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ICC-ES Evaluation Report

ESR-3557

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Reissued 10/2018
This report is subject to renewal 10/2019.

DIVISION: 08 00 00—OPENINGS
SECTION: 08 62 00—UNIT SKYLIGHTS

REPORT HOLDER:

ACUITY BRANDS LIGHTING DBA: SUNOPTICS PRISMATIC SKYLIGHTS

EVALUATION SUBJECT:

SUNOPTICS PRISMATIC SKYLIGHTS



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Section: 08 62 00—Unit Skylights

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PRISMATIC SKYLIGHTS**

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1.0 EVALUATION SCOPE

1.1 Compliance with the following codes:

- 2009 and 2006 *International Building Code*® (IBC)
- 2009 and 2006 *International Residential Code*® (IRC)

Properties evaluated:

- Structural
- Water penetration resistance
- Air infiltration
- Durability

1.2 Evaluation to the following green standard:

- 2015 and 2012 ICC 700 *National Green Building Standard*™ (ICC 700-2015 and ICC 700-2012)

Attributes verified:

- See Section 3.0

2.0 USES

The Sunoptics Prismatic Skylights AL-CM Series, Model 800MD skylights described in this report are plastic-glazed, non-operable skylights complying with Sections 2405 and 2610 of the IBC and Section R308.6 of the IRC.

3.0 DESCRIPTION

Sunoptics Prismatic Skylights are glazed using prismatic ribbed domes formed from two flat sheets of Class CC2 acrylic plastic identified in the quality manual. The outer sheet is a 0.165-inch-thick, 100 percent impact modified material, and the inner sheet is a 0.120-inch-thick, 50 percent impact modified material. The domes are attached at the factory to a frame made from 6063 T6 aluminum extrusions. The skylights are curb-mounted. Details for the skylights are noted in Table 1.

The attributes of the skylights have been verified as conforming to the requirements of ICC 700-2015 and ICC 700-2012 Section 701.4.3.3 for fenestration air leakage. Note that decisions on compliance for those areas rest with the user of this report. The user is advised of the project-

specific provisions that may be contingent upon meeting specific conditions, and the verification of those conditions is outside the scope of this report. These codes or standards often provide supplemental information as guidance.

4.0 DESIGN AND INSTALLATION

4.1 Design:

4.1.1 General: The allowable loads are expressed as performance grade rating values, PG. Under the IBC, the PG rating values must be equal to, or greater than, the maximum loads required by IBC Section 2405.5.2. Under the IRC, the PG rating values must be equal to, or greater than, the maximum loads determined in accordance with IBC Section 2405.5.2, except that the design wind forces must be as specified for skylights in IRC Section R301.2.1. See Table 1 for allowable positive and negative PG rating values.

4.1.2 Air Infiltration: The air leakage of the skylights, tested at an air pressure differential of 1.57 psf (75 Pa)₂, complies with the maximum air leakage rate of 0.3 cfm/ft² (1.5 L/s-m²) as required in Sections 402.4.4 and 502.4.1 of the 2009 *International Energy Conservation Code*® (IECC) (Sections 402.4.2 and 502.4.1 of the 2006 IECC).

4.2 Installation:

The curb-mounted skylights must be installed on minimum 2-by nominal wood framing with a minimum 0.50 specific gravity, sized to the inside dimension noted in Table 1, 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 must be designed to resist wind uplift and gravity loads.

The curbs must be square and be parallel to the plane of the roof deck. The skylights are installed on curbs that are flashed in accordance with the code. Caulking/sealing on the curb surface in contact with the mounted skylight is not required for an air seal. The skylight units are supplied with an air seal tape factory-applied on the frame surface that contacts the curb.

The skylight must be attached with No.12 by 1½-inch stainless steel, HWH (hex washer head) wood screws with a neoprene gasket, in each mounting hole provided in the skylight frame, with the screw length being sufficient to penetrate the wood a minimum of 7/8 inch (22.2 mm). See Table 1 for the required number of fasteners.

The skylights must have the gap between the skylight frame and the wood curb fully shimmed. Flashing of the curb must comply with, and be installed in accordance with, IBC Section 1507 or IRC Section R905, as applicable.

Additional installation details are provided in Figure 1.

5.0 CONDITIONS OF USE

The Sunoptics Prismatic Skylights AL-CM Series, Model 800MD skylights described in this report comply with, or are suitable alternatives to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 The skylights must be installed in accordance with this report, Sections 2405.4 and 2610 of the IBC or Section R308.6 of the IRC, as applicable, and the manufacturer’s published installation instructions. In the event of a conflict between this report and the manufacturer’s published installation instructions, this report governs.
- 5.2 The allowable loads (performance grades) for the skylights are as set forth in Table 1 and must be equal to, or greater than, the applied loads specified by the applicable code. Snow loads are outside the scope of this report
- 5.3 The manufacturer’s installation instructions must be provided at each jobsite.
- 5.4 The skylights are manufactured in Sacramento, California, under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Plastic-glazed Skylights (AC16), dated April 2011 (editorially revised August 2013).

