



TEST REPORT

Report No.: F8970.02-109-44

Rendered to:

VELUX America LLC Greenwood, South Carolina

PRODUCT TYPE: Skylight

SERIES/MODEL: Dynamic Dome Skylight Polycarbonate Smooth (5' x 10') (0.150 thickness)

SPECIFICATION(S): Occupational Safety and Health Administration/U.S. Department of Labor Regulations (Standards- 29 CFR) - 1910.23(e) (8)

California Code of Regulations, Title 8, Section 3212

Test Date(s): 07/29/16

Report Date: 01/09/18

Test Record Retention Date: 07/29/20





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Report Date: 01/09/18

1.0 Report Issued To: VELUX America LLC

1418 Evans Pond Road

P.O. Box 5001

Greenwood, South Carolina 29648-5001

2.0 Test Laboratory: Architectural Testing, Inc., an Intertek company ("Intertek-ATI")

130 Derry Court

York, Pennsylvania 17406-8405

717-764-7700

3.0 Project Summary:

3.1 Product Type: Skylight

3.2 Series/Model: Dynamic Dome Skylight Polycarbonate Smooth (5' x 10') (0.150

thickness)

3.3 Compliance Statement: Results obtained are tested values and were secured by using

test method(s) intended to address the designated performance specifications.

3.4 Test Date(s): 07/29/16

3.5 Test Record Retention End Date: All test records for this report will be retained until

July 29, 2020.

3.6 Test Location: Intertek-ATI test facility in York, Pennsylvania.

3.7 Test Specimen Source: The test specimen(s) was provided by the client. Representative

samples of the test specimen(s) will be retained by Intertek-ATI for a minimum of two

years from the test completion date.

3.8 Drawing Reference: The test specimen drawings have been reviewed by Intertek-ATI and are representative of the test specimen(s) reported herein. Test specimen

construction was verified by Intertek-ATI 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>

Timothy J. McGill Intertek-ATI

Richard E. Hartman III Intertek-ATI





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4.0 Test Method (intended to address listed specification(s)):

Occupational Safety and Health Administration/U.S. Department of Labor Regulations (Standards- 29 CFR) - 1910.23(e) (8)

California Code of Regulations, Title 8, Section 3212

A 400 lb. weight, fabricated from a bag filled with lead shot, was placed on the center of the screen for a minimum of 60 seconds. The bag was removed and the test unit was inspected for any signs of damage or failure.

Additional Loading:

The specimen was taken to failure using sandbags placed on the center of the screen for a minimum of 60 seconds. The highest load causing penetration or damage was recorded.

5.0 Test Specimen Description:

Intertek Building & Construction (B&C) was contracted by VELUX America LLC, 1418 Evans Pond Road on December 4, 2017 to evaluate the OSHA fall protection testing to the most recent referenced document. Occupational Safety and Health Administration (OSHA)/U.S. Department of Labor Regulations Standard 29 CFR §1910.29 – Fall protection systems and falling object protection-criteria and practices. Section 1910.29(e)(1) requires a cover to be capable of supporting without failure at least twice the maximum intended load that may be imposed on the cover at any one time.

Intertek Building & Construction (B&C) was contracted by VELUX America LLC, 1418 Evans Pond Road on December 4, 2017 to evaluate the Cal/OSHA fall protection testing to the most recent referenced document. California Code of Regulations, Title 8, Section 3212 §(b), which states, "covers shall be capable of safely supporting the greater of 400 lbs or twice the weight of the employees, equipment and materials that may be imposed on any one square foot area of the cover at any time."





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6.0 Test Specimen Description:

6.1 Product Sizes:

Overall Area: 57.5 ft ²	Width (inches)	Height (inches)
Overall size	65-3/4	126

6.2 Frame Construction:

Frame Member	Material	Description
Inner frame	Aluminum	Extruded
Dome clamp cover	Aluminum	Extruded

	Joinery Type	Detail
All corners	Mitered	Miter cut and welded

6.3 Reinforcement: No reinforcement was utilized

6.4 Weatherstripping:

Description	Quantity	Location	
Custom shaped gasket	1 row	Located around the interior perimeter	
Custom snapeu gasket	1 row	of the inner frame	

6.5 Glazing: No conclusions of any kind regarding the adequacy or inadequacy of the poly smooth in any glazed test specimen(s) can be made.

Glazing Type	Glazing Method
5/32" poly smooth	The glazing was set from the exterior onto a custom shaped gasket against the extruded aluminum frame. The glazing was secured using an aluminum extruded dome clamp cover with a bead of sealant on the glazing. The dome clamp cover was secured using #10 x 5/8" screws located 2" from all corners and 12" on center.

Location	Quantity	Daylight Opening (inches)	Glazing Bite (inches)
Dome	1	59-3/4 x 120	7/8

7.0 Installation: The specimen was installed into a Spruce-Pine-Fir wood buck.

Location	Anchor Location	
Aluminum frame	#10 x 1-1/2" pan head screw	8" from corners, 12" on center





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8.0 Test Results: The results are tabulated as follows:

8.1 California (and OSHA) minimum loading:

Test Load	Load Location	Results
400 lbf	Center of dome	No visible damage

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

8.2 Additional loading (applied on the same unit in the listed order):

Test Load	Load Location	Results
509 lbf at rest	Center of dome	No visible damage
615 lbf at rest	Center of dome	No visible damage
722 lbf at rest	Center of dome	No visible damage
830 lbf at rest	Center of dome	No visible damage
943 lbf at rest	Center of dome	No visible damage
1053 lbf at rest	Center of dome	No visible damage
1166 lbf at rest	Center of dome	No visible damage
1275 lbf at rest	Center of dome	See Note #1

Note #1: At 1275 lbf, the load created on opening larger than one square foot.

