

# Architectural Aesthetics + Theatrical Optical Performance

**Modular** TIR LED Optical System of Complementary Architectural Fixtures



## Fixture Design Features Overview

Highly customizable with modular and interchangeable parts.






- High Center Beam Candle Power (CBCP)
- Soft, Feathered Field Angle/Edge mimicking halogen light source
- Toolless beam changing with 8 optical beam shaping accessories
- 15 different CCT chromaticity options
- 7 dimming controls options
- Low operating temperatures create long light engine life
- Visually quiet fixtures - Built in snoot for optical control
- Modular erector set design allows for new solutions upon request
- Fixtures customizable to meet application needs
- 100% of fixtures available in RGBW3K or RGBW4K LED
- 6500+ Custom colors to blend visually or make a bold statement
- MADE in USA - BABA Compliant

# Clarté Lighting's **Modular** System of Illumination



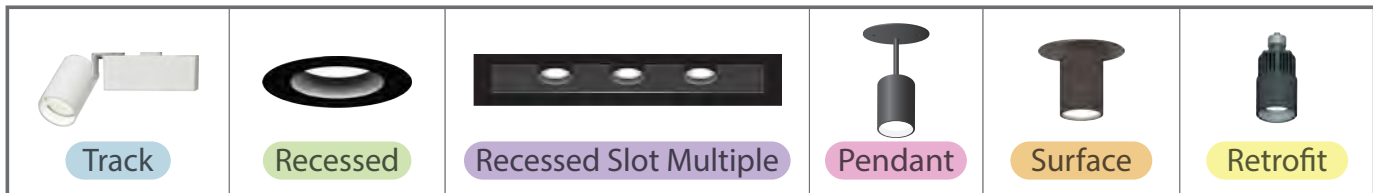
Highly customizable with modular and interchangeable parts.

- Available in 5 Standard LED Optical Arrays: 1", 2.25", 2.75", 4", and 4.5" OD
- 1" Built in snoot to veil source of light and allow for optical accessories
- Aluminum alloy machined outer housing
- Aluminum for light weight and thermal management, and alloy to add strength of steel

<p><b>1" PAR8 Scale</b> 0.75" ID : 1" OD</p>  <p>1100 delivered lumens</p>	<p><b>2" PAR16 Scale</b> 2" ID : 2 1/4" OD</p>  <p>1300 delivered lumens</p>	<p><b>2 3/4" PAR20 Scale</b> 2.5" ID : 2 3/4" OD</p>  <p>2300 delivered lumens</p>	<p><b>4" PAR30 Scale</b> 3.75" ID : 4" OD</p>  <p>4000 delivered lumens</p>	<p><b>4 1/2" PAR38 Scale</b> 4.25" ID : 4 1/2" OD</p>  <p>5000 delivered lumens</p>
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## 6 Matching Family of Fixtures - Mechanically, Optically and Aesthetically

- **New Track** – Stucchi Surface, Recessed or Trim Less Architectural 2C and 3C track.
- **Recessed** – ¾", 1", 2", 3", 5", or 6".
- **Recessed Slot Multiple** – 1, 2, 3, or 4 optics with up to 55° aiming adjustability.
- **Pendant** – 2", 4", or 6" OD with custom MOL up to 4'.
- **Surface** – 1, 2, or 3 optical array options.
- **Retrofit** – Simple solutions for replacing inefficient/outdated fixtures.
- **Retrofit Track** – 1C Halo, Lightolier, Juno, Lite Lab, or LSI compatible track adapters  
= Ideal for lighting upgrade of legacy light sources.

