

Grand_Emporium_10211 LED Lighting Kit

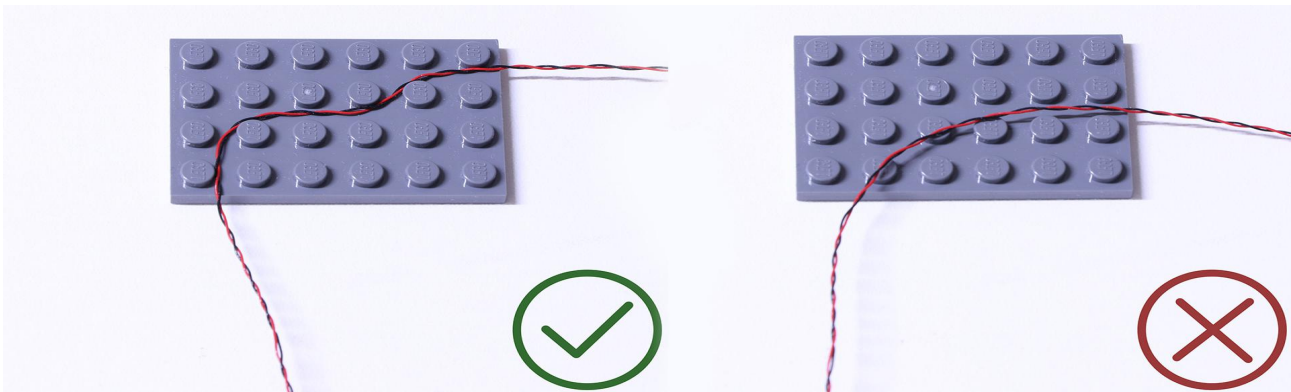
Package contents:

- 6x White Strip Lights
- 14x White 30cm Dot Lights
- 1x 12-port Expansion Board
- 1x 8-port Expansion Board
- 1x Lamp Post with LED and cable attached
- 1x AA Battery Pack (3x AA batteries not included)
- 8x Adhesive squares
- 5x LEGO Plates 1x6 (for mounting strip lights)
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- **Connecting Cables**
-
- 2x 5cm cable
- 3x 15cm cable
- 2x 30cm cable

Note:

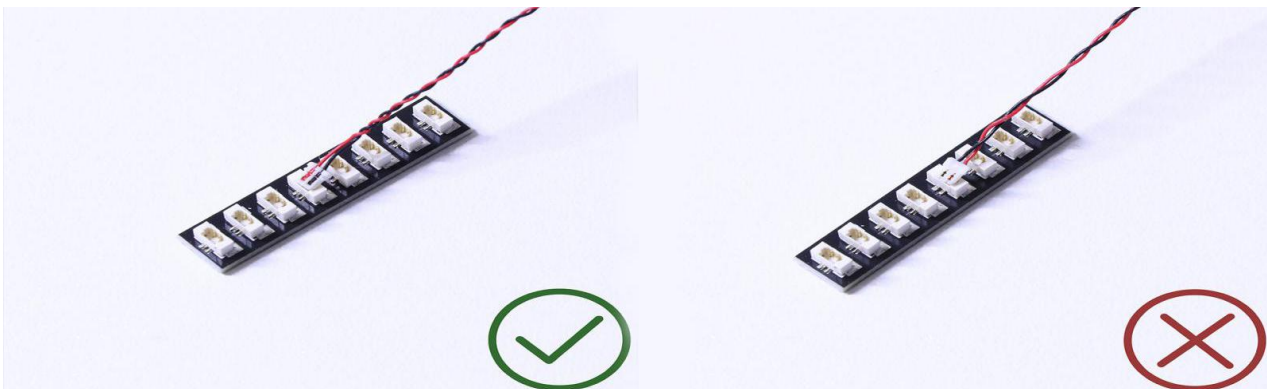
Place wires on the surface or under the LEGO building blocks.

The wire can be place between the building blocks or under the block, but they should be placed between the studs correctly.

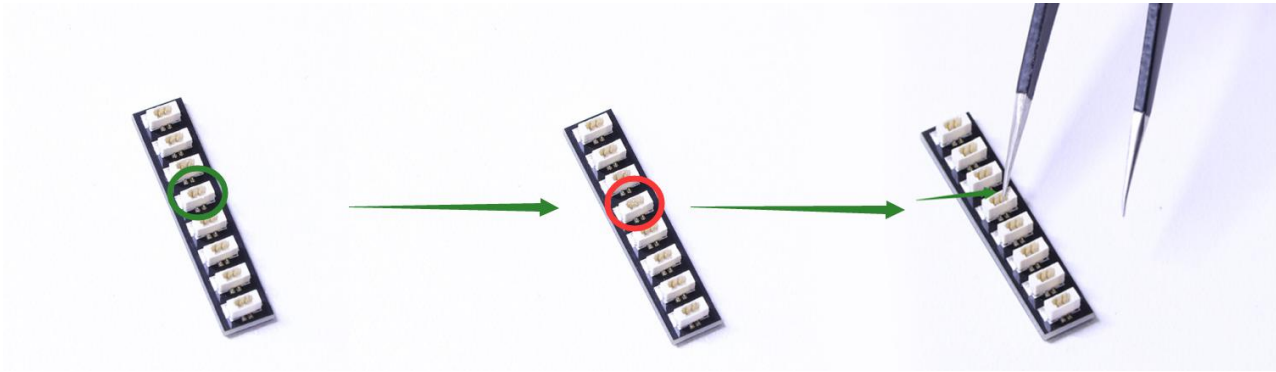


Insert the connectors to the ports.

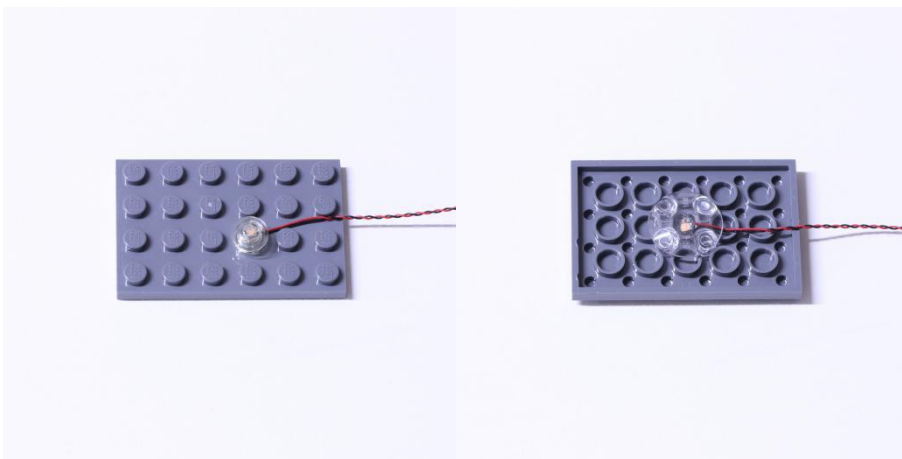
Be careful when you are operating, there's only one correct way to insert, make sure the expansion board is upward, find the soldered "=" sign on the left of the port. When you are inserting, the side which the wires can be seen should be faced to the "=" sign and if you feel hard to insert, please stop, and don't force it, for that may result in bent pins inside the port or overheating of the expansion board.



At this point, use the tweezers to straighten the bent pins.

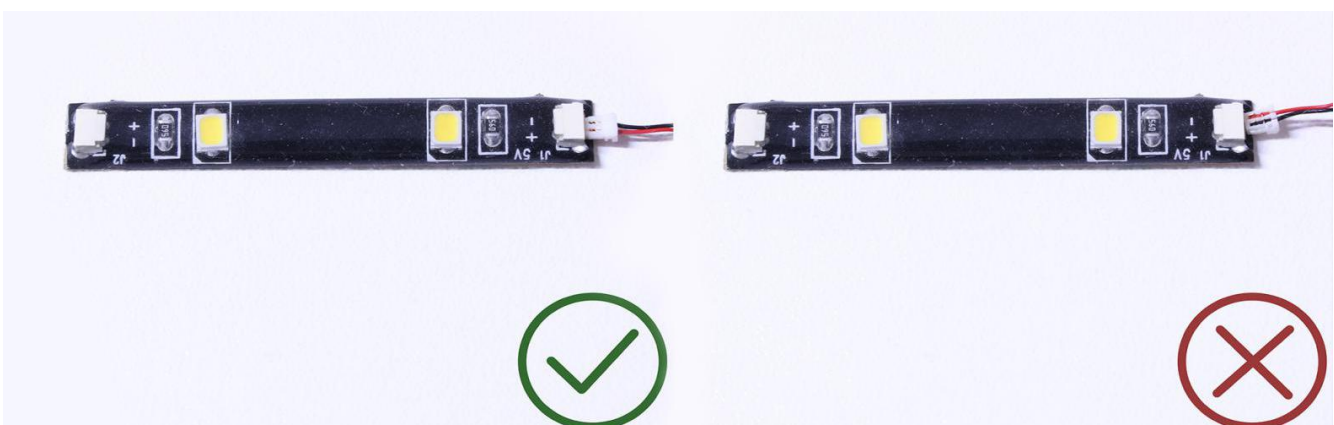


When installing dot lights, make sure they are correctly placed (Yellow LED package is exposed). You can put them either on the top of the studs or between studs.

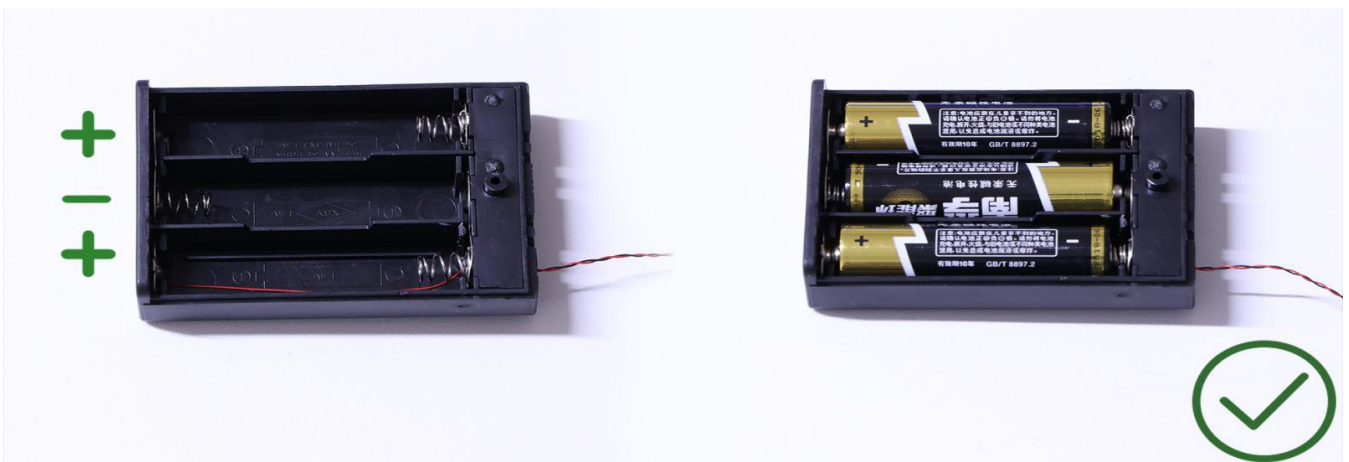


Connecting cable connectors to Strip Lights

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.



Finally, please pay attention to the positive and negative terminals of the battery when installing the battery case.



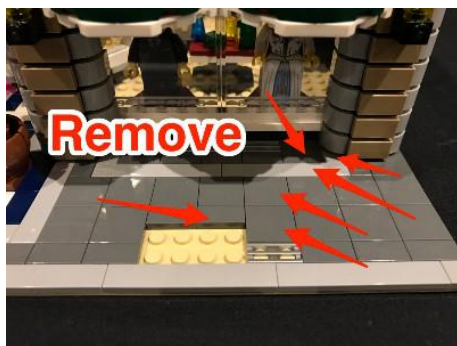
OK, Let's Begin!

Instructions for installing this kit

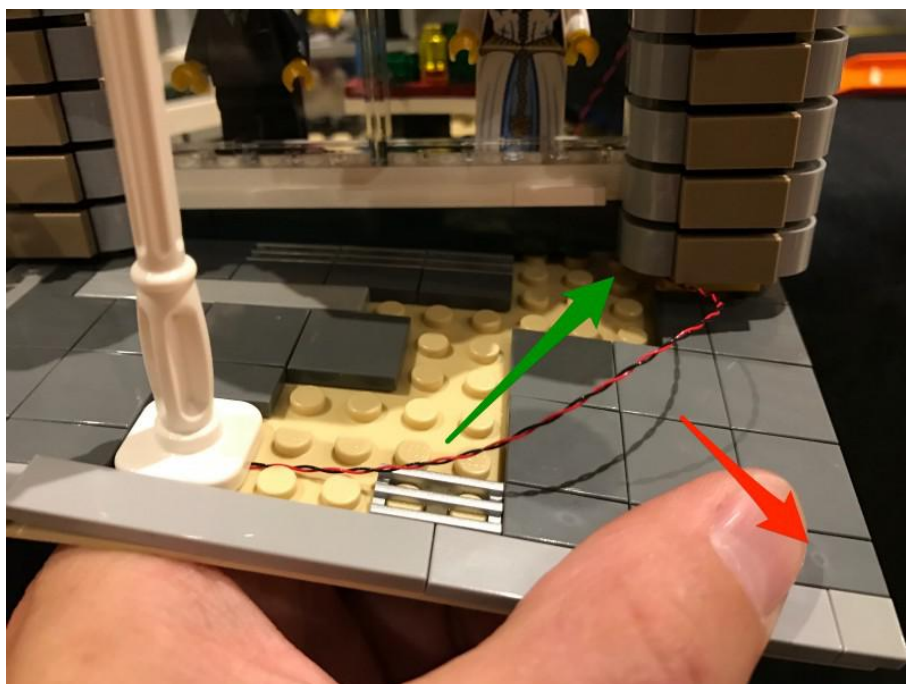
1.) This lighting kit is installed from the bottom up. Start by removing the 2nd and top levels of the modular building.



