

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: P367257

Luminaire Tested: **MSA-SA2A-830-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367257
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-830-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: 4762 lumens
Efficiency: N/A
Efficacy: 72.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

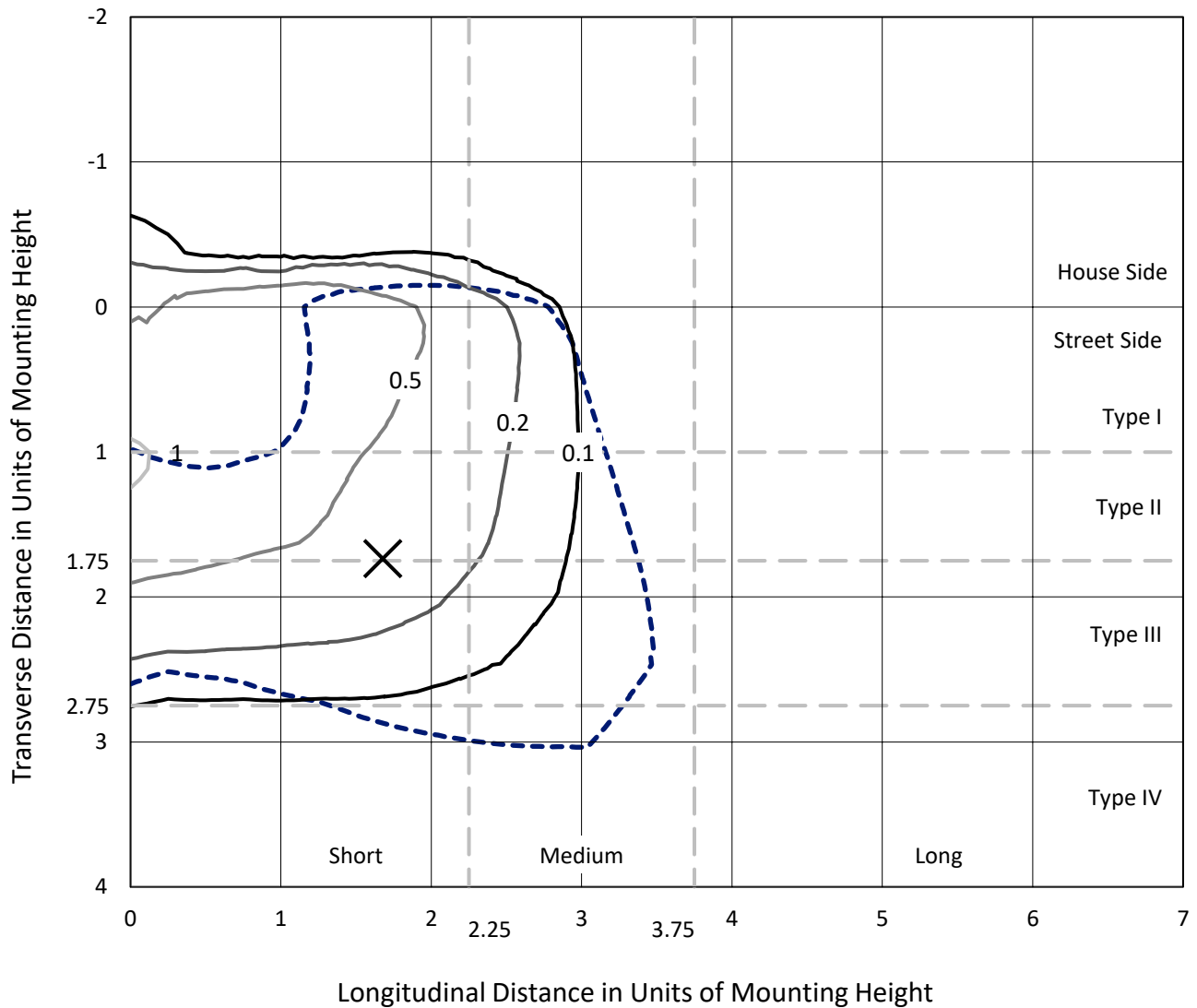
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

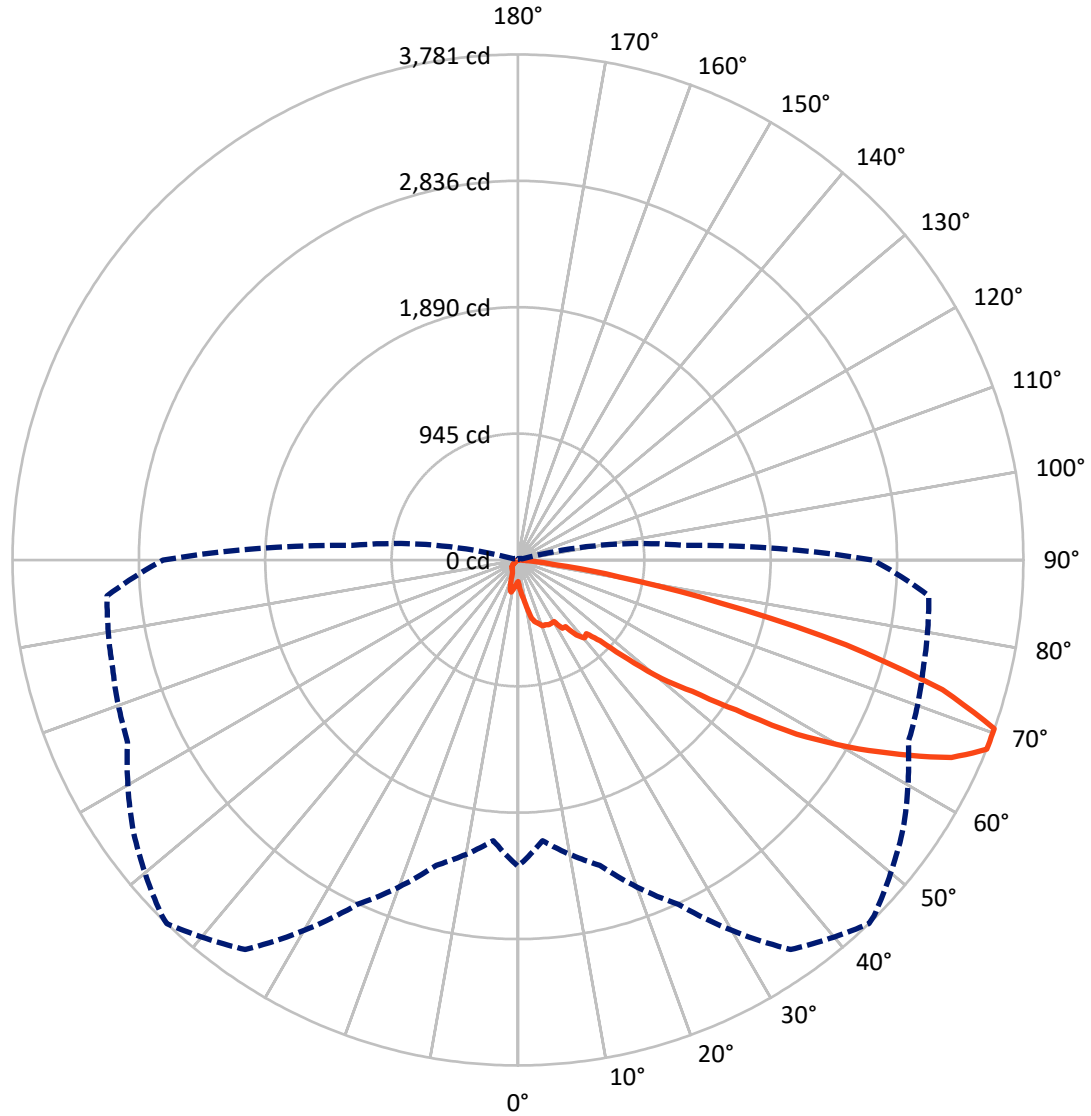
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 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
House Side	Lumens	483.7	0.0	483.7
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	4278.3	0.0	4278.3
	% Fixture	89.8	0.0	89.8
Total	Lumens	4762.0	0.0	4762.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.8	0.5
10°-20°	99.6	2.1
20°-30°	176.4	3.7
30°-40°	286.7	6.0
40°-50°	573.6	12.0
50°-60°	1176.8	24.7
60°-70°	1616.6	33.9
70°-80°	759.8	16.0
80°-90°	48.7	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°	4762.0	100.0
0°-180°	4762.0	100.0

Coefficient of Utilization



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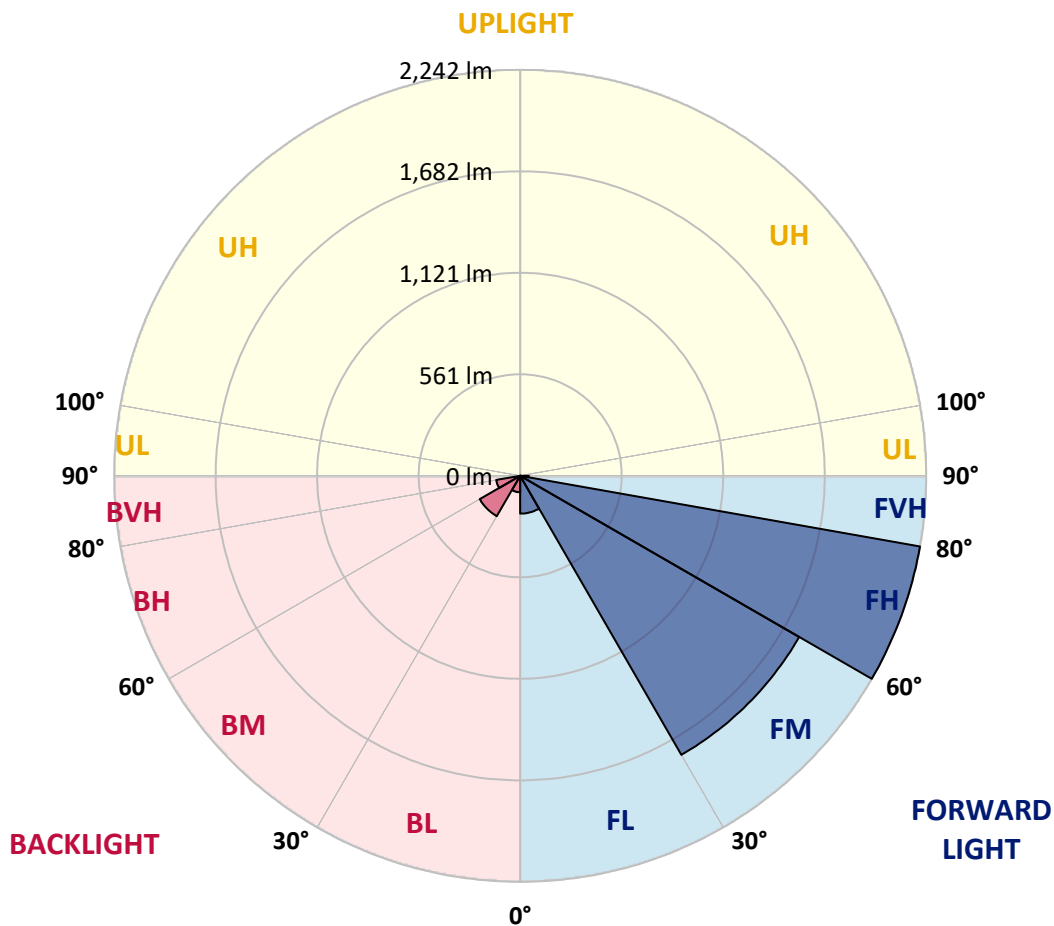
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	208.9	4.4			
FM (30°-60°)	1779.5	37.4			
FH (60°-80°)	2242.2	47.1			G2/5000
