ICC-ES TEST REPORT

ASTM A370 Mechanical Testing of Steel Products
ASTM E1592 Uniform Static Air Pressure Difference

RENDERED TO: LUX Architectural Products
14525 112 Ave NE Edmonton
AB T5M 2V5
Canada

PRODUCT: NEO LUMBER

Test Report No.: LAPA020626-30(R0)
Test Date(s): 02/24/2026 - 02/26/2026
Test Report Date: 09/04/2026
Pages: 32

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1.0 General Information

1.1 Product

NEO LUMBER

1.2 Project Summary

ICC Evaluation Service (ICC-ES) was contracted by LUX Architectural Products to evaluate NEO LUMBER in accordance with ASTM A370 Standard Test Method of Steel Products and ASTM E1592 Standard Test Method For Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference. Results obtained are tested values and were secured by using the designated test method(s). Testing was conducted at ICC-ES's facility in Nappanee, IN.

1.3 Product Description

Materials used for testing were received in good condition on January 30, 2026. A list of materials can be seen below in the table. The size of the specimens provided below is approximate.

Component	Description
Neo Lumber “A” 24 gauge galvaluxe alloy steel with Kynar 500 paint	2”X6.75”X120”
Neo Lumber “B” 24 gauge galvaluxe alloy steel with Kynar 500 paint	2”X6.75”X120”
“A” 20 Gauge Galvanized galvaluxe alloy steel support	1.25”X6.25”X120”
“B” 20 Gauge Galvanized galvaluxe alloy steel support	1.75”X5.75”X120”
Screws with attached 3/4” rubber washers	#14 X 1.25”
Major Screw Diameter (average)*	0.249
Hex Head Diameter (average)*	0.369

*Based on a sample size of 5 screws

1.4 Qualifications

ICC-ES in Nappanee, IN has demonstrated compliance with ISO/IEC 17025 and is consequently accredited as a Testing Laboratory. ICC-ES is accredited to perform all testing reported herein.

1.5 Product Sampling

No evidence was provided that a third-party agency sampled materials for the testing reported herein. All test specimens were supplied by LUX Architectural Products. Test results reported herein apply to the sample as received.

1.6 Witnessing

No representatives of LUX Architectural Products were present for testing reported herein.

1.7 Conditions of Testing

Unless otherwise indicated, all testing reported herein was conducted in ambient laboratory conditions.

2.0 Referenced Standards

ASTM A370-17, Standard Test Methods and Definitions for Mechanical Testing of Steel Products

ASTM E1592-05(2017), Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference

3.0 Summary of Results

Standard	Results			
	Description	Average Yield Stress (ksi)	Average Tensile Strength (ksi)	Average Modulus of Elasticity (ksi)
ASTM A370, Tensile Properties	Galvanized Board Support	43.7	57.5	20,420
	Neo Lumber Board	55.5	60.3	25,022
	Galvanized Fin Support	43.8	57.5	24,855
	Neo Lumber Fin	58.2	62.7	25,155

Standard	Results			
	Specimen	Specimen Pressure (in-use)*	Description	Ultimate Pressure (psf)
ASTM E1592, Uniform Static Air Pressure	172297	Negative/Outward	Unsupported span 118.5 inches	17.0
	172282	Negative/Outward	Supported span 118.5 inches	81.1

*Pressure differential across specimen under normal installation conditions

4.0 ASTM A370, Standard Test Method for Steel Products

4.1 General

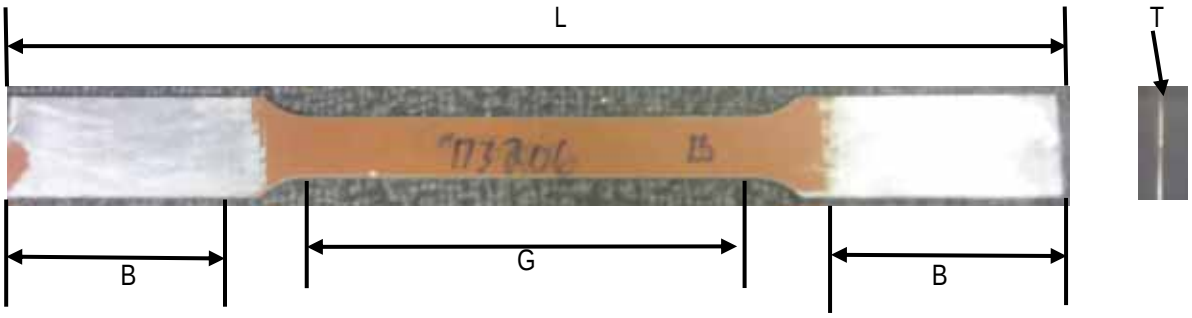
This test method covers the evaluation of the mechanical properties of metal used in the NEO LUMBER and the Galvanized Supports used to create the test specimens.

4.2 Test Specimens

Test specimens were cut from undamaged portions of representative Boards, Fins, and Supports that underwent the ASTM E1592 testing described below.

4.3 Test Setup and Procedure

The test procedure is based on ASTM A370. Testing was conducted using an Instron Universal Testing Machine (UTM) to apply a tension load on the specimen and elongation was measured by attaching an extensometer to the specimen. Results from testing are in Appendix B. Once the sections were cut to rough sizes, they were laid out in a Wazer water jet machine to cut them down to ASTM A370 approved test sizes. These pieces were then measured for thickness and dimensions. Sizes of specimens are approximately 8 inches in length and an approximate width of 0.5 inches in the narrow section of specimens the thickness of specimens tested was approximately 0.038 inches prior to paint removal. Pieces were then soaked in an acid bath to remove coatings and measured again. After removal of the paint specimens measured approximately 0.037 inches in thickness. The length and width of the narrow sections was measured to determine the cross sectional area. The measured cross sectional area was used for calculations shown in section 4.4 Test Results below. See Appendix A for photos of specimens before and after testing.



Description	Designation	Length (in)*
Overall Length	L	8
Grip Section	B	2
Gauge Length	G	2
Thickness with coating	T	0.038

*Lengths are approximate and may vary by ±0.01 in

The UTM used tensile gripping heads to hold the specimen during testing. Additionally, an extensometer was placed over the narrow section of the specimens to record the elongation of the specimen during testing. The extensometer is removed once yield strength is reached.

Deviations from the standard include: None.

4.4 Test Results

Results from testing are provided in the table below. Information can also be found in the appendices.

$$F_U = \frac{P_U}{A}$$

Where:

F_u = Tensile Strength (kip/in^2)
P_u = Ultimate Load (kips)
A = Cross-sectional Area in the necked down region of the tensile bar (in^2)

$$F_Y = \frac{P_Y}{A}$$

Where:

F_y = Yield Strength (kip/in^2)
P_y = Yield Load (kip)
A = Cross Sectional area in the necked down region of the tensile bar (in^2)

$$E = \frac{\sigma}{\varepsilon}$$

Where:

E = Modulus of Elasticity (kip/in^2)
σ = Stress (kip)
ε = Strain(in^2)

Part Tested	Specimen Number	Yield Stress (ksi)	Tensile Strength (ksi)	Modulus of Elasticity (ksi)	Yield Point Elongation (%)	Elongation at Break (in)	Uncoated Thickness (in)
Galvanized Board Support	173203	43.9	57.9	21,578	0.266	0.615	0.0366
	173204	43.5	57.0	17,878	0.317	0.662	0.0364
	173205	43.8	57.6	21,805	0.311	0.604	0.0364
	Avg.	**43.7**	**57.5**	**20,420**	**0.298**	**0.627**	**0.0364**
Neo Lumber Board	173206	54.6	59.7	24,717	0.337	0.497	0.0232
	173207	55.5	59.7	23,079	0.407	0.492	0.0232
	173208	56.5	61.4	27,269	0.319	0.536	0.0226
	Avg.	**55.5**	**60.3**	**25,022**	**0.355**	**0.508**	**0.0230**
Galvanized Fin Support	173209	43.8	57.6	22,639	0.236	0.644	0.0361
	173210	43.9	57.5	25,434	0.189	0.602	0.0361
	173211	43.7	57.3	26,492	0.196	0.629	0.0362
	Avg.	**43.8**	**57.5**	**24,855**	**0.207**	**0.625**	**0.0361**
Neo Lumber Fin	173212	59.3	63.7	25,420	0.388	0.389	0.0221
	173213	58.7	63.2	26,314	0.334	0.478	0.0222
	173214	56.5	61.1	23,731	0.354	0.532	0.0229
	Avg.	**58.2**	**62.7**	**25,155**	**0.359**	**0.466**	**0.0224**

5.0 ASTM E1592, Standard Test Method for Metal Siding

5.1 General

This test method covers the evaluation of the structural performance of NEO LUMBER with and without galvanized support members.

