



Laboratory Performance Test Report

Sample type: Aluminium Fence

Test sponsor: Aluminum Light Solutions (PrimeAlux)

Report number: DLR4008

Date: 14 August 2026 Revision: 0

Quality management

Version	Date	Information about the document	
0	14 August 2026	Description	Initial issue
		Name	Prepared by
		Designation	Reviewed & authorised by
		Signature	
Signed and issued on behalf of Al Futtaim Element Materials Technology Dubai L.L.C			

Contents

1.	Introduction	4
2.	Purpose of testing	4
3.	Test sample	4
3.1	Description	4
3.2	Drawings	5
4.	Test apparatus	5
4.1	Test rig	5
4.2	Pressure	5
4.3	Wind resistance test	6
4.4	Ambient conditions	6
4.5	General	6
5.	Test procedures & criteria	6
5.1	Sequence of testing	6
5.2	Wind resistance - serviceability	6
5.3	Wind resistance - ultimate	7
5.4	Controlled dismantle	7
6.	Test results	7
7.	Controlled dismantle	8
Appendix A	Figures	9
Appendix B	Drawings	10
8.	Test Photographs	11

1. Introduction

This report describes the tests performed at the Al Futtaim Element Materials Technology Dubai L.L.C (AFE) laboratory at Plot 597-451, Dubai Investments Park, Dubai, at the request of the test sponsor listed in Table 1.

Table 1 Test sponsor details

Test sponsor	Address
Aluminum Light Solutions (PrimeAlux)	P. O. Box 787 Aqaba 77110 Jordan Tel: +962 320 313 53

AFE is a A2LA accredited testing laboratory, certificate no.7583.0, and is accredited to ISO/IEC 17025:2017, which assesses the technical competence of the laboratory, as well as its quality management systems.

This test report is personal to the client, confidential, non-assignable and shall not be reproduced, except in full, without the prior, written approval of AFE.

2. Purpose of testing

The tests were carried out in January 2026 and were to determine the performance of fence samples with respect to wind resistance. The test methods were in accordance with the AFE method statement DMC5297 Rev.3.

This test report relates only to the actual sample as tested and described herein.

The tests were witnessed wholly or in part by the test witnesses listed in Table 2.

Table 2 Test witnesses

Test witness	Company
Ahmad Daaboul	Aluminum Light Solutions (PrimeAlux)

The tests were conducted by Shibin Ismail of AFE.

3. Test sample

3.1 Description

The sample was an aluminium fence consisted of two vertical posts, with a series of horizontal slats and a top rail fixed between the posts. The vertical posts were anchored to the concrete floor.

The AFE reference number for the sample was DC5297. The sample dimensions and full construction details are shown in the drawings in Appendix B.

The photograph below shows an external view of the sample.



Figure 1 External view of the test sample

3.2 Drawings

The tested sample was as shown in Aluminum Light Solutions (PrimeAlux) sample drawings numbered:

DWG - 01

DWG - 02

DWG - 03

DWG - 04

DWG - 05

DWG - 06

DWG - 07

DWG - 08

DWG - 09

Except for any variation as described in Section 7.

Copies of these drawings are included in Appendix B in this report.

4. Test apparatus

4.1 Test rig

The test rig comprised of a sealed chamber, fabricated from steel and plywood. A door was provided to allow access to the chamber.

One static pressure tapping was provided to measure the chamber pressure and was located so that the readings were unaffected by the velocity of the air supply into or out from the chamber.

4.2 Pressure

A pressure transducer, capable of measuring rapid changes in pressure to an accuracy within $\pm 2\%$ of the set point or ± 2.5 Pa (whichever is greater), was used to measure the differential pressure across the sample.

4.2.1 Static pressure testing

The air supply system comprised a centrifugal fan, associated ducting and control valves to create positive and negative static pressure differentials. The fan provided a constant air flow at the test pressures for the required periods.

4.3 Wind resistance test

LVDT transducers were used to measure the deflection of the principal framing members to an accuracy of 0.25 mm. The gauges were set normal to the sample framework at mid-span and as near to the supports of the members as possible and installed in such a way that the measurements were not adversely influenced by the application of pressure or other loading to the sample.

4.4 Ambient conditions

Air and water temperatures, atmospheric pressure, relative humidity and wind speed were recorded using the appropriate test equipment.