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.

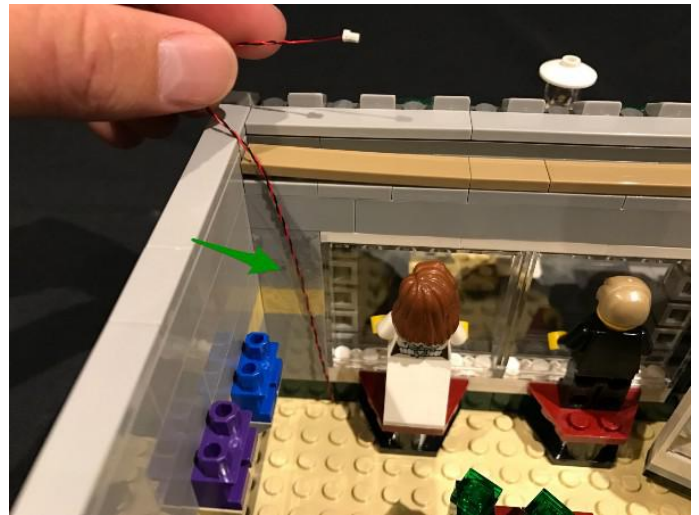


3.) Replace the stock lamp post with the Vonado lamp post ensuring that the cable is laid in the middle of the 2 studs facing toward the right of the building. Gently bend the base plate down and lift the building of the ground floor up so we can thread the cable for the lamp post underneath the building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

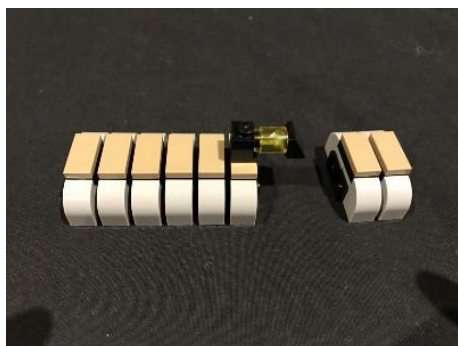


5.) We will now light up the lamps on the sides as well as two green shades. First remove the following Lego pieces to allow us access.

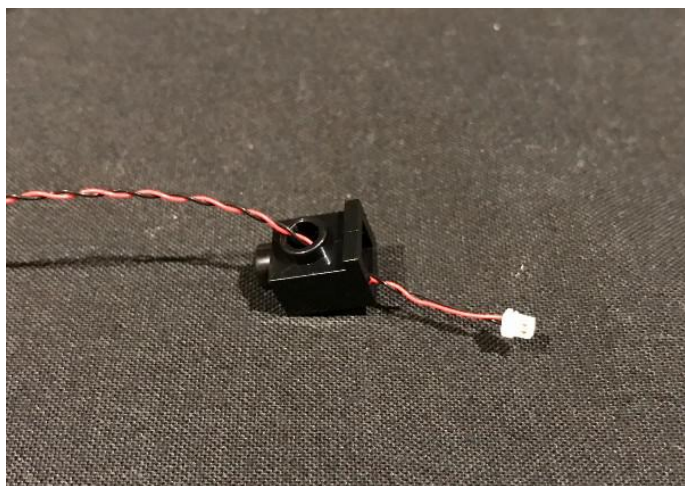
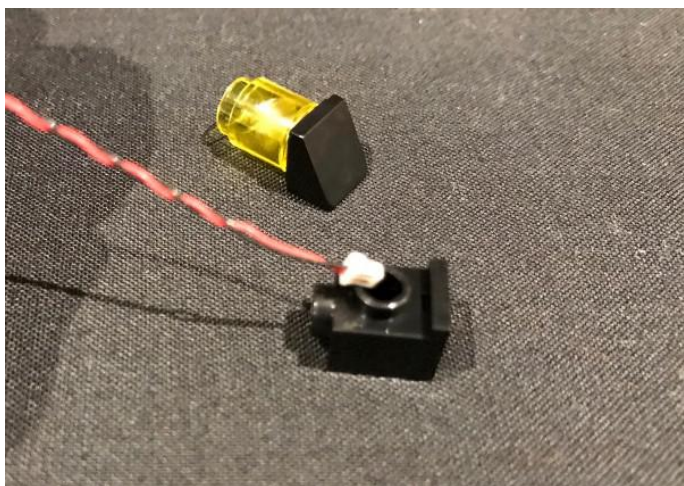


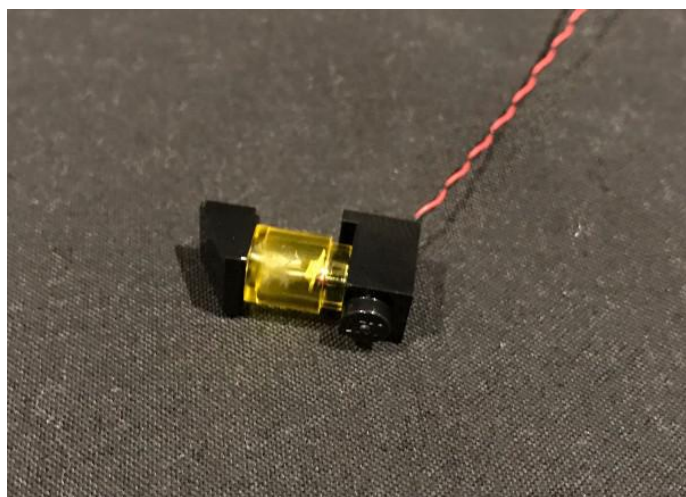
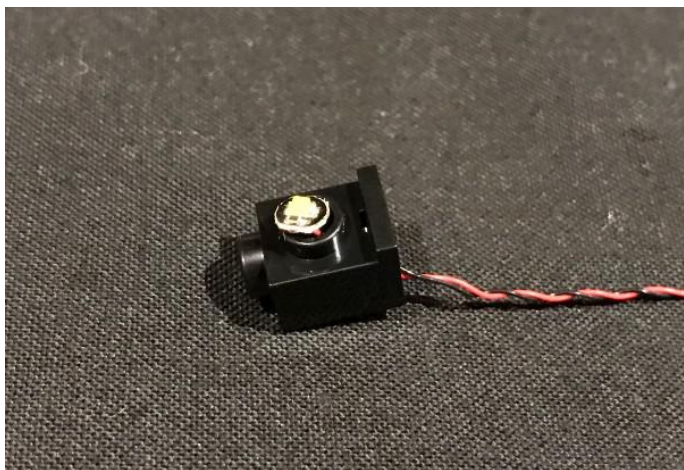


6.) Remove one of the pillars and then disconnect the top 2 layers. Disconnect the lamp and disassemble it as per below.

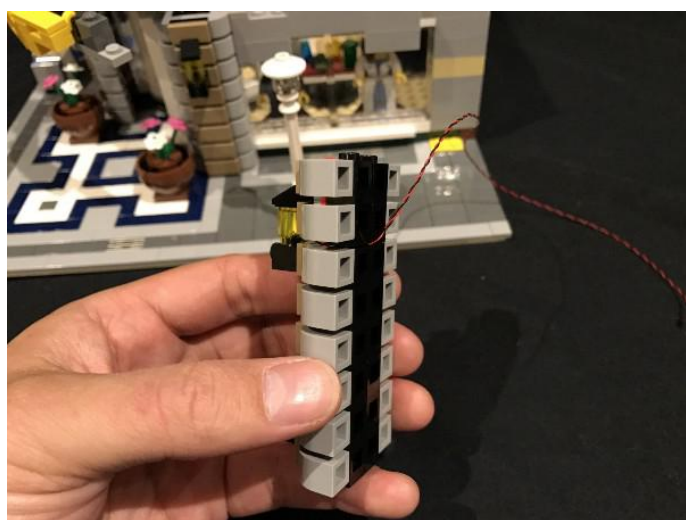


7.) Take 1x Dot Light and thread the connector end through the top whole of the black brick and out through the bottom end. Pull it all the way through until the LED reaches the end and then secure it in place by reconnecting the trans yellow piece.





8.) Reattach the lamp with Dot 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.



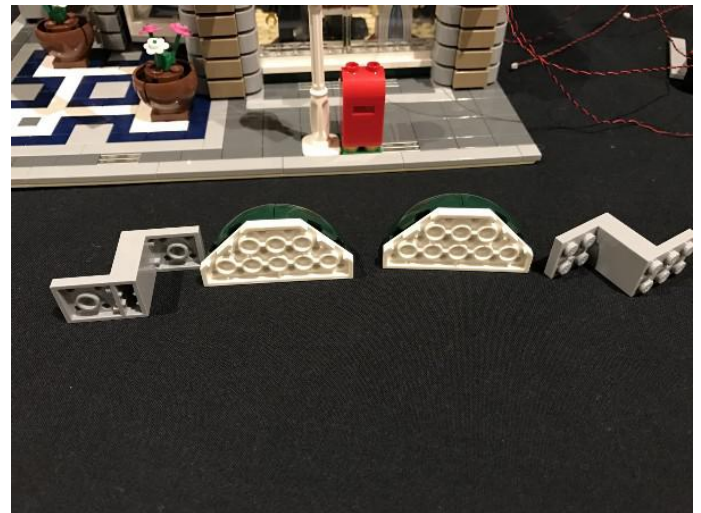
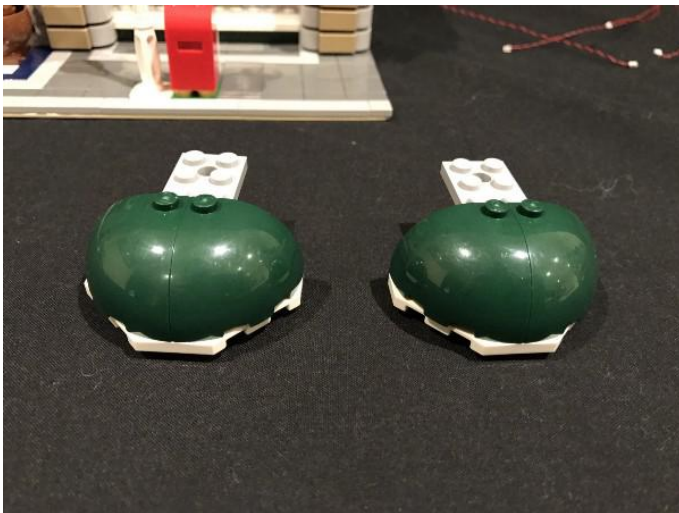
Reconnect the pillar back to the wall of the building ensuring the cable is behind in between the wall and pillar.



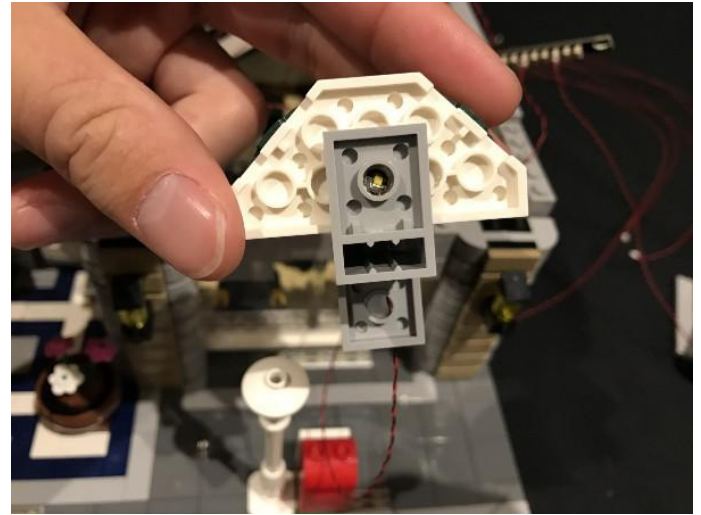
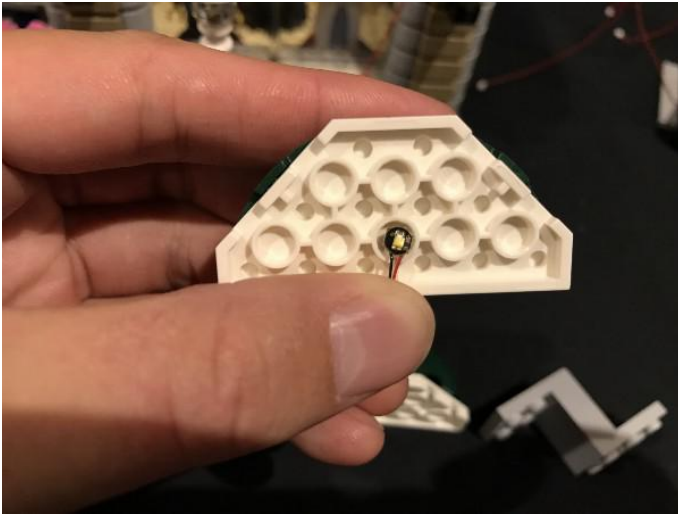
Repeat steps 6–8 to install another Dot Light to the lamp on the left side of this building.



