

# 围绕

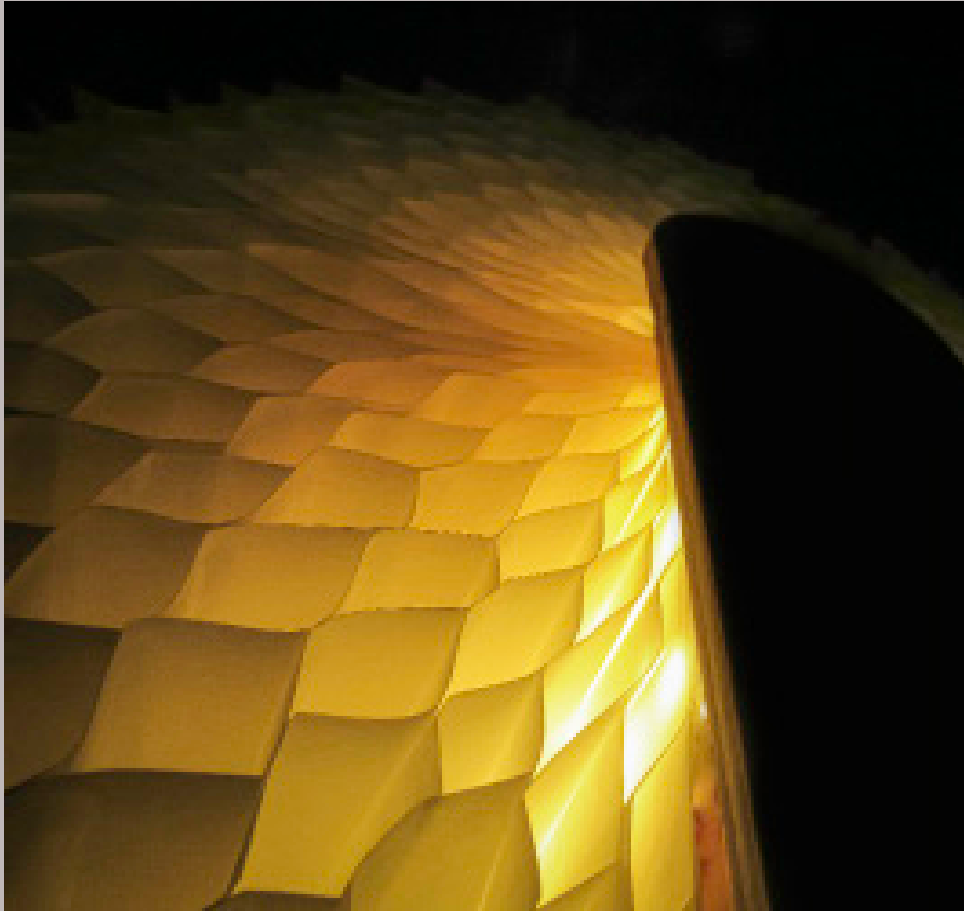
*Wéirào/ Revolve*

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***INDD 302***



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# Project Introduction

*The focus of this project was to design a luminaire by using biomimicry, biomimetics, or other similar inspirational methods. Inspiration came from the Escargo Begonia Leaf. It has a beautiful revolving pattern reflected in its form as well as its unique ability to filter light through its veins.*

## Goals

- 1. Create a light with the capability to transform the mood of the room its in.*
- 2. Perfect Li Hongbo's origami method*
- 3. Create an elegant wall light - a conversation piece*

## Mood Board



# Research



## Pitcher Plant

*The pitcher plant is similar in comparison to the venus fly trap, although its form is quite different. It attracts and eats anything from bugs to rats. The form of this plant is very elegant and when using it as inspiration, the lights were designed to attract people and be organic in shape.*



## Begonia Leaf

*The Begonia leaf is a very popular foliage plant and is well known for its spiral shape. It diffuses light through the majority of its body while focusing light through its veins. It is a fairly large leaf and sprouts in a variety of colors. The biomimicry of this plant focused on form in some iterations and functions in others.*



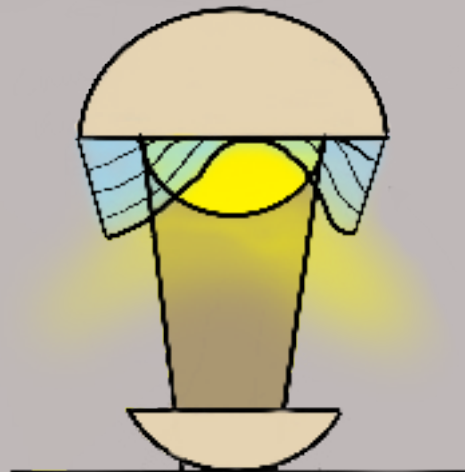
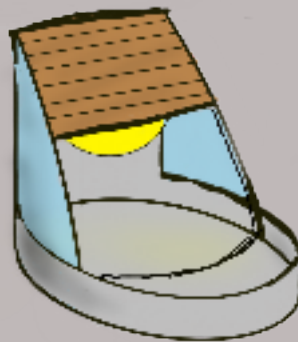
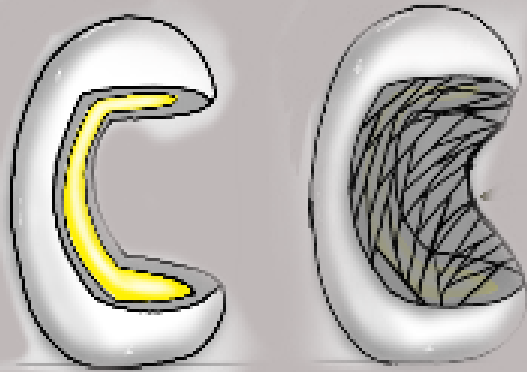
## Li Hongbo - Oragami

