

Go Your Own Way

USG

Libretto™

Gridless Metal Ceiling System



Get Off the Grid





Offices

Lobbies

Conference Rooms

Retail

Hospitality

Entertainment

Health Care

Transportation Hubs

LIBRETTO™ gridless metal ceiling system creates islands, canopies, radial ceilings and other dynamic shapes that define space and architectural features – all based on your own design concept! You determine the shape and style of your ceiling, and USG brings it to reality with custom-manufactured components that fit together with precision. Each assembly is designed for turnkey installation and delivered complete, assuring that the installation looks just as you envisioned.



User's Guide

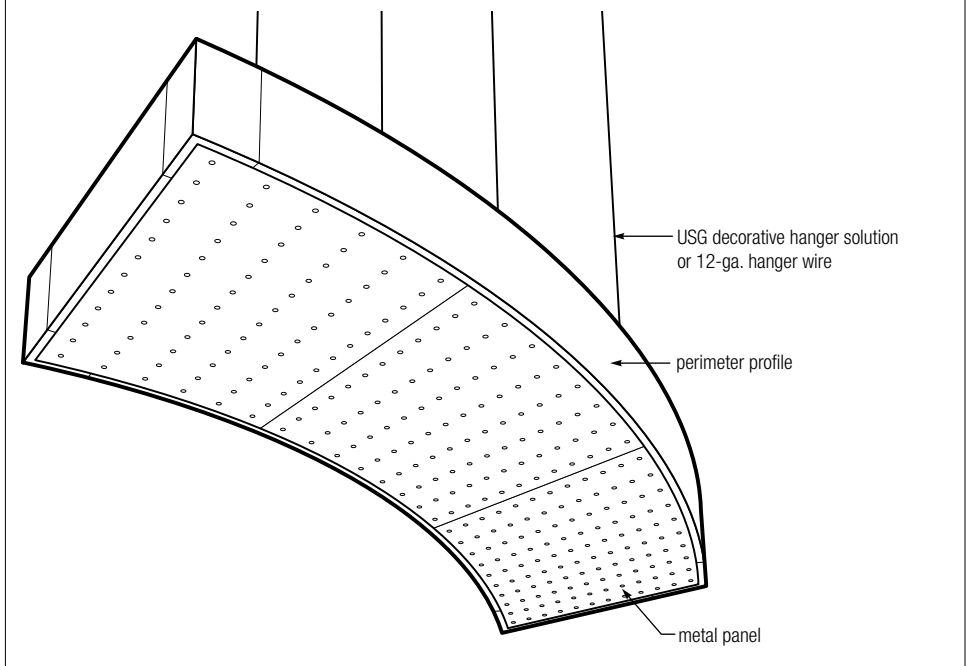
The LIBRETTO™ gridless metal ceiling system features individually fabricated aluminum panels that interconnect to form a continuous, uninterrupted plane. Collaborate with USG to create a custom design tailored to your space, and enhance the aesthetic with perforations that follow the contours of your unique ceiling. Even the concealed carrier system is custom-fit, with a choice of three perimeter profiles to achieve the proper scale for your space.

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Specify Your System	24	Application Guide Specifications
For More Information		Technical Service 800 USG.4YOU Web Site usg.com

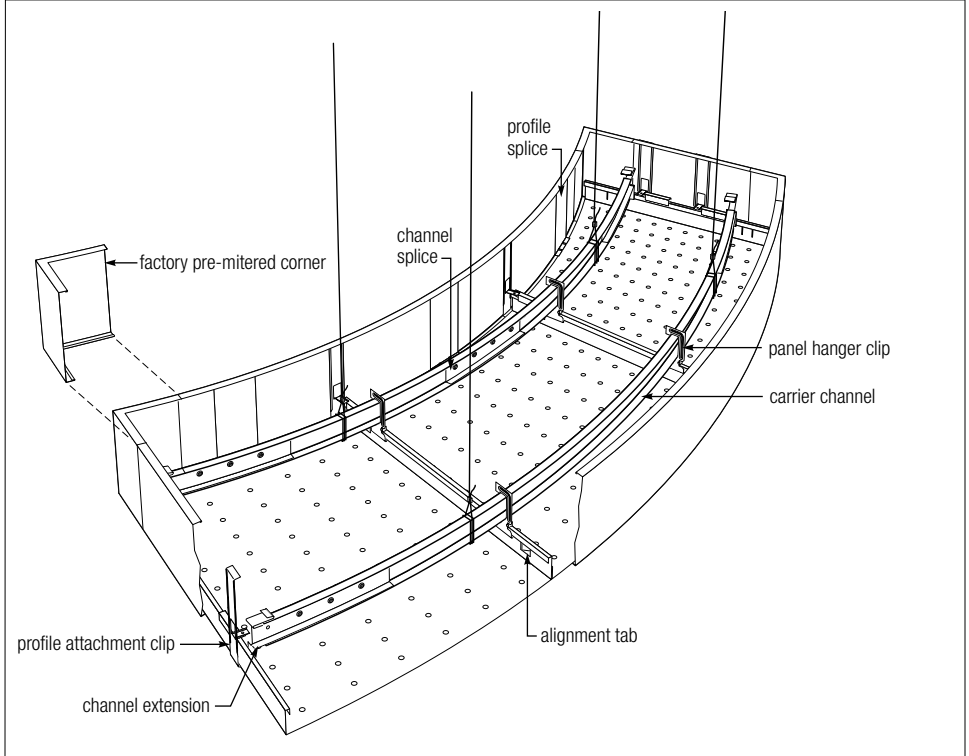
System Overview

Metal Panels	The LIBRETTO system features Interlocking metal panels that form a shape and size directed by the architect or designer. The assembly is manufactured complete to require no cutting or fitting by the installer. Optional access ports may be specified at the initial design stage; point access only.	
Carrier System	Engineered, concealed system suspended from the structure. Components include: <ul style="list-style-type: none">– Carrier channel– Channel splice/extension– Panel hanger clip	
Perimeter Profile	Each assembly is finished with a perimeter profile 4", 6" or 8" in height. Components include: <ul style="list-style-type: none">– Curved and straight perimeter profile sections– Factory pre-mitered corners– Profile attachment clips– Profile splices	
Materials	Recycled Content	
	Panels	Aluminum 80%
	Carrier system	Cold-rolled steel 25%
	Edge profile	Cold-rolled steel 25%
Colors	Standard colors: Flat White and Silver Satin. Custom colors available on request.	
Perforation	<ul style="list-style-type: none">– Contoured pattern that follows the shape of your LIBRETTO ceiling.– Custom graphic with a pattern you provide.– Standard patterns for square and rectangular ceilings.– Smooth, unperforated metal.	
Lighting	LIBRETTO assemblies may be lit from above with a variety of lighting systems to create a range of effects, from ambient to dramatic. See USG design guide IC533 for more information.	
Plenum Depth	Minimum 12", with 8" clearance above top edge of perimeter profile. See page 19 for details.	
Design Process	USG takes care of the design work for you! Simply send us the general shape and size of the LIBRETTO ceiling you want to create (see pages 10-11 for guidelines). We will design the assembly to fit your space, including an optional contoured perforation pattern that flows with the shape of your ceiling.	

View from Below



View from Above



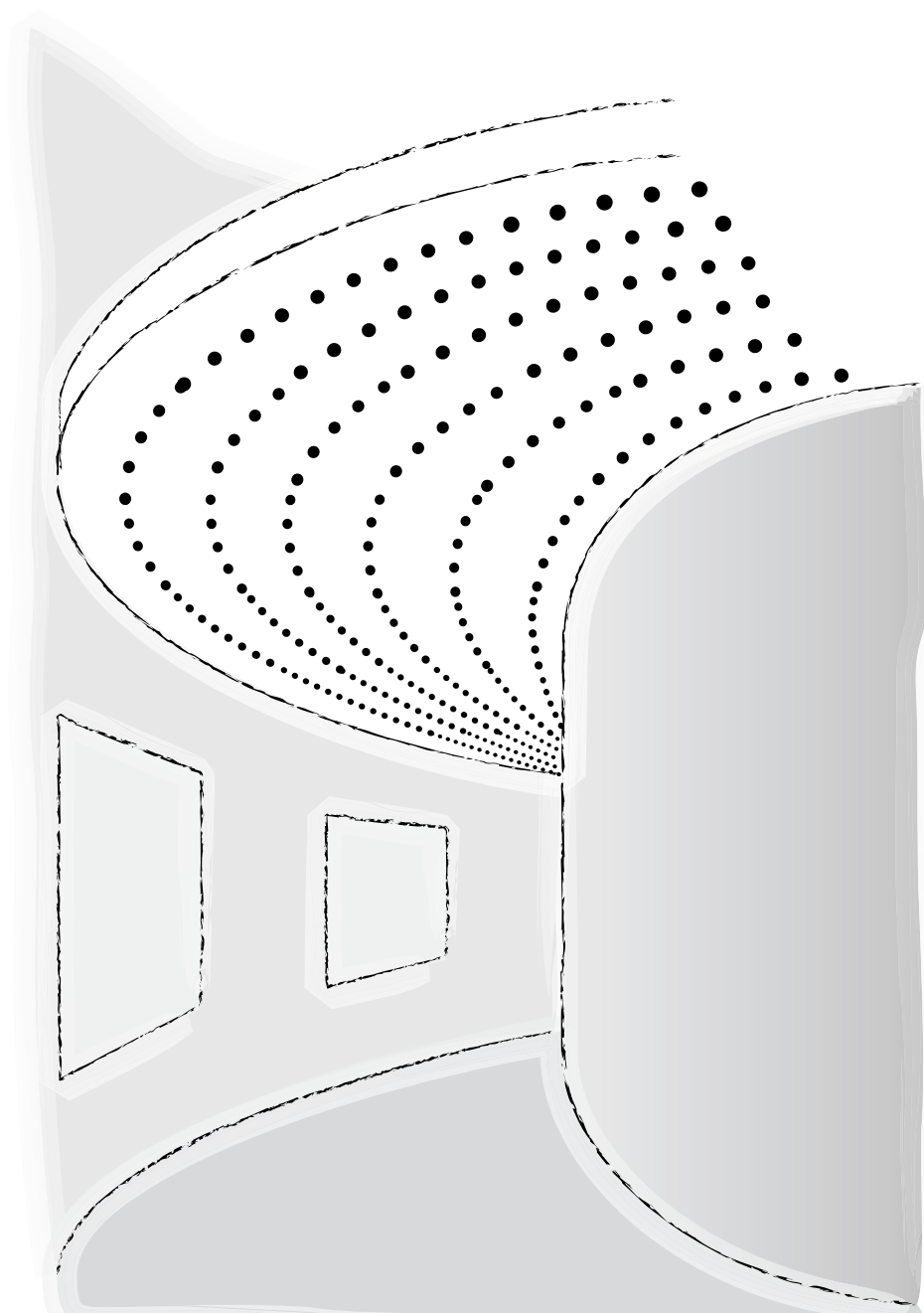
See page 21 for more information about system components.

System Overview

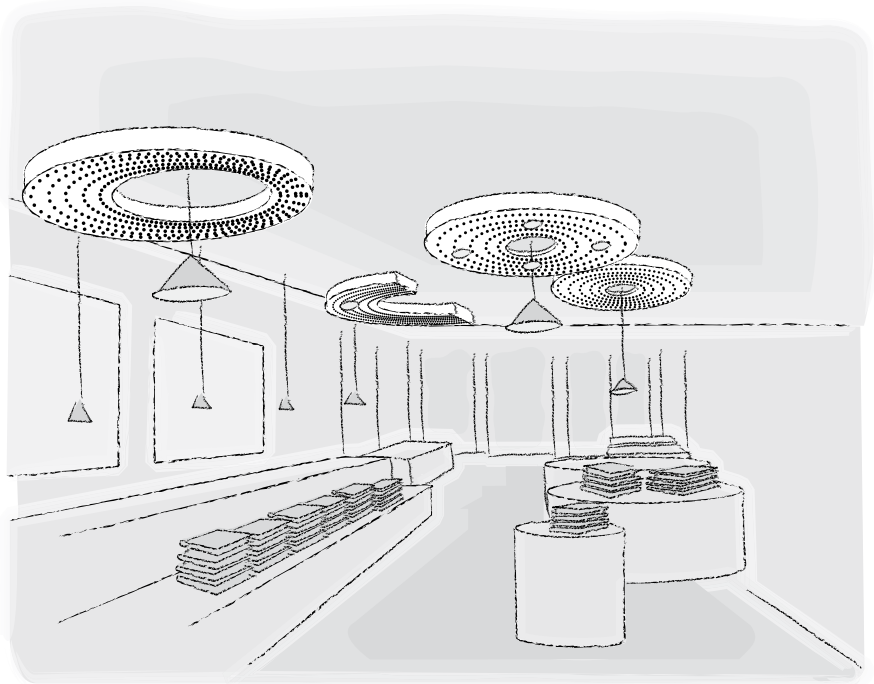
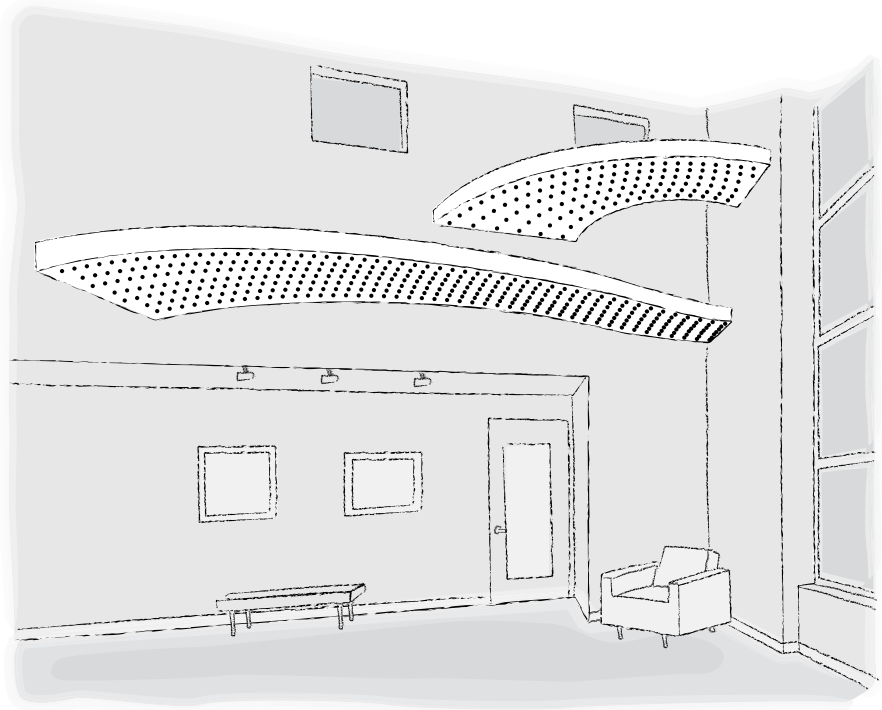
Application Concepts