7.0 IDENTIFICATION

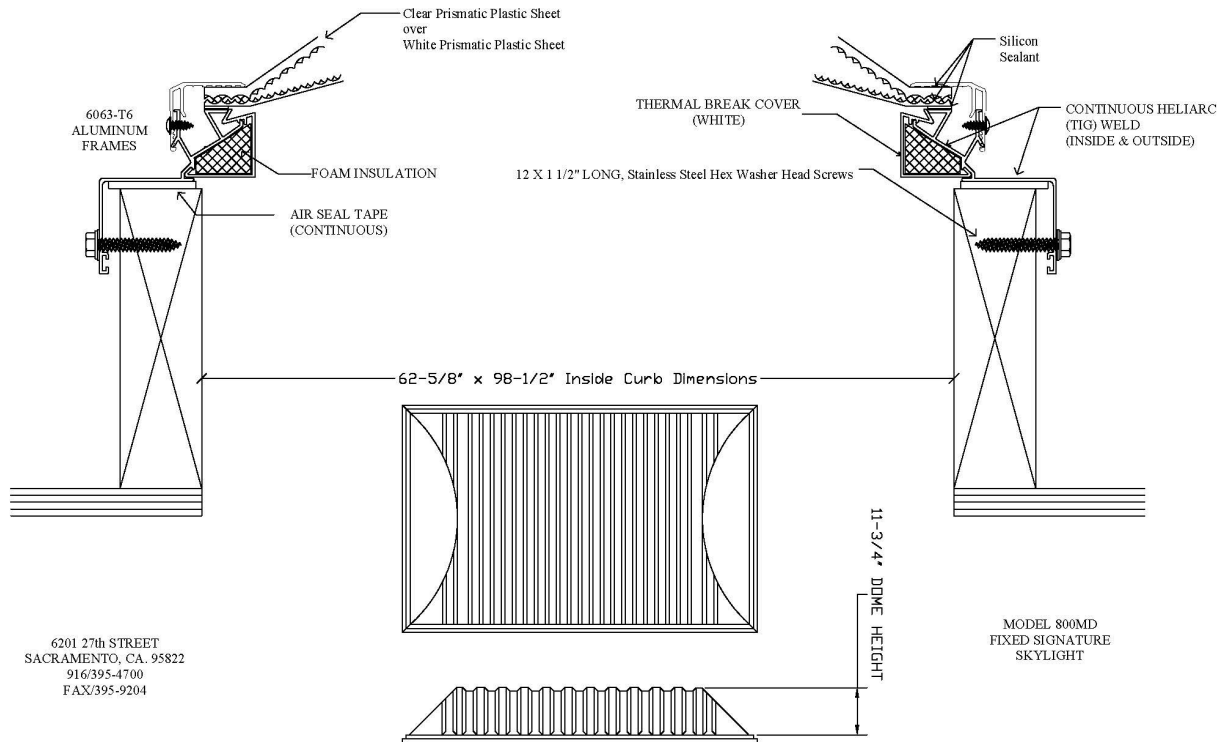
7.1 The skylights are labeled with the Sunoptics Prismatic Skylights name and address; the product model (AL-MD Series, Model 800MD) and performance grade ratings as noted in Table 1 of this report; the evaluation report number (ESR-3557); and a safety label complying with Class I, ANSI Z 35.1-1972 (warning of risk of falling).

7.2 The report holder’s contact information is the following:

**ACUITY BRANDS LIGHTING DBA: SUNOPTICS
PRISMATIC SKYLIGHTS
6201 27TH STREET
SACRAMENTO, CALIFORNIA 95822
(916) 395-4700
www.sunoptics.com
Scott.Weaver@AcuityBrands.com**

TABLE 1—DIMENSIONAL DETAILS, PERFORMANCE GRADE AND REQUIRED FASTENERS FOR PRISMATIC SKYLIGHTS

MODEL NO.	INSIDE CURB DIMENSIONS (inches)	DOME THICKNESS (inch)	DOME RISE (inches)	PERFORMANCE GRADE, PG, AND ALLOWABLE LOADS (psf), AL-CM SERIES		NUMBER OF SKYLIGHT MOUNTING FASTENERS
				PG _{pos} (inward forces)	PG _{neg} (outward forces)	
800MD	62 ⁵ / ₈ x 98 ¹ / ₂	0.230	11 ³ / ₄	20	20	16



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MODEL 800MD
FIXED SIGNATURE
SKYLIGHT

FIGURE 1—SUNOPTICS PRISMATIC SKYLIGHTS CURB MOUNT SKYLIGHT