2 SERIES IC & NON-IC
RECESSED DOWNLIGHT HOUSINGS AND TRIMS

INSTALLATION

Before beginning any DOWNLIGHT installation, disconnect electrical power at main switch or circuit breaker.

A. CAUTION
To reduce the risk of fire, electric shock, and potential damage to recessed housing assembly when electrical power is re-connected, DO NOT ATTEMPT TO CONNECT the following on branch circuit serving recessed downlight assembly:
- Motors
- Power tools
- Extension cords
- Appliances or similar electronics

Fixtures to be mounted in conditions where ambient temperatures do not exceed 40°C.

Lucifer Lighting LED housings must be used with Lucifer Lighting LED downlights.

Ensure AC input voltage is protected against surges & load shifts prior to power supply input.

B. SAFETY INSTRUCTIONS
1. Read installation instructions completely before attempting installation.
2. Failure to follow instructions may result in improper installation and void warranty.
3. Contact Lucifer Lighting Company with any questions or concerns before beginning any installation.
4. Ensure qualified electrician will perform all electrical procedures.
5. Disconnect electrical power circuit before attempting to install recessed downlight housing or trim, or if adding to or changing configuration of downlight housing or trim assembly.
6. Install / mount recessed downlight housing on structurally sound surface.
7. Recessed downlight housings may be installed in dry / damp locations only.
8. Do not install recessed downlight assembly closer than 6” (152mm) from curtains, exotic veneers, or similar combustible or heat sensitive materials.
9. This product must be installed in accordance with applicable electrical and installation codes by a person familiar with the construction and operation of the product and the hazards involved. “CAUTION– RISK OF FIRE”

C. SETBACKS
IC housing requires:
Minimum 3” (76mm) setback from polycell spray-in foam insulation having max R-Value of 40 on all sides and top of housing.

Non-IC housing requires:
Minimum 0.50” (13mm) setback from combustible and non-combustible materials on all sides and top of housing.
Minimum 3” (76mm) setback from insulation material having max R-value of 30 on all sides and top of Housing.
Minimum 6” (152mm) from polycell spray-in foam insulation having max R-Value of 40 on all sides and top of housing.

Consult factory for spacing requirements for any installations exceeding R-Value of 40.
**D. HOUSING INSTALLATION**

1. **KEY FIXTURE COMPONENTS**
   Become familiar with the wiring compartment access points, hanger bar assemblies and housing collar features associated housing platforms.

   Housing provides access to splice compartment from ceiling side via pop-off cover plate (removed by leveraging side tabs) and through the housing neck for servicing from below via spring loaded door [*Fig.1*].

2. **HANGER BAR ASSEMBLIES**
   Hanger bars extend from 14” to 24” centers and may mount to long axis or short axis of housing by locating hanger bar mounting brackets on preferred sides and securing with supplied screws. To install hanger bars on housing, slide mating halves together, joining through mounting bracket on housing sides. Position is secured with central locking screw [*Fig.2*].
Bottom side of hanger bar mounting bracket should be flush with underside of housing. If adjustment is required, housing depth may be adjusted using guide on brackets (Fig.3).

![Fig.3](image)

3. HOUSING COLLAR
Housing outfitted with one of four different adjustable collars (Fig.4), preset at factory for specified ceiling thickness. For in-field adjustment, loosen two opposing silver Allen screws using 9/64” Allen wrench and raise/ lower collar to desired position. Retighten Allen screws to secure position (Fig.5).

**Note:** Do not loosen or tighten two button-head black screws for standard adjustment. These screws are only removed if changing to different collar.

![Collars by ceiling thickness](image)

![Silver Adjustment Screw](image)

![Black Screw](image)
4. MOUNT HOUSING
Follow steps to ensure successful installation.

**General Housing Mounting Notes:**

- Recessed downlights housings installed in accessible and non-accessible ceilings shall be supported from the structural members of the building. Do not support housings by lay-in ceiling tile or support T-bars only, unless deemed suitable by NEC national and/or local code authority.
- Recessed downlight housings are thermally protected as required by Underwriters Laboratories (UL). Cycling fixture may indicate improper housing installation, inadequate plenum space surrounding housing or incompatible higher wattage lamp for specified housing. Verify insulation spacing complies with required setbacks [see page 1] and lamp’s wattage is suitable for housing.
- Determine specified fixture location, ensuring sufficient space exists to accommodate housing while maintaining factory established setbacks from construction materials and insulation [see page 1].
- With hanger bars properly affixed to housing [see page 4] attach hanger bars to selected framing member.

