

SUMMARY DATA
ASTM E0330-02, -02(2010), and -14
**Standard Test Method for Structural Performance of Exterior Windows, Doors,
 Skylights and Curtains Walls by Uniform Static Air Pressure Difference (Procedure B)**

General:

Client: Arcitell, LLC
 Job Number: AL060920-35

Test Location: ICC NTA
 Nappanee, Indiana

Specimen Description:

Date Received: 9/28/2020
 General Construction 2 x 4 SPF #2 Framing at 24-in. on center. 7/16 x 48 x 60-in. 24/16 Span Rated OSB fastened to framing with
 Description: 0.113 x 2-in. Smooth Shank Nails at 6/12 with 3/8-in. edge distance. Qora Cladding to sheathing fastened with
 #8 x 1-5/8-in. Self Drilling Lath Screw (4/panel) into sheathing only. 3 Qora cladding panels were used per
 specimen.

Test Parameters:

Specified Maximum Test Load: 12 psf
 Number of Load Increments: 6
 Support Conditions: 44.5-in. on center fastening between cladding and sheathing
 Chamber Pressure Differential: Negative
 Specimen Pressure (in-use): Negative

Table A1: Overall Test Results

Average Ultimate Pressure (psf)	Average Deflections, Gauges B-(A+C)/2									
	Increment 1 (in.)	Increment 2 (in.)	Increment 3 (in.)	Increment 4 (in.)	Increment 5 (in.)	Increment 6 (in.)	Increment 7 (in.)	Increment 8 (in.)	Increment 9 (in.)	Increment 10 (in.)
44	0.019	0.047	0.087	0.138	0.189	0.246	N/A	N/A	N/A	N/A

Test Modification(s): Per ICC-ES AC92 Section 4.7, test assemblies were constructed smaller than 4-ft x 8-ft since the panels spanned between framing members without bearing on the top and bottom headers. Load deflection readings were taken at the midpoint of the span on the center panel.