9.0 Test Results: The results are tabulated as follows:

The specimen was evaluated in accordance with Occupational Safety and Health Administration (OSHA)/U.S. Department of Labor Regulations Standard 29 CFR §1910.29(e)(1) to be capable of supporting twice the maximum intended load, up to (583) ft-lb.

The specimen was evaluated in accordance with California Code of Regulations, Title 8, Section 3212 §(b) to be capable of safely supporting loads exceeding 400 ft-lb.





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Intertek-ATI will service this report for the entire test record retention period. Test records such as detailed drawings, datasheets, representative samples of test specimens, or other pertinent project documentation, will be retained by Intertek-ATI for the entire test record retention period.

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 Intertek-ATI.

For ARCHITECTURAL TESTING, Inc.

Richard E. Hartman III Technician Timothy J. McGill Manager – Product Testing

REH:asm/abo

Attachments (pages): This report is complete only when all attachments listed are included.

Appendix-A: Photograph(s) (1) Appendix-B: Drawing(s) (15)

This report produced from controlled document template ATI 00514, revised 06/26/14.



Intertek



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Appendix A Photograph(s)



Photo No. 1 View of Tested Specimen



Photo No. 2
Test Specimen during 400 lb. Load

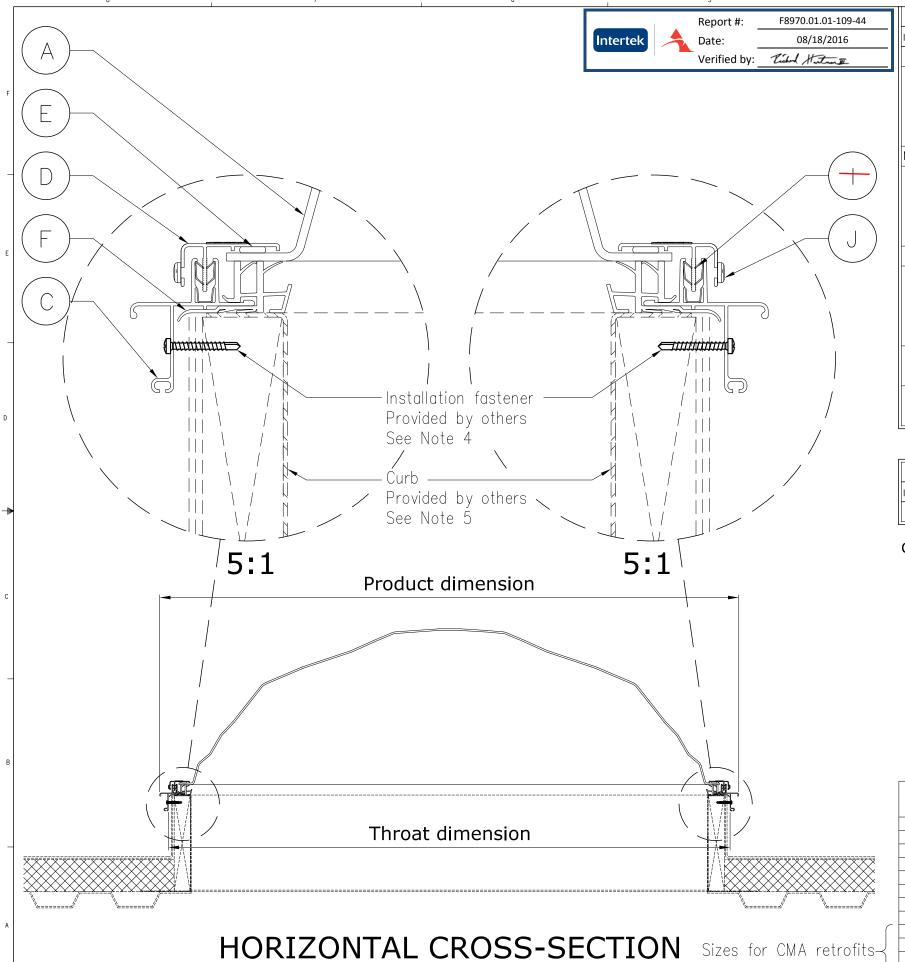




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Appendix B

Drawing(s)



(TYPICAL FOR FRAME VERTICAL CROSS-SECTION)

PART SCHEDULE ITEM QTY. PART NO. DESCRIPTION A 1 Dynamic exterior dome 3036150A03202 Thermoformed exterior dome Polycarbonate, or acrylic, or impact modified acrylic 2 3023590000001 Profile 3023590A03102 Cutting and punching С 6063/T5 Aluminum 4 Inner frame 302359 Powder coat color: NCS S 7500-N (Grey) 3023590A03902 Powder coat 3023590A04202 Welding N/A N/A Primer N/A Clamp cover, Inner Frame, & Domes 3023590A05201 Primer placement 3023610000001 Profile 3023610A03102 Cutting and drilling 6063/T5 Aluminum D | 4 Dome clamp cover 302360 Powder coat color: NCS S 7500-N (Grey) 3023610A03902 Powder coat 3023600A04201 Welding E N/A Commercial sealant 305660 Silicone for commercial application 3036600A05202 Silicone placement 3036120000001 Profile |3036110003901|Gasket groove cutting 4 High profile gasket 303612 TPE Color: Black 13036110A03101 Gasket cutting 3036110A04202 Gasket welding 305659000002 Profile/cutting 4 Gasket wick Polyethelene felt for wicking 3056590A05202 Wick placement 130622200dodo1 13062220A05202 Spring clip placement

