Designing with **integrated lighting & acoustic solutions**

FOCAL POINT®

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We are going **beyond illumination**

to optimize interior spaces for sound management with our Acoustic Solutions. Our integrated ceiling systems and decorative luminaires provide an optimal answer to the high noise levels and reverberation issues common to open interior spaces.

True to our lighting roots, our Acoustic Solutions use a **“luminaire first”** approach to ensure that technology and light quality are never sacrificed. Rather, the aesthetic and comfort of each space are optimized with beautiful, coordinated lighting and acoustic systems.

Our Acoustic Solutions also use **patent pending, eco-friendly AirCore™ Technology which maximizes sound absorption,** making our products some of the highest performing on the market. Good acoustics contribute to increased speech clarity, privacy, and comfort to deliver more human-centric environments.

The integrated systems **simplify specification, sourcing, and installation** while procuring a unified look that enhances the architecture of interior spaces.

Each ceiling system can be specified to meet **budget, acoustic, lighting, and aesthetic requirements.**

Acoustic Solutions deliver optimal illumination levels and control sound to increase the comfort and well-being of those who inhabit the spaces.

With our **vertically integrated operations,**

we control the process from conceptual design to engineering, to manufacturing, through to shipping.

We have expanded our capabilities, adding a **dedicated team and manufacturing area specifically for acoustic solutions.**

We are committed to providing superior quality lighting and acoustic products through our in-house operations using advanced technology and superior support with a team dedicated to the design, development, and execution of our Acoustic Solutions portfolio.

The ABC's of sound management

To select the proper Acoustic Solution for a project, it is critical to understand the fundamental principles of sound management and the acoustic requirements for creating more human-centric environments.

As sound moves through a space or medium, it can be reflected, transmitted or absorbed.

Absorbing:

Captures reflected sound waves and reduces reverberation time, or echoing, in a space. Common absorptive elements include acoustical ceiling tiles (ACTs), wall panels, soft upholstered furniture, acoustical baffles, and carpeted flooring.

Blocking:

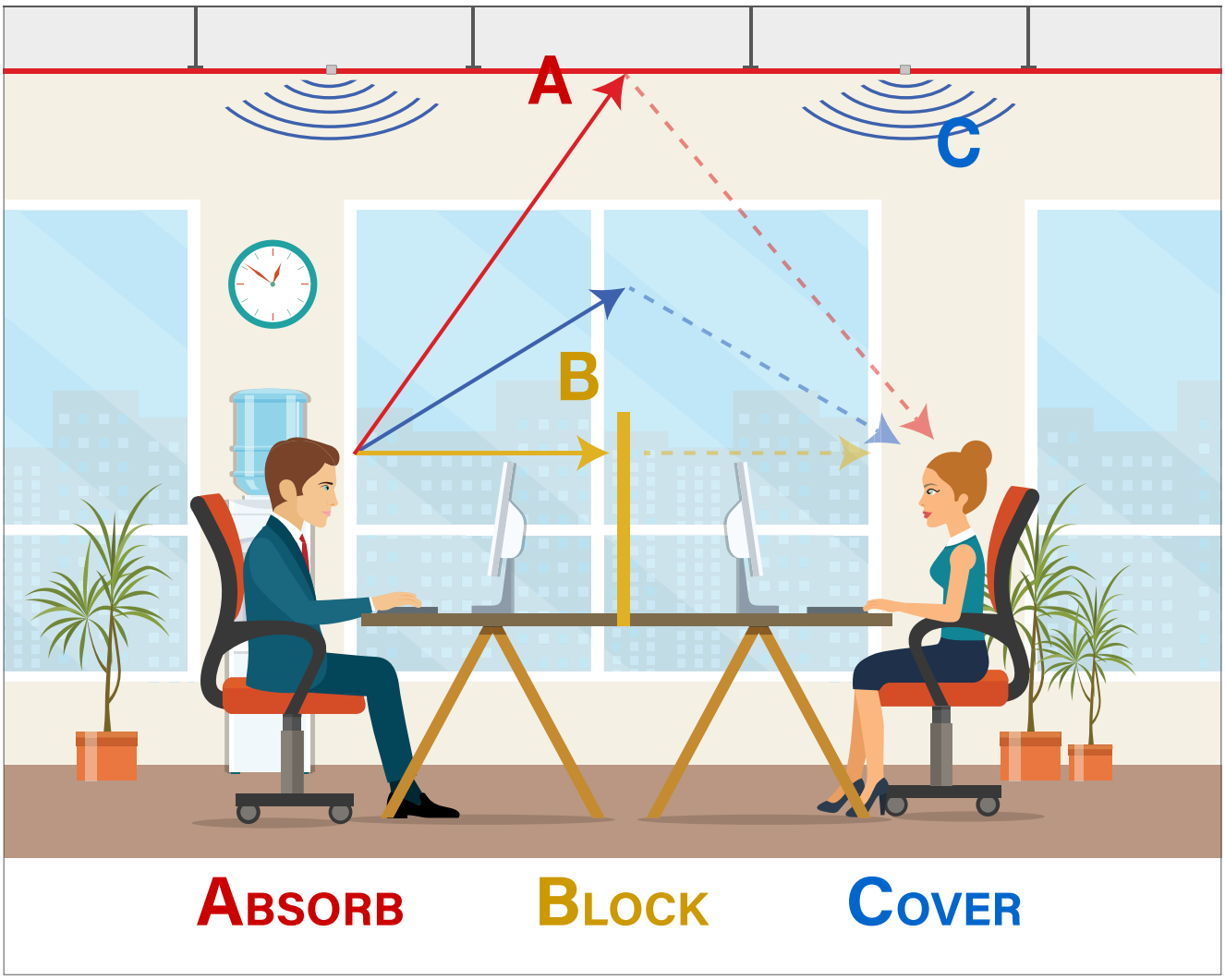
Reduces sound energy transmitting through materials and helps reduce the overall noise levels of a space. Sound blockers include walls, ceilings, windows, cubicle walls, and dividers.

Covering up:

Generating sound into an environment, raising the overall sound level of a space to mask unwanted sound. Also known as soundmasking, this is typically achieved by pumping noise in the frequency of human speech into a space.

Our Acoustic Solutions focus on **sound absorption** to improve human comfort and resolve some of the challenges of today's commercial environments.

The growing importance of acoustic comfort is evident through the evolution of global building certifications such as the WELL Building Standard™ (WELL) and the Leadership in Energy and Environmental Design™ (LEED®). These standards are driving change to balance health and wellness in commercial building design by providing recommendations for reducing noise in various environments.


A
B
C
ABSORB
BLOCK
COVER

Learning the language

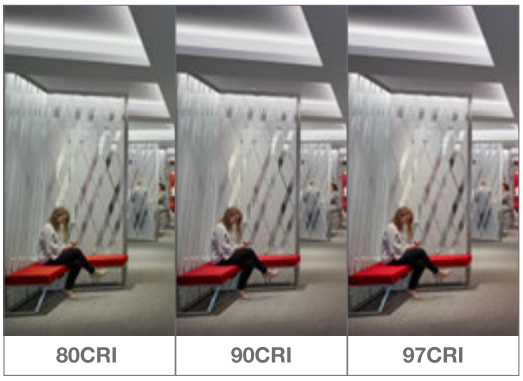
To understand how Acoustic Solutions address illumination and noise levels, it is important to become familiar with the terms related to lighting and sound management.

LIGHTING TERMS

Above Finished Floor (AFF) An acronym commonly used in dimensioning, especially for suspended lighting. It specifies the distance from the bottom of the luminaire above the surface of the finished floor.

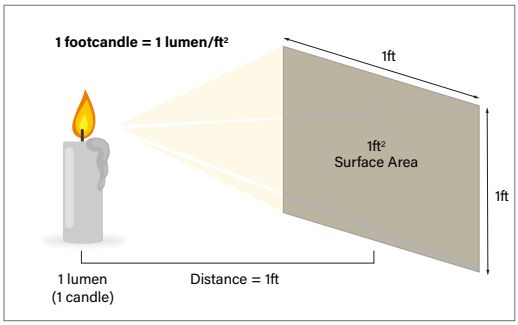
Color Rendering Index (CRI) A quantitative measure, on a scale of 0 to 100, indicating how accurate a light source is at rendering color in comparison with a black body radiator. The higher the CRI, the better the color rendering ability. Light sources with a CRI greater than 80 are typically used in commercial spaces.

Correlated Color Temperature (CCT) The chromaticity of a light source expressed in Kelvins, where the higher the number the "cooler" or bluer the light and the lower the number, the "warmer" or yellower the light.



Foot Candles A measurement of how much light strikes a surface (e.g. a desk or a wall) defined as the illuminance on a one-square foot surface from a uniform source of light. Lighting industry standards indicate the required foot candles for various types of rooms and tasks.

Light Reflectance Light reflectance quantifies how much light is reflected versus absorbed by various surfaces. It is key to assign the correct reflectance to the materials present in a room to perform accurate lighting calculations.



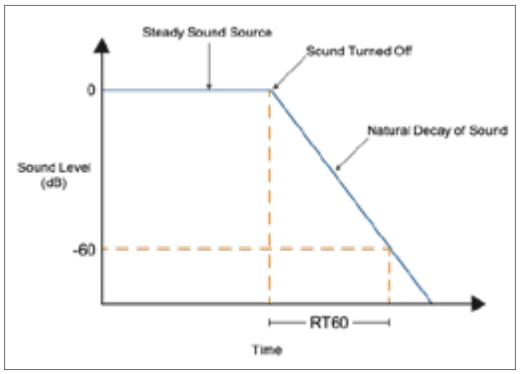
Lumens (lm) A measure of the amount of visible light emitted from a light source that's perceived by the human eye. The higher the lumen rating, the brighter the light will appear.

Lumens per Watt (LPW) The measurement of how much visible light is produced for a given amount of electricity, also known as luminous efficacy.

SOUND MANAGEMENT TERMS

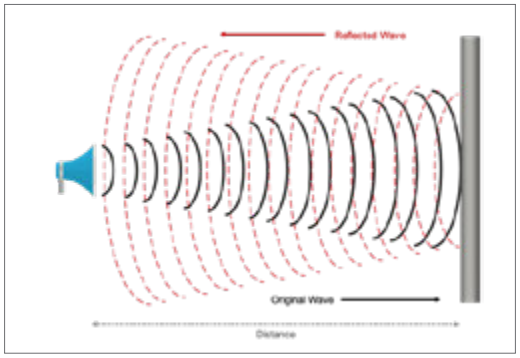
Reverberation
A prolongation of sound in an enclosed or partially enclosed space even after the sound source has stopped. In other words, it is the echoing effect observed after a noise is made.

Reverberation Time (RT60)
The amount of time, measured in seconds, required for the intensity of sound to drop by 60 decibels (dB) after the sound stops.



Sound Absorption
The process of dissipating sound energy when it comes into contact with different media.

Sound Absorption Coefficient (α)
A ratio of reflected sound energy that strikes a surface to the sound energy absorbed by that surface at a specific frequency. The α ranges from 0 (no absorption) to 1 (total absorption). As an example, a material that absorbs 35% of sound energy that strikes it, will have a α of 0.35.



Below are four common sound absorbing metrics based on the sound absorption coefficient:

Noise Reduction Coefficient (NRC)
An average of the sound absorption coefficients for the 250, 500, 1000, and 2000 Hz one-third octave bands. It indicates the amount of sound energy absorbed by a two-dimensional surface and is represented by a single number. NRC can be useful for quick, side-by-side comparisons of 2D products or flat surfaces like ceiling tiles or wall panels. There are other metrics more valid for calculating sound absorption of 3D objects.

Sabin
A unit of measure of the amount of sound absorption in one square foot of material. A perfect sound absorbing material has a value of 1 imperial Sabin. Sabin is the most useful metric for acoustic calculations of 3D objects, it provides a measuring tool to help define a room's acoustic performance.

