MOCK-UP TEST REPORT

NCTL-110-19973-1

ACURLITE STRUCTURAL SKYLIGHTS

MOCKUP TEST UNIT

TEST DATES
03/13/17, 03/21/17 – 03/23/17

REPORT DATE
04/03/17
Report Number: NCTL-110-19973-1

Report Date: 04/03/17

Report To: Acurlite Structural Skylights
1017 North Vine Street
Berwick, PA 18603

Project: Mockup Test Unit

Test Date(s): 03/13/17, 03/21/17 – 03/23/17

Test Method(s):
- ASTM E331-00(09) Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
- AAMA 501.1-05 Standard Test Method For Water Penetration Of Windows, Curtain Walls And Doors Using Dynamic Pressure

DRAWING REFERENCE

Acurlite Structural Skylights’s Drawings Titled, “AWS Test Unit”, Dated 06/15/16, Sheet Numbers 1.00, 2.00, 2.01, 2.02, 2.03, 2.04, 2.05, 3.00, 3.01, 3.02 and 3.03.

PROJECT SUMMARY

National Certified Testing Laboratories, Inc. was contracted by Acurlite Structural Skylights to conduct performance testing on a mock-up for the above-referenced project at their facility in Berwick, PA.

The test specimen successfully met all criteria outlined in the testing procedure.

SPECIMEN DESCRIPTION

The test specimen was a double pitch skylight with (1) gable end and (1) hipped end. The double pitch side each employed (6) fixed lites, the hipped end employed (4) fixed lites and the gable end employed (4) fixed lites. The units were installed onto an aluminum sill receptor/flashing system. The mock-up was anchored to a simulated skylight “curb” condition. See attached drawings for a full description of the mock-up.
## TEST RESULTS

Note: Unless otherwise noted, all dimensions are in the order (Width x Height x Thickness) and all designations are from an interior view.

<table>
<thead>
<tr>
<th>Date</th>
<th>Test</th>
<th>Test Details</th>
<th>Result</th>
<th>Allowed</th>
</tr>
</thead>
<tbody>
<tr>
<td>03/22/17</td>
<td>Preliminary Load Test</td>
<td>+22.5 psf - Pre-Load = Pass</td>
<td></td>
<td>Not Applicable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Allowed =</td>
<td></td>
<td></td>
</tr>
<tr>
<td>03/22/17</td>
<td>Air Infiltration</td>
<td>6.24 psf (49 mph)</td>
<td>0.02 cfm/ft²</td>
<td>0.06 cfm/ft²</td>
</tr>
<tr>
<td>03/22/17</td>
<td>Water Penetration</td>
<td>12.0 psf (68.47 mph)</td>
<td>Pass/ No Leakage</td>
<td>No Leakage</td>
</tr>
<tr>
<td>03/22/17</td>
<td>Dynamic Water Resistance</td>
<td>12.0 psf</td>
<td>Pass/ No Leakage</td>
<td>No Leakage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Note: Testing performed (2) times in order to facilitate testing on all elevations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>03/22/17</td>
<td>Uniform Load Deflection DP45</td>
<td>+ 45.0 psf - Design = 0.003”/ Pass</td>
<td></td>
<td>0.754”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Allowed =</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- 45.0 psf - Design = 0.012”/ Pass</td>
<td></td>
<td>0.745”</td>
</tr>
<tr>
<td>03/22/17</td>
<td>Repeat Air Infiltration</td>
<td>6.24 psf (49 mph)</td>
<td>0.02 cfm/ft²</td>
<td>0.06 cfm/ft²</td>
</tr>
<tr>
<td>03/23/17</td>
<td>Water Penetration</td>
<td>12.0 psf (68.47 mph)</td>
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<td>No Leakage</td>
</tr>
<tr>
<td>03/23/17</td>
<td>Dynamic Water Resistance</td>
<td>12.0 psf</td>
<td>Pass/ No Leakage</td>
<td>No Leakage</td>
</tr>
</tbody>
</table>
03/23/17 Uniform Load Structural DP45

+ 67.5 psf - Design = 0.012”/ Pass
Allowed = 0.264”

-67.5 psf - Design = 0.033”/ Pass
Allowed = 0.264”

Note: See Appendix B and C for full results of the Uniform Load tests

OPTIONAL PERFORMANCE GRADE DP-75

03/23/17 Uniform Load Deflection DP75

+ 75.0 psf - Design = 0.005”/ Pass
Allowed = 0.754”

- 75.0 psf - Design = 0.007”/ Pass
Allowed = 0.745”

Note: See Appendix B and C for full results of the Uniform Load tests

03/23/17 Uniform Load Structural DP75

+112.1 psf - Design = 0.034”/ Pass
Allowed = 0.264”

-112.1 psf - Design = 0.115”/ Pass
Allowed = 0.264”

Note: See Appendix B and C for full results of the Uniform Load tests

Witness Log: (All or Partial)
Keith Mazzie Acurlite Structural Skylights
Matt Snyder Acurlite Structural Skylights
Kyle Maylath Acurlite Structural Skylights
Robert DeFayette NCTL
George Edleblute NCTL

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National Certified Testing Laboratories

[Signature]

Robert Wm. DeFayette
Field Testing Manager

RWD/ dro
Encls:
Appendix A - Photographs
Appendix B - Drawings

Revision Summary

<table>
<thead>
<tr>
<th>Identification</th>
<th>Date</th>
<th>Page &amp; Revision</th>
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<tr>
<td>Original Issue</td>
<td>04/03/17</td>
<td>Not Applicable</td>
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APPENDIX A

Photographs

Photo No. 1

Photo No. 2
APPENDIX B

Drawings
PROJECT: AWS TEST UNIT
PURCHASED BY: ACURLITE STRUCTURAL SKYLIGHTS
UNIT TYPE: (1) CUSTOM DOUBLE PITCH SKYLIGHT WITH (1) HIPPED END AND (1) GABLE END
SLOPE GLAZING
1 5/16" I.G.U.
1/4" CLEAR HEAT STRENGTHENED
1/2" MILL AIRSPACE WITH BLACK SILICONE SECONDARY SEAL
9/16" CLEAR HEAT STRENGTHENED LAMINATED
1/4" CLEAR HEAT STRENGTHENED
.060 PVBC
1/4" CLEAR HEAT STRENGTHENED

VERTICAL GLAZING
1" I.G.U.
1/4" CLEAR TEMPERED
1/2" MILL AIRSPACE WITH BLACK SILICONE SECONDARY SEAL
1/4" CLEAR TEMPERED