



LANE-AIRE MANUFACTURING CORP.

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LANE-AIRE SKYLIGHTS

CSI Section:

08 62 00 Unit Skylights

1.0 RECOGNITION

Lane-Aire Acrylic Skylights recognized in this report has been evaluated for use as plastic-glazed, non-openable skylights. The structural performance and air infiltration properties of the Acrylic Skylights complies with the intent of the provisions of the following codes and regulations:

- 2012 and 2009 International Building Code® (IBC)
- 2012 and 2009 International Residential Code® (IRC)
- 2012 and 2009 International Energy Conservation Code® (IECC)
- 2013 California Building Code (CBC) – Attached Supplement

2.0 LIMITATIONS

Use of the Lane-Aire Skylights recognized in this report is subject to the following limitations:

2.1 The installation of Lane Aire skylights shall comply with Section 3.3 of this report, IBC Sections 2405.4 and 2610, and IRC Section R308.6, as applicable, and the manufacturer’s installation instructions. In the event of a conflict between any of the above listed items, the more restrictive shall govern.

2.2 The design loads for each skylight shall not exceed the allowable loads as set forth in [Table 1](#) of this report. Snow loads are outside the scope of this report.

2.3 The manufacturer’s installation instructions shall be provided on each proposed skylight’s installation jobsite.

2.4 Lane-Aire Skylights are manufactured and packaged in Carson, California.

3.0 PRODUCT USE

3.1 General: Lane-Aire Acrylic Skylights are plastic-glazed, non-openable skylights complying with IBC Sections 2405 and 2610 and IRC Section R308.6.

3.2 Design: The allowable loads are expressed as performance grade rating values, PG. Under the IBC, the PG rating values shall be equal to, or greater than, the maximum loads required by IBC Section 2405.5.2. Under the IRC, the PG rating values shall be equal to, or greater than, the maximum loads determined in accordance with IBC Section 2405.5.2, except the design wind forces shall be as specified for skylights in IRC Section R301.2.1. Table 1 of this report lists allowable positive and negative PG rating values.

3.2.1 Air Infiltration: The air leakage of the skylights, tested at an air pressure differential of 1.57 psf (75 Pa), complies with the maximum air leakage rate of 0.3 cfm/ft² (1.5L/s-m²) as required in Sections C402.4.3 and R402.3 of the 2012 IECC and Sections 402.4.4 and 502.4.1 of the 2009 IECC.

3.3 Installation: The skylights shall be installed in accordance with IBC Sections 2405 and 2610 and IRC Section R308.6. The curb mounted skylights shall be installed on framing of minimum 2 by 6 lumber, per the sizes in [Table 1](#) of this report, and of a height sufficient so that the plastic glazing is a minimum of 4 inches (102 mm) above the plane of the roof. The wood curb and its attachment to the roof structure shall be designed to resist wind uplift and gravity loads.

The self-flashing skylights are designed to mount directly to the roof deck. The skylight shall be attached to the wood curb or deck with ¼ inch (6.35 mm) diameter, corrosion resistant screws in each mounting hole provided, with the screw length being sufficient to penetrate the wood curb or wood deck framing member a minimum of 1½ inches (38.1 mm).

Curb mounted skylights shall have the gap between the skylight frame and the wood curb fully shimmed for proper fastener installation. The units shall be flashed as required by the applicable requirements of the IBC or IRC.

Compatible sealant shall be applied over the mounting flange of the self-flashing skylight and covered with the roof covering in such a manner as to assure a watertight seal.

Additional installation instructions are provided in [Figures 1](#) and [2](#) of this report.

4.0 PRODUCT DESCRIPTION

4.1 Product Information: Lane-Aire Skylights are glazed using smooth domes formed from 0.118, 0.150, 0177, and 0.236-inch-thick (3.0, 3.81, 4.5, and 6 mm) flat sheets of class CC2 acrylic plastic described in the approved quality manual. The domes are attached at the factory to a frame with a retainer cap. Model S skylights are curb-mounted and model SF skylights and self-flashing. Details for the skylights are noted in [Table 1](#) of this report.

