

NATIONAL CERTIFIED TESTING LABORATORIES

FIVE LEIGH DRIVE • YORK, PENNSYLVANIA 17406 • TELEPHONE (717) 846-1200 FAX (717) 767-4100 www.nctlinc.com

THERMAL TEST SUMMARY REPORT

ACUTLITE STRUCTURAL SKYLIGHTS, INC. AAMA 1503-09

Report No: NCTL-110-20649-3S

Test Specimen: Acutlite Structural Skylights, Inc. Series "Skylight" Skylight – Sloped Glazing measuring 2007 mm (79") wide by 2007 mm (79") high overall; **Thermal Break:** Air; **Glazing:** 32 mm (1.25") nominal overall, (1) lite of 6 mm (0.222") annealed glass to the exterior and (1) lite of laminated glass to the interior; **Coating:** A PPG Industries "Solarban 70XL" sputter-type low emissivity coating (e=0.018 per client) was applied to glazing surface no. 2; **Spacer Type/Size:** Aluminum (A1-D) 14.07 mm (0.554"); **Fill:** Argon - 90% single probe per client; **Glazing System:** Exterior glazed with a gasket back-bedding and a screwed-in-place extruded aluminum pressure plate with a gasket at the verticals and a silicone back-fill at the head and sill.

Procedure: Condensation Resistance Factor (CRF) and Thermal Transmittance (U Factor) were determined in accordance with AAMA 1503-09 with a temperature of $70.0^{\circ} \pm 0.5^{\circ}$ F on the room side of the specimen and $0.0^{\circ} \pm 0.5^{\circ}$ F plus a 15 mph dynamic wind on the weather side of specimen. The test specimen was sealed to produce a net air leakage of 0.0 cfm during the test.

Test Results:

1.	Average warm side air temperature (t _i):	69.6	°F
2.	Average cold side air temperature (t _{II}):	-0.1	°F
3.	Average weighted frame temperature (FT):	49.0	°F
4.	Average glass temperature (GT):	56.7	°F
5.	Condensation Resistance Factor of Frame (CRF _f):	70	
6.	Condensation Resistance Factor of Glass (CRFg):	81	
7.	Condensation Resistance Factor of Specimen (CRF):	70	

Thermal transmittance (U Factor) @ 15 mph exterior wind velocity:

0.40 BTU/hr/ft²/°F

Reference should be made to thermal performance test report number NCTL-110-20649-3 dated 07/16/18 for complete specimen description and test data.

National Certified Testing Laboratories

Performed By:

John W. Gordon Simulation/ Thermal Manager

Reviewed By:

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Raymond W. Lamb, P.E. Person In Responsible Charge

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THERMAL PERFORMANCE TEST REPORT

Report Number	NCTL-110-20649-3
Client	Acutlite Structural Skylights, Inc. 1017 North Vine St., PO Box 5 Berwick, PA 18603
Starting Test Date Ending Test Date	06/26/18 06/28/18
Report Date	07/16/18
Specification:	AAMA 1503-09, "Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections".
Description of Sample Test	ed
Note: All dimensions are in the orde	r (Width x Height x Thickness) unless otherwise noted.
Model/ Series	"Skylight"
Configuration	Skylight - Sloped Glazing
Frame Size	<u>Overall</u> 2007 mm x 2007 mm (79" x 79")
Viewing Area	(2) 902 mm x 1867 mm (35.5" x 73.5")
Frame Type	Extruded aluminum
Joint Construction	Frame (2) Screw butt-type
Glazing Components Overall Glass Thickness Coating Laminated Glass	 32 mm (1.25") Nominal (1) Lite of 6 mm (0.222") annealed glass to the exterior and (1) lite of laminated glass to the interior A PPG Industries "Solarban® 70XL" sputter-type low emissivity coating (e=0.018 per client) was applied to glazing surface no. 2. (2) lites of 6 mm (0.222") annealed glass separated by 0.76 mm (0.03") PVB interlayer
Spacer Type/ Size Fill	14.07 mm (0.554") Aluminum spacer (Type A1-D) Argon 90% single probe per client
Glazing System	Exterior glazed with a gasket back-bedding and a screwed-in-place extruded aluminum pressure plate with a gasket at the verticals and a silicone back-fill at the head and sill.

