

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: P596935

Luminaire Tested: **MSA-SA2A-835-U-T4W-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596935  
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-835-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: 4940 lumens  
Efficiency: N/A  
Efficacy: 74.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

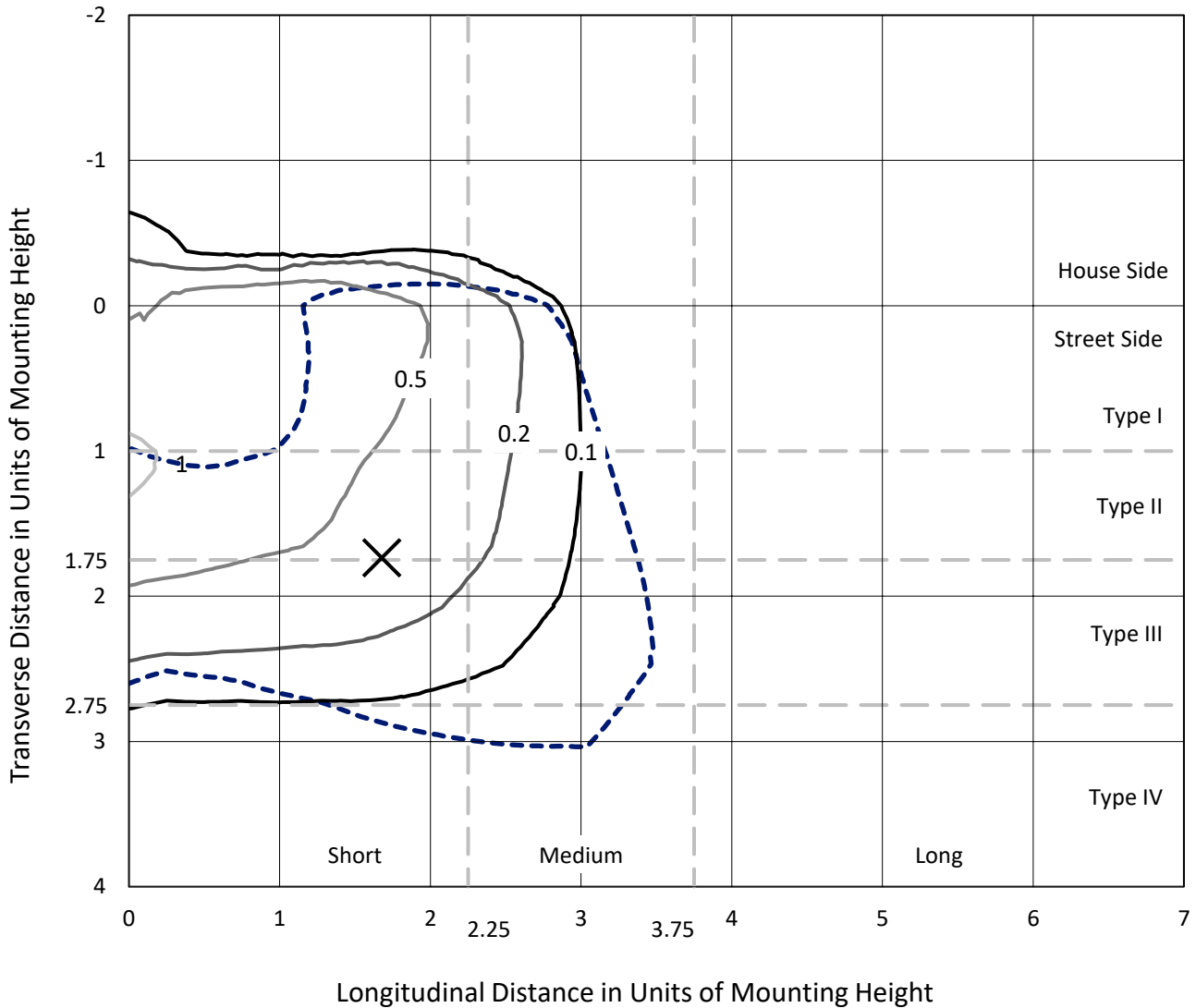
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

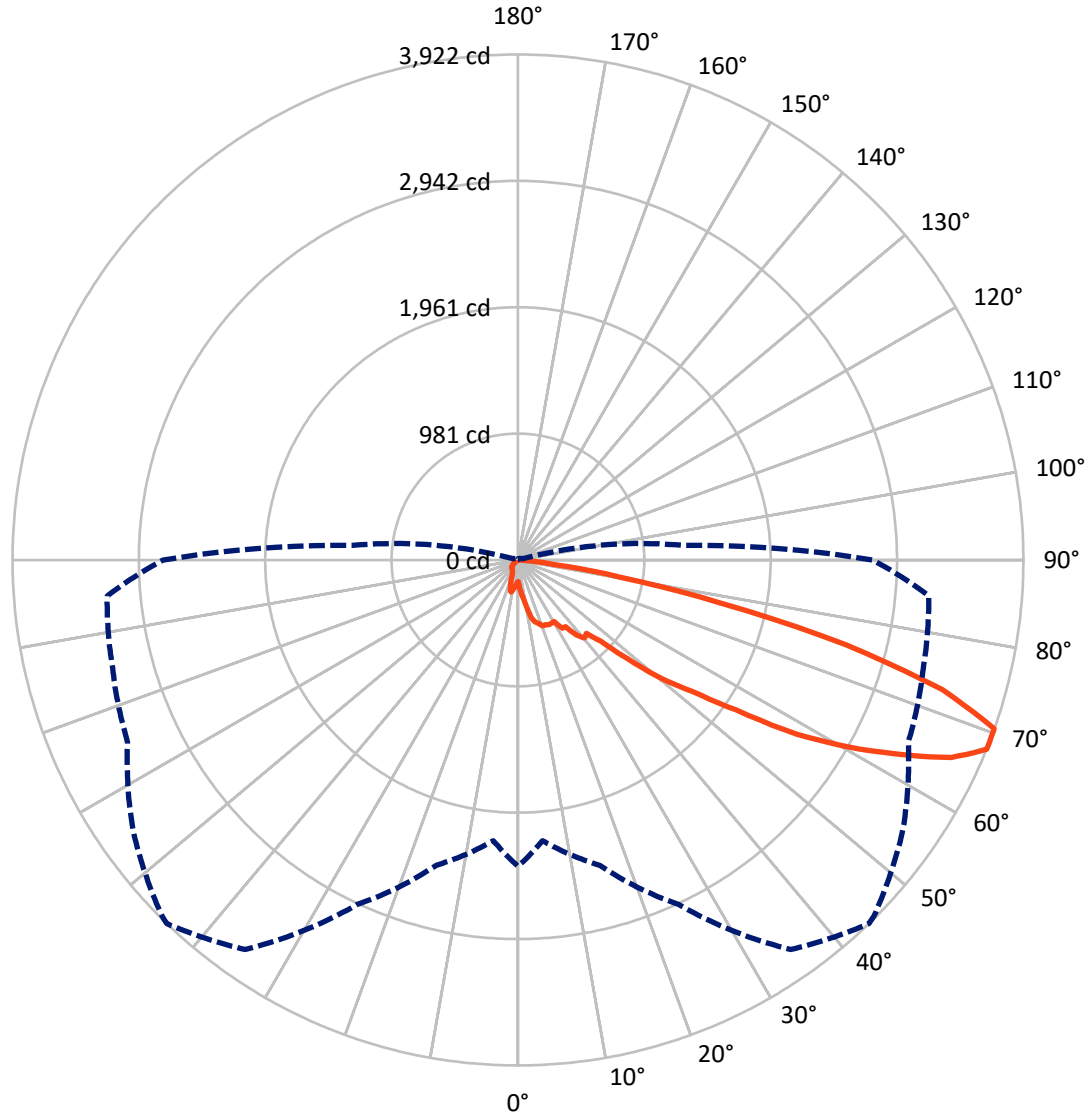
✕ Max cd  
 - - - 1/2 Max cd



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
<b>House Side</b>	Lumens	501.8	0.0	501.8
	% Fixture	10.2	0.0	10.2
<b>Street Side</b>	Lumens	4438.2	0.0	4438.2
	% Fixture	89.8	0.0	89.8
<b>Total</b>	Lumens	4940.0	0.0	4940.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.7	0.5
10°-20°	103.3	2.1
20°-30°	183.0	3.7
30°-40°	297.4	6.0
40°-50°	595.1	12.0
50°-60°	1220.8	24.7
60°-70°	1677.1	33.9
70°-80°	788.2	16.0
80°-90°	50.5	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°	4940.0	100.0
0°-180°	4940.0	100.0

**Coefficient of Utilization**

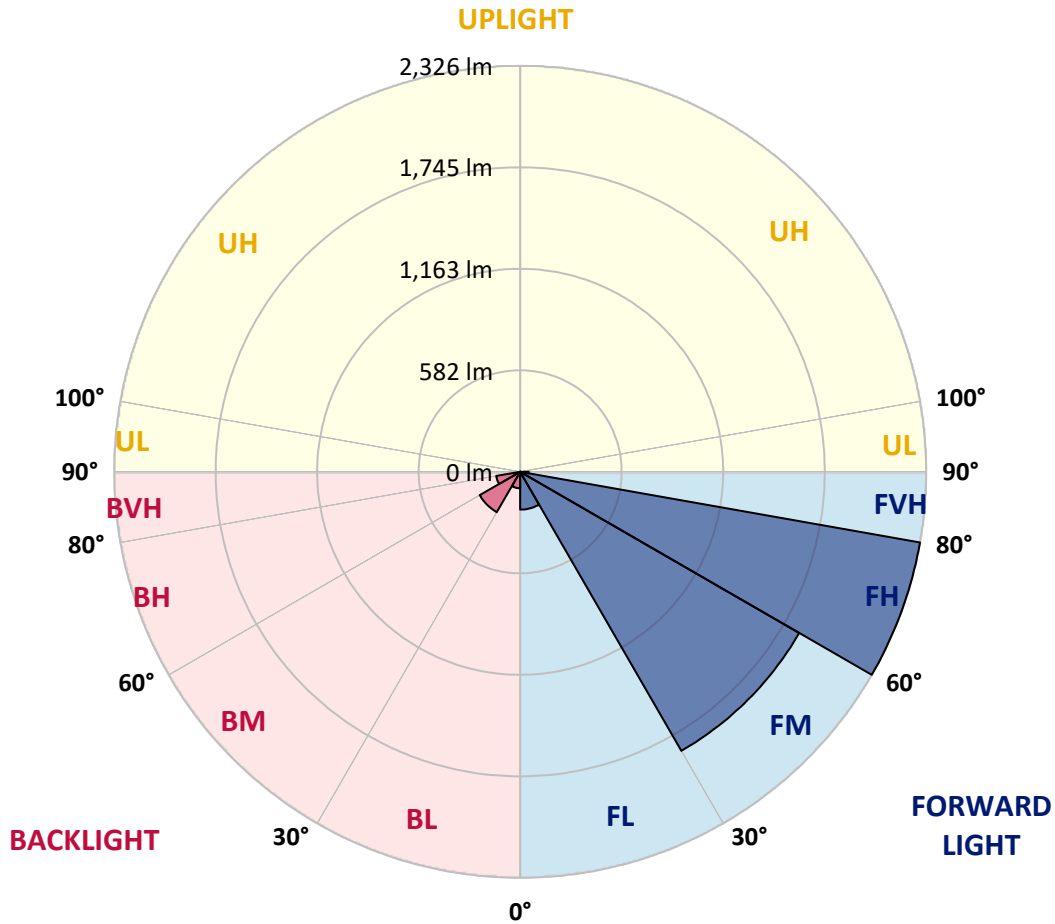


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	216.7	4.4			
FM (30°-60°)	1846.0	37.4			
FH (60°-80°)	2326.1	47.1			G2/5000
FVH (80°-90°)	49.5	1.0			G1/100
