

Custom Sculptural RGB Controlled Lighting

The Rose Hotel

Chicago O'Hare Tapestry
Collection by Hilton
Rosemont, Illinois



Custom Sculptural RGB Controlled Lighting

The Rose Hotel

Project: The Rose Hotel by Hilton (Tapestry Hotel Collection)

Completed: 2018

Location: Rosemont, Illinois

Specifier: Getty's Group (Title Page Photo Credit: Chris Bowden)

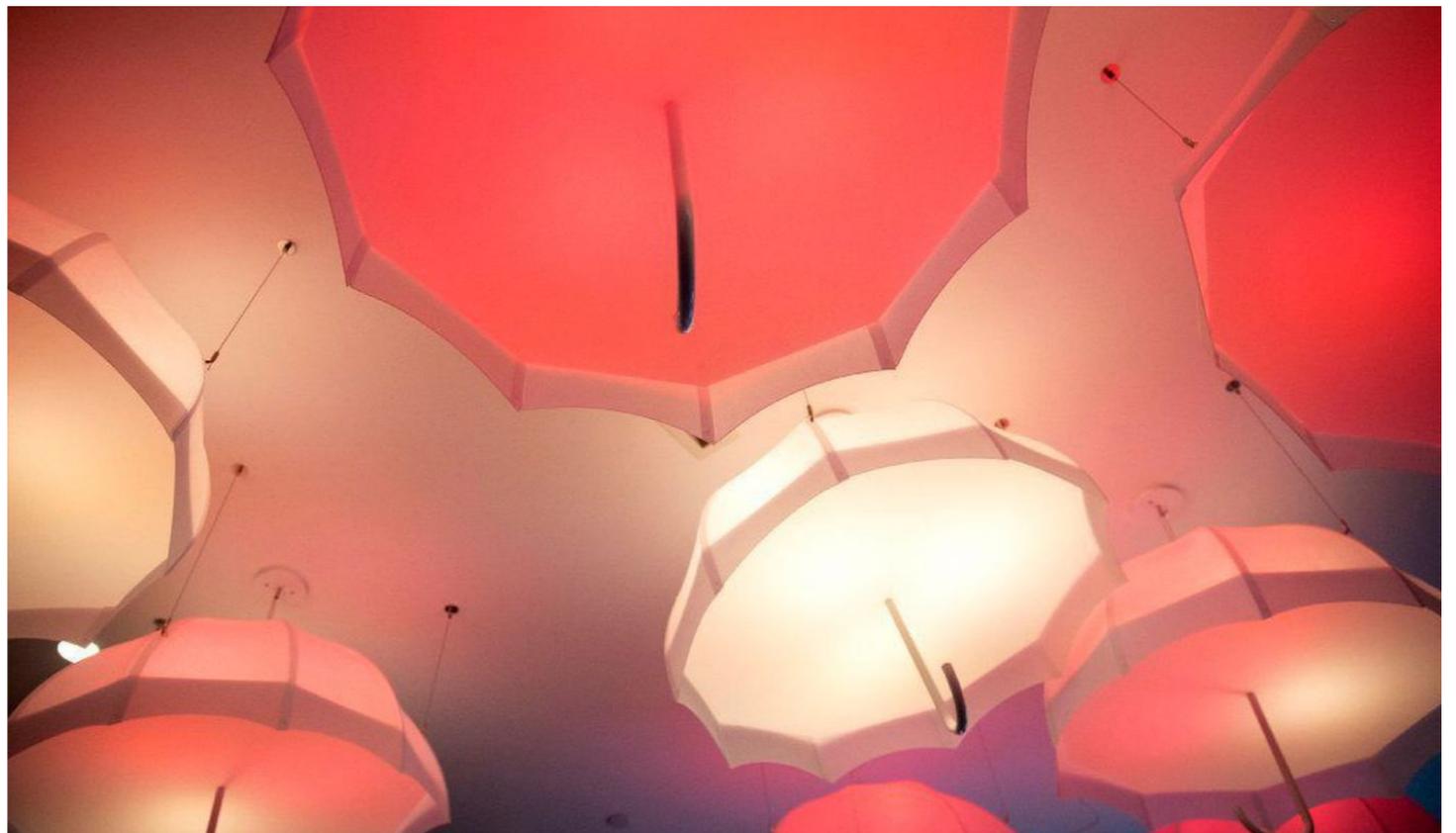
Project Overview

My Role - Project Manager

The first boutique hotel out of the many hotel offerings in the surrounding area of Chicago O'Hare airport. The concept of The Rose, a 165-room new build property was to convey to the visitor "where classy meets edgy". The designer was inspired by photos of the colorful, floating umbrella art installation at the famous Ágitaqveda art festival in Portugal.

When the project began it was pitched and quoted by the previous LightArt project manager, who had left prior to my hire. So after a bit of detective work and further conversations with the sales rep and designer, I was able to piece together the constraints and design intent desired for the project.

The umbrella fixtures were and still are unlike any custom sculptural light fixture LightArt created before, which posed unique challenges and opportunities to learn how to motivate my teammates to collaboratively bring to life - a one-of-a-kind, interactive, light sculpture installation.



(Photos Above Credit: Erin Hooley)

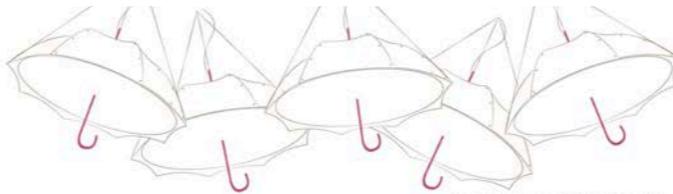
Custom Sculptural RGB Controlled Lighting

Project Process Details

Initially the specifier had explored only white lamp light and no bottom diffuser to hide the lamps, prior to the project coming across my desk. Since the scope of the project had changed I now needed to revise the quote and provide pricing as close as possible to the initial cost that had been factored into the overall building lighting budget.

On few past projects had LightArt created RGB/RGBW light fixtures, in those past cases only one previous very large and expensive project had an outside vendor been hired to create the programming and installation necessary for the color changing lighting. Being someone who loves light and colors, this was a challenge I was up for and I began exploring cost effective ways and the details of programming/operation of RGB LED lighting. Luckily, LED technology was rapidly advancing and to my benefit I was able to find, order, and hands on explore what would be the best option for the end user.

