Light My Bricks : Grand Emporium LED Lighting Kit

Here is the instructions document for the Lego Grand Emporium LED lighting kit. Please read and follow the steps carefully to ensure this lighting kit is installed properly.

Package contents:

- 6x **White Strip Lights**
- 14x **White 30cm Bit Lights**

- 1x **12-port Expansion Board**
- 1x **8-port Expansion Board**
- 1x **Lamp Post with LED** and cable attached
- 8x **Adhesive squares**
- 5x **LEGO Plates 1×6** (for mounting strip lights)
- 1x **Battery Pack** (requires 3x AA Batteries)
  OR
- 1x **USB Power Cable**

  Note – Battery Pack will be replaced with USB Power Cables from mid April 2020

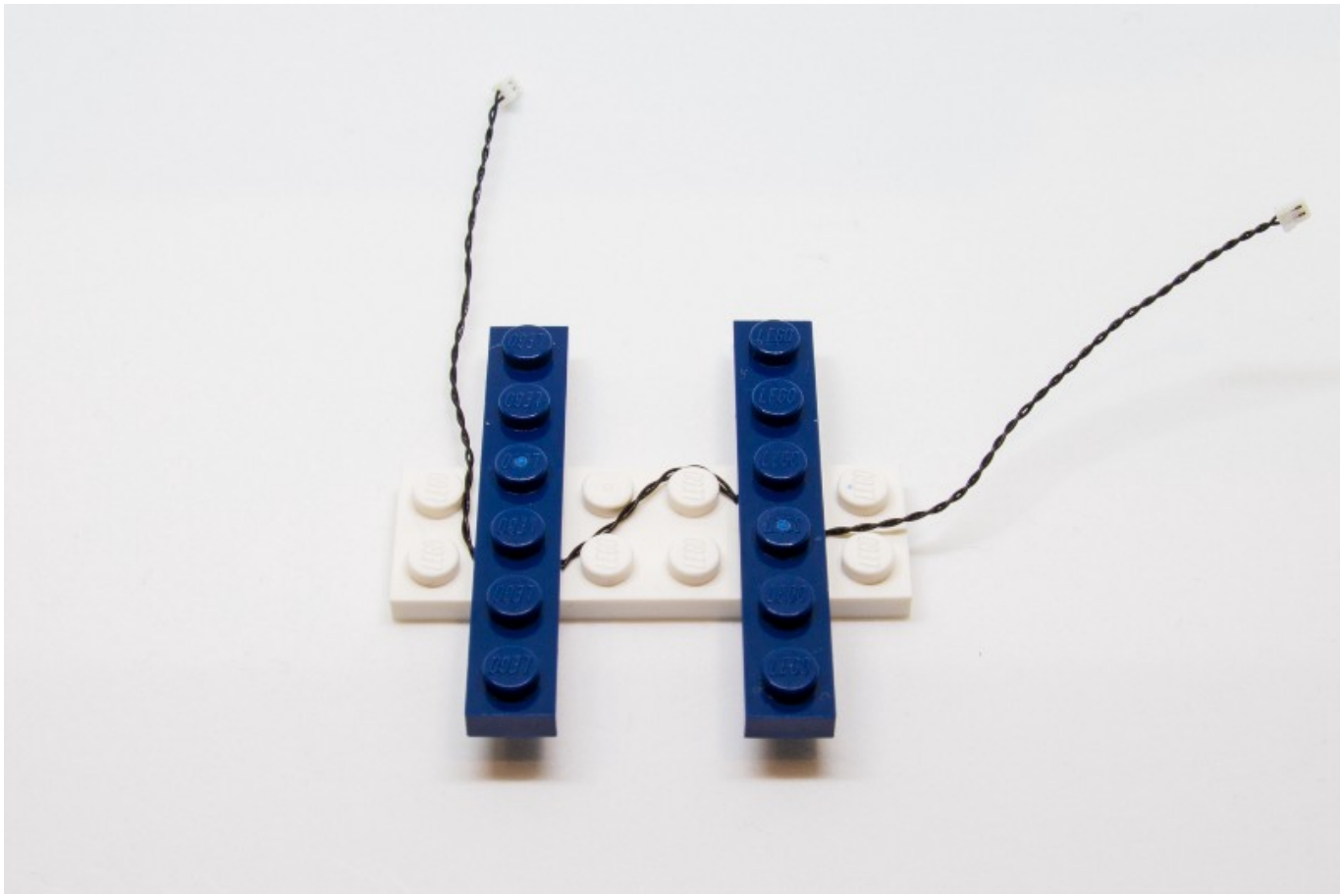
Connecting Cables

- 2x **5cm cable**
- 3x **15cm cable**
- 2x **30cm cable**

Important things to note:

Laying cables in between and underneath bricks

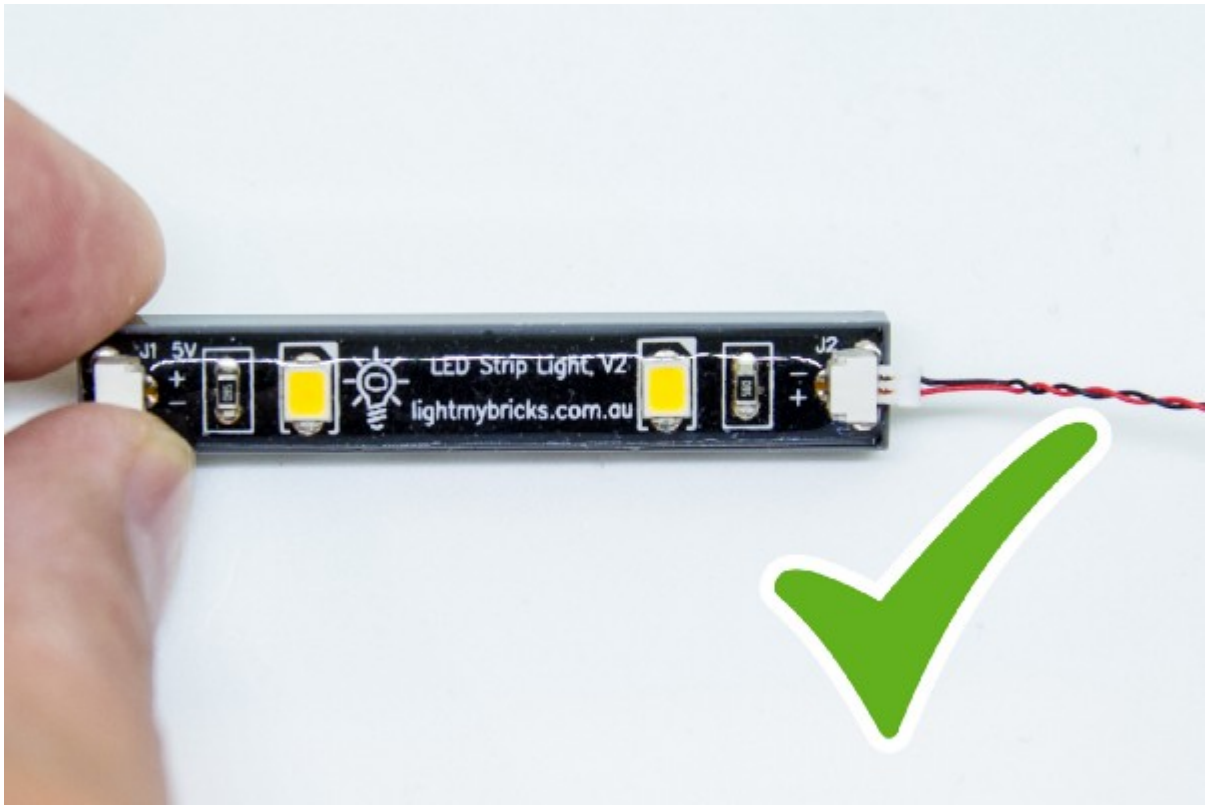
Cables can fit in between and underneath LEGO® bricks, plates, and tiles providing they are laid correctly between the LEGO® studs. Do NOT forcefully join LEGO® together around cables; instead ensure they are laying comfortably in between each stud.

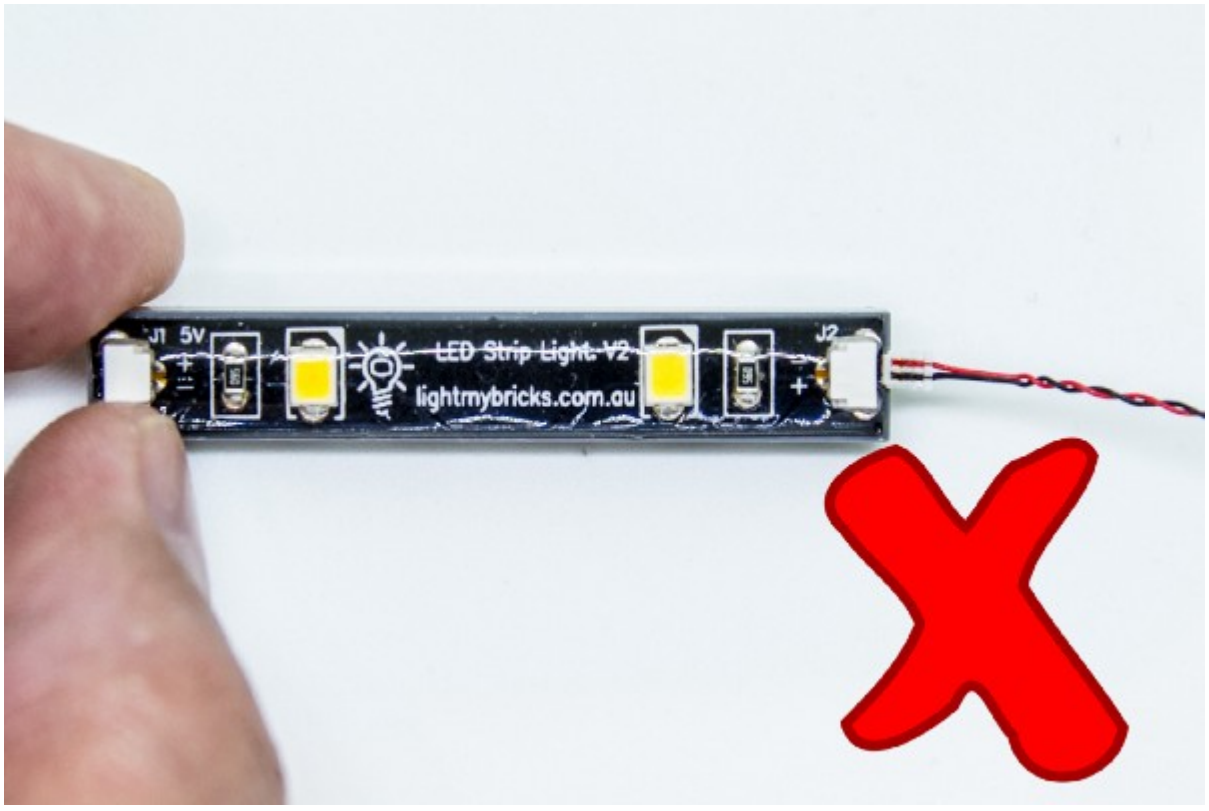


CAUTION: Forcing LEGO® to connect over a cable can result in damaging the cable and light.

Connecting cable connectors to Strip Lights

Take extra care when inserting connectors to ports on the Strip Lights. Connectors can be inserted only one way. With the Strip Light facing up, ensure the side of the connector with the wires exposed is facing down. If a plug won't fit easily into a port connector, don't force it. Doing so will damage the plug and the connector.

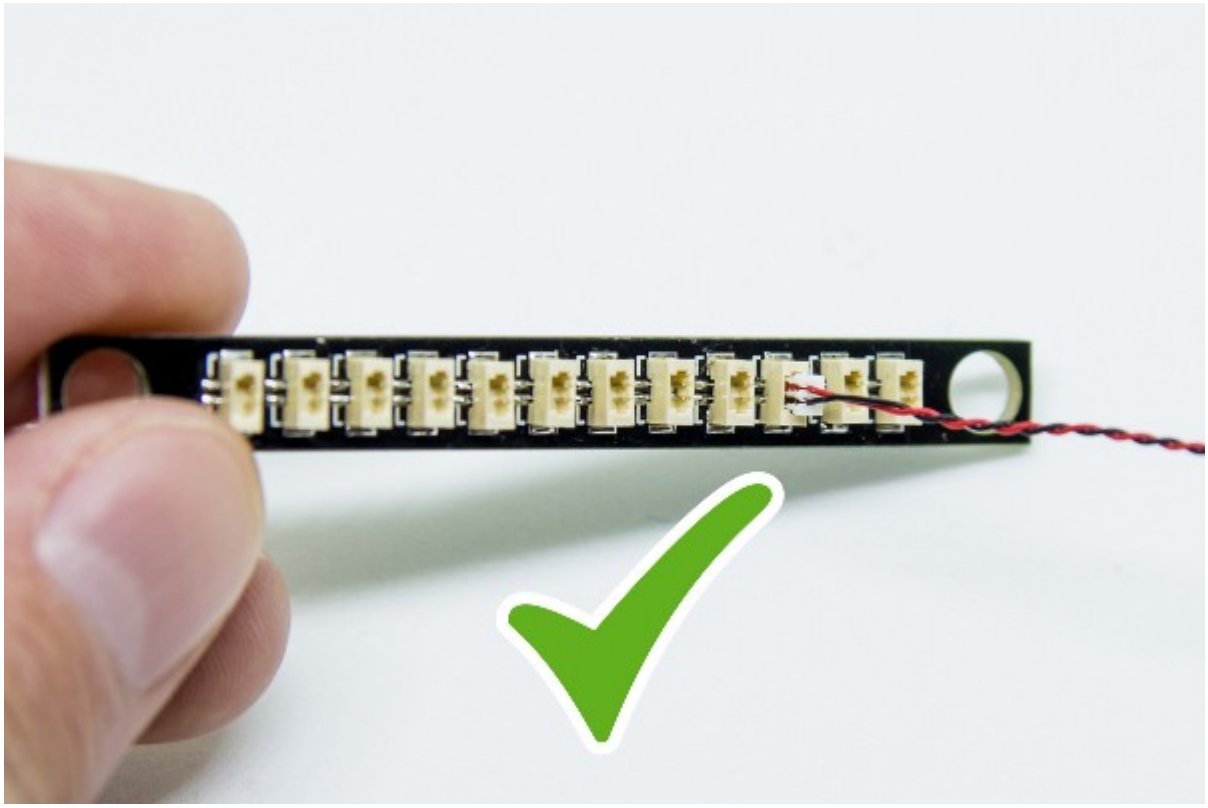


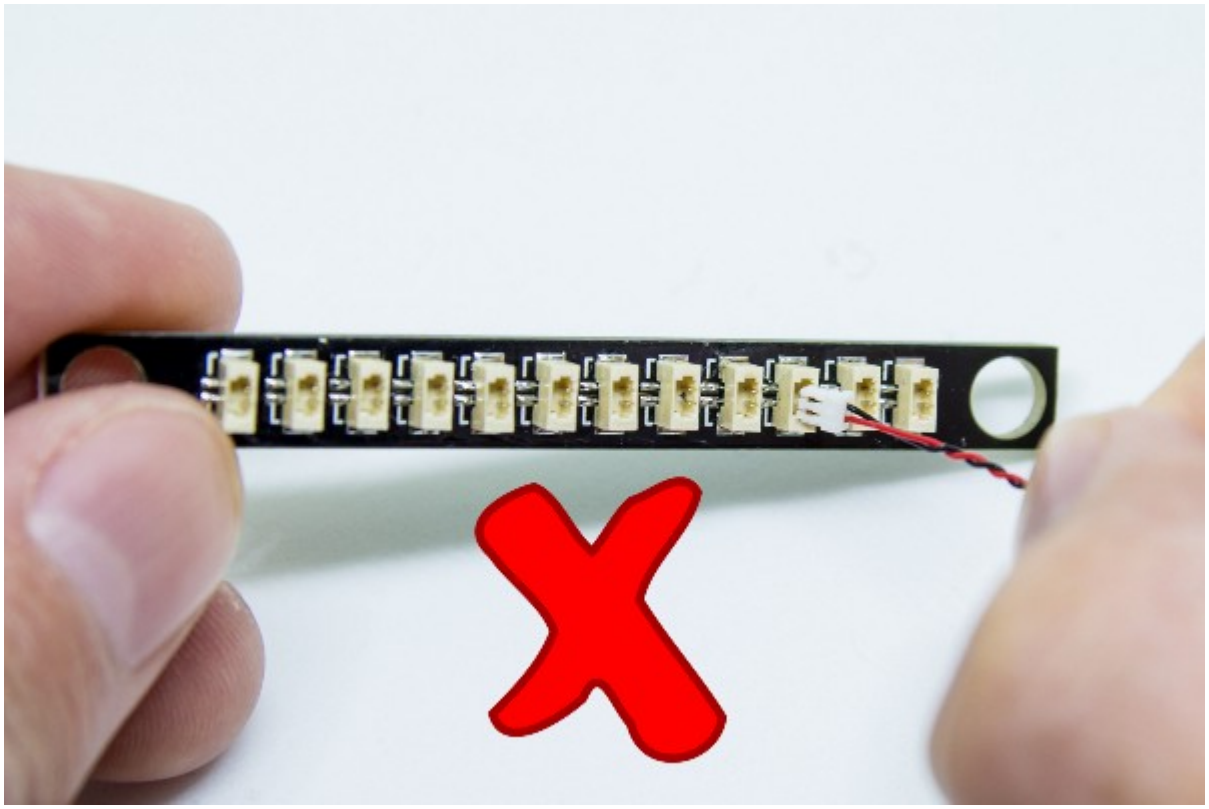


Connecting cable connectors to Expansion Boards

Take extra care when inserting connectors to ports of Expansion Boards. Connectors can be inserted only one way. With the expansion board facing up, look for the soldered “=” symbol on the left side of the port. The connector side with the wires exposed should be facing toward the soldered “=” symbol as you insert into the port. If a plug won’t fit easily into a port connector, do not force it.

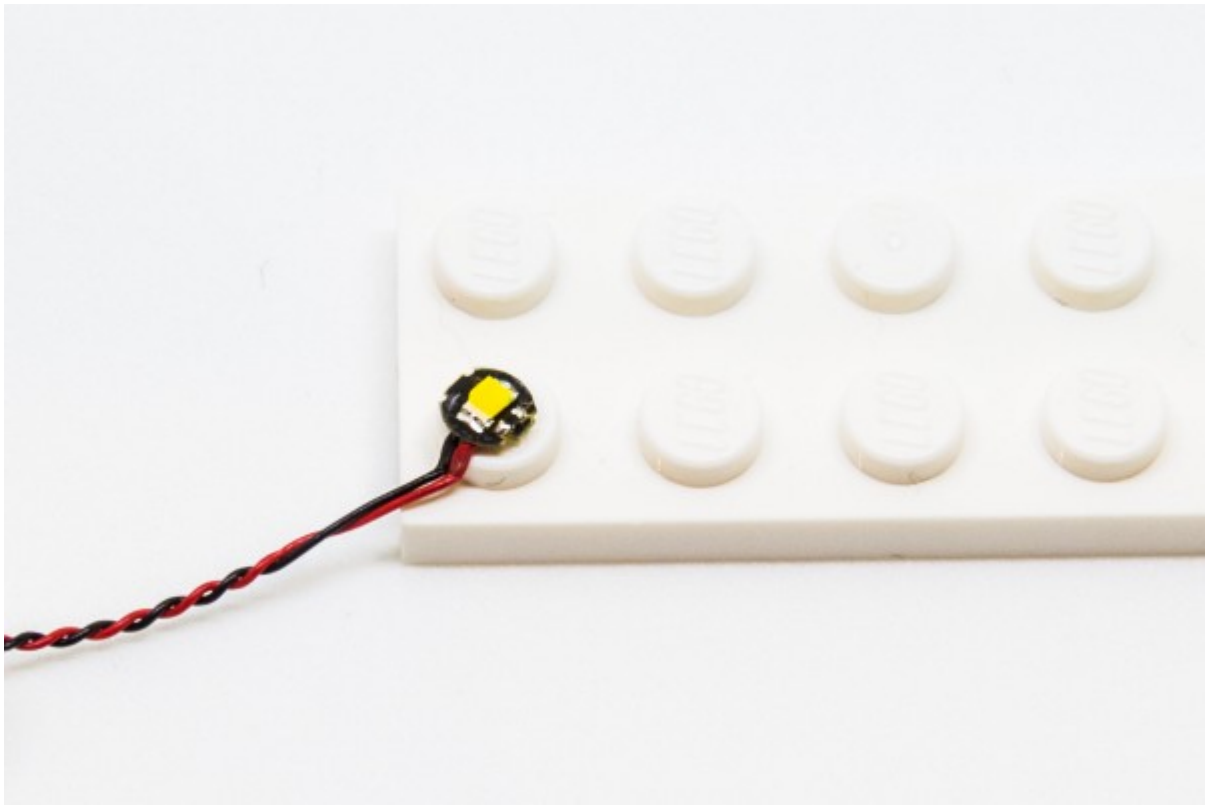
WARNING: Incorrectly inserting the connector can result in bent pins inside the port or possible overheating of the expansion board when connected.

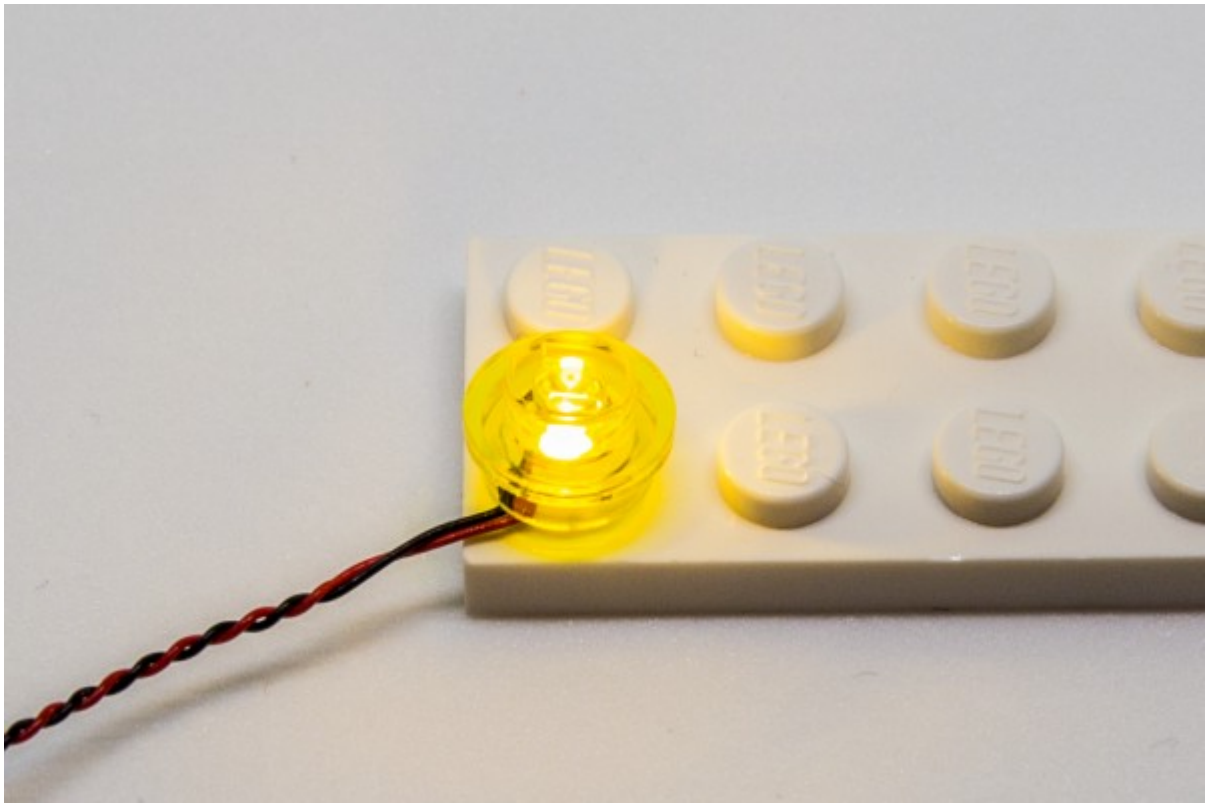


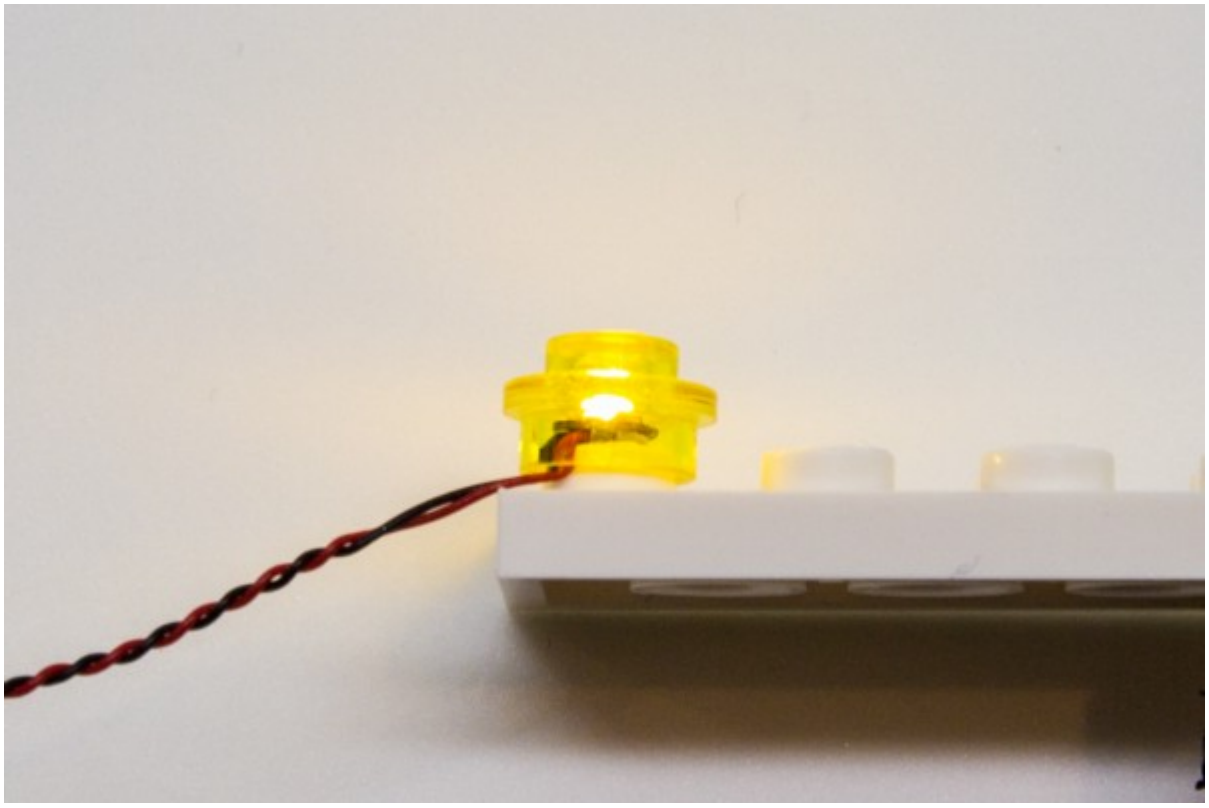


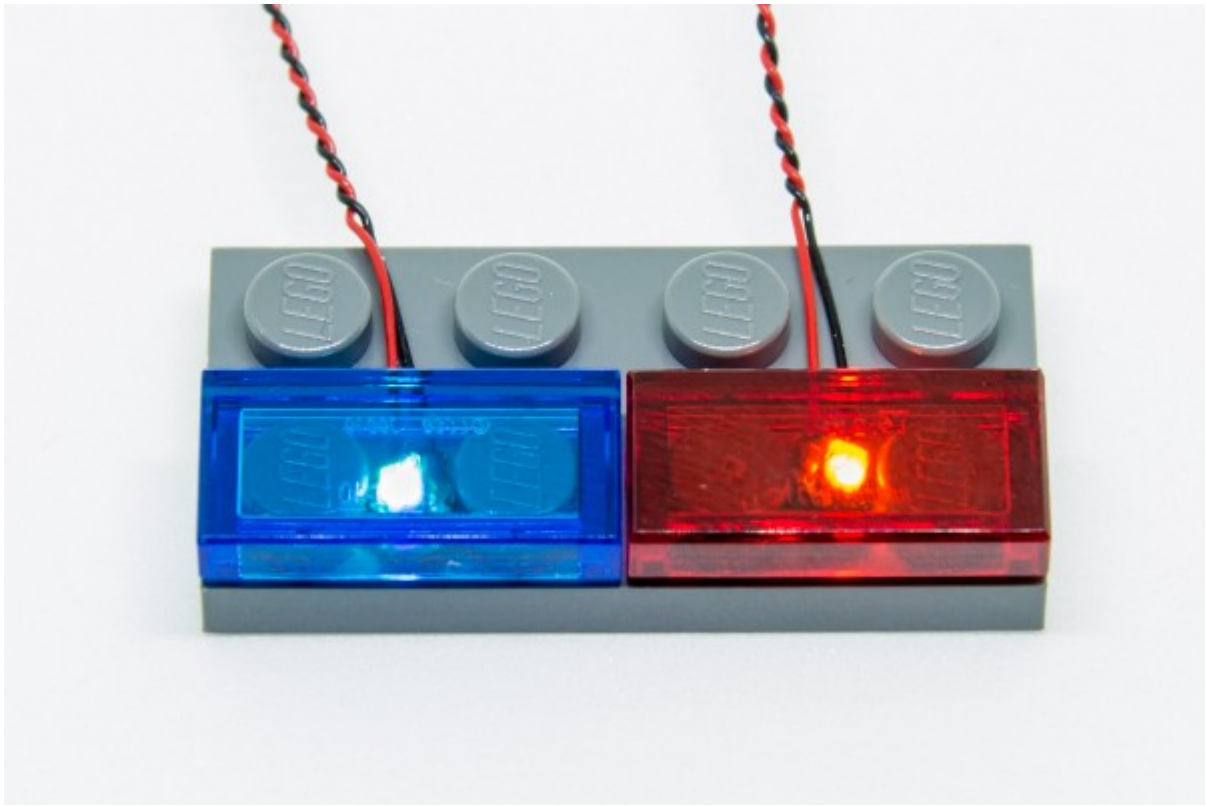
Installing Bit Lights under LEGO® bricks and plates.

When installing Bit Lights under LEGO® pieces, ensure they are placed the correct way up (Yellow LED component exposed). You can either place them directly on top of LEGO® studs or in between.







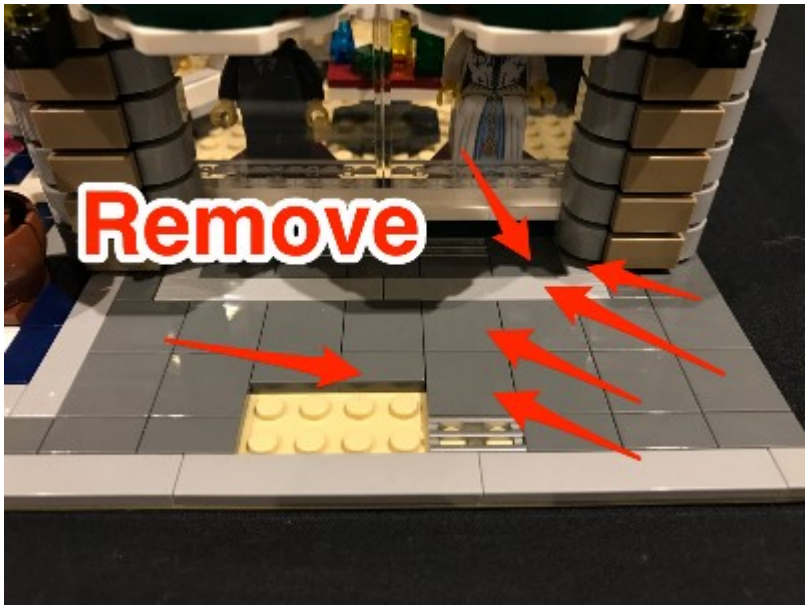


OK, Let’s Begin!

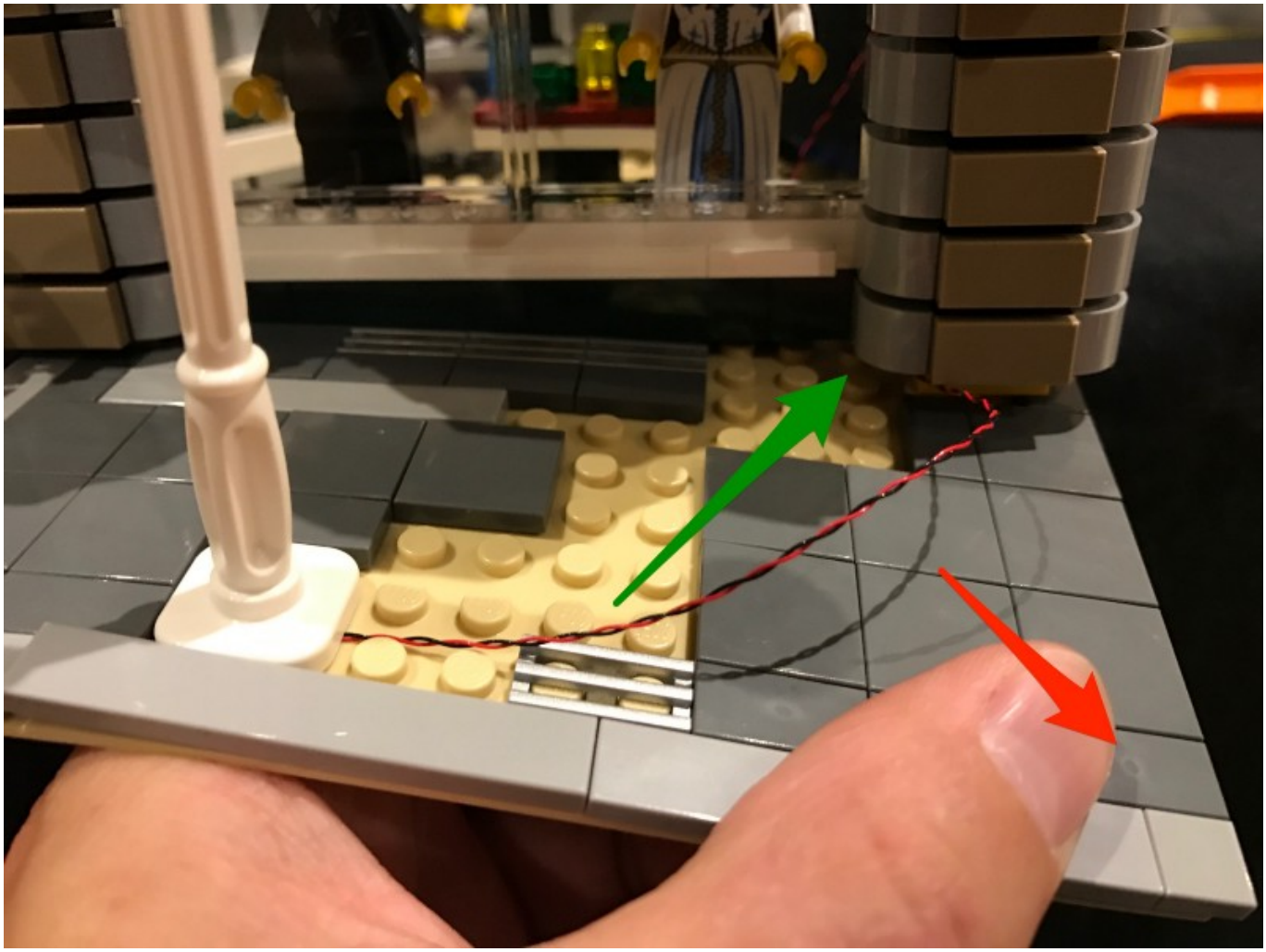
Instructions for installing this kit

1.) This lighting kit is installed from the bottom up. Start by removing the 2nd and top levels of the modular building.

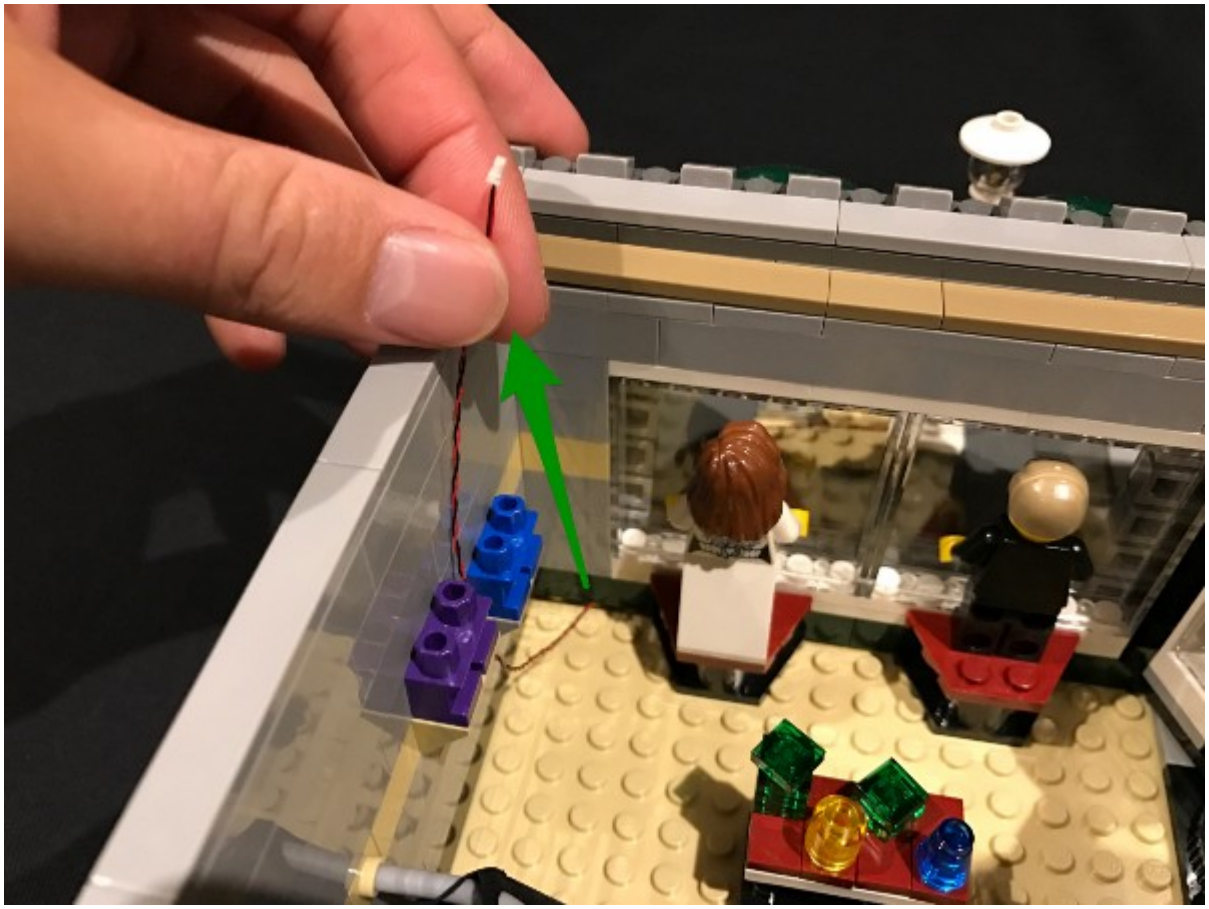
2.) To enable us to lay the cable for the lamp post underneath the brick tiles, remove the stock lamp post and mail box, as well as the following tiles as per below.

