



Conoco Fusion LED Light Bar Signature Image

Installation Guide

Please review site plans before proceeding. Contact LSI Customer Service at 1-800-231-0129 for installation support.

Read through all of the instructions prior to beginning installation, and verify (using the packing list) that all parts have been received and are in good condition.

The location of the disconnect switch after installation shall comply with Article 600 (A)(1) of the National Electrical Code.

This product is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.

Customer Service

Phone No. : 1-800-231-0129

Thomas Thompson, Field Service

Phone No. : 713-744-4135

Email: Thomas.Thompson@lsicorp.com

LSI part number of this installation guide is 661922.



***NOTE* BEFORE CUTTING OR INSTALLING ANY
ELEMENTS, FIELD VERIFY DIMENSIONS!**

**Verification is VITAL in ensuring all elements are
installed properly**

**PLEASE REFER TO ANY NECESSARY SITE SPECIFIC
LAYOUTS AND/OR RENDERINGS FOR GUIDANCE WITH
CUT SECTIONS AND ELECTRICAL WIRING.**

**The location of the disconnect switch after
installation shall comply with Article 600 (A)(1) of the Na-
tional Electrical Code.**

**This product is intended to be installed in accordance
with the requirements of Article 600 of the National Elec-
trical Code and/or other applicable local codes. This in-
cludes proper grounding and bonding of the product.**

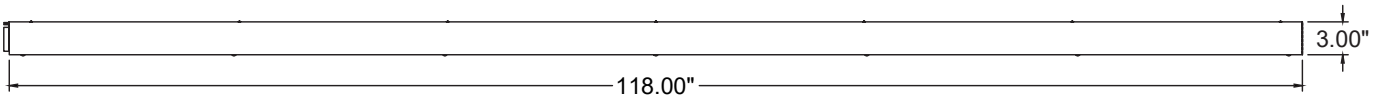


Part List

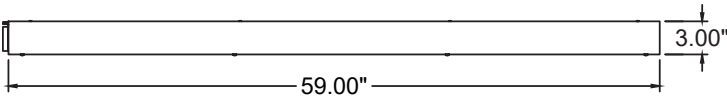
PLEASE NOTE

The packing list below will vary per site, depending on what is needed. This list is to give the installer a guideline of what should be received from LSI. LED light bar quantity will vary by site. Custom material will not be included below. Please make sure to check the packing list included with each shipment for more accurate verification.

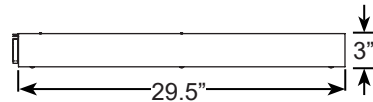
White light bars will be used for standard Fusion sites (white ACM).



118" LED Light Bar Section w/ White LED Assembly
Part Number 645727 (White)

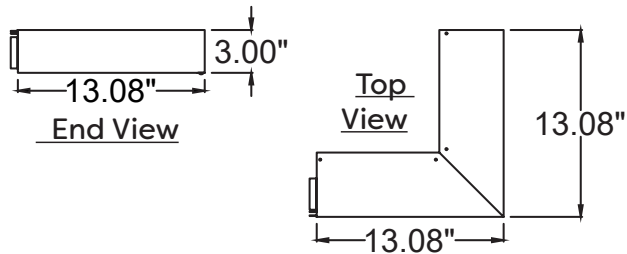


59" LED Light Bar Section w/ White LED Assembly
Part Number 653604 (White)

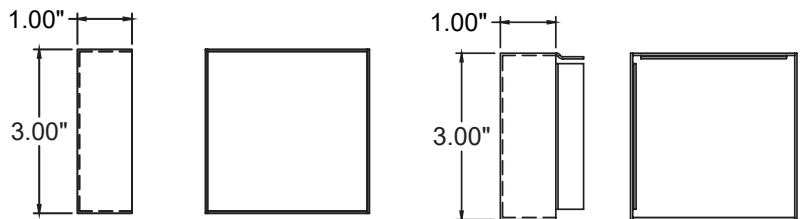


29.5" LED Light Bar Section w/ White LED Assembly, Part Number 674281 (White)

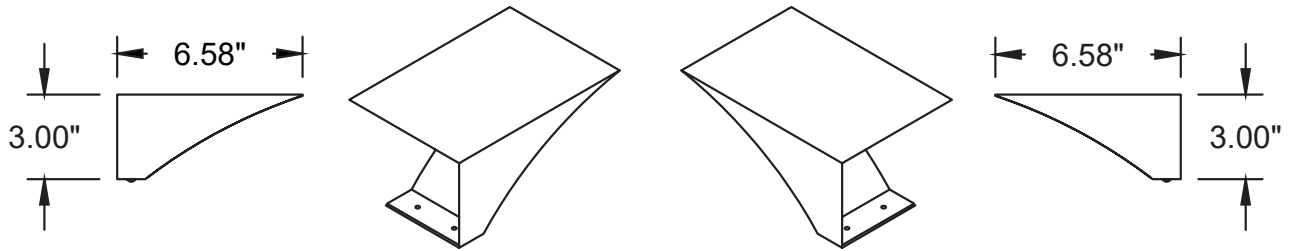
13"x13" LED Light Bar Corner w/
LED Assembly
Part Number 653607 (White)



End Caps – Left & Right Set
Part Number 645729 (White)



Part List



End Cap Set LH & RH Curves
Logo for Fusion Downlighter
Part Number 688480 (White)

