

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: P367301

Luminaire Tested: **MSA-SA2B-730-U-T4W-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367301  
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-SA2B-730-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: 6839 lumens  
Efficiency: N/A  
Efficacy: 80.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

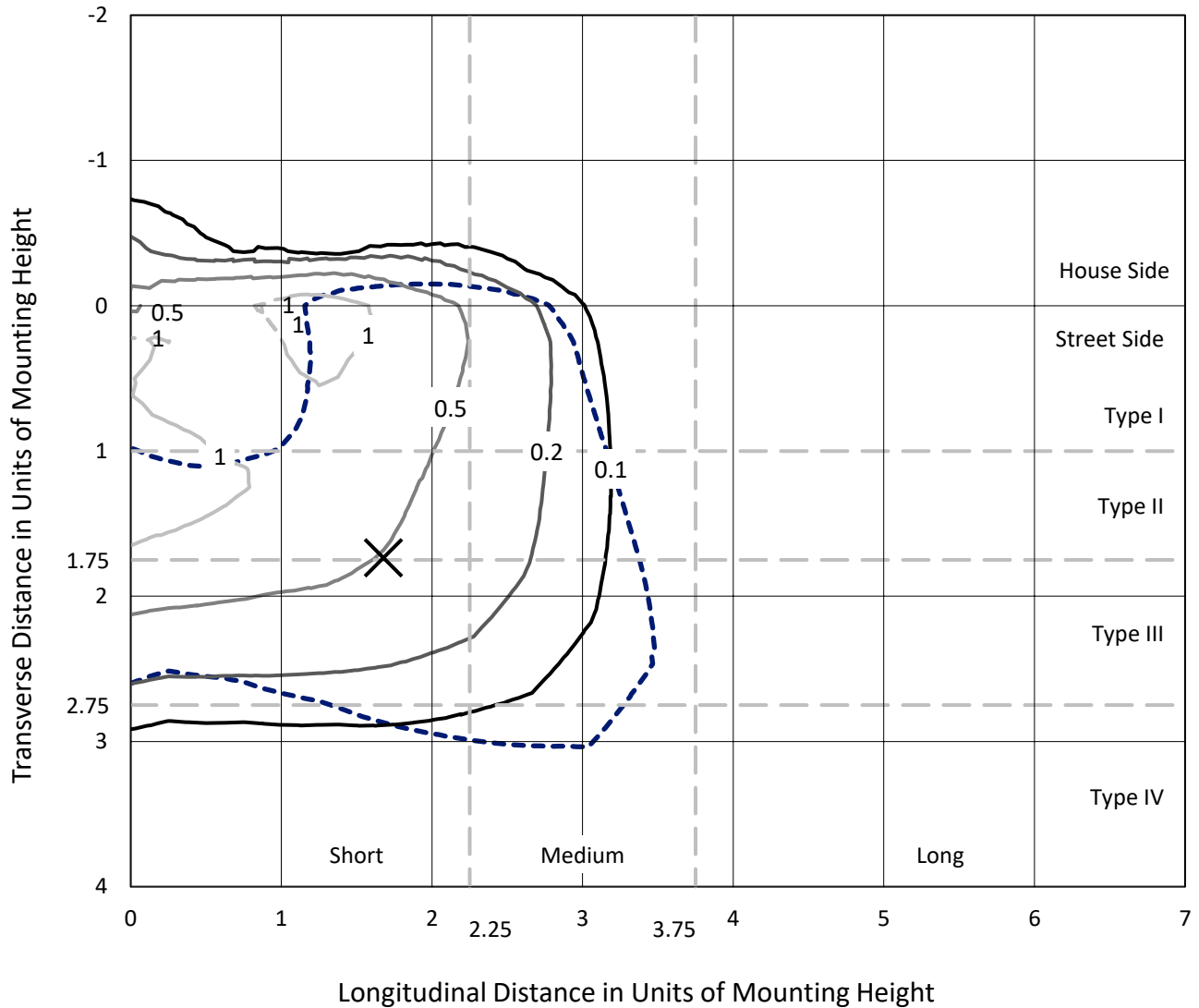
Input Watts (W): 85  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

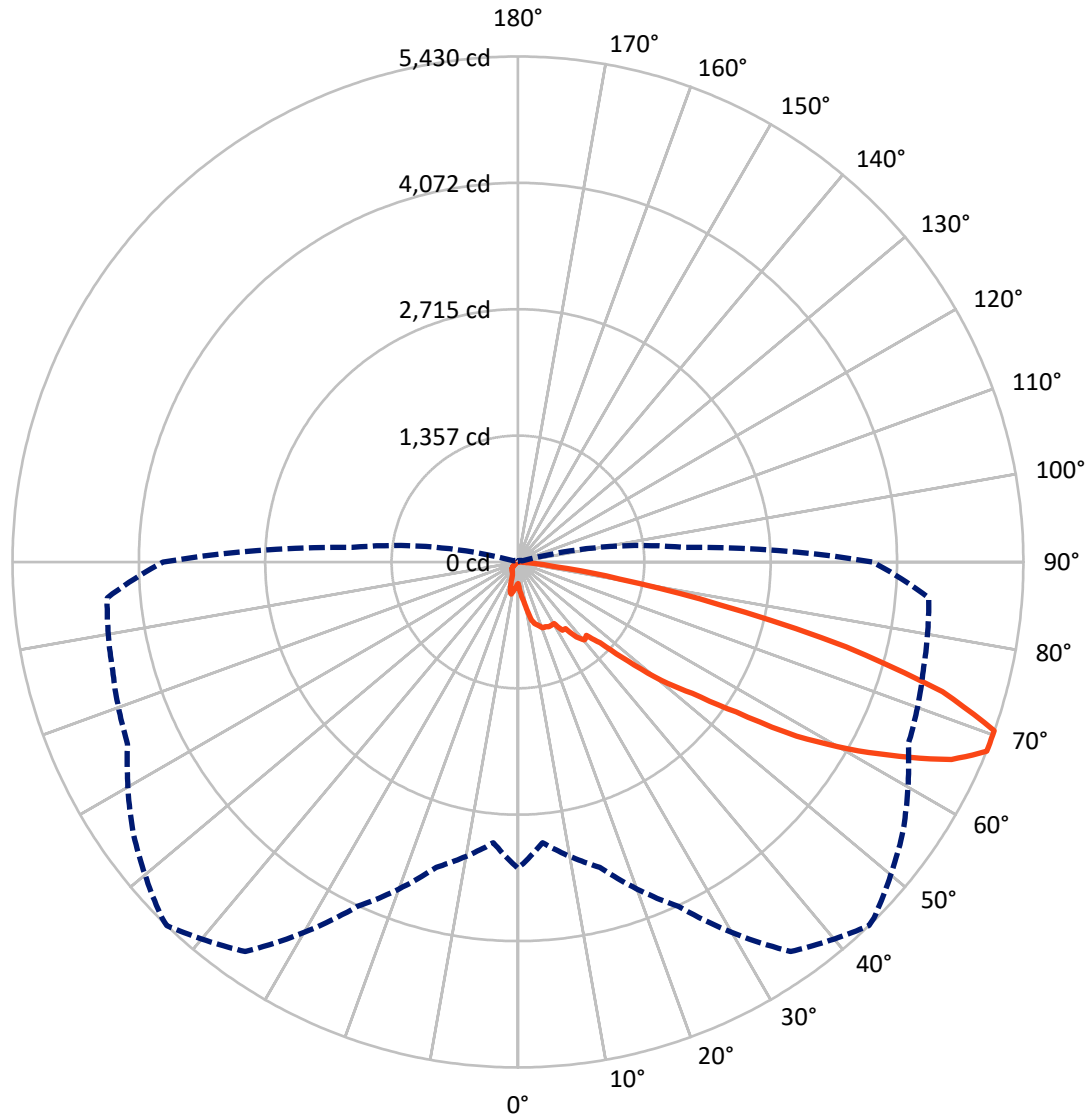
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.6 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	694.7	0.0	694.7
	% Fixture	10.2	0.0	10.2
<b>Street Side</b>	Lumens	6144.3	0.0	6144.3
	% Fixture	89.8	0.0	89.8
<b>Total</b>	Lumens	6839.0	0.0	6839.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	34.1	0.5
10°-20°	143.0	2.1
20°-30°	253.3	3.7
30°-40°	411.7	6.0
40°-50°	823.8	12.0
50°-60°	1690.1	24.7
60°-70°	2321.8	33.9
70°-80°	1091.3	16.0
80°-90°	69.9	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°	6839.0	100.0
0°-180°	6839.0	100.0

**Coefficient of Utilization**

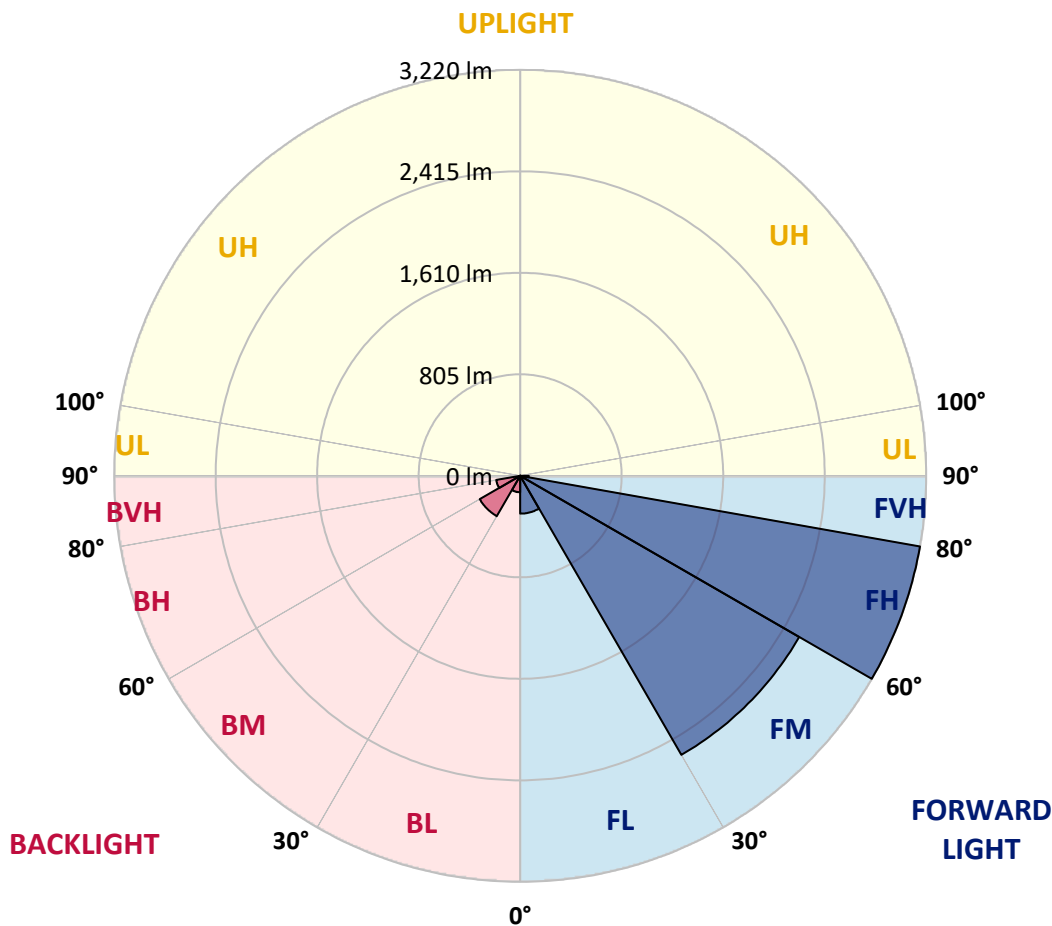


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	300.0	4.4			
FM (30°-60°)	2555.6	37.4			
FH (60°-80°)	3220.2	47.1			G2/5000
FVH (80°-90°)	68.5	1.0			G1/100
