



# ABI

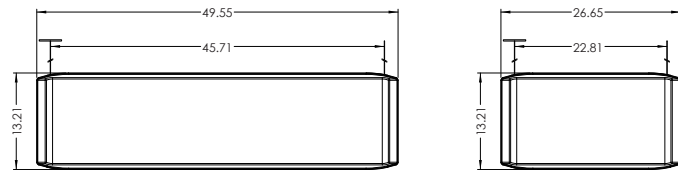
## Direct/Indirect - Pendant - Acoustic

Absorb I is a set length acoustic driven fixture. The luminaires are designed to be joined together to create unique patterns, but can also live independently as stand alone center piece fixtures.

- 180 ° and 90 ° joiners for custom configurations
- Individual 2' & 4' units that can be joined to create patterns.
- Multiple felt colors to choose from.



### DIMENSIONS



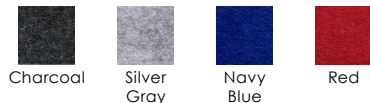
### PERFORMANCE

OUTPUT	DISTRIBUTION	NOMINAL LUMEN OUTPUT		INPUT WATT	EFFICACY
		INDIRECT	DIRECT		
LH HIGH	LOW GLARE LAMBERTIAN	-	808 lm / ft	10.3 W / ft	75 lm / W
	SYMMETRIC WIDE	1013 lm / ft	-	12 W / ft	85 lm / W
	SYMMETRIC EXTRA-WIDE	908 lm / ft	-	12 W / ft	76 lm / W
	ASYMMETRIC	1154 lm / ft	-	12 W / ft	96 lm / W
LS STANDARD	SYMMETRIC	-	417 lm / ft	5 W / ft	83 lm / W
	SYMMETRIC WIDE	526 lm / ft	-	5.5 W / ft	95 lm / W
	SYMMETRIC EXTRA-WIDE	471 lm / ft	-	5.5 W / ft	85 lm / W
	ASYMMETRIC	599 lm / ft	-	5.5 W / ft	108 lm / W

Based on static white 3500K. For the complete photometric data of this fixture go to page 3.

### FELT OPTIONS

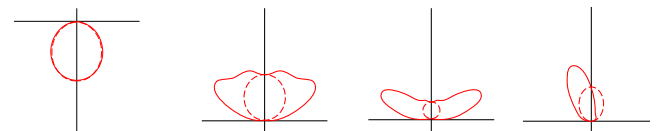
#### Standard colors



#### Premium colors

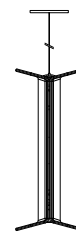


### LENS OPTIONS



Low glare lambertian(LG)      Batwing wide (BW)      Batwing extra-wide (BWW)      Asymmetric (ASY)

### MOUNTING OPTIONS

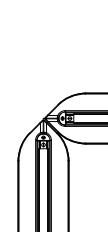


Air craft cable (S)

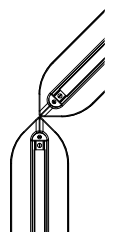
### JOINER OPTIONS



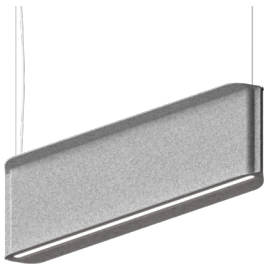
180 °



90 °



Custom



PROJECT INFORMATION

Project Info	Date
<input type="text"/>	<input type="text"/>
Type	Quantity
<input type="text"/>	<input type="text"/>



Need help?

Don't see what you need?

We know that having so many options can be overwhelming. Please reach out to our factory for any specific request or questions you have. Our talented Design Assist team is here to make the process move smoothly.

PERFORMANCE AT 3500K

OUTPUT	DISTRIBUTION	NOMINAL LUMEN OUTPUT		INPUT WATT	EFFICACY
		INDIRECT	DIRECT		
LH HIGH	LOW GLARE LAMBERTIAN	-	808 lm / ft	10.3 W / ft	75 lm / W
	BATWING WIDE	1013 lm / ft	-	12 W / ft	85 lm / W
	BATWING EXTRA-WIDE	908 lm / ft	-	12 W / ft	76 lm / W
	ASYMMETRIC	1154 lm / ft	-	12 W / ft	96 lm / W
LS STANDARD	LOW GLARE LAMBERTIAN	-	417 lm / ft	5 W / ft	83 lm / W
	BATWING WIDE	526 lm / ft	-	5.5 W / ft	95 lm / W
	BATWING EXTRA-WIDE	471 lm / ft	-	5.5 W / ft	85 lm / W
	ASYMMETRIC	599 lm / ft	-	5.5 W / ft	108 lm / W

Based on static white 3500K. For the complete photometric data of this fixture go to page 3.