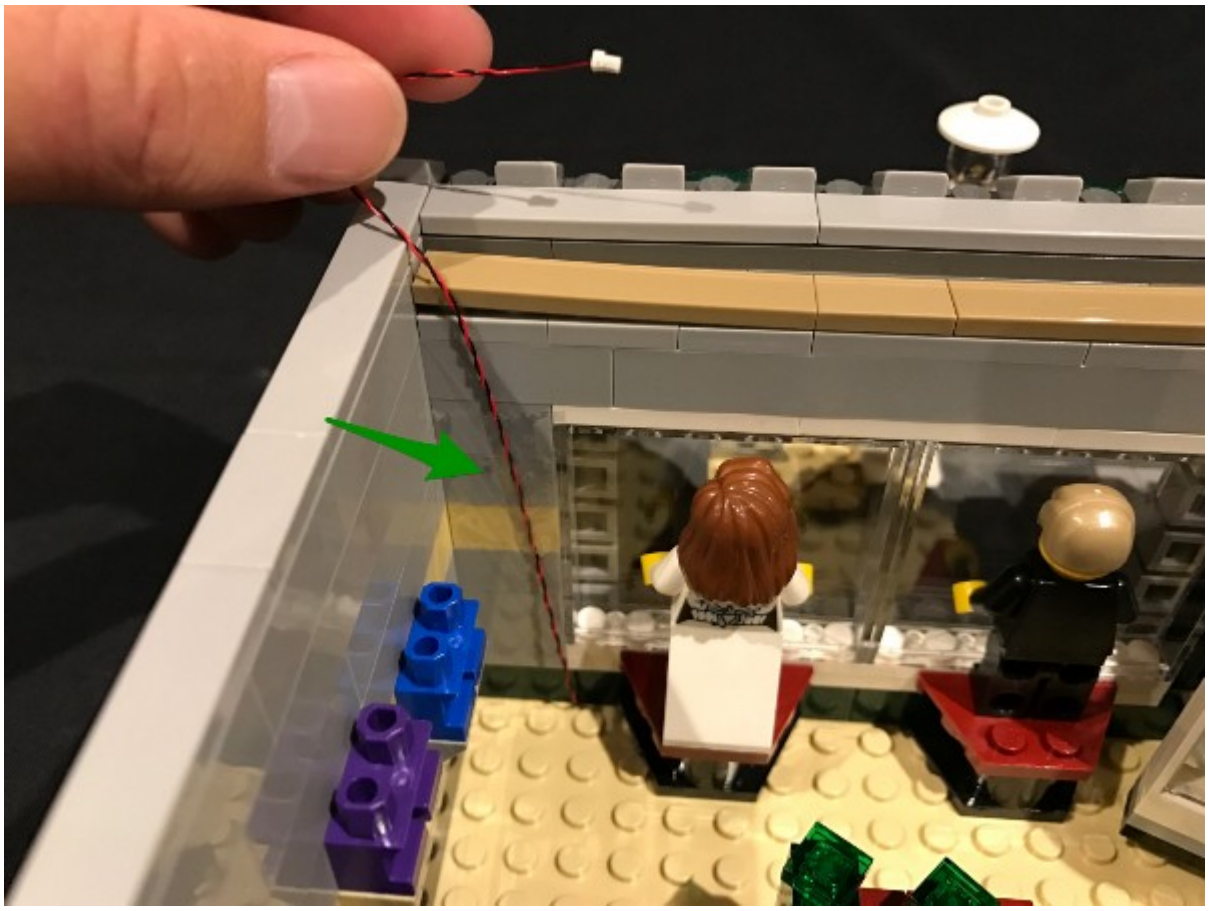


3.) Replace the stock lamp post with the Light My Bricks lamp post ensuring that the cable is laid in the middle of the 2 studs facing toward the right of the building. Gently bend the base plate down and lift the building of the ground floor up so we can thread the cable for the lamp post underneath the building wall.



Pull the cable all the way up from the inside of the building underneath the wall and then use some sticky tape to secure the cable to the wall and to prevent it from being seen from the outside looking in.

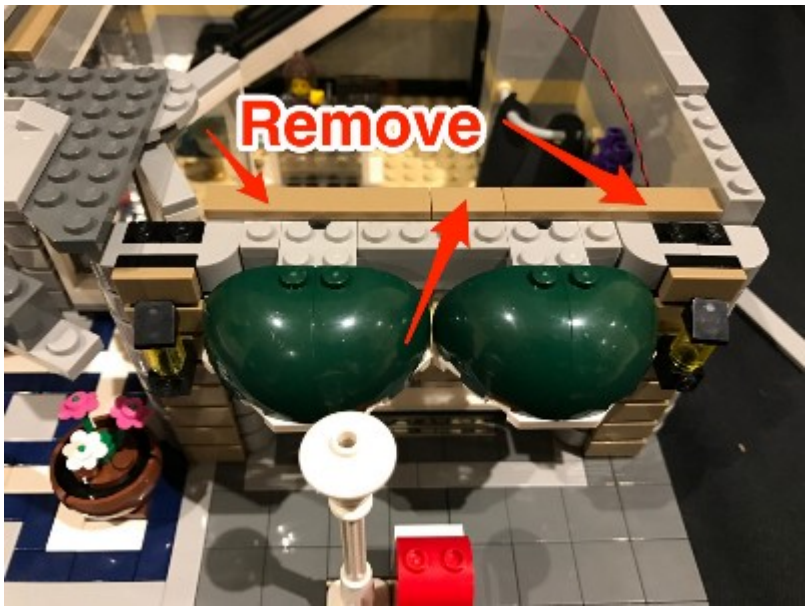


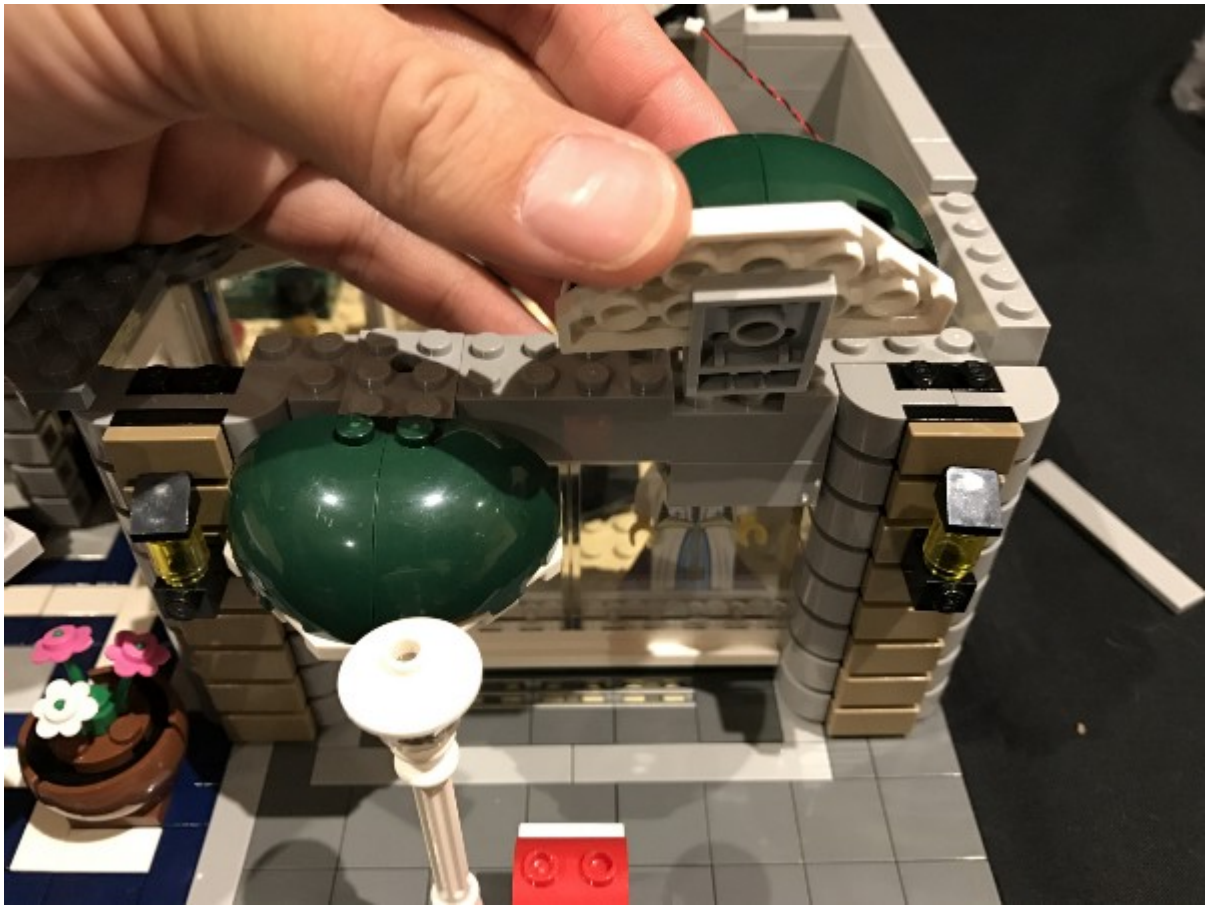


4.) Ensure the lamp post cable is laid neatly in between the Lego studs before reconnecting the tiles we removed earlier, followed by the mail box.

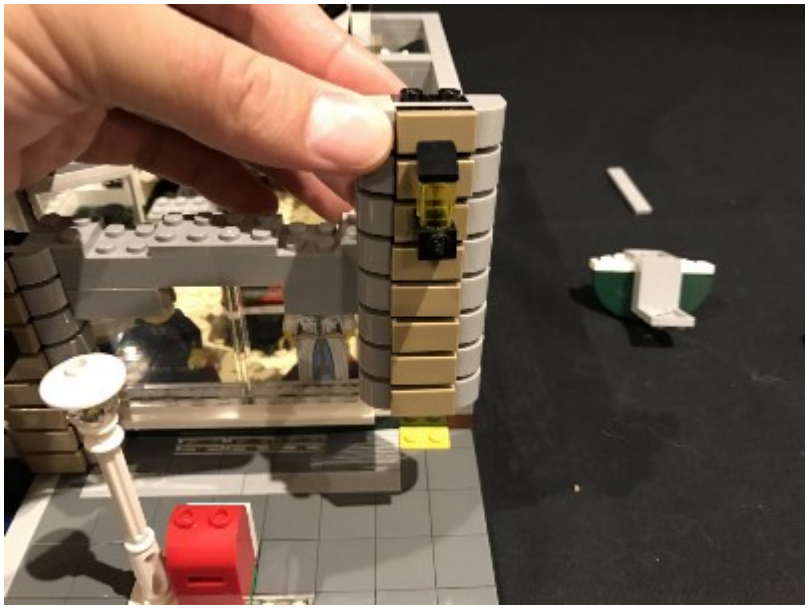
5.) We will now light up the lamps on the sides as well as two green shades. First remove the following Lego pieces to allow us access.

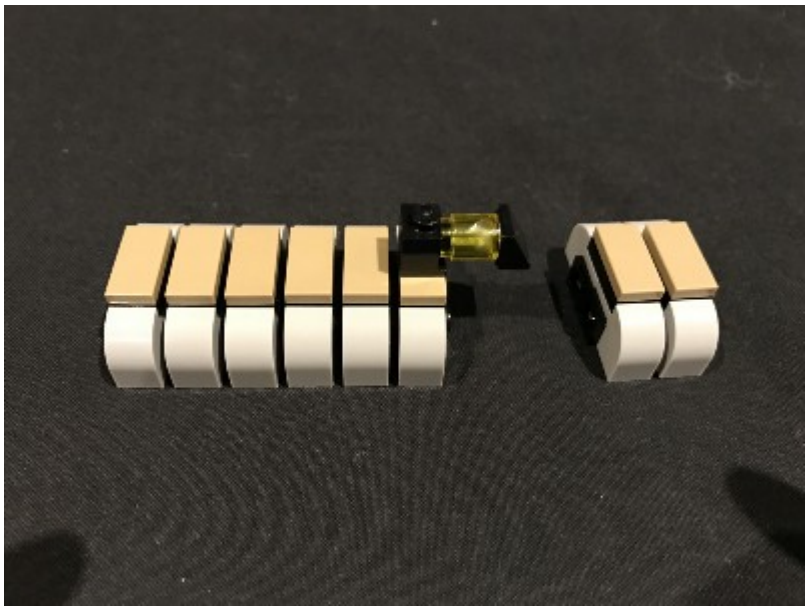
Remove

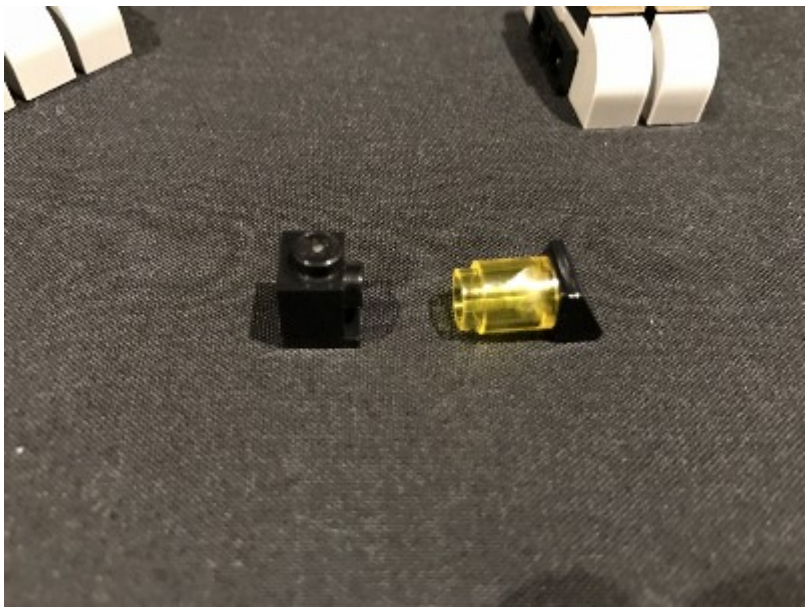

Remove



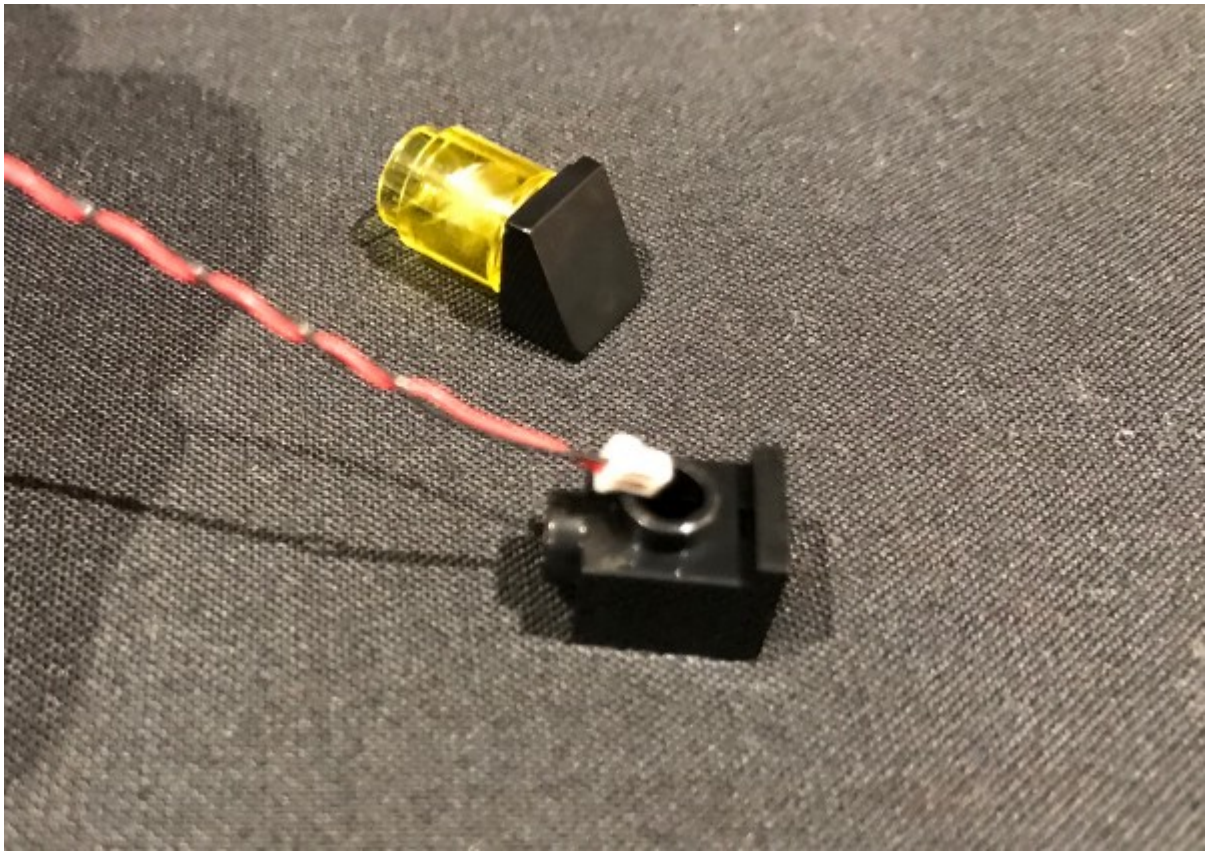
6.) Remove one of the pillars and then disconnect the top 2 layers. Disconnect the lamp and disassemble it as per below.

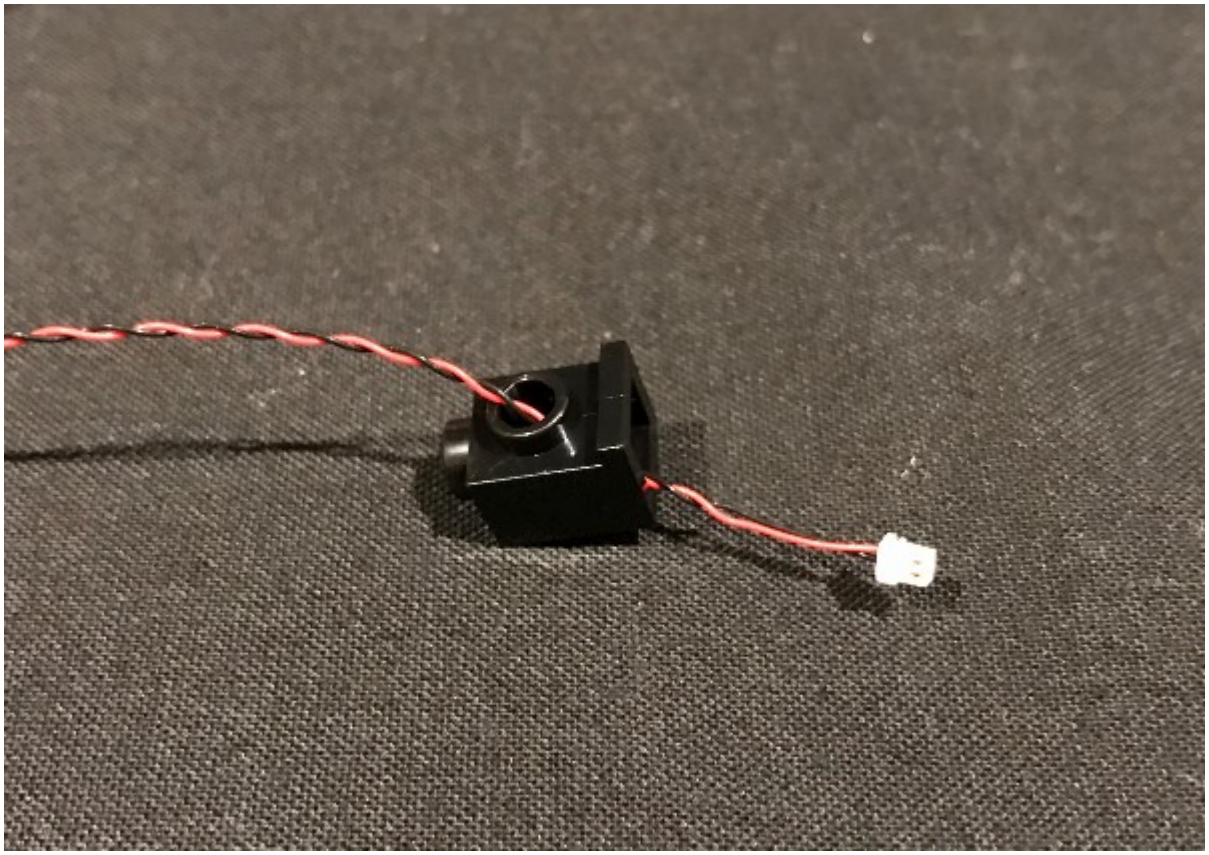


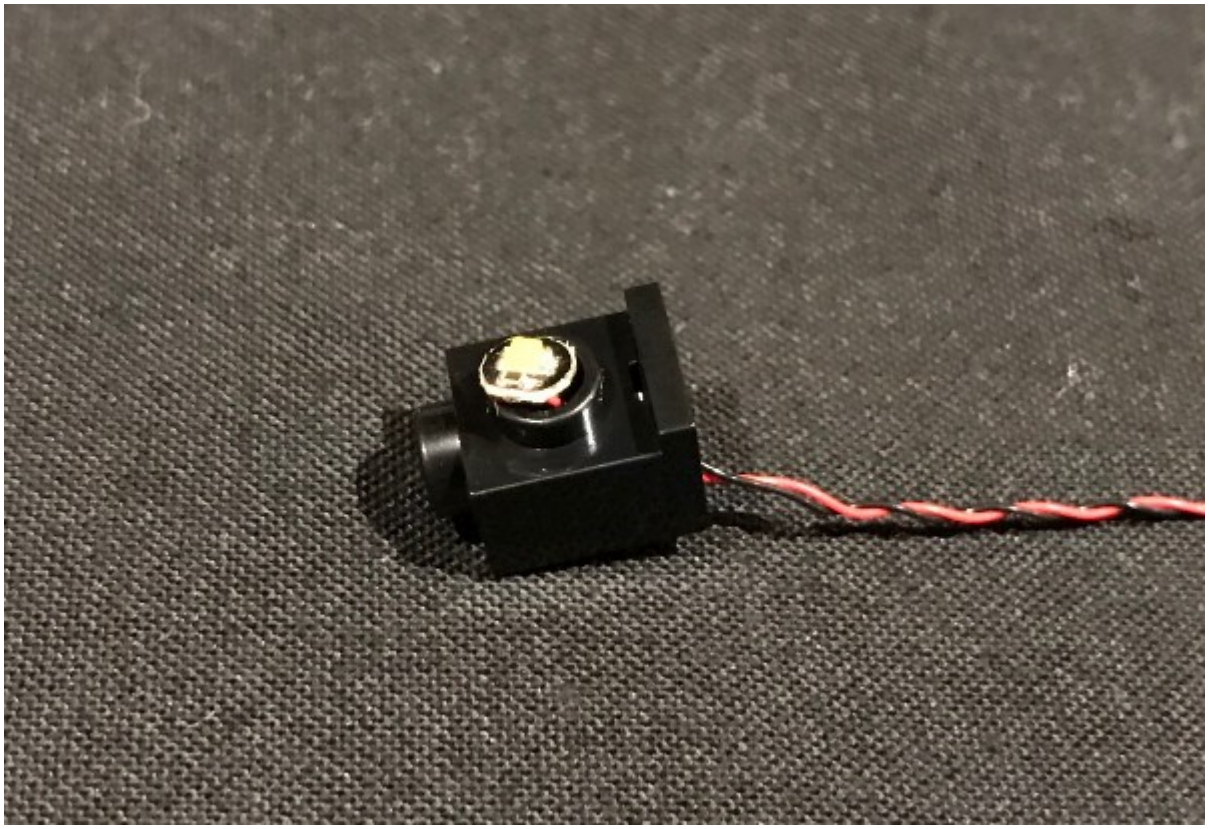


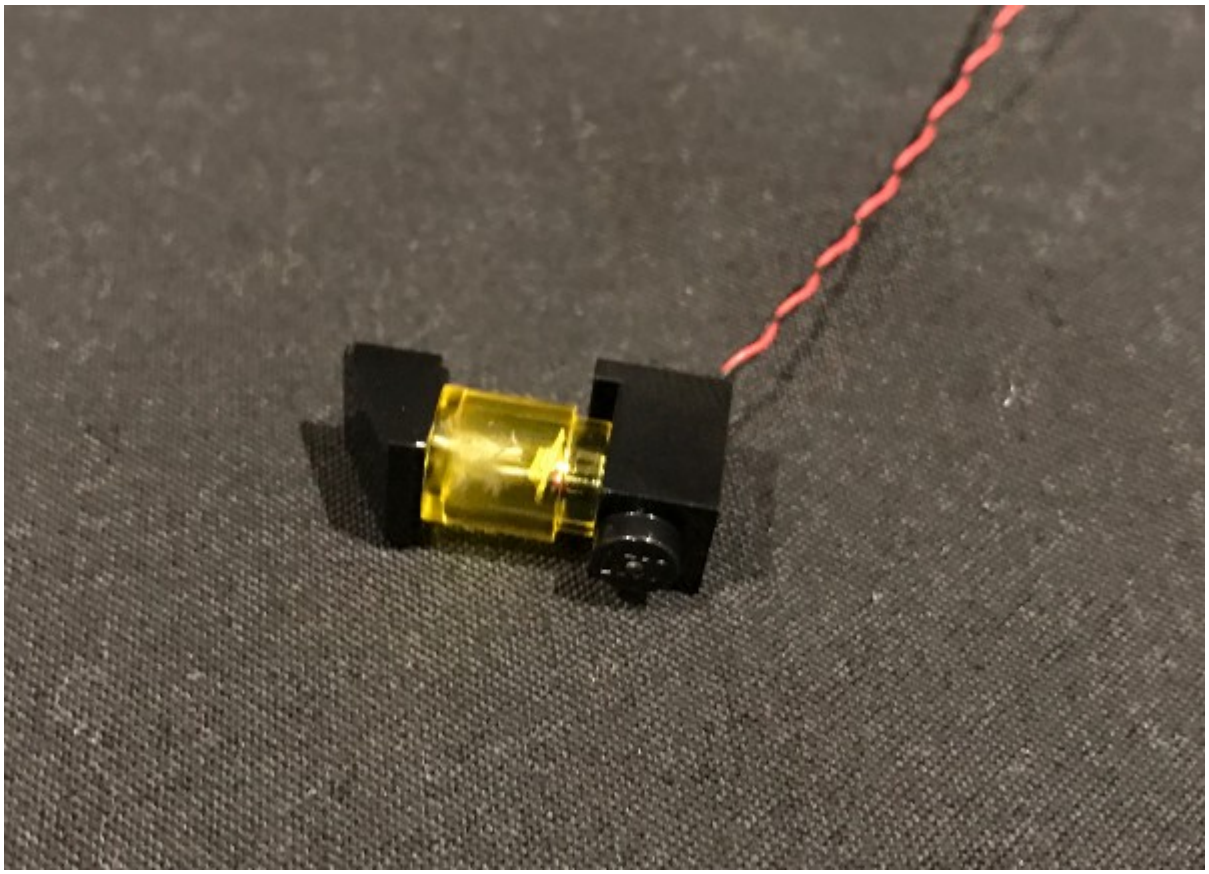


7.) Take 1x **Bit Light** and thread the connector end through the top whole of the black brick and out through the bottom end. Pull it all the way through until the LED reaches the end and then secure it in place by reconnecting the trans yellow piece.

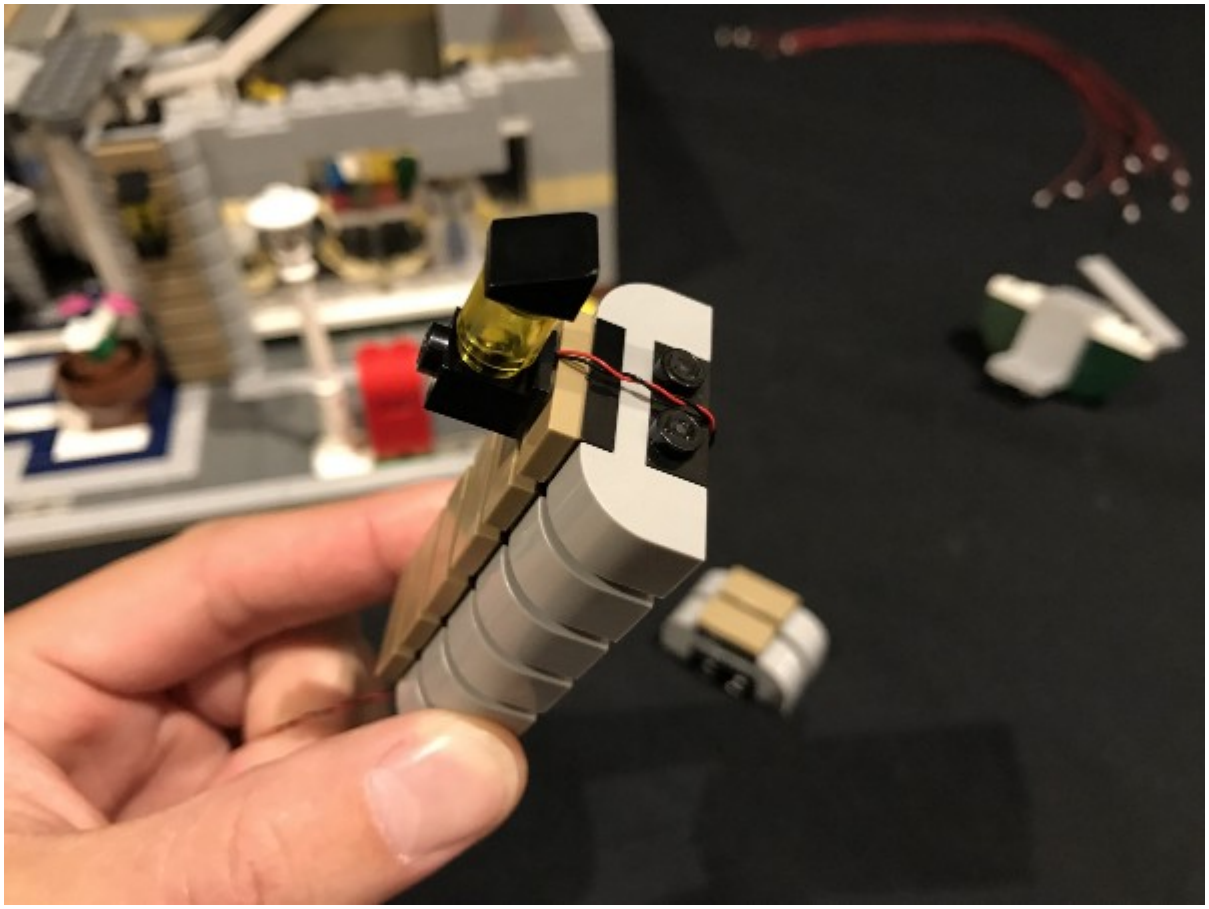


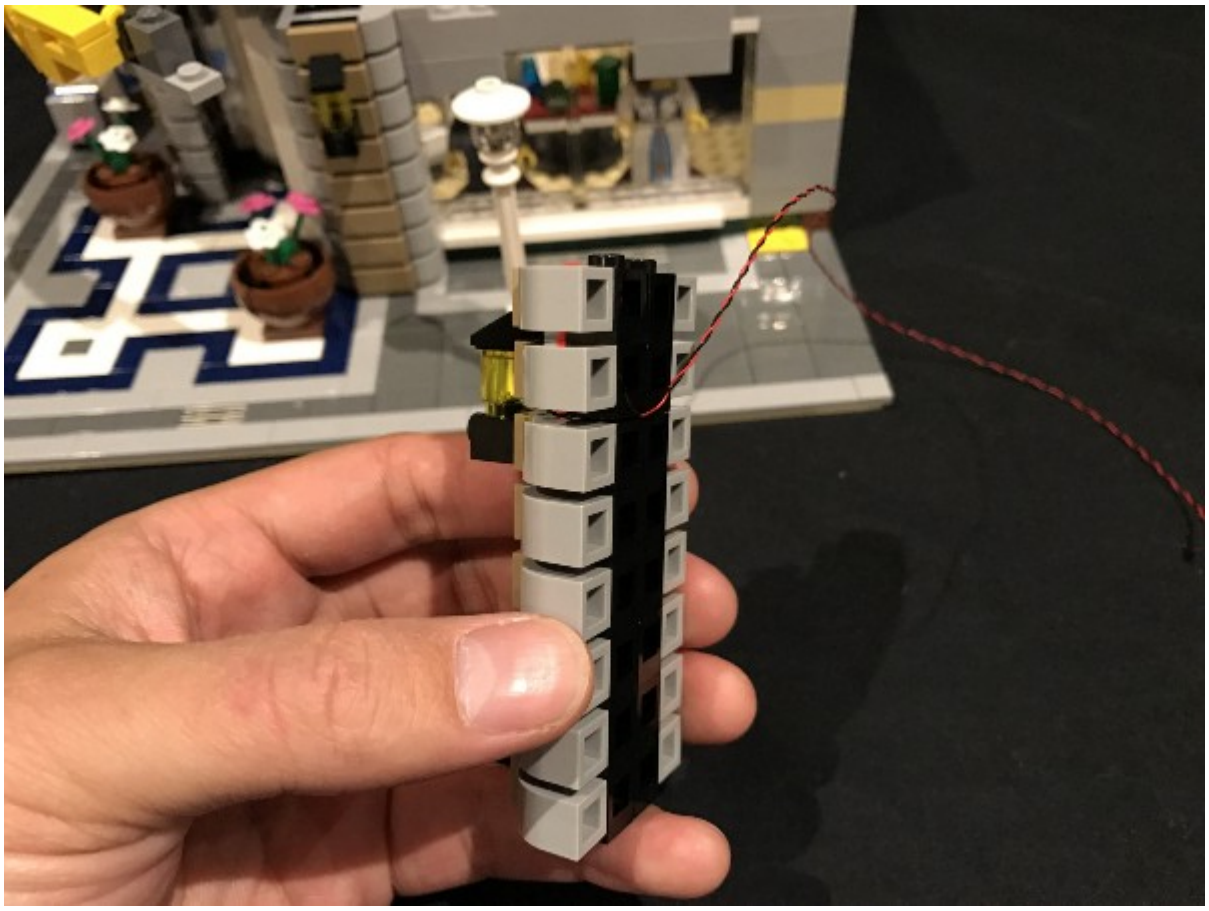




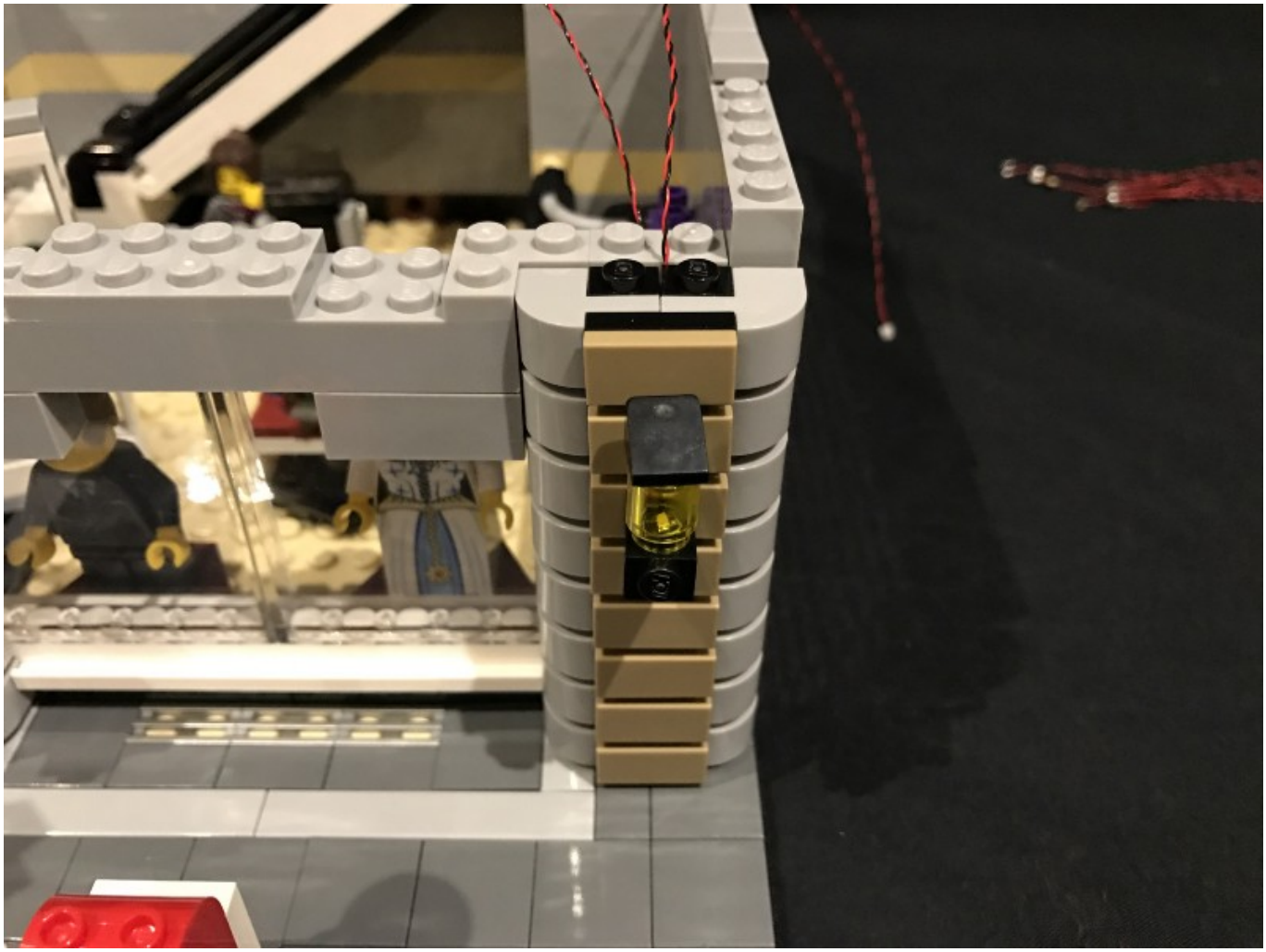


8.) Reattach the lamp with bit light installed onto the pillar ensuring the cable is laid in between the 2 black Lego studs, then reconnect the top two layers of the pillar.