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



Take one of the sections and install a Dot 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 Dot Light is behind and in between the grey piece and green pieces.

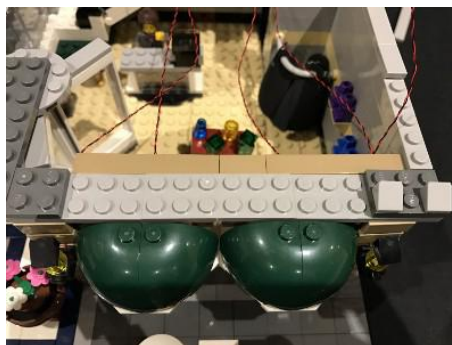


Repeat this step to install another Dot Light to the other green shade section.

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

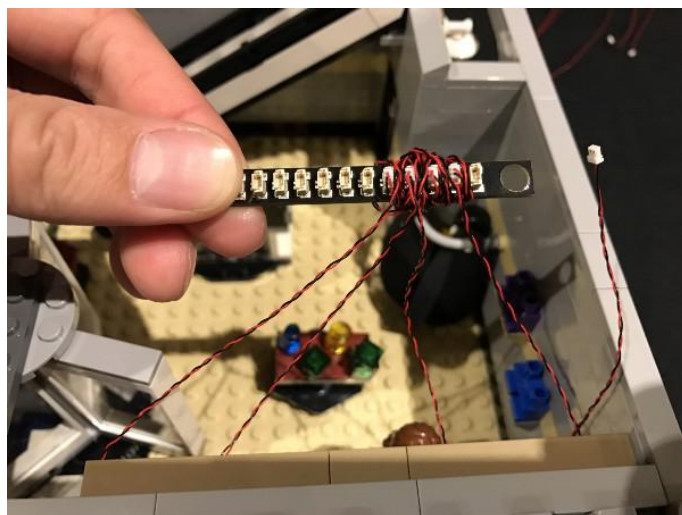
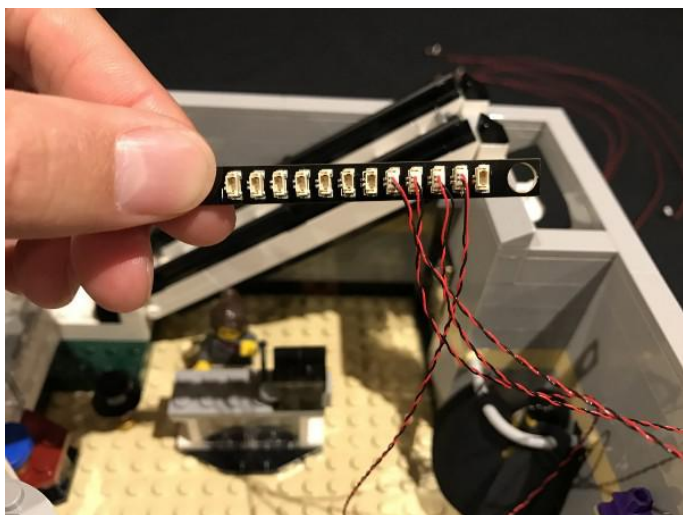


11.) Reconnect the pieces we removed earlier

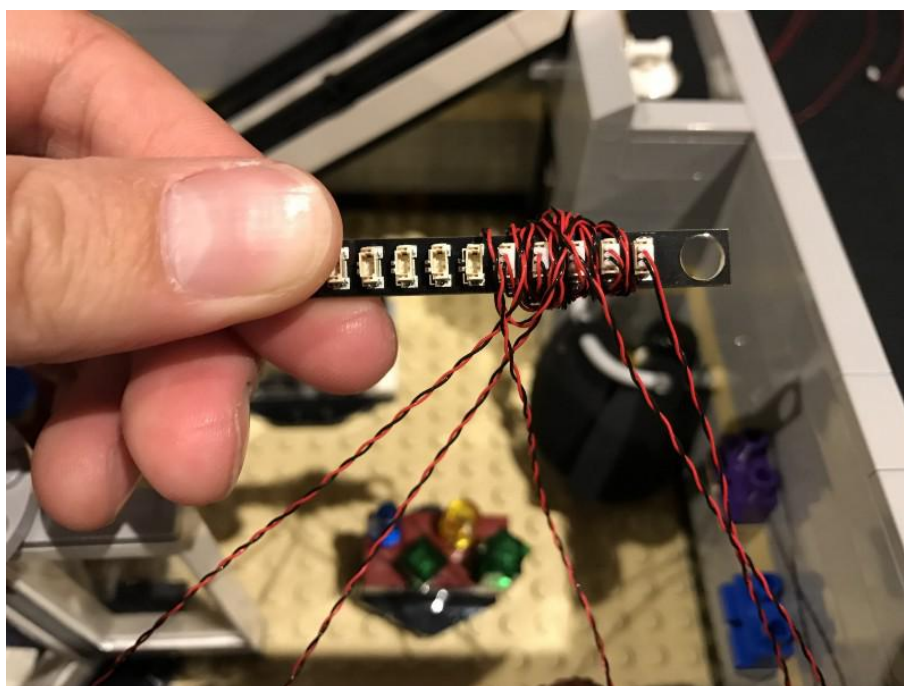


12.) Take the cables from the 4 lights we just installed and then connect them to spare ports (1 away from the right) of the 12-port expansion board. To eliminate excess cable, wind them around the board

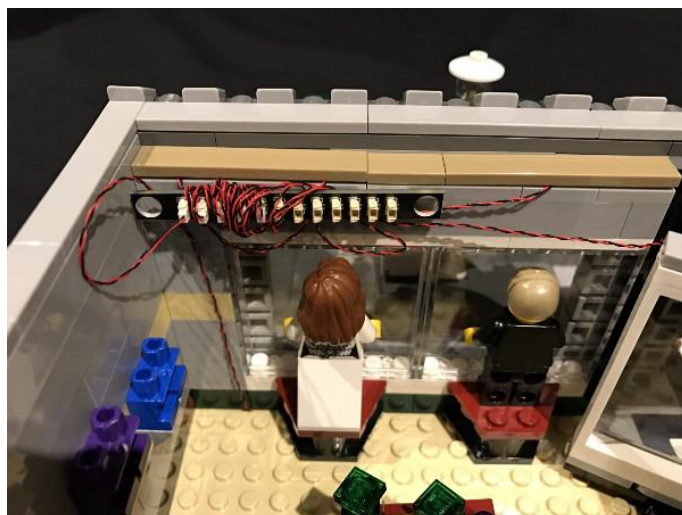
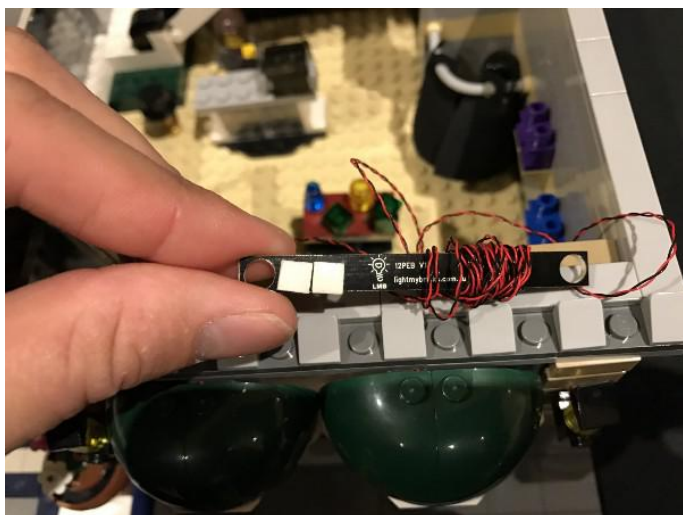
until you have about 5–6 cm of slack.



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 taking 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.

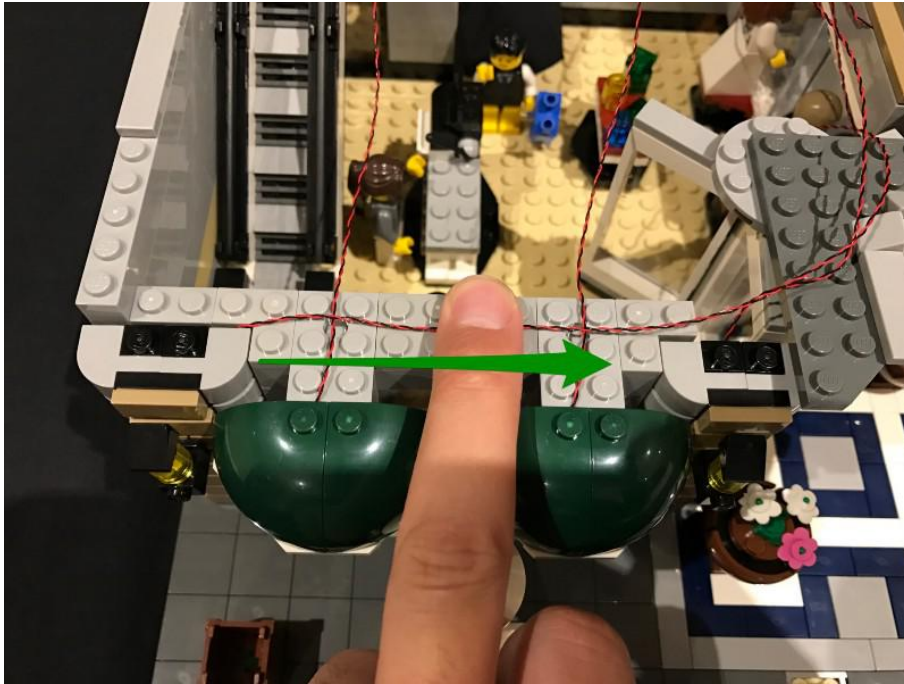


14.) We will now install lights to the other side of the building.

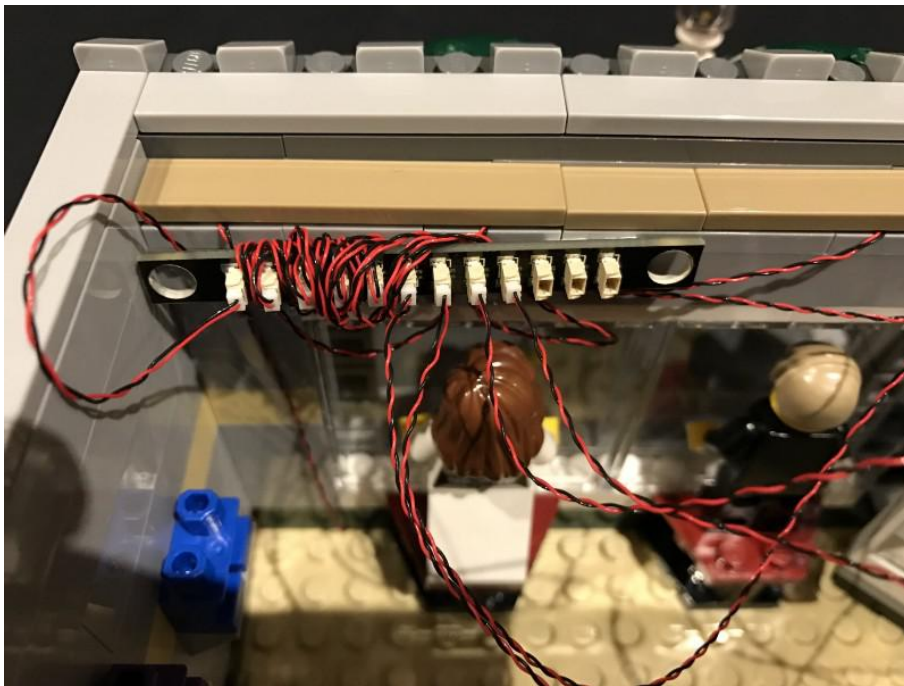


Repeat steps 5–10 to install another 4 Dot Lights (2 for the pillar lamps and another 2 for the green shades)

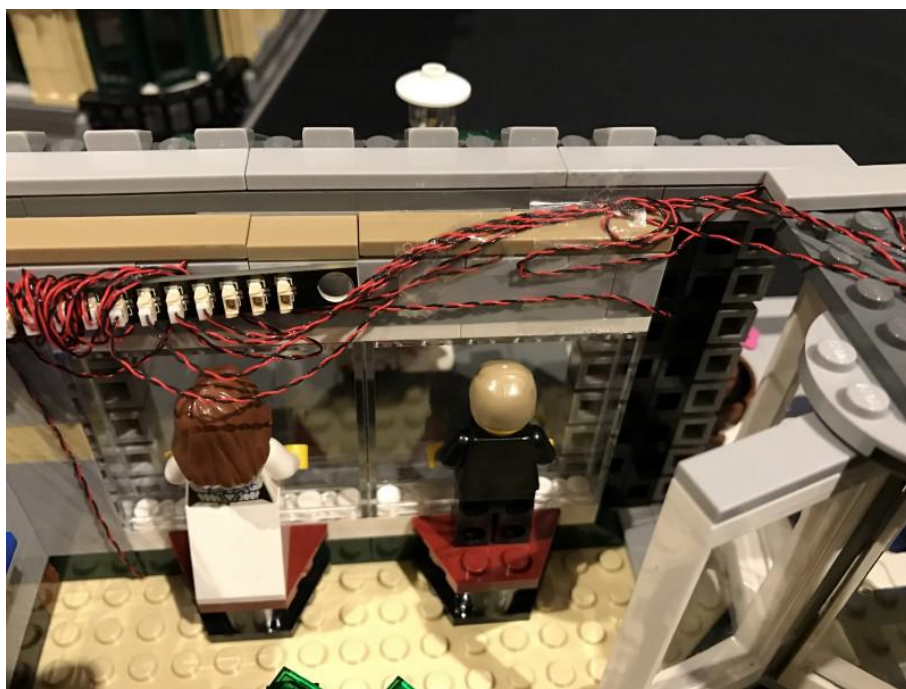
15.) You should now have another 4 lights installed to this side of the building. Before reconnecting the pieces surrounding the top, ensure the cable for the left pillar lamp is threaded across the top of the windows toward the right



