

**AAMA/WDMA/CSA  
TEST REPORT**

**Rendered to:**

**WOODHARBOR DOORS AND CABINETS**

**SERIES/MODEL: Woodharbor Exterior Newport EN211 Inswing Door**  
**PRODUCT TYPE: Transom Muller Over Side Hinged Door with Integral Sidelites**

<b>Title</b>	<b>Summary of Results</b>
AAMA/WDMA/CSA 101/I.S.2/A440-05	LW SHD-LC50 2350 x 3156 (92 x 124)
AAMA/WDMA/CSA 101/I.S.2/A440-08	Class LC-PG50 2350 x 3156 (92 x 124)- LW-SHD
Design Pressure	2400 Pa (50.0 psf)
Air Infiltration	0.15 L/s/m <sup>2</sup> (0.03 cfm/ft <sup>2</sup> )
Water Penetration Resistance Test Pressure	0 Pa (0 psf)
Uniform Load Structural Test Pressure	±3600 Pa (±75.0 psf)
Forced Entry Resistance	Pass

**Test Completion Date:** 09/10/09

Reference must be made to Report No. 94118.01-201-44, dated 10/23/09 for complete test specimen description and data.



## AAMA/WDMA/CSA TEST REPORT

Rendered to:

WOODHARBOR DOORS AND CABINETRY  
3277 Ninth Street SW  
Mason City, Iowa 50401

Report No.: 94118.01-201-44  
Test Dates: 08/21/09  
Through: 09/10/09  
Report Date: 10/23/09  
Test Record Retention Date: 08/21/13

**Project Summary:** Architectural Testing, Inc. was contracted by Woodharbor Doors and Cabinetry to perform testing on a Series/Model Woodharbor Exterior Newport EN211 Inswing Door, Transom Muller Over Side Hinged Door with Integral Sidelites at the Architectural Testing, Inc. test facility in St. Paul, Minnesota. The sample tested successfully met the performance requirements for LW SHD-LC50 2350 x 3156 (92 x 124) and Class LC-PG50 2350 x 3156 (92 x 124)-LW-SHD ratings. Test specimen description and results are reported herein. The sample was provided by the client.

**Test Specification:** The test specimen was evaluated in accordance with:

AAMA/WDMA/CSA 101/I.S.2/A440-08, *NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights.*

AAMA/WDMA/CSA 101/I.S.2/A440-05, *Standard/Specification for Windows, Doors, and Unit Skylights.*

**Test Specimen Description:**

**Series/Model:** Woodharbor Exterior Newport EN211 Inswing Door

**Product Type:** Transom Muller Over Side Hinged Door with Integral Sidelites

**Overall Size:** 2350 mm (92-1/2") wide by 3156 mm (124-1/4") high

**Transom Size:** 2350 mm (92-1/2") wide by 648 mm (25-1/2") high

**Transom Daylight Opening Size:** 2273 mm (89-1/2") wide by 565 mm (22-1/4") high

**Test Specimen Description: (Continued)**

**Door Panel Size:** 1010 mm (39-3/4") wide by 2445 mm (96-1/4") high

**Door Panel Daylight Opening Size:** 711 mm (28") wide by 1000 mm (39-3/8") high

**Sidelight Panel Sizes (2):** 610 mm (24") wide by 2432 mm (95-3/4") high

**Left Sidelight Daylight Opening:** 457 mm (18") wide by 457 mm (18") high

**Right Sidelight Daylight Opening:** 457 mm (18") wide by 2118 mm (83-3/8") high

**Overall Area:** 7.4 m<sup>2</sup> (79.7 ft<sup>2</sup>)

**Finish:** Interior and exterior wood was painted brown.

**Door and Sidelite Frame Construction:** The frame was comprised of finger jointed wood and CPVC reinforced aluminum sill. Head jamb to jamb corners were coped, butted, sealed with a foam gasket and secured with three #6 x 1-5/8" screws. The jamb to sill corners were coped, butted, sealed with a foam gasket and secured with three #6 x 1-5/8" screws. Integral wood mullions were coped and secured through the head and sill with three #6 x 1-5/8" screws.