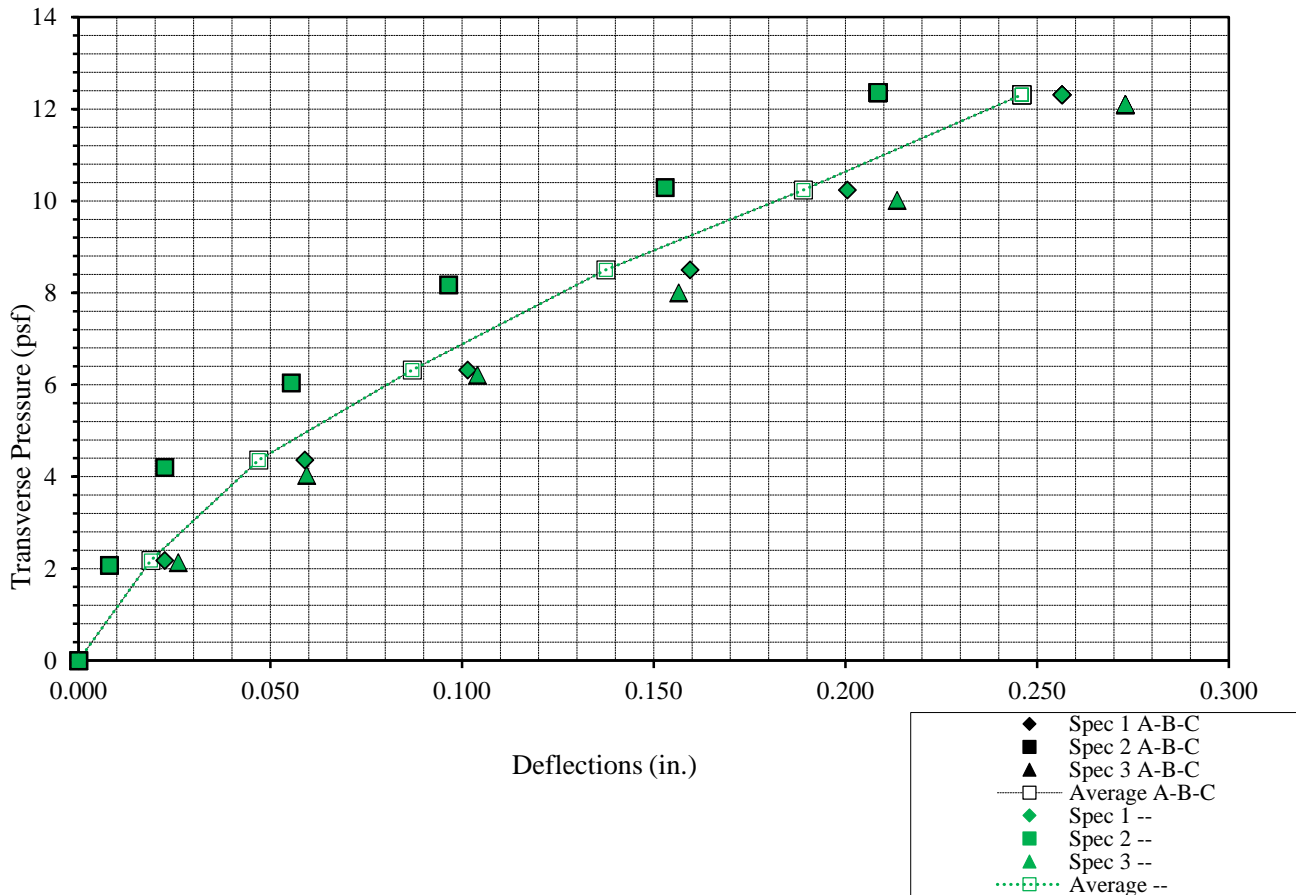
Pressures at Deflection Limits ^a										
For Span A-B-C, 44.5-in.						For Span --, -in.				
Limit (L=Span)	Deflection (in.)	Pressure (psf)				Deflection (in.)	Pressure (psf)			
		Spec. 1	Spec. 2	Spec. 3	Average		Spec. 1	Spec. 2	Spec. 3	Average
L/600	0.074	5.1	7.0	4.7	5.6		0.0	0.0	0.0	0.0
L/480	0.093	5.9	8.0	5.7	6.5		0.0	0.0	0.0	0.0
L/360	0.124	7.2	9.2	6.9	7.7		0.0	0.0	0.0	0.0
L/240	0.185	9.6	11.5	9.0	10.0		0.0	0.0	0.0	0.0
L/180	0.247	12.0	--	11.2	--		0.0	0.0	0.0	0.0
L/120	0.371	--	--	--	--		0.0	0.0	0.0	0.0
L/90	0.494	--	--	--	--		0.0	0.0	0.0	0.0

^a Interpolated from test data. Based on Net Deflection calculated as dial gauges B-(A+C)/2 or B-(D+E)/2.

This summary contains only data arrived at after employing the specific test procedures listed herein. This summary data might not include all reporting requirements of the test standard. The data herein does not constitute a recommendation for, endorsement of, or certification of the product or material tested. ICC NTA makes no warranty, expressed or implied, except that the test has been performed, and data prepared, based upon the specimen furnished 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 NTA 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 NTA has no control. ICC NTA has issued this data summary for the exclusive use of the client to whom it is addressed. Any use or duplication of this summary shall not be made without their consent. This summary shall only be reproduced in its entirety.

SUMMARY DATA
ASTM E0330-02, -02(2010), and -14
Standard Test Method for Structural Performance of Exterior Windows, Doors,
Skylights and Curtains Walls by Uniform Static Air Pressure Difference (Procedure B)

Pressure vs. Deflection



Net Deflections are Graphed (mid-span minus supports)

Apparatus: Asset No.
 Moisture Meter: 00830
 Balance: n/a
 Length Measure: 01384

Specimen	Ultimate Pressure (psf)	% Diff. from Av. (%)
1	54	24.5
2	38	-12.7
3	38	-11.8
Average:	44	--

Dial Gauge Locations:

Gauge A: Edge stud at mid-height
 Gauge B: Adjacent to center stud at mid-height on panel
 Gauge C: Edge stud at mid-height
 Gauge D: n/a
 Gauge E: n/a
 Gauge F: n/a

This summary contains only data arrived at after employing the specific test procedures listed herein. This summary data might not include all reporting requirements of the test standard. The data herein does not constitute a recommendation for, endorsement of, or certification of the product or material tested. ICC NTA makes no warranty, expressed or implied, except that the test has been performed, and data prepared, based upon the specimen furnished 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 NTA 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 NTA has no control. ICC NTA has issued this data summary for the exclusive use of the client to whom it is addressed. Any use or duplication of this summary shall not be made without their consent. This summary shall only be reproduced in its entirety.

