

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: P596572

Luminaire Tested: **MSA-SA2A-827-U-SL4**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596572
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2A-827-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5691 lumens
Efficiency: N/A
Efficacy: 86.2 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

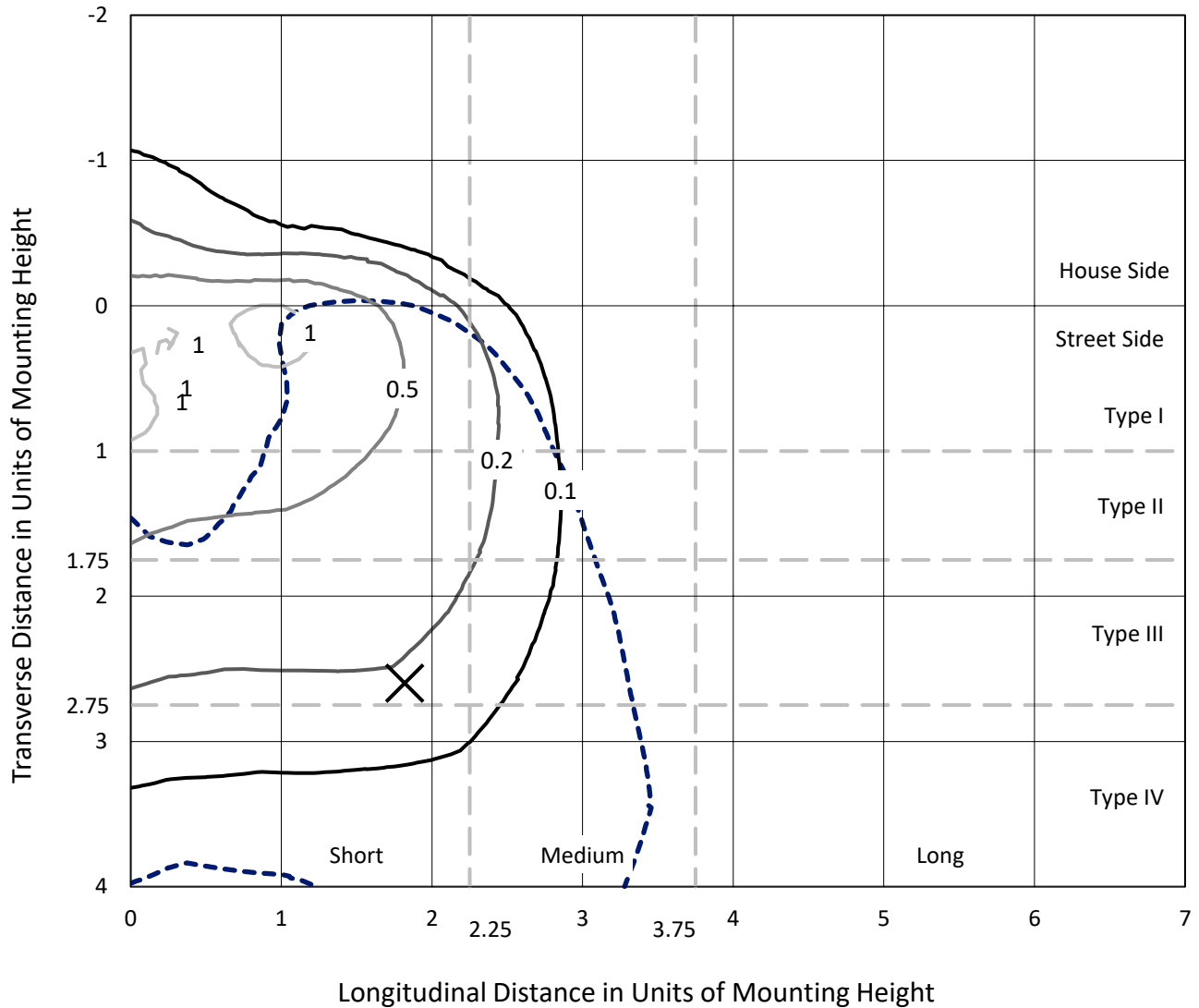
Input Watts (W): 66
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

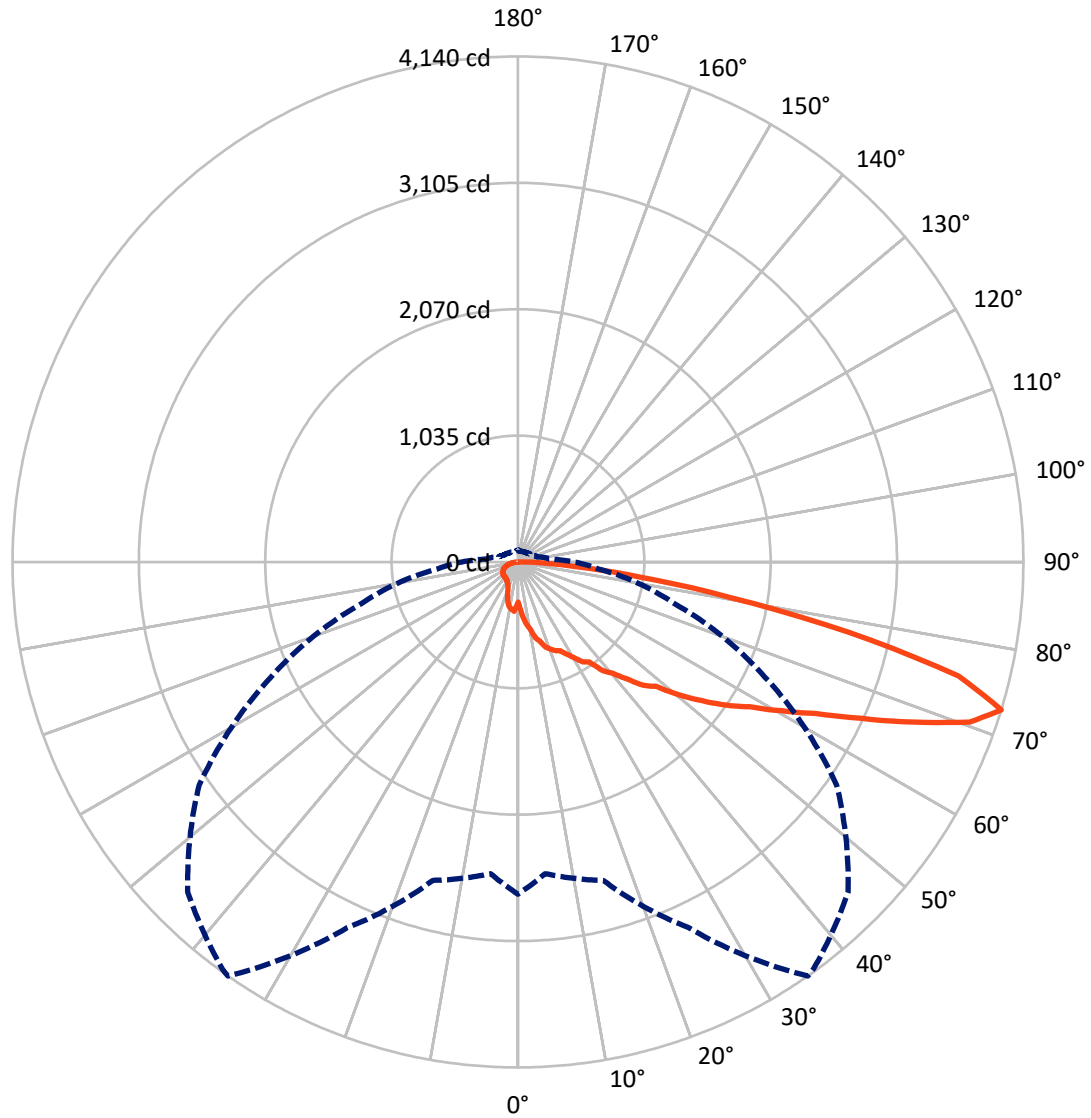
× Max cd
 - - - 1/2 Max cd



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 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	763.7	0.0	763.7
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	4927.3	0.0	4927.3
	% Fixture	86.6	0.0	86.6
Total	Lumens	5691.0	0.0	5691.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.7	0.8
10°-20°	154.0	2.7
20°-30°	267.5	4.7
30°-40°	447.1	7.9
40°-50°	776.1	13.6
50°-60°	1173.2	20.6
60°-70°	1519.9	26.7
70°-80°	1121.5	19.7
80°-90°	188.0	3.3
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°	5691.0	100.0
0°-180°	5691.0	100.0

Coefficient of Utilization

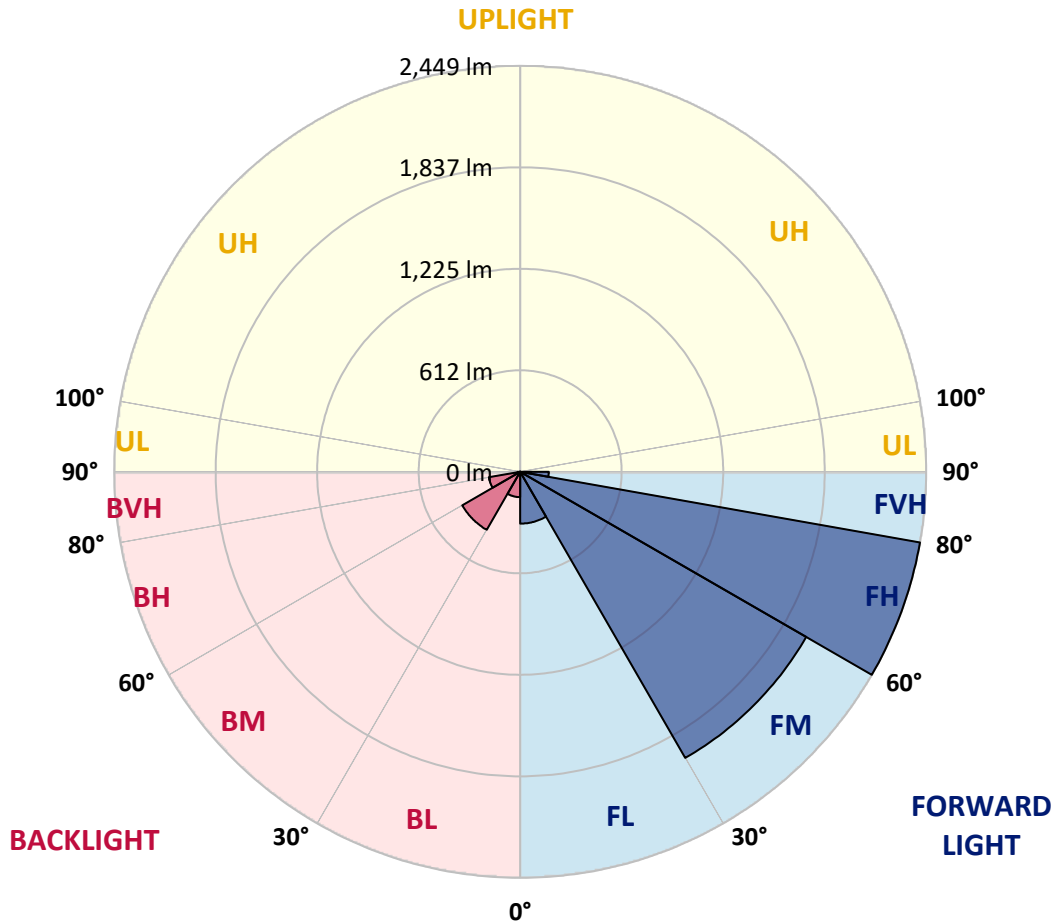


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	312.6	5.5			
FM (30°-60°)	1992.8	35.0			
FH (60°-80°)	2449.4	43.0			G2/5000
FVH (80°-90°)	172.6	3.0			G2/225
BL (0°-30°)	152.7	2.7	B1/500		