5.2 Test Specimens

One test assembly was constructed from standard #2 SPF 2X6's to connect the top and bottom of the approximately 10 foot long pieces of NEO LUMBER. Samples of NEO LUMBER tested measured approximately 2"X6.75"X120". Pieces connected along the 6.75" side of NEO LUMBER with 3 screws spaced equidistant with approximate on center spacing of 1.5 inches. Pieces of Neo Lumber attached in this fashion were designated 'Boards'. Pieces connected along the 2" side of NEO LUMBER with 2 screws attached equidistant with approximate on center spacing of 0.67 inches. Pieces of Neo Lumber attached in this fashion were designated 'Fins'. Specimens were attached using provided #14 X 1.25" hex head screws with 3/4" self sealing washers. Holes were predrilled through metal components with a 7/32" drill. See Appendix A for photos of specimens before and after testing. Each specimen assembly was made up of 3 pieces attached in Board fashion and 3 pieces attached in Fin fashion, alternating as shown in the drawings and photos of the appendices. Neo Lumber Installation Guide was used in assembly.

The second test assembly was constructed in the same manner as above with the addition of a support made of 20 gauge galvanized galvaluxe steel alloy. This piece was predrilled similar to all the other components and installed on the inside of the Neo Lumber pieces.

The supported test span was approximately 118.5 inches and unsupported test span was approximately 118.5 inches.

5.3 Test Setup and Procedure

The test procedure is based on ASTM E1592. Preloading and loading information was provided and approved by the client. Testing was conducted using negative pressure simulating outward pressure or negative wind pressure. Plastic sheeting was applied between the support and the Neo Lumber samples and then uniform static wind pressure was applied. Refer to photos in appendix A for reference. Deflection gauges were located at locations shown in Photographs 5, 6 & 8 of Appendix A and Drawing 1 in Appendix B.

During testing, the loading stages were applied in accordance with the test standard. At each loading stage, the test load is maintained for not less than 60 seconds and deflection readings are recorded. The pressure is then reduced to zero and/or the reference pressure for a period of not more than 5 minutes prior to taking a set of deflection readings. During this period, dial gauges readings are taken to record permanent deformation. The procedure is followed at stages up to ultimate pressure. When going to the final ultimate load dial gauges are typically removed to prevent damage. Failure observations during testing are noted.

Deviations from the standard include: None.

5.4 Test Results

Results from testing are provided in the table below.

Specimen Number	Applied Pressure (psf)	Board			Fin			Failure Mode
		Deflection Gauge A (inches)	Deflection Gauge B (inches)	Deflection Gauge C (inches)	Deflection Gauge D (inches)	Deflection Gauge E (inches)	Deflection Gauge F (inches)	
172297	10.9	0.053	0.269	0.038	0.016	0.020	0.011	N/A
	0	0.015	0.111	0.004	0.010	0.003	0.002	N/A
	17.0	0.096	0.473	0.079	0.031	0.043	0.021	Separation at button lock
	0	0.021	0.191	0.011	0.018	0.007	0.004	N/A
172282	50.1	0.222	0.766	0.128	0.099	0.101	0.055	N/A
	0	0.013	0.018	0.003	0.009	0.013	0.012	N/A
	58.2	0.315	0.960	0.176	0.129	0.118	0.061	N/A
	0	0.036	0.037	0.009	0.022	0.024	0.019	N/A
	68.7	0.416	1.199	0.240	0.190	0.186	0.083	N/A
	0	0.056	0.059	0.019	0.041	0.040	0.026	N/A
	81.1	1.351	2.087	1.064	0.223	0.238	0.129	Separation at button lock
	0	0.253	0.157	0.088	0.059	0.061	0.044	N/A

N/A = Not Applicable

6.0 Closing Statement

This test report contains only findings and results arrived at after employing the specific test procedures listed herein. It does not constitute a recommendation for, endorsement of, or certification of the product or material tested. Unless differently required, ICC-ES test reports apply the "Simple Acceptance" rule, also called "Shared Risk approach", of ILAC-G8:09/2019, Guidelines on Decision Rules and Statements of Conformity. ICC-ES makes no warranty, expressed or implied, except that the test has been performed, and a test report prepared, based upon the specimen specified by the client. Extrapolation of data, from the test data provided herein, to the batch or lot from which the specimens were obtained may not correlate and should be interpreted with extreme caution. ICC-ES assumes no responsibility for variations in quality, composition, appearance, performance, or other features of similar materials produced by the client, other persons, or under conditions over which ICC-ES has no control. ICC-ES has issued this test report for the exclusive use of the client to whom it is addressed. Any use or duplication of this test report shall not be made without their consent. This test report shall only be reproduced in its entirety.

For ICC Evaluation Service (ICC-ES):

Digitally signed by SStelter
Date: 2026.09.04 11:24:43 -04'00'

Prepared By
Scott Stelter, E.I.
Project Manager/Engineer

Reviewed and Authorized By
Gary Hartman, P.E.
Director of Cerification Engineering

