

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: P596583

Luminaire Tested: **MSA-SA2A-827-U-T4W-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596583
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-827-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: 4405 lumens
Efficiency: N/A
Efficacy: 66.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

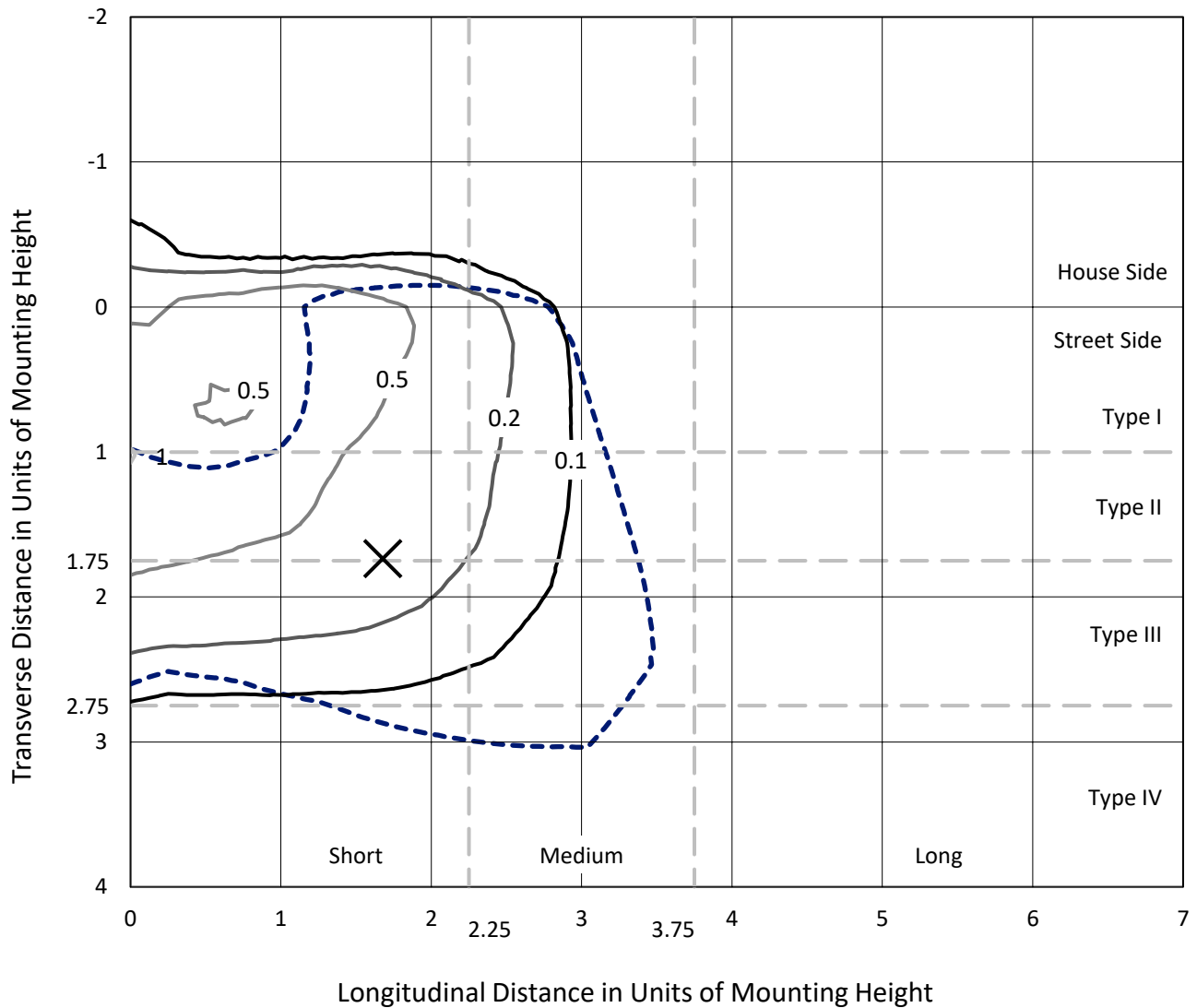
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

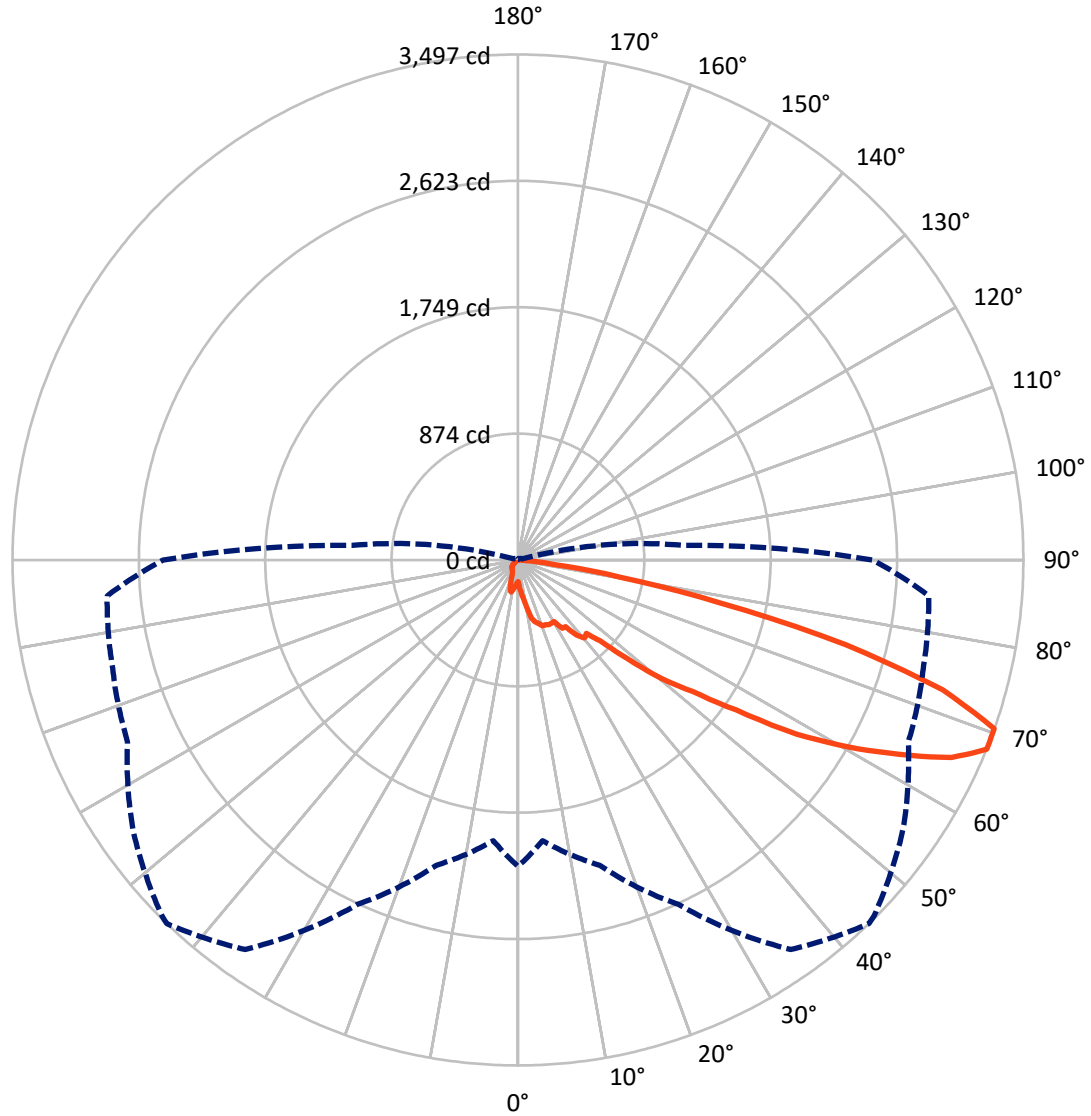
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1 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	447.5	0.0	447.5
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	3957.5	0.0	3957.5
	% Fixture	89.8	0.0	89.8
Total	Lumens	4405.0	0.0	4405.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.0	0.5
10°-20°	92.1	2.1
20°-30°	163.1	3.7
30°-40°	265.2	6.0
40°-50°	530.6	12.0
50°-60°	1088.6	24.7
60°-70°	1495.4	33.9
70°-80°	702.9	16.0
80°-90°	45.0	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°	4405.0	100.0
0°-180°	4405.0	100.0

Coefficient of Utilization

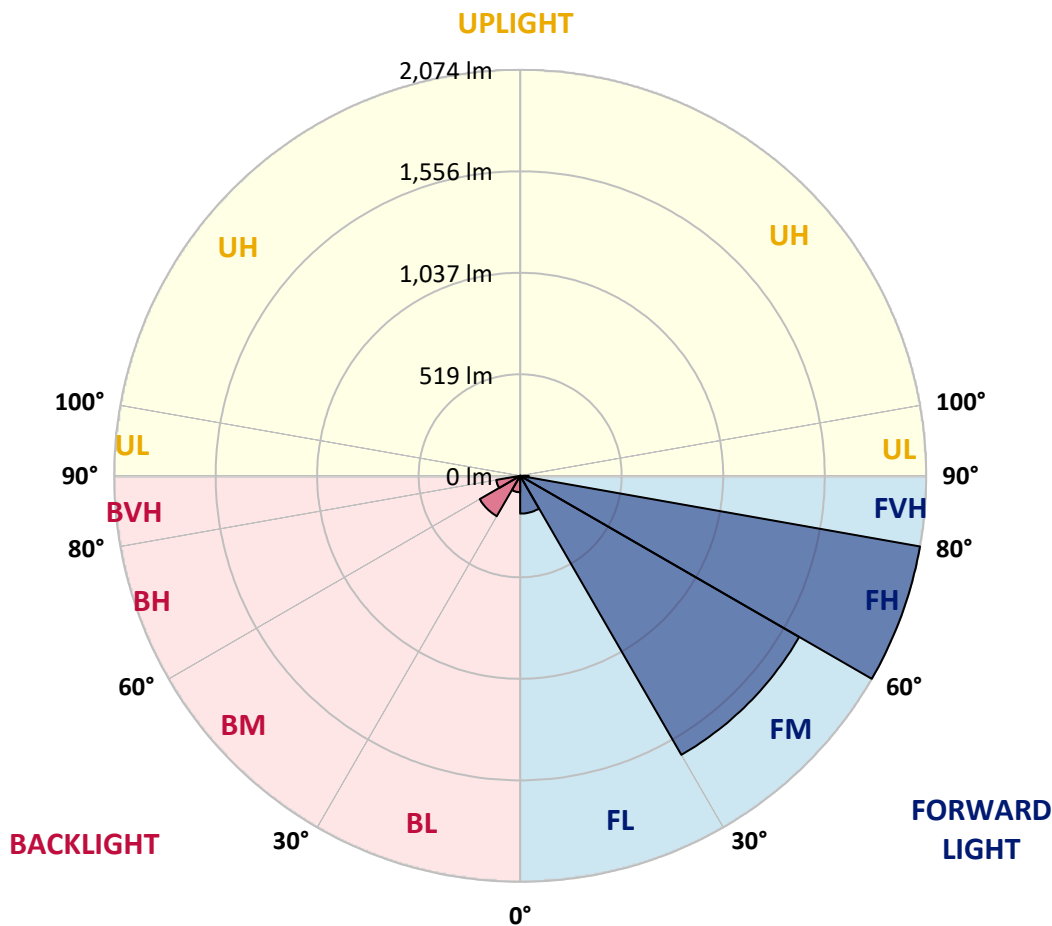


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	193.2	4.4			
FM (30°-60°)	1646.1	37.4			
FH (60°-80°)	2074.1	47.1			G2/5000
FVH (80°-90°)	44.1	1.0			G1/100
