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Legacy report on the 1997 *Uniform Building Code*™

DIVISION: 08—DOORS AND WINDOWS
Section: 08620—Unit Skylights

SKYVIEW SKYLIGHTS

SOLAR INDUSTRIES, INCORPORATED
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1.0 SUBJECT

Skyview Skylights.

2.0 DESCRIPTION

2.1 General:

The Skyview Skylights are either plastic-domed or glass-glazed skylights that are curb or deck mounted.

2.1.1 Plastic-Domed Skylights: The domes are formed from acrylic plastic sheets, and are attached by the manufacturer to an aluminum sill frame and aluminum retainer cap with corrosion-resistant screws. The sill frame acts as a code complying curb for deck-mounted units. A 2-by wood member acts as the curb for curb-mounted units. The skylights are fixed or openable, and have either single or double domes. Tables 1 and 2 list model numbers, dimensions, and allowable loads. Figures 1, 2 and 3 provide curb details.

2.1.2 Glass-Glazed Skylights: The glass-glazed, curb-mount skylights are similar in construction to the plastic-domed skylights except for the glazing material and the shape of the aluminum retainer cap. Table 3 lists model numbers, dimensions, and allowable loads. Figure 4 provides curb details.

2.2 Material:

2.2.1 Plastic Domes: Plastic domes are Type 147K Lucite acrylic plastics. See ICBO ES Evaluation Report ER-1990. The plastic has a CC2 classification.

2.2.2 Glass Glazing: Glazing is insulating glass with a top lite of $\frac{3}{16}$ -inch-thick tempered glass and a bottom lite of laminated glass. The laminated glass bottom lite consists of two plies of 0.122-inch-thick annealed glass with a polyvinyl butyral interlayer. The insulated glass glazing complies with ASTM E 774 and E 773.

2.2.3 Aluminum Frame and Retainer Cap: Extruded aluminum alloy Type 6063 T5 complies with Chapter 20, Division II, of the code and ASTM B 209.

2.2.4 Fasteners:

2.2.4.1 Screws: Electrogalvanized, No. 8, $\frac{1}{2}$ -inch-long, self-drilling, tamper-proof steel screws.

2.2.4.2 Nails: Galvanized 6d common nails.

2.2.5 Flashing: Minimum No. 26 gage corrosion-resistant metal.

2.2.6 Curbs: Wood curbs are minimum 2-inch-wide, nominal size, Group II species lumber.

2.3 Installation:

2.3.1 Curb-Mount Skylights: Curb-mount skylights are installed on roofs, including those that require no minimum slope. Wood curbs support the skylights at least 4 inches above the roof plane. The wood curb attachment to the roof structure is not recognized in this report and needs to be designed to resist the required wind-uplift and gravity loads. Step flashing extends 6 inches beyond each curb member. The flashing, which extends up the side to the top of the curb, is set in mastic at the roof sheathing, and tack nailed or set in mastic at the curb. The gap between the wood curb and vertical-mounting leg of the aluminum frame is maximum $\frac{9}{16}$ inch. A continuous $\frac{1}{2}$ -inch-diameter bead of silicone sealant provides a water-resistant seal between the frame and the flashing. The skylight is fastened to the curb with 6d common nails, which require a minimum nail penetration of $1\frac{1}{4}$ inches. See Table 4 for required number of fasteners.

2.3.2 Deck-Mount Skylights: Deck-Mount, plastic-domed skylights are self-flashing and are installed on roof decks that require no minimum slope. The skylights are attached with 6d common nails, which require a minimum nail penetration into structural members of $1\frac{1}{4}$ inches. See Table 4 for required number of fasteners.

2.4 Identification:

Each skylight unit label bears the manufacturer's name and address, evaluation report number, plastic thickness before forming, and CC2 plastic classification. Additionally, each skylight has a safety label warning of risk of fall. Glass identification complies with Section 2402 of the code.

3.0 EVIDENCE SUBMITTED

Data in accordance with the ICBO ES Acceptance Criteria for Plastic Skylights (AC16), dated April 1997; and ICBO ES Acceptance Criteria for Sloped Glass Glazing in Solariums, Patio Covers and Prefabricated Skylights (AC17), dated April 1991.



