



Connected emergency lighting system

Application guide

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FirstLink connected emergency lighting

The FirstLink system is a connected suite of code-required emergency lighting components that is controlled wirelessly via your smart device and the free FirstLink application. Through the FirstLink application, you will be able to schedule automated tests, retrieve test results, compile test results for reporting, initiate manual testing, and help ensure the continuous operation of your emergency lighting devices. FirstLink maximizes efficiency and minimizes the effort needed to complete code-required testing of the emergency egress lighting system.

Emergency lighting requirements

NFPA 101 outlines the key requirements for emergency lighting that are code-required. Emergency lighting must meet the following base requirements:

- Must provide an average of 1 foot-candle (10.8 lux), initially, along the entire path of egress at floor level.
- The minimum level of illumination along the path of egress is 0.1 foot-candle.
- Clear exit route visibility throughout path of egress.
- A maximum to minimum illumination ratio of no more than 40 to 1 (no overly bright or dark spots).
- Emergency lighting must provide 90 minutes of uninterrupted emergency illumination along the path of egress.
- Illumination levels are permitted to decline to not less than an average of 0.6 foot-candles (6.5 lux) and at any point, not less than 0.06 foot-candles (0.65 lux) at the end of the 90-minute discharge.
- Emergency lighting must be provided in stairs, aisles, corridors, and passageways leading to exits.
- Emergency exit signage must be illuminated and visible from all directions leading to exit.
- Emergency lighting system must be tested for 30 seconds monthly, and 90 minutes annually to maintain code compliance.
- Please refer to NFPA for detailed emergency lighting requirements prior to planning or installation of emergency system.



NOTE: This guide does not cover the design of your emergency lighting system. It is assumed that your system meets the emergency lighting illumination requirements of NFPA 101.

The FirstLink advantage

Automated code-compliant testing

FirstLink allows you to easily, via a smart device, schedule the exact dates and times you would like emergency testing to take place. Scheduled test times and dates can be changed as necessary, providing complete control of your emergency lighting system.

Want to run a test today? Through the intuitive app on your device, you can run a test on a specific fixture, multiple fixtures, or entire rooms with a simple tap.

Simplified test reporting

Traditionally, test reporting required a person to check each emergency lighting device and manually run a test. Upon completion, they would then have to create a record of those test results.

FirstLink simplifies this process to just 1-2 steps. Once your FirstLink devices perform their automated testing, open the FirstLink app to download a full report. This report can be quickly exported to a spreadsheet for simplified reporting.

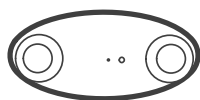
Reduced compliance costs

Time is money and the process of manually testing and recording test results can take hours.

With FirstLink, code compliance couldn't be easier. If you've already scheduled testing, simply open the app on your device to download and export test results. If you want to run the test today, simply select what you'd like to test and export the test results. Code compliance made easy!

Industry-leading features

We drive innovation, and we deliver that innovation to you with FirstLink. Our connected stand-alone suite of products has class-leading engineering behind it, and incredibly useful features including ABConnect and more.



FirstLink system components



Emergency LED drivers

Emergency LED drivers are installed inside of LED luminaires. When power is lost, these emergency drivers use their internal battery to provide power directly to the luminaire's existing LED arrays.



Unit equipment

Unit equipment (sometimes referred to as "bug-eyes") can be installed on a wall or ceiling, and provide light in an area through their integral LEDs, using a battery included inside the equipment.



Exit signs

Exit signs are fundamental components of an emergency egress system, indicating which doors are to be used in an emergency. The sign is illuminated when normal power is present. When normal power is lost, the internal battery takes over and ensures the sign remains illuminated.



Combo exit signs

Combining the benefits of exit signs and unit equipment, these signs point the way to the exit when power is present. When power is lost, the sign remains illuminated AND the integral LED lamps provide general path of egress illumination.



Emergency lighting kits

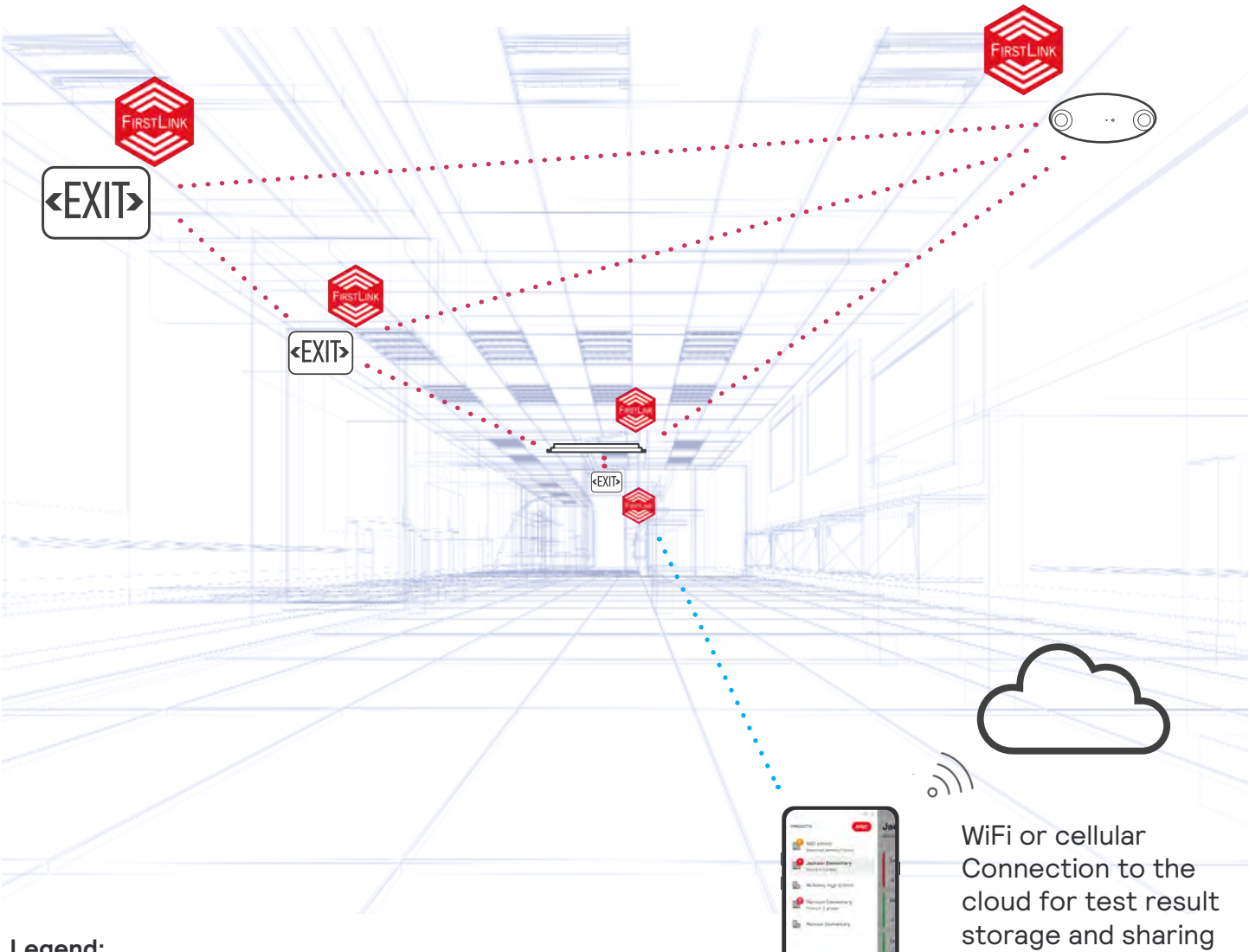
Emergency light kits (or retrofit kits) provide everything you need to add invisible, efficient, code compliant LED emergency lighting to most any luminaire, regardless of the luminaire's light source. When power is lost, the kit's emergency LED driver provides emergency power directly to the kit's included LED module.

See product spec sheets and product installation instructions for complete details on the various FirstLink offering.


The FirstLink network

The FirstLink system is a “stand-alone” system, which means the system requires no gateway or master controller and is completely independent of other lighting and building automation systems. System setup, control, and maintenance is accomplished simply through the FirstLink application installed on a smart device.


When in use, the FirstLink application opens a Bluetooth Low Energy (BLE) connection between the smart device and the nearest FirstLink product (typically).




Legend:




FirstLink node contained within light



Zigbee Connection



Bluetooth Connection



WiFi or Cellular Connection

The FirstLink network

FirstLink nodes are the means by which FirstLink emergency lighting devices are networked. The FirstLink node is embedded into some products (like the exit, combo exit, and unit equipment) and is provided separately with products like the emergency drivers for flexibility in placement, in order to optimize wireless communication range.



The FirstLink nodes create a Zigbee mesh network which allows all of your FirstLink emergency lighting devices to connect to one another for seamless access to your FirstLink system for testing and reporting.

FirstLink allows you to pull data from all emergency lighting devices in a building as long as each light is within range of the other. Once your smart device connects to the system, via Bluetooth, you can then pull data from the entire group of lights in range.

Network Range:

- FirstLink node to FirstLink node (Zigbee) – 40' typical, up to 80' line of sight
- Smart device to FirstLink node (Bluetooth) – 40' typical, up to 80' line of sight

NOTES:

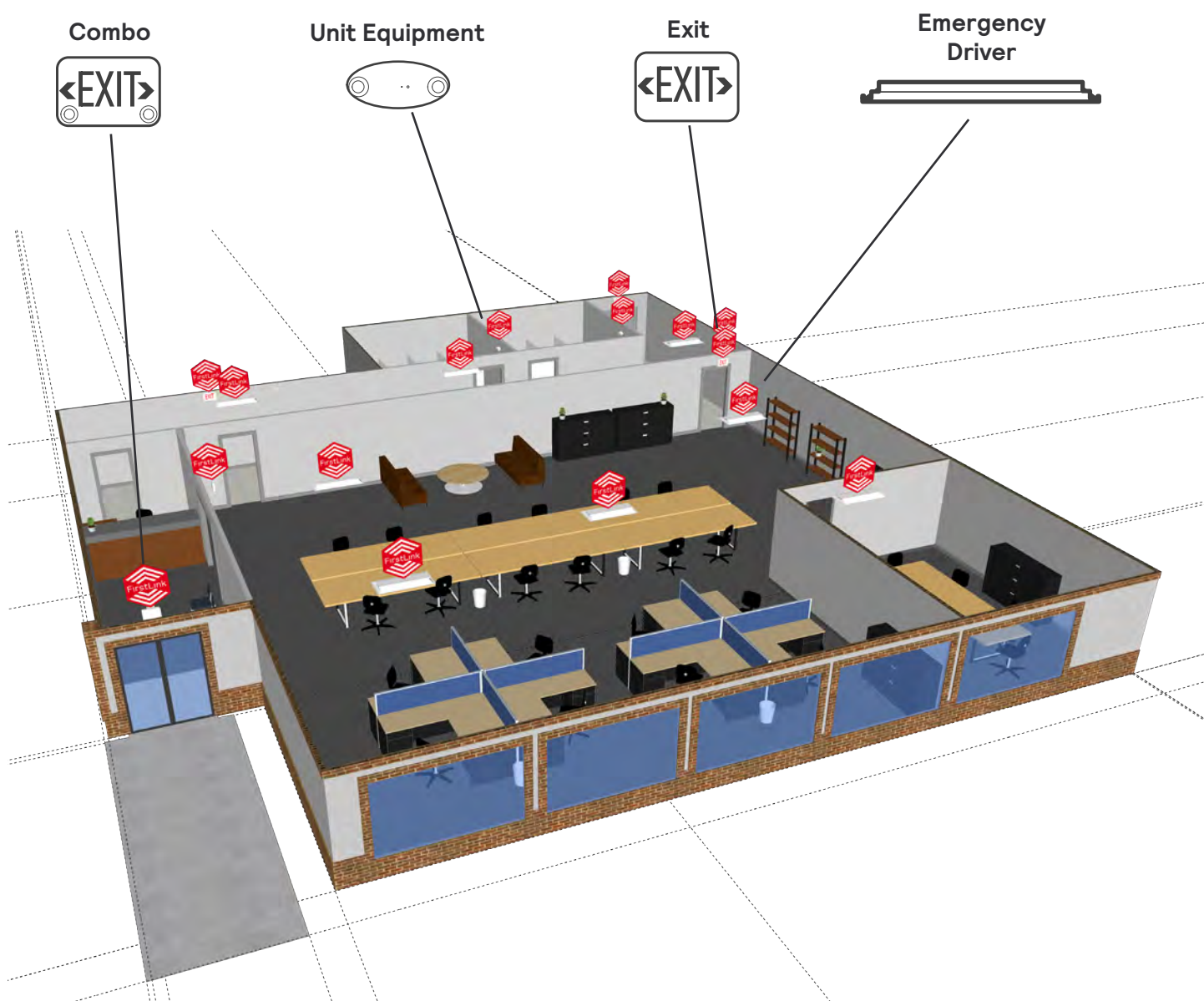
Wireless range can be influenced by many factors. For example, network signal strength may be reduced when passing through obstructions, such as walls, ceilings and floors or when in close proximity to metal surfaces.