60W Power Supply
Part Number 640933

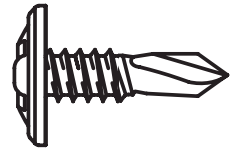
2X60W Power Supply
Part Number 640934

5' Jumper Cable
Part Number 502548

3" 8915 Matte Film w/ Premask
Part Number 651176

LED Light Bar Hardware Kit (included
with LED Light Bar - White)

K-lathe self-drilling screw
#8 x 3/4" (White)



Please read the following before beginning installation

LSI Components

LSI Graphic Solutions Plus provides components for the Conoco Fusion canopy system. The components provided by LSI have been evaluated and tested to meet requirements. The LED systems are UL recognized and listed under UL 48 as outline lighting. These installation guidelines must be followed to keep these certain specifications, and adjusted as required to meet local codes and site conditions.

Information to know about your site

Before beginning any installation, be sure to determine with your local Conoco representative that you are using the current Image Standards. Your order will be coordinated with a BIC project manager to determine the product you need to complete your site. Coordination between installer/project manager/representative is essential to the success of this program.

Structural knowledge of your site

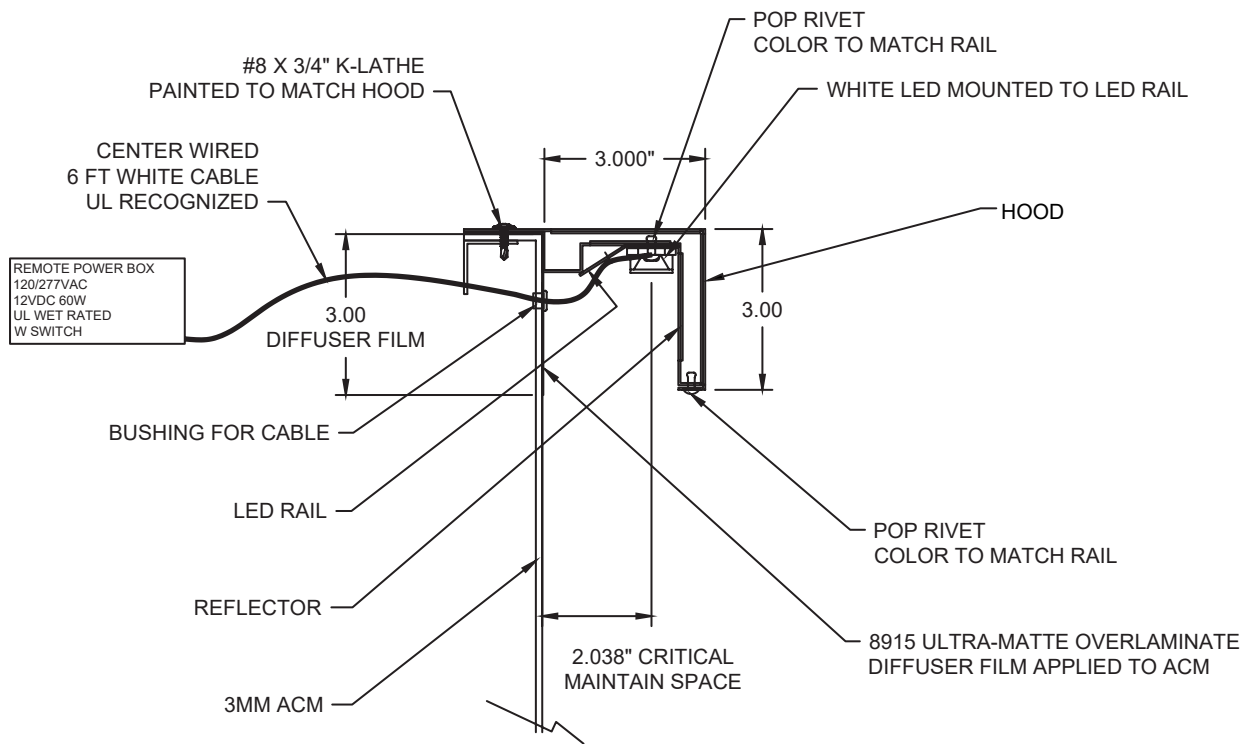
Information about your canopy is needed to be able to provide the correct components and plan a safe and structurally sound installation. The length of all sides of the canopy is important, as well as logo placement, to determine the number of sections needed and the layout of lighting elements and power sources. It is the installer's responsibility to ensure that the existing structure is sound and capable of supporting the weight of the LED light bar, as well as any additional wind load, snow load, or other potential conditions. The added weight of the logos must also be considered, and any additional bracing or structure required to support these must be added.

Component specs

The LED system requires 5.91W/ft. of power. One 60W power supply or half of a 2X60W power supply is required to run one 118" section of LED light bar. Electrical service must be provided for these in 120VAC 60hz, roughly every 10ft. or 20ft. on a canopy run, depending on the layout. Other voltage and frequency power supplies are available as an option. The 60W power source draws 1.1A, so a typical canopy of up to 150 illuminated ft. of LED lighting can be run from a single 20A circuit, not including logo signs or deck lighting.

This sign is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable local codes. This includes proper grounding and bonding of the sign.





Before beginning installation

Identify the sides of the canopy that will receive LED light bar BEFORE BEGINNING INSTALLATION. Refer to renderings/layouts provided by BIC for specifications.