FVH (80°-90°)	47.7	1.0			G1/100
BL (0°-30°)	90.8	1.9	B0/110		
BM (30°-60°)	257.7	5.4	B1/1000		
BH (60°-80°)	134.2	2.8	B1/500		G1/500
BVH (80°-90°)	1.0	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°	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4
2.5°	204.0	197.5	188.0	190.1	191.2	194.1	194.3	190.6	180.1	177.2	190.1
5°	286.0	269.9	267.1	261.0	248.9	242.4	240.8	247.4	239.0	236.3	239.7
7.5°	365.3	351.6	336.6	328.5	303.3	287.8	287.0	289.6	291.2	282.0	286.7
10°	418.0	403.1	399.9	380.8	359.0	355.3	353.7	343.7	335.6	328.8	305.9
12.5°	465.8	465.6	471.3	443.8	440.4	444.0	442.7	407.0	398.9	370.2	363.7
15°	529.4	545.1	520.2	497.1	467.7	480.3	476.9	454.0	448.5	429.1	401.0
17.5°	595.3	599.5	557.7	522.3	514.7	498.1	501.5	493.4	465.6	481.1	453.2
20°	596.9	606.1	561.4	502.9	526.2	525.4	525.7	517.8	481.1	517.3	491.8
22.5°	618.9	596.3	554.8	517.6	521.8	525.7	529.9	520.2	512.3	521.2	526.0
25°	610.0	601.1	561.2	536.5	532.5	535.7	536.7	549.1	544.1	565.6	553.8
27.5°	633.1	620.2	548.8	553.3	539.4	535.7	529.4	570.6	585.3	568.2	599.8
30°	672.7	670.9	570.1	576.6	565.9	533.6	550.4	604.2	622.6	612.1	650.4
32.5°	734.7	741.0	632.3	589.8	595.3	609.7	603.4	604.2	650.7	674.1	704.5
35°	822.7	819.3	693.0	639.7	610.8	613.1	622.1	664.9	725.0	723.4	755.7
37.5°	995.5	958.2	800.4	690.6	699.3	711.1	704.5	762.0	767.8	769.9	847.1
