

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: P367033

Luminaire Tested: **MSA-SA1D-730-U-T3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367033  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1D-730-U-T3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

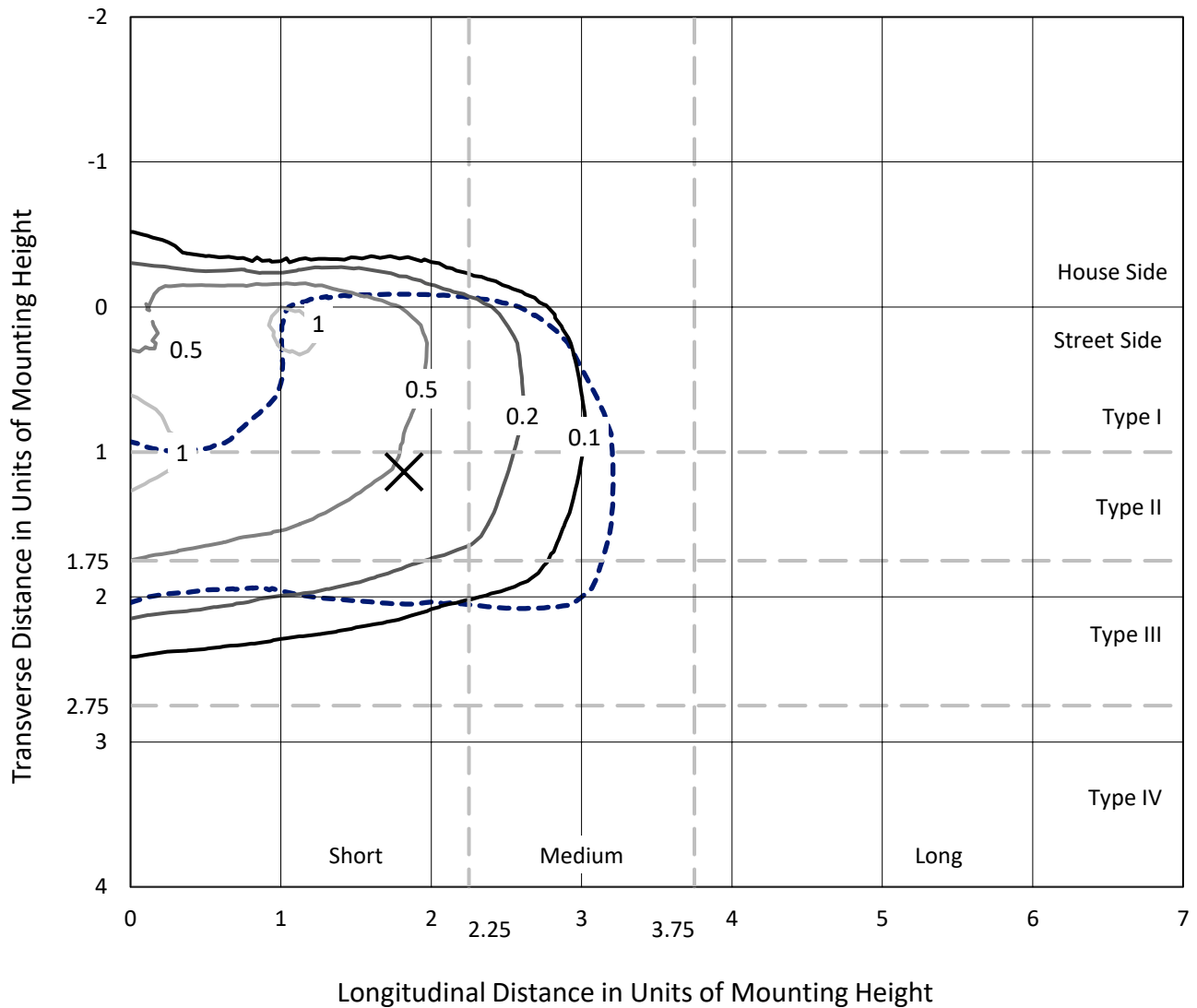
Lumens per Lamp: N/A  
Luminaire Lumens: 4612 lumens  
Efficiency: N/A  
Efficacy: 68.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G1  
  
Input Watts (W): 67  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

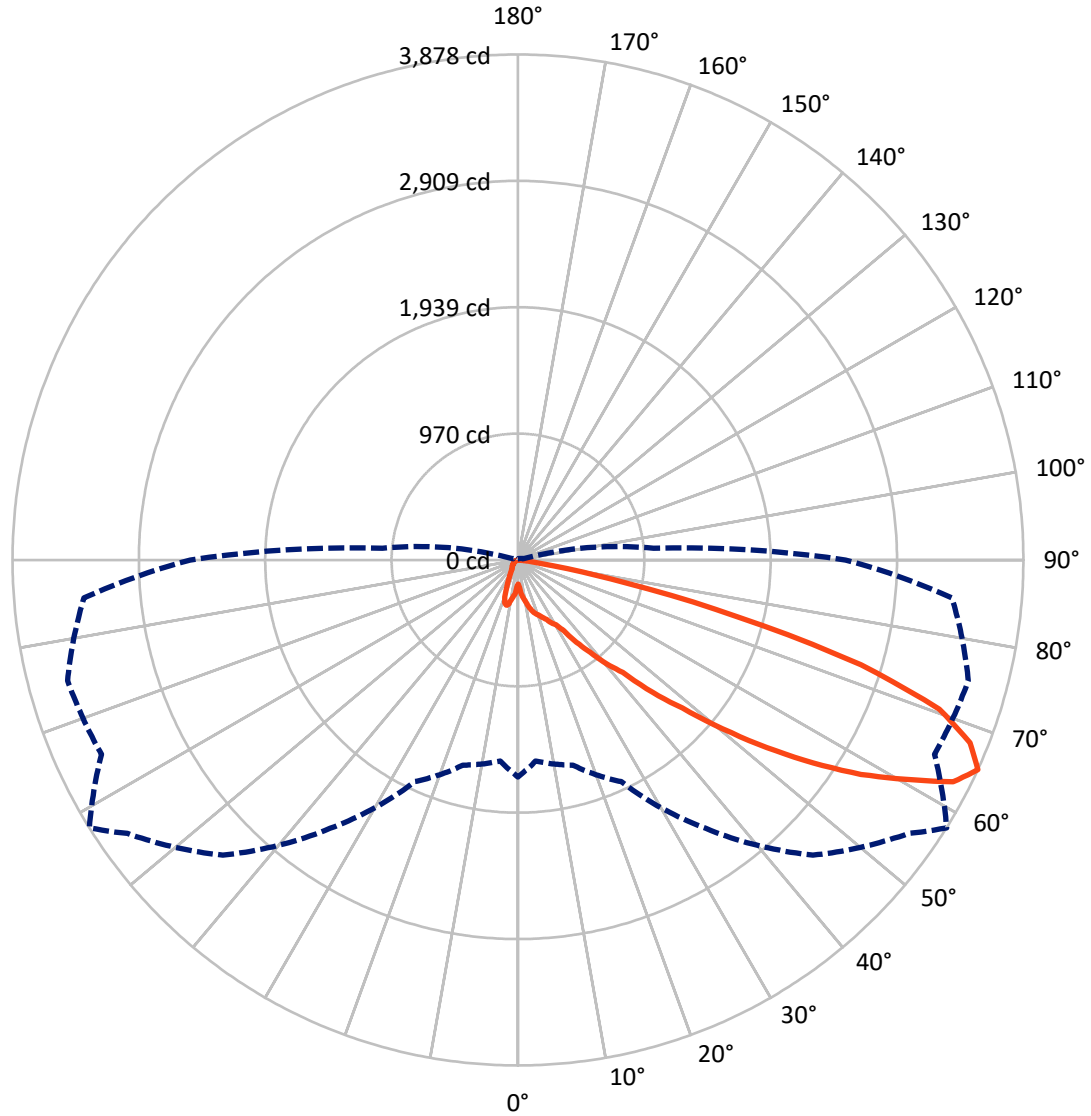
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.2 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	455.1	0.0	455.1
	% Fixture	9.9	0.0	9.9
<b>Street Side</b>	Lumens	4156.9	0.0	4156.9
	% Fixture	90.1	0.0	90.1
<b>Total</b>	Lumens	4612.0	0.0	4612.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.9	0.6
10°-20°	94.7	2.1
20°-30°	183.3	4.0
30°-40°	365.6	7.9
40°-50°	747.4	16.2
50°-60°	1325.7	28.7
60°-70°	1397.7	30.3
70°-80°	453.1	9.8
80°-90°	18.5	0.4
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°	4612.0	100.0
0°-180°	4612.0	100.0

**Coefficient of Utilization**



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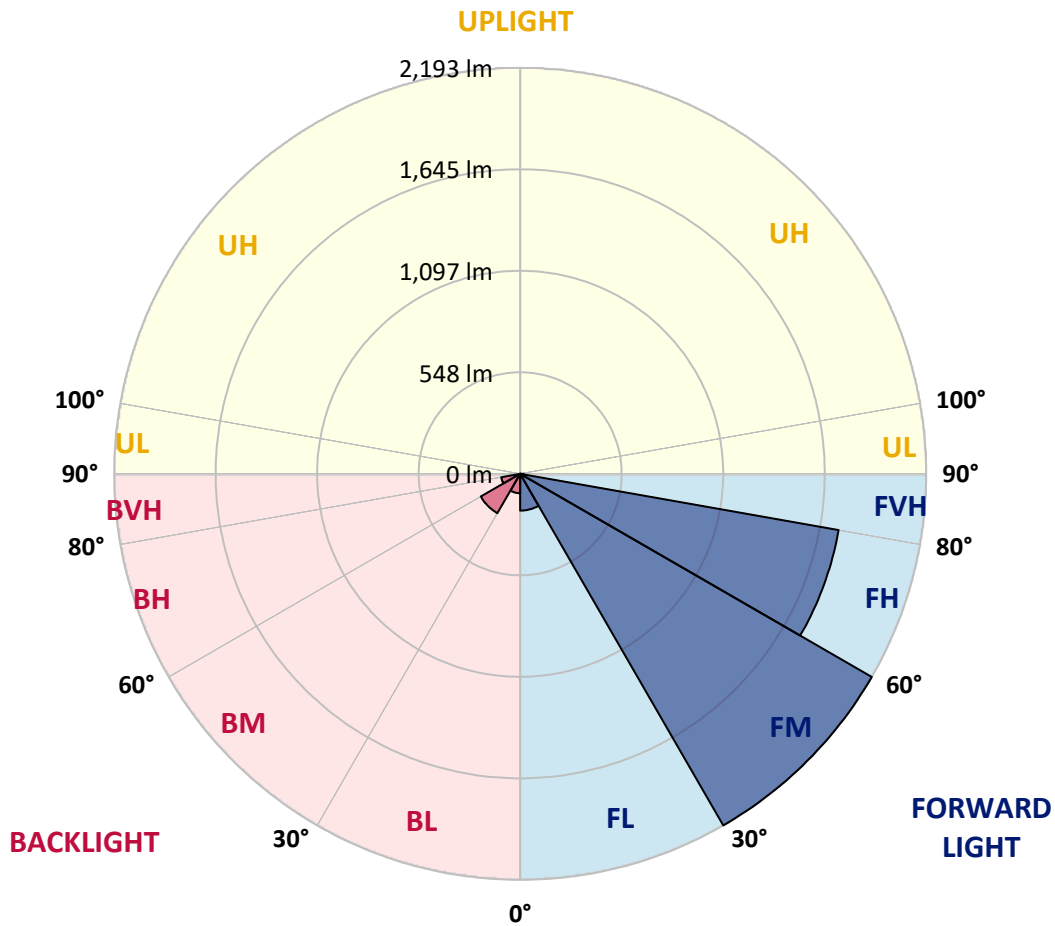
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	199.0	4.3			