Weatherstrip No weatherseals employed

Operating Hardware No operating hardware employed

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Acurlite Structural Skylights, Inc.

Auxiliary	
Type Location	Extruded aluminum pressure plate cover Vertical members
Reinforcement	No reinforcement employed
Weep Description	No apparent weeps employed
Interior/ Exterior Surface Finish	Clear anodized aluminum
Sealant	No apparent sealant applied
Insect Screen	No screen employed
Nail Fin	Not applicable/ No nail fin

SPECIMEN PREPARATION PRIOR TO TEST

The test specimen was pre-conditioned at ambient laboratory conditions prior to the test. The surround panelto-specimen interfaces were sealed with a non-reflective tape. Per section 9.3.4 the specimen was sealed on the exterior with a caulk sealant resulting in a net air leakage of 0.0 cfm per square foot.

TEST PARAMETERS

Tests to determine the thermal transmittance (U-factor) of the specimen were performed in the guarded hot box apparatus located at the York, PA facility. The thermal performance evaluations were completed in accordance with the referenced test methods using a dynamic wind perpendicular to the specimen on the cold side and simulated natural convection on the warm side. A zero static pressure differential (0.00" \pm 0.04" H₂O) was maintained across the specimen during the test by pressurizing the metering box on the room side. Data was collected over a (2) hour evaluation period after (4) hours of steady state conditions as defined in section 9.3.8 of the AAMA 1503-09 test procedure were achieved. The test was considered completed when the data of the 2 hour evaluation period also satisfied the criteria defined in section 9.3.8 of the AAMA 1503-09 test procedure.

Glass Thickness and Glazing Deflection:

	Glass Thicknesses	Glazing Deflection Before Test	Glazing Deflection After Test	
Left Lite: Right Lite:	0.474", 0.222" 0.474", 0.222"	0.0" 0.005"	0.015" 0.05"	
Projected Frame Dimension	ns Of Members:			

Member:	Left Head	Left Jamb	Left Sill	Meeting Stile	Right Head	Right Jamb	Right Sill
Dimension:	2.5"	2.75	2.5"	5.5"	2.5"	2.75"	2.5

Test Duration:

The test chamber environmental systems were initiated at 1748 on 06/26/18. The test conditions were considered stable for (5) 1-hour test periods from 0011 to 0511 on 06/28/18. The thermal test chamber was shut down 0718 on 06/28/18.

Areas:

Test Specimen Projected Area (A _s):	43.34	ft²
Test Specimen Interior Exposed (Wetted) Surface Area (Aint):	50.88	ft²
Test Specimen Exterior Exposed (Wetted) Surface Area (Aext):	58.14	ft²
Metering Box Opening Area (A _{mb}):	54.39	ft²

Acurlite Structural Skylights, Inc.	NCTI	-110-20649-3
Areas: (continued)		
Metering Box Baffle Area (A _{b1}):	46.44	ft²
Surround Panel Interior Exposed Area (Asp):	11.05	ft ²
Test Conditions		
Average Beem Side Air Temperature:	60.6	٥E
Average Weather Side Air Temperature.	09.0	с •
Average weather Side Air Temperature:	-0.1	F
Average Guard Box Air Temperature:	72.6	°F
Metering Box Average Relative Humidity:	19.3	%
Measured Weather Side Wind Velocity:	14.3	mph
Static Pressure Difference Across Specimen:	-0.05	" H2O
Heat Flows:		
Heat Input Rate to Metering Box (Q _{total}):	1242.6	BTU/hr
Surround Panel Heat Flow (Q _{sp}):	25.2	BTU/hr
Surround Panel Thickness:	6.500	Inches
Surround Panel Conductance:	0.0349	BTU/hr/ft²/°F
Metering Box Heat Flow (Q _{mb}):	14.1	BTU/hr
Flanking Loss Heat Flow (Q_{f}) :	1.0	BTU/hr
Net Test Specimen Heat Flow (Q _s):	1202.3	BTU/hr
Surface Temperature Data		
Specimen Area-Weighted Room Side Surface Temperature (t1):	56.1	٥F
Specimen Area-Weighted Weather Side Surface Temperature (t_2) :	5.0	٥F
Area-Weighted Room Side Frame Surface Temperature:	50.9	٥F
Area-Weighted Weather Side Frame Surface Temperature:	9.7	٥F
Area-Weighted Room Side Edge-of-Glass Surface Temperature:	55.6	٥F
Area-Weighted Weather Side Edge-of-Glass Surface Temperature:	4.2	٥F
Area-Weighted Room Side Center-of-Glass Surface Temperature:	58.9	٥F
Area-Weighted Weather Side Center-of-Glass Surface Temperature:	4.1	٥F
Test Results & Calculated Test Data:		
Condensation Resistance Factor (CRF)		
Average of Pre-specified Frame Thermocouples (FT_p) :	49.6	٥F
Average of Cold Point Thermocouples (FT _r):	41.9	٥F
Calculated Weighting Factor:	0.077	
Weighted Frame Temperature (FT):	49.0	٥F
Average Glazing Temperature. (GT):	56.7	٥F
Condensation Resistance Factor of Frame (CRE _i):	70	
Condensation Resistance Factor of Glass (CRF ₂)	81	
Condensation Resistance Factor of Specimen (CRF):	70	
Inermal Transmittance (U Pactor)	0.00	
ivieasurea Room Side Sufface Conductance (hi):	2.06	BIU/Nr/It²/°F
Measured Weather Side Surface Conductance (h _{II}):	5.42	BIU/hr/ft²/°F
Test Specimen Thermal Conductance (C_s):	0.54	BTU/hr/ft²/°F
Test Specimen Standardized Thermal Transmittance (U):	0.40	BTU/hr/ft²/°F