Be sure that matte diffuser film has been applied to all sides receiving LED light bar. All matte film is to be applied on site by the installer. DO NOT PROCEED WITH LED LIGHT BAR UNTIL MATTE FILM HAS BEEN APPLIED.

There are offsets on the left hand side of each section/corner. These offsets will fit into the next section, securing them together without gaps.

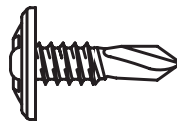
The LED light bar sections must be installed tight and flush against the fascia, with as little of a gap as possible between the reflector and the ACM. Failure to do so will cause improper illumination of the canopy.

If a canopy has four sides of illumination, four corners will need to be installed.

If a canopy only has three sides of illumination, end caps will be installed to terminate the LED light bar run at the edge of the canopy.

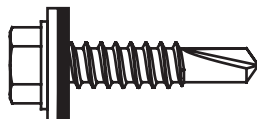
There will NEVER be less than three sides of LED light bar on a gas canopy. If a rendering/layout calls out less than three, verify!

(Right) Use #8 x 3/4" K-Lathe screws (white) to attach the top of the LED light bar section to the ACM.



If matte film has not been applied yet, apply the 8915 matte film to the top of all sides of canopy getting LED light bar. Follow all 3M vinyl application guidelines to ensure the matte film is installed properly.

UPDATED INSTRUCTIONS: Use PN 771520 - SCR TEK HWH #12X1 SHEETING, STL ZINC W/ WSHR to fasten the Light Bar to the top of the ACM panel on canopy. The sheeting screws will be driven thru the pre-punched holes in the Light Bar and ACM panel to the top mounting angle. The sheeting screws will provide more strength to hold the ACM panels to the canopy in high wind.



PN 771520, #12X1 SHEETING
SCREW

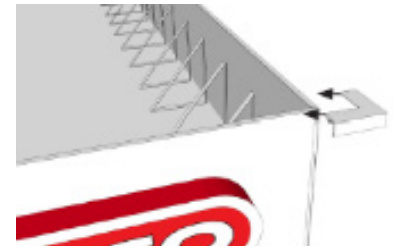


Installing LED Light Bar

Please note that there are four standard combinations of Conoco Fusion fascia height and canopy logos. Please refer to the table below to determine if your site's configuration should have a continuous run of light bar above the Conoco Capsule logo, or if it requires a break above the logo:

Fascia and Logo Combination	Light Bar Treatment
48" tall fascia and 8' (96") long Conoco Capsule	Extend lightbar all the way across top of Capsule
48" tall fascia and 6' (78") long Conoco Capsule	Extend lightbar all the way across top of Capsule
36" tall fascia and 6' (78") long Conoco Capsule	Extend lightbar all the way across top of Capsule
36" tall fascia and 8' (96") long Conoco Capsule	Use break in light bar as shown in Figure B

1. Install the corner sections FIRST. Drill a 5/8" diameter hole 1-1/2" from the top of the ACM panel for each of the power cables (make sure that the hole lines up with the respective cable so that the bushing will not have issues when placed in the ACM – DO NOT drill so that the cable will be stretched too tightly and cause potential current/future issues).



Ensure that the corner is flush and tight against the ACM before securing in place with the provided hardware. **The hood and reflector edges should be EVEN, and the screw should run through the pilot hole in the HOOD.** Run the cable through the drilled hole and secure the bushing in place in the ACM fascia.

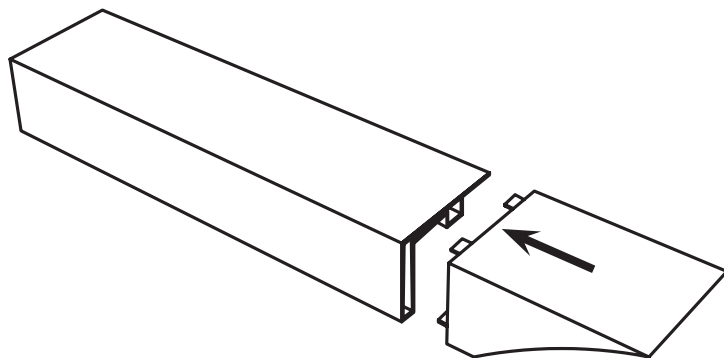


2. The light bar over the 30.5"Hx8' (95.75") logo on 36"H fascia must be interrupted, and a section of LED light bar will need to be cut to fit between the radius cap and the corner/end cap. A 29.5" section will be sent to cut down. The length of the section depends on the placement of the logo (for placement of logo, see site-specific layout and Conoco brand book). See Figure B for placement of radius caps.

Attach the radius caps to the LED light bar with provided screws BEFORE attaching to the canopy as shown in Figure A.

FIGURE A

ATTACH RADIUS CAPS TO LIGHT BAR SECTIONS BEFORE ATTACHING TO CANOPY.



Installing LED Light Bar

Install the LED light bar sections with radius caps around the 8' logo on 36"H fascia using the guidelines in Figure B for spacing. Align ends of light bar sections with edge of logo as shown. Follow the same process as above, drilling a 5/8" diameter hole 1-1/2" from the top of the ACM panel for each section.