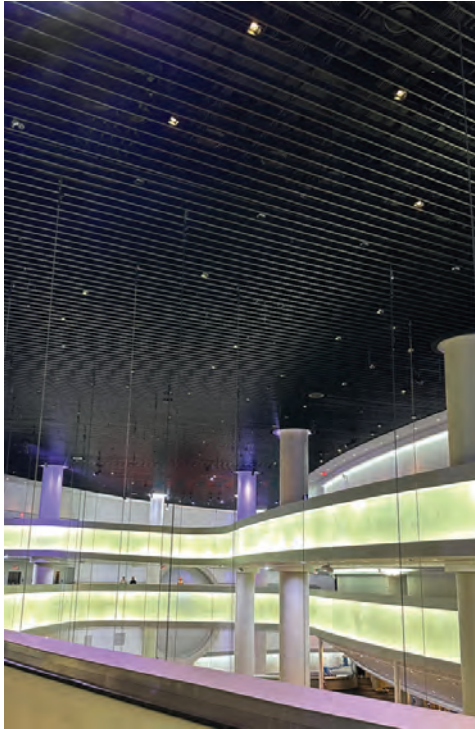


# The Sphere - Las Vegas, NV

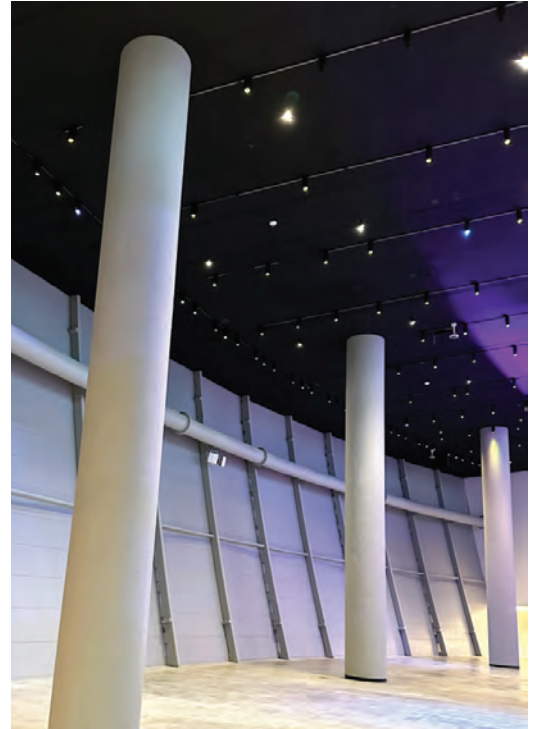
Surface



Pendant



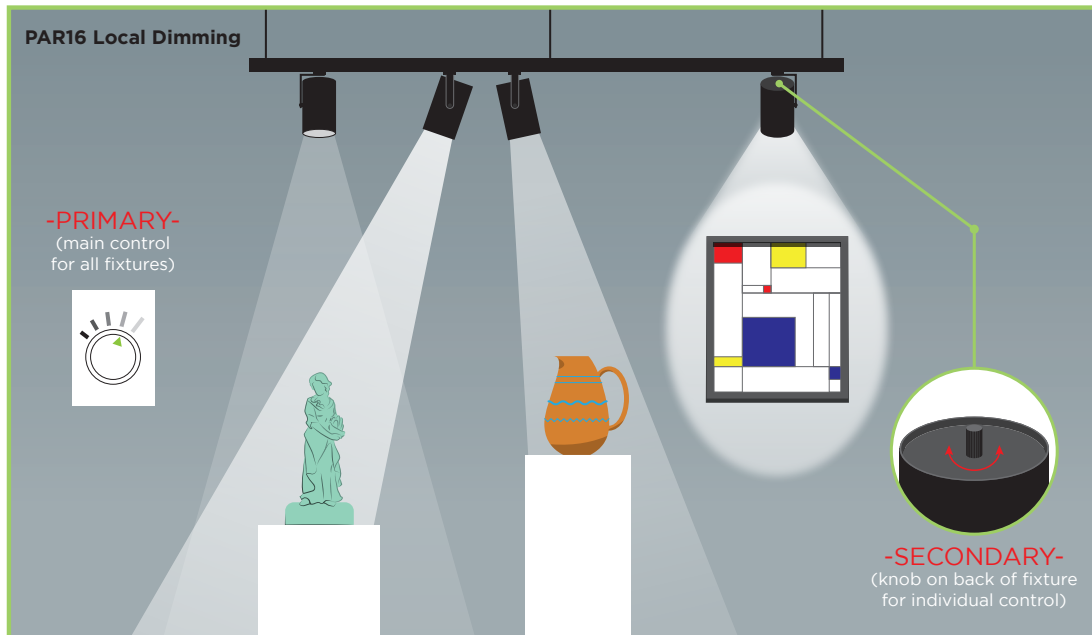
Track



Sphere - Las Vegas, NV  
Client - MSG Sphere Entertainment Group  
Architect - Populous  
Lighting Designer - ICRAVE -New York, NY



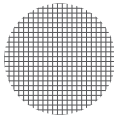
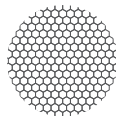




## 7 Dimming Control Options

- **D** - 2 Wire Forward Phase MLV 0.1% fade to OFF glow to ON dimming
- **0-10V** - 4 wire 1% analog dimming
- **DALI V2** - 4 wire 1% digital dimming
- **RDM Line voltage DMX** - 8 or 16-bit 0.01% dimming
- **RDM DMX Class 2 Absolute Light** - 32 bit 0.001% RGBW dimming.
- **NON-DMX RGBW Class 2** - Absolute Light 32 bit 0.001% RGBW dimming
- **24V DC** = Solar or wind without an inverter or ETC F Drive 0.1% dimming



## 8 Beam Shaping Optical Accessories

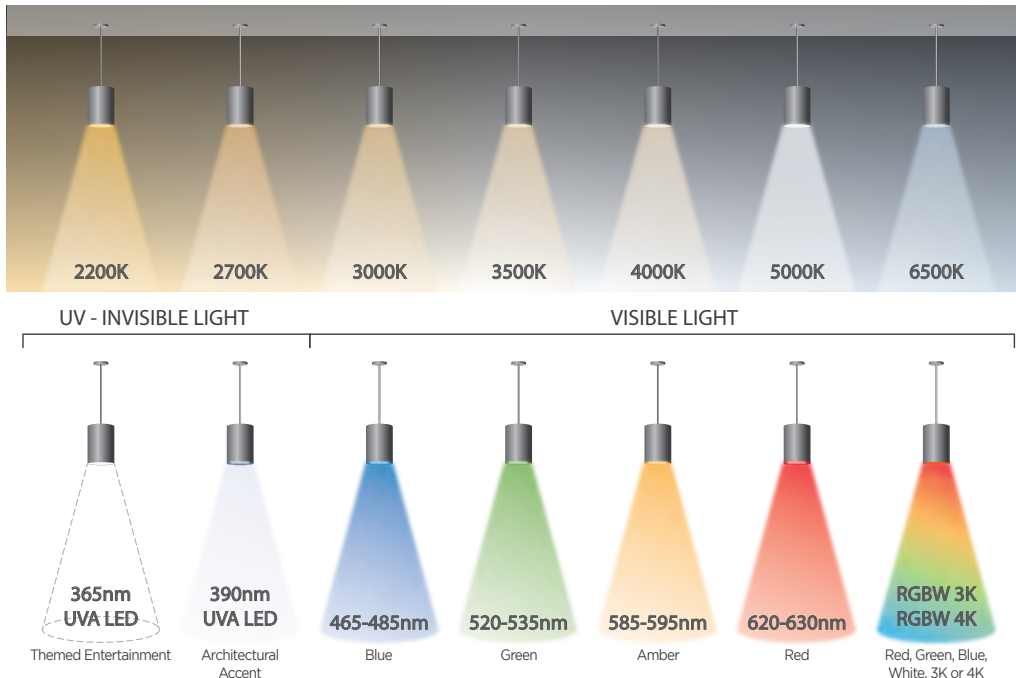
- **Lens Softener** - 20% Wider Beam
- **Linear Spread Lens** - 60 X 20 Rectangular Beam
- **Wide Flood** - Wall-Washing or Close-Mounting with an Even Wash of Light
- **Cross Hair Louver** - Glare Control with Less Light Loss
- **Hexcel or Paracube Louver** - Ideal for Optimum Visual Source Shielding
- **Halogen Lens** - Color Warmer from 2700k to 2600K
- **Dimmed Halogen Film** - Color Warmer from 2700K to 2400K
- **Dimmed Halogen Lens** - Color Warmer from 2700k to 2300K