4.5 General

All relevant test equipment was calibrated and traceable to international standards.

5. Test procedures & criteria

5.1 Sequence of testing

1. Wind resistance - serviceability
2. Wind resistance - ultimate
3. Controlled dismantle

Note: A positive pressure differential is where the pressure against the weather face is greater than that against the internal face.

5.2 Wind resistance - serviceability

5.2.1 Test procedure

Instrumentation was positioned to measure deflection of representative framing members.

The sample was subjected to incremental positive differential pressures of 391 Pa, 724 Pa and **835 Pa**. Each pressure increment was held for at least 10 seconds, and deflection readings were taken at each increment.

Ambient conditions during the test were recorded.

5.2.2 Test pass / fail criteria

Deflection shall be recorded for information. Sample shall be inspected for any detachment or loss of elements (e.g., parts flying off).

The measurement positions are shown in Figure 2 in Appendix A. Please see table below for the methodology of the displacement gauge positioning.

Table 3 Methodology of deflection gauge placement

Gauge no.	Element	Measuring the deflection of the...
1	Post 1	top of the post
2	Post 2	top of the post
3	Top rail	centre of the rail
4	Slat	centre of the slat

5.3 Wind resistance - ultimate

5.3.1 Test procedure

The sample was subjected to the maximum possible positive pressure differential with the test set-up and the observations were recorded.

5.3.2 Test pass / fail criteria

The failure load / mode shall be recorded.

5.4 Controlled dismantle

AFE witnessed the dismantling of the test sample and compared the as-built (and therefore as-tested) installation against the drawings supplied. See Section 7 for details.

6. Test results

Refer to Section 5 for the test sequence numbers, test procedures and performance criteria.

The following table summarises, in chronological order, the tests performed.

Table 4 All tests in chronological order

Date	Test	Result	Test no.
16 Jan. '26	Wind resistance - serviceability	Pass	Test 1
16 Jan. '26	Wind resistance - ultimate	N/A	Test 2
27 Jan. '26	Controlled dismantle	N/A	Test 3

Test 1	Wind resistance - serviceability		Pass
Date	16 Jan. '26	Time	3:10pm
Table 5 below show the gross deflections, in mm, for gauges 1, 2 for posts, and gauges 3 & 4 for the top rail and slat respectively.			
No visual damage was observed at the peak load of 835 Pa.			
See Figure 2 in Appendix A for the gauge locations.			
Ambient temperature	24 °C		
Atmospheric pressure	1017 mbar	Relative humidity	41 %

Table 5 Wind resistance (serviceability) - deflections

Pressure (Pa)	Deflection at gauge locations (mm)			
	1	2	3	4
0	0	0	0	0
391	20.9	20.7	23.5	14.4
724	61.7	52.4	62.3	35.4
835	65.2	55.7	66.2	38.0

Test 2		Wind resistance - ultimate		N/A
Date	16 Jan. '26	Time	3:40pm	
The entire external face of the fence was covered with a polythene sheet to prevent excessive air leakage during the test.				
Approximately at +2300 Pa, the post along with the slat were deformed and further loading was not possible due to excessive air leakage. Test terminated.				
No detachment of any components of the sample were observed.				
Ambient temperature	23 °C			
Atmospheric pressure	1017 mbar	Relative humidity	41 %	

7. Controlled dismantle

AFE witnessed the controlled dismantle of the sample, performed visual & dimensional checks on the components, where possible, and compared them against the supplied information. Refer to the drawings in Appendix B

Any material properties, classifications, item no. / catalogue no. / brand references detailed in the drawings, if applicable, were not verified by AFE.

Date of dismantling: 27 January 2026

No variations were observed.