Individual Islands

LIBRETTO ceilings provide an excellent solution for creating visual interest in conference rooms, retail spaces and reception areas. The shape and perforation pattern is fully customizable, allowing you to highlight functional zones, echo the shape of workstations or open floor area, and draw attention to architectural details. Crescents, serpentine, toruses, and even simple squares and rectangles provide the basis for unlimited creativity.



Application Concepts

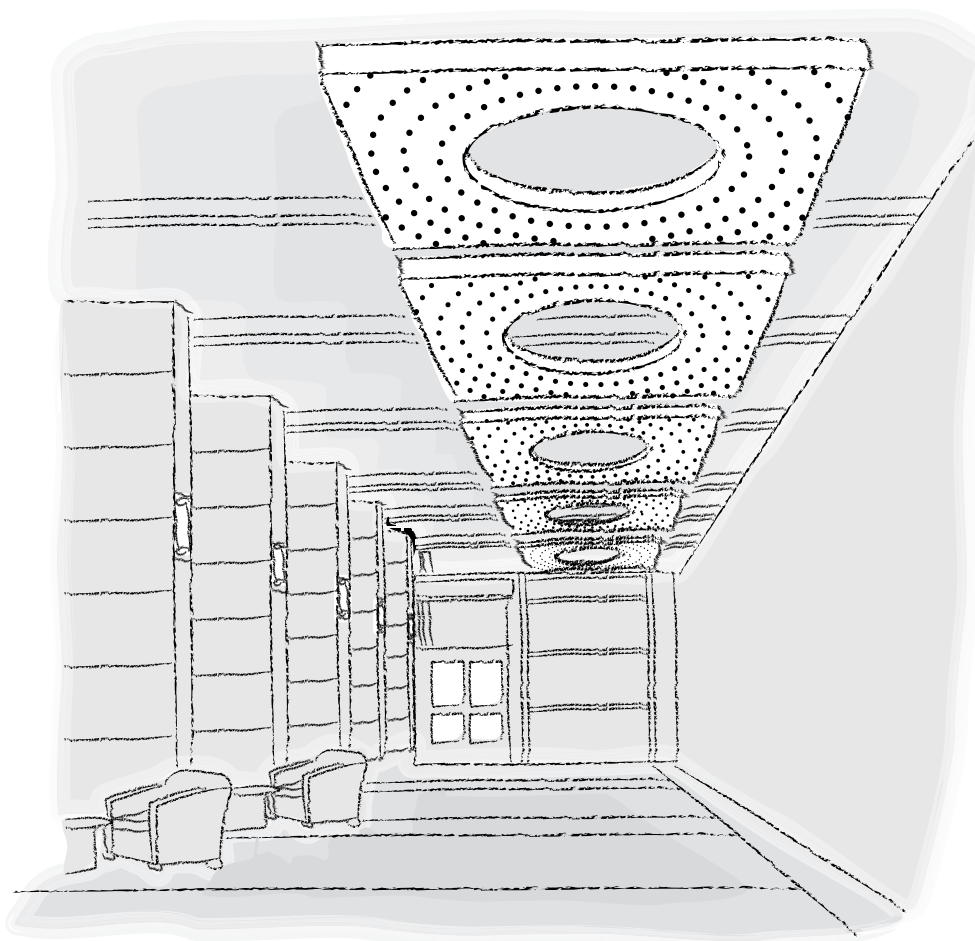


System Overview

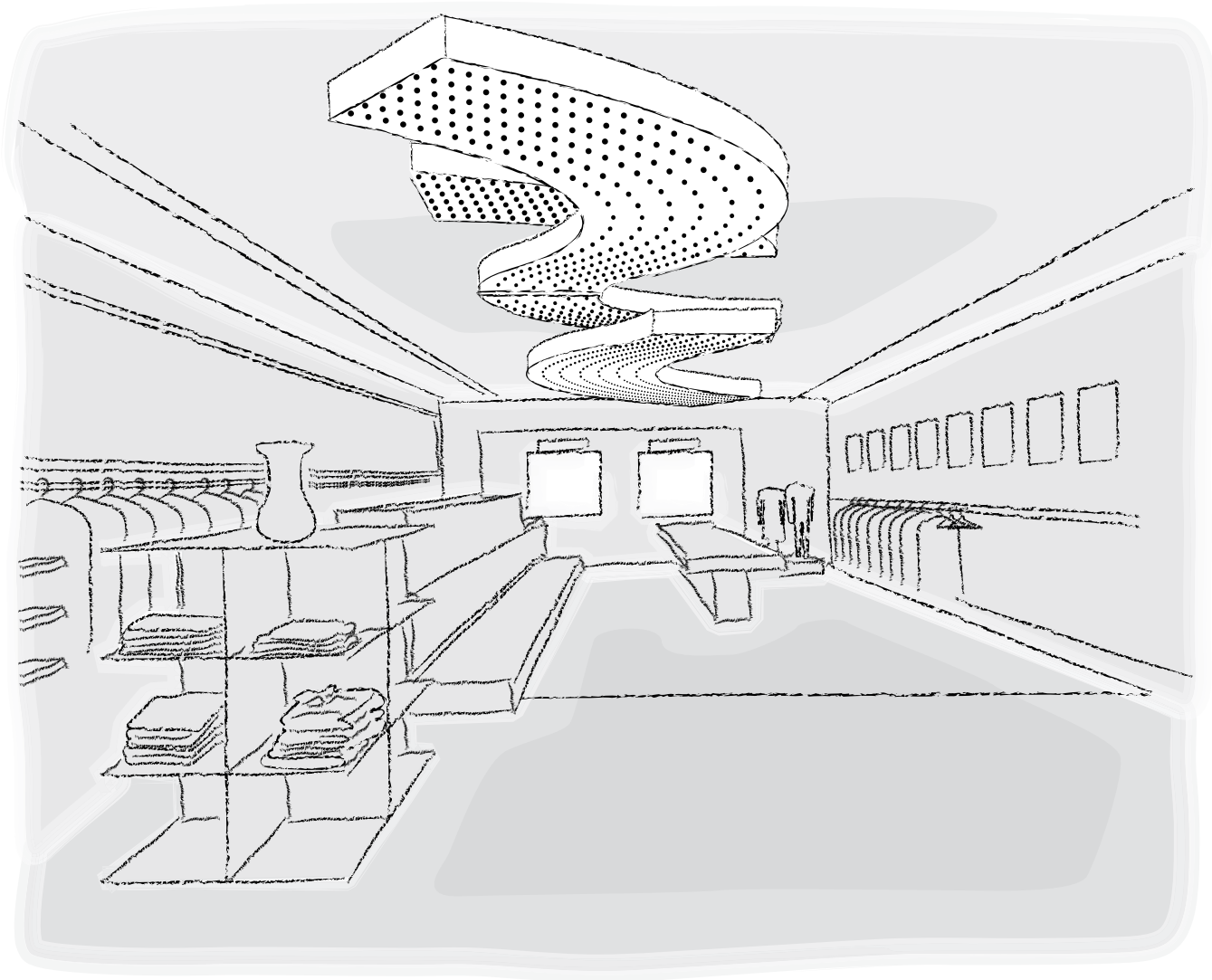
Application Concepts

Multiple Islands

LIBRETTO ceilings provide an easy, cost-effective solution for creating visual energy by repeating and nesting shapes. Align multiple islands to accentuate linear space and provide wayfinding. Or, group islands in tandem to break up bland expanses with geometric interest. Islands may also be positioned at varying heights to reflect the scale of high spaces.



