



TEST REPORT

Report No.: E3508.02-301-44

Rendered to:

SKYCO SKYLIGHTS Costa Mesa, California

SERIES/MODEL: 4896-A-S-CM-SPW-MF **PRODUCT TYPE**: Unit Skylight – Plastic Glazed

SPECIFICATION: Occupational Safety and Health Administration/U.S. Department of Labor Regulations Standards – 29 CFR 1926 Subpart M (Fall Protection) 1926.501(b)(4)(i); 1926.501(i)(2); 1926.501(b)(4)(ii)

Test Date:	12/11/14
Report Date:	01/05/15
Revision Date:	01/12/15
Test Record Retention Date:	12/11/18





1.0 Report Issued To:	Skyco Skylights 2995 Airway Avenue, Suite B Costa Mesa, California 92626
2.0 Test Laboratory:	Architectural Testing, Inc. 4 Rancho Circle
	Lake Forest, California 949-460-9600

3.0 Project Summary:

- 3.1 Series/Model: 4896-A-S-CM-SPW-MF
- 3.2 Product Type: Unit Skylight Plastic Glazed
- **3.3 Compliance Statement**: Results obtained are tested values and were secured by using the designated test methods.
- **3.4 Test Date**: 12/09/14-12/11/14
- **3.5 Test Record Retention End Date**: All test records for this report will be retained until December 11, 2018.
- **3.6 Test Location**: Architectural Testing, Inc. test facility in Lake Forest, California.
- **3.7 Test Sample Source**: The specimens were selected by Architectural Testing, Inc. personnel. The specimens were witnessed during production and tagged prior to shipment on December 5, 2014, (Reference Architectural Testing Test Specimen Selection Report No. E3507.01-301-15, dated December 8, 2014). Representative samples of the test specimens will be retained by Architectural Testing for a minimum of four years from the test completion date.
- **3.8 Drawing Reference**: The test specimen drawings have been reviewed by Architectural Testing and are representative of the test specimens reported herein. Test specimen construction was verified by Architectural Testing per the drawings located in Appendix B. Any deviations are documented herein or on the drawings.

3.9 List of Official Observers:

<u>Name</u>	<u>Company</u>
Bob Sampson	RCS Consulting
Ryan Marshall	Skyco Skylights
Patrick Walsh	Skyco Skylights
Jarod S. Hardman	Architectural Testing, Inc.





4.0 Test Specifications:

Occupational Safety and Health Administration/U.S. Department of Labor Regulations Standards – 29 CFR 1926 Subpart M (Fall Protection) 1926.501(b)(4)(i); 1926.501(i)(2); 1926.501(b)(4)(ii).

A 400 lbf. weight, fabricated from a bag filled with sand, was placed on the center of the dome for a minimum of 60 seconds. The bag was removed and the test unit was inspected for any signs of damage or failure. A 200 lbf. weight, fabricated from a bag filled with sand, was dropped from a 4' height above the dome, any visible damage was noted.

The static test was performed to demonstrate that a 4896-A-S-CM-SPW-MF unit skylight – plastic glazed, installed according to the manufacturer's instructions and in new or undamaged condition can support a 350-Pound weight at any one time based on 1926.502(i)(2).

The 800 lbf-ft impact test was performed to demonstrate the adequacy of the 400 lb. static test results.

5.0 Test Specimen Description:

5.1 Product Sizes:

Overall Area :	Width		Length	
3.38 m ² (36.37 ft ²)	Millimeters	Inches	Millimeters	Inches
Overall size	2546	100-1/4	1327	52-1/4
Outside curb dimension	2521	99-1/4	1302	51-1/4

	Dimension	
	Millimeters	Inches
Dome Thickness (Min.)	3	0.12
Dome Height	333	13-1/8
Dome Width	2489	98
Dome Length	1270	50
	Mass	
	Kilograms	Pounds
Dome Weight	10.8	24.0





5.0 Test Specimen Description: (Continued)

5.2 Frame Construction:

Frame Member	Material	Drawing #
Curb frame	6063 T-5	See attached Drawing #ALCM048 and Drawing
Curb frame	Aluminum	#ALCM096.
Snap-in	6063 T-5	See attached Drawing #SICP048 and Drawing
perimeter cap	Aluminum	#SICP096.