4.0 FINDINGS

That the Solar Industries, Inc., Skyview Skylights described in this report comply with the 1997 *Uniform Building Code*™, subject to the following conditions:

4.1 Installation complies with Sections 2409.4 and 2603.7 of the code, the manufacturer's instructions, and this report.

4.2 Allowable loads comply with Tables 1, 2 and 3, of this report.

This report is subject to re-examination in two years.

TABLE 1—ALLOWABLE LOADS FOR CURB-MOUNTED PLASTIC SKYLIGHTS¹

ITEM NO.	MODEL NO.	CURB DIMENSIONS (in. × in.)		NOMINAL PLASTIC THICKNESS PRIOR TO FORMING ² (in.)	DOME RISE (in.)	ALLOWABLE LOADS (psf)	
		Outer	Inner			Gravity	Uplift
1	2028	18 ³ / ₄ × 26 ³ / ₈	14 ¹ / ₄ × 22 ¹ / ₄	0.093	5	20	20
2	2040	18 ³ / ₄ × 38 ³ / ₈	14 ¹ / ₄ × 34 ¹ / ₄	0.093	5	20	20
3	2042	18 ³ / ₄ × 40 ³ / ₈	14 ¹ / ₄ × 36 ¹ / ₄	0.093	5	20	20
4	2052	18 ³ / ₄ × 50 ³ / ₈	14 ¹ / ₄ × 46 ¹ / ₄	0.093	5	20	20
5	2076	18 ³ / ₄ × 74 ³ / ₈	14 ¹ / ₄ × 70 ¹ / ₄	0.118	5	20	20
6	2864	26 ³ / ₈ × 62 ³ / ₈	22 ¹ / ₄ × 58 ¹ / ₄	0.118	5	20	20
7	2876	26 ³ / ₈ × 74 ³ / ₈	22 ¹ / ₄ × 70 ¹ / ₄	0.118	5	20	20
8	2896	26 ³ / ₈ × 94 ³ / ₈	22 ¹ / ₄ × 90 ¹ / ₄	0.118	5	20	20
9	2840	26 ³ / ₈ × 38 ³ / ₈	22 ¹ / ₄ × 34 ¹ / ₄	0.118	5	35	35
10	2842	26 ³ / ₈ × 40 ³ / ₈	22 ¹ / ₄ × 36 ¹ / ₄	0.118	5	35	35
11	2852	26 ³ / ₈ × 50 ³ / ₈	22 ¹ / ₄ × 46 ¹ / ₄	0.118	5	35	35
12	3652	34 ³ / ₈ × 50 ³ / ₈	30 ¹ / ₄ × 46 ¹ / ₄	0.118	6	20	20
13	4052	38 ³ / ₈ × 50 ³ / ₈	34 ¹ / ₄ × 46 ¹ / ₄	0.118	7	20	20
14	4252	40 ³ / ₈ × 50 ³ / ₈	36 ¹ / ₄ × 46 ¹ / ₄	0.118	7 ¹ / ₄	20	20
15	3676	34 ³ / ₈ × 74 ³ / ₈	30 ¹ / ₄ × 70 ¹ / ₄	0.150	6	20	20
16	4264	40 ³ / ₈ × 62 ³ / ₈	36 ¹ / ₄ × 58 ¹ / ₄	0.150	7 ¹ / ₄	20	20
17	4364	41 ³ / ₈ × 62 ³ / ₈	37 ¹ / ₄ × 58 ¹ / ₄	0.150	7 ¹ / ₂	20	20
18	4276	40 ³ / ₈ × 74 ³ / ₈	36 ¹ / ₄ × 70 ¹ / ₄	0.150	7 ¹ / ₄	20	20
19	4296	40 ³ / ₈ × 94 ³ / ₈	36 ¹ / ₄ × 90 ¹ / ₄	0.150	7 ¹ / ₄	20	20
20	5264	50 ³ / ₈ × 62 ³ / ₈	46 ¹ / ₄ × 58 ¹ / ₄	0.150	9 ¹ / ₄	20	20
21	5276	50 ³ / ₈ × 74 ³ / ₈	46 ¹ / ₄ × 70 ¹ / ₄	0.150	9 ¹ / ₄	20	20
22	5296	50 ³ / ₈ × 94 ³ / ₈	46 ¹ / ₄ × 90 ¹ / ₄	0.150	9 ¹ / ₄	20	20
23	5298	50 ⁵ / ₈ × 96 ³ / ₈	46 ¹ / ₂ × 92 ¹ / ₄	0.150	9 ¹ / ₄	20	20
24	52100	50 ³ / ₈ × 98 ³ / ₈	46 ¹ / ₄ × 94 ¹ / ₄	0.150	9 ¹ / ₄	20	20
25	54102	52 ¹ / ₈ × 100 ¹ / ₈	48 × 96	0.150	9 ³ / ₄	20	20
26	2020	18 ³ / ₈ × 18 ³ / ₈	14 ¹ / ₄ × 14 ¹ / ₄	0.093	5	35	35
27	2424	22 ³ / ₈ × 22 ³ / ₈	18 ¹ / ₄ × 18 ¹ / ₄	0.093	5	35	35
28	2828	26 ³ / ₈ × 26 ³ / ₈	22 ¹ / ₄ × 22 ¹ / ₄	0.093	5	35	35
29	3636	34 ³ / ₈ × 34 ³ / ₈	30 ¹ / ₄ × 30 ¹ / ₄	0.118	6	30	30
30	4040	38 ³ / ₈ × 38 ³ / ₈	34 ¹ / ₄ × 34 ¹ / ₄	0.118	6	30	30
31	4242	40 ³ / ₈ × 40 ³ / ₈	36 ¹ / ₄ × 36 ¹ / ₄	0.118	7 ¹ / ₄	30	30
32	5252	50 ³ / ₈ × 50 ³ / ₈	46 ¹ / ₄ × 46 ¹ / ₄	0.118	9 ¹ / ₄	30	30
33	6464	62 ³ / ₈ × 62 ³ / ₈	58 ¹ / ₄ × 58 ¹ / ₄	0.187	12	20	20
34	7676	74 ³ / ₈ × 74 ³ / ₈	70 ¹ / ₄ × 70 ¹ / ₄	0.187	14	20	20
35	9696	94 ³ / ₈ × 94 ³ / ₈	90 ¹ / ₄ × 90 ¹ / ₄	0.250	18	20	20
36	102102	100 ¹ / ₈ × 100 ¹ / ₈	96 × 96	0.250	19 ¹ / ₂	20	20