**Door and Sidelite Panel Construction:** The panel rails and stiles consisted of an engineered wood core with laminated surfaces. Lower corners were coped, butted, and secured with three 1/2" x 4" hardwood dowels and glued corner. Upper corners were coped, butted, and secured with two 1/2" x 4" hardwood dowels and glued corner. Intermediate panel rails were coped, butted, and secured with two 1/2" x 4" hardwood dowels and glued corner. Sidelite panels were secured into place against a one sided foam tape secured through the frame with #6 x 2" screws 102 mm (4") from each end and spaced 203 mm (8") to 559 mm (22") to 660 mm (26") on center

**Weatherstripping:**

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Door sweep	1 Row	Operable panel bottom rail
Vinyl wrapped foam leaf	1 Row	Jambs and head jamb

**Test Specimen Description:** (Continued)

**Door and Sidelite Glazing Details:** The panels unit utilized nominal 19.0 mm (3/4") insulating glass fabricated from two nominal 3.0 mm tempered sheets separated by a silicone foam spacer. The glazing was set from the interior against polyurethane backbedding. The interior was sealed with a latex caulk heel bead and secured with wood glazing stops secured with 19 mm (3/4") brad nails 25 mm (1") from each corner and spaced 102 mm (4") to 152 mm (6") on center.

**Door and Sidelite Insert Panels:** The flush panels consisted of an engineered wood core with laminated surfaces. The panels were set from the interior against polyurethane backbedding. The interior was sealed with a latex caulk heel bead and secured with wood glazing stops secured with 19 mm (3/4") brad nails 25 mm (1") from each corner and spaced 102 mm (4") to 152 mm (6") on center.

**Transom Frame Construction:** The frame was comprised of finger jointed wood. Corners were coped, butted, sealed with a foam gasket and secured with three #6 x 1-5/8" screws. An exterior glazing stop was sealed with polyurethane and secured with #4 x 1" screws blind screwed through the frame 51 mm (2") from each corner and spaced 203 mm (8") on center.

**Transom Glazing:** The transom utilized nominal 19.0 mm (3/4") insulating glass fabricated from two nominal 3.0 mm tempered sheets separated by a silicone foam spacer. The glazing was set from the interior against polyurethane backbedding. The interior was secured with wood glazing stops secured with 19 mm (3/4") brad nails 25 mm (1") from each corner and spaced 102 mm (4") to 152 mm (6") on center.

**Mullion:** The transom sill was mullied to the door assembly head jamb, sealed with two rows of polyurethane sealant, secured with #6 x 2" screws through the transom frame into the head jamb of the door assembly 51 mm (2") from each end and spaced 203 mm (8") on center. The interior was secured with 1" x 3/8" 8-fingered metal cleats 51 mm (2") from each end and spaced 203 mm (8") on center. A wood trim piece was secured over the seam on the interior with 3/4" brad nails at each end and spaced 152 mm (6") on center.

**Drainage:** No drainage was utilized

**Hardware:**

<u>Description</u>	<u>Quantity</u>	<u>Location</u>
Butt hinges	3	Operable panel stile to integral mullion spaced 330 mm (13"), 1270 mm (50") and 2210 mm (87") from the sill.
Lock handle and deadbolt	1	1092 mm (43") from the bottom of the panel

**Test Specimen Description:** (Continued)

**Installation:** The unit was installed within a wood test buck and secured with #8 x 3" screws through the jambs and head jamb 76 mm (3") and spaced 610 mm (24") on center. The unit was also secured with 2-1/2" brad nails spaced 51 mm (2") from each corner and 152 (6") to 203 mm (8") on center. The unit was sealed to the buck with silicone.

**Test Results:** The temperature during testing was 24°C (76°F). The results are tabulated as follows:

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
5.3.1.2	Force to Latch Side-Hinged Door System per ANSI/BHMA A156.2		
5.3.1.2	Force to latch	44 N (10.0 lbf)	65 N (15 lbf) max.
	Deadbolt	22 N (5.0 lbf)	100 N (22.5 lbf) max.
5.3.2.1	Air Leakage Resistance per ASTM E 283		
5.3.2.1	75 Pa (1.6 psf)	0.15 L/s/m <sup>2</sup> (0.03 cfm/ft <sup>2</sup> )	1.5 L/s/m <sup>2</sup> (0.3 cfm/ft <sup>2</sup> ) max.

*Note #1: The tested specimen meets (or exceeds) the performance levels specified in AAMA/WDMA/CSA 101/I.S.2/A440-05 for air leakage resistance.*

5.3.3.1	Water Penetration Resistance per ASTM E 331		
5.3.3.1	0 Pa (0 psf)	No leakage	No leakage
5.3.4.2	Uniform Load Deflection per ASTM E 330		See Note #2
5.3.4.2			
5.3.4.3	Uniform Load Structural per ASTM E 330		See Note #2
5.3.4.3			

*Note #2: The client opted to start at a pressure higher than the minimum required. Those results are listed under "Optional Performance".*

5.3.5	Forced Entry Resistance per AAMA 1304		
5.3.5	1330 N (300 lbf) point load		
	Top lock stile corner	No entry	No entry
	Bottom lock stile corner	No entry	No entry
	Above lock	No entry	No entry