Appendix A Figures

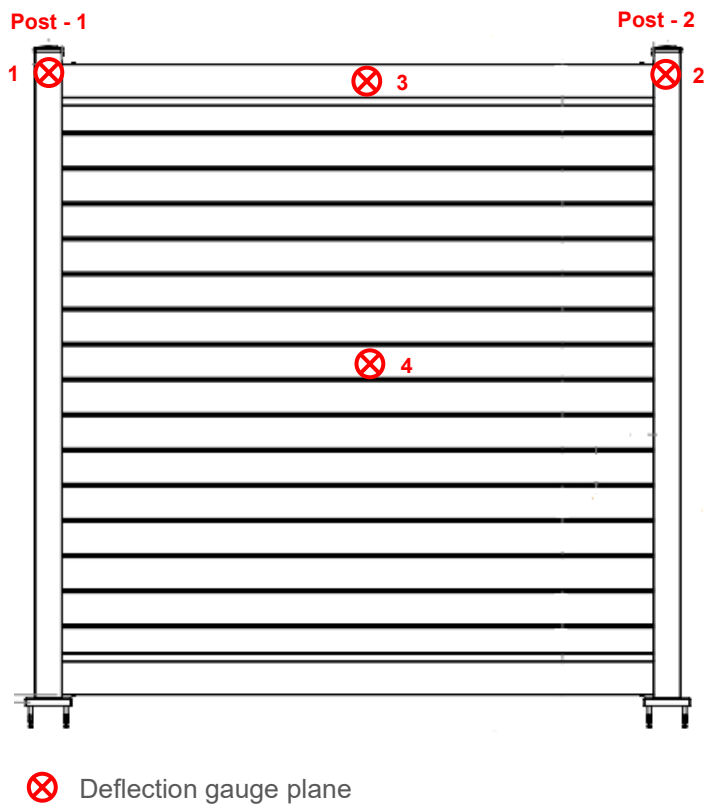
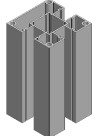
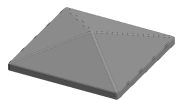
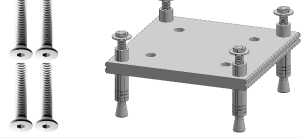
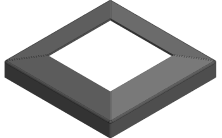
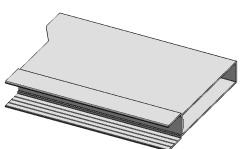
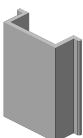
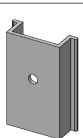
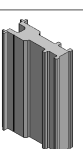
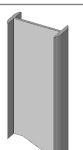
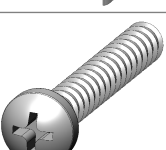
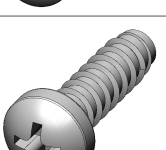