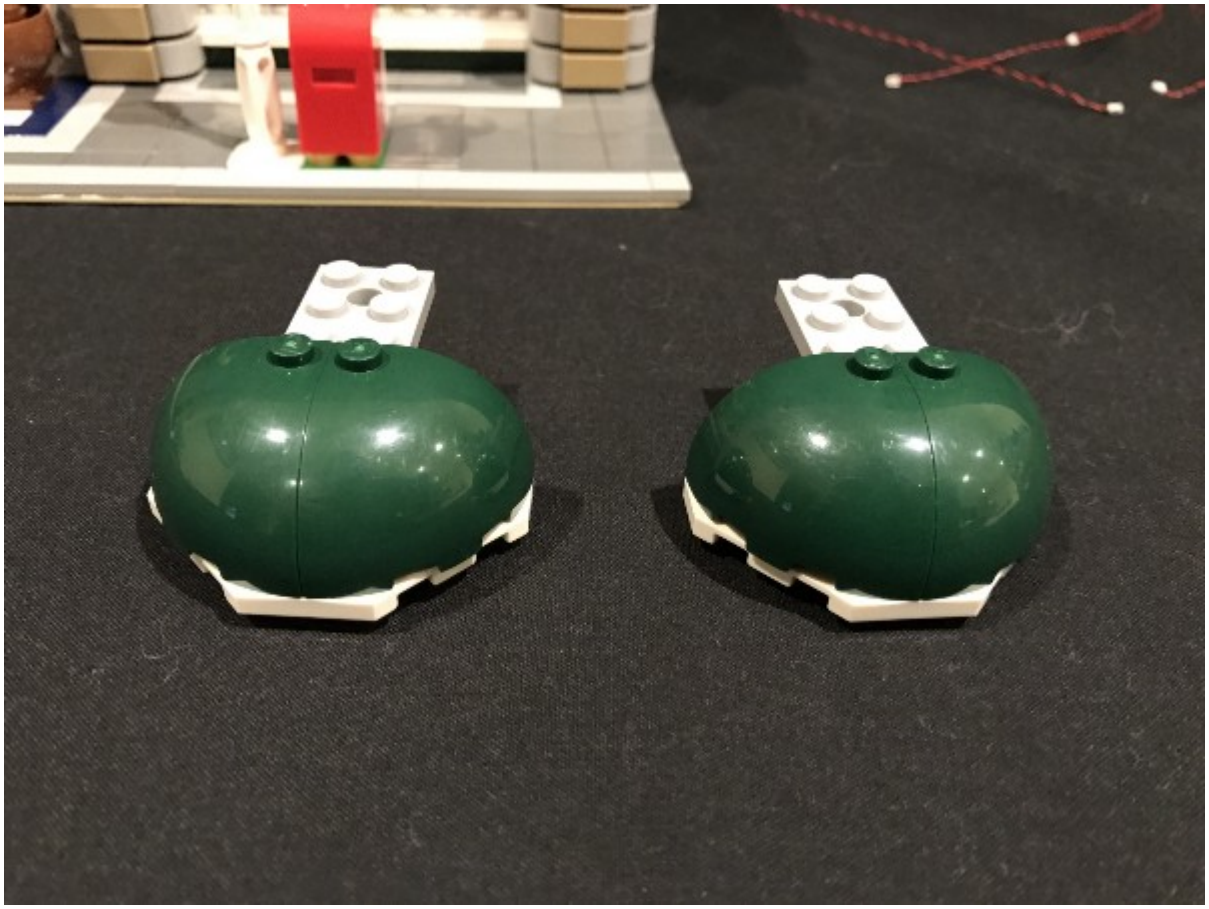


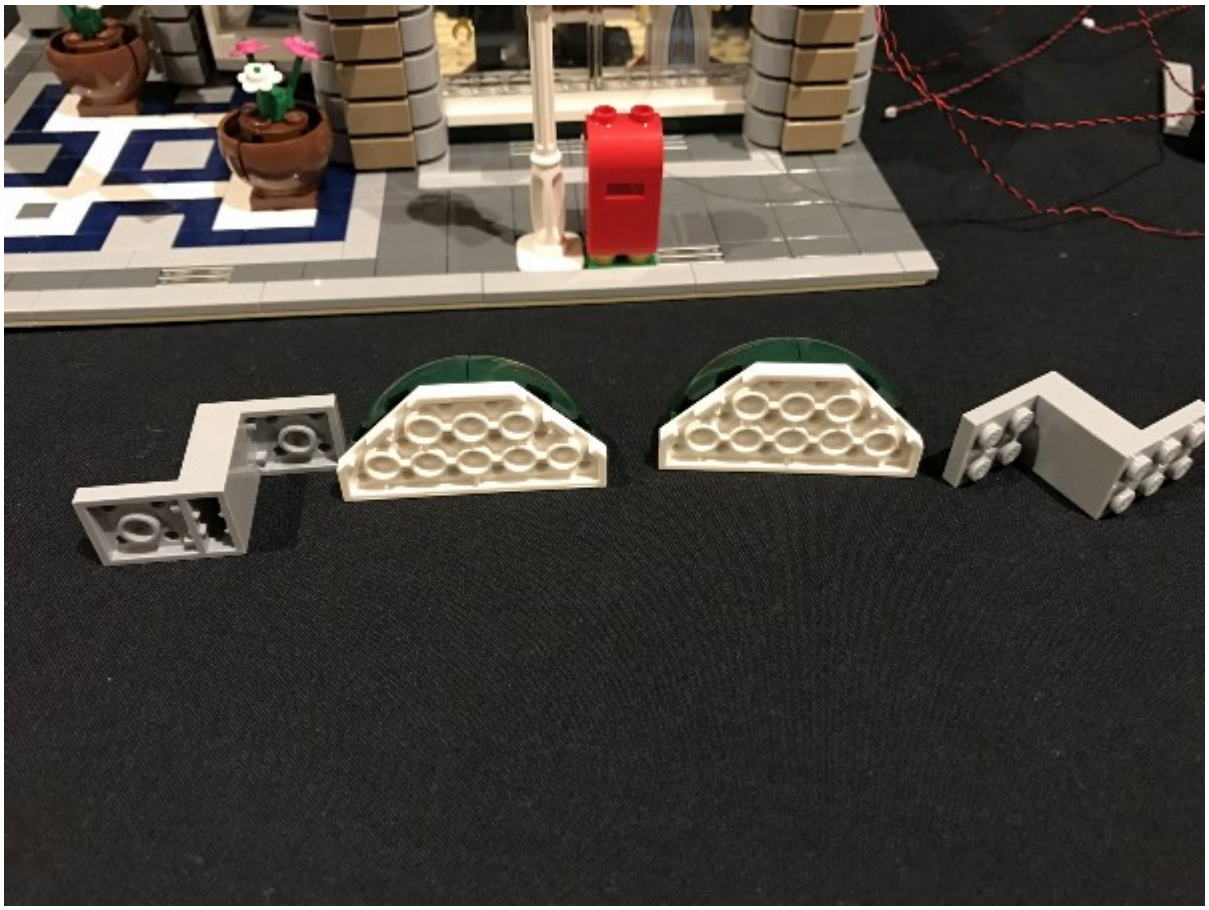
Reconnect the pillar back to the wall of the building ensuring the cable is behind i
between the wall and pillar.



Repeat steps 6–8 to install another bit light to the lamp on the left side of this building.

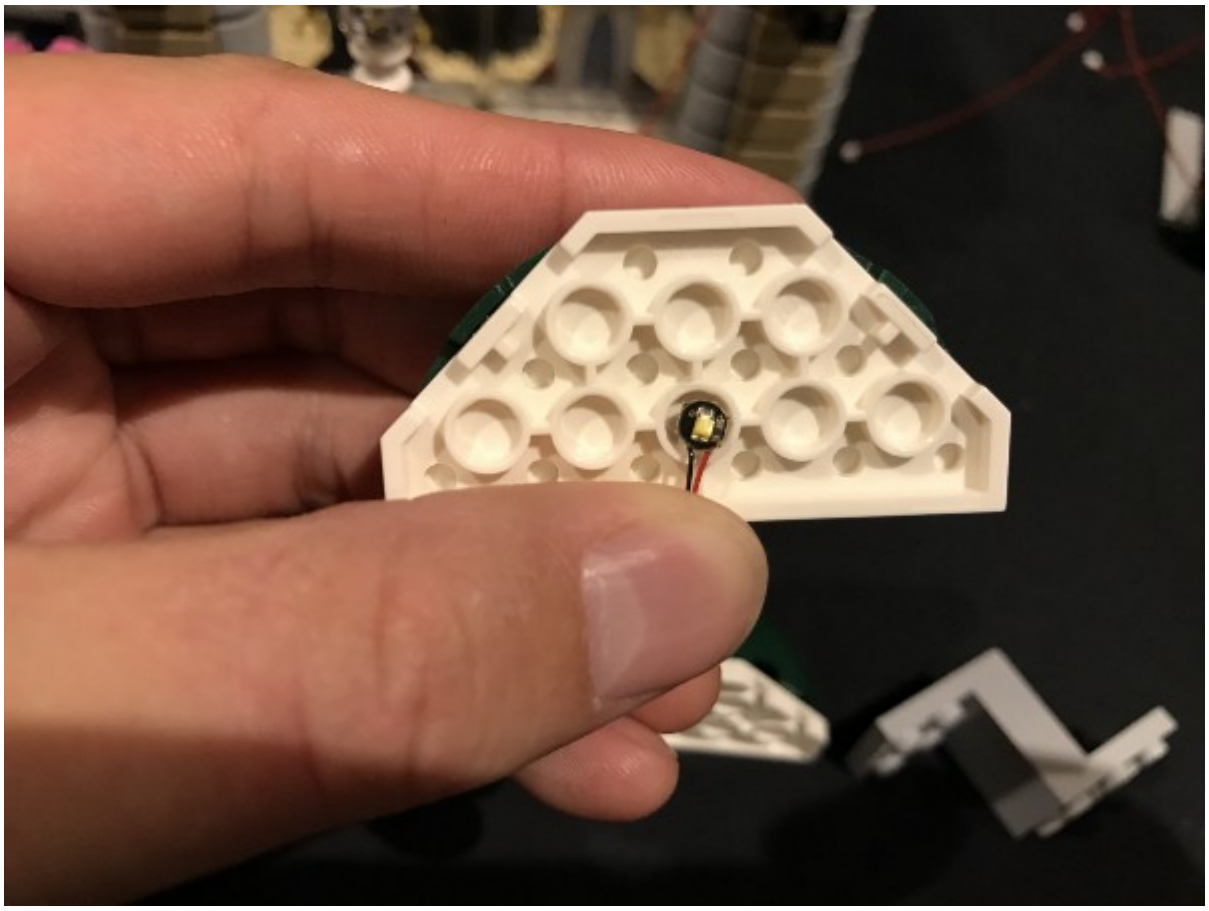
9.) Take the green shades and disconnect the grey piece from underneath each one.

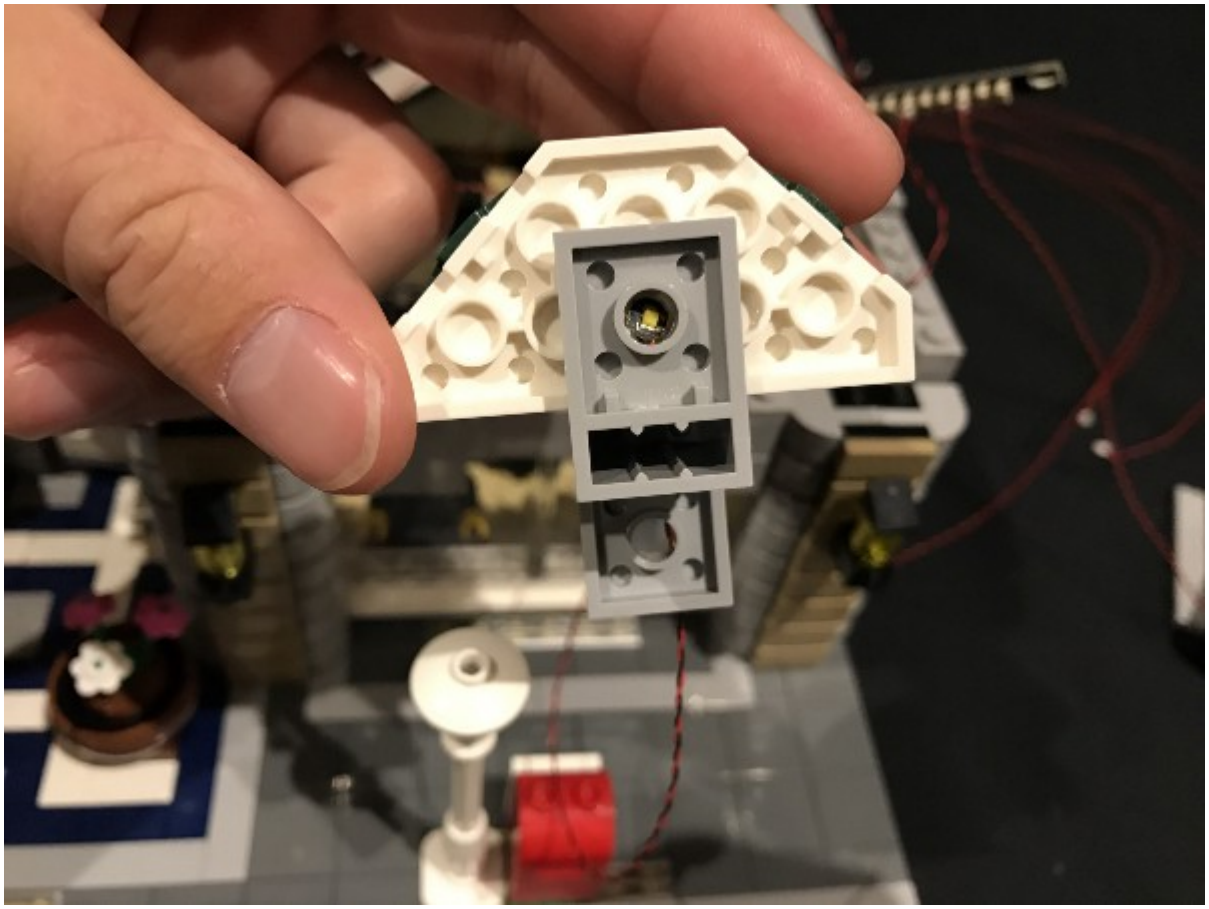




Take one of the sections and install a bit light underneath in the following position and then secure it in place by reconnecting the grey piece we removed earlier.

Ensure the cable for this bit light is behind and in between the grey piece and green pieces.

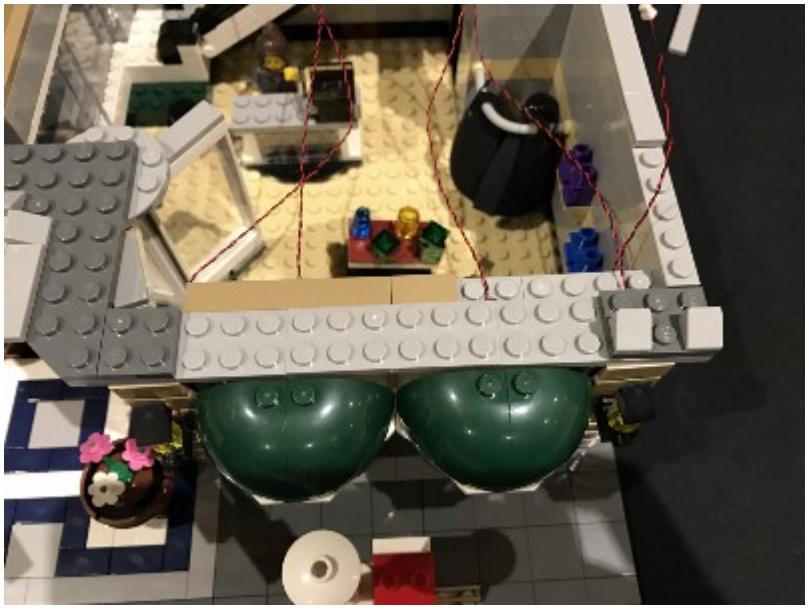


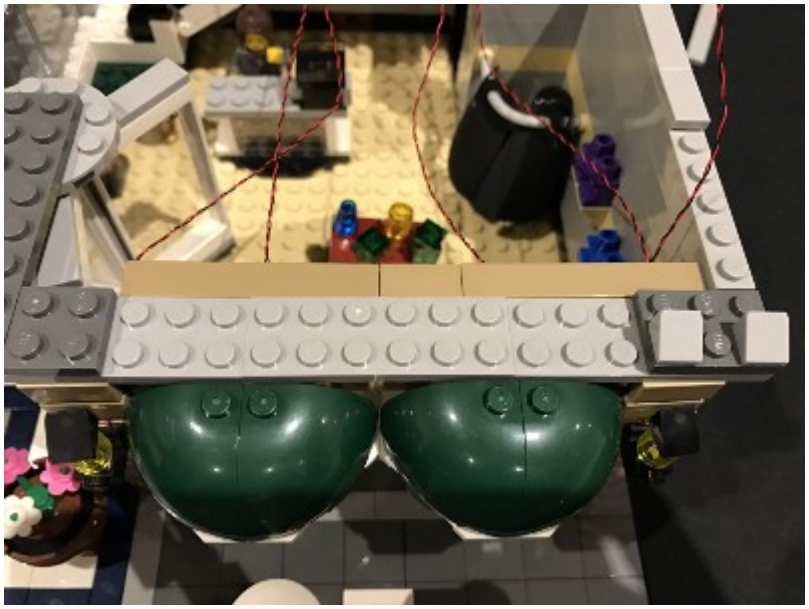


Repeat this step to install another bit light to the other green shade section.

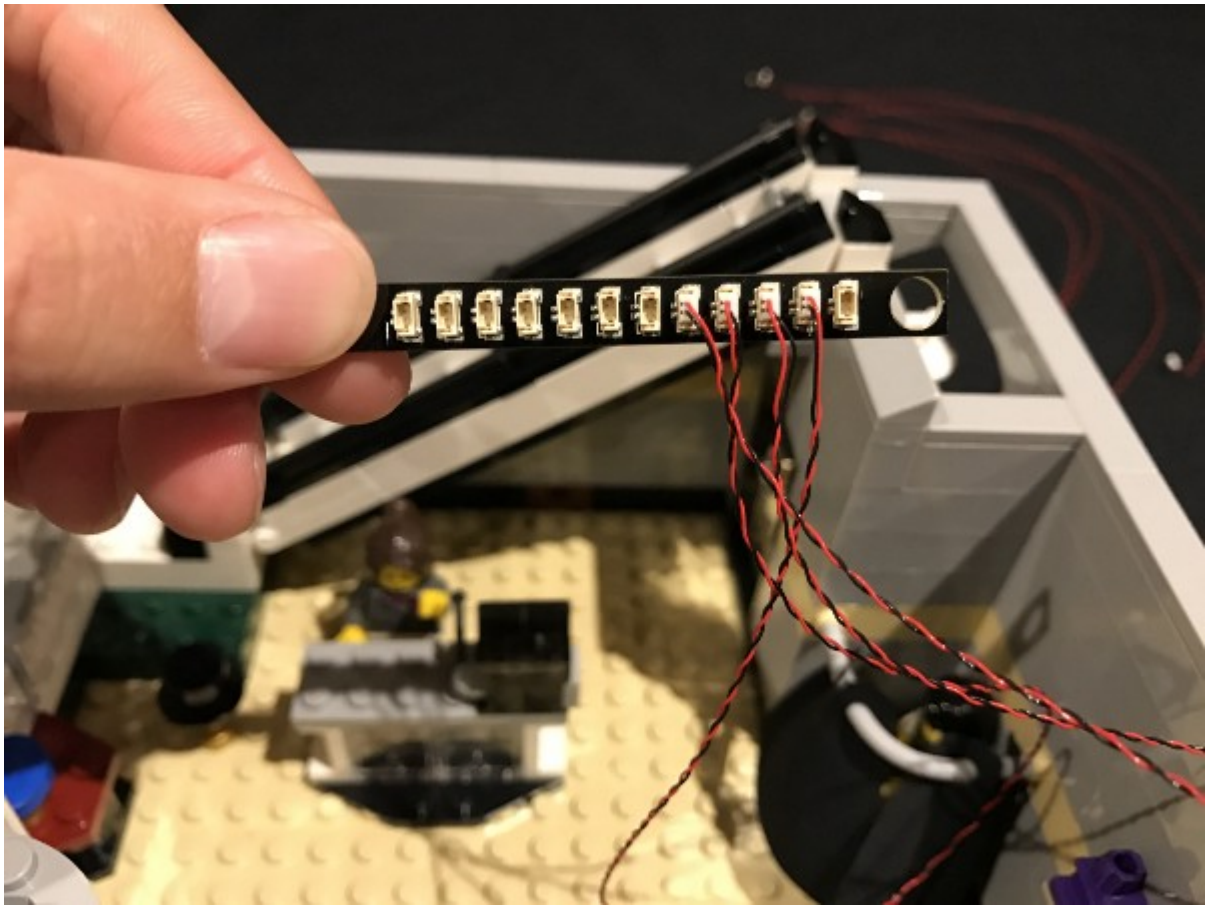
10.) Reconnect both green shades to the building ensuring the cables for both lights are sitting between the grey studs as per below.

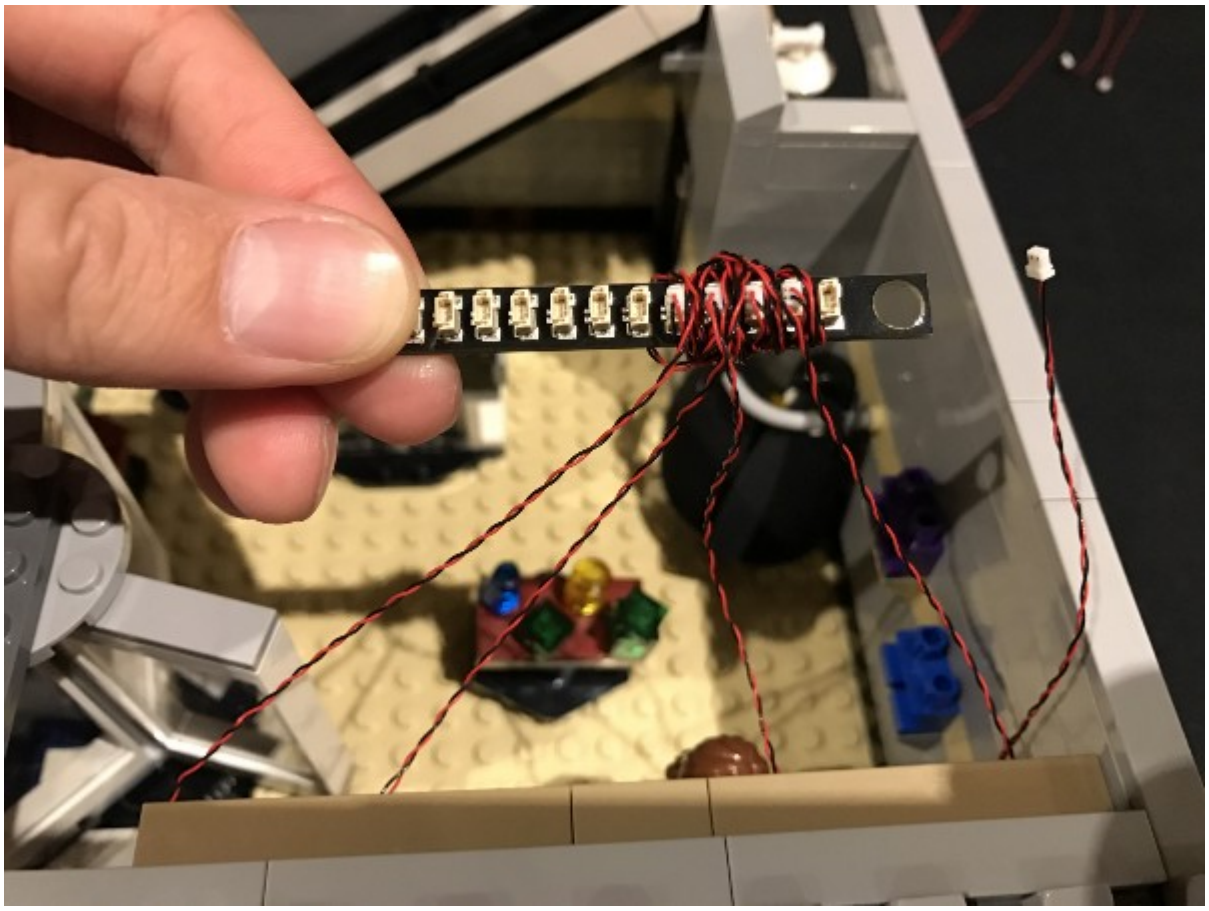
11.) Reconnect the pieces we removed earlier



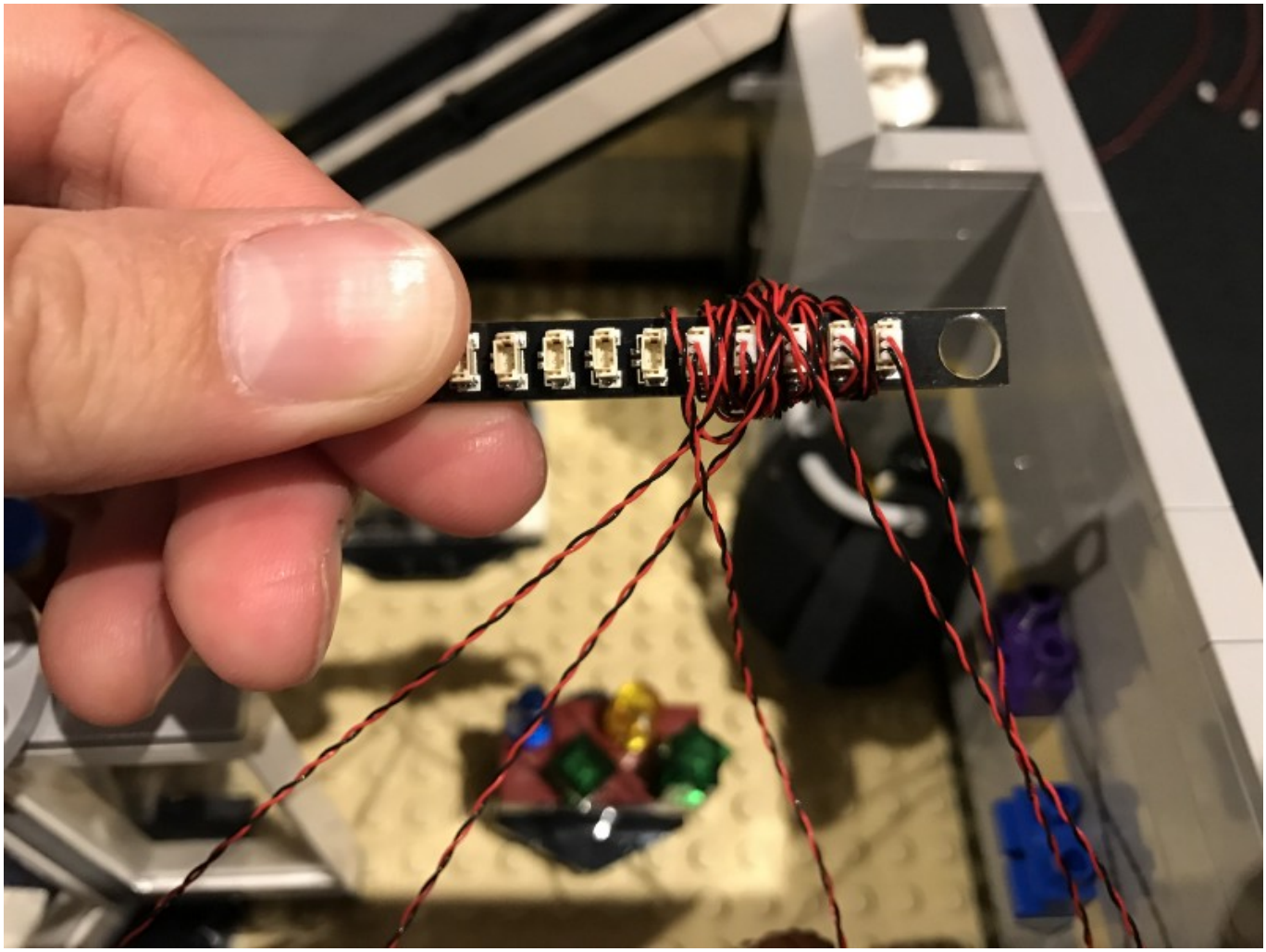


12.) Take the cables from the 4 lights we just installed and then connect them to spare ports (1 away from the right) of the **12-port expansion board.** To eliminate excess cable, wind them around the board until you have about 5–6 cm of slack.

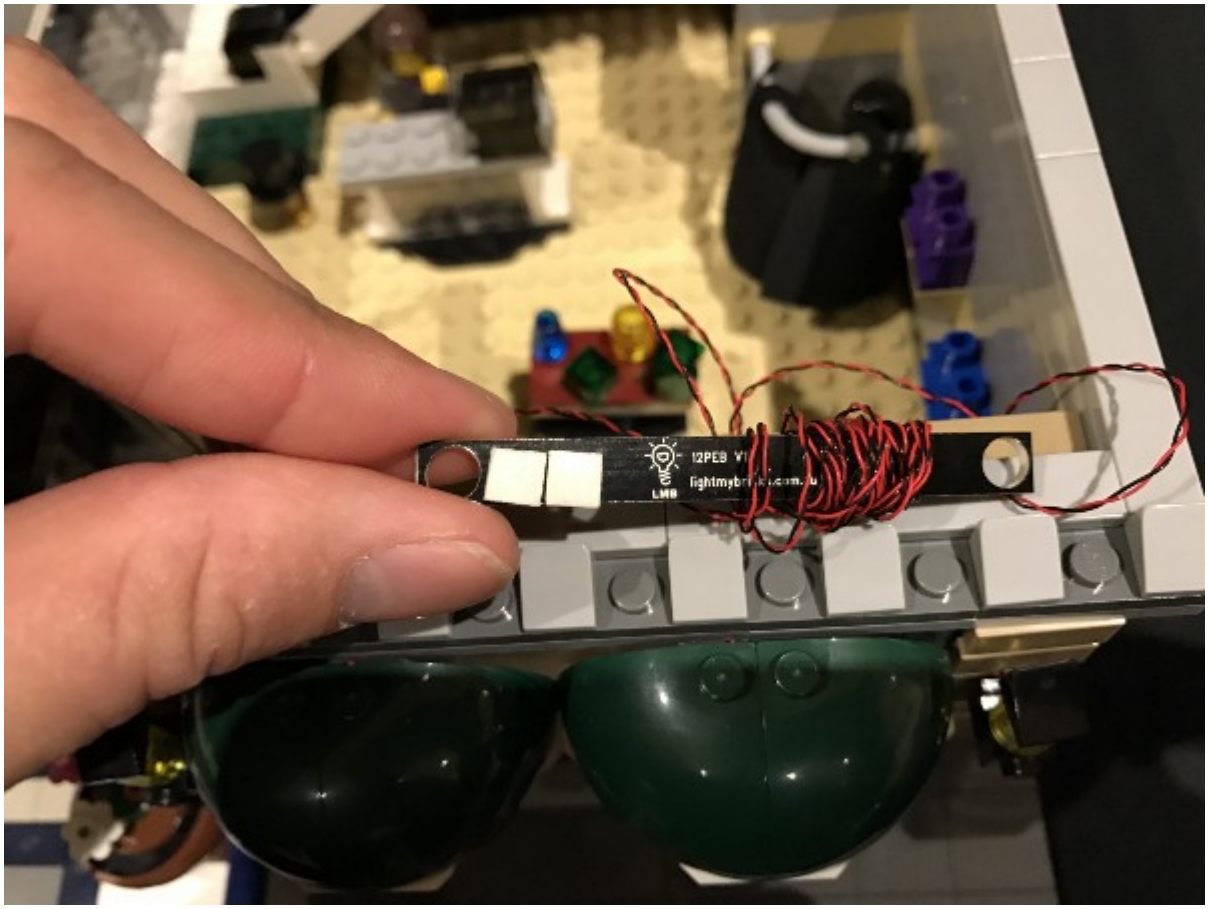


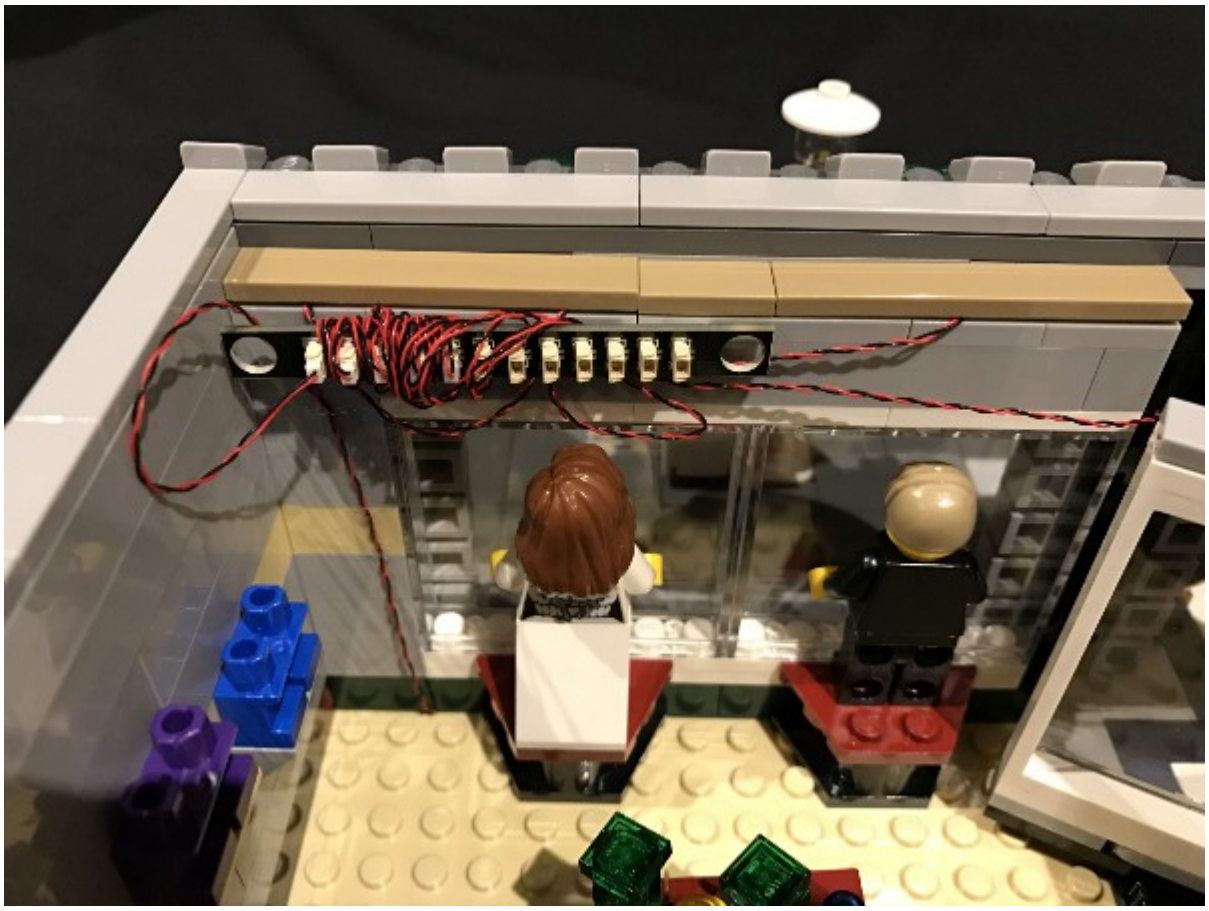


Take the cable from lamp post and connect this into the far right port of the expansion board.



13.) Mount the expansion board onto the inside of the building (on the front wall) using two of the provided adhesive squares, as show below:





Now is a good time to test the lights we have installed so far. We can do so by takir the battery pack from this kit and installing 3x AA batteries into it. Connect the

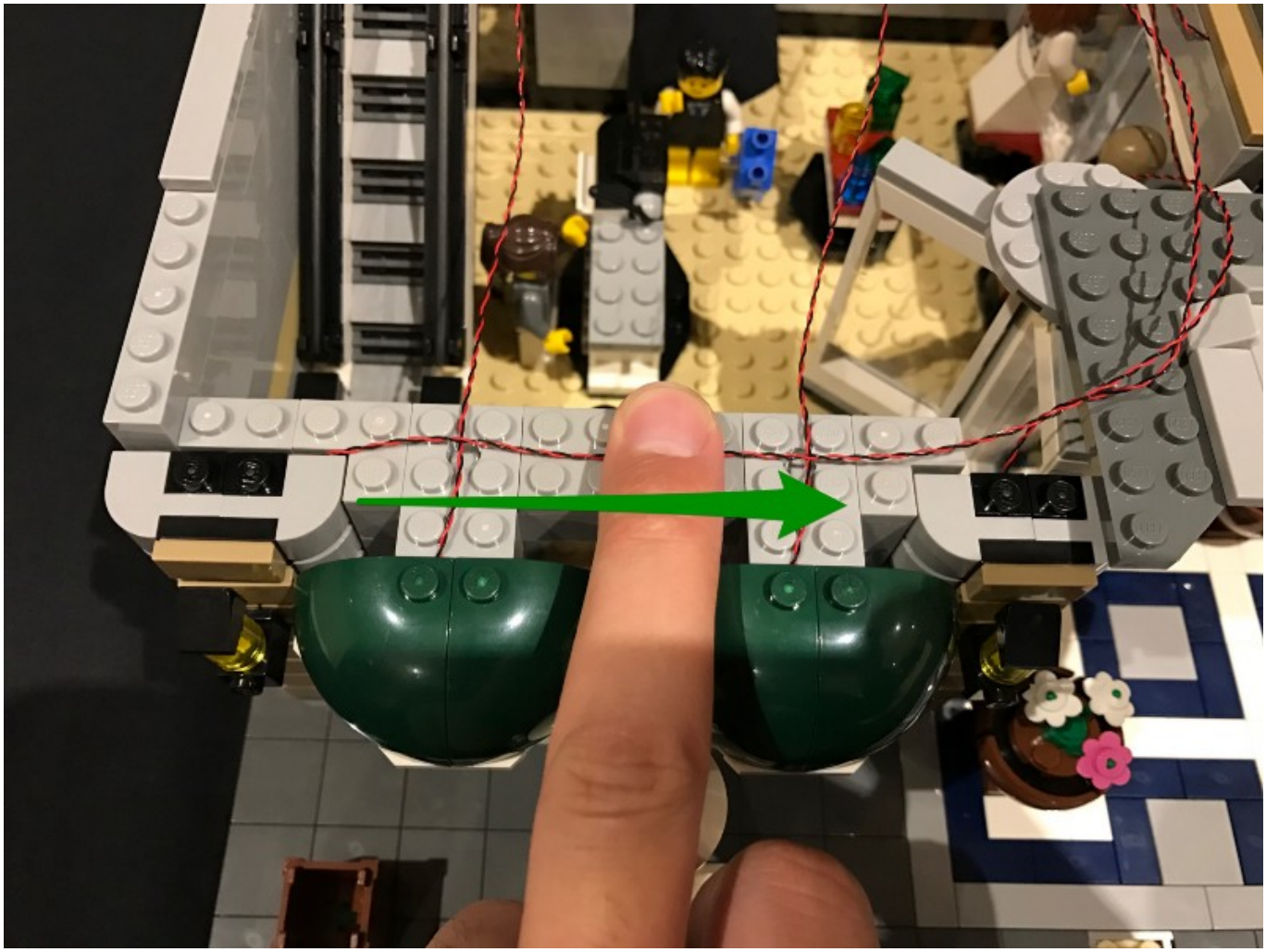
battery cable into one of the spare ports of the expansion board and then turn it on.