 <p>Lens Softener - (LS) 20% Increase Beam Width</p>	 <p>Linear Spread Lens - (LSL) 20 x 60 Rectangular Beam Shaping</p>	 <p>Wide Flood Lens - (WFL) +50% increase beam width</p>	 <p>Louver - (LV) Honeycomb Louver</p>
 <p>Halogen - (H) 100K Warmer, 2700K to 2600K</p>	 <p>Dimmed Halogen - (DH) 400K Warmer, 2700K to 2300K</p>	 <p>Cross Hair Louver - (CHL) ½" Deep</p>	 <p>Paracube Louver - (PL) 5/8" Deep Cell Louver</p>



# 16 Chromaticity Options

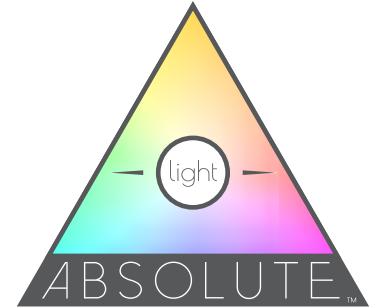
- 22K, 27K, 30K, 35K, 40K, 50K, or 65K
- UV365 and UV390 Black Light
- Dedicated Red, Green, Blue or Amber
  - Blue LED (465 - 485nm) Data Center Stacks, Isle Lights, Back Stage Theater Running Lights
  - Amber LED (585 - 595nm) Turtle Breeding Beaches - Meets Federal Requirements
  - Photo Red (650 - 670 nm) Living Wall with Binary Hue 4K or 5K for plant health
- 100% of fixtures offered in RGBW3K or RGBW4K





# 100% of Architectural Fixtures Available in RGBW

- RGBW3K or RGBW4K Option
- Retrofit, Remodel or New Construction Solutions
- 120V/277V line voltage 8 bit or 16 bit RDM DMX
  - Power and CAT5 data connection
  - RDM 512 DMX Dimming Protocol
- 48W class 2 option – Absolute Light RGBW3K
  - Like POE with power and data to single 18-5 connection
  - RDM DMX and NON DMX option
  - 32 bit processor for seamless color blending
  - Lower installed cost operating multiple fixtures
  - Up to 10 of 1' PAR8, Up to 4 of 2" PAR16 & Up to 2 of 2 ¾" PAR20
  - NON DMX 11 Controls Options
  - AMX, Control4, Creston, ELAN, Keg Digital, Leviton, Lutron, On Controls, RTI, Savant, URC, Vantage
  - Ketra compliant - Solutions not offered by Ketra
  - Color matched to Ketra for side by side installation.
  - RDM 512 DMX control version works with any DMX 512 dimming system



**Tunable White**

• 1800k To 7000k



**Warm Dim**

• 2000k to 3000k



**Wellness Light**

• Sunrise and Sunset



**Color**

• 16.7 Million Different Colors



**Daylight Tracer**

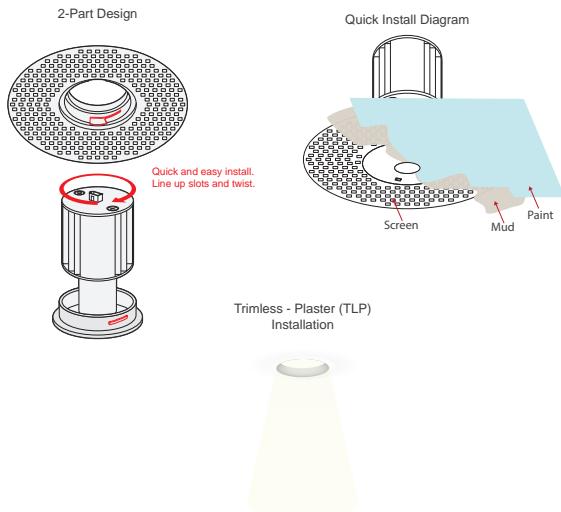
• Track and Match the Color of the Sun

# 3D Printed Trimless Solutions

## Minimalistic with Simple Clean Lines

- 3D printing allows unique designs to quickly be created
- Recessed or Surface install options
- Fixed or Adjustable install options
- Precise with 100% repeatability from part to part

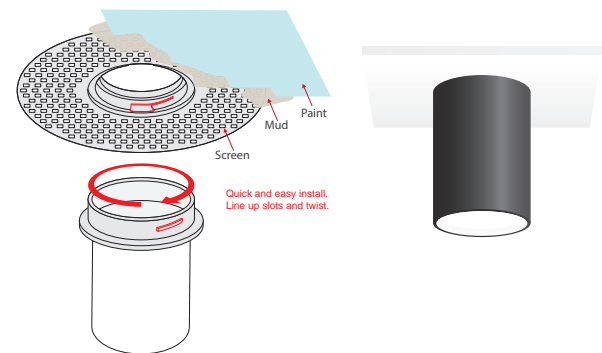
### PAR8 RECESSED PLASTER INSTALL



### PAR8 ADJUSTABLE PLASTER INSTALL

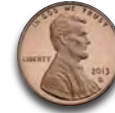


### PAR16 SURFACE PLASTER INSTALL



# 1" PAR8 Scale Lipstick = Smallest & Brightest Globally

- 3/4" ID and 1" OD
- Recessed Fixtures Deliver up to 1150+ Lumens
- Surface Fixtures Deliver up to 900 Lumens
- Up to 2 Accessories for Recessed Fixtures
- Up to 3 Accessories for Surface Fixtures