ORDERING CODE

ABI	+	S
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ABI	+	S							
SERIES	FIXTURE TYPE	PATTERN	OUTPUT	INDIRECT DISTRIBUTION	DIRECT DISTRIBUTION	LED CCT	OPTIONS	FIXTURE SIZE	VOLTAGE
ABI	1 Indirect 2 Direct/Indirect 3 Direct N No light	- Nominal length* PR_ Rectangle/Square** CP Custom pattern***  If single fixture is required leave case blank. *Specify to nearest nominal 2' or 4' (i.e. PS4, PS6, PS12, etc.) **Specify to nearest nominal 2' (i.e. PR4x4, PR8x8, PR6x10, etc.) ***Contact Design Assist for custom patterns.	ILS Indirect LED Standard ILH Indirect LED High IC_ Indirect LED Custom* + DLS Direct LED standard DLH Direct LED High DC_Direct LED Custom*	BW Batwing wide BWW Batwing extra-wide ASY TIR asymmetric  *If fixture type does not require uplight, leave case empty. **If different optics are required, contact Design Assist.	LG Low glare lambertian  *If selected fixture type does not require downlight, leave case empty.	27 2700K 30 3000K 35 3500K 40 4000K DW Dim-to-warm (2700K to 5000K)* TW Tunable white (2700K to 5000K)*  * Standard CCT range is 2700-5000K. Contact design assist for custom range.	- 80+ CRI 90CRI 90+ CRI	R Regular (Nominal 4') S Small (Nominal 2') RS Regular 4' & small 2'*	U 120V-277V 3 347V

S	MOUNTING	FINISH	ACOUSTIC FINISH	CIRCUITING	DIMMING	EMERGENCY	SENSORS
S	Aircraft Cable*	T Titanium W White B Black O_Other*	<p><b>Standard Colors</b></p> <p>CHF SGF NBF REF</p> <p><b>Premium Colors</b></p> <p>AWF SBF PGF PNF DYF LBF ABF LGF ZFF TOF BTF DBF GGF TPF BOF TGF OBF DTF PPF PBF BBF MGF BGF BYF BKF OAF</p> <p>*Specify RAL# Black power cord provided for black and titanium finish and white power cord provided for all other fixture finishes, unless otherwise specified. **See Acoustic color chart for reference. Premium colors require longer lead time. ***For multiple colors within same pattern, contact design assist.</p>	1 One circuit 2 Multi circuit* M Other**	D Standard 0-10V dimming* D1 HiLume Ecosystems 1% (LDEI) D2 ELV 5% dimming D3 DMX 0.1% dim-to-dark D4 DALI dim-to-off NAIR nLight @AIR (dim-to-off)** NWIR nLight @Wired (dim-to-off)	EC Circuted E_ Battery*  *Factory-installed emergency battery pack. Specify desired quantity of batteries. Not available in nominal 2' fixture. Not available for 347V. See technical data for more information.	OC Occupancy Sensor PC Photocell/Daylight Sensor OPC Occ. & Daylight Sensor  *Sensor will be matched to dimming input. Fixture mounted sensors not available. **All sensors are ceiling mounted.

**LIGHT DISTRIBUTION**

DISTRIBUTION

Direct Low glare lambertian  
 Indirect Batwing wide  
 Indirect Batwing extra-wide  
 Indirect Asymmetric

OUTPUT (DC)

LH: Uplight high output - 12 W/ft  
 LS: Uplight standard output - 5.5 W/ft  
 C: Custom tuned output - Contact Design Assist

DLH: Downlight high output - 10.3 W/ft  
 DLS: Downlight standard output - 5 W/ft  
 C: Custom tuned output - Contact Design Assist

PERFORMANCE AT 3500K

OUTPUT	DISTRIBUTION	NOMINAL LUMEN OUTPUT		INPUT WATT	EFFICACY
		INDIRECT	DIRECT		
LH HIGH	LOW GLARE LAMBERTIAN	-	808 lm / ft	10.3 W / ft	75 lm / W
	BATWING WIDE	1013 lm / ft	-	12 W / ft	85 lm / W
	BATWING EXTRA-WIDE	908 lm / ft	-	12 W / ft	76 lm / W
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LS STANDARD	SYMMETRIC	-	417 lm / ft	5 W / ft	83 lm / W
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	ASYMMETRIC	599 lm / ft	-	5.5 W / ft	108 lm / W

Based on static white 3500K.