	FASTENER SCHEDULE									
ITE	ITEM QTY. PART PART NO. DESCRIPTION				Category	DRAWING NO Commodity No.	_	Edition	COMMENTS	
	J	#	Torx screw	306225	Torx Pan head, SST, #2 drill point #10-16x5/8"	21	306225000	00	01	Commodity drawing

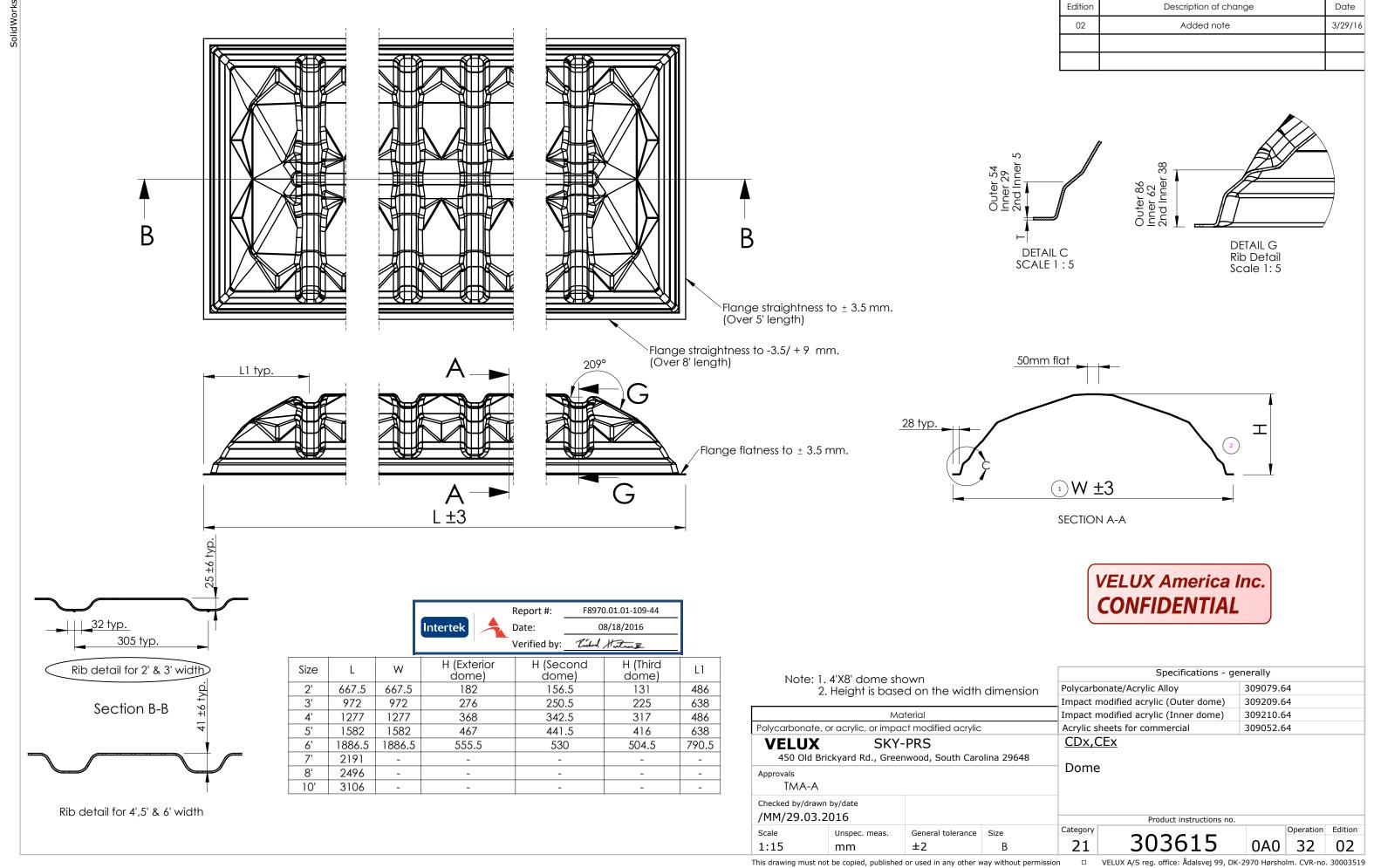
GENERAL NOTES

- * Not Visible in this drawing
- 1. Unless noted otherwise, all parts listed are for CD1, CE1, CT1, CG1, CH1, CJ1 Commercial Dome skylights.
- 2. A copy of this drawing plus any other supplemental documentation regarding this skylight model will be maintained at the Skylight Technical Database in the following category location — Technical Data/Submittal Data/
- 3. Horizontal and Vertical Frame Cross—Section part sizes, materials and assembly are identical.
- 4. #8 or larger stainless steel installation fasteners, appropriate for supporting structure. Provided by others. One fastener per hole of
- 5. The CDx skylight installs directly on site built or prefabricated curbs, provided by others.