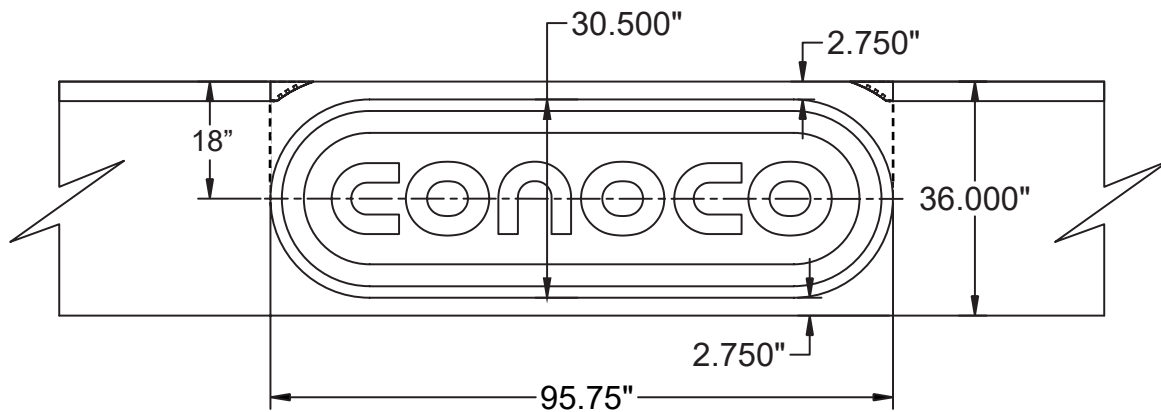
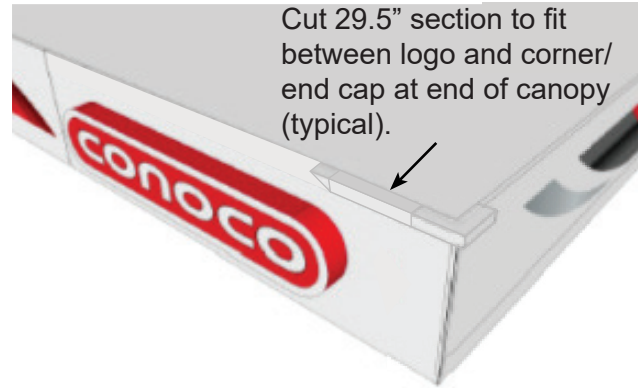


FIGURE B

Placement of radius caps around logo. The light bar on 36"H fascia over the 30.5"H x 8' (95.75") logo must be interrupted, and that light bar must have end caps. Align ends of light bar section with edge of logo as shown.



