

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: P367169

Luminaire Tested: **MSA-SA2A-730-U-T4W-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367169  
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-SA2A-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**

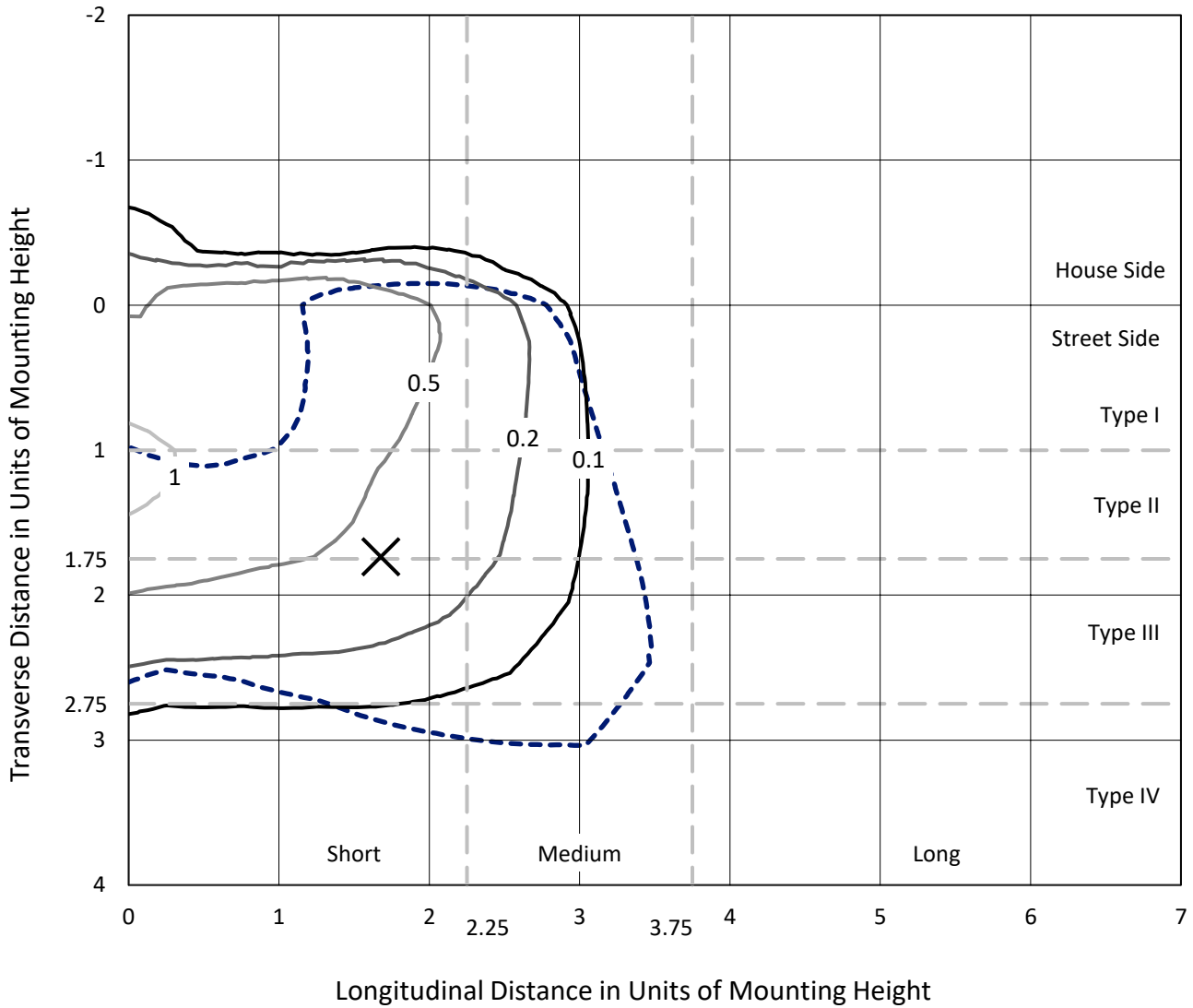
Lumens per Lamp: N/A  
Luminaire Lumens: 5457 lumens  
Efficiency: N/A  
Efficacy: 82.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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