Throat dimension mm	Product dimension mm
717	758
1022	1063
1326.5	1368
1631.5	1672.5
1936	1977.5
2241	2282
2546	2857
3155.5	3197
743	784
946	987
1047.5	1088.5
1352.5	1393.5
	mm 717 1022 1326.5 1631.5 1936 2241 2546 3155.5 743 946 1047.5

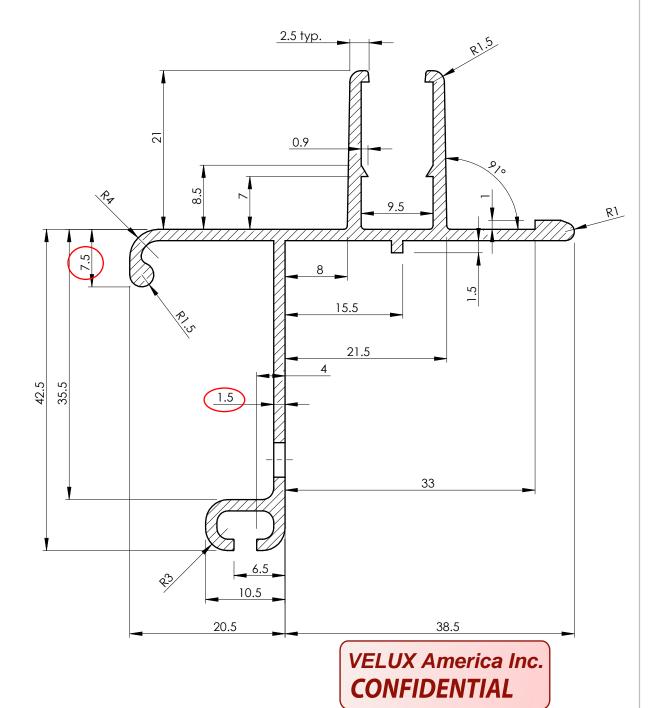
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DIMENSIONS ARE IN MM GENERAL TOLERANCES: ANGULAR: ±1 ONE PLACE DECIMAL:±0.5		VELUX.	SK 1418 Evans Po Greenwood, Sou			
MATERIAL SPECIFICATION		Commercial Single Dome Skylight CD1, CE1, CT1, CG1, CH1, CJ1 Product Certification				
SH		Typical Arrangement with				
SPECIFICATION		Product List of	Parts			
STANDARDS		SIZE COMMODITY NO.	REV. SCALE:	CKU (UBAMAI (DATE	RLE / IDH 04 /06 /2016	



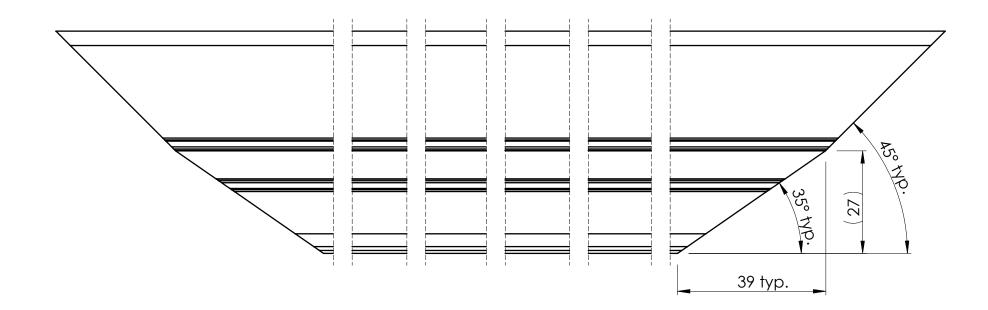
SolidWorks

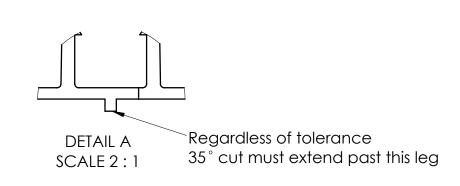
Edition	Description of change	Date

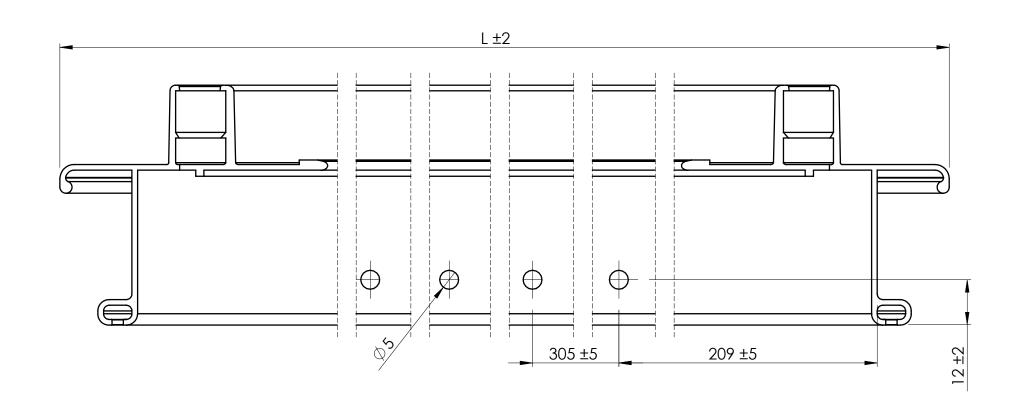


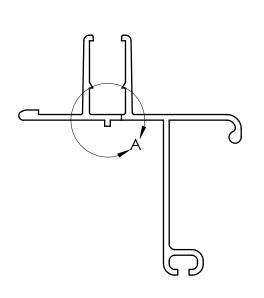
Material			Specifications - generally					
6063/T5 Aluminum			Extruded A	Extruded Aluminum-Generally 309078.64				
VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648			CDx,CEx,CTx,CGx,CHx,CJx					
Approvals TMA-A			Inner frame Profile					
Checked by/drawn by/date /MM/20.01.2016			Product instructions no).				
Scale 2:1	Unspec. meas.	General tolerance ±0.5	Size B	Category 21	302359	000	Operation 00	Edition 01