FM (30°-60°)	2193.2	47.6			
FH (60°-80°)	1747.0	37.9			G1/1800
FVH (80°-90°)	17.7	0.4			G1/100
BL (0°-30°)	104.9	2.3	B0/110		
BM (30°-60°)	245.5	5.3	B1/1000		
BH (60°-80°)	103.9	2.3	B0/110		G0/110
BVH (80°-90°)	0.8	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-G1**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	184.6	184.6	184.6	184.6	184.6	184.6	184.6	184.6	184.6	184.6	184.6
2.5°	225.4	218.6	208.0	209.8	211.9	216.0	212.7	209.6	206.2	201.8	218.6
5°	272.1	261.0	259.9	257.6	255.8	255.5	259.7	258.4	260.2	268.5	277.1
7.5°	289.3	284.6	275.8	279.4	273.7	269.3	287.7	293.7	305.1	309.0	331.3
10°	287.5	280.7	284.3	286.2	290.1	306.2	317.8	324.3	334.2	355.5	351.1
12.5°	295.8	301.7	305.6	305.9	325.9	355.5	363.8	369.3	386.9	395.2	417.0
15°	323.5	333.4	327.2	329.8	336.3	372.4	391.8	403.8	428.7	455.7	461.2
17.5°	363.3	369.5	356.5	347.2	365.1	384.8	420.1	432.6	448.5	511.6	523.2
20°	413.4	424.0	396.0	358.9	382.5	405.9	444.3	450.3	467.1	549.5	567.9
22.5°	530.5	514.7	471.8	413.9	406.9	417.3	453.9	477.3	505.8	570.8	613.6
25°	646.1	640.6	577.5	512.8	466.1	442.7	491.3	504.3	551.0	621.4	645.0
27.5°	774.6	785.5	680.1	640.9	549.2	472.9	514.7	547.1	602.4	639.8	696.7
30°	944.2	926.8	803.2	763.9	659.3	555.7	575.2	577.2	658.5	700.6	754.6
32.5°	1077.1	1088.3	933.0	872.8	789.1	683.2	620.6	647.6	705.8	799.5	850.7