¹See Figures 1 and 2 for details of curb-mount and deck-mount skylights, respectively.

²Thickness is within a tolerance of 10 percent.

TABLE 2—ALLOWABLE LOADS FOR OPERABLE PLASTIC-DOMED AND GLASS-GLAZED SKYLIGHTS¹

ITEM NO.	MODEL NO.	CURB DIMENSIONS (in. × in.)		NOMINAL PLASTIC THICKNESS PRIOR TO FORMING ² (in.)	PLASTIC DOME RISE (in.)	ALLOWABLE LOADS (psf)	
		Outer	Inner			Gravity	Uplift
1	2028	18 ³ / ₈ × 26 ³ / ₈	14 ¹ / ₄ × 22 ¹ / ₄	0.093	5	20	30
2	2040	18 ³ / ₈ × 38 ³ / ₈	14 ¹ / ₄ × 34 ¹ / ₄	0.093	5	20	30
3	2042	18 ³ / ₈ × 40 ³ / ₈	14 ¹ / ₄ × 36 ¹ / ₄	0.093	5	20	30
4	2052	18 ³ / ₈ × 50 ³ / ₈	14 ¹ / ₄ × 46 ¹ / ₄	0.093	5	20	30
9	2840	26 ³ / ₈ × 38 ³ / ₈	22 ¹ / ₄ × 34 ¹ / ₄	0.118	5	35	35
10	2842	26 ³ / ₈ × 40 ³ / ₈	22 ¹ / ₄ × 36 ¹ / ₄	0.118	5	35	35
11	2852	26 ³ / ₈ × 50 ³ / ₈	22 ¹ / ₄ × 46 ¹ / ₄	0.118	5	35	35
12	3652	34 ³ / ₈ × 50 ³ / ₈	30 ¹ / ₄ × 46 ¹ / ₄	0.118	6	20	30
13	4052	38 ³ / ₈ × 50 ³ / ₈	34 ¹ / ₄ × 46 ¹ / ₄	0.118	7	20	30
14	4252	40 ³ / ₈ × 50 ³ / ₈	36 ¹ / ₄ × 46 ¹ / ₄	0.118	7 ¹ / ₄	20	30
26	2020	18 ³ / ₈ × 18 ³ / ₈	14 ¹ / ₄ × 14 ¹ / ₄	0.093	5	35	35
27	2424	22 ³ / ₈ × 22 ³ / ₈	18 ¹ / ₄ × 18 ¹ / ₄	0.093	5	35	35
28	2828	26 ³ / ₈ × 26 ³ / ₈	22 ¹ / ₄ × 22 ¹ / ₄	0.093	5	35	35
29	3636	34 ³ / ₈ × 34 ³ / ₈	30 ¹ / ₄ × 30 ¹ / ₄	0.118	6	30	30
30	4040	38 ³ / ₈ × 38 ³ / ₈	34 ¹ / ₄ × 34 ¹ / ₄	0.118	6	30	30
31	4242	40 ³ / ₈ × 40 ³ / ₈	36 ¹ / ₄ × 36 ¹ / ₄	0.118	7 ¹ / ₄	30	30
32	5252	50 ³ / ₈ × 50 ³ / ₈	46 ¹ / ₄ × 46 ¹ / ₄	0.118	9 ¹ / ₄	30	30