Edition	Description of change	Date
02	Added CG2 sizes	3/22/16









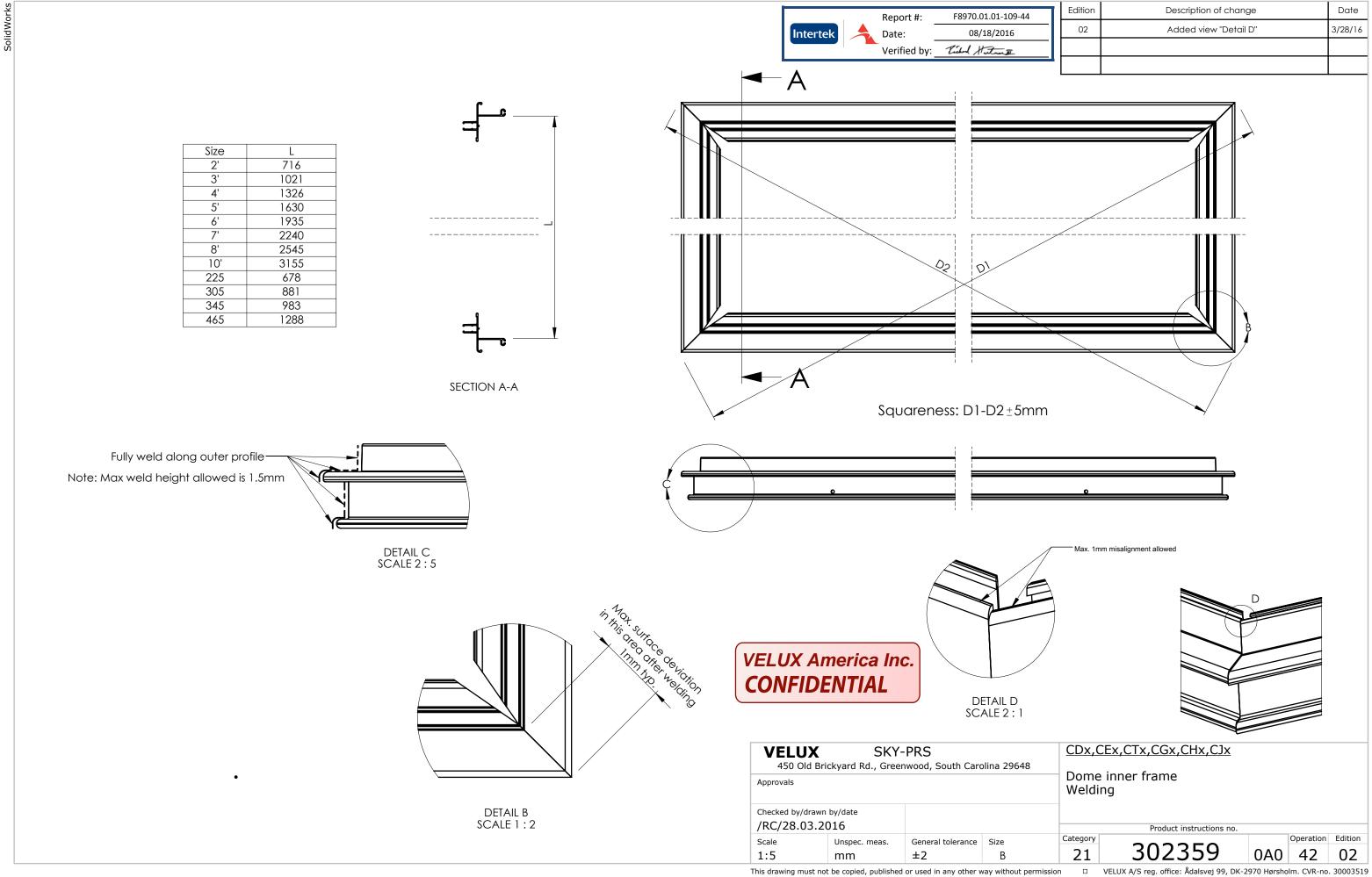
Report #:

	Intertek	Date: 08/ Verified by: المناسلة	/18/2016 Tutum
	Size	L	Number of holes
	2 foot	757	2
	3 foot	1062	3
	4 foot	1366	4
	5 foot	1671	5
	6 foot	1976	6
	7 foot	2281	7
	8 foot	2586	8
	10 foot	3195	10
	225	719	2
	305	922	3
	345	1024	3
_	465	1329	4
	403	1327	4

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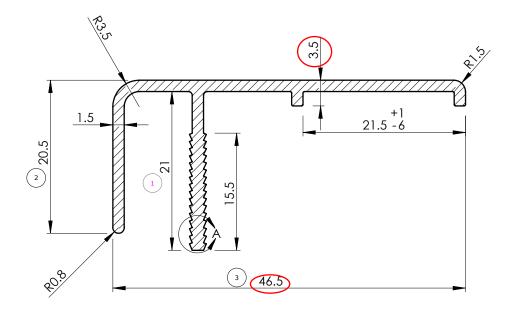
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VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648					CDx,CEx,CTx,CGx,CHx,CJx Inner frame Cutting and punching				
Approvals									
Checked by/d	Checked by/drawn by/date								
/REC/21.	03.2016				Product instructions no.				
Scale	Unspec. meas.	General tolerance	Size	Category	2222		Operation	Edition	
1:1 mm ±1 C		21	302359	0A0	31	02			
is drawing mu	ist not be copied, publishe	d or used in any other v	vay without permi	ssion 🗆	VELUX A/S reg. office: Ådalsvej 99, DI	(-2970 Hørsh	olm. CVR-no	. 3000351	