REPORT NUMBER: P367169  
 CATALOG NUMBER: MSA-SA2A-730-U-T4W-HSS

### Iso-Footcandle Lines of Horizontal Illumination

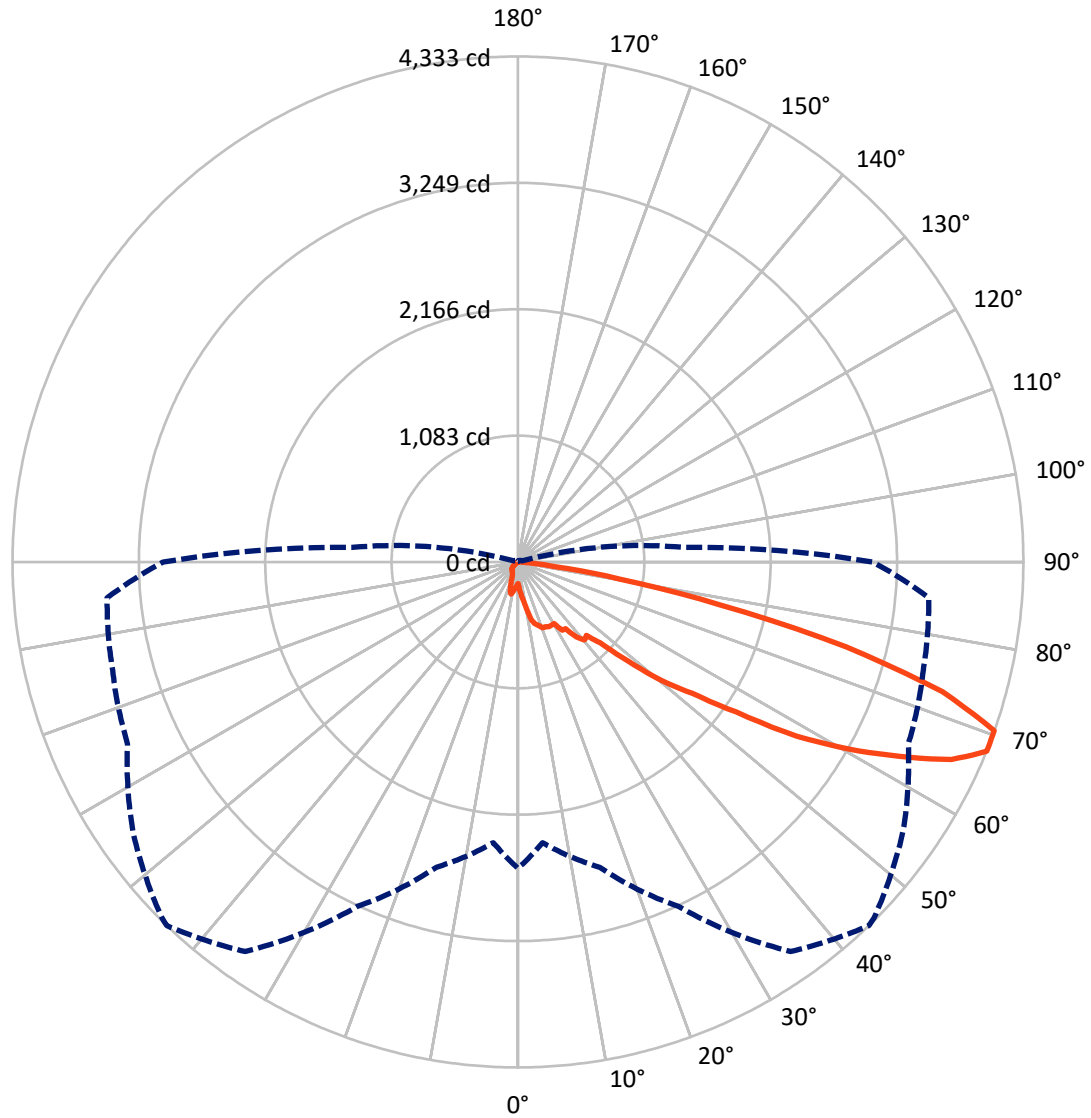
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.3 fc  
 Type IV - Short - N/A

REPORT NUMBER: P367169  
CATALOG NUMBER: MSA-SA2A-730-U-T4W-HSS

### Luminous Intensity Polar Plot



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

REPORT NUMBER: P367169  
 CATALOG NUMBER: MSA-SA2A-730-U-T4W-HSS

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	554.3	0.0	554.3
	% Fixture	10.2	0.0	10.2
<b>Street Side</b>	Lumens	4902.7	0.0	4902.7
	% Fixture	89.8	0.0	89.8
<b>Total</b>	Lumens	5457.0	0.0	5457.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	27.2	0.5
10°-20°	114.1	2.1
20°-30°	202.1	3.7
30°-40°	328.5	6.0
40°-50°	657.4	12.0
50°-60°	1348.6	24.7
60°-70°	1852.6	33.9
70°-80°	870.7	16.0
80°-90°	55.8	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°	5457.0	100.0
0°-180°	5457.0	100.0

