

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: P367131

Luminaire Tested: **MSA-SA2A-727-U-SL2-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367131  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2A-727-U-SL2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

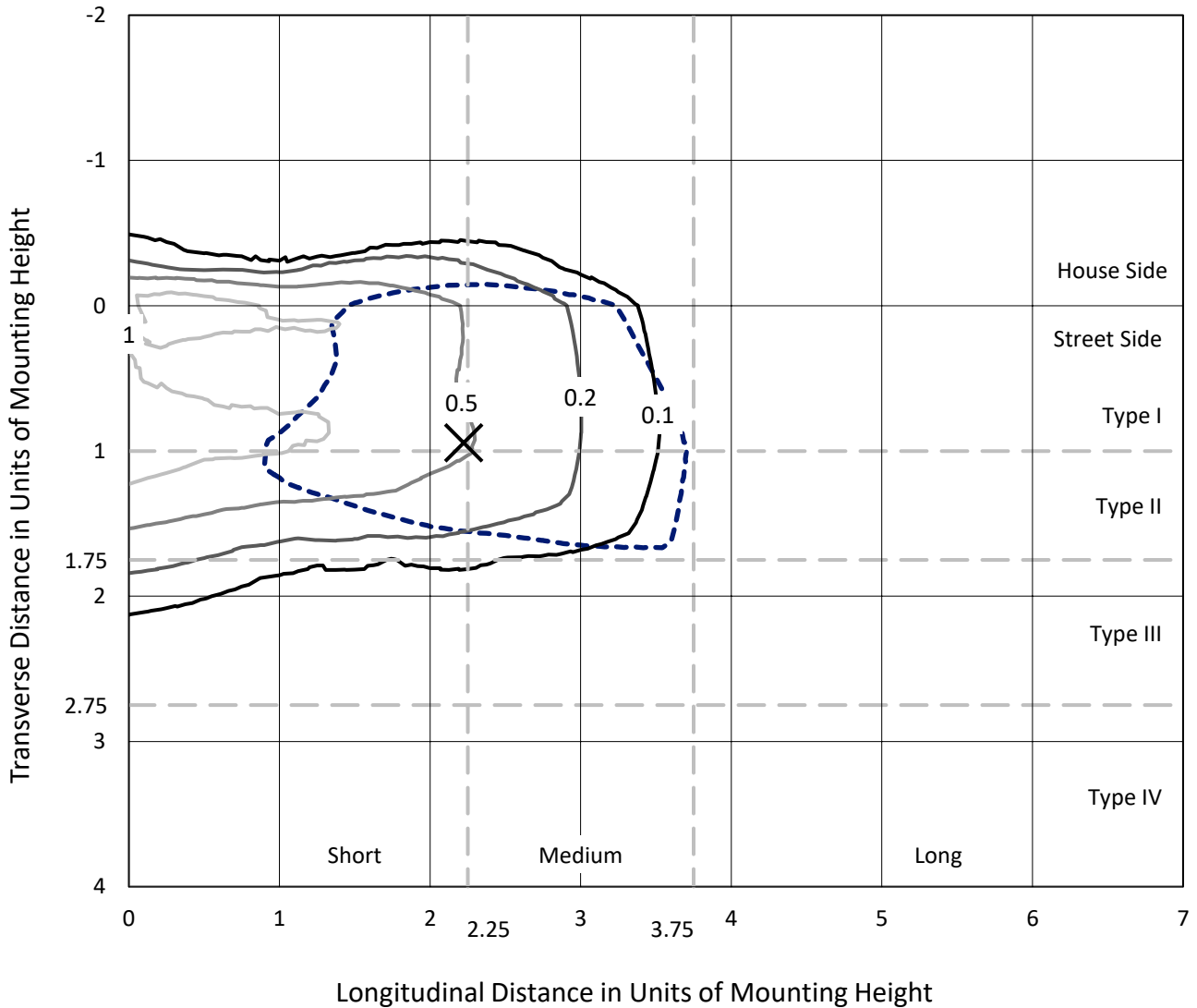
Lumens per Lamp: N/A  
Luminaire Lumens: 5448 lumens  
Efficiency: N/A  
Efficacy: 82.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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

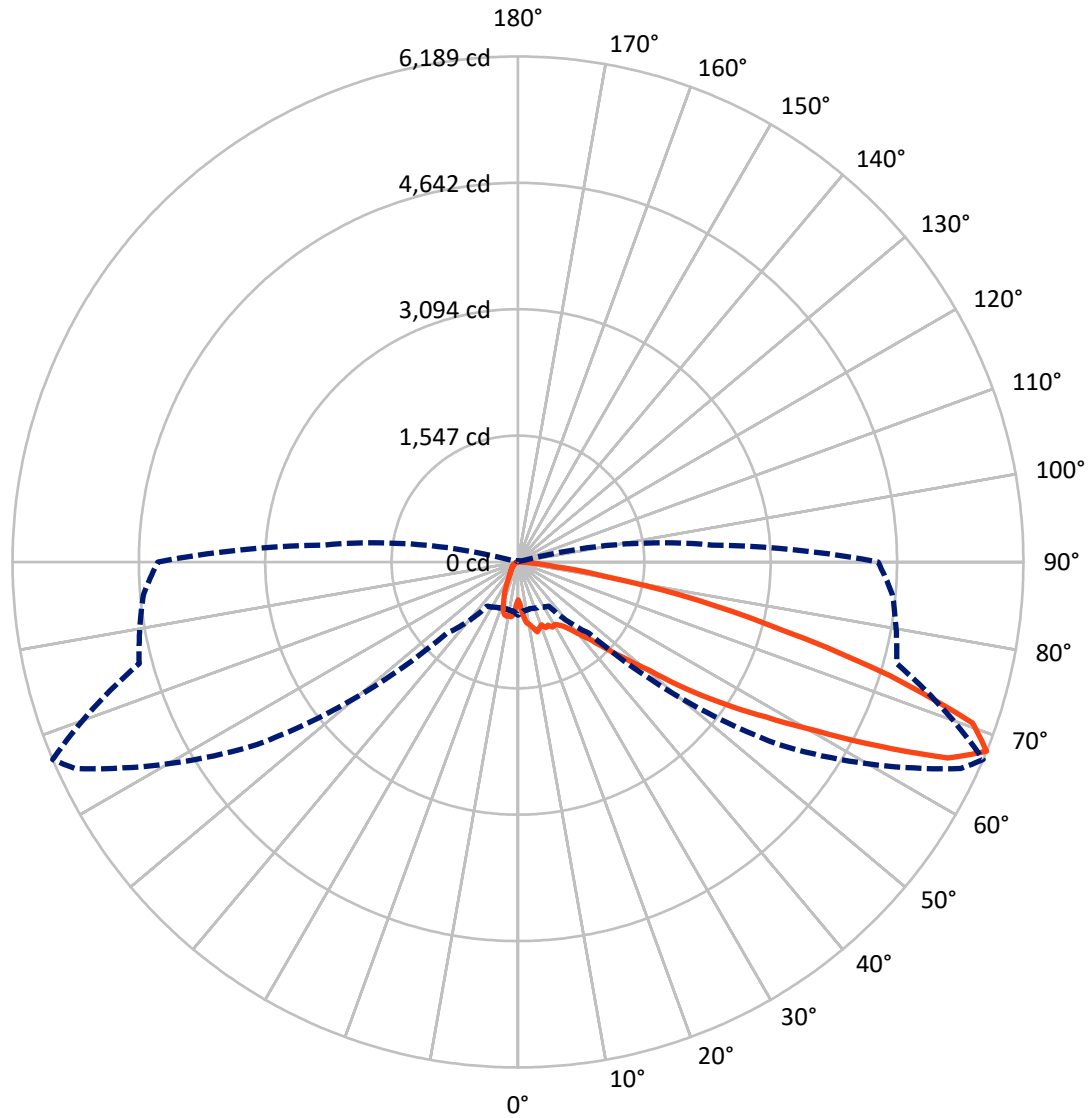
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	673.8	0.0	673.8
	% Fixture	12.4	0.0	12.4
<b>Street Side</b>	Lumens	4774.2	0.0	4774.2
	% Fixture	87.6	0.0	87.6
<b>Total</b>	Lumens	5448.0	0.0	5448.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.2	1.1
10°-20°	172.3	3.2
20°-30°	270.1	5.0
30°-40°	435.5	8.0
40°-50°	800.2	14.7
50°-60°	1351.5	24.8
60°-70°	1494.1	27.4
70°-80°	782.0	14.4
80°-90°	84.0	1.5
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°	5448.0	100.0
0°-180°	5448.0	100.0

**Coefficient of Utilization**



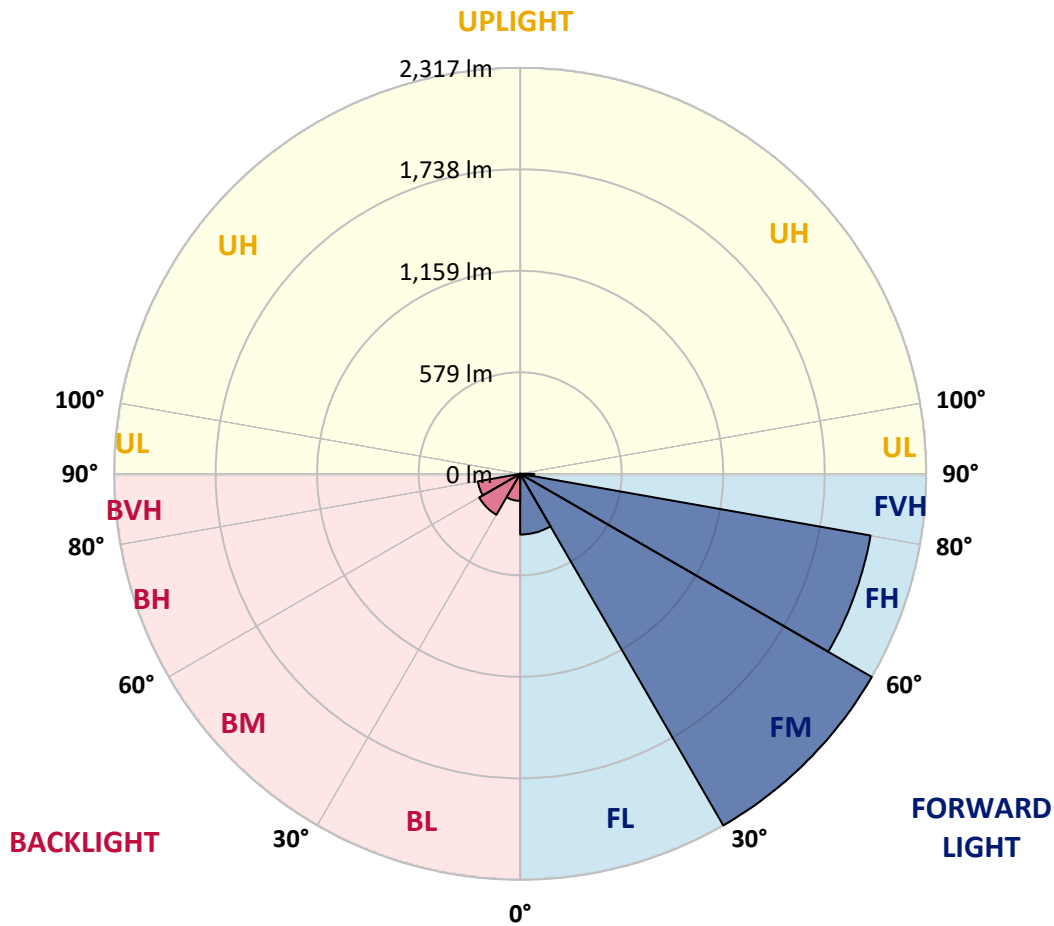
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	346.4	6.4			
FM (30°-60°)	2317.1	42.5			
FH (60°-80°)	2030.4	37.3			G2/5000
FVH (80°-90°)	80.4	1.5			G1/100
BL (0°-30°)	154.3	2.8	B1/500		