Application Concepts

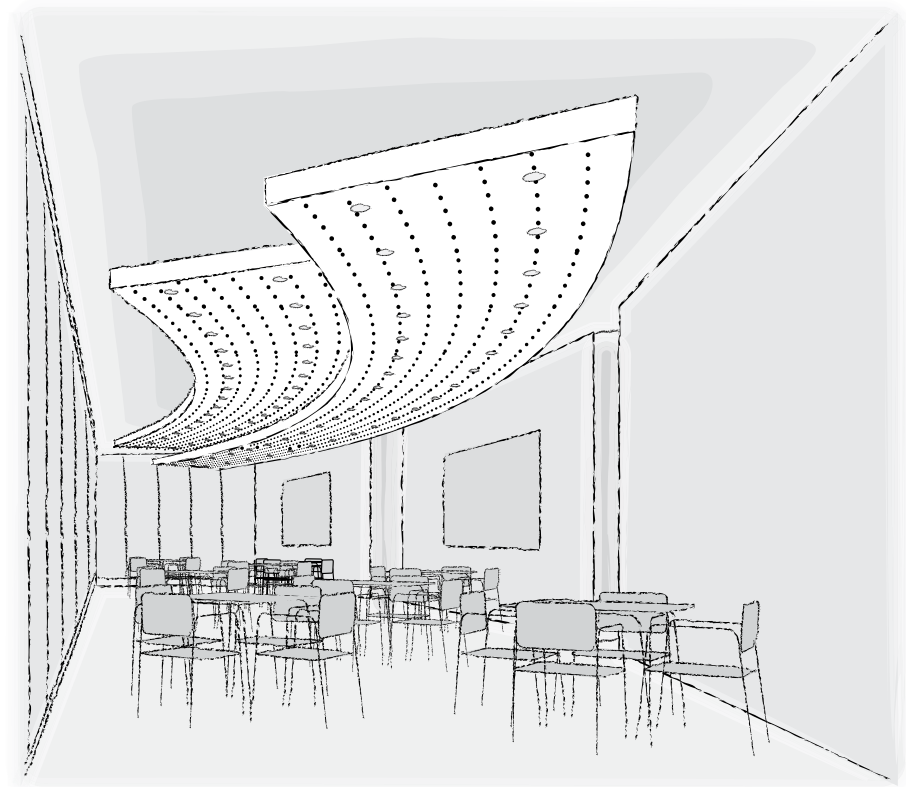


System Overview

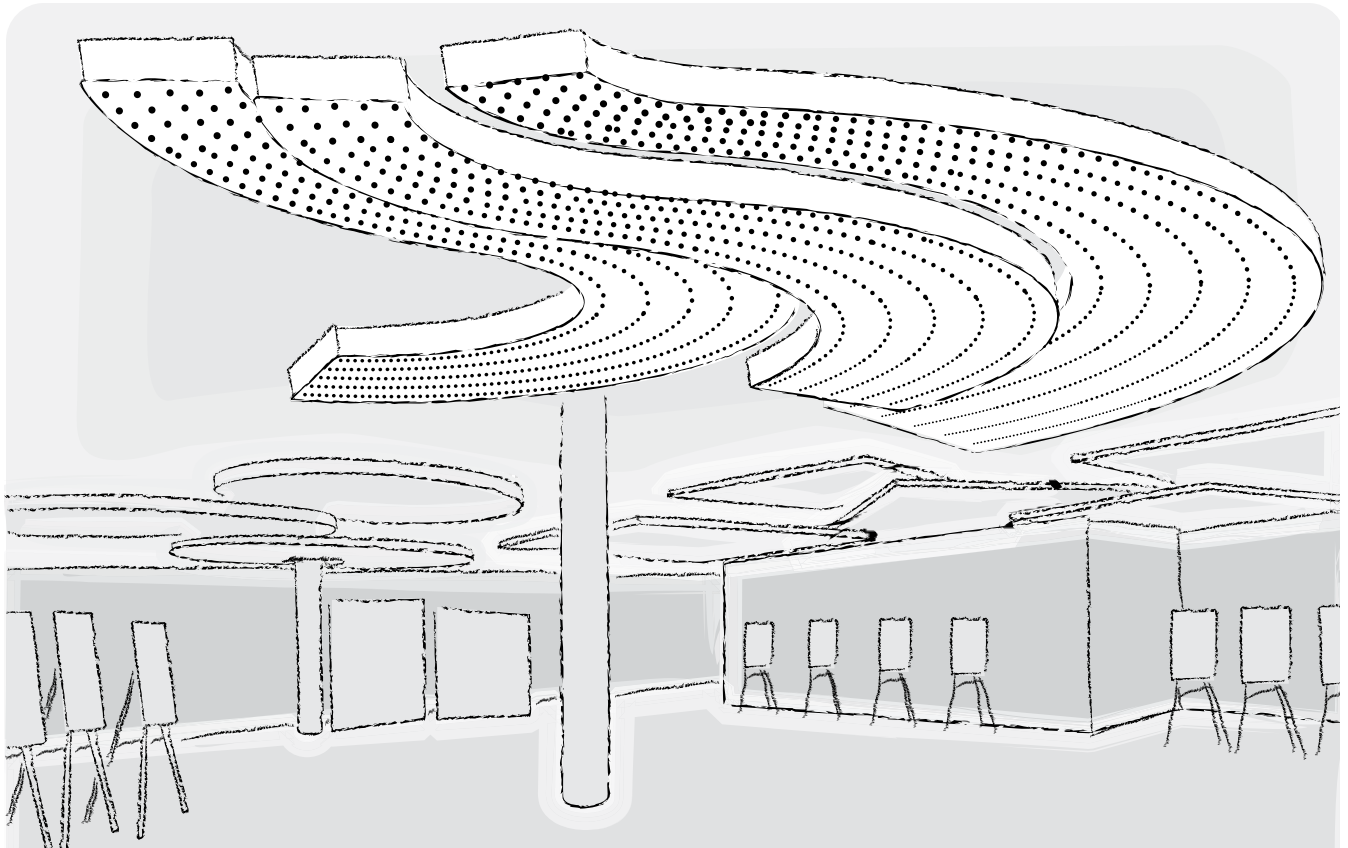
Application Concepts

Radial Applications

Made with the latest computer-controlled manufacturing technology, LIBRETTO ceilings offer unprecedented accuracy, ensuring that even the largest assemblies provide a seamless fit. Design expansive concentric and multi-level radial designs with confidence, bringing intimacy and visual interest to large spaces such as amphitheaters, showrooms and auditoriums.



Application Concepts



Design Guide

LIBRETTO ceilings can be configured to create a wide range of shapes, with multiple perforation options to enhance the visual interest of the ceiling itself, integrate custom patterns or icons, and create unique lighting effects. Following are the steps and guidelines for creating a LIBRETTO ceiling that will provide a crowning touch to your project.

Step 1
Select Shape

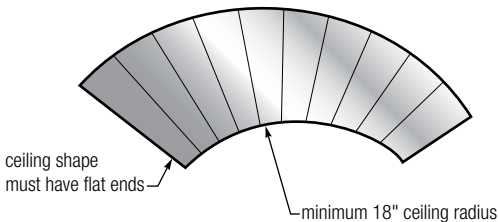
LIBRETTO ceilings may be shaped as crescents, serpentine, four-sided polygons, and toruses. The illustrations in this section show basic design concepts and guidelines.

**Crescent, Serpentine,
and Polygon**

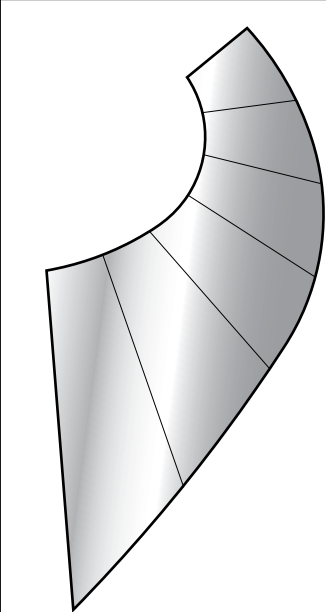
Criteria

- Must have two straight opposite ends.
 - Length of each end must be 30"-144".
 - Corners must be 15°-165°.
 - Sides may include curved and straight sections.
 - All curves must have minimum 18" radius.
 - Opposite sides not required to be concentric.
- Note:** Appropriate panel widths will be determined by the USG design staff.

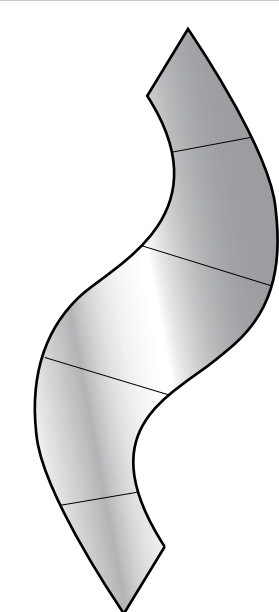
Example



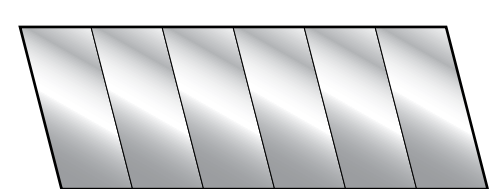
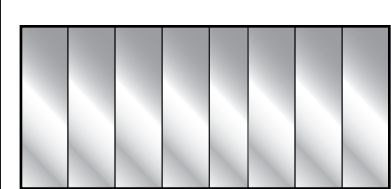
Crescent



Serpentine



Four-sided Polygon

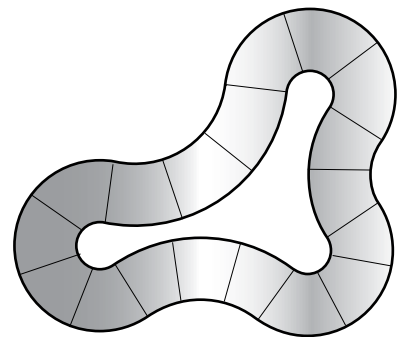
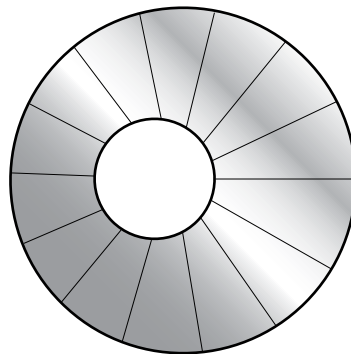
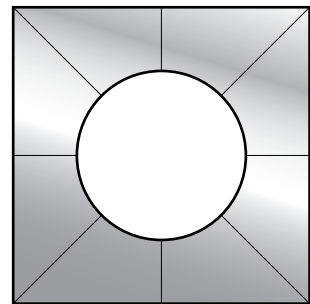
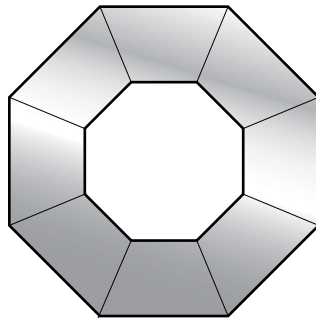


Torus

A torus is a crescent, serpentine, or polygon with ends that meet, so the preceding guidelines also apply to torus shapes. Additional standards apply to the shape of the opening relative to the LIBRETTO ceiling island:

- The inside perimeter must be at least 1/3 the outside perimeter.
- Both the outside perimeter and the opening may include curved and straight sections.
- All curves must have a minimum 18" radius; all straight sections must be at least 8" long.

Examples







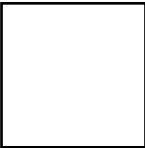
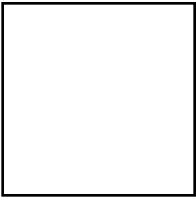



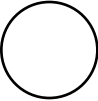
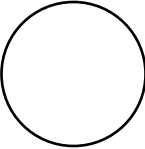
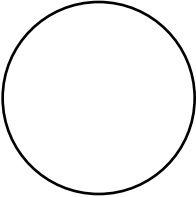
Design Guide

Step 2
Select Perforation

LIBRETTO panels are available in solid metal or a choice of perforation options:

- Contoured perforation flows with the shape of your ceiling without interruption across panel joints. You specify perforation shape, size and orientation, and we customize the pattern to fit your LIBRETTO ceiling.
- Custom graphic lets you make your own statement! Design a pattern or provide an image to appear on individual panels or radiate over the entire ceiling.
- Standard perforations are available in a selection of 14 patterns and are recommended for rectangular islands only.
- Optional black or white ACOUSTIBOND® backer available.

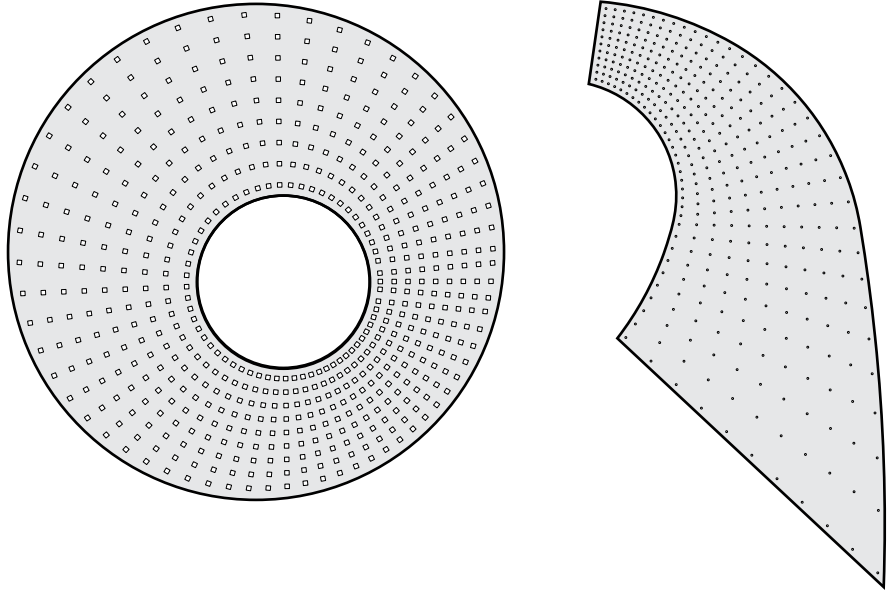
Punches available for contoured and custom graphic perforation:

1/8"	1/4"	3/8"	1/2"	3/4"	1"
					
					

Contoured Perforation

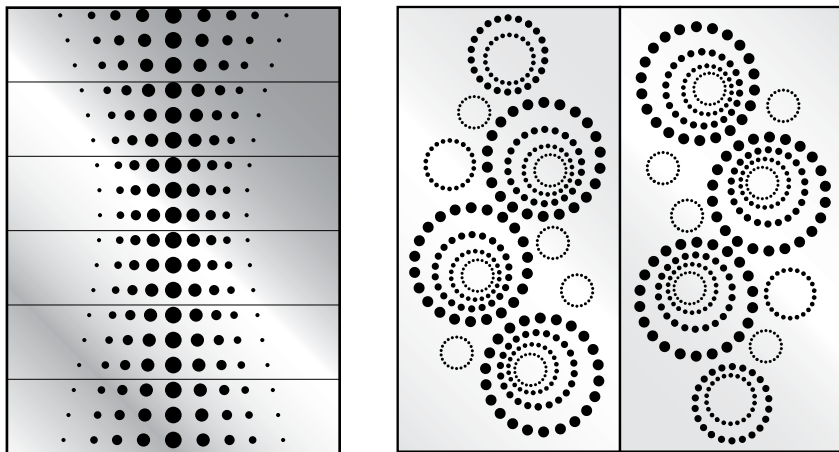
Available with all panel shapes and especially recommended for curved and trapezoidal islands, this option creates an attractive landscape of flowing patterns of light and dark. Patterns are uninterrupted over panel joints, and perforations are generally larger and more widely spaced than standard patterns (shown on page 14). Perforations may be round or square.

Round or square perforations



Custom Graphic Perforation

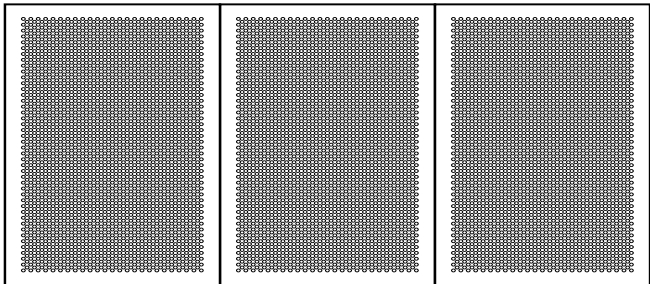
Provide your own illustration or use up to five standard hole sizes to design a custom pattern. An electronic drawing (.dvg or .dxf) will be required at time of manufacture. **Note:** Custom graphic perforation patterns require a minimum 3/4" break across panel joints.