The FirstLink node should never be completely enclosed in metal.

FirstLink system installation example

The FirstLink line of products offers tremendous versatility and flexibility in a building's emergency lighting design.

In this example, we have a mix of emergency LED drivers, unit equipment ("bug eyes"), exit signs and combo exit signs. These products provide emergency lighting coverage for the rooms and hallways and clearly define the exit pathways from the building.



Quick Install Process

System quick install process

Introduction

Welcome to your FirstLink connected emergency lighting system!

This guide will walk you through the incredibly easy and intuitive process of setting up your FirstLink system, including step by step instructions on setting up your account, creating and setting up your first project, commissioning, test scheduling, and testing.

If viewing this document digitally, there are links available throughout for fast and easy access to the information you need.

If you run into any issues or need any help with your installation, we are always here for you! Please call us at **+1 (888) 263-4638, option 2**, or email us at **FirstLink@signify.com**.

System quick install process

Before you get started

Read through these instructions and plan your installation. Though the FirstLink system is flexible and can be modified as needed by the installer, a good plan prior to installation will greatly simplify the process of commissioning your system using the FirstLink application.

Important notes

- These devices comply with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.
- Make sure the FirstLink communication node Zigbee/Bluetooth antenna is not covered by metal for proper RF communication.
- Once a light has been added to a project, it will no longer be detectable by the “add light” function. To move a light between projects or groups, it must first be “decommissioned” (i.e. removed from the group or project to which it belongs). Moving between zones can be done without decommissioning.
- A light can store a maximum of 6 test results. If the data isn’t downloaded, by connecting the app to the network and downloading the results, and 6 test results have accumulated in the light, the oldest test result will be overwritten with the newest. Once results are downloaded to the device, they are stored and can always be retrieved.
- Maximum number of nodes
 - Per Project: 500 (recommended max)
 - Per Group: 120
 - Per Zone: 120
- Maximum number of zones per group: 15

Security

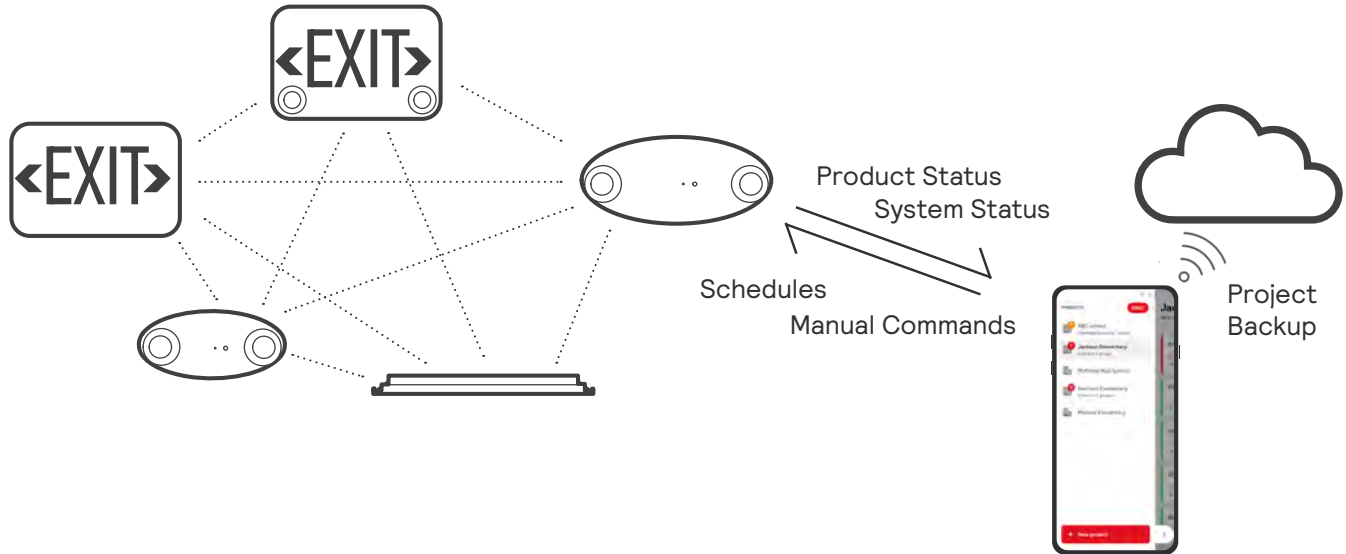
- FirstLink lights start out with open interfaces.
- Communication becomes encrypted with secret keys upon commissioning of lights into a project.
- Once commissioned, the FirstLink lights will only be visible for users that claimed it first.

System quick install process

Installation overview

Step-by-step installation overview:

1. Hardware installation
2. Download and install the application
3. Create an account and login
4. Create your first project
5. Add groups to your project
6. Search for and add lights to group
7. Creating zones (optional)
8. Running your first emergency test
9. Downloading test results
10. Exporting test report
11. Test scheduling and manual testing procedure
12. Sharing/Exporting projects



System quick install process

Hardware installation and safety information

Before beginning the step-by-step Quick Install Guide, the FirstLink hardware must first be installed and connected to AC power. Please follow the cautions and installation process outlined in each hardware component's installation instructions.

We are here to help! If you run in to any issues with installation or have any questions, please give us a call at **+1 (888) 263-4638, option 2** or email us at **Firstlink@signify.com**.

! WARNING !

WHEN USING ELECTRICAL EQUIPMENT, ALWAYS FOLLOW BASIC SAFETY PRECAUTIONS

Read and follow all safety precautions given here and included with the products. Failure to do so can result in personal injury, death, and can cause property damage. These products should only be installed and maintained by individuals qualified to do so.

- These products are intended to provide emergency lighting for a minimum of 90 minutes, in compliance with NFPA 101 and NEC 700.12.
- Make sure all connections are in accordance with the National Electrical Code and any local regulations.
- To reduce the risk of electric shock, disconnect both normal and emergency power supplies before installation.
- Install product in ambient temperatures and environments compliant with their ratings. Failure to do so could negatively impact product performance or possibly result in product failure. These products are suitable for use in dry and damp locations (as defined in NEC article 100). Products are not suitable for heated air outlets and wet or hazardous locations.
- An unswitched AC power source is required (120-277 VAC, 50/60 Hz).
- Do not install near gas or electric heaters.
- Do not attempt to service the battery. A sealed, no-maintenance battery is used that is not field replaceable. Contact the manufacturer for information on service.
- The use of accessory equipment not recommended by the manufacturer may cause an unsafe condition.
- Do not use this product for other than intended use.
- Installation should be performed by qualified service personnel.
- Equipment should be mounted in locations and at heights where it will not be subjected to tampering by unauthorized personnel.

Communication node warnings

- FirstLink communication node to be used only with FirstLink drivers, exit signs, and unit equipment.
- Do not apply mains power directly to the node.
- Do not cover the node during operation or mount the node internal to the luminaire.
- Make sure the node is protected from damage during shipment and handling.
- FirstLink communication nodes are designed for typical dry and damp environments (offices, conference rooms, classrooms, corridors, etc.), in normally heated and ventilated areas. FirstLink communication nodes have no protection against aggressive chemicals or water.

Once all hardware is installed and AC power is applied, commissioning of the FirstLink system continues in the FirstLink application (app). Open the FirstLink app on your smart device and follow the remaining steps.

System quick install process

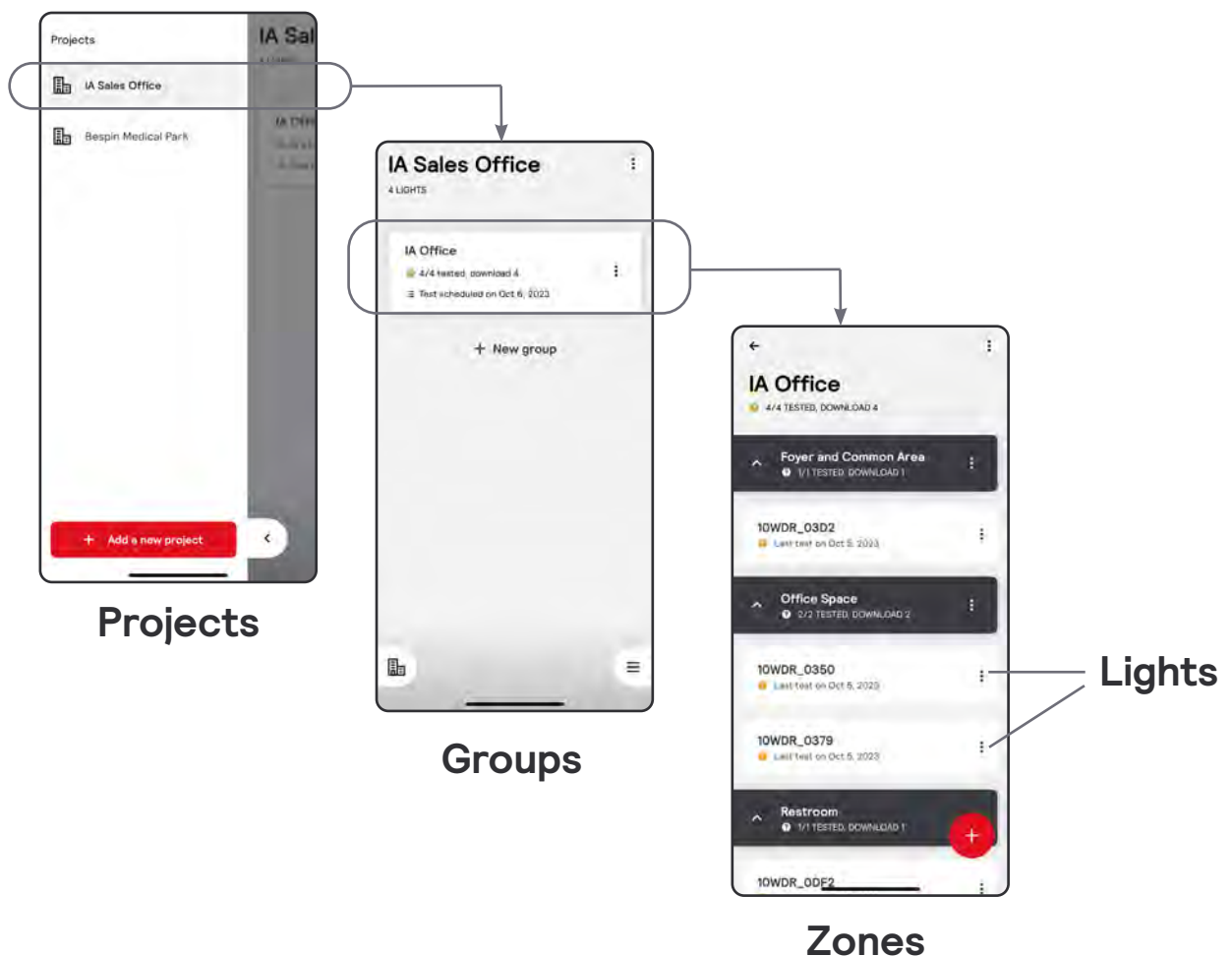
Project structure overview

Before we begin the login and setup process, it is important to understand the way the FirstLink app defines the hierarchy of projects, groups, zones, and lights.

Organizing your project in advance will help to simplify your installation process. See the FirstLink commissioning structure below:

Project
- **Group**
- **Zone**
- **Light**

Projects, Groups, Zones and Lights.



