

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: P367411

Luminaire Tested: **MSA-SA2C-727-U-T4W-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367411  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2C-727-U-T4W-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS  
EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7778 lumens  
Efficiency: N/A  
Efficacy: 68.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

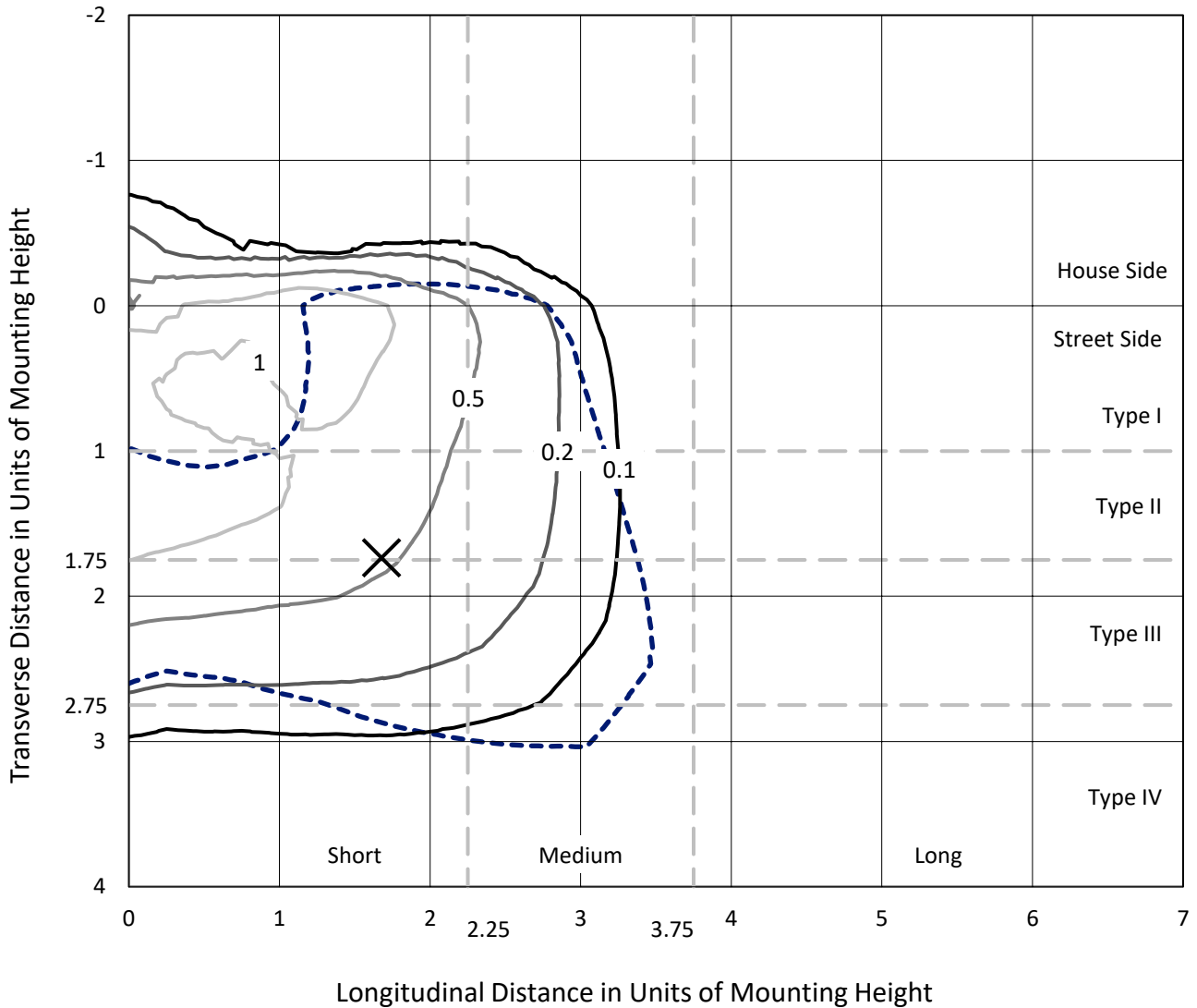
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

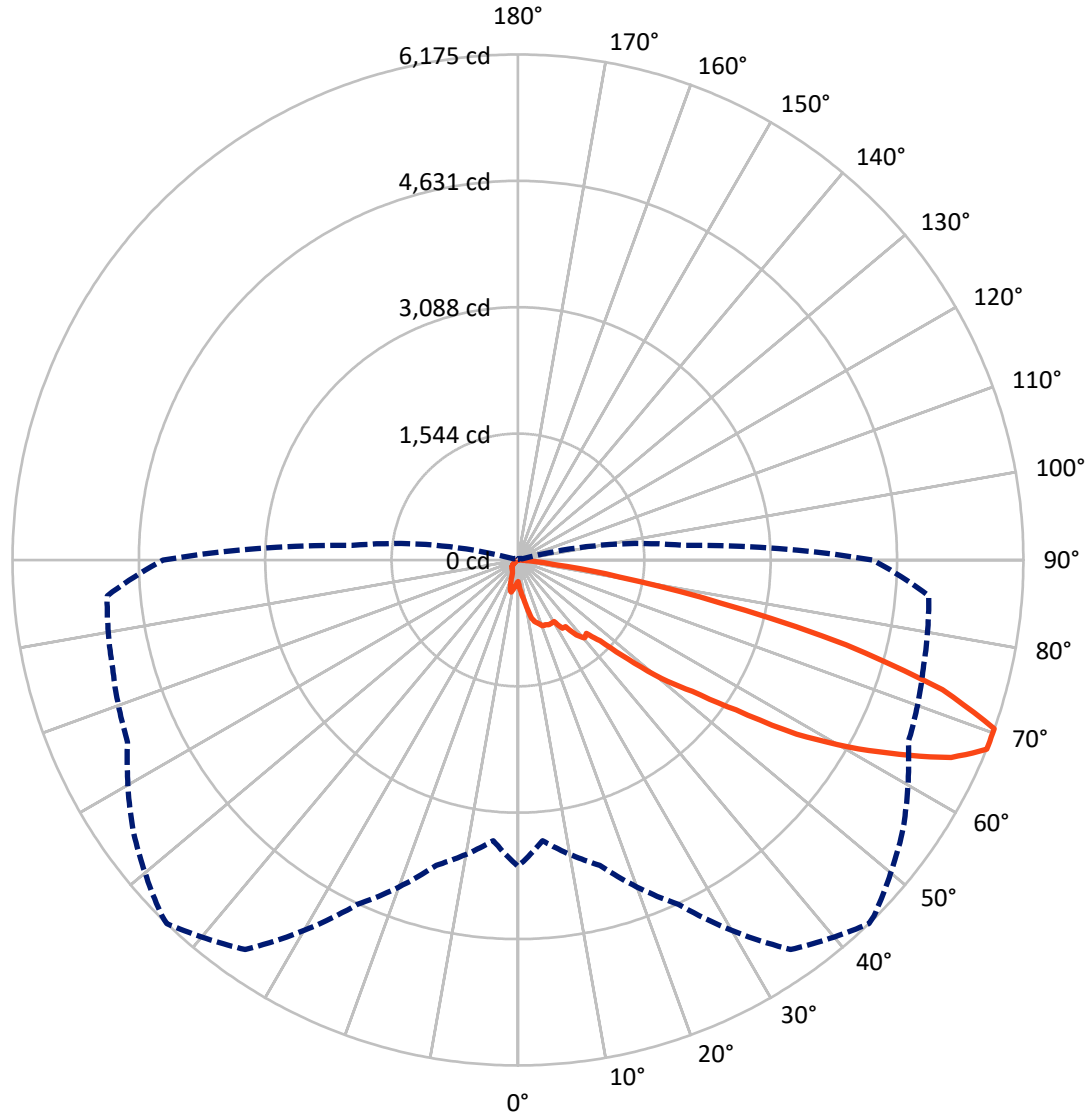
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.8 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	790.1	0.0	790.1
	% Fixture	10.2	0.0	10.2
<b>Street Side</b>	Lumens	6987.9	0.0	6987.9
	% Fixture	89.8	0.0	89.8
<b>Total</b>	Lumens	7778.0	0.0	7778.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.8	0.5
10°-20°	162.6	2.1
20°-30°	288.1	3.7
30°-40°	468.2	6.0
40°-50°	937.0	12.0
50°-60°	1922.2	24.7
60°-70°	2640.5	33.9
70°-80°	1241.1	16.0
80°-90°	79.5	1.0
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°	7778.0	100.0
0°-180°	7778.0	100.0

**Coefficient of Utilization**



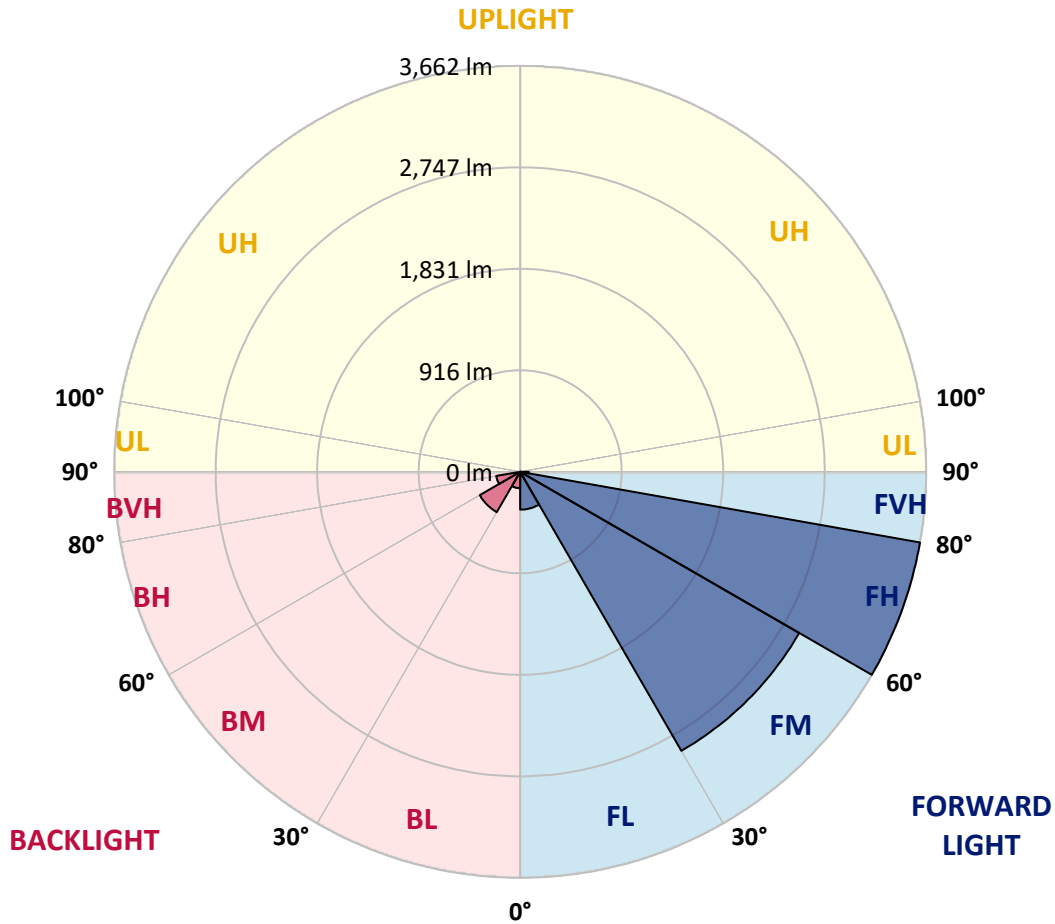
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	341.2	4.4			
FM (30°-60°)	2906.5	37.4			
FH (60°-80°)	3662.4	47.1			G2/5000
