



NATIONAL CERTIFIED TESTING LABORATORIES

FIVE LEIGH DRIVE • YORK, PENNSYLVANIA 17406 • TELEPHONE (717) 846-1200
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OSHA Title 8 General Industry Safety Orders Floor Openings, Floor Holes, Skylights and Roofs

Maximum Static Concentrated Center Load
400 lb. Drop Test to Failure

TEST REPORT

NCTL-110-19260-2

REPORT TO:
VELUX America LLC.
1418 Evans Pond Road
P.O. Box 5001
Greenwood, SC 29648-5001

REPORT NUMBER: NCTL-110-19260-2
REPORT DATE: 06/23/16

PRODUCT TYPE:
Fixed Curb-Mounted Unit Skylight

SERIES/ MODEL:
"FCM 4672 0004"



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Report Number NCTL-110-19260-2

Report Date 06/23/16

Report To VELUX America LLC.
1418 Evans Pond Road
P.O. Box 5001
Greenwood, SC 29648-5001

Date Testing Started 06/09/16
Date Testing Completed 06/09/16

Specification/ Tests OSHA Title 8:
Subchapter 7. General Industry Safety Orders, Group 1. General Physical Conditions and Structural Orders, Article 2. Standard Specifications, 3212 Floor Openings, Floor Holes, Skylights and Roofs, (a)(5)(b)

Tests:
Maximum Static Concentrated Centered Load Test and 400 lb Drop Test to Failure

Description of Specimen Tested

Note: All dimensions are in the order (Width x Height x Thickness) unless otherwise noted.

Model/ Series "FCM 4672 0004"

Configuration Fixed Curb-Mounted Unit Skylight

Outside Curb Size 1270 mm x 1905 mm (50" x 75")

Frame Size 1308 mm x 1959 mm (51.5" x 77.125")

Viewing Area 1207 mm x 1861 mm (47.5" x 73.25")

Frame Type Roll-formed aluminum

Joint Construction Mitered with plastic corner keys

Glazing Components

- Overall 18.80 mm (0.740") nominal
- Glass Thickness (1) Lite of 4 mm (0.154") nominal tempered glass to the exterior; (1) lite of laminated to the interior
- Laminated Glass (2) Lites of 2.5 mm (0.090") nominal heat strengthened glass separated by a 0.76 mm (0.030") PVB interlayer
- Spacer Type/ Size Stainless steel spacer (Type SS-D)

Glazing System Interior glazed with a silicone back-bedding

Weatherstrip

- Type TPE inner frame gasket with welded, mitered corners
- Location Glass frame perimeter fastened with evenly spaced staples

Operating Hardware	No operating hardware employed
Reinforcement	No reinforcement employed
Weep Description	
Type	(8) 5 mm (0.196") Diameter holes
Location	80 mm (3.15") From each end of the inner frame gasket, all sides
Interior Surface Finish	Not applicable
Exterior Surface Finish	Kynar
Sealant	No apparent sealant applied
Insect Screen	No screen employed
Installation Method	The skylight was tested on a horizontal test chamber. The skylight was fastened to the curb with #8 x 46.74 mm (1.840") pan head screws through each pre-punched frame hole. Fasteners were provided by the manufacturer in the shipping box.

Test Results - OSHA Title 8 - General Industry Safety Order

<u>Paragraph</u> 3212(a)(5)(b)	<u>Test</u> Floor Openings, Floor Holes, Skylights and Roofs 650 lb applied over a one square foot area	Result = Pass - Capable of safely supporting No glass breakage or damage
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<u>Test</u> Drop Test 400 lb from Drop Height of 2 feet with a tightly wrapped, sand-filled bag	Result = Pass - Capable of safely supporting No glass breakage or damage
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<u>Test</u> Drop Test 400 lb from Drop Height of 3 feet with a tightly wrapped, sand-filled bag	Result = Fail - Glass Breakage Allowed entry to the interior
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The tested specimen meets the performance requirements for the referenced paragraphs of the referenced specification. This test report was prepared by National Certified Testing Laboratory (NCTL), for the exclusive use of the above named client and it does not constitute certification of this product. The results are for the particular specimen tested and do not imply the quality of similar or identical products manufactured or installed from specifications identical to the tested product. The test specimen was supplied to NCTL by the above named client. Foam tape is mounted to the perimeter of the test buck prior to clamping to the test wall. NCTL is a testing lab and assumes that all information provided by the client is accurate and does not guarantee or warranty any product tested or installed.

Ambient conditions during the referenced testing are available upon request. A copy of this report along with representative sections of the test specimen will be retained by NCTL. This report does not constitute certification or approval of the product, which may only be granted by a certification program validator or recognized approval entity. All tests were conducted in full compliance with the referenced specification paragraphs. This report may not be reproduced, except in full, without the written consent of NCTL.

For National Certified Testing Laboratories

A digital signature in cursive script that reads "Justin L. Bupp". The signature is overlaid on a circular NCTL logo. Below the signature, the words "DIGITAL SIGNATURE" are printed in a small, sans-serif font.

Justin L. Bupp
Laboratory Manager

A digital signature in cursive script that reads "R. H. Zeiders". The signature is overlaid on a circular NCTL logo. Below the signature, the words "DIGITAL SIGNATURE" are printed in a small, sans-serif font.

Robert H. Zeiders, P.E.
Vice-President Engineering & Quality

JLB/ dro
Attachments
Appendix A – Revision Summary

Appendix A
Revision Log

<u>Identification</u>	<u>Date</u>	<u>Page & Revision</u>
Original Issue	06/23/16	Not Applicable