40°	1250.2	1200.6	969.7	798.0	714.5	766.8	763.6	777.8	816.4	830.8	943.5
42.5°	1585.8	1519.1	1267.8	995.5	788.0	752.1	771.5	798.3	928.0	969.2	1092.6
45°	1956.5	1821.6	1565.0	1277.0	972.4	860.8	875.5	925.4	1105.2	1173.5	1309.8
47.5°	2196.8	2078.1	1859.4	1526.4	1164.6	1106.0	1107.3	1118.1	1313.5	1440.0	1622.8
50°	2405.6	2279.3	2076.3	1787.2	1504.6	1393.8	1368.6	1319.0	1578.7	1751.7	1954.4
52.5°	2700.2	2552.6	2293.2	2093.1	1892.5	1631.5	1622.5	1639.3	1891.4	2073.4	2294.5
55°	2965.9	2786.6	2539.0	2412.9	2334.7	1980.7	1988.3	2016.4	2292.9	2389.3	2597.0
57.5°	3083.3	2889.0	2761.6	2704.9	2663.2	2457.8	2432.1	2415.3	2609.6	2646.4	2913.9
60°	3160.2	2975.4	2917.6	2930.7	3057.3	2839.4	2816.0	2718.3	2871.7	2901.9	3198.1
62.5°	3111.7	2943.1	2955.4	3064.9	3345.9	3202.5	3135.0	2971.7	3085.9	3110.4	3402.1
65°	2805.8	2630.1	2788.7	3053.6	3565.9	3562.5	3531.3	3205.7	3204.6	3235.9	3417.8
67.5°	2291.9	2107.5	2364.1	2842.0	3556.8	3780.7	3766.0	3516.1	3221.7	3138.2	3084.4
70°	1593.4	1433.5	1724.4	2347.0	3239.8	3779.2	3755.5	3724.5	3086.7	2701.2	2391.4
72.5°	827.9	740.0	1011.0	1617.3	2582.6	3320.4	3398.4	3347.5	2635.6	1962.6	1408.3
75°	281.2	252.3	417.0	858.4	1716.8	2535.5	2626.9	2575.2	1790.1	1053.0	556.9
77.5°	109.0	101.4	149.4	348.5	861.3	1545.1	1644.3	1591.5	960.0	385.7	131.0
