

# WINDLOCH, LLC

# COMPUTER SIMULATION REPORT

**SCOPE OF WORK**

MINIMAL 52 SLIDING DOOR - NFRC 100/200/500

**REPORT NUMBER**

P4680.02-116-45 R0

**TEST DATE**

11/22/22

**ISSUE DATE**

11/22/22

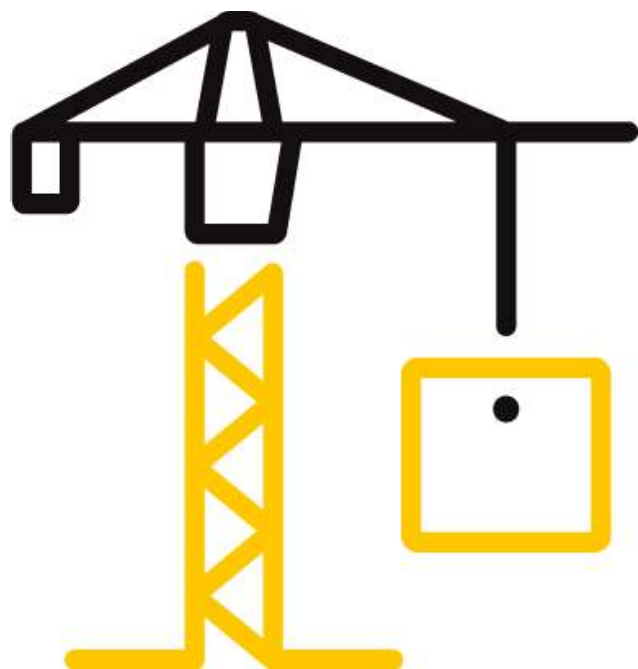
**PAGES**

12

**DOCUMENT CONTROL NUMBER**

RT-R-AMER-Test-4044 (04/11/22)

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## TEST REPORT FOR WINDLOCH, LLC

Report No: P4680.02-116-45 R0

Date: 11/22/22

### REPORT ISSUED TO

#### WINDLOCH, LLC

467 Brook Avenue

Deer Park, New York 11729

### SECTION 1


#### SUMMARY

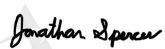
#### SERIES/MODEL: Minimal 52 Sliding Door

Architectural Testing, Inc. (an Intertek company) dba Intertek Building & Construction (B&C) was contracted to perform U-Factor, Solar Heat Gain Coefficient, Visible Transmittance and Condensation Resistance simulations in accordance with the National Fenestration Rating Council (NFRC).

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends five years after the test date. Test records, such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained for the entire test record retention period.

FOR INTERTEK B&C:

**COMPLETED BY:** Eric S. Leitner  
Manager - Thermal  
**TITLE:** Testing & Simulations  
**SIGNATURE:**   
Digitally Signed by: Eric S. Leitner  
**DATE:** 11/22/22

**REVIEWED BY:** Jonathan P. Spencer  
**TITLE:** Project Engineer  
**SIGNATURE:**   
Digitally Signed by: Jonathan Spencer  
**DATE:** 11/22/22

ESL:esl

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## TEST REPORT FOR WINDLOCH, LLC

Report No: P4680.02-116-45 R0

Date: 11/22/22

### SECTION 2

#### TEST METHODS

The products were evaluated in accordance with the following:

***ANSI/NFRC 100-2020, Procedure for Determining Fenestration Product U-Factors***

***ANSI/NFRC 200-2020, Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence***

***NFRC 500-2017, Procedure for Determining Fenestration Product Condensation Resistance Values***

*\*Condensation Resistance results obtained from this procedure are for controlled laboratory conditions and do not include the effects of air movement through the specimen, solar radiation, and the thermal bridging that may occur due to the specific design and construction of the fenestration system opening.*

Ratings values included in this report are for submittals to an NFRC-licensed IA and are not meant to be used directly for labeling purposes. Only those values identified on a valid Certificate of Authorization (CA) by an NFRC accredited Inspection Agency (IA) are to be used for labeling purposes. The ratings values were rounded in accordance with NFRC 601, NFRC Unit and Measurement Policy.

Intertek B&C is an NFRC accredited simulation laboratory and all simulations were conducted in full compliance with NFRC approved procedures and specifications. The values included in this report are not considered in compliance with ANSI/NFRC 100, ANSI/NFRC 200, and/or NFRC 500 unless the associated validation test requirements have been satisfied, as applicable.

**TEST REPORT FOR WINDLOCH, LLC**

Report No: P4680.02-116-45 R0

Date: 11/22/22

**SECTION 3**

**TEST PROCEDURE**

The total product, including specific frame, spacer, and glass details, was modeled using NFRC approved software.

<b>FRAME AND EDGE MODELING</b>	THERM 7.4.4
<b>CENTER-OF-GLASS MODELING</b>	WINDOW 7.4.14
<b>TOTAL PRODUCT CALCULATIONS</b>	WINDOW 7.4.14
<b>SPECTRAL DATA LIBRARY</b>	IGDB 88.0

**Modeling Assumptions / Technical Interpretations**

Any modeling assumptions and technical interpretations required to model this product are listed below.

- 1) To prevent air infiltration, tape was applied to all interior sash crack locations.

**SECTION 4**

**SIMULATION SPECIMEN DESCRIPTION**

<b>SERIES/MODEL</b>	Minimal 52 Sliding Door
<b>PRODUCT TYPE</b>	Sliding Glass Door
<b>FRAME MATERIAL</b>	AT - Aluminum w/ Thermal Breaks - All Members
<b>SASH MATERIAL</b>	AT - Aluminum w/ Thermal Breaks - All Members
<b>STANDARD SIZE</b>	4000mm x 3048mm

## TEST REPORT FOR WINDLOCH, LLC

Report No: P4680.02-116-45 R0

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### SECTION 4 (Continued)

#### SIMULATION SPECIMEN DESCRIPTION

SPACER OPTIONS			
TYPE	PRIMARY SEAL	SECONDARY SEAL	CODE
Technoform Spacer	PIB	Silicone	TS-D

GRID OPTIONS		
GRID SIZE	GRID TYPE	GRID PATTERN
None	-	-

REINFORCEMENT OPTIONS	
LOCATION	MATERIAL
None	-

GAS FILLING TECHNIQUE	
FILL TYPE	METHOD
90% Argon	Single probe

EDGE-OF-GLASS CONSTRUCTION	
<b>INTERIOR CONDITION</b>	EPDM gasket between glazing bead and glass
<b>EXTERIOR CONDITION</b>	EPDM gasket between sash leg and glass

WEATHERSTRIPPING		
TYPE	QUANTITY	LOCATION
Finpile	2 rows	Frame perimeter
EPDM gasket	2 rows	Interlock

FRAME/SASH MATERIALS FINISH	
<b>INTERIOR</b>	Painted aluminum
<b>EXTERIOR</b>	Painted aluminum

VALIDATION MATRIX*	
PRODUCT LINE	REPORT NUMBER
None	-

\*These products are part of a validation matrix. Only one is required for validation testing.

**TEST REPORT FOR WINDLOCH, LLC**

Report No: P4680.02-116-45 R0

Date: 11/22/22

**SECTION 5**

**SPECIALTY PRODUCTS TABLE**

The specialty products method allows the manufacturer to determine the overall product SHGC and VT for any glazing option. The center of glass SHGC and/or VT must be determined using WINDOW 7.4.14. The method calculates overall product SHGC and VT indexed on center of glass properties. All values used in the calculations are truncated to six decimal place precision.

	No Dividers	Dividers < 1	Dividers > 1
<b>SHGC0</b>	0.006723	0.010019	0.013101
<b>SHGC1</b>	0.828440	0.731383	0.640644
<b>VT0</b>	0.000000	0.000000	0.000000
<b>VT1</b>	0.821717	0.721364	0.627543

$$SHGC = SHGC0 + SHGCc (SHGC1 - SHGC0)$$

$$VT = VT0 + VTc (VT1 - VT0)$$

**TEST REPORT FOR WINDLOCH, LLC**

Report No: P4680.02-116-45 R0

Date: 11/22/22

**SECTION 6**

**SIMULATION RESULTS**

TOTAL PRODUCT CALCULATIONS (Minimal 52 Sliding Door)												
Option Number	Pane Thickness 1 (in)	Gap Width 1 (in)	Pane Thickness 2 (in)	Gap Width 2 (in)	Pane Thickness 3 (in)	Gap Width 3 (in)	Pane Thickness 4 (in)	Gap Fill	Low-e (Surface #)	Tint	Spacer	Grid Type
	U-Factor (Btu/Hr-Ft <sup>2</sup> -F)		Solar Heat Gain Coefficient (SHGC) Grids (None / <1 / >=1)				Visible Transmittance (VT) Grids (None / <1 / >=1)		Condensation Resistance (CR)			
1	GL2: SB60 (#2) on Clear / arg / Clear (6mm/6mm) - 25mm IG											
	0.223	0.563	0.223					ARG90	0.035(#2)	CL	TS-D	N
	U-Factor 0.316		SHGC(N) 0.348				VT(N) 0.631		CR 51.4			