¹Glass-glazed skylights are curb mounted, and the insulated glass thickness is 1 inch. The insulated glass consists of a tempered top pane and a laminated bottom pane. See Section 2.2 of this report for details.

²Thickness is within a tolerance of 10 percent.

TABLE 3—ALLOWABLE LOADS FOR CURB-MOUNT GLASS-GLAZED SKYLIGHTS^{1,2}

ITEM NO.	MODEL NO.	CURB DIMENSIONS (in. × in.)		ALLOWABLE LOADS (psf)	
		Outer	Inner	Gravity	Uplift
1	2028	18 ³ / ₈ × 26 ³ / ₈	14 ¹ / ₄ × 22 ¹ / ₄	40	40
2	2040	18 ³ / ₈ × 38 ³ / ₈	14 ¹ / ₄ × 34 ¹ / ₄	40	40
3	2042	18 ³ / ₈ × 40 ³ / ₈	14 ¹ / ₄ × 36 ¹ / ₄	40	40
4	2052	18 ³ / ₈ × 50 ³ / ₈	14 ¹ / ₄ × 46 ¹ / ₄	40	40
5	2076	18 ³ / ₈ × 74 ³ / ₈	14 ¹ / ₄ × 70 ¹ / ₄	40	40
6	2864	26 ³ / ₈ × 62 ³ / ₈	22 ¹ / ₄ × 58 ¹ / ₄	40	40
7	2876	26 ³ / ₈ × 74 ³ / ₈	22 ¹ / ₄ × 70 ¹ / ₄	40	40
8	2896	26 ³ / ₈ × 94 ³ / ₈	22 ¹ / ₄ × 90 ¹ / ₄	40	40
9	2840	26 ³ / ₈ × 38 ³ / ₈	22 ¹ / ₄ × 34 ¹ / ₄	40	40
10	2842	26 ³ / ₈ × 40 ³ / ₈	22 ¹ / ₄ × 36 ¹ / ₄	40	40
11	2852	26 ³ / ₈ × 50 ³ / ₈	22 ¹ / ₄ × 46 ¹ / ₄	40	40
12	3652	34 ³ / ₈ × 50 ³ / ₈	30 ¹ / ₄ × 46 ¹ / ₄	40	40
13	4052	38 ³ / ₈ × 50 ³ / ₈	34 ¹ / ₄ × 46 ¹ / ₄	40	40
14	4252	40 ³ / ₈ × 50 ³ / ₈	36 ¹ / ₄ × 46 ¹ / ₄	40	40
26	2020	18 ³ / ₈ × 18 ³ / ₈	14 ¹ / ₄ × 14 ¹ / ₄	40	40
27	2424	22 ³ / ₈ × 22 ³ / ₈	18 ¹ / ₄ × 18 ¹ / ₄	40	40
28	2828	26 ³ / ₈ × 26 ³ / ₈	22 ¹ / ₄ × 22 ¹ / ₄	40	40
29	3636	34 ³ / ₈ × 34 ³ / ₈	30 ¹ / ₄ × 30 ¹ / ₄	40	40
30	4040	38 ³ / ₈ × 38 ³ / ₈	34 ¹ / ₄ × 34 ¹ / ₄	40	40
31	4242	40 ³ / ₈ × 40 ³ / ₈	36 ¹ / ₄ × 36 ¹ / ₄	40	40
32	5252	50 ³ / ₈ × 50 ³ / ₈	46 ¹ / ₄ × 46 ¹ / ₄	40	40