BM (30°-60°)	270.2	5.0	B1/1000		
BH (60°-80°)	245.8	4.5	B1/500		G1/500
BVH (80°-90°)	3.6	0.1			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 II Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	464.0	464.0	464.0	464.0	464.0	464.0	464.0	464.0	464.0	464.0	464.0
2.5°	547.8	529.2	497.7	506.9	525.1	540.3	533.1	519.0	519.3	504.9	556.6
5°	637.3	612.4	594.2	600.5	599.7	599.2	633.2	646.1	651.7	675.4	710.5
7.5°	663.0	654.2	635.1	640.9	621.8	623.2	682.9	739.3	748.1	762.8	825.2
10°	653.1	635.9	642.8	642.8	643.1	674.1	714.1	768.0	778.8	835.2	841.8
12.5°	642.3	643.1	670.5	665.5	703.1	758.6	772.2	832.7	827.4	876.4	949.0
15°	682.3	703.3	685.7	692.6	696.2	761.4	783.2	863.6	886.9	948.8	996.0
17.5°	751.2	753.9	717.2	707.2	733.2	751.7	795.7	834.3	849.8	1012.3	1079.2
20°	763.6	781.3	744.0	686.5	741.5	766.9	797.6	816.1	822.7	1031.9	1126.2
22.5°	838.5	818.9	759.2	715.5	731.3	758.9	778.0	833.8	873.6	994.9	1171.2
25°	876.9	871.7	814.7	777.4	761.4	759.2	802.8	845.1	857.8	1033.3	1182.3
27.5°	968.9	957.1	846.8	842.1	789.3	742.9	803.7	879.7	903.4	997.1	1223.7
30°	1094.1	1089.7	943.0	939.9	855.9	772.4	848.4	900.9	886.6	1015.6	1251.4
32.5°	1220.2	1256.1	1106.0	1020.3	957.3	881.1	835.7	894.3	920.0	1060.7	1302.2
35°	1372.4	1398.4	1245.6	1183.4	1043.3	931.9	920.0	957.6	968.7	1114.3	1360.0
37.5°	1638.8	1599.6	1469.4	1363.6	1290.1	1113.5	1054.9	1025.0	1050.7	1187.0	1478.0