**TEST REPORT FOR WINDLOCH, LLC**

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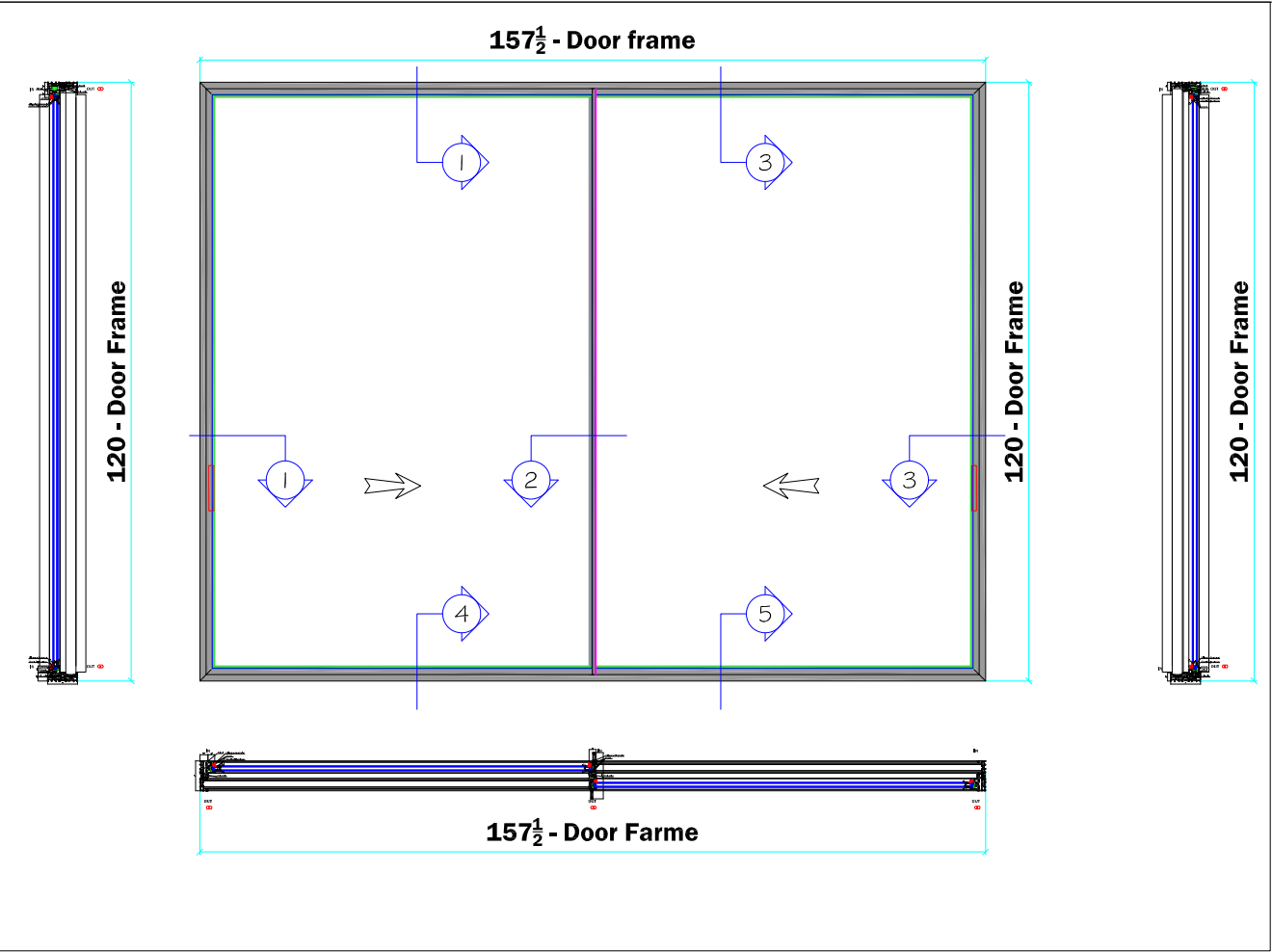
**SECTION 7**

**DRAWINGS / BILL OF MATERIALS**

The drawings which follow have been reviewed by Intertek B&C and are representative of the simulation results reported herein. Any deviations are documented herein or on the drawings.

*At the time of simulation, dimensioned part drawings were not available and could not be verified.*





# General Notes:

Profiles: Aluminum 6063-T6

## Glass:

### Option 1:

Outer pane:  $\frac{1}{4}$  Solarban 72#2 on Acuity

Spacer:  $\frac{9}{16}$  Warm edge with Argon

Inner pane:  $\frac{1}{4}$  Acuity

### Option 2:

Outer pane:  $\frac{1}{4}$  Solarban 60#2 on Clear

Spacer:  $\frac{9}{16}$  Warm edge with Argon

Inner pane:  $\frac{1}{4}$  Clear

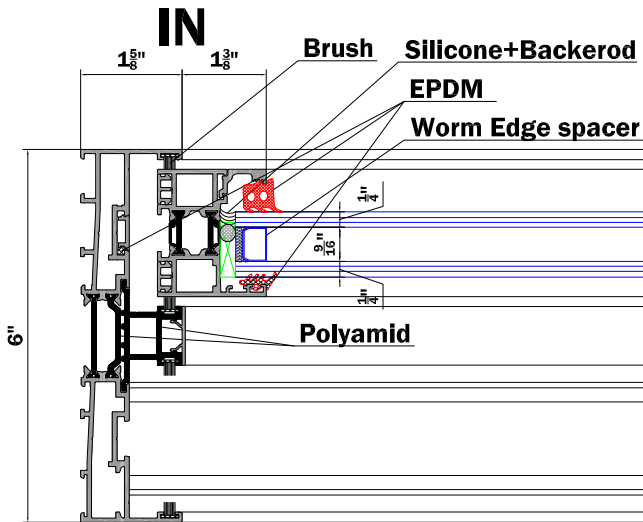

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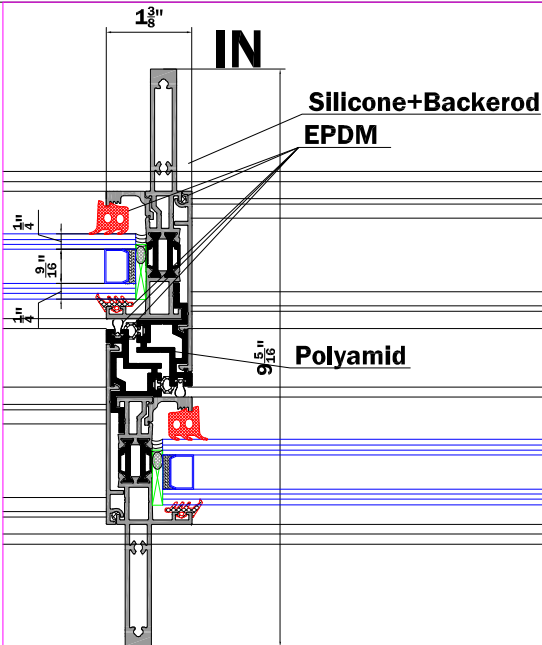
REV.	DESCRIPTION	BY	DATE

PROJECT:	YOAV BEN-SHIMON
LOCATION:	SCALE:
ARCHITECT:	$\frac{1}{2}$ "=1' (11x17)
CONSULTANT:	DATE:
	11/22/22
SHEET DESCRIPTION:	SHEET NO.:
Sliding Door Minimal 52	101



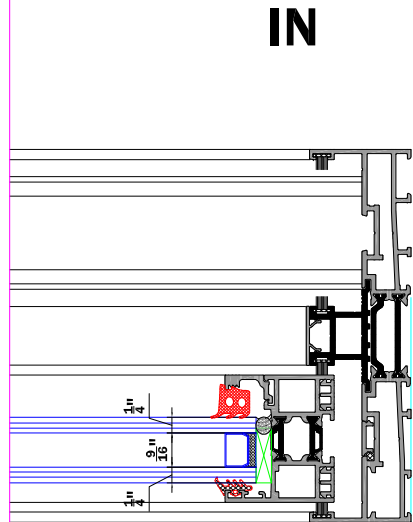
OUT

1



OUT

2



OUT

3

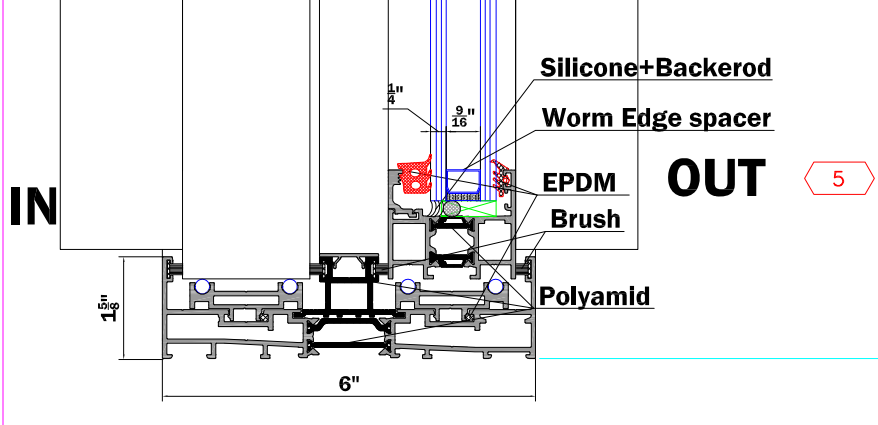
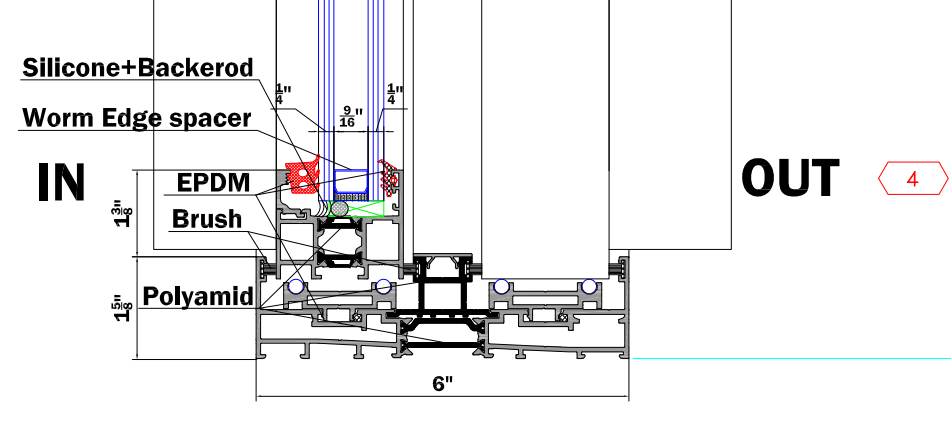
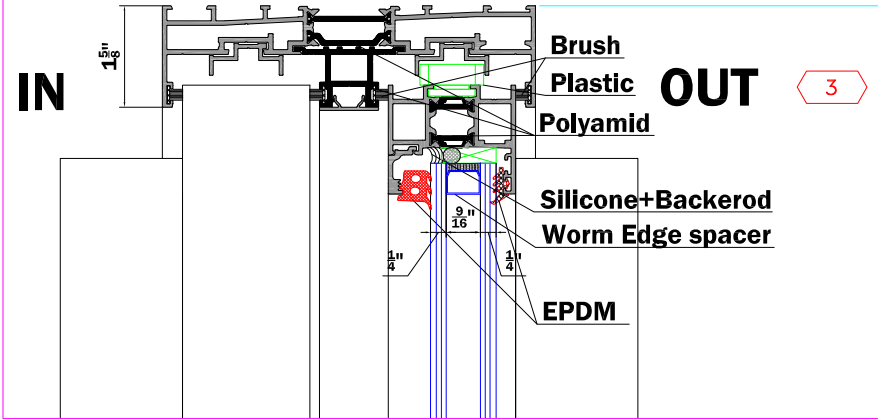
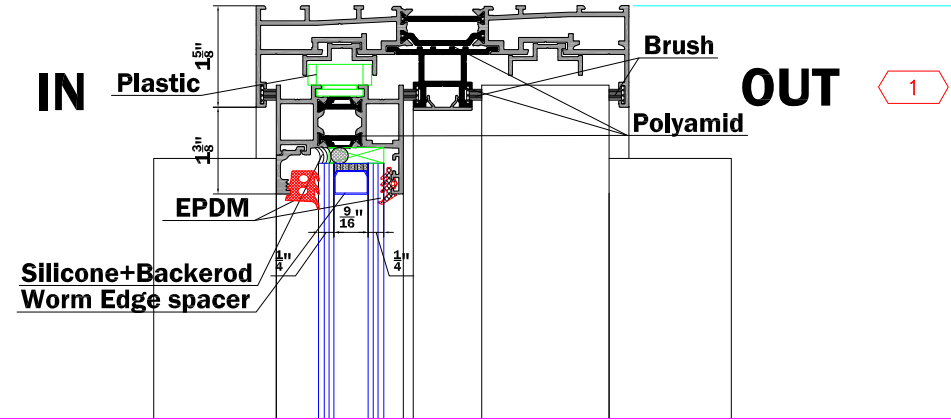
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REV.	DESCRIPTION	BY	DATE
PROJECT:	DRAWN BY:		
LOCATION:	YOA V BEN-SHIMON		
ARCHITECT:	SCALE:		
CONSULTANT:	6"=1' (11x17)		
SHEET DESCRIPTION:	DATE:		
Sliding Door Minimal 52	11/22/22		
	SHEET NO.:		
	401		



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REV.	DESCRIPTION	BY	DATE

PROJECT:	YOAV BEN-SHIMON
LOCATION:	SCALE:
ARCHITECT:	6"=1' (11x17)
CONSULTANT:	DATE:
	11/22/22
SHEET DESCRIPTION:	SHEET NO.:
Sliding Door Minimal 52	402



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**TEST REPORT FOR WINDLOCH, LLC**

Report No: P4680.02-116-45 R0

Date: 11/22/22

**SECTION 8**

**REVISION LOG**

<b>REVISION #</b>	<b>DATE</b>	<b>PAGES</b>	<b>REVISION</b>
.02 R0	11/22/22	N/A	Original report issue.