16.) Connect the 4 Dot 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)

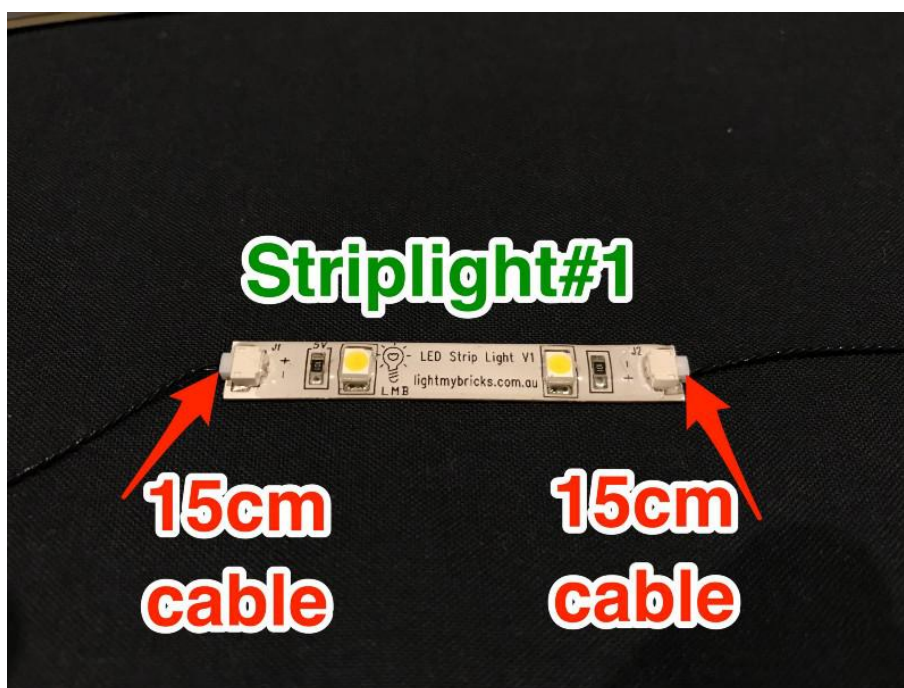


Do your best to hide as much cable as you can from being seen from the outside of the building

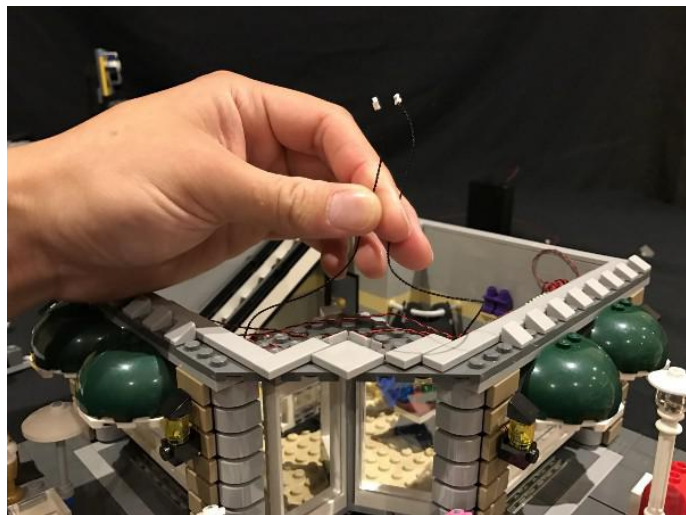
Connect the battery pack to the expansion board again to test the lights we have installed so far.



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.

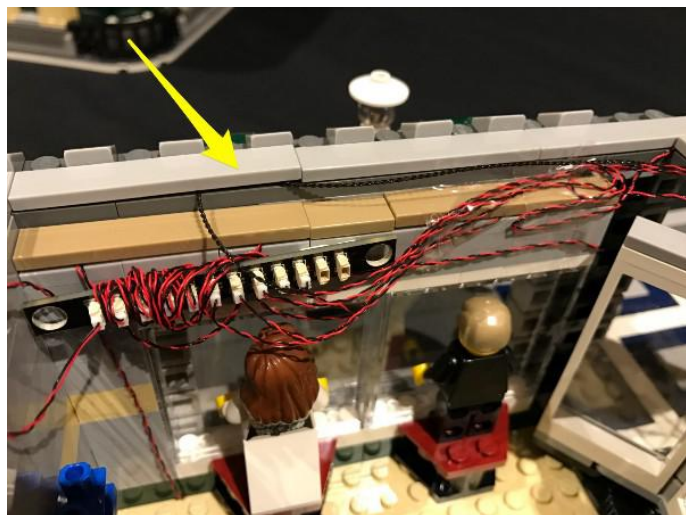


Stick the strip light underneath the centre of the roof in the following position and then thread both cables up in between the doors and ceiling. Pull them up from inside of the building.

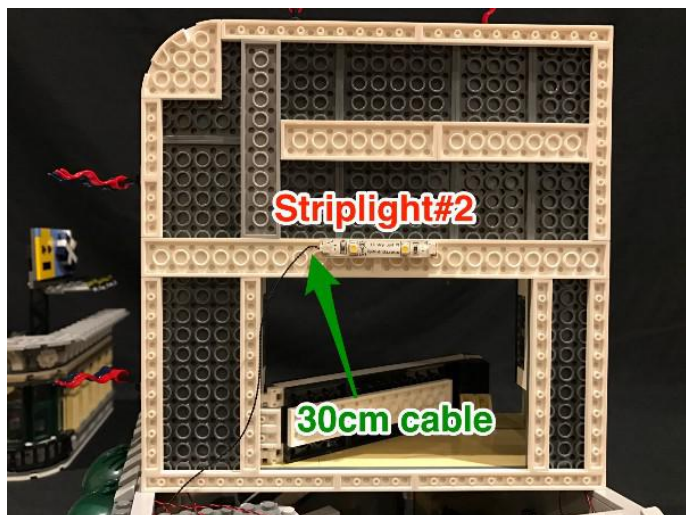


We are sticking the strip light directly onto the ceiling rather than a 1x6 Lego plate so that it is not as obvious from the front

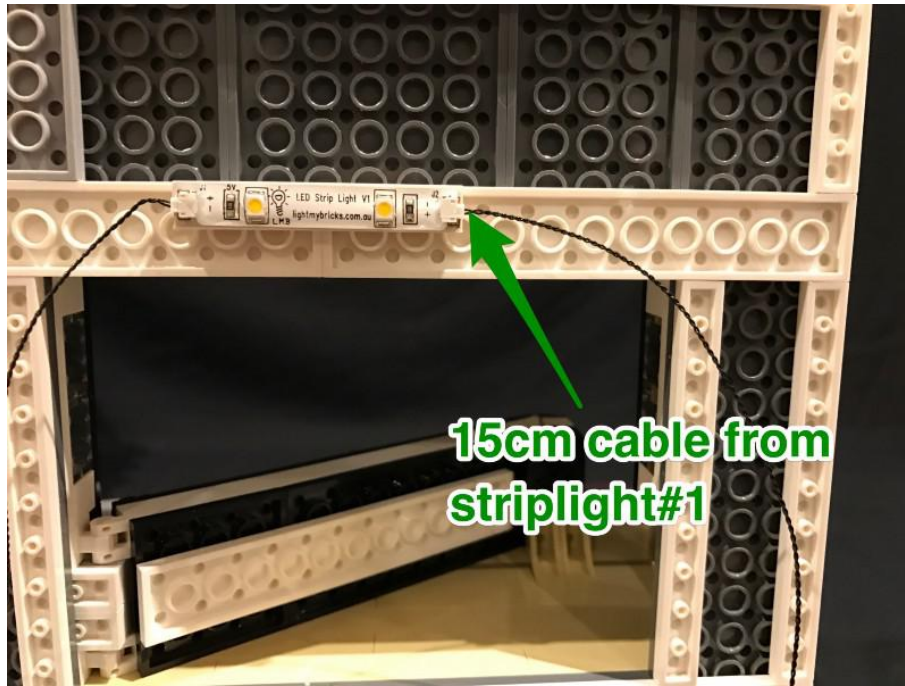
19.) Connect the cable from the right port of striplight#1 into the next available port on the expansion board then hide the excess cable underneath one of the grey tiles.



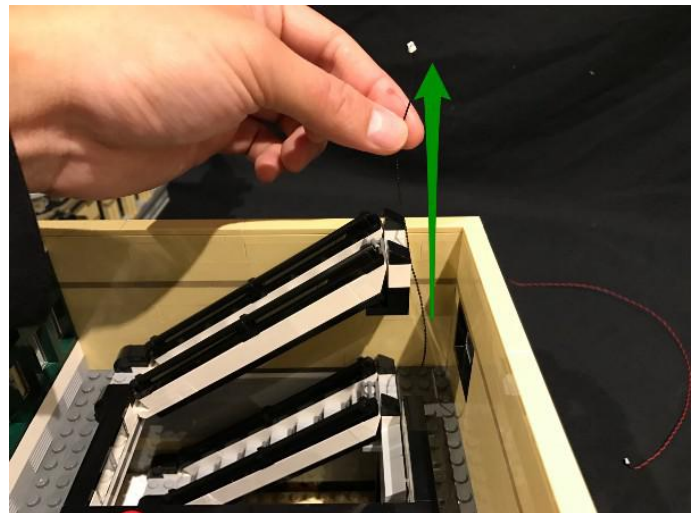
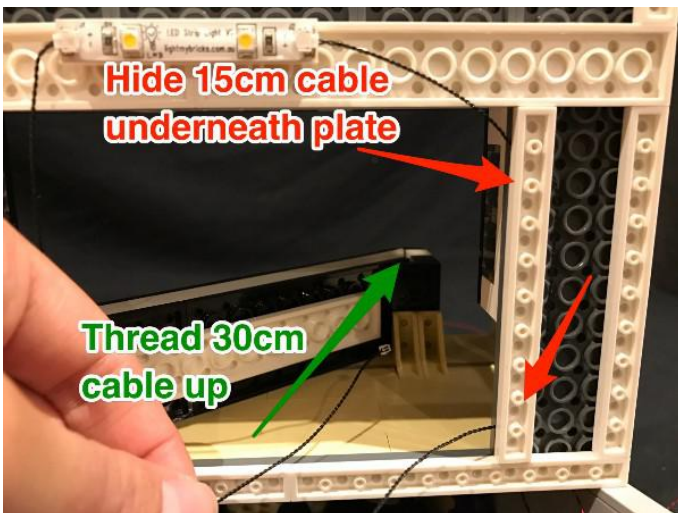
20.) Take the entire second floor and then connect/stick another strip light (striplight#2) on to the bottom of it, in the following position. Take a 30cm connecting cable and connect it to the left port.



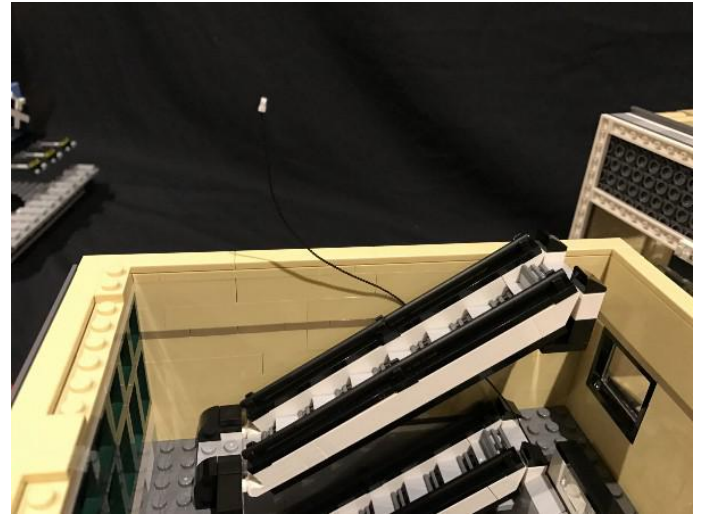
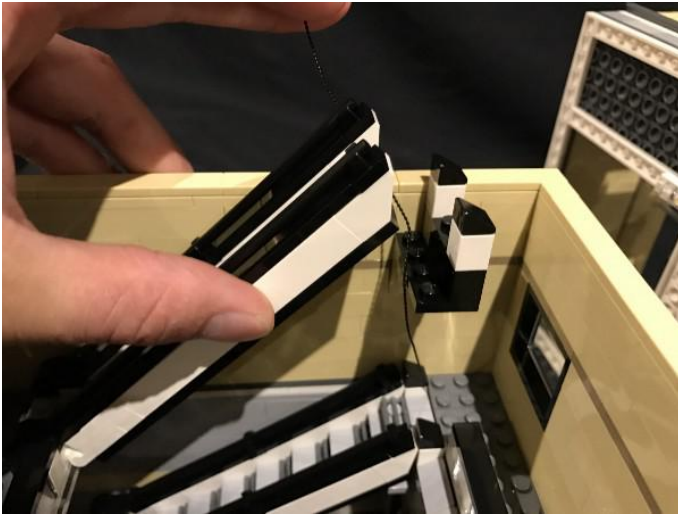
Connect the loose 15cm cable from striplight#1 into the right port of striplight#2



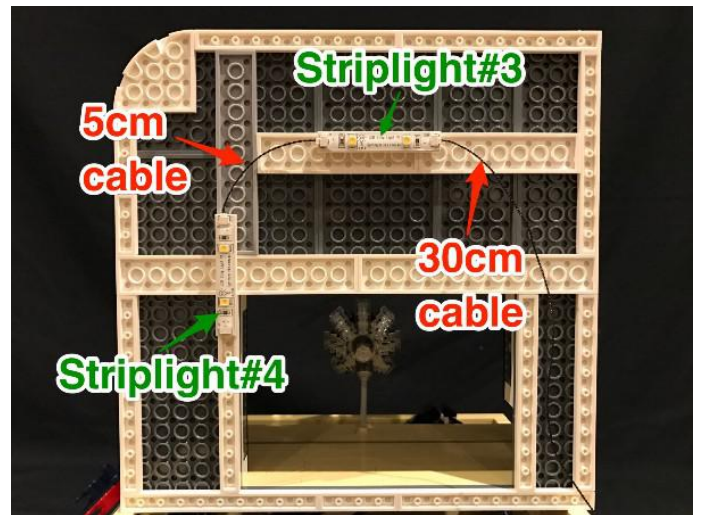
21.) Hide the 15cm cable underneath the white Lego plate and then thread the other end of the 30cm cable up to the next floor above. Connect back the second level and then pull up the 30cm cable from underneath.