Appendix A - Photographs

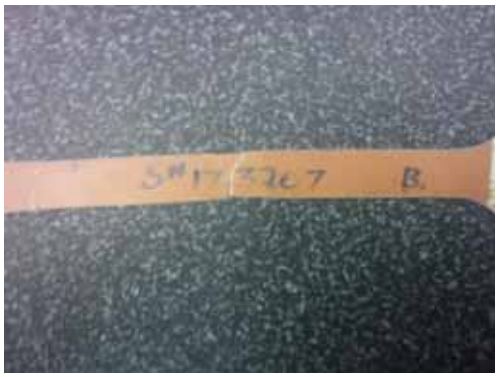


Photo No. 1
Specimen 173207 board after tensile test

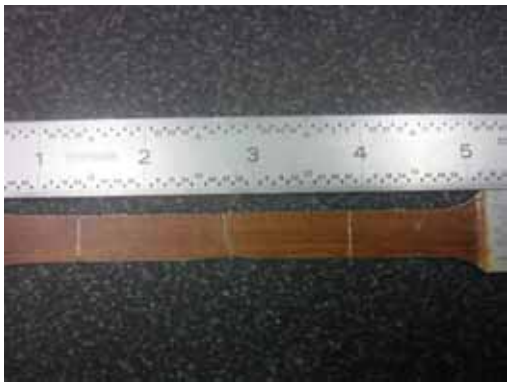


Photo No. 2
Specimen 173207 board after tensile test

Photo No. 3
Specimen 173204 board support during test

Photo No. 4
Specimen 173204 board support after test

Photo No. 5
Specimen 172282 middle gauge labels and locations

Photo No. 6
Specimen 172282 bottom gauge labels and locations

Photo No. 7
Specimen 127282 before testing

Photo No. 8
Specimen 127282 during testing

Photo No. 9
Specimen 172282 button lock separation after testing

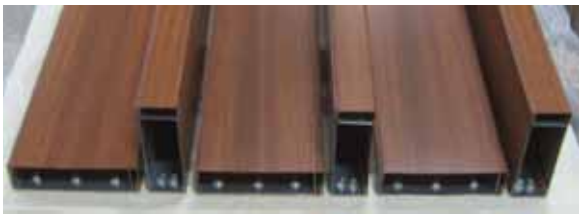


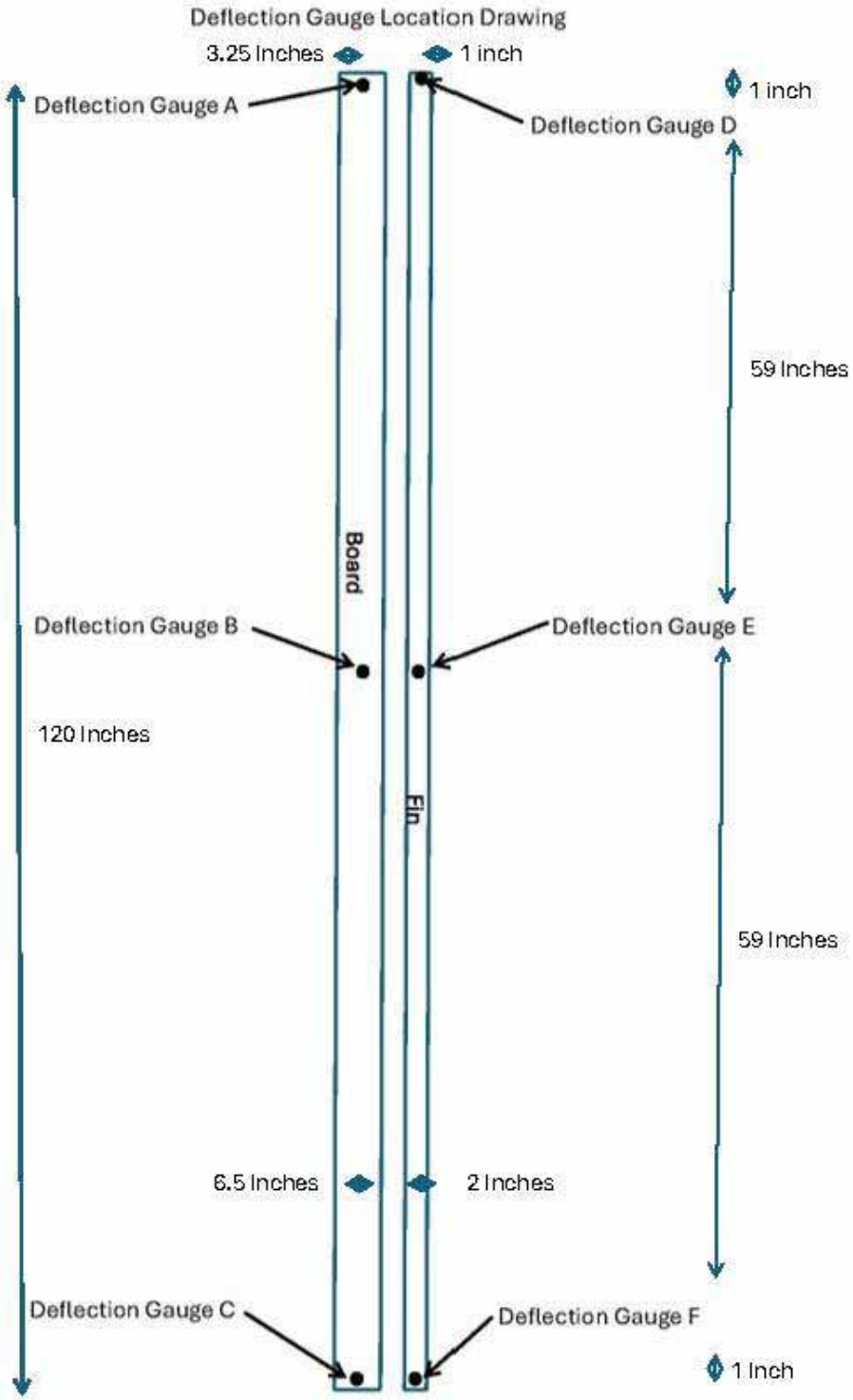
Photo No. 10
Specimen 172282 completed construction

Photo No. 11
Specimen 172297 completed construction

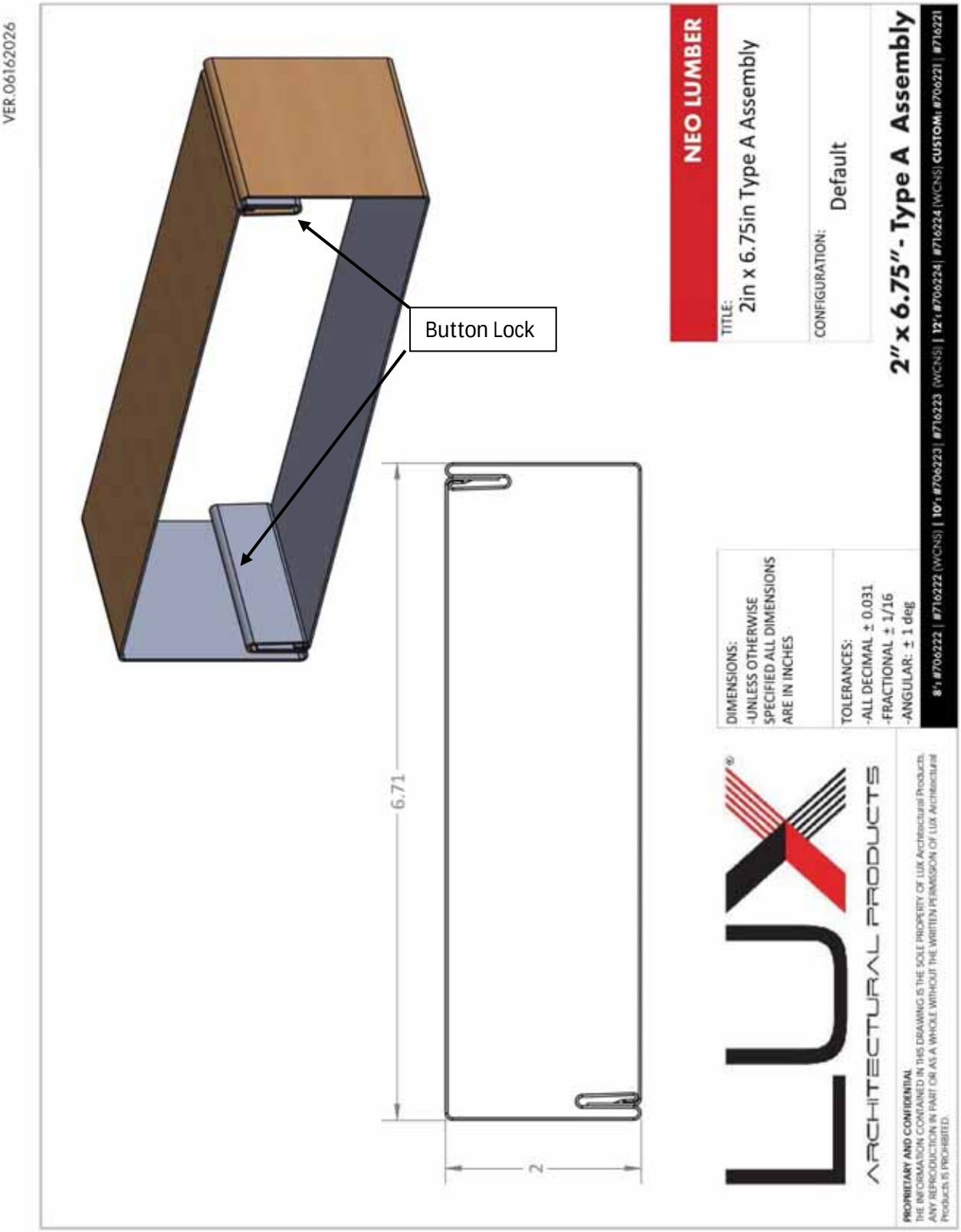
Photo No. 12
Specimen 172297 button lock separation after testing