# WINDLOCH, LLC

## COMPUTER SIMULATION REPORT

### SCOPE OF WORK

MINIMAL 52 SLIDING DOOR - CUSTOM COMPUTER SIMULATIONS TO DETERMINE INTERIOR SURFACE CONDENSATION

### REPORT NUMBER

P4680.03-116-45 R0

### TEST DATE

11/22/22

### ISSUE DATE

11/22/22

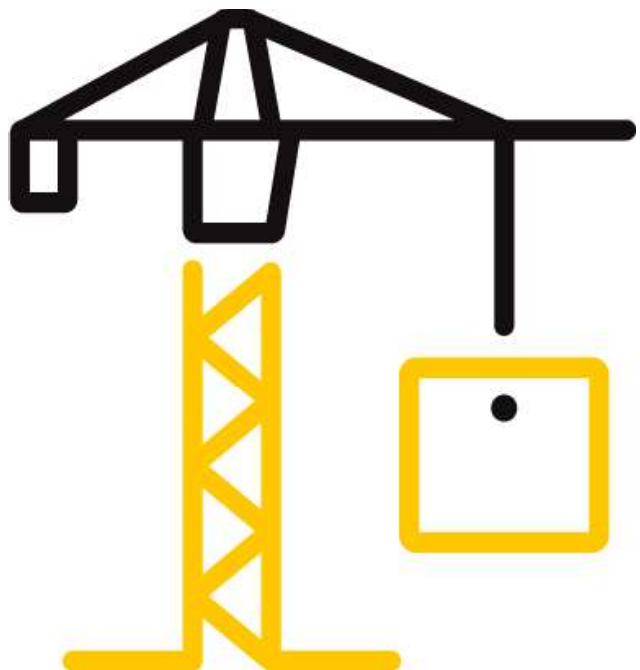
### PAGES

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### DOCUMENT CONTROL NUMBER

RT-R-AMER-Test-3751 (01/13/22)

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## TEST REPORT FOR WINDLOCH, LLC

Report No.: P4680.03-116-45 R0

Date: 11/22/22

### REPORT ISSUED TO

#### WINDLOCH, LLC

467 Brook Avenue

Deer Park, New York 11729

### SECTION 1

#### SUMMARY

#### SERIES/MODEL: Minimal 52 Sliding Door

Architectural Testing, Inc. (an Intertek company), dba Intertek Building & Construction (Intertek B&C), was contracted to perform custom computer simulations utilizing thermal modeling computer software developed by Lawrence Berkeley National Laboratory (LBNL). Results obtained are simulated values and were secured using the designated test methods.


This report is prepared for research and informational purposes only. These results are only a guide to the actual system performance and should not be interpreted as exact performance. This analysis is performed at ideal steady-state conditions and does not account for any outside influences, three-dimensional interactions, or final installation of the system in the field.

This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. Intertek B&C will service this report for the entire test record retention period. The test record retention period ends four years after the test date.

For INTERTEK B&C:

<b>COMPLETED BY:</b>	Eric S. Leitner
<b>TITLE:</b>	Manager - Simulations & Thermal Testing, SIRC
<b>SIGNATURE:</b>	 <small>Digitally Signed by: Eric S. Leitner</small>
<b>DATE:</b>	11/22/22

ESL:esl

<b>REVIEWED BY:</b>	Jonathan P. Spencer
<b>TITLE:</b>	Project Engineer
<b>SIGNATURE:</b>	 <small>Digitally Signed by: Jonathan Spencer</small>
<b>DATE:</b>	11/22/22

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## TEST REPORT FOR WINDLOCH, LLC

Report No.: P4680.03-116-45 R0

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### SECTION 2

#### TEST METHODS

The products were evaluated in general accordance with the following:

##### ***THERM 7 / WINDOW 7 NFRC Simulation Manual***

***THERM 7.4***, This program calculates heat loss through frame and edge-of-glass components using finite difference analysis. The program solves for temperature and heat flow distribution throughout the cross section. The temperature distribution can then be used to determine overall heat loss, total and component U-Factors, and local temperatures at points of interest.

***WINDOW 7.4***, This program calculates U-Factor and center-of-glazing (COG) temperatures using a two-dimensional heat flow analysis.

### SECTION 3

#### TEST PROCEDURE

The total product, including specific frame, spacer and glass details, was modeled using NFRC approved software.

<b>FRAME AND EDGE MODELING</b>	THERM 7.4.4
<b>CENTER-OF-GLASS MODELING</b>	WINDOW 7.4.14
<b>TOTAL PRODUCT CALCULATIONS</b>	WINDOW 7.4.14
<b>SPECTRAL DATA LIBRARY</b>	IGDB 88.0

#### **Modeling Assumptions / Technical Interpretations**

Any modeling assumptions and technical interpretations required to model this product are listed below.

- 1) To prevent air infiltration, tape was applied to all interior sash crack locations.
- 2) Models were constructed at ideal conditions. Hardware, fasteners, and weep holes were not modeled.

## TEST REPORT FOR WINDLOCH, LLC

Report No.: P4680.03-116-45 R0

Date: 11/22/22

### SECTION 4

#### SIMULATION SPECIMEN DESCRIPTION

<b>SERIES/MODEL</b>	Minimal 52 Sliding Door
<b>FRAME MATERIAL</b>	AT - Aluminum w/ Thermal Breaks - All Members
<b>SASH MATERIAL</b>	AT - Aluminum w/ Thermal Breaks - All Members

GLAZING OPTIONS				
	OUTER PANE	GAP SIZE	GAP FILL	INNER PANE
GL1	6mm SB72 (#2) on Acuity	0.563	90% Argon	6mm Acuity
GL2	6mm SB60 (#2) on Clear	0.563	90% Argon	6mm Clear

SPACER OPTIONS				
	TYPE	PRIMARY SEAL	SECONDARY SEAL	CODE
	Technoform Spacer	PIB	Silicone	TS-D

### SECTION 5

#### MEASURED SIMULATION DATA

DEWPOINT TEMPERATURE ANALYSIS†	
Exterior Air Temperature	0°F
Interior Air Temperature	70°F
Relative Humidity	30% RH
Exterior Wind Velocity	12.3 mph

†Dewpoint temperature criteria per Windloch, LLC



**TEST REPORT FOR WINDLOCH, LLC**

Report No.: P4680.03-116-45 R0

Date: 11/22/22

**SECTION 6**

**SIMULATION RESULTS**

**DEWPOINT TEMPERATURE ANALYSIS**

The component parts of the system were modeled at the specified conditions to determine the coldest temperature on the interior surface of each section. The coldest temperature can be compared with the dewpoint at the specified temperatures to determine the probability of condensation.

Cross Section Description	Section Coldest Temperature	Dewpoint Temperature
1/401	34.1°F	37.2°F
2/401	15.3°F	37.2°F
3/401	30.6°F	37.2°F
1/402	40.3°F	37.2°F
3/402	34.0°F	37.2°F
4/402	36.0°F	37.2°F
5/402	33.3°F	37.2°F

## TEST REPORT FOR WINDLOCH, LLC

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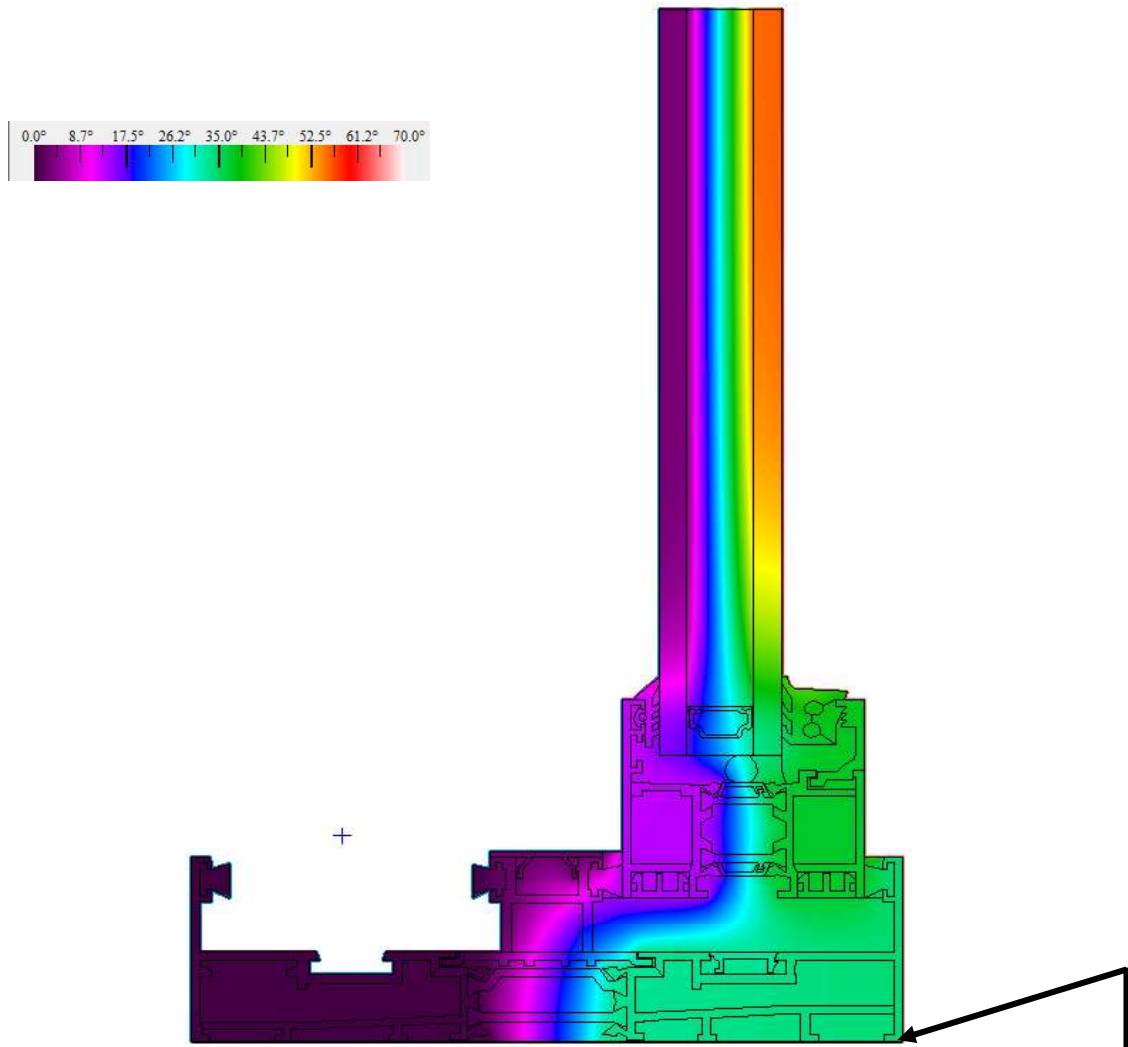
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### SECTION 6