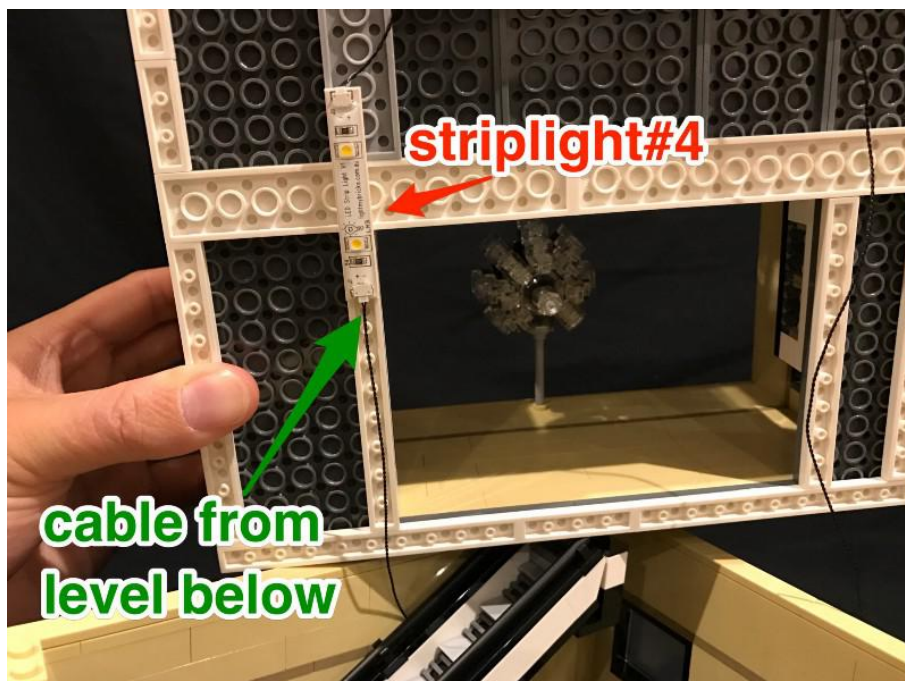
Secure this cable behind the escalator by first disconnecting the main section of the escalator and then threading the cable behind.



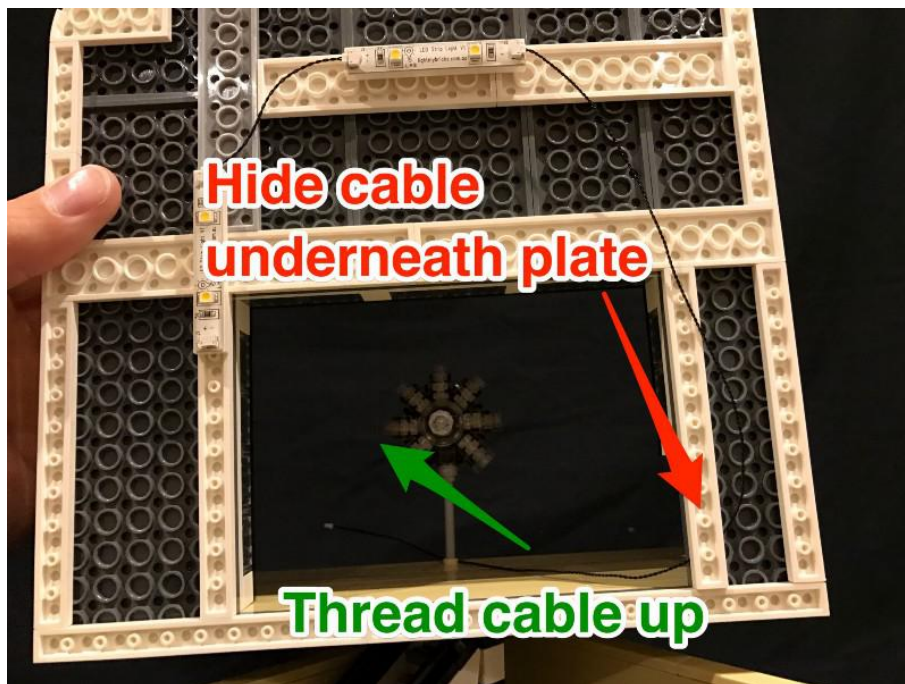
22.) Take the entire third level and then pop it onto its side. Take another two strip lights (striplight#3 and #4) and connect/stick them in the following positions. Connect a 5cm cable in between the strip lights and take a 30cm cable and connect it to the right port of striplight#3. All shown below.



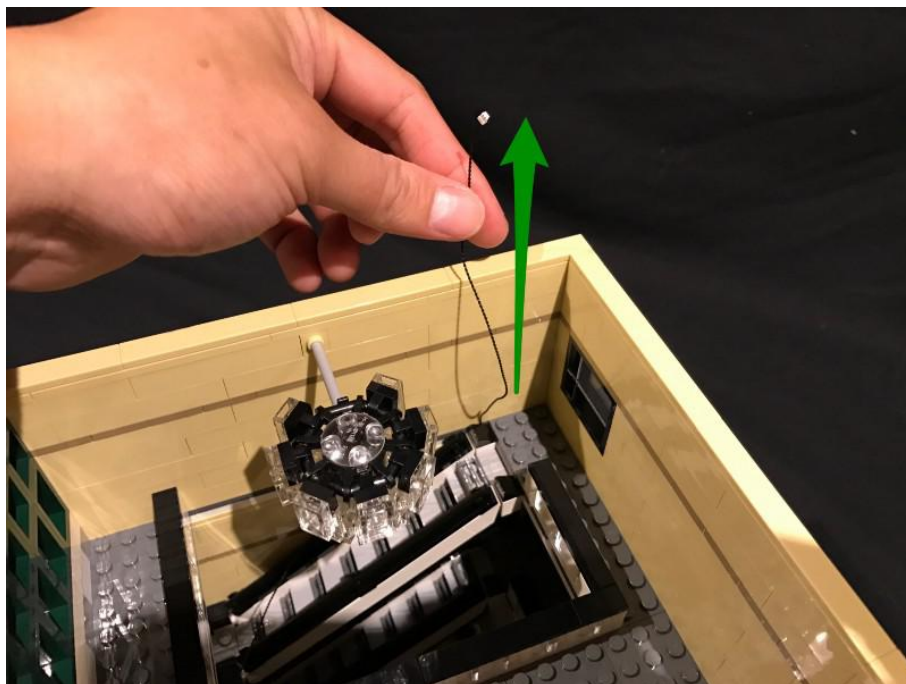
23.) Connect the loose cable from the level below into the spare port of striplight#4



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 to it. Turn on to verify all is working.

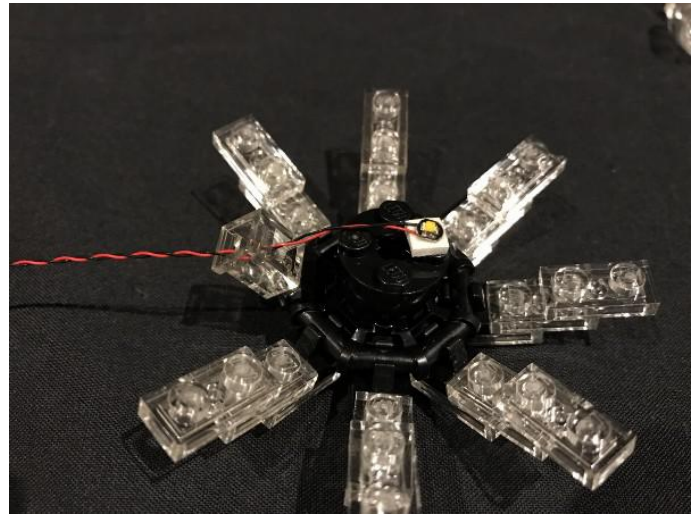
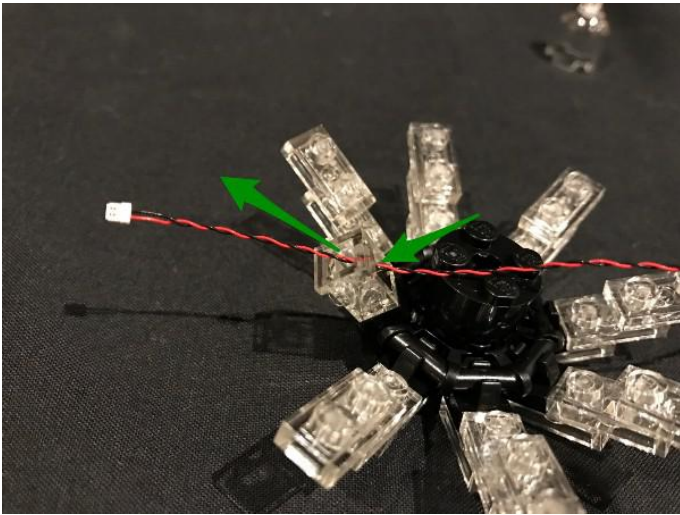


24.) We will now light up the chandelier. First disconnect it from the wall and then disconnect the centre piece by first pulling down the surrounding pieces.

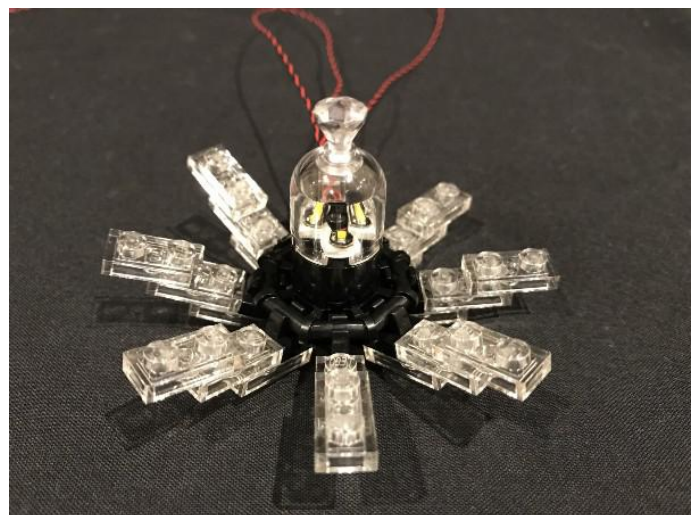
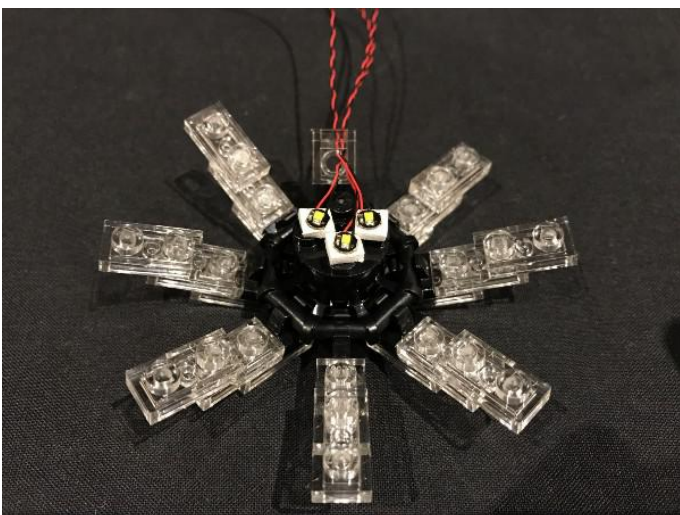
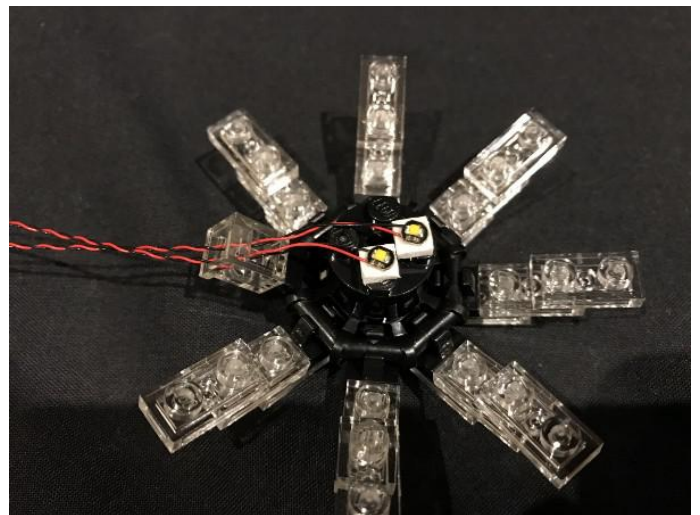
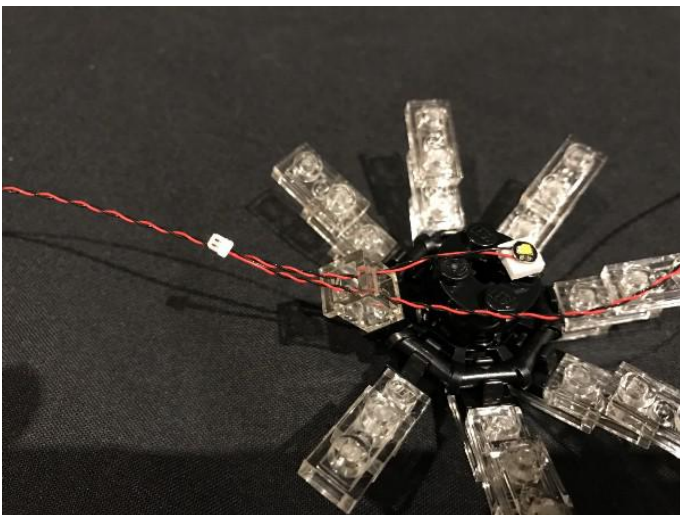