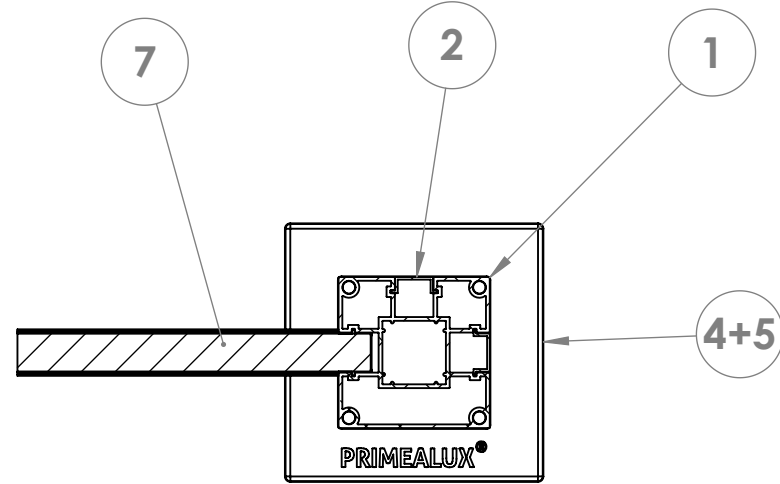
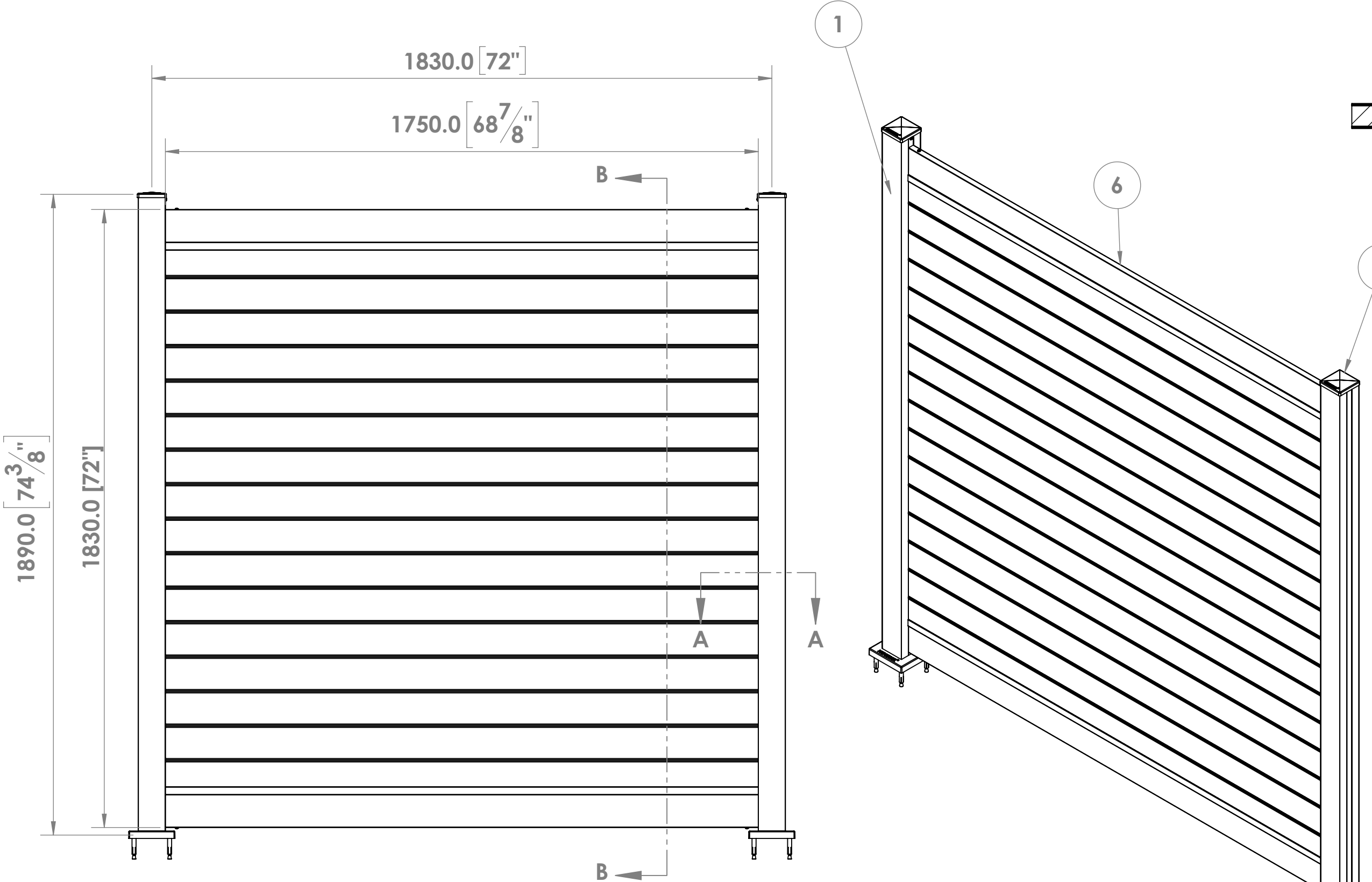
Figure 2 Deflection gauge locations (as viewed from inside)