Appendix B - Drawings

Drawing 1



Drawing 2


VER.06162026
Button Lock
6.71
2
NEO LUMBER
TITLE:
2in x 6.75in Type A Assembly
CONFIGURATION:
Default
2" x 6.75" - Type A Assembly
DIMENSIONS:
-UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
-ALL DECIMAL ± 0.031
-FRACTIONAL ± 1/16
-ANGULAR: ± 1 deg
8': #706222 | #716222 (WCNS) | 10': #706223 | #716223 (WCNS) | 12': #706224 | #716224 (WCNS) CUSTOM: #706221 | #716221
LUX
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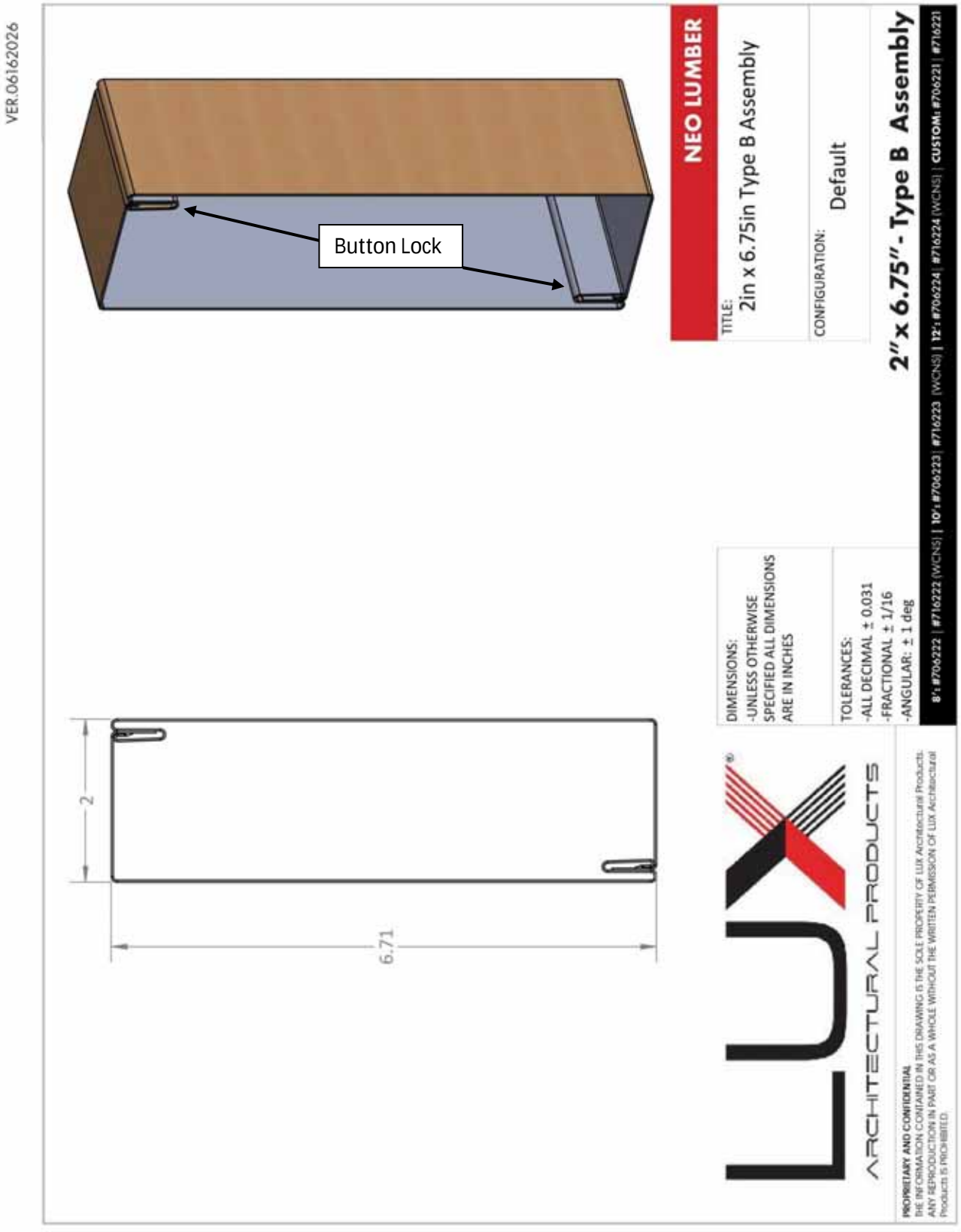
Drawing 3


VER.06162026
Button Lock
NEO LUMBER
TITLE:
2in x 6.75in Type B Assembly
CONFIGURATION:
Default
2" x 6.75" - Type B Assembly
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DIMENSIONS:
-UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
-ALL DECIMAL ± 0.031
-FRACTIONAL ± 1/16
-ANGULAR: ± 1 deg
LUX
ARCHITECTURAL PRODUCTS
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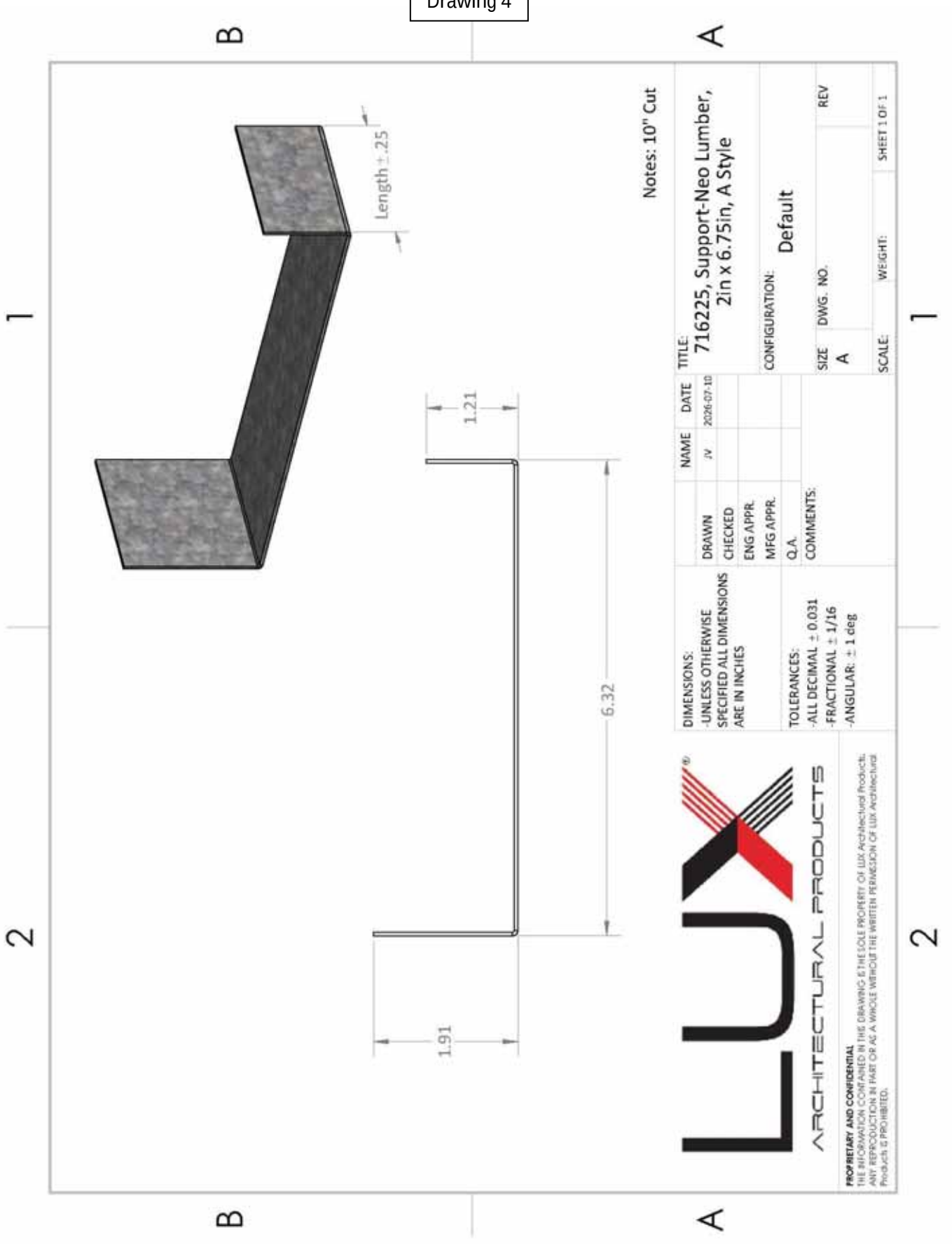
2
6.71