BL (0°-30°)	130.4	1.9	B1/500		
BM (30°-60°)	370.1	5.4	B1/1000		
BH (60°-80°)	192.8	2.8	B1/500		G1/500
BVH (80°-90°)	1.4	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°	230.4	230.4	230.4	230.4	230.4	230.4	230.4	230.4	230.4	230.4	230.4
2.5°	293.0	283.6	270.0	273.0	274.5	278.7	279.1	273.8	258.7	254.6	273.0
5°	410.7	387.7	383.5	374.9	357.5	348.1	345.8	355.2	343.2	339.4	344.3
7.5°	524.6	505.0	483.5	471.8	435.6	413.3	412.2	416.0	418.2	405.0	411.8
10°	600.4	578.9	574.4	546.8	515.5	510.2	508.0	493.6	482.0	472.2	439.3
12.5°	669.0	668.6	676.9	637.3	632.4	637.7	635.8	584.5	572.8	531.7	522.3
15°	760.3	782.9	747.1	713.9	671.6	689.7	684.8	652.0	644.1	616.2	575.9
17.5°	854.9	861.0	801.0	750.1	739.2	715.4	720.3	708.6	668.6	690.9	650.9
20°	857.2	870.4	806.3	722.2	755.7	754.6	755.0	743.7	690.9	742.9	706.3
22.5°	888.9	856.4	796.9	743.3	749.3	755.0	761.0	747.1	735.8	748.6	755.4
25°	876.0	863.2	805.9	770.5	764.8	769.3	770.8	788.6	781.4	812.3	795.3
27.5°	909.2	890.8	788.2	794.6	774.6	769.3	760.3	819.5	840.6	816.1	861.3
30°	966.2	963.5	818.7	828.2	812.7	766.3	790.4	867.7	894.1	879.1	934.1
32.5°	1055.2	1064.2	908.1	847.0	854.9	875.7	866.6	867.7	934.5	968.1	1011.8
35°	1181.5	1176.6	995.2	918.7	877.2	880.6	893.4	954.9	1041.2	1039.0	1085.3
37.5°	1429.7	1376.1	1149.5	991.8	1004.3	1021.2	1011.8	1094.4	1102.7	1105.7	1216.6