If you're using the **USB Power Cable**, connect this to the board this instead of the battery pack, and connect the other end to a **USB Power Bank** or **wall adaptor** (sold separately) and turn it ON to test the front lights are working OK.

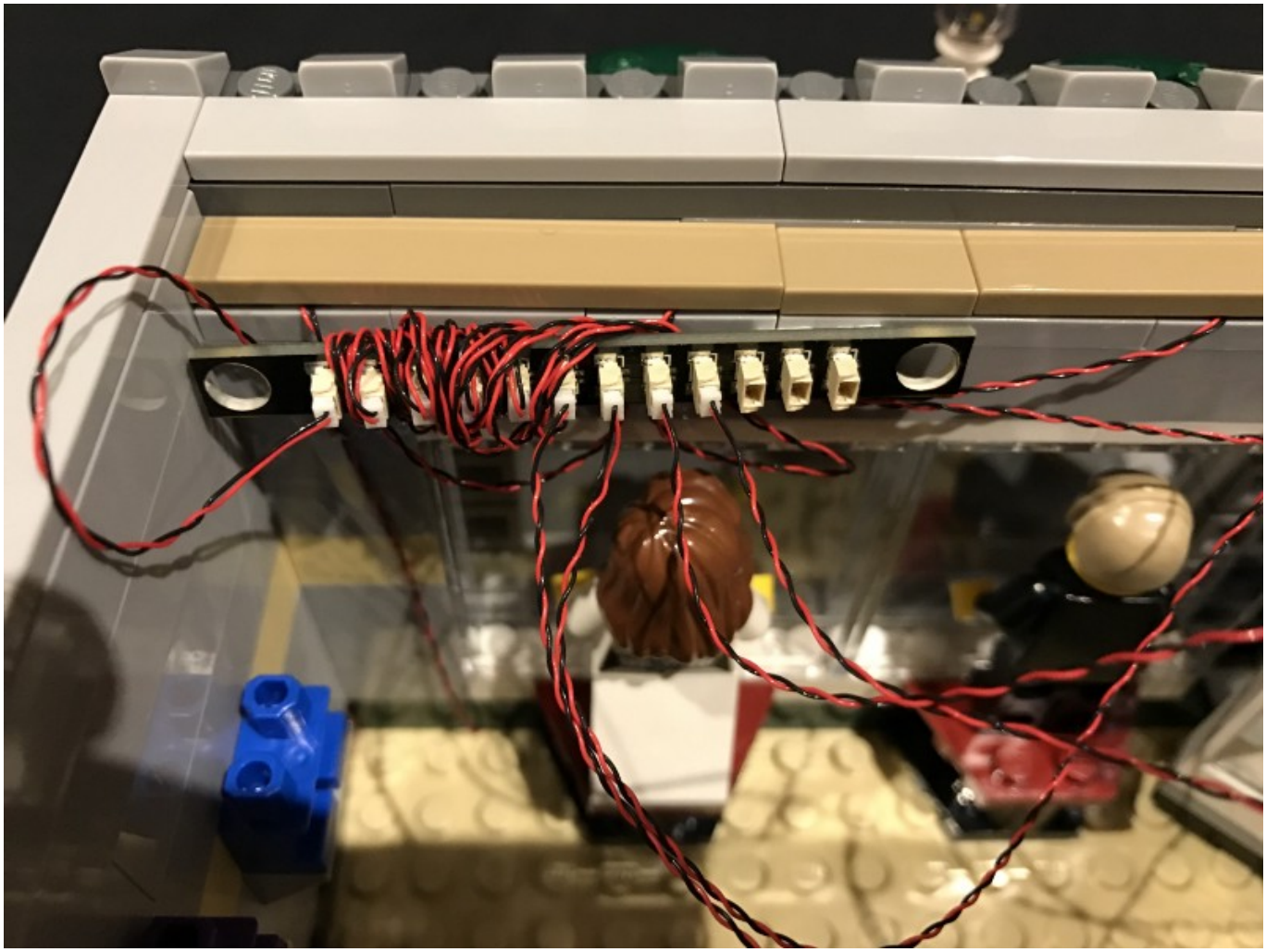
14.) We will now install lights to the other side of the building.

Repeat steps 5–10 to install another 4 bit lights (2 for the pillar lamps and another 2 for the green shades)

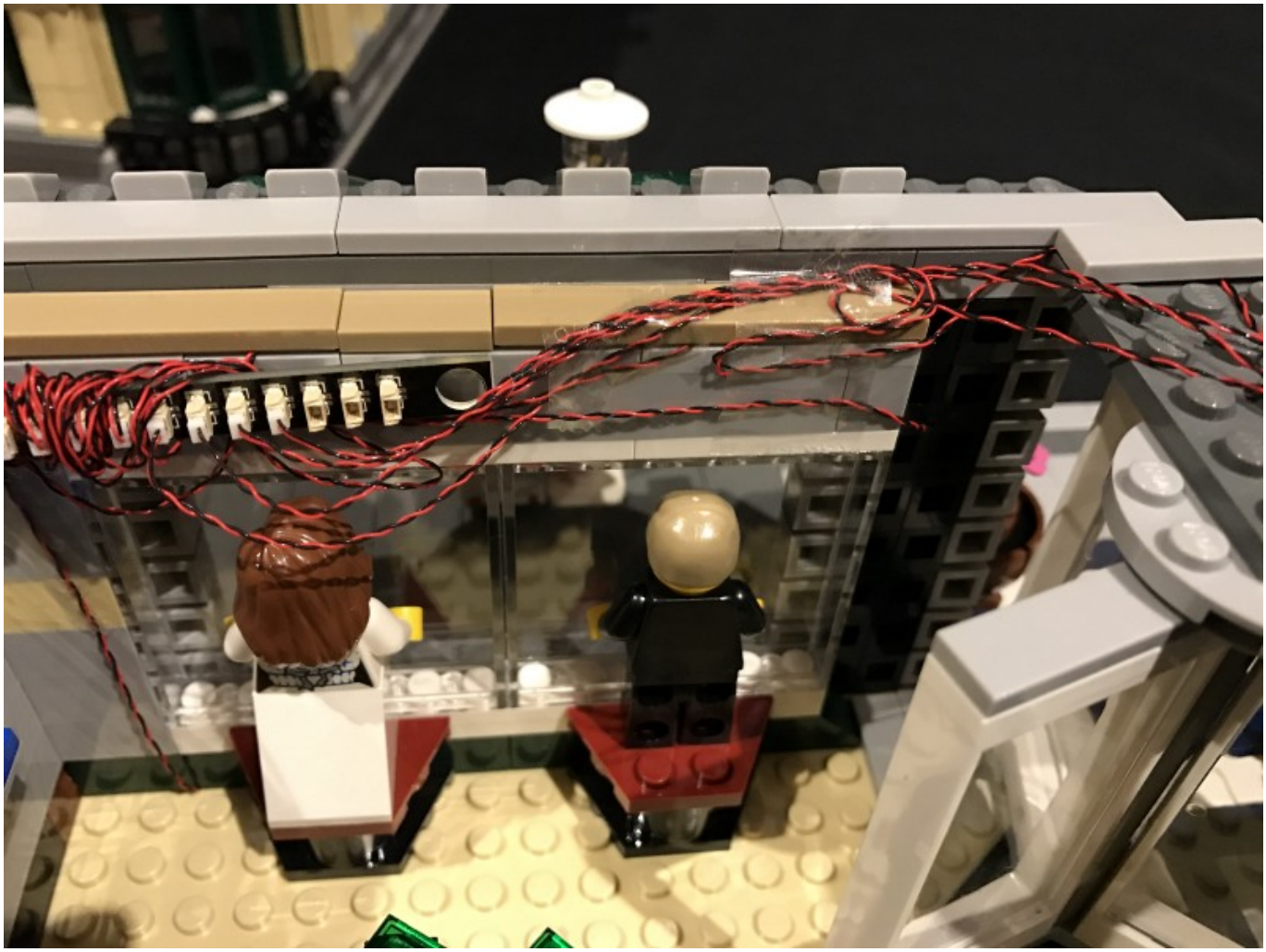
15.) You should now have another 4 lights installed to this side of the building. Before reconnecting the pieces surrounding the top, ensure the cable for the left pillar lamp is threaded across the top of the windows toward the right



16.) Connect the 4 bit lights we just installed the next available ports on the 12-port expansion board.



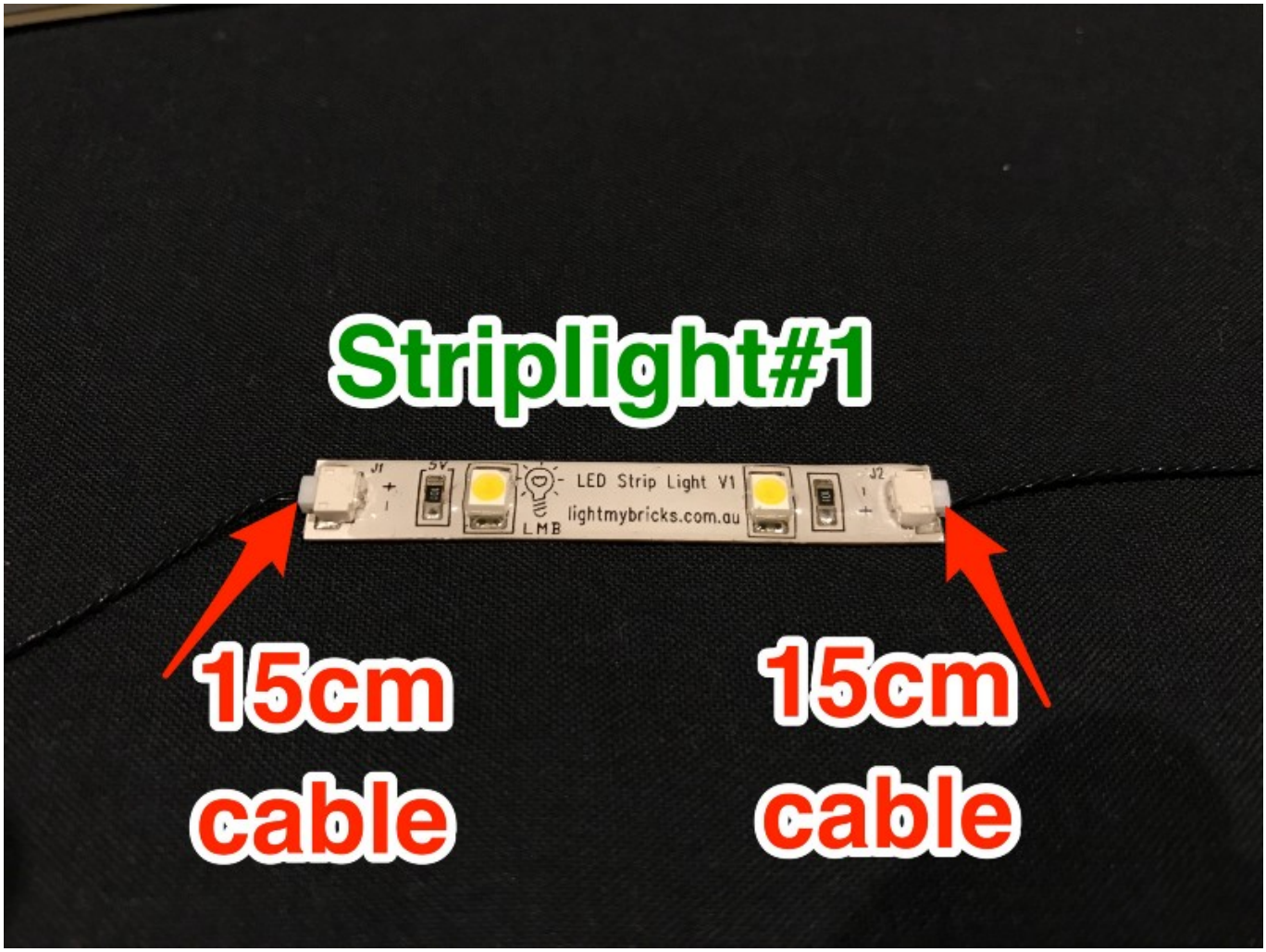
17.) Lay the cables neatly around the top of the inside of the building as shown below. You can also lay the cables underneath the grey tiles surrounding the top as well as use sticky tape to secure them down (as I have done so for the cables toward the right of the expansion board)



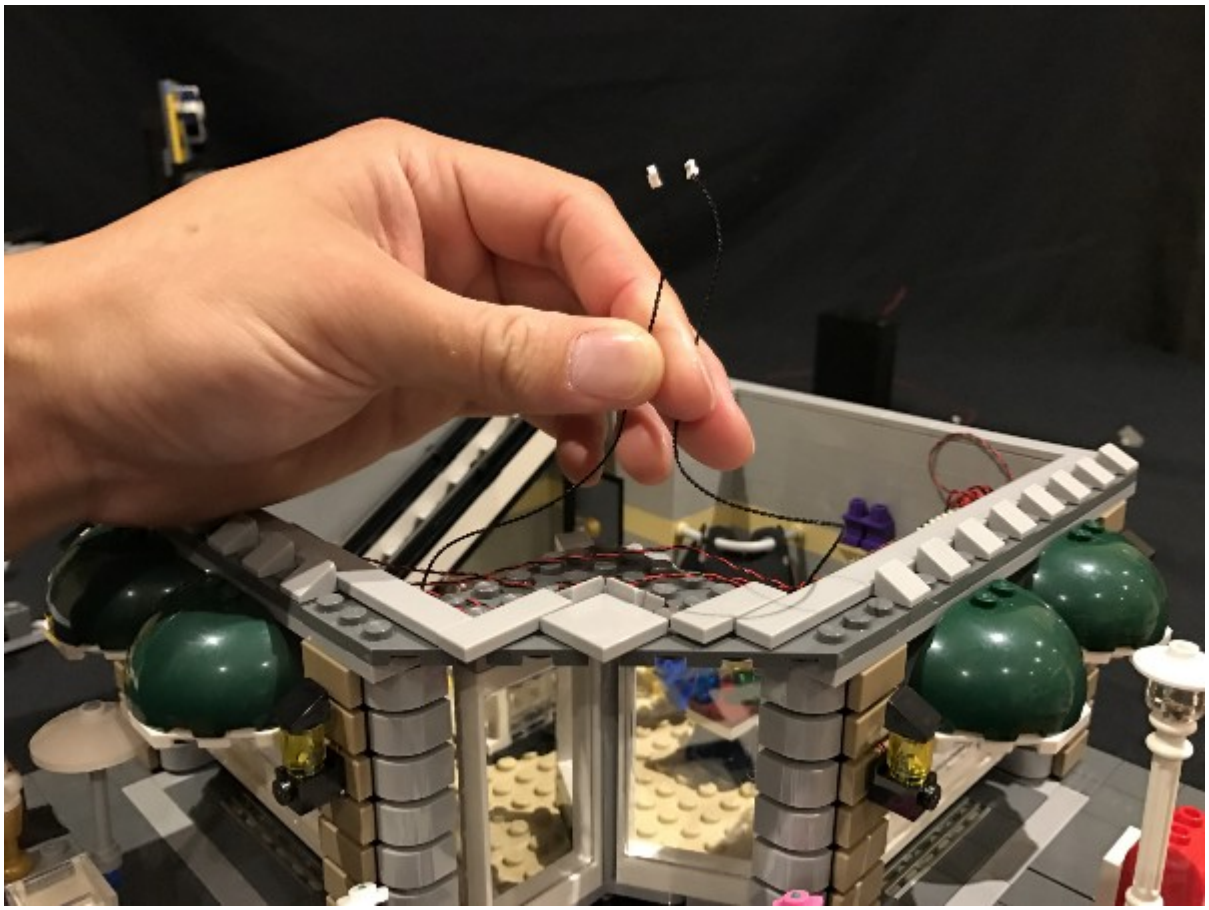
> *Do your best to hide as much cable as you can from being seen from the outside of the building*

Connect the battery pack/usb cable to the expansion board again to test the lights we have installed so far.

18.) Take one **strip light** and connect one 15cm cable to the left port and another 15cm cable to the right port. We have a total of six strip lights so we will identify this as **striplight#1.**

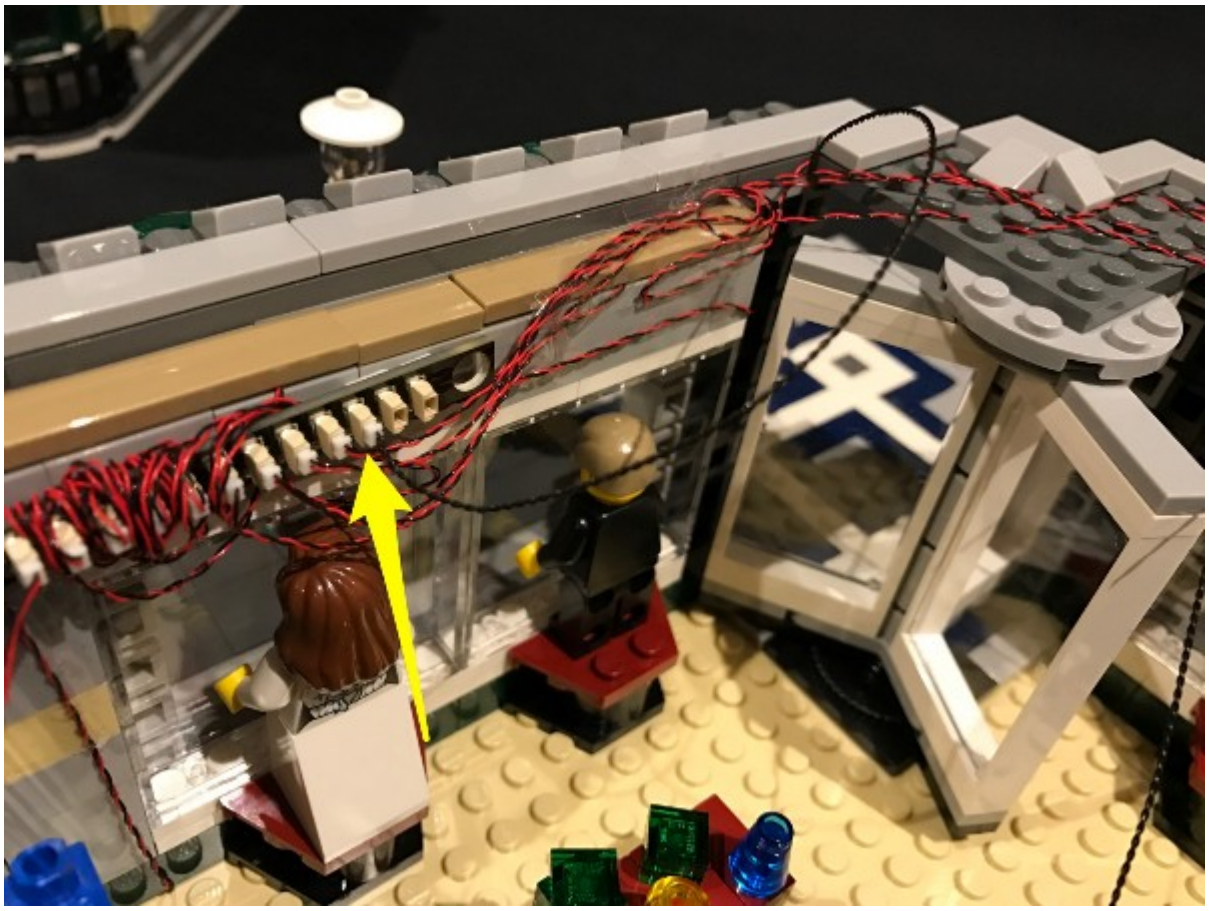


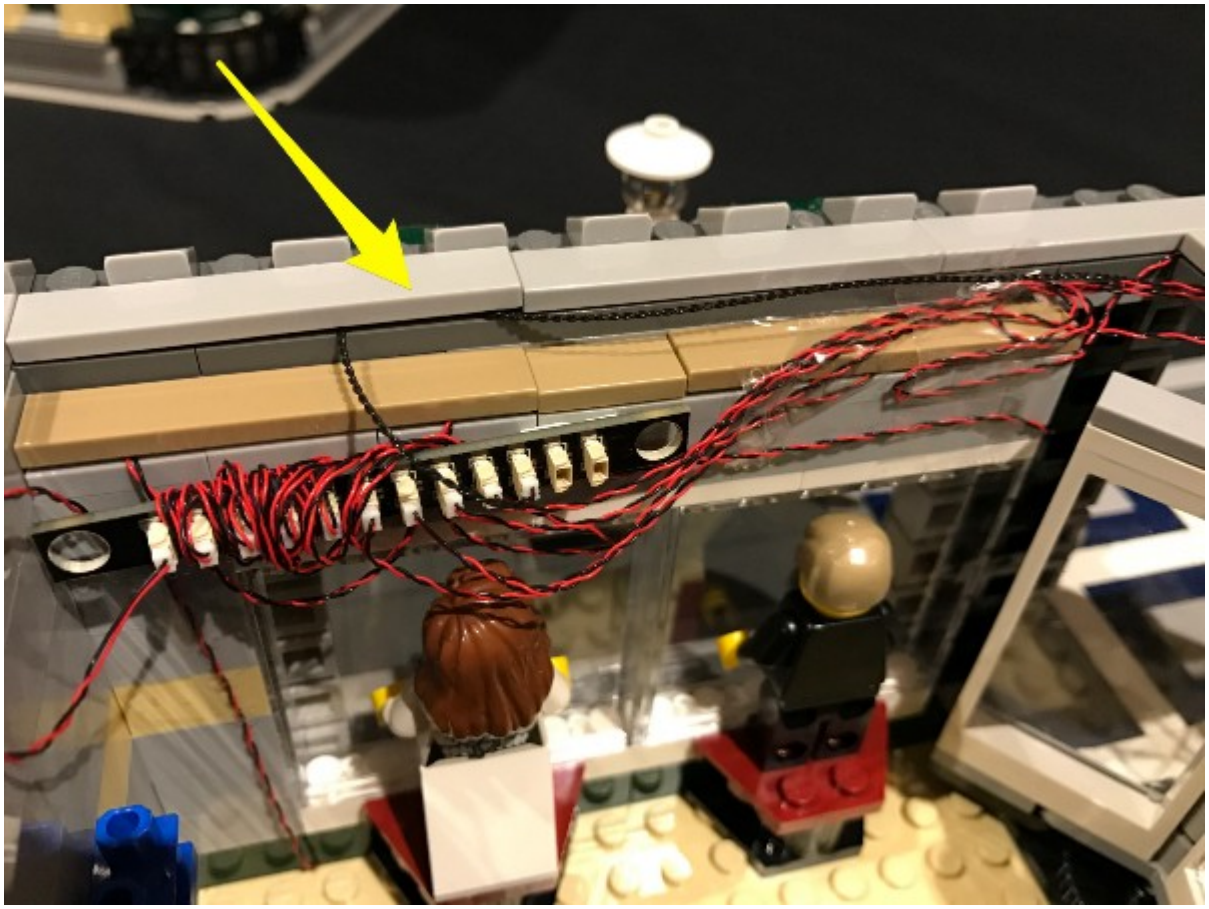
Stick the strip light underneath the centre of the roof in the following position and then thread both cables up in between the doors and ceiling. Pull them up from inside of the building.



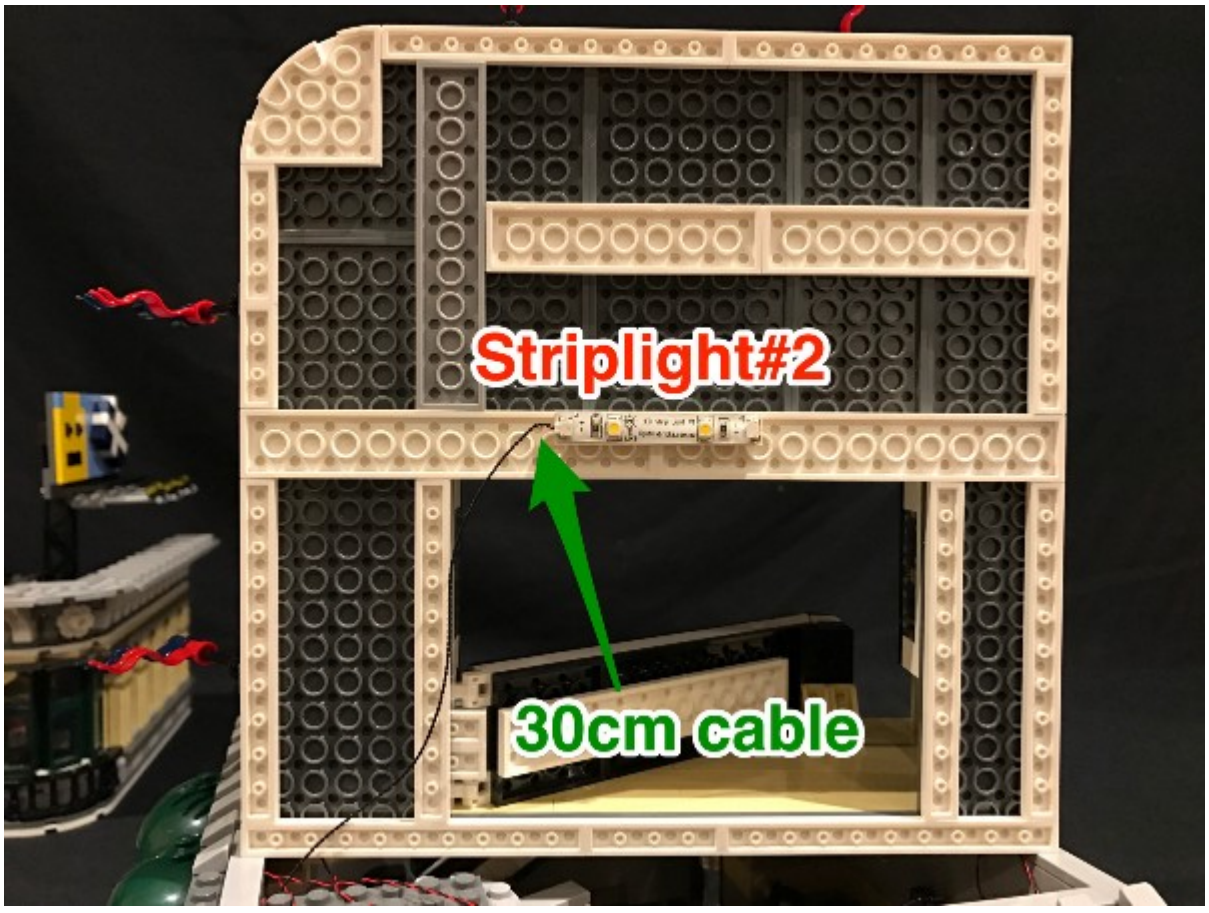
We are sticking the strip light directly onto the ceiling rather than a 1×6 Lego plate so that it is not as obvious from the front

19.) Connect the cable from the right port of striplight#1 into the next available port on the expansion board then hide the excess cable underneath one of the grey tiles.

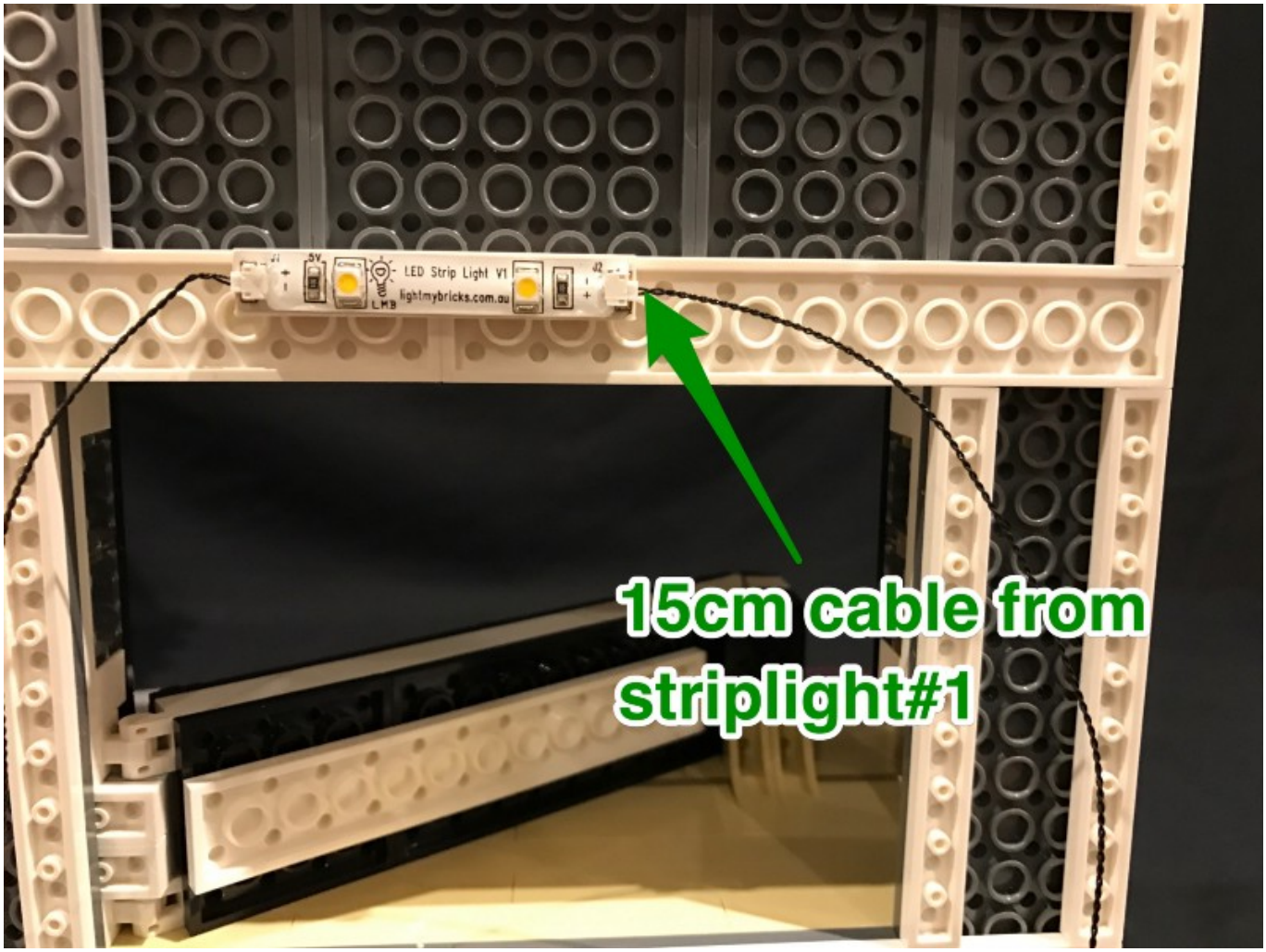




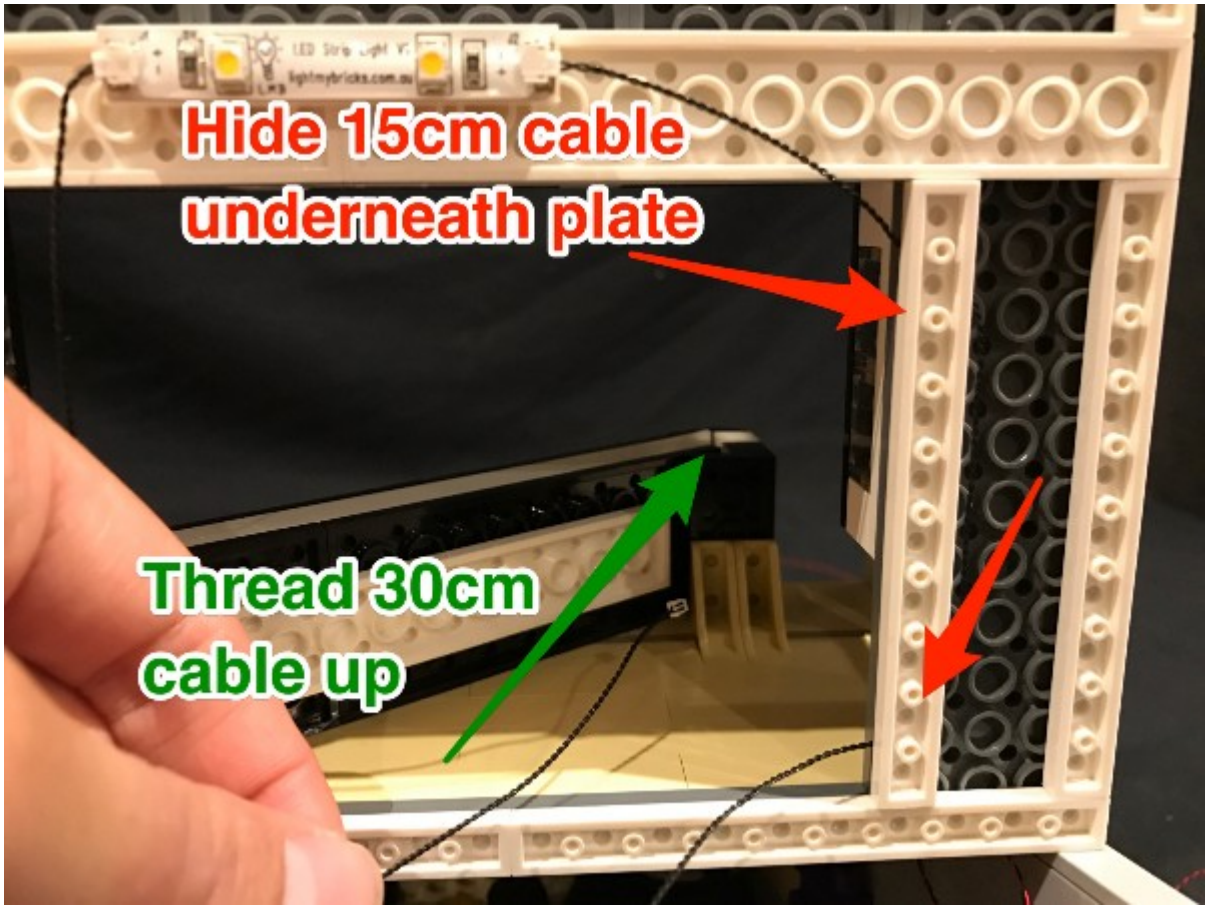
20.) Take the entire second floor and then connect/stick another strip light **(striplight#2)** on to the bottom of it, in the following position. Take a 30cm connecting cable and connect it to the left port.