#### SIMULATION RESULTS

#### DEWPOINT TEMPERATURE ANALYSIS: TEMPERATURE DISTRIBUTION PLOT

<b>Cross Section</b>	1/401
<b>Exterior Air Temperature</b>	0°F
<b>Interior Air Temperature</b>	70°F
<b>Relative Humidity</b>	30% RH
<b>Exterior Wind Velocity</b>	12.3 mph



<b>Dewpoint Temperature</b>	37.2°F
<b>Coldest Interior Frame Temperature</b>	34.1°F
<b>Edge of Glass Temperature</b>	46.7°F
<b>Coldest Interior Temperature</b>	34.1°F

## TEST REPORT FOR WINDLOCH, LLC

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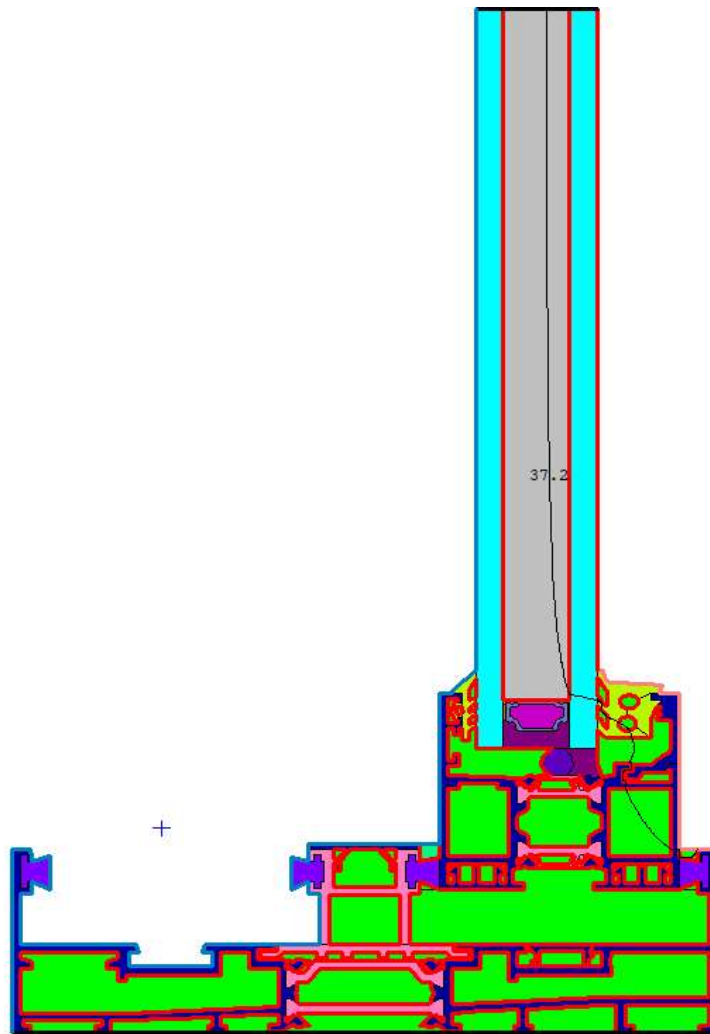
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### SECTION 6

#### SIMULATION RESULTS

#### DEWPOINT TEMPERATURE ANALYSIS: DEWPOINT LINE PLOT

<b>Cross Section</b>	1/401
<b>Exterior Air Temperature</b>	0°F
<b>Interior Air Temperature</b>	70°F
<b>Relative Humidity</b>	30% RH
<b>Exterior Wind Velocity</b>	12.3 mph



<b>Dewpoint Temperature</b>	37.2°F
<b>Coldest Interior Frame Temperature</b>	34.1°F
<b>Edge of Glass Temperature</b>	46.7°F
<b>Coldest Interior Temperature</b>	34.1°F

## TEST REPORT FOR WINDLOCH, LLC

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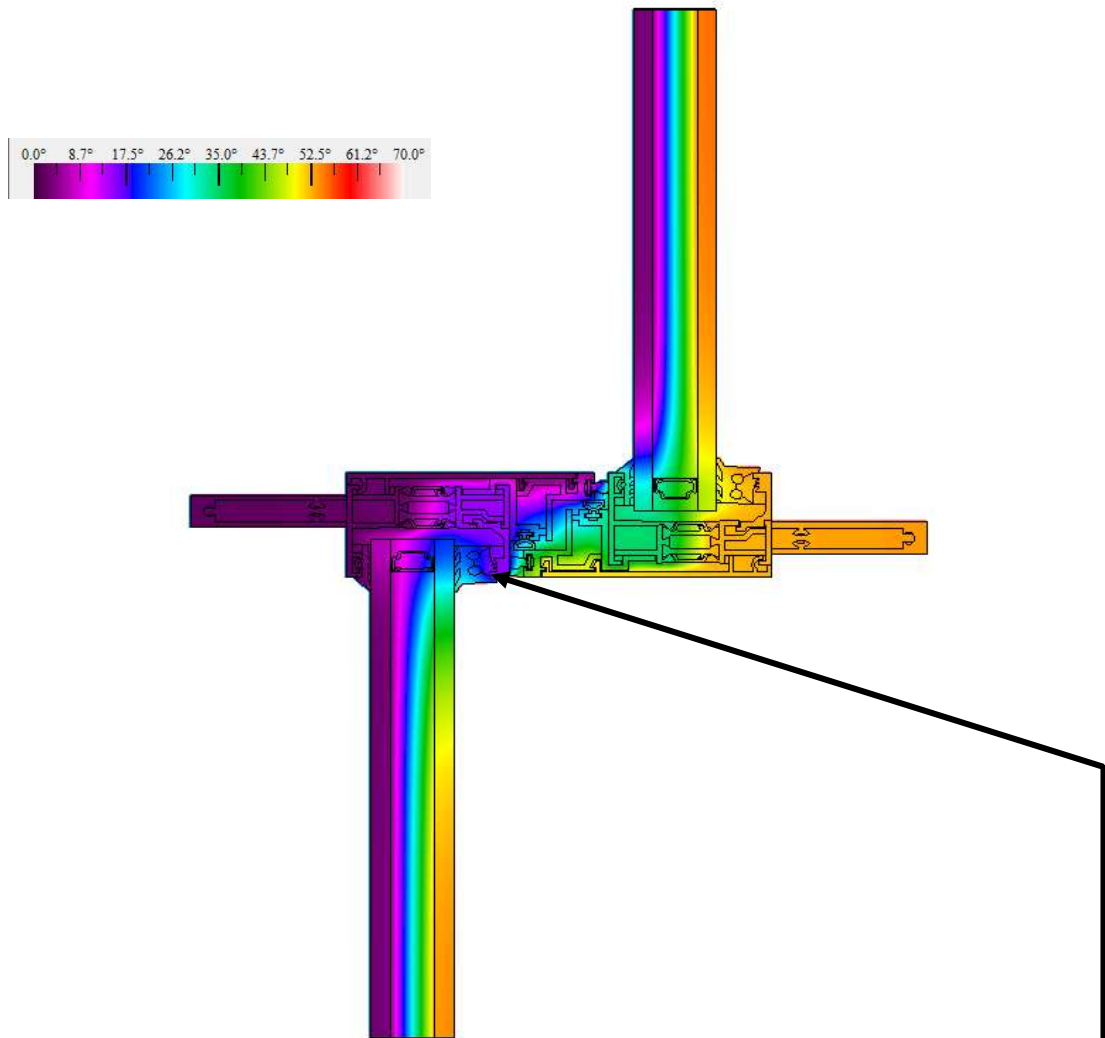
Date: 11/22/22

### SECTION 6

#### SIMULATION RESULTS

#### DEWPOINT TEMPERATURE ANALYSIS: TEMPERATURE DISTRIBUTION PLOT

<b>Cross Section</b>	2/401
<b>Exterior Air Temperature</b>	0°F
<b>Interior Air Temperature</b>	70°F
<b>Relative Humidity</b>	30% RH
<b>Exterior Wind Velocity</b>	12.3 mph



<b>Dewpoint Temperature</b>	37.2°F
<b>Coldest Interior Frame Temperature</b>	15.3°F
<b>Edge of Glass Temperature</b>	38.4°F
<b>Coldest Interior Temperature</b>	15.3°F

## TEST REPORT FOR WINDLOCH, LLC

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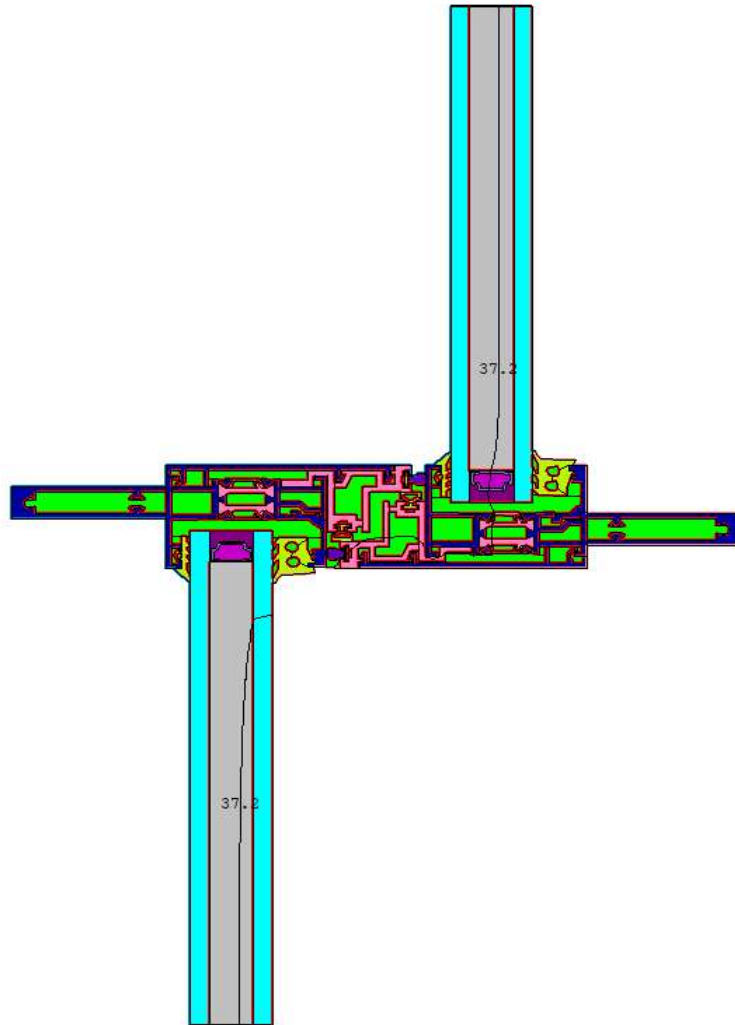
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### SECTION 6