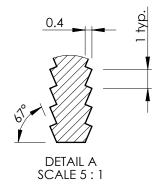


SolidWorks

Edition	Description of change	Date



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Notes:

- Cross sectional area- 138 mm sq.
 Break Corners- .38R
 Purchased lineal length is 120"

Material				Specifications - generally				
6063/T5 Aluminum			Extruded	xtruded Aluminum-Generally 309078.64				
VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648			CDx,CEx,CTx,CHx,CGx,CJx					
Approvals TMA-A			Dome clamp cover Profile					
Checked by/drawn by/date /MM/21.03.2016			Product instructions no					
Scale 2:1	Unspec. meas.	General tolerance ±.5	Size A	Category 21	302361	000	Operation 00	Edition 01

345

465

976

1281

±.5

General tolerance Size

Unspec. meas.

mm

Scale

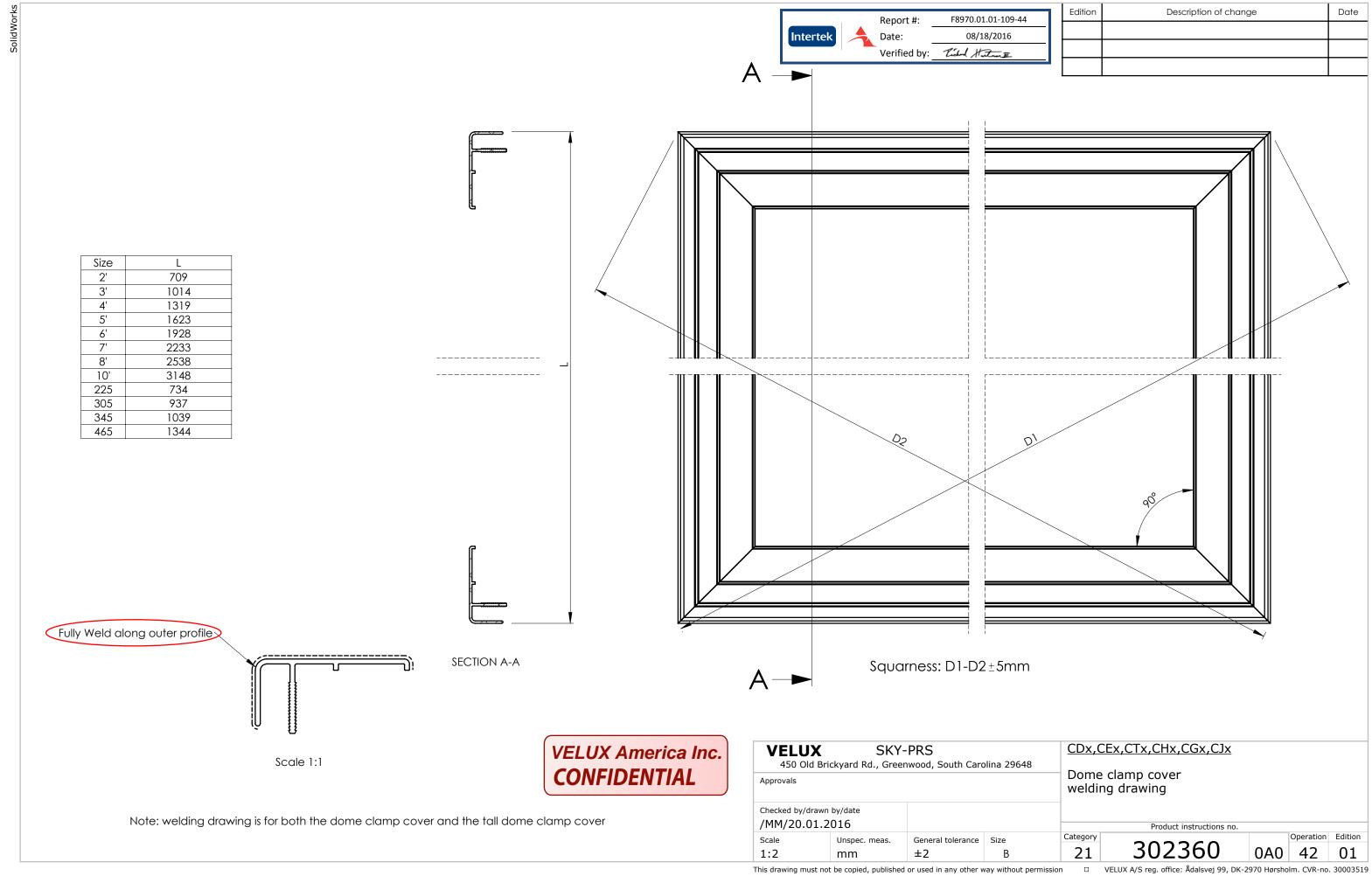
1:1

302361

Category

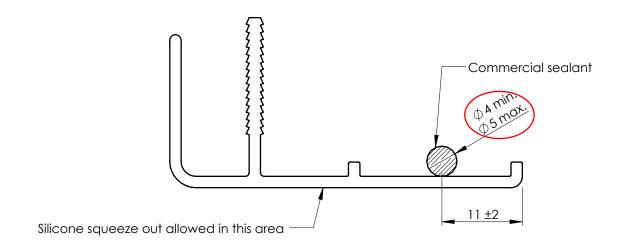
Operation Edition

0A0 31 02



SolidWorks

Edition	Description of change	Date
02	Added note	3/29/16
·		



Notes:

Silicone bead shape is not important.

