



*The vastness of the sky...*

*i n s i d e*

## SKY FACTORY ILLUSIONS OF NATURE™

A unique fusion of art, cognitive science, and digital technology, Sky Factory's *illusions of nature* provide architects, designers, and other professionals with a unique resource:

*A research-verified design palette to transform enclosed interiors into genuine restorative spaces for human wellness.*

*And by restoring a connection to beauty, space acquires a healing dimension.*

Leveraging the healing power of multisensory imagery woven into an architectural context, Sky Factory's craftsmanship alters our perception of enclosed interiors by engaging our physiology in a universal experience of nature—the “*Relaxation Response.*”

## OPEN SKIES IMAGE TECHNOLOGY™

Unlike standard commercial photography, this artistic framework evokes embedded spatial reference frames—multisensory imagery that our memory readily identifies—which engage areas of the brain involved in spatial cognition (depth perception).

First studied at Texas Tech University's Neuroimaging Institute, this framework engrosses the observer in a nature illusion that has been the subject of multiple international awards for its exceptional scholarship in research design.





## ASPIRE LUMINOUS SKYCEILINGS™

Sky Factory Luminous SkyCeilings are the world's only research-verified virtual skylights. Because SkyCeilings are designed to faithfully reproduce the rich saturation and subtle visual stimuli of real skies, they are the ideal biophilic design solution for enclosed interiors.

Modular and easy to install, Aspire SkyCeilings are available in a wide array of rectangular shapes with two industry standard ceiling tile sizes—2' x 2' (60cm x 60cm) and 2' x 4' (60cm x 120cm).

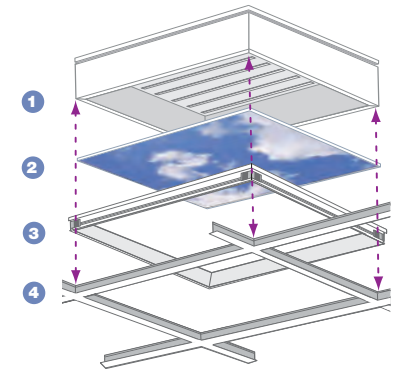
### Features

- Daylight-balanced light for human wellness
- Energy-efficient lighting system
- Affordable durability
- Full technical support
- Vast image selection



Aspire Luminous SkyCeilings are ideal to connect isolated interiors to a therapeutic view to nature.

### Elements of a Luminous SkyCeiling



- 1 **LED lighting Systems** (2 types) provide uniform daylight-quality light
- 2 **SkyTiles™** Durable, translucent photographic panels
- 3 **Elevators** Architectural reveals that enhance perspective
- 4 **Ceiling Grid** SkyCeilings work on client provided standard or custom grids



## REVELATION SKYCEILINGS™

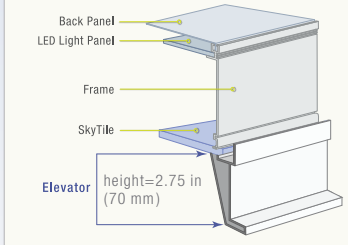
Sky Factory's Revelation SkyCeiling, with its large, self-supporting gridwork, provides the most engaging biophilic illusion-of-sky available—transforming the larger rooms and higher ceilings found in deep-plan enclosed interiors into beautiful, healthier, and more restorative environments.

The enhanced dimensions and angled profile of the Revelation SkyCeiling make it an ideal architectural feature for the higher ceilings found in most commercial, corporate, and public spaces. In ceilings greater than 9' (2.7m) in height, the Revelation SkyCeiling creates a captivating, geometrically sculpted portal to nature.

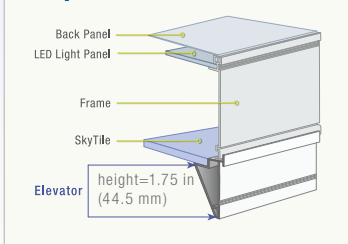
### Features

- Self-supporting framework
- Available in 5 standard sizes
- Architecturally sculpted reveal
- Custom panels available
- Ideal for public spaces

#### Revelation Elevator



#### Aspire Elevator

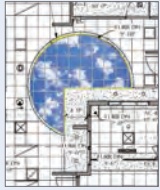


Revelation SkyCeilings reduce acute stress and anxiety.

The deeper, angled profile of the faux skylight framework enhances the illusion of depth.

# SKY FACTORY STUDIO™ CUSTOM INSTALLATIONS

## YOUR CREATIVITY AT WORK



Whether you have a pencil sketch on a napkin or a 3D model, our team has a wealth of experience to bring custom designs to life.

## VAST SEAMLESS SKIES

Unlike anyone else in the business, we are not limited in scale or scope. Our proprietary library allows our clients the freedom to create seamless *illusions of sky* of any size. Whether you envision a 350-foot interior corridor or multiple skylights featuring segments of the same master image, we can go as large as your interior space demands.