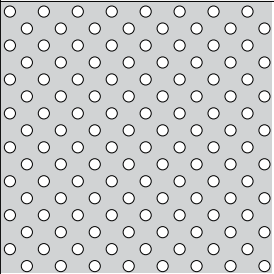
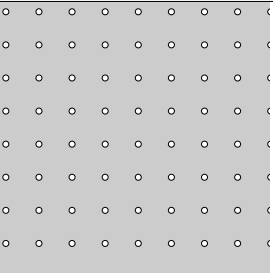
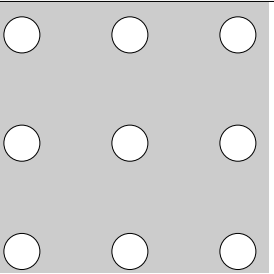
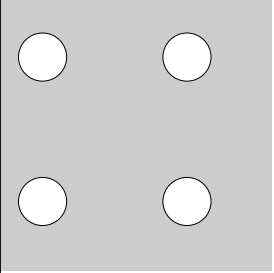
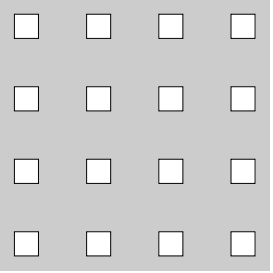
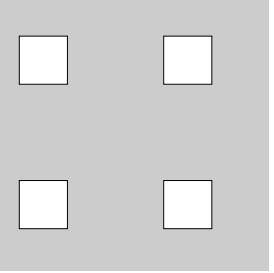


Design Guide

Standard Perforation

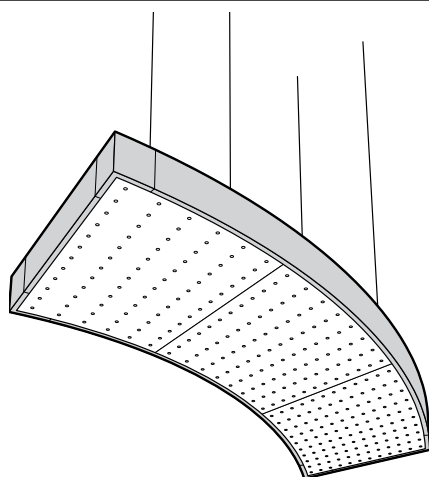
Recommended for rectangular panels only. Each panel will have a minimum 3/8" unperforated border.



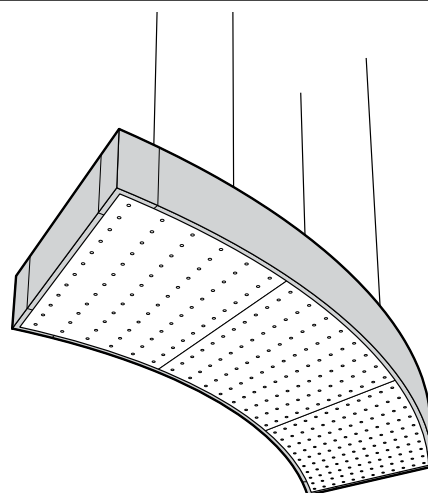
<p>Standard Perforations (shown at 50% size) Six of the most popular perforation patterns shown here. The following patterns also available: A062, A188, A250, A500, C116, C188, C250A and D375. See USG perforation selector IC425 for full-size illustrations of all patterns.</p>	<p>Pattern No. A116</p>  <p>Round—15/128" perforations .25" o.c., 17% open area</p>	<p>Pattern No. C062</p>  <p>Round—1/16" perforations .351" o.c., 2% open area</p>	<p>Pattern No. C375</p>  <p>Round—.375" perforations 1-1/8" o.c., 9% open area</p>
	<p>Pattern No. C500</p>  <p>Round—1/2" perforations 1-1/2" o.c., 9% open area</p>	<p>Pattern No. D250</p>  <p>Square—1/4" perforations 3/4" o.c., 11% open area</p>	<p>Pattern No. D500</p>  <p>Square—1/2" perforations 1-1/2" o.c., 17% open area</p>

Step 3
Select Perimeter Profile

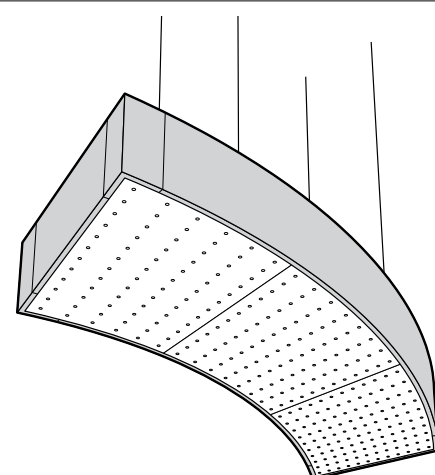
4" Profile



6" Profile



8" Profile



Step 4
Finish and Specify
Your Design

- Complete the Selector Worksheet on pages 16 and 17.
- Prepare an electronic drawing (.dwg or .dxf file) of your overall ceiling layout and LIBRETTO shape(s).
- Contact your local USG representative to discuss any questions about your design or call 800.USG.4YOU to locate a representative near you.

Selector Worksheet

Shape and Size

☐ Crescent ☐ Serpentine ☐ Polygon ☐ Torus ☐ Other

Total sq. ft. area _____

Perforation

☐ Contoured

Contoured perforation patterns conform to the shape of the ceiling. Perforation patterns flow smoothly across panel joints without interruption. Using our proprietary perforation technology, our experienced staff can provide an aesthetically pleasing pattern with minimal specifications. Select the following:

A. Punch shape and size:

Shape ☐ Round ☐ Square

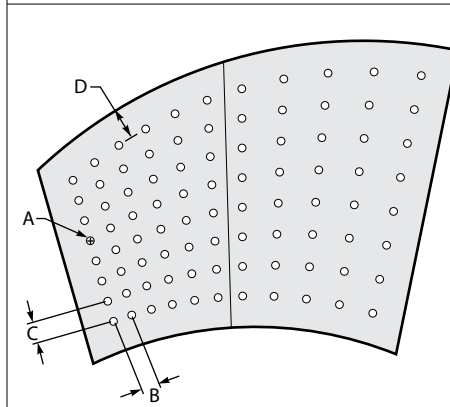
Size ☐ 1/8" ☐ 1/4" ☐ 3/8" ☐ 1/2" ☐ 3/4" ☐ 1"

B. Minimum distance between holes (minimum 1/16" between hole edges).

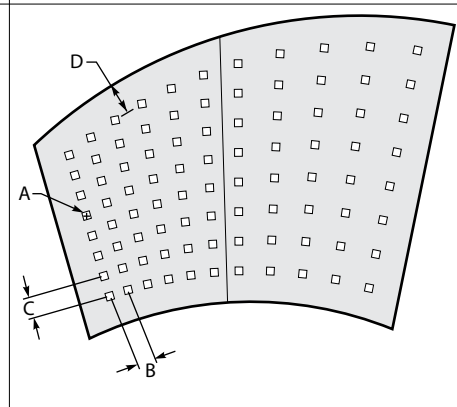
C. Minimum distance between rows (if different from B).

D. Border dimension to frame the island (3/8" min.).

Round Perforations



Square Perforations



☐ Custom Graphic

- Provide a full-scale electronic drawing (.dxf or .dwg file) illustrating your idea.
 - Our staff can help refine your concept to ensure that it fits within LIBRETTO design guidelines.
- Note:** Custom graphic perforation patterns require a minimum 3/4" break across panel joints.

☐ Standard

Each panel will have a minimum 3/8" unperforated border; the exact border dimension may be specified or it may be developed by our staff to assure that the pattern is centered on each panel. Standard perforation is recommended for rectangular islands only.

- | | | |
|-------------------------------|--------------------------------|-------------------------------|
| <input type="checkbox"/> A062 | <input type="checkbox"/> C062 | <input type="checkbox"/> D250 |
| <input type="checkbox"/> A116 | <input type="checkbox"/> C116 | <input type="checkbox"/> D375 |
| <input type="checkbox"/> A188 | <input type="checkbox"/> C188 | <input type="checkbox"/> D500 |
| <input type="checkbox"/> A250 | <input type="checkbox"/> C250A | |
| <input type="checkbox"/> A500 | <input type="checkbox"/> C375 | |
| | <input type="checkbox"/> C500 | |

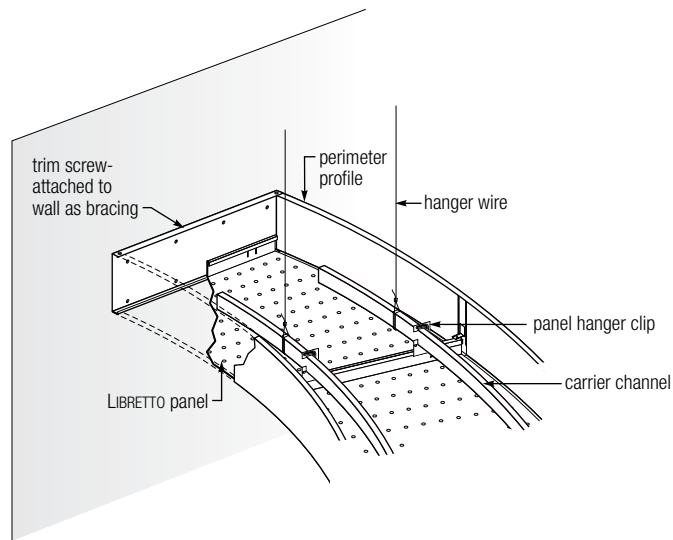
☐ Smooth

No perforation

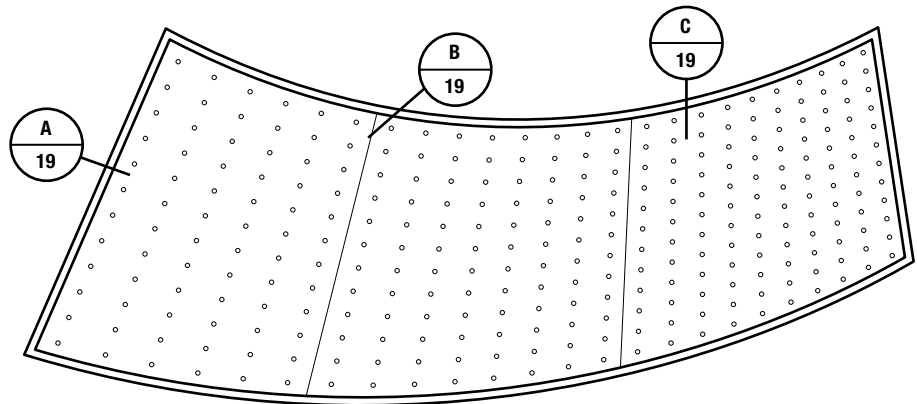
<div></div>		
ACOUSTIBOND Backer		<input type="checkbox"/> Black <input type="checkbox"/> White <input type="checkbox"/> None Available with Flat White and Silver Satin panels only.
Perimeter Profile		Available profiles: <input type="checkbox"/> 4" <input type="checkbox"/> 6" <input type="checkbox"/> 8" Note: Minimum 12" plenum depth and 8" clearance above top edge required for proper installation.
Colors		<input type="checkbox"/> Silver Satin [002] <input type="checkbox"/> Flat White [050] <input type="checkbox"/> Custom color based on industry standard colors or to match customer sample. Provide paint manufacturer's name and color number or a 3" x 5" color sample. Notes: (1) Metallic colors not available. (2) Standard ACOUSTIBOND backer not available with custom color. Check for availability and restrictions.
Utilities	Factory cutouts	Available on request. Provide an electronic drawing (.dxf or .dwg file) indicating exact sizes and positions.
	Integrated Fixtures	Please provide an electronic drawing (.dxf or .dwg file) showing all fixtures such as lighting, sprinkling and HVAC so we can ensure that these items will not intersect a panel joint or interfere with the concealed carrier system.
Accessories	Hanger Options	Choose from 12-gauge galvanized wire for concealed applications or decorative solutions for exposed applications including 18-gauge stainless steel wire or multi-stranded aircraft cable. See installation guide IC453 for options and applications.
	Access Ports	Standard LIBRETTO ceilings are installed progressively and are not accessible. If required, our staff can assist in designing special panels with access ports to meet your accessibility needs. Provide an electronic drawing (.dwg or .dxf file) indicating point(s) where access is needed.
<div></div>		
Contact Name		
Contact Phone Number		
Project Name		