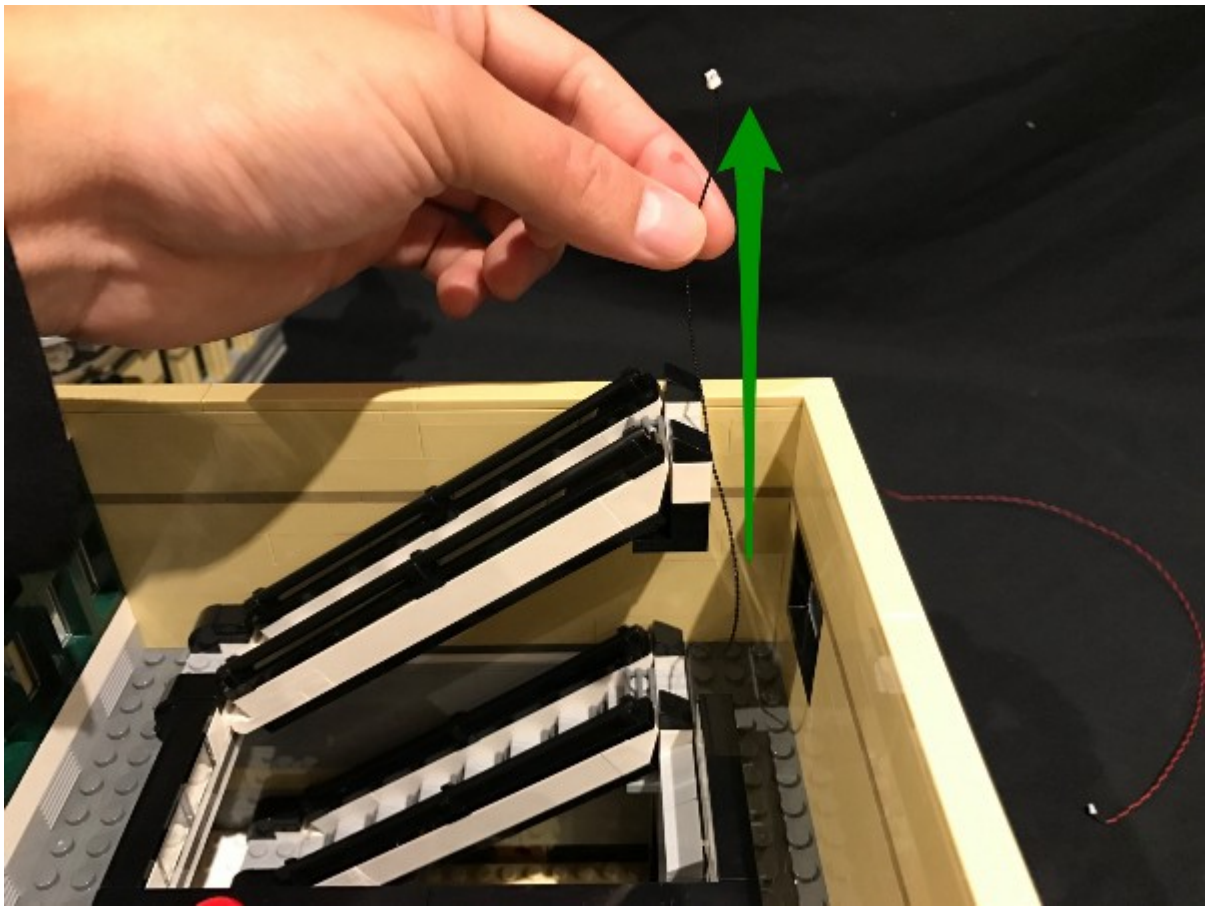


Connect the loose 15cm cable from striplight#1 into the right port of striplight#2

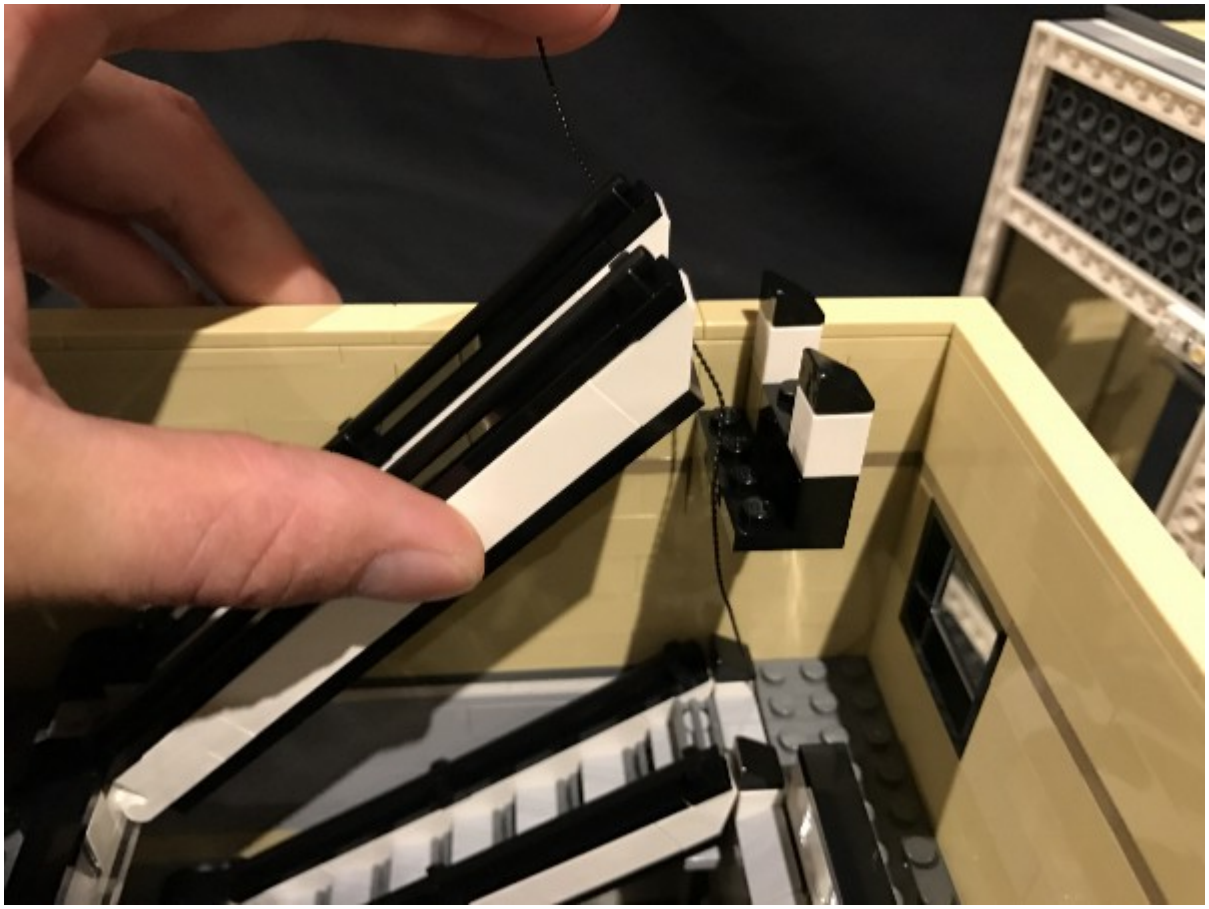


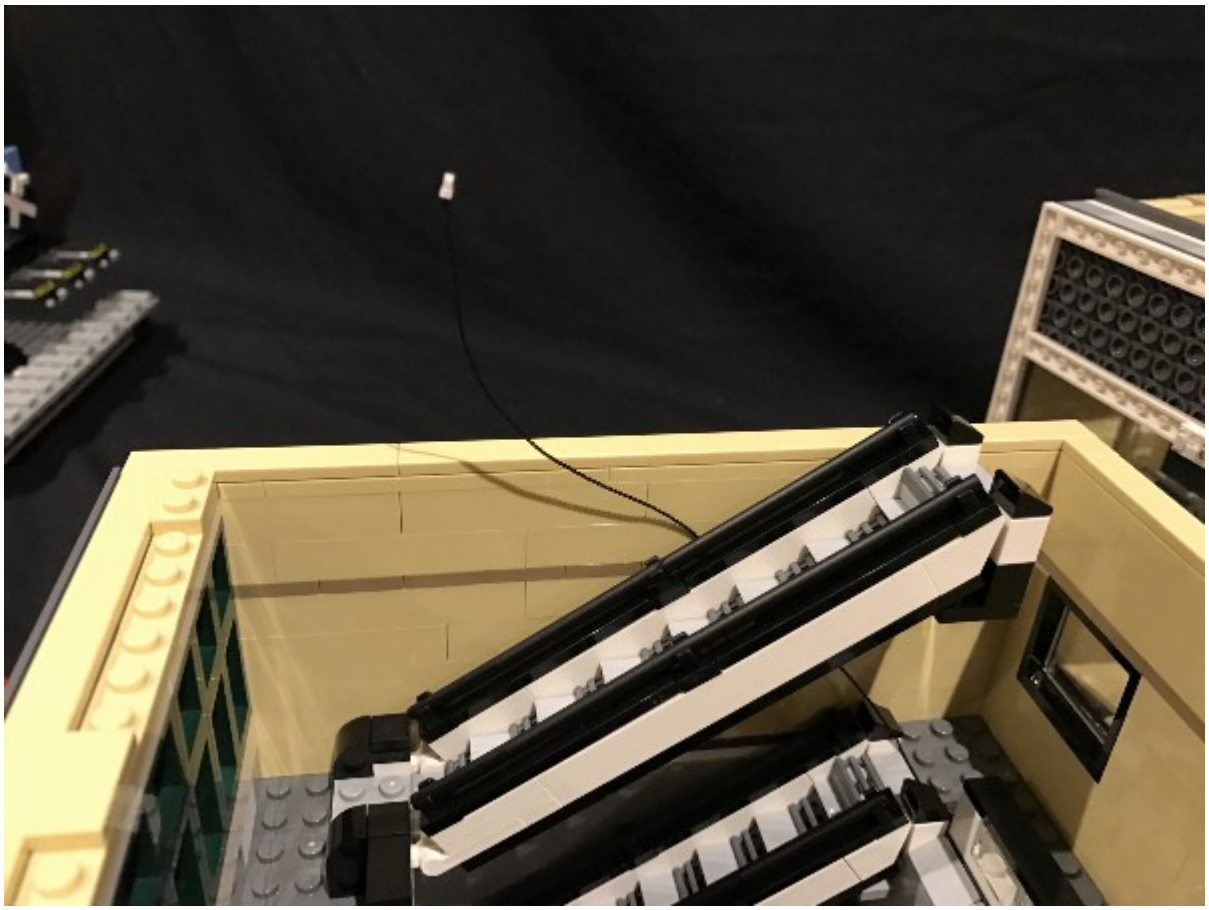
21.) Hide the 15cm cable underneath the white Lego plate and then thread the other end of the 30cm cable up to the next floor above. Connect back the second level and then pull up the 30cm cable from underneath.





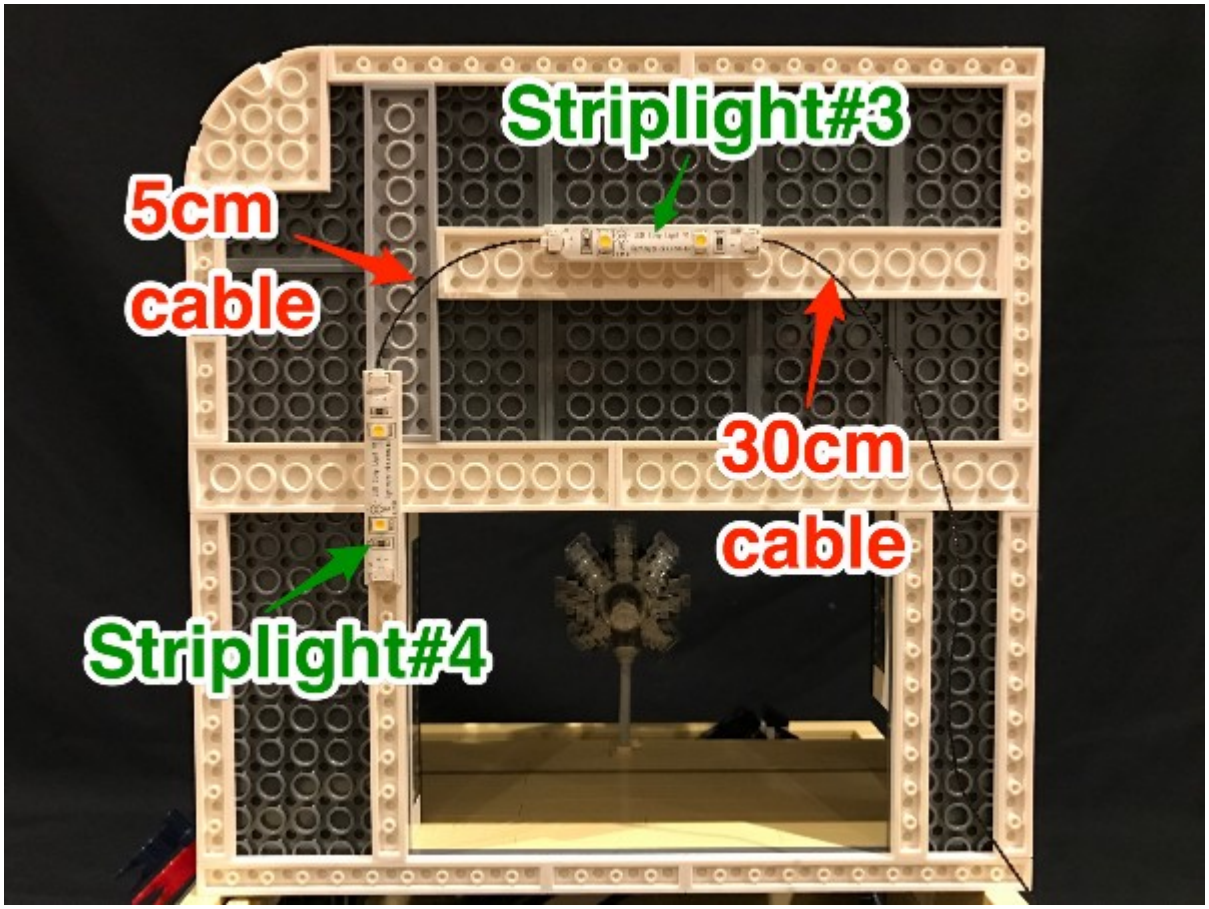
Secure this cable behind the escalator by first disconnecting the main section of th escalator and then threading the cable behind.



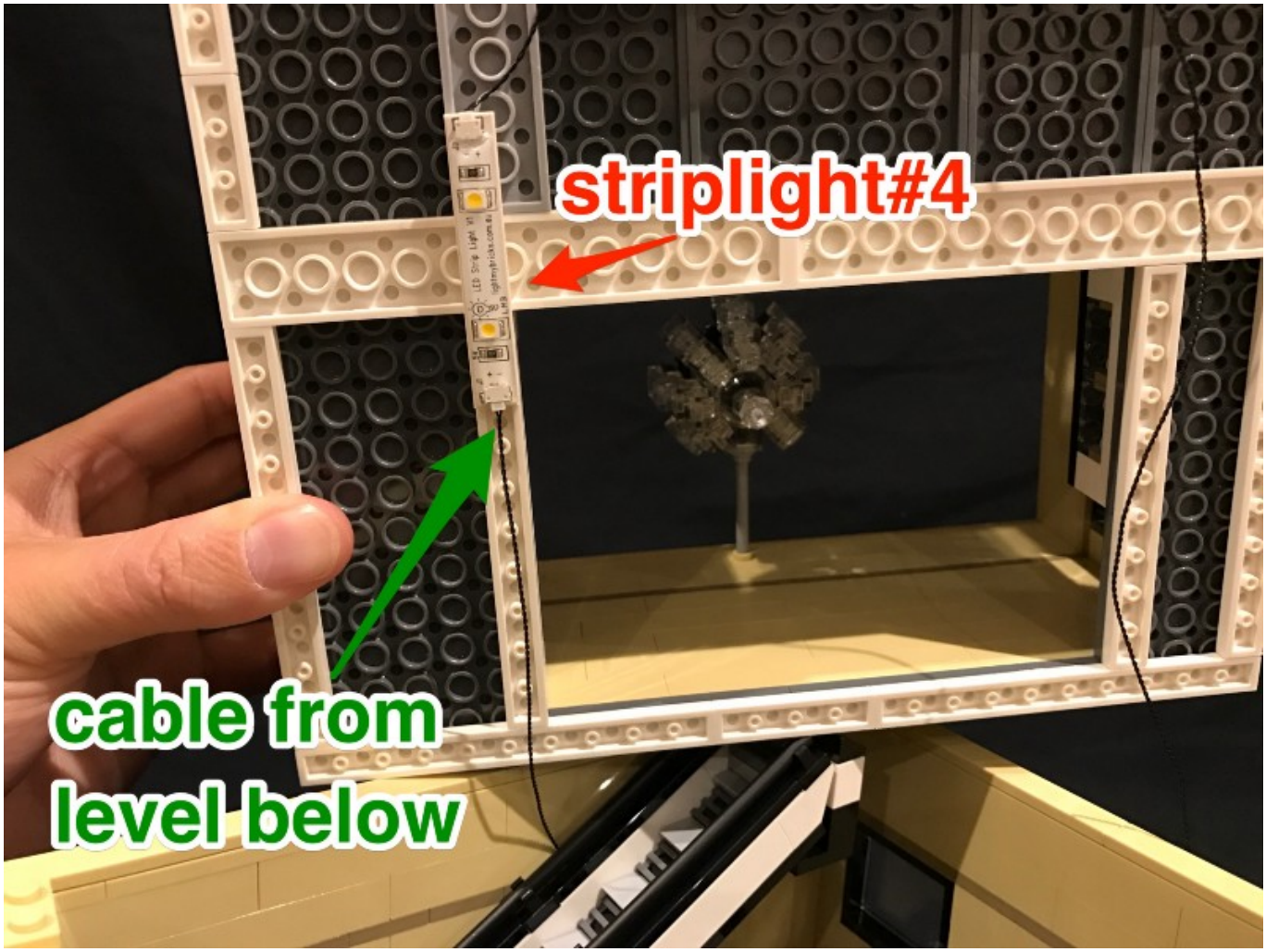


22.) Take the entire third level and then pop it onto its side. Take another **two strip lights** (striplight#3 and #4) and connect/stick them in the following positions.

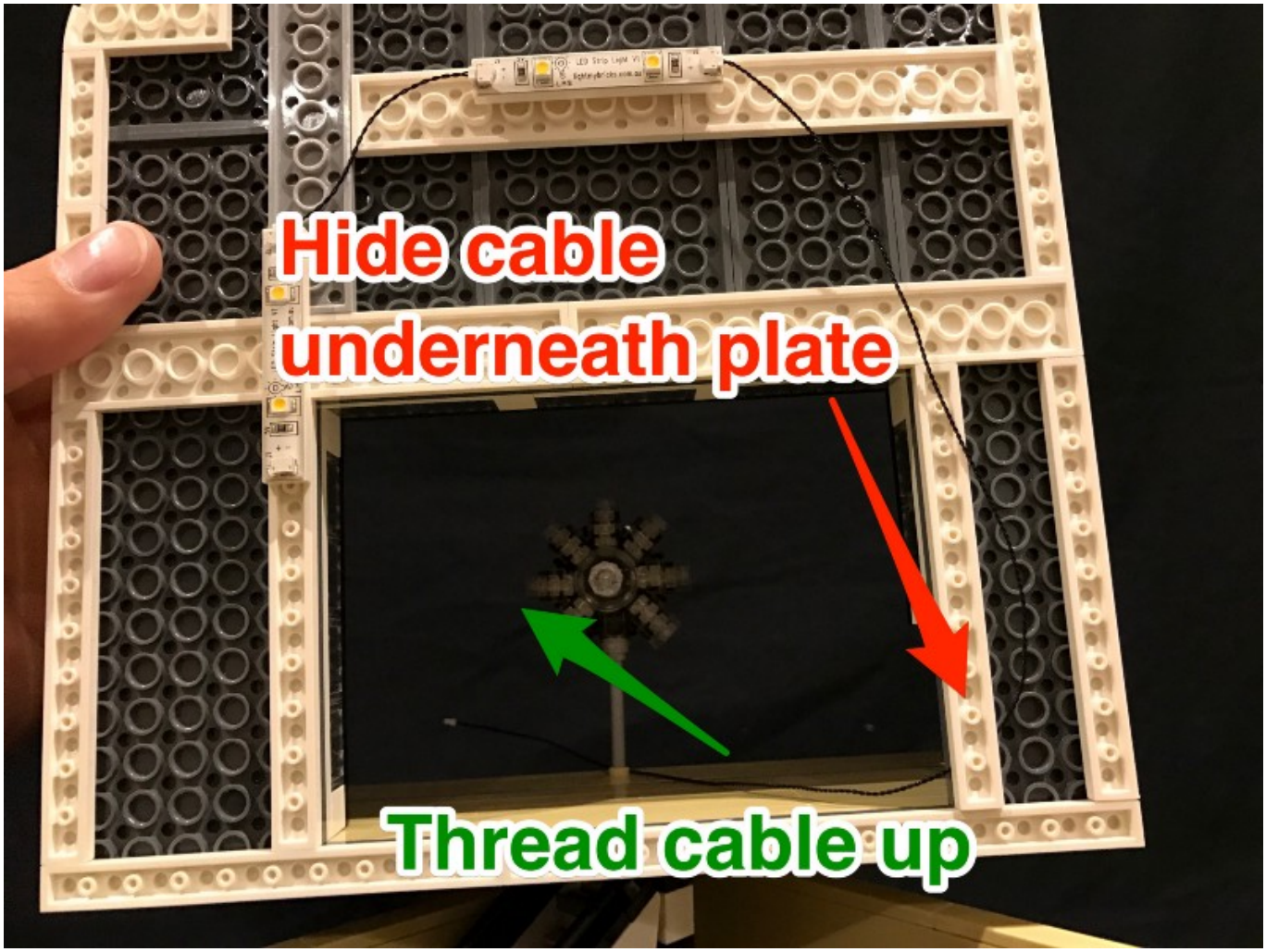
Connect a **5cm cable** in between the strip lights and take a **30cm cable** and connect it to the right port of striplight#3. All shown below.



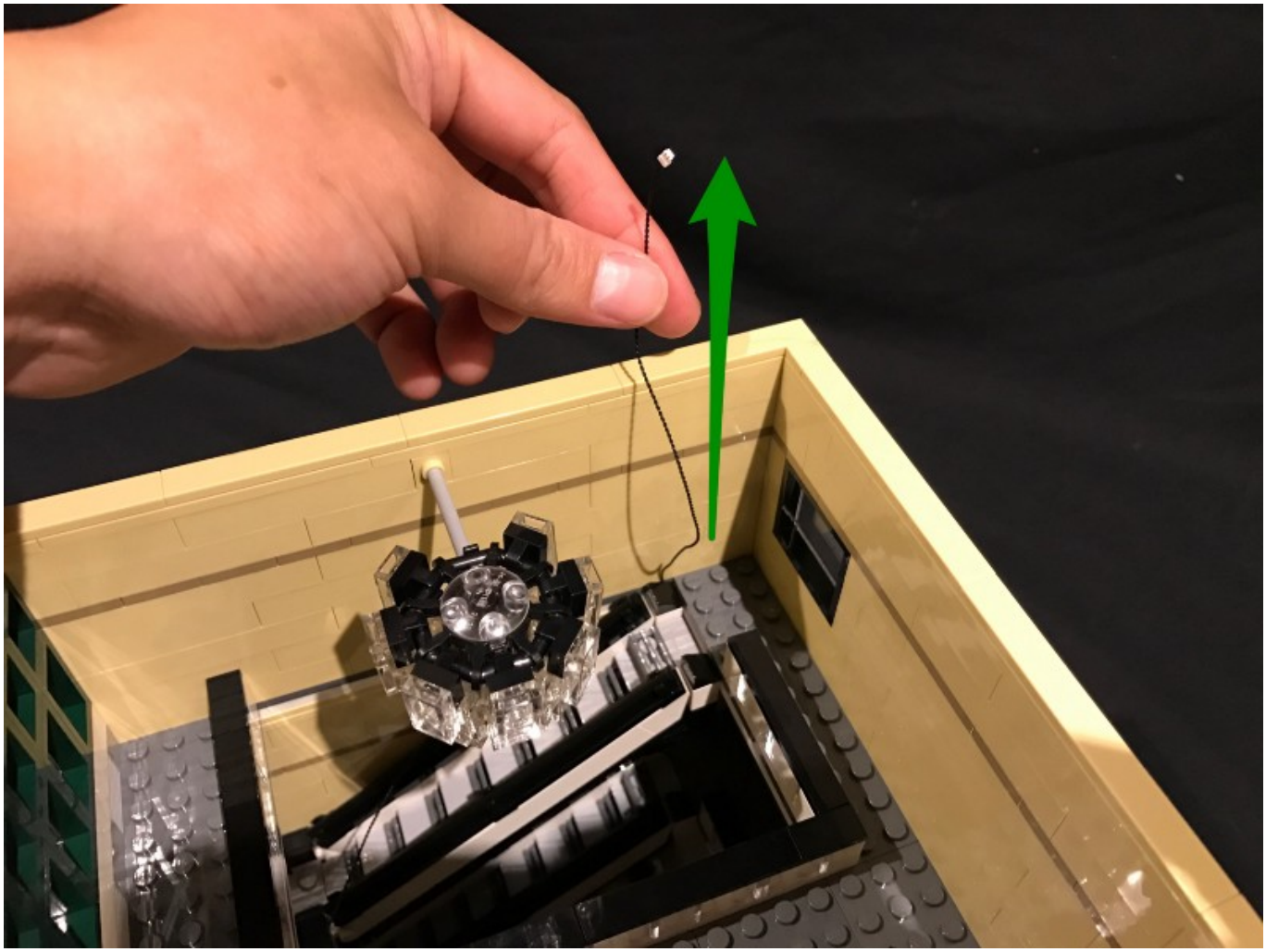
23.) Connect the loose cable from the level below into the spare port of striplight#4



Hide the 30cm cable underneath the white Lego plate before threading the other end of it up to the next level above.

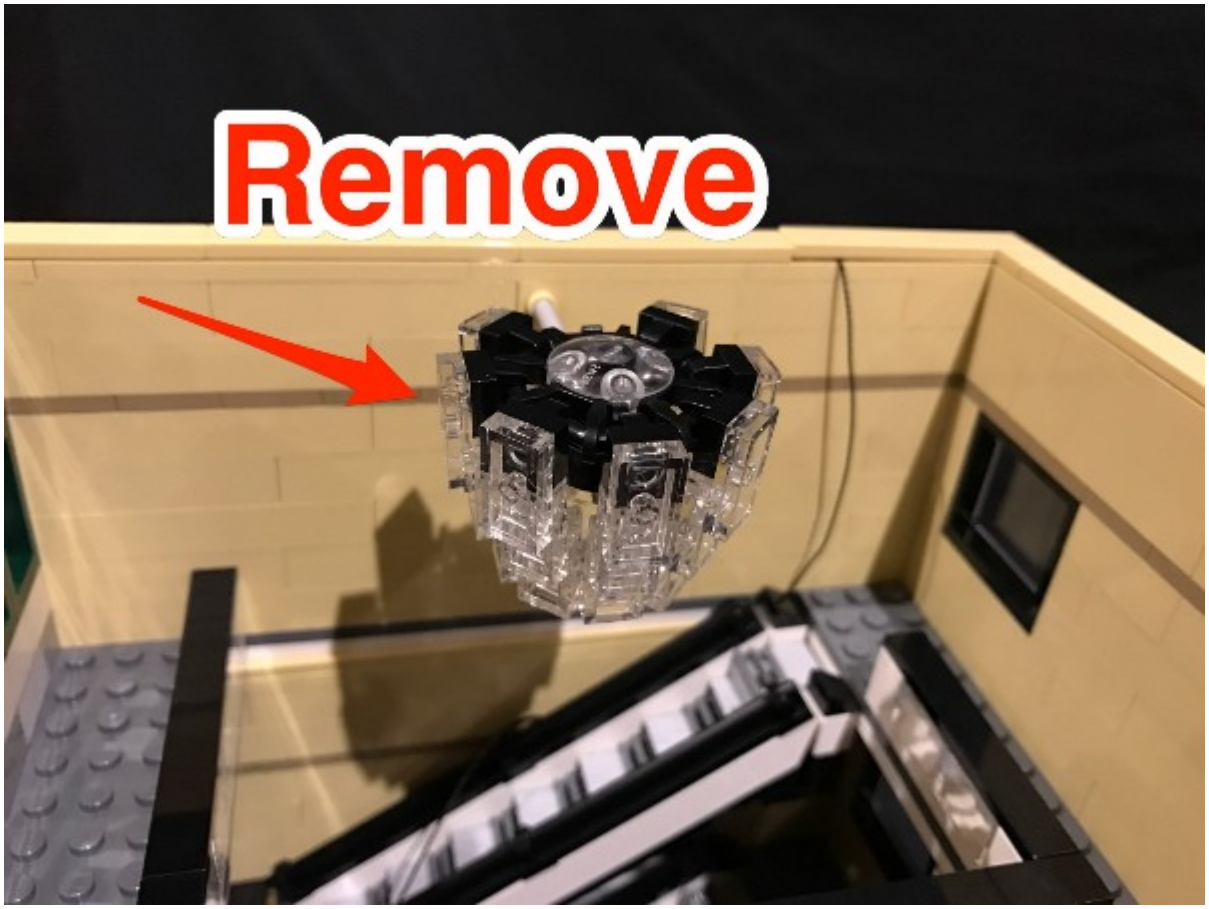


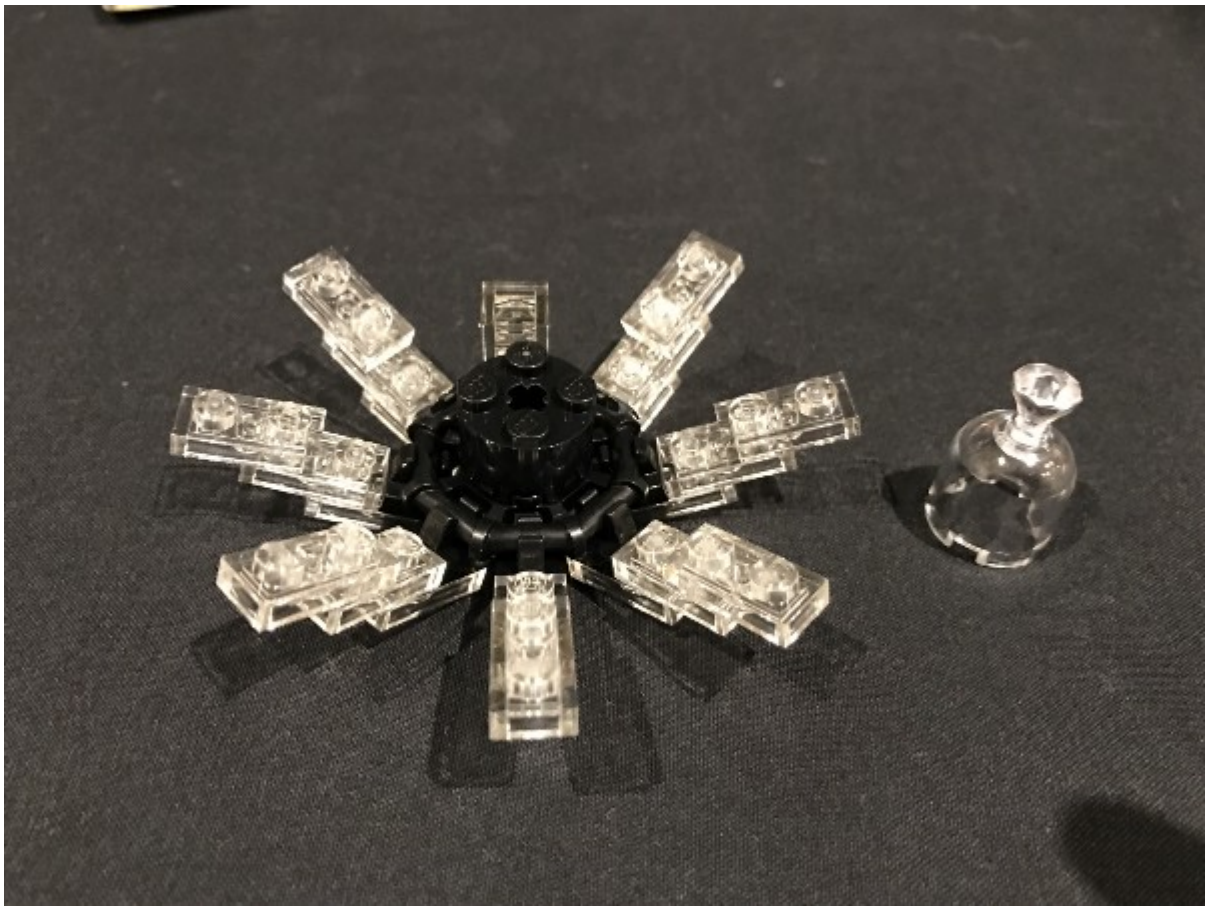
Reconnect back the entire third level and then pull the 30cm cable up from underneath.



Now is a good time to test (again) the lights we have installed so far. To do this, connect the other end of this cable to a spare expansion board and then connect the battery pack cable/usb cable to it. Turn on to verify all is working.

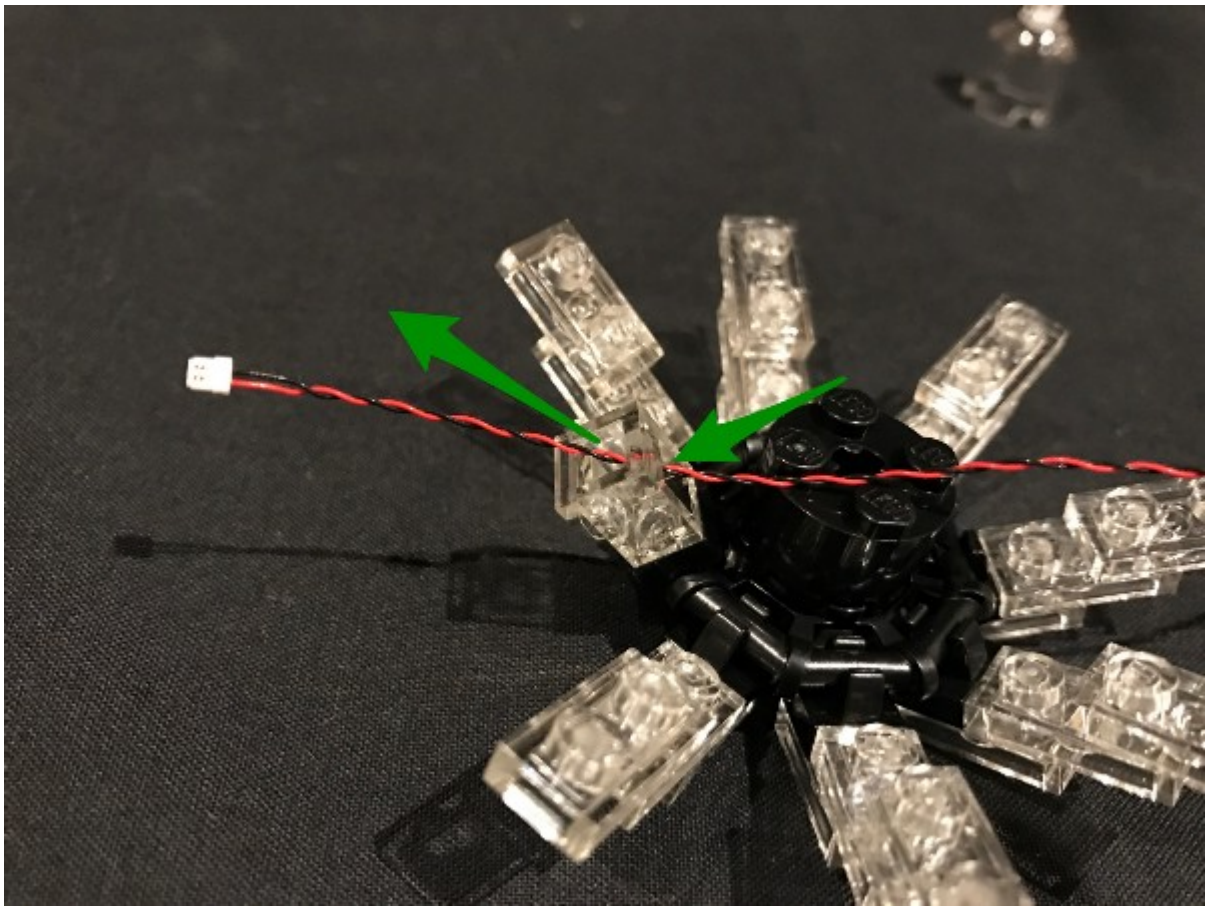
24.) We will now light up the chandelier. First disconnect it from the wall and then disconnect the centre piece by first pulling down the surrounding pieces.