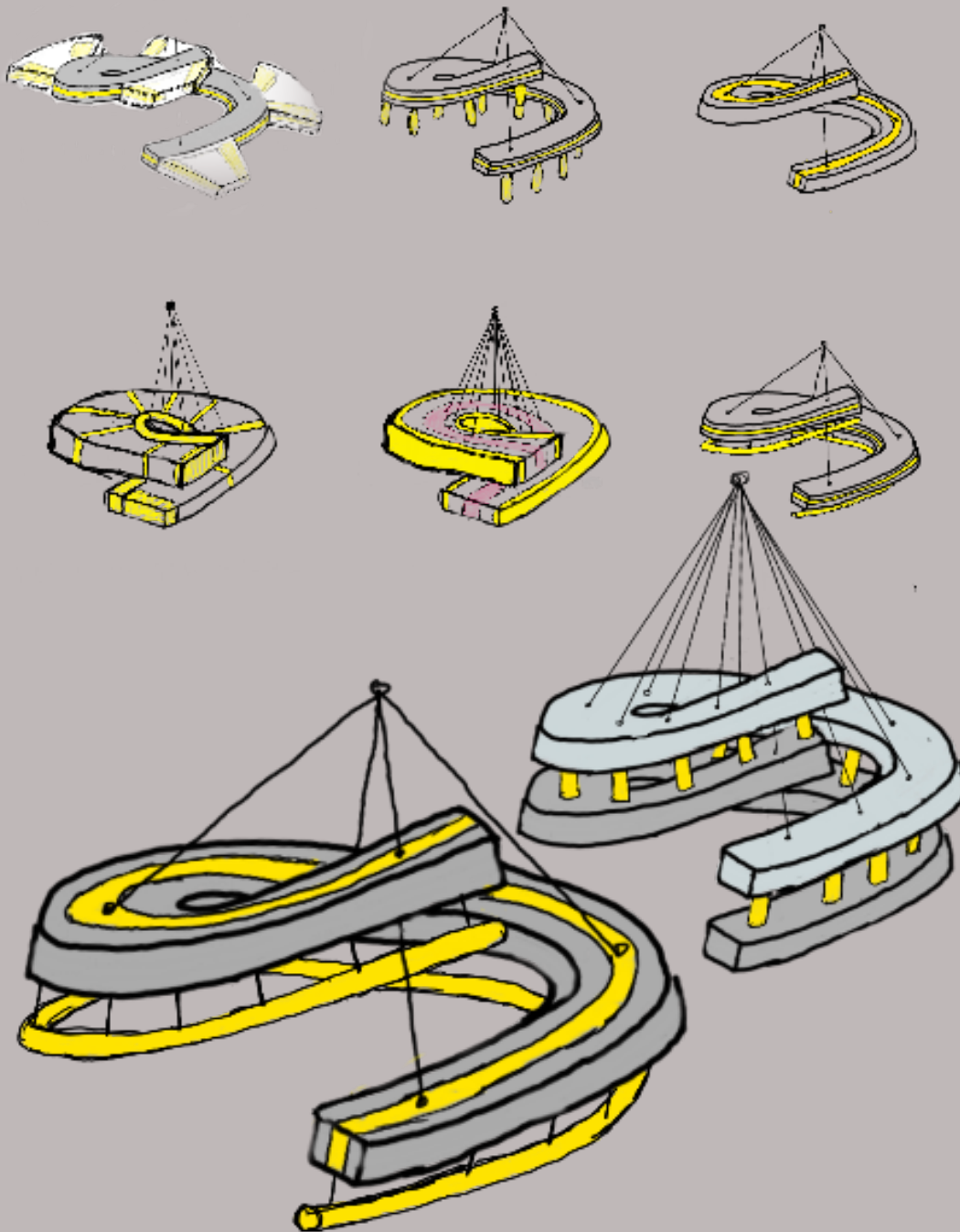
*Chinese Paper Gourds are a very elegant form of oragami. Li Hongbo an artist from china is famous for his use of this craft in huge head sculptures and then his latest piece, a thousand piece gun collection, all made of paper. Mr. Hongbo has perfect this art form and I wanted to incorporate this elegant form into the light somehow because it reflected the elegance and form of the begonia leaf.*