FACE OF THE OPTIC 3/4".  
THE SAME DIAMETER  
AS A PENNY!  
Patent No. US 10,208,928 B1

Canopy Adjustable



Canopy Fixed



Trimless Pendant



Trimless 1/2" Recessed



3/4" Trimless

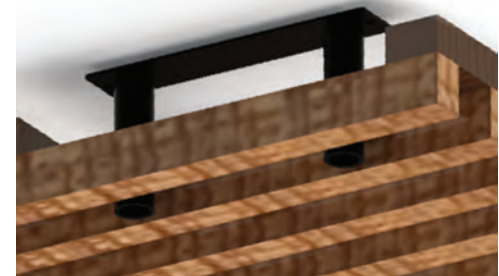


Luminosity  
Option

Slot Ceiling

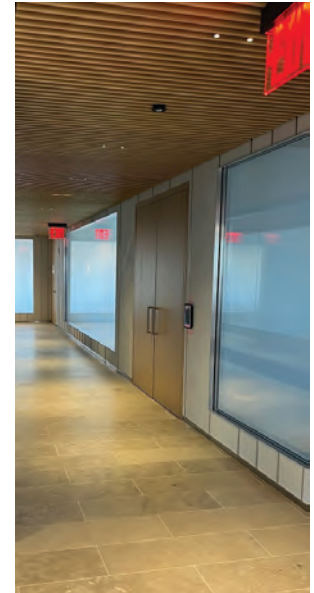


Slot Ceiling Application



## EQT - New York, NY

Clarté's SMR2-601-PAR8-FIX-WS1, 2-Lamp Slat Fixtures Installed



EQT - New York, NY

# Micro (12V AC) vs Standard Track (120V, 230V or 277V)

## Robust and Expansive Track Offering

- Manufactured in Italy
- 120V/230V/277C or 12V Micro Track
- 1 circuit for Micro Track and 2 or 3 circuit for Line Voltage
- 100% rigid/robust extruded aluminum
- Matching Surface, Round, and Trimless Data Track
- Remote 12V AC MLV power supply to power Track creates smaller fixture profile for all track types
- UL Listed for Wall or Ceiling mount.

120V/277V Class 1 Data Track

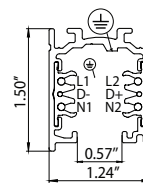


MICRO 48V Class 2 Data Track

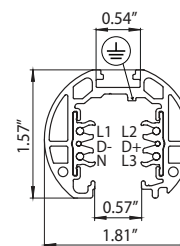


SDT-835-PAR16-CM-MT

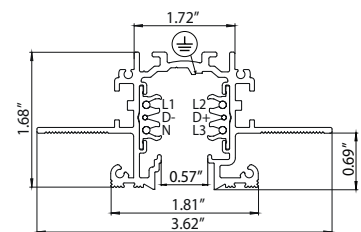
SURFACE Track



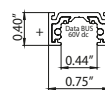
ROUND Track



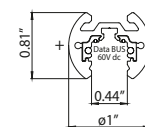
TRIMLESS Track



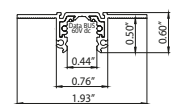
MICRO SURFACE Track



MICRO ROUND Track



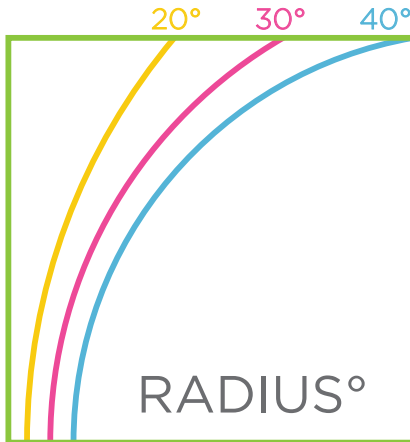
MICRO TRIMLESS Track



# Round, Curved, or Radius End Track

## Micro and Standard Track

- Round, Radius End, Oval, S Curve and Custom Track Design Options.
- Custom Fabrication 100% in Italy
- 12 week lead time for custom round, curved or radius track
- Quality 2nd to None globally.
- Micro Track 12V AC = Most Minimalistic Globally
- Send drawing to Clarté to send for review and approval from Stucchi.





# Savoy Automobile Museum - Cartersville, GA

## Clarté's SDT-838-PAR30 Track Fixtures Installed



Savoy Automobile Museum - Cartersville, GA  
Architect - INOX-Design  
MEP - Pursuit Engineering  
Lighting Designer - Lightsmarts

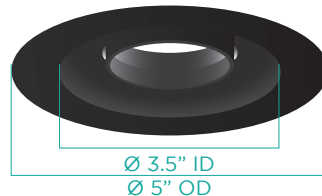


# Families of Architectural Recessed Solutions

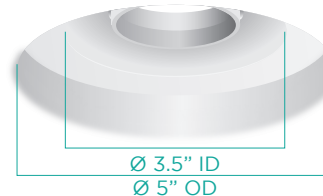
## Flexible and Adaptable

- 3/4", 1", 2" 3", 5" or 6" ID Recessed
- Round & Square
- Matching families of adjustable, fixed, or fixed wall wash
- Trimmed = Trim lip best in class .02" thin
- Best in class aiming angles from 35 to 90 degrees
- Trimmed, trimless, or trimless with ½" inset
- Trim less plaster, wood, gypsum, or metal

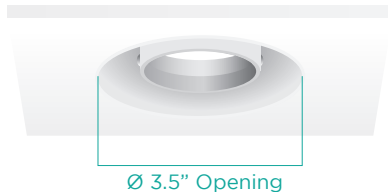
Recessed with Trim



Trimless ½" Inset



Trimless Plaster



Trimless Wood



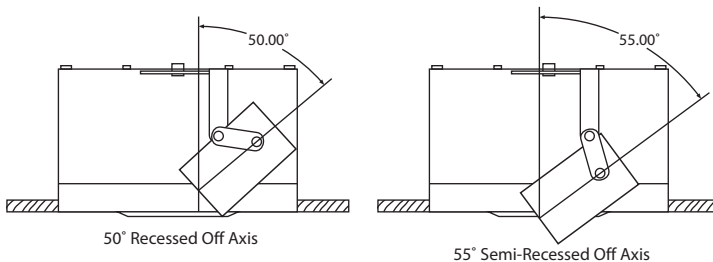
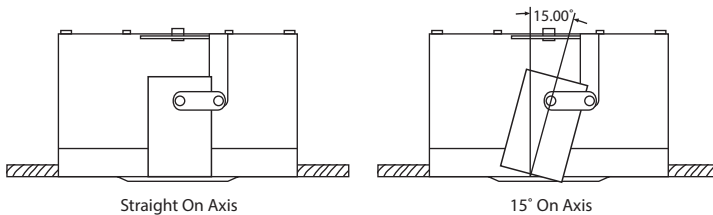
Trimless Acoustic Tile



# Recessed Slot Multiples

## Extreme Optical Aiming Flexibility

- 1, 2, 3 and 4 optic versions
- Round/Oval or Square/Rectangular
- Trimmed or trim less
- Fully recessed and semi-recessed capability per optic
- No visible side walls on all 4 sides, creates slot effect visually
- Best in Class Adjustability
  - 400° optical rotation left to right
  - 2" adjustment up and down
  - 50° aiming fully recessed
  - 55° aiming semi-recessed



Single bracket praying mantis shown here  
Double bracket praying mantis increases adjustability by ~ 20%.

