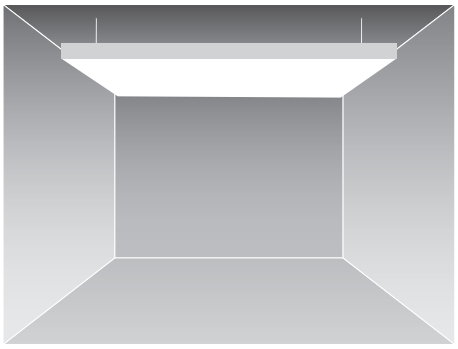
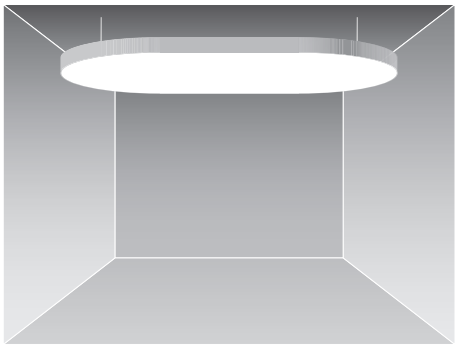
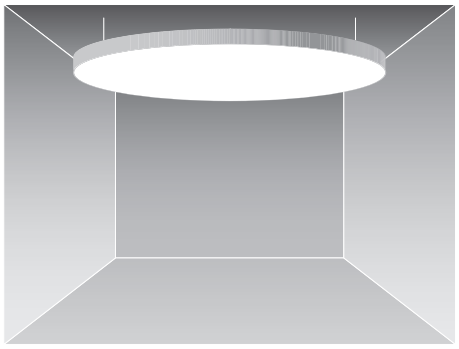
SKYSPAN SUSPENDED: SPECIFICATIONS

COOLEDGE™

PROJECT		REFERENCE TYPE	
SPECIFIED BY		QUANTITY	
DATE		NOTE	Luminous Ceiling

SKYSPAN - SUSPENDED STANDARD CONFIGURATION

Large area luminaires that are ideal for open plan spaces with higher ceilings or exposed elements. Option for additional sound absorption allows lighting and acoustic performance to be combined into a single solution.

GENERAL

Mounting Type	Surface Mount
Input Voltage	Nom. 120-277 VAC
Diffuser Material	Polyester Woven Fabric (coated) - Standard (other options available)
Frame Material	Extruded Aluminum
Light Source (Luminous Ceiling)	Cooledge TILE Products
Dust Ply Included	No (available upon request)
Maximum Seamless Dimensions	15.5ft (4.7m) x 161ft (49m) (WxL)
Frame Height	5.3 in (135mm)
Bend Radius (Curves)	Minimum 15” (380mm)
Average Weight	10’ x 10’ = 1.7lb/sqft (3m x 3m = 8.3 kg/m^2)

SPECIFICATION

A luminous surface of dimensions aa x bb consisting of a lighting system, woven polyester light emitting diffuser, and aluminum profile suspended from the ceiling surface with cables or rods.
The luminous ceiling fixture(s) forms a single or series of uniformly diffuse and seamless light emitting surfaces; providing a minimum of xx fc (lux) on the horizontal workplane; and are installable in occupied premises, without need for heating devices or water.
The surface material(s) is of a coated polyester fabric with a fire rating ASTM E 84 Class A /EN:3501-1 Class B/CAN ULC S102.2.
Light output from the luminous surface is CRI>90; provides flux within 10% of nominal and has a color consistency of 2 SDCM over the entire surface. (Single CCT & Tunable White)
Cooledge SkySpan systems are UL Listed and/or CE Compliant.

FEATURES

- **Wide Area Coverage:** Large scale luminous surfaces suspended with cable or rods bring the feeling of natural light in a more traditional form
- **Curves & Rounds**: A bendable profile allows curved shapes, rounded corners and circles with radii down to 15” (380mm)
- **Immersive Illumination:** A large luminous surface delivers a surprising amount of illumination without visual discomfort
- **Adaptable**: Choice of tunable white, dim-to-warm, W+RGB or static color temperature
- **Code Friendly**: Fire-rated polyester fabric and a fully certified lighting system eliminate inspection challenges
- **Acoustic Performance**: Exceptional sound absorption eliminates the need for acoustic baffles or clouds in open plan

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SKYSPAN SUSPENDED: SPECIFICATIONS

PHOTOMETRICS[1] (SINGLE CCT & TUNABLE WHITE)

The following assumes Cooledge's standard smooth white fabric material as the primary luminous ceiling diffuser.