Appendix B Drawings

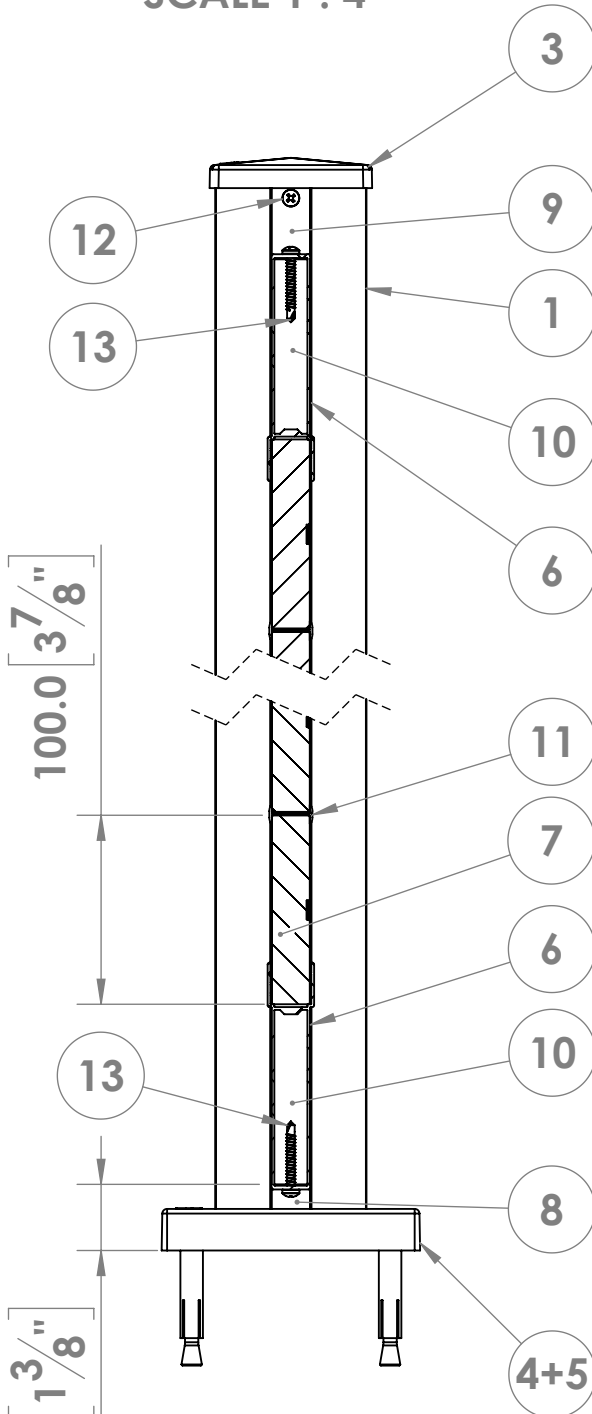
The following nine un-paginated sheet is copy of Aluminum Light Solutions (PrimeAlux) drawings numbered:

- DWG - 01
- DWG - 02
- DWG - 03
- DWG - 04
- DWG - 05
- DWG - 06
- DWG - 07
- DWG - 08
- DWG - 09

ITEM NO.	DESCRIPTION	CODE	SIZE (mm-inches)	QTY	FIGURE
1	POST	P8006	1890 74 3/8"	1	
2	6' POST COVER	PC06	1890 74 3/8"	1	
3	POST CAP	CP80	—	1	
4	BASE PLATE ASM	BPK80	—	1	
5	BASE PLATE CAP	BC80	—	1	
6	RAIL (TOP/BOTTOM)	FR06	1750 68 7/8"	2	
7	ALU SLAT 6' HORIZONTAL	S10070	1785 70 1/4"	16	
8	BOTTOM SPACER	SP25	25 1"	2	
9	TOP SPACER TO BE DRILLED ON SITE	SP45	45 1 3/4"	2	
10	RAIL BRACKET 4"	RB4	90 3 35/64"	4	
11	H RAIL	HH06	1750 68 7/8"	15	
12	PAN HEAD SCREW	FS4232	m4.2x32 mm	2	
13	PAN HEAD SCREW	FS4219	m4.2x19 mm	4	