The product described in this Uniform Evaluation Service (UES) Report has been evaluated as an alternative material, design or method of construction in order to satisfy and comply with the intent of the provision of the code, as noted in this report, and for at least equivalence to that prescribed in the code in quality, strength, effectiveness, fire resistance, durability and safety, as applicable, in accordance with IBC Section 104.11. This document shall only be reproduced in its entirety.





4.2 Material Information

4.2.1 Plastic Dome: The plastic dome is thermoformed from Plexiglas brand acrylic. Domes are available in white translucent, clear transparent, bronze, and grey transparent solar control Plexiglas brand acrylic sheet Type MC as described in [ESR-1653](#). The acrylic plastic complies as a light-transmitting plastic in accordance with IBC Section 2606.4 and has a CC2 classification.

4.2.2 Self-Flashing Curb: The self-flashing curb is made from sheet aluminum alloy 3003 or 5052 H32.

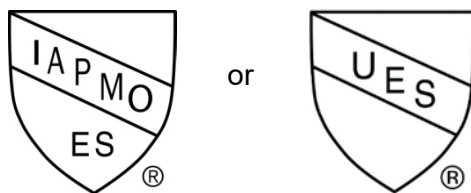
4.2.3 Fasteners: The fasteners shall be cadmium-plated steel, aluminum, or 300 series stainless steel.

4.2.4 Gaskets: The glazing gaskets shall be extruded silicone, with a 50 +/- 5 durometer hardness and a minimum elongation of 450 percent.

4.2.5 Retainer Cap: The retainer cap is made from 6063 T5 extruded aluminum.

5.0 IDENTIFICATION

A label shall be affixed on at least one of the following: product, packaging, installation instructions, or descriptive literature. The label shall include the company name or trademark, model number, and the Evaluation Report Number (ER-1998), the name of the inspection agency (Smith-Emery Laboratories) and a safety label in compliance with Class I, ANSI Z 35.1-1972 (warning of risk of falling) to identify the products recognized in this report. A die-stamp label may also substitute for the label. Either IAPMO UES Mark of Conformity may also be used as shown below:



IAPMO UES ER-1998

6.0 SUBSTANTIATING DATA

The following data has been submitted as follows and is in accordance with:

- ICC-ES Acceptance Criteria for Plastic Glazed Skylights (AC16), approved April 2011, editorially revised August 2013.