	Joinery Type	Detail
Frame corners	Mitered	Corners welded and silicone sealant applied to corner joint inside of condensation track.
Snap-in perimeter cap	Mitered	Cap bead of silicone sealant applied to exterior of miter.

5.3 Weatherstripping:

Description	Quantity	Location
EPDM Gasket	1 row	Press fit into channel of frame (Drawing #ALCM048/ALCM096), see attached Drawing #GSKT048/GSKT096.

5.4 Glazing:

Glass Type	Glazing	Glazing Method
Monolithic	0.118" CC1 Polycarbonate	Secured by snap in perimeter cap with 1/2" bead of silicone sealant on top and underside of dome perimeter when secured.

Location	ation Quantity Daylight Opening Diameter			Class Pito
LUCATION	Quantity	millimeters	Inches	Glass Dite
Dome	1	2438 x 1219	96 x 48	1"





6.0 Installation: The specimens were witnessed during installation by Architectural Testing, Inc. personnel and checked for compliance with manufacturer installation instructions.

The specimen was installed onto a nominal 2x8 Spruce-Pine-Fir curb. The rough opening allowed for a 1/2" shim space. A bead of silicone sealant was applied to the top side of the curb and the skylight was compressed against the curb.

Location	Anchor Description	Anchor Location
Full perimeter of skylight	#10 x 1-3/4" slotted hex head screw with neoprene bonded steel washer	3" from each corner and 12" on center spacing for long spans and 3" from each corner and 15-1/2" on center spacing for short spans.

7.0 Test Results: The results are tabulated as follows:

7.1 OSHA Safety Test

Test	Load Location	Results
400 lbf	Center of dome	No visible damage to dome or
400 IDI.		inversion of dome occurred.

Note: The 400 lbf. weight was gently applied perpendicular to the center of dome. After 60 seconds of rest time, there was no visible damage to skylight.

7.2 OSHA Safety Drop Test

Test Method	Load Location	Results	
800 lbf-ft (4' drop height)	Center of dome	Dome ridge indented at point of impact, no visible damage or cracking of dome and no compromising of dome	
		perimeter retention.	

Note: The dome ridge returned to its original shape approximately 30 minutes after impact test occurred, a small crease in the dome remained at the point of impact inversion.





The service life of this report will expire on the stated Test Record Retention End Date, at which time such materials as drawings, data sheets, samples of test specimens, copies of this report, and any other pertinent project documentation, shall be discarded without notice.

If test specimen contains glazing, no conclusions of any kind regarding the adequacy or inadequacy of the glass in any glazed test specimens can be made. This report does not constitute certification of this product nor an opinion or endorsement by this laboratory. It is the exclusive property of the client so named herein and relates only to the specimen(s) tested. This report may not be reproduced, except in full, without the written approval of Architectural Testing, Inc.

For ARCHITECTURAL TESTING, Inc.

Jarod S. Hardman Laboratory Manager Tyler Westerling, P.E. Senior Project Engineer

JSH: ss

Attachments (pages): This report is complete only when all attachments listed are included. Appendix-A: Photographs (2) Appendix-B: Drawings (14)

This report produced from controlled document template ATI 00514, issued 02/28/11.





Revision Log

<u>Rev. #</u>	Date	Page(s)	Revision(s)
0	1/05/15	N/A	Original report issue.
1	1/12/15	2, 4	Revised impact force to reflect 800 lbf- ft. impact load.





Test Report No.: E3508.02-301-44 Report Date: 01/05/15 Revision 1 Date: 01/12/15 Test Record Retention End Date: 12/11/18

Appendix A Photographs





Test Report No.: E3508.02-301-44 Report Date: 01/05/15 Revision 1 Date: 01/12/15 Test Record Retention End Date: 12/11/18



Photo No. 1 OSHA Safety Test After Load Applied



Photo No. 2 OSHA Safety Drop Test After Load Applied – Inversion of Dome Ridge







Photo No. 3 OSHA Safety Drop Test After Load Applied – Crease in Dome after Return of Dome Ridge