After many conversations, internally with outside vendors, my internal design development team and fabricators, and the specifier I narrowed down the LED lamp choice to the Philips hue. Now the task was to procure all of the lamps and understand how best the end user could operate the lighting based upon their described needs - whether that was in the Philips Hue app or ... another compatible app that I discovered.



Umbrella fixtures with White Opal diffuser

OPTION 1: DIFFUSER + WHITE LED BULBS
CUSTOM UMBRELLA LIGHT FIXTURES

Unit Price:
Quantity: 12
Dimensions: Approx. 30" Dia. x 20" H
Lead-time: 10 weeks

MATERIALS
Shade Material: Translucent Suede Varia (white)
Gauge: 1/8"
Front Finish: Vellum
Back Finish: Vellum
Diffuser Material: White Opal
Diffuser Gauge: 1/4"

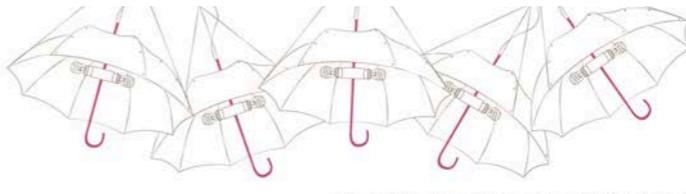
LIGHTING
- (3) 8.5 watt, E26 (medium base), 120v, LED lamps

HARDWARE
- Matte silver canopy mounts to standard round electrical junction box
- Silver power cord from fixture to ceiling canopy, adjustable 12" - 8'0"
- (3) Stainless steel articulating cable to ceiling connections, 12" - 8'0"

CRATING & SHIPPING
Crate Price:
Shipping:

Project Total:

Use of an incandescent bulb will negate the warranty and damage our product
Price does not include sales tax. State Sales Tax will be billed if 3-Form LightArt does not receive a valid Resale/Tax Exempt Certificate



Umbrella fixtures without diffuser will have 3-socket bulbs visible

OPTION 2: RGB COLOR CHANGING BULBS + NO DIFFUSER
CUSTOM UMBRELLA LIGHT FIXTURES

Unit Price:
Quantity: 12
Dimensions: Approx. 30" Dia. x 20" H
Lead-time: 10 weeks

MATERIALS
Shade Material: Translucent Suede Varia (white)
Gauge: 1/8"
Front Finish: Vellum
Back Finish: Vellum

LIGHTING
- (3) 8.5 watt, E26 (medium base), 120v, Philips Hue RGB LED lamp
- RGB Lamps Controlled with app on tablet or phone

HARDWARE
- Matte silver canopy mounts to standard round electrical junction box
- Silver power cord from fixture to ceiling canopy, adjustable 12" - 8'0"
- (3) Stainless steel articulating cable to ceiling connections, 12" - 8'0"

CRATING & SHIPPING
Crate Price:
Shipping:

Project Total:

Philips Hue RGB LED system controlled by smart phone



*Material + Diffusion EXAMPLE:
TSV (translucent suede varia) with White Opal diffuser*





TSV (translucent suede varia) with color changing LED's



CUSTOM UMBRELLA LIGHT FIXTURES

Unit Price:
Quantity: 12
Dimensions: Approx. 36" Dia. x 18" H
Lead-time: 10 weeks

MATERIALS
Shade Material: Translucent Suede Varia (white)
Gauge: 1/8"
Front Finish: Vellum
Back Finish: Vellum
Diffuser Material: White Opal
Diffuser Gauge: 1/4"

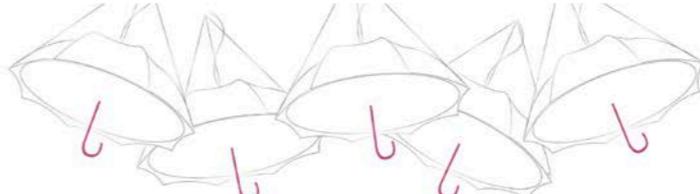
LIGHTING
- (3) bulbs per fixture, 8.5 watt, E26 (medium base), 120v, Philips Hue LED lamps
- Philips Hue compatible Bridge, to connect to ethernet (WiFi) to control colors of bulbs, customer responsible for remote controlling smart device (i.e. iphone) and programming.
- 3A-P socket attached to the metal interior rod, wiring to run up rod and out of the top of fixture.

HARDWARE
- White canopy mounts to standard round electrical junction box
- White power cord from fixture to ceiling canopy, adjustable 12" - 8'0"
- (4) Stainless steel articulating cable to ceiling connections, 12" - 8'0"
- Interior tab system, for clean connection point of shades on exterior surface.
- Powdercoated pink or white or black (TBD) central metal pipe/umbrella handle.

CRATING & SHIPPING
Crate Price:
Shipping:

Project Total:

Use of an incandescent bulb will negate the warranty and damage our product
Price does not include sales tax. State Sales Tax will be billed if 3-Form LightArt does not receive a valid Resale/Tax Exempt Certificate
Change in quantity and/or material will affect the unit price of this product



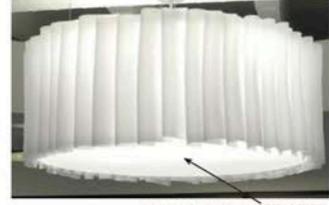
Umbrella fixtures with White Opal diffuser



Example of color changing LED diffusion through LightArt TSV material



Philips Hue Kit - (1) Bridge controller to connect to Bulbs and smart device (provided by others) to illuminate + control interior lighting color of custom Umbrella Fixture



*Material + Diffusion EXAMPLE:
TSV (translucent suede varia) with White Opal diffuser*

Custom Sculptural RGB Controlled Lighting

Project Process Details

I enjoy researching and learning, especially when I need to have detailed knowledge of the solution I am proposing to a specifier and then communicating the solution to an installer who has not seen or installed anything like a light fixture umbrella before. I have found that having detailed shared communication verbally, in writing, and in visual images ensures that there is a collective understanding and makes my life a lot easier throughout the final stages of the process.

During this project I was able to attend an LED specifier summit in Seattle and learn more about RGB programmable/addressable LED's and additional lighting and technology trends. I was able to put my compare and contrast details, findings, and explanation of the systems into drawings and a presentation that I provided to the internal Project Management team, Design Developers, and Lighting Lab.