Installing LED Light Bar

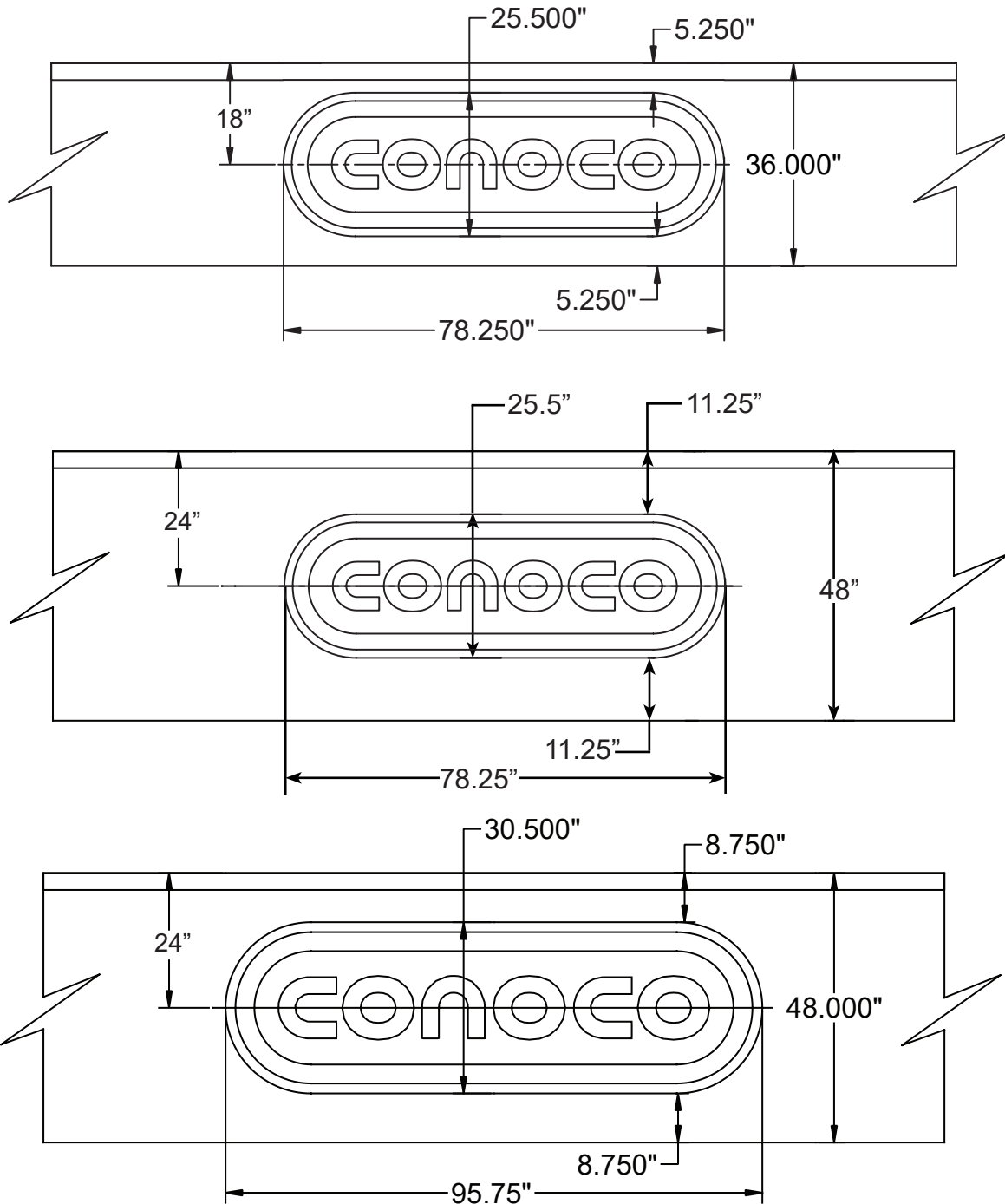


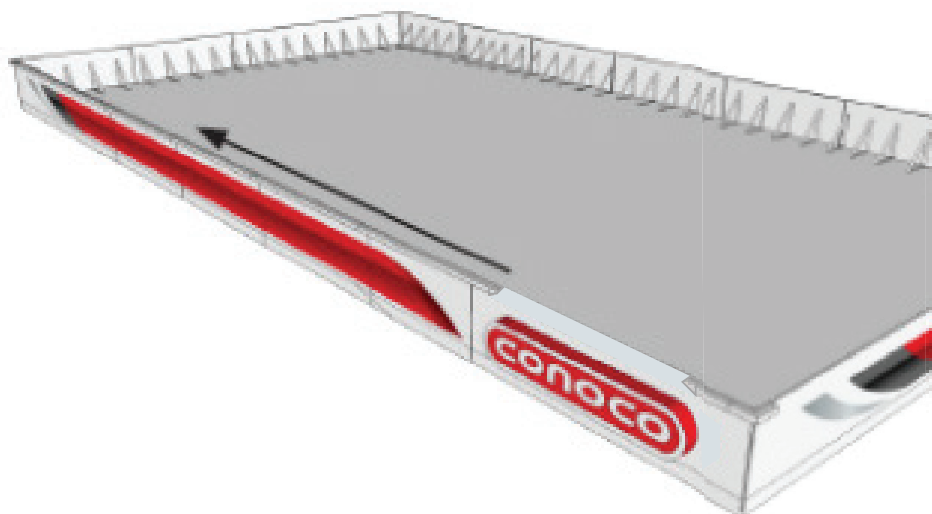
FIGURE C

The light bar on 36"H fascia over the 6' (78.25") logo is continuous. The light bar on 48"H fascia is continuous over the 6' and 8' logos.



Installing LED Light Bar

3. Begin installing 118" sections. Follow the same process as above, drilling a 5/8" diameter hole 1-1/2" from the top of the ACM panel for each section. The hood and reflector edges should be EVEN, and the screw should run through the pilot hole in the HOOD. When approaching the end of a canopy side, pay close attention to make sure that the remaining cut LED light bar section will not be less than 24". If it appears that the last section would be less than 24", two cut sections will be necessary (or a 29.5"/59" section if provided and a cut 118" section).



4. Measure & cut the necessary length piece(s) to fill the remaining space. DO NOT CUT THROUGH THE LED MODULES! It may be necessary to remove or relocate an LED if the cut falls in that area.

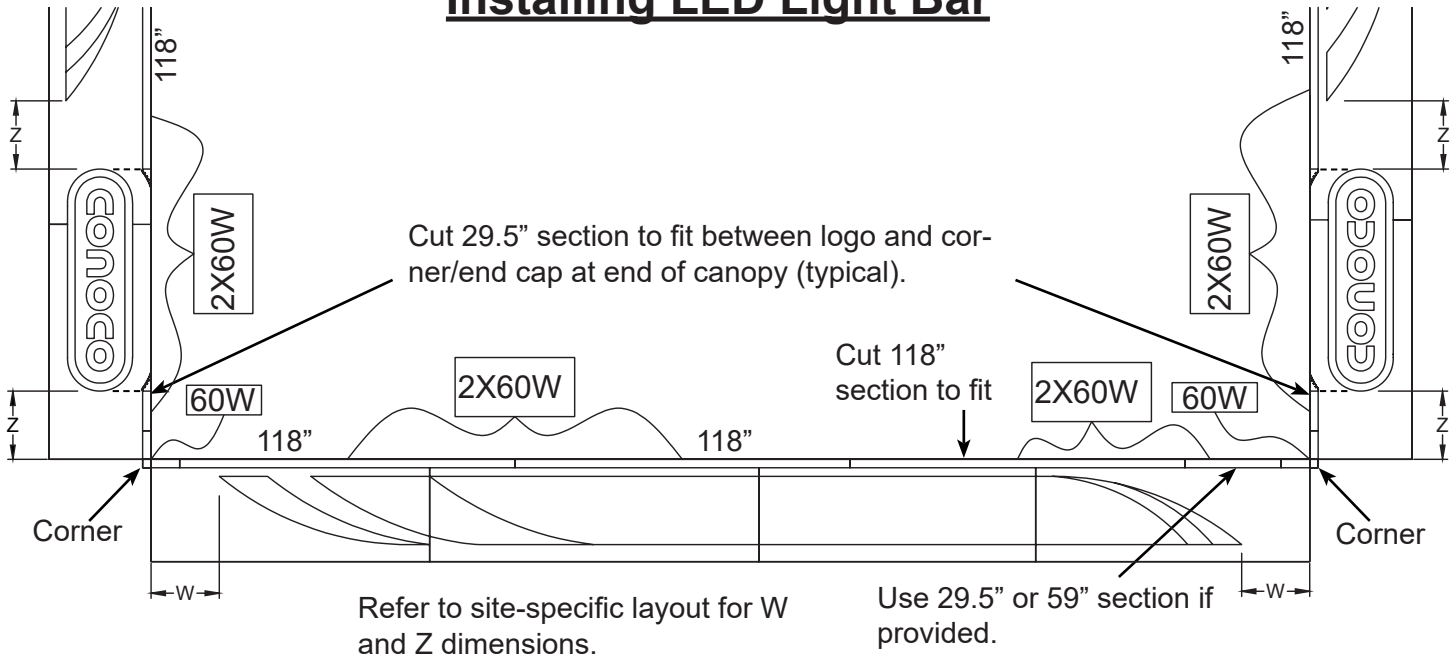
In some cases, a 29.5" or 59" LED light bar section may be sent to fill the remaining space, which has its own dedicated wire coming from the end of the assembly. It is also possible that a side will need a 29.5" or 59" section AND an additional cut section. Use the 29.5" or 59" section at the end and cut the adjacent 118" section to fit.