MS1-623-PAR16



MS2-624-PAR16



MS3-625-PAR16



MS4-625-PAR16



# Architectural Pendants

- 1", 2", 4", or 4 ½" LED Pendant
  - Rigid 5/8" stem or Cord Hung Options
  - Smaller and Lower Cost Option
  - 1" OD - 12", 18" or 22" length or custom length up to 60
- 4" and 6" OD Housing Regressed LED Array
  - Enhanced visual vertical cutoff, visually for theaters.
  - ¾" rigid stem or aircraft cable with cord option.
  - Adjustable or wall wash option
  - 4" OD - 7", 18" or 24" length
  - 6" OD - 12" length and custom lengths up to 48"



1" PAR8



2" PAR16



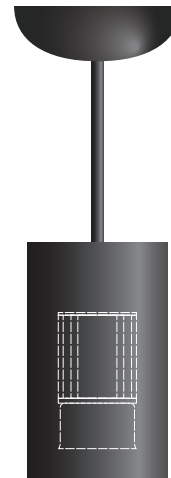
2½" PAR20



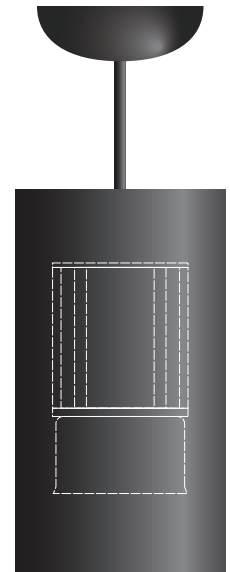
4" PAR30



4½" PAR38



4" Outer Housing



6" Outer Housing

# Architectural Surface Fixtures

## 1, 2, & 3 Optic Versions

- Compact, minimalist design
- PAR8 mono point
- PAR8 linear 1" slot ceiling version
- Wall or Ceiling Mount

SMR2-601-PAR8



SMR2-601-PAR8-FIX-WS1



SMS1-666-PAR30



SMS2-667-PAR30



SMR32-601-PAR8



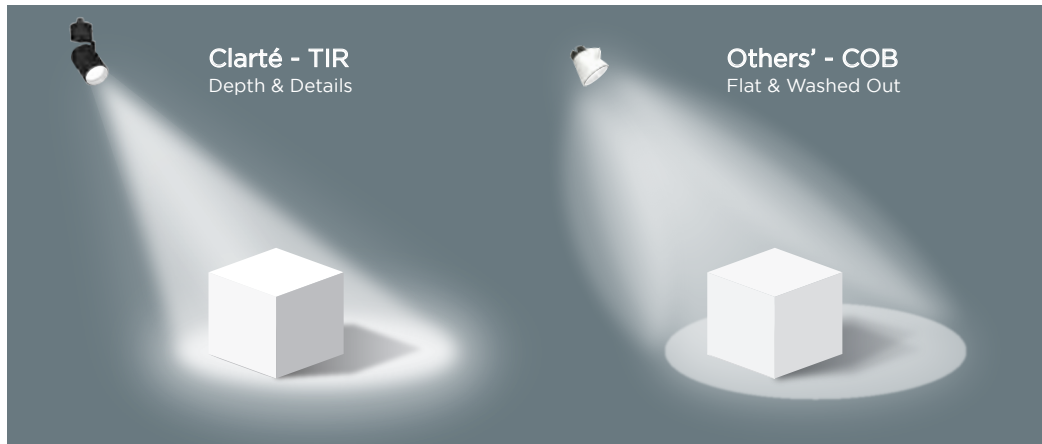
SMR3-601-PAR8-FIX-WS1



SMS3-668-PAR30



## Clarté TIR Optic vs. COB LED = Precision Optical Control vs. Blob of Light



### Clarté TIR Optics

- Designed in Photopia and tooled to match Halogen Point Light Source
- 35% to 50% higher CBCP compared to ALL other COB fixtures
- 45° vertical cut-off creates less glare
- Precise optical control
- Have primary and secondary fields of light
- Soft beam edge
- Single shadow

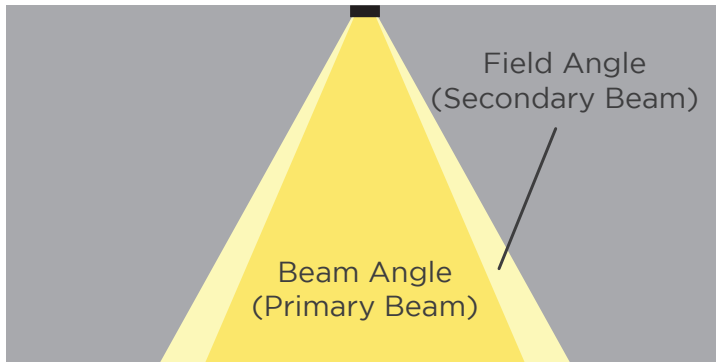
### Others' COB Optics

- COB = Blob of Light Optically
- Majority LED fixtures are COB
- 100% of LED flashlights are COB LED
- Only have a primary field of light and lack a secondary field of light
- Hard beam edge
- Multiple shadows

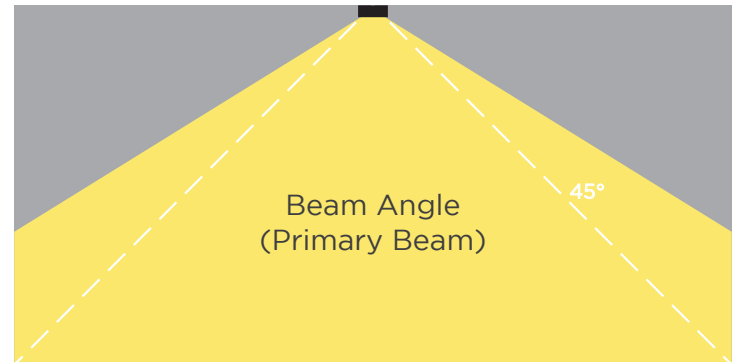
# Illuminating Architectural Spaces with Flashlights

