

**TEST REPORT**

**Report No.:** A9976.01-301-41

**Rendered to:**

CIRALIGHT GLOBAL, INC.  
Sherman Oaks, California

TYPE: Skylight  
SERIES/MODEL: 4' x 4' Sun Tracker

<b>Summary of Results</b>	
For a graph of Solar Heat Gain Coefficient (SHGC) vs. Sun Altitude See Appendix A	
<b>Unit Size:</b>	48" x 48"
Testing was performed in the 48" Solar Calorimeter ICN# 62060	

**Test Completion Date:** 05/12/11

Reference must be made to Report No. A9976.01-301-41, dated 09/23/11 for complete test specimen description and data.

**1.0 Report Issued To:** Ciralight Global, Inc.  
15303 Ventura Blvd.  
Sherman Oaks, California 91403

**2.0 Test Laboratory:** Architectural Testing, Inc.  
2524 E. Jensen Ave  
Fresno, California 93706  
559-233-8705

**3.0 Project Summary:**

**3.1 Product Type:** Skylight

**3.2 Series/Model:** 4' x 4' Sun Tracker

**3.3 Test Date:** 05/12/11

**3.4 Overall Size:** 48" x 48"

**3.5 NFRC Standard Size:** 47" x 47"

**3.6 Test Sample Submitted by:** Manufacturer

**3.7 Test Sample Submitted for:** R & D testing

**4.0 Test Specification:**

Testing was performed on a solar calorimeter which measures the SHGC based on the test method of NFRC 201-2010. The testing deviated from the standard in that product was not positioned normal to the sun. Instead it the product was held in the horizontal position and the internal mirrors of the skylight tracked the azimuth of the sun

**5.0 Test Specimen Description:** See Appendix B for a photo of the skylight during testing

## 5.0 Test Specimen Description: (Continued)

### 5.1 Glazing:

<b>Layer 1:</b>	0.14 Clear acrylic dome with a 24-1/2" outward rise
<b>Gap 1:</b>	Sun Tracker mirror installed in airspace between dome and layer 2
<b>Layer 2:</b>	0.14" flat clear acrylic sheet
<b>Gap 2:</b>	22-1/2" white light well
<b>Layer 3:</b>	0.12" clear prismatic acrylic with an 6-3/4" inward rise

### 5.2 Calibration Information 48 inch Calorimeter ICN 62060

1.	Moving Pyranometer ICN 004604	02/16/10
2.	Flowmeter ICN 004065	01/28/10
3.	Thermocouple	02/08/10
4.	Surround Panel Conductivity	12/02/09
5.	Power Input	02/08/10
6.	Fluid Temperature	02/08/10
7.	Miscellaneous Power Input Last Calibration	02/08/10
8.	Metering Box Last Calibration	03/15/09
9.	Calibration Transfer Standard	03/05/10

The specimen was installed into an extruded polystyrene foam panel with an R-value of 18 using silicone caulking. 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 6.00%

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 Architectural Testing 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 ARCHITECTURAL TESTING, INC.

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Niilo Smeds  
Technician

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

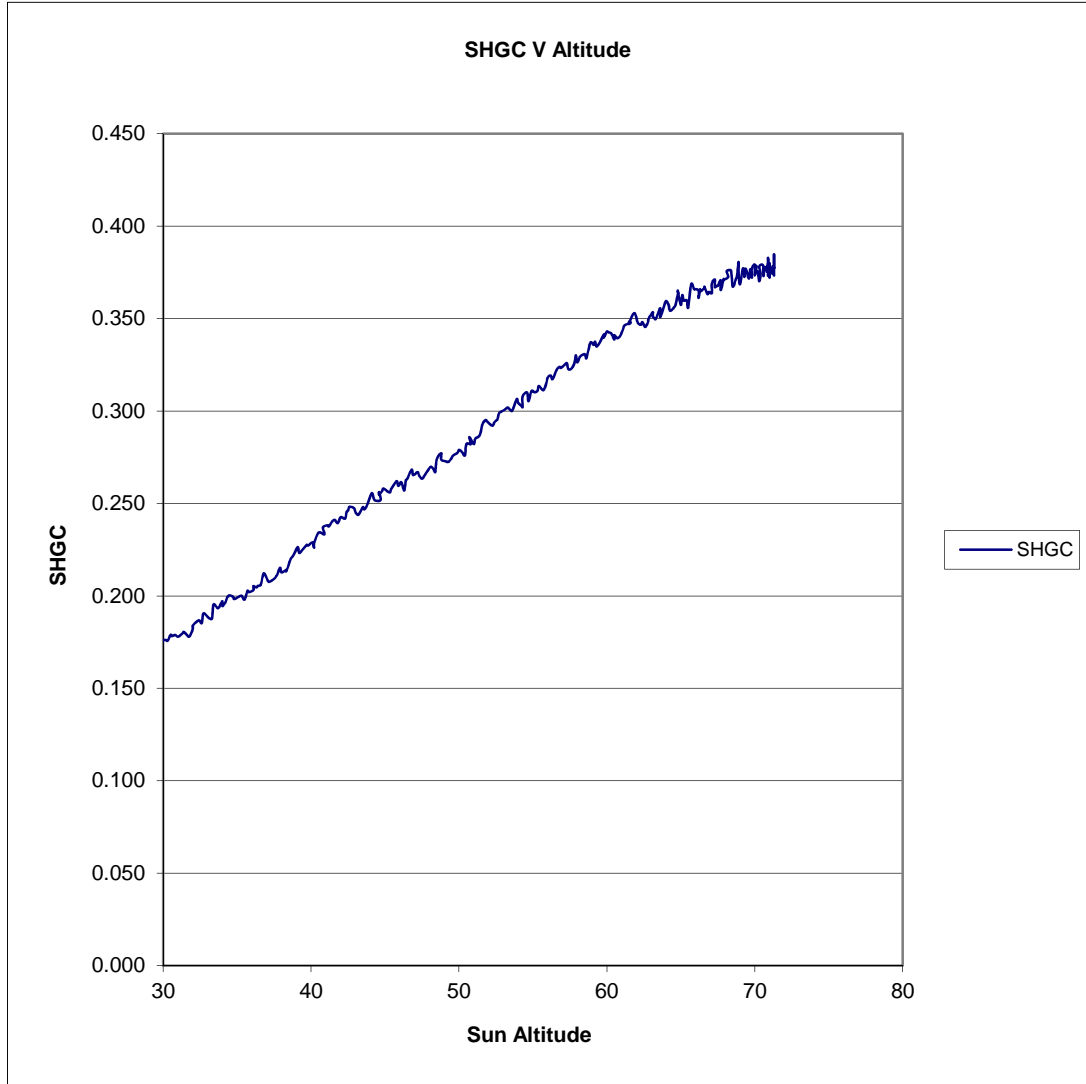
TW:ss

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

Appendix-A: Graph of SHGC vs. Altitude (1)

Appendix-B: Test Specimen Photo (1)

### Appendix A Graph



**Appendix B**  
**Photo**