**Wood or Metal Studs:**
Position reference tab of hanger bar foot to underside of stud ([Fig.6]). If wood, use integral nailing tab and suitable “customer-supplied” nail or screw to secure. If metal, use suitable “customer-supplied” screws ([Fig.7]).

**Note:** Must use two nails or screws at each of four hanger bar feet.

**T-Bar Frame:**
Slide hanger bar over appropriately supported T-bar frame. Lock in place using “customer-supplied” #8 self-tapping screw in hanger bar foot ([Fig.8]).

**Note:** See Section D-6.5 for additional instructions regarding installation of ceiling tiles.

**Furring Channel:**
Bracket accommodates 1 1/2” depth furring channel as shipped. If using 7/8” depth furring channel, fold at break line and remove extension tab. Install bracket by latching it over the flanges of the channel. Fold tabs toward channel to lock bracket in place. Secure hanger bar to bracket using supplied screws ([Fig.9]).
5. WIRE HOUSING

**Note:** Heed all WARNINGS and CAUTIONS and consult Safety Instructions in Section C prior to commencing wiring or servicing.

**General Wiring Notes:**

The housing assembly should be installed by a registered electrician and shall comply with National Electric Code (NEC), local codes and ordinances.

Installer is responsible for furnishing any required electrical equipment and materials for proper housing installation.

Installed housings permit access to components and splice connections. “Customer-supplied feed wires” within splice compartment should be provided in minimum lengths of 14” (356mm) to accommodate future servicing.

Metal conduit shall be used if required by applicable codes. The conductor insulation must feature the appropriate temperature rating as specified on the label for each Lucifer Lighting Company downlight housing.

The ground wire at the service junction box shall be secured to a ground screw. No part of the secondary circuit shall be grounded.

For dimming equipped systems, consult controls manufacturer to verify control compatibility and for proper installation procedures.
**Wiring Installation Process:**

**Note:** If using “customer-supplied” generic low-voltage transformer, use appropriate raceway, connectors, wire and strain reliefs as required installing same through knockout in housing splice compartment.

Splice compartment / power supply assembly provides three (3) wires for connection to the mains voltage: black, white and green *(Fig. 12).*

Remove splice compartment cover, gaining access to wiring compartment of the housing *(Fig. 13).*

Use appropriate raceway, connectors, wire and strain reliefs as required installing same through knockout in housing splice compartment.

Join structured building wires to corresponding housing wires with suitable “customer-supplied” wire connecting device *(Fig. 12).*

**Note:** Ensure wires are firmly joined together prior to moving to the next step.

Push all wires and wire connections into splice compartment, ensuring that no wires are pinched or frayed. Reinstall splice compartment cover.

**Important:** Verify required minimum wire lengths exist in splice compartment.

Confirm housing is still in the preferred position.

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**Fig. 12**

**Fig. 13**
6. CEILING SUBSTRATE AND FINISH OUT
Factory recommends use of properly sized hole saw for cut-outs. Correct size and quality of hole is critical. Many trims have minimal ceiling overlay of trim flange.

Make proper hole cut-out referencing measurements from adjacent walls to housing neck/ aperture centerline.

IC & NON-IC HOUSINGS CUT-OUTS
3.75” (95mm) diameter for flange overlay
5.60” (142mm) diameter for zero-sightline

6.1 GYPSUM BOARD
Install drywall in typical fashion. Oversized hole cut-outs must be filled in with mud or plaster utilizing appropriate tape in accordance with industry standards.

Zero-sightline installs now refer to page 12.

Important: If zero-sightline, appliqué must be installed prior to mudding or finishing of ceiling. Failure to follow these instructions will lead to failed expectations and added expense.

Sand, prime and apply finish coat to ceiling.

6.2 WOOD CEILING
Install wood in accordance with local and National building codes, employing suitable fire barriers as required. Hole cut-outs should be clean and precise. Sand, stain and apply finish seal coat prior to installing trim ceiling adaptor and trim.