BL (0°-30°)	94.2	1.9	B0/110		
BM (30°-60°)	267.3	5.4	B1/1000		
BH (60°-80°)	139.2	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°	166.4	166.4	166.4	166.4	166.4	166.4	166.4	166.4	166.4	166.4	166.4
2.5°	211.7	204.8	195.0	197.2	198.3	201.3	201.6	197.8	186.9	183.9	197.2
5°	296.6	280.0	277.0	270.8	258.2	251.4	249.8	256.6	247.9	245.2	248.7
7.5°	378.9	364.7	349.2	340.8	314.6	298.6	297.7	300.5	302.1	292.6	297.5
10°	433.7	418.1	414.9	395.0	372.4	368.6	366.9	356.6	348.1	341.0	317.3
12.5°	483.2	483.0	489.0	460.4	456.8	460.6	459.3	422.2	413.8	384.1	377.3
15°	549.2	565.5	539.6	515.7	485.2	498.2	494.7	471.0	465.3	445.1	416.0
17.5°	617.5	621.9	578.6	541.8	533.9	516.7	520.3	511.8	483.0	499.0	470.2
20°	619.2	628.7	582.4	521.7	545.9	545.1	545.4	537.2	499.0	536.6	510.2
22.5°	642.1	618.6	575.6	536.9	541.3	545.4	549.7	539.6	531.5	540.7	545.6
25°	632.8	623.5	582.1	556.5	552.4	555.7	556.8	569.6	564.4	586.8	574.5
27.5°	656.8	643.4	569.3	574.0	559.5	555.7	549.2	591.9	607.2	589.5	622.2
30°	697.9	696.0	591.4	598.2	587.0	553.5	571.0	626.8	645.9	635.0	674.7
32.5°	762.2	768.7	655.9	611.8	617.5	632.5	626.0	626.8	675.0	699.3	730.9
35°	853.4	849.9	718.9	663.6	633.6	636.1	645.3	689.7	752.1	750.5	784.0
37.5°	1032.7	994.0	830.3	716.4	725.4	737.7	730.9	790.5	796.5	798.7	878.8