BL (0°-30°)	84.0	1.9	B0/110		
BM (30°-60°)	238.4	5.4	B1/1000		
BH (60°-80°)	124.2	2.8	B1/500		G1/500
BVH (80°-90°)	0.9	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°	148.4	148.4	148.4	148.4	148.4	148.4	148.4	148.4	148.4	148.4	148.4
2.5°	188.7	182.7	173.9	175.9	176.8	179.5	179.7	176.3	166.6	164.0	175.9
5°	264.5	249.7	247.0	241.4	230.3	224.2	222.7	228.8	221.0	218.6	221.8
7.5°	337.9	325.2	311.4	303.9	280.6	266.2	265.5	267.9	269.4	260.9	265.2
10°	386.7	372.9	369.9	352.2	332.0	328.6	327.2	318.0	310.4	304.1	283.0
12.5°	430.9	430.7	436.0	410.5	407.3	410.7	409.5	376.5	369.0	342.5	336.4
15°	489.7	504.3	481.2	459.8	432.6	444.3	441.1	420.0	414.9	396.9	370.9
17.5°	550.7	554.5	515.9	483.1	476.1	460.8	463.9	456.4	430.7	445.0	419.2
20°	552.1	560.6	519.3	465.2	486.8	486.0	486.3	479.0	445.0	478.5	455.0
22.5°	572.5	551.6	513.3	478.8	482.6	486.3	490.2	481.2	473.9	482.2	486.5
25°	564.3	556.0	519.1	496.2	492.6	495.5	496.5	507.9	503.3	523.2	512.3
27.5°	585.6	573.7	507.7	511.8	498.9	495.5	489.7	527.8	541.4	525.6	554.8
30°	622.3	620.6	527.3	533.4	523.5	493.6	509.1	558.9	575.9	566.2	601.7
32.5°	679.6	685.5	584.9	545.6	550.7	564.0	558.2	558.9	601.9	623.5	651.7
35°	761.0	757.9	641.0	591.7	565.0	567.2	575.4	615.0	670.7	669.2	699.1
37.5°	920.8	886.3	740.4	638.8	646.8	657.8	651.7	704.9	710.2	712.2	783.6
