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|--------------|--|----------------|--|------|--|
| PROJECT | | REFERENCE TYPE | | DATE | |
| SPECIFIED BY | | QUANTITY | | NOTE | |

Good Design vs Hope

What sets Velaria Systems apart from other stretch ceiling companies is our understanding of illumination and the depth of information available for you to make an informed choice that ensures the best lighting possible in your space.



We don't just add some lights and hope for the best. Velaria Systems provides photometric files to ensure you can calculate the illuminance, color rendering data to ensure people look and feel better, and a wide range of color temperature options to ensure the mood of your space is set exactly the way you want it.

We source lighting solutions from leading suppliers of illumination products that have been designed specifically for luminous ceilings or as complementary lighting for acoustic membrane solutions.

The Biggest Difference

Perhaps the biggest difference between Velaria Systems and others is that we've already solved illumination.

What does that mean?...

Instead of offering a selection of translucent membranes and telling you to figure out how much light you may get on your own, we have tested and selected the best combination of membranes that ensures optimum system efficiency while preserving the quality of light and acoustic performance that are the keys to an integrated FAL (Finishes + Acoustics + Light) system.

Providing illumination is a critical task that shouldn't be left to chance. You can provide Velaria Systems' data to your team's lighting design professional with confidence, or you can work with our Design Studio to generate the illuminance calculations you need to verify that your design will meet requirements for illumination levels, light quality, and applicable energy codes.

Selecting Your Illumination

Color Temperature (CCT): Lower color temperatures will enhance warm finishes and evoke intimate experiences while higher values will highlight cooler colors and give a sense of action to your environment.



Illumination Systems are available in the following color temperatures (CCTs):

Fixed CCT:

A single color temperature: **2700K, 3000K, 3500K, 4000K, 5700K**

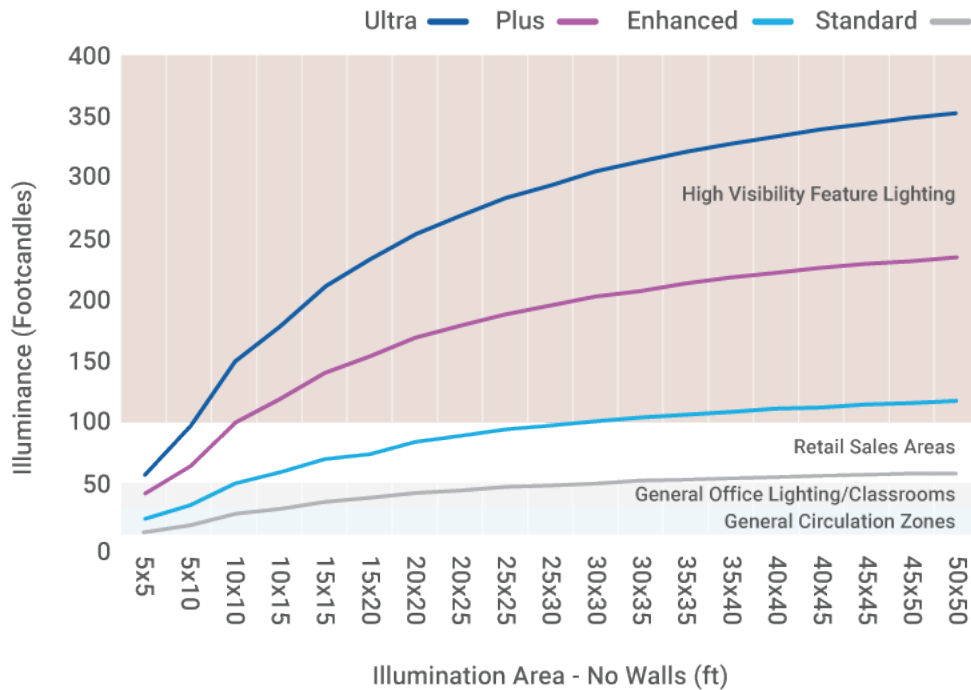
Tunable White:

Uses a control system to select or dynamically change any color temperature within the following range:
2700K-5700K

Illuminance Levels (footcandles): Using a Velaria Systems illumination system is a great way to provide superior quality lighting that fills your space with vibrant but comfortable light.