80°	62.0	59.9	82.5	157.0	379.7	768.6	838.4	760.5	346.1	130.0	34.1
82.5°	26.3	27.0	46.0	84.8	190.9	271.3	302.5	276.0	144.9	89.0	12.6
85°	5.8	7.1	21.8	47.3	80.1	77.5	81.1	90.1	89.0	65.4	5.5
87.5°	0.0	0.0	6.8	12.9	19.2	12.6	10.0	17.6	27.3	26.3	2.4
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°	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4
2.5°	192.5	189.9	173.3	172.3	173.3	170.4	170.2	164.1	164.6	178.3	179.3
5°	239.7	226.6	212.4	208.0	203.8	194.3	199.6	199.6	199.6	208.2	210.9
7.5°	282.5	265.0	245.0	228.2	211.9	200.1	208.2	214.0	217.4	228.7	234.0
10°	302.0	284.6	266.8	242.9	230.3	225.8	216.4	211.4	217.4	215.1	217.9
12.5°	343.5	327.7	297.0	272.3	262.9	247.6	219.8	200.4	187.5	185.4	184.9
15°	383.9	374.2	333.0	299.9	267.1	231.9	184.3	158.6	144.9	142.6	142.8
17.5°	435.1	421.2	360.5	313.0	257.3	194.1	142.3	120.3	119.2	125.0	125.5
20°	469.2	446.4	374.5	302.2	225.3	146.8	111.3	106.1	114.5	125.0	123.9
22.5°	501.8	477.1	392.8	292.8	174.6	111.3	102.4	102.9	110.0	121.3	124.2
25°	523.3	514.4	415.4	270.7	133.1	96.4	97.9	101.9	107.9	118.7	118.7
27.5°	588.2	546.4	412.8	227.9	102.4	89.8	93.5	98.5	101.6	114.5	115.8
30°	627.6	613.9	426.4	184.3	89.8	81.4	88.5	93.0	95.1	109.8	110.3
32.5°	675.9	645.7	443.0	136.0	83.5	80.9	79.3	82.7	88.8	101.6	102.4
35°	734.7	725.8	419.4	106.9	81.4	75.6	72.5	74.3	78.3	86.9	88.8