FVH (80°-90°)	77.9	1.0			G1/100
BL (0°-30°)	148.4	1.9	B1/500		
BM (30°-60°)	420.9	5.4	B1/1000		
BH (60°-80°)	219.3	2.8	B1/500		G1/500
BVH (80°-90°)	1.6	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	262.1	262.1	262.1	262.1	262.1	262.1	262.1	262.1	262.1	262.1	262.1
2.5°	333.3	322.5	307.1	310.5	312.2	317.0	317.4	311.4	294.2	289.5	310.5
5°	467.1	440.9	436.2	426.3	406.6	395.9	393.3	404.0	390.3	386.0	391.6
7.5°	596.6	574.3	549.8	536.6	495.4	470.1	468.8	473.1	475.6	460.6	468.4
10°	682.8	658.4	653.2	621.9	586.3	580.3	577.7	561.4	548.1	537.0	499.7
12.5°	760.9	760.4	769.9	724.8	719.3	725.3	723.1	664.8	651.5	604.7	594.0
15°	864.7	890.4	849.6	811.9	763.9	784.5	778.9	741.6	732.6	700.8	654.9
17.5°	972.3	979.2	911.0	853.1	840.6	813.6	819.2	805.9	760.4	785.7	740.3
20°	974.9	989.9	917.0	821.3	859.5	858.2	858.7	845.8	785.7	844.9	803.3
22.5°	1010.9	974.0	906.3	845.4	852.2	858.7	865.5	849.6	836.8	851.4	859.1
25°	996.3	981.7	916.6	876.2	869.8	875.0	876.7	896.8	888.7	923.8	904.5
27.5°	1034.1	1013.1	896.4	903.7	881.0	875.0	864.7	932.0	956.0	928.1	979.6
30°	1098.8	1095.8	931.1	941.9	924.3	871.5	899.0	986.9	1016.9	999.8	1062.4
32.5°	1200.1	1210.3	1032.8	963.3	972.3	995.9	985.6	986.9	1062.8	1101.0	1150.7
35°	1343.7	1338.2	1131.9	1044.8	997.6	1001.5	1016.1	1086.0	1184.2	1181.6	1234.4
37.5°	1625.9	1565.0	1307.3	1128.0	1142.2	1161.5	1150.7	1244.7	1254.1	1257.5	1383.6