35°	1221.0	1219.9	1068.5	987.5	878.2	787.3	755.4	775.1	848.1	954.3	967.8
37.5°	1436.0	1417.5	1238.9	1120.2	1027.3	949.6	925.2	899.0	974.3	1075.6	1126.2
40°	1638.8	1575.2	1410.0	1269.3	1150.3	1118.7	1030.4	1046.5	1068.8	1202.5	1342.5
42.5°	1843.7	1804.2	1583.5	1465.6	1319.4	1244.1	1186.4	1178.9	1285.1	1443.5	1588.1
45°	2114.0	1993.2	1816.7	1713.0	1543.7	1468.2	1421.7	1449.5	1545.0	1776.4	1872.7
47.5°	2340.9	2229.8	2078.1	1920.8	1743.2	1828.1	1740.8	1696.9	1828.1	2067.2	2195.3
50°	2535.9	2412.1	2258.6	2142.0	2113.2	2194.7	2018.2	2034.3	2119.4	2400.4	2472.6
52.5°	2677.7	2547.4	2413.4	2357.0	2475.2	2516.2	2427.7	2392.1	2469.5	2684.5	2719.5
55°	2784.4	2651.0	2546.3	2624.0	2852.5	2839.0	2870.1	2748.6	2822.6	2980.8	2964.1
57.5°	2790.9	2632.8	2571.5	2696.4	3010.1	3219.1	3310.3	3103.6	3145.6	3212.4	3175.0
60°	2586.8	2429.5	2424.5	2601.9	3055.8	3317.5	3517.0	3416.2	3359.9	3409.5	3338.6
62.5°	2180.2	2070.1	2121.5	2317.6	2885.7	3263.3	3627.1	3748.3	3528.9	3540.1	3439.3
65°	1664.7	1549.2	1629.7	1876.6	2513.9	3202.5	3658.2	3878.2	3525.8	3577.2	3342.7
67.5°	1102.6	1035.6	1126.7	1398.8	1998.7	2827.0	3642.1	3741.8	3413.9	3432.1	2984.1
70°	569.2	552.8	626.6	841.3	1343.8	2171.9	3484.0	3429.5	3186.7	2956.6	2301.7
72.5°	182.3	183.1	254.0	384.3	724.5	1322.2	2678.0	2752.8	2550.0	2162.8	1405.3
75°	80.8	79.5	106.2	161.3	302.0	592.8	1663.7	1744.5	1587.6	1189.8	590.7