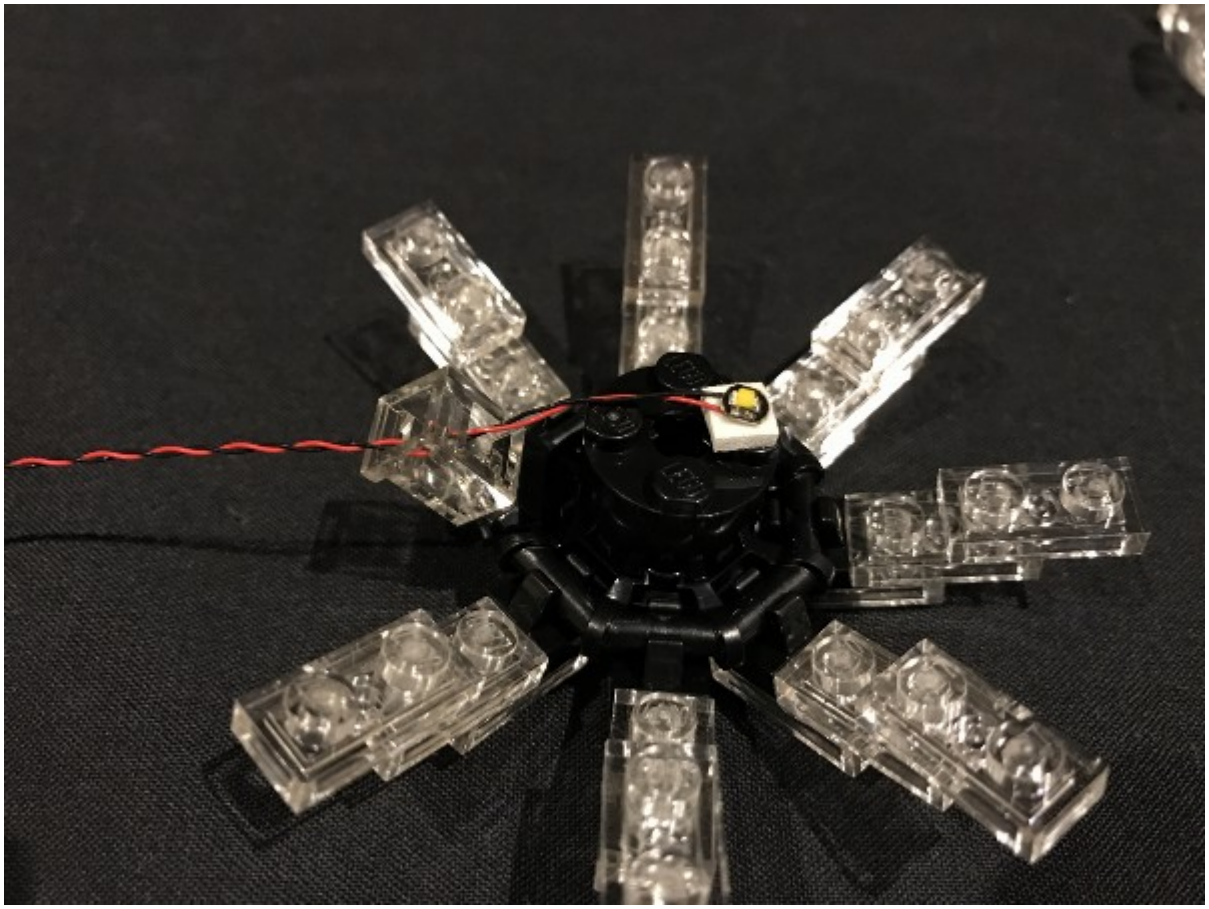

Remove



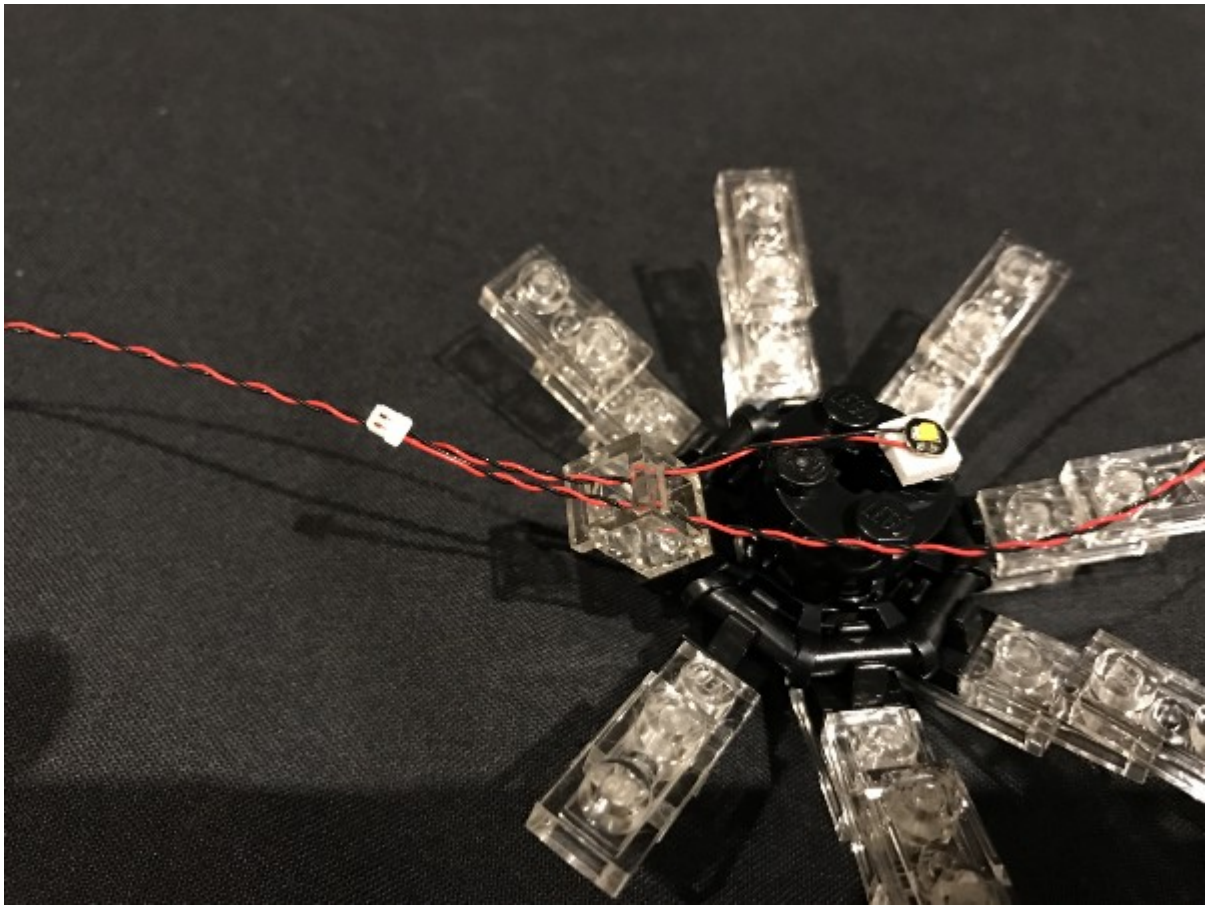
25.) Take a **bit light** and thread the connector end through the back of the Lego 1×1 trans brick and then out through the base of the brick. Pull it all the way through

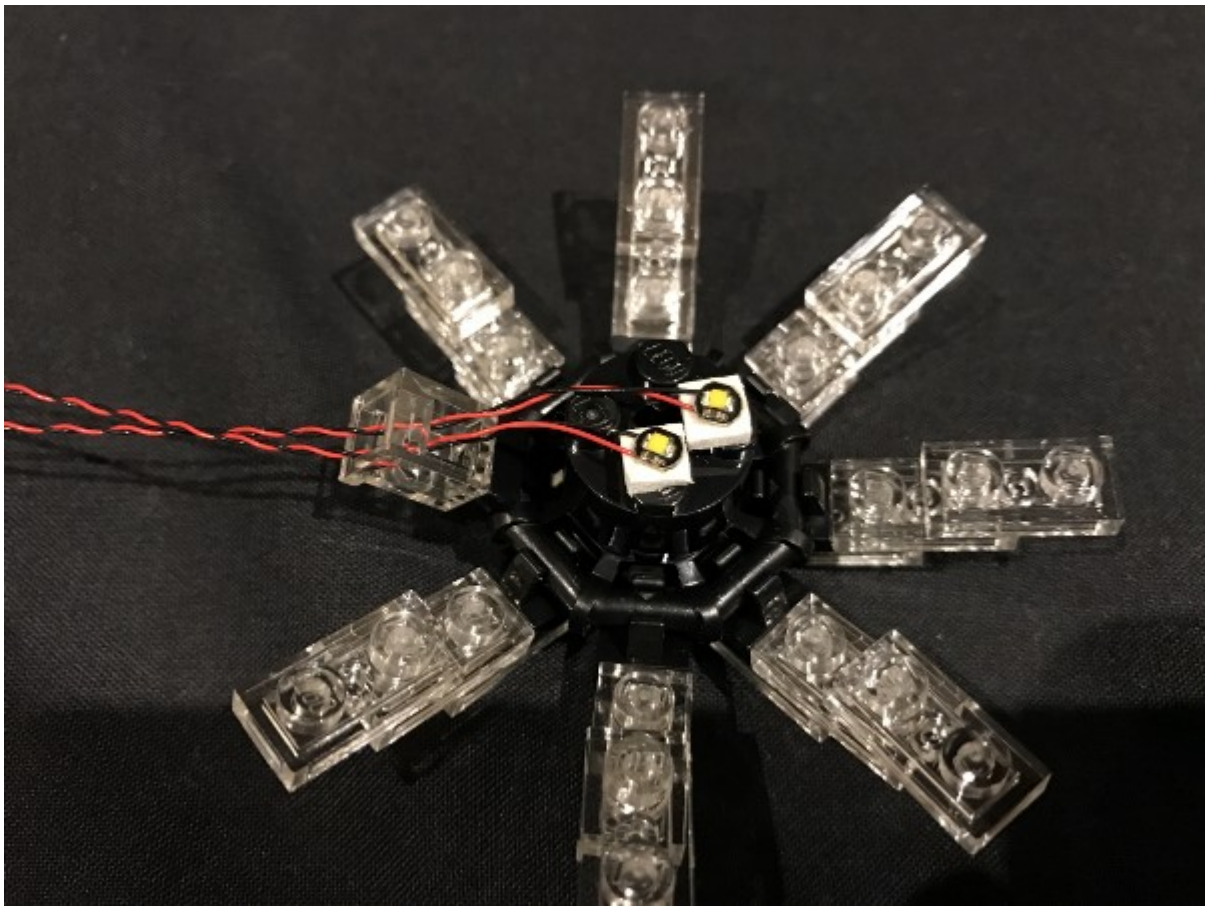
and then stick the bit light onto one of the black studs (closest to the top middle) using an **adhesive square.**

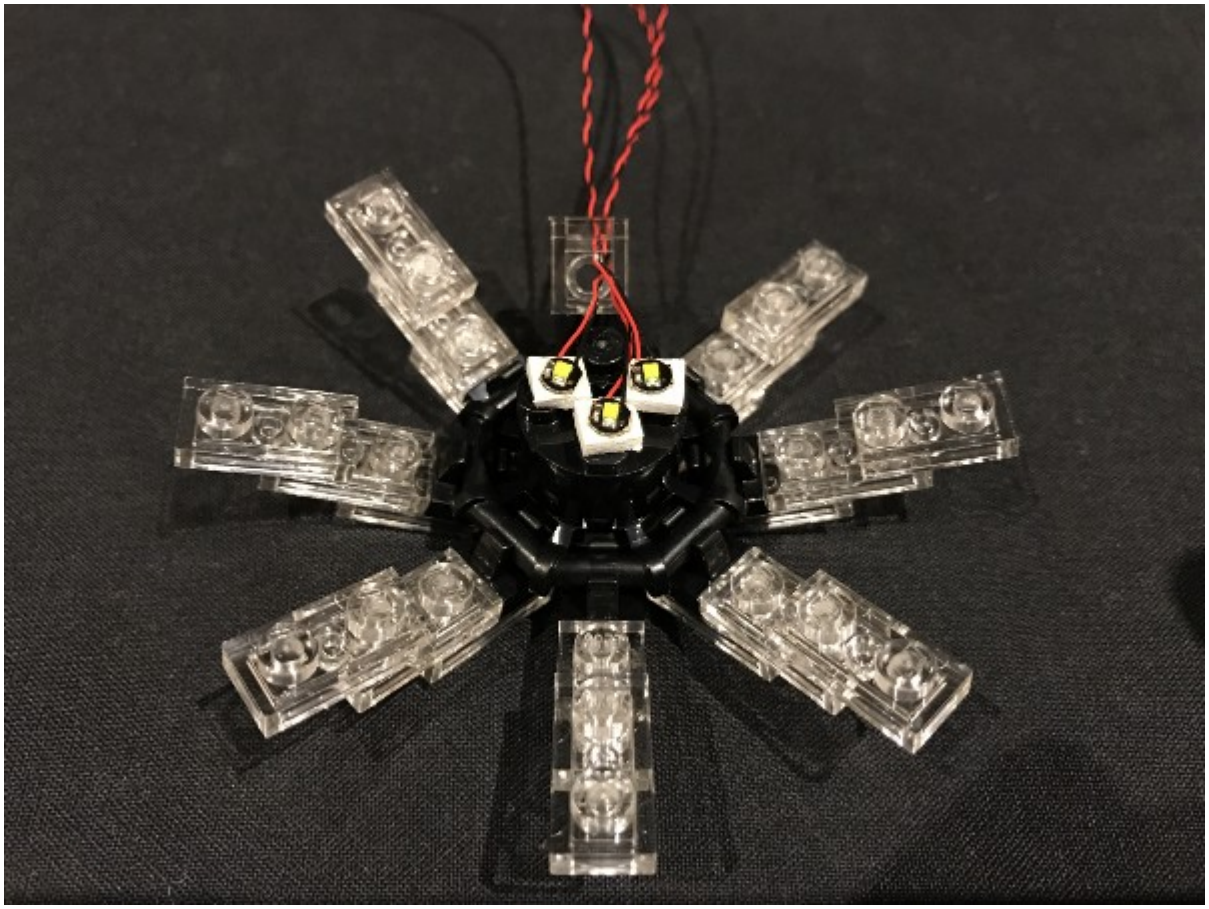


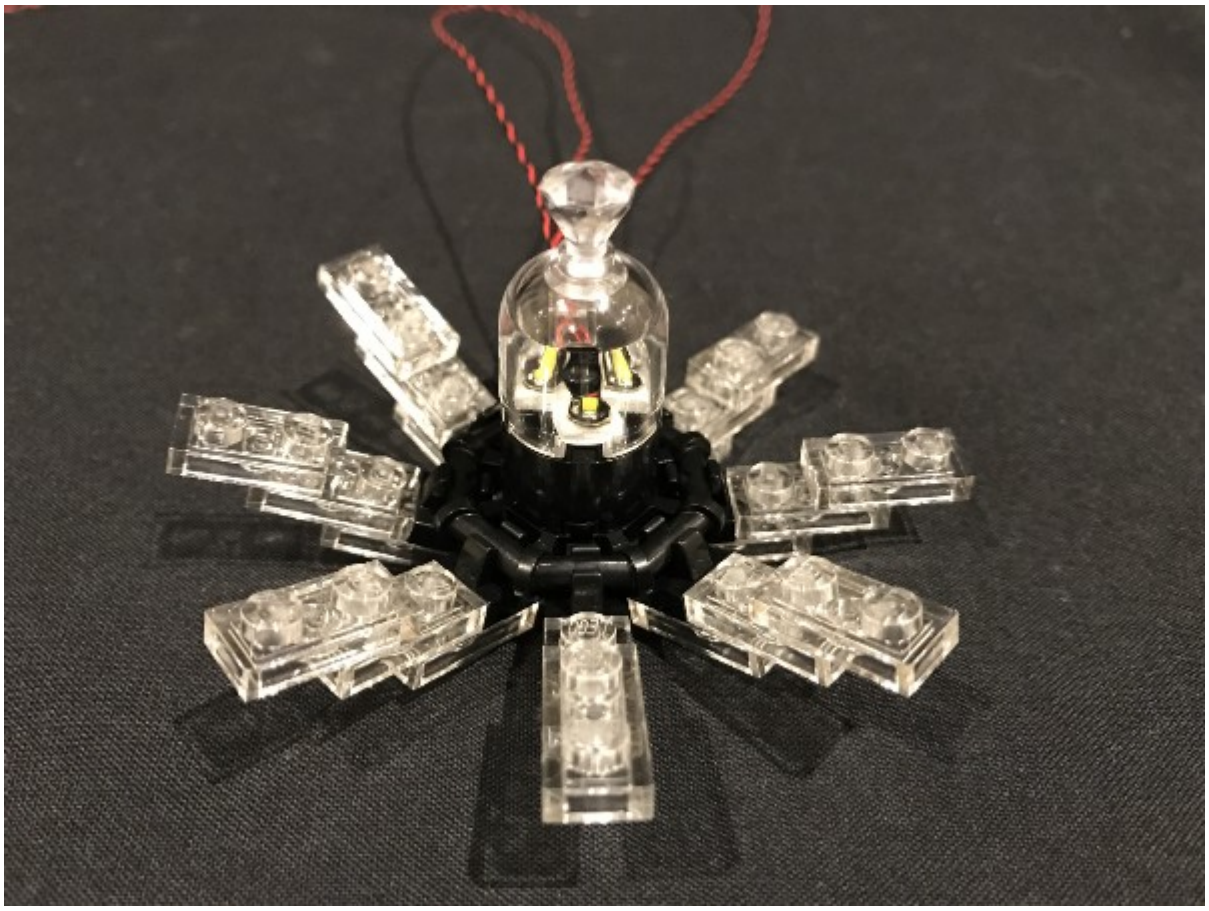


26.) Repeat this step for another **2 bit lights** so that we have 3 bit lights stuck to the 3 black studs closest to the front of the chandelier. Then reconnect the centre piece we removed earlier.



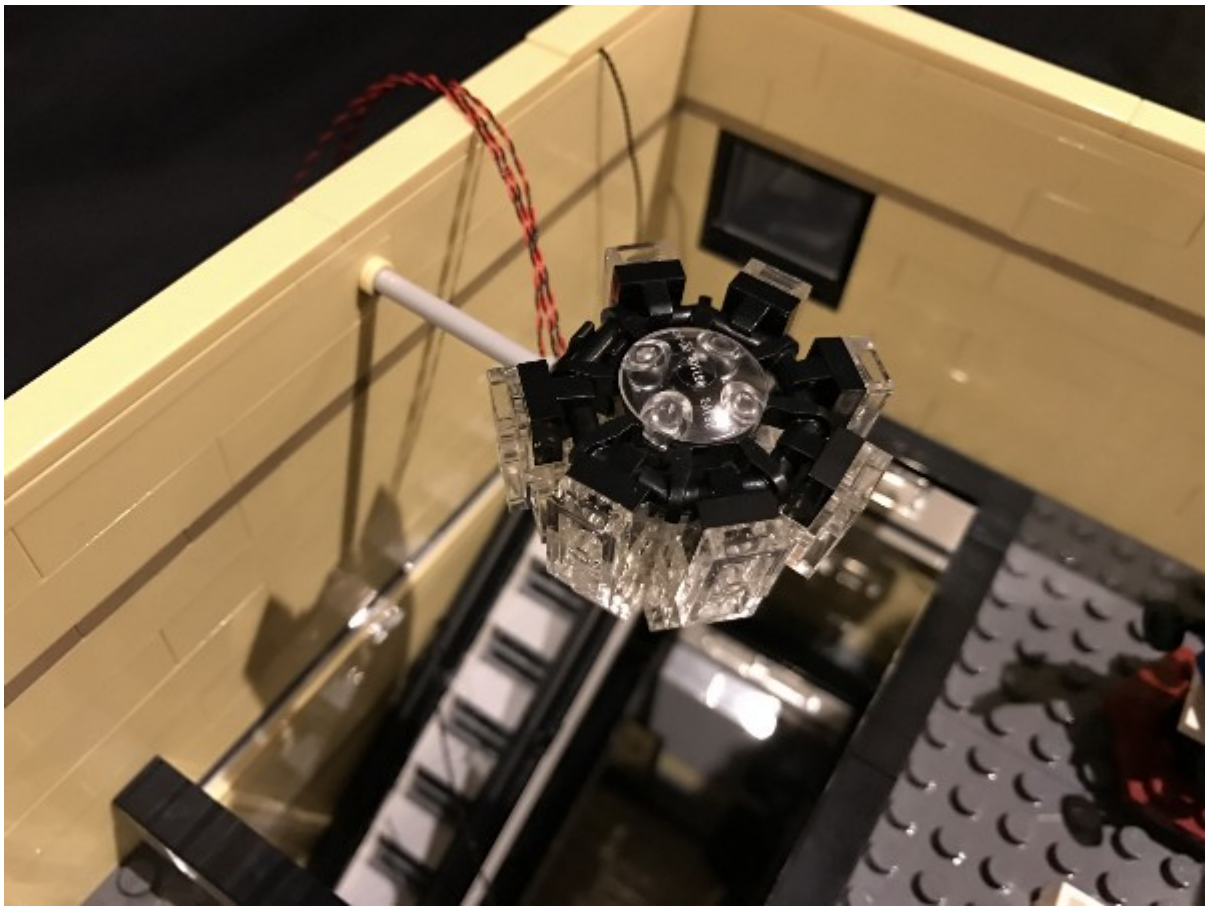


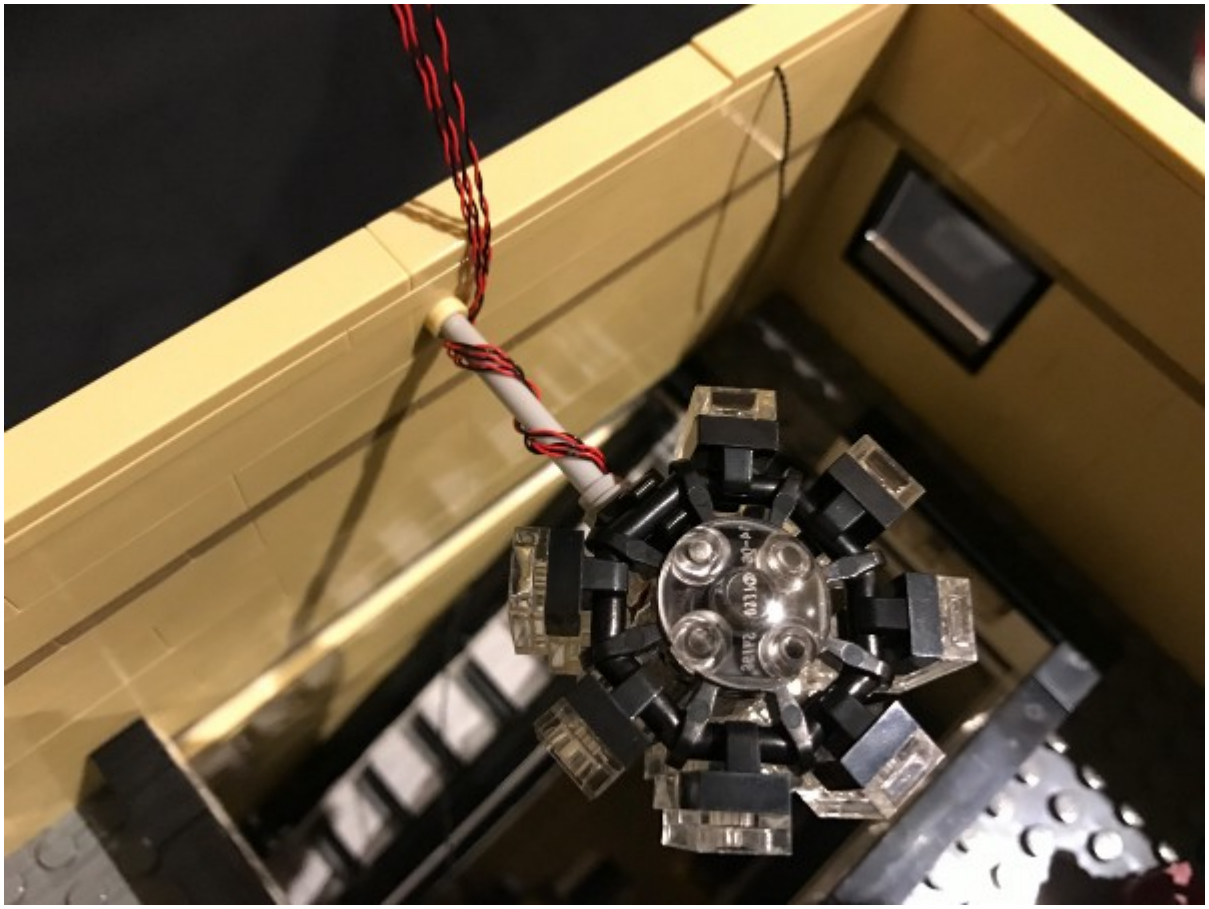




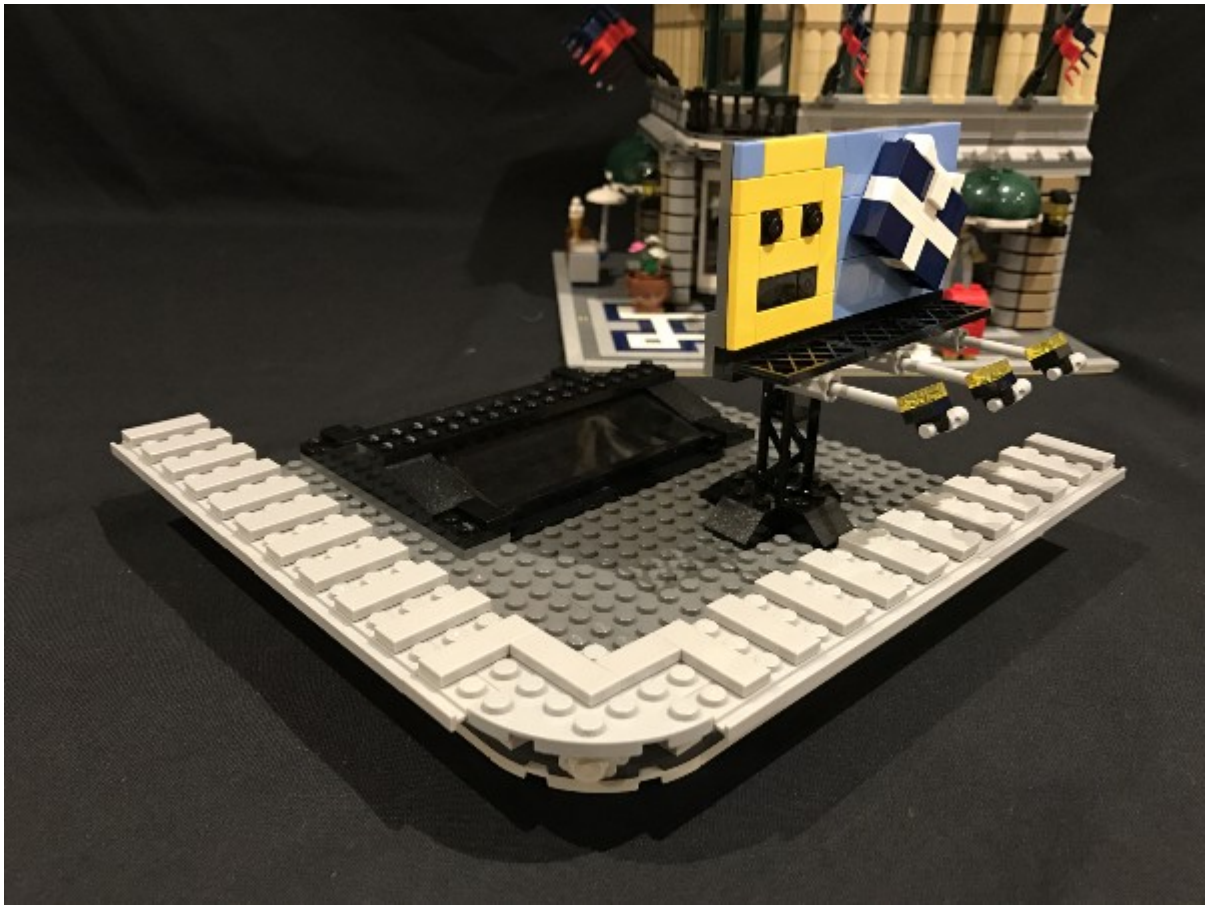
27.) Close up the surrounding pieces of the chandelier and then reconnect the chandelier back to the wall of the third floor. Wind the 3 cables around the grey pole

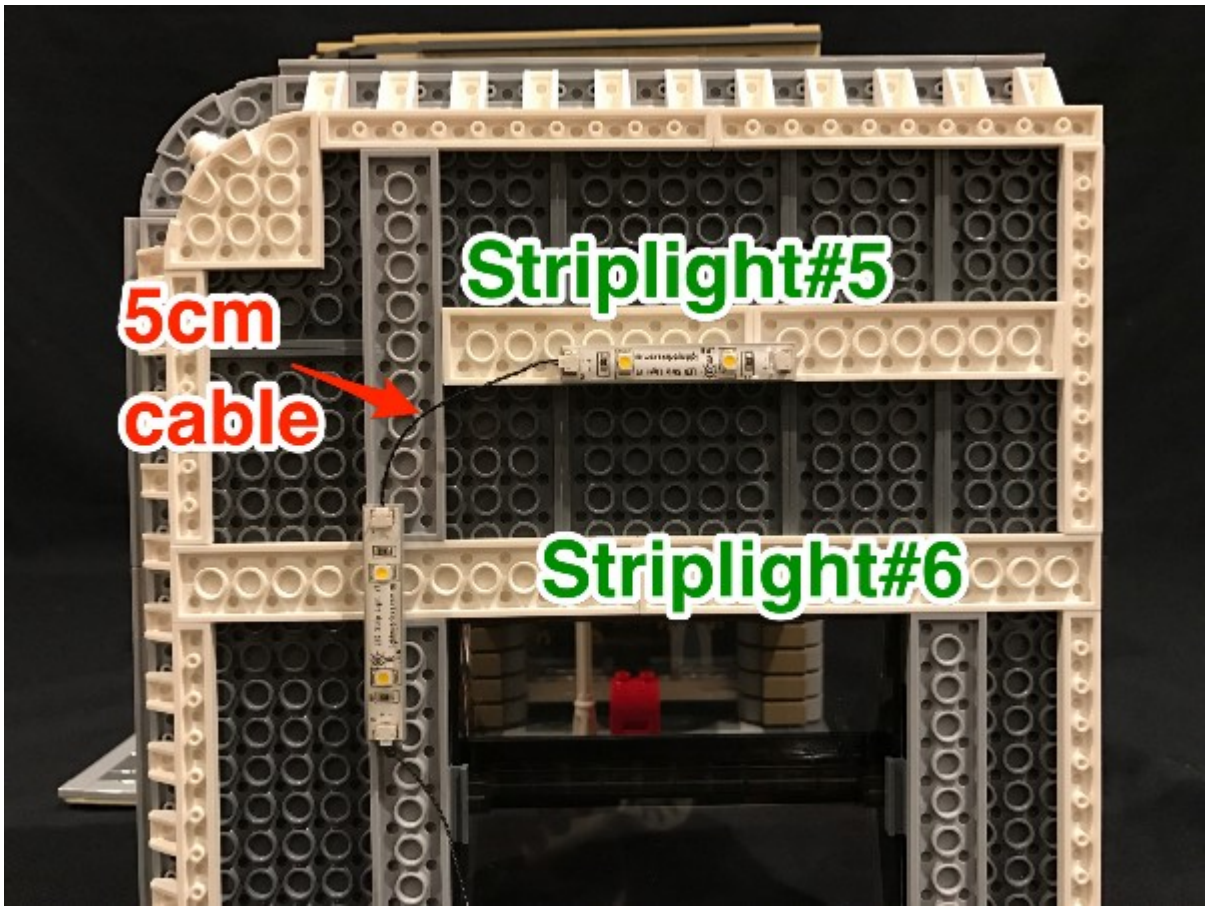
as shown below. Leave the ends of the cables for now as we will connect them to an expansion board on the roof later.



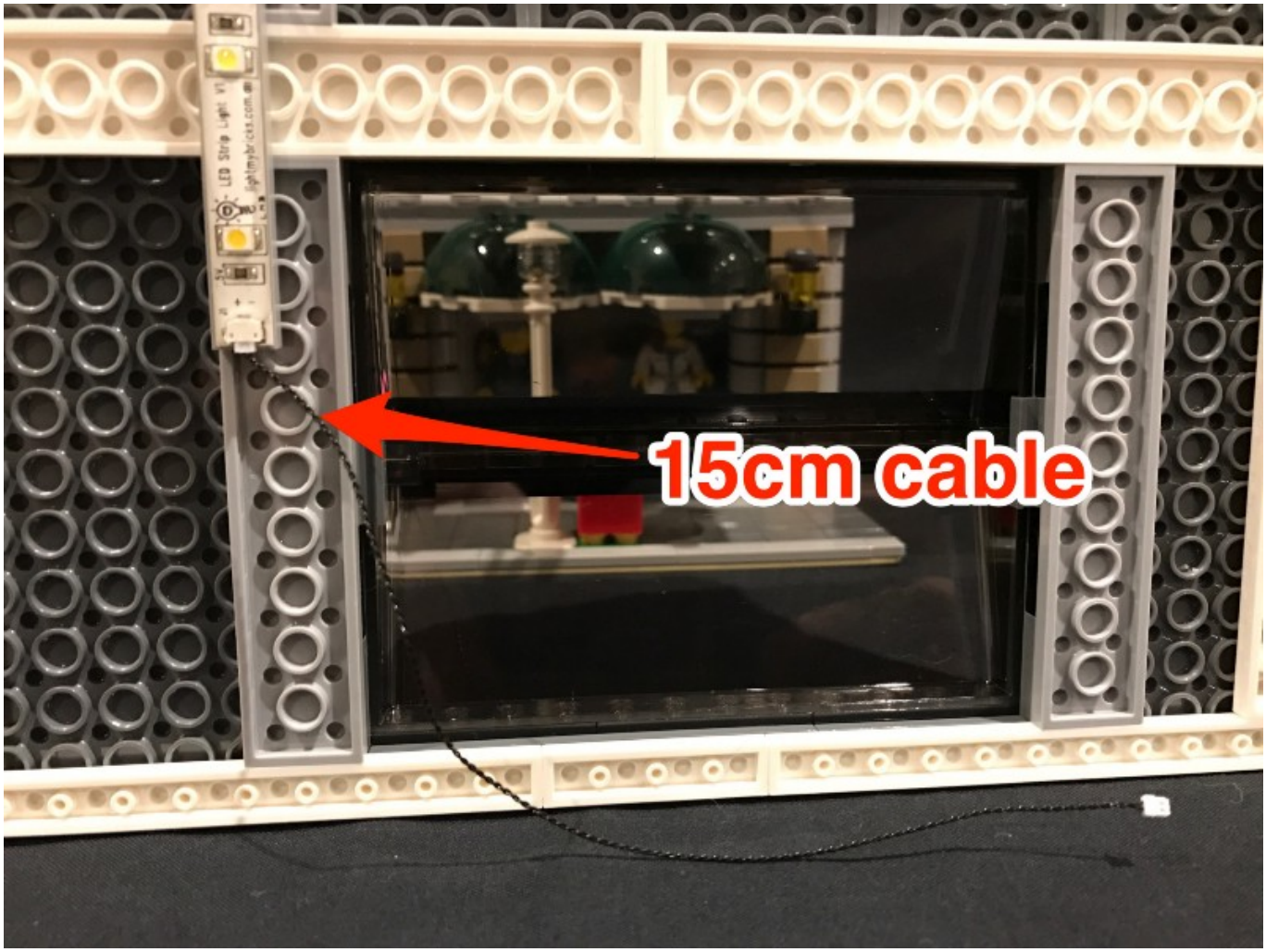


28.) Take the roof of the building and then connect/stick another two strip lights (striplight#5 and #6) underneath in the following positions. Take a 5cm cable and connect it between the two strip lights.

