

CONSTRUCTION CONSULTING LABORATORY, *INTERNATIONAL*



TEST REPORT:

OSHA 2910.23 (e) (8)

Impact Performance Testing to show compliance with

OSHA 2910.23 (a) (4) & OSHA 29 CFR 1926.501(b)(4)(i)

American Skylights

Series TCM-AP-FG Curb Mount Skylight

Report #CCLI-16-086

June 7, 2016

Prepared for:



AMERICAN SKYLIGHTS

Phone: 855.772.7401 Fax: 855.445.7282



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APPENDIX

APPENDIX A: AMERICAN SERIES TCM-AP-FG CURB MOUNT SKYLIGHT DRAWING

Refer to drawing in **Appendix A**, this report is not complete unless this drawing is stamped and initialed by **CCLI** as illustrated below.

Drawing #	Detail	Date	Stamped as Illustrated
None	Section and Schedules	Not dated	Construction Consulting Laboratory International 1601 Luna Road Carrollton, Texas 75006 (972) 242-0556



1. PROJECT DATA

Project: OSHA Static Load and Fall Impact Test

Date of testing: May 26, 2016

Tested for: American Skylights

Witnessed by	(All or Partial Viewing)	
American Skylights	Barry Cowling	
CCLI	Edsson Alarcon	Juvenal Azua

2. SCOPE

CCLI was requested to perform static load and drop/impact load tests on the specimen using a 200 lb. bag filled with sand. Testing was performed to verify the skylight system meets the static load requirements of OSHA 29 CFR 1910.23 (e) (8) and OSHA 29 CFR 1926.501(b)(4)(i) without the use of an exterior protective screen. Upon completion of the static load test the bag was raised to incremental heights and dropped onto the skylight glazing.

3. TEST SPECIMEN

Product Type: Domed Skylight, **Product Drawings, Appendix A**
Series Model: American Skylights Series TCM-AP-FG Curb Mount Skylight
Test Method: OSHA 2910.24 (e) (8)
Skylight Size: 6'-2 $\frac{3}{4}$ " x 8'-4 $\frac{3}{4}$ "
Glazing Type: $\frac{3}{16}$ " Acrylic outer dome with a $\frac{1}{8}$ " Polycarbonate inner dome
Configuration: O

Skylight Installation: The TCM-AP-FG curb mount skylight frame was set into a bed of structural silicone and attached to a nominal 2" x 8" SPF wood curb with #12 x 38.1mm (1 $\frac{1}{2}$ ") screws spaced 101.6mm (4") from each corner and on 304.8mm (12") centers.

Glazing: One (1) inner 3.175mm (1/8") thickness polycarbonate dome and one (1) outer 4.76mm (3/16") acrylic domes.

Glazing Installation: Inner dome sealed to frame members (perimeter framing) with one row of 3.175 x 12.7mm (1/8" x 1/2") butyl sealant tape between frame and dome full perimeter. Outer dome is sealed to inner dome with one row of 3.175 x 12.7mm (1/8" x 1/2") butyl sealant tape between domes full perimeter. Structural silicone sealant applied to the exterior face of outer dome glazing leg and covered with 38.1 x 44.5mm x 1.52mm thickness (1 $\frac{1}{2}$ " x 1 $\frac{3}{4}$ " x .060") aluminum retaining angle at frame perimeter. Retaining angle secured to framing members (perimeter) with #10 x 9.52mm (3/8") stainless steel screws spaced 101.6mm (4") from each corner and on 304.8mm (12") centers.

Other Features: Main frame corners and glazing retaining angle are fully welded at the corner miters. Main frame members are polyurethane poured and de-bridged thermally broken.



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Test Method: Testing was conducted to verify the skylights resistance to a 200 Lb. static/point load applied to multiple locations perpendicular to the glazing as noted in OSHA 29 CFR 1910.23 (e) (8) load requirements for protective screens. Static test loads were applied by setting a 16" wide x 24" long bag filled with 200 lbs. of sand at the center and corners of the dome and then inspecting the specimen for damage. Upon successful static/point load tests, the sand bag was raised to incremental heights of 24" up to 120" and dropped into the center of the dome. The purpose of testing was to verify this skylight's ability to resist penetration from an unintended impact without the use of screens or security railings as noted in the OSHA 29 CFR 2910.23 (a) (4) "Every skylight floor opening and hole shall be guarded by a standard skylight screen or a fixed standard railing on all exposed sides", and OSHA 29 CFR 1926.501(b)(4)(i) "Each employee on walking/working surfaces shall be protected from falling through holes (including skylights) more than 6 feet (1.8 m) above lower levels, by personal fall arrest systems, covers, or guardrail systems erected around such holes"

4. PERFORMANCE RESULTS

Paragraph Number	Title of Test	Location	Allowed	Results
1910.24(e) (8)	200 lbs. Load test	Center dome	No Damage	No Damage
	200 lbs. Load test	Each Corner dome	No Damage	No Damage
2910.23 (a) (4)	200 lbs. Drop Test			
	200 lbs. Drop Test	Center	No Damage	No Damage
	200 lbs. Drop Test	Center	No Damage	No Damage
	200 lbs. Drop Test	Center	No Damage	No Damage
	200 lbs. Drop Test	Center	No Damage	No Damage
	200 lbs. Drop Test	Center	No Damage	No Damage

Assembly drawings indicating specimen construction and retained samples of the specimen are on file and were compared to the test sample submitted. These records will be retained at **CCLI** for a period of four years.