Important: Zero-Sightline installations are not compatible with wood ceiling applications.

6.3. JA8-2016 TITLE 24 INSTALLATIONS
Once the ceiling is installed, using a caulk suitable for the site conditions and associated materials, apply a bead of caulk between housing collar and ceiling substrate to create an airtight seal, in accordance with CEC instructions and guidelines (Fig.14) (Fig.15).
6.3 T-GRID LAY-IN TILE CEILING
Install tiles in accordance with manufacturer’s recommendations. Housings must be fully supported by T-grid or framing structure above and not solely by decorative ceiling tile.

**Note:** See General Mounting Notes on page 5.

**Important:** Zero-Sightline installations are not compatible with lay-In tile ceiling applications.

**D. TRIM CEILING ADAPTOR INSTALLATION**

**Note:** All Lucifer Lighting 2-Series trims supplied with ceiling adaptor (1 per fixture) designed to receive retention plunger balls of trim and are equipped with safety lanyard. Adaptor mates with trim in only one orientation by aligning blue indicator lines found on both trim and adaptor. Blue indicator line also defines direction trim will aim, defining mid-axial rotation point as well. Additionally, adaptor is used to line up adjacent square faced trims in flange overlay applications.

**Important:** Adaptor to be installed after final finish and paint have been applied to ceiling. Adaptor must be removed prior to any refinishing or repainting of ceiling. Presence of paint, ceiling mud or other construction materials on or in adaptor represents unsafe condition and must be replaced or cleaned to original condition and specifications to maintain factory warranty.

Determine wall plane or direction in which trim is to aim, positioning side of adaptor with blue line closest to or pointing in that direction *(Fig.16).*

**Important:** For wallwash application, aim squarely / directly at adjacent (target) wall *(Fig.16).*

Ensure trim adaptor arms are pointed inward *(Fig.17)*, and Insert adaptor up through housing collar or appliqué as applies *(Fig.18).*
Begin tightening adaptor arm screws, ensuring arms swing out, then down to engage top of housing collar lip (Fig. 19).

Utilize string line or laser level to obtain uniform or desired alignment between multiple fixtures and square fixtures in relation to parallel planes referencing markings on trim adaptor face perimeter (Fig. 20).

Hand-tighten adaptor arm screws, not exceeding 5 in-lbs. (0.565 Nm), ensuring adaptor lip seats uniformly flush with finished ceiling plane and housing collar, adjusting housing collar if necessary (see page 5).

**Note:** Do not overtighten.

Guide low-voltage wiring and safety lanyard through adaptor to hang below ceiling to facilitate trim installation (Fig. 21).

*Connector type varies and may look different than graphic.*

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**E. TRIM INSTALLATION**

Attach safety lanyard from mounting adaptor to designated hole in support arm of downlight fixture using supplied clasp (Fig. 22).

*Connector type varies and may look different than graphic.*
Downlight fixtures typically accept multiple effects devices.

To install or change lamp or effects devices, loosen thumb screw of fixture, then slide lampholder up and swing out for access (Fig.23).

**Important:** Handle lamp socket with care. When mating to or removing from lamp, pull or push directly straight on or off lamp pins. Other motions, such as rocking or twisting, may damage socket and lamp pins.

Position required special effects device(s) in lens recess of downlight in preferred order and correct orientation.

Return lampholder to locking position and secure by tightening thumb screw.

**Important:** Before final downlight installation in ceiling, ensure lampholder is secure and safety lanyard is properly affixed to downlight and mounting adaptor.

Downlight trim mates with housing collar via positive engagement, high performance ball-plungers.

To install downlight, ensure blue line of trim is aligned with blue line of trim ceiling adaptor, guide safety lanyard and power supply wires up through opening so that they do not become entangled or pinched and insert trim up into neck of adaptor.

Apply even pressure to underside of trim faceplate (mechanism, if adjustable trim) until the unit “pops” up into final resting position in adaptor (Fig.24).

Verify trim faceplate seats fully and uniformly to ceiling plane (Fig.25).
Hot-aimable tilt and rotation adjustment is accessed by removing fixture’s faceplate held in place by rare earth magnets, revealing adjustment mechanisms (Fig.26).

