



# NATIONAL CERTIFIED TESTING LABORATORIES

FIVE LEIGH DRIVE • YORK, PENNSYLVANIA 17406 • TELEPHONE (717) 846-1200  
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NFRC 400-2014

## AIR LEAKAGE PERFORMANCE TEST REPORT SUMMARY

### RENDERED TO:

#### NEON ENERGY

230 Park Avenue, 10th Floor  
New York, NY 10169

**PRODUCT TYPE: Fixed Lite**

**SERIES/ MODEL: "Fixed"**

TITLE	SUMMARY OF RESULTS
Total Air Leakage	1.17 L/sec (2.47 scfm)
Extraneous (Tare) Air Leakage	0.93 L/sec (1.97 scfm)
Net Specimen Air Leakage	0.24 L/sec (0.50 scfm)
Air Leakage Rate	0.1 L/(sec• m <sup>2</sup> ) (<0.01 scfm/ft <sup>2</sup> ) Measured

Test Completed: 08/03/16

Reference must be made to NCTL Report Number NCTL-110-19965-1 dated 03/15/17 for complete test sample description and data.

### National Certified Testing Laboratories

#### Performed By:



DIGITAL SIGNATURE

Justin L. Bupp  
Laboratory Manager

#### Reviewed By:



Raymond W. Lamb, PE  
Person In Responsible Charge



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**Report Number** NCTL-110-19965-1  
**Report Date** 03/15/17  
**Report To** Neon Energy  
230 Park Avenue, 10th Floor  
New York, NY 10169  
**Date Testing Started** 07/18/16  
**Date Testing Completed** 08/03/16  
**Specification** NFRC 400-2014 "Procedure for Determining Fenestration Product Air Leakage"

### Description of Sample Tested

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

**Model/ Series** Fixed  
**Configuration** Fixed Lite  
**Frame Size** Overall  
1524 mm x 2515 mm (60" x 99")  
**Viewing Area** 1422 mm x 2413 mm (56" x 95")  
**Frame Type** Extruded aluminum with polyamide thermal break  
**Joint Construction** Frame  
Mitered, with epoxied with aluminum staked-in-place and epoxied corner gusset  
**Glazing Components**  
Overall 22.23 mm (0.875") nominal  
Glass Thickness (1) Lite of 6 mm (0.230") nominal tempered glass to the exterior and (1) lite of 6 mm (0.230") nominal annealed glass to the interior  
Spacer Type/Size 10.54 mm (0.415") Desiccant-filled stainless steel spacer (Type SS-D)  
Glazing System Interior glazed against a multi-fin vinyl glazing gasket and a snap-in extruded aluminum glazing bead with a flexible vinyl wedge gasket  
**Weatherstrip**  
Type Bulb-vinyl gasket  
Location Sill  
**Operating Hardware** No operating hardware employed  
**Auxiliary** No auxiliary items employed  
**Reinforcement** No reinforcement employed  
**Weep Description**  
Size 25.4 mm (1") wide by 7.95 mm (0.313") high with plastic weep cover  
Location 136.53 mm (5.375") from each end and midspan of the exterior sill face  
**Interior/ Exterior Surface Finish** White painted aluminum

*Professionals In The Science of Testing*

**Sealant**

Location 152.4 mm (6") High heal bead employed at bottom of jambs  
 Material Silicone

**Insect Screen**

No screen employed

**Installation Method**

The window was installed in a 50.8 mm x 254 mm (2" x 10") spruce-pine-fir lumber test buck and secured with (1) #8 x 38.1 mm (1.5") pan head screw located at 50.8 mm (2") and 559 mm (22") from each end of the sill and head; 50.8 mm (2"), 559 mm (22"), 1067 mm (42"), 1702 mm (67"), 2197 mm (86.5") and 2464 mm (97") from the bottom of each jamb. The exterior perimeter was sealed with silicone sealant.

***Test Results - NFRC 400***ParagraphTest

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Air Leakage Resistance  
 ASTM E283-04(12)

Air Infiltration at 300 Pa (6.2 psf)

Air Temperature	=	24.89 °C	(76.8° F)
Atmospheric Pressure	=	762 mm Hg	(30 "Hg)
Relative Humidity	=	51 %	
Total Air Leakage	=	1.17 L/sec	(2.47 scfm)
Extraneous <sub>(Tare)</sub> Air Leakage	=	0.93 L/sec	(1.97 scfm)
Net Specimen Air Leakage	=	0.24 L/sec	(0.50 scfm)
Air Leakage Rate	=	0.1 L/(sec• m <sup>2</sup> )	
	=	(<0.01 scfm/ft <sup>2</sup> )	Measured

This report is a reissued report. All information has been reviewed prior to re-submission. It is reissued via authorization from Section 2 of NFRC 400 and no test sample was submitted for this test report. This test report was prepared by National Certified Testing Laboratories (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 client. 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. The results in this report are actual tested values and are applicable to the specimen tested only, using the components and construction methods described herein.

Detailed drawings were available for laboratory records. A copy of this report will be retained by NCTL per applicable retention requirements. Ratings included in this report are for submittal to an NFRC licensed IA for certification purposes and are not meant to be used for labeling purposes. Only those values identified on a valid Certification Authorization Report (CAR) are to be used for labeling purposes. 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 specifications and/or test methods. Tests were performed in the order set forth by the applicable standard or specification. This report is the joint property of NCTL and the Client to whom it is issued. Permission to reproduce this report by anyone other than NCTL and the Client must be granted in writing. This report may not be reproduced, except its entirety, without the written consent of NCTL.