7.0 STATEMENT OF RECOGNITION

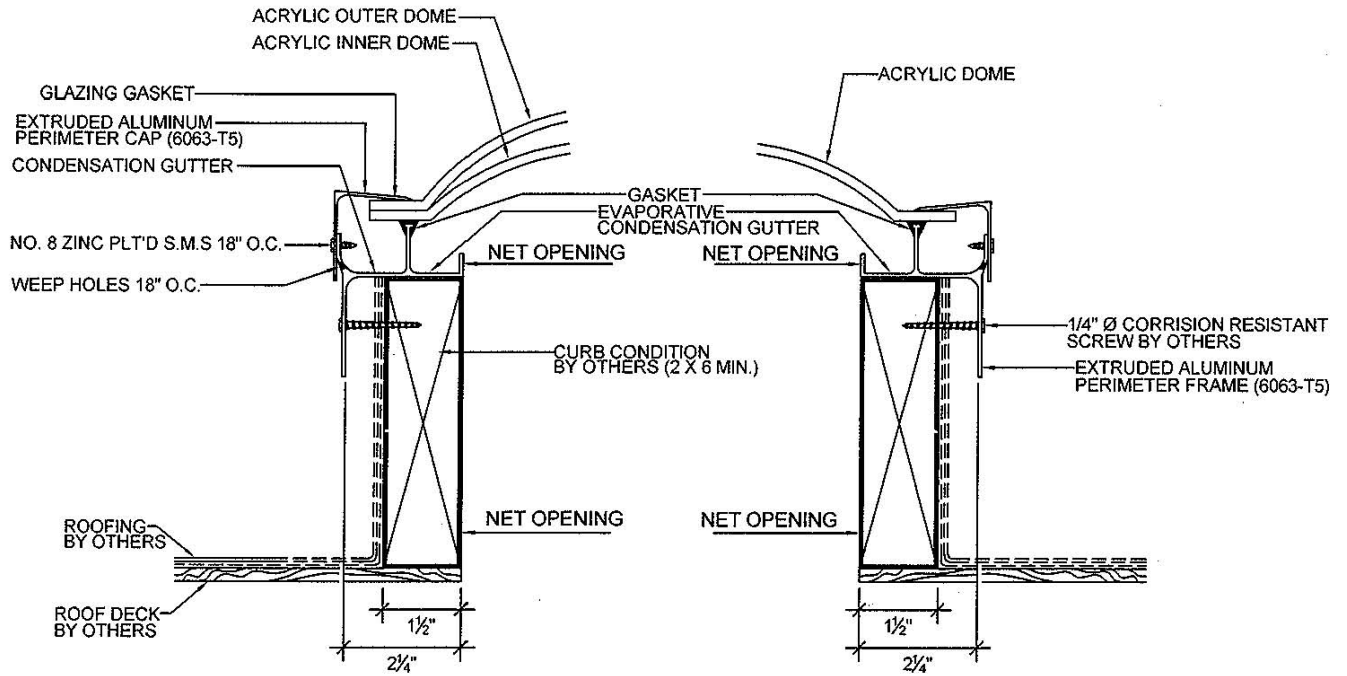
This evaluation report describes the results of research completed by IAPMO Uniform Evaluation Service on Lane-Aire Acrylic Skylights to assess conformance to the codes shown in Section 1.0 of this report and serves as documentation of the product certification. Products are manufactured at the location noted in Section 2.4 of this report under a quality control program with periodic inspection under the supervision of IAPMO UES.

For additional information about this evaluation report please visit www.uniform-es.org or email us at info@uniform-es.org



TABLE 1—DIMENSIONAL DETAILS AND PERFORMANCE GRADES FOR LANE-AIRE SKYLIGHTS

MODEL NO.	INSIDE CURB DIMENSIONS (Inches)	DOME THICKNESS (Inch)	DOME RISE (Inches)	PERFORMANCE GRADE, PG, AND ALLOWABLE LOADS (psf), MODEL S AND SF	
				PG _{pos} (inward Forces)	PG _{neg} (outward Forces)
2020	14.25 x 14.25	0.118	4	20	20
2028	14.25 x 22.25	0.118	4	20	20
2052	14.25 x 46.25	0.118	5	20	20
2424	19 x 19	0.118	5	20	20
2828	22.25 x 22.25	0.118	7	20	20
2836	22.25 x 30.25	0.118	7	20	20
2842	22.25 x 37	0.118	7	20	20
2852	22.25 x 46.25	0.118	7	20	20
3232	25.50 x 25.50	0.118	7	20	20
3636	30.25 x 30.25	0.118	8	20	20
3652	30.25 x 46.25	0.118	8	20	20
4242	37 x 37	0.118	10	20	20
5252	46.25 x 46.25	0.118	12	20	20
5555	48 x 48	0.118	12	20	20
2876	22.25 x 69.50	0.150	7	20	20
2896	22.25 x 89.50	0.150	9.75	20	20
28102	22.25 x 96	0.150	9.75	20	20
3296	25.50 x 89.50	0.150	9.75	20	20
5276	46.25 x 69.50	0.150	12	20	20
5296	46.25 x 89.50	0.150	12	20	20
55102	48 x 96	0.150	12	20	20
3676	30.25 x 69.50	0.177	8	20	20
4280	37 x 75	0.177	10	20	20
4364	38 x 59	0.177	10	20	20
6060	55 x 55	0.177	14	20	20
6476	57.50 x 69.50	0.177	15	20	20
6496	57.50 x 89.50	0.177	15	20	20
8080	75 x 75	0.177	19	20	20
9898	92.50 x 92.50	0.236	24	20	20