#### SIMULATION RESULTS

#### DEWPOINT TEMPERATURE ANALYSIS: DEWPOINT LINE PLOT

<b>Cross Section</b>	2/401
<b>Exterior Air Temperature</b>	0°F
<b>Interior Air Temperature</b>	70°F
<b>Relative Humidity</b>	30% RH
<b>Exterior Wind Velocity</b>	12.3 mph



<b>Dewpoint Temperature</b>	37.2°F
<b>Coldest Interior Frame Temperature</b>	15.3°F
<b>Edge of Glass Temperature</b>	38.4°F
<b>Coldest Interior Temperature</b>	15.3°F

## TEST REPORT FOR WINDLOCH, LLC

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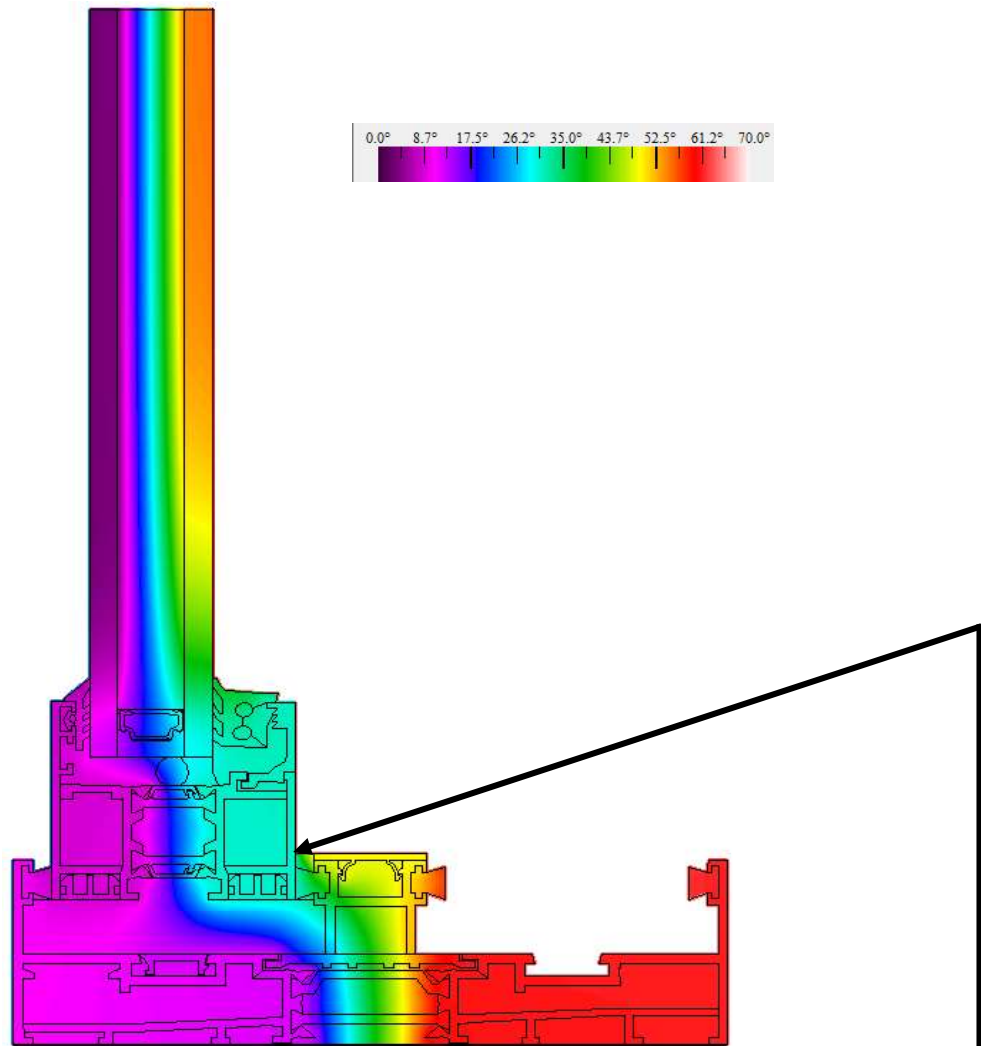
Date: 11/22/22

### SECTION 6

### SIMULATION RESULTS

#### DEWPOINT TEMPERATURE ANALYSIS: TEMPERATURE DISTRIBUTION PLOT

<b>Cross Section</b>	3/401
<b>Exterior Air Temperature</b>	0°F
<b>Interior Air Temperature</b>	70°F
<b>Relative Humidity</b>	30% RH
<b>Exterior Wind Velocity</b>	12.3 mph



<b>Dewpoint Temperature</b>	37.2°F
<b>Coldest Interior Frame Temperature</b>	30.6°F
<b>Edge of Glass Temperature</b>	43.8°F
<b>Coldest Interior Temperature</b>	30.6°F

## TEST REPORT FOR WINDLOCH, LLC

Report No.: P4680.03-116-45 R0

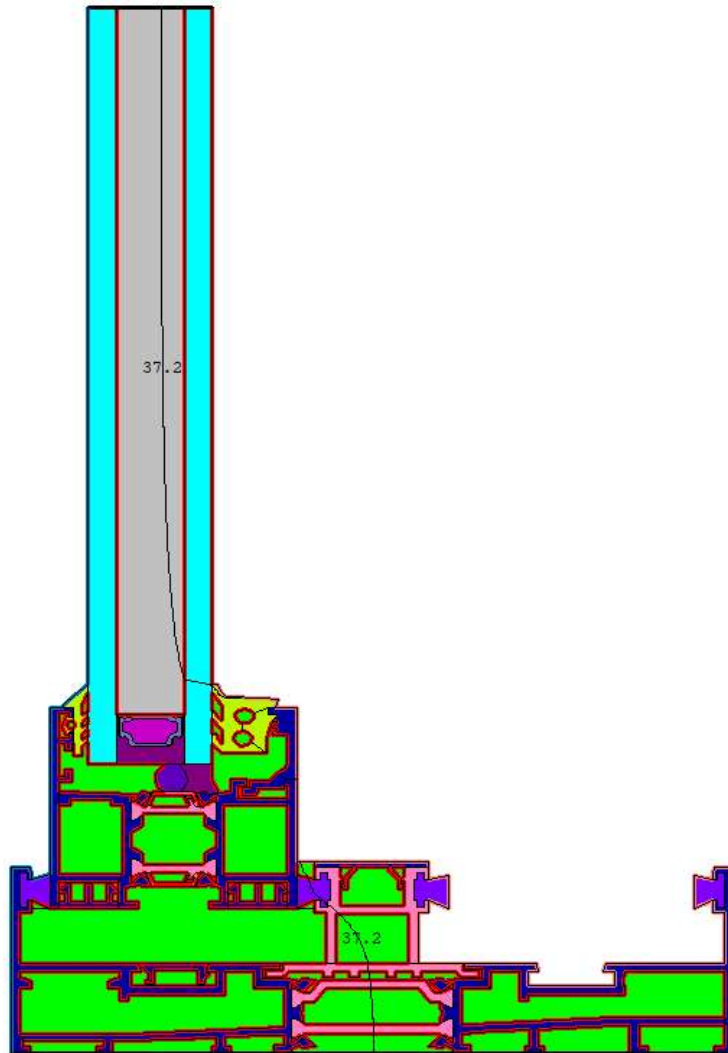
Date: 11/22/22

### SECTION 6

#### SIMULATION RESULTS

#### DEWPOINT TEMPERATURE ANALYSIS: DEWPOINT LINE PLOT

<b>Cross Section</b>	3/401
<b>Exterior Air Temperature</b>	0°F
<b>Interior Air Temperature</b>	70°F
<b>Relative Humidity</b>	30% RH
<b>Exterior Wind Velocity</b>	12.3 mph



<b>Dewpoint Temperature</b>	37.2°F
<b>Coldest Interior Frame Temperature</b>	30.6°F
<b>Edge of Glass Temperature</b>	43.8°F
<b>Coldest Interior Temperature</b>	30.6°F