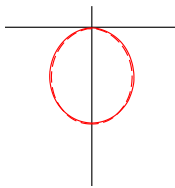
**PHOTOMETRIC DATA**

DIRECT LOW GLARE LAMBERTIAN

LH - 4FT - 3500K - Low glare lambertian

Lumens: 808 lm/ft  
 Input watts: 10.3 W/ft  
 Efficacy: 75 lm/W

LH: ———  
 LS: - - - - -

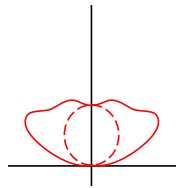


INDIRECT BATWING WIDE

LH - 4FT - 3500K - LEDIL Linda up

Lumens: 1013 lm/ft  
 Input watts: 12 W/ft  
 Efficacy: 85 lm/W

LH: ———  
 LS: - - - - -

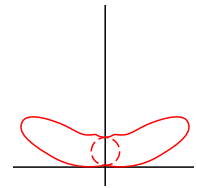


INDIRECT BATWING EXTRA-WIDE

LH - 4FT - 3500K - LEDIL Linda up 2

Lumens: 908 lm/ft  
 Input watts: 12 W/ft  
 Efficacy: 76 lm/W

LH: ———  
 LS: - - - - -

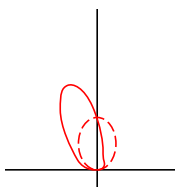


INDIRECT ASYMMETRIC

LH - 4FT - 3500K - LEDIL Linda ZT25

Lumens: 1154 lm/ft  
 Input watts: 12 W/ft  
 Efficacy: 96 lm/W

LH: ———  
 LS: - - - - -



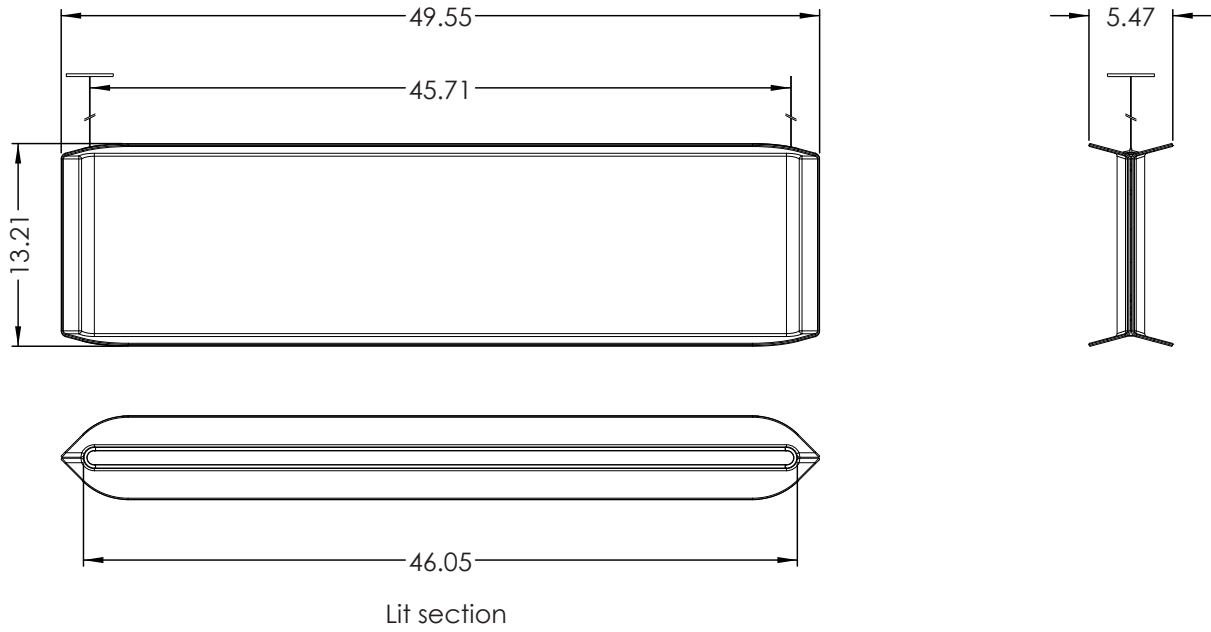
**LIGHT LOSS FACTORS (LLF)**

OUTPUT	CCT	LLF RATIO		DIRECT		INDIRECT					
						BATWING WIDE		BATWING EXTRA-WIDE		ASYMMETRIC	
		CRI 80+	CRI 90+	CRI 80+	CRI 90+	CRI 80+	CRI 90+	CRI 80+	CRI 90+	CRI 80+	CRI 90+
LH (high)	4000k	102.1%	90.4%	808 lm/ft	713 lm/ft	1013 lm/ft	894 lm/ft	908 lm/ft	802 lm/ft	1154 lm/ft	1019 lm/ft
	3500k	100%	87.5%	791 lm/ft	690 lm/ft	992 lm/ft	865 lm/ft	889 lm/ft	775 lm/ft	1130 lm/ft	986 lm/ft
	3000k	96.3%	82.8%	761 lm/ft	652 lm/ft	954 lm/ft	817 lm/ft	855 lm/ft	733 lm/ft	1087 lm/ft	931 lm/ft
	2700k	92.7%	78.6%	732 lm/ft	618 lm/ft	918 lm/ft	775 lm/ft	823 lm/ft	695 lm/ft	1046 lm/ft	883 lm/ft
LS (standard)	4000k	102.1%	90.4%	417 lm/ft	368 lm/ft	526 lm/ft	464 lm/ft	471 lm/ft	416 lm/ft	599 lm/ft	529 lm/ft
	3500k	100%	87.5%	408 lm/ft	356 lm/ft	515 lm/ft	449 lm/ft	461 lm/ft	402 lm/ft	586 lm/ft	512 lm/ft
	3000k	96.3%	82.8%	393 lm/ft	337 lm/ft	495 lm/ft	424 lm/ft	444 lm/ft	380 lm/ft	564 lm/ft	483 lm/ft
	2700k	92.7%	78.6%	378 lm/ft	319 lm/ft	477 lm/ft	402 lm/ft	427 lm/ft	360 lm/ft	543 lm/ft	458 lm/ft