Sabin Count (A)
The sum total of Sabins or the total amount of sound absorptive elements in a space. Sabin count is directly correlated to reverberation time (RT60) via the equation RT60 = k * (V/A), where k is a constant and V is the total volume of a space.

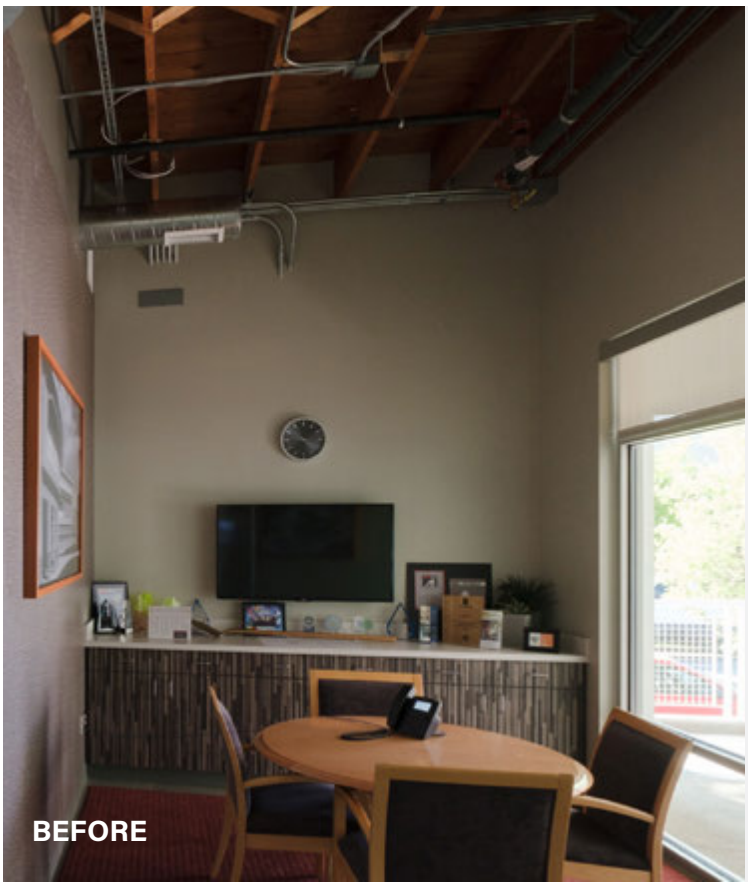
Sound Absorption Average (SAA)
An average of the sound absorption coefficients for twelve one-third octave bands from 200 to 2500 Hz. The higher the SAA value, the better the material absorbs sound. This single number rating can be obtained from ASTM C423 test reports.

Designing
for light & sound

When designing with integrated acoustic ceiling and lighting systems, it is necessary to perform a few simple calculations to determine the best solution for the project. Answering the following questions will help compute the sound absorption and lighting needed in the space, thus providing a guide to selecting the ideal integrated solution. Let's break down the process using a real-life case.

Δ How is the space being used?

Determine the ideal reverberation time (RT60) using leading global building standards such as ANSI, WELL or LEED and required light levels using the IESNA Lighting Handbook.



CSHQA
Conference, breakout and teleconferencing room

12' long x 10' wide x 12' high

Concrete & carpet floor
3 gypsum walls
1 glass wall
Concrete deck with wood decking

CSHQA

Having lived with an echoing problem for too long, the team at CSHQA finally found the solution to make their small conference room functional and comfortable.

Problem:
CSHQA, a full-service architecture and engineering firm struggled with the echoing and reverberation issues in one of their conference rooms, so acute that it made the room nearly unusable and earned it the nickname of “fishbowl”. A large window wall, glass entryway, and high open ceiling contributed to the problem.

Solution:
The CSHQA team tackled the challenge by bringing an acoustician and Focal Point’s Acoustic Solutions team to the rescue. Due to the small size of the room, a useful reverberation time (RT) analysis could not be conducted. Alternatively, using the ASTM C423 test report for the Seem 1 Acoustic baffles, the acoustician calculated the recommended surface area of acoustic baffles necessary to achieve optimal RT and our team presented a few layouts that met the requirement.

CSHQA selected an array of four 8' long and 16" high baffles at 24" on-center, which matches the joist spacing. The target reverberation time of 0.8 second was achieved and two baffles with direct lighting provide the 30 to 40 foot candles required on the work surfaces.

Result:
The room is now used on a regular basis for in-person meetings and conference calls. The team at CSHQA also commented on the improved aesthetics of the room, which feels more cozy with a lower ceiling plane.

Δ What are the variables of the space?

Determine the current RT and the amount of additional sound absorption required to meet the target RT, as well as the lumens required.

Calculate the volume of the room (V)

length x width x height

12' x 10' x 12' = **1440 ft³**

Calculate the Sabin count of the room (A)

Concrete floor	0.50
3/4" pile carpet	42.13
Double-layer 5/8" gypsum walls	11.70
1/4" laminated glass wall	4.20
Concrete deck with wood decking	4.47

Sabins are derived from the NRC values of the various materials as provided by the manufacturers.

63 Total Sabins

Calculate the RT of the space

RT60 = k* x (V/A)

*k=0.049 when the unit of measurement of V is feet (0.161 for measurement expressed in meters)

RT60 = 0.049 x (1440/63)

RT60 = 1.12 seconds

Calculate the amount of acoustical absorption required in Sabins

A = k* x V / RT60

*k=0.049 when the unit of measurement of V is feet (0.161 for measurement expressed in meters)

A = 0.049 x 1440 / 0.8

A >88 Sabins

88 Sabins – 63 Sabins = **25 additional Sabins**

Calculate the lighting requirements

length x width x required foot candles = required lumens

12' x 10' x 30 foot candles > **3,600 lumens**

For more complex lighting schemes, it will be necessary to run lighting calculations for the room. Dimension from Above Finish Floor (AFF) and bottom of the luminaires, as well as the reflectance values for each of the surfaces will be required.

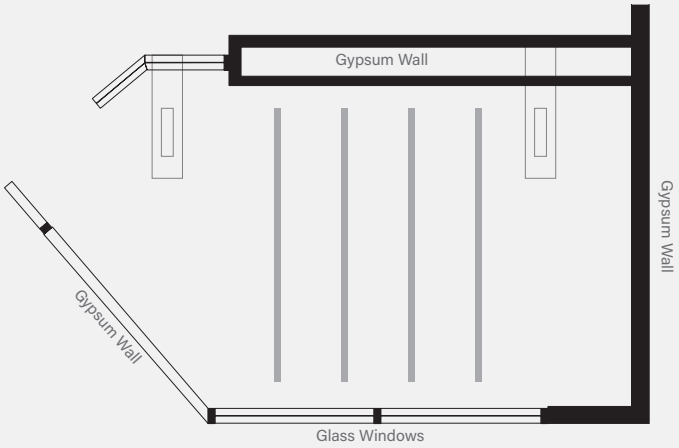
The last two important elements to consider are the Color Rendering Index (CRI) and Correlated Color Temperature (CCT) of the luminaires.

CSHQA - CONFERENCE, BREAKOUT AND TELECONFERENCING ROOM

Target RT60 <0.8 seconds recommended by acoustician | Target foot candles 30-40

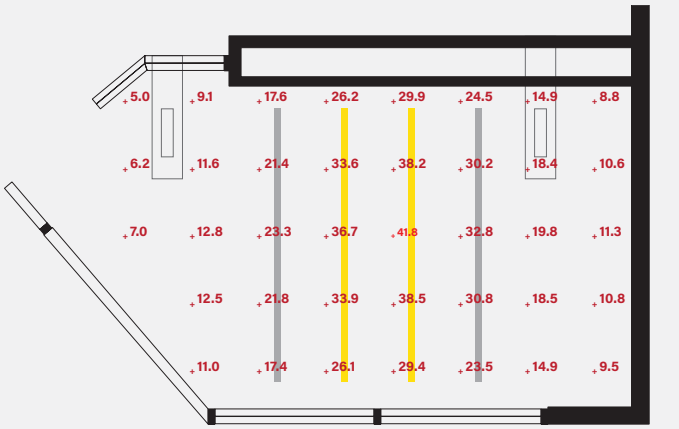
ACOUSTIC PERFORMANCE

Baffle Layout		Reverberation Time (RT)	Additional Sabins
None		1.1	0
4 rows	12" High	0.9	20
4 rows	**16" High**	**0.8**	**25**



LIGHTING PERFORMANCE

Average Foot candles (workplane) = 28.9



Δ What is the desired aesthetic and what are the budget constraints?

Select the ideal integrated acoustical lighting system and optimize the space for light and sound.

Various types of linear baffles, as well as tile and pendant systems can help meet the acoustic, lighting, design, and budget requirements of the space.

For assistance with design, layout, and acoustical calculations, contact Focal Point's dedicated team of experts at acoustic.solutions@focalpointlights.com.

Linear
Architectural Systems

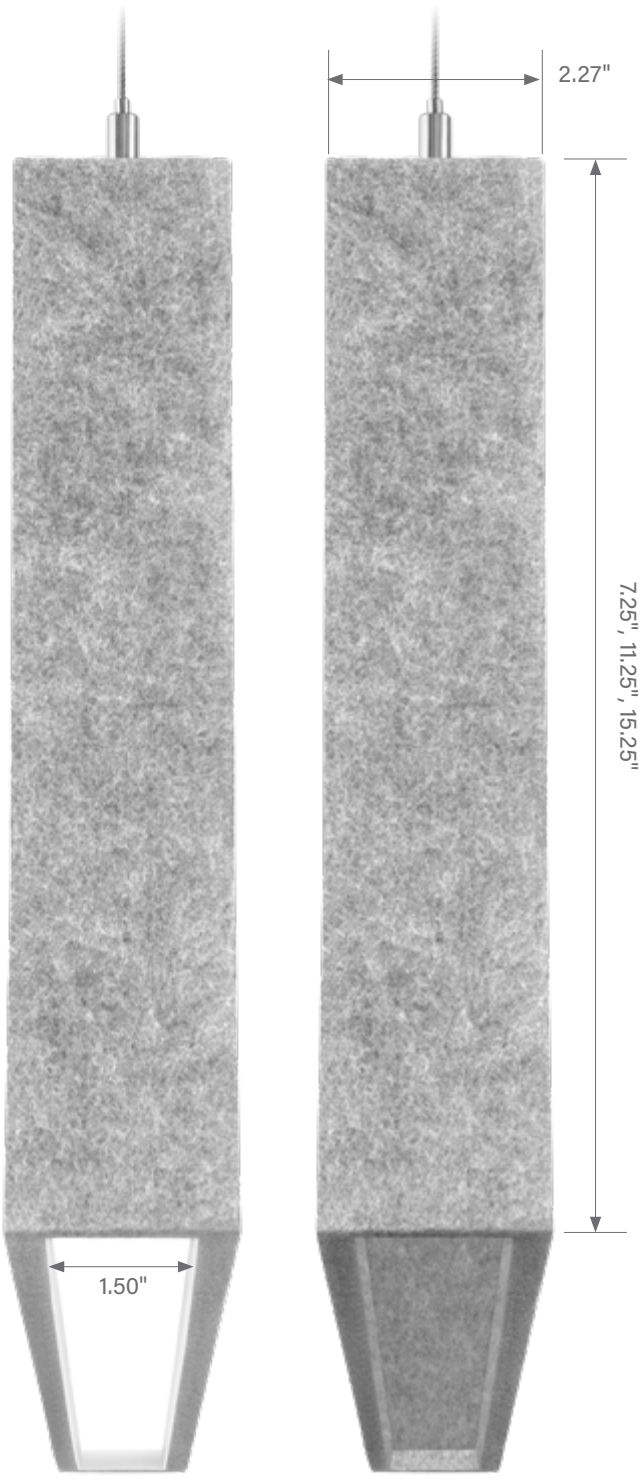
Integrated linear systems, ideal for open, multi-use spaces, simplify specification, sourcing, and installation and procure a unified look that enhances the architecture of each interior space. The flexible system enables the optimization of sound and light while allowing freedom of placement to accommodate diverse rooms and project needs. Vary the height, spacing, orientation, baffle type, and layout to achieve the desired budget, acoustic, lighting, and aesthetic requirements.

