OSHA FALL PROTECTION TEST REPORT

Rendered to:

VELUX AMERICA INC.

SERIES/MODEL:  CM-1
PRODUCT TYPE:  Fixed Acrylic Glazed Curb Mount Skylight

Report No:  90200.01-109-44
Test Date:   04/01/09
Report Date:  10/20/09
Record Retention Date:  04/01/13
OSHA FALL PROTECTION TEST REPORT

Rendered to:

VELUX AMERICA INC.
P.O. Box 5001
(1418 Evans Pond Road)
Greenwood, South Carolina  29648-5001

Report No.: 90200.01-109-44
Test Date: 04/01/09
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Project Summary: Architectural Testing, Inc. was contracted by VELUX America Inc. to perform testing on a Series/Model CM-1, fixed acrylic glazed curb mount skylight. The test specimen description and results are reported herein. The test specimen was provided by the client.

Test Specification: The test specimen was tested to assess compliance with Occupational Safety and Health Administration/U.S. Department of Labor Regulations (Standards- 29 CFR)-1910.23(e)(8). A 200 lbf weight, fabricated from a bag filled with sand, was placed on the center of the dome for a minimum of 60 seconds and then dropped from a specified height above the dome of the skylight with any permanent visible damage being noted.

Test Specimen Description:

Series/Model: CM-1

Product Type: Fixed Acrylic Glazed Curb Mount Skylight

Overall Size: 48" by 48"

Curb Size: 46-1/2" by 46-1/2"

Overall Area: 16 ft²

Finish: All aluminum was anodized.

Weatherstripping: No weatherstripping was utilized.
Test Specimen Description: (Continued)

**Glazing Detail:** The skylight dome was constructed of two sheets of free blown acrylic, an interior sheet measuring 0.110” thick and an exterior sheet measuring 0.140” thick, all measured at the center of the dome. The edges of the two sheets were secured to each other with a layer of double-sided adhesive foam tape. The assembled dome was set against the aluminum main frame, resting on double-sided adhesive foam tape and secured with an "L" shaped aluminum cover frame. Double-sided adhesive foam tape was utilized between the cover frame and the dome. The cover frame was secured to the main frame with #12 x 1/4" hex head screws, located 5" from each corner and spaced 16" on center.

**Frame Construction:** The frame was constructed of extruded aluminum with mitered and welded corners, with silicone on each corner.

**Installation:** The skylight was installed onto a Spruce-Pine-Fir wood curb with #8 x 1-1/2" long pan head screws, located 5" from corners and spaced 16" on center through pre-drilled holes. The test frame was placed and leveled prior to testing.

**Test Results:** The results are tabulated as follows:

<table>
<thead>
<tr>
<th>Test Method</th>
<th>Load Location</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>200 lbf</td>
<td>Center of dome</td>
<td>No visible damage</td>
</tr>
</tbody>
</table>

*Note:* The 200 lbf weight was gently applied perpendicular to the center of each dome. After 60 seconds of rest time, the weight was removed and there was no visible damage to the skylight.

**OSHA Safety Drop Test**

700 lbf-ft (42" drop height) Center of dome   See Note #1

*Note #1:* At the 42" drop height, both the interior and exterior domes broke and the weight fell through the skylight.
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 the retention period, Architectural Testing shall discard such material without further notice. Architectural Testing shall service the test report for the full retention period.

Results obtained are tested values and were secured by using the designated test methods. 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 Architectural Testing, Inc.

For ARCHITECTURAL TESTING, INC:

[Signature]
Jeremy R. Bender
Technician

[Signature]
Michael D. Stremmel, P.E.
Senior Project Engineer

JRB:dem

Attachments (pages): This report is complete only when all attachments listed are included.
  Appendix-A: Test Equipment (1)
  Appendix-B: Photographs (1)
  Appendix-C: Drawing (1) Complete drawings packet on file with Architectural Testing, Inc.
## Revision Log

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<th>Date</th>
<th>Page(s)</th>
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This report produced from controlled document template ATI 00205, issued 03/05/09.
Appendix A

Test Equipment

<table>
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<tr>
<th>Instrument</th>
<th>Manufacturer</th>
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<td>200 lbf sand filled sack</td>
<td>Architectural Testing, Inc.</td>
<td>N/A</td>
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</tbody>
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Appendix B

Photographs

Photo No. 1
Skylight After 200 lbf Load was Taken Off

Photo No. 2
Skylight After 42" Drop Height, Impactor Fell Through Glazing
Appendix C

Drawing

*Note:* Complete drawings packet on file with Architectural Testing, Inc.