**Test Results:** (Continued)

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
5.3.6.10	Operation/Cycling Performance per AAMA 920		
5.3.6.10	25,000	Meets as stated	Meets as stated
5.3.6.11	Vertical Loading Resistance per AAMA 925		
	Pre-load - 200 N (45 lbf)		
	Maximum vertical deflec.	0.3 mm (0.01")	N/A
	Test load - 675 N (150 lbf)		
	Maximum vertical deflec.	0.8 mm (0.03")	N/A
	Residual vertical deflec.	0.3 mm (0.01")	N/A
	Diagonal deformation	<0.3 mm (<0.01")	N/A
	Force to latch	44 N (10.0 lbf)	65 N (15 lbf) max.

Optional Performance

4.4.2.6	Uniform Load Deflection per ASTM E 330		
4.3.2.1	(Deflections were taken on the horizontal mullion)		
	(Loads were held for 10 seconds)		
	2400 Pa (50.0 psf) (positive)	16.3 mm (0.64")	See Note #3
	2400 Pa (50.0 psf) (negative)	16.3 mm (0.64")	See Note #3
	(Deflections were taken on the vertical mullion)		
	(Loads were held for 10 seconds)		
	2400 Pa (50.0 psf) (positive)	14.0 mm (0.55")	See Note #3
	2400 Pa (50.0 psf) (negative)	9.7 mm (0.38")	See Note #3
	(Deflections were taken on the panel lock stile)		
	(Loads were held for 10 seconds)		
	2400 Pa (50.0 psf) (positive)	77.7 mm (3.06")	See Note #3
	2400 Pa (50.0 psf) (negative)	24.6 mm (0.97")	See Note #3

**Note #3:** *The deflections reported are not limited by AAMA/WDMA/CSA 101/I.S.2/A440 for this product designation. The deflection data is recorded in this report for special code compliance and information only.*

**Test Results:** (Continued)

<u>Paragraph</u>	<u>Title of Test - Test Method</u>	<u>Results</u>	<u>Allowed</u>
<u>Optional Performance</u> (Continued)			
4.4.2.6	Uniform Load Structural per ASTM E 330		
4.3.2.1	(Permanent sets were taken on the horizontal mullion) (Loads were held for 10 seconds)		
	3600 Pa (75.0 psf) (positive)	0.8 mm (0.03")	9.1 mm (0.36") max.
	3600 Pa (75.0 psf) (negative)	<0.3 mm (<0.01")	9.1 mm (0.36") max.
	(Permanent sets were taken on the horizontal mullion) (Loads were held for 10 seconds)		
	3600 Pa (75.0 psf) (positive)	2.8 mm (0.11")	9.7 mm (0.38") max.
	3600 Pa (75.0 psf) (negative)	1.0 mm (0.04")	9.7 mm (0.38") max.
	(Permanent sets were taken on the panel lock stile) (Loads were held for 10 seconds)		
	3600 Pa (75.0 psf) (positive)	6.1 mm (0.24")	9.4 mm (0.37") max.
	3600 Pa (75.0 psf) (negative)	5.6 mm (0.22")	9.4 mm (0.37") max.

Tape and film were used to seal against air leakage during structural testing. In our opinion, the tape and film did not influence the results of the test.

**Drawing Reference:** The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimen reported herein.

**List of Official Observers:**

<u>Name</u>	<u>Company</u>
Mark Kroneman	Woodharbor Doors and Cabinetry
Al Nelson	Woodharbor Doors and Cabinetry
Tony D. Gavin	Architectural Testing, Inc.

Detailed drawings, data sheets, representative samples of test specimens, a copy of this report, or other pertinent project documentation will be retained by Architectural Testing, Inc. for a period of four years from the original test date. At the end of this retention period, such materials shall be discarded without notice and the service life of this report will expire.

Results obtained are tested values and were secured by using the designated test methods. If test specimen contains glazing, no conclusions of any kind regarding the adequacy or inadequacy of the glass in the test specimen can be made. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.


For ARCHITECTURAL TESTING, INC.



Digitally Signed by: Eric Schoenthaler

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Eric J. Schoenthaler  
Project Manager



Digitally Signed by: Daniel A. Johnson

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Daniel A. Johnson  
Director - Regional Operations

EJS/jb

Attachments (pages): This report is complete only when all attachments listed are included.

Appendix-A: Alteration Addendum (1)

Appendix-B: Drawings (6)

### Revision Log

<u>Rev. #</u>	<u>Date</u>	<u>Page(s)</u>	<u>Revision(s)</u>
0	10/23/09	N/A	Original report issue.

## **Appendix A**

### **Alteration Addendum**

*Note: No alterations were required.*