

January 10, 2008

Doorlights

Skylights

Entry  
Treatments

ICC-ES Evaluation Service, Inc.  
Attn: Evaluation Committee  
Business/Regional Office  
5360 Workman Mill Road  
Whittier, CA 90601

RECEIVED  
JAN 14 2008  
ICC-ES, Los Angeles

Your reference  
AC16-0208-R1

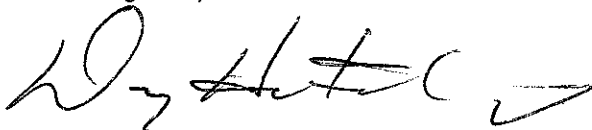
**Subject: Proposed Revision to the Acceptance Criteria for Plastic Glazed Skylights**

Dear Committee Members:

Our company would like to reinforce our initial support, reference attached 22October2007 letter, of the change to AC16 proposed in the referenced staff filing. Your approval of the revision proposed will correct a poorly defined and unnecessarily severe pass/fail criteria related to a non-structural component in a widely used, economical tubular daylighting device, aka, tubular skylight.

Thank you for your consideration in this matter.

Best regards,



Doug Hutchings  
Vice President of Product Development  
ODL, Inc.

215 East Roosevelt Ave

Zeeland MI 49464

Ph 616 772 9111

Fx 616 772 3810

www.odl.com

22 October 2007

Russ Krivchuk, P.E.  
Sr. Staff Engineer  
ICC-ES West  
5360 S Workman Mill Road  
Whittier, California 90601

Dear Mr. Krivchuk,

I thank you for the conversation we had last week concerning the impact requirement history of tubular skylights. I've found no one in the industry that can identify the origin of what is now called AC16-2007 Section A3.15.

A3.15. Reports of tests conducted in accordance with UL 746 C on tubular skylights installed in accordance with the manufacturers installation instructions shall demonstrate that the tube passes the 5 lb-ft (6.78 N m) ball impact without cracking, product disassembly or permanent deformation.

The tubular skylight manufacturers listed below with better than 90% of US sales request changing permanent deformation with rupture.

The tube assembly does not affect the structural performance of the skylight as the dome/flashing assembly is attached to the roof, which carries the positive and negative roof loads. The tube carries light and traps air for thermal and visual performance addressed in the energy code. Any dent in the tube will be tapped out and will not measurably affect performance. A rupture in the tube assembly will affect thermal and visual performance and we agree constitutes a failure. A dent (permanent deformation) will not. All rigid tubes currently listed will dent when tested to UL746C. We strongly encourage modifying AC 16 to more accurate measure code compliance.

If any more information is required, I may be reached at [dave.deblock@odl.com](mailto:dave.deblock@odl.com) or 616.772.9111.  
Sincerely for the Tubular Skylight Manufacturers,




David A. De Block

Director of Product Code  
Compliance

ODL Inc.  
215 E. Roosevelt  
Zeeland, MI 49464

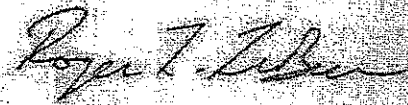
ODL Tubular Skylights  
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San Marcos, California,  
92069



Paul Jaster

Director of Engineering

Solatube International, Inc.  
2210 Oak Ridge Way  
Vista, CA 92083-8341



Roger LeBrun

Product Certification  
Engineer

VELUX America, Inc.  
1418 Evans Pond Rd.  
Greenwood, SC 29649



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Attn: Evaluation Committee  
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5360 Workman Mill Road  
Whittier, CA 90601

Your reference  
AC16-0208-R1

**Subject: Proposed Revision to the Acceptance Criteria for Plastic Glazed Skylights**

Dear Committee Members:

ODL wishes to confirm and reinforce our support of the change to AC16 proposed in the referenced staff filing. Your approval of the revision proposed will correct a poorly defined and unnecessarily severe pass/fail criteria related to a non-structural component in a widely used, economical tubular daylighting device, aka, tubular skylight.

Thank you for your consideration in this matter.

Best regards,

Raymond C. Dill  
Engineering Manager - Continuous Improvement  
ODL, Inc.