25.) Take a Dot Light and thread the connector end through the back of the Lego 1x1 trans brick and then out through the base of the brick. Pull it all the way through and then stick the Dot Light onto one

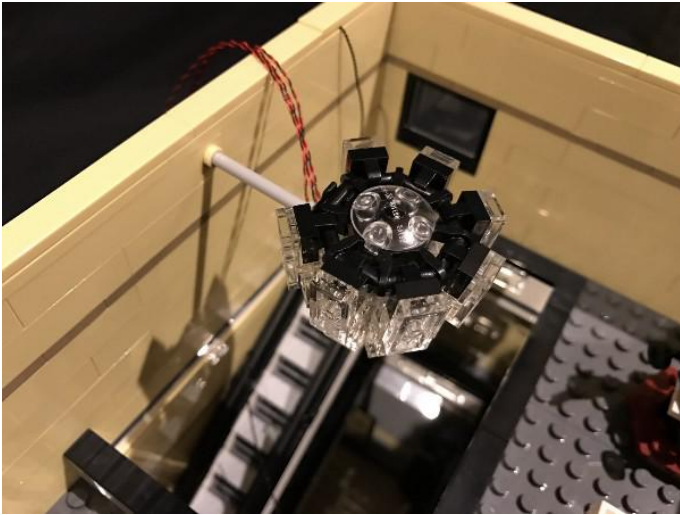
of the black studs (closest to the top middle) using an adhesive square.



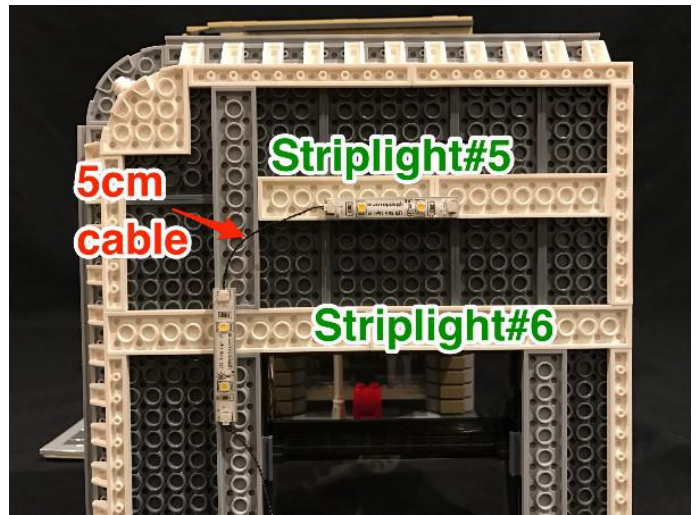
26.) Repeat this step for another 2 Dot Lights so that we have 3 Dot Lights stuck to the 3 black studs closest to the front of the chandelier. Then reconnect the centre piece we removed earlier.



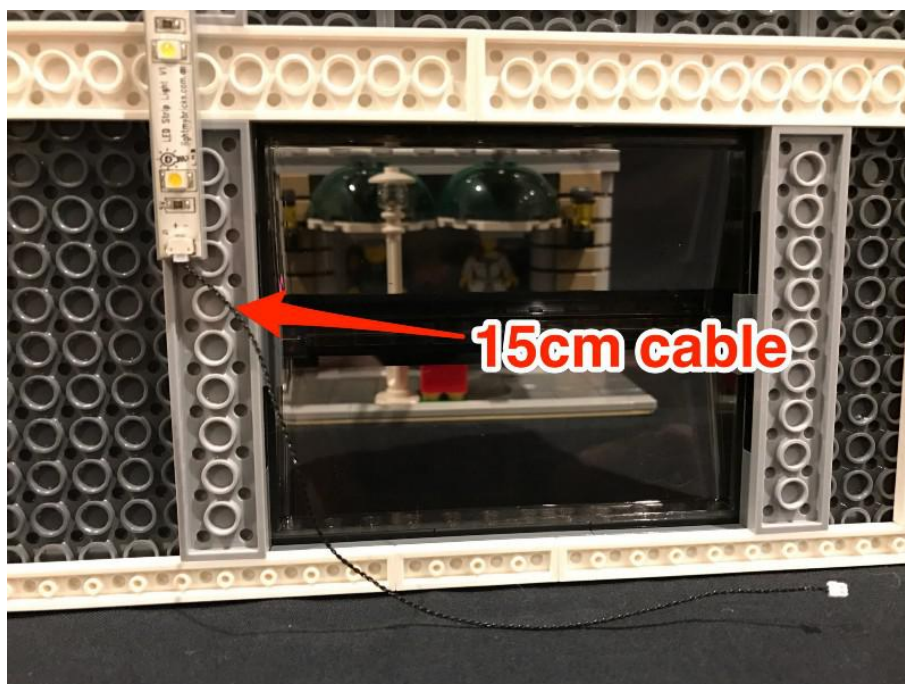
27.) Close up the surrounding pieces of the chandelier and then reconnect the chandelier back to the wall of the third floor. Wind the 3 cables around the grey pole as shown below. Leave the ends of the cables for now as we will connect them to an expansion board on the roof later.



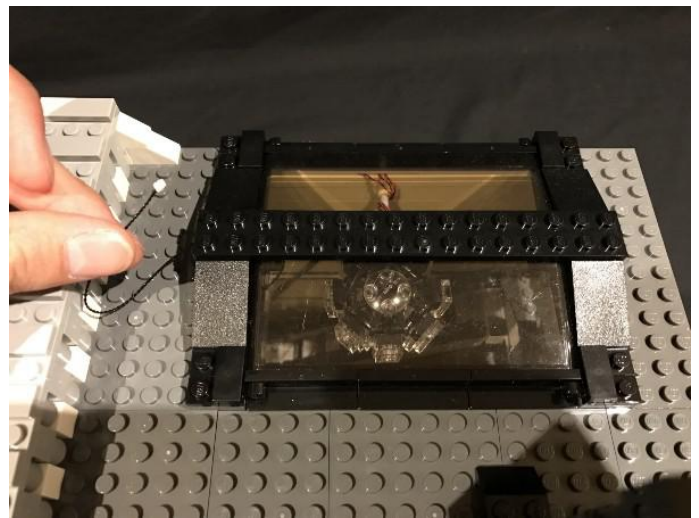
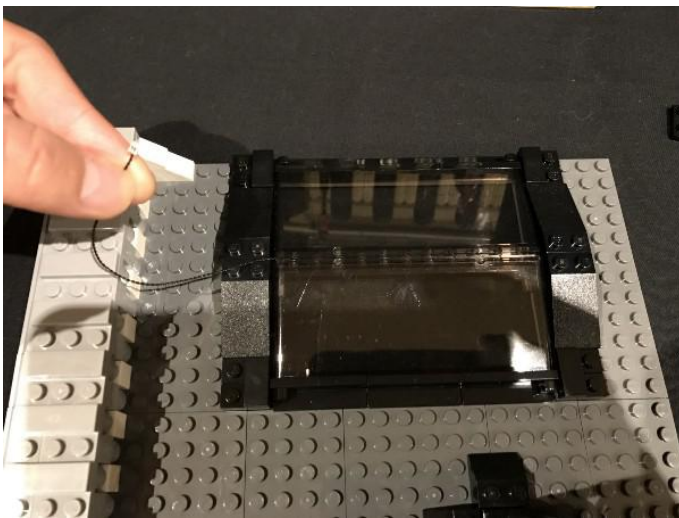
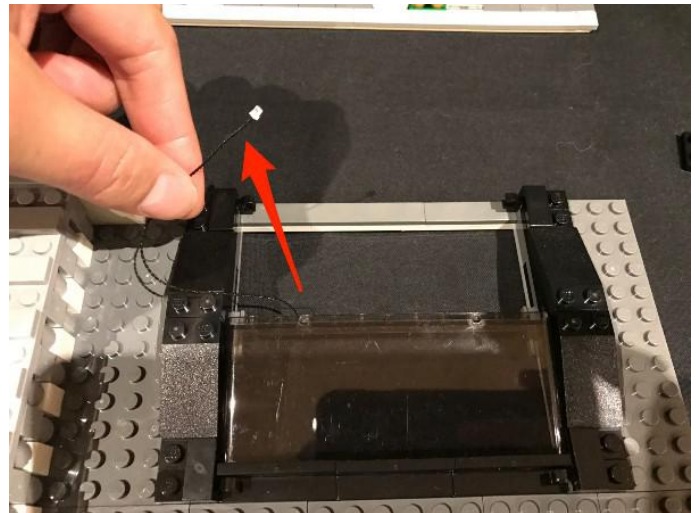
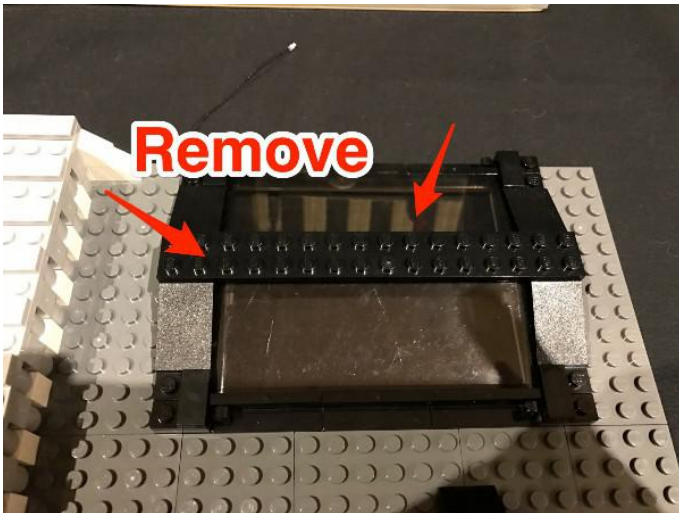
28.) Take the roof of the building and then connect/stick another two strip lights (striplight#5 and #6) underneath in the following positions. Take a 5cm cable and connect it between the two strip lights.



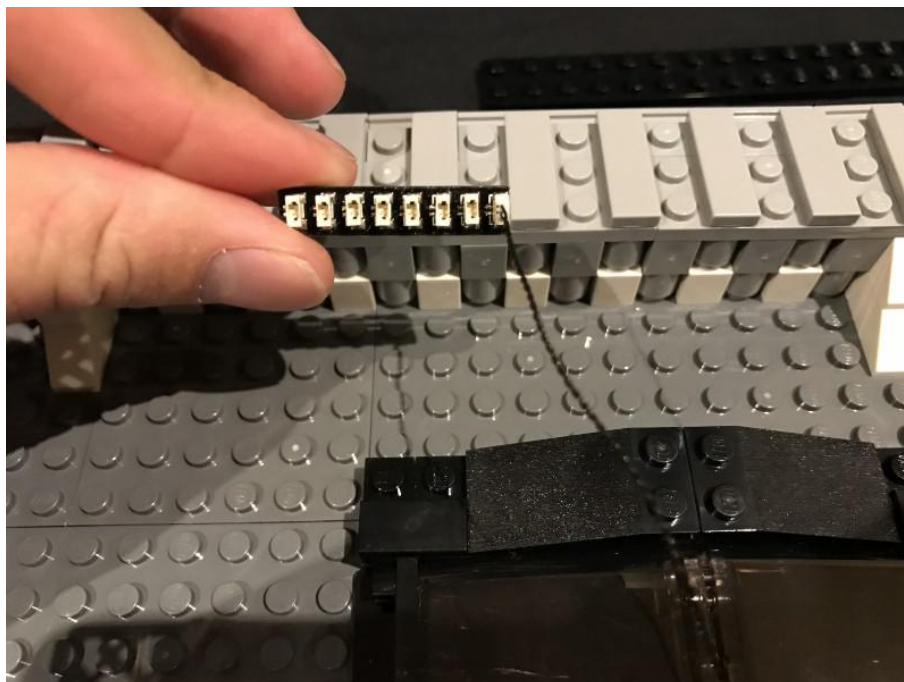
Connect a 15cm cable to the left port of striplight#6



29.) Flip the roof over and then disconnect the black 2x16 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.