SUMMARY DATA
ASTM E0330-02, -02(2010), and -14
Standard Test Method for Structural Performance of Exterior Windows, Doors,
Skylights and Curtains Walls by Uniform Static Air Pressure Difference (Procedure B)

Specimen 1

General:	Ambient Conditions:	Apparatus:	Asset No.
Specimen No.: 129911	Ambient Temp.: 69.9 deg. F	Manometer:	2179, 2180
Test Date: 2/8/2021 4:30 PM	Ambient R.H.: 17.4%	Vacuum Table:	02170
Performed By: Todd Ferguson	Sensor Asset No.: 00576	Timing Device:	02447
Witnessed By: Lucas Ward		Deflection Gauge A:	02365
		Deflection Gauge B:	02185
		Deflection Gauge C:	02186
		Deflection Gauge D:	--
		Deflection Gauge E:	--
		Deflection Gauge F:	--

Loading Conditions:

Specified Maximum Test Load: 12 psf
 Chamber Pressure Differential: Negative
 Specimen Pressure (in-use): Negative
 Siding Material: 0 psf
 Support Conditions: 44.5-in. on center fastening between cladding and sheathing
 Test Variable(s): *None*

Table A2: Specimen 1 Test Data

Load Stages	Applied Pressure (psf)	Member Deflection Readings ^a (in.)						Net Deflection B-(A+C)/2	Net Deflection E-(D+F)/2	Stage Duration (mm:ss)
		Gauge A	Gauge B	Gauge C	Gauge D	Gauge E	Gauge F			
Pre-Load	6.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0:12
(REF)	0.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	4:19
Increment 1	2.2	0.008	0.030	0.007	--	--	--	0.023	--	0:21
(REF)	0.0	0.000	0.001	0.000	--	--	--	0.001	--	3:26
Increment 2	4.4	0.021	0.078	0.017	--	--	--	0.059	--	0:21
(REF)	0.0	0.001	0.001	0.001	--	--	--	0.000	--	4:01
Increment 3	6.3	0.038	0.135	0.029	--	--	--	0.102	--	0:19
(REF)	0.0	0.001	0.002	0.001	--	--	--	0.001	--	2:57
Increment 4	8.5	0.058	0.209	0.041	--	--	--	0.160	--	0:17
(REF)	0.0	0.005	0.007	0.001	--	--	--	0.004	--	3:11
Increment 5	10.2	0.067	0.259	0.050	--	--	--	0.201	--	0:18
(REF)	0.0	0.006	0.010	0.001	--	--	--	0.007	--	3:06
Increment 6	12.3	0.081	0.327	0.060	--	--	--	0.257	--	0:18
(REF)	0.0	0.007	0.013	0.001	--	--	--	0.009	--	3:05
Increment 7	--	--	--	--	--	--	--	--	--	--
(REF)	--	--	--	--	--	--	--	--	--	--
Increment 8	--	--	--	--	--	--	--	--	--	--
(REF)	--	--	--	--	--	--	--	--	--	--
Increment 9	--	--	--	--	--	--	--	--	--	--
(REF)	--	--	--	--	--	--	--	--	--	--
Increment 10	--	--	--	--	--	--	--	--	--	--
(REF)	--	--	--	--	--	--	--	--	--	--

^a See page 1 for dial gauge location descriptions.