Drawing 4


Length ±.25
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6.32
1.91
Notes: 10" Cut
TITLE:
716225, Support-Neo Lumber, 2in x 6.75in, A Style
CONFIGURATION: Default
SIZE A
DWG. NO.
REV
SCALE:
WEIGHT:
SHEET 1 OF 1
DRAWN JV 2026-07-10
CHECKED
ENG APPR.
MFG APPR.
Q.A.
COMMENTS:
DIMENSIONS:
-UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
-ALL DECIMAL ± 0.031
-FRACTIONAL ± 1/16
-ANGULAR: ± 1 deg
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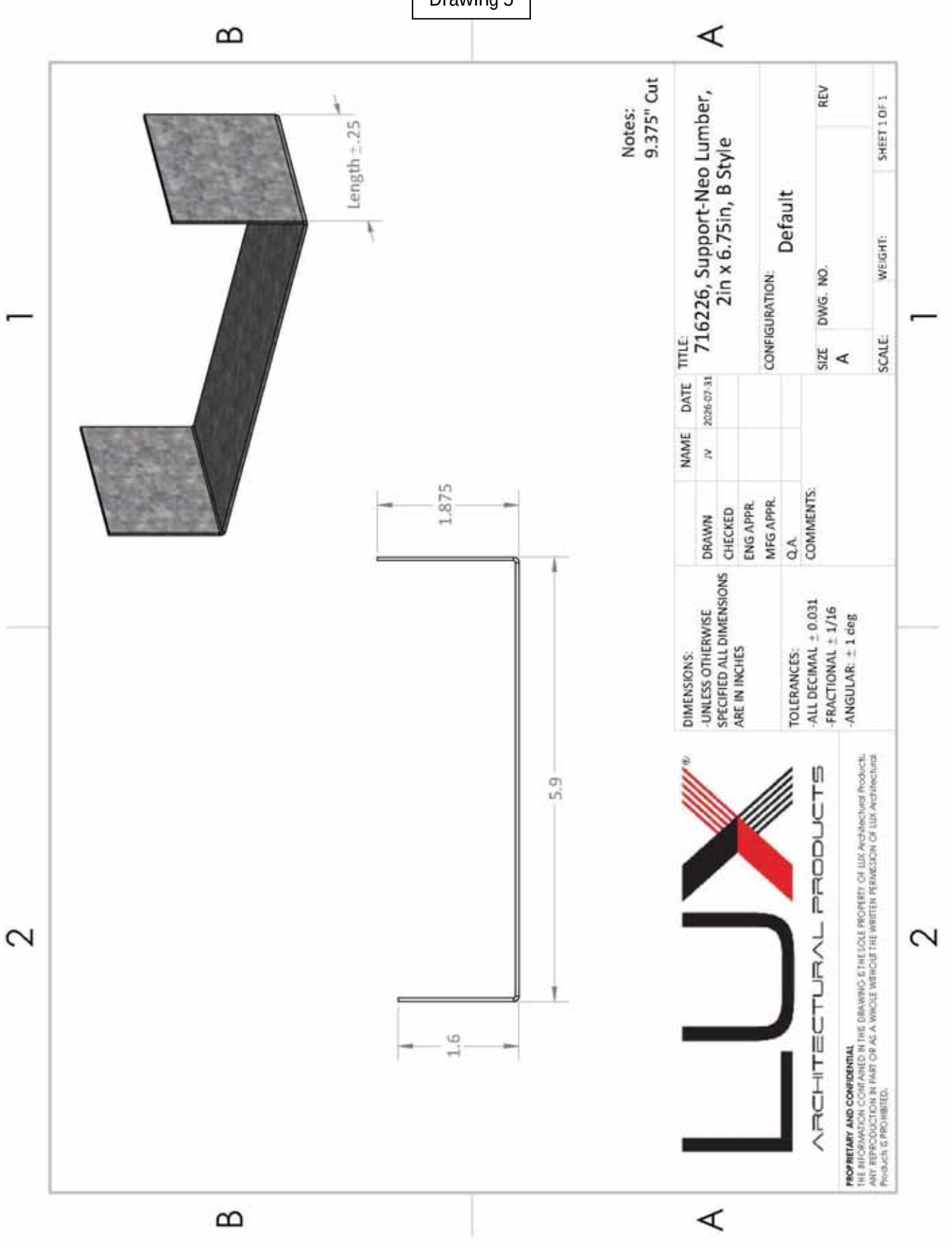
Drawing 5


Length ±.25
1.875
5.9
1.6
Notes:
9.375" Cut
TITLE:
716226, Support-Neo Lumber, 2in x 6.75in, B Style
CONFIGURATION:
Default
SIZE
A
DWG. NO.
REV
SCALE:
WEIGHT:
SHEET 1 OF 1
DIMENSIONS:
-UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES
TOLERANCES:
-ALL DECIMAL ± 0.031
-FRACTIONAL ± 1/16
-ANGULAR: ± 1 deg
DRAWN
CHECKED
ENG APPR.
MFG APPR.
Q.A.
COMMENTS:
NAME
DATE
JV
2026-07-31
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Appendix C - Data

SUMMARY DATA
ASTM A0370-17 Standard Test Methods and Definitions for Mechanical Testing of Steel Products Section 1-14 Tension

Client: LUX Architectural Products
Job Number: LAPA020626-30
Test Location: *ICC-ES*
Nappanee, Indiana

Performed By: Adam Polhemus
Witnessed By: Scott Stelter

General:
Date Received: 1/30/2026
Construction Date: 5/4/2026
Constructed By: Adam Polhemus
Test Date: 5/6/2026

Apparatus: Asset No.
Test Frame: 00140
Load Cell: 00151
Extensometer: 00141
Calipers: 00643
Ball Tip Micrometer: 02339

Ambient Conditions:
Ambient Temp.: 72.3˚ F
Ambient R.H.: 48.3% R.H.
Sensor Asset No.: 00725

Product Description:
Test Series/ Description: ASTM A370 - Board Support from LAPA020626-30 ASTM E1592, Specimen #172282
Material Description: Neo Lumber, Galvanized Board Support (labeled "E Grade: Not provided
Manufacturer/Source: LUX Architectural Products Surface/Coating: Not provided
Orientation to Coil: Parallel

Nominal Specimen Properties:

Yield:	0.0	ksi.	Date Received:	1/30/2026
Thickness:	0.038	in.	Parent Spec. No.:	172015
Width:	0.5	in.	Specimen Type:	Sheet-Type
O/A Length:	8.0	in.	Fabrication Date:	5/4/2026
Gage Length:	2.0	in.		