40°	1835.6	1810.7	1650.5	1587.2	1418.0	1314.7	1161.6	1133.6	1162.4	1261.6	1560.1
42.5°	2073.0	2021.3	1870.4	1827.6	1653.5	1454.2	1298.9	1308.6	1290.6	1408.9	1704.1
45°	2287.7	2171.1	2087.1	2096.8	2003.9	1734.7	1528.0	1523.3	1508.4	1622.3	1855.5
47.5°	2432.3	2330.3	2248.5	2221.7	2210.6	2228.1	1859.1	1775.6	1764.6	1846.4	2094.0
50°	2509.9	2398.3	2297.1	2302.7	2527.1	2695.9	2200.7	2082.1	2086.3	2171.7	2420.1
52.5°	2457.7	2331.4	2224.7	2328.4	2772.5	3008.0	2766.1	2482.6	2578.8	2556.9	2857.6
55°	2216.4	2106.7	2031.0	2216.4	2799.3	3343.7	3462.3	3085.3	3063.8	3014.0	3303.7
57.5°	1810.5	1716.0	1669.2	1864.9	2506.1	3614.3	4161.5	3766.6	3582.8	3374.4	3674.0
60°	1348.9	1279.3	1230.7	1334.0	1974.6	3351.5	4619.4	4408.6	4195.8	3721.8	4006.7
62.5°	999.1	942.4	890.7	900.1	1359.7	2882.5	4795.2	5088.7	4966.6	4088.5	4320.7
65°	797.3	745.6	709.4	688.7	842.1	2168.6	4550.6	5646.1	5787.1	4434.0	4547.3
67.5°	651.1	607.5	589.5	613.3	660.5	1236.2	3897.3	5984.4	6188.9	4800.5	4603.1
70°	529.8	493.9	491.9	556.0	608.3	753.6	2866.7	5750.9	5904.8	4862.9	4268.5
72.5°	369.2	353.5	378.6	469.5	602.8	627.6	1646.3	4759.0	4764.5	4295.0	3510.9
75°	208.9	206.4	246.2	374.5	587.0	621.3	917.8	3363.1	3365.6	3248.4	2432.3
77.5°	115.0	107.5	143.4	253.2	504.1	606.9	592.0	2296.3	2237.5	1807.7	1111.0