Distribution	Lambertian
Light Output[2] (lm/sqft) *Available in 3000K, 3500K, 4000K, and Tunable White 2700K-5700K only	Extra High Flux (XHF) = 590 High Flux (HF) = 395 *Medium High Flux (MHF) = 305 Medium Flux (MF) = 200 *Low Medium Flux (LMF) = 150 Low Flux (LF) = 100 *Eco Power (ECO) = 65
Light Output[2] (lm/m^2) *Available in 3000K, 3500K, 4000K, and Tunable White 2700K-5700K only	Extra High Flux (XHF) = 6390 High Flux (HF) = 4260 *Medium High Flux (MHF) = 3280 Medium Flux (MF) = 2130 *Low Medium Flux (LMF) = 1620 Low Flux (LF) = 1065 *Eco Power (ECO) = 700
Correlated Color Temperature (CCT)	2200K, 2700K, 3000K, 3500K, 4000K, 5700K, Tunable White 2700K-5700K, 2200K-3500K Dim-to-Warm 3500K-2200K
Color Rendering Index (CRI)	≥ 90
Color Uniformity	2 SDCM (typical)
Lumen Maintenance[3]	L80 = 75,000 hr

1 Photometric files available from cooledgelighting.com
2 Based on a 10'x10' (3mx3m) area - refer to SkySpan Size Factors for other sizes
3 Based on LM80 data & TM-21 calculations

Cooledge has conducted extensive testing on the interaction between the light source and the surface materials to deliver the optical and photometric properties of the Solution.

TM-30-15 DATA

CCT	2200K	2700K	3000K	3500K	4000K	5700K	TNW*
Rf	88	91	90	89	86	88	90
Rg	99	99	98	98	96	98	100

For more details about Cooledge Solutions color rendering, please see "Light Quality Metrics" at www.cooledgelighting.com

** = Tunable White @50% point in the tunable range 2700K - 5700K*

PHOTOMETRICS (W+RGB)

	lm/sqft*	lm/m^2*
W (3500K)	320	3450
Full W+RGB	640	6900
Red only	95	1020
Green only	260	2800
Blue only	55	600

**Approximate: actual flux values may vary depending on the size and shape of the Specialty Illumination Solution.*

WHITE - 3500K

Correlated Color Temperature (CCT)	3500K
CRI (Ra) - White	94
R9	64
Color Unigormity - White (Typical)	3 SDCM
Lumen Maintenance (L70)	50,000 hr

WHITE - W+RGB: OTHER CCTS*

Nominal CCT	Calculated CCT	CRI	R9
2700K	2752K	80	51
3000K	3080K	90	79
3500K	3465K	95	95
4000K	3985K	95	97
5000K	5031K	93	96
5700K	5640K	91	88

SKYSPAN SUSPENDED: SPECIFICATIONS

POWER (SINGLE CCT & TUNABLE WHITE)

Flux Category	Light Output (lm/sqft)	Light Output (lm/m^2)	CCT	Power (W/sqft)	Power (W/m^2)
Extra High Flux (XHF)	590	6390	2200K	n/a	n/a
			2700K	7.8	83.4
			3000K	7.1	76.2
			3500K	7.0	75.0
			4000K	7.0	75.0
			5700K	7.0	75.0
High Flux (HF)	395	4260	2200K	5.6	60.4
			2700K	5.2	55.6
			3000K	4.8	52.0
			3500K	4.6	49.6
			4000K	4.6	49.6
			5700K	4.7	50.8
Medium High Flux (MHF)	305	3280	2700K	4.0	43.4
			3000K	3.7	40.0
			3500K	3.6	38.4
			4000K	3.6	38.4
Medium Flux (MF)	200	2130	2200K	2.8	30.2
			2700K	2.6	27.8
			3000K	2.5	26.6
			3500K	2.2	24.2
			4000K	2.4	25.4
			5700K	2.2	24.2
Low Medium Flux (LMF)	150	1620	2700K	2.0	21.0
			3000K	1.8	19.4
			3500K	1.7	18.6
			4000K	1.7	18.6
Low Flux (LF)	100	1065	2200K	1.3	14.5
			2700K	1.2	13.3
			3000K	1.2	13.3
			3500K	1.1	12.1
			4000K	1.1	12.1
			5700K	1.1	12.1
Eco Power (ECO)	65	700	2700K	0.9	9.3
			3000K	0.8	8.6
			3500K	0.8	8.2
			4000K	0.8	8.2