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Appendix **B**

Drawings

			INDEX						
PAGE	ILLUS	TRATION	DESCRIPTION	1					
01			INDEX / PARTS LIST						
02	ASSY001 CURB FRAME ASSEMBLY		CURB FRAME ASSEMBLY						
03	ASS	ASSY002 CURB FRAME & EPDM GASKET ASSEMBLY			•				
04	ASSY003 4896 A-S-CM EXPLODED DIAGRAMS		4896 A-S-CM EXPLODED DIAGRAMS		\geq				
05	ASS	ASSY004 4896 A-S-CM							
06	ALCM048 CM-R FRAME 048		CM-R FRAME 048						
07	ALC	ALCM096 CM-R FRAME 096				\searrow			
08	SIC	SICP048 SNAP-IN PERIMETER CAP: 048							
09	SIC	P096	SNAP-IN PERIMETER CAP: 096						
ΰŅ	GSK	CT048	EPDM GASKET 048						
<u>л1</u>	GSK	KT096 EPDM GASKET 096			~				
j 12	DON	/E400	5098 SKYPRO SKYWAVE DOME	Bonort #: E2E08 201 44					
r 13	E⊸ł	E-8380 CM-R FRAME DIE DRAWING		Date: 12/18/2014					
114	E⊸ł	E-8381 SNAP-IN PERIMETER CAP DIE DRAWING		Architectural Testing Verified by:					
PARTS LIST									
ITĘM NO.	PAGE	REFERENCE	DESCRIPTION	MATERIAL	FINISH	QUANTITY			
1.	06	ALCM048 05	CM-R FRAME O48	6063-T5 ALUMINUM	MILL	2			
;2.	07	ALCM096	CM-R FRAME 096	6063-T5 ALUMINUM	MILL	2			
<u>;</u> 3.	08	SICP048 07	SNAP-IN PERIMETER CAP 048	6063-T5 ALUMINUM	MILL	2			
÷4.	09	SICP096 08	SNAP-IN PERIMETER CAP 096	6063-T5 ALUMINUM	MILL.	2			
<u>'</u> 5.	10	GSKT048	EPDM GASKET 048	ETHYLENE PROPYLENE DIENE MONOMER RUBBER	BLACK	2			
∶6 .	11	GSKT096 10	EPDM GASKET 096	ETHYLENE PROPYLENE DIENE MONOMER RUBBER	BLACK	2			
7.	12		5098 SKYPRO SKYWAVE DOME	0.118" CC1 POLYCARBONATE	HIGH WHITE	1			
<u></u> 8.	04/05	SEAL100 04/05	SCHNEE-MOREHEAD POLY-GLAZE PLUS SEALANT	SILICONE	CLEAR	AS REQ'D.			
SKYCO SKYLIGHTS 2995 AIRWAY AVENUE, SUITE B COSTA MESA, CALIFORNIA 92626 Phone (949) 629-4090 Fax (949) 629-4088 A-S-CM AIR, WATER & STRUCTURAL T			EST 12/04/14	SHEET: 01					





NOTES: (UNLESS) THERWISE SPECIFIED) 1.) ALUM. MANUFACURERS STANDARDS APPLY 45.00° 🗸 45.00° 1.500 51.512 **TOP VIEW** SCALE : 1 1/2" = 1'-0" 875 Ö 51.512 SIDE VIEW SCALE : 1 1/2" = 1'-0" 1.500 E3508-301-44 Report #: 12/18/2014 Date: Quild. Hel Architectural Testing Verified by: 0.875 END VIEW DESCRIPTION : SNAP-IN PERIMETER CAP 048 DRAWING NUMBER: MATERIAL: 6063-T5 ALUMINUM SICP048 FINISH: MILL UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: DECIMAL ANGLES SHEET: 08 THE INFORMATION CONTAINED HEREIN IS CONFIDENTIAL AND PROPRIETARY TO SKYCO SKYLIGHTS, NO PART MAY BE 2995 AIRWAY AVENUE, SUITE B DATE : COSTA MESA, CALIFORNIA 92626 Phone (949) 629-4090 Fax (949) 629-4088 SKYLIGHTS 12/04/14 OF: 14 DISTRIBUTED OR DISCLOSED IN ANY FORM TO A THIRD PARTY WITHOUT WRITTEN PERMISSION OF SKYCO SKYLIGHTS. X.XXX: 0.010 t 0.2°

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