¹Insulating glass thickness is 1 inch and complies with Section 2.2 of this report.

²See Figure 3 for skylight details.

TABLE 4—FASTENER REQUIREMENTS FOR PLASTIC-DOME AND GLASS-GLAZED SKYVIEW SKYLIGHTS

ITEM NO.	MODEL NO.	NUMBER OF RETAINER FASTENERS ¹	NUMBER OF FRAME-TO-CURB FASTENERS ²	NUMBER OF FRAME-TO-ROOF STRUCTURE FASTENERS ³
1	2028	6	6	12
2	2040	6	6	14
3	2042	6	6	14
4	2052	8	8	18
5	2076	12	12	22
6	2864	12	12	22
7	2876	10	10	26
8	2896	18	16	30
9	2840	8	8	18
10	2842	8	8	18
11	2852	10	10	20
12	3652	10	10	22
13	4052	10	10	22
14	4252	10	10	22
15	3676	14	14	28
16	4264	12	12	24
17	4364	12	12	26
18	4276	14	14	28
19	4296	18	16	34
20	5264	14	14	28
21	5276	16	16	32
22	5296	20	18	36
23	5298	20	18	36
24	52100	20	18	38
25	54102	20	18	38
26	2020	4	4	10
27	2424	4	4	12
28	2828	8	8	14
29	3636	8	8	18
30	4040	8	8	20
31	4242	8	8	20
32	5252	12	12	26
33	6464	16	16	32
34	7676	20	20	38
35	9696	28	24	48
36	102102	28	24	50

¹Retainer fasteners attach the retainer cap to the skylight frame.

²Frame-to-curb fasteners attach curb-mount skylight to Douglas fir wood curb, other species of lumber will require additional nails.

³Frame-to-roof structure fasteners attach deck-mounted skylight to the roof structure.