BM (30°-60°)	403.6	7.1	B1/1000		
BH (60°-80°)	192.0	3.4	B1/500		G1/500
BVH (80°-90°)	15.4	0.3			G1/100
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°	36°	45°	55°	65°	75°	85°
0°	328.9	328.9	328.9	328.9	328.9	328.9	328.9	328.9	328.9	328.9	328.9
2.5°	410.3	390.6	373.6	372.9	388.6	394.7	392.3	386.9	380.6	367.3	396.4
5°	514.0	485.8	480.5	474.1	459.8	463.7	440.4	458.1	463.7	476.6	496.0
7.5°	575.2	558.7	545.8	540.5	515.7	512.8	495.5	520.8	531.5	529.8	558.7
10°	599.2	584.2	585.1	567.7	559.6	563.0	565.0	565.5	572.0	577.4	562.8
12.5°	611.6	617.4	638.8	626.9	637.1	641.3	661.7	640.8	641.5	614.0	629.1
15°	674.0	688.6	676.2	675.7	672.6	679.4	696.9	682.8	693.7	685.0	665.5
17.5°	749.3	753.7	729.9	720.2	732.8	730.6	726.3	728.5	701.2	751.8	728.0
20°	772.4	789.7	758.3	720.2	762.0	767.6	766.6	757.1	710.5	783.3	760.3
22.5°	839.5	816.1	791.4	767.1	788.5	791.6	786.3	763.7	748.1	775.8	794.0
25°	869.8	864.2	832.7	829.7	806.2	795.0	804.2	797.7	782.4	831.7	811.5
27.5°	939.3	932.7	860.1	890.0	855.7	852.8	804.0	825.9	841.2	837.5	867.6
30°	1018.0	1025.5	919.4	949.2	909.7	904.3	855.2	882.9	893.4	896.8	934.4
32.5°	1105.4	1126.1	1020.7	996.1	975.0	978.6	937.1	886.6	927.1	1006.6	1022.8
35°	1200.2	1208.7	1098.1	1061.2	1006.1	1002.2	1002.9	1009.2	1050.3	1140.9	1153.5
37.5°	1375.3	1335.9	1239.0	1145.5	1127.1	1090.9	1115.4	1134.8	1175.9	1314.8	1367.8
40°	1483.1	1454.0	1306.3	1252.1	1201.1	1204.5	1250.4	1250.2	1347.1	1490.4	1571.3