Ultimate Uniform Pressure: 54 psf Duration of Specified Maximum Pressure: 17 seconds
 Failure Mode: *Fastener withdrawal at one side of center panel, and bottom (2) screws of top panel.*

Observations during Test: None

Tape Use: *Tape and film were used to seal the specimen.*
 Tape Influence: *The tape and or film did not influence the test results.*

This summary contains only data arrived at after employing the specific test procedures listed herein. This summary data might not include all reporting requirements of the test standard. The data herein does not constitute a recommendation for, endorsement of, or certification of the product or material tested. ICC NTA makes no warranty, expressed or implied, except that the test has been performed, and data prepared, based upon the specimen furnished 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 NTA 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 NTA has no control. ICC NTA has issued this data summary for the exclusive use of the client to whom it is addressed. Any use or duplication of this summary shall not be made without their consent. This summary shall only be reproduced in its entirety.

SUMMARY DATA
ASTM E0330-02, -02(2010), and -14
Standard Test Method for Structural Performance of Exterior Windows, Doors,
Skylights and Curtains Walls by Uniform Static Air Pressure Difference (Procedure B)

Specimen 2

General:	Ambient Conditions:	Apparatus:	Asset No.
Specimen No.: 129912	Ambient Temp.: 69.9 deg. F	Manometer:	2179, 2180
Test Date: 2/9/2021 9:08 AM	Ambient R.H.: 18%	Vacuum Table:	02170
Performed By: Todd Ferguson	Sensor Asset No.: 00576	Timing Device:	02447
Witnessed By: Lucas Ward		Deflection Gauge A:	02365
		Deflection Gauge B:	02185
		Deflection Gauge C:	02186
		Deflection Gauge D:	--
		Deflection Gauge E:	--
		Deflection Gauge F:	--

Loading Conditions:

Specified Maximum Test Load: 12 psf
 Chamber Pressure Differential: Negative
 Specimen Pressure (in-use): Negative
 Siding Material: 0 psf
 Support Conditions: 44.5-in. on center fastening between cladding and sheathing
 Test Variable(s): *None*

Table A3: Specimen 2 Test Data

Load Stages	Applied Pressure (psf)	Member Deflection Readings ^a (in.)						Net Deflection B-(A+C)/2	Net Deflection E-(D+F)/2	Stage Duration (mm:ss)
		Gauge A	Gauge B	Gauge C	Gauge D	Gauge E	Gauge F			
Pre-Load (REF)	6.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0:13
	0.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3:01
Increment 1 (REF)	2.1	0.010	0.018	0.010	--	--	--	0.008	--	0:27
	0.0	0.000	0.001	0.000	--	--	--	0.001	--	2:58
Increment 2 (REF)	4.2	0.027	0.046	0.020	--	--	--	0.023	--	0:19
	0.0	0.000	0.001	0.001	--	--	--	0.001	--	2:56
Increment 3 (REF)	6.0	0.042	0.091	0.029	--	--	--	0.056	--	0:18
	0.0	0.001	0.000	0.000	--	--	--	-0.001	--	3:11
Increment 4 (REF)	8.2	0.056	0.144	0.039	--	--	--	0.097	--	0:17
	0.0	0.002	0.003	0.000	--	--	--	0.002	--	3:14
Increment 5 (REF)	10.3	0.069	0.212	0.049	--	--	--	0.153	--	0:20
	0.0	0.003	0.008	0.000	--	--	--	0.007	--	3:04
Increment 6 (REF)	12.4	0.082	0.279	0.059	--	--	--	0.209	--	0:18
	0.0	0.003	0.008	0.000	--	--	--	0.007	--	2:42
Increment 7 (REF)	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Increment 8 (REF)	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Increment 9 (REF)	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Increment 10 (REF)	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--

^a See page 1 for dial gauge location descriptions.

Ultimate Uniform Pressure: 38 psf Duration of Specified Maximum Pressure: 17 seconds
 Failure Mode: *Fastener withdrawal at center panel.*

Observations during Test: None

Tape Use: *Tape and film were used to seal the specimen.*
 Tape Influence: *The tape and or film did not influence the test results.*

This summary contains only data arrived at after employing the specific test procedures listed herein. This summary data might not include all reporting requirements of the test standard. The data herein does not constitute a recommendation for, endorsement of, or certification of the product or material tested. ICC NTA makes no warranty, expressed or implied, except that the test has been performed, and data prepared, based upon the specimen furnished 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 NTA 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 NTA has no control. ICC NTA has issued this data summary for the exclusive use of the client to whom it is addressed. Any use or duplication of this summary shall not be made without their consent. This summary shall only be reproduced in its entirety.