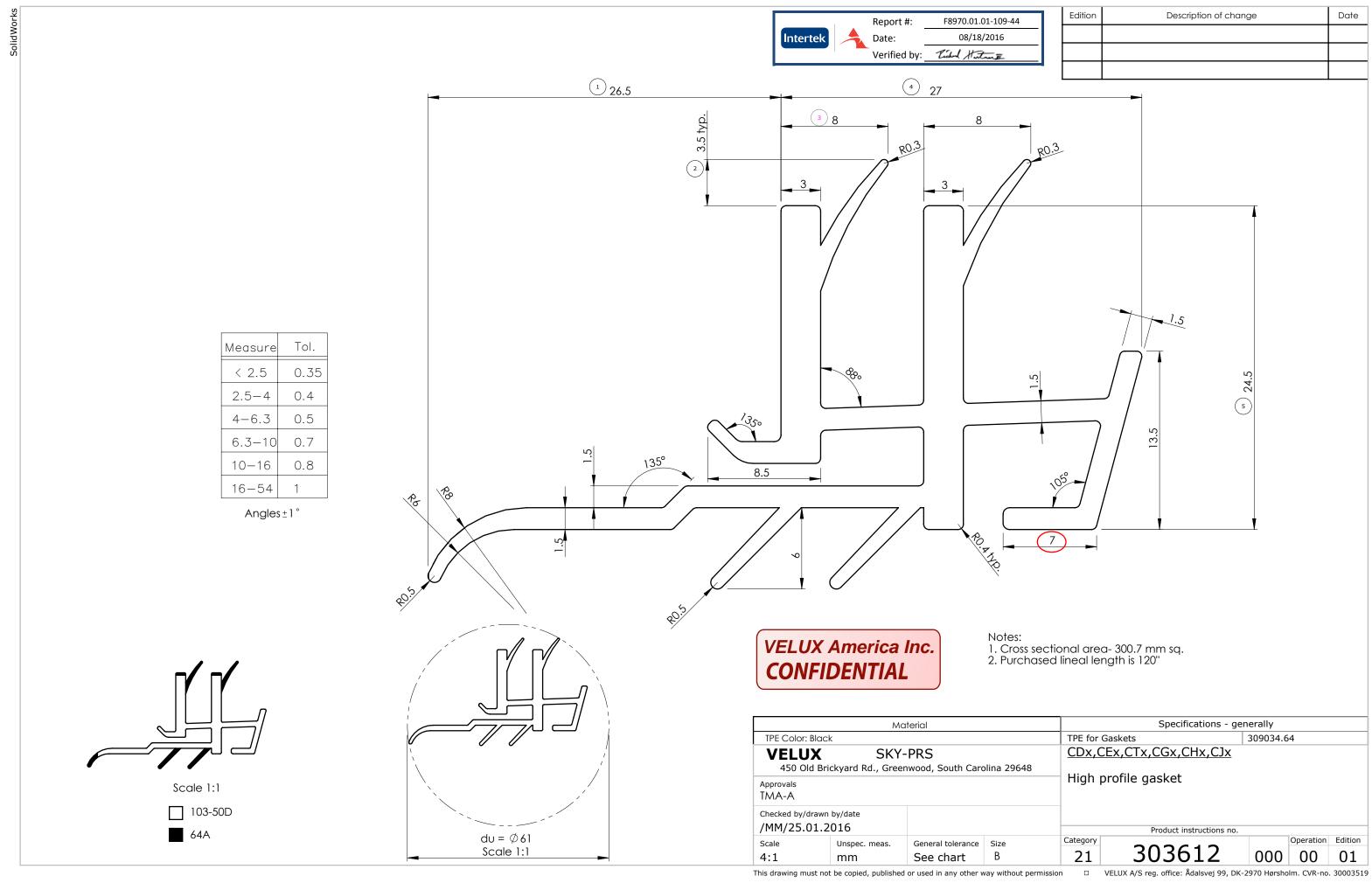
Min/Max diameter is used to determine total area.