42.5°	1583.0	1551.2	1412.0	1357.6	1309.2	1321.1	1334.2	1357.3	1543.1	1774.1	1811.1
45°	1663.4	1593.7	1493.6	1481.4	1441.6	1425.8	1481.4	1518.4	1777.5	2003.7	2025.0
47.5°	1718.0	1660.7	1562.8	1552.1	1522.7	1561.4	1713.2	1737.0	1959.2	2234.2	2232.5
50°	1801.1	1722.6	1634.2	1628.6	1711.5	1732.1	1917.2	1914.8	2136.1	2425.6	2385.5
52.5°	1896.8	1797.9	1702.0	1762.0	1888.3	1898.5	2059.1	2124.4	2329.2	2610.2	2505.5
55°	2006.8	1896.3	1803.5	1883.7	2071.7	2041.6	2204.1	2363.7	2570.8	2804.8	2592.2
57.5°	2143.1	2009.0	1934.0	2055.9	2239.0	2265.8	2411.7	2612.6	2765.4	2925.7	2655.4
60°	2286.9	2129.5	2060.8	2176.9	2473.4	2504.0	2646.9	2819.6	2983.5	3039.6	2643.5
62.5°	2424.1	2253.9	2191.7	2335.0	2733.3	2809.1	2914.5	3024.6	3165.0	3067.3	2499.4
65°	2576.9	2406.4	2367.3	2582.3	3085.8	3161.1	3298.8	3265.8	3227.2	2969.2	2261.1
67.5°	2738.7	2565.5	2572.8	2869.1	3501.4	3514.3	3725.8	3506.2	3154.0	2709.3	1861.1
70°	2825.6	2648.3	2723.4	3174.9	3924.3	3905.8	3949.1	3570.9	2856.0	2141.6	1282.8
72.5°	2720.2	2562.1	2699.6	3303.7	4139.5	4119.6	3823.7	3187.3	2233.0	1331.8	665.1
75°	2303.2	2150.6	2361.0	2944.9	3726.6	3745.0	3254.1	2370.2	1278.4	535.6	276.2
77.5°	1565.0	1486.3	1666.5	2195.1	2768.1	2832.0	2414.4	1386.0	536.8	221.8	167.1
80°	827.1	789.7	922.8	1264.5	1752.8	1800.4	1419.7	690.3	275.0	143.6	119.3
82.5°	449.4	433.6	505.0	650.2	995.9	1037.4	736.2	458.6	185.3	89.9	72.9