System quick install process

Project structure overview

Projects are tested and data is downloaded at the group level. For simplicity, it is recommended that you keep the number of groups to a minimum, so long as the number of lights can be accommodated (120 lights per group limit). However, there is no impact to the performance of the system if more than one group is needed. You may add extra groups as you feel is necessary to keep your project organized, per your preference.

Zones are optional and can be applied in order to better organize your project's lights and make them easier to setup and manage. However, their use is completely optional and does not affect the operation of the FirstLink system.

Project
- **Group**
- **Zone**
- **Light**

Two example projects:

Project 1 is typical of a small office or restaurant installation. One group can easily cover the number of lights and the communication range is more than sufficient for all lights in the group to communicate with each other.

IA Sales Office
 IA Office
 Foyer and Common Area
 Light A
 Light B
 Office Space
 Light C
 Light D
 Restroom
 Light E

Project 2 is a larger installation, where multiple buildings are covered by the FirstLink system. In this installation, individual reports were desired for each building so multiple groups were used.

Bespin Medical Park
 Building A
 Hallways
 Light A
 Light B
 Light C
 Conference Room
 Light D
 Exam Room 1
 Light E
 Exam Room 2
 Light F
 Building B
 Hallways
 Light G
 Light H
 Operating Room
 Light J
 Patient Room 1
 Light K
 Patient Room 2
 Light L

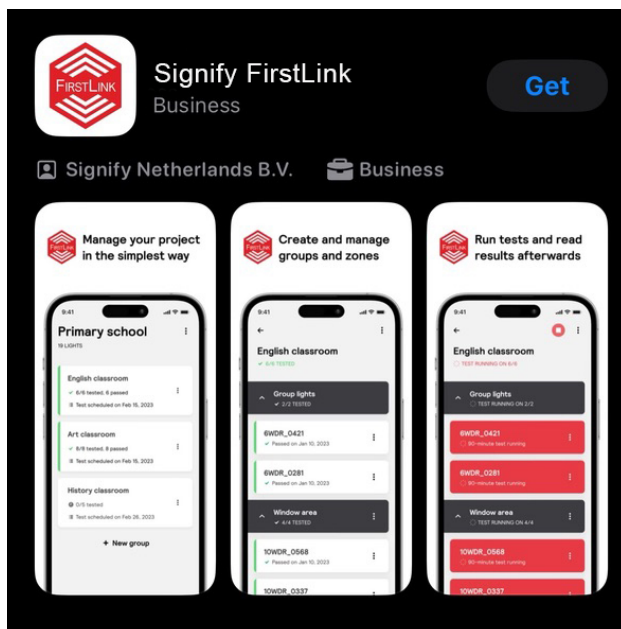
System quick install process

FirstLink application installation

The FirstLink app for the Apple iPhone and Android Devices is the control center for your FirstLink system. From this incredibly intuitive app, you will be able to:

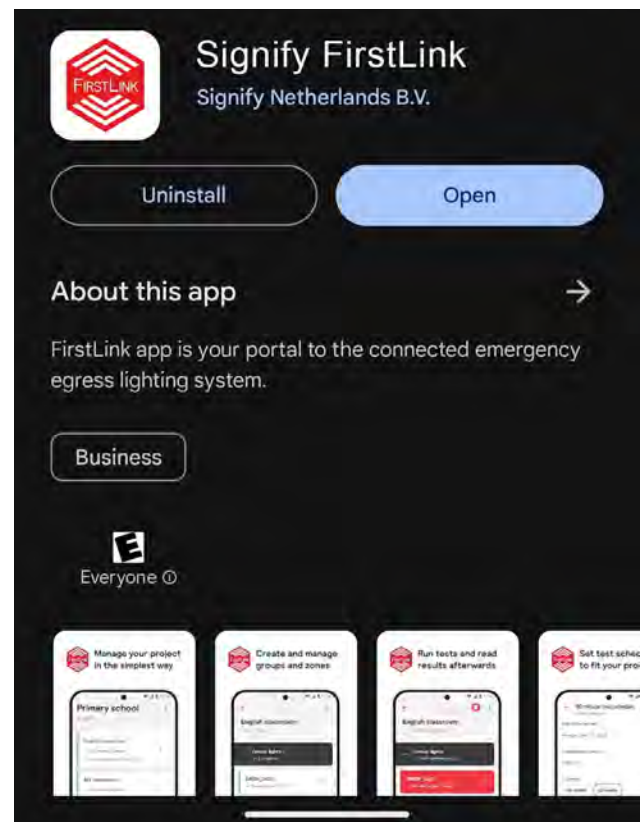
- Identify hardware
- Configure the system
- View test results
- Create reports
- Export and share reports
- Change testing schedules
- Manually start a test
- Share projects with other users
- Backup project data to the cloud
- Upgrade communication node firmware
- Share access to projects

To begin your FirstLink setup, install the FirstLink application by going to the Apple App Store or Google Play Store and search for **Signify FirstLink**.



FirstLink App System Requirements:

- Apple iOS version 16.0 or newer
- Android OS version 11 or newer
- Bluetooth 5.0 or newer



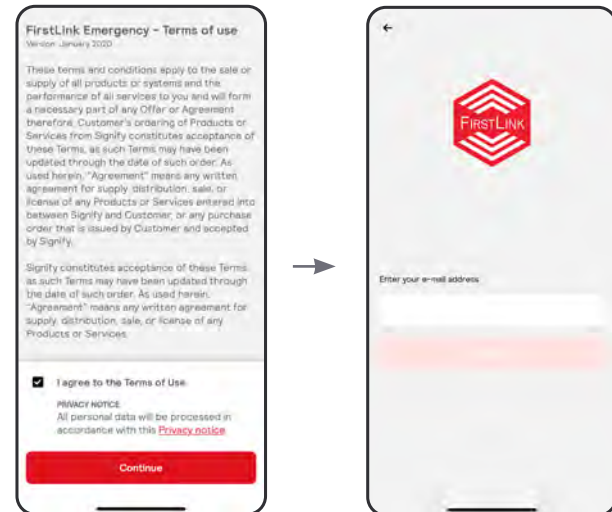
System quick install process

Creating an account and logging in

To begin using the FirstLink app, you will need to create an account. This account will be linked to your profile and projects.

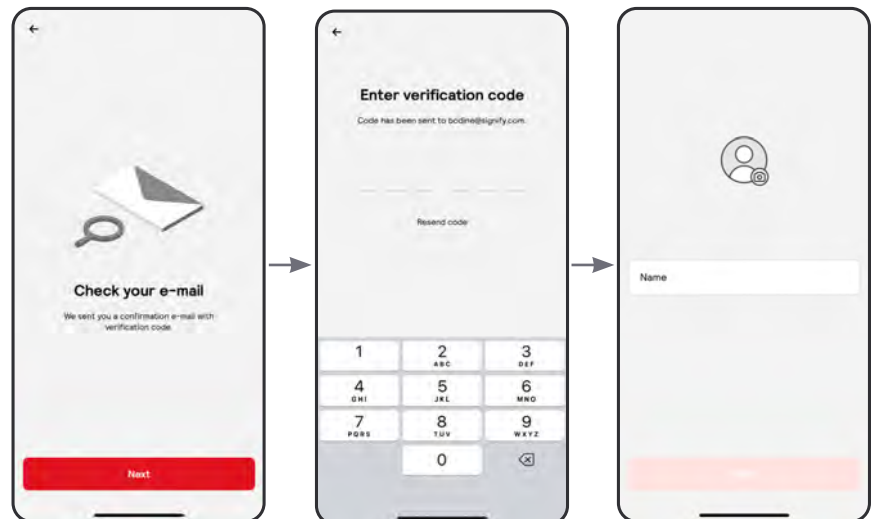
When first opening the app, you will be presented with the terms of service. Please read, check the box if you agree to these terms, and click the red “Continue” button.

Then, enter your email address into the field, and select the “Next” button.



FirstLink will send a 6-digit verification code to your email. Once you have the 6-digit code, select “Next” to continue and enter the code on the following screen.

Finally, enter your name into the entry box and select the “Next” button to continue.



For future logins, you need to only select your account from the list.

NOTE:

- A stable internet connection is required to register, login, or sync data to the FirstLink cloud.
- Please ensure Bluetooth is activated on the smart device being used. If prompted by your device, please allow FirstLink to access Bluetooth communications.
- If you use the FirstLink app on different devices with the same user account (email address), you will need to re-login every time you switch devices and start the app.

System quick install process

Creating a project

When logging into the app for the first time, the app will automatically launch the project creation screen.

Type in the name of your project in the “Project name” field.

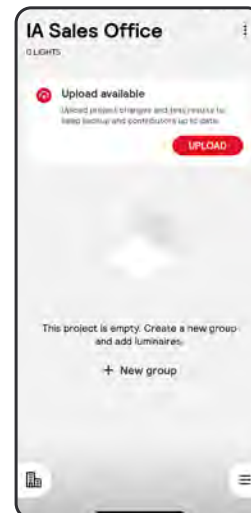
Type in the project address in the appropriate fields.

When done, click the red “Create” button found on the bottom of the page.



Congratulations! You’ve begun your first project. You are now in your first project’s home screen.

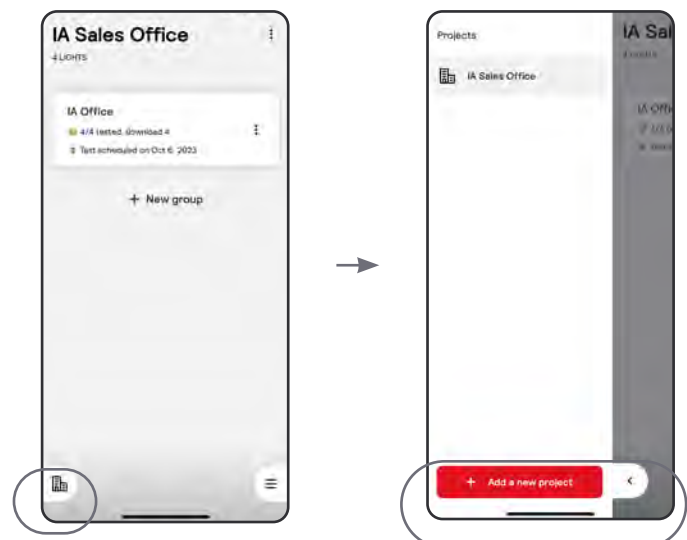
Now, follow the directions on the next page to add at least one group and to begin adding lights to the group.



When first created, you will be reminded to upload your project. Clicking “UPLOAD” will sync your project with the FirstLink cloud for archival purposes and so it can be shared with other users. [More on this later in the document, page 45.](#)

To add additional projects, navigate back to the project overview screen and simply click “Add a new project”.

NOTE: There are no limitations to the number of projects possible per app installation.

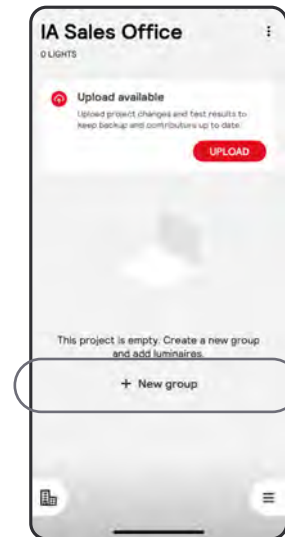


System quick install process

Creating groups

Now that you have an open project, you will need to create at least one group to add your FirstLink lights to your project.

To begin, click “+ New group” on the Project screen.



On this screen, you will enter the name of the group you are creating.

Once you are satisfied with the group name you've entered, select the “Create” button.

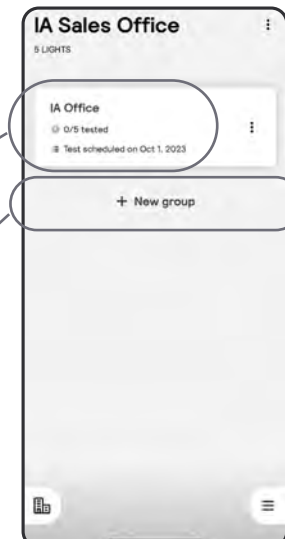
NOTE: If you need to later edit the name of the group, see [pages 36 and 37 of this guide](#).



You've created your first group!


Now, you can either create more groups or add lights to the group you've just created.