Acurlite Structural Skylights, Inc.

Attachment 1 to this report lists the average measured surface temperatures from the two-hour evaluation period of the test. Attachment 2 to this report is an isometric drawing showing surface thermocouple measurement locations corresponding to the data on Attachment 1.

This test method does not include procedures to determine the heat flow due to either air movement through the specimen or solar radiation effects. As a consequence, the thermal transmittance results obtained do not reflect performances which may be expected from field installations due to not accounting for solar radiation, air leakage effects, and the thermal bridge effects that may occur due to the specific design and construction of the fenestration system opening. Therefore, it should be recognized that the thermal transmittance results obtained from this test method are for ideal laboratory conditions and should only be used for fenestration product comparisons and as input to thermal performance analyses which also include solar, air leakage, and thermal bridge effects.

Detailed drawings were available for laboratory records and compared to the test specimen at the time of this report. A copy of this report along with representative sections of the test specimen will be retained by NCTL for a period of (4) years. The test specimen was supplied to NCTL by the above named client. The results obtained apply only to the specimen tested. This report may not be reproduced, except in full, without the written approval of National Certified Testing Laboratories. NCTL is a testing lab NCTL is a testing lab accredited by A2LA to ISO/IEC 17025 and assumes that all information provided by the client is accurate and does not guarantee or warranty any product tested or installed. This report does not constitute certification or approval of the product, which may only be granted by a certification program validator or recognized approval entity. Testing described in this report was conducted in full compliance with AAMA 1503-09 requirements.

National Certified Testing Laboratories

Performed By:

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John W. Gordon Simulation/ Thermal Manager

Reviewed By:

Kaymond li hamb

Raymond W. Lamb, P.E. Person In Responsible Charge

ATTACHMENT 1 SURFACE TEMPERATURE MEASUREMENTS

Acutlite Structural	Skylights, Inc. NCTL-1	10-20649-3	0011-0511	06/28/018
	Thermocouple	Individual <i>i</i>	Average Surface Temp	peratures (°F)
	Location #	Warm S	lide	Cold Side
	1	36.7		19.5
	2	50.2		8.1
	3	37.4		18.3
	4	47.5		20.5
	5	59.4		8.7
	6	46.8		23.8
	7	53.7		9.9
FRAME	8	55.0		11.1
	9	50.0		5.8
	10	49.4		6.5
	11	46.2		7.8
	12	44.8		8.0
	13	60.0		6.5
	14	56.7		6.6
	15	50.7		5.9
	16	57.6		4.0
GLAZING	17	55.6		3.1
	18	55.2		4.2
	19	60.2		4.2
	20	60.7		6.6
	21	48.7		
COLD	22	38.4		
POINTS	23	47.4		
	24	44.5		



ATTACHMENT 3

Section 1:

Component Drawings, with Applicable Part Numbers, Manufacturing and Modeling Details, were reviewed (as submitted) for Product Verification (Reference: NCTL-110-20649-3)

See Attached Documentation; any deviations noted.