Note: for Tunable White use 2700K power value; for Dim-to-Warm use 3500K value

POWER (W+RGB)

	W/sqft	W/m^2
W (3500K)	5.8	62
Full W+RGB	23	248
Red only	5.8	62
Green only	5.8	62
Blue only	5.8	62

CERTIFICATIONS

c UL us LISTED

CE

RoHS

WARRANTY

Refer to Cooledge Terms and Conditions for full warranty details.

SKYSPAN SUSPENDED: SPECIFICATIONS

BUILD-TO-ORDER FLUX VS POWER

For applications that require a more precise selection of flux/power combinations than is offered by standard SkySpan/SkyLine options, Cooledge offers a “Build-To-Order” (BTO) program that allows you to choose a non-standard flux/power combination to optimize for power density while still meeting the required illumination levels for your design.

Refer to the table below and select either a desired power level with corresponding light output level, or conversely, choose the minimum flux level that delivers the required illumination to determine the power level.

Flux (lm/sqft)	2200K	2700K	3000K	3500K	4000K	5700K
65	0.9	0.8	Standard			0.8
100	Standard					
125	1.7	1.6	1.5	1.4	1.5	1.5
150	2.1	1.9	Standard			1.7
175	2.4	2.2	2.1	2.0	2.0	2.0
200	Standard					
225	3.2	2.9	2.7	2.6	2.6	2.6
250	3.5	3.2	3.0	2.9	2.9	2.9
275	3.9	3.5	3.3	3.2	3.2	3.2
300	4.3	3.9	3.6	3.5	3.5	3.5
305	4.4	4.0	Standard			3.6
325	4.6	4.2	3.9	3.8	3.8	3.8
350	5.0	4.5	4.2	4.0	4.1	4.1
375	5.3	4.9	4.5	4.3	4.4	4.4
395	Standard					

Flux (lm/sqft)	2200K	2700K	3000K	3500K	4000K	5700K
425	6.1	5.5	5.1	4.9	4.9	5.0
450	6.4	5.8	5.4	5.2	5.2	5.3
475	6.8	6.2	5.7	5.5	5.5	5.6
500	7.2	6.5	6.0	5.8	5.8	5.9
525	7.5	6.8	6.3	6.1	6.1	6.1
550	7.9	7.1	6.6	6.4	6.4	6.4
575	8.2	7.5	6.9	6.7	6.7	6.7
590	Standard					
625	9.0	8.1	7.5	7.2	7.3	7.3
650	9.3	8.4	7.8	7.5	7.6	7.6
675	9.7	8.8	8.1	7.8	7.8	7.9
700	10.1	9.1	8.4	8.1	8.1	8.2
725	10.4	9.4	8.7	8.4	8.4	8.5
750	10.8	9.8	9.0	8.7	8.7	8.8
775	11.2	10.1	9.3	9.0	9.0	9.1

Notes:

1 Power levels shown are for SkySpan/SkyLine systems including power supplies and control modules.

2. Luminous flux values are based on calculations with a tolerance of ±5% of the value shown.

SKYSPAN SUSPENDED: SPECIFICATIONS

Flux (lm/m^2)	2200K	2700K	3000K	3500K	4000K	5700K
700	9.2	8.8	Standard			8.2
1065	Standard					
1420	18.5	17.1	16.4	15.4	15.7	15.6
1620	22.4	20.6	Standard			18.8
1950	26.3	24.1	22.9	21.6	22.0	21.9
2130	Standard					
2490	34.1	31.2	29.3	27.9	28.2	28.3
2670	38.0	34.7	32.5	31.0	31.3	31.4
3020	41.9	38.2	35.7	34.1	34.5	34.6
3190	45.8	41.7	38.9	37.2	37.6	37.7
3280	46.9	42.7	Standard			38.6
3550	49.7	45.2	42.1	40.4	40.7	40.9
3730	53.6	48.7	45.4	43.5	43.8	44.1
4090	57.5	52.2	48.6	46.6	47.0	47.2
4260	Standard					