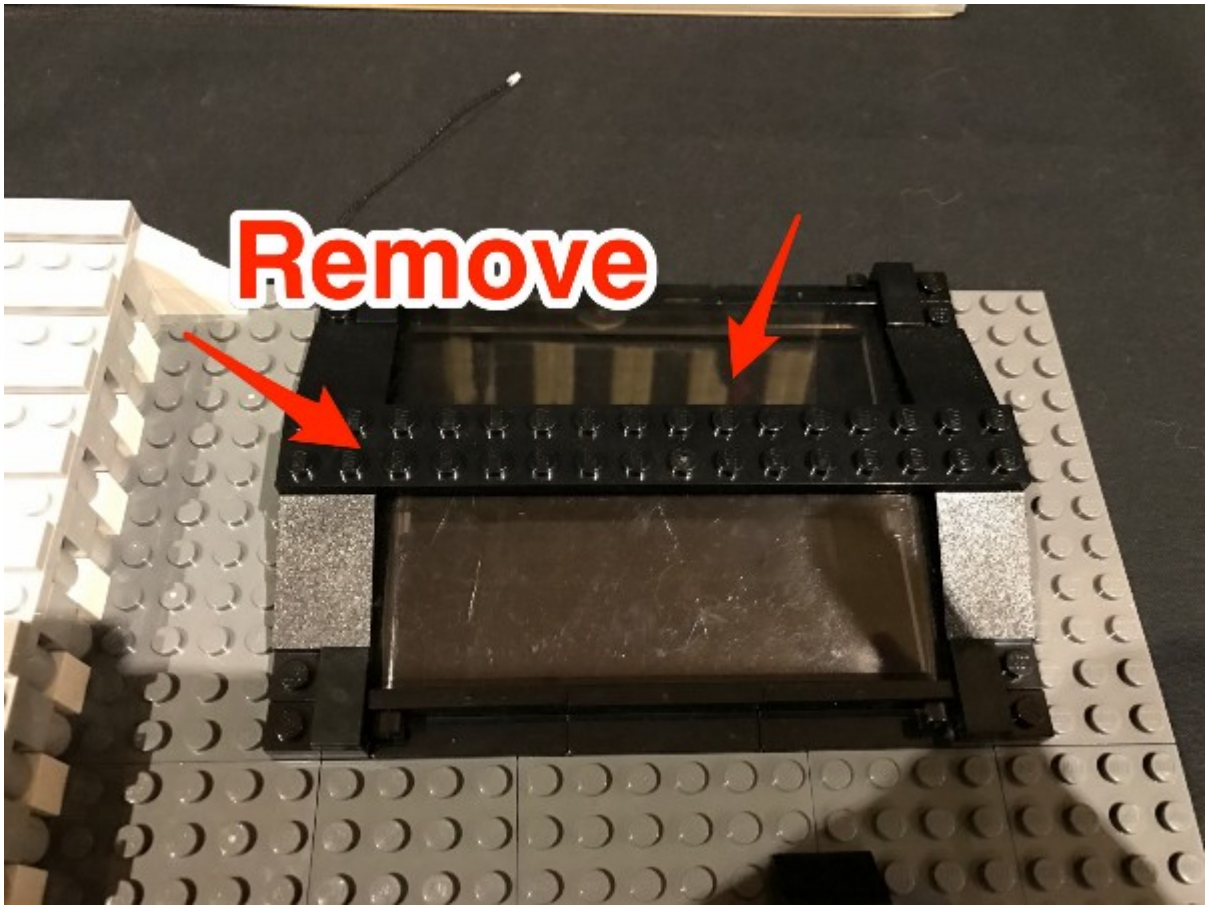




Connect a 15cm cable to the left port of striplight#6



29.) Flip the roof over and then disconnect the black 2×16 plate in the centre of the sky light, as well as the top window. Pull the 15cm cable from striplight#6 up and then reconnect pieces.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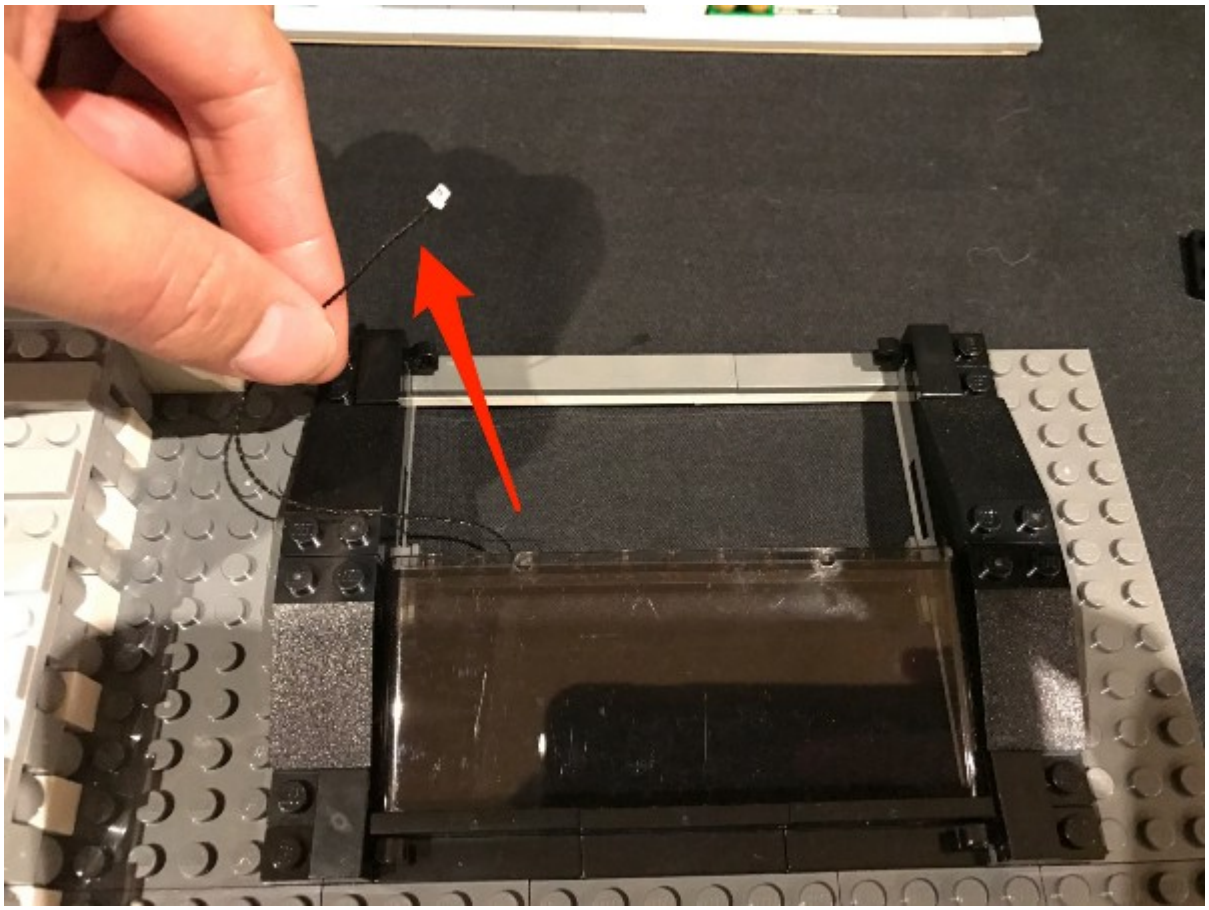
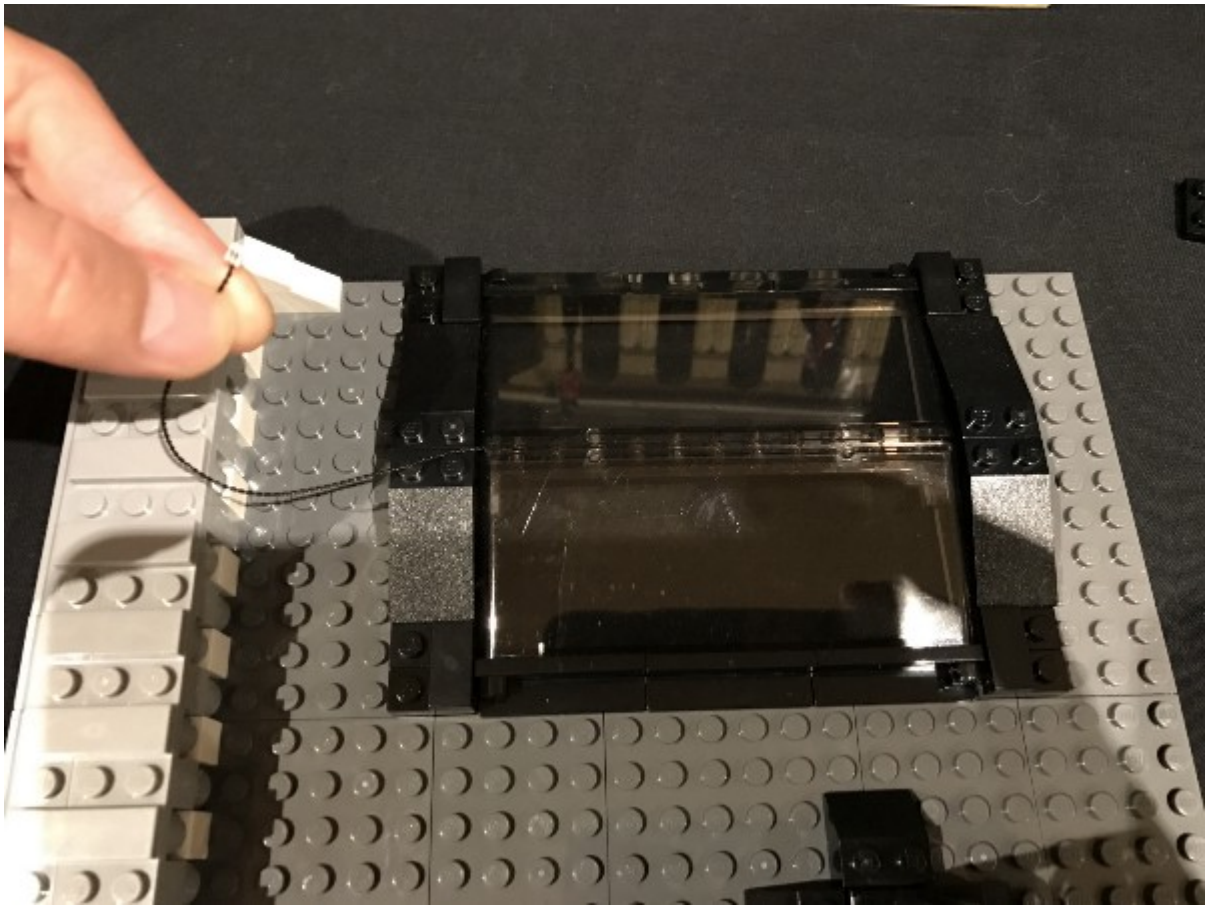
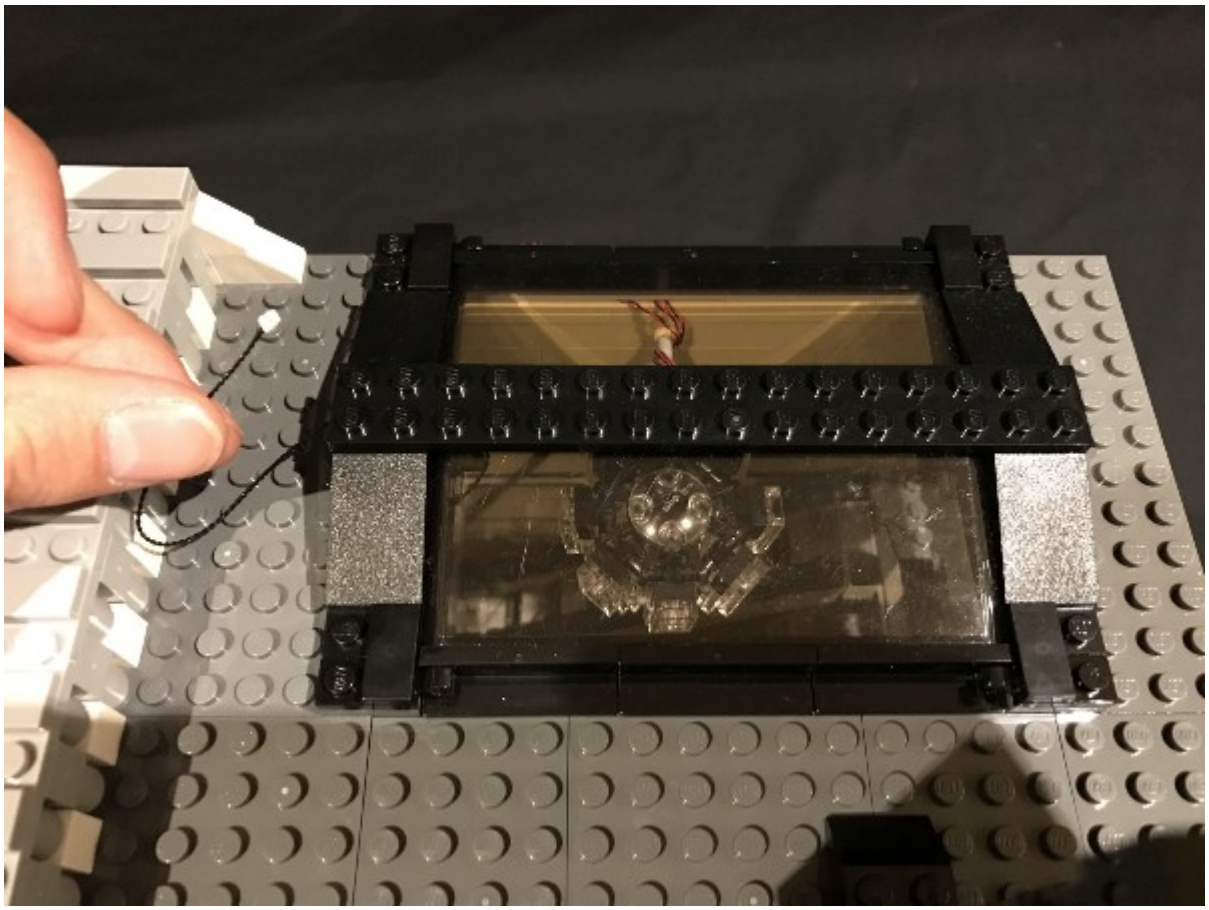
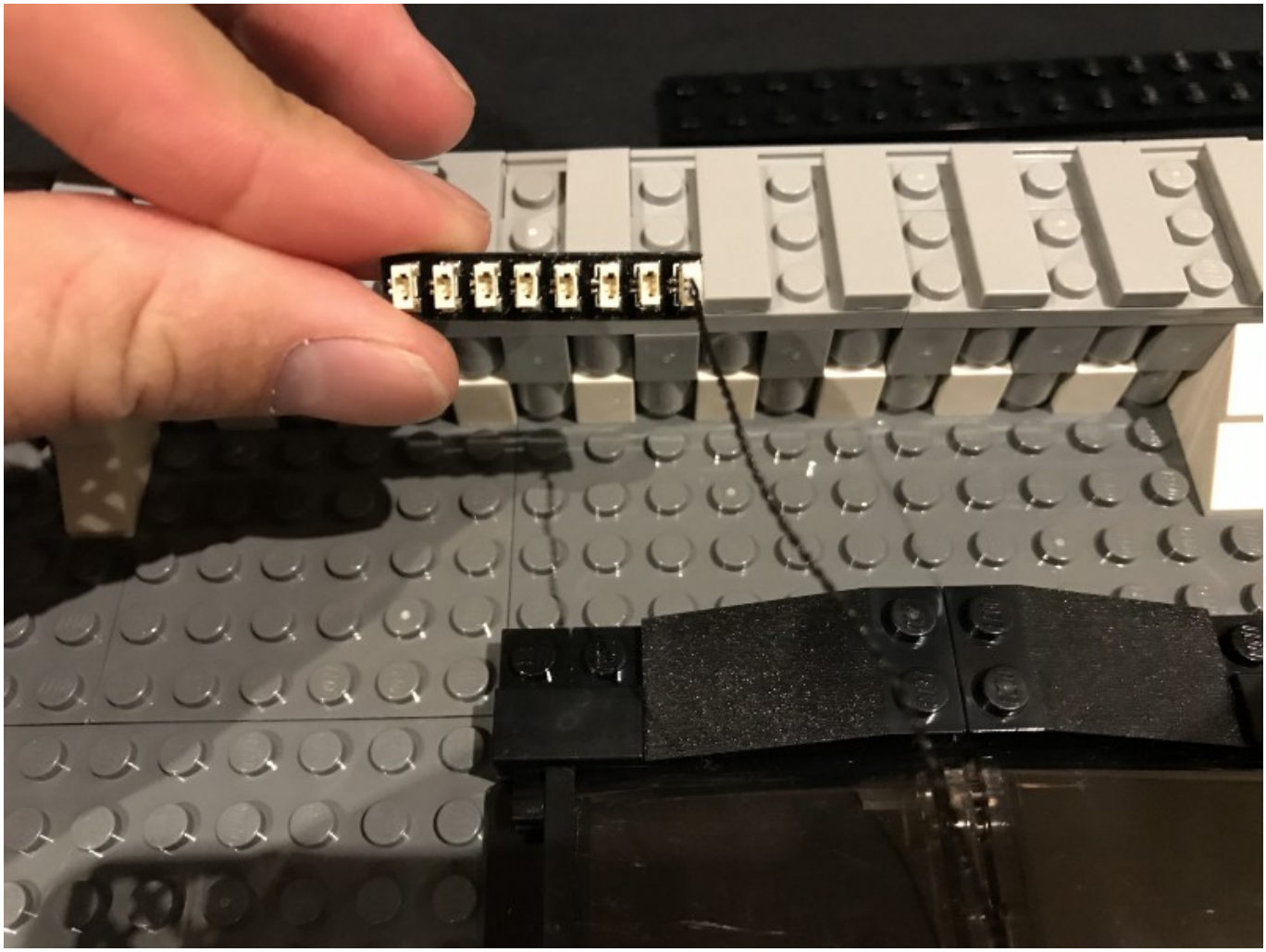


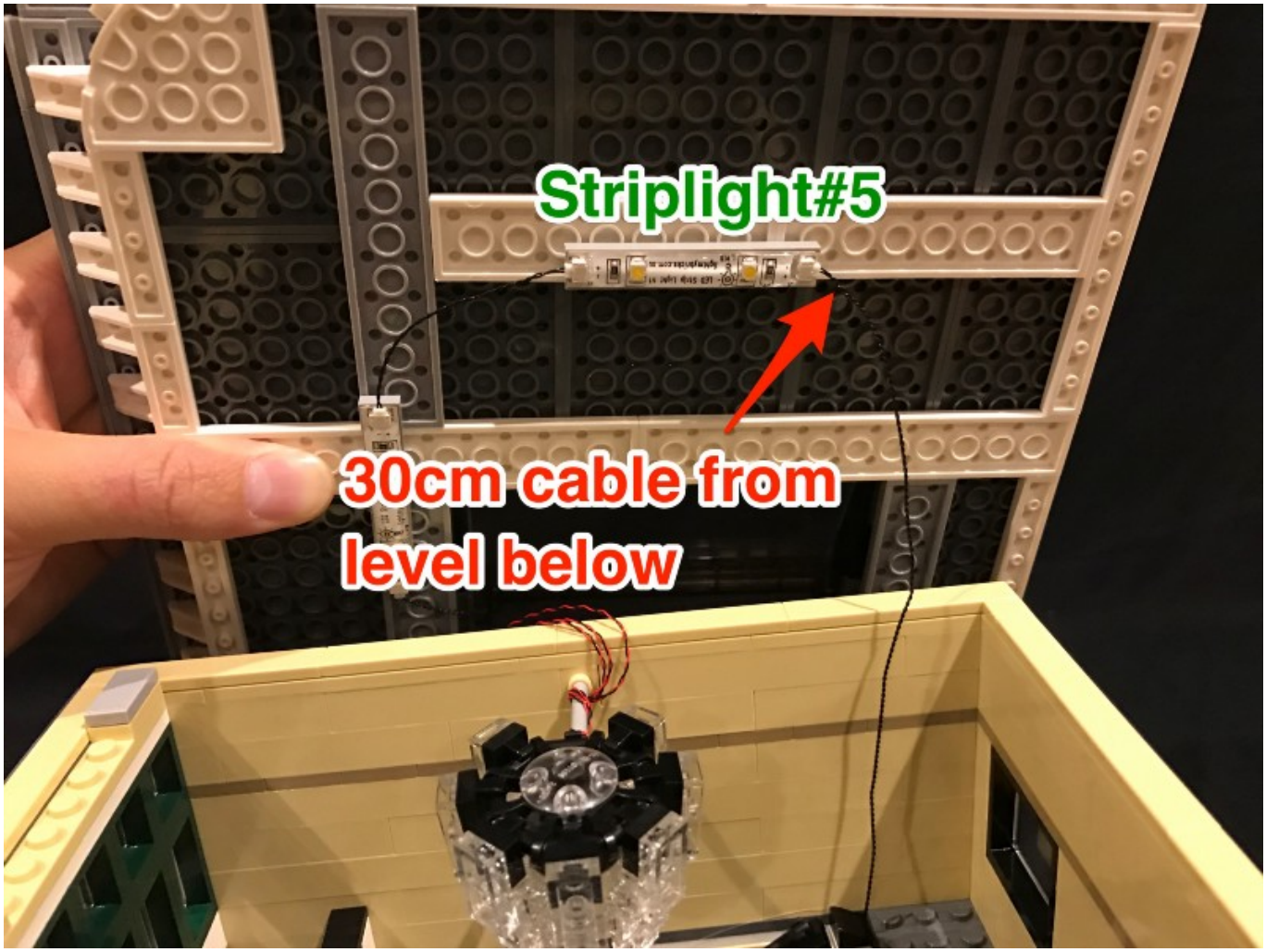




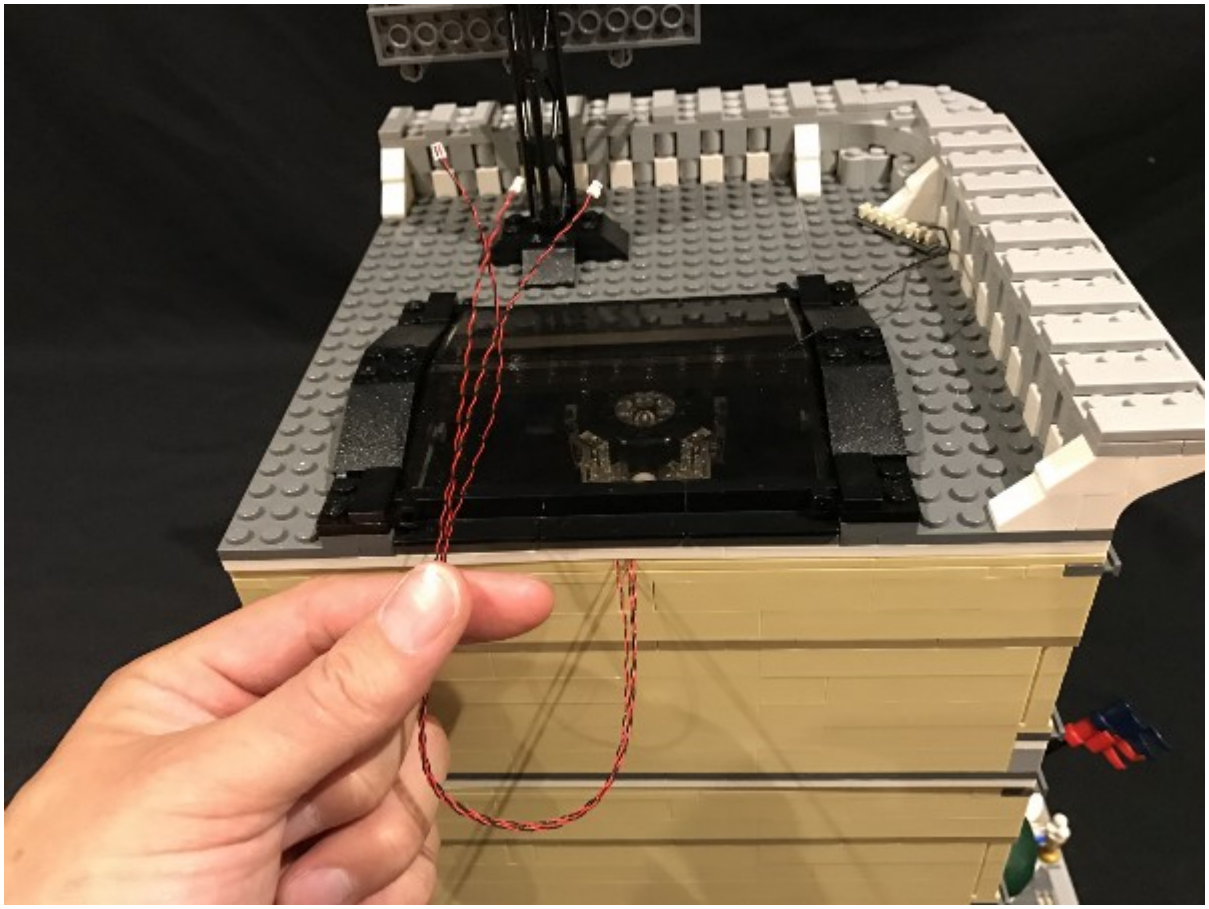
30.) Connect this cable into the first port of the **8-port expansion board**

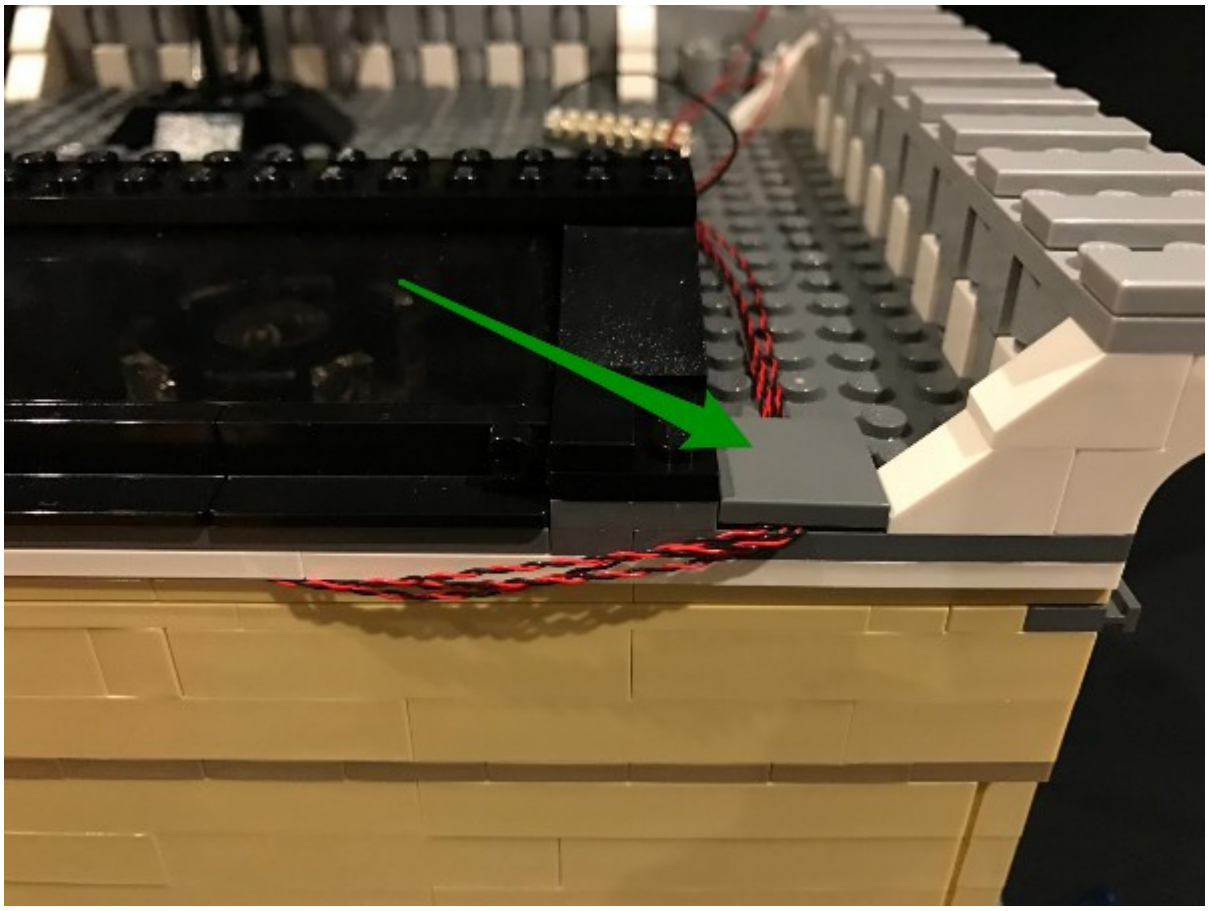


31.) Lift the roof up again and connect the other end of the the 30 cm cable from the level below to the right port of striplight#5. Then reconnect the roof



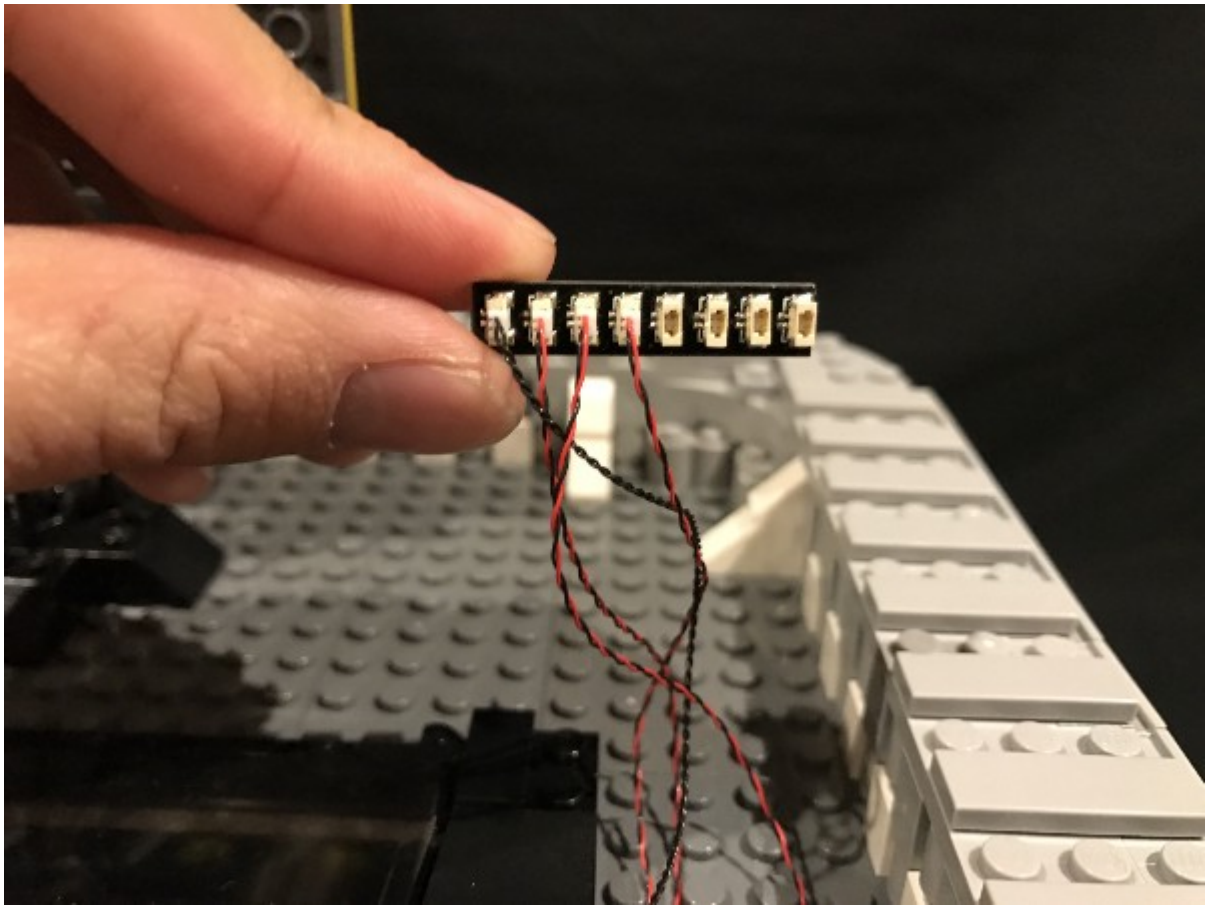
32.) Take the 3 cables from the chandelier and then pull them to the right and then up across the roof of the building. Lay them down neatly and secure them down using any spare Lego plate or brick you might have, ensuring the cables are in between the studs.

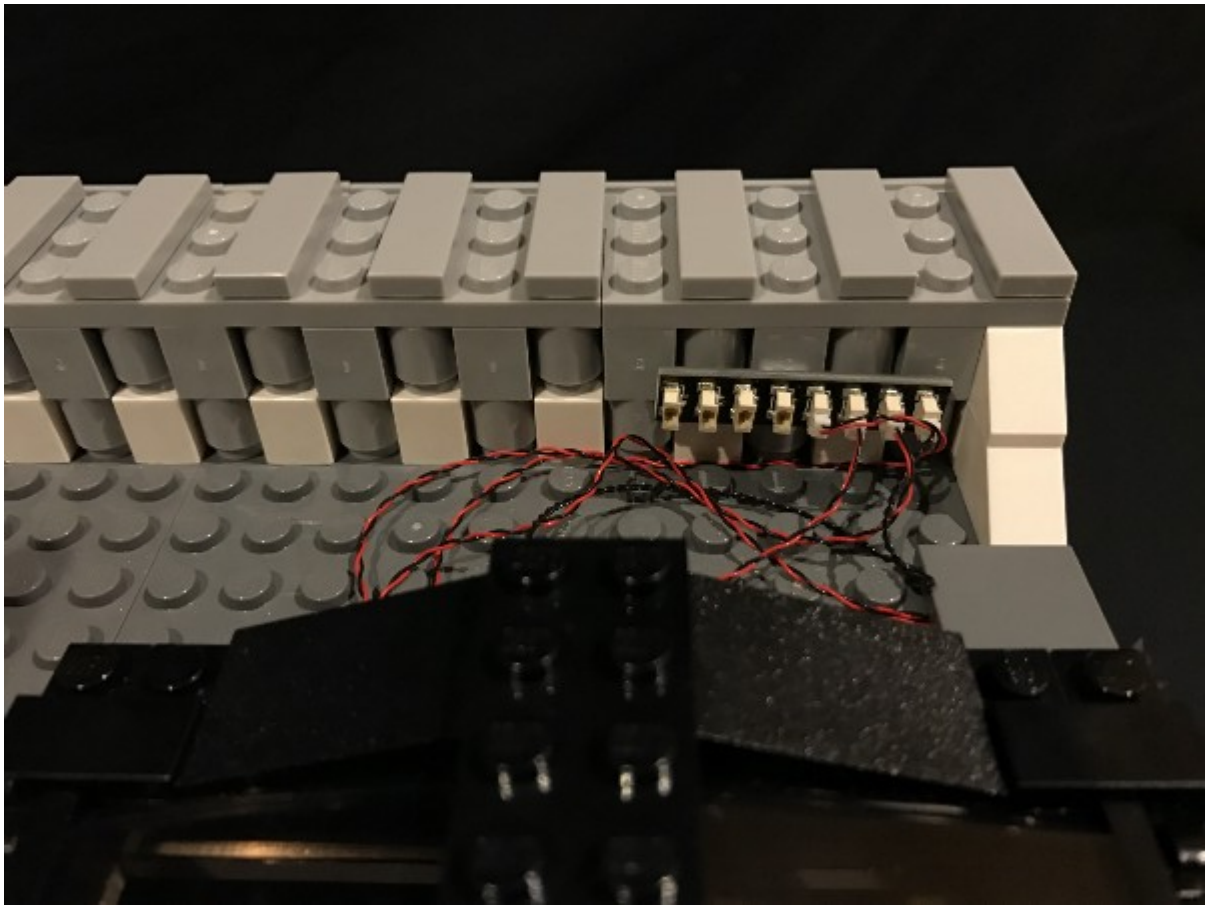




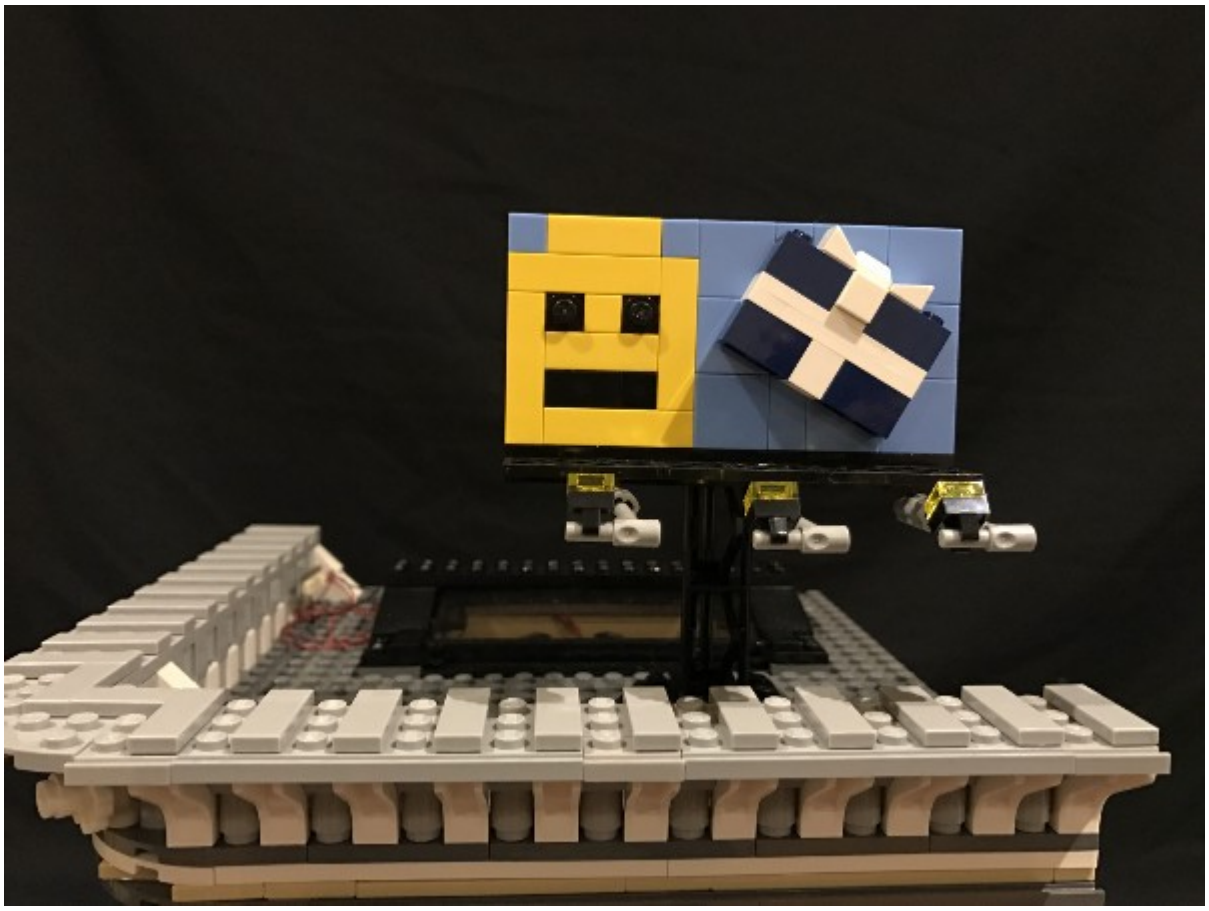
33.) Connect the cables from the chandelier to the next available ports on the 8-pc expansion board and then secure the expansion board to the inside of the roof's

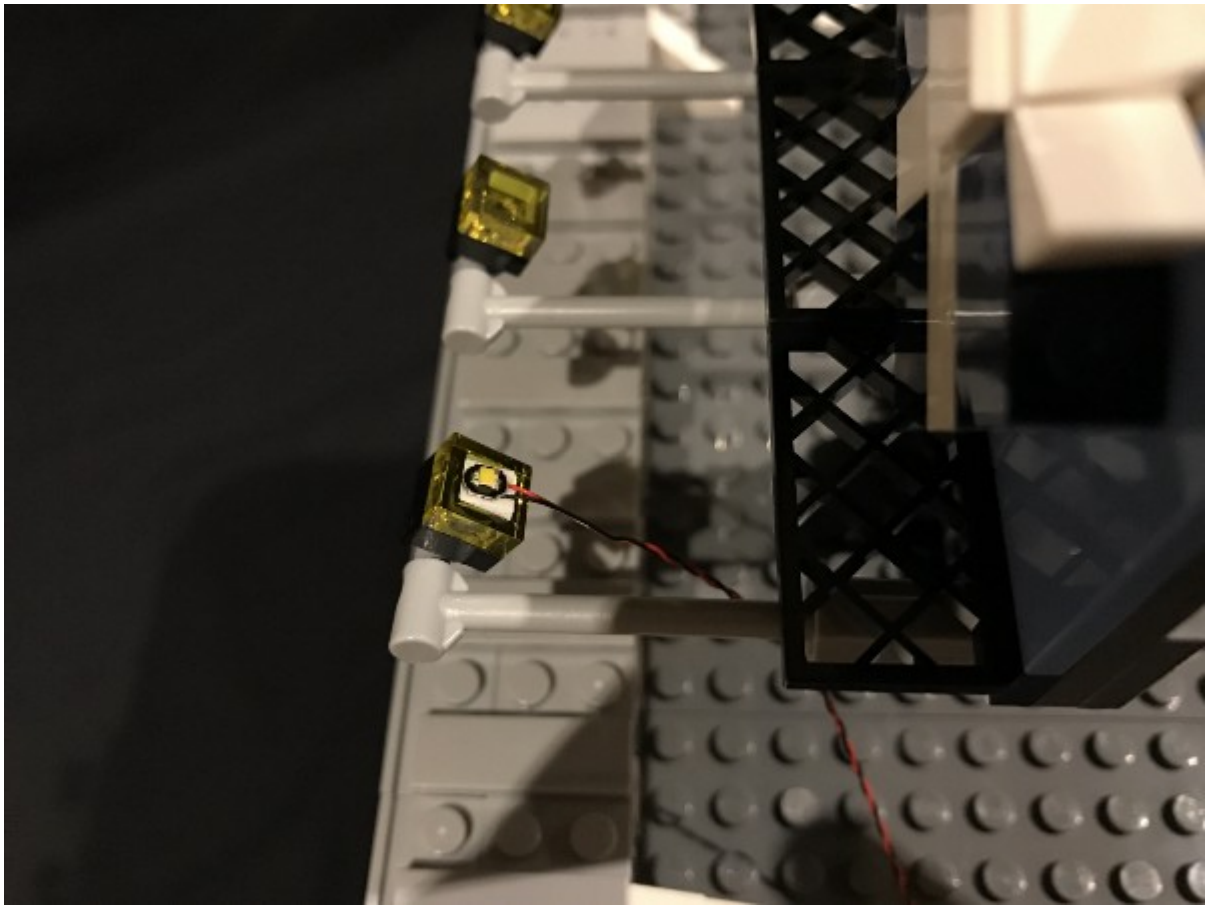
edge using 2x self adhesive squares. Neatly lay the cables down below.

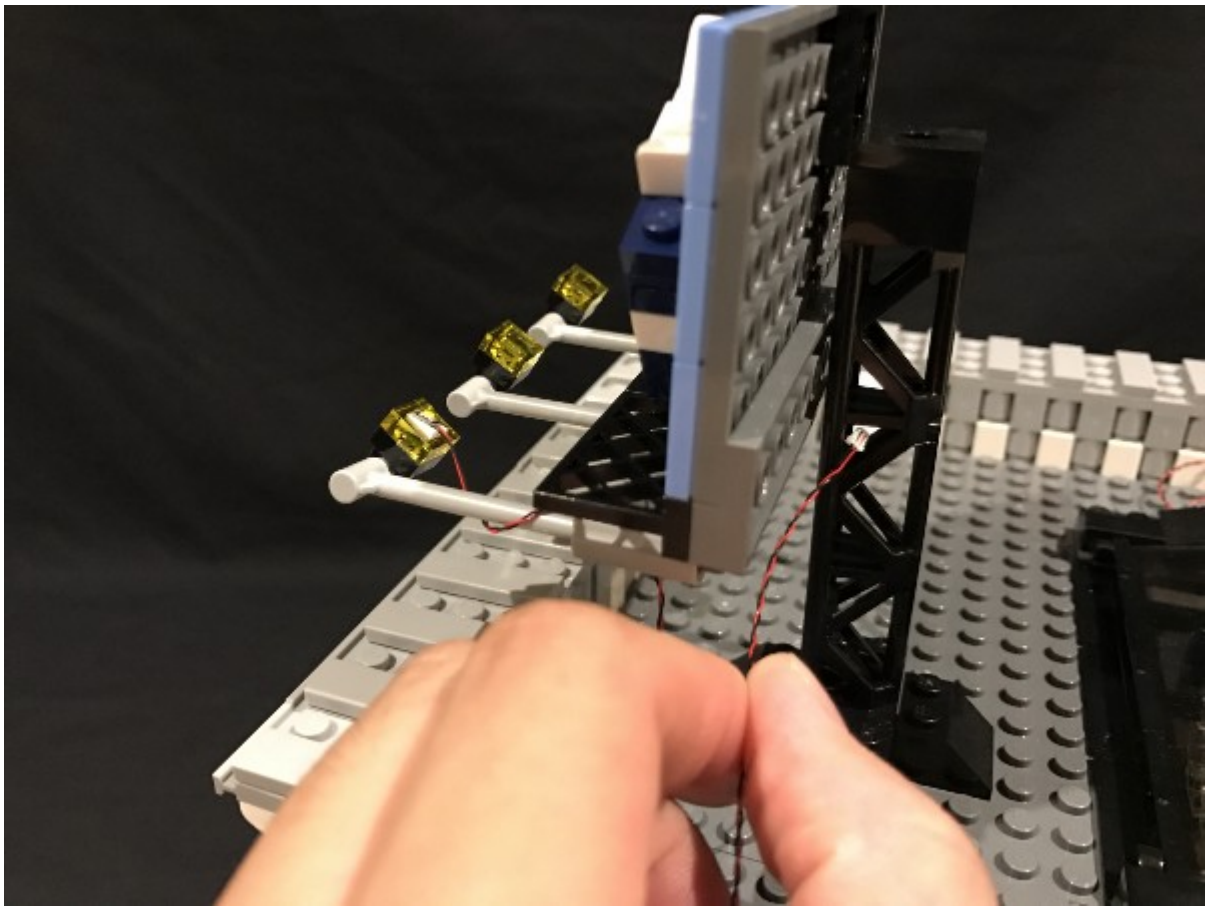


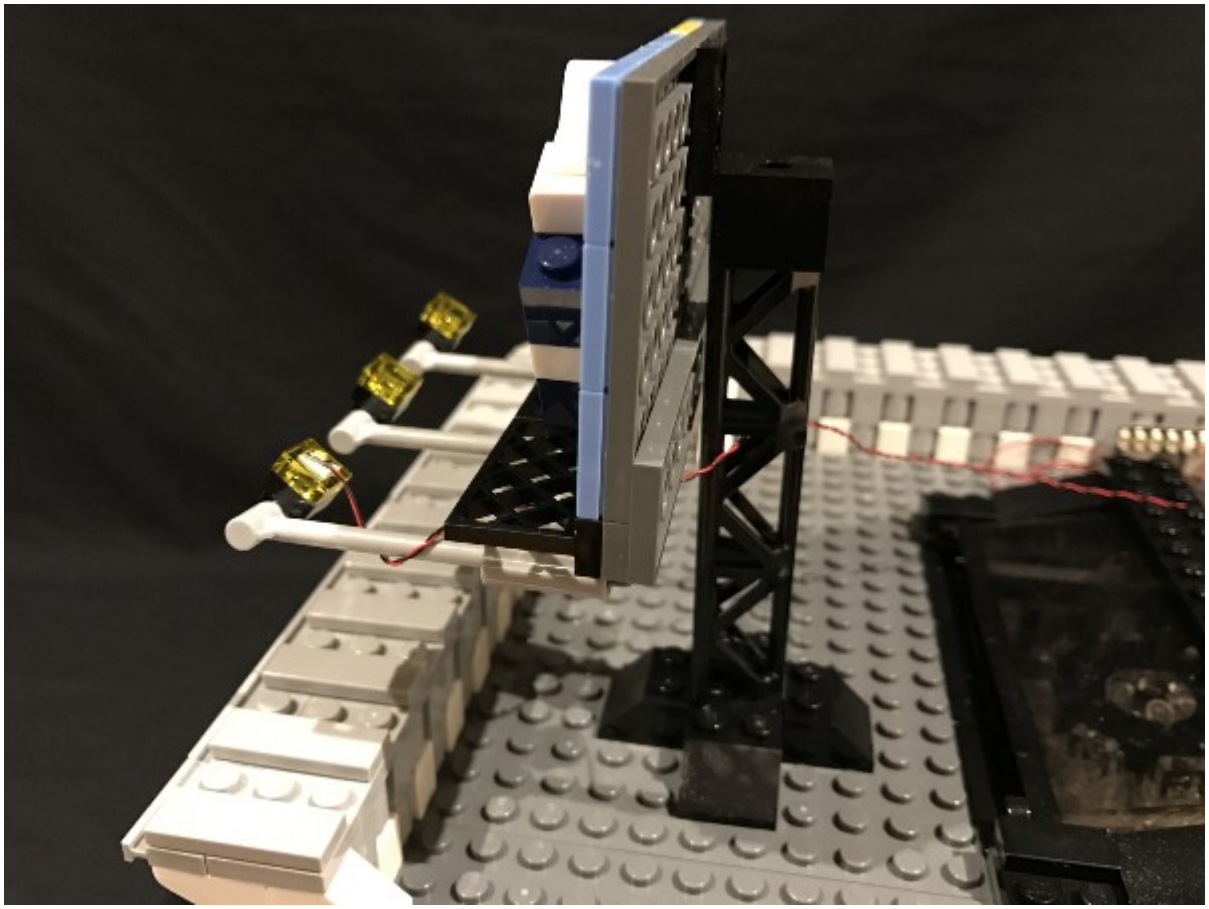


34.) We will now light up the Emporium billboard. Take one bit light and stick it to the inside of one of the light pieces using a self adhesive square. Then wind the cable around the light pole a few times before threading it behind into one of the black holes of the billboard base.