40°	1156.5	1110.5	897.0	738.2	660.9	709.3	706.4	719.5	755.2	768.5	872.7
42.5°	1466.9	1405.2	1172.7	920.8	728.9	695.7	713.6	738.4	858.4	896.6	1010.7
45°	1809.9	1685.0	1447.7	1181.2	899.5	796.2	809.8	856.0	1022.4	1085.5	1211.6
47.5°	2032.1	1922.3	1720.0	1412.0	1077.3	1023.1	1024.3	1034.3	1215.0	1332.1	1501.1
50°	2225.2	2108.4	1920.6	1653.2	1391.8	1289.3	1266.0	1220.1	1460.3	1620.4	1807.9
52.5°	2497.8	2361.3	2121.3	1936.2	1750.6	1509.2	1500.9	1516.4	1749.6	1918.0	2122.5
55°	2743.6	2577.7	2348.6	2232.0	2159.6	1832.2	1839.3	1865.2	2121.0	2210.2	2402.3
57.5°	2852.2	2672.4	2554.6	2502.1	2463.5	2273.6	2249.8	2234.2	2414.0	2448.0	2695.5
60°	2923.3	2752.3	2698.9	2711.0	2828.1	2626.5	2604.9	2514.5	2656.4	2684.3	2958.3
62.5°	2878.4	2722.4	2733.9	2835.2	3095.1	2962.4	2900.0	2748.9	2854.6	2877.2	3147.0
65°	2595.4	2432.9	2579.6	2824.7	3298.6	3295.5	3266.5	2965.3	2964.4	2993.3	3161.6
67.5°	2120.0	1949.5	2186.8	2628.9	3290.1	3497.3	3483.7	3252.5	2980.2	2902.9	2853.1
70°	1473.9	1326.0	1595.1	2171.1	2996.9	3495.8	3474.0	3445.3	2855.3	2498.7	2212.1
72.5°	765.9	684.5	935.2	1496.0	2388.9	3071.5	3143.6	3096.5	2438.0	1815.4	1302.7
75°	260.1	233.4	385.7	794.0	1588.1	2345.5	2430.0	2382.1	1655.9	974.0	515.2
77.5°	100.8	93.8	138.2	322.3	796.7	1429.2	1521.1	1472.2	888.0	356.8	121.2