## BEST SELLING DESIGNS



We also offer a range of custom Circular and Elliptical Luminous SkyCeilings that cut down on design time while still delivering

the aesthetic appeal of a curved perimeter.

*When I saw the image, it looked three-dimensional to me.*

~ M.P. Manager, Radiation Oncology, Covenant Cancer Treatment Center

## FROM CONCEPT... TO COMPLETION



## MEET OUR SKY DESIGNERS



Skilled at creating *illusions of nature* and open sky, our artists and design team enable architects to shed the restrictions inherent in structural space.

Sky Designers help creative professionals alter occupants' perception of enclosed environments with multisensory views to nature that generate a genuine experience of relief.

By restoring a healing sense of place to isolated interiors, any building can gain the restorative attributes of *illusions of nature* for tenants and other occupants.

## QUALITY USA CRAFTSMANSHIP

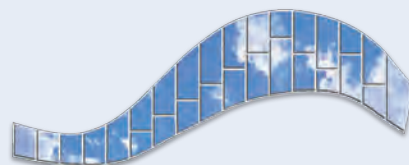


All our installations are designed and manufactured in our studio in

Fairfield, Iowa. We strive to source local materials and ship all over the world.

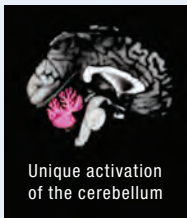
*Sky Factory products are extremely useful in deep plan areas that don't have access to natural light or views to nature.*

~ R.B., Principal and Healthcare Studio Director  
WBRC Architects/Engineers





## THE NEUROARCHITECTURE OF ILLUSIONS OF NATURE



In 2014, Texas Tech University published a paper on the effects of Sky Factory’s multisensory *Open Sky Compositions* using brain imaging technology. Analysis of the brain maps indicated the *Open Sky Compositions* shared all of the characteristic neural activations of positive images while activating several other unique brain regions. Of particular interest were those found in the cerebellum.

“Brain activation of the cerebellum is often associated with aspects of spatial cognition, in particular the experience of extended space,” said neuroscientist Dr. Michael O’Boyle.

## REDUCTION OF STRESS AND ANXIETY

In 2015, Texas Tech University published a second study that examined the impact of Luminous SkyCeilings on acute stress and anxiety in a medical-surgical inpatient unit at Covenant Health Hospital in Lubbock, TX.



The single-blind study found a difference in Acute Stress by more than half (53.40%) and a difference in Anxiety by more than a third (34.79%) in patients assigned to experimental rooms where the *illusions of sky* were installed.

## NEURAL CORRELATES OF NATURE STIMULI: AN fMRI STUDY

In 2017, the *Environmental Design Research Association* conferred on this pioneering study on neuroarchitecture its prestigious Certificate of Research Excellence (CORE).

EDRA’s CORE recognition is awarded to published, peer-reviewed studies whose rigorous and impactful practice-based design research sparks innovation and promotes best practice in environmental design.

Even 30 years since Roger Ulrich’s landmark study on the therapeutic effects of a window view to nature in patient environments, *no one has yet explored the neural correlates of multisensory nature imagery.*

The possibility that nature stimulus can be designed to evoke a multisensory illusion (a visual and spatial experience) has noteworthy implications. Images perceived as biophilic illusions can reasonably be expected to hold more robust restorative benefits than standard representational images simply on account of their deeper impact on our organs of perception. This constitutes a stimulating proposition with considerable design impact for health and sustainability.



On the eve of its publication, the study earned the Best International Research Project Award at the 2014 *Design & Health International Academy Awards*.

## THE RESTORATIVE IMPACT OF PERCEIVED OPEN SPACE A SKY FACTORY WHITE PAPER



This paper explores the impact of deep plan buildings on human performance. It analyzes the role circadian light and perceived open space play in shaping cognitive function, as well as how our psycho-physiology changes in response to different interior environments.

The paper also explores how our sensorimotor system and our memory share the same neural pathways that perceive and map our surroundings, making our memory a neural repository of *spatial reference frames*—visual perspectives that we instinctively recognize.

By reviewing the malleable nature of human perception and how multisensory illusions can be incorporated into architectural settings, the reader gains a deeper insight into how biophilic design technologies enable deep plan buildings to minimize their deleterious impact on occupants during the long lifecycles typical of today’s buildings.

# BIOPHILIA



## WHAT IS BIOPHILIA?

Coined by Erich Fromm in 1964 to describe a psychological orientation toward living systems, “biophilia” defines our connection to the natural world.