- COB LED optics lack a secondary field of light
- 98+% of LED flashlights utilize COB LEDs
- Majority of LED Fixtures use same COB LEDs as flashlights
- Halogen Lamp & Clarté optics have a primary and secondary field of light

TIR/Halogen  
(24° Narrow Flood)

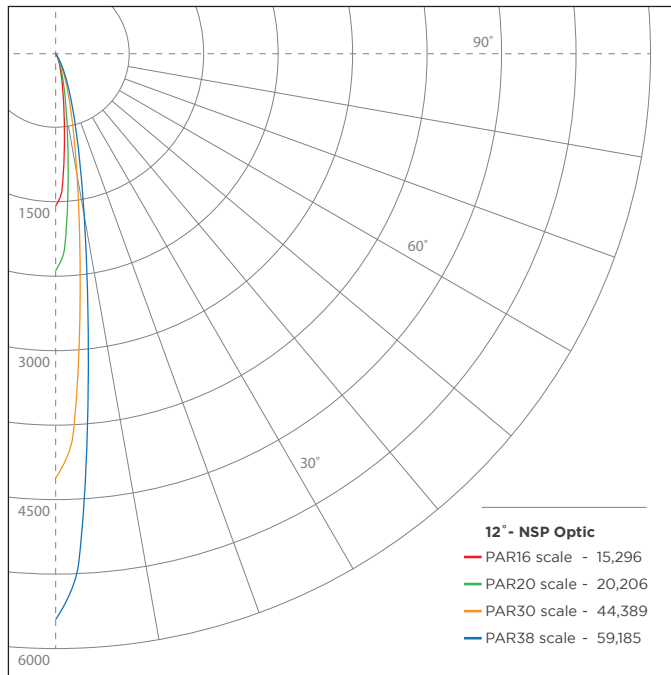


COB



# Best In Class Center Beam Candel Power (CBCP) Ideal for High Ceilings

- Your eyes don't see lumens.
- A lumen travels through space, hits a surface, and becomes a foot candle.
- Your eyes see foot candles.
- #1 determinant of a foot candle is CBCP



Clarte	Wattage	Beam	CBCP
PAR16 Scale	20	12°	15,296
PAR20 Scale	28	12°	20,206
PAR30 Scale	55	12°	44,389
PAR38 Scale	68	12°	59,185
Halogen			
70W AR70	50	8°	12,500
MR16	50	10°	11,500
PAR20	50	8°	13,000
PAR20	50	10°	9,500
PAR30	50	10°	9,500
PAR38	50	10°	11,900
PAR38	75	10°	18,200
PAR38	250	10°	46,500
LED Lamp			
MR16	7.5	10°	6,000
PAR20	10.8	10°	8,640
PAR30	18.5	9°	18,500
PAR38	18.5	9°	18,500



## Architects and Interior Designers Get Excited About Color Options

- **6500+** custom colors for any Clarté Lighting fixture type
- Blend Seamlessly into décor
- Make a bold branding statement
- Automotive paints maintain color over time
- Improved depth and dimensionality to the color



# Replacing and Upgrading Inefficient Legacy Light Sources

- Clarté Lighting provides simple solutions to replace inefficient legacy light sources
- Inefficient legacy light sources are becoming harder to source
- Inefficient legacy light sources' prices will continue to increase as supply diminishes
- Inefficient legacy light sources will eventually disappear.
- Eliminate lamp maintenance cost & reduce energy cost by up to -75%
- Visually upgrade from Analog to 4K with enhanced depth, texture, and color

## Clarté Lighting Upgrade Guide

### CMH - T or PAR

20W CMH
39W CMH
70W CMH
100W CMH
150W CMH

### LED

12W PAR16
24W PAR20
28W PAR20 or 33W PAR30
43W PAR30
55W PAR30

- Mercury Vapor (MV)
- High Pressure Sodium (HPS)
- Metal Halide (MH)

### LED

70W
100W
150W/175W
250W
400W

24W PAR20 or 33W PAR30
33W PAR30
43W PAR30
55W PAR30
68W PAR38

### Halogen

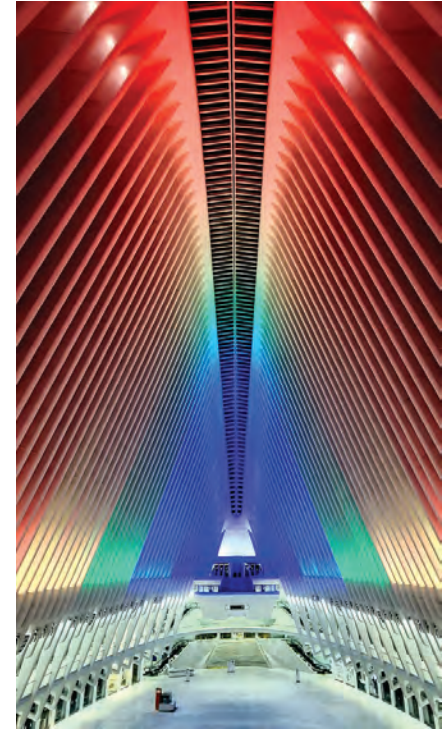
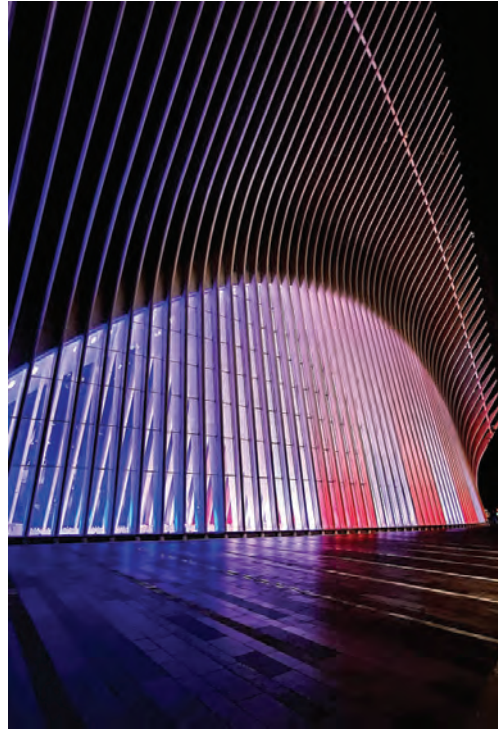
35W/50W MR16
50W PAR20
60W PAR30
75W MR16
75W PAR30
90W/100W PAR38
120W/150W PAR38
250W PAR38
250W Mini Can
300W PAR56/64
500W Mini Can
500W PAR56/64