SUMMARY DATA
ASTM E0330-02, -02(2010), and -14
Standard Test Method for Structural Performance of Exterior Windows, Doors,
Skylights and Curtains Walls by Uniform Static Air Pressure Difference (Procedure B)

Specimen 3

General:	Ambient Conditions:	Apparatus:	Asset No.
Specimen No.: 129913	Ambient Temp.: 71.3 deg. F	Manometer:	2179, 2180
Test Date: 2/9/2021 11:22 AM	Ambient R.H.: 18.2%	Vacuum Table:	02170
Performed By: Todd Ferguson	Sensor Asset No.: 00576	Timing Device:	02447
Witnessed By: Lucas Ward		Deflection Gauge A:	02365
		Deflection Gauge B:	02185
		Deflection Gauge C:	02186
		Deflection Gauge D:	--
		Deflection Gauge E:	--
		Deflection Gauge F:	--

Loading Conditions:

Specified Maximum Test Load: 12 psf
 Chamber Pressure Differential: Negative
 Specimen Pressure (in-use): Negative
 Siding Material: 0 psf
 Support Conditions: 44.5-in. on center fastening between cladding and sheathing
 Test Variable(s): *None*

Table A4: Specimen 3 Test Data

Load Stages	Applied Pressure (psf)	Member Deflection Readings ^a (in.)						Net Deflection B-(A+C)/2	Net Deflection E-(D+F)/2	Stage Duration (mm:ss)
		Gauge A	Gauge B	Gauge C	Gauge D	Gauge E	Gauge F			
Pre-Load (REF)	6.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0:13
	0.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2:47
Increment 1 (REF)	2.1	0.013	0.037	0.009	--	--	--	0.026	--	0:17
	0.0	0.000	0.001	0.001	--	--	--	0.001	--	2:33
Increment 2 (REF)	4.0	0.028	0.086	0.025	--	--	--	0.060	--	0:19
	0.0	0.000	0.000	0.001	--	--	--	-0.001	--	3:34
Increment 3 (REF)	6.2	0.042	0.160	0.070	--	--	--	0.104	--	0:14
	0.0	0.000	0.000	0.000	--	--	--	0.000	--	3:50
Increment 4 (REF)	8.0	0.055	0.228	0.088	--	--	--	0.157	--	0:16
	0.0	0.000	0.005	0.003	--	--	--	0.004	--	3:00
Increment 5 (REF)	10.0	0.068	0.299	0.103	--	--	--	0.214	--	0:16
	0.0	0.000	0.009	0.004	--	--	--	0.007	--	3:54
Increment 6 (REF)	12.1	0.082	0.373	0.118	--	--	--	0.273	--	0:15
	0.0	0.001	0.016	0.007	--	--	--	0.012	--	2:45
Increment 7 (REF)	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Increment 8 (REF)	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Increment 9 (REF)	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
Increment 10 (REF)	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--

^a See page 1 for dial gauge location descriptions.

Ultimate Uniform Pressure: 38 psf Duration of Specified Maximum Pressure: 14 seconds
 Failure Mode: *Fastener withdrawal at center panel.*

Observations during Test: None

Tape Use: *Tape and film were used to seal the specimen.*

Tape Influence: *The tape and or film did not influence the test results.*

This summary contains only data arrived at after employing the specific test procedures listed herein. This summary data might not include all reporting requirements of the test standard. The data herein does not constitute a recommendation for, endorsement of, or certification of the product or material tested. ICC NTA makes no warranty, expressed or implied, except that the test has been performed, and data prepared, based upon the specimen furnished 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 NTA 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 NTA has no control. ICC NTA has issued this data summary for the exclusive use of the client to whom it is addressed. Any use or duplication of this summary shall not be made without their consent. This summary shall only be reproduced in its entirety.