# Concept

## Pitcher Plant

*These are all iterations and of the light inspired by the Pitcher Plant. All of them are desk lamps and work with the idea of personalization and malleability. I worked with the idea of having a magnetic mesh that the user could move around which would then draw the user closer and achieve the goal of attracting people.*



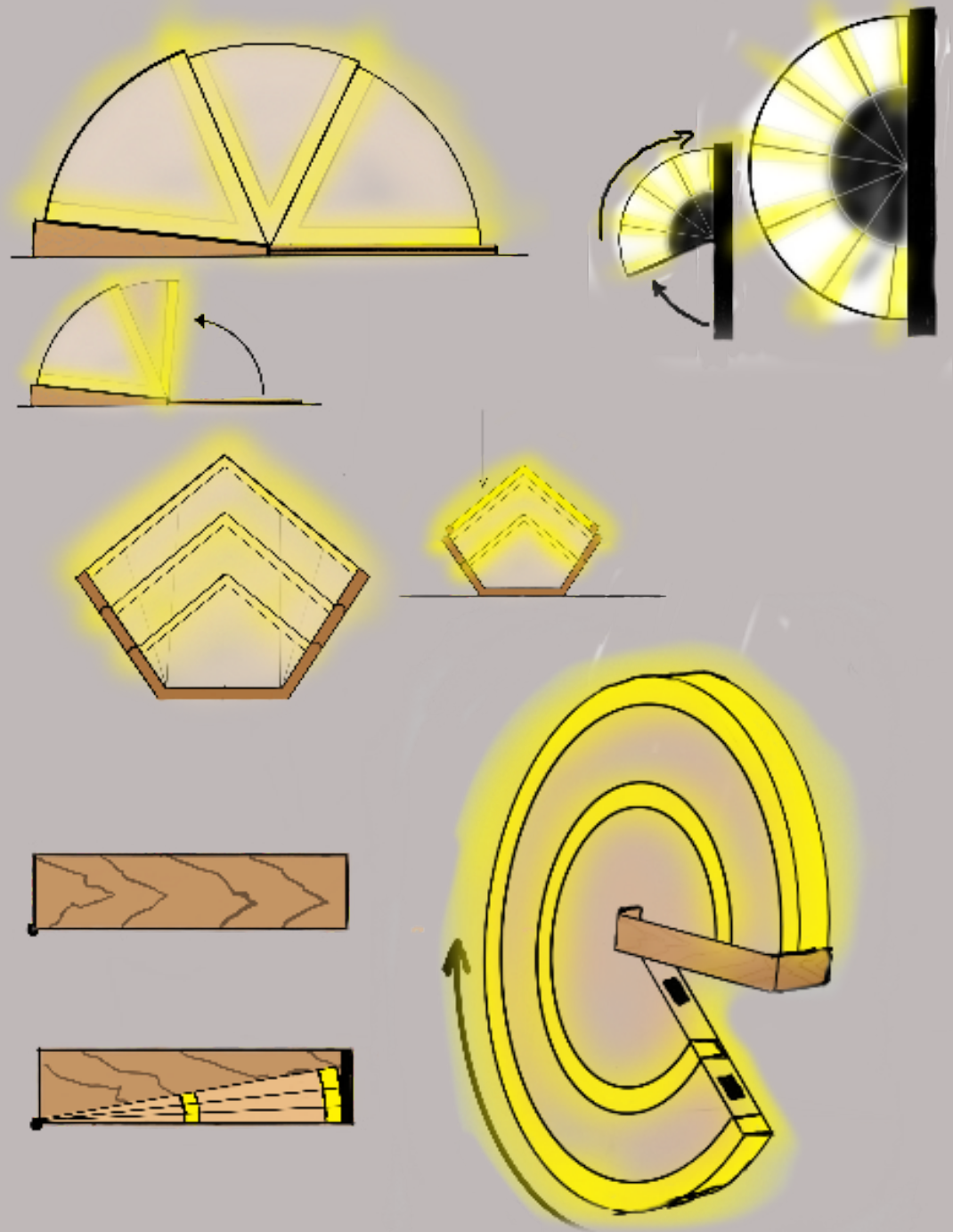


## ***Escargot Begonia Leaf***

*This was my chandelier proposal that used the Begonia biomimcry. The design was focused on representing direct light that mimicked the way the begonia leaf filtered light through its veins. The form also represented the spiraling form of the leaf.*