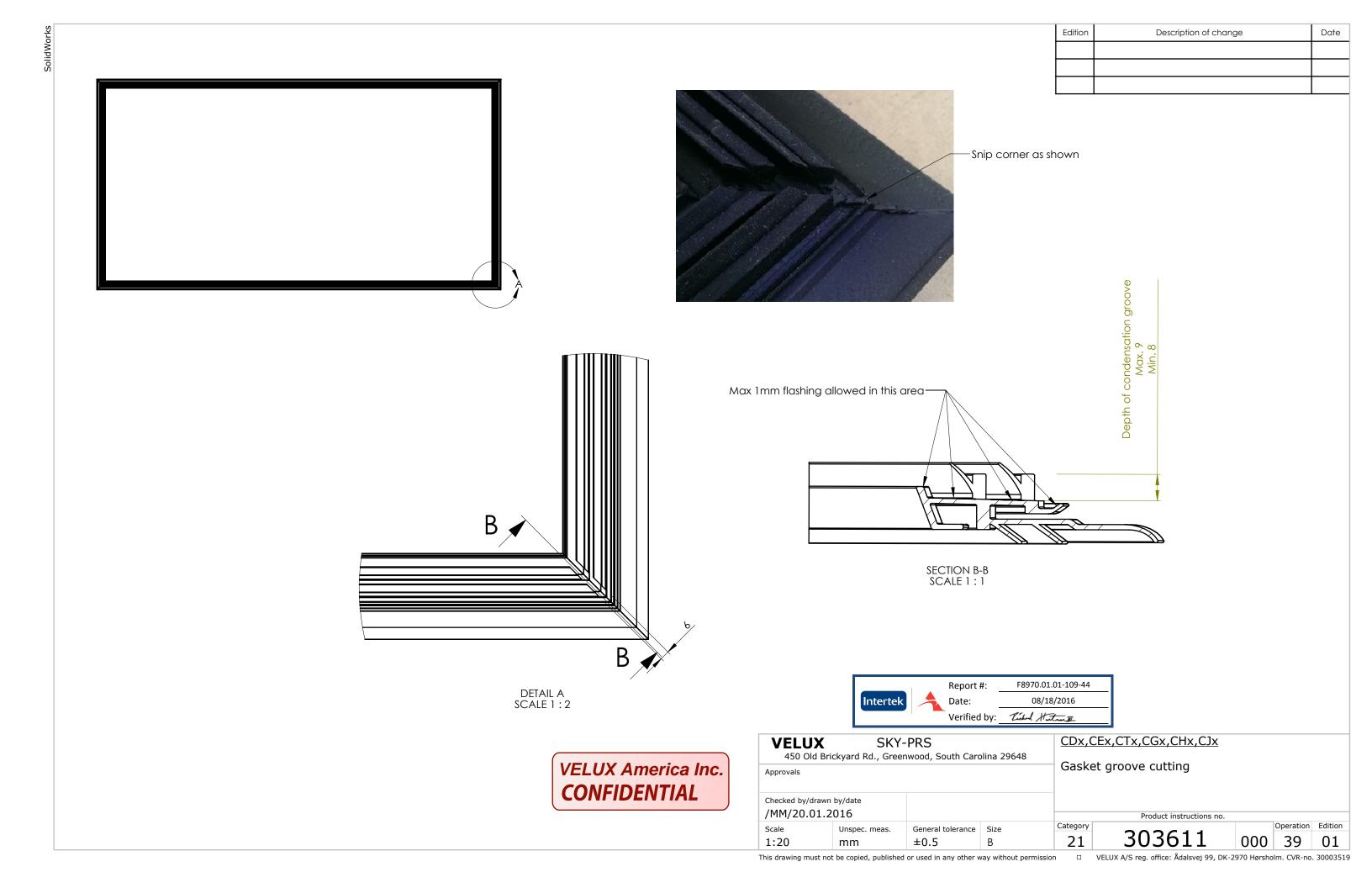
No gaps in silicone allowed.

No squeeze out allowed on lens.

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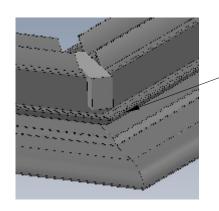
Specifications - generally Silicone for commercial application 309213.64 CDx,CEx,CTx,CHx,CGx,CJx **VELUX** SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648 Clamp Frame Approvals Silicone placement Checked by/drawn by/date /MM/29.03.2016 Product instructions no. Operation Edition Category Scale Unspec. meas. General tolerance Size 303660 21 0A0 52 02 2:1 mm ± 1



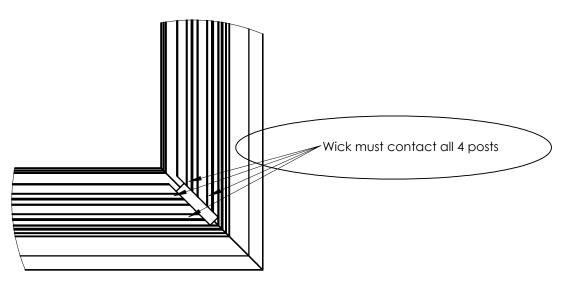


	Edition	Description of change	Do
	02	Revised material description	3/29
	02	Kevisea Material description	3/2.
- 25 ±2	-	(6.35)	
		(1/4)	
		VELUX America Inc.	
		CONFIDENTIAL	
Report #: F8970.01.01	-109-44	CONFIDENTIAL	
Intertek Date: 08/18/20	016		-
Verified by: Lidel Hate	T.		
Material		Specifications - generally	
Wool felt for wicking (grey)		t wick mat'l commercial domes 30921	2.64
VELUX SKY-PRS		,CTx,CGx,CHx,CJx	
450 Old Brickyard Rd., Greenwood, South Carolina 290	Gasket v	iick	
Approvals	Gasket V	VICK	
ТМА-В	Profile/cı	utting	
Checked by/drawn by/date		-	

Edition	Description of change	Date
02	Added note	3/29/16



-Wick must not extend beyond this surface



DETAIL A SCALE 1:2

Place wicks in all four corners

| Report #: F8970.01.01-109-44 |
| Date: 08/18/2016 |
| Verified by: | Hutur

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	VELUX SKY-PRS 450 Old Brickyard Rd., Greenwood, South Carolina 29648				CDx,CEx,CTx,CGx,CHx,CJx				
Approvals			Gasket						
	Checked by/drawn by/date /MM/29.03.2016			Wick pl	acement Product instructions no.				
Scale	Unspec. meas.	General tolerance	Size	Category			Operation	Edition	
1:10	mm	±1	A	21	305659	0A0	52	02	