Photo 1. A slide from my presentation showing the capabilities of the two RGBW + hub systems.

Photo 2. An additional slide showing what would be necessary for a programmable system if LED light strips were selected. The DMX adapter would require software on the iPad, to act as the controller to tell the LED strip(s) what color codes to change to (and timing rate if motion color changing is required).

RGBW LED Bulbs

- Leading brand name RGBW bulbs, both require a wifi connected decoder to speak to the bulbs to control colors via a smart device (i.e. iphone app).
- We have both in house to test capabilities.
- Philips Hue Bridge can support the control of up to 50 bulbs.
- Osram-Sylvania sells separately the Gateway controller, alternatively Samsung SmartThings can also be used as a controller.
- Both are compatible with Amazon's Alexa.
- For both it is the customer/designer's responsibility for set-up installation of device(s) and controller(s).



Philips Bridge + RGBW Philips Hue (kit)



Osram-Sylvania Lightify Gateway + RGBW Bulb

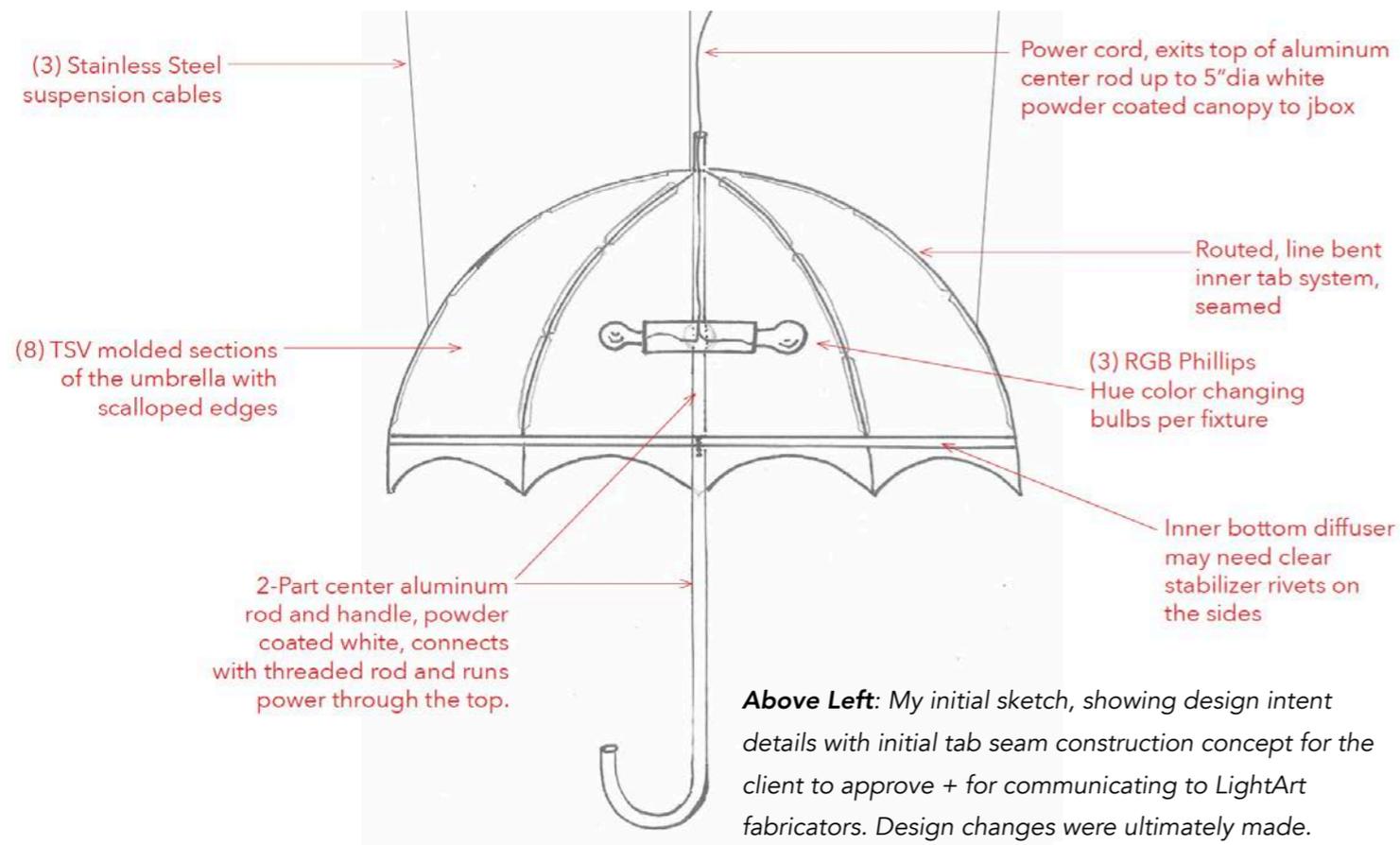
RGBW LED Light Strips

How It Works

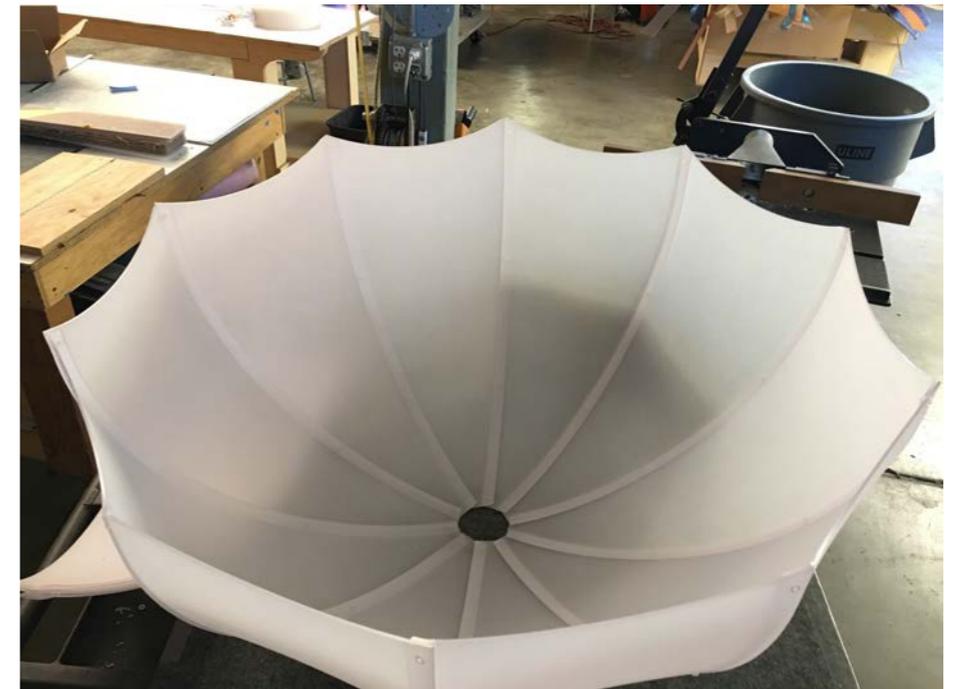
With just a tap of the finger your iPad seamlessly controls your entire stage light setup. In order for this to work, a signal must travel through a series of devices to reach your fixtures. Here's what you will need:



Custom Sculptural RGB Controlled Lighting



Above Left: My initial sketch, showing design intent details with initial tab seam construction concept for the client to approve + for communicating to LightArt fabricators. Design changes were ultimately made.



Above: Success, the 2-part mold created the correct compound curves needed for the umbrella shape, alternating lap joints with clear rivets (to reduce the shadow) necessary to attach and create the full shade shape.



Above: First prototype failure, after Shop Manager overriding decision to reduce production time and not use 2-part mold. Creating poor seaming and light leak.



Above: Second prototype with the light off, specifier decided on white powder coated handle.

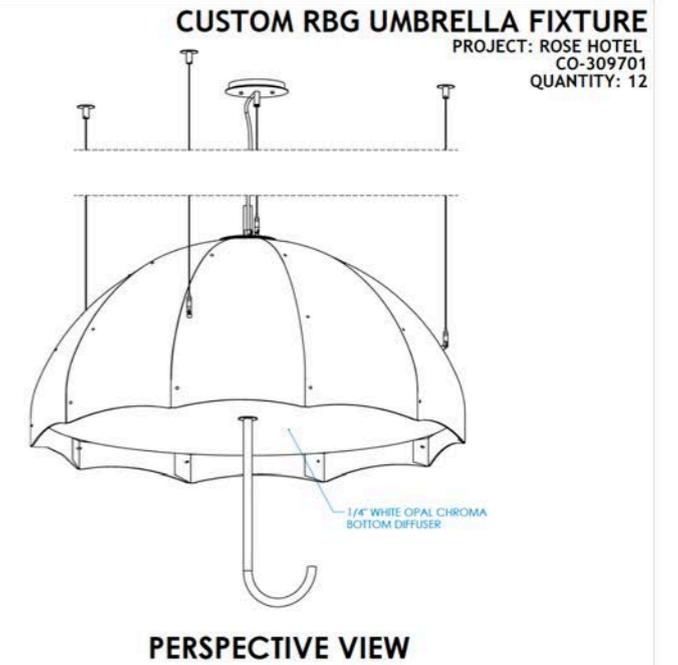
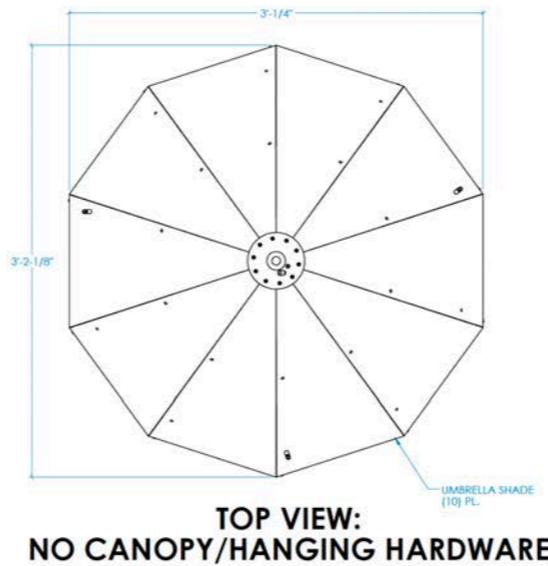
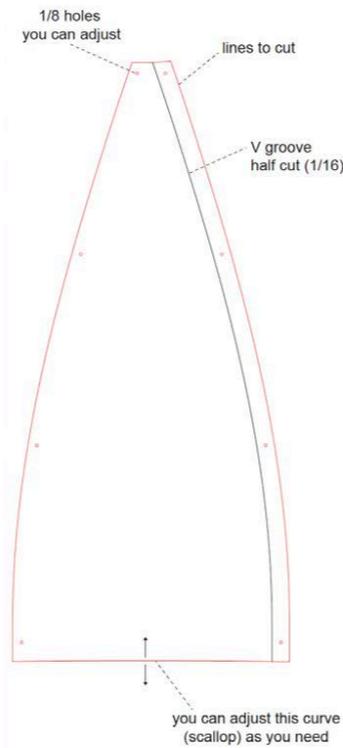


Above: Second prototype with the light on, showing how the white opal bottom diffuses the 3 lamps light.

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Project Process Details

I collaborated with an outside developer to create the files for the 5-axis routing machine to create the 2-part (male/female) mold. The mold was necessary for forming the two complex curves, which would allow for shade continuity in each of the (10) pieces to overlap, rivet, and fit together seamlessly.