SUMMARY DATA
ASTM A0370-17 Standard Test Methods and Definitions for Mechanical Testing of Steel Products Section 1-14 Tension

Test Data:

Test Date:	5/6/2026		Ambient Temp.:	72.3	deg. F
Average Actual Stress Rate:	71,000	psi/min.	Ambient RH:	48.3	%
Gage Length:	2.0	in.			

Table A1: Tensile Test Results[a]

Specimen No.	Yield Stress F_y (ksi)	Tensile Strength F_u (ksi)	Elastic Modulus E (ksi)	Yield Point Elongation YPE (%)	Elong. at Break (in.)	Coated Thickness (in.)	Un-Coated Thickness (in.)
173203	43.9	57.9	21,578	0.266	0.615	0.0383	0.0366
173204	43.5	57.0	17,878	0.317	0.662	0.0377	0.0364
173205	43.8	57.6	21,805	0.311	0.604	0.0383	0.0364
Max	43.9	57.9	21,805	0.317	0.662	0.0383	0.0366
Min	43.5	57.0	17,878	0.266	0.604	0.0377	0.0364
Avg	**43.7**	**57.5**	**20,420**	**0.298**	**0.627**	**0.0381**	**0.0364**
St. Dev.	0.2	0.5	2,205	0.028	0.031	0.0003	0.0001

[a]Results based on measured base metal dimensions

F_y = 43.7 ksi True Yield Point
F_u = 57.5 ksi
F_u/F_y = 1.31
% Elong. At Break = 31.0%

SUMMARY DATA

ASTM A0370-17 Standard Test Methods and Definitions for Mechanical Testing of Steel Products Section 1-14 Tension

Client: LUX Architectural Products
Job Number: LAPA020626-30
Test Location: *ICC-ES*
Nappanee, Indiana

Performed By: Adam Polhemus
Witnessed By: Scott Stelter

General:
Date Received: 1/30/2026
Construction Date: 5/4/2026
Constructed By: Adam Polhemus
Test Date: 5/6/2026

Apparatus: Asset No.
Test Frame: 00140
Load Cell: 00151
Extensometer: 00141
Calipers: 00643
Ball Tip Micrometer: 02339

Ambient Conditions:
Ambient Temp.: 72.3˚ F
Ambient R.H.: 48.4% R.H.
Sensor Asset No.: 00725

Product Description:
Test Series/ Description: ASTM A370 - Material from LAPA020626-30 ASTM E1592, Specimen #172282
Material Description: Neo Lumber, Board, (labeled "A") Steel
Grade: Not provided
Manufacturer/Source: LUX Architectural Products
Surface/Coating: Not provided
Orientation to Coil: Parallel

Nominal Specimen Properties:

Yield:	0.0	ksi.	Date Received:	1/30/2026
Thickness:	0.025	in.	Parent Spec. No.:	172017
Width:	0.5	in.	Specimen Type:	Sheet-Type
O/A Length:	8.0	in.	Fabrication Date:	5/4/2026
Gage Length:	2.0	in.		

SUMMARY DATA

ASTM A0370-17 Standard Test Methods and Definitions for Mechanical Testing of Steel Products Section 1-14 Tension

Test Data:

Test Date:	5/6/2026		Ambient Temp.:	72.3	deg. F
Average Actual Stress Rate:	55,500	psi/min.	Ambient RH:	48.4	%
Gage Length:	2.0	in.			

Table A1: Tensile Test Results[a]

Specimen No.	Yield Stress F_y (ksi)	Tensile Strength F_u (ksi)	Elastic Modulus E (ksi)	Yield Point Elongation YPE (%)	Elong. at Break (in.)	Coated Thickness (in.)	Un-Coated Thickness (in.)
173206	54.6	59.7	24,717	0.337	0.497	0.0251	0.0232
173207	55.5	59.7	23,079	0.407	0.492	0.0249	0.0232
173208	56.5	61.4	27,269	0.319	0.536	0.0249	0.0226
Max	56.5	61.4	27,269	0.407	0.536	0.0251	0.0232
Min	54.6	59.7	23,079	0.319	0.492	0.0249	0.0226
Avg	**55.5**	**60.3**	**25,022**	**0.355**	**0.508**	**0.0250**	**0.0230**
St. Dev.	0.9	0.9	2,112	0.046	0.024	0.0001	0.0004

[a]Results based on measured base metal dimensions

F_y = 55.5 ksi True Yield Point
F_u = 60.3 ksi
F_u/F_y = 1.09
% Elong. At Break = 25.3%

SUMMARY DATA

ASTM A0370-17 Standard Test Methods and Definitions for Mechanical Testing of Steel Products Section 1-14 Tension

Client: LUX Architectural Products
Job Number: LAPA020626-30
Test Location: *ICC-ES*
Nappanee, Indiana

Performed By: Adam Polhemus
Witnessed By: Scott Stelter

General:
Date Received: 1/30/2026
Construction Date: 5/4/2026
Constructed By: Adam Polhemus
Test Date: 5/6/2026

Apparatus: Asset No.
Test Frame: 00140
Load Cell: 00151
Extensometer: 00141
Calipers: 00643
Ball Tip Micrometer: 02339

Ambient Conditions:
Ambient Temp.: 71.7˚ F
Ambient R.H.: 47.6% R.H.
Sensor Asset No.: 00725

Product Description:
Test Series/ Description: ASTM A370 - Material from LAPA020626-30 ASTM E1592, Specimen #172282
Material Description: Neo Lumber, Galvanized Fin Support (labeled "B") Grade: Not provided
Manufacturer/Source: LUX Architectural Products Surface/Coating: Not provided
Orientation to Coil: Parallel

Nominal Specimen Properties:

Yield:	0.0	ksi.	Date Received:	1/30/2026
Thickness:	0.0378	in.	Parent Spec. No.:	172016
Width:	0.5	in.	Specimen Type:	Sheet-Type
O/A Length:	8.0	in.	Fabrication Date:	5/4/2026
Gage Length:	2.0	in.		

SUMMARY DATA

ASTM A0370-17 Standard Test Methods and Definitions for Mechanical Testing of Steel Products Section 1-14 Tension

Test Data:

Test Date:	5/6/2026		Ambient Temp.:	71.7	deg. F
Average Actual Stress Rate:	56,000	psi/min.	Ambient RH:	47.6	%
Gage Length:	2.0	in.			