40°	2042.0	1960.9	1583.9	1303.4	1167.0	1252.4	1247.2	1270.4	1333.4	1357.0	1541.0
42.5°	2590.1	2481.2	2070.7	1625.9	1287.1	1228.4	1260.1	1303.8	1515.7	1583.1	1784.6
45°	3195.7	2975.3	2556.2	2085.7	1588.2	1405.9	1429.9	1511.4	1805.2	1916.7	2139.3
47.5°	3588.2	3394.3	3037.0	2493.2	1902.2	1806.5	1808.7	1826.2	2145.3	2352.1	2650.6
50°	3929.1	3722.8	3391.3	2919.1	2457.6	2276.6	2235.4	2154.4	2578.5	2861.2	3192.3
52.5°	4410.3	4169.3	3745.6	3418.7	3091.1	2664.7	2650.2	2677.6	3089.3	3386.6	3747.7
55°	4844.4	4551.5	4147.0	3941.1	3813.3	3235.2	3247.6	3293.5	3745.1	3902.5	4241.8
57.5°	5036.1	4718.7	4510.7	4418.1	4349.9	4014.5	3972.4	3945.0	4262.4	4322.4	4759.5
60°	5161.8	4859.8	4765.5	4786.9	4993.6	4637.7	4599.5	4439.9	4690.4	4739.7	5223.5
62.5°	5082.4	4807.1	4827.2	5006.1	5465.0	5230.8	5120.6	4853.8	5040.4	5080.3	5556.8
65°	4582.8	4295.8	4554.9	4987.6	5824.4	5818.8	5767.8	5236.0	5234.3	5285.3	5582.5
67.5°	3743.4	3442.3	3861.4	4642.0	5809.4	6175.3	6151.2	5742.9	5262.1	5125.7	5037.8
70°	2602.5	2341.3	2816.6	3833.5	5291.7	6172.7	6134.1	6083.5	5041.7	4412.1	3906.0
72.5°	1352.3	1208.6	1651.3	2641.6	4218.2	5423.4	5550.8	5467.6	4304.8	3205.6	2300.2
75°	459.3	412.2	681.1	1402.1	2804.1	4141.4	4290.7	4206.2	2923.8	1719.9	909.7
77.5°	178.0	165.6	244.0	569.1	1406.8	2523.6	2685.8	2599.5	1568.0	630.0	214.0
80°	101.2	97.8	134.7	256.5	620.2	1255.4	1369.5	1242.1	565.3	212.3	55.8