Application Details

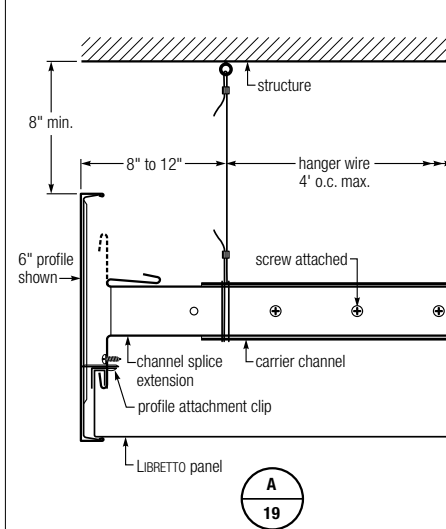
Wall Termination



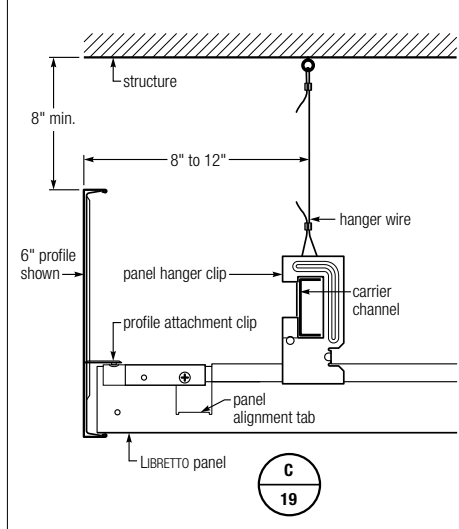
Section Plan



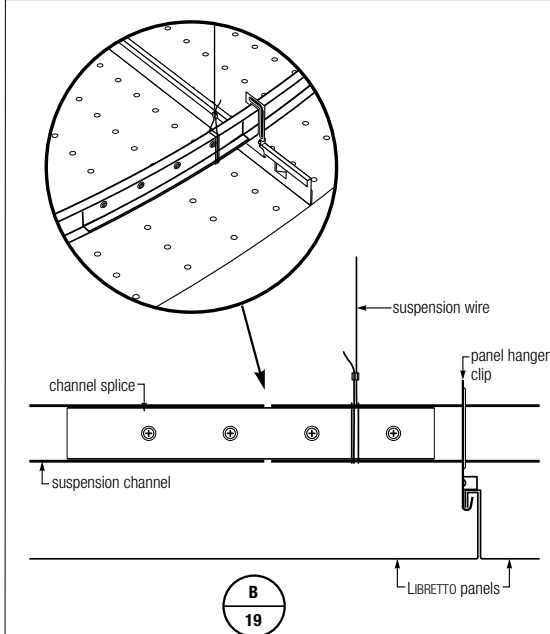
Perimeter Profile – Perpendicular to Carrier



Perimeter Profile – Parallel with Carrier



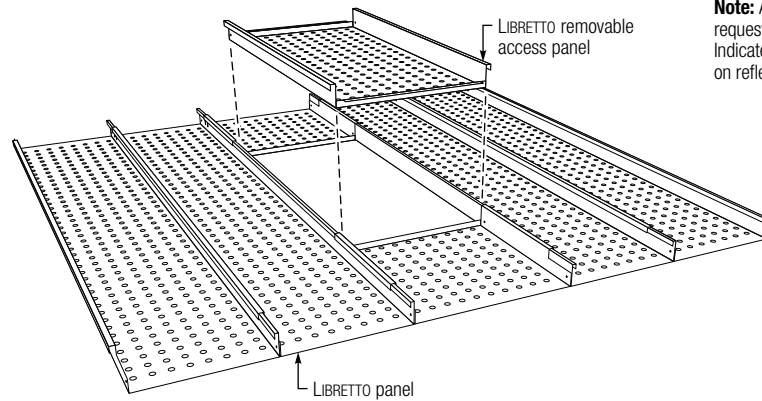
Typical Assembly



Application Details

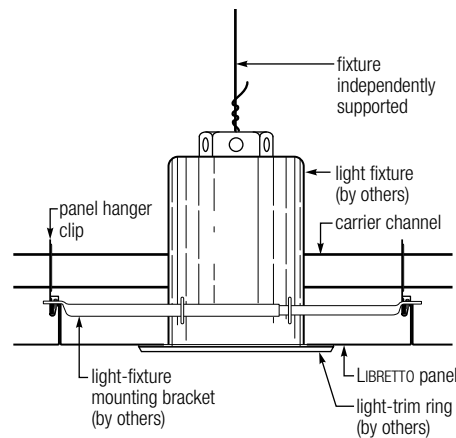
Utility Integration

Optional Access Panel

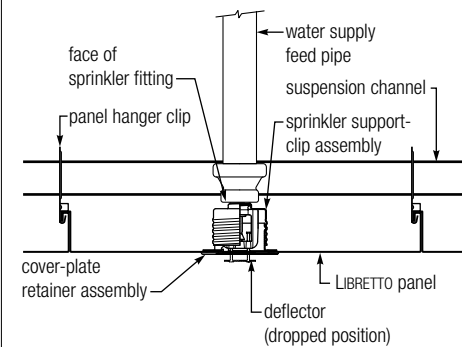


Note: Accessibility on special request. Point access only. Indicate required access point(s) on reflected ceiling plan.

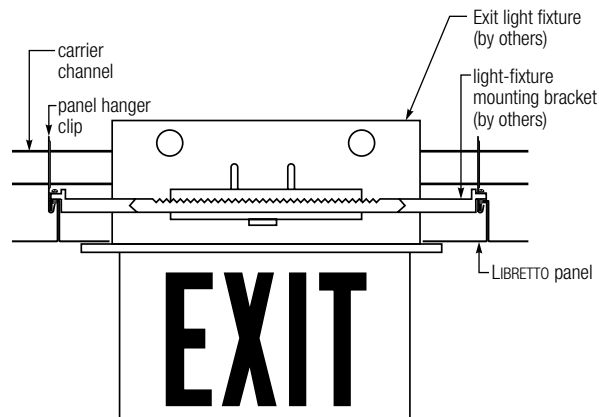
Recessed Light Fixtures



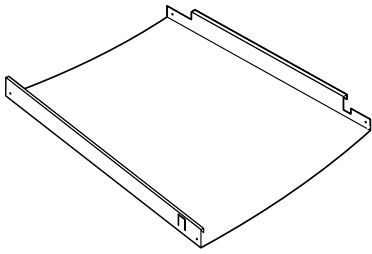
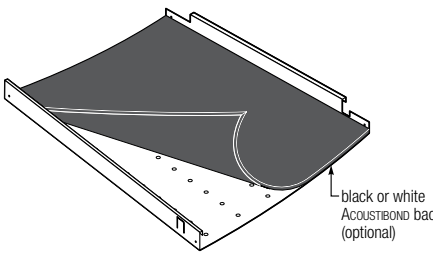
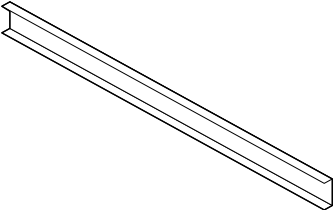
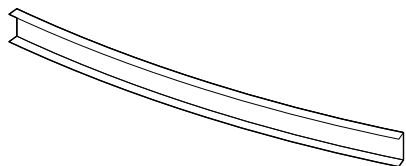
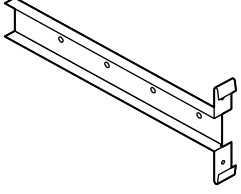

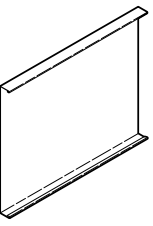
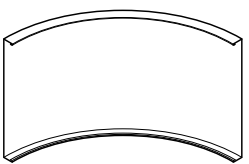
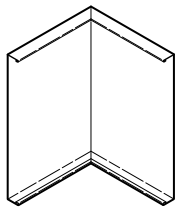
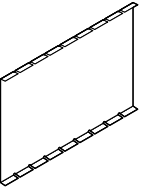
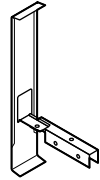
Sprinkler Systems



Signage



System Components

<p>LIBRETTO Panel – Solid</p> 	<p>LIBRETTO panel – Perforated, with ACOUSTIBOND Backer</p> 	
<p>Carrier Channel – Straight</p> 	<p>Carrier Channel – Curved</p> 	
<p>Channel Splice/Extension</p> 	<p>Panel Hanger Clip</p> 	
<p>Perimeter Profile – Straight</p> 	<p>Perimeter Profile – Custom-Curved</p> 	<p>Perimeter Profile – Pre-Mitered Corner</p> 
<p>Profile Splice</p> 	<p>Profile Attachment Clip</p> 	

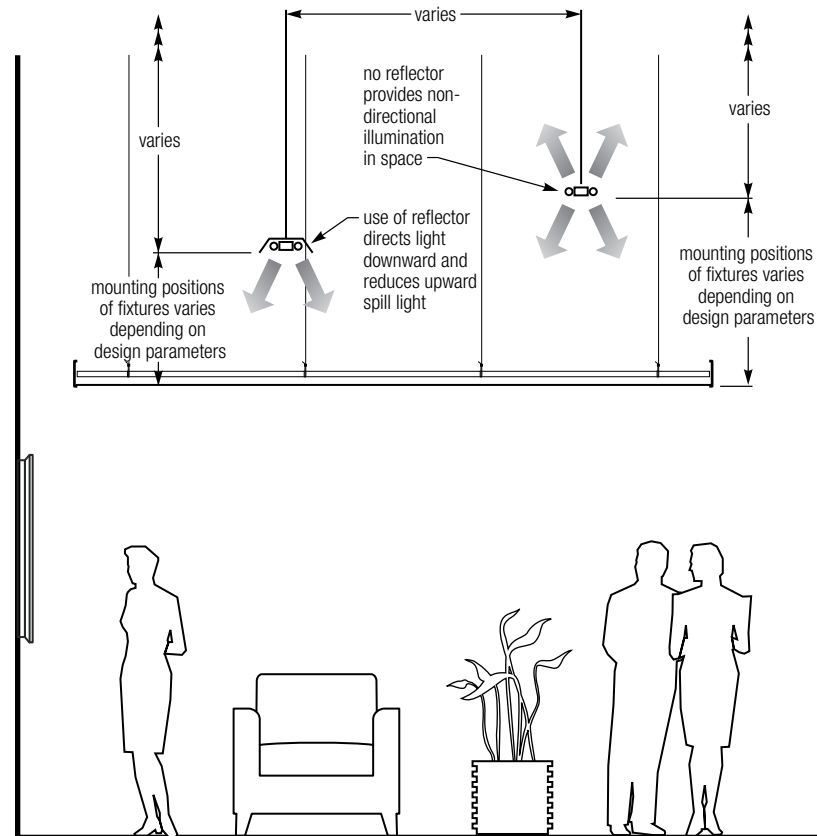
Lighting

A LIBRETTO ceiling may be lighted in a variety of ways, creating effects that can showcase the unique qualities of the ceiling itself, highlight architectural details of the space, or play a central role in your design theme. Following is an overview of general lighting options. For specific concepts developed by an independent lighting design consultancy, see USC design guide IC533.

Backlighting

Fluorescent fixtures with no reflector provide non-directional illumination in space. Use of fixtures with a reflector directs light downward and reduces upward spill light.

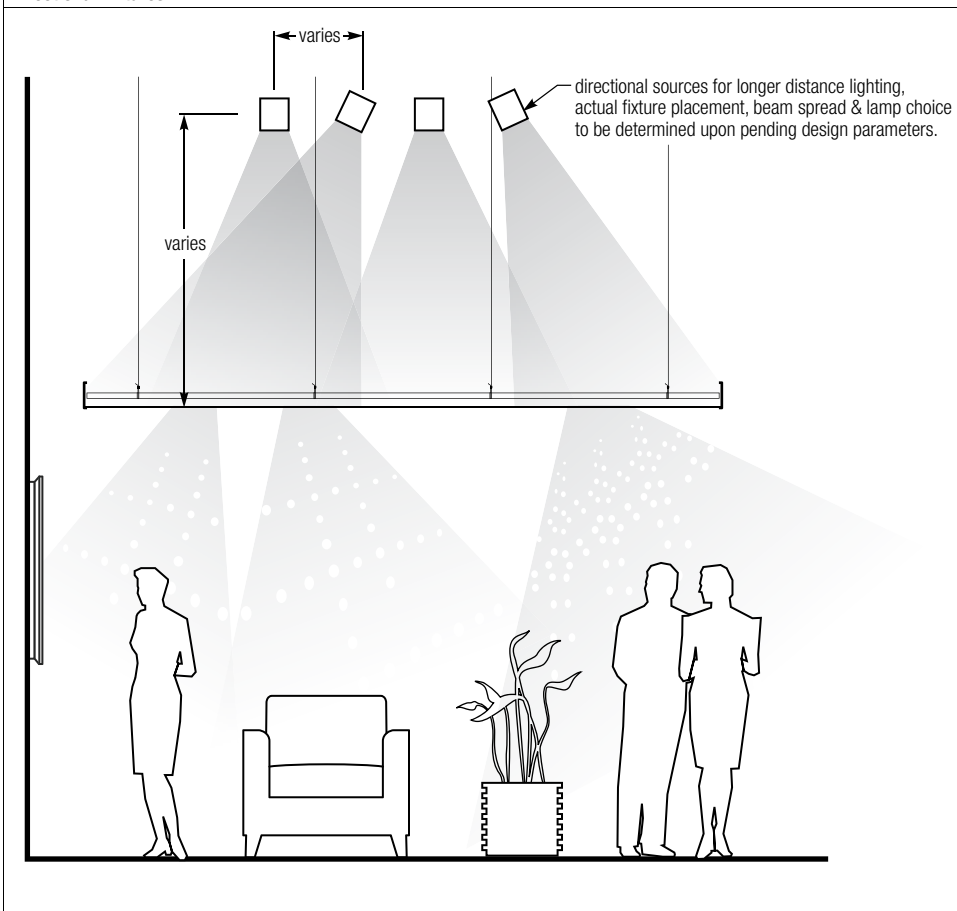
Linear Fluorescent Fixtures



Backlighting

Where ACOUSTIBOND backer is not selected, the perforation pattern can be projected on walls and floors of the space. White ACOUSTIBOND backer will diffuse light to create an even glow. (See photo on brochure cover.)