## ***Escargot Begonia Leaf***

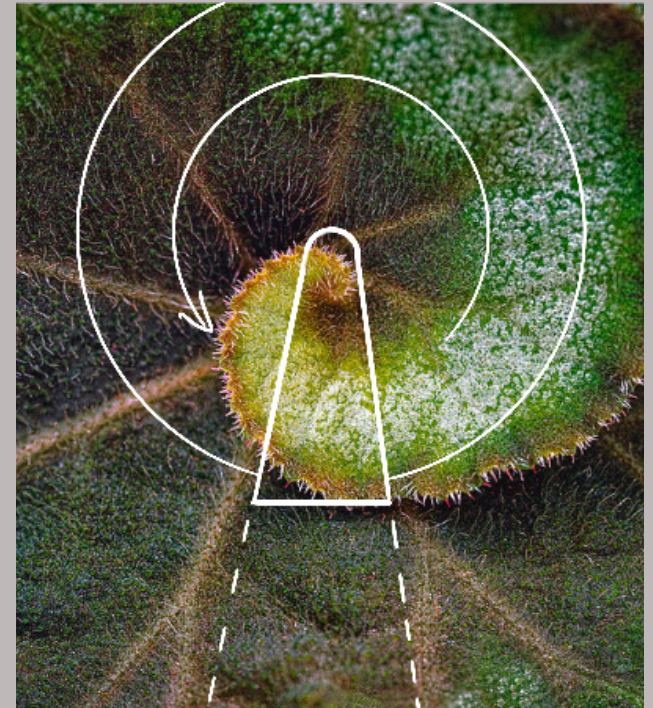
*This is the wall mounted luminaire proposal. Its the final concept I went with. This design focused and the revolving pattern and form of the leaf. I wanted to creat a light that could be used both as an accent light as well as a statement piece.*



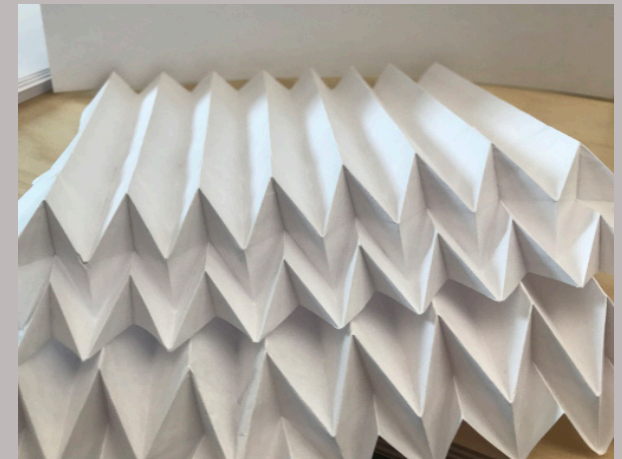
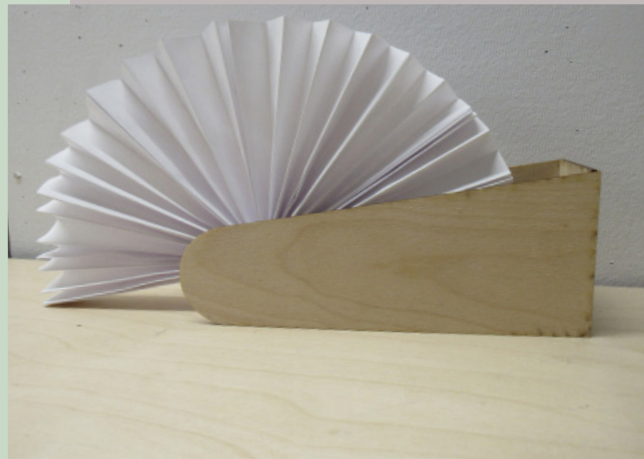
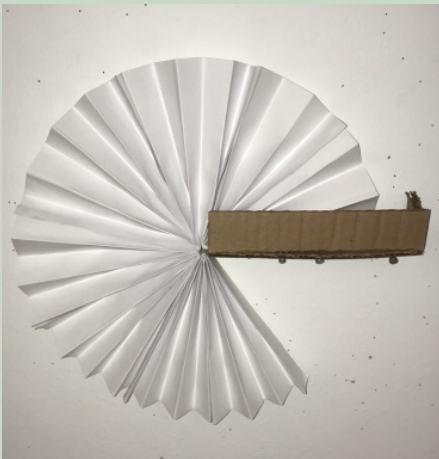
# Final Inspiration

