**PERFORMANCE TEST REPORT**

**Report No.**: H0140.01-109-44

**Rendered to**:

VELUX America LLC
Greenwood, South Carolina

**PRODUCT TYPE**: Curb Mounted Skylight
**SERIES/MODEL**: Specials Dome Skylight 0.118 Thickness PC Smooth/0.118 Thickness Prismatic

| Title | Summary of Results |
|---|---|
| Design Pressure | +1680 Pa (+35.09 psf) |
| Negative Design Pressure | -2160 Pa (-45.11 psf) |
| Air Infiltration | <0.1 L/s/m$^2$ (<0.01 cfm/ft$^2$) |
| Positive Uniform Load Structural Test Pressure | +3360 Pa (+70.18 psf) |
| Negative Uniform Load Structural Test Pressure | -4320 Pa (-90.23 psf) |

Reference must be made to Report No. H0140.01-109-44, dated 05/26/17 for complete test specimen description and detailed test results.

**1.0 Report Issued To**: VELUX America LLC
1418 Evans Pond Road
P.O. Box 5001
Greenwood, South Carolina 29648-5001

**2.0 Test Laboratory**: Architectural Testing, Inc., an Intertek company ("Intertek-ATI")
130 Derry Court
York, Pennsylvania 17406-8405
717-764-7700

**3.0 Project Summary**:

**3.1 Product Type**: Curb Mounted Skylight

**3.2 Series/Model**: Specials Dome Skylight 0.118 Thickness PC Smooth/0.118 Thickness Prismatic

**3.3 Compliance Statement**: Results obtained are tested values and were secured by using the designated test method(s). Test specimen description and results are reported herein.

**3.4 Test Date(s)**: 05/15/17 – 05/17/17

**3.5 Test Record Retention End Date**: All test records for this report will be retained until May 17, 2021.

**3.6 Test Location**: Intertek-ATI test facility in York, Pennsylvania.

**3.7 Test Specimen Source**: The test specimen(s) was provided by the client. Representative samples of the test specimen(s) will be retained by Intertek-ATI for a minimum of two years from the test completion date.

**3.8 Drawing Reference**: The test specimen drawings have been reviewed by Intertek-ATI and are representative of the test specimen(s) reported herein. Test specimen construction was verified by Intertek-ATI per the drawings on file with Intertek-ATI. Any deviations are documented herein or on the drawings.

**3.9 List of Official Observers**:

| Name | Company |
|---|---|
| Timothy J. McGill | Intertek-ATI |
| Richard E. Hartman III | Intertek-ATI |

## 4.0 Test Method(s):

ASTM E283-04 (2012), *Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen*

ASTM E330/E330M-14, *Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference*

## 5.0 Test Specimen Description:

### 5.1 Product Sizes:

| **Overall Area:** 4.0 m² (42.7 ft²) | **Width** | | **Length** | |
|---|---|---|---|---|
| | **millimeters** | **inches** | **millimeters** | **inches** |
| Overall size | 1534 | 60-3/8 | 2584 | 101-3/4 |

### 5.2 Frame Construction:

| **Frame Member** | **Material** | **Description** |
|---|---|---|
| Inner frame | Aluminum | Extruded |
| Dome clamp cover | Aluminum | Extruded |

| | **Joinery Type** | **Detail** |
|---|---|---|
| All corners | Mitered | Miter cut and welded |

**5.3 Reinforcement**: No reinforcement was utilized.

### 5.4 Weatherstripping:

| **Description** | **Quantity** | **Location** |
|---|---|---|
| Low profile, custom-shaped gasket | 1 Row | Located around the interior perimeter of the inner frame |

**5.0 Test Specimen Description**: (Continued)

**5.5 Glazing**: *No conclusions of any kind regarding the adequacy or inadequacy of the glazing in any glazed test specimen(s) can be made.*

| Glazing Type | Interior Lite | Spacer Type | Exterior Lite | Glazing Method |
|---|---|---|---|---|
| 3/8" wide gap | 1/8" polycarbonate clear prismatic | Double-sided adhesive foam spacer | 1/8" polycarbonate clear smooth | The glazing was set from the exterior onto a low profile, custom-shaped gasket against the extruded aluminum frame. The glazing was secured using an extruded aluminum dome clamp cover with a bead of sealant on the glazing. The dome clamp cover was secured using #10 x 5/8" self-tapping pan head screws spaced 4-7/8" from member ends and at the midspan of the length sides. |

| Location | Quantity | Daylight Opening | | Glazing Bite |
|---|---|---|---|---|
| | | millimeters | inches | |
| Dome | 1 | 1391 x 2445 | 54-3/4 x 96-1/4 | 1-1/8" |

**5.6 Drainage**:

| Method | Size | Quantity | Location |
|---|---|---|---|
| Weepslot with wick | 1" wide by 1/4" high | 1 per corner | Located in each corner of the low profile, custom-shaped gasket |