40°	1296.9	1245.4	1006.0	827.8	741.2	795.4	792.1	806.9	846.9	861.9	978.7
42.5°	1645.0	1575.9	1315.2	1032.7	817.5	780.2	800.3	828.1	962.7	1005.4	1133.5
45°	2029.7	1889.7	1623.5	1324.7	1008.7	892.9	908.2	959.9	1146.5	1217.4	1358.7
47.5°	2278.9	2155.8	1928.9	1583.5	1208.1	1147.4	1148.7	1159.9	1362.6	1493.9	1683.5
50°	2495.5	2364.5	2153.9	1854.0	1560.9	1445.9	1419.8	1368.3	1637.7	1817.2	2027.5
52.5°	2801.1	2648.0	2378.9	2171.3	1963.2	1692.4	1683.2	1700.6	1962.1	2150.9	2380.3
55°	3076.8	2890.7	2633.9	2503.1	2421.9	2054.7	2062.6	2091.8	2378.6	2478.6	2694.1
57.5°	3198.6	2997.0	2864.9	2806.0	2762.7	2549.7	2523.0	2505.6	2707.1	2745.3	3022.9
60°	3278.4	3086.6	3026.7	3040.3	3171.6	2945.5	2921.3	2819.9	2979.0	3010.3	3317.6
62.5°	3228.0	3053.1	3065.9	3179.5	3471.0	3322.2	3252.2	3082.8	3201.3	3226.6	3529.3
65°	2910.6	2728.4	2892.9	3167.8	3699.2	3695.7	3663.3	3325.5	3324.4	3356.8	3545.6
67.5°	2377.5	2186.3	2452.4	2948.2	3689.7	3922.1	3906.8	3647.5	3342.1	3255.5	3199.6
70°	1652.9	1487.0	1788.9	2434.7	3360.9	3920.4	3895.9	3863.8	3202.1	2802.2	2480.8
72.5°	858.9	767.6	1048.8	1677.7	2679.1	3444.5	3525.4	3472.6	2734.1	2035.9	1460.9
75°	291.7	261.8	432.6	890.5	1781.0	2630.3	2725.1	2671.5	1857.0	1092.3	577.8
77.5°	113.0	105.1	155.0	361.5	893.5	1602.8	1705.8	1651.0	995.9	400.2	135.9