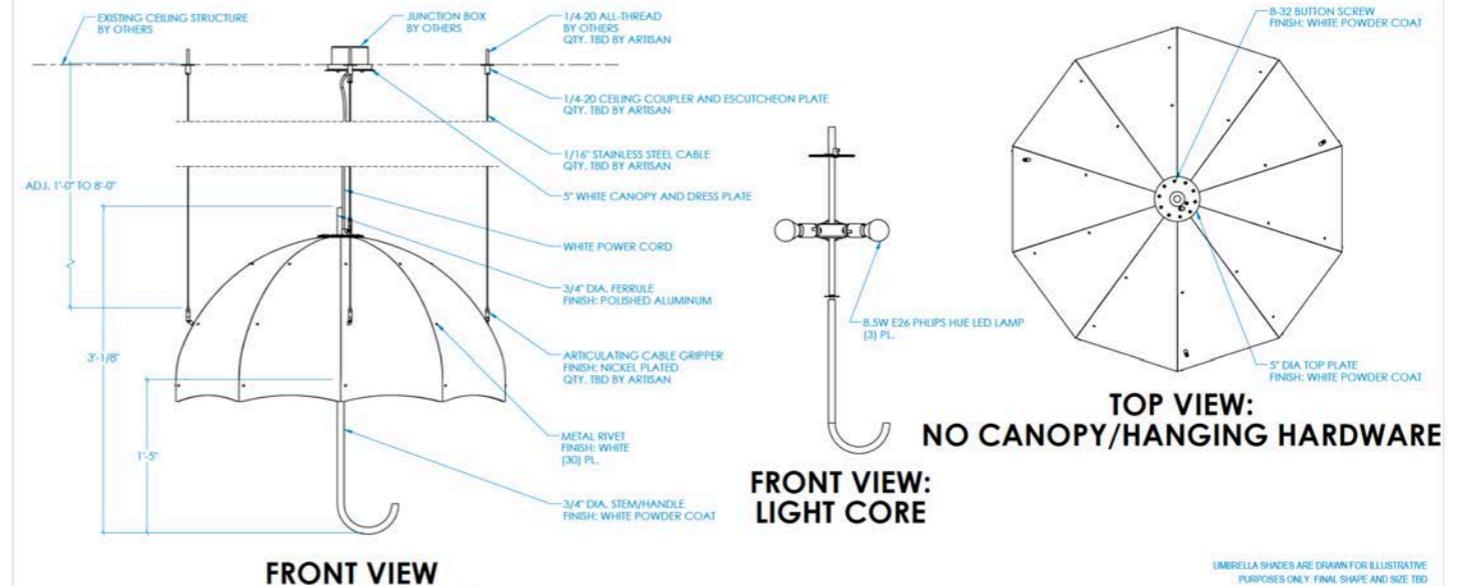
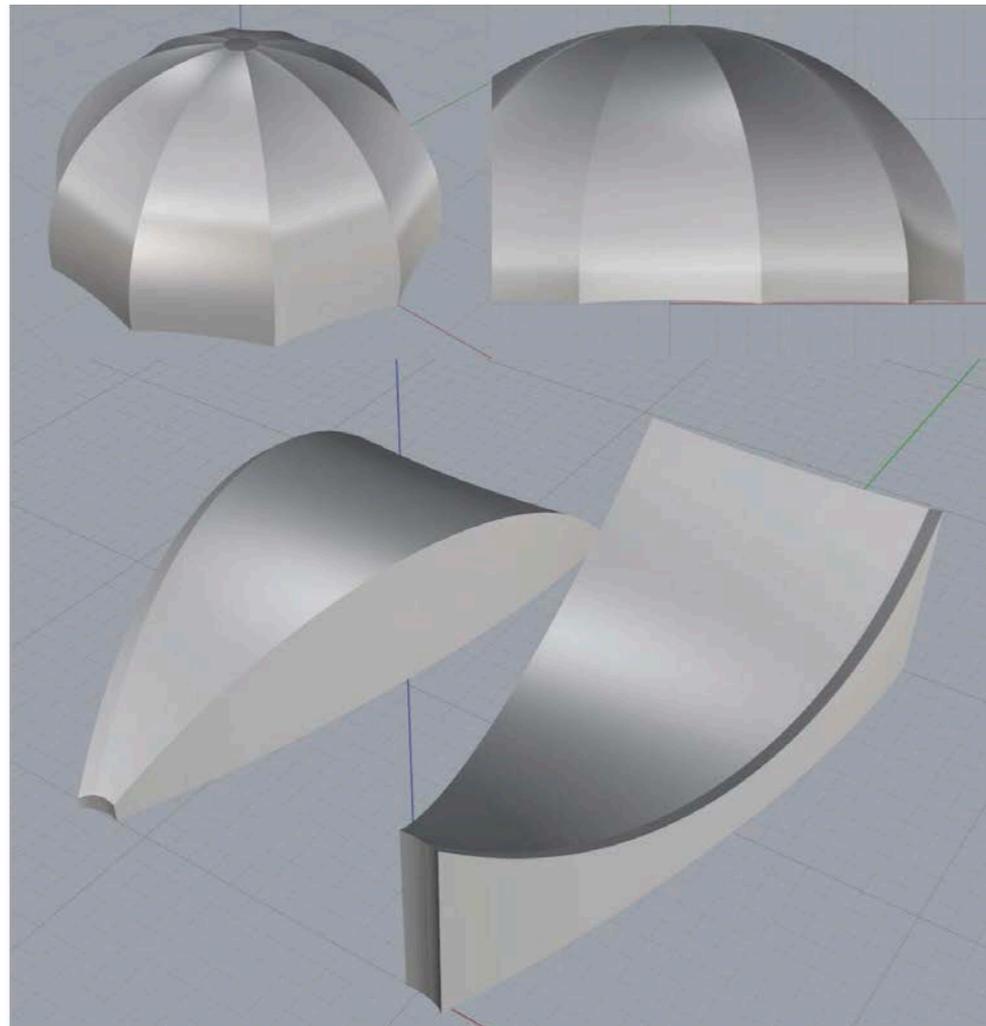


PROJECT SPECIFICATION

DIMENSIONS: 3'-1/4" L X 3'-2-1/8" W X 3'-1/2" H
SHADE MATERIAL: 1/8" TRANSLUCENT SUEDE VARIA
FINISH: SANDED (FRONT), GLOSSY (BACK)
FIXTURE WEIGHT: APPROX. 30 LBS
FIXTURE QUANTITY: 12
COLOR TEMP: RGBW (16 MILLION COLOR OPTIONS)
TOTAL WATTAGE: 25.5W (8.5W E26 PHILIPS HUE LED LAMP*)
VOLTS: 120V
DIMMING: YES
*PHILIPS HUE HUB PROVIDED, LAMP CONTROLLER PROVIDED BY OTHERS

PRINT NAME:	LightArt®	Drawn By: CGL	Approved By:	Date:	LA 1.1
SIGNATURE:	LightArt®	4700 Ohio Ave, Suite A Seattle, Washington 98134	Approved Issue: Submitted 1 Submitted 2 Submitted 3 Submitted 4	04/27/2018 05/14/2018	
APPROVED AS NOTED	REVISION AND RESUBMIT	DATE:			

UMBRELLA SHADES ARE DRAWN FOR ILLUSTRATIVE PURPOSES ONLY. FINAL SHAPE AND SIZE TBD BY ARTISAN.
FIXTURE SHOWN HUNG LEVEL.
ACTUAL FIXTURES TO BE HUNG AT VARIOUS ANGLES WITH RESPECT TO FLOOR.
MAX SUGGESTED ANGLE NOT TO BE PAST 20 DEGREES.
CAPABLE OF 80 DEGREE ANGLES.
GC TO CONTACT DESIGNER FOR INSTALL. DESIGNER WILL BE ON-SITE TO DETERMINE HANGING ARRANGEMENT AND ANGLE.
*PLEASE REFER TO INSTALLATION INSTRUCTIONS AND ADDITIONAL DW FILES FOR ADDITIONAL INFORMATION.