Flux (lm/m^2)	2200K	2700K	3000K	3500K	4000K	5700K
4610	65.3	59.3	55.0	52.8	53.2	53.5
4790	69.2	62.8	58.2	56.0	56.3	56.7
5150	73.1	66.3	61.4	59.1	59.4	59.9
5330	77.0	69.8	64.6	62.2	62.6	63.0
5680	81.0	73.3	67.8	65.3	65.7	66.2
5860	84.8	76.8	71.0	68.4	68.8	69.3
6220	88.8	80.3	74.2	71.6	71.9	72.5
6390	Standard					
6750	96.6	87.4	80.7	77.8	78.2	78.8
6920	100.5	90.9	83.9	80.9	81.3	82.0
7280	104.4	94.4	87.1	84.1	84.4	85.1
7460	108.3	97.9	90.3	87.2	87.5	88.3
7810	112.2	101.4	93.5	90.3	90.7	91.4
7990	116.1	104.9	96.7	93.4	93.8	94.6
8340	120.0	108.4	99.9	96.5	96.9	97.8

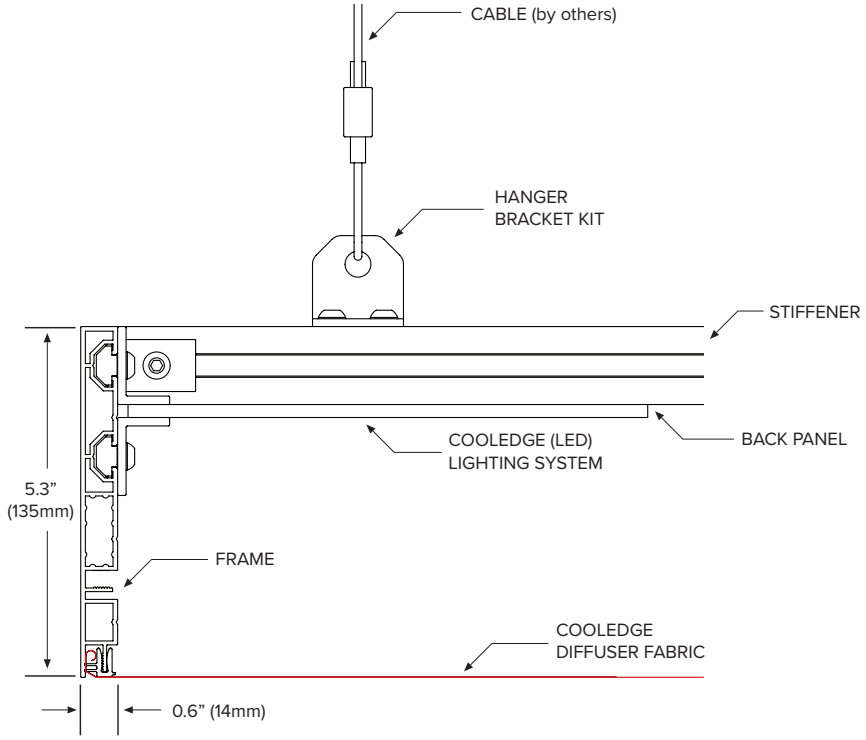
Notes:

1 Power levels shown are for SkySpan/SkyLine systems including power supplies and control modules.

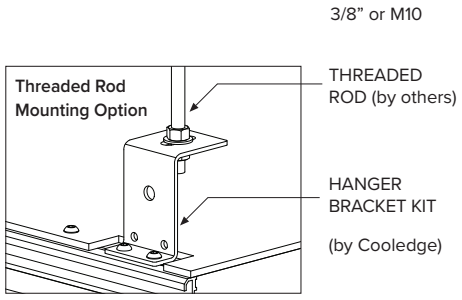
2. Luminous flux values are based on calculations with a tolerance of ±5% of the value shown.

SKYSPAN SUSPENDED: SPECIFICATIONS

MECHANICAL DETAILS



X-Section



Cooledge SkySpan systems include the illumination source, frame, mounting hardware, diffuser fabric, and installation of all non-electrical components

GENERAL

Location	Indoor, dry location only
Operating Temp. Range	0-40°C (32-104°F)
Storage Temp. Range	-40-85°C (-40-185°F)
Relative Humidity	90% max (non-condensing)
Fire Spread	ASTM E84: Class A (FSI = 0–25); EN13501-1: Class B – s1,d0; CAN ULC S102.2.