80°	64.3	62.1	85.5	162.9	393.9	797.3	869.8	788.9	359.0	134.8	35.4
82.5°	27.2	28.1	47.7	88.0	198.0	281.4	313.8	286.3	150.4	92.3	13.1
85°	6.0	7.4	22.6	49.0	83.1	80.4	84.2	93.4	92.3	67.8	5.7
87.5°	0.0	0.0	7.1	13.3	19.9	13.1	10.4	18.3	28.3	27.2	2.5
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°	166.4	166.4	166.4	166.4	166.4	166.4	166.4	166.4	166.4	166.4	166.4
2.5°	199.7	196.9	179.8	178.7	179.8	176.8	176.5	170.3	170.8	185.0	186.1
5°	248.7	235.1	220.4	215.7	211.4	201.6	207.0	207.0	207.0	216.0	218.7
7.5°	293.1	274.9	254.2	236.7	219.8	207.6	216.0	222.0	225.5	237.3	242.7
10°	313.3	295.3	276.8	252.0	238.9	234.3	224.5	219.3	225.5	223.1	226.1
12.5°	356.3	340.0	308.1	282.5	272.7	256.9	228.0	207.8	194.5	192.3	191.8
15°	398.3	388.2	345.4	311.1	277.0	240.5	191.2	164.5	150.4	147.9	148.2
17.5°	451.4	436.9	374.0	324.7	267.0	201.3	147.6	124.8	123.7	129.7	130.2
20°	486.8	463.1	388.4	313.5	233.7	152.3	115.5	110.1	118.8	129.7	128.6
22.5°	520.6	495.0	407.5	303.7	181.1	115.5	106.2	106.8	114.1	125.9	128.8
25°	542.9	533.6	430.9	280.8	138.1	100.0	101.6	105.7	112.0	123.1	123.1
27.5°	610.2	566.9	428.2	236.4	106.2	93.2	97.0	102.2	105.4	118.8	120.1
30°	651.0	636.9	442.4	191.2	93.2	84.4	91.8	96.4	98.6	113.9	114.4
32.5°	701.2	669.8	459.5	141.1	86.6	83.9	82.3	85.8	92.1	105.4	106.2
35°	762.2	752.9	435.0	110.9	84.4	78.5	75.2	77.1	81.2	90.2	92.1