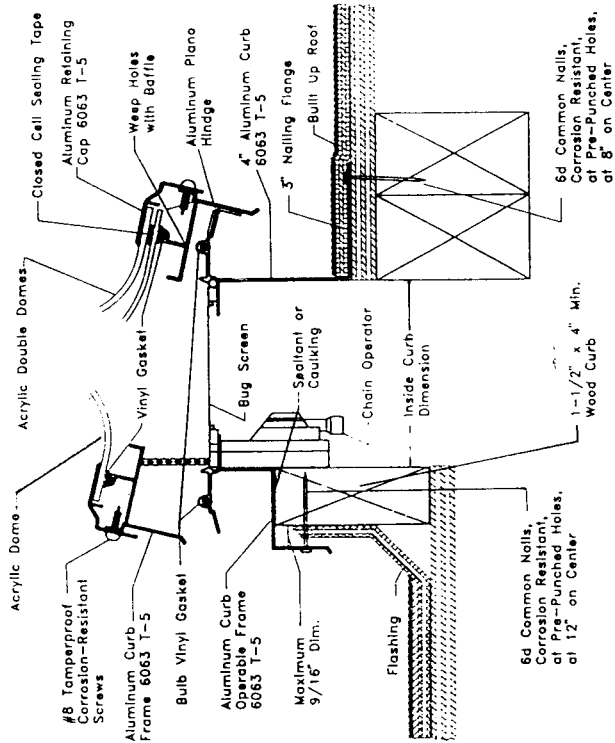


FIGURE 2—PLASTIC-DOME SKYLIGHTS

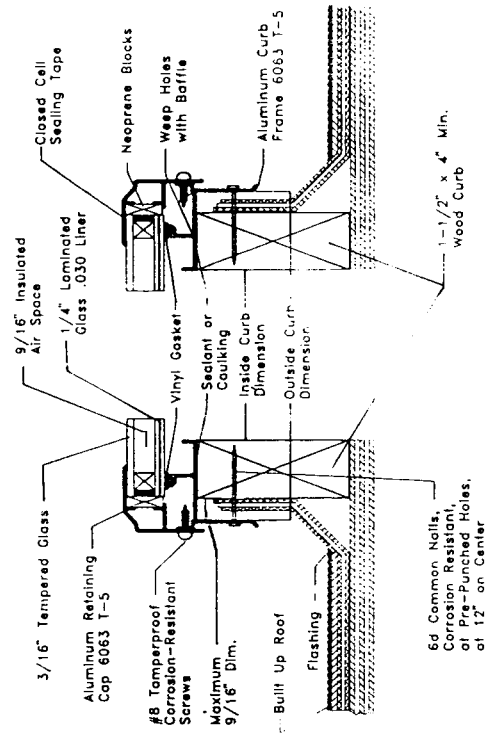


FIGURE 4—GLASS-GLAZING SKYLIGHTS

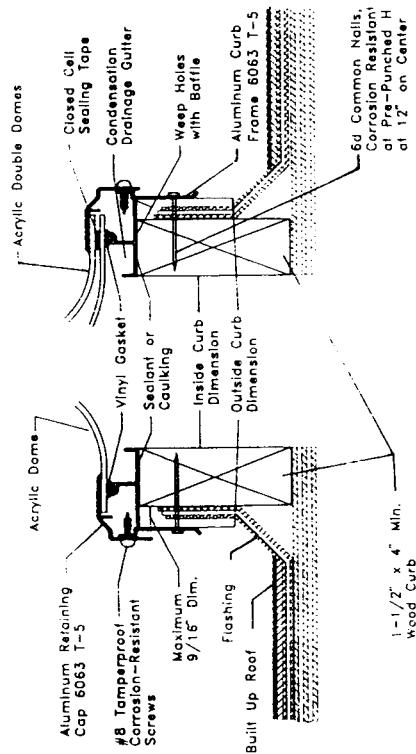


FIGURE 1—PLASTIC-DOME SKYLIGHTS

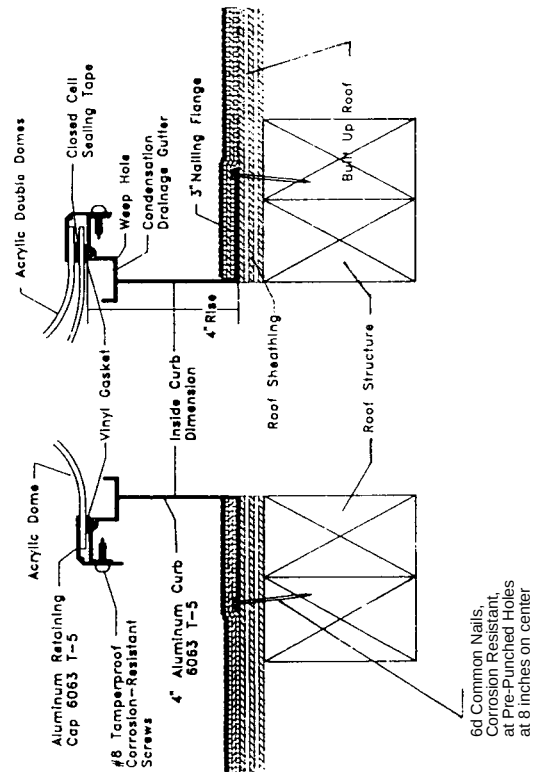


FIGURE 3—PLASTIC-DOME SKYLIGHTS