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22 October 2007

Russ Krivchuk, P.E.  
Sr. Staff Engineer  
ICC-ES West  
5360 S Workman Mill Road  
Whittier, California 90601

Dear Mr. Krivchuk,


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If any more information is required, I may be reached at [dave.deblock@odl.com](mailto:dave.deblock@odl.com) or 616.772.9111.  
Sincerely for the Tubular Skylight Manufacturers,



David A. De Block

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215 E. Roosevelt  
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VELUX America, Inc.  
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Greenwood, SC 29649

**From:** Smithemerysalem@comcast.net [mailto:smithemerysalem@comcast.net]  
**Sent:** Thursday, January 24, 2008 1:16 PM  
**To:** Russ Krivchuk  
**Cc:** 'Andy Tan'; chuck.pergler@odl.com; lou@www.elitesolarsystems.com; Michael Beaton  
**Subject:** AC-16, previously submitted info

**Mr. Krivchuk, P.E. (ICC-ES):**

The attached letters were submitted to ICC on the indicated dates and this email is to confirm they will be introduced as evidence for the up coming meeting.

Letter to ICC-ES, Dated 04-24-07

Letter to ICC-ES, Dated 02-22-07

**William J. Tate Jr**  
**Smith Emery Laboratories**  
**N.W Regional Technical Director**  
**Salem, OR 97305**  
[smithemerysalem@netzero.net](mailto:smithemerysalem@netzero.net)  
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[smithemerysalem@comcast.net](mailto:smithemerysalem@comcast.net)  
503-371-6918 fax  
[smith Emery.com](http://smithEmery.com)

**Contacts:** Salem office email

Mr. Tate during travel;

Web-Site:

**Certified: RAB/AS-10704- 440, QSA- Q0104685, Expires August 8, 2009**

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**SMITH-EMERY LABORATORIES**

An Independent Commercial Testing Laboratory, Established 1904

2475 Lancaster Drive NE, Bldg. B Suite 13  
Salem, Oregon 97305

phone: (503) 371-6911  
fax: (503) 371-6918

02-22-07

**ICC EVALUATION SERVICE, Inc.**  
**Los Angeles Business/Regional office**  
**5360 Workman Mill Road**  
**Whittier, CA 90601 USA**

**Attention: Mr. Russ Krivchuk, P.E. Senior Staff Engineer**

**Subject: Proposed Revisions to the Acceptance Criteria for Plastic Glazed Skylight Subject  
AC16-1206-R1 (RK/DP/IY) (Without-Electrical components)**

**Dear Mr. Krivchuk,**

First of all, thank you for including Smith Emery on your list to provide comments on the above item. Although there are a lot of issues with this Criteria, I will only focus on one in this letter at this time. However, I may submit further comments from Clients at a latter date.

**Reference standard and Section:**

**UL Standard UL-746, Section 56 (Impact Testing)**

**AC-16, current 2006 revision**

**AC-16-1206-R1, Proposed revisions**

**Comments:**

Currently the 2006 revision of ICC-ES AC-16, (Section A3.12) directs the laboratory or the Manufacture to utilize UL Standard UL 746C when conducting Impact resistance testing. However, adds a permanent deformation requirement to the test standard; which is over an above the pass fail criteria of the UL-Standard.

- **The pass fail criteria provided in the UL standard is written around the likelihood that the skylight would have an electrical or fire, or both during the use of the equipment. Ref: Section: 21.1 UL-746**
- **The pass fail criterion also indicates the results of the test shall not affect the accessibility to the products components. Ref: Section 21.1 UL 746**
- **Effect the Mechanical Performance of the Product**
- **Or produce a condition that would increase the likelihood of Elect. Shock.**

As you can see the common denominator to the above is Electrical components and or equipment, performance driven. Understanding the above, I have a couple of issues that will need to be addressed either in the new AC-16 criteria or in the committee meeting.