Directional Fixtures

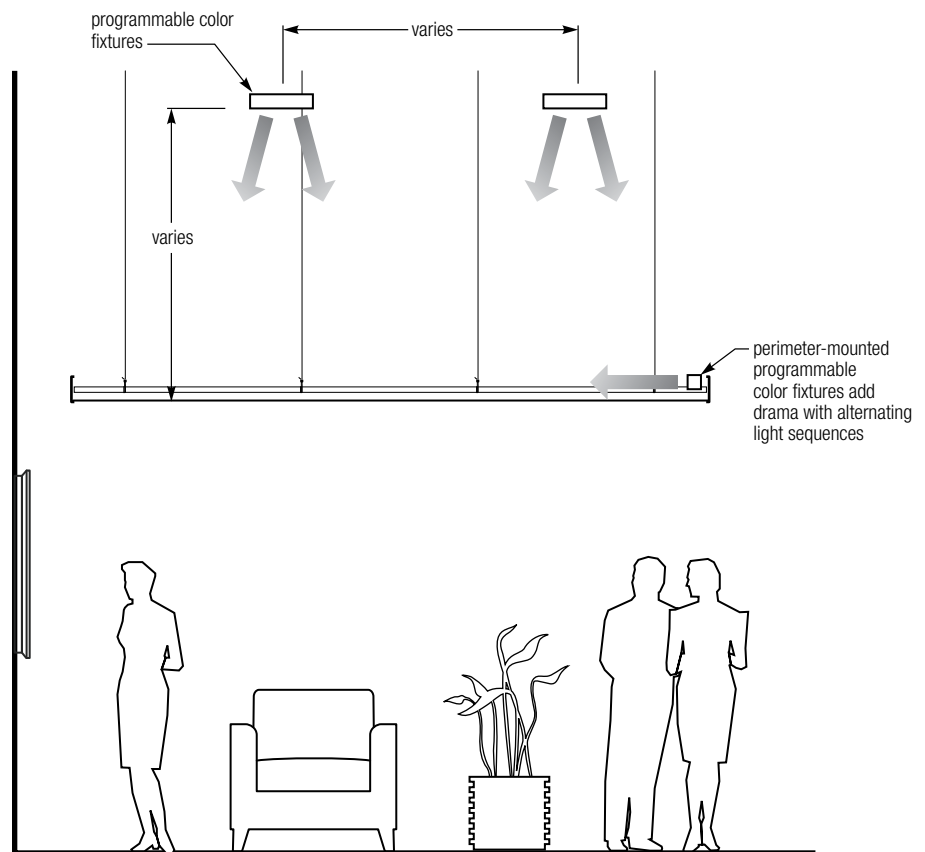


Lighting

Backlighting

Programmable LEDs add an additional level of interest by allowing the opportunity to project the perforation pattern with changing colors.

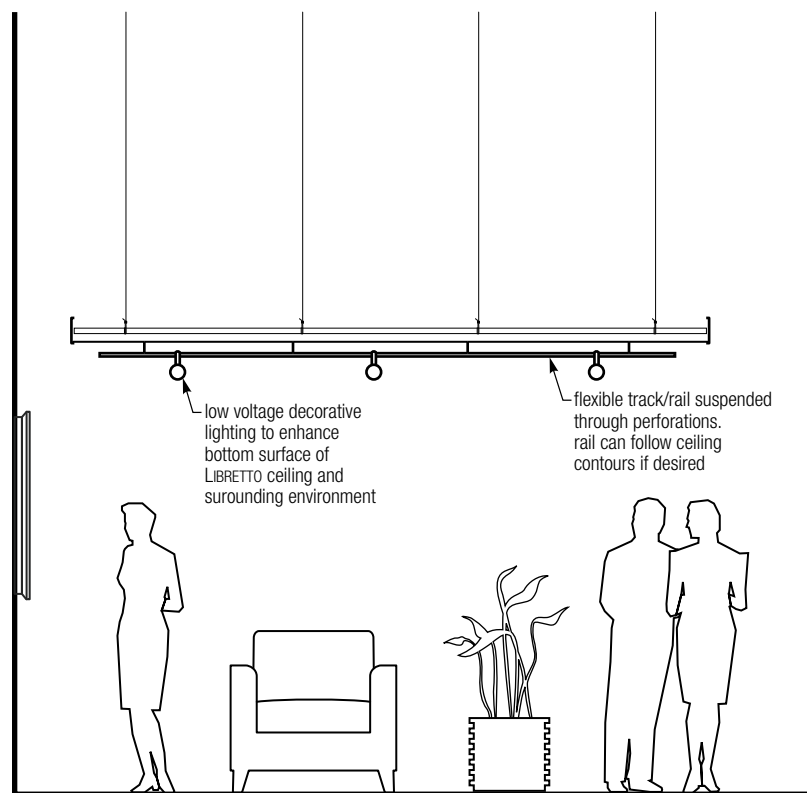
Programmable Color LEDs



Uplighting

Low-voltage track lighting can be attached to the LIBRETTO ceiling surface for dramatic uplighting. Pendant-style indirect fluorescent fixtures create a more uniform effect.

Track and Pendant Lighting

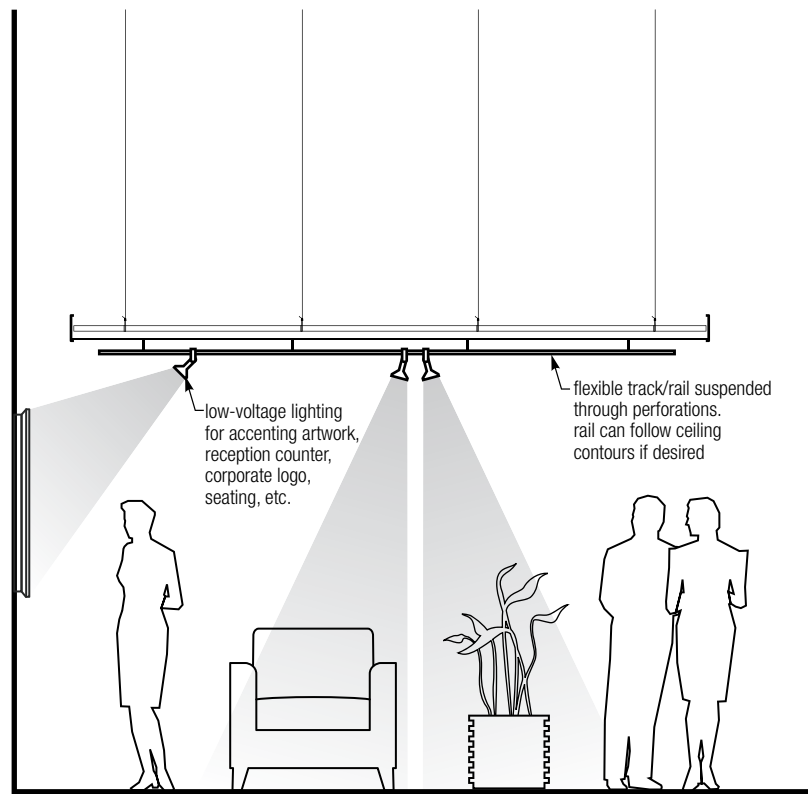


Lighting

Accent Lighting

Highlight specific features within a space, and provide effective task lighting in seating areas and workstations.

Rail-Mounted Low-Voltage Fixtures



Application Guide

Specifications

Part 1 General

1.1 Summary

- A.** Description of Work: Work of this Section includes, but is not limited to, the following:
1. Metal ceiling panels.
 2. Metal suspension systems.
 3. Trim and accessories.

1.2 Related work specified elsewhere

- A.** See Section _____ – HVAC
B. See Section _____ – Lighting
C. See Section 095100(09150) – Acoustical Ceilings

1.3 Submittals

- A.** Product Data: Submit manufacturer's specifications and installation instructions with project conditions and materials clearly identified or detailed for each required system.

1.4 References

- A.** ASTM C636: Recommended Practice for Installation of Metal Suspension System for Acoustical Tile and Lay-in Panels.
B. Cisca Ceiling Systems Installation Handbook

1.5 Quality assurance

- A.** Reference Standards
1. SSMA ICBO ER-4943P Steel Stud Manufacturers Association Product Technical Information
 2. ASTM C636, Recommended Practice for Installation of Metal Suspension Systems.
 3. Cisca Ceiling Systems Installation Handbook
- B.** Submittals
1. Samples: Submit representative sample of color and finish for all exposed materials.
 2. Shop Drawings:
 - a.** Reflected ceiling plans: Submit ceiling suspension system layout indicating dimensions, lighting fixture locations, and related mechanical components.
 - b.** Assembly Drawings: Indicate installation details, accessory attachments and installation of related mechanical system components.
 3. Manufacturer's Data:
 - a.** System Details: Submit manufacturer's catalogue cuts or standard drawing showing details of system with project conditions clearly identified and manufacturer's recommended installation instructions.

1.6 Delivery, Storage And Handling

- A.** Delivery:
1. Deliver Material to site promptly without undue exposure to weather.
 2. Deliver in manufacturer's unopened containers or bundles, fully identified with name, brand, type and grade.
- B.** Inspection:
1. Promptly inspect delivered materials, file freight claims for damage during shipment, and order replacement materials as require. Any damaged materials shall be promptly removed from the job site.
- C.** Storage:
1. Store above ground in dry, ventilated space.
 2. Protect materials from soiling, rusting and damage.
- D.** Handling:
1. Handle in a manner to ensure against racking, distortion or physical damage of any kind.

1.7 Project Conditions

- A.** Environmental Requirements
1. Do not install system or any parts until space is enclosed and weatherproof, wet-work is complete and dry, for occupancy.

Application Guide

Specifications

1.8 Coordination With other work:

- A.** General:
1. Coordinate with other work including mechanical and electrical work and other trades. Installation of conduit and ductwork above the metal ceiling system shall be complete before installation of the metal ceiling system.
- B.** Protection:
1. Follow good safety and industrial hygiene practices during handling and installing of all products and systems, with personnel to take necessary precautions and wear appropriate personal protective equipment as needed. Read Material Safety Data Sheets and related literature for important information on products before installation. Contractor to be solely responsible for all personal safety issues during and subsequent to installation; architect, specifier, owner and manufacturer will rely on contractor's performance in such regard.

Part 2: Materials:

1.1 Materials

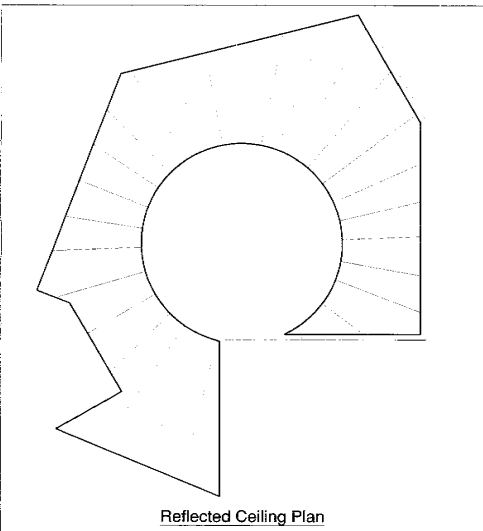
- A.** LIBRETTO metal ceiling panels:
1. Manufactured by USG Interiors, Chicago, IL, USA, in compliance with applicable ASTM & Industry Standards. Designed to be installed with LIBRETTO Suspension System.
 2. Panel finishes shall be painted in color/finish# *Refer to page 17 for finish availability.
 3. Perforation patterns.
 - a. For contoured pattern: Perforation pattern shall converge and diverge as necessary to follow the shape specified on the architectural plans. Variable pattern shall consist of [size & shape] perforations and minimum spacing [B dimension] x [C dimension] and [D dimension] border. [Delete if not used]. *Refer to page 12 for available hole shapes and sizes.
 - b. For custom graphic: Perforation plan shall be a custom design in accordance with architectural plans [Delete if not used]. *Refer to page 12 for available hole shapes and sizes.
 - c. For standard pattern: Perforation pattern shall be USG standard [pattern] with [width] panel border [Delete if not used]. *Refer to page 14 for Standard Perforation patterns.
 4. Panels shall have factory-applied [black] [white] acoustical backer. USG ACOUSTIBOND or equivalent.
- B.** LIBRETTO carrier system:
1. Manufactured by USG (United States Gypsum Company, USG Interiors), Chicago, IL, USA, in compliance with applicable Industry Standards.
 2. 1-1/2 inch cold-rolled U-channel, 16-gauge, commercial quality, hot-dipped galvanized. All parts factory-curved and factory-cut to final dimensions as required for installation.
 3. Carrier channels: Channel splices, channel extensions, and panel hangers of commercial-quality cold-rolled steel, exposed surfaces hot-dipped galvanized.
- C.** Accessories: [Delete this section when not used]
- a. Panels with cutouts: For incandescent lights, sprinklers, or speakers in accordance with architectural plans.
 - b. Panels with access ports in accordance with architectural plans.
 - c. Hanger wire note to specifier: Common installation practice for suspended systems would be the use of 12-ga. steel hanger wire. Alternative decorative 18-ga or stainless cables can be substituted with local authorities' approval.
- D.** LIBRETTO perimeter profile:
1. Manufactured by USG (United States Gypsum Company, USG Interiors), Chicago, IL, USA, in compliance with applicable ASTM Standards. Design to be installed on LIBRETTO metal ceiling panels.
 2. Custom-engineered, roll-formed trim channels of commercial-quality steel. All parts factory-curved and factory-cut to final dimensions as required for installation.
 3. Profile size: [4-inch] [6-inch] [8-inch] high with 9/16-inch horizontal legs.
 4. Profile finishes shall be painted in color/finish# *Refer to page 17 for finish availability.
 5. Profile attachment clips of commercial-quality cold-rolled steel, exposed surfaces hot-dipped galvanized.
 6. Profile splices of commercial-quality cold-rolled steel in finish to match LIBRETTO perimeter profile; formed for snap-fit into LIBRETTO perimeter profile.