Humanity’s innate, genetic-based need to affiliate with nature and other living organisms was first proposed by Harvard biologist Edward O. Wilson in his book, *Biophilia* (1984). Wilson argued that experiencing diverse natural environments and climates strengthens and nurtures our psycho-physiological well-being.

## BIOPHILIA HYPOTHESIS

In *The Biophilia Hypothesis* (1993), Wilson and Stephen R. Kellert further proposed that man’s genetically encoded predisposition for engagement with nature must be restored to support the psycho-physiological well-being of individuals and society alike. Urbanization in the 20th century has been responsible for our dwindling connection to natural ecosystems, a trend we must reverse by redesigning cities as extensions of the natural environment.

## EVIDENCE-BASED DESIGN

Also in 1984, healthcare design researcher Roger Ulrich published an influential study showing that patients in rooms featuring windows with views to nature healed faster than patients in rooms without them. The natural environment’s role in healing then became central to the rising field of evidence-based design (EBD). In 30 years, EBD in healthcare has experimentally validated the biophilia hypothesis.

## BIOPHILIC DESIGN

In 2008, Stephen R. Kellert, co-editor of the seminal book, *Biophilic Design*, along with Judith Heerwagen and Martin Mador, defined the theory, science, and practice of bringing buildings to life.

Bringing together experts from every field, *Biophilic Design* recognizes the critical impact of nature on human health, performance, and well-being.

Among its fundamental tenets in the design of buildings fit for human occupancy are ample daylighting, green spaces, and beautiful views to nature.

## ILLUSIONS OF NATURE

Roger Ulrich’s landmark study on patient rooms with views to nature noted that realistic nature simulations can also elicit the beneficial “relaxation response” that is triggered by genuine views to nature.

Sky Factory’s *illusions of nature* are designed to deliver beauty and a consistent experience of vastness that deepens biophilic engagement, the innate mental and physical comfort we feel when we bask in spacious natural environments.

Unlike backlit photography that is representational in nature and subject to interpretation, illusions take shape in the mind. A skilled illusionist can assemble discrete visual cues in such a way that our habits of perception cannot help but reach an extraordinary conclusion.

*All the mighty world  
Of eye and ear, both what they half-create,  
And what perceive.*

~ William Wordsworth

I L L U S I O N S   O F   N A T U R E

# BIOPHILIA

O P E N   S K Y   C O M P O S I T I O N S





# THE BEST INVESTMENT FOR DEEP PLAN BUILDINGS

## INCREASE TENANT RETENTION

Buildings with large areas of inward-facing office space dull our senses and hamper cognitive function.

Given that the average useful life of a commercial building is 80 years, effective retrofit solutions to enhance human wellness are essential.

## CREATE SUSTAINABLE INTERIORS

The prevalence of windowless interiors and their detrimental effect on wellness and cognitive function have led building owners and facility planners to mitigate the impact on occupant productivity and well-being.

Sky Factory's Luminous SkyCeilings are modular and easy-to-install. They are backed by peer-reviewed published research verifying their unique ability to simulate views to nature, providing meaningful occupant outcomes.



Luminous SkyCeilings create a dramatic spatial counterpoint that endows isolated spaces with a soothing connection to open space.

## Increase perceived property value:

- Reception areas and elevator foyers
- Interior hallways and mezzanines
- Conference rooms and interior office space
- Gyms, indoor pools, and wellness centers

## Custom-tailored Installations

- Hospitality ~ reception and lounges
- Retail ~ specialty areas, fitting rooms
- Specialty ~ control rooms, casinos, labs
- Education ~ classrooms, libraries
- Cultural ~ museums, galleries, cafes



*They capture the sense of natural light that we have in the rest of the office.*

~ M.A., Portfolio Manager  
Microsoft HQ, México City



EARLY MORNING

MORNING

MID-DAY

AFTERNOON

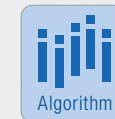
LATE EVENING

Sky Factory’s IRIS delivers our most powerful experience of biophilic engagement. IRIS computes the local diurnal and seasonal cycle for each installation in order to deliver a beautiful, real-time simulation of daylight.

Imagine—golden sunrise to cool noon and rosy sunset—IRIS mimics sunlight’s atmospheric effect filtered through our Open Sky Compositions.

The result is the deepening of the biophilic input and the consequent “Relaxation Response” that occupants experience in enclosed interiors.

Unlike standard tunable lighting systems, which lack visual content with a meaningful connection to nature, IRIS triggers the visceral experience of perceived open space with an organic infusion of color and stunning images that enliven the senses with beauty.



Algorithm

Endowed with a *light intensity algorithm* that mimics the Heraclitean patterns inherent in natural daylight, IRIS’ subtle dance of color and light enhances mental alertness during the day while helping preserve melatonin rhythm (sleep onset) after sunset.