40°	1795.5	1724.2	1392.7	1146.1	1026.1	1101.2	1096.7	1117.0	1172.5	1193.2	1355.0
42.5°	2277.4	2181.6	1820.7	1429.7	1131.7	1080.1	1108.0	1146.4	1332.7	1391.9	1569.2
45°	2809.9	2616.1	2247.6	1833.9	1396.5	1236.2	1257.3	1329.0	1587.3	1685.3	1881.1
47.5°	3155.0	2984.5	2670.4	2192.2	1672.5	1588.4	1590.3	1605.8	1886.3	2068.1	2330.6
50°	3454.8	3273.4	2981.9	2566.7	2160.9	2001.7	1965.5	1894.3	2267.2	2515.8	2806.9
52.5°	3877.9	3666.0	3293.4	3006.0	2717.9	2343.0	2330.2	2354.4	2716.4	2977.7	3295.3
55°	4259.6	4002.0	3646.4	3465.3	3353.0	2844.6	2855.5	2895.9	3293.0	3431.4	3729.7
57.5°	4428.1	4149.1	3966.2	3884.7	3824.7	3529.8	3492.9	3468.7	3747.8	3800.6	4184.9
60°	4538.6	4273.1	4190.2	4209.0	4390.8	4077.8	4044.2	3903.9	4124.2	4167.5	4592.9
62.5°	4468.9	4226.7	4244.5	4401.7	4805.2	4599.3	4502.4	4267.8	4431.9	4467.0	4885.9
65°	4029.5	3777.2	4005.0	4385.5	5121.3	5116.4	5071.5	4603.9	4602.4	4647.2	4908.6
67.5°	3291.5	3026.8	3395.2	4081.6	5108.1	5429.8	5408.6	5049.6	4626.9	4506.9	4429.6
70°	2288.4	2058.7	2476.5	3370.7	4652.9	5427.5	5393.5	5349.0	4433.0	3879.4	3434.4
72.5°	1189.1	1062.7	1451.9	2322.7	3709.0	4768.7	4880.7	4807.5	3785.1	2818.6	2022.5
75°	403.9	362.4	598.9	1232.8	2465.6	3641.5	3772.7	3698.4	2570.8	1512.2	799.9
77.5°	156.5	145.6	214.6	500.4	1236.9	2219.0	2361.5	2285.7	1378.7	554.0	188.2
80°	89.0	86.0	118.4	225.5	545.3	1103.8	1204.1	1092.1	497.0	186.7	49.0