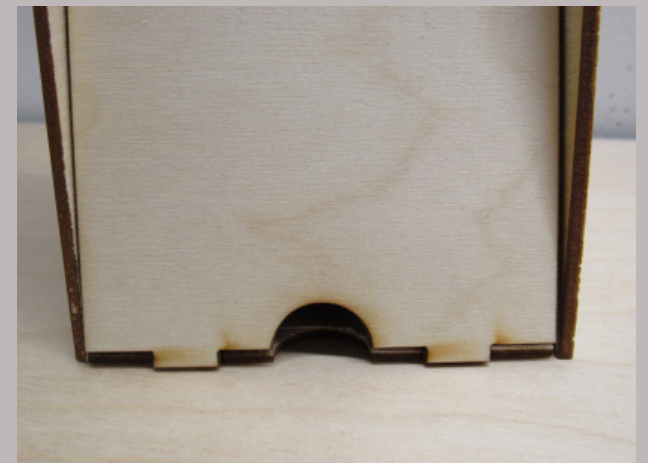
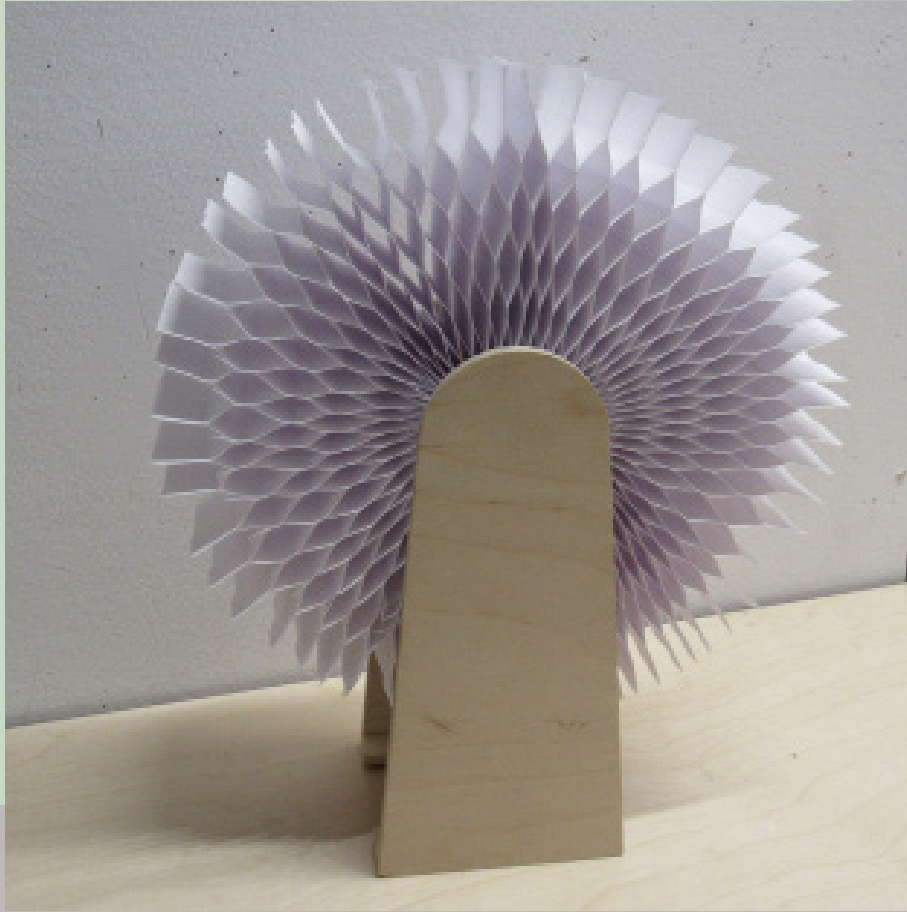
## Escargot Begonia Leaf

*This type of Begonia leaf is a very common foliage plant. "Escargot" comes from their snail like swirl pattern that makes them one of the most identifiable begonia leaves. These leaves grow anywhere from 4-9in in length and this lumineer replicated that as well as following the swirl form of the leaf.*



## Prototypes





# Schematic design

## Context

*The lumineer is meant to mainly be used in a livingroom, but can also be used in bedroom. The closed position of the light produces a more white light that brightens up the room greatly and would be used during everyday task and anytime an abundant amount of light is needed. The open position of the light produces a warm light and could be used as a mood setter or just create a nice atmosphere during get togethers. This light is designed to transform spaces and the mood of the users by either opening it or closing it.*





## **User**

### ***Young to Middle Age Adults, Home Owners***

*The majority of home owners search for a piece that can bring their interior together and has the capability to transform the spaces within their home. A lot of young adults want a conversation or statement piece that they can be proud of and show off to their friends. They want the option between cold and warm lighting while also keeping themselves different and unique from society. Environment is important to them so recyclability is a key factor when they are deciding to purchase something.*



# Final Design

## Design Details

*The final iteration consists of Bamboo, a light filtering fabric called Pellon, and Steel brackets that mount the light to the wall. This light mimicks the swirling motion of the beautiful begonia leaf.*