Initial adjustment to fixture tilt may be made prior to installing downlight by using marked indicator.

Spring loaded tilt allows fixture to pass through ceiling opening in vertical position and return to pre-set angle once installed.

Adjustments made with supplied, standard .050” Allen tool.

With faceplate removed, locate tilt adjustment screw and rotation lock screw.

**Rotation:** To rotate, use supplied hex tool and loosen lock screw, then carefully set trim to desired position by hand. Tighten lock screw to secure (Fig.27). **DO NOT OVER TIGHTEN.**

**Tilt:** To adjust tilt, use hex tool engaged with countersunk jack screw and rotate counter-clockwise to increase tilt angle (up to 45° max), or clockwise to decrease tilt angle (Fig.28). **DO NOT TURN SCREW PAST LIMITS OF ADJUSTMENT, DAMAGE TO MECHANISM MAY ARISE.**

Complete installation by bringing faceplate close to mechanism, aligning magnets, and allow faceplate to seat to trim and ceiling plane.
I. ZERO-SIGHTLINE
An appliqué is required for zero-sightline installations. The following instructions assume housing has been installed and / or proper ceiling cut-out has been made ready to accept appliqué and / or trim adaptor.

**Important:** For square fixture installations, appliqué must be properly aligned. Utilize string line or laser level to obtain uniform or desired alignment between multiple fixtures, or in relation to parallel planes *(Fig.29)*.

**With Housing:** For installations utilizing a downlight housing, align 4 countersunk screw holes in appliqué with corresponding holes of rotatable housing collar in ceiling cut-out. Use 4 provided screws through proper holes in appliqué and tighten until appliqué is fully seated against ceiling surface *(Fig.30)*, ensuring desired alignment if square appliqué is used.

**Without Housing:** For remodel or tethered power supply installations without a housing, center appliqué in cut-out and install trim adaptor (with arms pointed inward) up through appliqué. To secure, tighten adaptor screws so arms swing out then down, until appliqué is fully seated against ceiling surface *(Fig.31)*, ensuring desired alignment if square appliqué is used.

Trim adaptor should rest completely and uniformly in appliqué recess.

**Important:** After plaster mudding/ floating has been performed, subsequent appliqué adjustment is not possible. Ensure proper, fully seated fit and desired alignment if square.

After appliqué is secured (by screws or trim adaptor), install plaster plug *(Fig.32)*.

Do not remove plug until all plaster and paint work is complete.
With paint / plaster plug installed, (Fig.33) use floating knife to apply first pass of drywall compound and float area up to slightly below edge of flange/ plaster stop. Float out as far as necessary to hide perforated appliqué and allow first pass of joint compound to dry (Fig.34).

After first pass is dry, apply second coat of drywall compound. Make surface as smooth as possible. Ensure coat of compound falls below flange / plaster stop (Fig.35).

On this pass, feather compound as you move away from flange to give appearance of a perfectly flat ceiling (Fig.36). Allow drywall compound to dry fully and cure.

Gently use block sanding screen and sand surface until drywall compound is even with bottom of flange/ plaster stop (Fig.37). Ensure surface is smooth.

Once drywall compound is fully cured, ceiling may be painted. After paint is dry, remove plaster plug making sure adhesive tape is removed as well.

Check for any drywall compound or paint that may have seeped beneath plug and carefully scrape if necessary.

**Important:** Any foreign material left in or on recessed appliqué surface or trim adaptor may prevent proper fixture installation and satisfactory zero-sightline trim installation.

Resume downlight installation procedure detailed in Section H of these instructions to perform final alignment and securing of trim adaptor.

**Note:** The size of some transformers or power supplies may require removal of trim adaptor to facilitate insertion through cut-out.
G. SERVICING FIXTURE

**Important:** Before servicing or maintaining trim or housing, disconnect electrical power at main switch or circuit breaker. Additionally, review notes in Sections A & B and refer to figures in main installation instructions where necessary.

REPLACING LAMP:
Remove trim from ceiling using following techniques for the respective trim type.