### LED

9W XLED PAR16
9W XLED PAR16
12W PAR16
12W PAR16
12W PAR16
22W PAR30
33W PAR30
43W PAR30
43W PAR30
55W PAR30
55W PAR30
68W PAR38

# Oculus - New York, NY

Clarté's Lighting Upgrade - CMH to RGBW LED



Oculus World Trade Center - New York, NY

Client - New York Port Authority

Architect - Santiago Calatrava

Lighting Designer - Fisher Marantz Stone

# Clarté Lighting Upgrade Check List



## Existing Installation Details

Please Provide the Following:

- ☐ Wattage of existing lamp
- ☐ Type of existing lamp
- ☐ Approximate mounting height of each fixture type
- ☐ Are the existing light levels too low, too high, or just right?

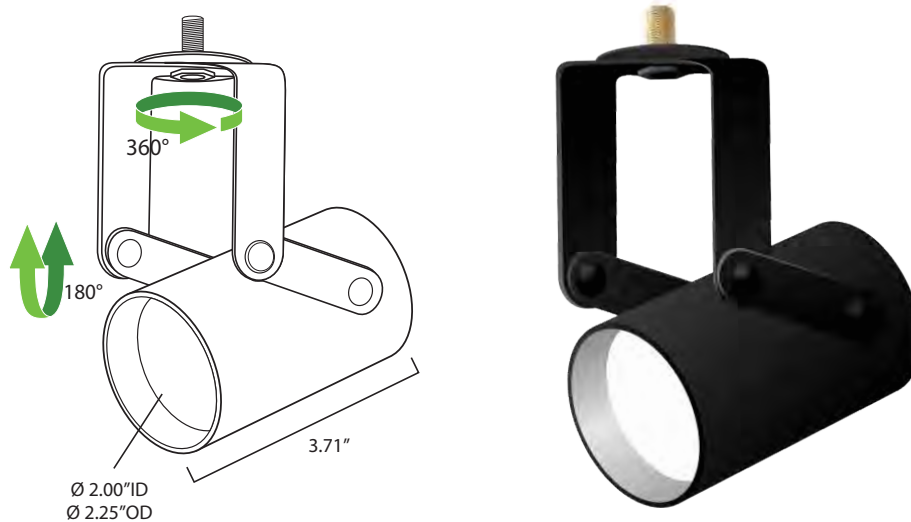
## Existing Installation Pictures

Please Provide the Following:

- ☐ A wide shot of the space showing multiple fixtures illuminating the space.
- ☐ A close up picture of the existing fixture.
- ☐ If recessed, take a picture of the trim installed and a picture of the trim removed showing the interior of the housing.

## Replace Existing legacy lamps to Clarté Lighting LED Solutions

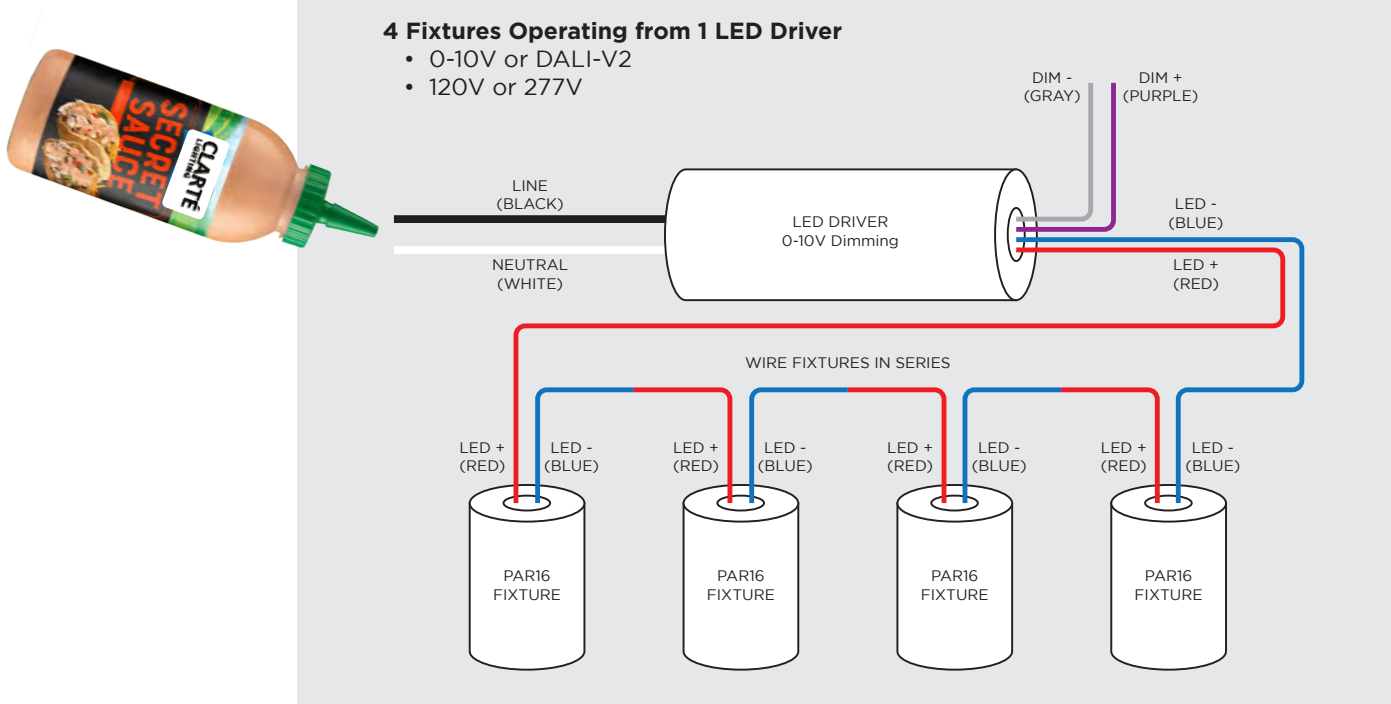
- 250W PAR38 halogen
- 300W or 500W - PAR56 or PAR64 halogen
- Recessed Multiples with 1, 2, 3 or 4 halogen fixtures
- Recessed Multiples with 1, 2, 3 or 4 PAR or T CMH fixtures
- Upgrade from 2, 3 or 4 CMH Ballast to Only Using 1 LED Driver