80°	57.3	55.4	76.3	145.3	351.2	711.0	775.6	703.4	320.1	120.2	31.6
82.5°	24.3	25.0	42.5	78.5	176.6	250.9	279.8	255.3	134.1	82.3	11.7
85°	5.3	6.6	20.2	43.7	74.1	71.7	75.1	83.3	82.3	60.5	5.1
87.5°	0.0	0.0	6.3	11.9	17.7	11.7	9.2	16.3	25.3	24.3	2.2
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°	148.4	148.4	148.4	148.4	148.4	148.4	148.4	148.4	148.4	148.4	148.4
2.5°	178.0	175.6	160.3	159.3	160.3	157.6	157.4	151.8	152.3	164.9	165.9
5°	221.8	209.6	196.5	192.4	188.5	179.7	184.6	184.6	184.6	192.6	195.1
7.5°	261.4	245.1	226.6	211.1	196.0	185.1	192.6	198.0	201.1	211.6	216.4
10°	279.3	263.3	246.8	224.7	213.0	208.9	200.2	195.5	201.1	198.9	201.6
12.5°	317.7	303.1	274.7	251.9	243.1	229.1	203.3	185.3	173.4	171.5	171.0
15°	355.1	346.1	308.0	277.4	247.0	214.5	170.5	146.7	134.1	131.9	132.1
17.5°	402.5	389.6	333.5	289.5	238.0	179.5	131.7	111.2	110.3	115.6	116.1
20°	434.1	412.9	346.4	279.6	208.4	135.8	103.0	98.1	105.9	115.6	114.6
22.5°	464.2	441.4	363.4	270.8	161.5	103.0	94.7	95.2	101.8	112.2	114.9
25°	484.1	475.8	384.3	250.4	123.2	89.1	90.6	94.2	99.8	109.8	109.8
27.5°	544.1	505.5	381.8	210.8	94.7	83.1	86.5	91.1	94.0	105.9	107.1
30°	580.5	567.9	394.5	170.5	83.1	75.3	81.9	86.0	87.9	101.5	102.0
32.5°	625.2	597.3	409.8	125.8	77.2	74.8	73.4	76.5	82.1	94.0	94.7
35°	679.6	671.4	387.9	98.9	75.3	70.0	67.0	68.7	72.4	80.4	82.1
