1
50°	1888.8	1812.5	1760.5	1745.8	1825.6	1985.2	1880.7	1837.7	1928.2	2368.8	2358.8
52.5°	2124.1	2029.1	1942.4	1941.5	2056.9	2160.5	2234.1	2160.0	2193.3	2619.1	2647.6
55°	2329.6	2219.6	2141.7	2184.7	2349.1	2412.5	2662.6	2604.6	2576.6	2871.8	2953.3
57.5°	2406.3	2277.8	2227.0	2290.4	2532.7	2858.5	3122.9	2970.4	2943.1	3157.8	3328.6
60°	2237.9	2102.0	2105.1	2224.6	2644.3	3186.1	3626.2	3496.8	3336.7	3513.9	3680.6
62.5°	1758.1	1635.3	1715.4	1897.1	2550.7	3504.4	4300.8	4355.4	3786.3	3809.1	3875.8
65°	1195.0	1109.9	1182.1	1360.0	2068.8	3678.0	4943.3	5162.2	4195.8	4002.4	3960.2
67.5°	786.4	726.3	740.3	858.6	1424.2	3135.5	5372.9	5611.6	4570.1	4161.1	3811.5
70°	609.0	560.5	554.4	616.4	844.6	2178.3	5118.3	5481.2	4798.1	4012.4	3322.2
72.5°	477.9	441.1	444.4	504.0	654.1	1208.5	3960.6	4661.1	4454.7	3460.4	2552.4
75°	372.7	342.5	359.4	427.5	605.0	751.0	2732.7	3537.6	3444.0	2562.4	1455.8
77.5°	270.5	251.1	275.0	364.1	568.6	644.4	1701.1	2468.1	2206.3	1315.6	499.5
80°	177.4	166.5	186.2	296.9	515.7	620.2	1051.3	1512.3	1090.2	369.6	189.1
82.5°	104.5	99.8	116.1	200.9	414.5	581.2	701.2	840.3	446.1	156.3	100.5
85°	54.9	51.3	68.9	115.4	285.7	530.6	552.0	503.1	215.4	67.9	48.0
87.5°	18.3	17.8	29.2	44.7	108.1	281.7	294.5	238.9	88.8	19.7	10.5
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°	530.4	530.4	530.4	530.4	530.4	530.4	530.4	530.4	530.4	530.4	530.4
2.5°	644.9	635.4	580.7	588.3	595.5	591.9	589.8	565.1	562.7	597.8	595.0
5°	812.6	773.1	726.6	724.4	693.8	662.4	668.6	658.6	661.5	676.0	677.4
7.5°	901.1	852.0	807.6	735.4	674.1	624.4	632.3	629.9	623.5	656.3	665.1
10°	899.5	855.8	805.7	718.3	676.9	636.6	588.1	542.3	528.7	512.6	514.0
12.5°	958.9	920.2	810.9	721.8	665.8	596.2	505.4	455.3	407.3	406.4	394.3
15°	977.4	948.9	822.1	701.4	587.6	487.9	394.0	339.7	305.0	298.1	287.9
17.5°	1024.2	979.5	788.1	635.4	496.9	381.5	296.2	258.2	255.3	260.1	254.9
20°	1027.3	954.8	726.8	537.7	399.3	289.1	241.6	222.6	232.8	244.4	243.9
22.5°	1024.7	923.7	673.8	454.6	300.0	232.3	211.6	207.4	216.9	234.2	236.3
25°	998.1	913.5	607.6	373.4	243.5	199.0	193.3	196.0	207.8	228.3	228.3
27.5°	1025.8	871.9	524.4	303.8	204.7	177.2	181.2	187.9	196.7	219.9	224.2
30°	1016.8	885.7	457.5	244.6	180.5	162.0	171.0	177.7	187.6	211.9	214.0
32.5°	1041.0	848.9	401.2	205.7	164.6	156.1	158.2	167.2	180.3	199.3	203.1
35°	1078.1	862.4	336.6	185.0	156.8	149.2	153.2	160.3	173.4	191.9	195.0
37.5°	1196.4	861.7	291.9	173.6	155.3	147.7	149.6	154.6	169.8	186.7	193.8
40°	1272.4	911.1	251.3	171.0	153.7	147.0	145.4	150.8	162.9	182.9	187.9
42.5°	1415.1	941.3	233.7	170.1	153.4	143.0	141.3	147.7	159.6	178.1	185.7
45°	1566.0	984.3	219.7	169.6	152.7	142.3	137.3	145.4	155.3	173.2	181.9
47.5°	1743.4	1075.3	211.9	167.9	151.3	143.2	135.9	139.9	151.1	168.9	177.7
50°	1975.7	1195.7	213.5	165.6	153.4	143.5	133.7	135.6	145.8	163.2	172.2
52.5°	2258.1	1382.1	224.2	166.5	154.9	142.3	132.8	131.8	140.6	155.8	164.8
55°	2598.5	1646.7	256.3	171.0	154.9	142.0	131.3	127.1	133.7	146.1	154.9
57.5°	3009.1	1953.1	319.0	173.2	153.7	140.6	128.3	120.7	124.7	134.9	143.2
60°	3361.8	2200.4	383.6	174.6	156.1	137.3	122.1	112.6	115.2	123.0	130.4
62.5°	3541.7	2269.7	403.1	173.4	162.5	135.1	114.7	104.0	104.3	110.9	117.6
65°	3575.4	2177.3	324.9	172.2	170.8	134.9	109.5	96.7	95.0	99.8	105.5
67.5°	3335.0	1889.9	234.4	169.6	171.7	133.5	105.9	90.7	86.5	89.8	94.5
70°	2831.7	1522.0	196.9	164.4	160.3	126.4	99.8	84.6	78.9	81.2	84.8
72.5°	2111.1	1126.1	171.7	153.2	139.7	108.1	90.3	77.7	71.7	73.4	76.0
75°	1172.9	600.7	143.7	133.2	114.0	87.4	77.0	68.9	63.7	64.4	67.2
77.5°	389.5	221.6	105.5	105.7	86.2	67.5	63.4	58.9	54.9	55.1	57.5
80°	176.5	122.6	75.5	76.0	60.1	48.9	48.7	47.3	44.7	43.9	45.6
82.5°	102.4	74.3	51.8	49.4	38.7	31.8	35.4	34.7	34.0	31.4	31.8
85°	50.4	39.9	27.1	25.7	21.4	15.9	19.0	19.7	19.0	16.2	15.9
87.5°	12.4	13.1	6.7	6.2	3.6	1.7	2.9	2.9	3.6	2.4	1.2
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)