5. DISCLAIMER

The above results indicate compliance with OSHA 29 CFR 2910.23 (a) (4), and OSHA 29 CFR 1926.501 (b) (4) (i). This report does not constitute certification of this product.

Respectfully submitted,
CONSTRUCTION CONSULTING LABORATORY, INTERNATIONAL


WESLEY WILSON
LABORATORY MANAGER
Signed Electronically


EDSSON ALARCON
SENIOR TEST TECHNICIAN
Signed Electronically



APPENDIX A

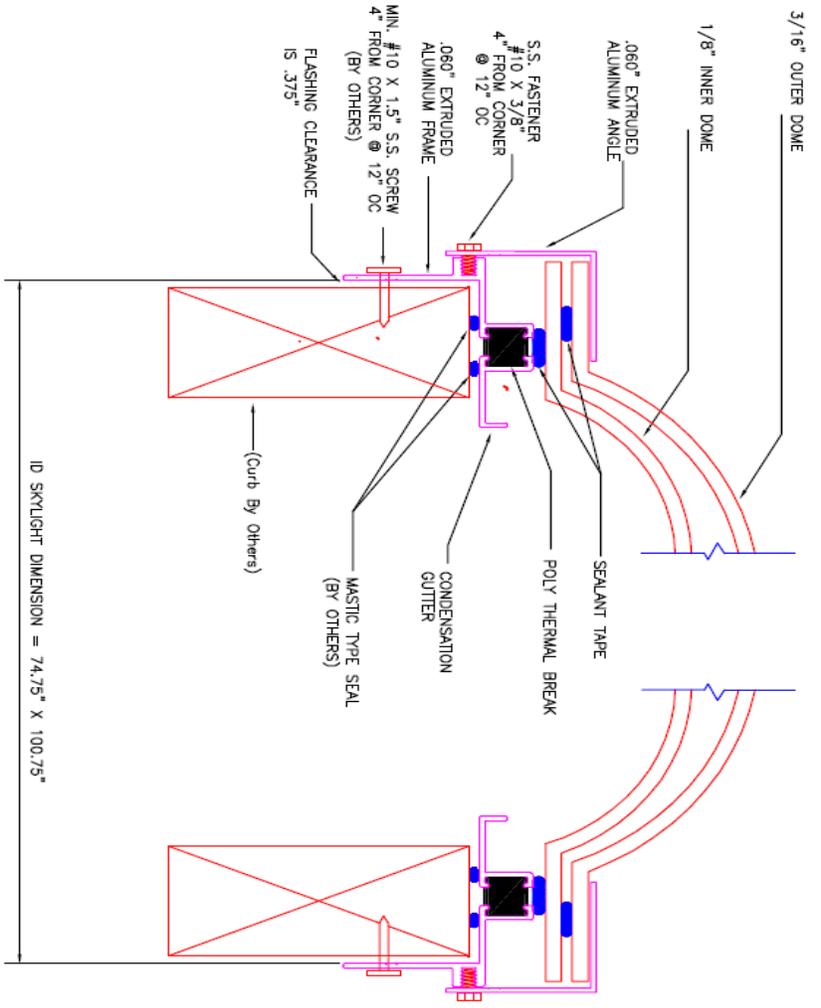
PRODUCT DRAWINGS

Drawing #	Detail	Date	Stamped as Illustrated
None	Section and Schedules	Not dated	<p>Construction Consulting Laboratory International 1601 Luna Road Carrollton, Texas 75006 (972) 242-0556</p>

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1: GLAZING MATERIAL INNER OUTER ACRYLIC DOME <input checked="" type="checkbox"/> <input type="checkbox"/> POLYCARBONATE DOME <input checked="" type="checkbox"/> <input type="checkbox"/>	
2: GLAZING COLOR CLEAR <input checked="" type="checkbox"/> <input type="checkbox"/> BRONZE <input type="checkbox"/> <input type="checkbox"/> N/A WHITE <input type="checkbox"/> <input type="checkbox"/> OTHER <input type="checkbox"/> <input type="checkbox"/>	
3: FRAME FINISH MILL BRONZE ANODIZED <input checked="" type="checkbox"/> <input type="checkbox"/> CLEAR ANODIZED <input type="checkbox"/> <input type="checkbox"/> CUSTOM COLOR _____ <input type="checkbox"/>	
4: PYRAMID PITCH (OPTIONAL) 22 DEGREE (1/2 WIDTH X .414) <input type="checkbox"/> 30 DEGREE (1/2 WIDTH X .577) <input type="checkbox"/> 40 DEGREE (1/2 WIDTH X .839) <input type="checkbox"/>	
FOR CURB MOUNT SKYLIGHTS PROVIDE OUTSIDE DIMENSION OF FINISHED CURB QTY: 1 ID SKYLIGHT = 74.75" X 100.75"	



FALL PROTECTION THERMALLY BROKEN CURB MOUNT
(MODEL TCM-AP-FG)

AMERICAN SKYLIGHTS

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- END OF REPORT -