- **Seem® 1 Acoustic**
- **AirCore Blade™**
- **TruBlade™**
- **AirCore Bridge™**

Linear
Architectural Systems

SEEM 1 ACOUSTIC

- Standard nominal heights of 8", 12" or 16"
- 1.5" lens aperture (2.27" housing width)
- Standard lengths available in 2' to 208' lengths in 1' increments (minimum lengths vary based on distribution)
- AirCore Technology: patent pending, eco-friendly technology that maximizes sound absorption and reduces ecological impact
- Direct/Indirect, Direct only, Indirect only or unlit baffle options
- Up to 500LF direct and 800LF indirect
- Driver options:
  0-10V, Lutron EcoSystem®, DALI
- Aircraft cable, direct-to-grid or direct-to-strut mounting

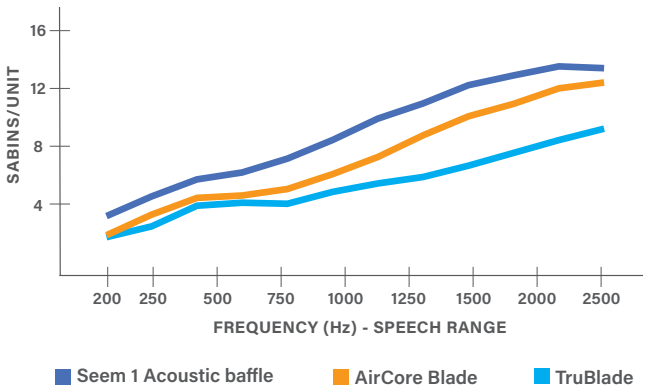


Direct, Direct/Indirect

Unlit

ACOUSTIC PERFORMANCE

12" HEIGHT | 18" ON-CENTER SPACING

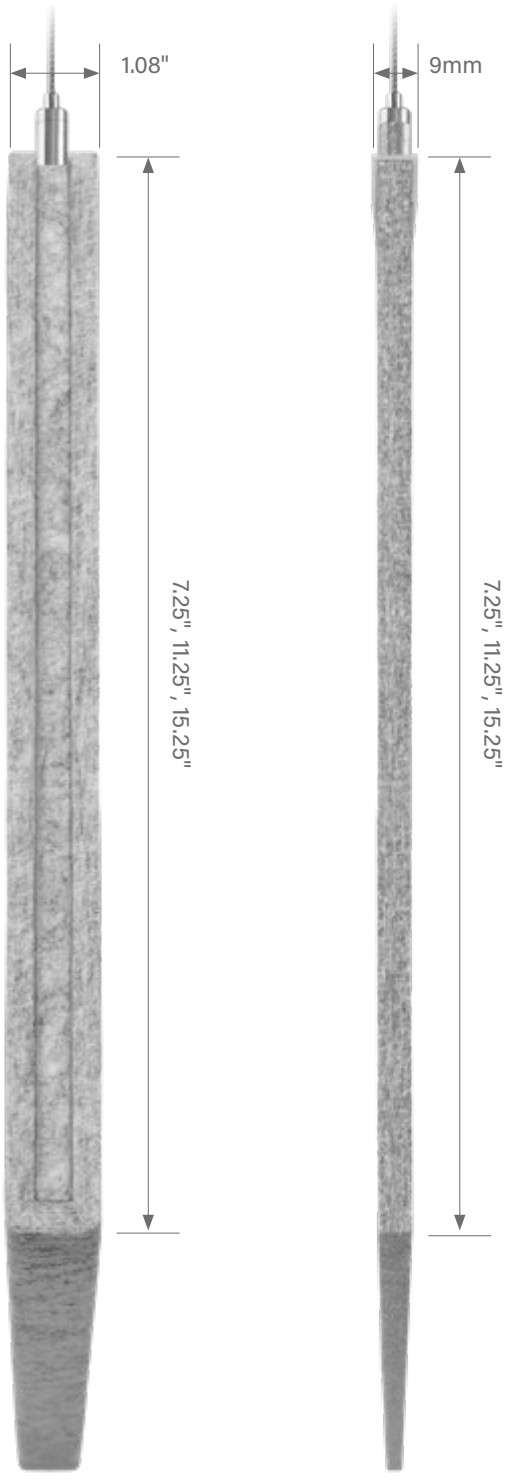


AIRCORE BLADE

- Standard nominal heights of 8", 12" or 16"
- 1.08" width
- Standard lengths available in 2' to 8' lengths in 1" increments
- AirCore Technology: patent pending, eco-friendly technology that maximizes sound absorption and reduces ecological impact
- Aircraft cable, direct-to-grid or direct-to-strut mounting

TRUBLADE

- Standard nominal heights of 8", 12" or 16"
- 9mm width
- Standard lengths available in 2' to 8' lengths in 1" increments
- Aircraft cable mounting

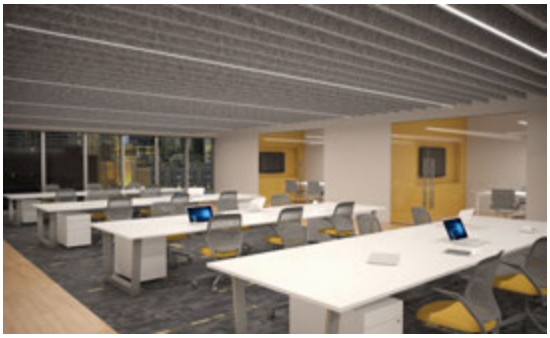


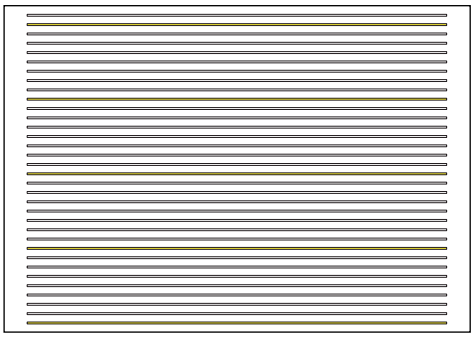
AirCore Blade **TruBlade**

Linear
Architectural Systems

SEEM 1 ACOUSTIC

MEDIUM-DENSITY

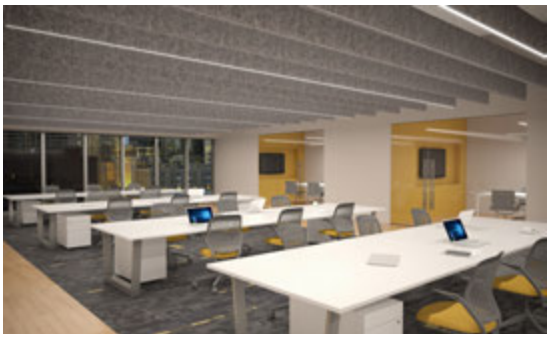


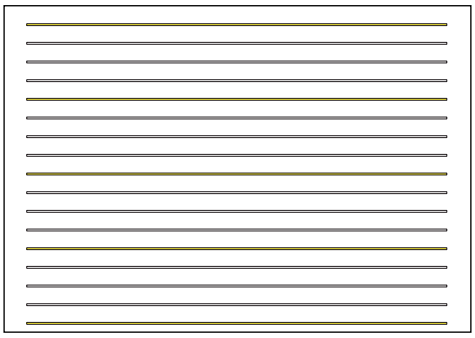


SPACING	12" OC
SABINS/FT²	1.26

(5) 45' Seem 1 Acoustic luminaires
(29) 45' Seem 1 Acoustic baffles

LOW-DENSITY



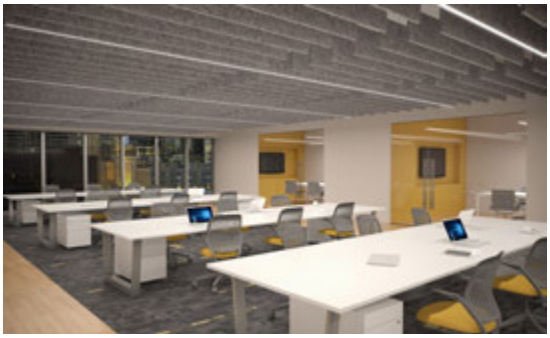


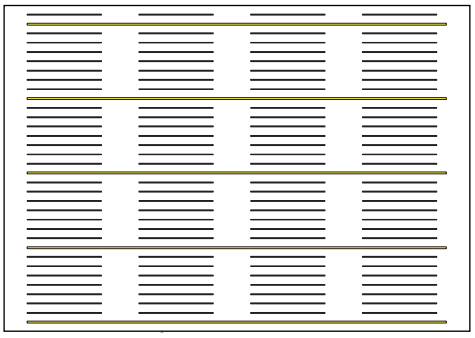
SPACING	24" OC
SABINS/FT²	0.72

(5) 45' Seem 1 Acoustic luminaires
(12) 45' Seem 1 Acoustic baffles

AIRCORE BLADE & SEEM 1 ACOUSTIC

MEDIUM-DENSITY





SPACING	12" OC
SABINS/FT²	0.80

(5) 45' Seem 1 Acoustic luminaires
(116) 8' AirCore Blade baffles

DESIGN GUIDELINES

Linear systems offer tremendous flexibility for designing for light and sound. Various product combinations, from the best performing Seem 1 Acoustic to the most economical TruBlade, as well as different baffle heights and spacing can be used to optimize reverberation times and light levels.

Calculation details

Ceiling Height:14ft

Room Dimensions: 35ft x 50ft

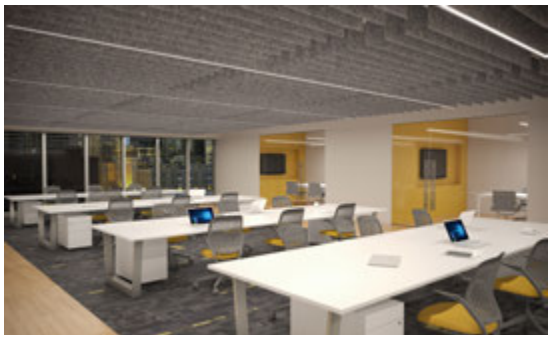
Baffle Height: 12"