82.5°	42.9	44.2	75.1	138.5	311.8	443.1	494.1	450.8	236.8	145.4	20.6
85°	9.4	11.6	35.6	77.2	130.8	126.5	132.5	147.1	145.4	106.8	9.0
87.5°	0.0	0.0	11.2	21.0	31.3	20.6	16.3	28.7	44.6	42.9	3.9
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°	262.1	262.1	262.1	262.1	262.1	262.1	262.1	262.1	262.1	262.1	262.1
2.5°	314.4	310.1	283.1	281.4	283.1	278.4	277.9	268.1	268.9	291.2	292.9
5°	391.6	370.1	347.0	339.7	332.8	317.4	326.0	326.0	326.0	340.1	344.4
7.5°	461.5	432.8	400.2	372.7	346.1	326.8	340.1	349.6	355.1	373.6	382.1
10°	493.2	464.9	435.8	396.7	376.1	368.9	353.4	345.3	355.1	351.3	356.0
12.5°	561.0	535.3	485.1	444.8	429.3	404.4	359.0	327.2	306.2	302.8	301.9
15°	627.0	611.2	543.8	489.8	436.2	378.7	301.1	259.1	236.8	232.9	233.3
17.5°	710.7	688.0	588.9	511.2	420.3	317.0	232.5	196.4	194.7	204.2	205.0
20°	766.4	729.1	611.6	493.7	368.0	239.8	181.9	173.3	187.0	204.2	202.4
22.5°	819.6	779.3	641.6	478.2	285.2	181.9	167.3	168.1	179.7	198.2	202.9
25°	854.8	840.2	678.5	442.2	217.5	157.4	160.0	166.4	176.3	193.9	193.9
27.5°	960.7	892.5	674.2	372.3	167.3	146.7	152.7	160.8	166.0	187.0	189.1
30°	1025.1	1002.8	696.5	301.1	146.7	133.0	144.5	151.8	155.3	179.3	180.1
32.5°	1104.0	1054.7	723.5	222.2	136.4	132.1	129.5	135.1	145.0	166.0	167.3
35°	1200.1	1185.5	684.9	174.6	133.0	123.5	118.4	121.4	127.8	142.0	145.0