SECTION VIEW = DOME SKYLIGHT (SDD)
NOT TO SCALE

FIGURE 1—SDD DETAIL

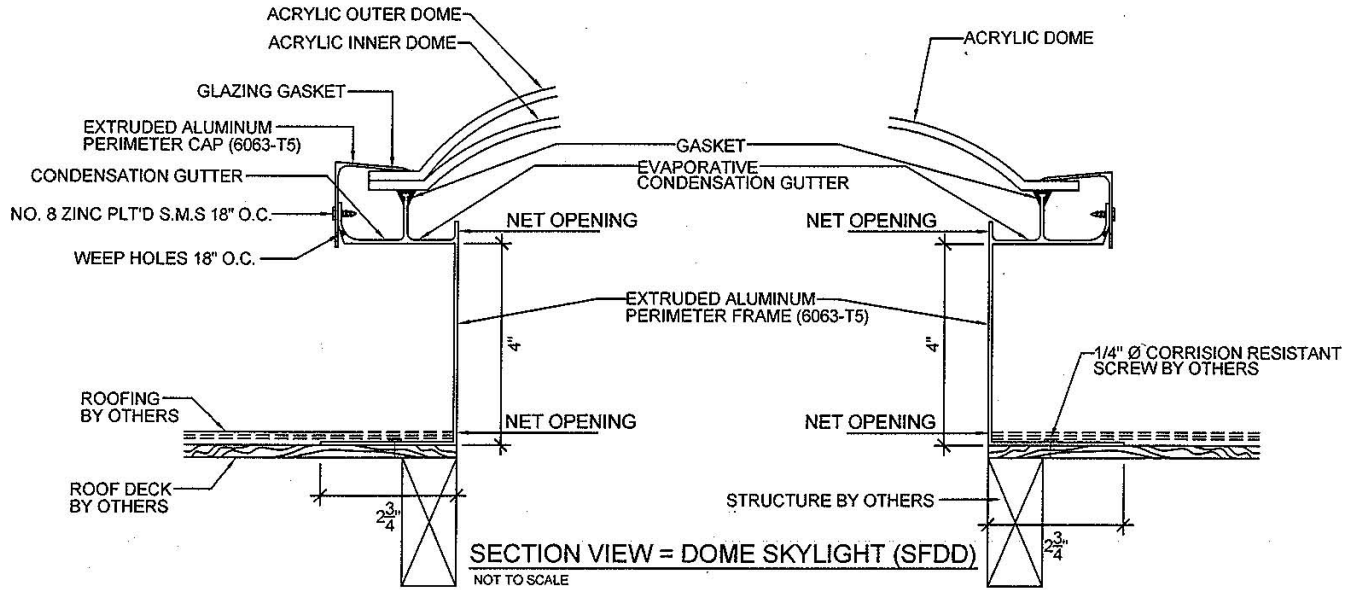


FIGURE 2— SFDD DETAIL



CALIFORNIA SUPPLEMENT

CODE SUPPLEMENT TO ER-1998

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CSI Division: 08 00 00—Openings

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1.0 SCOPE OF EVALUATION

1.1 Compliance to the following codes & regulations:

- 2013 California Building Code® (CBC)

1.2 Evaluated in accordance with:

- ICC-ES AC16, approved April 2011 (editorially revised August 2013)
- AAMA/WDMA/CSA 101/I.S.2/A-440-11

1.3 Properties assessed:

- Structural
- Air Infiltration

2.0 APPLICABILITY

All provisions of ER1998 referencing the 2012 IBC shall apply for use under the 2013 CBC.

3.0 ADDITIONAL REQUIREMENTS

There are no additional requirements for use under the 2013 CBC.

This supplement expires concurrently with ER-1998.

4.0 SUBSTANTIATING DATA

Data in accordance with the ICC-ES Acceptance Criteria for Plastic Glazed Skylights (AC16), approved April 2011, editorially revised August 2013; and AAMA/WDMA/CSA 101/I.S.2/A-440-11.

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