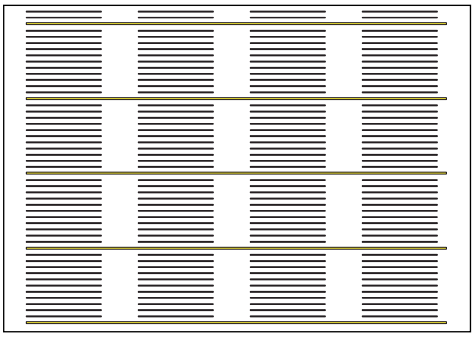
Baffle Array Square Footage: 1494 ft²

Sabins/ft² based on 1000Hz

TRUBLADE & SEEM 1 ACOUSTIC

HIGH-DENSITY

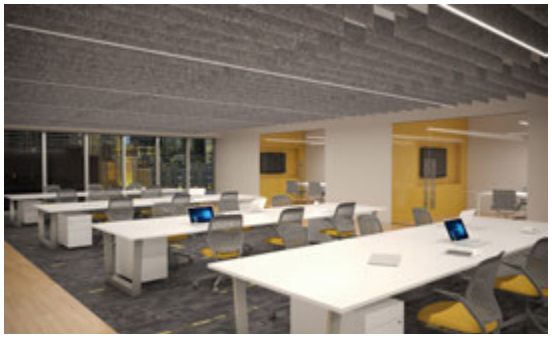




SPACING	8" OC
SABINS/FT²	0.77

(5) 45' Seem 1 Acoustic luminaires
(184) 8' TruBlade baffles

MEDIUM-DENSITY

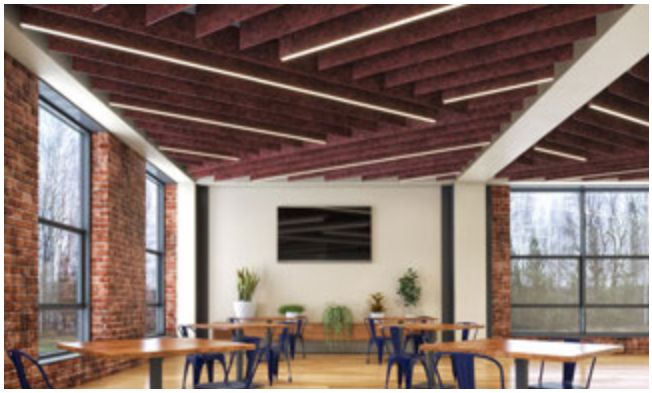


SPACING	12" OC
SABINS/FT²	0.77

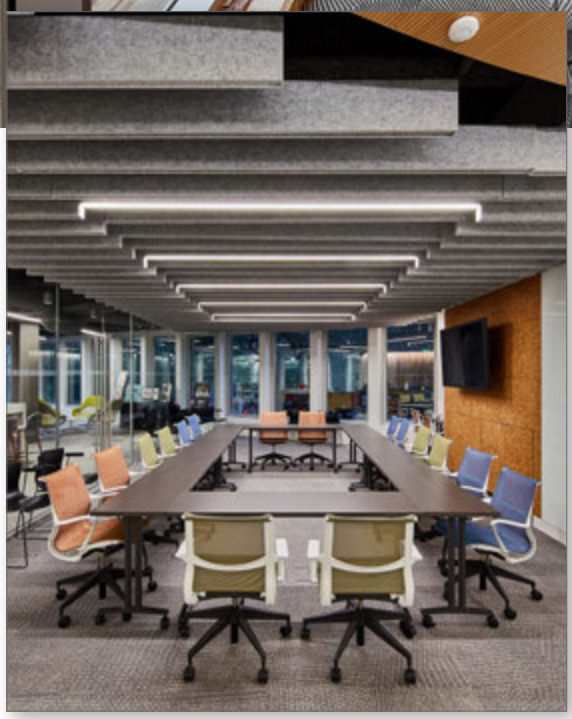
(5) 45' Seem 1 Acoustic luminaires
(116) 8' TruBlade baffles

TRUBLADE & SEEM 1 ACOUSTIC

CAFE



DESIGN INSPIRATION
Linear baffles can also be used to add drama to the ceiling. Baffles are used to create a geometric pattern that heightens architecture while dampening sound levels.



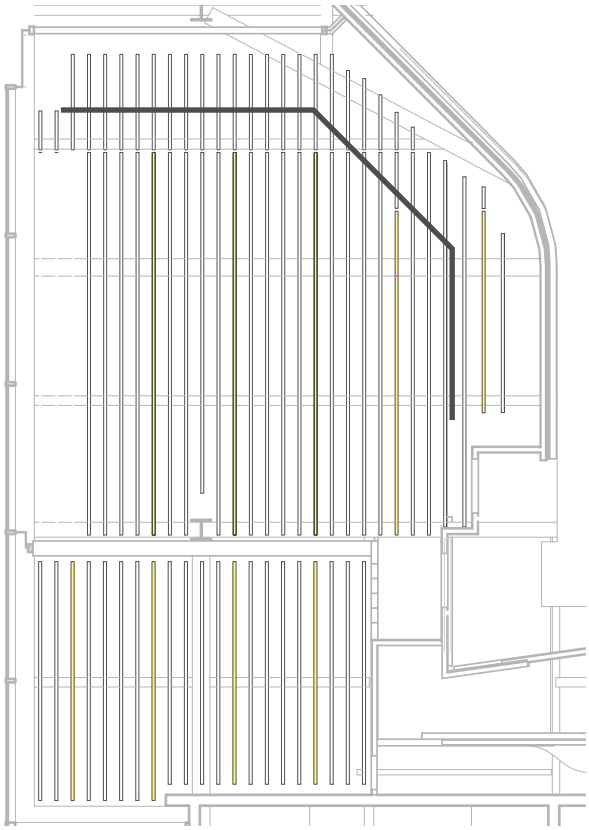
ACOUSTIC PERFORMANCE

Space	Baffle Layout		Reverberation Time (RT)
Training Room	None		0.85
	30 rows	**12" High**	**0.62**
Conference Room	None		1.05
	31 rows	**12" High**	**0.76**

"Using Seem 1 Acoustic was a way for us to showcase products that were emerging in the market and were relevant to what we needed. It also helped us achieve the cleanliness of having one system to answer both lighting and acoustics."

Connor Peirce, Senior Associate
Omniplan

TRAINING ROOM LAYOUT



30 rows | various lengths | 12" high | 12" O.C. spacing

AD EX DALLAS

The American Institute of Architects (AIA Dallas) and the Architecture and Design Foundation (formerly DCFA) converged in a new space to form AD EX, the Architecture and Design Exchange.

Problem:
The existing, two-story space featured an odd-shaped layout, low ceilings, and a large amount of glass. The two floors were intended to serve different purposes: the first floor would be a multi-use space designed to host groups and events while the second floor would be home to the AIA Dallas headquarters with administrative offices, a conference room, and a members' lounge.

Solution:
The design team opted to remove the low ceiling, revealing an open structure, and used the ceiling plane to unify the space. The integrated Seem 1 Acoustic lighting and baffle system helped create that visual harmony. It was used throughout the first floor, together with a moveable partition, providing the flexibility to divide the space to accommodate diverse activities, controlling sound levels, and optimizing lighting. Thirty runs, continuous and individuals, of 12-inch tall Seem 1 Acoustic direct luminaires and baffles, with 12-inch on-center spacing were integrated into the space. The Seem 1 Acoustic system was also used in the second-floor conference room where a coffered ceiling effect was created over the conference table by hanging standard baffles at different heights. This mitigates reverberation issues and addresses the lighting needs of the room.

Result:
After removing the ceiling, reverberation times (RT) of 0.85 second and 1.05 seconds were recorded in the first-floor training room and conference room, respectively. Not only did the Seem 1 Acoustic system provide flexibility to the design team with custom lengths, individual units and continuous runs, it reduced the reverberation times by approximately 30 percent, bringing RT in the desirable range for those spaces. The Seem 1 Acoustic system has enhanced the AD EX by optimizing lighting and noise levels and it has earned the praises of many visitors for the harmonious visual effect and comfort it imparts.

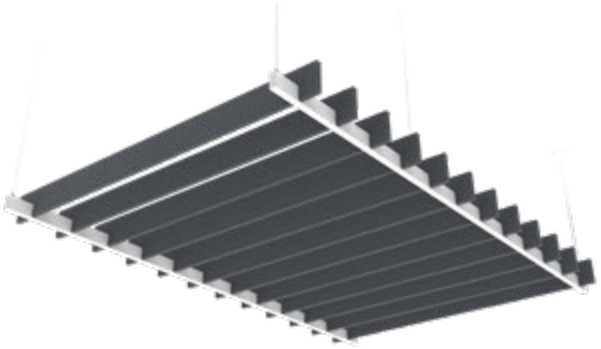
Linear
Architectural Systems

AIRCORE BRIDGE SYSTEM

- Integrated ceiling system using AirCore Blade and Seem 1 Suspended luminaire
- Three standard configurations: Truss, Cantilever, Cantilever Wave and custom configurations available upon request

TRUSS

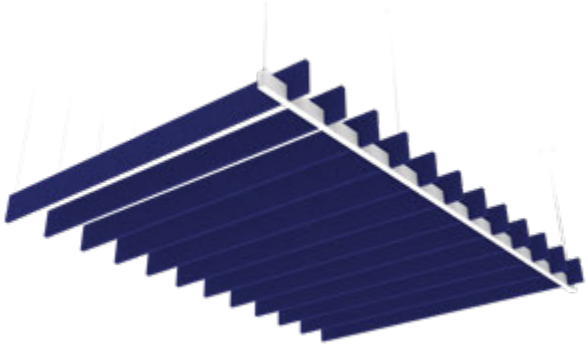
Inspired by the framework used to support a roof or a bridge, Truss uses two Seem 1 luminaires as the rails that support AirCore Blade baffles. Installation is greatly simplified as the baffles rest on the luminaires, eliminating all baffle suspension points.



Luminaires on-center spacing of 4', 5', 6', or 7'.

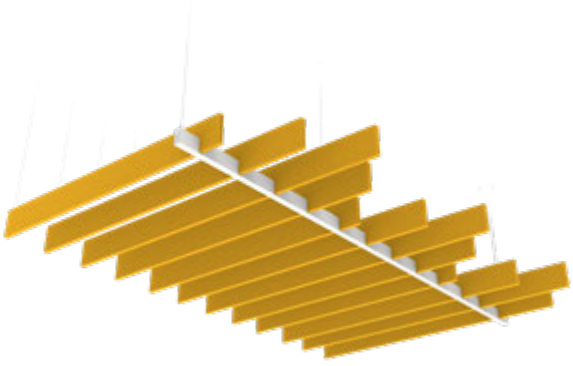
CANTILEVER

Mimicking a cantilever structure, where a rigid structural element, supported at only one end extends horizontally, Cantilever creates a visual effect where the AirCore Blade baffles appear to be floating in the space, resting on one Seem 1 luminaire and hanging from the ceiling with a single suspension point at the other extremity.



CANTILEVER WAVE

Cantilever Wave adds movement and visual interest to the traditional cantilever structure with varied length baffles resulting in an asymmetric edge. Not only do the baffles appear to project from the Seem 1 luminaire, the jagged edge ads to their airy appearance. As with Cantilever, only one suspension point is needed per baffle, the other extremity resting on the Seem 1 luminaire.



Baffles on-center spacing of 12".

Linear
Architectural Systems

AIRCORE BLADE

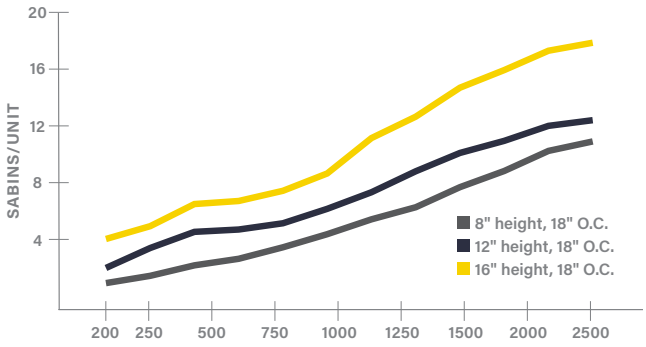
- 1.08" width
- 8", 12" or 16" nominal heights
- 5', 6', 7' and 8' lengths
- 12", 18", 24" on-center spacing*
- AirCore Technology: patent pending, eco-friendly technology that maximizes sound absorption and reduces ecological impact.
- Aircraft cable mounting**

SEEM 1 SUSPENDED DIRECT LUMINAIRES

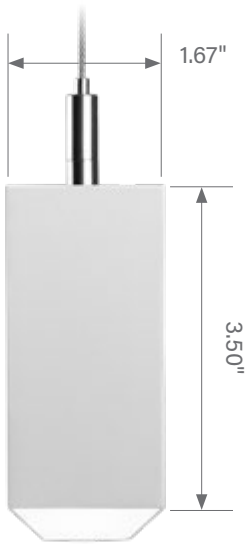
- Individual units of 6' minimum and runs up to 208' as a standard
- Flush, Batwing, and 0.5" Pop-Down lens
- Direct light distribution, 125 – 625 lumens per foot
- Driver options: 0-10V, Lutron EcoSystem®, DALI
- PoE compatible
- Preferred Light: Lighting for better color rendition and human preference
- Aircraft cable mounting

ACOUSTIC PERFORMANCE

8", 12" & 16" HEIGHTS | 18" ON-CENTER SPACING



AirCore Blade



Seem 1

*12" on-center spacing only for Cantilever Wave **Truss systems are supported by luminaires

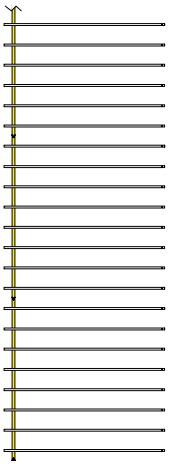
HOW TO SPECIFY AIRCORE BRIDGE

1. Select a configuration: Truss, Cantilever or Cantilever Wave
2. Determine luminaire length and spacing based on room size and lighting requirements
    a. Truss requires two luminaires
3. Determine baffle length based on luminaire spacing
4. Determine baffle height and on-center spacing* based on aesthetic and acoustic requirements
5. Select baffle color and luminaire lighting options
6. Repeat for each array

Linear
Architectural Systems

AIRCORE BRIDGE - CANTILEVER

CORRIDOR

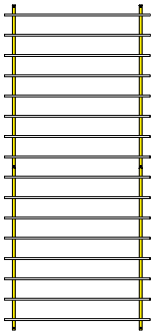


DESIGN INSPIRATION
A long run of dark blue baffles echoes the color scheme of the flooring and creates a tray ceiling effect, turning the hallway into a comfortable space for impromptu gatherings.