**Coefficient of Utilization**

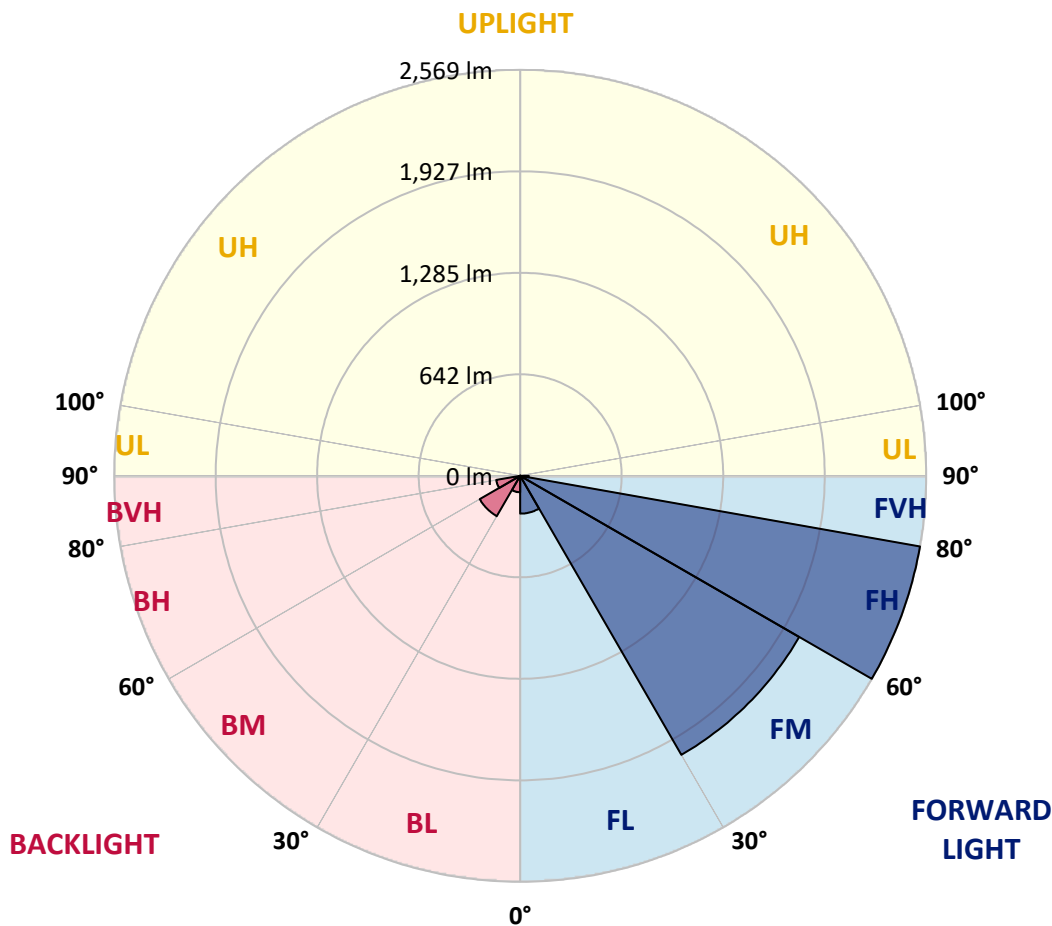


REPORT NUMBER: P367169  
 CATALOG NUMBER: MSA-SA2A-730-U-T4W-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	239.4	4.4			
FM (30°-60°)	2039.2	37.4			
FH (60°-80°)	2569.5	47.1			G2/5000
FVH (80°-90°)	54.6	1.0			G1/100
BL (0°-30°)	104.1	1.9	B0/110		
BM (30°-60°)	295.3	5.4	B1/1000		
BH (60°-80°)	153.8	2.8	B1/500		G1/500
BVH (80°-90°)	1.1	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