- **To add lights**, first, select the group to which you wish to add lights and go on to the next page.
- **To add more groups**, press “+ New group” on the project screen.



System quick install process

Adding lights to a group

To begin adding FirstLink devices and components to the group, click .

FirstLink will do the work for you by finding all unpaired FirstLink drivers, exit signs, and/or unit equipment in range.

Remember, all FirstLink devices **must be powered** to be discovered.




Please note: **lights already paired to a group or zone will not show up as available** for other projects, groups, or zones.

The discovery screen will show you all unpaired products FirstLink has automatically discovered.

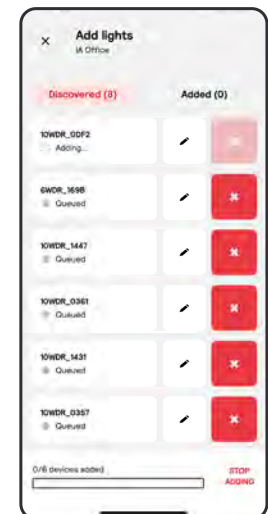
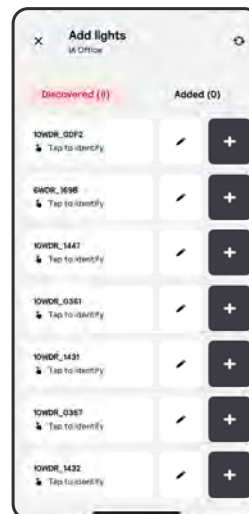
Products are arranged in the list by signal strength, strongest to weakest. This generally means the lights nearest to your current location are on the top of the list.

Select the lights you'd like to add to this group by pressing .

The selected lights will be queued for the network and moved to the "Added" tab. Clicking on this tab will show you the progress of the queue.

Device Renaming: If you would like to rename your devices, you can do so by clicking the pencil icon . You can also do this at anytime after commissioning.

Once you have all lights you'd like to add to the group selected, press the red "Apply Schedules" button.



Having trouble finding which lights were added? You can identify individual lights, groups, or zones at the installation site by using the **"Tap to identify"** feature!


System quick install process

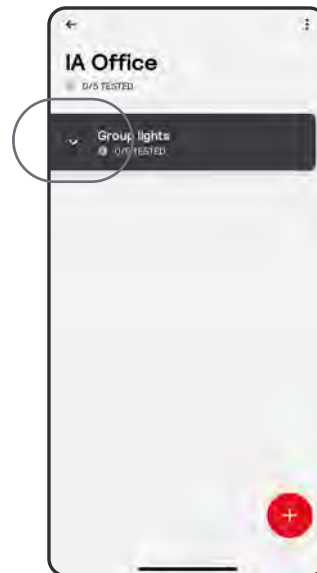
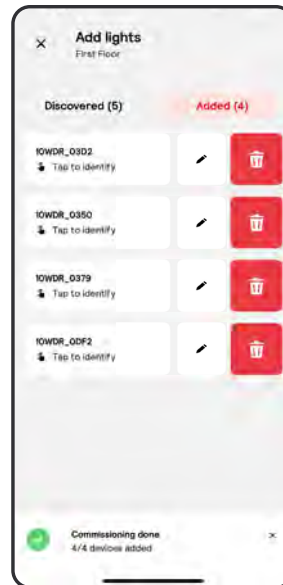
Adding lights to a group (continued)

When complete, the screen will show a message “Commissioning Done” and you will be shown the default test schedule applied to this group. This schedule can be changed. [Instructions on how to do so are found on page 27.](#)

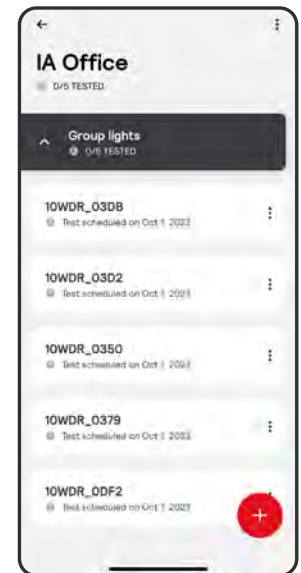
The selected lights have now been added to the group, and you have completed setting up your first group.

Back on the Project overview screen, you can expand or collapse the light list by clicking the up or down arrow next to the group name.

If you need to add more lights to this group, click the  button once more. Otherwise, continue adding lights to all required groups until the project is fully established in the FirstLink application.



Group
Closed



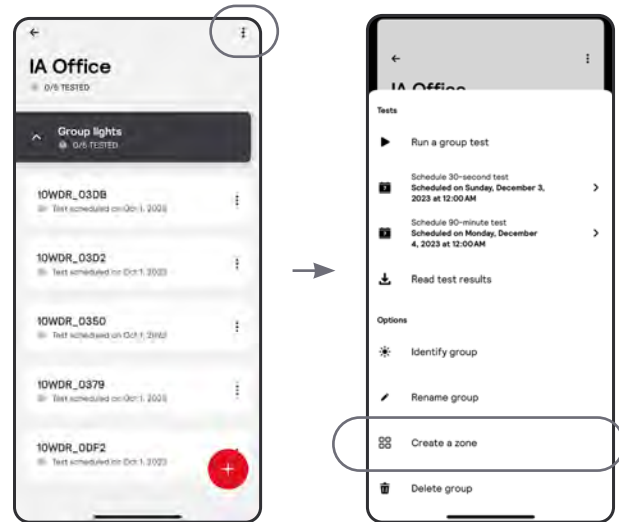
Group
Open

System quick install process

Creating zones

Zones give you the ability to organize your project further. For example, a zone could correspond to a real world location, helping to identify a specific place in your building like a large conference room, for example.

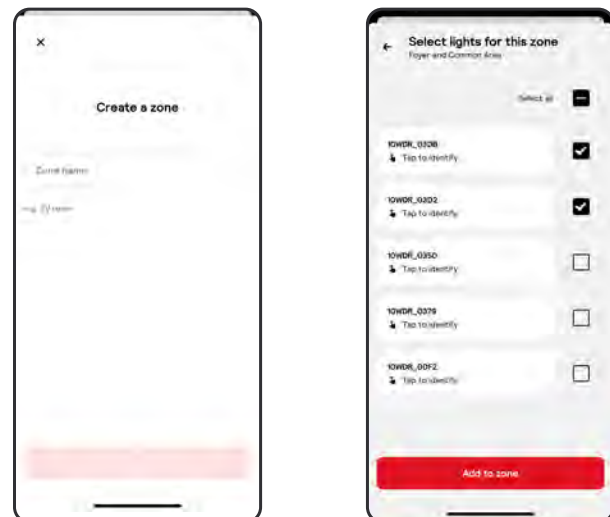
To get started, in the group page, click the 3-dot menu button and select “Create a zone”.



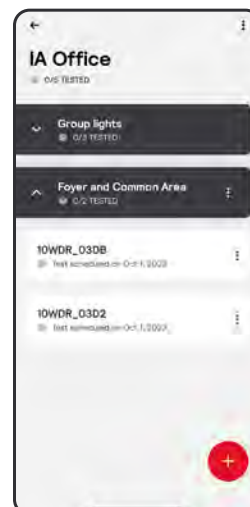
Simply type in the name you'd like for this zone, and select the red “Next” button.

Now, select which FirstLink lights you would like to add to this zone.

Select the desired lights and click “Add to zone”.



You will now see your group with the brand new zone you just created, containing the specific lights you selected. Continue the process until you have created all zones desired for the project. Zones can be added or removed at any time.



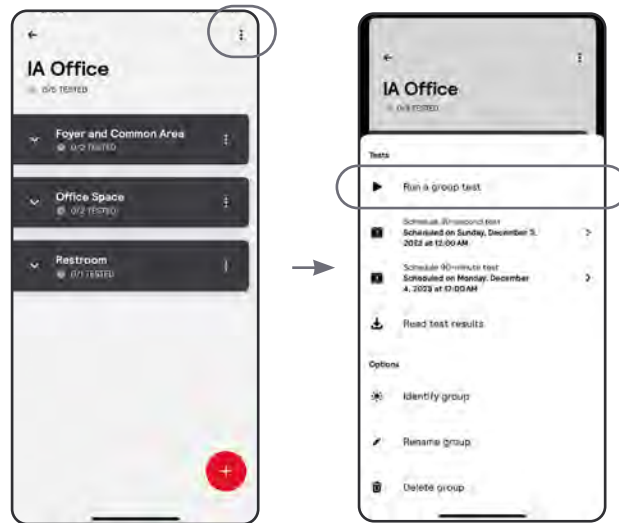
NOTE: The “Create Zone” menu option will only appear if there are lights in the group not already assigned to a zone.

System quick install process

Running your first test (manual)

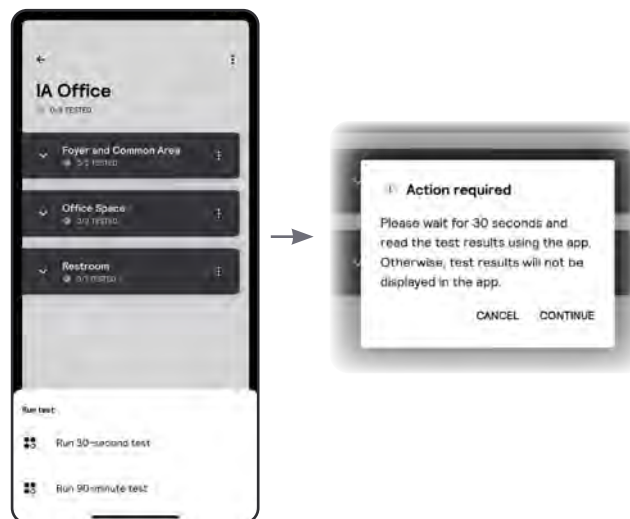
Notice the project and group screen indicates that the lights have not yet been tested, so let's manually test this new installation.

You have the option to test by Group level, Zone level, or individual light level. For this first check, let's run a group level test. To do so, click the 3-dot menu at the top right of the Group screen and then select "Run a group test".



Here you will be presented with two options, a 30-second functional test and a 90-minute duration test. Choose either option you wish.

NOTE: Products should be charged for 24 hours prior to running a full duration test and a minimum of one hour prior to performing a 30-second test.



The test will run shortly after the button is pressed. Visual notification of a running test will be shown on the Group overview screen.

Once the test concludes, you are able to download the test results, as described on the following page.

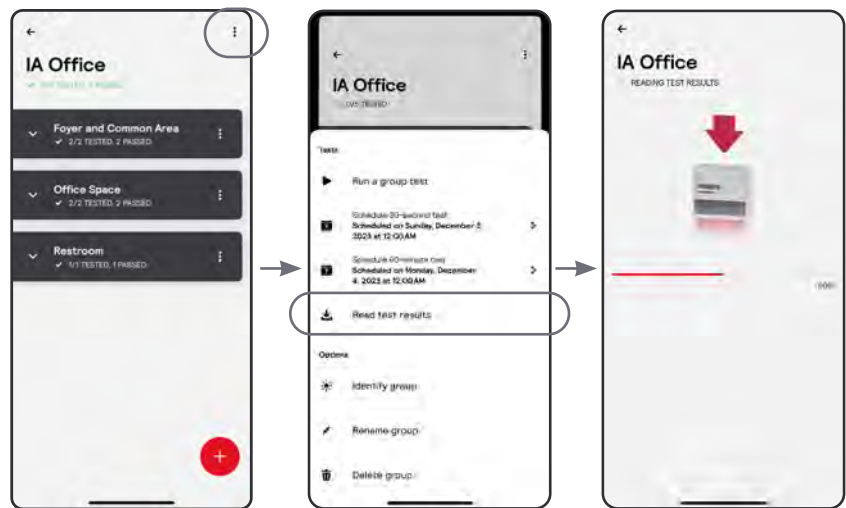


System quick install process

Retrieve test results

Now that the test has concluded, the test results must be read from the lights. To do so, click the 3-dot menu on the Group screen, like before, and select “Read test results”.

The app will remind you to stay within range of at least one FirstLink light. Once confirmed, the app will begin pulling unread test data from the FirstLink lights in the group.



Once done, the Group overview screen will update, showing a summary of the lights that passed the test in green.