8" Baffle height
12" Baffle spacing
8' Baffle length

AIRCORE BRIDGE - TRUSS

CONFERENCE ROOM



DESIGN INSPIRATION
A simple array blends in with the minimalist aesthetic of this conference room by using a dark grey color scheme and playing off the linear pattern found on the accent wall.

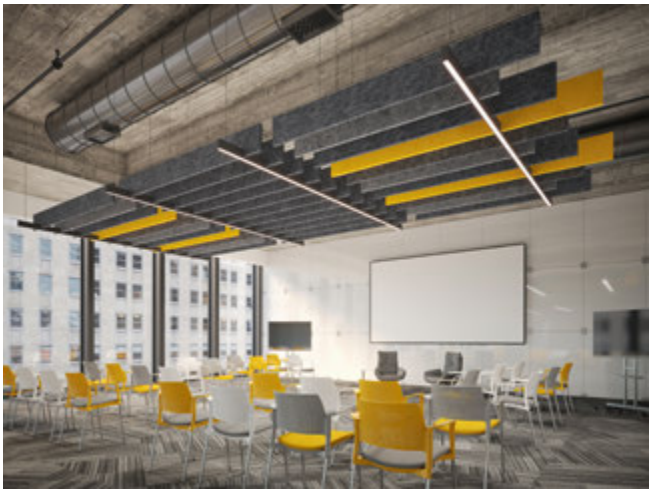
12" Baffle height
12" Baffle spacing
7' Baffle length
16' Luminaire length

DESIGN GUIDELINES

AirCore Bridge is offered in three standard configurations that offer a host of design options. Each can be used as a standalone system or combined over large ceiling expanses. A broad palette of PET felt colors enhances a variety of interiors with neutral tones and bold hues.

AIRCORE BRIDGE - CANTILEVER, TRUSS, AND CANTILEVER WAVE

MEETING SPACE



DESIGN INSPIRATION

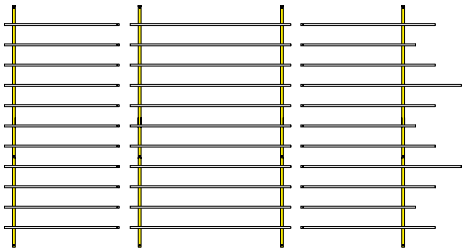
The three configurations come together in custom, multi-colored arrays that add a pop of color and welcomed sound dampening to this space where hard surfaces are prominent.

12" Baffle height

12" Baffle spacing

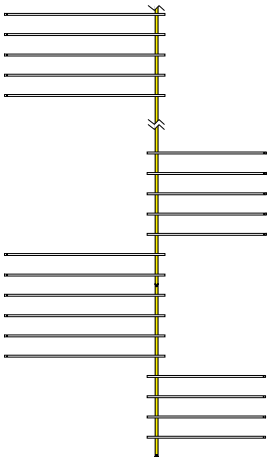
11' 6" Luminaire length

6' & 8' Baffle lengths and a custom pattern



AIRCORE BRIDGE - CUSTOM CANTILEVER AND TRUSS

MIXED USE



DESIGN INSPIRATION

A custom Cantilever array in bold yellow further enlivens this dynamic space while Truss arrays provide quiet and comfort over a working area.

16" Baffle height

12" Baffle spacing

6' & 8' Baffle lengths

Tile Systems

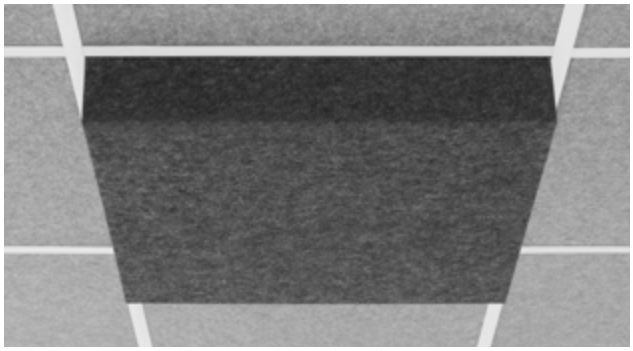
Acoustic tile systems invite creativity and impart a bold statement into any interior space. 2'x2' acoustic tiles are designed to fit into 9/16" and 15/16" grids, providing the building blocks to easily create eye-catching and sound-dampening ceilings that enhance architecture and occupants' comfort. A cut and fold fabrication technique yields crisp, defined edges and superior acoustic performance. The various tiles are offered in dozens of hues to complement any color scheme. Combine with architectural troffers, downlights or linear luminaires to turn the ceiling into a cohesive, textural system that optimizes light and sound levels.

- **Nivo™ Acoustic**
- **Ori™**

Tile Systems

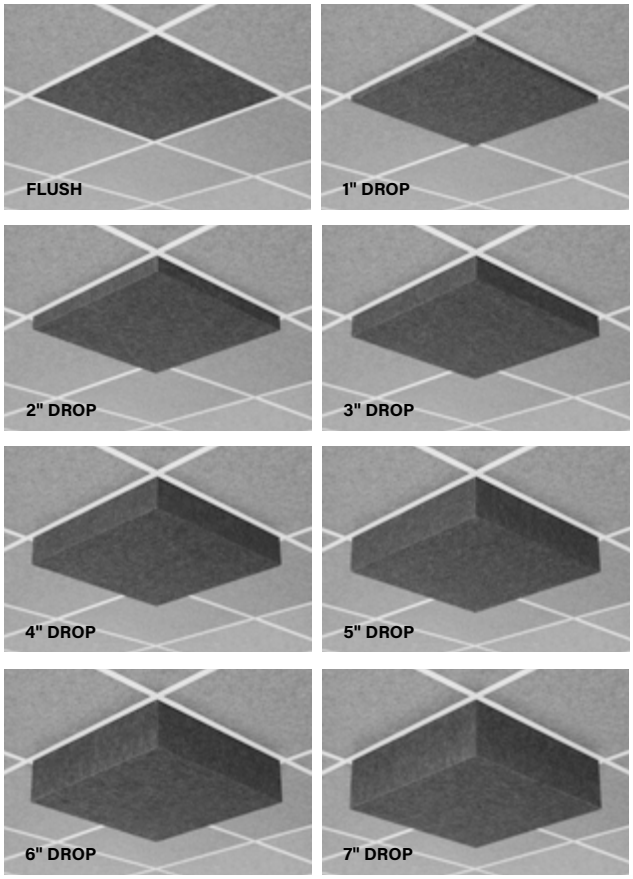
NIVO ACOUSTIC

- Sound absorbing ceiling tile companion to the Nivo luminaire
- Standard 2x2 tile format; other dimensions available as custom upon request
- Various drop heights from flush to 7" down from the ceiling plane in 1" increments
- Cut and folded, not thermoformed, to yield crisp, defined edges
- Designed for 9/16" and 15/16" T grid ceilings
- Can be installed in existing or new grid ceilings, integrated in drywall ceilings with ACT transition or used in a suspended ceiling cloud
- Plenum option meets construction requirements for CCEA (Chicago Plenum) marking, 2015 IMC 602.2 & 2018 NFPA 90A
- AirCore Technology: patent pending, eco-friendly technology that maximizes sound absorption and reduces ecological impact
- Pair with Nivo luminaires to create an integrated cloud system with a coordinated look

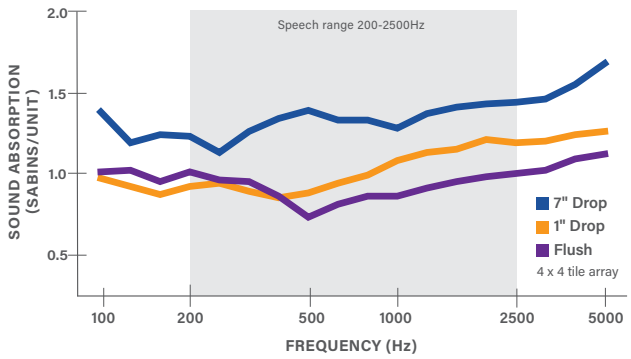


Acoustic - 4" drop shown

Flush to 7" drop



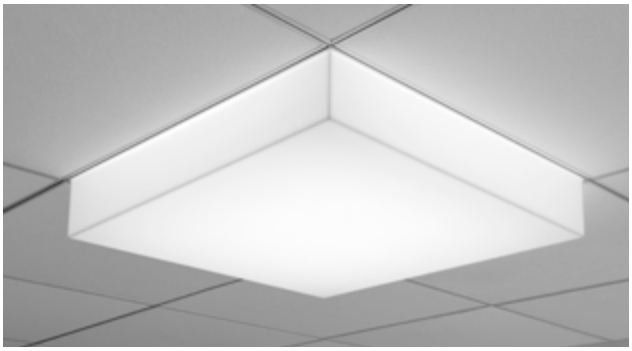
ACOUSTIC PERFORMANCE



*Standard tile only. Plenum results will vary.

NIVO

- Various drop heights from flush to 7" down from the ceiling plane in 1" increments
- Solid or hollow diffuser design
- Up to 4000 lumens
- Driver options: 0-10V and Lutron EcoSystem®
- PoE compatible
- Preferred Light: Lighting for better color rendition and human preference



Luminaire - 4" drop shown

Tile Systems

NIVO ACOUSTIC & NIVO

CONFERENCE ROOMS

4	2	1	4
1	2	3	2
2	5	2	3
3	2	4	2
4	1	3	5

(1) 5" drop acoustic tile
(3) 4" drop acoustic tiles
(3) 3" drop acoustic tiles
(4) 2" drop acoustic tiles
(3) 1" drop acoustic tiles

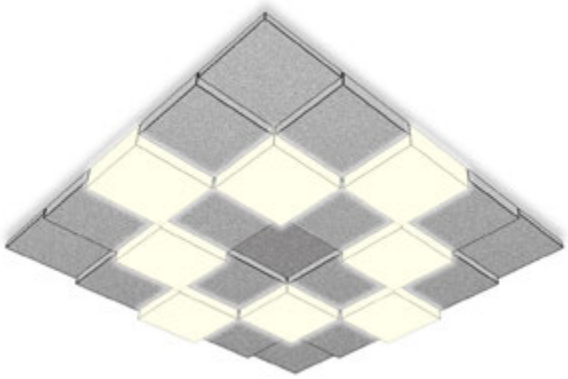
(3) 2" drop luminaires
(1) 3" drop luminaire
(1) 4" drop luminaire
(1) 5" drop luminaire

*per cluster

ROOM AREA	3,840ft^2
TOTAL SABINS	638.2
RT(60)	0.29s

NIVO ACOUSTIC & NIVO

5X5 DIAMOND



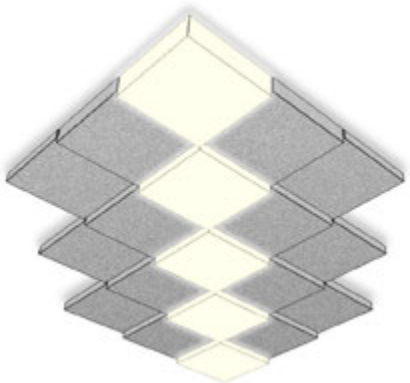
2	4	7	4	2
4	7	4	7	4
7	4	2	4	7
4	7	4	7	4
2	4	7	4	2

DESIGN INSPIRATION
A dynamic pattern which can easily be repeated over large ceiling expanses to create a quilted effect.