The first step is to determine what illumination level you require: are you creating a bright in-store retail experience that requires high levels of illumination. Or a more subdued hospitality experience where visual acuity is still important, but a more intimate feeling is desired?

Our illumination systems are offered with 4 light output options (Standard, Enhanced, Plus, and Ultra) designed to deliver the appropriate level of illumination no matter your application. While there may be several factors influencing the final lighting design - contrast ratios for sales environments, energy code considerations, or others – Velaria Systems has a solution for you.



To help you determine exactly what you need, the Velaria Systems Design Studio will guide you through the selection process with expert assistance and tools. If you prefer to hand off the task to the lighting design professional on your team, we have all of the data they will need to create a complete lighting design, including IES files for design calculations.

Light Output & Power: Once you have selected your color temperature and illuminance level, you will be able to determine the light output and power consumption values from the table below.

| CCT | Standard | | Enhanced | | Plus | | Ultra | |
|---------|------------------------|----------------|------------------------|----------------|------------------------|----------------|------------------------|----------------|
| | Light Output (lm/sqft) | Power (W/sqft) | Light Output (lm/sqft) | Power (W/sqft) | Light Output (lm/sqft) | Power (W/sqft) | Light Output (lm/sqft) | Power (W/sqft) |
| 2200K | 92 | 1.4 | 184 | 2.8 | 368 | 5.5 | 552 | 8.6 |
| 2700K* | 92 | 1.4 | 184 | 2.5 | 368 | 5.1 | 552 | 7.6 |
| 3000K | 92 | 1.1 | 184 | 2.3 | 368 | 4.6 | 552 | 6.9 |
| 3500K** | 92 | 1.2 | 184 | 2.2 | 368 | 4.5 | 552 | 6.7 |
| 4000K | 92 | 1.2 | 184 | 2.4 | 368 | 4.6 | 552 | 6.9 |
| 5700K | 92 | 1.2 | 184 | 2.4 | 368 | 4.7 | 552 | 7.0 |

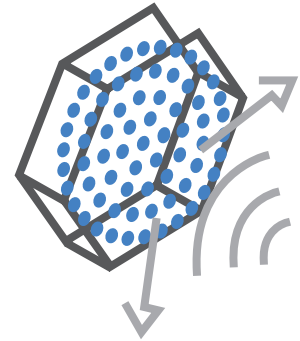
*Tunable White (TNW) = 2700K-5700K (for power value, assume 2700K)

**Dim-to-Warm (DTW) = 3500K-2200K (for power value, assume 3500K)

Acoustic Performance

Velaria Systems illumination systems come standard with acoustic performance that will significantly contribute to reducing noise in your space.

For even better comfort, Velaria Systems offers Enhanced and Ultra levels of acoustic performance; and for spaces where noise levels are less of a concern, a budget-friendly Basic option is also available.



Illumination Configurations

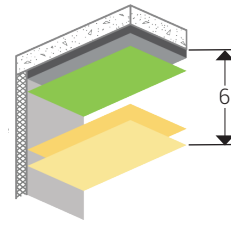
| Performance Level | Description | Noise Reduction Coefficient (NRC) |
|-------------------|---|-----------------------------------|
| Standard | Outer Layer Non-acoustic Membrane + Inner Layer Non-acoustic Membrane + Acoustic Light Panel | 0.30 |
| Enhanced | Outer Layer Acoustic Membrane + Inner Layer Acoustic Membrane + Acoustic Light Panel + 1" Acoustic Absorber | 0.50 |
| Ultra | Outer Layer Acoustic Membrane + Inner Layer Acoustic Membrane + Acoustic Light Panel + 2" Acoustic Absorber | 0.65 |