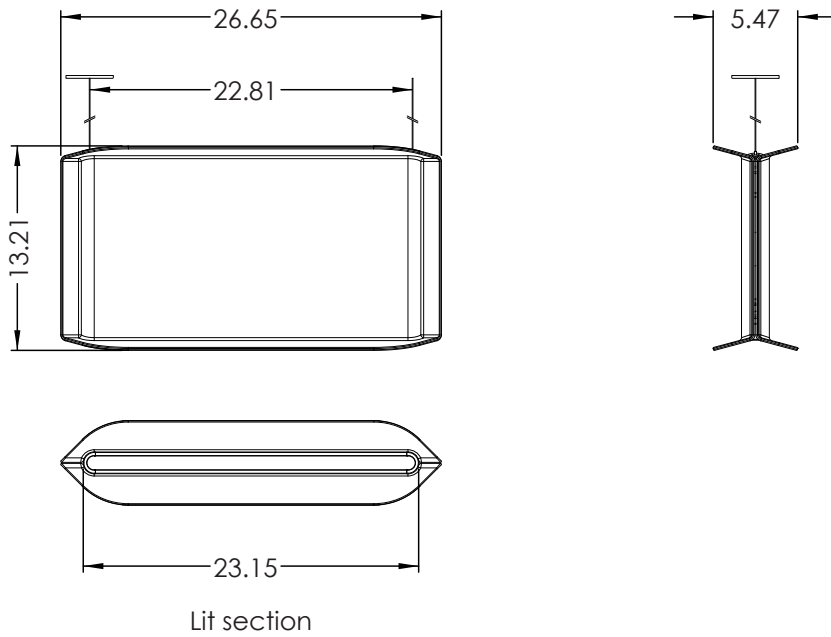
Factors above for high output (LH).  
 For standard output (LS) -50%.

FIXTURE DIMENSIONS

Absorb I regular



Absorb I small

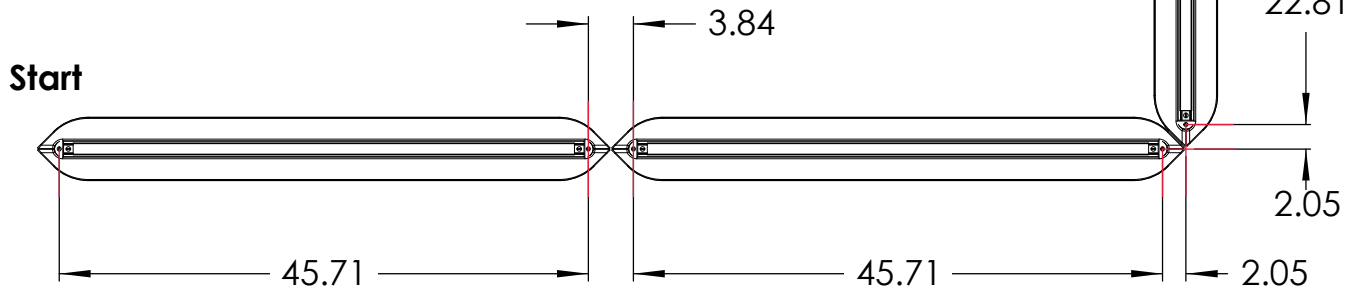
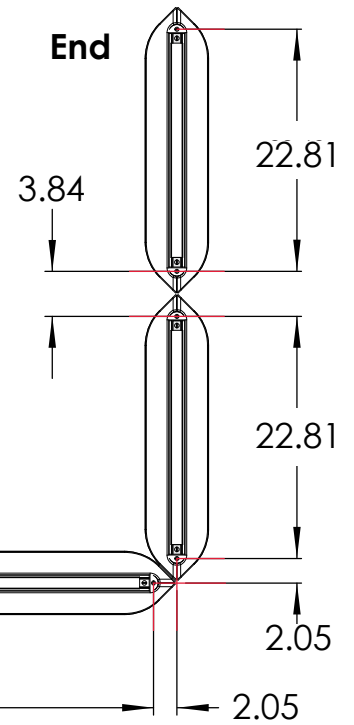
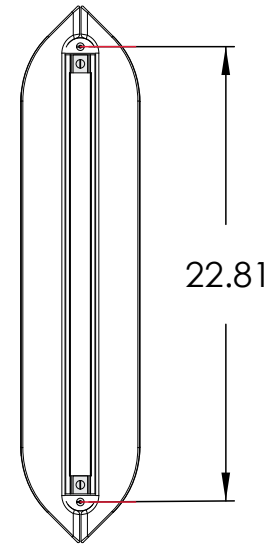
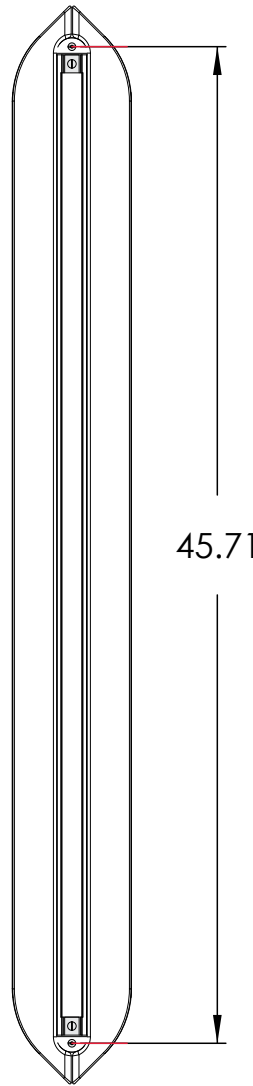


**NOTE**

All adjacent corner joined fixtures must have aircraft cables on each fixture.