37.5°	1396.1	1309.4	661.8	149.7	133.0	120.5	114.9	107.2	108.1	117.9	123.5
40°	1561.2	1534.6	597.0	145.4	127.0	116.2	102.5	93.1	86.6	89.6	91.8
42.5°	1864.4	1741.3	513.4	143.3	121.4	105.1	87.1	77.2	67.3	68.2	71.6
45°	2232.4	1966.9	438.8	141.1	117.5	93.9	73.3	61.8	51.5	51.9	55.3
47.5°	2723.9	2295.9	348.3	134.7	110.7	83.6	59.2	47.2	41.2	42.5	45.5
50°	3282.3	2584.5	275.4	124.8	102.5	73.8	48.0	38.2	36.0	37.3	40.7
52.5°	3781.2	2797.3	227.3	115.8	90.9	60.0	40.3	33.9	33.0	33.9	36.5
55°	4224.6	2920.8	190.0	105.5	78.1	48.5	36.5	31.3	30.9	30.5	32.2
57.5°	4640.7	2956.4	148.4	89.2	63.5	42.0	33.9	29.2	28.3	27.0	28.3
60°	4943.9	2895.5	108.9	71.6	51.9	38.2	31.7	26.2	24.9	22.7	23.6
62.5°	5090.2	2728.6	82.3	57.5	44.2	34.7	28.3	22.7	21.0	18.4	18.9
65°	4951.2	2453.7	64.8	48.5	37.7	29.2	24.0	19.3	17.2	14.6	14.6
67.5°	4335.7	2035.5	54.9	42.0	31.7	24.9	19.7	17.6	14.2	12.0	11.6
70°	3182.4	1464.3	47.2	36.9	27.4	21.4	16.7	15.9	13.7	11.6	10.7
72.5°	1796.2	828.6	40.3	32.6	23.2	18.0	14.2	14.6	13.3	10.7	9.9
75°	685.4	279.2	33.5	27.0	18.9	13.7	12.0	12.0	12.0	9.0	7.7
77.5°	169.8	71.2	26.6	21.9	15.0	9.0	9.9	10.3	10.3	7.7	5.6
80°	46.7	24.0	15.9	15.9	10.7	5.1	6.9	6.9	5.6	2.6	0.0
82.5°	17.2	9.0	5.6	6.9	4.7	1.7	2.6	1.7	1.3	0.0	0.0
85°	7.3	4.7	3.4	3.9	2.1	0.0	0.4	0.9	0.0	0.0	0.0
87.5°	3.0	2.1	1.7	1.7	0.9	0.0	0.0	0.0	0.0	0.0	0.0
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)