SECTION A-A
SCALE 1 : 4



SECTION B-B
SCALE 1 : 4

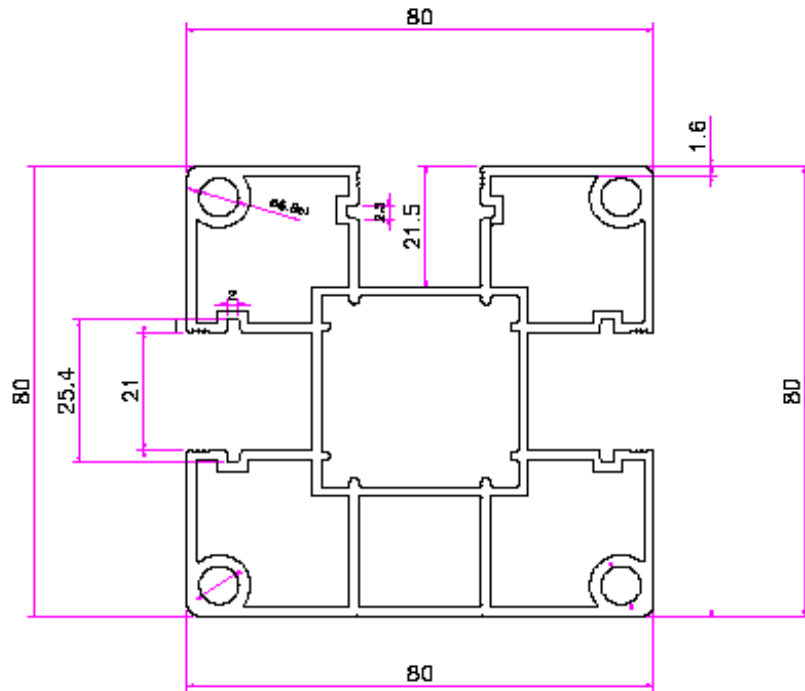


TITLE : W 6' x H 6' PRIVACY PLUS HORIZONTAL FENCE

email: Info@primealux.com
website: www.primealux.com

NOTES :

- DIMENSIONS IN BRACKETS [] ARE IN INCHES.
- TOLERANCES: LINEAR: +-1 mm or [1/16"], ANGULAR: +-1 Deg.
- CONSULT LOCAL CONDITIONS, CODES FOR FOUNDATION.
- INSTALLATION TO BE COMPLETED PER MANUFACTURER'S SPECIFICATION.
- THIS DRAWING IS PROVIDED FOR PLANNING PURPOSES ONLY.
- SIZES ARE APPROXIMATED AND COULD VARY DEPENDING ON THE SYSTEM OF CHOICE, PLEASE REFER TO THE INSTALLATION MANUAL FOR MORE DETAILED DIMENSIONS.
- OVERALL WIDTH IS MEASURED FROM POST CENTER TO POST CENTER.



Scale 1:1



Gen.Wall Thickness : ----- mm

Area: ---.--- mm²

Ext. perimeter : ---.--- mm

Weight: ----- kg/m

Exp.perimeter : ---- mm

Scale: --:--

Alloy: ---- / --

NOTES

1. Exposed surface = _ _ _ _ _

2. All dimensions are in millimeters

3. Gen. Tolerance BS EN 755-9

4. Corner Radius 0.30 Unless Specified

5. Extrusion / blend lines may occur at exposed / visible surface



REV

--

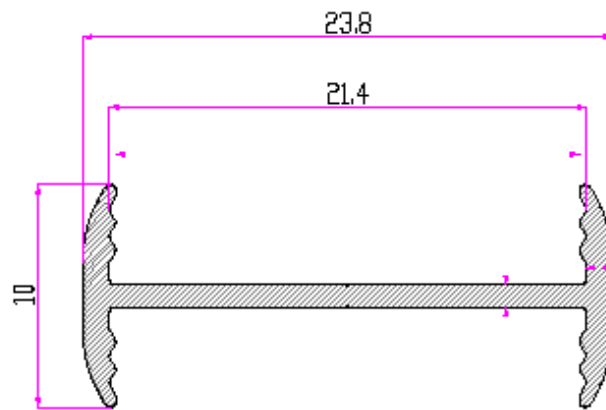
PROFILE NAME: Post

[illegible]


 الفطيم
 Al-Futtaim
 
 اليمنت
 element



PROFILE NAME: Rail Holder



Scale 4:1



Gen.Wall Thickness : ----- mm

Area: ---,--- mm²

Ext. perimeter : ---,--- mm

Weight: ----- kg/m

Exp.perimeter : ---- mm

Scale: --:--

Alloy: ---- / --

NOTES

1. Exposed surface = _ _ _ _ _

2. All dimensions are in millimeters

3. Gen. Tolerance BS EN 755-9

4. Corner Radius 0.30 Unless Specified

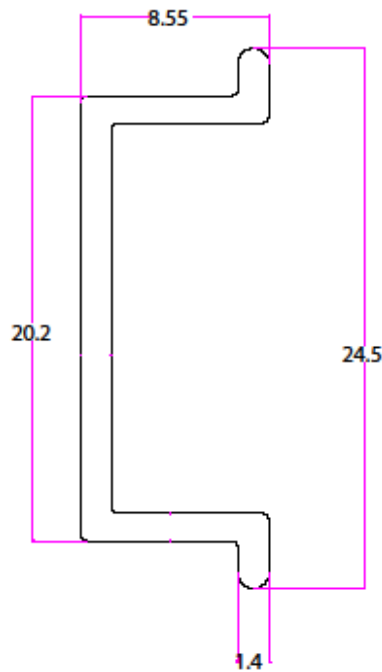
5. Extrusion / blend lines may occur at exposed / visible surface