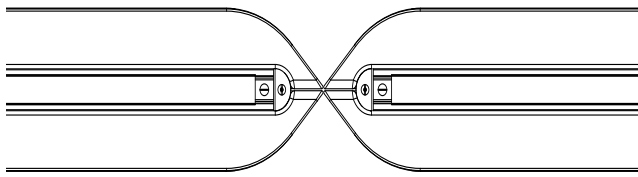
Dimensions are always calculated from the center of the aircraft cable

Refer to aircraft cable installation sheet to properly install your mounting points

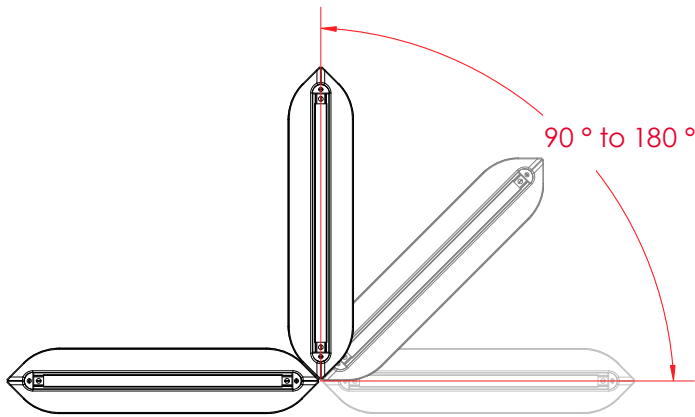


JOINERS

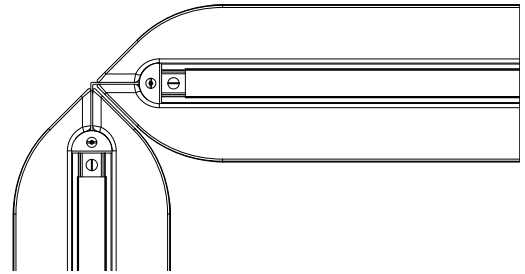
180° (straight)



Custom



90° (corner)

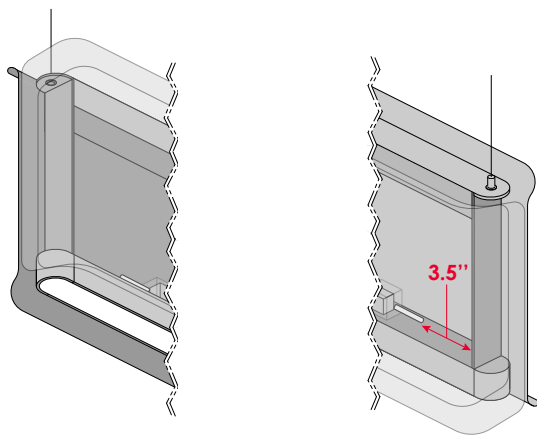


The joiners create a physical connection between multiple fixtures, giving the designer creative flexibility. They also act as an electrical bridge for connections to be passed from one fixture to the next allowing a group of connected Absorb I's to feed off one power drop.

Custom angles can go from 90° to 180°. Acute angles are not possible. For custom joiner angles please contact our Design Assist team.

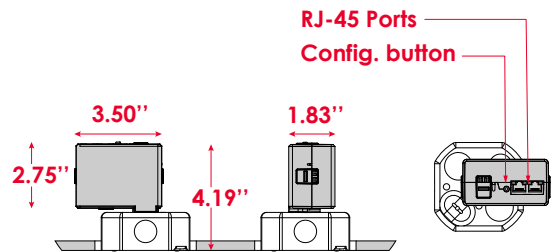
NLIGHT DIMENSIONS

AIR : r10



\* nLight components completely integrated into the fixture. (Not visible)

Wired : nPP16

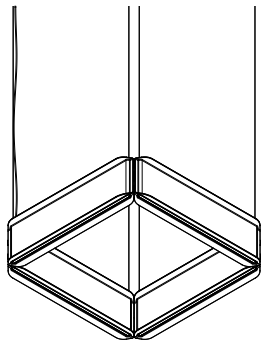


\*Mounted on standard 4" octagonal j-box. Fits on any j-box with 5/8" knockouts

CONFIGURATIONS

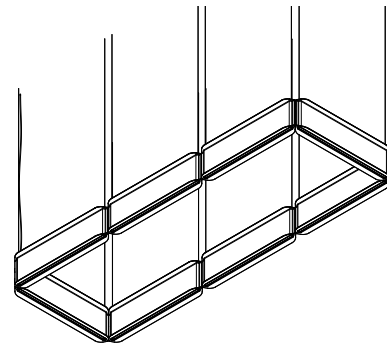
Square (PR16) : 90° joiners

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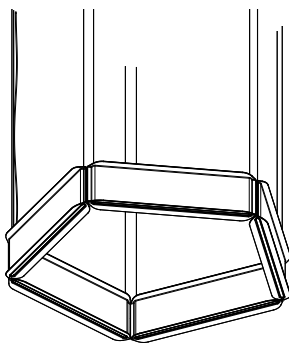
Rectangle (PR32) : 90° joiners & 180° joiners

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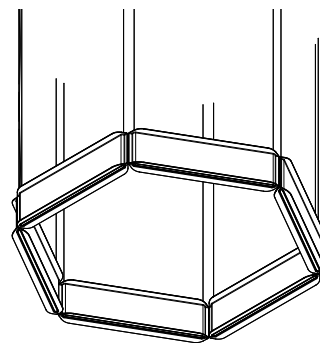
Pentagon (CP) : Custom 108° joiners