**5.7 Hardware**:

| Description | Quantity | Location |
|---|---|---|
| Spring clip | 26 | Pressed into the shoulder of the inner frame extrusion above each predrilled installation hole |

## 6.0 Installation:

The specimen was installed into a Spruce-Pine-Fir wood curb. The rough opening allowed for a 1/4" shim space.

| Location | Anchor Description | Anchor Location |
|---|---|---|
| Inner frame | #8 x 1-3/4" pan head screws | 6-1/4" from the corners of the length sides and 12" on center, 5-5/8" from the corners of the width sides and 12" on center |

**7.0 Test Results**: The temperature range during testing was between 19°C (67°F) and 24°C (75°F). The results are tabulated as follows:

| Title of Test | Results | Note |
|---|---|---|
| **Air Leakage,** Infiltration per ASTM E283 at 75 Pa (1.57 psf) | <0.1 L/s/$m^2$ (<0.01 cfm/$ft^2$) | 1 |
| **Air Leakage,** Exfiltration per ASTM E283 at 75 Pa (1.57 psf) | <0.1 L/s/$m^2$ (<0.01 cfm/$ft^2$) | 1 |
| **Uniform Load Deflection,** per ASTM E330 Deflections taken at dome clamp cover | | |
| +1680 Pa (+35.09 psf) | 1.3 mm (0.05") | |
| +1920 Pa (+40.10 psf) | 0.5 mm (0.02") | 2, 3, 4 |
| **Uniform Load Structural,** per ASTM E330 Permanent sets taken at dome clamp cover | | |
| +3360 Pa (+70.18 psf) | 0.8 mm (0.03") | |
| -4320 Pa (-90.23 psf) | 0.3 mm (0.01") | 3, 4 |

***General Note**: All testing was performed in accordance with the referenced standard(s).*

*Note 1:* Test Date 05/15/17 / Time: 10:30 AM (Air Note Only)

*Note 2: During the Positive 40.10 psf load, the interior glazing deglazed.*

*Note 3: Loads were held for 60 seconds.*

*Note 4: 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.*

Intertek-ATI will service this report for the entire test record retention period. Test records such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained by Intertek-ATI for the entire test record retention period.

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(s) tested. This report may not be reproduced, except in full, without the written approval of Intertek-ATI.

For ARCHITECTURAL TESTING, INC.:

Digitally Signed by: Richard Hartman III

Richard E. Hartman III
Technician

Digitally Signed by: Timothy J. McGill

Timothy J. McGill
Manager - Product Testing

REH:cmd

Attachments (pages): This report is complete only when all attachments listed are included.
Appendix A: Photograph(s) (2)
Appendix B: Drawing(s) (0) Complete drawings packet on file with Intertek-ATI.

This report produced from controlled document template ATI 00479, revised 03/13/17.

**Appendix A**

**Photograph(s)**

**Photo No. 1**
**View of Tested Specimen**

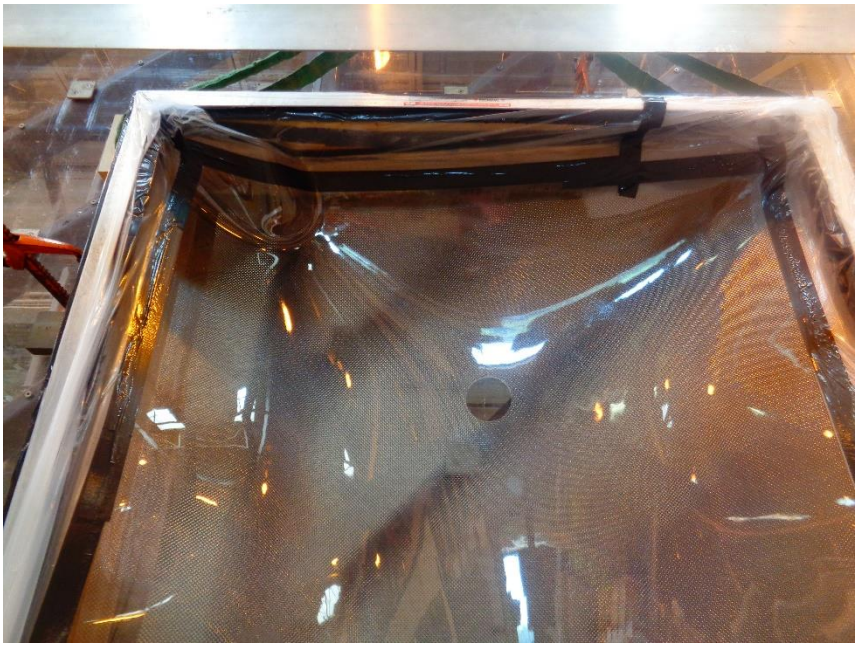

**Photo No. 2**
**View of Failure Method**

## Appendix B

## Drawing(s)

***Note**: Complete drawings packet on file with Intertek-ATI.*