(FOR PLACEMENT OF LOGO, REFER TO SITE-SPECIFIC LAY-OUT AND CONOCO BRAND BOOK)

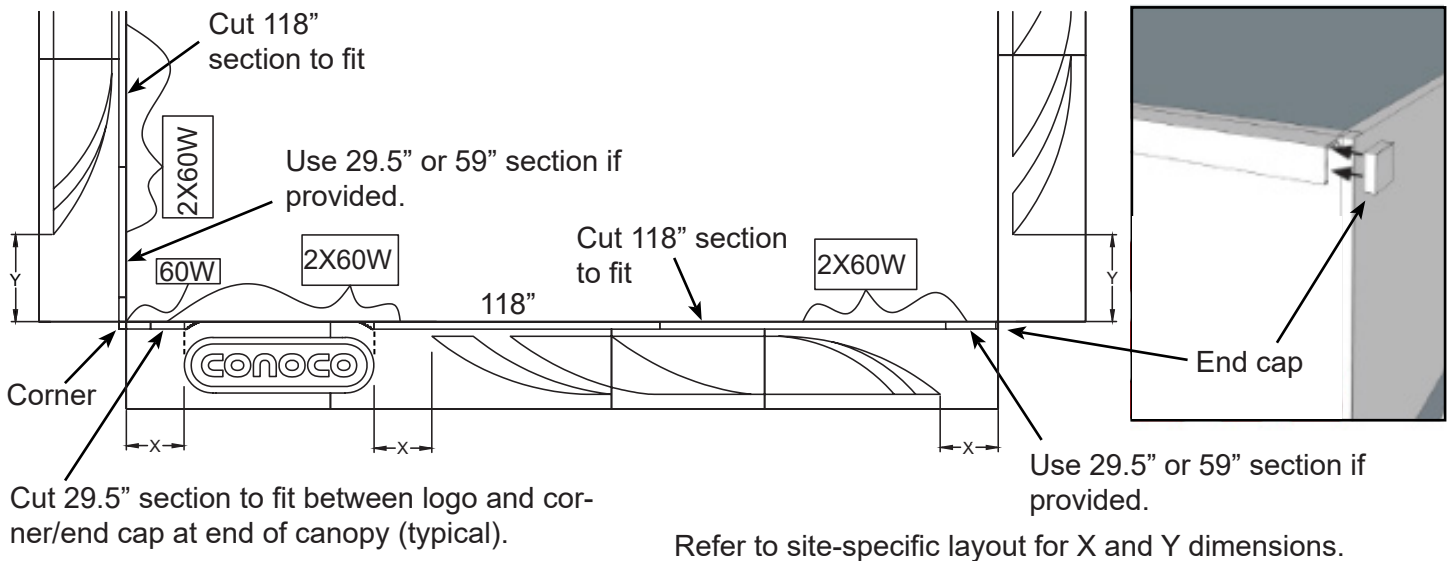
Be mindful of where the offset is needed on each section – always try to cut so that the offset is on the usable piece. Close off the cut end of any necessary wires with a dab of silicone to prevent water from entering the wiring.



Installing LED Light Bar



5. If an LED light bar run ends against an unlit side, end caps (left and right) will need to be installed. The end caps will need to be installed flush with the edge of the canopy. When cutting an LED light bar section, keep in mind that there will need to be 1" from the edge of the canopy to the edge of the LED light bar for the end cap to fit.



6. Apply paintable caulk/silicone to any gaps in the corner sections. Be sure to check and make sure there are no light leaks between any of the LED light bar sections, and that all sections have been installed flush and tight against the canopy surface.