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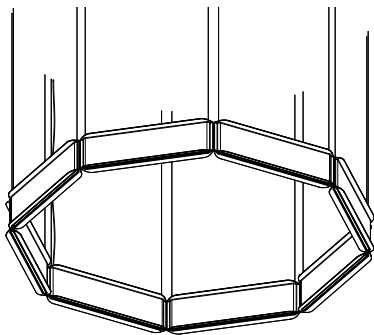
Hexagon (CP) : Custom 120° joiners

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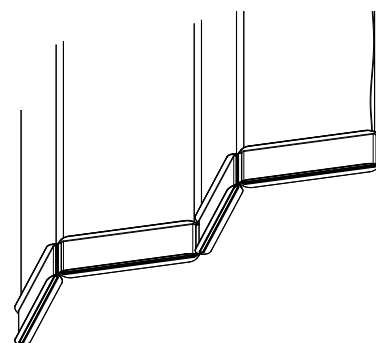
Octagon (CP) : Custom 135° joiners

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Zig zag (CP) : Custom 120° joiners

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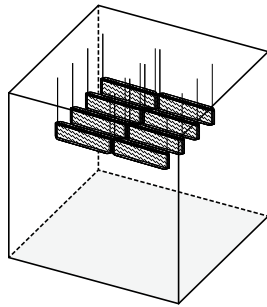
ACOUSTICAL PERFORMANCE

The acoustic testing of our fixtures enables us to get data such as the average Sabins per object and the sound absorbing coefficient (Sabins/ft<sup>2</sup>). One Sabins is the equivalent of 1ft<sup>2</sup> of perfect sound absorption. This coefficient enables us to calculate the apparent noise reduction coefficient (NRC) of our test layout. For the

ABSORB I, we tested two acoustic configurations, the ABI fixtures spaced 24 inches apart and 55 inches apart to help us understand better how different layouts might affect the acoustic performances of a space.

Test layout ABI (24 in distance)

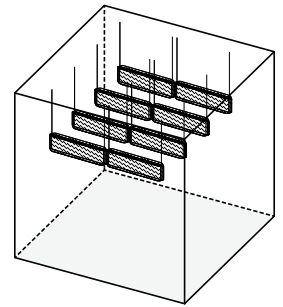
- 250Hz - 3.00 Sabins
- 500Hz - 6.40 Sabins
- 1000Hz - 9.39 Sabins
- 2000Hz - 10.05 Sabins



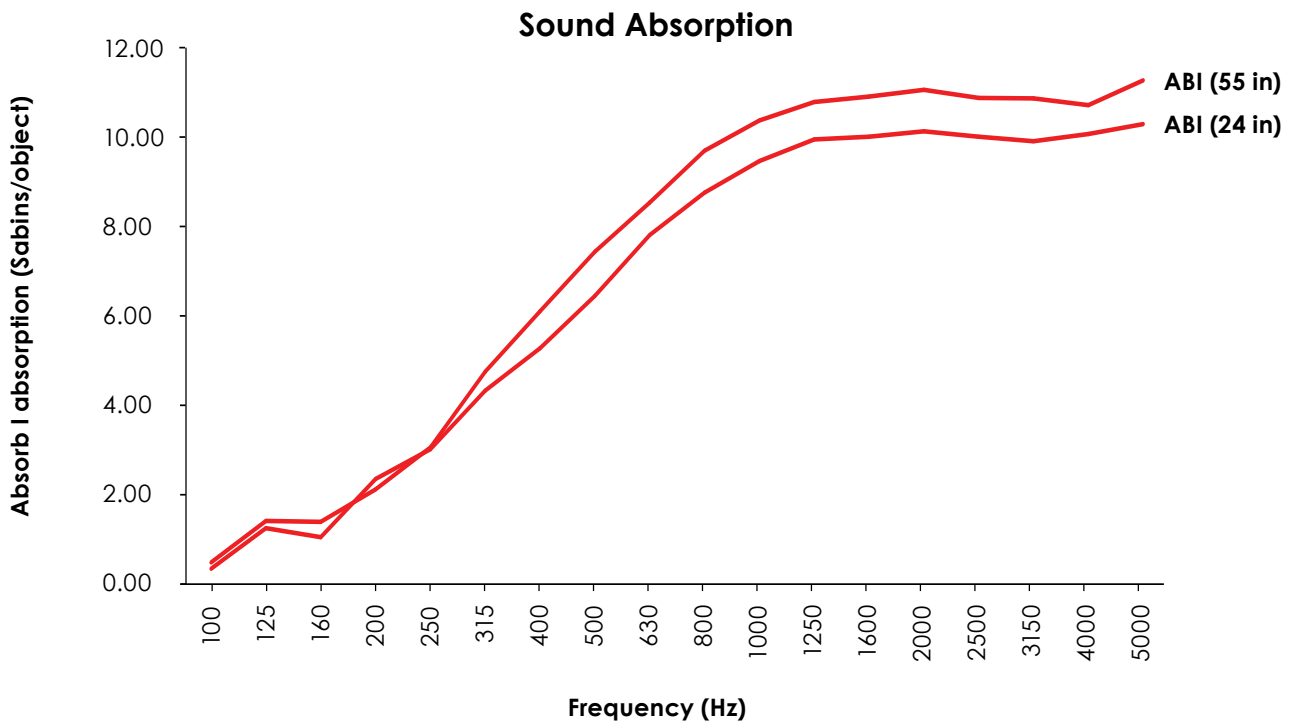
Average per fixture:  
**7.21 Sabins**

Test layout ABI (55 in distance)