REV

--

PROFILE: H-Rail



Gen.Wall Thickness : ----- mm

Area: ---,--- mm²

Ext. perimeter : ---,--- mm

Weight: ----- kg/m

Exp.perimeter : ---- mm

Scale: --:--

Alloy: ---- / --

NOTES

1. Exposed surface = _ _ _ _ _

2. All dimensions are in millimeters

3. Gen. Tolerance BS EN 755-9

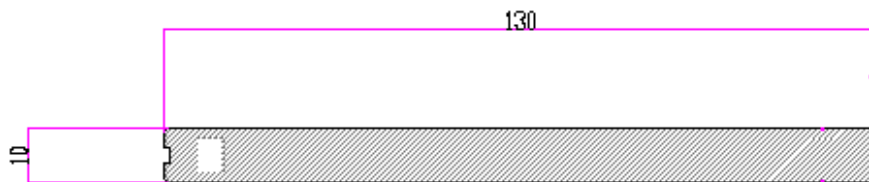
4. Corner Radius 0.30 Unless Specified

5. Extrusion / blend lines may occur at exposed / visible surface



REV
--

PROFILE NAME: Post Cover



Scale 1:1



Gen.Wall Thickness : ----- mm

Area: ---,--- mm²

Ext. perimeter : ---,--- mm

Weight: ----- kg/m

Exp.perimeter : ---- mm

Scale: --:--

Alloy: ---- / --

NOTES

1. Exposed surface = _ _ _ _ _

2. All dimensions are in millimeters

3. Gen. Tolerance BS EN 755-9

4. Corner Radius 0.30 Unless Specified

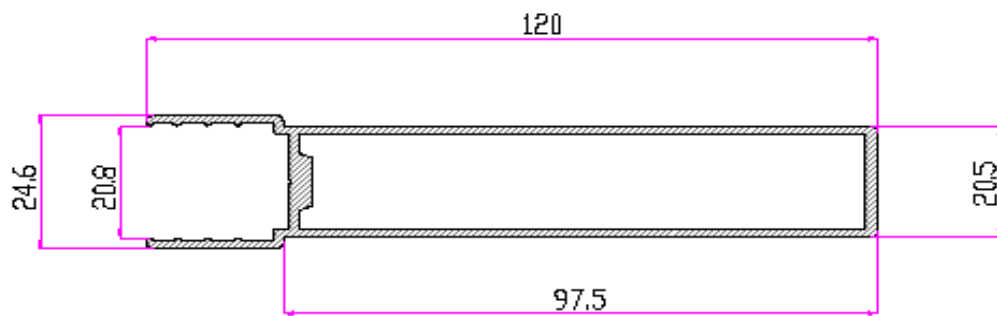
5. Extrusion / blend lines may occur at exposed / visible surface