85°	301.9	295.9	343.2	349.3	471.0	484.6	385.7	353.2	111.2	44.0	48.1
87.5°	151.1	145.0	180.7	159.6	179.7	180.0	176.8	225.4	28.2	14.6	8.7
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°	328.9	328.9	328.9	328.9	328.9	328.9	328.9	328.9	328.9	328.9	328.9
2.5°	396.9	388.4	359.0	358.8	363.1	360.2	362.4	350.5	345.4	368.7	367.5
5°	493.3	467.8	443.3	434.8	424.8	403.2	404.4	404.7	401.0	414.9	415.8
7.5°	549.9	519.3	496.7	451.5	416.1	388.4	392.0	396.2	392.0	410.5	417.3
10°	558.2	533.9	506.9	456.7	433.1	408.1	382.8	360.5	357.8	349.3	352.0
12.5°	607.2	587.1	530.7	475.6	448.1	409.8	363.6	338.1	316.7	320.4	313.6
15°	647.6	633.2	565.7	493.6	428.0	380.4	331.3	296.3	277.1	275.0	268.2
17.5°	702.2	681.8	568.9	481.2	402.0	344.9	289.5	249.9	241.7	238.3	234.9
20°	728.5	691.8	557.5	442.3	371.6	302.7	248.2	214.2	211.8	217.9	216.7
22.5°	751.3	700.0	547.3	418.8	324.3	259.9	220.1	197.7	195.0	202.8	204.3
25°	764.6	723.6	536.1	394.7	294.9	228.1	198.9	186.3	186.8	197.0	195.8
27.5°	824.9	731.9	507.9	366.3	261.1	204.5	188.7	182.2	179.5	193.6	194.8
30°	862.8	785.8	501.6	336.2	236.1	187.3	179.5	176.8	176.3	193.3	194.6
32.5°	933.2	803.8	504.5	303.4	213.5	181.9	172.7	172.5	177.3	193.6	195.5
35°	1030.9	879.5	490.4	284.7	201.1	173.7	167.4	169.3	177.6	195.3	198.0
37.5°	1221.3	950.9	494.8	267.2	197.0	171.0	165.9	167.1	180.5	199.7	207.0
40°	1372.1	1080.4	488.0	258.4	191.4	170.5	162.7	167.6	180.2	202.1	208.7