37.5°	886.7	831.6	420.3	95.1	84.4	76.5	73.0	68.1	68.6	74.9	78.5
40°	991.5	974.7	379.2	92.3	80.6	73.8	65.1	59.1	55.0	56.9	58.3
42.5°	1184.1	1106.0	326.1	91.0	77.1	66.7	55.3	49.0	42.8	43.3	45.5
45°	1417.9	1249.2	278.7	89.6	74.6	59.7	46.6	39.2	32.7	33.0	35.1
47.5°	1730.0	1458.2	221.2	85.5	70.3	53.1	37.6	30.0	26.2	27.0	28.9
50°	2084.7	1641.5	174.9	79.3	65.1	46.9	30.5	24.2	22.9	23.7	25.9
52.5°	2401.5	1776.6	144.4	73.5	57.7	38.1	25.6	21.5	21.0	21.5	23.2
55°	2683.2	1855.1	120.7	67.0	49.6	30.8	23.2	19.9	19.6	19.3	20.4
57.5°	2947.4	1877.7	94.3	56.7	40.3	26.7	21.5	18.5	18.0	17.2	18.0
60°	3140.0	1839.0	69.2	45.5	33.0	24.2	20.2	16.6	15.8	14.4	15.0
62.5°	3232.9	1733.0	52.3	36.5	28.1	22.1	18.0	14.4	13.3	11.7	12.0
65°	3144.6	1558.4	41.1	30.8	24.0	18.5	15.3	12.3	10.9	9.3	9.3
67.5°	2753.7	1292.8	34.9	26.7	20.2	15.8	12.5	11.2	9.0	7.6	7.4
70°	2021.2	930.0	30.0	23.4	17.4	13.6	10.6	10.1	8.7	7.4	6.8
72.5°	1140.8	526.3	25.6	20.7	14.7	11.4	9.0	9.3	8.4	6.8	6.3
75°	435.3	177.3	21.2	17.2	12.0	8.7	7.6	7.6	7.6	5.7	4.9
77.5°	107.9	45.2	16.9	13.9	9.5	5.7	6.3	6.5	6.5	4.9	3.5
80°	29.7	15.3	10.1	10.1	6.8	3.3	4.4	4.4	3.5	1.6	0.0
82.5°	10.9	5.7	3.5	4.4	3.0	1.1	1.6	1.1	0.8	0.0	0.0
85°	4.6	3.0	2.2	2.5	1.4	0.0	0.3	0.5	0.0	0.0	0.0
87.5°	1.9	1.4	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)