37.5°	854.7	801.7	405.2	91.6	81.4	73.8	70.4	65.6	66.2	72.2	75.6
40°	955.8	939.5	365.5	89.0	77.7	71.2	62.8	57.0	53.0	54.9	56.2
42.5°	1141.5	1066.1	314.3	87.7	74.3	64.3	53.3	47.3	41.2	41.8	43.9
45°	1366.8	1204.2	268.6	86.4	71.9	57.5	44.9	37.8	31.5	31.8	33.9
47.5°	1667.7	1405.6	213.2	82.5	67.7	51.2	36.2	28.9	25.2	26.0	27.8
50°	2009.6	1582.4	168.6	76.4	62.8	45.2	29.4	23.4	22.1	22.8	24.9
52.5°	2315.0	1712.6	139.2	70.9	55.7	36.8	24.7	20.7	20.2	20.7	22.3
55°	2586.5	1788.2	116.3	64.6	47.8	29.7	22.3	19.2	18.9	18.6	19.7
57.5°	2841.2	1810.0	90.9	54.6	38.9	25.7	20.7	17.9	17.3	16.5	17.3
60°	3026.8	1772.7	66.7	43.9	31.8	23.4	19.4	16.0	15.2	13.9	14.4
62.5°	3116.4	1670.6	50.4	35.2	27.0	21.3	17.3	13.9	12.9	11.3	11.6
65°	3031.3	1502.3	39.7	29.7	23.1	17.9	14.7	11.8	10.5	8.9	8.9
67.5°	2654.5	1246.2	33.6	25.7	19.4	15.2	12.1	10.8	8.7	7.4	7.1
70°	1948.4	896.5	28.9	22.6	16.8	13.1	10.2	9.7	8.4	7.1	6.6
72.5°	1099.7	507.3	24.7	20.0	14.2	11.0	8.7	8.9	8.1	6.6	6.0
75°	419.6	170.9	20.5	16.5	11.6	8.4	7.4	7.4	7.4	5.5	4.7
77.5°	104.0	43.6	16.3	13.4	9.2	5.5	6.0	6.3	6.3	4.7	3.4
80°	28.6	14.7	9.7	9.7	6.6	3.2	4.2	4.2	3.4	1.6	0.0
82.5°	10.5	5.5	3.4	4.2	2.9	1.1	1.6	1.1	0.8	0.0	0.0
85°	4.5	2.9	2.1	2.4	1.3	0.0	0.3	0.5	0.0	0.0	0.0
87.5°	1.8	1.3	1.1	1.1	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)