### National Certified Testing Laboratories

#### Performed By:

A stylized digital signature of Justin L. Bupp in black ink, with a small NCTL logo integrated into the signature. Below the signature, the text "DIGITAL SIGNATURE" is printed in a small, sans-serif font.

Justin L. Bupp  
Laboratory Manager

#### Reviewed By:

A handwritten signature of Raymond W. Lamb in black ink, with a small NCTL logo integrated into the signature.

Raymond W. Lamb, PE  
Person In Responsible Charge

## APPENDIX A

### **Section 1:**

Modifications to the Test Specimen to Achieve the Listed Results

*Any modifications (if applicable) are included in the test specimen description listed in this report.*

### **Section 2:**

Component Drawings, with Applicable Part Numbers, Manufacturing and Modeling Details, were reviewed (as submitted) for Product Verification  
(Reference: NCTL-110-19965-1)

See Attached Documentation;  
any deviations noted.

Note: The above referenced component drawings along with representative sections of the test specimen will be retained per procedure by NCTL. This testing facility assumes that all information provided by the client is accurate.

### **Section 3:**

<u>Identification</u>	<u>Date</u>	<u>Page &amp; Revision</u>
Original Issue	03/15/17	Air data from original NCTL report 110-19251-2 and is being used to comply with NFRC 400.

**Description of test specimen No 5 & No 6:**

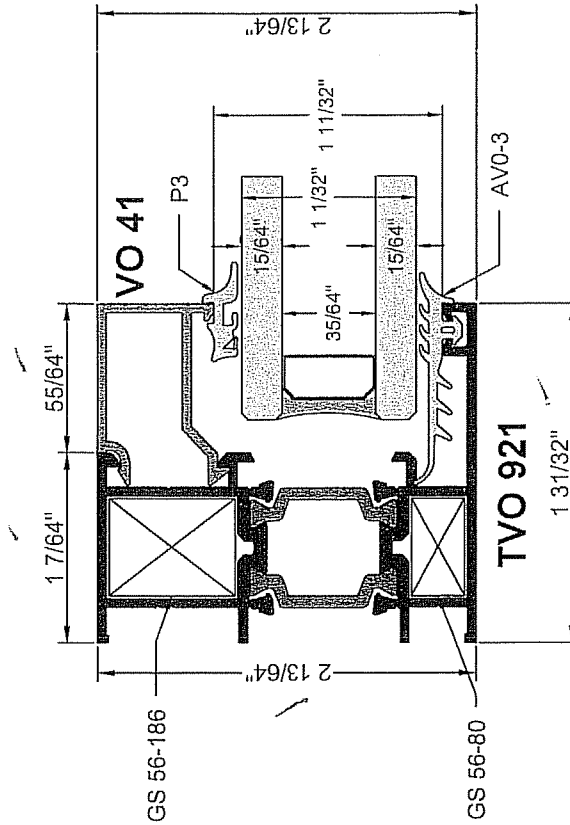
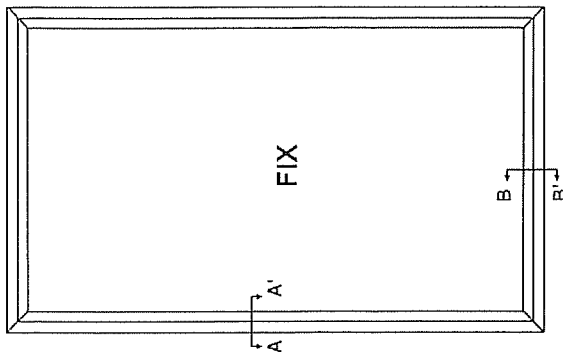
Product	Fixed window
Manufacturer	Alco Hellas S.A.
Date of manufacture	3/6/2016
System	Ultra 2016 Opening System
Type of opening / Opening directions	No opening
Frame material	Aluminum profiles with thermal break
Overall frame dimensions (WxH)	5' 0" x 8' 3"
<b>Frame member</b>	Profile No TVO 921
Frame joint	mitred, compressed and bonded with corner connection No GS 56-80 and GS 152-186
<b>Infill panel</b>	Glass Unit
Configuration	from inside to outside: 15/64" glass, 35/64" airspace, 15/64" glass
<b>Incorporation of infill panel</b>	
<b>Glazing gasket</b>	
<u>Internal:</u>	
Material	Sealing material – EPDM
Item No	P3
Corner design	mitred and bonded
<u>Glazing bead</u>	Profile No VO 41
Corner design	butt-jointed
Fixing	clamped
<u>External:</u>	
Material	Sealing material – EPDM
Item No	AVO-03
Corner design	mitred and bonded

TEST SPECIMEN COMPLIES  
WITH THESE DETAILS.  
ANY DEVIATION IS NOTED  
REPORT NO. NCTL-110- 19965-1  
TEST DATE 8/3/16

# HORIZONTAL SECTION A-A' & VERTICAL SECTION BB'

KA. 1:1

TEST SPECIMENT No 5 & No 6



TEST SPECIMEN COMPLIES  
WITH THESE DETAILS.  
ANY DEVIATION IS NOTED  
REPORT NO. NCTL-110-19965-1  
TEST DATE 8/3/16