ILLUMINATION / CEILINGS



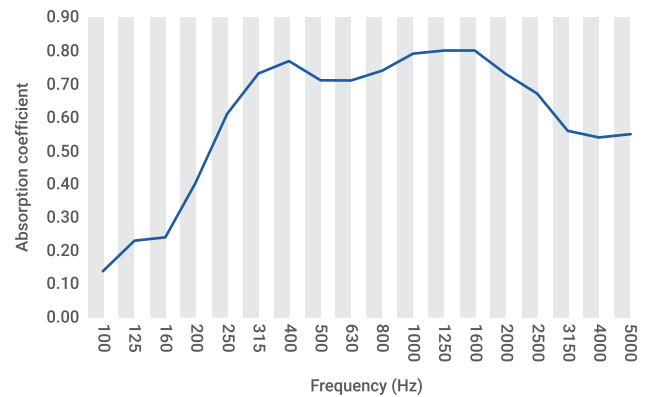
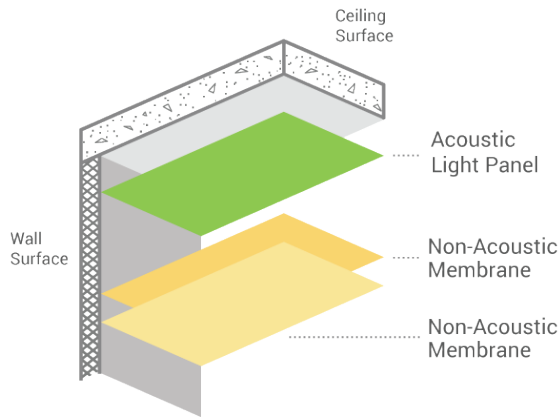
Configurations

(based on typical 6" space between surface and outer membrane)



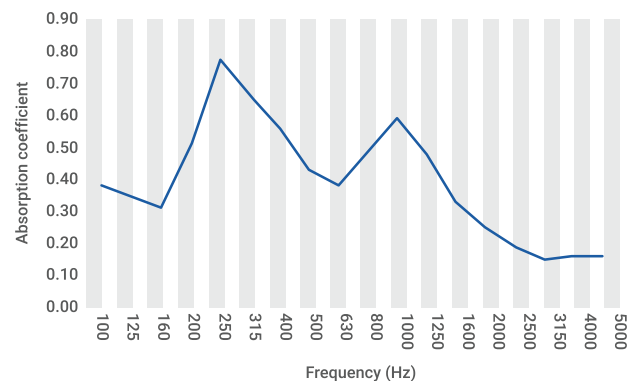
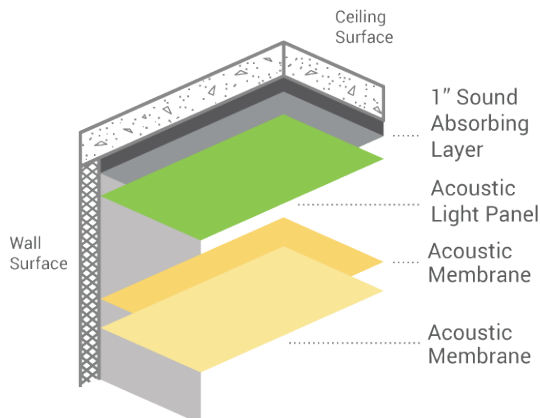
Standard

| | Frequency (Hz) | | | | | | Noise Reduction Coefficient |
|------------|----------------|------|------|------|------|------|-----------------------------|
| | 125 | 250 | 500 | 1000 | 2000 | 4000 | NRC |
| α_s | 0.21 | 0.45 | 0.22 | 0.31 | 0.18 | 0.15 | 0.30 |