REV

--

PROFILE NAME: Base Plate



Scale 1:1



Gen.Wall Thickness : ----- mm

Area: ---,--- mm²

Ext. perimeter : ---,--- mm

Weight: ----- kg/m

Exp.perimeter : ---- mm

Scale: --:--

Alloy: ---- / --

NOTES

1. Exposed surface = _ _ _ _ _

2. All dimensions are in millimeters

3. Gen. Tolerance BS EN 755-9

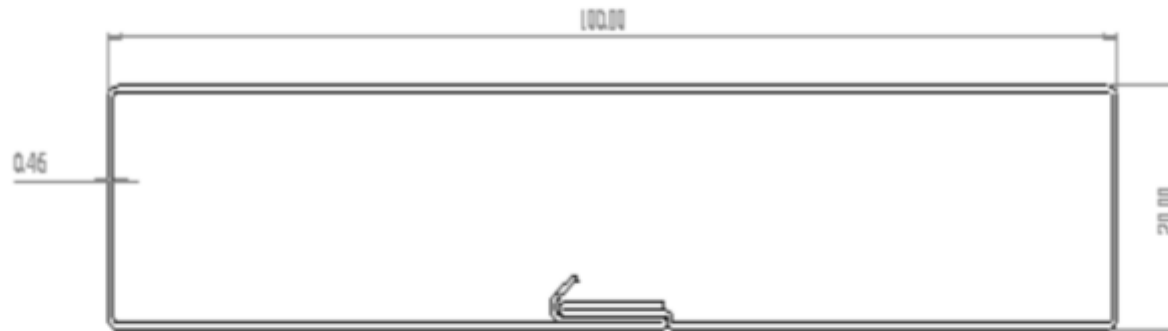
4. Corner Radius 0.30 Unless Specified

5. Extrusion / blend lines may occur at exposed / visible surface



REV
--

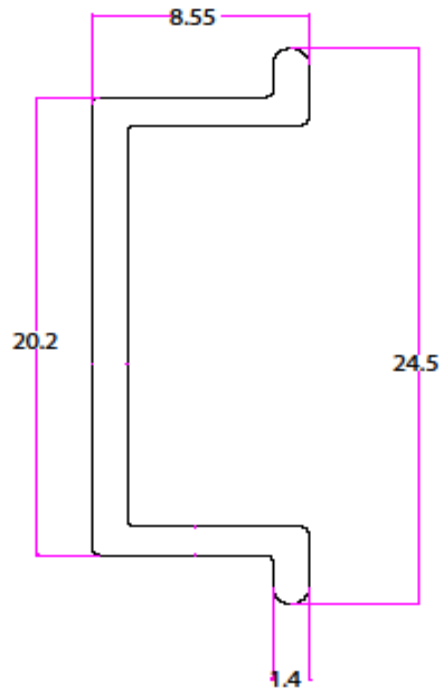
PROFILE NAME: Rail



Gen.Wall Thickness : ----- mm	Area: ----- mm ²
Ext. perimeter : ----- mm	Weight: ----- kg/m
Exp.perimeter : ----- mm	Scale: --:-- 1:1
NOTES 1.Exposed surface = - - - - - 2.All dimensions are in millimeters 3.Gen. Tolerance BS EN 755-8 4.Corer Radius 0.30 Unless Specified	



REV	PROFILE	SLAT-YWW
--		



Gen.Wall Thickness : ----- mm

Area: ---,--- mm²

Ext. perimeter : ---,--- mm

Weight: ----- kg/m

Exp.perimeter : ---- mm

Scale: --:--

Alloy: ---- / --

NOTES

1. Exposed surface = _ _ _ _ _

2. All dimensions are in millimeters

3. Gen. Tolerance BS EN 755-9

4. Corner Radius 0.30 Unless Specified

5. Extrusion / blend lines may occur at exposed / visible surface



REV	
--	

PROFILE: Top/Bottom Spacer

8. Test Photographs

Sl no.	Description	Photograph
1.	Test set up	
2.	Wind resistance - serviceability	

SI no.	Description	Photograph
3.	Wind resistance - ultimate	



Al Futtaim Element Materials Technology Dubai
Plot 597-451, Dubai Investments Park 2,
P.O. Box 34924,
Dubai, UAE
T: +971 4 886 8715
info.facade@element.com

General conditions of use

This report is made by AFE at the request of the test sponsor. It relates only to the actual sample of the specific product/system/location as tested and described herein. The results are not used to indicate or imply that they are applicable to other similar items/locations. AFE has no responsibility for the design, materials, workmanship or performance of the product / sample tested. This report does not constitute approval, certification, guarantee of performance or endorsement of the product / system / location tested / manufacturer /supplier/user and no such claims to this should be made. Any reporting of conformity in response to either customer specification or regulation or normative documents was made in accordance with Element's policy, which can be found at www.element.com/about-element/statements-of-conformity. The measured values and the statements of conformity in the report relate only to the sample tested and the conditions under which the tests were carried out.

The document may only be used for the purposes for which it was commissioned and in accordance with the terms and conditions for the commission. Only the test sponsor is authorised to permit copying or distribution of the report and then only in its entirety with no deviation. Any third parties to whom this report may be circulated rely on the content of the report at their own risk. Unauthorised use of this document in any form whatsoever is prohibited.

-- End of report --