- **Downlight Trims** – Using round-shafted flat blade screw driver, carefully position blade of screw driver on top of baffle with shaft gently resting on opposing trim aperture. Pry slightly to dislodge trim from trim adaptor.
- **Wallwash Trims** – Grasp baffle using soft gloves or with clean soft cloth, pulling away from mounting plane.
- **Adjustable Trims:**
  1. **Dry/Damp** – Insert fingers in trim aperture, grabbing and pulling downward on removable faceplate.
  2. **Wet** – Carefully grasp perimeter of trim pulling downward on removable faceplate.
  3. With respective faceplate removed, grasp trim mechanism with fingers and pull downward.
- Release trim from wiring harness by separating male/female connectors by pulling apart.
- Detach lamp by loosening knurled knob thumb screw, allowing lampholder to swing up and out releasing lamp.
- Carefully disengage lamp from socket.
- Replace with new lamp sourced through or approved by Lucifer Lighting, reversing order of preceding steps.
- Reinsert trim, reinstalling trim adaptor and leveling housing collar as required.

EXCHANGING EFFECTS DEVICES:
See page 13.

TRANSFORMER REPLACEMENT:
Transformer assembly is accessed through housing aperture.

**Note:** In some configurations, the trim mounting adaptor may need to be removed and housing collar may need to be lowered to gain access to the transformer sled assembly and splice compartment.

- **Non-IC Housing:**
  1. Begin by inserting hand through ceiling opening, grasping door tab and pulling back to release transformer sled assembly.
  2. Rotate transformer sled assembly as required to facilitate guiding down and through ceiling opening.
  3. Disconnect sled wiring from line voltage feed wires, removing splice connectors.
  4. Replace with new OEM transformer assembly sourced through Lucifer Lighting, ensuring wires are firmly spliced together.
  5. Return transformer sled back through ceiling opening, ensuring all wires are correctly placed within the splice compartment.
  6. Align tab of door with slot of housing and push door squarely into place until door positively engages into closed position, verifying no wires are pinch.
  7. Reinsert trim.
• **IC Housing:**
  1. Begin by inserting hand through housing opening; grasping splice compartment door tab and pulling door back through housing collar opening, exposing line voltage connections.
  2. Disconnect housing wiring from line voltage feed wires, removing splice connectors.
  3. Take out transformer sled assembly by depressing sled retaining clip, while sliding sled assembly back and through housing opening.
  4. Replace with new OEM transformer assembly sourced through Lucifer Lighting, ensuring wires are firmly spliced together.
  5. Reverse steps for reinstalling sled assembly, verifying wires are firmly spliced together and not pinched, ensuring both sled and splice compartment door positively snap and lock into position.
  6. Reinsert trim, reinstalling trim adaptor and leveling housing collar as required.

**FIELD PAINTING OF TRIM:**
Though we strongly recommend custom paint be applied by factory during manufacturing, trims may be field painted without impacting factory mechanical warranty using following guidelines.

- Select paint suitable for application and location of trim, recognizing Lucifer Lighting Company fixtures are tested not to exceed temperatures of 90° Celsius, where typical operating temperature of faceplate is 66° Celsius nominal.
- Trim plate surface must be properly prepped in accordance with paint manufacturer’s instructions. Paint supplied and furnished by customer.

**Important:** Paint to be applied to trim faceplate only. Do not apply paint to magnets of adjustable series trim. Any disassembly or modification to trim or mechanism voids factory warranty and may represent an unsafe operating condition.
LIMITED WARRANTY

LUCIFER LIGHTING COMPANY (Seller) warrants that for a period of one (1) year from date of sale to the first non-retail purchaser, Seller will repair or replace, at the Seller’s sole option, free of charge, any defective products purchased from Seller provided that prior authorization is obtained from the Seller and the products are sent prepaid to the Seller’s manufacturing facility. Lamps are not warranted or guaranteed in any manner for any length of time, except LED lamp modules and power supplies used in Seller’s recessed, surface mount and exterior lighting fixtures, are warranted to operate with 70% lumen maintenance from the date of sale by Seller for five (5) years. LED MR-16 style lamps supplied by Seller are only warranted as provided by their original maker. Please refer to the following limiting conditions.