## Materials



**Bamboo Wood**

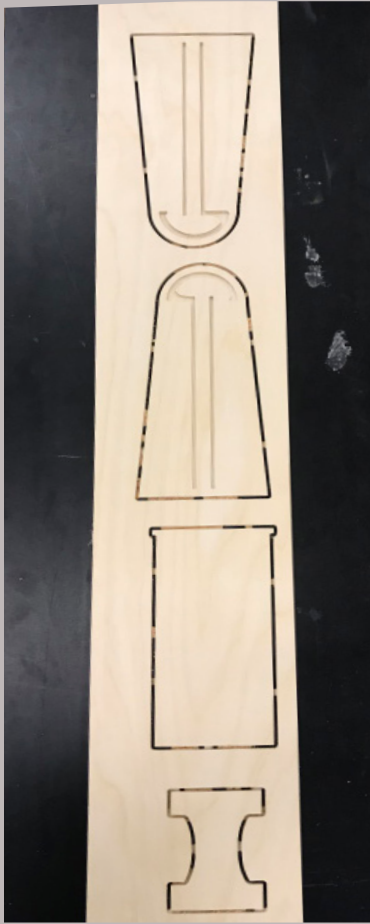


**Pellon Fabric**

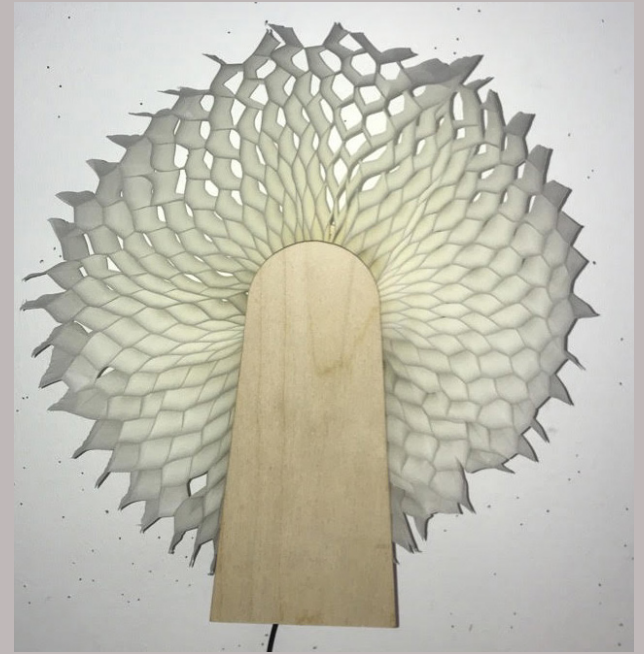
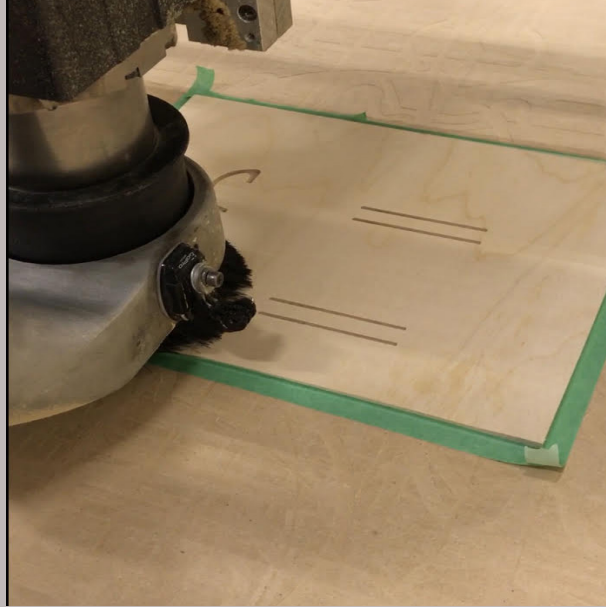


**Steel**

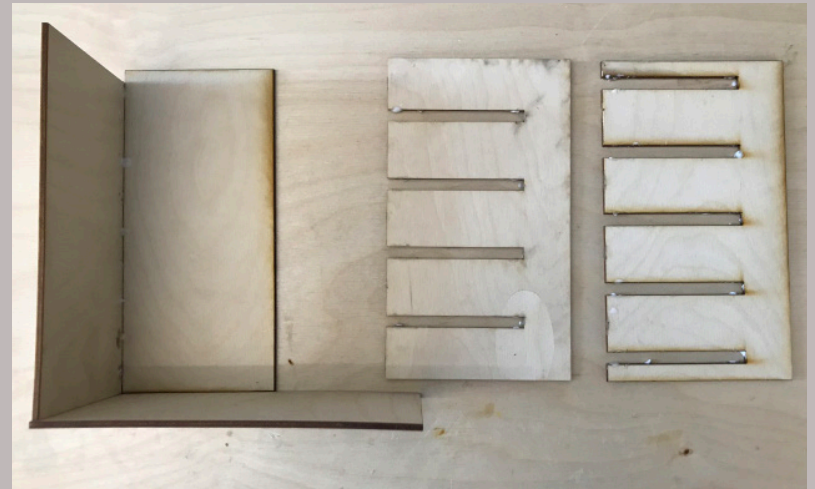
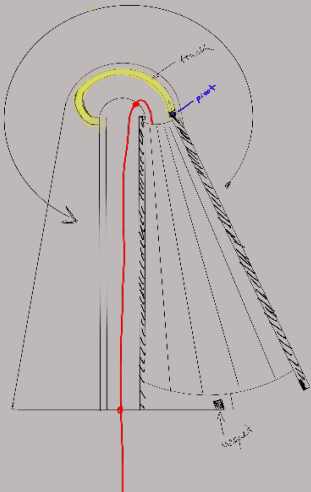