ACOUSTIC PERFORMANCE

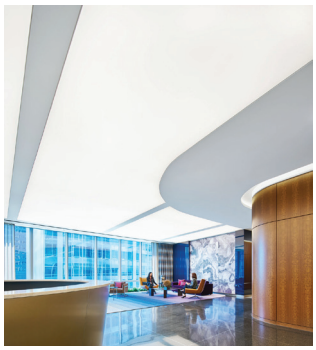
When used in conjunction with an acoustic lighting system from Cooledge, SkySpan and SkyLine products provide exceptional acoustic performance that when combined with their large surface area result in significant noise reduction capability.

Mounting Type	Noise Reduction Coefficient	Sound Absorption Average	Weighted Sound Absorption Coefficient (ISO EN11654)
	NRC	SAA	αw
Suspended	0.90	0.91	0.90
Surface Mount	0.60	0.62	0.45 (M)

SKYSPAN SUSPENDED: SPECIFICATIONS

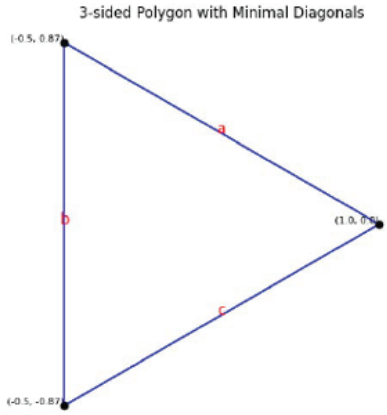
COMPLEX SHAPES

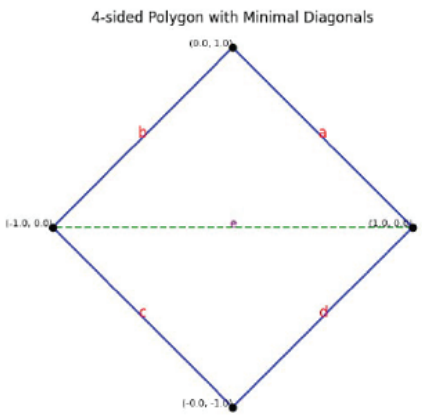
Cooledge SkySpan systems are generally configured in simple geometric shapes such as squares, rectangles, and circles. However, many other forms are possible – especially with Flush Mount systems. Symmetrical and non-symmetrical polygons as well as curved shapes including but not restricted to ovals are all possible.

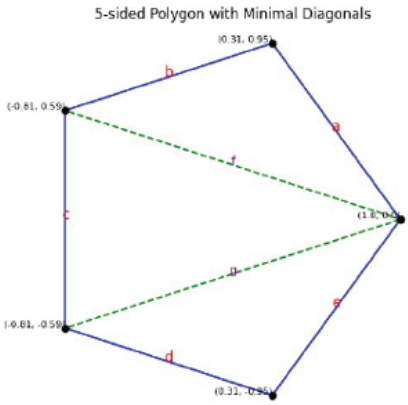


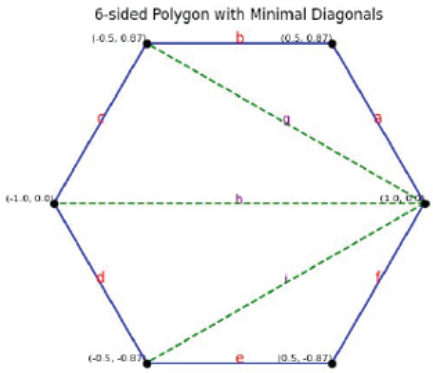
Cooledge will work with you to define the required dimensions for inclusion in your design and to guide related construction details. Below are examples of symmetrical polygons and the dimensions required to correctly define them.