Note: The above referenced component drawings along with representative sections of the test specimen will be retained per procedure by NCTL. This testing facility assumes that all information provided by the client is accurate.

Section 2:

Identification Date Page	<u>& Revision</u>
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Original Issue 07/16/18 Not Applicable

PROJECT: ACURLITE THREMAL TESTING PURCHASED BY: UNIT TYPE:



ATIONS:	NOTES:	INSTALLATION
LEVATION MARKER.	 PLEASE REVIEW INSTALLATION NOTES, ERECTION DRAWINGS AND MATERIALS LIST THOROUGLY PLEASE CALL ACURLITE STRUCTURAL SKYLIGHTS INC. IF THERE ARE ANY QUESTIONS PRIOR TO INSTALLATION FIELD VERIFY THE SITE PER THE GAUGE CHECK GIVEN ON THE CURB PLAN. SITE MUST BE PLUMB, LEVEL AND SQUARE PRIOR TO SKYLIGHT ERECTION. 	Ι.
MARKER. LER NOTES.	 3.) CHECK ALL CONTAINERS AGAINST THE MATERIALS LIST AND BE SURE THEY BOTH COINCIDE BEFORE STARTING INSTALLATION. 4.) <u>HOW ACURLITE STRUCTURAL SKYLIGHTS INC. LABELS THE PARTS ON THE ERECTION DRAWINGS.</u> PLEASE REFER TO THE MATERIALS LIST. THERE WILL BE A PART QUANTITY, A PART NUMBER AND PART LENGTH. THE PART NUMBER WILL ALSO BE WRITTEN ON THE ERECTION DRAWING AT THE LOCATION WHERE THE PART IS TO 	HEX TAP
	 BE INSTALLED. 5.) <u>AREAS WHERE FIELD FABRICATION AND MODIFICATION WILL NEED TO BE MADE.</u> THERE MAY BE SPECIAL AREAS WHERE FIELD MODIFICATIONS WILL BE NECESSARY. THERE WILL BE A STAR () TO LOCATE THESE AREAS ON THE ERECTION DRAWINGS WITH A NOTE GIVING DIRECTION. 	1/4" - 5/16" - 3/8" - 7/16" -
w	IRREGULAR CURBS THAT VARY FROM THE APPROVED CURB DIMENSIONS AND CONSTRUCTION CAN DICTATE FIELD MODIFICATION OF PARTS. 6.) SILICONE SEALANTS:	1/2 - 5/8" - 3/4" -
	A.) METAL TO METAL JOINT: DOW CORNING 795 (COLOR TBD) B.) WEATHER-SEAL JOINT: DOW CORNING 795 BLACK C.) STRUCTURAL-SEAL JOINT: DOW CORNING 795 BLACK	PILO SCHEW
	 ALL SILICONE SEALANTS SUPPLIED BY ACORDINE STRUCTURAL SKYLIGHTS INC. MUST BE STORED IN A COOL DRY LOCATION. SEALANTS CAN NOT BE STORED IN A DAMP, HUMID LOCATION. PROPER TOOLING OF ALL SILICONE SEALANT JOINTS ARE REQUIRED TO ACHIEVE A CLEAN AND WATERTIGHT CONDITION. EXCESSIVE AMOUNTS OF SILICONE SEALANT APPLIED IN AN UNTOOLED, UNFINISHED AND UNAESTHETIC MANNER IS NOT ACCEPTABLE. 	#8 (.1 #10 (.1 #12 (.2 #14 (.2
TOR, PRIOR TO OF ZINC CHROMATE	9.) IT IS THE RESPONSIBILITY OF THE INSTALLER OR GENERAL CONTRACTOR, PRIOR TO THE ASSEMBLY OF THE SKYLIGHT FRAME, TO APPLY (2) COATS OF ZINC CHROMATE PRIMER OR EQUAL TO THE STEEL SURFACES AND/OR BITUMASTIC PAINT TO MASONRY OR WOOD CURBS THAT MAY COME IN CONTACT WITH THE ALUMINUM FRAMING MEMBERS.	