REPORT NUMBER: P367169

CATALOG NUMBER: MSA-SA2A-730-U-T4W-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9
2.5°	233.8	226.3	215.5	217.9	219.1	222.4	222.7	218.5	206.4	203.1	217.9
5°	327.7	309.3	306.0	299.1	285.3	277.7	275.9	283.5	273.8	270.8	274.7
7.5°	418.6	402.9	385.8	376.4	347.6	329.8	328.9	331.9	333.7	323.2	328.6
10°	479.1	461.9	458.3	436.3	411.3	407.1	405.3	393.9	384.6	376.7	350.6
12.5°	533.8	533.5	540.1	508.5	504.6	508.8	507.3	466.4	457.1	424.3	416.8
15°	606.6	624.7	596.1	569.6	535.9	550.4	546.5	520.3	514.0	491.7	459.5
17.5°	682.2	687.0	639.1	598.5	589.8	570.8	574.7	565.4	533.5	551.3	519.4
20°	684.0	694.5	643.3	576.2	603.0	602.1	602.4	593.4	551.3	592.8	563.6
22.5°	709.2	683.4	635.8	593.1	597.9	602.4	607.2	596.1	587.1	597.3	602.7
25°	699.0	688.8	643.0	614.8	610.2	613.9	615.1	629.2	623.5	648.2	634.6
27.5°	725.5	710.8	628.9	634.0	618.1	613.9	606.6	653.9	670.7	651.2	687.3
30°	770.9	768.8	653.3	660.8	648.5	611.5	630.7	692.4	713.5	701.4	745.4
32.5°	842.0	849.2	724.6	675.8	682.2	698.7	691.5	692.4	745.7	772.4	807.3
35°	942.8	938.8	794.1	733.0	699.9	702.6	712.9	761.9	830.8	829.0	866.0
37.5°	1140.8	1098.0	917.2	791.4	801.3	814.9	807.3	873.2	879.9	882.3	970.7
40°	1432.6	1375.8	1111.3	914.5	818.8	878.7	875.1	891.3	935.5	952.1	1081.2
42.5°	1817.2	1740.8	1452.8	1140.8	903.0	861.8	884.1	914.8	1063.4	1110.7	1252.1
45°	2242.1	2087.4	1793.4	1463.3	1114.3	986.4	1003.2	1060.4	1266.5	1344.8	1500.9
47.5°	2517.4	2381.4	2130.8	1749.2	1334.5	1267.4	1268.9	1281.3	1505.2	1650.2	1859.6
50°	2756.7	2611.9	2379.3	2048.0	1724.2	1597.2	1568.4	1511.5	1809.1	2007.4	2239.7
52.5°	3094.3	2925.2	2627.9	2398.6	2168.7	1869.6	1859.3	1878.6	2167.5	2376.0	2629.4
55°	3398.8	3193.3	2909.5	2765.1	2675.4	2269.8	2278.5	2310.7	2627.6	2738.0	2976.0
57.5°	3533.3	3310.6	3164.7	3099.7	3051.8	2816.5	2787.0	2767.8	2990.5	3032.6	3339.2
60°	3621.5	3409.6	3343.4	3358.5	3503.5	3253.8	3227.0	3115.0	3290.8	3325.4	3664.8
62.5°	3565.8	3372.6	3386.8	3512.2	3834.2	3669.9	3592.6	3405.4	3536.3	3564.3	3898.6
65°	3215.2	3013.9	3195.7	3499.3	4086.4	4082.5	4046.7	3673.5	3672.3	3708.1	3916.7
67.5°	2626.4	2415.1	2709.1	3256.8	4075.8	4332.5	4315.7	4029.2	3691.9	3596.2	3534.5
70°	1825.9	1642.7	1976.1	2689.5	3712.6	4330.7	4303.6	4268.1	3537.2	3095.5	2740.4
72.5°	948.8	848.0	1158.5	1853.3	2959.5	3805.0	3894.4	3836.0	3020.3	2249.0	1613.8
75°	322.3	289.2	477.8	983.7	1967.4	2905.6	3010.3	2951.0	2051.3	1206.7	638.2
77.5°	124.9	116.2	171.2	399.3	987.0	1770.6	1884.3	1823.8	1100.1	442.0	150.2
80°	71.0	68.6	94.5	179.9	435.1	880.8	960.8	871.4	396.6	149.0	39.1
82.5°	30.1	31.0	52.7	97.2	218.8	310.8	346.7	316.3	166.1	102.0	14.4