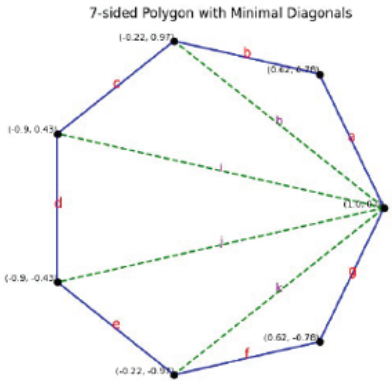
REQUIRED DIMENSIONS FOR POLYGONS

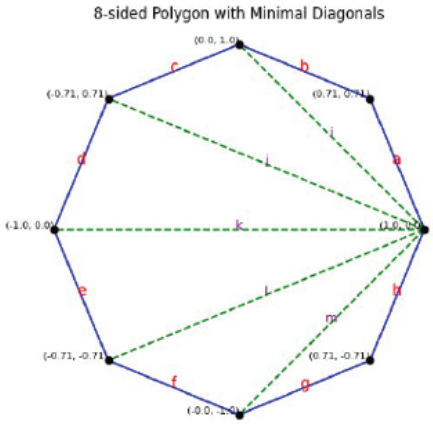












COOLEDGE™
Light as a building material

SKYSPAN SUSPENDED: SPECIFICATIONS

POWER AND CONTROL

SkySpan include all mechanical, electrical, and lighting components required including power supplies and Cooledge Control Modules selected from the options listed below.

Specifications for the power supplies and Cooledge Control Modules shown below are available in the following documents:
- Power and Control Specifications (cUL Listed)
- Power and Control Specifications (CE Compliant)

POWER SUPPLIES (54V) - cUL Listed

Order Code	# Controller Channels *	Enclosure
EPSS-092-54V-UL	1	Yes
EPSS-200-54V-UL	2	Yes
EPSS-400-54V-UL	4	Yes

**Class 2 (max 90W) output*

POWER SUPPLIES (54V) - CE Compliant

Order Code	# Controller Channels*	Enclosure
EPSS-092-54V-CE	1	Yes
EPSS-200-54V-CE	2	Yes
EPSS-400-54V-CE	4	Yes

**Class 2 (max 90W) output*

ATHENA WIRELESS
LUTRON

COOLEDGE CONTROL MODULES (54V) - Static CCT

Order Code	Protocols
CTR-SCT-DAL/010-48/58V	0-10V, DALI
CTR-SCT-DMX-48/58V	DMX
CTR-SCT-CAS-48/58V	Casambi (wireless)

COOLEDGE CONTROL MODULES (54V) - TUNABLE WHITE

Order Code	Function	Protocols
CTR-TNW-DAL/010-48/58V	Tunable White	0-10V, DALI
CTR-TNW-DMX-48/58V	Tunable White	DMX
CTR-TNW-CAS-48/58V	Tunable White	Casambi (Wireless)
CTR-DTW-DAL/010-48/58V	Dim-to-Warm	0-10V, DALI
CTR-DTW-DMX-48/58V	Dim-to-Warm	DMX
CTR-DTW-CAS-48/58V	Dim-to-Warm	Casambi (Wireless)

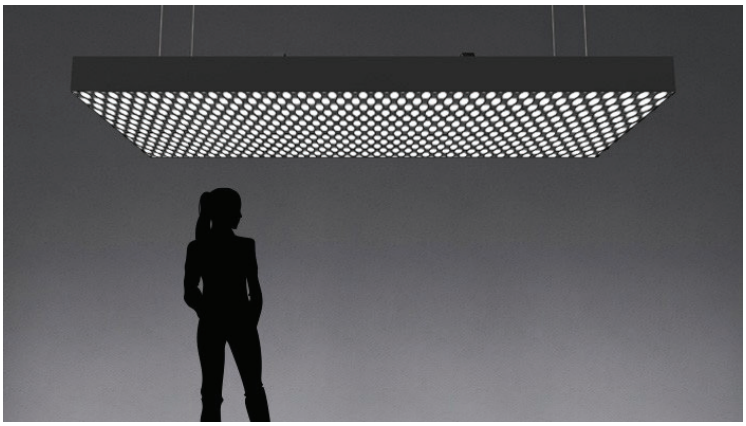
W+RGB solutions require alternate power & controls (DMX & Casambi only). Please contact Cooledge for details.

SKYSPAN SUSPENDED: SPECIFICATIONS

FAUX PERFORATED METAL (PRINTED)

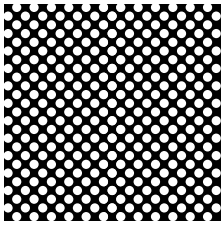
Make your design unique by adding the look of illuminated perforated metal panels to your SkySpan or SkyLine system using images printed right on the diffuser fabric.

Combine exceptional quality illumination, true acoustic performance, and visual interest in one simple luminaire solution.