80°	53.1	50.0	77.7	162.2	368.7	574.0	474.5	1262.2	1138.1	588.9	271.1
82.5°	21.8	20.7	35.7	104.2	233.0	462.4	399.9	559.9	449.4	111.9	83.7
85°	3.9	4.1	14.6	63.0	130.4	213.1	324.2	265.9	195.4	31.0	45.9
87.5°	0.0	0.0	3.0	15.2	31.5	58.3	131.5	74.3	51.1	9.1	13.5
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°	464.0	464.0	464.0	464.0	464.0	464.0	464.0	464.0	464.0	464.0	464.0
2.5°	566.8	562.1	514.6	516.8	520.1	517.1	516.5	503.3	491.1	531.2	530.6
5°	716.9	683.5	650.6	637.9	610.5	574.6	574.8	563.5	551.9	568.2	568.2
7.5°	823.8	777.7	736.0	661.6	589.2	523.7	517.9	502.4	484.7	506.0	510.2
10°	848.7	808.6	754.8	645.6	577.1	513.2	443.0	385.3	358.4	346.0	343.8
12.5°	925.3	895.4	774.9	654.2	555.5	447.4	332.5	263.9	217.2	213.6	208.7
15°	976.4	955.4	794.8	632.9	464.3	321.7	208.9	160.3	141.5	139.8	137.4
17.5°	1055.7	1019.2	775.8	565.2	363.1	212.2	140.4	126.6	128.8	133.8	129.9
20°	1088.0	1016.7	734.3	467.1	255.1	142.3	121.9	114.4	120.2	124.9	122.7
22.5°	1121.2	1023.9	697.5	385.0	166.6	117.7	108.6	104.7	105.3	110.0	110.3
25°	1120.9	1043.8	655.0	299.9	124.1	104.7	98.1	93.1	91.2	94.5	93.7
27.5°	1175.4	1020.9	577.3	222.5	109.2	93.7	87.3	81.3	74.3	77.7	77.7
30°	1175.7	1058.2	523.2	159.7	100.0	83.5	77.9	68.5	60.5	63.3	63.6
32.5°	1206.9	1025.9	473.1	122.2	92.9	77.4	65.2	56.7	52.0	53.6	53.6
35°	1242.5	1053.5	396.3	107.8	85.7	68.8	55.8	48.9	45.3	46.7	46.7