77.5°	58.2	56.3	68.0	94.3	149.6	201.0	780.0	841.9	719.8	412.4	135.3
80°	41.0	40.8	49.3	66.2	93.5	89.3	246.4	276.3	221.2	100.0	39.7
82.5°	23.1	23.9	34.3	46.7	56.9	44.7	69.3	76.3	74.5	53.2	17.4
85°	11.2	12.5	22.3	33.8	29.9	17.4	24.7	26.7	31.2	30.9	8.8
87.5°	0.0	0.0	9.1	15.3	8.0	2.6	7.5	8.6	8.3	9.9	2.1
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°	184.6	184.6	184.6	184.6	184.6	184.6	184.6	184.6	184.6	184.6	184.6
2.5°	222.0	220.5	200.7	202.3	206.7	204.9	206.4	202.8	198.6	215.5	215.3
5°	280.7	269.0	262.8	257.1	258.1	246.4	253.2	256.3	255.8	265.4	268.0
7.5°	332.1	316.5	304.1	292.1	274.0	257.6	267.7	274.2	278.6	295.2	301.7
10°	356.3	343.5	338.6	315.2	302.3	292.1	279.9	271.1	274.7	270.3	274.7
12.5°	409.2	400.7	381.7	358.1	342.5	321.7	276.3	238.4	215.0	215.3	213.7
15°	457.5	457.0	428.7	389.5	344.3	285.1	214.2	166.4	144.4	138.1	136.1
17.5°	520.6	512.8	461.2	403.3	322.0	220.7	145.9	114.0	111.9	115.6	114.0
20°	560.9	549.5	477.3	383.3	265.4	149.3	110.1	101.0	107.2	112.4	111.1
22.5°	601.1	584.0	489.5	358.9	188.8	109.3	99.5	97.9	101.8	108.3	109.3
25°	623.2	619.8	513.4	313.2	129.3	95.8	95.8	95.3	96.6	101.3	100.5
27.5°	687.3	641.6	495.5	244.3	100.0	88.0	89.3	88.8	84.1	88.8	89.1
30°	727.3	706.3	496.7	174.0	88.0	77.9	81.3	77.1	70.1	74.0	73.2
32.5°	807.8	755.4	492.9	117.4	80.2	74.3	69.1	63.1	57.9	59.5	58.2
