Intertek | Architectural Testing

TEST REPORT

Report No.: E5190.03-301-41

Rendered to:

THE NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS
Glen Ellyn, Illinois

TYPE: Sunshade in the Horizontal Position above a dual glazed clear window

SERIES/MODEL: 3/4 0.125 Unflat AL, LWD: 2", SWD 0.95", Strand Width 0.375"

Specification: *NFRC 201-2010, "Interim Standard Test Method for Measuring the Solar Heat Gain Coefficient of Fenestration Systems Using Calorimetry Hot Box Methods".*

Summary of Results	
Solar Heat Gain Coefficient (SHGC) at 60 degree sun angle	0.10
Base Size 37" x 47"	
Testing was performed in the 48" Solar Calorimeter ICN# 62060	

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Test Completion Date: 04/14/15

Reference must be made to Report No. E5190.03-301-41, dated 05/15/15 for complete test specimen description and data.

1.0 Report Issued To: The National Association of Architectural Metal Manufacturers
800 Roosevelt Rd. Bldg C, Suite 312
Glen Ellyn, Illinois 60137

2.0 Test Laboratory: Architectural Testing, Inc.
an Intertek Company ("Intertek-ATI")
2524 E. Jensen Ave
Fresno, California 93706
559-233-8705

3.0 Project Summary:

3.1 Product Type: Sunshade in the Horizontal Position above a dual glazed clear window

3.2 Series/Model: 3/4 0.125 Unflat AL, LWD: 2", SWD 0.95", Strand Width 0.375"

3.3 Test Date: 04/14/15

3.4 Overall Size: 37" x 47"

3.5 Daylight Opening: 35" x 47"

3.6 Test Sample Submitted by: Manufacturer

3.7 Test Sample Submitted for: Comparison Testing

4.0 Test Specification:

NFRC 201-2010, "Interim Standard Test Method for Measuring the Solar Heat Gain Coefficient of Fenestration Systems Using Calorimetry Hot Box Methods".

Testing was conducted in full compliance to NFRC standards with the exception that sun altitude was not tracked by the calorimeter

6.0 Test Results: (Continued)

6.3 Test Duration:

1.	The test parameters were not considered stable since altitude was not tracked

6.4 Calibration Information 48 inch Calorimeter ICN 62060:

1.	Moving Pyranometer ICN 004059	04/15/13
2.	Flowmeter ICN 004065	04/11/13
3.	Thermocouple	01/04/12
4.	Surround Panel Conductivity	06/21/13
5.	Power Input	11/16/13
6.	Fluid Temperature	11/16/13
7.	Miscellaneous Power Input Last Calibration	11/16/13
8.	Metering Box Last Calibration	11/16/12
9.	Calibration Transfer Standard	03/08/10

The specimen was installed into an extruded polystyrene foam panel with an R-value of 18 using silicone caulking. Tracking system azimuth and altitude are read every minute and the calorimeter is moved to a position normal to the sun from chart stored in computer. The calorimeter is located at 2524 East Jensen in Fresno, California near the northeast corner of the lot elevated approximately 15 feet from ground level. The foreground is desert, the background is industrial buildings.

The estimated uncertainty of this test is 2.85%

This was determined using ANSI/NCSL Z540-2-1997 type B evaluation as described in section 4.3 of this specification. For assumptions used for this calculation or for a description of the procedure contact the "Individual-In-Responsible-Charge" that signed this report.

"This test method does not include separate procedures to determine the heat flows due to either air movement or nighttime U-factor effects. As a consequence, the SHGC results obtained do not reflect the overall performance which may be found in field installations due to temperature differences, wind, shading, air leakage effects, and the thermal bridge effects specific to the design and construction of the fenestration system opening."

"Since there is a wide variety of fenestration system openings in residential, commercial and industrial buildings, it is not feasible to select a "typical" surround panel construction in which to mount the fenestration test specimen. The selection of a relatively high thermal resistance surround panel places the focus of the test on the solar performance of the system. Therefore, it should be recognized that the solar heat gain coefficient results obtained from this test method, for ideal laboratory conditions in a highly insulating surround panel, should only be used for fenestration product comparisons or as input to performance analyses which also include thermal, air leakage and thermal bridge effects due to the surrounding building structure. To determine air leakage effects for windows and doors, refer to Test Method ASTM E 283. For thermal transmittance refer to Test Method ASTM C 1199."

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.

Detailed drawings, representative samples of the test specimen and a copy of this report will be retained by Intertek-ATI for a period of four years. This report is the exclusive property of the client so named herein and relates only to the fenestration product tested. This report may not be reproduced, except in full, without the approval of the laboratory.

For INTERTEK-ATI
Test performed by:

Jerry Bontilao/ss
Digitally Signed for: Jerry Bontilao by Shannon Stein

Jerry Bontilao
Technician-Solar Department

Digitally Signed by: Tyler Westerling

Tyler Westerling, P.E.
Senior Project Engineer
Individual-In-Responsible-Charge

TW:JB:ss

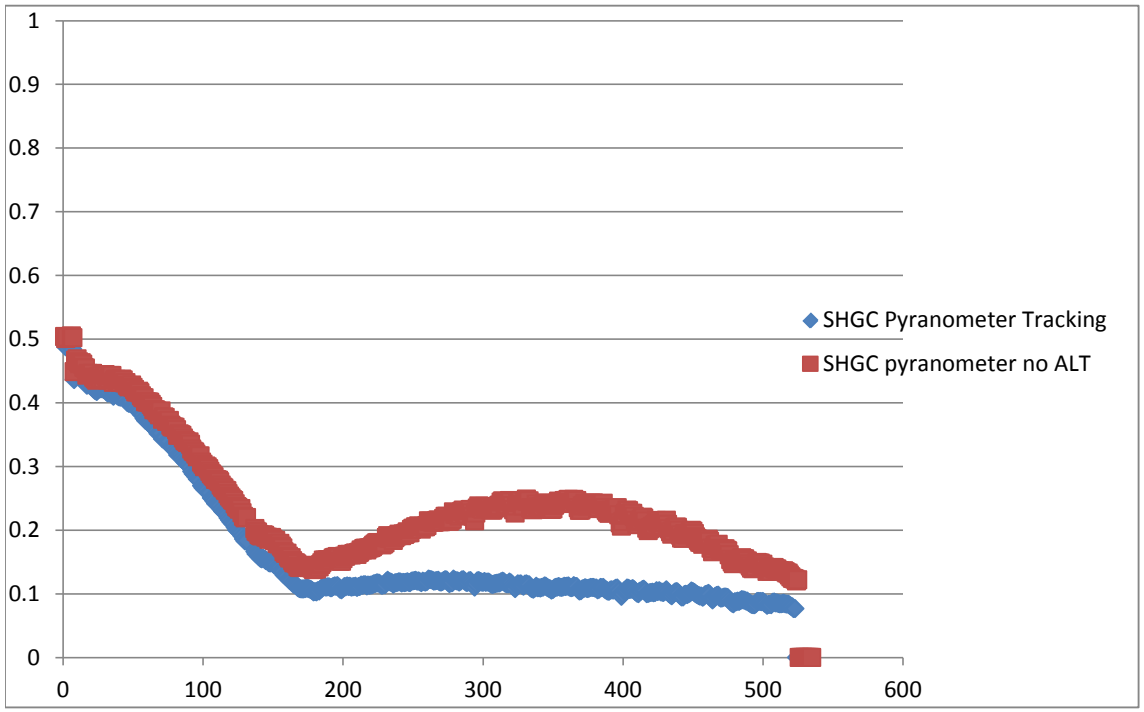
Attachments (pages): This report is complete only when all attachments listed are included.

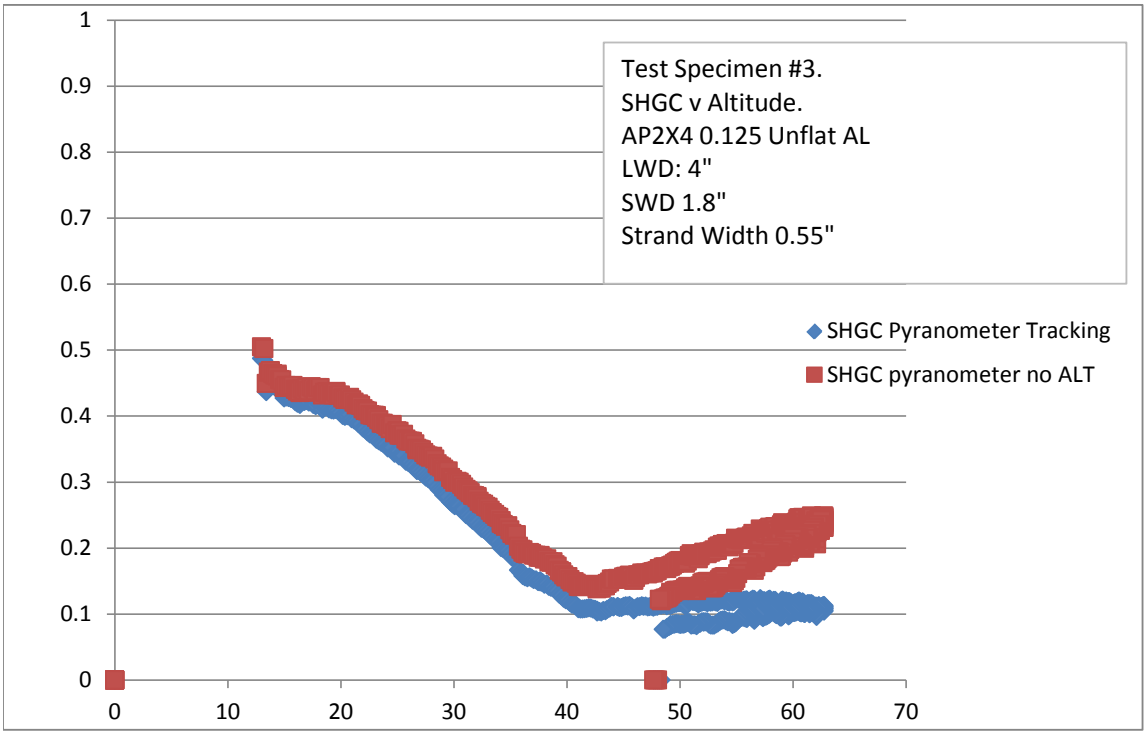
Appendix-A: Graphs (2)

Revision Log

Rev. #	Date	Page(s)	Revision(s)
0	05/15/15	All	Original Report Issue. Work requested by Jeff Church of The National Association of Architectural Metal Manufacturers

Appendix A
Graphs




Test Specimen #3.
SHGC v Altitude.
AP2X4 0.125 Unflat AL
LWD: 4"
SWD 1.8"
Strand Width 0.55"
SHGC Pyranometer Tracking
SHGC pyranometer no ALT
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
0
10
20
30
40
50
60
70