85°	6.6	8.1	25.0	54.2	91.8	88.8	93.0	103.2	102.0	74.9	6.3
87.5°	0.0	0.0	7.8	14.7	22.0	14.4	11.4	20.2	31.3	30.1	2.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P367169  
 CATALOG NUMBER: MSA-SA2A-730-U-T4W-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9	183.9
2.5°	220.6	217.6	198.6	197.4	198.6	195.3	195.0	188.1	188.7	204.3	205.5
5°	274.7	259.7	243.4	238.3	233.5	222.7	228.7	228.7	228.7	238.6	241.6
7.5°	323.8	303.6	280.8	261.5	242.8	229.3	238.6	245.2	249.2	262.1	268.1
10°	346.0	326.2	305.7	278.3	263.9	258.8	248.0	242.2	249.2	246.4	249.8
12.5°	393.6	375.5	340.3	312.0	301.2	283.8	251.9	229.6	214.9	212.4	211.8
15°	439.9	428.8	381.6	343.6	306.0	265.7	211.2	181.8	166.1	163.4	163.7
17.5°	498.6	482.7	413.2	358.7	294.9	222.4	163.1	137.8	136.6	143.2	143.8
20°	537.7	511.5	429.1	346.3	258.2	168.2	127.6	121.6	131.2	143.2	142.0
22.5°	575.0	546.8	450.2	335.5	200.1	127.6	117.4	118.0	126.1	139.0	142.3
25°	599.7	589.5	476.0	310.2	152.6	110.4	112.2	116.8	123.7	136.0	136.0
27.5°	674.0	626.2	473.0	261.2	117.4	102.9	107.1	112.8	116.5	131.2	132.7
30°	719.2	703.5	488.7	211.2	102.9	93.3	101.4	106.5	108.9	125.8	126.4
32.5°	774.5	739.9	507.6	155.9	95.7	92.7	90.9	94.8	101.7	116.5	117.4
35°	842.0	831.7	480.6	122.5	93.3	86.7	83.1	85.2	89.7	99.6	101.7
37.5°	979.5	918.7	464.3	105.0	93.3	84.6	80.6	75.2	75.8	82.8	86.7
40°	1095.3	1076.7	418.9	102.0	89.1	81.5	71.9	65.3	60.8	62.9	64.4
42.5°	1308.1	1221.7	360.2	100.5	85.2	73.7	61.1	54.2	47.2	47.8	50.3
45°	1566.2	1380.0	307.8	99.0	82.4	65.9	51.5	43.3	36.1	36.4	38.8
47.5°	1911.1	1610.8	244.3	94.5	77.6	58.7	41.5	33.1	28.9	29.8	31.9
50°	2302.9	1813.3	193.2	87.6	71.9	51.8	33.7	26.8	25.3	26.2	28.6
52.5°	2652.8	1962.5	159.5	81.2	63.8	42.1	28.3	23.8	23.2	23.8	25.6
55°	2964.0	2049.2	133.3	74.0	54.8	34.0	25.6	22.0	21.7	21.4	22.6
57.5°	3255.9	2074.2	104.1	62.6	44.5	29.5	23.8	20.5	19.9	19.0	19.9
60°	3468.6	2031.5	76.4	50.3	36.4	26.8	22.3	18.4	17.5	15.9	16.6
62.5°	3571.2	1914.4	57.8	40.3	31.0	24.4	19.9	15.9	14.7	12.9	13.2
65°	3473.7	1721.5	45.4	34.0	26.5	20.5	16.9	13.5	12.0	10.2	10.2
67.5°	3041.9	1428.1	38.5	29.5	22.3	17.5	13.8	12.3	9.9	8.4	8.1
70°	2232.8	1027.3	33.1	25.9	19.3	15.0	11.7	11.1	9.6	8.1	7.5
72.5°	1260.2	581.4	28.3	22.9	16.2	12.6	9.9	10.2	9.3	7.5	6.9
75°	480.9	195.9	23.5	19.0	13.2	9.6	8.4	8.4	8.4	6.3	5.4
77.5°	119.2	50.0	18.7	15.3	10.5	6.3	6.9	7.2	7.2	5.4	3.9
80°	32.8	16.9	11.1	11.1	7.5	3.6	4.8	4.8	3.9	1.8	0.0
82.5°	12.0	6.3	3.9	4.8	3.3	1.2	1.8	1.2	0.9	0.0	0.0
85°	5.1	3.3	2.4	2.7	1.5	0.0	0.3	0.6	0.0	0.0	0.0
87.5°	2.1	1.5	1.2	1.2	0.6	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)