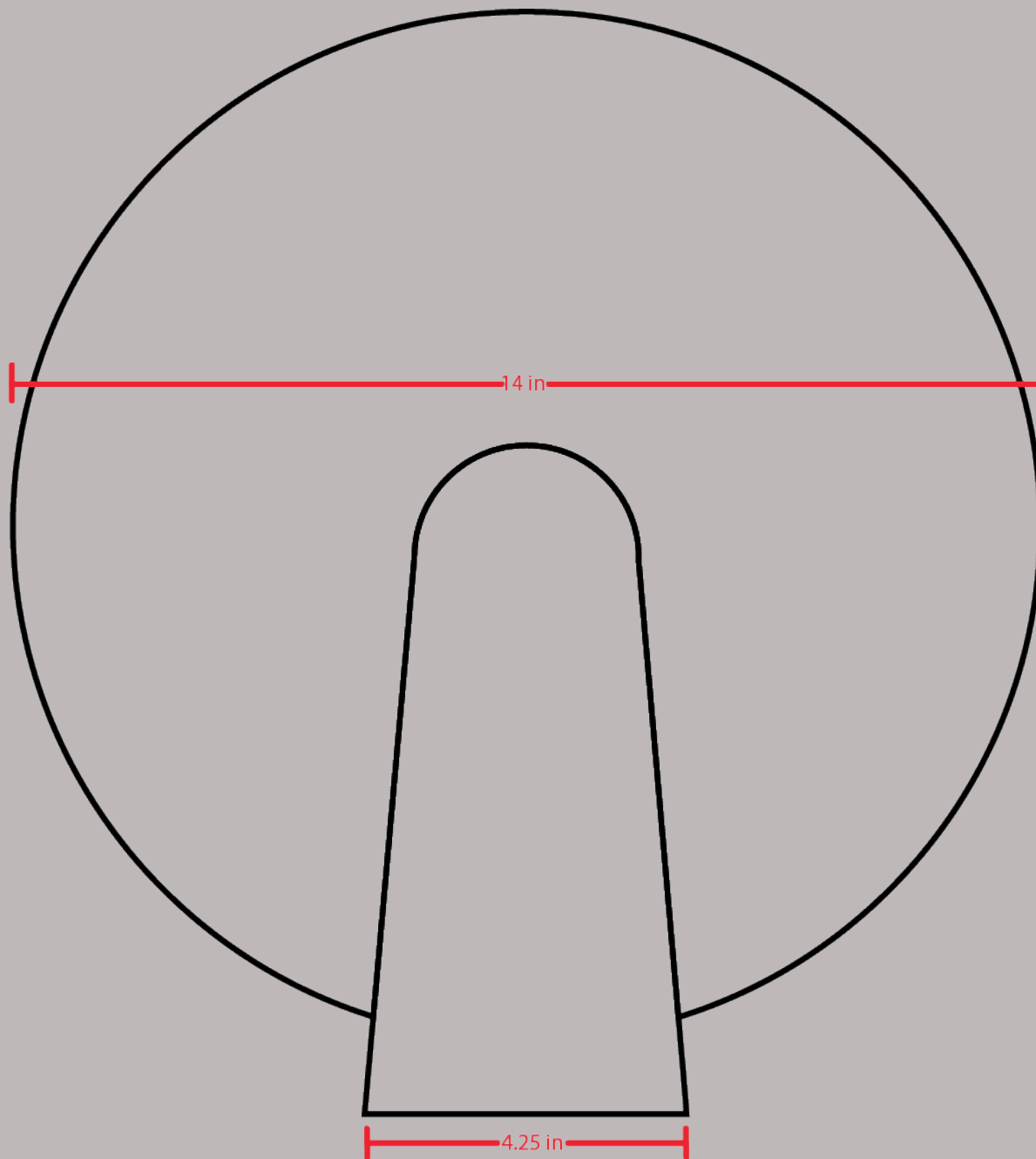
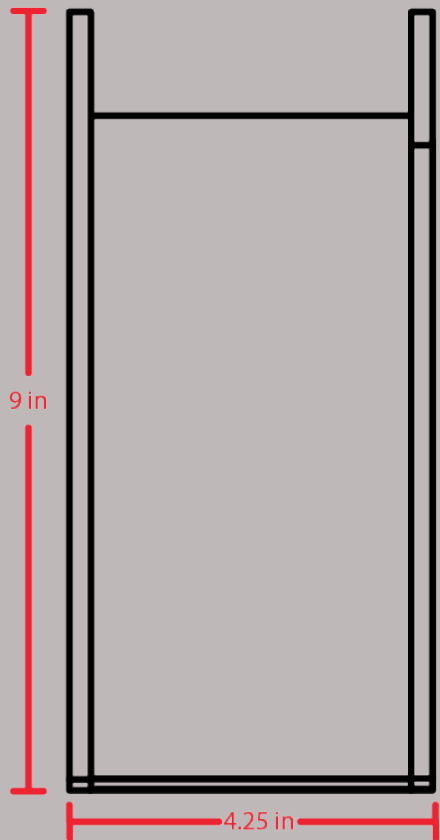