C PAINT TO THE ALUMINUM D TO THE RIZED PRIOR	10.) IT IS THE RESPONSIBILITY OF THE INSTALLER TO PREPARE AND CLEAN ALL SURFACES IN ACCORDANCE WITH THE SEALANT MANUFACTURER'S INSTRUCTIONS PRIOR TO THE APPLICATION OF THE SILICONE SEALANTS. (CLEANERS AND PRIMER ARE NOT BY ACURLITE STRUCTURAL SKYLIGHTS INC.)	
NSIONS, ELEVATIONS,	 <u>TO ACHIEVE A GOOD WEATHER SEAL DO THE FOLLOWING:</u> PLEASE READ THE MANUFACTURER'S DIRECTIONS BEFORE APPLYING. CLEAN THOROUGHLY ALL GLASS EDGES THAT COME IN CONTACT WITH SILICONE. INSERT THE BACKER ROD BELOW OUTER LITE OF GLASS (1/4") MIN. BEAD. APPLY MASK TAPE ABOVE AND BELOW VOID TO BE FILLED. FILL THE VOID WITH THE SILICONE SEALANT AND TOOL. REMOVE THE MASKING TAPE IMMEDIATELY. ALLOW SILICONE TO CURE 7 DAYS PRIOR TO THE CLEANING OF THE SKYLIGHT. 	
ATION TO	 BOND BREAKER TAPE APPLICATION - REFERENCE DETAILS FOR PLACEMENT. 12.) INSTALLATION OF BENT GLASS: CURVED GLASS MUST NOT BE SUBJECTED TO STRESS LEVELS BEYOND ITS CAPACITY. SPECIAL CARE MUST BE TAKEN TO AVOID ANY EDGE DAMAGE TO THE GLASS WHICH WILL GREATLY REDUCE THE STRENGTH OF THE UNIT. 	
CERTIFICATION BLOCK)	2. UPON INSTALLATION OF CURVED GLASS ONTO FRAME, A VOID BETWEEN GLASS AND FRAME MAY OCCUR. <u>THIS VOID MUST BE RECOGNIZED AND FILLED ON SITE.</u> 3. FAILURE TO MAINTAIN A LINIFORM LOAD-REARING SURFACE OF THE GLASS WILL	
TED DRAWINGS ARE ADDRESSED ON	MPOSE UNDUE STRESS WHEN THE PRESSURE PLATES AND COVERS ARE APPLIED AND GLASS BREAKAGE MAY OCCUR.	
	GLASS SHOULD BE TEMPORARILY HELD IN PLACE WITH "TEMP" CAPS (SUPPLIED BY ACURLITE) UNTIL THE SILICONE CURES BEFORE FULL LENGTH CAPS ARE INSTALLED.	
	TO TOUCH THE GLASS. IF LONGER SCREWS ARE REQUIRED TO PREVENT OVER GENERAL T TIGHTENING, CONTACT ACURLITE STRUCTURAL SKYLGHTS INC. FOR REPLACEMENTS.	ORQUE SPECIFIC
	13.) <u>PROPER STORAGE AND PROTECTION OF THE MATERIALS ONCE ON THE JOB SITE.</u> KEEP IN A COOL DRY PLACE.	SAE 2 MILD STEEL SAE 5
	tensile (p.s.i.) strength Proof load (p.s.i.)	74,000 60,000 120,000 105, 55,000 33,000 85,000 74,0
	Steel grade symbols	$\bigcirc $
	Bolt diameter (inches) 1/4" 5/16"	Torque (lbs. ft. 7 10 14 21
	3/8" 7/16" 1/2"	24 37 39 60 59 90
	9/16" 5/8" 3/4"	85 130 117 180 205 320
	//8 1" 1 1/8" 1 1/4"	200 515 300 775 425 95 600 13 ⁴
	NOTE: Use on available. The and are based gasketed joint	ily when manufacturer's spec se values are for stiff meta d on 90% of proof load. Do ts or joints of soft metal.