- 1. The UL-Standard does not call out for, or define a Permanent deformation, during testing or installation.**
- 2. AC-16 section A1.4.7, (2006) and A1.4.8, 2007, definitions, are not applicable to a tubular, non mechanical/non - electrical type skylight.**
- 3. No-definition is provided for Section A3.15 of the New AC-16, permanent deformation**  
*May need to provide clarification: permanent deflection Vs permanent deformation.*

Deformation can be major or minor, and can affect a skylight in many different ways. In the case where there are no electrical parts or mechanical components, a small dent in the metal tubular section does not allow the tube to return to within in spec. however does allow it to perform efficiently, causing testing compliance concerns with our clients; and concessions need to be made. Sel would recommend that a new pass fail criteria be provided for this type of skylight with this type of condition that is also performance driven. The object is that the performance of the skylight not be affected, not the appearance of the tube section in the attic, where it can't be seen. In some cases the manufacture allows an elbow or angle is included within the installation of the unit. I think this maybe a starting place in your discussions with the manufactures; applying min and max's. Also Ref; section 22.2 of UL 746C.



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Smith Emery will continue to discuss the proposed ICC-ES Changes to the aforementioned Criteria's, and work with our clients in an effort to assist ICC to obtain industry and committee approvals.

Should you have any questions concerning this letter, or its contents, please feel free to give me a call or email me at the provided address below.

**William J. Tate Jr.**  
**NW Regional Technical Director**  
**Smith Emery Laboratories**  
**Salem, Oregon Branch Office**

[Smithemerysalem@netzero.net](mailto:Smithemerysalem@netzero.net)  
[smithemery.com](http://smithemery.com)



**William J Tate Jr.**  
**RAB/AS-10704-440**  
**QSA-Q0104685**

*Expires August 8, 2009*



## SMITH-EMERY LABORATORIES

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04-24-07

**ICC EVALUATION SERVICE, Inc.**  
**Los Angeles Business/Regional office**  
**5360 Workman Mill Road**  
**Whittier, CA 90601 USA**

**Attention: Mr. Rao Latchireddi**  
**Evaluation Specialist, Chicago**  
**Mr. Russ Krivchuk, Los Angeles**  
**Mr. Mike Beaton, Los Angeles**

**Subject: ICC-ES file No #ESR 1761**

**References:**

- **SEL Email dated 9-25-06**
- **Verbal conversations' 04-23-07**

**Gentlemen:**

To follow-up with our conversations' Smith Emery is requesting that ICC-ES re-review the Impact testing and compliance requirements stated in AC-16 section A3.15 and A1.4.8. Please see below:

Para from Email to ICC ES, 10-19-2006

*The AC 16 has a permanent deformation clause in the results, where as the UL-Test standard does not. I believe the intent is to make sure the Unit still is functional/operates after the testing or installation. As the Elite Skylights do not include any electrical components, this part would be N/A. In addition my interpretation of permanent deformation would be any unit that could not be repaired, so it could be operational or function after the test.*

As ICC-ES can tell by reviewing the evaluation report noted above, Elites Ski-lights will continue to function if dented during Testing, shipment or Installation. Therefore; we feel if ICC-ES wants to put additional test results requirements/restrictions in the Criteria, the criteria should take into effect/account all the different types and designs, based on the individual design or just simply remove the deformation clause so that it consistent with the UL-Testing requirements that industry has been using as a guide since 1973.

**Thank you,**

*William J. Tate, Jr.*

*William J. Tate, Jr.*  
*NW Regional Technical Director*  
*RAB/QSA/ATCA-QSM-AS-Certified # 10704-440*  
*Smith Emery Laboratories*  
*Salem Branch Office*

**CC: Mr. Lou Estrada President**  
**Elite Solar Systems, Inc.**  
**310 E. Comstock Drive**  
**Chandler, AZ 85225**  
**Fax 480-635-9767**



Skylights

RECEIVED

JAN 14 2008

ICC-ES, Los Angeles

ICC-ES Evaluation Service, Inc.  
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864-941-4870 Fax  
www.veluxusa.com

Your reference  
AC16-0208-R1

Our reference  
29-17-0

Date  
January 9, 2008

**Subject: Proposed Revision to the Acceptance Criteria for Plastic Glazed Skylights**

Dear Committee Members:

We would like to reinforce our initial support of the change to AC16 proposed in the referenced staff filing. Your approval of the revision proposed will correct a poorly defined and unnecessarily severe pass/fail criteria related to a non-structural component in a widely used, economical daylighting option.

Best regards,

Roger LeBrun  
Product Certification Engineer

c: J. Lawton

-/RLE