37.5°	790.6	741.6	374.8	84.8	75.3	68.3	65.1	60.7	61.2	66.8	70.0
40°	884.2	869.1	338.1	82.3	71.9	65.8	58.1	52.7	49.1	50.8	52.0
42.5°	1055.9	986.2	290.8	81.1	68.7	59.5	49.3	43.7	38.1	38.6	40.6
45°	1264.3	1113.9	248.5	79.9	66.6	53.2	41.5	35.0	29.1	29.4	31.3
47.5°	1542.7	1300.3	197.2	76.3	62.7	47.4	33.5	26.7	23.3	24.0	25.7
50°	1858.9	1463.7	155.9	70.7	58.1	41.8	27.2	21.6	20.4	21.1	23.1
52.5°	2141.4	1584.2	128.7	65.6	51.5	34.0	22.8	19.2	18.7	19.2	20.6
55°	2392.6	1654.2	107.6	59.8	44.2	27.4	20.6	17.7	17.5	17.2	18.2
57.5°	2628.2	1674.3	84.0	50.5	35.9	23.8	19.2	16.5	16.0	15.3	16.0
60°	2799.9	1639.8	61.7	40.6	29.4	21.6	18.0	14.8	14.1	12.9	13.4
62.5°	2882.8	1545.3	46.6	32.5	25.0	19.7	16.0	12.9	11.9	10.4	10.7
65°	2804.1	1389.6	36.7	27.4	21.4	16.5	13.6	10.9	9.7	8.3	8.3
67.5°	2455.5	1152.8	31.1	23.8	18.0	14.1	11.2	10.0	8.0	6.8	6.6
70°	1802.3	829.3	26.7	20.9	15.5	12.1	9.5	9.0	7.8	6.6	6.1
72.5°	1017.3	469.3	22.8	18.5	13.1	10.2	8.0	8.3	7.5	6.1	5.6
75°	388.2	158.1	18.9	15.3	10.7	7.8	6.8	6.8	6.8	5.1	4.4
77.5°	96.2	40.3	15.1	12.4	8.5	5.1	5.6	5.8	5.8	4.4	3.2
80°	26.5	13.6	9.0	9.0	6.1	2.9	3.9	3.9	3.2	1.5	0.0
82.5°	9.7	5.1	3.2	3.9	2.7	1.0	1.5	1.0	0.7	0.0	0.0
85°	4.1	2.7	1.9	2.2	1.2	0.0	0.2	0.5	0.0	0.0	0.0
87.5°	1.7	1.2	1.0	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)