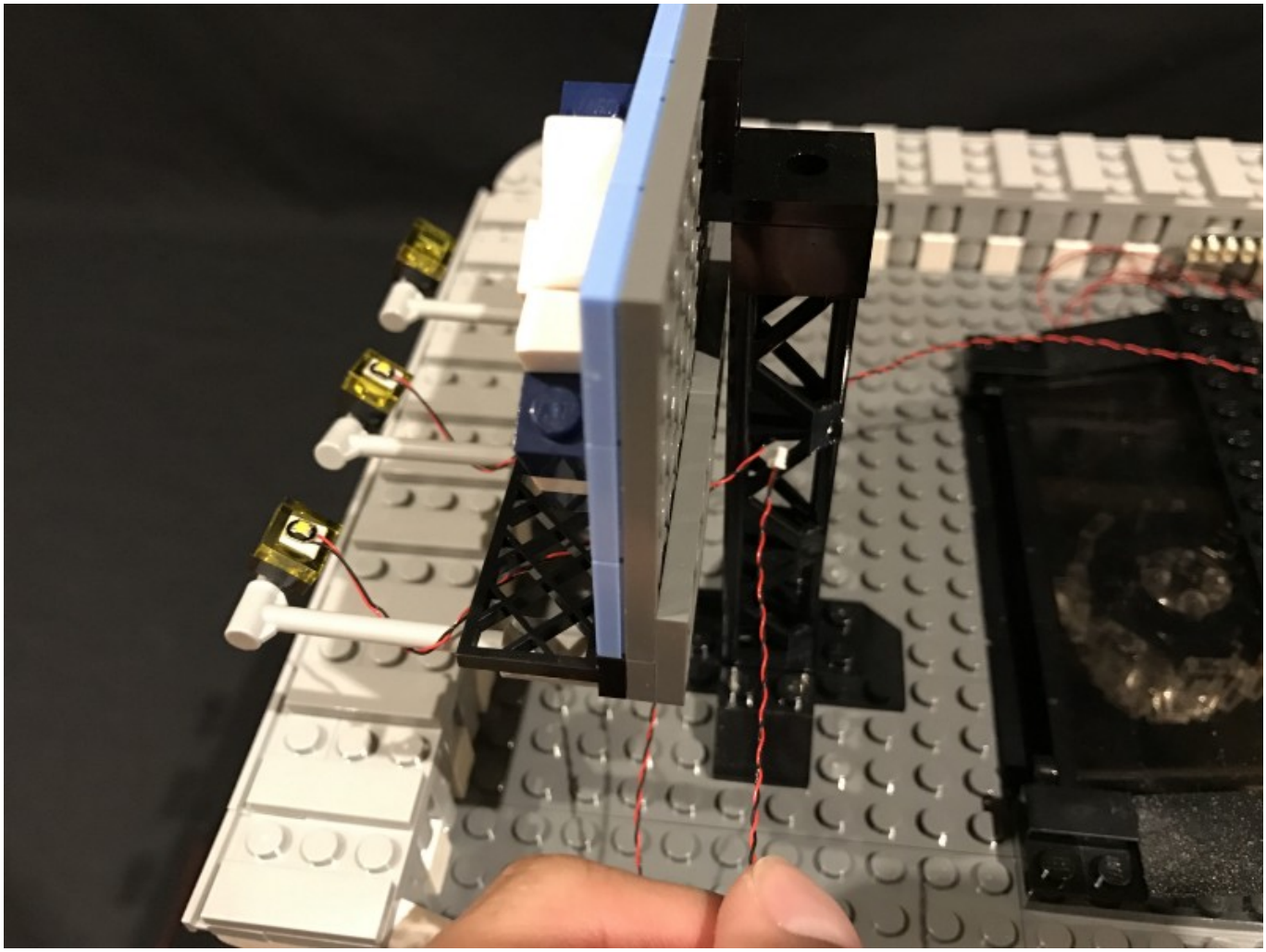


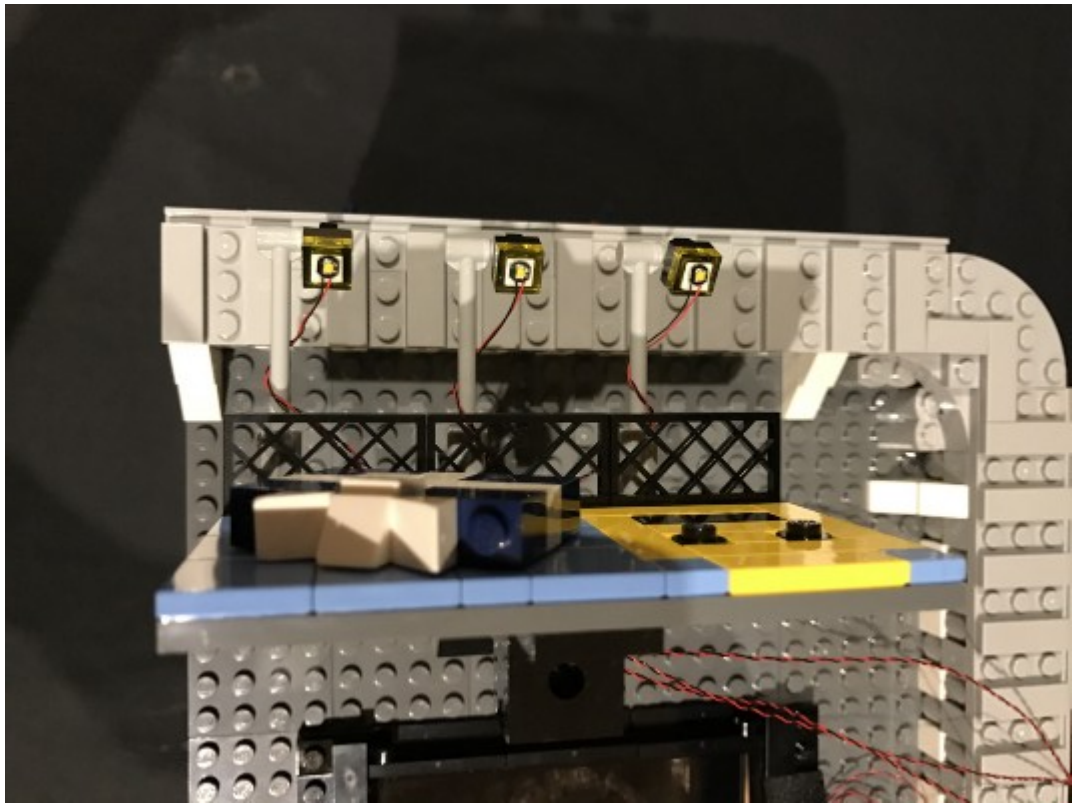


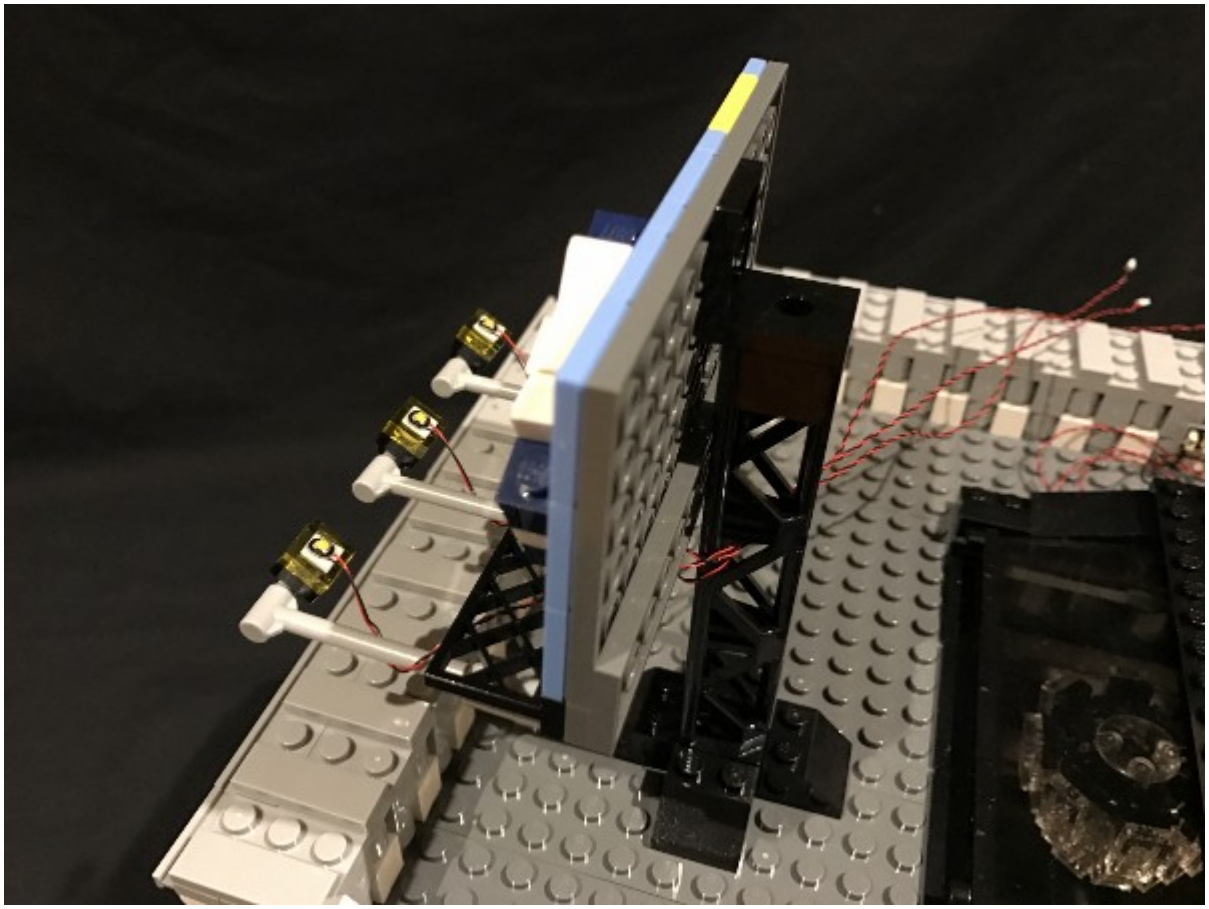


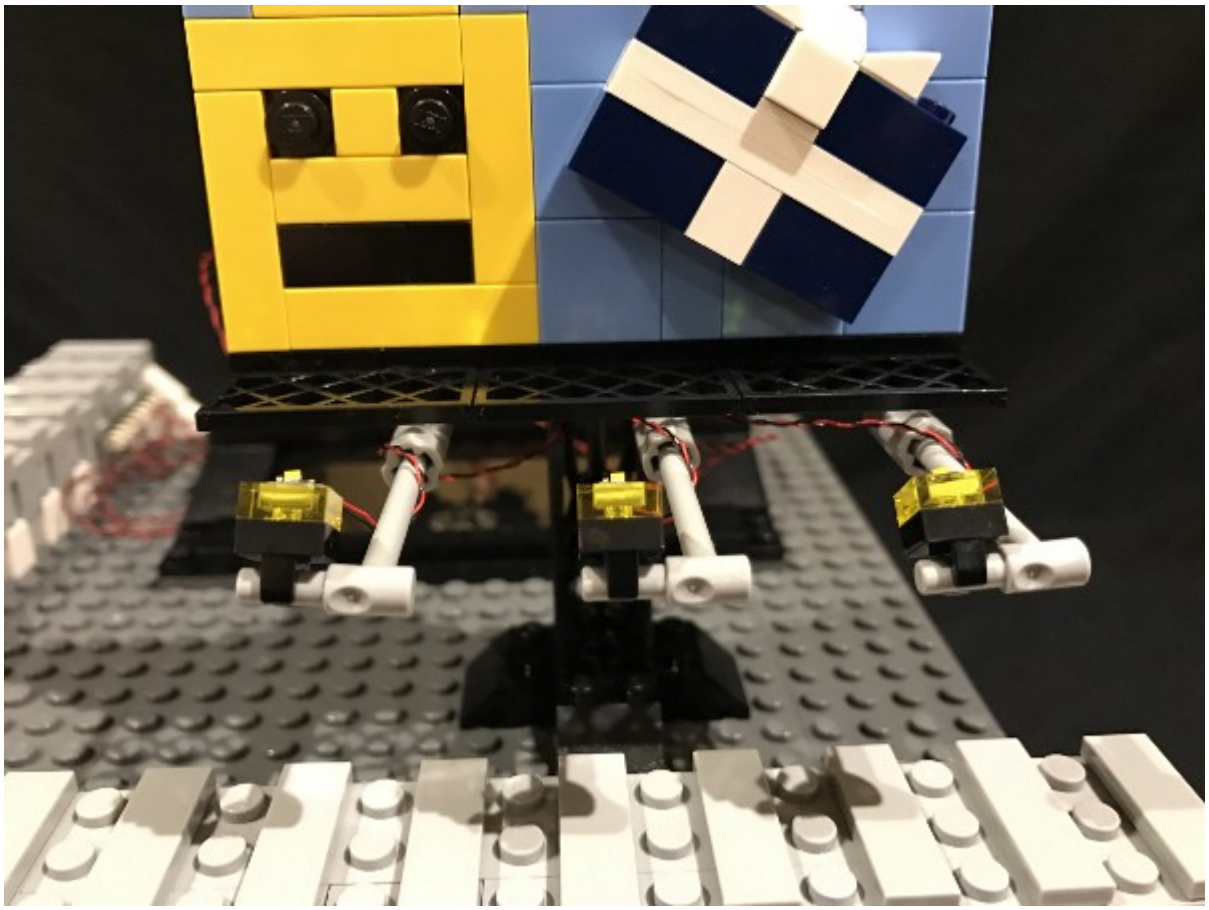


Repeat this step for another two bit lights so all 3 billboard lights are installed.

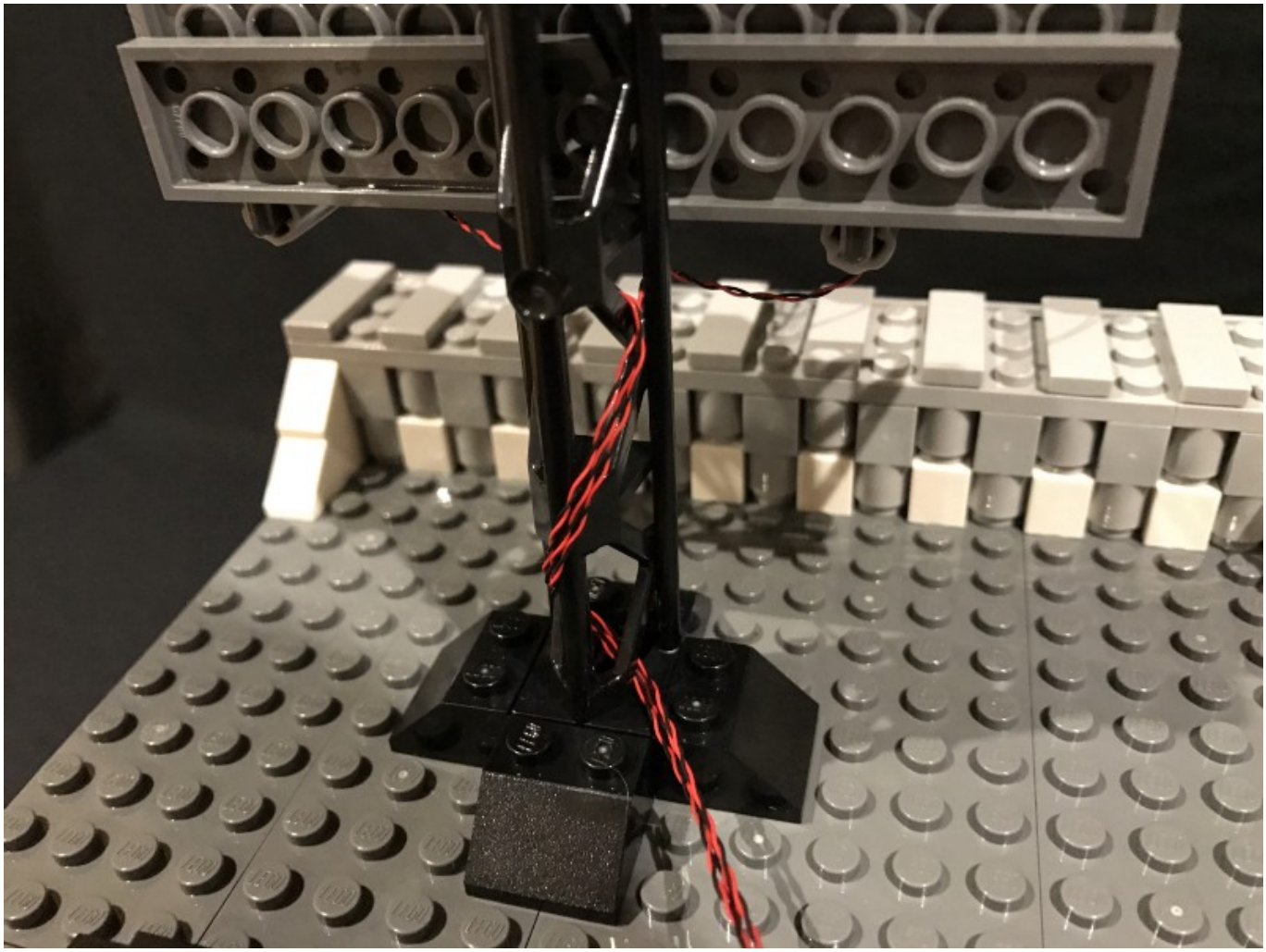




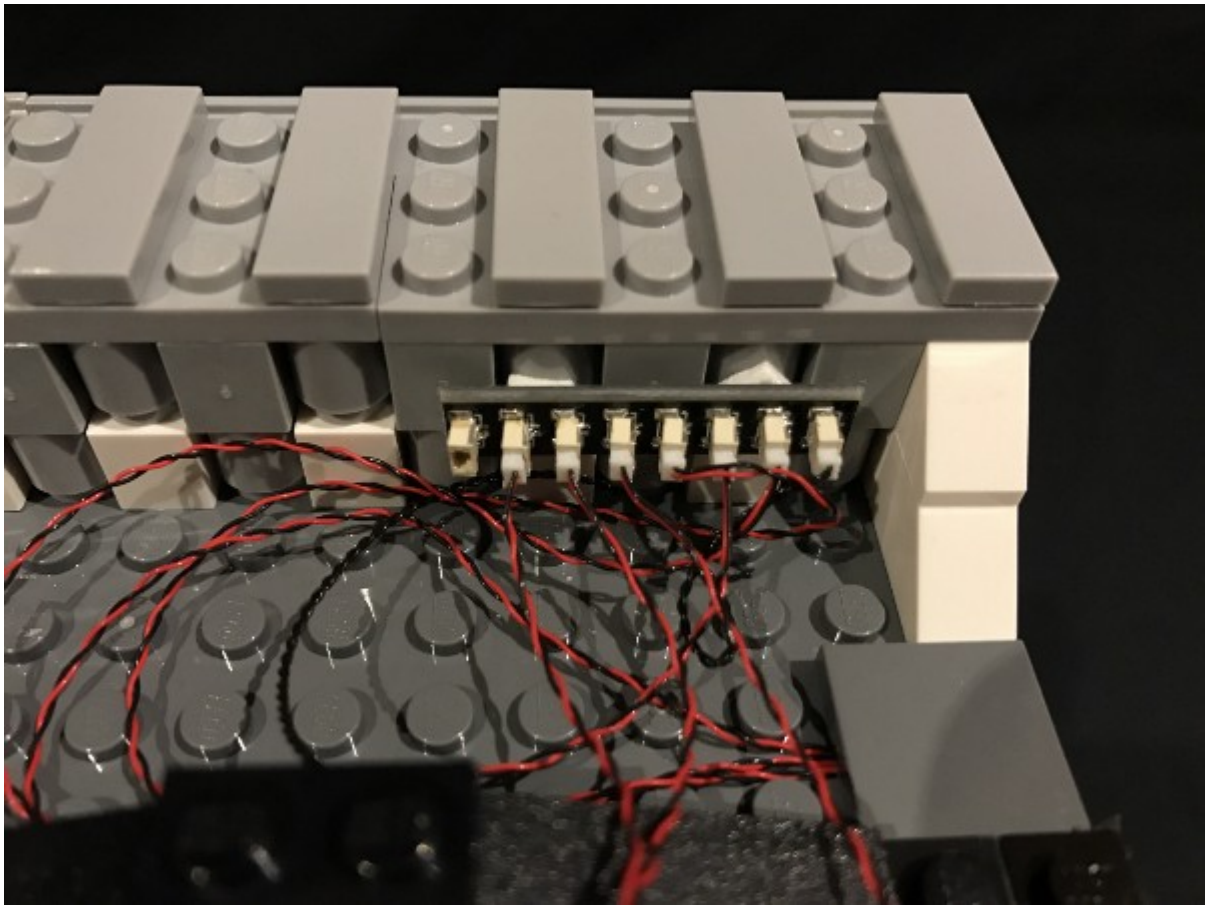


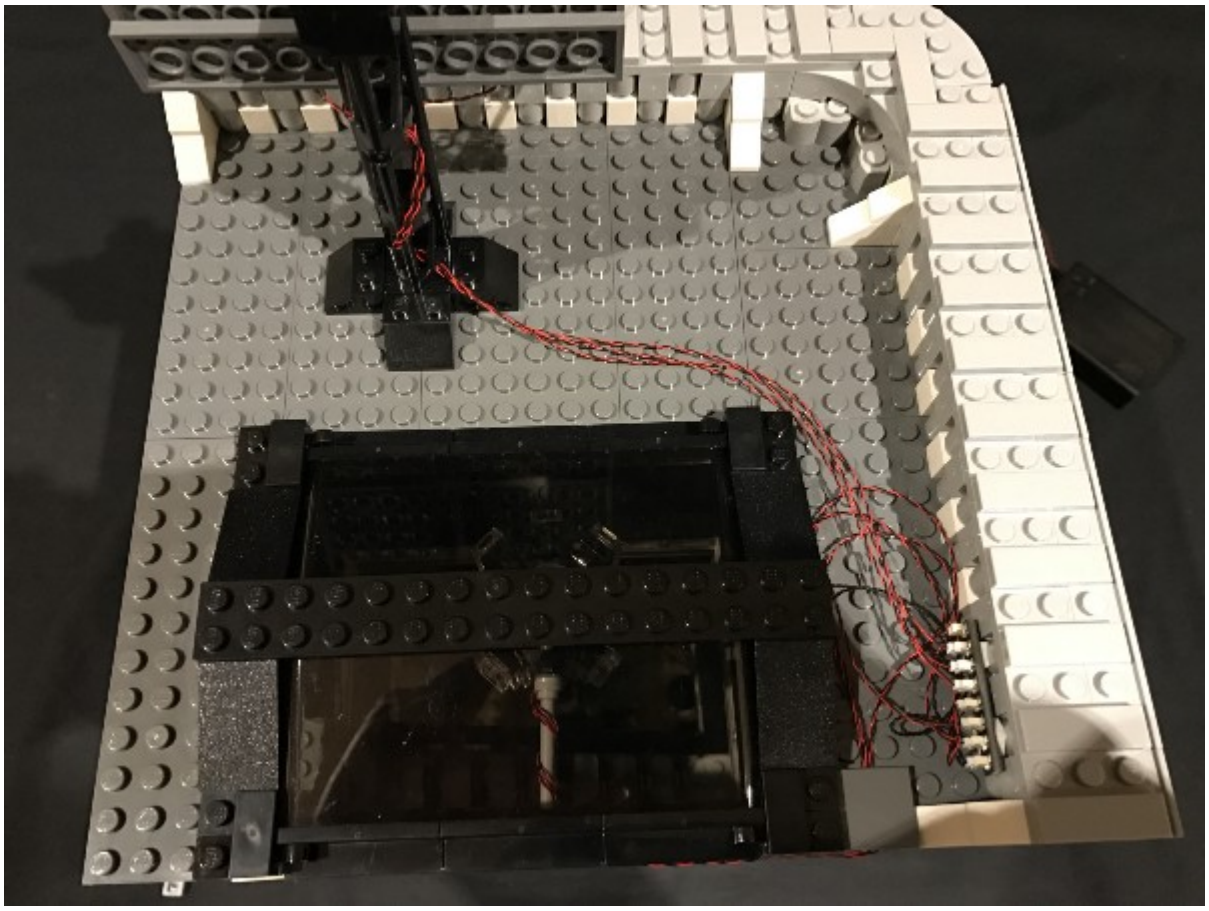


35.) Take the 3 cables and ensure they are wound and threaded around the billboa
base as per below.



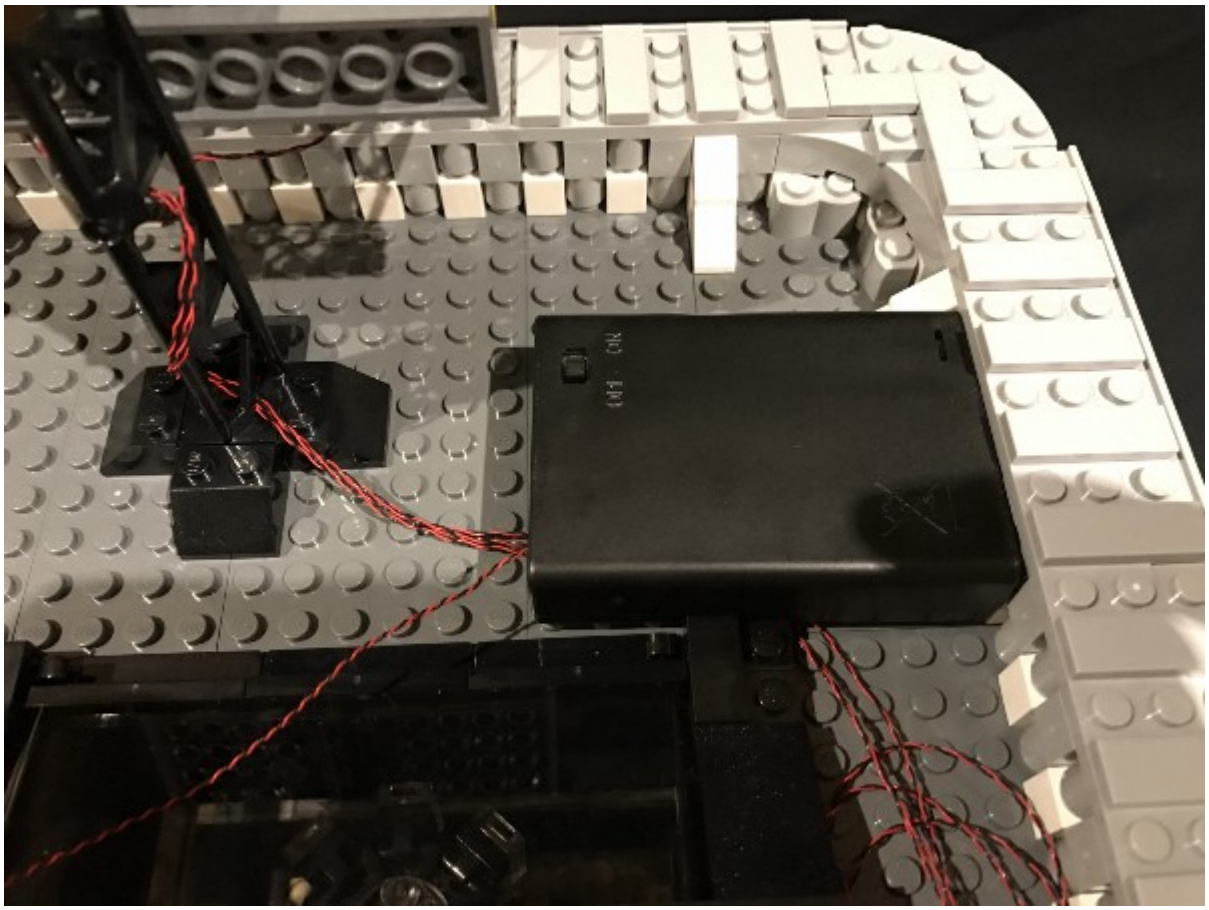
36.) Connect all three cables into the next available ports on the 8-port expansion board and then neatly lay the cables down as per below.

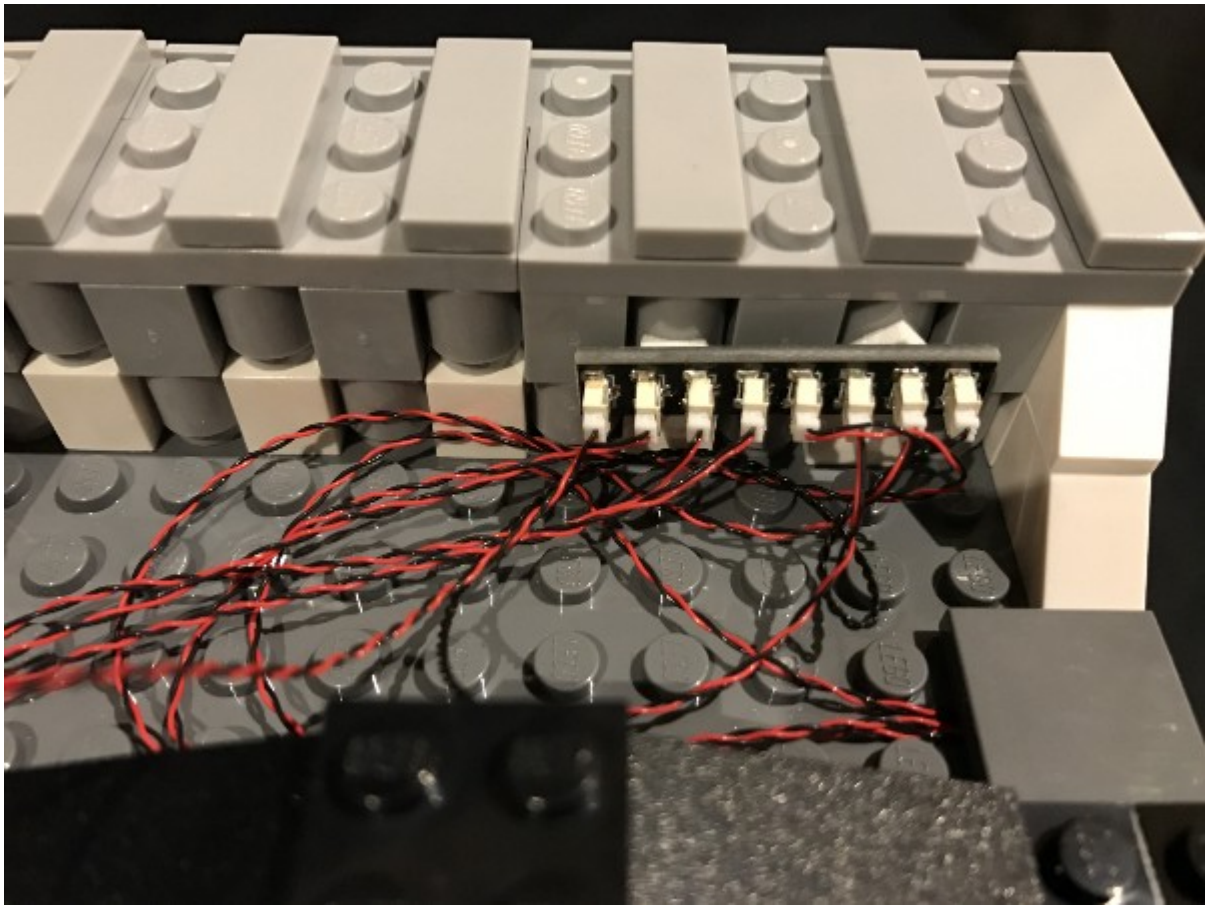




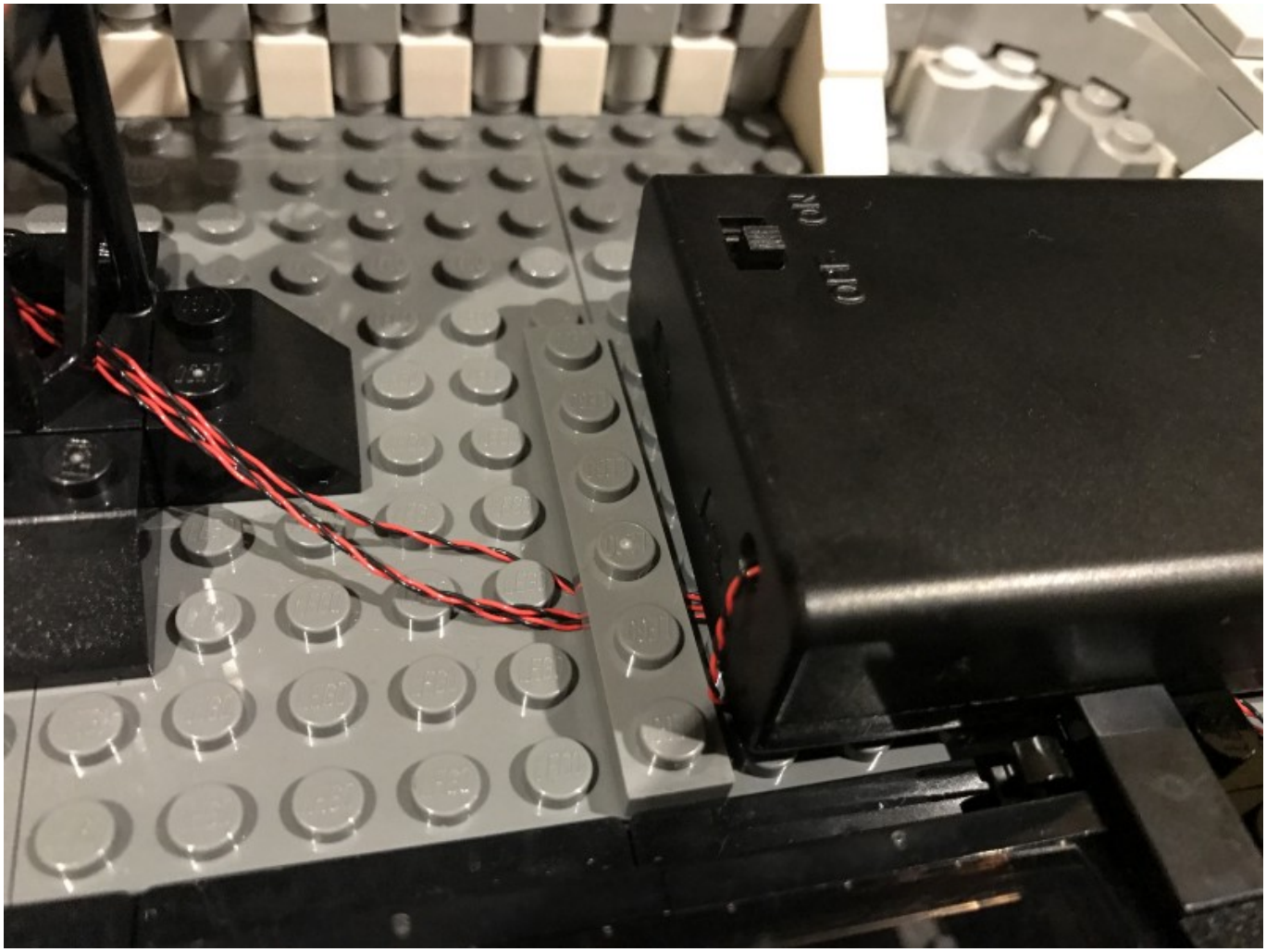
37.) Take the AA battery pack /usb cable and place it on the roof in the following position. It should sit nicely in between the sky light frame and white Lego pieces on

the roof. Ensure the on/off switch is facing the correct way and then connect the battery /usb cable into the last port on the expansion board





You can secure the battery pack a little more and to prevent it from moving around by connecting a Lego piece on the top side of the battery pack.



This now completes installation of your Grand Emporium LED Lighting kit. Simply turn on and ENJOY!

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