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Below: The final approved quote details - the mock up was approved by specifier, so the studio ended up making 11 fixtures to meet up with the 12th fixture on-site.

Name	RTG Number	RTG Subtype	Description	Report Quantity
Umbrella Mock Up			8-10 week lead time for design and development of Umbrella fixture. > Once fixture is completed, it will be sent to the customer for approval and returned to LightArt to complete the project. > Once the mock-up is approved and received by LightArt the timeline for lead time will start over, with an additional 8-10 weeks to complete the remaining 11 fixtures for this installation.	1

Part Id	Description	Qty
6-07-CUST-K	Custom LightArt Product: (12) Custom White Umbrella Light Fixtures with Bottom Diffusers	12.00

DIMENSIONS: Approx. 36"Dia. x 18"H

MATERIALS:

Shade Material: Translucent Suede Varia (white)

Gauge: 1/8"

Diffuser Material: White Opal

Diffuser Gauge: 1/4"

LIGHTING:

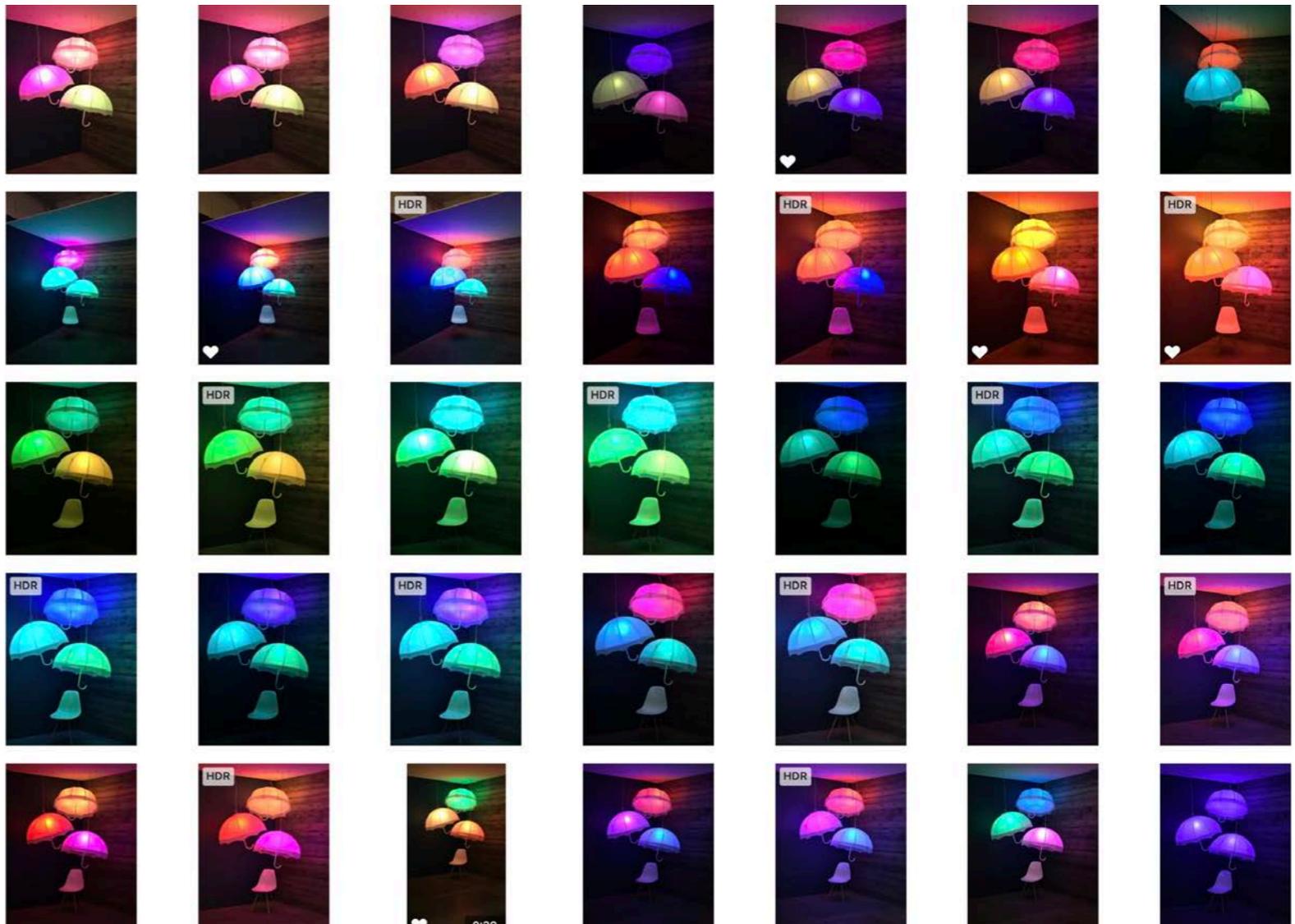
- (3) bulbs per fixture, 8.5 watt, E26 (medium base), 120v, Philips Hue LED lamps (provided by others).
- Philips Hue compatible Bridge (provided by others), to connect to ethernet (Wifi) to control colors of bulbs, customer responsible for remote controlling smart device (i.e. iphone) and programming.
- 3A-P, socket attached to the white powder coated metal interior rod, wiring to run up rod and out of the top of fixture.

HARDWARE:

- White canopy mounts to standard round electrical junction box
- White power cord from fixture to ceiling canopy, adjustable 12" - 8'0"
- (4) Stainless steel articulating cable to ceiling connections, 12" - 8'0"
- Interior tab system, for clean connection point of shades on exterior surface.
- Powder coated white central metal pipe/umbrella handle.