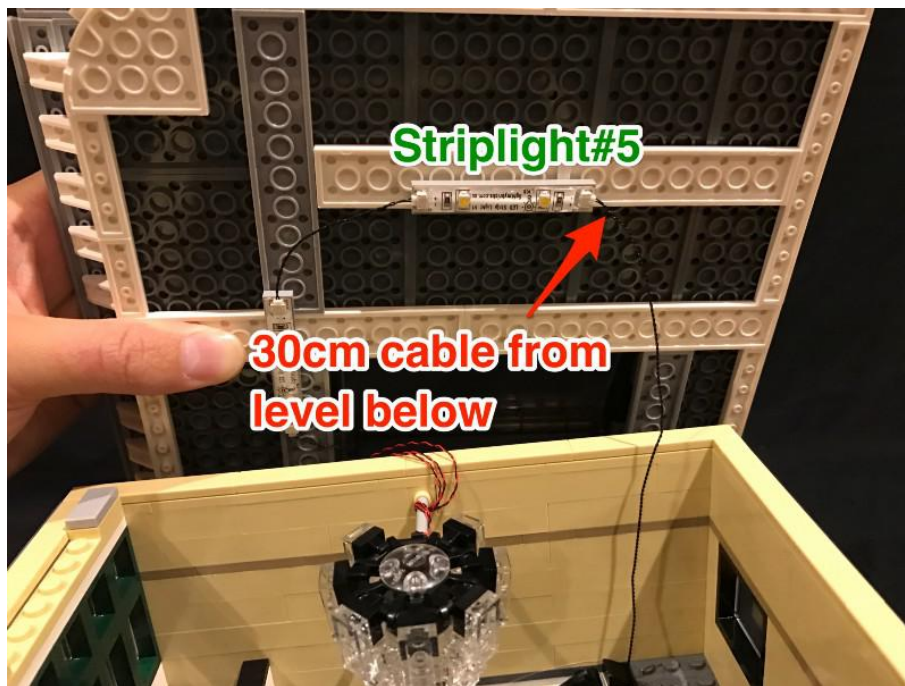


30.) Connect this cable into the first port of the 8-port expansion board

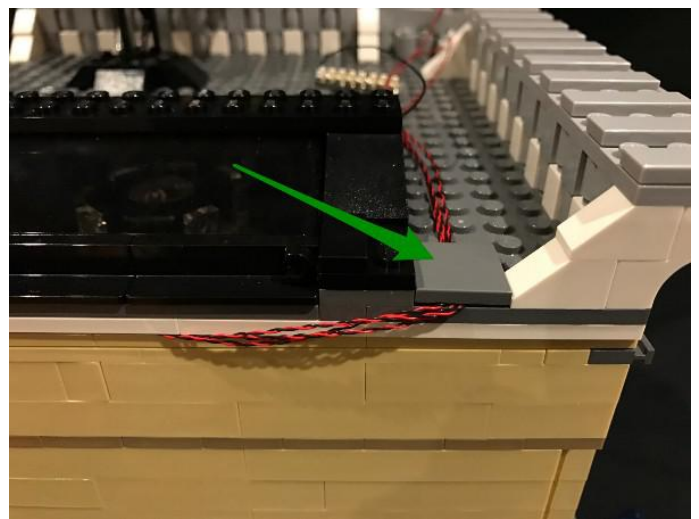
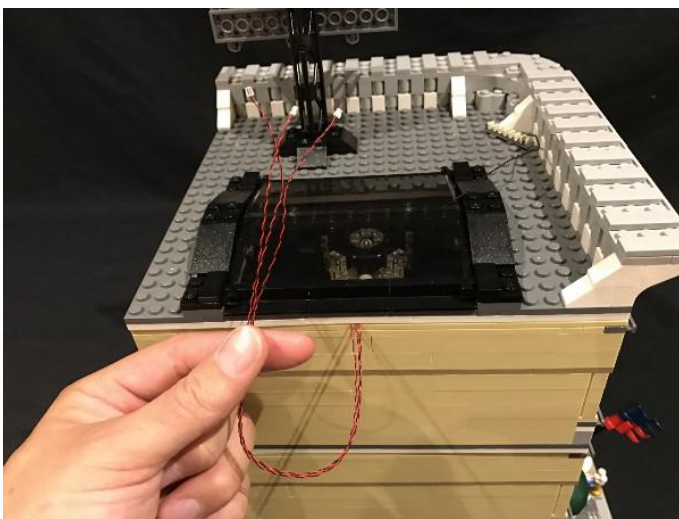


31.) Lift the roof up again and connect the other end of the the 30 cm cable from the level below to the

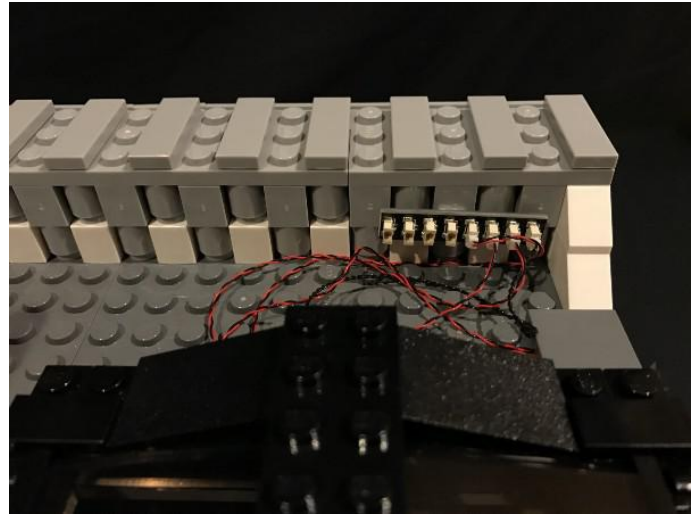
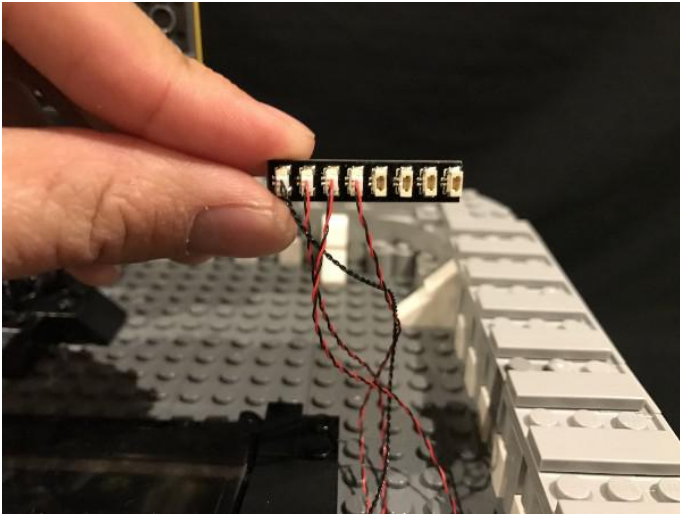
right port of striplight#5. Then reconnect the roof



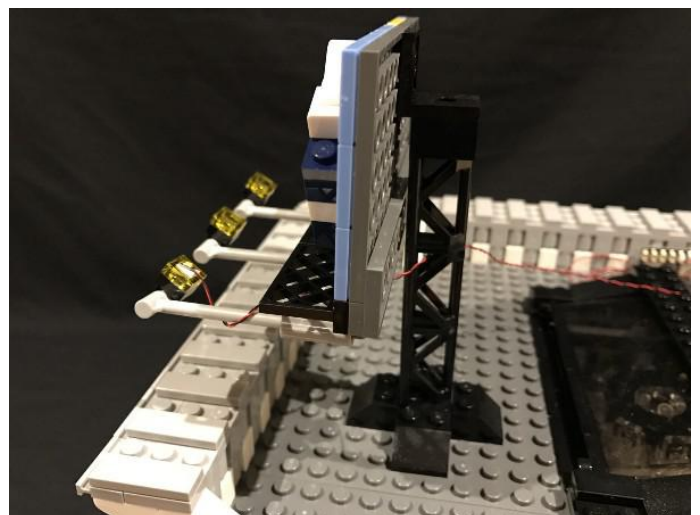
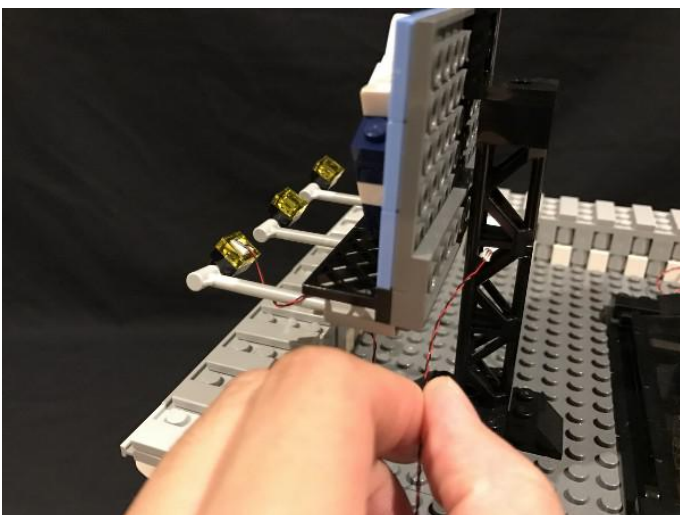
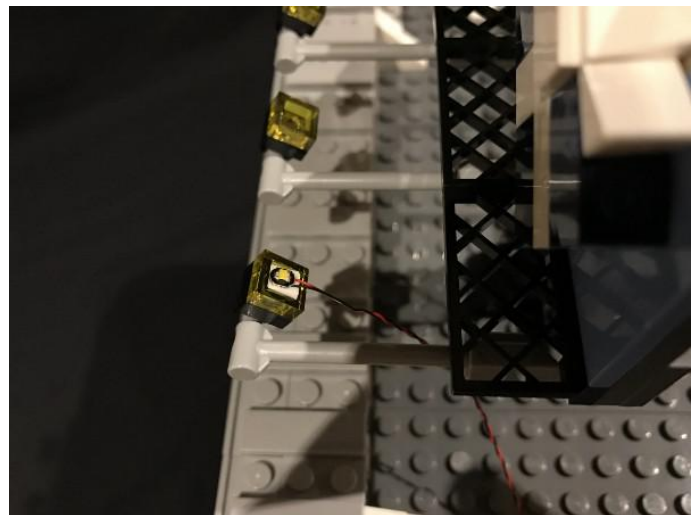
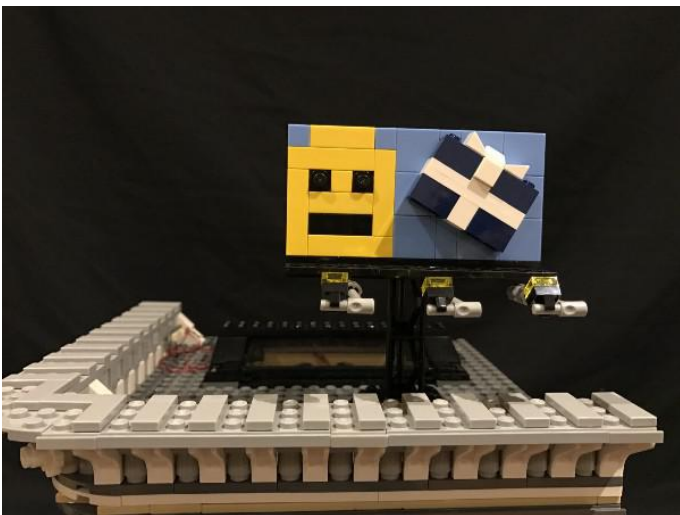
32.) Take the 3 cables from the chandelier and then pull them to the right and then up across the roof of the building. Lay them down neatly and secure them down using any spare Lego plate or brick you might have, ensuring the cables are in between the studs.