35°	901.6	861.6	440.1	94.3	74.8	65.7	57.4	51.4	46.0	47.3	47.0
37.5°	1088.0	961.0	396.5	84.9	71.1	60.2	50.6	42.3	39.5	40.2	41.0
40°	1260.7	1127.0	315.2	80.8	64.9	53.8	41.8	35.8	34.0	34.5	35.3
42.5°	1518.8	1258.9	238.1	76.6	58.7	45.4	34.8	30.9	29.1	30.1	30.6
45°	1768.6	1371.1	177.9	73.0	53.5	39.2	29.3	26.7	24.7	25.4	26.5
47.5°	2018.2	1495.7	132.7	67.3	47.8	33.8	25.2	23.4	22.1	22.3	23.6
50°	2241.5	1553.9	104.4	60.2	43.1	29.3	22.9	21.0	20.5	20.8	21.8
52.5°	2405.6	1554.4	88.0	54.0	38.7	26.0	21.6	19.5	19.2	19.7	20.8
55°	2553.9	1512.8	76.3	48.6	34.8	23.6	20.5	18.7	18.7	19.2	20.3
57.5°	2652.3	1436.5	66.2	42.8	31.4	22.3	19.7	17.9	17.7	17.4	18.2
60°	2700.3	1332.4	56.1	37.7	28.3	21.6	19.2	15.8	15.6	15.1	15.6
62.5°	2669.9	1202.0	47.0	32.5	25.2	20.5	16.9	13.8	13.2	12.2	13.0
65°	2514.6	1043.6	39.7	27.8	21.8	17.4	14.3	11.7	10.4	9.1	8.8
67.5°	2197.1	847.8	33.2	23.9	18.7	14.3	11.7	10.4	8.0	7.0	6.8
70°	1646.6	578.8	27.5	20.5	15.6	12.2	9.9	9.3	7.5	6.8	6.2
72.5°	966.0	312.4	23.1	17.9	13.2	10.1	8.0	8.6	7.5	6.2	5.7
75°	385.9	103.9	18.4	14.3	10.6	7.3	6.8	7.0	6.8	5.7	4.7
77.5°	88.0	32.7	14.3	11.2	8.3	4.7	5.5	6.0	6.0	4.7	3.4
80°	27.5	13.0	8.3	7.0	6.0	2.6	3.9	4.2	2.9	1.3	0.0
82.5°	8.8	3.6	2.9	2.9	2.6	0.5	0.8	0.5	0.0	0.0	0.0
85°	3.4	2.3	1.8	1.8	1.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	1.3	1.0	0.8	1.0	0.5	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)