** See attached drawing of fixture, last page of quote **

Use of an incandescent bulb will negate the warranty and damage our product



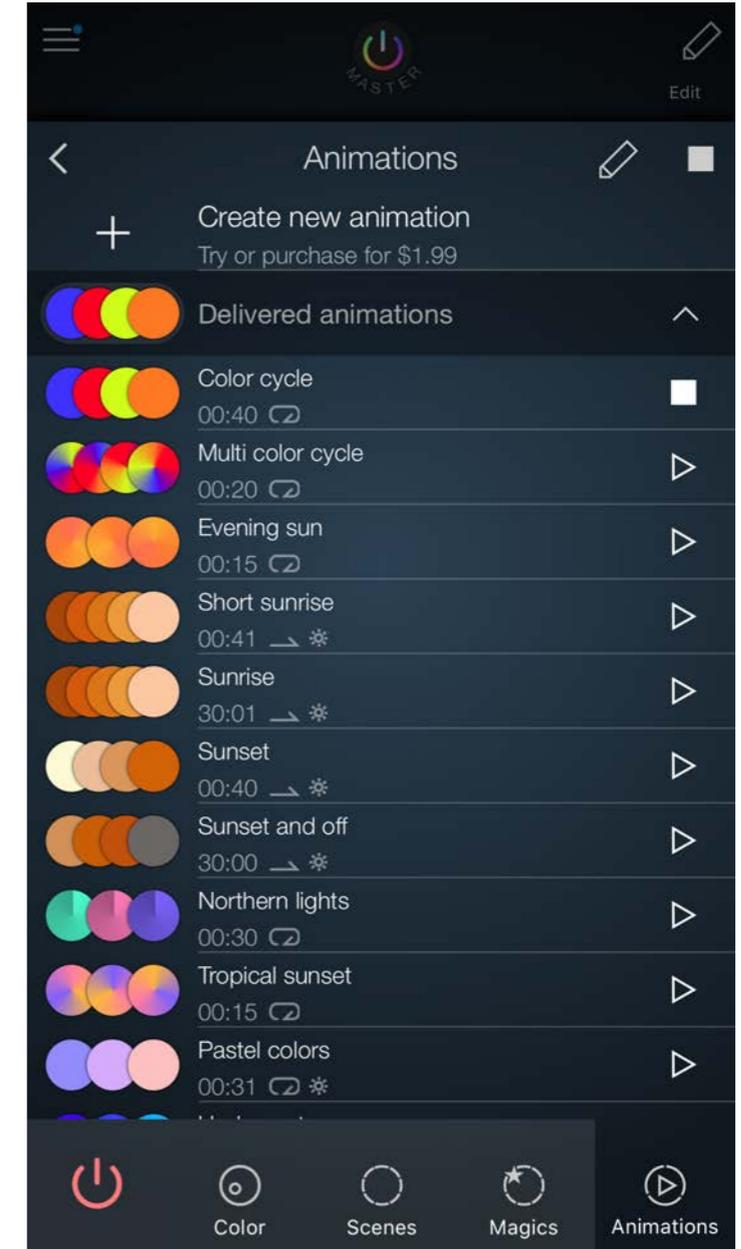
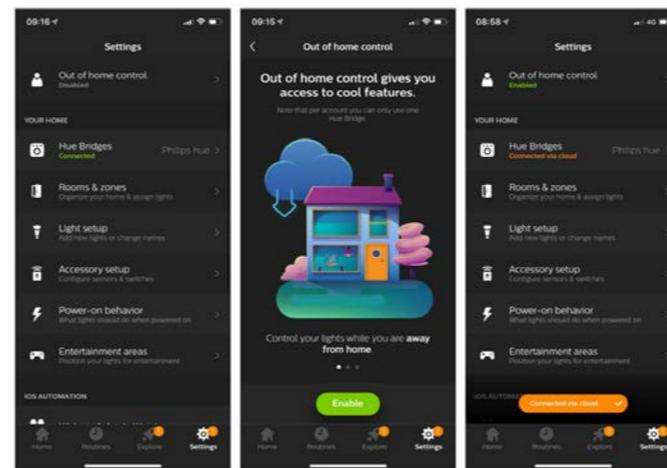
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Obstacles

