# **Product Evaluation Report**

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### Manufacturer

Natural Light Energy Systems, dba Natural Light Energy Systems, dba Kennedy Skylights 5294 Tower Way Sanford, FL 32773

### Product Series, Model and/or Description

ISFG4 Curb Mounted Glass Skylight Large Missile Impact

Code: Current Edition of the Florida Building Code including the 8th Edition (2023) Florida Building Code

Compliance Methods: Product Approval Rule 61G20-3.005(1)(a) - Certification Mark or Listing

#### **Product Installation Instructions:**

 KENN0004, Rev. C, dated 10-16/23, signed and sealed by Robert J. Amoruso, Natural Light Energy Systems, dba Natural Light Energy Systems, dba Kennedy Skylights "ISFG4" Curb Mounted Self-Flashing Glass Skylight - LMI, Installation Anchorage Details

**Engineering Analysis & Product Evaluation:** The following engineering and/or rational analysis/calculations have been performed.

- Anchorage and product verification has been substantiated by calculation (PTC Report. No. 2058-1 and 2058-2) prepared, signed, and sealed by Robert J. Amoruso, P.E. in accordance with the current edition of the Florida Building Code.
- Design Pressure Evaluation/Product Evaluation
  - Drawing No. KENN0004
    - o Product Name/Series: "ISFG4" Curb Mounted Self-Flashing Glass Skylight LMI
    - High Velocity Hurricane Zone (HVHZ): NO
    - o Outside High Velocity Hurricane Zone (HVHZ): YES
    - Impact Resistant: YES
      - Glazed laminated product using Kuraray Trosifol PVB Glass Interlayer by Kuraray America, Inc.
        Current Kuraray America NOA can be found <a href="here">here</a>.
    - National Certified Test Laboratory, Inc. Test Report No. NCTL-210-2959-1
    - Design Pressure
      - +/-52.5 psf
      - Margin of Safety = 2 applied for positive and negative loading to Structural Design Pressure per Sections 1504 and 1523 of the current edition of the FBC and MD FAQ (<a href="http://www.miamidade.gov/building/products/skylights.asp">http://www.miamidade.gov/building/products/skylights.asp</a>).
    - Performance and Testing Standards
      - Test Report No. NCTL-210-2959-1
        - o ASTM E330-90
        - o ASTM E331-93
        - o ASTM E283-91
        - o ASTM E1886-99
        - o ASTM E1996-99

### Performance Testing Standards:

- ASTM E330-90, Standard Test Method for Structural Performance of Exterior windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference
- ASTM E331-93, Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference



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- ASTM E283-91, Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
- ASTM E1886-99, Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by missile(s) and Exposed to Cyclic Pressure Differentials
- ASTM E1996-99, Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Windborne Debris in Hurricanes

### **Product Testing:**

• NCTL-210-2959-1, dated 10/30/03, signed and sealed by Gerald J. Ferrara, P.E., testing to ASTM E283-91/E330-90/E331-93 and ASTM E1886-99/1996-99 for "ISFG4" Curb Mounted Self-Flashing Glass Skylight

## Material Certifications/Component Approvals:

 Laminated Glass Interlayer: See current Miami-Dade Notice of Acceptance (NOA) for component approval for Kuraray Trosifol (formally Butacite) PVB Glass Interlayer by Kuraray America, Inc. used in this product. Kuraray America NOA can be found <a href="here">here</a>.

#### Limitations & Conditions of Use:

- "ISFG4" Curb Mounted Self-Flashing Glass Skylight shown on KENN0004.
  - o This product has not been evaluated for use inside the HVHZ (High Velocity Hurricane Zone)
  - o This product is Impact Resistance. Therefore, a protective impact-rated device is not required.
- Refer to Product Installation Instructions noted above for:
  - Maximum allowable wind loads at related maximum allowable size(s).
  - o Overall dimensions and material/grade of main product components, accessories, etc.
  - o Illustrated diagrams of the attachment of the product to the structure.
  - Anchor type(s), size(s), substrate(s), embedment, edge distance, and spacing/locations.
- Site wind pressures shall be determined by a licensed professional engineer in accordance with the current edition of the Florida Building Code (and/or ASCE 7 as referenced in the current edition of the Florida Building Code) for components and cladding based on allowable stress design.
- Site conditions not covered in this product evaluation document are subject to additional engineering analysis by a licensed professional engineer or registered architect as required by the authority having jurisdiction.
- Adequacy of the existing structural substrates as a main wind force resisting system capable of withstanding and transferring applied product loads to the foundation is the responsibility of the licensed professional engineer or registered architect acting as the design professional of record for the project of installation.

## Certificate of Independence per Product Approval Rule 61G20-3.009

PTC Product Design Group, LLC and Robert J. Amoruso, P.E. does not have, nor will acquire, any financial interest in the company manufacturing or distributing product(s) covered by this Product Evaluation Report. PTC Product Design Group, LLC and Robert J. Amoruso, P.E. do not have, nor will acquire any financial interest in any other entity involved in the approval process or testing of the product(s) covered by this Product Evaluation Report.

Evaluated by: Robert J. Amoruso, P.E. FL PE License No. 49752