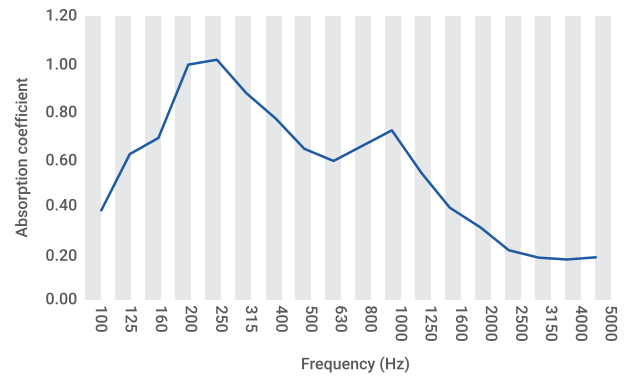
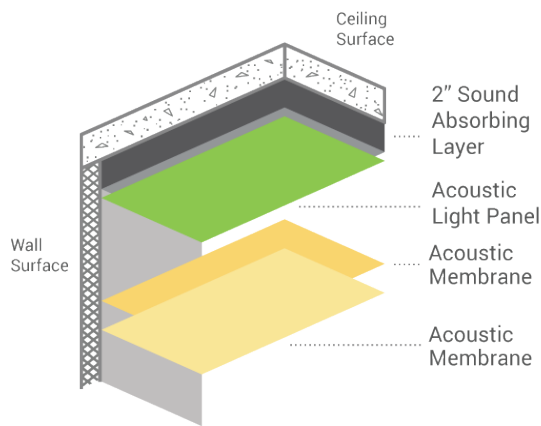
Enhanced

| | Frequency (Hz) | | | | | | Noise Reduction Coefficient |
|------------|----------------|------|------|------|------|------|-----------------------------|
| | 125 | 250 | 500 | 1000 | 2000 | 4000 | NRC |
| α_s | 0.34 | 0.77 | 0.43 | 0.59 | 0.25 | 0.16 | 0.50 |



Ultra

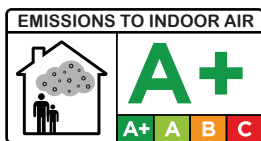
| Frequency (Hz) | | | | | | | Noise Reduction Coefficient |
|----------------|------|------|------|------|------|------|-----------------------------|
| | 125 | 250 | 500 | 1000 | 2000 | 4000 | NRC |
| α_s | 0.62 | 1.02 | 0.64 | 0.72 | 0.31 | 0.17 | 0.65 |



Fire Ratings

The fire rating for the membranes used for illumination is ASTM E84 Class A.

Environmental



A+ rating for Volatile Organic Compounds (VOC) emissions



100% Recyclable

Certifications



CE CERTIFICATE OF CONFORMITY CE: 1488-CPD-0106/W COMPLIANCE WITH STANDARD: EN 14716:2008 (system of assessment and verification of performance constancy 1)

How to Specify

Using our simple process, specifying an illuminated membrane system is easy.

1. Select your light levels and color temperature (CCT)
2. Enhance your acoustic performance (or not)
3. Contact Velaria Systems - In addition to your selections, we will need to know:
 - Size
 - Mounting Requirements (so we can select the correct profile to meet your requirement)*

*A wide selection of profiles is available to suit your specific requirements. Velaria Systems experts will recommend the best option to meet those requirements. No need for you to sort through a huge catalogue..

Specification Codes

NOTE: Specification Codes are provided for use as simple references to Velaria Systems Architectural Textile products in specifications and/or construction documents and may not include all details required to define the system. Specification Codes are NOT ordering codes. In order to receive quotations or purchase these products from Velaria Systems additional information may be required before issuing a quotation or accepting a purchase order.

| | | | | | | | | | | |
|-----------------|---|-------------|---|------------------------|---|---|---|---|---|--|
| VS | - | C | - | MEM | - | ILLUM | - | Acoustic Performance | - | Light Output |
| Velaria Systems | | C = Ceiling | | MEM = Membrane Systems | | COL = Colors PATT = Patterns GRPH = Graphics ILLUM = Illuminations | | 22 = 2200K 27 = 2700K 30 = 3000K 35 = 3500K 40 = 4000K 57 = 5700K TNW = Tunable White DTW = Dim-To-Warm RGBW = RGBW | | STD = Standard ENH = Enhanced PLUS = Plus ULT = Ultra |

NOTE: See "Statera Lighting System" for complete specifications of the lighting system.