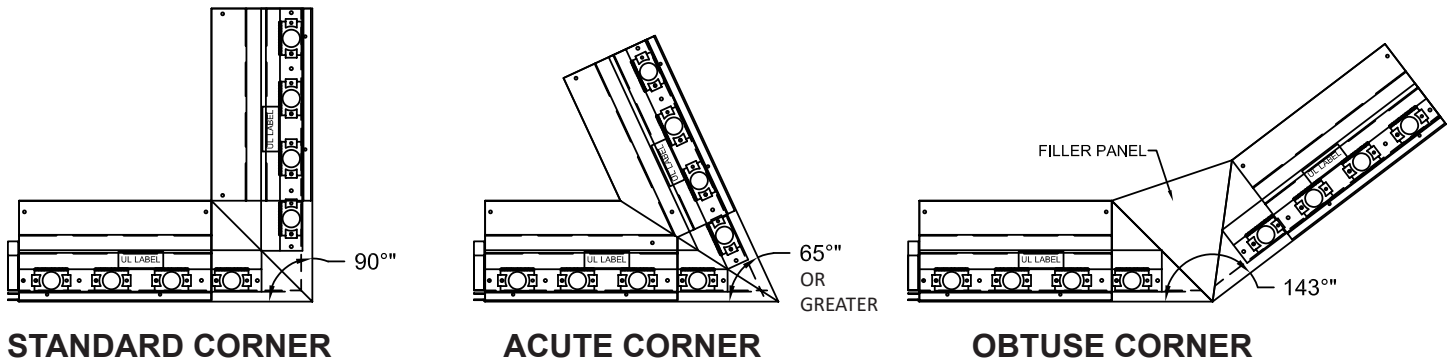
Installing LED Light Bar

Obtuse/Acute angles

For sites with non-90° angles, field modifications will be needed to make the LED light bar system work.

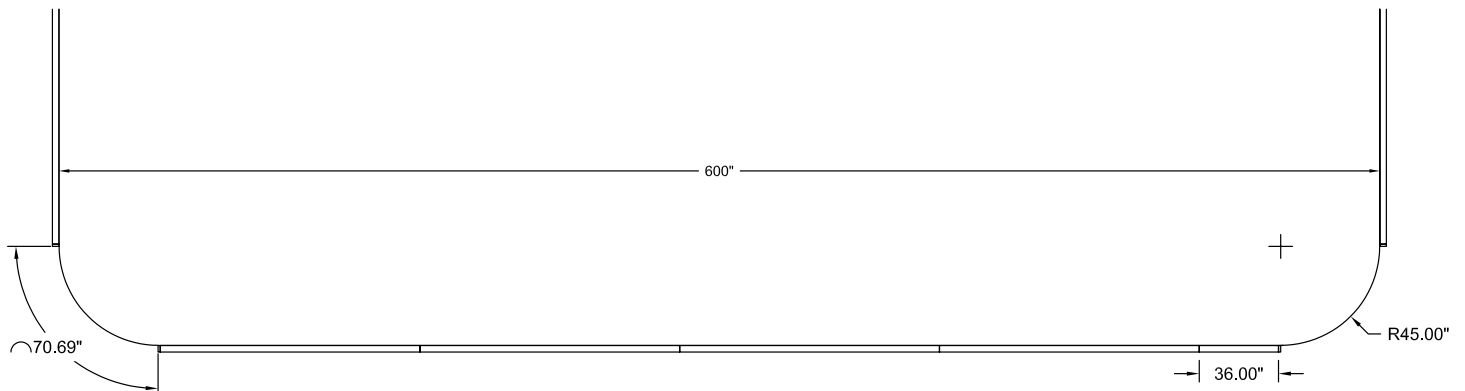
Acute angles - the inner portion of the corner section will need to be cut down to accommodate a tighter angle, to be no less than a 65°. Be sure not to cut the LEDs!

Obtuse angles – the corner section can be opened up wider to accommodate a wider angle, and a filler panel will need to be fabricated in the field to fit over the created gap between the sides.



Rounded Corners

If the canopy has rounded corners (for film-over treatment only), the LED light bar will begin and end BEFORE the curve begins for the corner. The LED light bar will not wrap around side to side if there are rounded corners, but rather terminate on each side with a set of end caps. Verify that enough sets of end caps have been received prior to beginning installation.



Installing LED Light Bar

Electrical

LED Specifications:

1.32W/module, 5.91W/ft, 83Lm/W

118" LED light bar – 44 LEDs per section = 58.08W

59" LED light bar – 22 LEDs per section = 29.04W

29.5" LED light bar – 11 LEDs per section = 14.52W

13"x13" corner – 4 LEDs per section (x2) = 10.56W

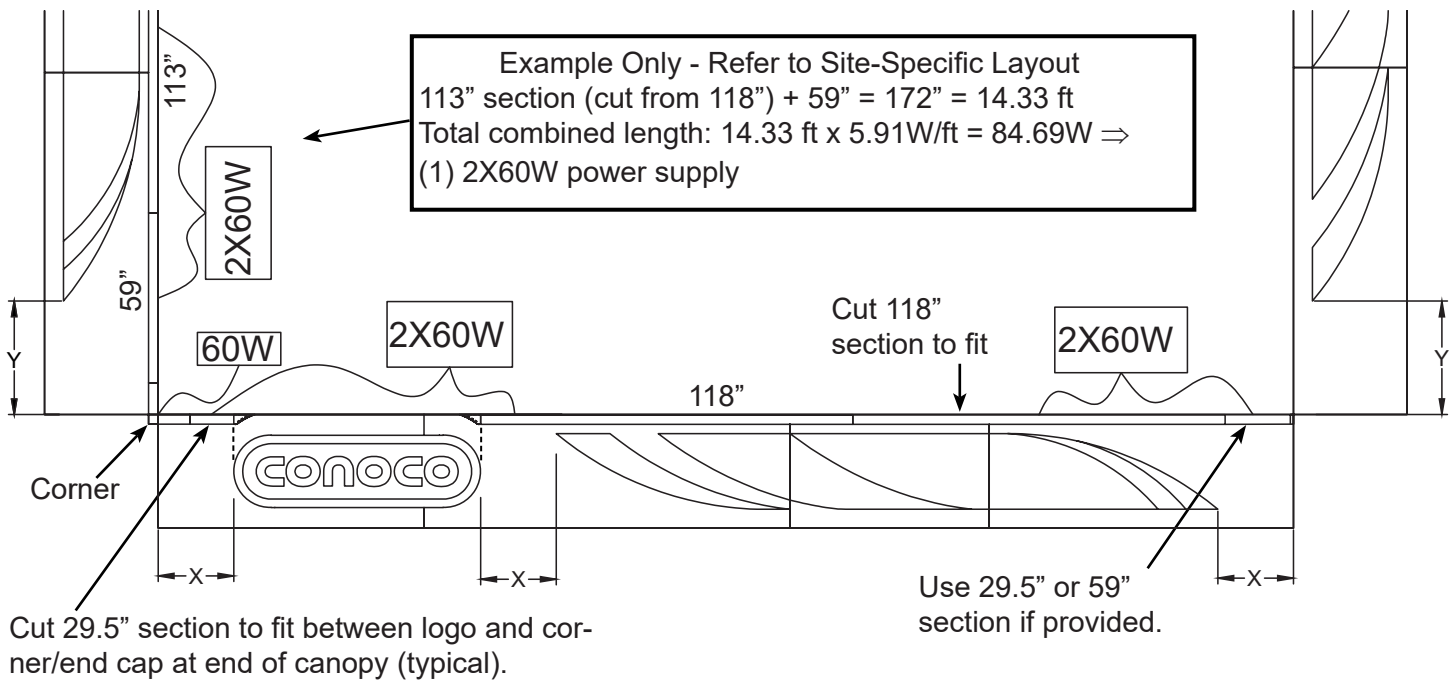
Power Supply Specifications:

60W power supply – 100-277VAC / 12VDC, 1.1A-0.45A

2X60W power supply – 100-277VAC / 12VDC, 2.2A-0.90A

Each 118" LED light bar section requires one 60W power supply (or half of a 2X60W box).

Cut sections/corners can be combined onto one 60W power supply, however, a 60W power supply is provided with each corner section. If combining sections/corner, then get as close as possible to maximizing the power supply potential for optimum efficiency; running 105" of LED light bar on a 60W power supply will be better than running 20" of LED light bar on a 60W power supply. **DO NOT EXCEED THE MAXIMUM WATTS!**



Refer to site-specific layout for X and Y dimensions.

Failure to follow these guidelines can blow out the power supply and cause damage to the LEDs.



Appendix

06/07/2017 – Date created

06/27/2017 – Added notes for hood/reflector alignment & caulk/silicone

10/20/2017 – Guide changed to reflect LED light bar, Obtuse/Acute angles, Rounded corners

12/21/2018 - Added verbiage for UL compliance

05/20/2019 - Added instructions on using radius caps to allow larger logos to break through light bar

05/22/2019 - Added PN 661922 to front page (part number was previously assigned).

2/11/2020 - Specified using 29.5" section between logo sign and corner at end of canopy on pp. 10-11.

2/18/2020 - Updated example layouts to show 2X60W power supplies, and not show as many sections/corners wired to a power supply. Added 29.5" LED light bar to Part List (p. 3). Removed use of light bar above logo.

2/21/2020 - On p. 10, added "(or a 29.5"/59" section if provided and a cut 118" section)." On p. 10, removed "Be mindful that some "drop" from a cut section may be used for a different side."

2/24/2020 - On p. 7, added "gas" to statement "There will NEVER be less than three sides of LED light bar on a gas canopy." On p. 8, changed "**2. A LARGE LOGO** requires" to "**2. ALL LOGOS** require". On p. 9, Removed "LARGE" from **FIGURE B** PLACEMENT OF RADIUS CAPS AROUND LARGE LOGOS.

3/9/2020 - Changed K-lathe screw from #10 to #8 on p. 6.

6/30/2021 - Changed light bar on 36"H fascia with 25.5" H x 6-1/2' (78.25") logo and on 48"H fascia with 30.5" H x 8' (95.75") logo to not be interrupted above logo (requested by Phillips to provide light on fascia above logo).

7/12/2021 - Added statement and table on p. 8 explaining there are four standard combinations of Conoco Fusion fascia height and canopy logos, with 36" tall fascia and 8' long Conoco Capsule being the only one requiring interruption of light bar above logo. Added 48" high fascia with 6' long Conoco Capsule in new Figure C.

9/8/2021 - Added updated instructions (yellow box) to use PN 771520, #12X1 sheeting screws to fasten Light Bar (for more strength in high wind).