If an error is encountered, it will show on this screen. Information on this failure can be found two different ways. The full report can be downloaded, which gives the status of every light. This includes the complete test history including any failure information. You can also use the app to find information on a specific light. The next page will show you how to find more information.

NOTE: A failure of the 90-minute test will set a flag in the FirstLink app and in the hardware which can only be cleared by passing another 90-minute test or resetting the device. Passing a 30-second test will not clear this flag.



Best Practice: Per code, emergency lighting devices must be tested every month. Though FirstLink completely takes care of the testing, the data should be downloaded each month and the results checked to verify proper functioning. Each light stores a maximum of 6 test results. If the results aren't read from the light within 6 months, data loss may occur. Once test results are read from the light into the FirstLink app, the results are always available.

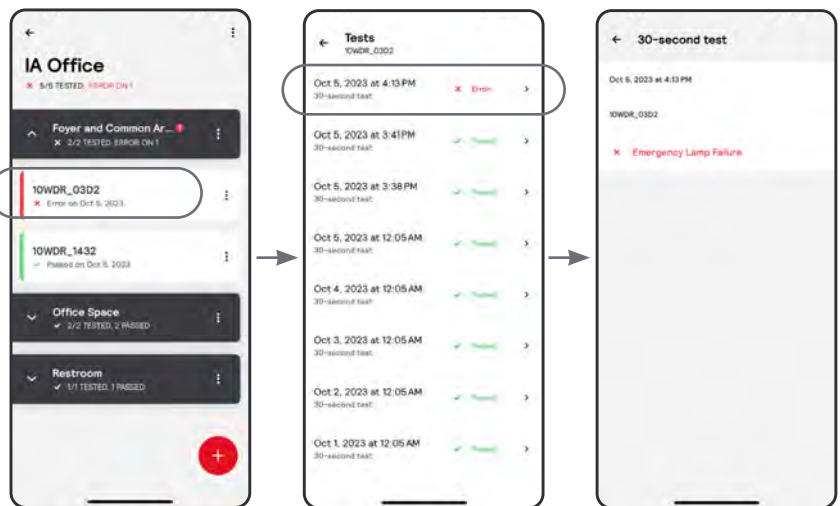
System quick install process

Viewing test results

You can use the app to find test results, including details on any errors encountered during testing.

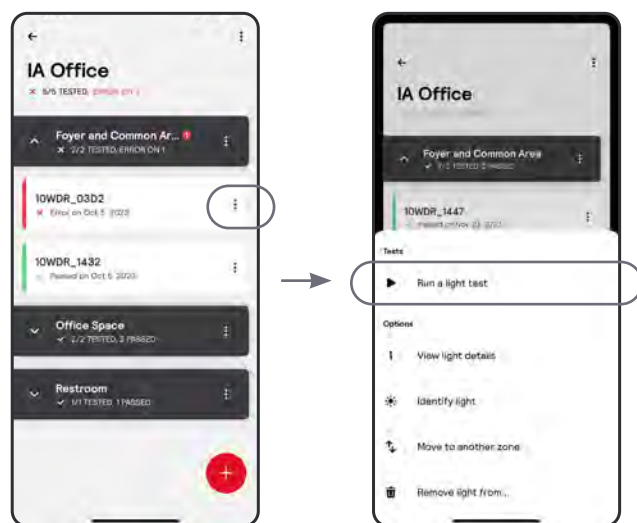
In the Group screen, locate the light for which you wish to know more information and click on the light entry. This will bring up the light test results page.

The entire test history can be found on this page for this specific light. Select any specific test to see the test details.



If you wish to retest a light, click the 3-dot menu button next to the light or in the light information screen and choose “Run a light test”.

After the test is complete, go back to the Light screen and download the test results as previously shown.



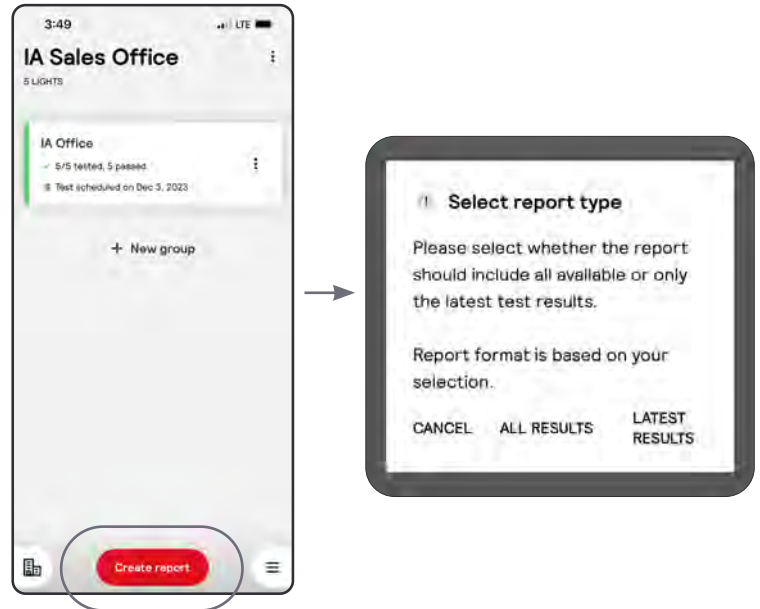
System quick install process

Exporting and sharing test reports

Once test results are downloaded for a project, the FirstLink app creates a report which can easily be shared.

First, select the project for which you need to export and share test results and press the red “Create report” button.

Next, select if you want to share only the latest test results or all tests results for the project and stored within the lights.



At this point, you will be given various options to share or save the report. These options should include the ability to share the report by messaging or email, or to save the report to your device. These options are based on your smart device.

System quick install process

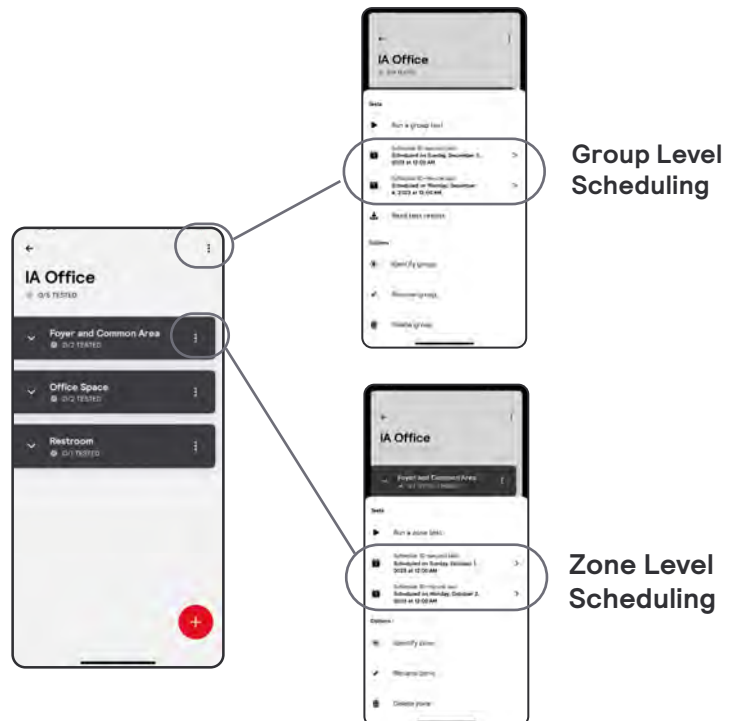
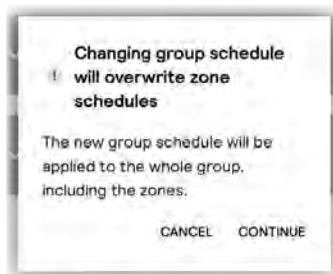
Automatic testing setup

FirstLink lights come pre-programmed to run a 30-second self-test once a month, and a 90-minute self-test once a year.

If needed, the test schedule can be changed to a time that is more convenient for you. You can change the schedule for the 90-minute and 30-second tests, individually. Additionally, tests can be scheduled at the group level or at the zone level.

Select the 3-dot menu button next to the group name for the group menu or the 3-dot menu next to the zone name for the zone menu. Then, simply select the “Schedule 30-second test” or “Schedule 90-minute test” option as desired.

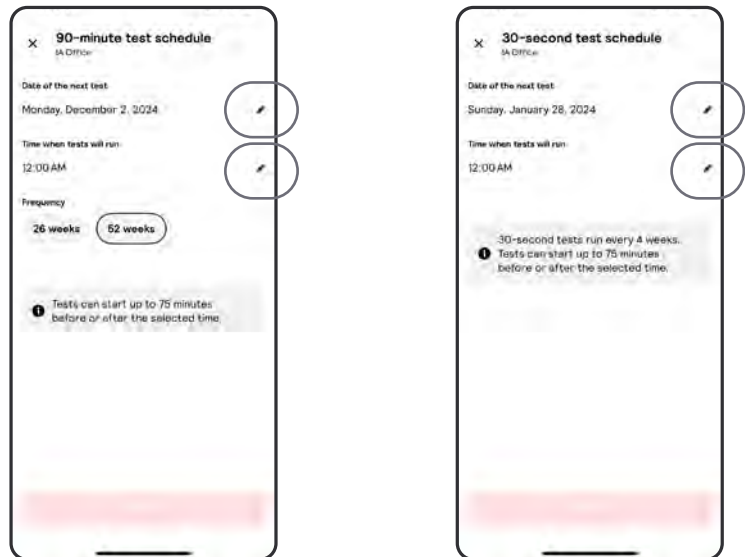
NOTE: Changing the Group level schedule will override a custom Zone level schedule. In other words, if desired to have certain Zones have a schedule that is different than the Group, change the group level schedule before changing the Zone level.



System quick install process

Automatic testing setup

Once in the schedule change menu, simply click the pencil icon ✎ next to the date and/or time to change these values.



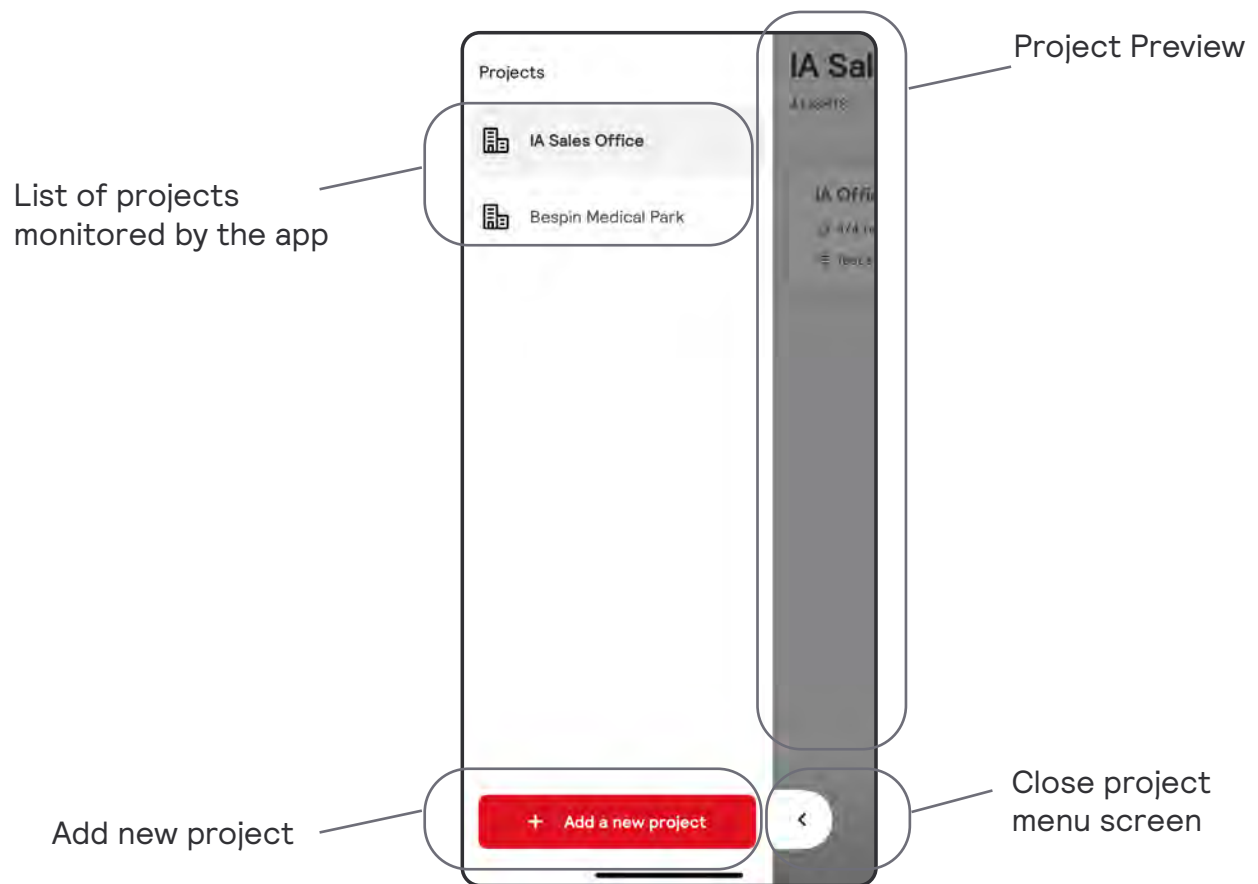
NOTE: FirstLink hardware time-keeping is accomplished within each light. However, each time the FirstLink app connects to the mesh network, the time is synchronized between all lights. If power has been off for an extended period (approximately 24 hours or greater), the hardware may lose their time. In this case, tests may be delayed until the FirstLink app is connected to the network and time resynchronization is executed.