82.5°	37.7	38.8	66.0	121.8	274.2	389.6	434.4	396.4	208.2	127.8	18.1
85°	8.3	10.2	31.3	67.9	115.0	111.2	116.5	129.4	127.8	93.9	7.9
87.5°	0.0	0.0	9.8	18.5	27.5	18.1	14.3	25.3	39.2	37.7	3.4
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°	230.4	230.4	230.4	230.4	230.4	230.4	230.4	230.4	230.4	230.4	230.4
2.5°	276.4	272.7	248.9	247.4	248.9	244.7	244.4	235.7	236.5	256.1	257.6
5°	344.3	325.5	305.1	298.7	292.6	279.1	286.6	286.6	286.6	299.1	302.8
7.5°	405.8	380.5	351.9	327.7	304.3	287.4	299.1	307.4	312.3	328.5	336.0
10°	433.7	408.8	383.2	348.8	330.7	324.3	310.7	303.6	312.3	308.9	313.0
12.5°	493.3	470.6	426.5	391.1	377.5	355.6	315.6	287.7	269.3	266.2	265.5
15°	551.3	537.4	478.2	430.7	383.5	333.0	264.7	227.8	208.2	204.8	205.2
17.5°	624.9	604.9	517.8	449.5	369.6	278.7	204.4	172.7	171.2	179.5	180.3
20°	673.9	641.1	537.8	434.1	323.6	210.8	159.9	152.4	164.4	179.5	178.0
22.5°	720.7	685.2	564.2	420.5	250.8	159.9	147.1	147.8	158.0	174.2	178.4
25°	751.6	738.8	596.6	388.8	191.2	138.4	140.7	146.3	155.0	170.5	170.5
27.5°	844.7	784.8	592.8	327.3	147.1	129.0	134.3	141.4	145.9	164.4	166.3
30°	901.3	881.7	612.4	264.7	129.0	116.9	127.1	133.5	136.5	157.6	158.4
32.5°	970.7	927.3	636.2	195.3	119.9	116.2	113.9	118.8	127.5	145.9	147.1
35°	1055.2	1042.4	602.3	153.5	116.9	108.6	104.1	106.7	112.4	124.8	127.5