42.5°	1590.7	1183.6	488.7	249.7	191.2	168.6	162.3	168.1	179.7	199.9	208.9
45°	1778.3	1276.2	499.2	244.6	188.7	171.7	161.5	168.8	176.6	192.1	202.1
47.5°	1932.0	1379.4	509.8	239.7	187.8	174.6	160.8	163.7	171.2	183.4	192.4
50°	2057.4	1452.1	523.4	238.8	187.8	173.2	158.9	158.6	164.9	174.6	183.1
52.5°	2155.0	1503.3	532.7	240.0	187.8	167.6	156.4	154.5	158.4	165.4	173.9
55°	2225.7	1519.1	525.1	243.1	187.5	162.5	152.1	150.4	152.3	157.2	165.2
57.5°	2254.1	1477.6	480.2	237.6	187.5	158.9	146.7	144.8	146.7	150.4	158.4
60°	2182.9	1344.0	415.4	223.2	183.9	154.0	140.6	139.4	142.3	145.5	153.3
62.5°	2004.4	1166.4	346.1	206.2	176.3	149.9	134.8	135.1	139.7	144.0	151.8
65°	1727.0	951.7	288.6	189.0	166.9	143.3	128.7	130.4	137.0	142.8	150.6
67.5°	1359.0	705.1	242.9	172.2	153.5	132.6	121.9	122.4	127.0	132.6	140.2
70°	908.4	448.6	199.7	152.5	136.0	118.8	111.5	109.8	108.6	113.4	120.0
72.5°	460.8	265.0	164.0	130.4	117.1	103.7	98.1	93.8	90.4	93.3	98.4
75°	241.4	185.3	132.4	108.3	96.7	88.2	84.0	78.2	75.8	77.5	81.1
77.5°	170.8	145.0	107.1	85.7	78.7	70.0	70.7	64.6	62.7	63.6	67.5
80°	131.2	114.9	82.3	64.9	60.7	52.2	54.7	51.0	48.6	48.1	51.0
82.5°	89.4	86.5	58.5	45.4	42.5	36.4	39.8	38.4	35.2	33.3	34.7
85°	60.2	57.3	35.7	26.2	25.0	18.9	24.3	23.3	20.6	17.7	18.0
87.5°	10.4	19.2	10.2	6.6	6.1	2.2	5.6	5.3	4.9	2.4	1.9
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)