Synchronization of time occurs each time the light connects to the smart device. Please note, the light will take whatever time is set on the smart device. If the smart device's clock is incorrect, the time on the light will be incorrect as well.

Navigation quick reference

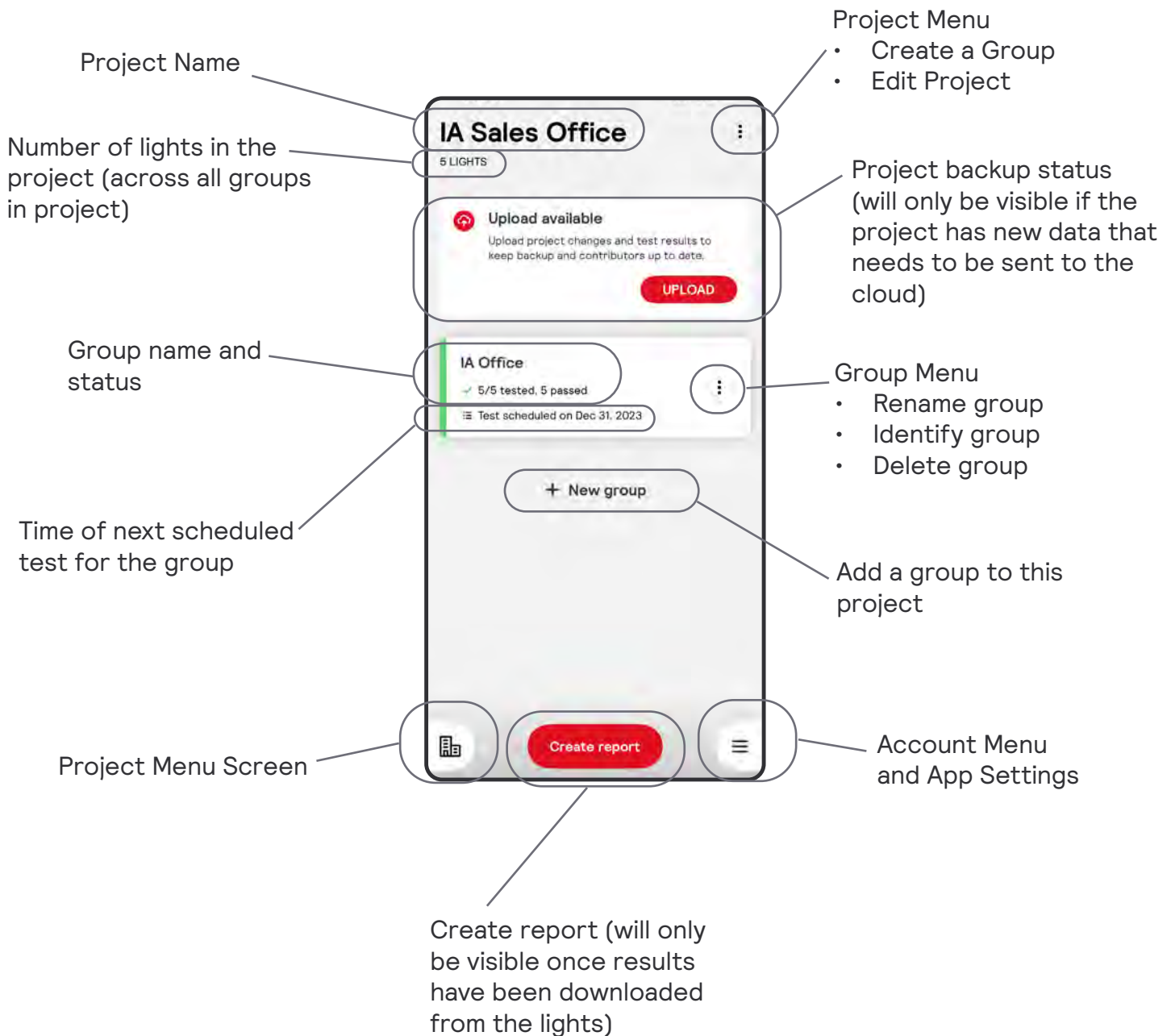
Navigation quick reference

Project menu screen



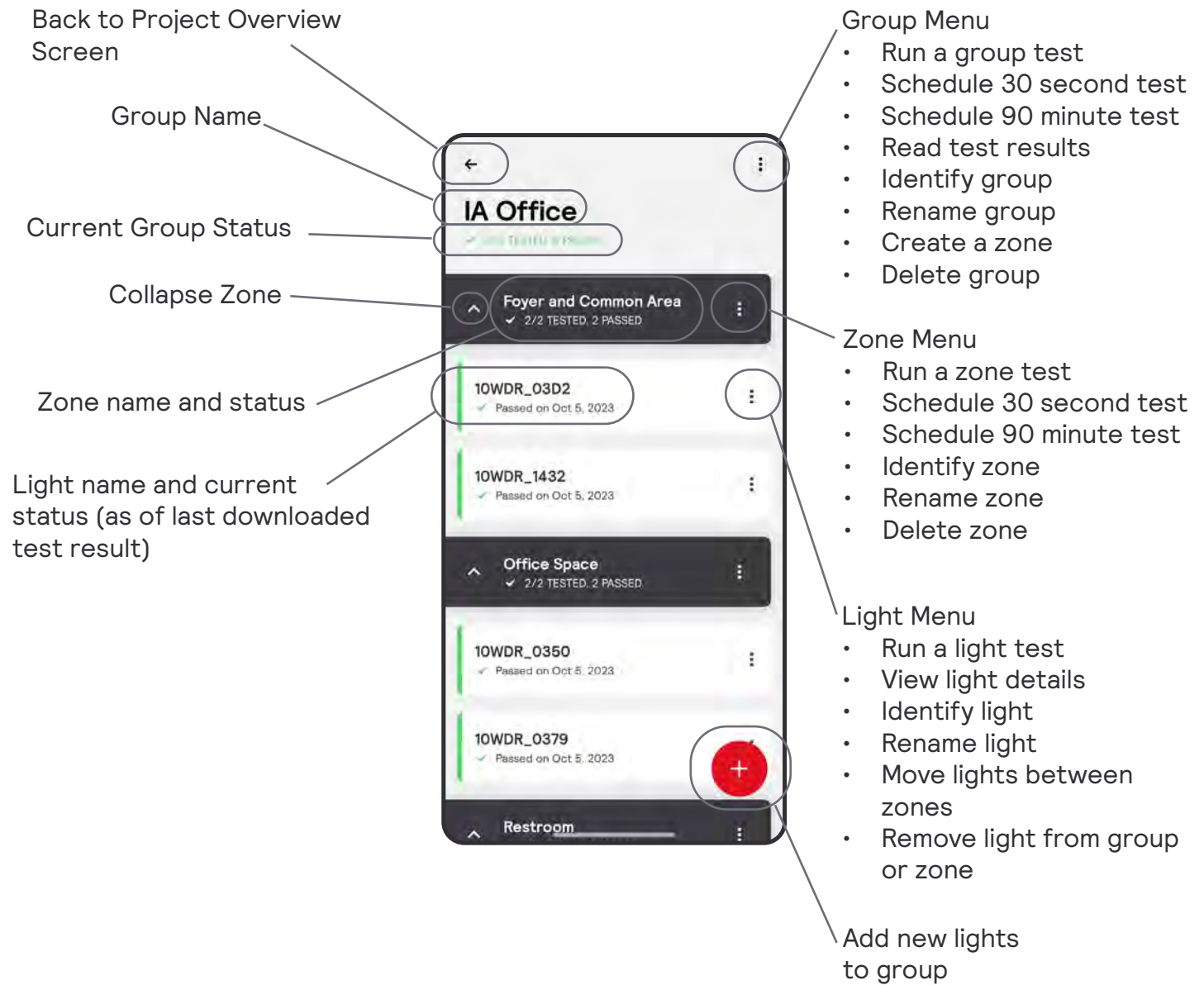
Navigation quick reference

Project overview screen



Navigation quick reference

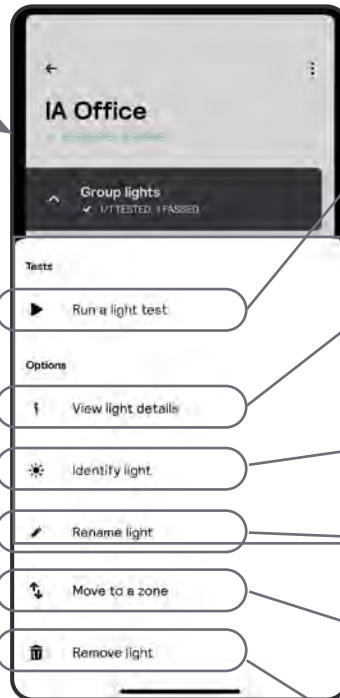
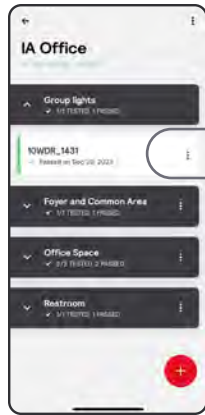
Group overview screen



NOTE: Some menu options may not be visible depending on the state of the project.

Navigation quick reference

Light management screen



Manually initiate a 30-second or 90-minute test on the selected light.

View details on this light, such as the hardware and network addresses, firmware revision, and group/zone association.

Flashes light for easy on-site identification.

Customize your installation by renaming the light.

Move the light between zones.

Remove the light from the current zone or the current group.

NOTE: Some menu options may not be visible depending on the state of the project.

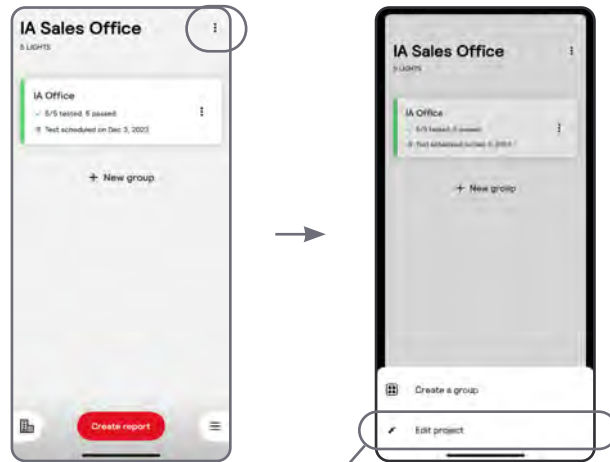
**Miscellaneous
program operation
and maintenance**

Miscellaneous operation and maintenance

Manage/edit project

Edit Project

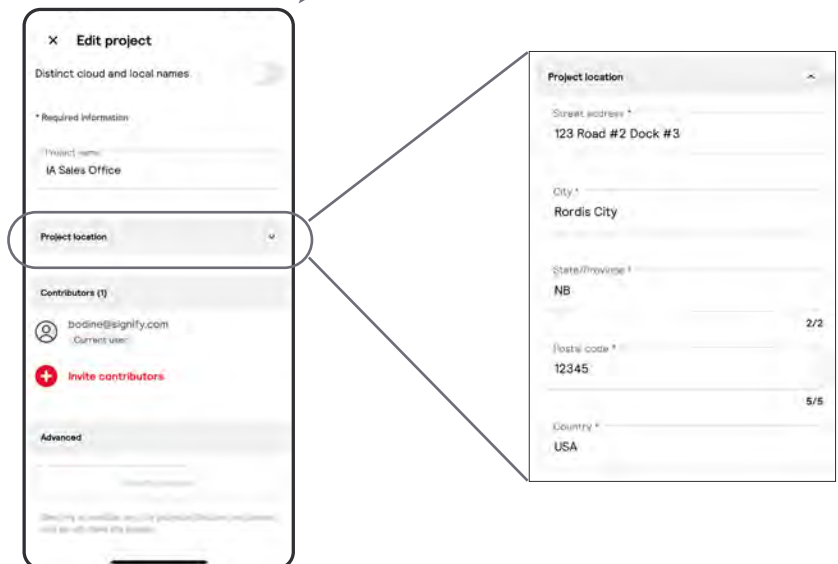
In the Project overview screen, click on the 3-dot menu button and select “Edit Project”.