Table A1: Tensile Test Results[a]

Specimen No.	Yield Stress F_y (ksi)	Tensile Strength F_u (ksi)	Elastic Modulus E (ksi)	Yield Point Elongation YPE (%)	Elong. at Break (in.)	Coated Thickness (in.)	Un-Coated Thickness (in.)
173209	43.8	57.6	22,639	0.236	0.644	0.0378	0.0361
173210	43.9	57.5	25,434	0.189	0.602	0.0379	0.0361
173211	43.7	57.3	26,492	0.196	0.629	0.0378	0.0362
Max	43.9	57.6	26,492	0.236	0.644	0.0379	0.0362
Min	43.7	57.3	22,639	0.189	0.602	0.0378	0.0361
Avg	**43.8**	**57.5**	**24,855**	**0.207**	**0.625**	**0.0379**	**0.0361**
St. Dev.	0.1	0.2	1,990	0.025	0.021	0.0000	0.0001

[a]Results based on measured base metal dimensions

F_y = 43.8 ksi True Yield Point
F_u = 57.5 ksi
F_u/F_y = 1.31
% Elong. At Break = 31.2%

SUMMARY DATA

ASTM A0370-17 Standard Test Methods and Definitions for Mechanical Testing of Steel Products Section 1-14 Tension

Client: LUX Architectural Products
Job Number: LAPA020626-30
Test Location: *ICC-ES*
Nappanee, Indiana

Performed By: Adam Polhemus
Witnessed By: Scott Stelter

General:
Date Received: 1/30/2026
Construction Date: 5/4/2026
Constructed By: Adam Polhemus
Test Date: 5/6/2026

Apparatus: Asset No.
Test Frame: 00140
Load Cell: 00151
Extensometer: 00141
Calipers: 00643
Ball Tip Micrometer: 02339

Ambient Conditions:
Ambient Temp.: 71.9˚ F
Ambient R.H.: 47.4% R.H.
Sensor Asset No.: 00725

Product Description:
Test Series/ Description: ASTM A370 - Material from LAPA020626-30 ASTM E1592, Specimen #172282
Material Description: Neo Lumber, Fin Support (Labeled "B"), Steel
Grade: Not provided
Manufacturer/Source: LUX Architectural Products
Surface/Coating: Not provided
Orientation to Coil: Parallel

Nominal Specimen Properties:

Yield:	0.0	ksi.
Thickness:	0.025	in.
Width:	0.5	in.
O/A Length:	8.0	in.
Gage Length:	2.0	in.

Date Received: 1/30/2026
Parent Spec. No.: 172018
Specimen Type: Sheet-Type
Fabrication Date: 5/4/2026

SUMMARY DATA

ASTM A0370-17 Standard Test Methods and Definitions for Mechanical Testing of Steel Products Section 1-14 Tension

Test Data:

Test Date:	5/6/2026		Ambient Temp.:	71.9	deg. F
Average Actual Stress Rate:	50,000	psi/min.	Ambient RH:	47.4	%
Gage Length:	2.0	in.			

Table A1: Tensile Test Results[a]

Specimen No.	Yield Stress F_y (ksi)	Tensile Strength F_u (ksi)	Elastic Modulus E (ksi)	Yield Point Elongation YPE (%)	Elong. at Break (in.)	Coated Thickness (in.)	Un-Coated Thickness (in.)
173212	59.3	63.7	25,420	0.388	0.389	0.0252	0.0221
173213	58.7	63.2	26,314	0.334	0.478	0.0252	0.0222
173214	56.5	61.1	23,731	0.354	0.532	0.0254	0.0229
Max	59.3	63.7	26,314	0.388	0.532	0.0254	0.0229
Min	56.5	61.1	23,731	0.334	0.389	0.0252	0.0221
Avg	**58.2**	**62.7**	**25,155**	**0.359**	**0.466**	**0.0253**	**0.0224**
St. Dev.	1.5	1.4	1,311	0.028	0.072	0.0001	0.0004

[a]Results based on measured base metal dimensions

F_y = 58.2 ksi True Yield Point
F_u = 62.7 ksi
F_u/F_y = 1.08
% Elong. At Break = 23.2%

ASTM E1592-05(2017) Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference
Results Summary

Client:
Job Number: LAPA020626-30

Specimen Description:
Panel Manufacturer: *LUX Architectural Products*
Trade Name/Description: *Neo Lumber*

Support Conditions: *118.5-in. oc*
Purlin Description: *#2 SPF Lumber KD-HT, Mill #104*

Table A1: Overall Test Results

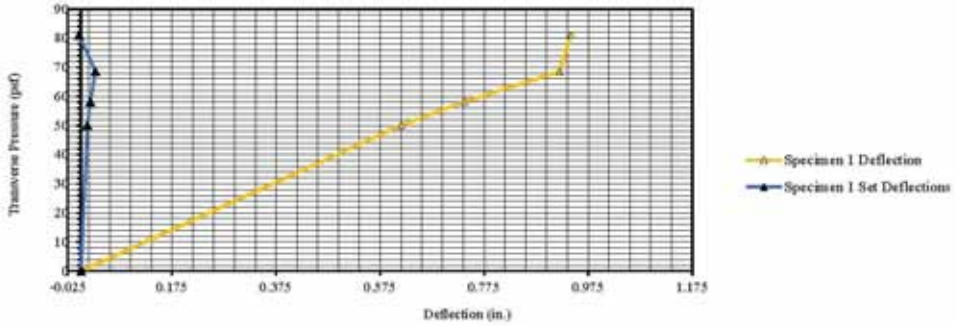
Specimen	Specimen No.	Specimen Pressure (in-use)*	Ultimate Pressure (psf)
1	172282	*Outward*	81.1
2			
3			
		Average	**81.1**

* Pressure differential across specimen under normal installation conditions.

Notes:
Specimen 172282: Support internally with 20ga. "C" channel
Specimen :
Specimen :

Average Measured Panel Thickness (Coated): 0.0251-in.

Dial Gauge Locations:
Gauge A: Along Center (End Span)
Gauge B: Along Center (Mid-Span)
Gauge C: Along Center (End Span)
Gauge D: Adjacent to Center, Mid-Span (End Span)
Gauge E: Adjacent to Center, Mid-Span (Mid-Span)
Gauge F: Adjacent to Center, Mid-Span (End Span)
Gauge G: n/a



Note: Support deflections were subtracted from the mid-span deflection, deflections graphed are from gauges A, B, and C

Transverse Pressure vs. Deflection

ASTM E1592-05(2017) Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference
Specimen 1

Client: LUX Architectural Products
Job Number: LAPA020626-30
Test Method: ASTM E1592-05(2017)

Performed By: Todd Ferguson
Witnessed By: Scott Stelter

General:
Specimen No.: 172282
Received: 1/30/2026
Fabrication Date: 2/24/2026
Test Date: 2/26/2026
Test Location: ICC-ES
Nappanee, Indiana

Apparatus: Asset No.
Manometer: 02180
Vacuum Table/Chamber : 02170
Timing Device: 02498

Ambient Conditions:
Ambient Temp.: 75.9 deg. F
Ambient R.H.: 19.3%
Senor Asset No.: 00576

Loading Conditions:
Test Variable(s): *Support internally with 20ga. "C" channel*
Anticipated Ultimate Load (UL) : psf
Specimen Pressure (in-use): Outward
Loads Applied in Direction of Gravity: NO
Support Conditions: 118.5-in. oc

Specimen Sealing Method:
Panel and Sealing Method Observed By: Scott Stelter
Tape and Film were used to seal the specimen against air leakage. It is the Project Manager/Engineer's judgement that the sealing method did not influence the test results