## TEST REPORT FOR WINDLOCH, LLC

Report No.: P4680.03-116-45 R0

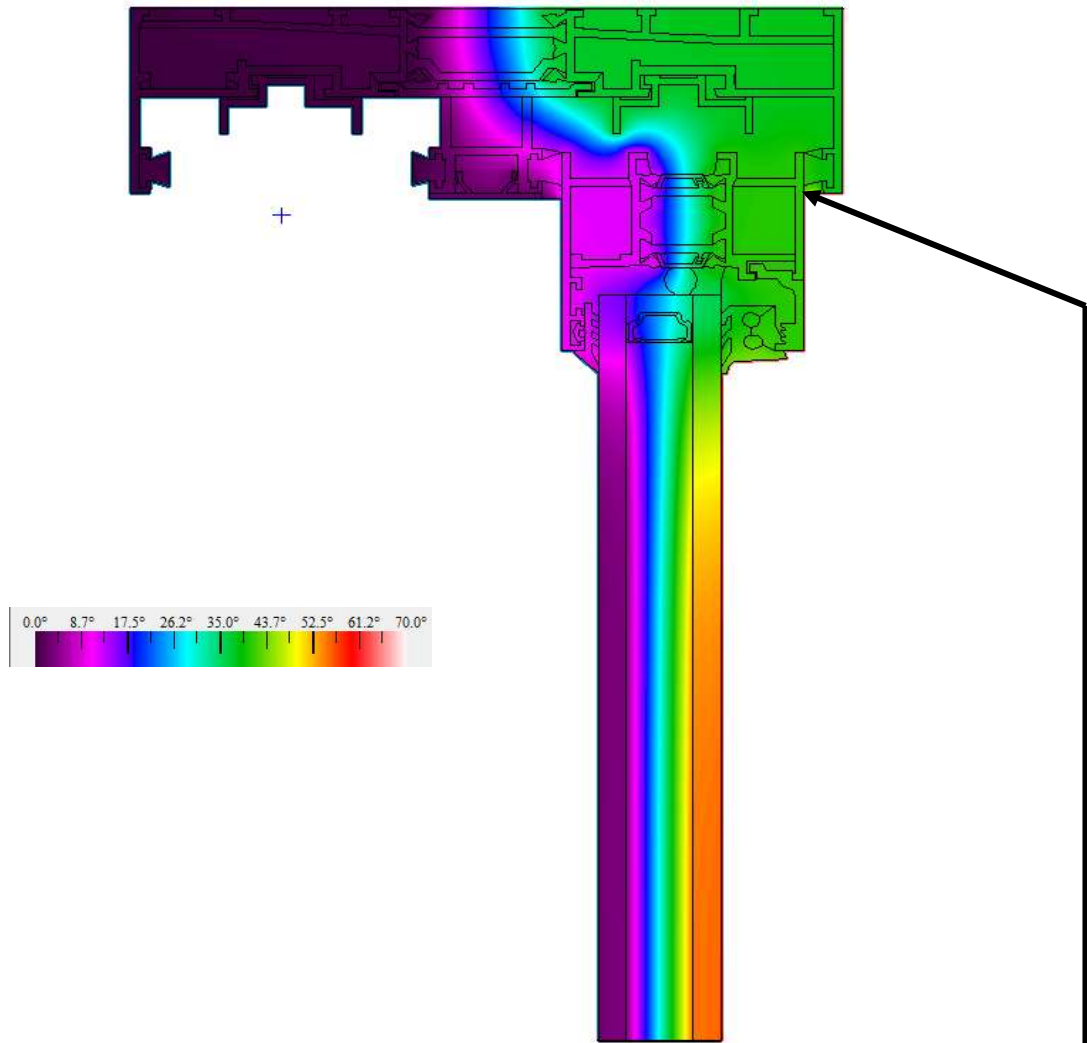
Date: 11/22/22

### SECTION 6

#### SIMULATION RESULTS

#### DEWPOINT TEMPERATURE ANALYSIS: TEMPERATURE DISTRIBUTION PLOT

<b>Cross Section</b>	1/402
<b>Exterior Air Temperature</b>	0°F
<b>Interior Air Temperature</b>	70°F
<b>Relative Humidity</b>	30% RH
<b>Exterior Wind Velocity</b>	12.3 mph



<b>Dewpoint Temperature</b>	37.2°F
<b>Coldest Interior Frame Temperature</b>	40.3°F
<b>Edge of Glass Temperature</b>	47.1°F
<b>Coldest Interior Temperature</b>	40.3°F



## TEST REPORT FOR WINDLOCH, LLC

Report No.: P4680.03-116-45 R0

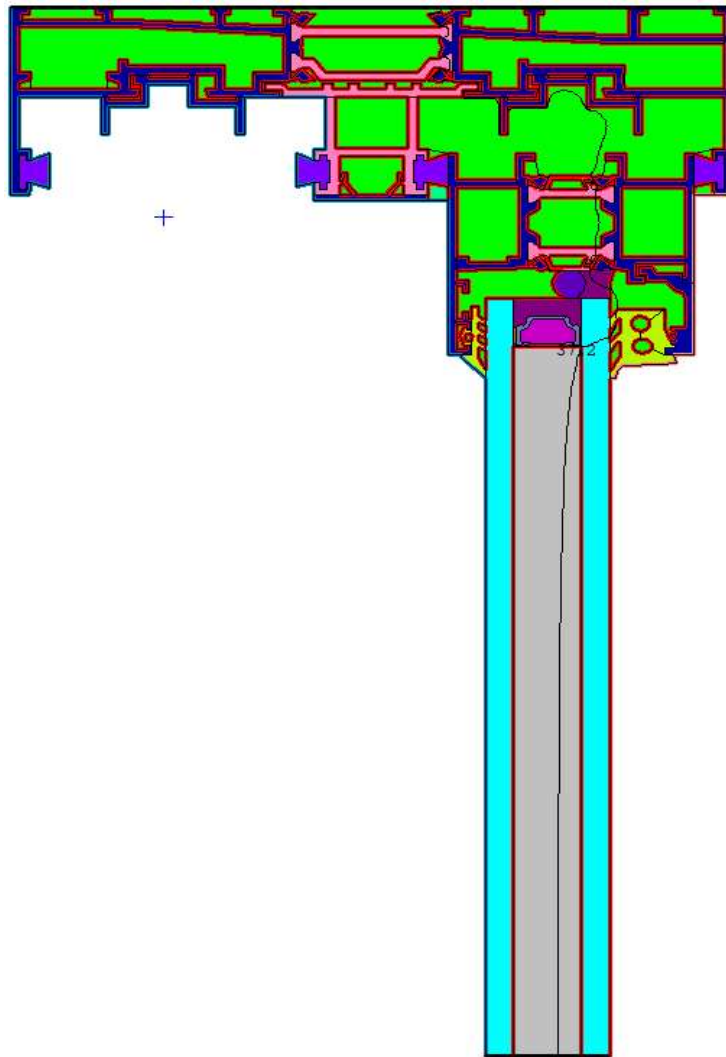
Date: 11/22/22

### SECTION 6

#### SIMULATION RESULTS

#### DEWPOINT TEMPERATURE ANALYSIS: DEWPOINT LINE PLOT

<b>Cross Section</b>	1/402
<b>Exterior Air Temperature</b>	0°F
<b>Interior Air Temperature</b>	70°F
<b>Relative Humidity</b>	30% RH
<b>Exterior Wind Velocity</b>	12.3 mph



<b>Dewpoint Temperature</b>	37.2°F
<b>Coldest Interior Frame Temperature</b>	40.3°F
<b>Edge of Glass Temperature</b>	47.1°F
<b>Coldest Interior Temperature</b>	40.3°F

## TEST REPORT FOR WINDLOCH, LLC

Report No.: P4680.03-116-45 R0

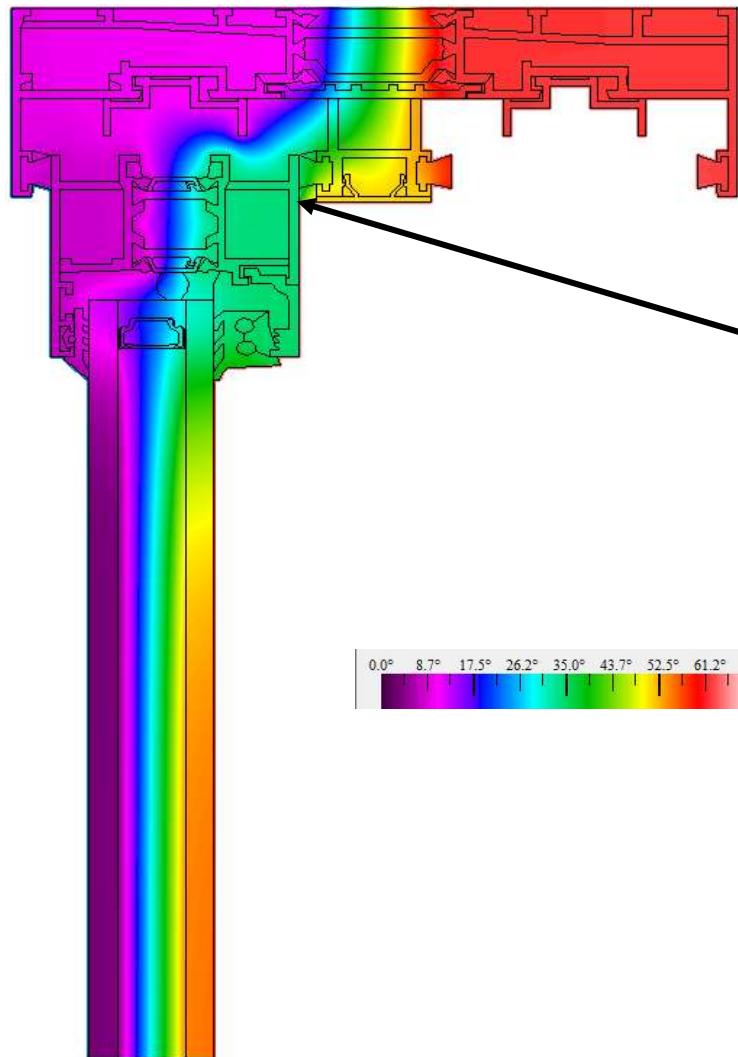
Date: 11/22/22

### SECTION 6

#### SIMULATION RESULTS

#### DEWPOINT TEMPERATURE ANALYSIS: TEMPERATURE DISTRIBUTION PLOT

<b>Cross Section</b>	3/402
<b>Exterior Air Temperature</b>	0°F
<b>Interior Air Temperature</b>	70°F
<b>Relative Humidity</b>	30% RH
<b>Exterior Wind Velocity</b>	12.3 mph



<b>Dewpoint Temperature</b>	37.2°F
<b>Coldest Interior Frame Temperature</b>	34.0°F
<b>Edge of Glass Temperature</b>	44.7°F
<b>Coldest Interior Temperature</b>	34.0°F

## TEST REPORT FOR WINDLOCH, LLC

Report No.: P4680.03-116-45 R0

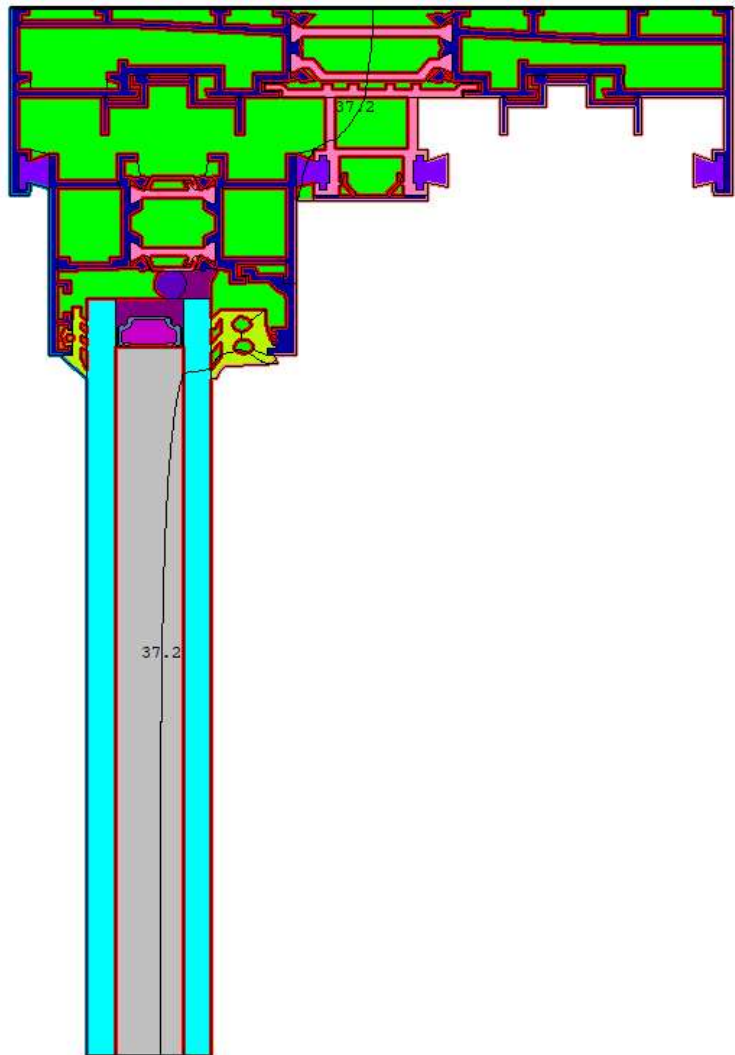
Date: 11/22/22

### SECTION 6

#### SIMULATION RESULTS

#### DEWPOINT TEMPERATURE ANALYSIS: DEWPOINT LINE PLOT

<b>Cross Section</b>	3/402
<b>Exterior Air Temperature</b>	0°F
<b>Interior Air Temperature</b>	70°F
<b>Relative Humidity</b>	30% RH
<b>Exterior Wind Velocity</b>	12.3 mph