# Clarté Lighting Secret Sauce

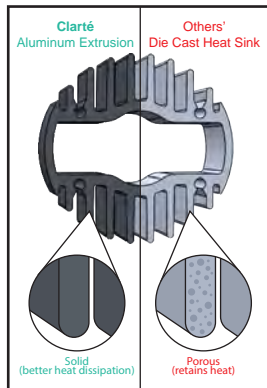


- Operate up to 4 PAR8 or PAR16 fixtures with 1 LED Driver
- Reduce Cost to Buy, Install and LED Drivers by up to -75%
- Reduces energy -37% compared to 1 LED driver with 1 LED array
- Help meet energy codes and save \$\$\$ operating fixtures

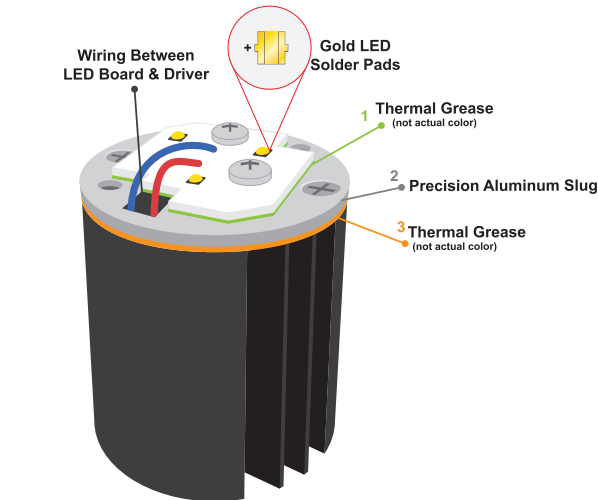


# Clarté Lighting Architectural Fixtures Last Longer

- Most COB LED fixture LED junction temperatures are 85°C to 105°C.
- Clarté Lighting Junction Temperatures are 65°C to 85°C.
- Maximum COB Junction Temperature = 135°C
- Maximum Clarté CREE LED junction temperature = 150°C
- Clarté Lighting fixtures L70 life is 104,500 hrs to 262,000 hrs.
- All LED fixtures vary photometrically, aesthetically, and thermally. Meaning they will also vary in length of L70 life.



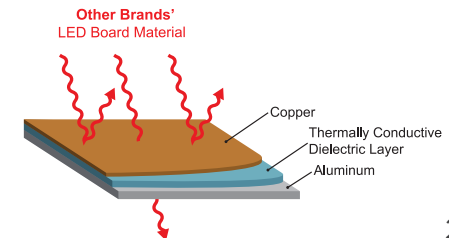
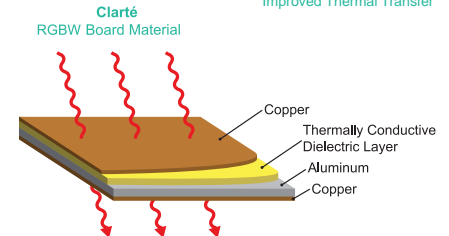
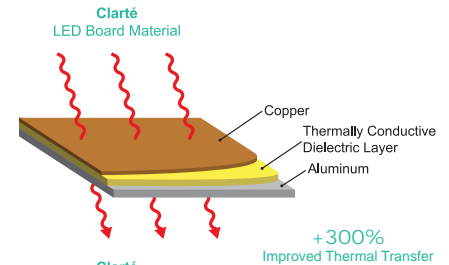
-15 to - 20°C  
Lower Junction  
Temperature  
EXTRUDED ALUMINUM  
HEAT SINK



1  
-2 to - 4°C  
Lower Junction  
Temperature  
THERMAL  
GREASE

2  
-2 to - 5°C  
Lower Junction  
Temperature  
ALUMINUM  
SLUG

3  
-2 to - 4°C  
Lower Junction  
Temperature  
THERMAL  
GREASE





# Made in the USA

**CLARTÉ**  
LIGHTING



- Designed & Manufactured in our Studio in Covina, CA
- BABA Compliant
- In-house vertical integration with multiple industrial grade machines.
- In-house vertical CNC and horizontal lathe CNC machines
- In house 3D printing for rapid prototyping and creating custom solutions.
- In-house design and production capabilities allow for fast product changes or new product line extensions.

**HORIZONTAL CNC LATHE MACHINE**

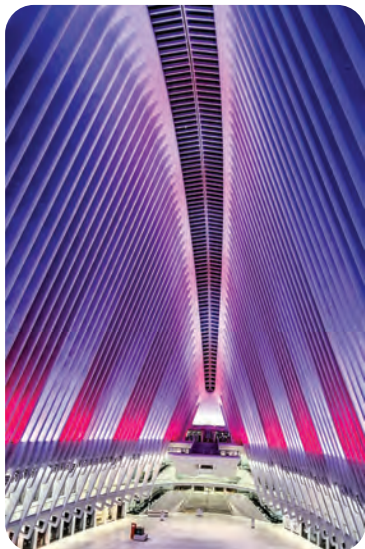


**3D PRODUCTION PRINTER**



# Thank You for Learning About Clarté Lighting

**CLARTÉ**  
LIGHTING



Oculus World Trade Center – New York, NY



Panorama – Santa Fe, NM



Porsche Studio – Portland, OR



Polo Bar – New York, NY

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