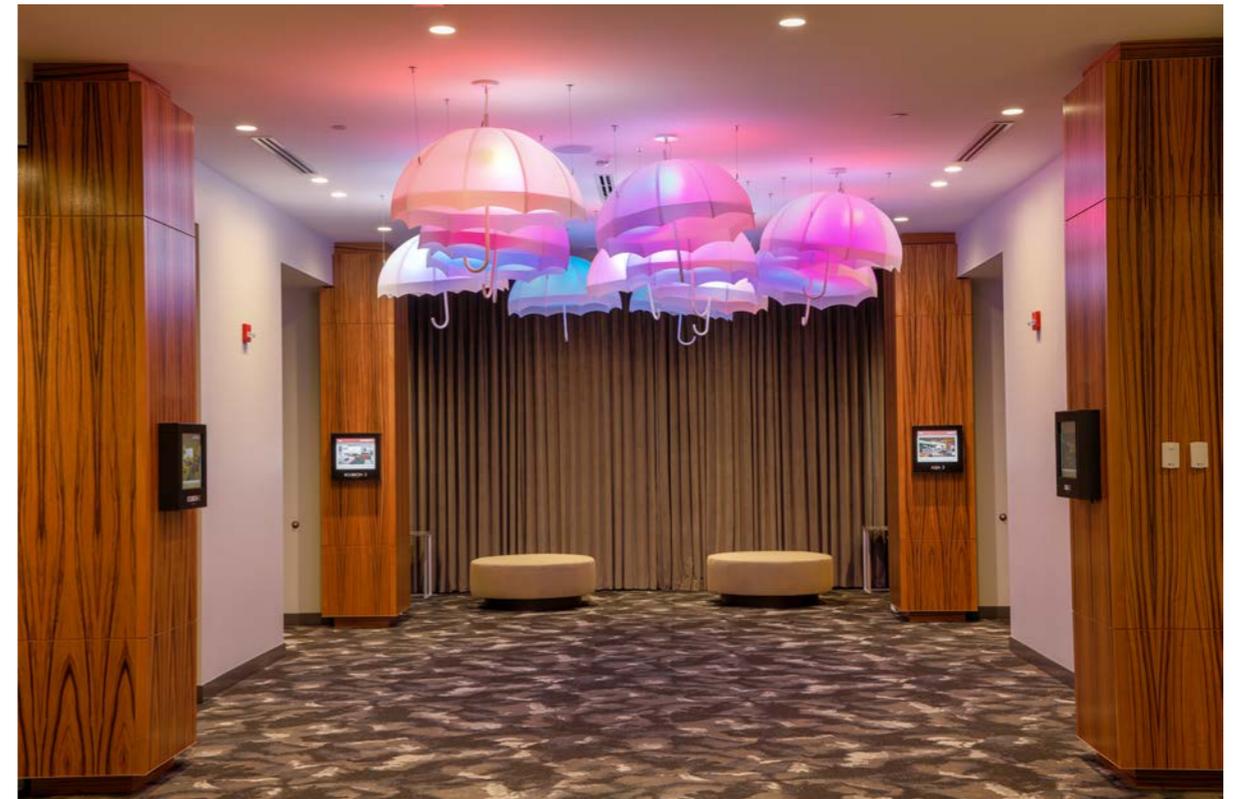
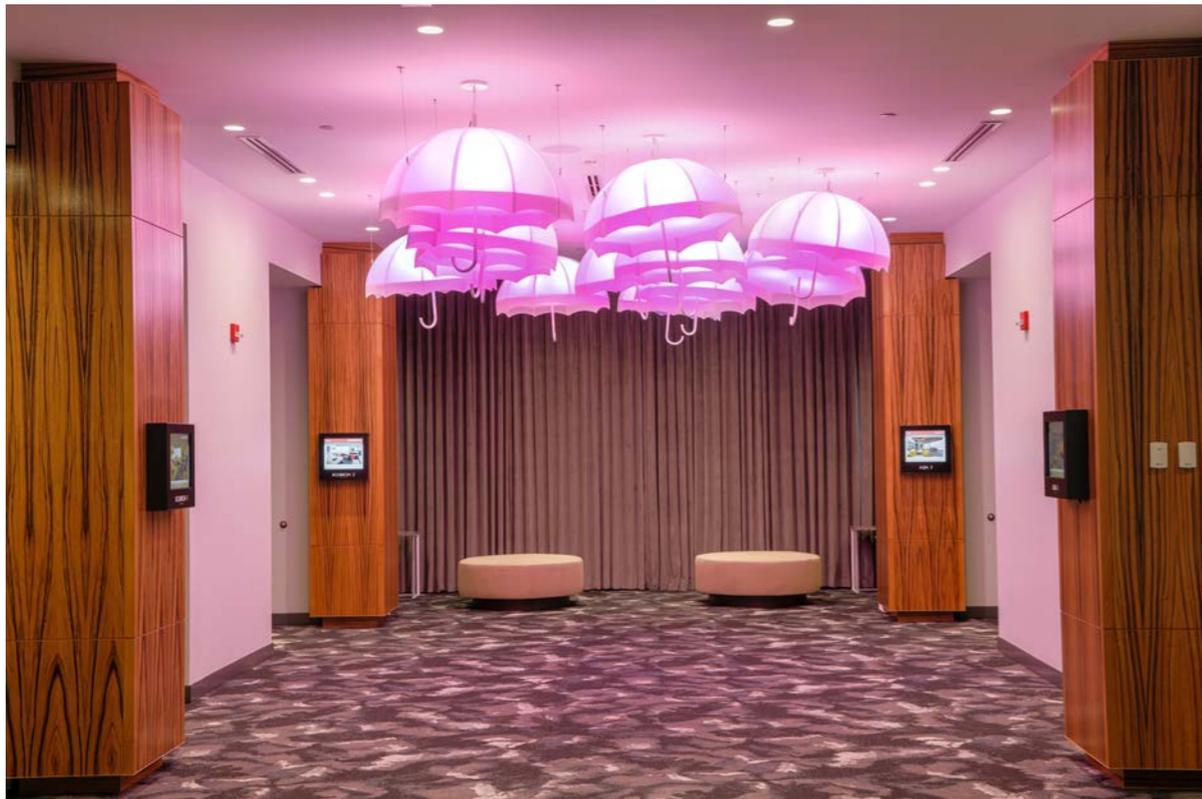
Luckily the Philips Hue hub system would allow a maximum of 50 lamps to connect to one system, being that there were (3) lamps per fixture, (12) fixtures in all, so all (36) lamps would work on this system. I testing out the functions of the Philips Hue app, I found that it made sense for a residential application, however it did not meet the functions I was seeking based upon the end users needs.

The end user wanted to be able to change the lights for events, holidays, etc. and wanted it to have the ability to have the colors change based upon selecting specific fixtures, color schemes, or how the time based color changing occurred. In my continued search for an already existing app that met these needs, I found the iConnectHue compatible app. The app was easy to set up, had a variety of functions that were easy to use, various color schemes and animations available, and settings that could be set-up to run during specific times of the day.

Discovering the iConnectHue app was the silver lining in this project, as it was easy for me to explain to the installer for set-up and the end user(s) (hotel staff) for daily use. I usually gauge if a project is a success in how little or many calls I receive after the fixture is shipped. Only one phone call from the installer to verify details regarding the installation of the router and verifying the device the hotel would be using to control the fixtures.



Custom Sculptural RGB Controlled Lighting



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Project Takeaways

- There are solutions to any problem, do the research, learn something new, consult outside sources, and determine the best solution and make sure everyone is on board with that decision to move forward.
- Sometimes it takes extra convincing to get all parties on the same page and in agreement, taking a little extra work to get over hurdles in design challenges - such as convincing the operations manager that a 2-part mold was necessary.
- Document learning to create a presentation and team reference tool, for ease in accessing information for future projects.
- Managing specifier expectations were a challenge in this project. Helping them to understand why extra time and additional costs were added when they decided to change the scope of the initial design intent. The result, was a pleased specifier and end user who would need to know how to operate and maintain the unique umbrella fixtures.
- Although, this project took extra time outside of the office, it was well worth it for a learning experience. Additionally, it brought the internal teams of the LightArt studio together and people had fun with the fixtures when we could all see the light at the end of the tunnel with this project.