(8) 7" drop luminaires
(5) 2" drop acoustic tiles
(12) 4" drop acoustic tiles

NIVO ACOUSTIC & NIVO

3X5 RIDGE



7	5	3		
5	7	5	3	
3	5	7	5	3
	3	5	7	5
		3	5	7

DESIGN INSPIRATION
A diagonal crest that slopes away on either side offers a myriad of possibilities to create cross and zigzag patterns.

(5) 7" drop luminaires
(6) 3" drop acoustic tiles
(8) 5" drop acoustic tiles

DESIGN GUIDELINES

Nivo Acoustic and Nivo architectural troffer offer unlimited possibilities to add texture and color to the ceiling while filling the space with comfortable ambient lighting.

NIVO ACOUSTIC & NIVO

3X5 CHECKER

2	4	2	4	2
4	2	4	2	4
2	4	2	4	2

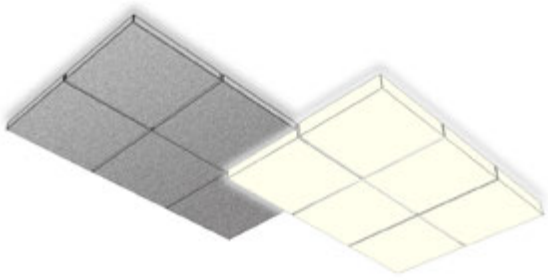
DESIGN INSPIRATION
A uniform pattern imparts a sense of unity and can be enhanced with additional colors.

(7) 4" drop luminaires

(8) 2" drop acoustic tiles

NIVO ACOUSTIC & NIVO

2X3 OVERLAP



		4	4	4
2	2	4	4	4
2	2	2		

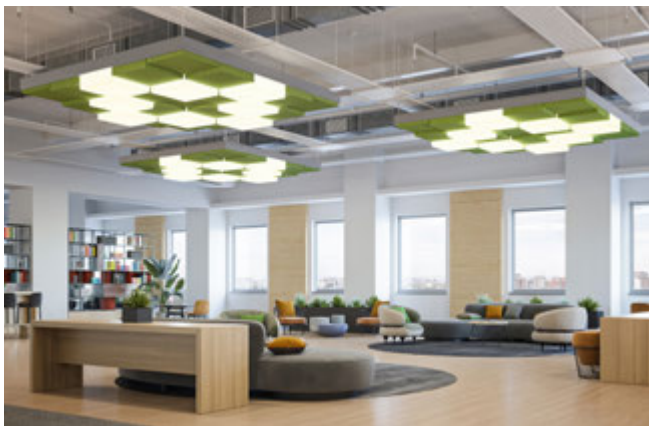
DESIGN INSPIRATION
Overlapping large surface areas of acoustic tiles and architectural troffers, with different drop heights, add interesting layers to the ceiling and can help define areas within an open space.

(6) 4" drop luminaires

(5) 2" drop acoustic tiles

NIVO ACOUSTIC & NIVO

OPEN OFFICE



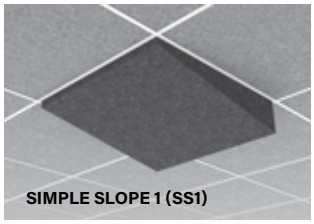
DESIGN INSPIRATION
Diamond-patterned clouds hover over an open space, supplementing the natural light, adding a punch of color, and bringing a sense of coziness to the room with a lower ceiling plane and more comfortable acoustics.

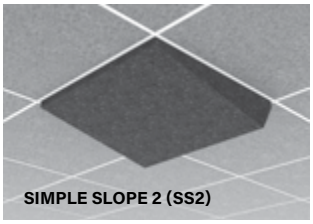
Tile Systems

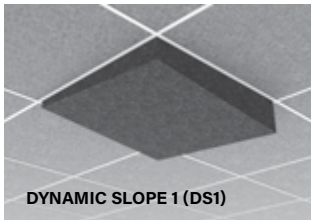
ORI

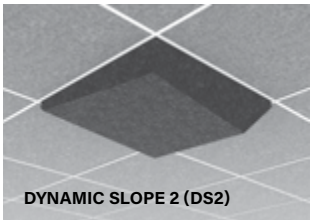
- Sound absorbing ceiling tile, standard 2x2 format; other dimensions available as custom upon request
- 10 design variations to add dimension to the ceiling plane
- Cut and folded, not thermoformed, to yield crisp, defined edges
- Designed to fit in 9/16" and 15/16" T grid ceilings
- Can be installed in existing or new grid ceilings, integrated in drywall ceilings with ACT transition or used in a suspended ceiling cloud
- Plenum option meets construction requirements for CCEA (Chicago Plenum) marking, 2015 IMC 602.2 & 2018 NFPA 90A
- AirCore Technology: patent pending, eco-friendly technology that maximizes sound absorption and reduces ecological impact
- Integrates with architectural troffers, downlights, linear recessed, and suspended luminaires

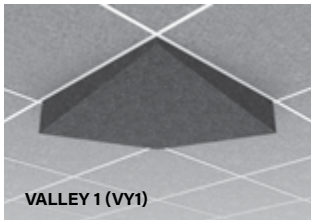
Design variations

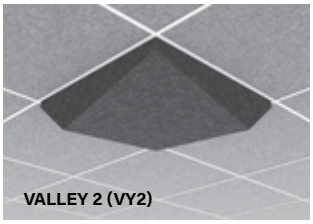


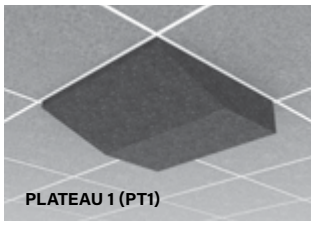


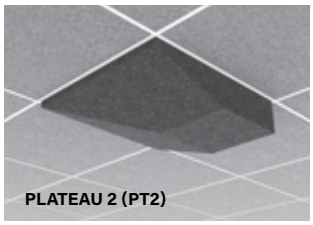


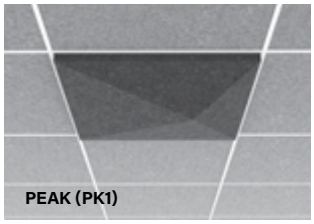


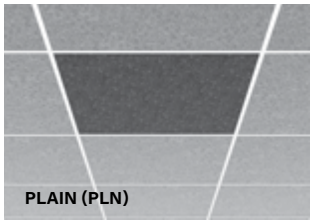




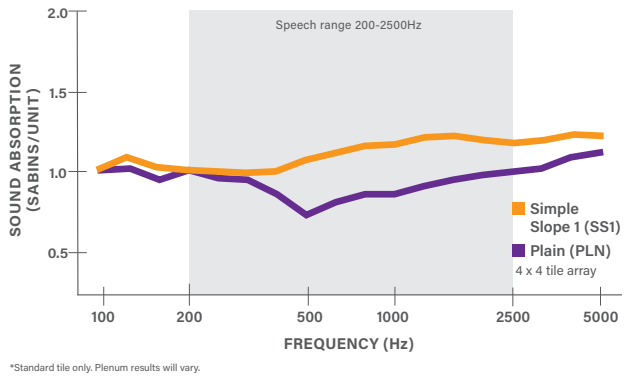








ACOUSTIC PERFORMANCE

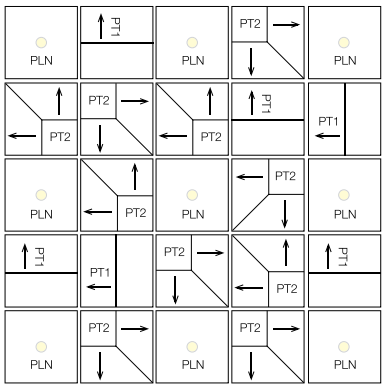


*Standard tile only. Plenum results will vary.

Tile Systems

ORI & ID+ 3.5" DOWNLIGHTS

RECEPTION

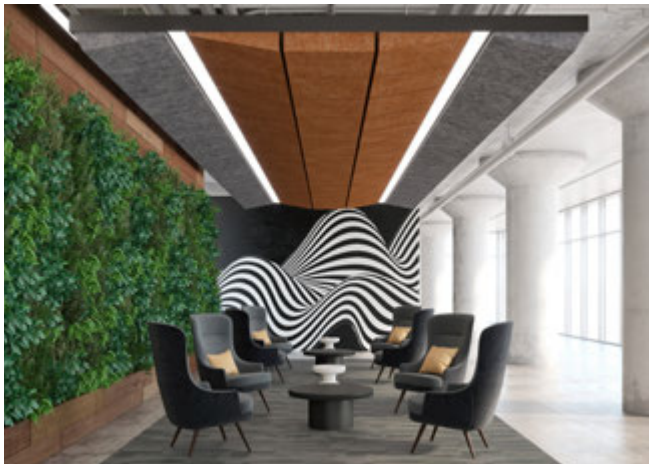


DESIGN INSPIRATION
Downlights easily integrate with Plain tiles in this suspended ceiling cloud, reminiscent of a rugged, rocky landscape that adds flair to the reception area.

(6) Plateau 1 (PT1)
(10) Plateau 2 (PT2)
(9) Plain (PLN)
(9) ID+ 3.5" Downlights

ORI, NIVO ACOUSTIC & SEEM 4 RECESSED

OPEN SEATING



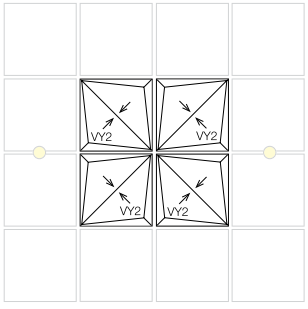
DESIGN INSPIRATION
Linear luminaires, angled tiles and stripes of color combine in a textural ceiling that defines the seating area and adds a sense of movement with a series of parallel lines.

(2) Simple Slope 1
(2) Simple Slope 2
(1) Nivo Acoustic 5" Drop
(2) Seem 4 Recessed

* Acoustic quantities per row. Luminaires per pattern.

ORI, CYLINDERS & ACOUSTICAL CEILING TILES

CORRIDOR



DESIGN INSPIRATION
Valley 2 combines in organic patterns reminiscent of flowers that add interest to the ceiling while the color spectrum, from light to dark blue, supports wayfinding.

(4) Valley 2 (VY2)
(2) ID+ 3.5" Surface Mount Cylinders
(12) ACT (by others)

*Quantities per pattern grouping.

DESIGN GUIDELINES

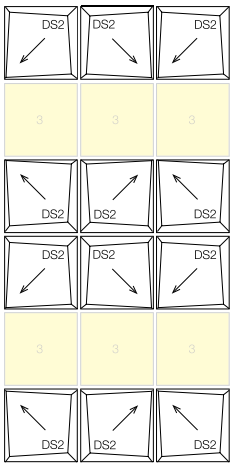
Ori offers 10 ceiling tile variations, the building blocks to easily create eye-catching and sound-dampening ceilings that integrate not only architectural troffers, but a variety of luminaires to suit the lighting needs and desired aesthetic of each environment.

Key

- ← Indicates the orientation of the tiles, pointing to the shallowest point of the tile
- Denotes luminaires
- Denotes acoustical ceiling tiles (ACT, by others)
- # Denotes Nivo Acoustic or luminaire drop in inches

ORI & NIVO ARCHITECTURAL TROFFERS

CONFERENCE ROOM



DESIGN INSPIRATION

Dynamic angles capture sound and define the space in this conference room. The square shape of Nivo architectural troffers balances out the angles of the Ori tiles.