<b>Dewpoint Temperature</b>	37.2°F
<b>Coldest Interior Frame Temperature</b>	34.0°F
<b>Edge of Glass Temperature</b>	44.7°F
<b>Coldest Interior Temperature</b>	34.0°F

## TEST REPORT FOR WINDLOCH, LLC

Report No.: P4680.03-116-45 R0

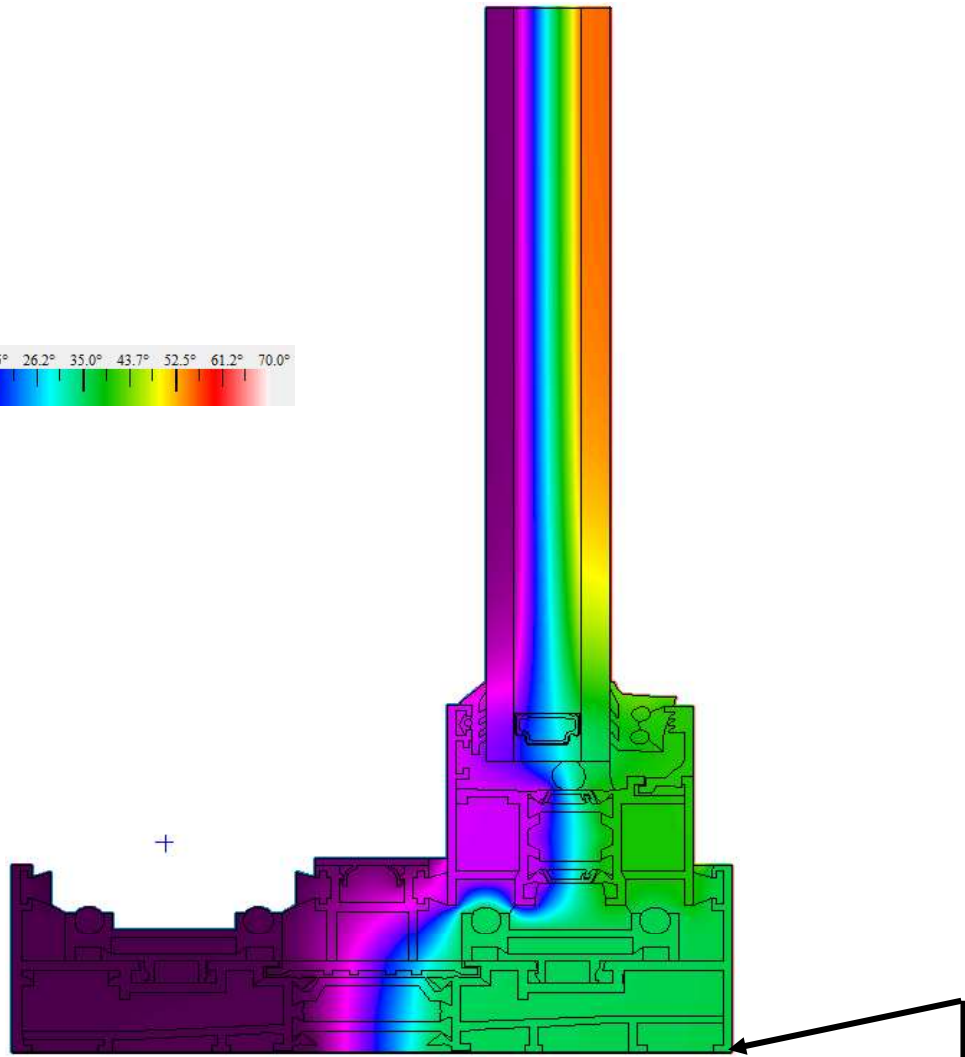
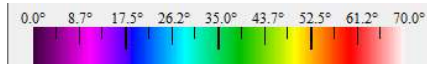
Date: 11/22/22

### SECTION 6

### SIMULATION RESULTS

#### DEWPOINT TEMPERATURE ANALYSIS: TEMPERATURE DISTRIBUTION PLOT

<b>Cross Section</b>	4/402
<b>Exterior Air Temperature</b>	0°F
<b>Interior Air Temperature</b>	70°F
<b>Relative Humidity</b>	30% RH
<b>Exterior Wind Velocity</b>	12.3 mph



<b>Dewpoint Temperature</b>	37.2°F
<b>Coldest Interior Frame Temperature</b>	36.0°F
<b>Edge of Glass Temperature</b>	47.0°F
<b>Coldest Interior Temperature</b>	36.0°F

## TEST REPORT FOR WINDLOCH, LLC

Report No.: P4680.03-116-45 R0

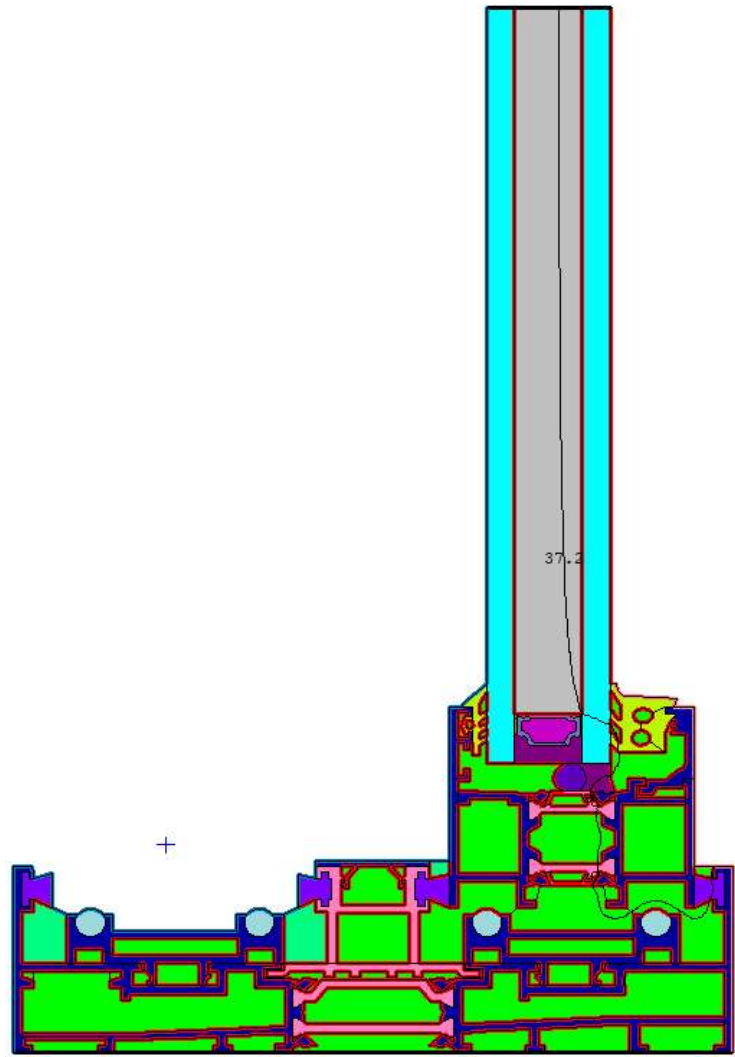
Date: 11/22/22

### SECTION 6

#### SIMULATION RESULTS

#### DEWPOINT TEMPERATURE ANALYSIS: DEWPOINT LINE PLOT

<b>Cross Section</b>	4/402
<b>Exterior Air Temperature</b>	0°F
<b>Interior Air Temperature</b>	70°F
<b>Relative Humidity</b>	30% RH
<b>Exterior Wind Velocity</b>	12.3 mph



<b>Dewpoint Temperature</b>	37.2°F
<b>Coldest Interior Frame Temperature</b>	36.0°F
<b>Edge of Glass Temperature</b>	47.0°F
<b>Coldest Interior Temperature</b>	36.0°F

## TEST REPORT FOR WINDLOCH, LLC

Report No.: P4680.03-116-45 R0

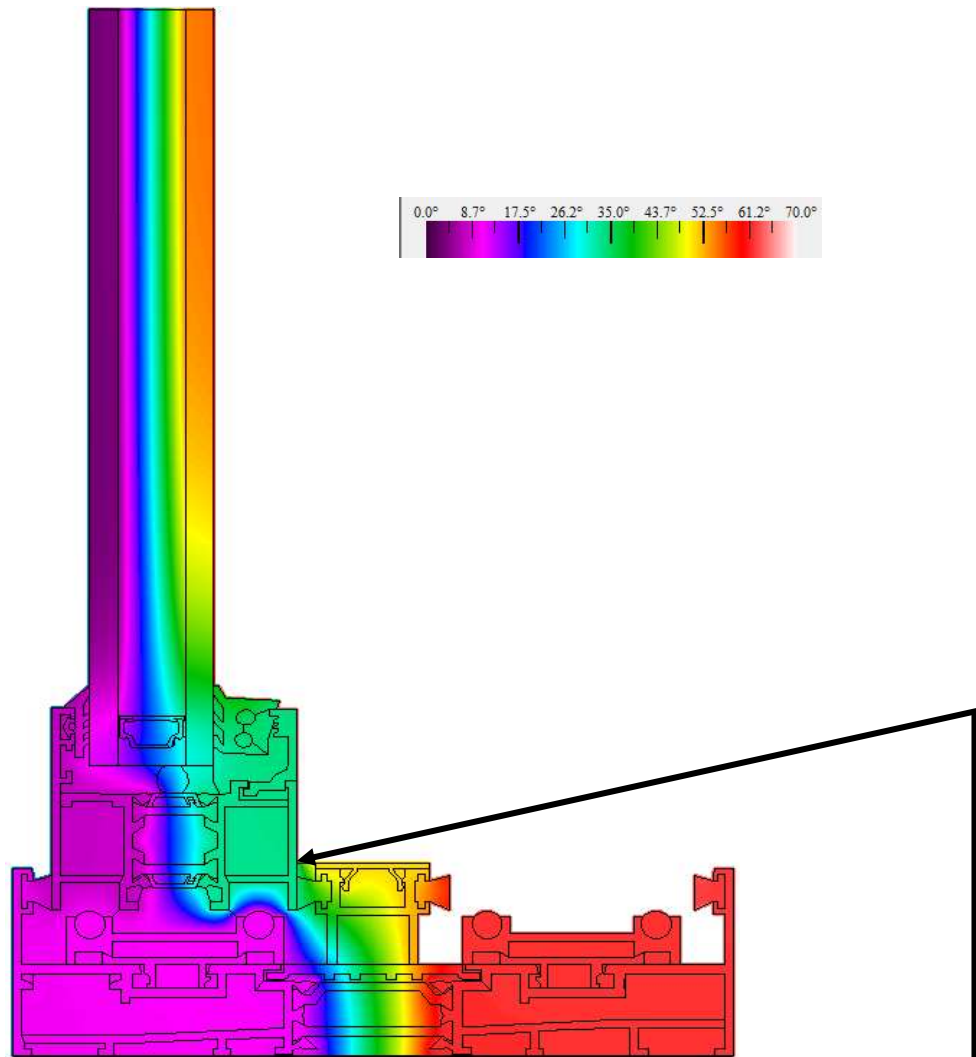
Date: 11/22/22

### SECTION 6

#### SIMULATION RESULTS

#### DEWPOINT TEMPERATURE ANALYSIS: TEMPERATURE DISTRIBUTION PLOT

<b>Cross Section</b>	5/402
<b>Exterior Air Temperature</b>	0°F
<b>Interior Air Temperature</b>	70°F
<b>Relative Humidity</b>	30% RH
<b>Exterior Wind Velocity</b>	12.3 mph