- 250Hz - 3.04 Sabins
- 500Hz - 7.38 Sabins
- 1000Hz - 10.29 Sabins
- 2000Hz - 10.97 Sabins



Average per fixture:  
**7.92 Sabins**

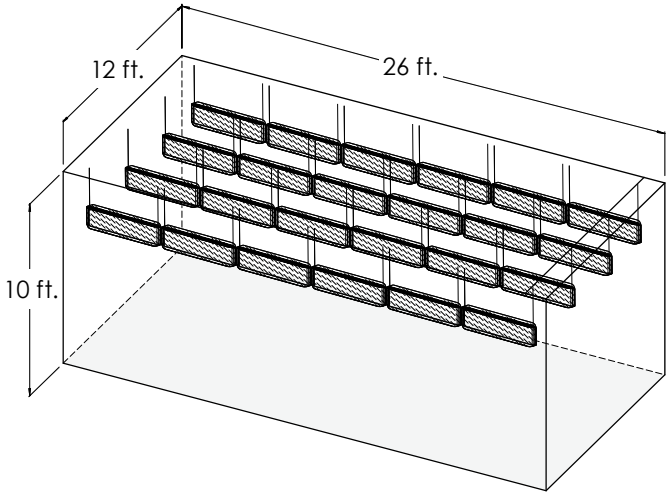




**REVERBERATION TIME**

Based on the test data, we are able to calculate the reverberation time of fixture layouts in a closed room and the extra area (ft<sup>2</sup>) of sound absorbing material it would need to get to a comfortable level. Reverberation time is the calculation of the time it takes for sound to fade by 60 dB in a closed space in seconds.

As a reference, the WELL standard recommends a reverberation time of 0.5 seconds for an open office applications and 0.6 seconds for a conference room. Here are two acoustic scenarios using the ABSORB I fixtures with sound absorbing material.



Scenario 1

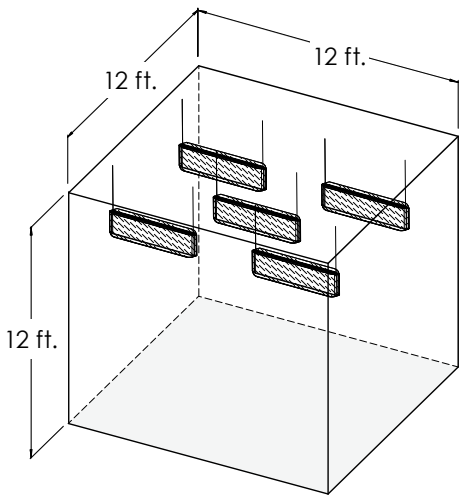
24x aircraft cable pendant 48" ABI spaced 55" from each other hanging 24" from the sheet rock ceiling.

**Reverberation time**

Without ABI : 1.00 seconds

With ABI : **0.76 seconds**

Additional 1.00 NRC material needed to reach 0.50s : **98ft<sup>2</sup>**



Scenario 2


5x aircraft cable pendant 48" ABI spaced 50" from each other hanging 24" from the sheet rock ceiling.


**Reverberation time**


Without ABI : 0.95 seconds


With ABI : **0.87 seconds**

Additional 1.00 NRC material needed to reach 0.50s : **71ft<sup>2</sup>**

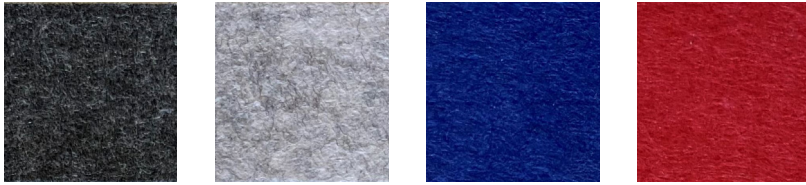
 Carpet on concrete floor

 1/2" sheet rock walls and ceiling

 Acoustic material (on both sides)

 Indirect light + Direct light

STANDARD COLORS



**CHF**  
Charcoal

**SGF**  
Silver gray

**NBF**  
Navy blue

**REF**  
Red

PREMIUM COLORS



**AWF**  
Arctic white

**LBF**  
Light beige

**BTF**  
Battleship gray

**TGF**  
Titanium gray

**BBF**  
Basic black

**SBF**  
Sky blue

**ABF**  
Azure blue



**DBF**  
Denim blue

**OBF**  
Ocean blue

**DTF**  
Deep teal green

**MGF**  
Moss green

**PGF**  
Pearl green

**LGF**  
Lime green

**GGF**  
Grass green



**BGF**  
Bubble gum

**PNF**  
Pinot noir

**ZFF**  
Zinfandel

**TLF**  
Tulip purple

**PPF**  
Plum purple

**BYF**  
Banana yellow

**DYF**  
Daisy yellow



**TOF**  
Tangerine orange

**BOF**  
Blood orange

**PBF**  
Peanut brown

**BKF**  
Bark brown

**OAF**  
Oak brown

\* Color chart for reference only. Due to the dye process, colors may vary from batch to batch, please consult Design Assist for details.