(12) Dynamic Slope 2

(6) Nivo 3" Drop Luminaires

ORI & NIVO LUMINAIRE

OPEN OFFICE & CONFERENCE ROOM

DESIGN INSPIRATION

Soft tones and glowing architectural troffers create an inviting space with a connection to the outdoors. The random ceiling pattern adds dynamism to this otherwise subdued interior.

Simple Slope 2 (SS2)

Nivo Luminaire (various drops)

*Random pattern, quantities vary by ceiling configuration.

Pendant Systems

Pendant systems deliver illumination and acoustic comfort with a coordinated aesthetic, with simple yet alluring designs, while enhancing architecture. Various sizes, color options, and the availability of coordinated luminaires make them ideal for large, open interior environments and provide flexibility for diverse applications.

- **Skydome Edge® Acoustic**
- **Seem® 1 Acoustic Trio**

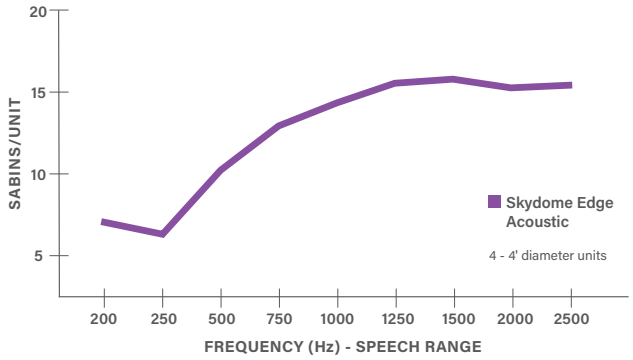
Pendant Systems

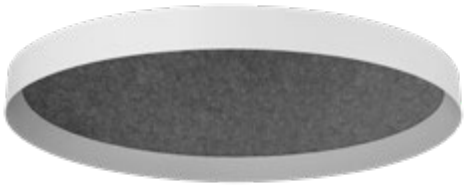
SKYDOME EDGE ACOUSTIC

- Nominal 2', 3' or 4' diameters
- Available in suspended or surface mount
- Up to 3.6" housing height
- AirCore Technology: patent pending, eco-friendly technology that maximizes sound absorption and reduces ecological impact
- Three standard finish options or customize with any RAL color
- Pair with Skydome Edge luminaires to create an integrated cloud system with a coordinated look

Acoustic - 3' pendant

ACOUSTIC PERFORMANCE





Acoustic - 3' surface mount

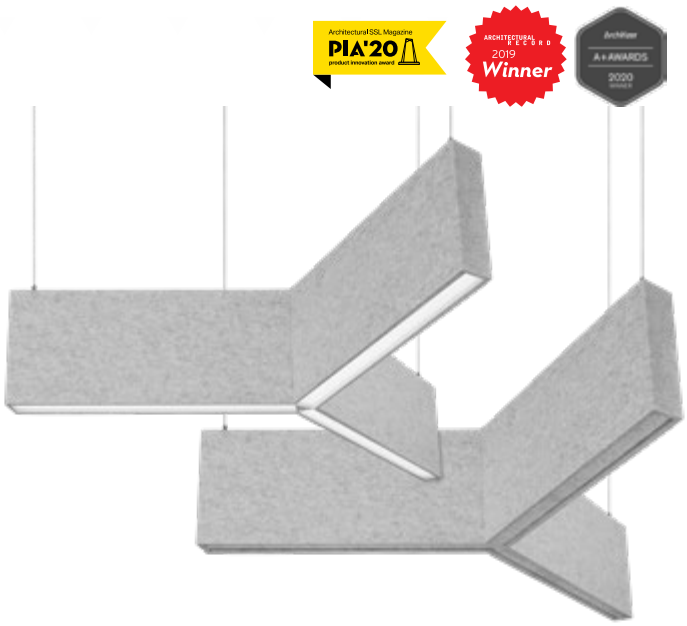
SKYDOME® EDGE™

- Nominal 2', 3' or 4' diameters
- Available in suspended or surface mount
- Up to 3.6" housing height
- Three standard finish options or customize with any RAL color
- Direct/Indirect or Direct only distributions
- Up to 14000 lumens
- 80 or 90 CRI
- Driver options: 0-10V, Lutron EcoSystem®, DALI
- PoE compatible

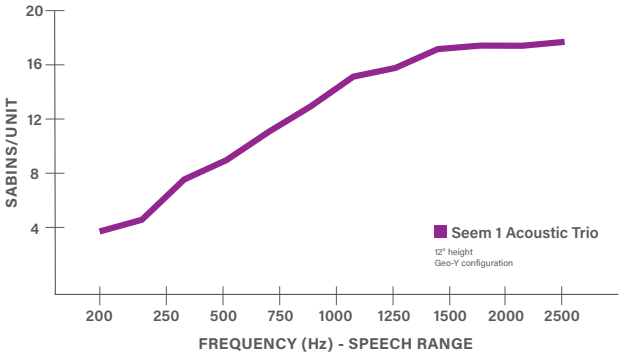
Luminaire - 3' pendant

SEEM 1 ACOUSTIC TRIO

- 1.5" lens aperture (2.27" housing width)
- 4' and 6' diameter pendants
- Standard nominal heights of 8", 12" or 16"
- AirCore Technology: patent pending, eco-friendly technology that maximizes sound absorption and reduces ecological impact
- Direct/Indirect, Direct only, Indirect only or unlit options
- Up to 4500lm direct and 7200lm indirect distributions
- Driver options: 0-10V, Lutron EcoSystem®, DALI
- Pair with Seem 1 Acoustic luminaires and baffles to create a coordinated look within interior spaces



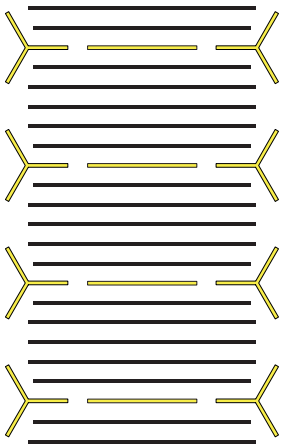
ACOUSTIC PERFORMANCE



Pendant Systems

SEEM 1 ACOUSTIC TRIO & UNLIT BAFFLE

ARROW CAPS

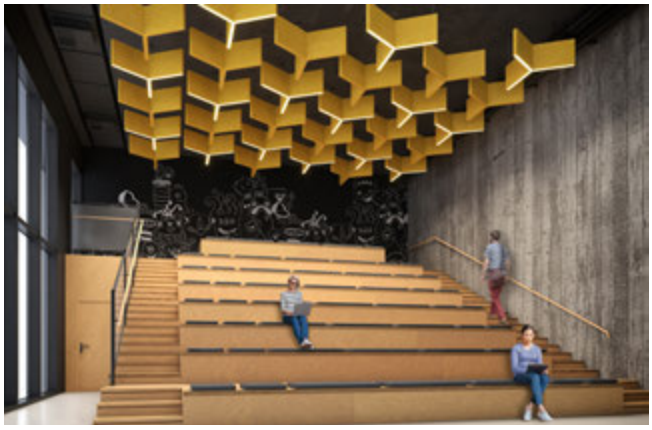


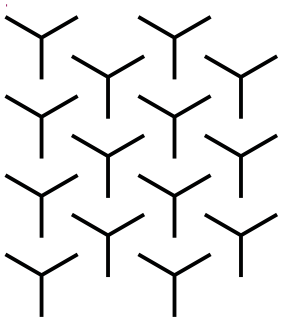
AREA	31,908FT²
BAFFLE HEIGHT	12"
SPACING	12" OC
SABINS/UNIT	9.8
TOTAL SABINS	289.7

(8) 4' Seem 1 Acoustic Trio luminaires
(4) 5' 6" Seem 1 Acoustic luminaries
(8) 11' Seem 1 Acoustic baffles
(11) 11' 6" Seem 1 Acoustic baffles

SEEM 1 ACOUSTIC TRIO

GEO-Y

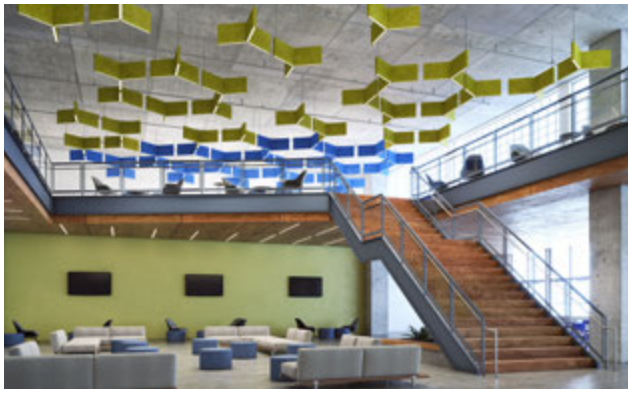


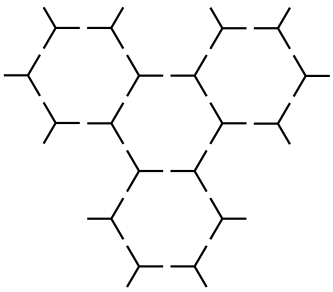


DESIGN INSPIRATION
Inspired by geometric Y patterns popular in the textile industry, this pattern features an even and balanced grid and directional movement reminiscent of a flock of birds. Lines of suspension are equally spaced.

SEEM 1 ACOUSTIC TRIO

HIVE





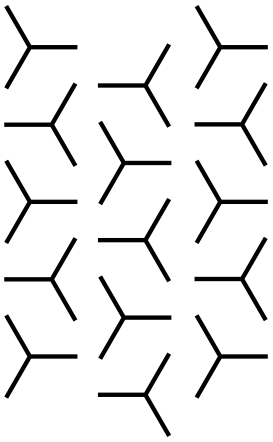
DESIGN INSPIRATION
This honeycomb pattern works best in larger spaces. Deliberate exclusion of cells in the patchwork of this motif add a dispersed, pixel-like effect.

DESIGN GUIDELINES

Pendant systems offer limitless possibilities to create dynamic, integrated ceiling systems that beautify spaces and ensure the well-being of the occupants.

SEEM 1 ACOUSTIC TRIO

STAGGERED HEX



DESIGN INSPIRATION

This design evolved by overlooking the Y-form and instead focusing on the implied hexagonal footprint. Alternating stacks create the pattern and alignment is irregular to account for suspension lines. The final result is an array with varied angles from all points of view. Columns can be shifted for a fuller or sparser effect.

SKYDOME EDGE ACOUSTIC & LUMINAIRE

MULTI-OFFICE WORKSPACE

DESIGN INSPIRATION

While the black luminaire housings and suspensions blend in the dark ceiling, the bold PET felt colors of the Skydome Edge Acoustic pendants enhance this modern office. Skydome Edge luminaires infuse the space with at once soft and powerful illumination.

SKYDOME EDGE ACOUSTIC & LUMINAIRE

PUBLIC SPACE

DESIGN INSPIRATION

Combining the three sizes of the Skydome Edge luminaire and unlit acoustic version and using a monochromatic palette infuses the space with a sense of serenity. A strong connection to the outdoors is achieved via the color scheme and also the electrical light supplementing the abundant daylight.

"A big part of the overall planning and design of the space was to get the lighting exactly right for the many different space types they utilize. From heads down to open collaboration, the sensitivity to the lighting and acoustical elements utilized in these locations was of great importance to the Coupang team."

Kerri Snook, Senior Interior Designer
JPC Architects

COUPANG

The largest online retailer in South Korea sought to establish its first US office downtown Seattle, selecting a premier location with an important drawback.

Problem:
For its new office, located in the heart of Seattle, Coupang wanted a bright, open workplace that would promote collaboration and reflect its brand ethos. The surrounding skyscrapers that engulfed Coupang's building and blocked natural light posed a challenge, as well as the open structure and reflective materials that promoted high noise levels. The project team also faced the additional constraint of a short, 12-week time frame to complete the remodel.