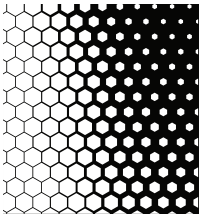


STANDARD PATTERNS

The following are standard patterns available from Cooledge. We are also able to work with other images that you have selected.



PATTERN A



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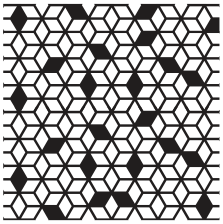

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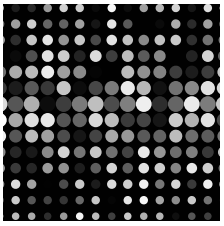
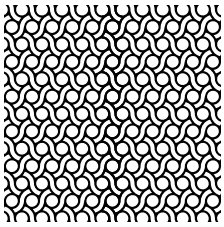
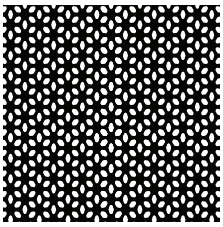


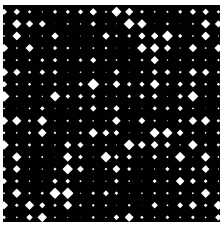
PATTERN D



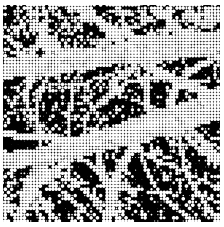
PATTERN E



PATTERN F



PATTERN G



PATTERN H

DIFFUSER OPTIONS – DESIGNER SERIES FOR LUMINOUS CEILINGS

In addition to our standard smooth white fabric diffuser, Cooledge offers options to change aesthetic appeal of its luminous ceiling product by introducing the Designer Series of fabric diffusers. These fabrics add an element of texture to your design and elevates the luminous ceiling from the appearance of a traditional light fixture to a unique architectural element.

WAFFLE CONTOURS

Add some sparkle and depth with this fabric option that allows a hint of the LEDs to shine through a waffle pattern structured surface

TEXTURED

The fabric (cotton) weave pattern adds a subtle texture to the appearance of the fabric without impacting the light transmission performance.

SKYSPAN SUSPENDED: SPECIFICATIONS

HOW TO SPECIFY

NOTE: By their nature, Cooledge SkySpan and SkyLine are custom products. These Specification Codes are provided for use as simple references to SkySpan/SkyLine in specifications and/or construction documents and do 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 Cooledge, the dimensions and are required. Cooledge may also request additional information before issuing a quotation or accepting a purchase order.

SKYS	-	**SU**	-	_____	-	_____	-	_____	-	_____	-	_____	-	_____	-	_____	-	_____
1		2		3		4		5		6		7		8		9		10

1 PRODUCT
SKYS = **S**kySpan

2 TYPE
SU = **Su**spended
SM = **S**urface **M**ount
FM = **F**lush **M**ount

3 SHAPE
REC = **R**ectangle
CIR = **C**ircle
CUR = **C**urve
POLY = **P**olygon

4 FLUX
XHF = E**x**tra **H**igh **F**lux
HF = **H**igh **F**lux
MF = **M**ed **F**lux
MHF = **M**ed **H**igh **F**lux
LF = **L**ow **F**lux
LMF = **L**ow **M**edium **F**lux
ECO = **E**co **P**ower

5 CCT
22 = **22**00K
27 = **27**00K
30 = **30**00K
35 = **35**00K
40 = **40**00K
57 = **57**00K
TNW2757 = Tunable White 2700-5700K
TNW2235 = Tunable White 2200-3500K
DTW3522 = Dim-To-Warm 3500-2200K

6 CONTROL
010 = 0-10V
DAL = DALI
DMX = DMX
CAS = Casambi (Wireless)
ATH = Athena (Wireless)

7 DIFFUSER
STD = Smooth White
TXT = Textured White
WAF = Waffle Contour White
FPRF-x = Faux Perforated Metal – Pattern x (printed)
GRPH = Custom Graphic Image (printed)

8 ACOUSTIC
STD = Standard (Not tested)
ACU = Acoustic (NRC=0.90)

9 PROFILE FINISH
B = Black
W = White

10 CERTIFICATION
UL = **U**L Listed
CE = **C**E Compliant

INSTALLATION

Installation of Cooledge SkySpan and SkyLine products is included in the purchase of the product.
Installation of these products must be done by a Cooledge approved installer.