37.5°	1227.5	1151.3	581.9	131.6	116.9	106.0	101.1	94.3	95.0	103.7	108.6
40°	1372.7	1349.3	524.9	127.8	111.6	102.2	90.1	81.8	76.2	78.8	80.7
42.5°	1639.3	1531.1	451.4	126.0	106.7	92.4	76.6	67.9	59.2	60.0	63.0
45°	1962.9	1729.5	385.8	124.1	103.3	82.6	64.5	54.3	45.3	45.6	48.6
47.5°	2395.1	2018.7	306.2	118.4	97.3	73.5	52.0	41.5	36.2	37.3	40.0
50°	2886.1	2272.5	242.1	109.7	90.1	64.9	42.2	33.6	31.7	32.8	35.8
52.5°	3324.7	2459.6	199.9	101.8	79.9	52.8	35.4	29.8	29.0	29.8	32.1
55°	3714.6	2568.2	167.1	92.8	68.6	42.6	32.1	27.5	27.2	26.8	28.3
57.5°	4080.4	2599.5	130.5	78.4	55.8	37.0	29.8	25.6	24.9	23.8	24.9
60°	4347.0	2545.9	95.8	63.0	45.6	33.6	27.9	23.0	21.9	20.0	20.7
62.5°	4475.6	2399.2	72.4	50.5	38.8	30.5	24.9	20.0	18.5	16.2	16.6
65°	4353.5	2157.5	56.9	42.6	33.2	25.6	21.1	17.0	15.1	12.8	12.8
67.5°	3812.3	1789.8	48.3	37.0	27.9	21.9	17.3	15.5	12.4	10.6	10.2
70°	2798.2	1287.5	41.5	32.4	24.1	18.9	14.7	14.0	12.1	10.2	9.4
72.5°	1579.4	728.6	35.4	28.7	20.4	15.8	12.4	12.8	11.7	9.4	8.7
75°	602.6	245.5	29.4	23.8	16.6	12.1	10.6	10.6	10.6	7.9	6.8
77.5°	149.3	62.6	23.4	19.2	13.2	7.9	8.7	9.1	9.1	6.8	4.9
80°	41.1	21.1	14.0	14.0	9.4	4.5	6.0	6.0	4.9	2.3	0.0
82.5°	15.1	7.9	4.9	6.0	4.1	1.5	2.3	1.5	1.1	0.0	0.0
85°	6.4	4.1	3.0	3.4	1.9	0.0	0.4	0.8	0.0	0.0	0.0
87.5°	2.6	1.9	1.5	1.5	0.8	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)