<b>Dewpoint Temperature</b>	37.2°F
<b>Coldest Interior Frame Temperature</b>	33.3°F
<b>Edge of Glass Temperature</b>	44.5°F
<b>Coldest Interior Temperature</b>	33.3°F

**TEST REPORT FOR WINDLOCH, LLC**

Report No.: P4680.03-116-45 R0

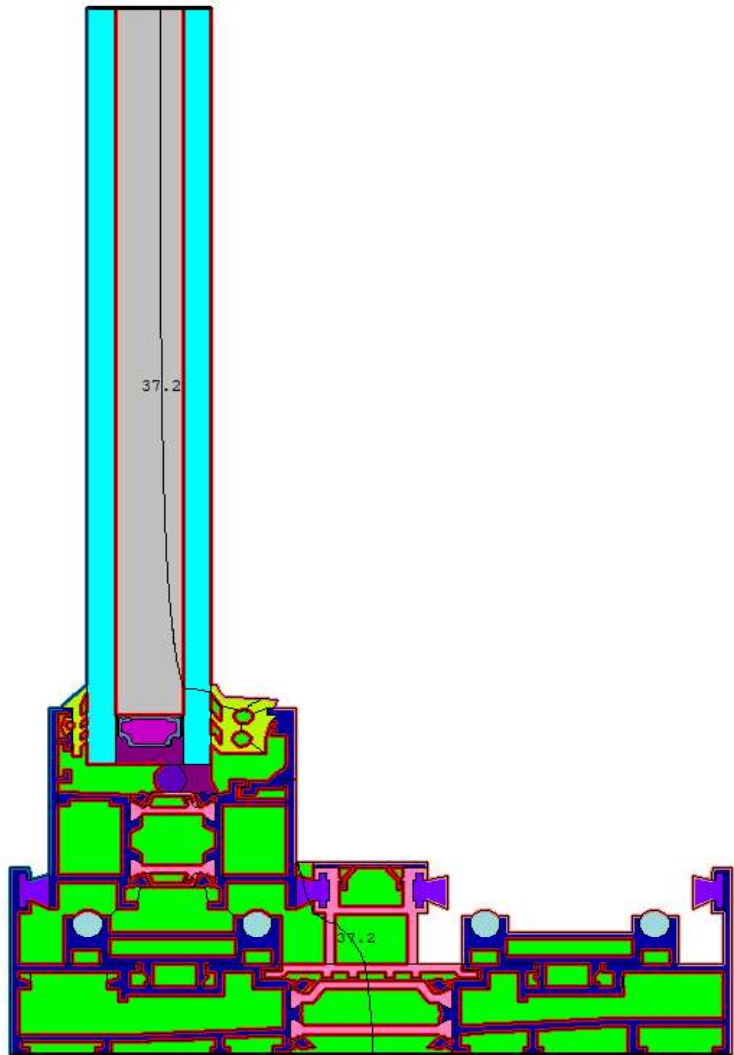
Date: 11/22/22

**SECTION 6**

**SIMULATION RESULTS**

**DEWPOINT TEMPERATURE ANALYSIS: DEWPOINT LINE PLOT**

<b>Cross Section</b>	5/402
<b>Exterior Air Temperature</b>	0°F
<b>Interior Air Temperature</b>	70°F
<b>Relative Humidity</b>	30% RH
<b>Exterior Wind Velocity</b>	12.3 mph



<b>Dewpoint Temperature</b>	37.2°F
<b>Coldest Interior Frame Temperature</b>	33.3°F
<b>Edge of Glass Temperature</b>	44.5°F
<b>Coldest Interior Temperature</b>	33.3°F



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**TEST REPORT FOR WINDLOCH, LLC**

Report No.: P4680.03-116-45 R0

Date: 11/22/22

**SECTION 7**

**DRAWINGS / BILL OF MATERIALS / THERM REPORTS\***

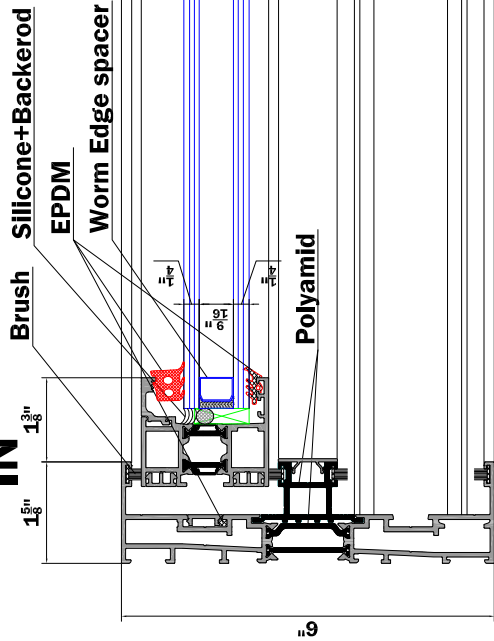
The drawings which follow have been reviewed by Intertek B&C and are representative of the simulation result(s) reported herein. Any deviations are documented herein or on the drawings.

*\*THERM Reports available where applicable.*





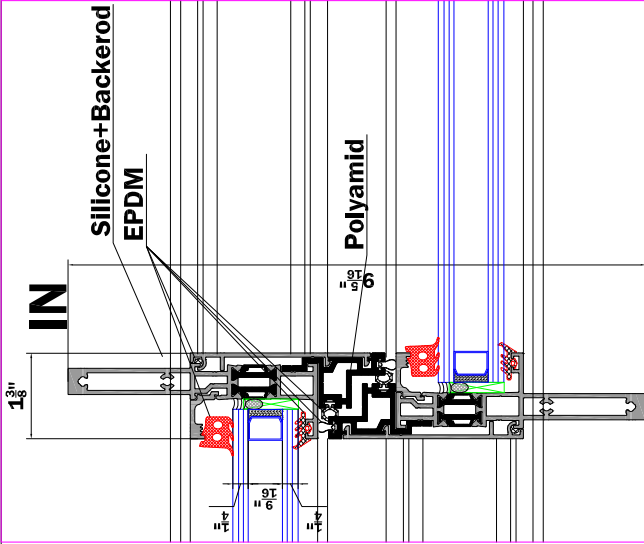
**IN**



**OUT**

1

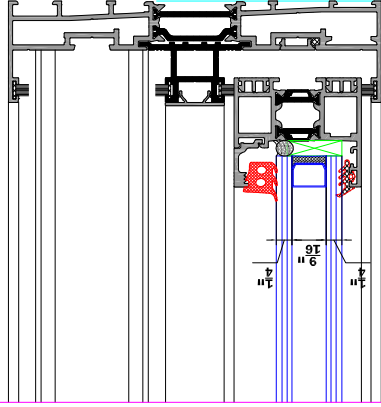
**IN**



**OUT**

2

**IN**



**OUT**

3



**WINDLOCH**

THESE SHOP DRAWINGS CONTAIN INFORMATION PROPRIETARY TO WINDLOCH LLC. THEY ARE INTENDED SOLELY FOR THE INFORMATION AND USE OF WINDLOCH LLC, AND THE ARCHITECT'S OFFICE. NO OTHER PROPRIETARY INFORMATION MAY NOT BE USED, REPRODUCED OR DISCLOSED TO ANY OTHER PARTIES WITHOUT THE EXPRESS WRITTEN PERMISSION OF WINDLOCH LLC.

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(943)718-4868 Fax  
www.windloch.com  
WWW.WINDLOCH.COM

REV.	DESCRIPTION	BY	DATE

PROJECT: YOAV BEN-SHIMON  
SCALE: 6"=1' (11x17)  
ARCHITECT: DATE: 11/22/22  
CONSULTANT:  
SHEET NO.: 401

SHEET DESCRIPTION: Sliding Door Minimal 52



**TEST REPORT FOR WINDLOCH, LLC**





















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Date: 11/22/22

**SECTION 8**

**MATERIALS PROPERTIES LIST**

This table outlines approved NFRC 101 Materials, and their associated colors, used to perform these custom simulations. All listed values may be found in NFRC 101-2020 [E1A14]. Any material properties not included on this list are available upon request.

	Material	Conductivity (W/m*K)	Conductivity (Btu*in/h*ft2*F)	Emissivity
	Aluminum Alloys (Painted)	160	1109.36	0.9
	Aluminum Alloys (mill finish)	160	1109.36	0.05
	Brick, Fired clay - medium density	0.74	5.131	0.9
	Butyl rubber (isobutene, solid/hot melt)	0.24	1.664	0.9
	Concrete - medium density	1.15	7.973	0.9
	Coniferous woods (Softwoods)	0.14	0.971	0.9
	Ethylene Propylene Diene Monomer (EPDM)	0.25	1.733	0.9
	Foam Rubber	0.06	0.416	0.9
	Frame Cavity NFRC 100	VARIABLES	VARIABLES	-
	Frame Cavity Slightly Ventilated NFRC 100	VARIABLES	VARIABLES	-
	Glass Fiber (Semi-Rigid) Sheathing	0.034	0.236	0.9
	Gypsum plasterboard	0.16	1.109	0.9
	Mineral Fiber-low density (rock, slag, glass)	0.042	0.291	0.9
	Mohair (polyester) sweep	0.14	0.971	0.9
	Polyamide (PA 66/Nylon - 25% glass fill)	0.30	2.08	0.9
	Polyisobutylene (PIB)	0.20	1.387	0.9
	Expanded Polystyrene (EPS)	0.038	0.263	0.9
	Quanex Building Products Super Spacer TriSeal	0.141	0.978	0.9
	Silicone	0.35	2.427	0.9
	Steel (rolled, ground, plated)	50	346.674	0.2



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**TEST REPORT FOR WINDLOCH, LLC**

Report No.: P4680.03-116-45 R0

Date: 11/22/22

**SECTION 9**

**REVISION LOG**

REVISION #	DATE	PAGES	REVISION
.01R0	11/22/22	N/A	Original Report Issued to Windloch, LLC.