Part 3: Execution	3.1 General	<p>A. Standard for ceiling suspension system installations: Comply with ASTM C636.</p> <p>B. Cisca Ceilings Systems Handbook.</p>
	3.2 Inspection	<p>A. Examine areas to receive ceiling panels for conditions that will adversely affect installation. Provide written report of discrepancies.</p> <p>B. Do not start work until unsatisfactory conditions are corrected.</p> <p>C. Work to be concealed: Verify work above ceiling is complete and installed in manner that will not affect layout and installation of ceiling panels.</p> <p>D. Beginning of installation shall signify acceptance of conditions in areas to receive ceiling panels.</p>
	3.3 Preparation	<p>A. Field dimensions must be verified prior to installation.</p>
	3.4 Installation	<p>A. Standard reference: Install ceiling panels and suspension system, including necessary hangers, grillage, and other supporting hardware in accordance with ASTM C636, Cisca Ceiling Systems Handbook, any applicable code requirement, and manufacturer recommendations.</p> <p>B. Hanger Wires:</p> <ol style="list-style-type: none"> 1. Spacing: Space hanger wires on the suspension channels not more than 48 inches o.c. 2. Limitations: Attach hanger wires directly to the structure, as required to support the imposed loads. Do not support wires from mechanical and/or electrical equipment, piping or other equipment occurring above ceiling. <p>C. LIBRETTO carrier system</p> <ol style="list-style-type: none"> 1. Hang suspension channels by hanger wires in accordance with shop drawings. 2. Connect sections of suspension channels by applying channel splices with self-drilling sheet metal screws. 3. Apply channel extensions to the ends of the suspension channels with self-drilling sheet-metal screws. <p>D. LIBRETTO panels.</p> <ol style="list-style-type: none"> 1. Install panels progressively in accordance with shop drawings. 2. Suspend panels from panel hanger clips. 3. Interlock adjacent panels along the factory formed standing seam edges per manufacturer's recommendations. <p>E. LIBRETTO perimeter profile.</p> <ol style="list-style-type: none"> 1. Apply profile attachment clips to the ends of LIBRETTO panels per manufacturer's recommendations. 2. Profile attachment clips shall be spaced between 18 to 36 inches on center. 3. Install profile components progressively in accordance with shop drawings and manufacturer's recommendations. 4. Connect sections of perimeter profile by snapping together with trim splices per manufacturer's recommendations.
	3.5 Cleaning	<p>A. Perform any necessary cleaning maintenance with non-solvent-based commercial cleaner.</p> <p>B. Immediately remove any corrosive substances or chemicals that would attack painted finishes (i.e. wallpaper adhesives).</p> <p>C. Touch up all minor scratches and spots, as acceptable, or replace damaged sections when touch-up is not permitted.</p> <p>D. Repainting of components shall be with a high-quality solvent-based enamel paint and applied as recommended by paint manufacturer.</p> <p>E. Removal of debris: Remove all debris resulting from work of this section.</p>

Head First

Libretto™ Gridless Metal Ceiling System

INSTALLATION PLANS



Reflected Ceiling Plan

- Contents:
- Bill of Materials
 - Suspension Plan
 - Panel Plan
 - Trim Plan
 - Typical Details

KA Architects

Color: 002 Silver Satin

Style: Intellipert, Acoustibond Backer

Trim Size: 6"



USG Building Systems

ORDER NO.
272647

Ceilings Solutions Group

DATE
7-24-07

1500 Crocker Road

Westlake, Ohio 44145-1089

tel: 440 892 7363

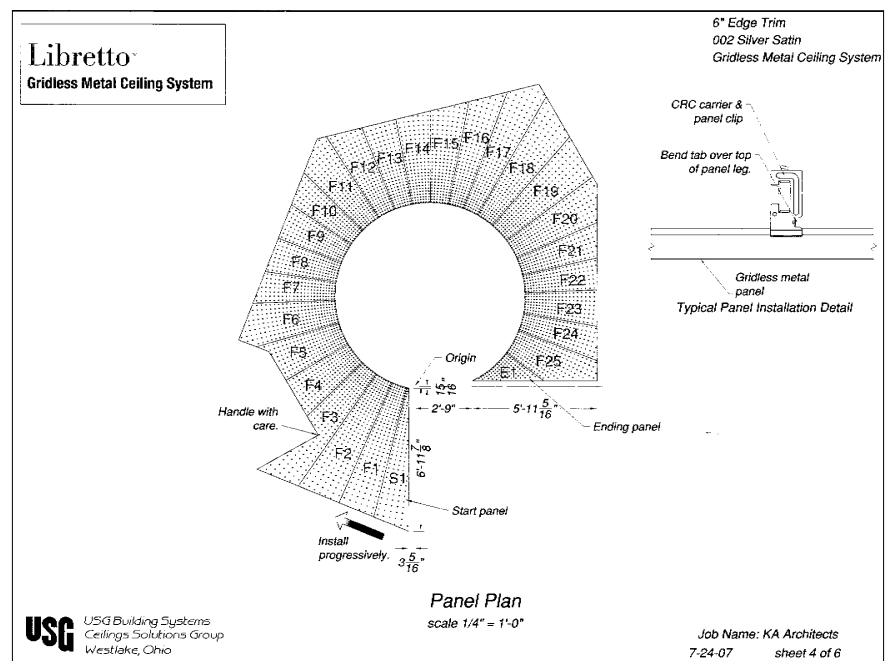
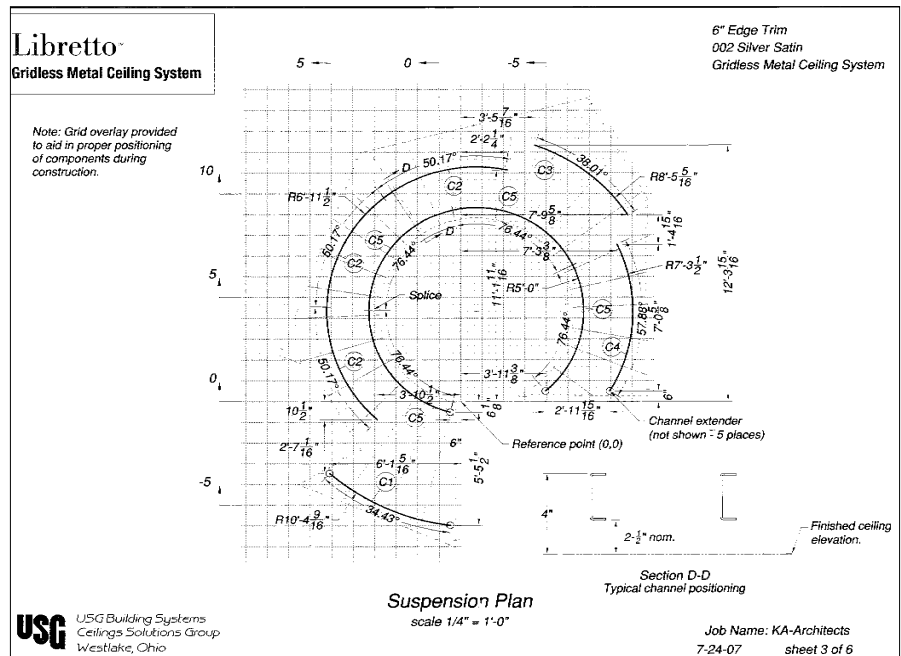
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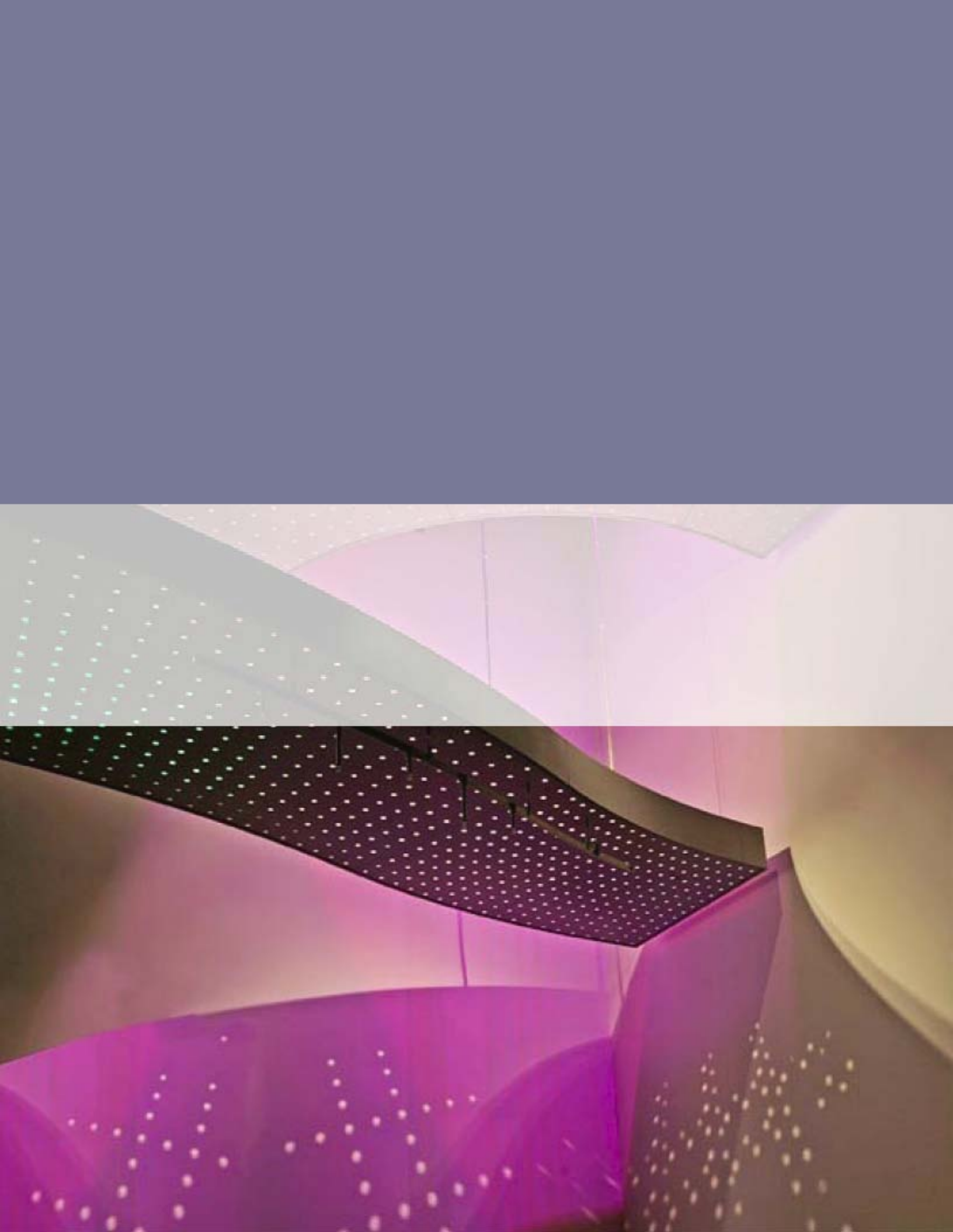
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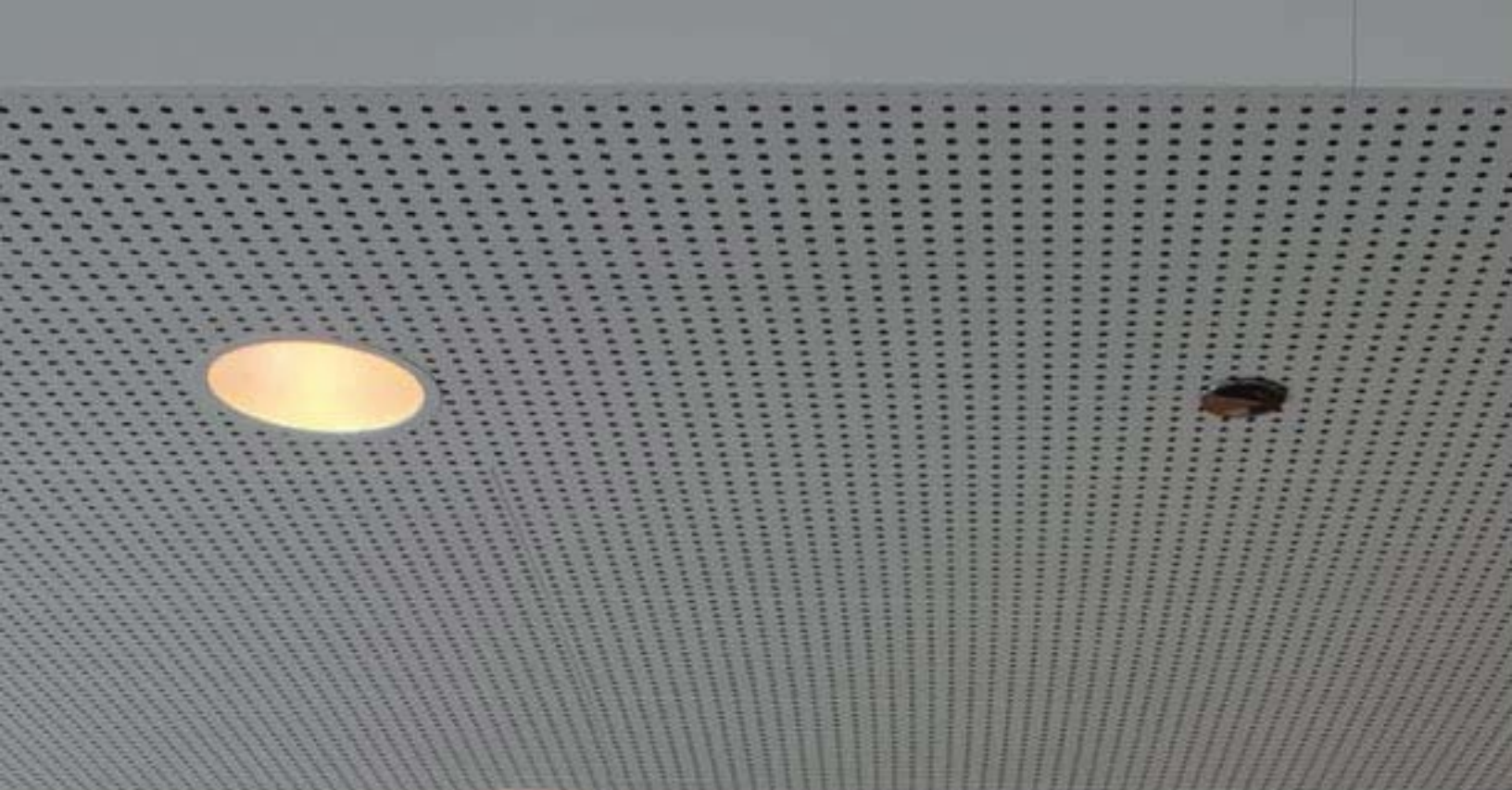
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SHEET
1 OF 6