From here, you'll be able to:

- Update the project name
- Update the project location
- Share a project (add contributors)
- Delete the project entirely

NOTE: To delete a project, the project cannot be shared and must first have all groups removed from it. These requirements are to protect from accidental project deletion.



Miscellaneous operation and maintenance

Rename and delete groups

There are two ways to access the “Rename group” and “Delete group” options.

1. From the Project overview screen, click on the 3-dot menu button next to the group you wish to modify and select the relevant option.

2. From the Group overview screen, click on the 3-dot menu button on the top right of the screen then select the relevant option.

NOTE: The “Identify group” option causes all group lights to flash for a short time, for easy on-site identification.



Once pressing the “Delete group” option, you will be warned that this will decommission all the lights in this group (will remove all the lights from the project). You will be asked to confirm.



To rename a group, simply type in the new group name and hit “save”.

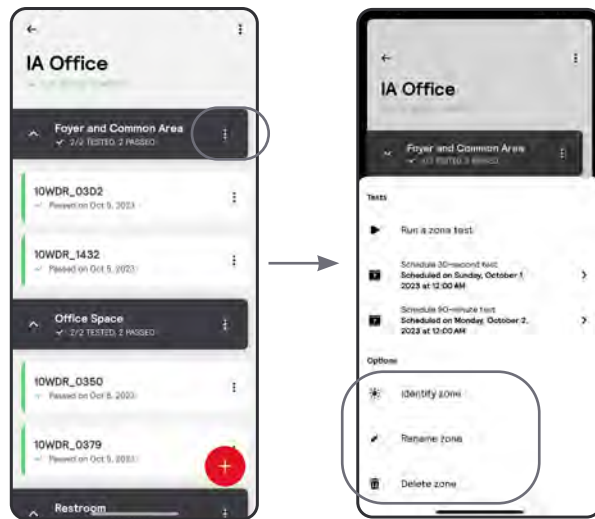


Miscellaneous operation and maintenance

Rename and delete zones

Zones can be edited in the same way as projects and groups. To do so, click the 3-dot menu button next to the relevant zone.

NOTE: The “Identify zone” option causes all zone lights to flash for a short time, for easy on-site identification.



Once pressing the “Delete zone” option, you will be warned that this will remove all the lights from the zone and move them back into the group. You will be asked to confirm.



To rename a zone, simply type in the new zone name and hit “save”.



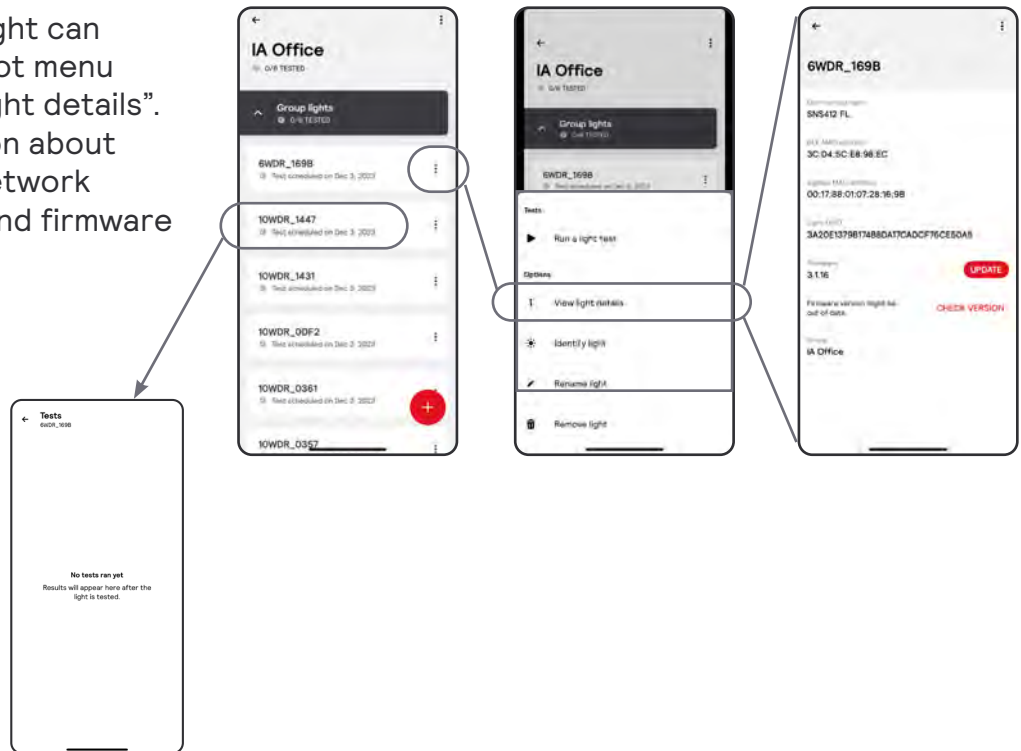
Miscellaneous operation and maintenance

Light information, options, and renaming

Technical information on a light can be found by clicking the 3-dot menu button, and clicking “View light details”. This gives general information about the FirstLink light such as network name, network addresses, and firmware version.

Clicking on a light’s name on the group menu page will take you to list of test results.

Initially, as in this example, no tests have been performed so no information is present.



Other options in the 3-dot menu are the option to manually perform a test, identify the light by flashing, give the light a custom name, or remove the light from the group or zone.

FirstLink Device Naming and Renaming

By default, FirstLink devices are given a name to assist in identifying which device is which, when using the app. The convention is a 4-digit prefix that identifies the type of device and a 4 digit suffix that identifies the network MAC address. For example: 6WDR_169B → 6W emergency LED driver with a MAC address ending in 169B.

Full List of Default Prefixes:

- 6WDR → 6W emergency LED driver or 1000 lumen kit
- 10WDR → 10W emergency LED driver
- EXGR or EXRD → Exit signs (green or red lettering)
- CMBGR or CMBRD → Combo Exit signs (green or red)
- BUG1 → 180 lumen unit equipment
- BUG2 → 520 lumen unit equipment

Choosing “Rename light” in the light menu will allow you to change the light’s name from the default. The custom name can be up to 15 characters long. In case it is needed for later identification, the light’s MAC address will still appear in the new custom name.

Miscellaneous operation and maintenance

Manually starting a test (at the group, zone, & light level)

Manual testing can assist with running a quick verification of your system or with troubleshooting. With the FirstLink app, you can manually initiate a 30-second or 90-minute test on demand.

To initiate a manual test, you have three options: test by group, test by zone, or test a light individually.

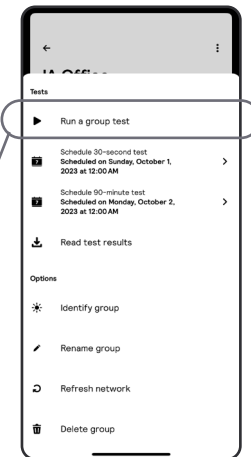
① If testing a group, select the 3-dot icon on the Group screen and select the desired test (30-second or 90-minute).

② If testing a zone, select the 3-dot menu next to the zone you wish to test and select the desired test.

③ If testing an individual light, select the 3-dot menu next to the light you wish to test and select the desired test.

Testing will begin within moments of activation.

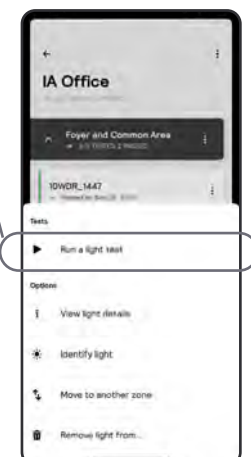
Group Testing



Zone Testing



Individual Light Testing



Miscellaneous operation and maintenance

Moving lights within a project

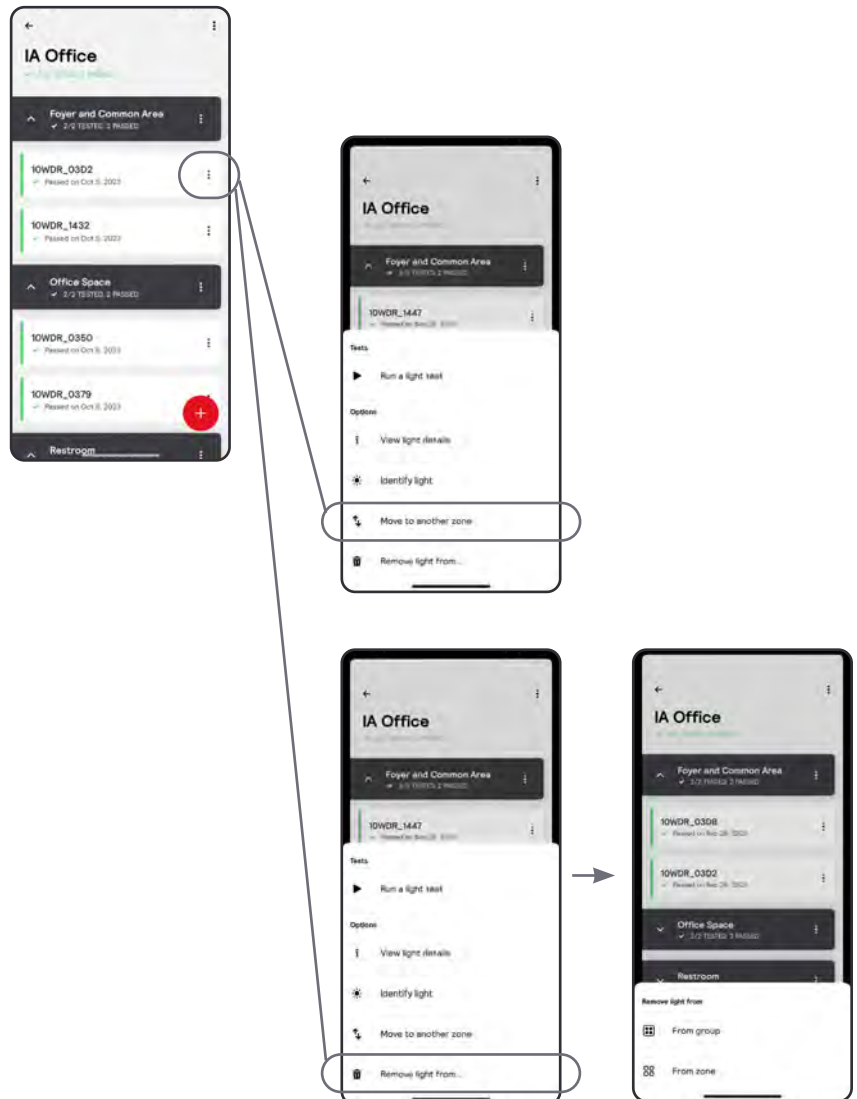
If needed, lights can be moved within a project, to another group or within the same group but to another zone.

In the Group screen, click on the 3-dot menu button next to the light you wish to move and select either:

- Move to another zone
- Remove light from...

If you select “Move to another zone”, you will be asked to which zone you would like to move the light based on the zones that already exist in the project.