1. The Citizen, Bridgelux, Xicato, Sharp and Lumenetix LED lamp modules provided by Seller are only suitable for use in ceiling or plenum conditions where the maximum operating temperature of the module does not exceed 90°C (194°F) and/or the ambient temperature does not exceed 40°C (104°F) or lower threshold as featured on Seller’s product specification literature.
2. These terms only cover the power supply (if purchased from Seller) and Citizen, Bridgelux, Xicato, Sharp, and Lumenetix LED modules.
3. If installed outdoors, the power supply must always be shielded from direct sunlight. The power supply cannot be installed in areas where liquids may pool.
4. The end user must ensure that the AC input voltage has measures in place to prevent lightning strike surges and that large load shift surges are reduced or eliminated prior to the input of the power supply. Power supplies returned with this type of damage are not covered under Seller’s Limited Warranty.
5. Seller reserves the right to physically evaluate the LED module and driver supplied by Seller for compliance with these conditions. An end user’s refusal to return such fixture articles shall void Seller’s Limited Warranty.
6. The LED module will be considered in working condition and therefore not warrantable if it meets or exceeds 70% of its original flux and remains within a range of 3 duv.
7. The color temperature of the Citizen, Bridgelux, Xicato, Sharp and Lumenetix LED module is guaranteed to remain within a range of 3 duv for a period of five (5) years from date of sale by Seller.
8. Any tampering or disassembly of the LED module or LED heat-sink assembly without Seller’s prior written consent will immediately void the warranty.

Where Seller’s fixtures are used in conjunction with drivers/power supplies sourced by others and/or where POE (power over ethernet) systems are present, Seller’s warranty will only apply to the Seller supplied lighting fixtures. In all instances where drivers/power supplies and/or POE are by others, the responsibility to confirm the selected power supply(s) conforms to operating parameters of Seller’s fixtures shall be the responsibility of others. Approved parameters (including voltage, current, and power quality for the selected fixtures and outputs) will be provided by Seller upon request, however the parameters should not be considered exhaustive for the purpose of the warranty and represents a good faith effort by Seller to support its customers. All warranty claims are subject to Seller’s review and if Seller determines the root cause of the issue involves supplied power supply(s) by others, Seller’s warranty shall not be applicable. Further, in such events of supplied power supply(s) by others, Seller makes no guarantee as to fixture operating performance (startup time, flicker, shimmmer, pop-on/pop-off, dimming, etc.). In no event shall Seller’s obligations under this warranty extend beyond the initial cost of the products and, accordingly, consequential damages arising out of any claimed product defect are expressly excluded. This Warranty does not cover the costs, if any, in re-installation of products serviced under this Warranty. This Warranty does not cover damage or failure caused by abnormal spikes in power, dirty power, and light fixtures used with power supplies or other products not supplied by Seller, nor shall it apply to defects for which written notice thereof is not received by Seller.

In the event that any of the terms of this Warranty are in conflict with any rule of law or statutory provision or otherwise unenforceable under the laws or regulations of any government or subdivision thereof, such terms shall be deemed stricken from this Warranty, but such invalidity or unenforceability shall not invalidate any of the other terms of this Warranty and this Warranty shall continue in force.

EXCEPT AS TO SELLER’S WARRANTY OF REPAIR OR REPLACEMENT SET FORTH ABOVE, THERE ARE NO UNDERSTANDINGS, AGREEMENTS, REPRESENTATIONS, OR WARRANTIES, EXPRESS OR IMPLIED INCLUDING ANY REGARDING THE MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT, AND ANY WARRANTIES ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE, RESPECTING LUCIFER LIGHTING COMPANY PRODUCTS. THIS WARRANTY IS THE PURCHASER’S SOLE AND EXCLUSIVE REMEDY AGAINST THE SELLER FOR THE REPAIR OR REPLACEMENT AT SELLER’S OPTION OF DEFECTIVE LUCIFER LIGHTING PRODUCTS. UNDER NO CIRCUMSTANCES SHALL SELLER BE LIABLE FOR ANY LOSS OR DAMAGE, DIRECT OR CONSEQUENTIAL, ARISING OUT OF THE USE OF, OR INABILITY TO USE, THE PRODUCTS SOLD HEREUNDER.

For service under this warranty, please provide the original date of sale and nature of difficulty being experienced. All service matters should be directed to:

[061119]
3750 IH 35 North
San Antonio, Texas 78219 USA
[PH] +1 210 227 7329
[FAX] +1 210 227 4967
www.luciferlighting.com

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