BILL OF MATERIAL				w.o. 07725					
PART NO	DESCRIPTION			FINISH	QTY	OVS TOTAL	arc length	chord ht	ch length
SUSPENSION CHANNELS									
60010158	C1	R124.54" x 34.43" curved channel (OS)		mill	1	1	74.84	5.58	73.72
60010158	C2	R83.52" x 50.17" curved channel (OS)		"	3	3	73.13	7.88	70.82
60010158	C3	R101.32" x 38.01" curved channel (OS)		"	1	1	67.22	5.52	65.99
60010158	C4	R87.52" x 57.88" curved channel (OS)		"	1	1	88.41	10.93	84.70
60010158	C5	R60.00" x 76.44" curved channel (OS)		"	4	4	80.05	12.86	74.24
PANELS									
	S1	Start panel		Silver Satin	1	1			
	F	Field panel (F1-F25)		"	25	25			
	E1	End panel		"	1	1			
		Acoustibond backer (factory applied)		White	165	165			
		Intellipert treatment (factory applied)			165	165			
EDGE TRIM									
	T1	107" corner		Silver Satin	1	1			
	T2	75.54" straight		"	1	1			
	T3	68" corner		"	1	1			
	T4	86.96" straight		"	1	1			
	T5	52" corner		"	1	1			
	T6	36.51" straight w/ 45.5" miter		"	1	1			
45.5", 19.5"	T7	55.46" straight w/ dbl miter		"	1	1			
	T8	90" corner 4"x18.72" w/mitr		"	1	1			
	T9	117.25" straight		"	1	1			
	T10	125" corner		"	1	1			
	T11	61.58" straight		"	2	2			
	T12	106" corner		"	1	1			
	T13	59.23" straight		"	1	1			
	T14	150" corner		"	1	1			
	T15	105.95" straight		"	1	1			
	T16	90" corner		"	1	1			
	T17	64.75" straight		"	1	1			
	T18	29" corner		"	1	1			
	T19	R54.00" x 80.55" inside curve		"	1	1	75.92	12.80	69.82
	T20	R54.00" x 78.43" inside curve		"	3	3	73.92	12.16	68.28
QUANTITIES									
60010154		Trim attachment clip	6" trim	mill	52	5	57	straight trim	62 in ft
60010156		Panel hanger clip		"	50	5	55	curved trim	25 in ft
60010157		Channel splice/extension		"	10	1	11	connect	11 pcs
60004353		Trim splice	6" trim	Silver Satin	21	2	23	panels	165 sq ft
60010368		Corner splice		"	2	1	3	subp. system	165 sq ft

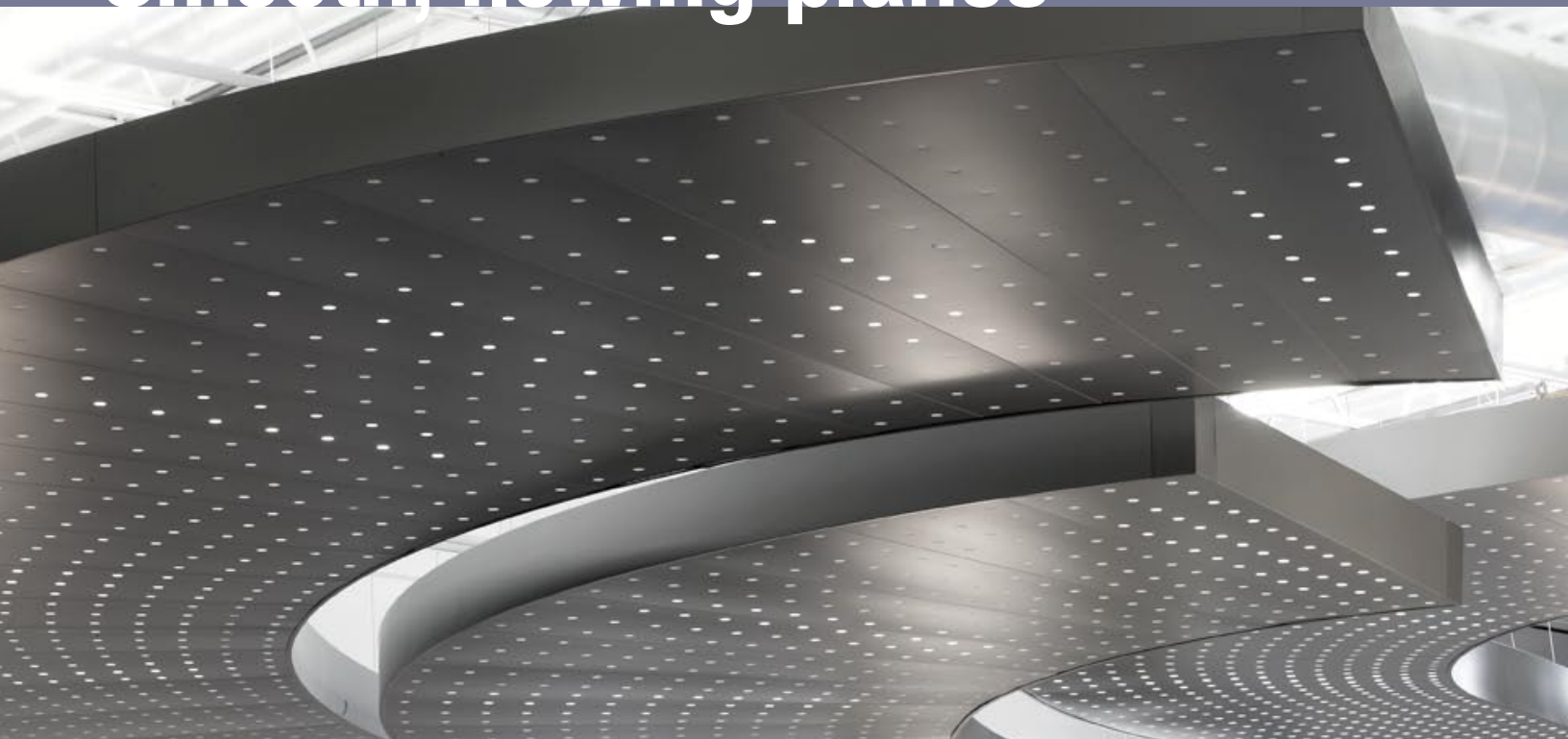


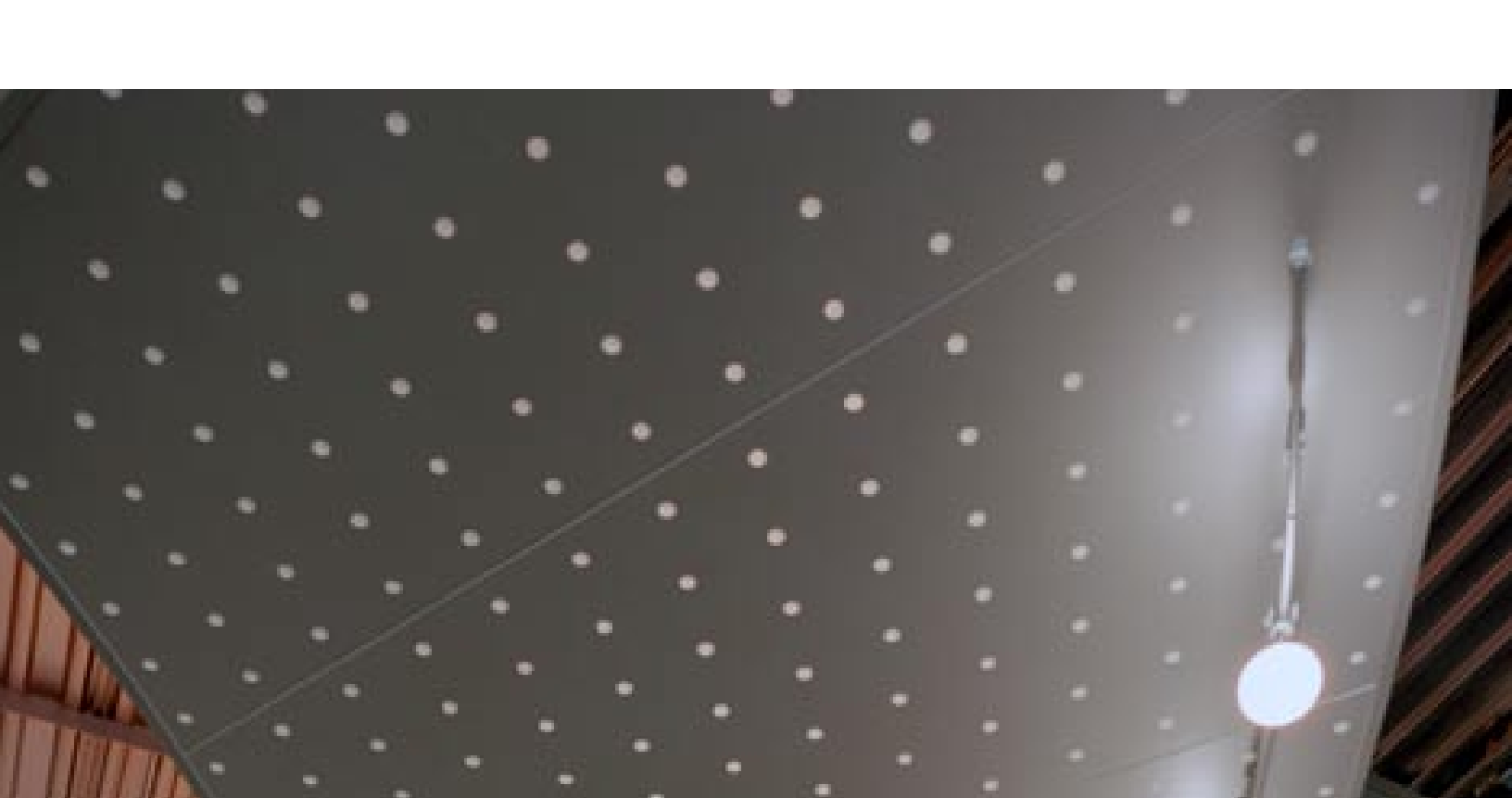






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Patents

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Safety First!

Follow good safety and industrial hygiene practices during handling and installation of all products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read material safety data sheets and related literature on products before specification and/or installation.



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