Solution:
The circular shape, clean design, and high lumen output levels of the Skydome Edge luminaire and acoustic companion made it the ideal solution for brightening the space, delivering illumination and acoustic comfort with a coordinated look. The use of the acoustic cloud system in bold colors conveyed the brand spirit, elevating the modern, bright space that supports the organization's culture.

Result:
The combination of Skydome Edge Acoustic and Skydome Edge illuminated pendants, in bold hues that reflect Coupang's brand colors, enliven the space while providing optimal lighting. The incredibly creative and uniquely designed office garnered praises from Coupang. It offers a modern and bright space that supports the organization's culture and establishes its brand on the North American continent.

Decorative Pendants

Decorative pendants add flair to interior spaces, balancing form and function with PET felt housings and powerful illumination. They provide design flexibility with various sizes, distribution options, finishes, and material colors. The luminaires can be clustered or used individually to enhance any interior space with simple, yet intriguing forms.

- **Blume™ 3 & 4**
- **Zyl™ 3 & 4**

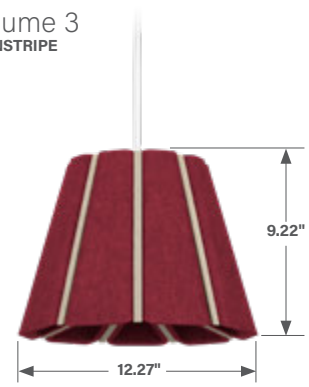
Decorative Pendants

BLUME

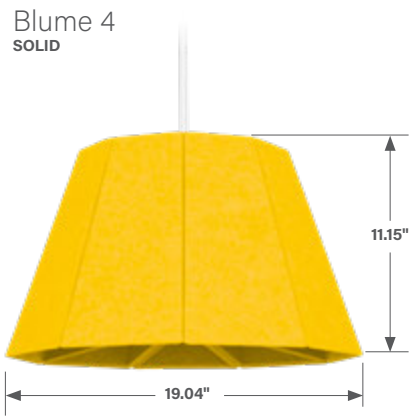
- Solid or Pinstripe design
- Nominal 12" and 19" diameter pendants
- Material color palette enables personalization with hundreds of color combinations
- Mix and match finishes and colors for canopy, stem, and cord
- Spot to Super Wide Flood distributions
- Lumen output range: 700- 3000lm
- Driver options: 0-10V, Lutron EcoSystem®, DALI
- Accommodates various ceiling applications: grid, drywall, and open ceiling

Blume 3
SOLID

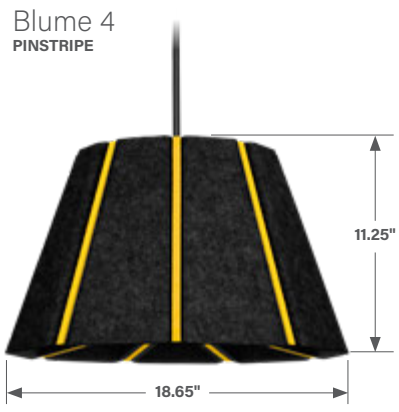
Blume 3
PINSTRIPE



Blume 4
SOLID



Blume 4
PINSTRIPE

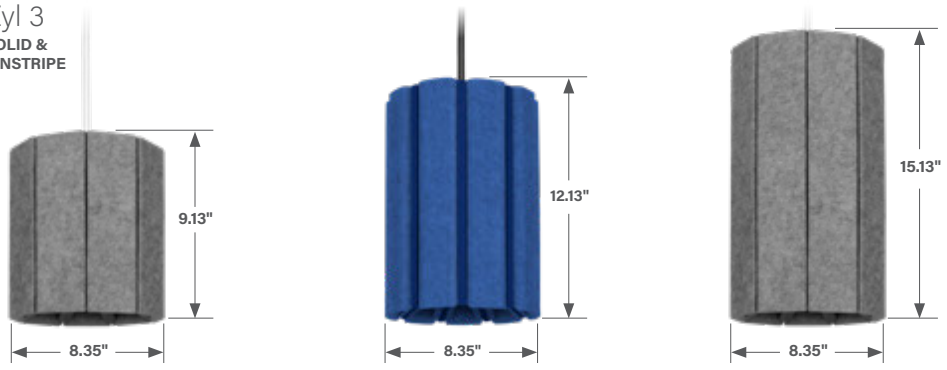


Architectural SSL Magazine
PIA'20
product innovation award

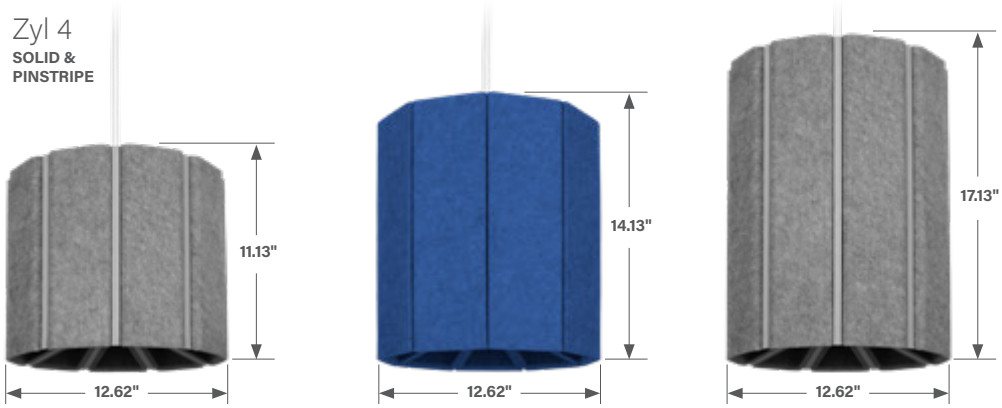
ZYL

- Solid or Pinstripe design
- Nominal 8" and 12" diameter pendants with three height options for each size
- Material color palette enables personalization with hundreds of color combinations
- Mix and match finishes and colors for canopy, stem, and cord
- Spot to Super Wide Flood distributions
- Lumen output range: 700 - 3000lm
- Driver options: 0-10V, Lutron EcoSystem®, DALI
- Accommodates various ceiling applications: grid, drywall, and open ceiling

Zyl 3
SOLID & PINSTRIPE



Zyl 4
SOLID & PINSTRIPE



PET Felt

Made of a durable polyester comprised of up to 50% post-consumer recycled content, the sound absorbing material reduces ecological impact, provides an ASTM E-84 Class A fire rating and is bacteria and moisture resistant.

All Acoustic Solutions products are available in a wide color palette, ranging from neutral to bold, to provide design flexibility and personalization for any project.

MATERIAL SPECIFICATIONS

Content:	100% polyester containing up to 50% recycled plastic bottles (PET felt).
Fire Testing:	ASTM E-84 Class A/CAN ULC S102
Environmental:	100% recyclable, formaldehyde free.
PET Thickness:	9mm
Variances:	Variations in fiber mix and color may occur. All products will be supplied within commercial tolerances.
Safety:	Impact, bacteria, and moisture resistant.
Care:	Easy to clean and maintain. Remove dust and debris with a clean, soft, lint-free cloth or vacuum.

Declare.

9mm PET Felt
Focal Point, LLC

Final Assembly: Chicago, Illinois, USA
Life Expectancy: 30 Years
End of Life Options: Salvageable/Reusable in its Entirety, Recyclable (100%)

Ingredients:

PET; Octadecanamide, N,N'-1,2-ethanediylbis-; Stearic Acid; Benzenamine, 4-(1-methyl-1-phenylethyl) -N-[4-(1-methyl-1-phenylethyl)phenyl]-; Benzenepropanoic acid, 3,5-bis(1,1-dimethylethyl)-4-hydroxy-, octadecyl ester; Titanium dioxide

Living Building Challenge Criteria: Compliant
I-13 Red List:
■ LBC Red List Free
☐ LBC Red List Approved
☐ Declared
% Disclosed: 100% at 100ppm
VOC Content: Not Applicable

I-10 Interior Performance: CDPH Standard Method v1.1-2010
I-14 Responsible Sourcing: Not Applicable

FPL-0001
EXP. 01 FEB 2022
Original Issue Date: 2020

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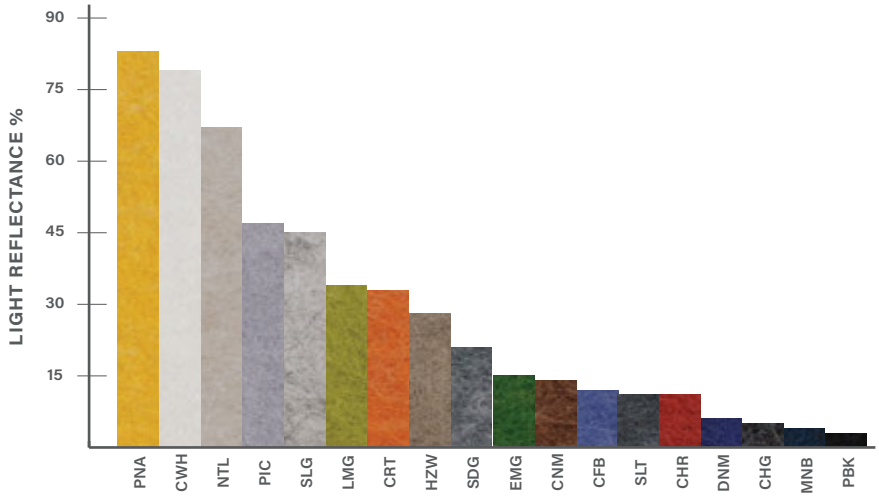
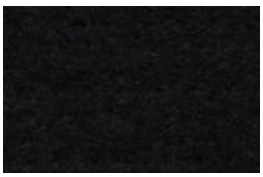
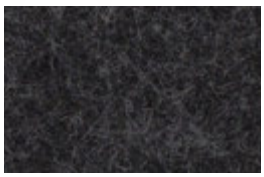
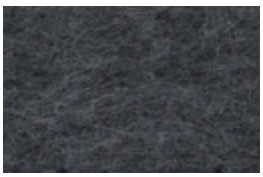
PET LIGHT REFLECTANCE

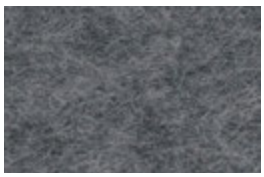


STANDARD COLORS


PURE BLACK **PBK**


CHARCOAL GRAY **CHG**


SLATE **SLT**


SHADOW GRAY **SDG**


SILVER GRAY **SLG**


PEARL ICE **PIC**

CLASSIC WHITE **CWH**


NATURAL LINEN **NTL**


HAZELWOOD **HZW**

PREMIUM COLORS*


CORNFLOWER BLUE **CFB**


DENIM BLUE **DNB**

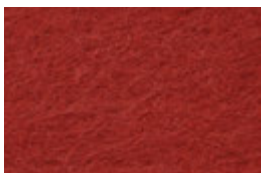

MIDNIGHT BLUE **MNB**


DEEP PURPLE **DPP**


BLUSH **BLS**

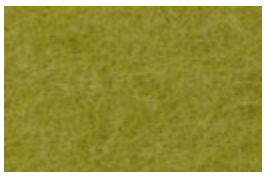

BRICK RED **BRD**


BERRY **BRY**

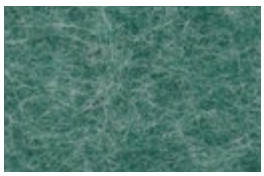

CHERRY RED **CHR**


CARROT **CRT**


PINEAPPLE **PNA**


LIME GREEN **LMG**


EMERALD GREEN **EMG**


SEAFOAM **SFM**


DEEP WATER **DWT**


LIMESTONE **LMS**


CINNAMON **CNM**

SAMPLING PROGRAM

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*Contact factory for lead time and pricing.

Our **dedicated team**

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