THICKNESS	.100	.010 Rudi	us or us noted
tomer URLITE SK	Customer's Part Number		
Name			
t Title RAFTER			Scale 1:1
Alloy 6063	Est. Area 2.127 In ²	Finish Perimeter 10.500 In	Date 03-23-04
Temper T-5	Est. Wt./Ft. 2.552 Lbs	Est. Perimeter 39.961 In	Drawn D.S.S.
vity Size	Circle Size 4.7 In	Exterior Perimeter 26.969 In	Checked







TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED BY TECHNICIAN: BP REPORT NO. NCTL-110-20649-3

TEST DATE: 06/28/18

S-3	5591
Die N	umber
Design	Number

specified I Thickness	.090	.015 R	rea ladiu	k All Corners us or as Noted
stomer CURLITE SK	YLIGHTS			Customer's Part Number
Name		an - Chan - Alaban		
t Title KYLIGHT PR	ESSURE CAP			Scale 1:1
Alloy	Est. Area	Finish Perimet	eri	Date
6063	0.295 In ²	0.000	In	01-14-04
Temper	Est. Wt./Ft.	Est. Perimete	erl	Drawn
T-6	0.354 Lbs	6.969	In	D.S.S.
vity Size	Circle Size	Exterior Perimet	ter	Checked
	2.3 In	6.969	In	



NCTL	TEST SPECIMEN CON ANY DEVIATION IS NO	1PLIES WITH THESI OTED BY TECHNICI 10-20649-3	E DETAILS. AN: BP				
EXTRUDED	TEST DATE: 06/28/18	3	S-3	S-38970			
THERWISE			Die N	lumber			
		*	Design	Number			
nabat kadhaat							
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	in			0			
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specified Il Thickness: .	.090	.010	Break Ext Radius or	. Corners as Noted			
stomer CURLITE SKY	LIGHTS		Cus Port	tomer's Number			
b Name				t tott no c 1			
rt Title				Scale			
Allov	SEAL Est. Aren	Finish Perime	ter	4:1			
6063	0.167 In ²	3.500	In 10-	-14-05			
T-5	LST. Wt./Ft. 0.200 Lbs	Lst. Perime 3.910	ter l In	A.D.			

Exterior Perimeter

3.910

Checked

Circle Size

In

1.6







TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED BY TECHNICIAN: BP REPORT NO. NCTL-110-20649-3 TEST DATE: 06/28/18





TEST SPECIMEN COMPLIES WITH THESE DETAILS. ANY DEVIATION IS NOTED BY TECHNICIAN: BP REPORT NO. NCTL-110-20649-3 SPACERS TEST DATE: 06/28/18

MATERIAL

Aluminum, Stainless Steel and ExtremEdge™ are the three spacer material options available from Viracon. Although aluminum is the most specified, increasing energy performance requirements are escalating the demand for alternate spacer options to improve edge of glass (EOG) u-value.

ALUMINUM

Historically has been the most-used spacer because of its malleability and availability.

STAINLESS STEEL

A warm edge spacer option offered by Viracon. Stainless steel has one-tenth the thermal conductivity of aluminum.

EXTREMEDGE™

Viracon's newest warm edge spacer offering. The ExtremEdge™ spacer consists of a biopolymer in the cross section area which is encapsulated in stainless steel. This combination further reduces the edge conductivity and thus reduces heat transfer into the building.





BLACK



MILL FINISH



SPACER AVAILABILITY

Please use this chart as a guideline when selecting spacer color, material and thickness.

		Aluminum		Stainless Steel		ExtremEdge™	
Nominal	Thickness	Black	Mill Finish	Black	Mill Finish	Black	Mill Finish
5/16"	7.5mm	YES					
3/8"	9.0mm	YES	YES		YES		
7/16"	11mm	YES					
15/32"	12mm	YES	YES		YES		
1/2"	13.2mm	YES	YES	YES	YES		
17/32"	13.5mm					YES	YES
9/16"	14mm	YES					
5/8"	15.5mm	YES	YES		YES		
3/4"	18.5mm	YES	YES	YES	YES		
7/8"	22mm	YES	YES				
1"	25.4mm	YES	YES		YES		

Black painted and black anodized finishes are interchangeable.

▶ ExtremEdge™ cannot be used in spandrel applications.



▲IBC BANK PLAZA

LOCATION: AUSTIN, TEXAS GLASS TYPE: VE1-42, VE1-2M ARCHITECT: HKS, INC. GLAZING CONTRACTOR: HARMON, INC. PHOTOGRAPHER: © JONATHAN JACKSON