## SKY FACTORY DIGITAL CINEMA ILLUSIONS OF NATURE

IMAGE, MOTION, SOUND—IMMERSIVE BIOPHILIA

Sky Factory's Digital Cinema products are a fusion of fine art and digital technology that provide a stunning new level of realism.

Hours-long, unedited, real-time sequences of extraordinary landscapes, seascapes, and sky views are delivered through the world's finest digital imaging technology.

Sky Factory's proprietary Digital Cinema content cannot be found anywhere else.

### SKY FACTORY SKYVIEW™

**SkyView™** is an illusion of real sky, a virtual skylight displaying the essence of nature's sky events in vivid, hours-long, Ultra HD sequences. This ceiling-mounted system uses a 4K precision monitor integrated into an architectural skylight framework to create a dramatic portal to open skies.

#### FEATURES

- Engaging skyward views
- Unedited, real-time sequences
- 5K source video
- Color-calibrated LED screens
- Professional-grade components



Sky Factory uses RED EPIC Digital Cinema™ technology to record SkyView, eEscape™, and eSea™ scenes.



## DIGITAL CINEMA VIRTUAL WINDOW™

**eScape™** Sky Factory's eScape brings the dynamic beauty of nature—real-time moving images and sound—to interior environments. A high-tech illusion, eScape features a wall-mounted, vertically oriented Full HD monitor embedded in a full-size casing window to provide a breathtaking, simulated view to nature.

### FEATURES

- Seasonal, tropical, or temperate nature scenes
- Unique, unedited panoramic views
- 5K source video
- Audiophile sound system
- Custom trim finishes available

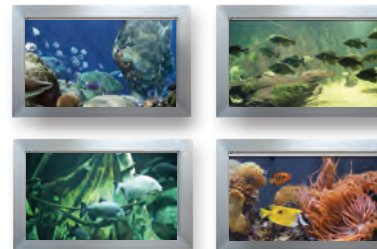
*The high-definition video and sound creates a convincing illusion; I could believe I was in a room looking out at a beautiful landscape.*

~ Henry Domke, MD and Nature Artist



## DIGITAL CINEMA VIRTUAL AQUARIA™

**eSea™** Sky Factory's eSea brings the visually soothing, psycho-physiological benefits of aquariums without the demands of maintaining a real tank. Create an elegant and relaxing environment in waiting rooms and lobbies, daycare centers and lounges, restaurants or offices with an HD virtual aquarium. Research has shown that aquariums lower blood pressure, calm the mind, and help alleviate anxiety.



Each eSea unit features scenes of living underwater environments in real-time.

### FEATURES

- Beautiful freshwater and saltwater sequences
- Exotic marine environments
- 5K source video
- Unedited, real-time scenes
- Preloaded with 5 hours of therapeutic footage



## LUMINOUS VIRTUAL WINDOWS™

Sky Factory's Luminous Virtual Windows transform enclosed interiors into more spacious-feeling and memorable environments with photographic illusions of wild natural vistas in a window-like frame. By extending the perceived horizon line, occupants perceive a restorative change of scale that enhances well-being.

### FEATURES

- Unique artistic photography
- Energy-efficient, uniform illumination
- Designed for flush or surface mounting
- Standard and custom sizes available
- Variety of trim styles and materials



Combining a virtual nature panorama with an illusory sky creates a therapeutic feeling of openness.



Arranged in multiples along with a horizontal clerestory, the array deepens the illusion of nature.

## CONTACT US

**CALL US.** Get design advice, project tools, or a quick, free, written quote.  
866.759.3228 • 641.472.1747 • info@skyfactory.com

**VISIT ONLINE.** View our portfolio. Learn about Biophilia. Review our research.

**TRANSFORM YOUR SPACE.** Request a custom render with your photos or materials.

**REVIT SPECS AVAILABLE.**



The Sky Factory is a factory-direct company, based in the USA, providing exceptional quality and the most affordable pricing in the industry.

We welcome international inquiries and ship our products worldwide.



**Inc.** magazine named Sky Factory one of North America's **Top 20 Small Company Workplaces 2010.**

## SKY FACTORY SKYMOBILE™



*Book our mobile showroom and experience our products first-hand.*

## AIA LUNCH-AND-LEARN WEBINARS

Sky Factory is an AIA Registered Continuing Education Provider. Members of the AIA, ASID and IIDA, can explore the restorative attributes of biophilic illusions of nature for interior architecture and earn credit.

## RECENT AWARDS

*Popular Choice Award*

**Ceiling Products**

2015 A + Awards

Architizer

*Best Products of the Year*

**Best of Lighting & Electrical**

2015 Architectural Record Awards

Architectural Record

*Readers' Choice Awards*

**Best Ceiling Products**

2015 Readers' Choice Awards

Interiors & Sources



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