Table A2: Specimen 1 Test Data

Load Stages[b]	Applied Pressure (psf)	Duration of Load (seconds)	Member Deflection Readings[a] Gauge A	Gauge B	Gauge C	Gauge D	Gauge E	Gauge F	Gauge G
			02365	02185	02184	02187	02188	02189	--
0 (Ref)	--	--	--	--	--	--	--	--	--
Pre-Load:	0.0	160	0.000	0.000	0.000	0.000	0.000	0.000	--
1/3 ~ UL	50.1	61	0.222	0.766	0.128	0.099	0.101	0.055	--
0 (Ref)	--	--	--	--	--	--	--	--	--
Pre-Load:	0.0	271	0.013	0.018	0.003	0.009	0.013	0.012	--
1/2 ~UL	58.2	63	0.315	0.960	0.176	0.129	0.118	0.061	--
0 (Ref)	--	--	--	--	--	--	--	--	--
Pre-Load:	0.0	119	0.036	0.037	0.009	0.022	0.024	0.019	--
2/3 ~UL	68.7	63	0.416	1.199	0.240	0.190	0.186	0.083	--
0 (Ref)	--	--	--	--	--	--	--	--	--
Pre-Load:	0.0	300	0.056	0.059	0.019	0.041	0.040	0.026	--
5/6 ~UL	81.1	73	1.351	2.087	1.064	0.223	0.238	0.129	--
0 (Ref)	--	--	--	--	--	--	--	--	--
Pre-Load:	0.0	316	0.253	0.157	0.088	0.059	0.061	0.044	--
~UL	--	--	--	--	--	--	--	--	--
0 (Ref)	--	--	--	--	--	--	--	--	--
Pre-Load:	--	--	--	--	--	--	--	--	--
Prev. + 1/6 ~UL	--	--	--	--	--	--	--	--	--
0 (Ref)	--	--	--	--	--	--	--	--	--
Pre-Load:	--	--	--	--	--	--	--	--	--

[a] See page 1 for dial gauge location descriptions.
[b] ~UL = Anticipated Ultimate Load, Prev. = Previous Load

Ultimate Uniform Load: 81.1 psf
Failure Mode: *Disengagement of the interlocking members, "Board". (Note: Possible start of disengagement after intial load, as well as noises heard at 2nd load of 45psf.)*

ASTM E1592-05(2017) Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference
Results Summary

Client: Lux Architectural Products
Job Number: LAPA020626-30

Specimen Description:
Panel Manufacturer: *LUX Architectural Products*
Trade Name/Description: *Neo Lumber*

Support Conditions: *118.5-in. oc*
Purlin Description: *#2 SPF Lumber KD-HT, Mill #104*

Table A1: Overall Test Results

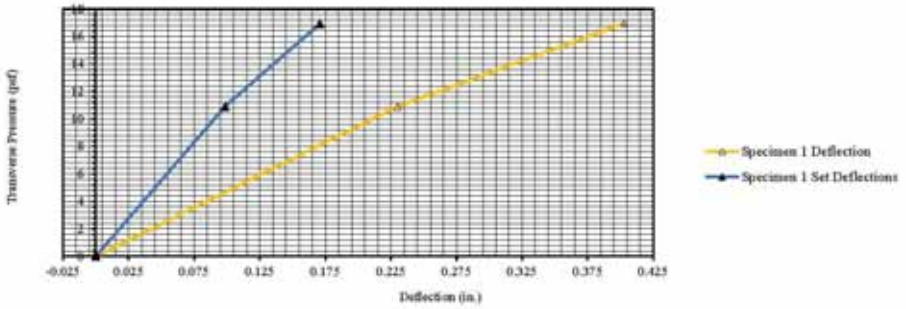
Specimen	Specimen No.	Specimen Pressure (In-use)*	Ultimate Pressure (psf)
1	172297	*Outward*	17.0
2			
3			
		Average	**17.0**

* Pressure differential across specimen under normal installation conditions.

Notes:
Specimen 172297: Unsupported internally
Specimen :
Specimen :

Average Measured Panel Thickness (Coated): 0.0252-in.

Dial Gauge Locations:
Gauge A: Along Center Rib (End Span)
Gauge B: Along Center Rib (Mid-Span)
Gauge C: Along Center Rib (End Span)
Gauge D: Adjacent to Center Rib, Mid-Pan (End Span)
Gauge E: Adjacent to Center Rib, Mid-Pan (Mid-Span)
Gauge F: Adjacent to Center Rib, Mid-Pan (End Span)
Gauge G: n/a



Note: Support deflections were subtracted from the mid-span deflection, deflections graphed are from gauges A, B, and C

Transverse Pressure vs. Deflection

ASTM E1592-05(2017) Standard Test Method for Structural Performance of Sheet Metal Roof and Siding Systems by Uniform Static Air Pressure Difference
Specimen 1

Client: Lux Architectural Products
Job Number: LAPA020626-30
Test Method: ASTM E1592-05(2017)

Performed By: Todd Ferguson
Witnessed By: Scott Stelter

General:
Specimen No.: 172297
Received: 1/30/2026
Fabrication Date: 2/25/2026
Test Date: 2/27/2026
Test Location: ICC-ES
Nappanee, Indiana

Apparatus: Asset No.
Manometer: 02180
Vacuum Table/Chamber : 02170
Timing Device: 02498

Ambient Conditions:
Ambient Temp.: 73.7 deg. F
Ambient R.H.: 28.1%
Senor Asset No.: 00576

Loading Conditions:
Test Variable(s): *Unsupported internally*
Anticipated Ultimate Load (UL) : psf
Specimen Pressure (in-use): Outward
Loads Applied in Direction of Gravity: NO
Support Conditions: 118.5-in. oc

Specimen Sealing Method:
Panel and Sealing Method Observed By: Scott Stelter
Tape and Film were used to seal the specimen against air leakage. It is the Project Manager/Engineer's judgement that the sealing method did not influence the test results

Table A2: Specimen 1 Test Data

Load Stages[b]	Applied Pressure (psf)	Duration of Load (seconds)	Member Deflection Readings[a] Gauge A 02365	Gauge B 02185	Gauge C 02184	Gauge D 02187	Gauge E 02188	Gauge F 02189	Gauge G --
0 (Ref)	--	--	--	--	--	--	--	--	--
Pre-Load:	0.0	0	0.000	0.000	0.000	0.000	0.000	0.000	--
Load	10.9	62	0.053	0.269	0.038	0.016	0.020	0.011	--
0 (Ref)	--	--	--	--	--	--	--	--	--
Pre-Load:	0.0	131	0.015	0.111	0.004	0.010	0.003	0.002	--
Load	17.0	1	0.096	0.473	0.079	0.031	0.043	0.021	--
0 (Ref)	--	--	--	--	--	--	--	--	--
Pre-Load:	0.0	--	0.021	0.191	0.011	0.018	0.007	0.004	--
2/3 ~UL	--	--	--	--	--	--	--	--	--
0 (Ref)	--	--	--	--	--	--	--	--	--
Pre-Load:	--	--	--	--	--	--	--	--	--
5/6 ~UL	--	--	--	--	--	--	--	--	--
0 (Ref)	--	--	--	--	--	--	--	--	--
Pre-Load:	--	--	--	--	--	--	--	--	--
~UL	--	--	--	--	--	--	--	--	--
0 (Ref)	--	--	--	--	--	--	--	--	--
Pre-Load:	--	--	--	--	--	--	--	--	--
Prev. + 1/6 ~UL	--	--	--	--	--	--	--	--	--
0 (Ref)	--	--	--	--	--	--	--	--	--
Pre-Load:	--	--	--	--	--	--	--	--	--

[a] See page 1 for dial gauge location descriptions.
[b] ~UL = Anticipated Ultimate Load, Prev. = Previous Load

Ultimate Uniform Load: 17 psf
Failure Mode: *Disengagement of the interlocking members, "Board" on the way to 2nd load of 20psf.*

Appendix D - Revision Log

Rev. #	Date	Page(s)	Revision(s)
0	09/04/2026	32	Original test report issue