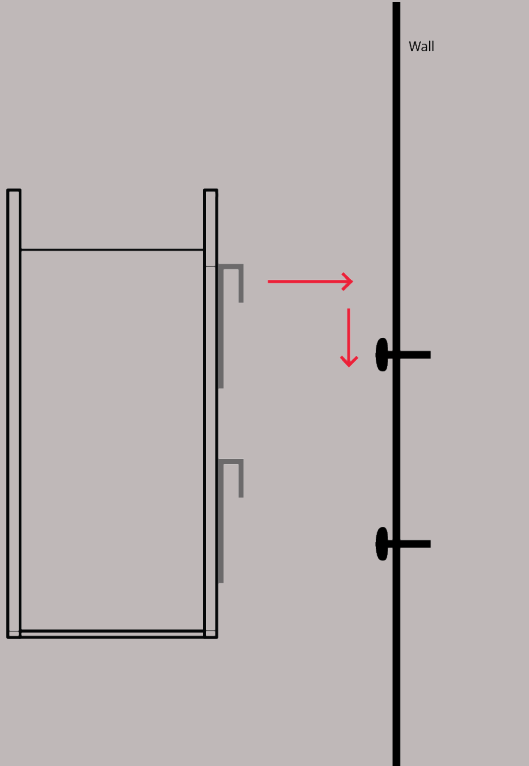
*I used rhino to model my prototype which allowed me to layout all my pieces and use the CNC machine to cut them out. This made my track system line up perfectly as well as the inset inner walls.*



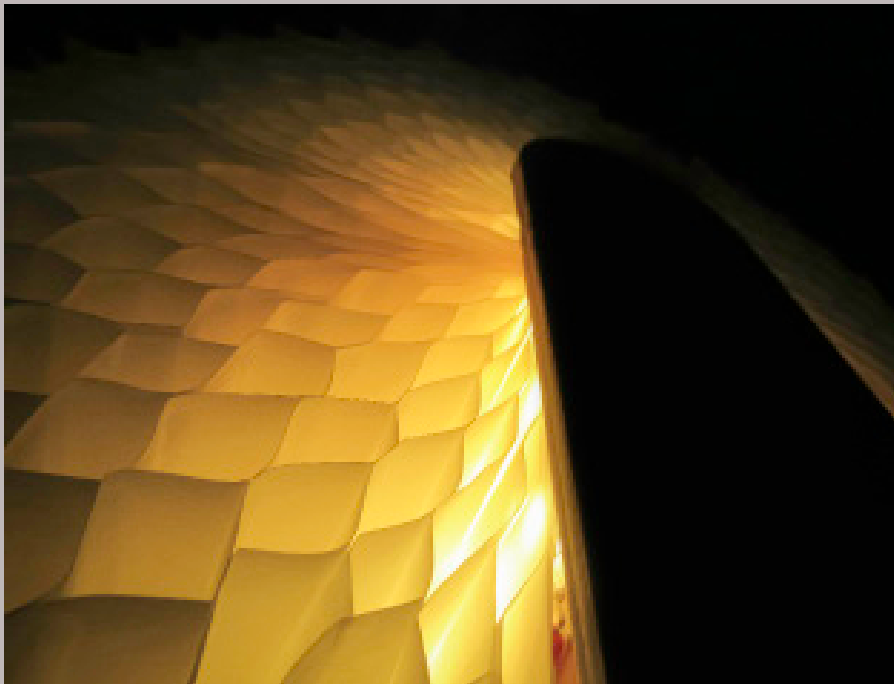
*I studied the gluing pattern Li Hongbo uses for his art and replicated making my own system which sped up the process of gluing the fabric together.*











# Reflection

*Through this project; I studied and taught myself origami in order to achieve the form i was wanting, I learned how to program the CNC machine which made for perfect factory cuts on all my pieces, as well as learning how to wire and solder lights together. During the design process it was brought to my attention that in order to design a succesful product you must spend a decent ammount of time doing indepth research on precedents and other inspirations.*

*Although i am proud of the design and prototype i built, there are a few things i would change. First i would make the storage compartment for the pellon fabric deeper so more material could fit which would allow the fan to be a perfect circle instead of deformaing. I also want to create a magnetic locking mechanism whcih would increase the haptic feed back between the user and the product. Lastly instead of using Led strips i would take individual led lights and router holes for them into the wood so they are flush with the surface which would allow me to place more lights and have it be diffused evenly.*

*This light is intended to be hung on the wall but in the future i plan to make it wireless and detachable so that it can be used as a desk lamp as well as a wall lantern.*

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