## LINEAR DIMENSIONS

2' & 4' nominal length individual fixtures that can be joined to create various rows and patterns.

Custom - Contact [Design Assist](#) for modifications to product not detailed within elements or integrations specification sheets.

## OPTICS

The Low glare lambertian lens offers a soft and efficient ambient light distribution.

All uplight configurations can accommodate the entire Linda family from Ledil. Uplight configurations usually use Batwing (BW), Batwing extra-wide (BWW), or Asymmetric (ASY).

## LED LIGHT SOURCE

Custom manufactured linear board array uses high performance Nichia® LED in combination with a performance driven heat sink technology. Tested in accordance with LM79 and LM-80; L70>60,000hr; operated at reduced output for high efficacy and lumen maintenance. 2700K, 3000K, 3500K, 4000K, and tunable white with 80+ CRI standard; other color temperatures and 90+ CRI available upon request, contact factory. LED color variation maintained at a 3-step MacAdam ellipse (SDCM 3x). LEDs are available in Standard and High outputs. Refer to photometry for delivered lumens. Custom output available in the range 25% to 125% of high output, contact factory.

## LED DIMMING DRIVER

Factory tuned constant current electronic 0-10V control dimming driver is standard. Specification grade dimming down to 1%. Driver life of 50,000 hrs with ambient operating temperature range of -30°C to 50°C, maximum case temperature of 75°C. Electrical specifications at maximum driver load: PF >0.9, THD <20%, >85% Efficiency. Other available drivers include Lutron Hi-lume 1% EcoSystem LED Driver (LDE1) with Soft On, Fade to Black dimming technology; and DMX and DALI protocol drivers. Other Lutron and specialty drivers available, contact factory.

## EMERGENCY

This luminaire is provided with a factory installed LED emergency lighting battery pack for both normal and emergency operation, 120-277v only. This fixture integrated unit contains long-life Ni-Cad recyclable battery, 24 hour charger, and converter circuit. Test switch and charge indicator provided. Test button to be remote located within 3 feet of the luminaire, by others in accordance with local code. Emergency mode provides constant power to a nominal 12W LED load for a period of 90 minutes, delivering 1200 lumens of unwavering illumination throughout the full 90 minute emergency duration. Unless otherwise specified, the emergency battery pack will illuminate the full direct portion of the fixture.

Emergency circuiting provided as a separate circuit from normal power circuit according to NEC requirements, specify circuit length and location.

## CONTROLS

Low-profile ceiling mounted occupancy and daylight sensors are available to deliver high performance control in an architecturally pleasing package.

Integrated nLight® for system networking wired and wireless:

### NLIGHT® AIR WIRELESS

The integrated API smart sensor is part of each luminaire in the nLight® AIR network, which can be grouped to control multiple luminaires. The granularity of control with the digital PIR occupancy detection and daylight sensing makes a great solution for any application. Optionally you can order nLight® AIR less sensors for compatibility with an nLight Air wireless system. The rIO, rES7, rMSOD, and rCMS models are available for integration.

### CONTROLS AND SYSTEM NETWORKING OPTIONS

For wired networking via Cat-5e, choose an nLight® wired module. The nIO EZ PH, nIO EZDL CCT, nES7 and nCM are available for integration.

Other manufacturer controls may be available for product integration, contact factory.

## MOUNTING

Suspension with aircraft cables. Aircraft cable set includes 48" standard length 1/16" stainless steel adjustable aircraft cables with secure micro grippers to field set suspension length, comes factory installed in fixture. 4-1/2" x 4-1/2" round white canopies. Cord strain also included. Power cord options available for aircraft cable. Black power cord provided for black and titanium body finishes, white power cord provided for all other fixture finishes unless otherwise specified.

Specify if other suspension length is required. Canopies provided as required for quantity of power feed and non power feed locations (crossbar included). Specify if other shape, size, or color is required.

## ACOUSTICS

The felt-like polyester panels are made from at least 40% post-consumer recycled PET bottles and are fully recyclable, No VOCs and formaldehyde free. Fire tested according to ASTM E-84 Class A. The carefully studied hollow core design and the large surface area contribute to lowering the reverberation time in a set environment by absorbing sound frequencies (ideal for human voice range 250Hz to 2000Hz). Material has inherent NRC of 0.75. As results may vary, it is recommended to consult sound professionals for optimal spacing, positioning and quantity of acoustic material for your environment. Due to the dye process, colors may vary from batch to batch. Premium colors require longer lead time.

## STRUCTURE

Robust, high quality 60% recycled aluminum extruded housing. 0.040" thick aluminum internal gear trays. Molded aluminum end caps. Aluminum joiner brackets. 3.75 lbs/ft approximate fixture weight.

## FINISH

Electrostatically applied powder coat finish. Standard finish options include titanium, white, and black. Other colors and custom finish options available, specify RAL# or contact factory regarding custom finish requirement.

## WARRANTY

Limited defect-free manufactured equipment warranty provided under normal use and proper storage for five (5) year. LED products (LED boards and drivers) will be covered for five (5) years. Please refer to the full terms and conditions on our website. Wet location fixtures are not recommended for extreme wet weather conditions and must be installed according to factory drawings; there is a modified warranty for LED components installed in applications not following factory recommendations/ drawings. Please refer to the full terms and conditions on our website.