37.5°	1360.3	1047.7	343.0	100.3	81.0	62.2	50.9	43.1	41.5	42.3	43.4
40°	1402.8	1088.9	270.6	95.9	73.2	56.1	44.8	39.0	36.8	37.3	37.6
42.5°	1511.2	1098.0	216.1	92.3	66.3	48.6	39.8	35.7	32.9	32.9	33.7
45°	1630.8	1120.9	171.9	89.3	60.5	43.7	35.9	32.6	28.5	27.9	29.0
47.5°	1804.1	1208.8	140.1	83.2	53.6	40.6	33.2	28.2	24.9	23.8	24.9
50°	2094.0	1358.1	123.8	75.7	48.6	38.1	29.3	24.0	21.6	20.2	21.0
52.5°	2503.0	1615.9	115.2	68.8	44.2	34.3	26.3	21.0	18.5	17.4	18.0
55°	2957.4	1911.6	111.1	61.9	40.3	30.1	22.9	18.5	16.3	14.9	15.2
57.5°	3377.5	2189.6	107.0	55.3	36.5	26.8	20.2	16.3	14.1	12.7	13.0
60°	3791.5	2411.6	97.0	47.5	32.9	24.0	17.7	14.1	12.7	11.1	11.1
62.5°	4157.6	2544.2	82.6	41.2	29.6	21.3	15.8	12.7	11.6	9.9	9.9
65°	4406.9	2550.3	66.6	35.4	26.0	18.2	13.8	11.9	10.8	8.8	8.6
67.5°	4410.5	2384.5	53.3	31.5	22.9	16.0	12.4	11.3	9.9	8.3	7.7
70°	3947.6	1969.9	44.5	27.6	19.9	14.1	10.8	10.8	9.7	8.0	7.2
72.5°	3157.7	1505.4	37.3	24.0	17.7	12.2	9.9	10.2	9.4	8.0	7.2
75°	2122.5	863.4	31.0	20.5	15.5	10.2	9.7	9.9	9.7	8.0	6.9
77.5°	977.5	275.0	24.0	16.9	13.3	8.6	9.4	9.4	8.8	7.2	6.1
80°	220.3	67.7	17.4	12.4	10.8	6.4	8.6	7.7	6.9	5.0	3.6
82.5°	80.1	20.7	10.5	7.7	6.6	2.5	5.5	5.5	5.0	3.6	2.2
85°	45.9	10.8	5.8	5.0	3.6	1.1	3.0	3.3	2.8	2.5	1.1
87.5°	14.9	2.5	2.8	3.0	2.8	0.6	1.1	1.1	0.8	0.6	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)