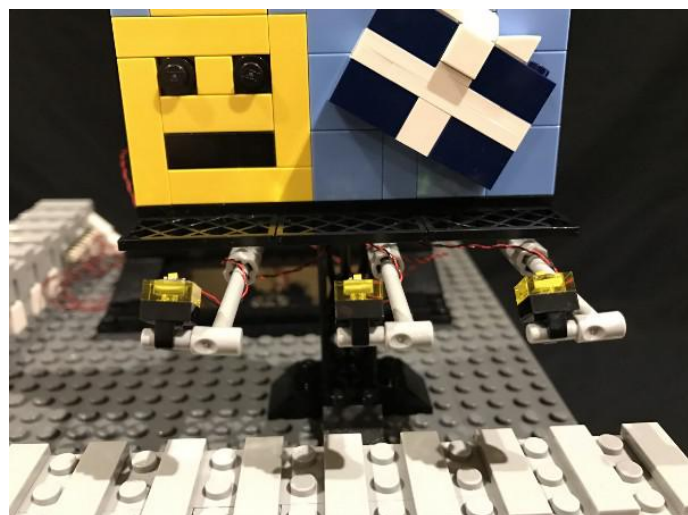
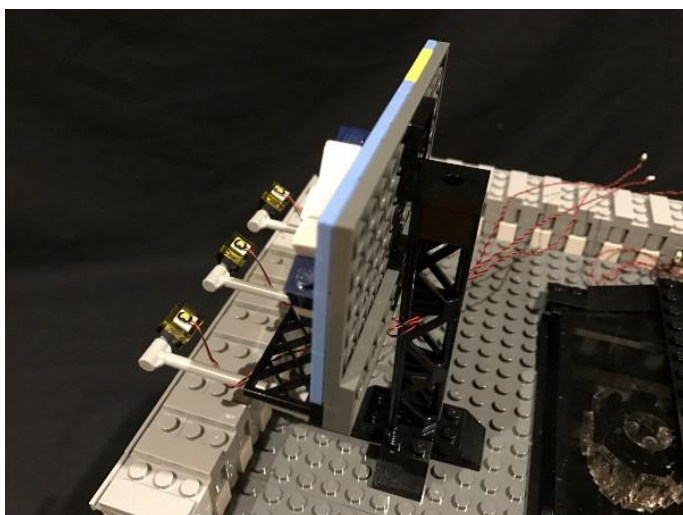
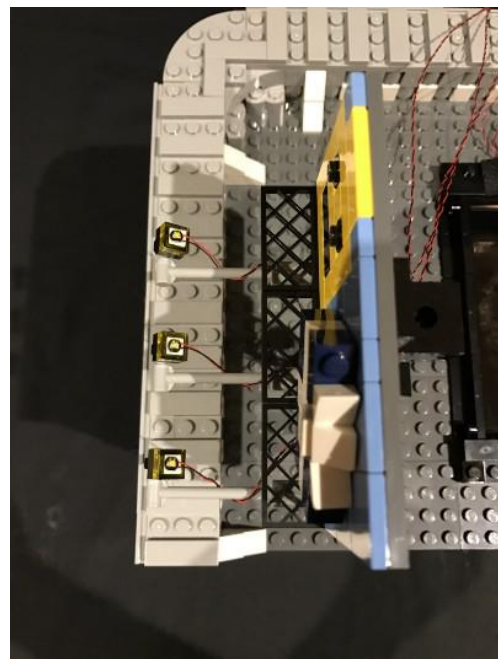
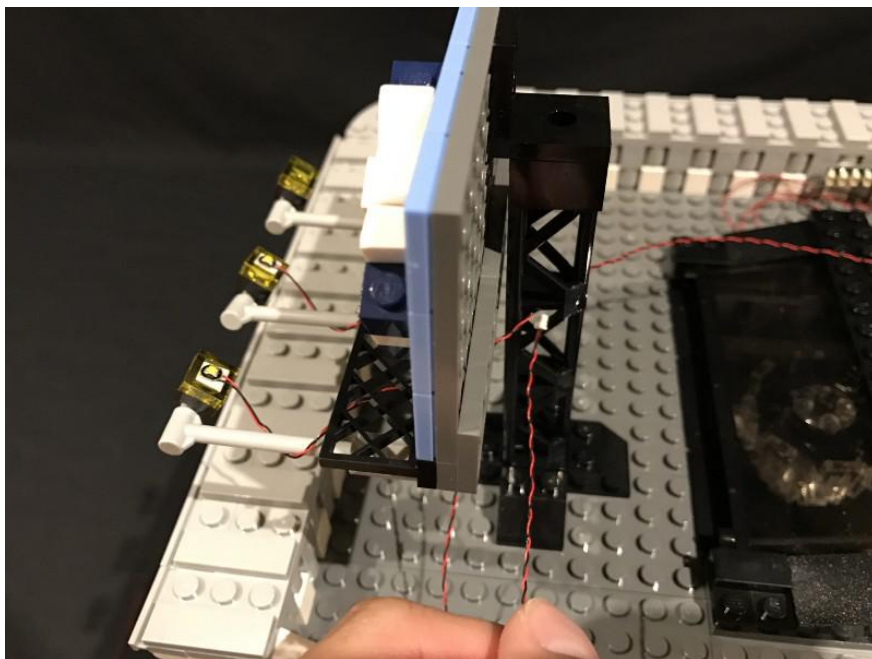
33.) Connect the cables from the chandelier to the next available ports on the 8-port expansion board and then secure the expansion board to the inside of the roof's edge using 2x self adhesive squares. Neatly lay the cables down below.



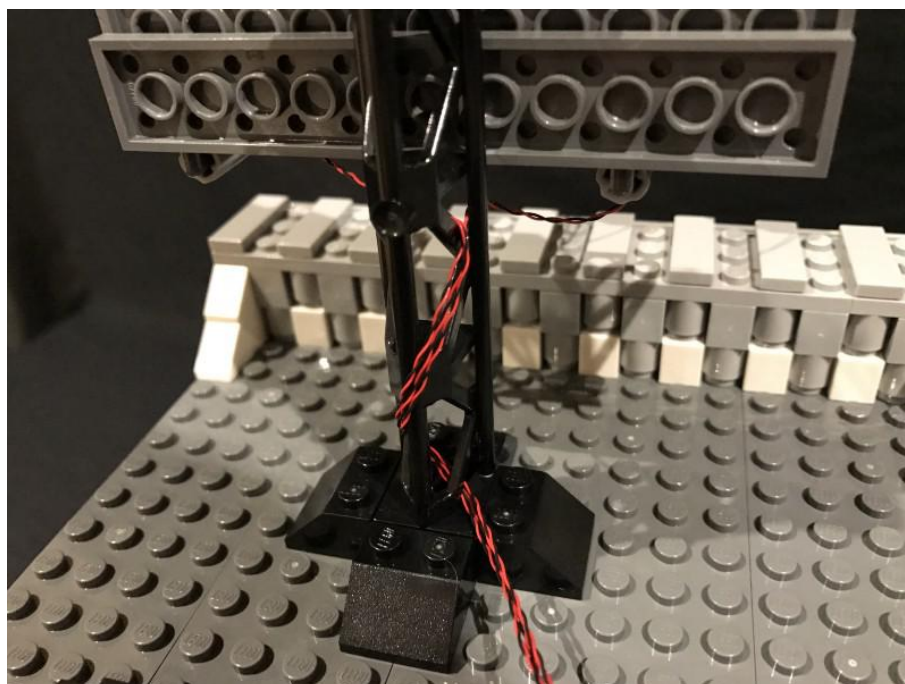
34.) We will now light up the Emporium billboard. Take one Dot Light and stick it to the inside of one of the light pieces using a self adhesive square. Then wind the cable around the light pole a few times before threading it behind into one of the black holes of the billboard base.



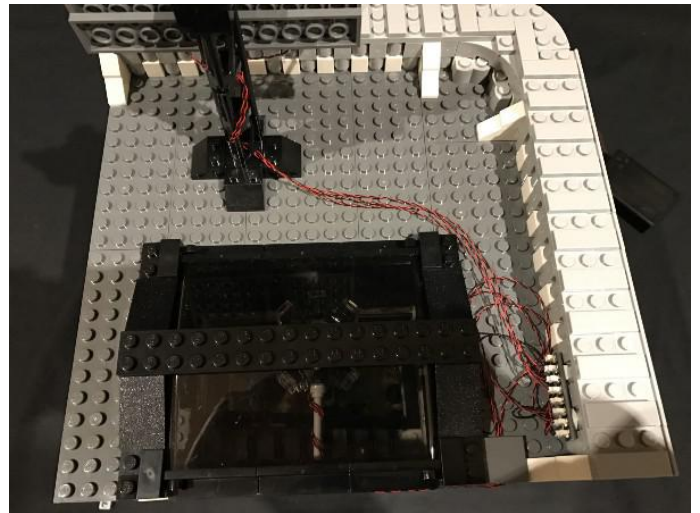
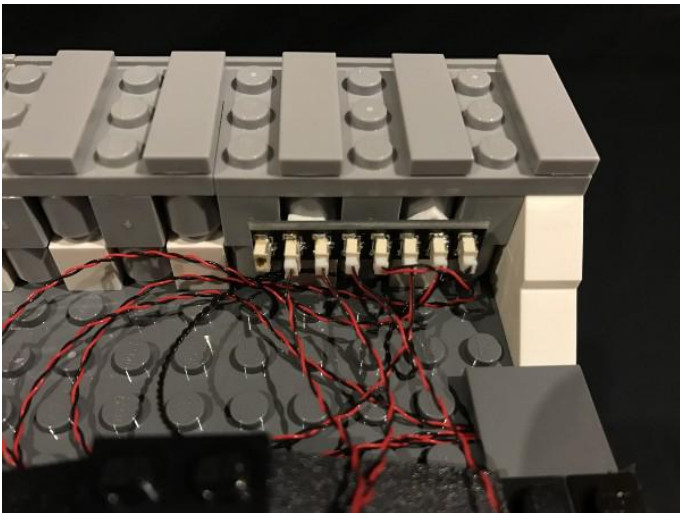
Repeat this step for another two Dot Lights so all 3 billboard lights are installed.



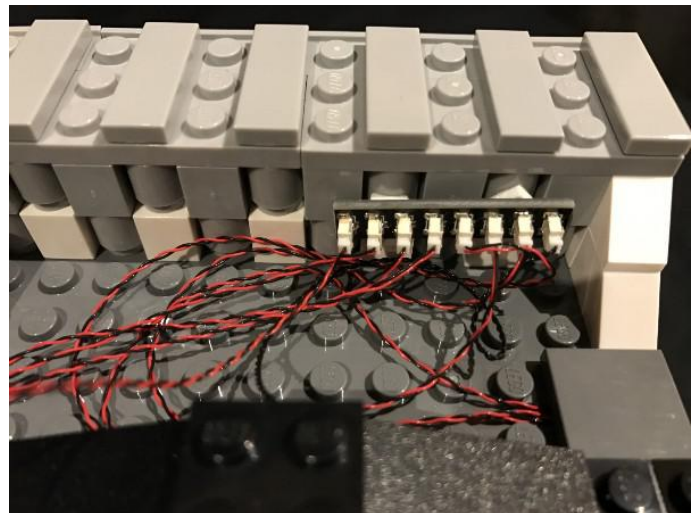
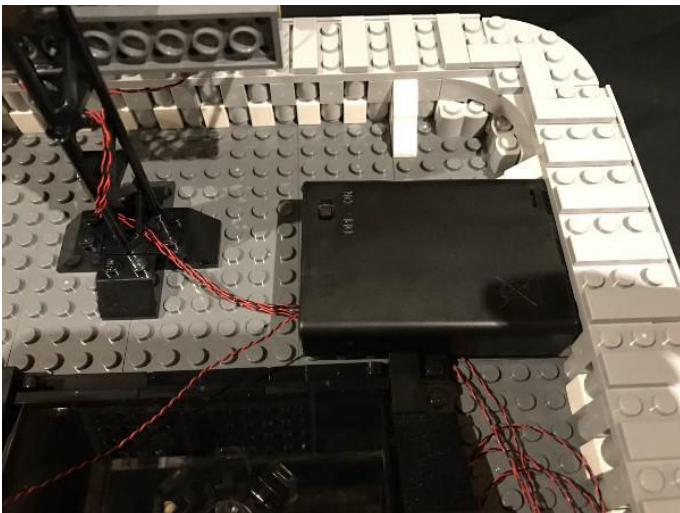
35.) Take the 3 cables and ensure they are wound and threaded around the billboard base as per below.



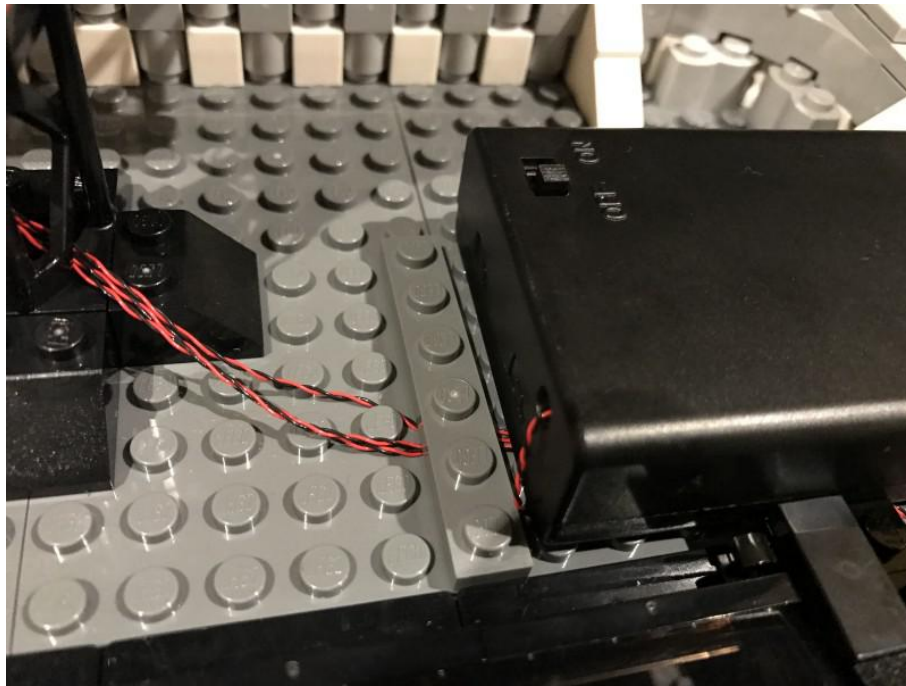
36.) Connect all three cables into the next available ports on the 8-port expansion board and then neatly lay the cables down as per below.



37.) Take the AA battery pack 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 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!