Selecting “Remove light from...” will present you with the option to remove the light from the current group, which decommissions the light and makes it available for commissioning into a new group, or to remove the light from the current zone, which simply places the light back into the group.



Miscellaneous operation and maintenance

Removing lights from a project

Once added to a project, FirstLink lights become locked to that project and are no longer discoverable by the “Add Light” function. In case a light needs to be moved to another project or group they must first be removed from their current project.

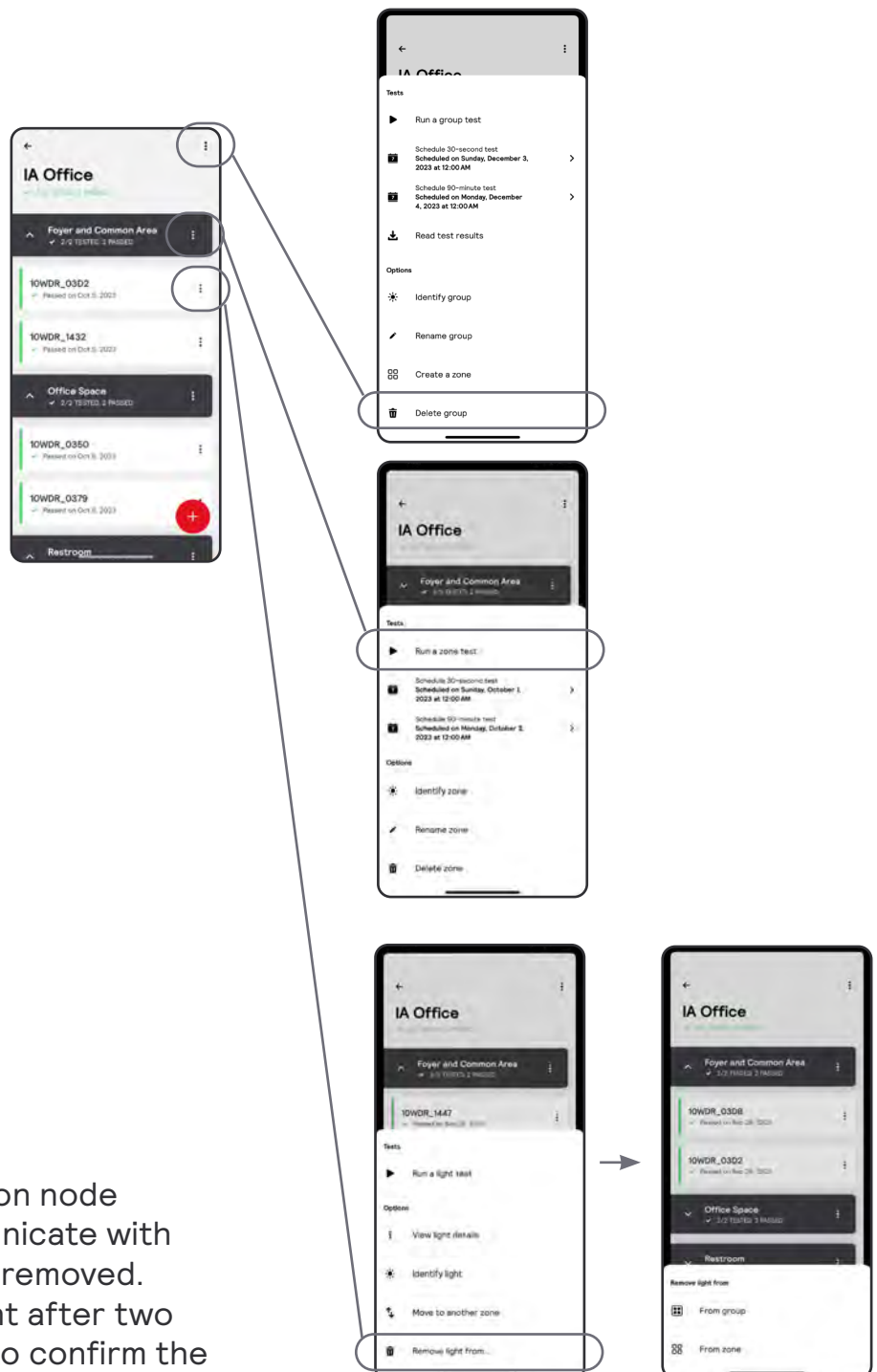
Remove a group

In the Group screen, click on the 3-dot menu button and select “Delete group”. You will be asked to confirm. Once confirmed, after a few seconds you will receive a confirmation message that the light has been removed from the group.

Remove a single light

From the Group screen, click on the 3-dot menu button and select “Remove light from...”. Select “From group” on the following menu and after a few seconds you will receive a confirmation message that the light has been removed from the group.

NOTE: If a light or communication node fails such that it cannot communicate with the FirstLink app, it can still be removed. If the app cannot reach the light after two attempts, the app will ask you to confirm the device should be removed from the project.



Miscellaneous operation and maintenance

Replacing lights

In case of a failure that results in the need for a replacement of a FirstLink light, the following describes the best practice of replacing that light within the FirstLink system:

1. Procure replacement light.
2. Remove the malfunctioning light from network (using the app, [see page 41](#)).
3. Uninstall malfunctioning light.
4. Install replacement light and apply AC mains (see warnings found [on page 13](#) of this guide as well as the precautions found in the product's installation instructions).
5. Add new light to the appropriate project, group, or zone (using the app, [see page 20](#)).
6. Push new schedule to the light as appropriate by it's group or zone (using the app, [see page 27](#)).
7. Test to verify everything is functioning properly (using the app, [see page 39](#)).

Miscellaneous operation and maintenance

Adding a contributor (sharing projects)

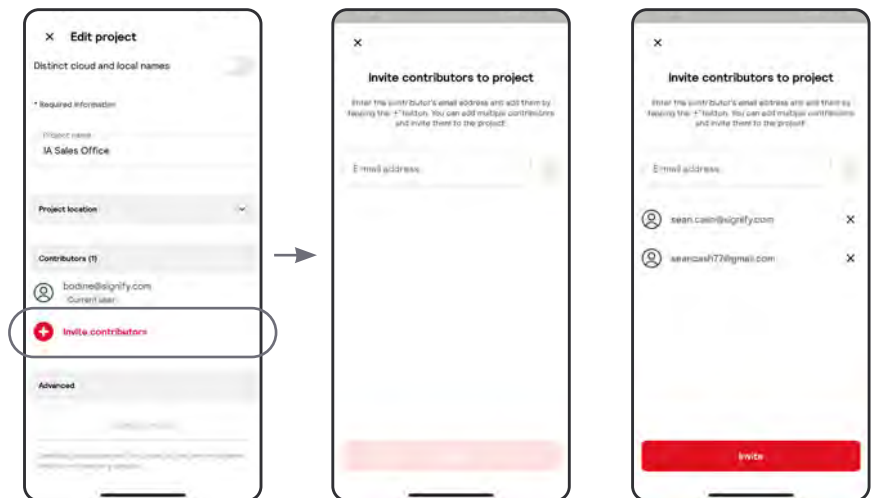
Once a project has been created, it can be shared with other users. This is done through the “Invite Contributors” process in the Edit Project Screen.

Keep in mind, the project must be backed up to the cloud in order for it to be shared. Make sure to sync the project after changes are made, so that all project contributors will see the latest updates. See [page 45](#) for more information on project backup.

Invite Contributor

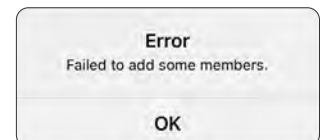
Under “Contributors” in the Edit Project screen, click the red + labelled “Invite Contributors”.

This opens a new window where you can enter email addresses. Enter an address and press the red + button to add them to the invite list. Once the list is complete, press the red “Invite” button.



Possible causes of error:

1. The user must already be registered as a FirstLink user by installing and logging in for the first time with an active email address.
2. Attempting to share a project with a user that has already been invited will result in an error. Don't worry, the user will have access to the project as long as their name appears on the list of contributors.



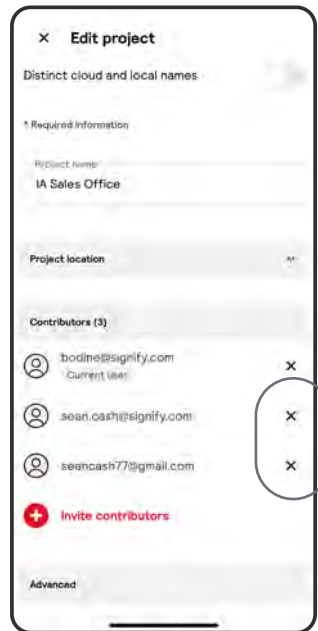
When a project is shared with you, you will receive a notification upon logging in. If the project is shared with you while you have the FirstLink app open, you may need to close and reopen the application in order to see the project.

Miscellaneous operation and maintenance

Removing a project contributor

It may be necessary to remove someone from a project. In doing so, the user will no longer be able to see or interact with the project.

In the Edit Project screen, to remove a user, simply click the “x” next to the users name. You will be asked to confirm. Once confirmed, the user will be removed.



NOTE:

If the removed user has the project open on their device, they will continue to have access until the app is closed. During this time, the user will be able to test lights and download results, but nothing else. Once reopened, the user will be notified that they no longer have access to the project and that project will be removed from their local device.

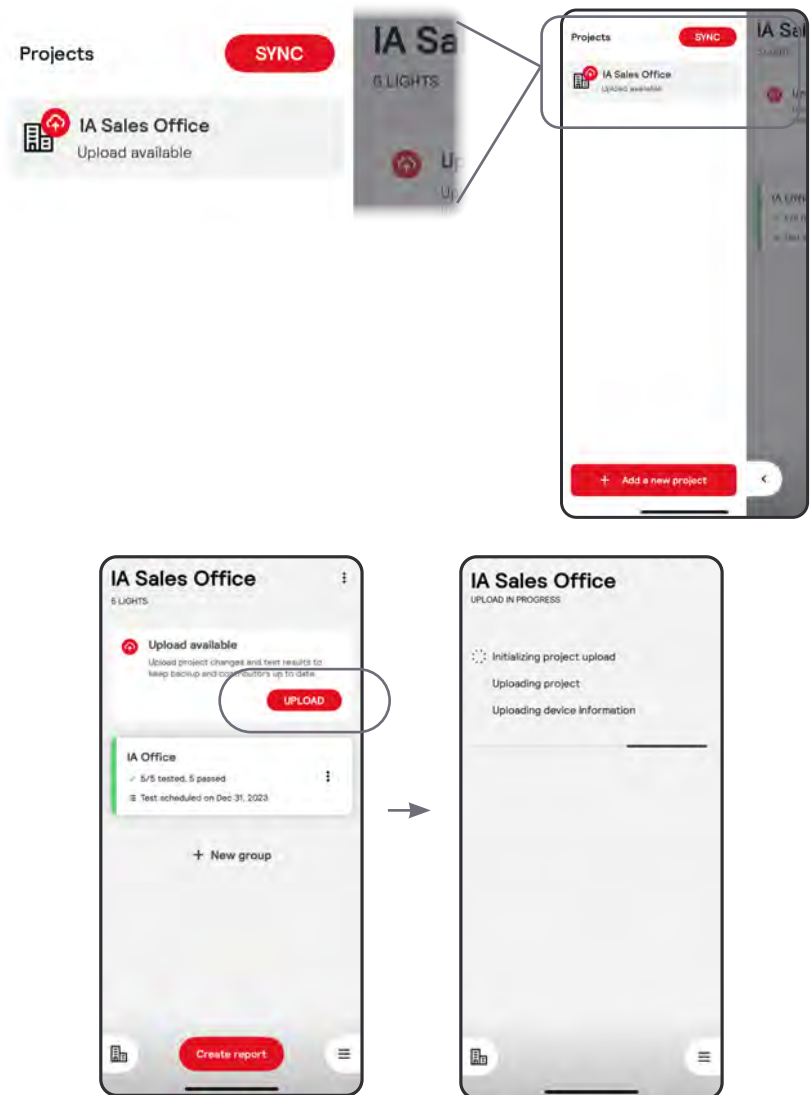
Miscellaneous operation and maintenance

Project backup

When a change has been made to a project, including changing of the schedules, adding/removing lights, or downloading of test data, the project must be synced to the cloud in order for it to be properly shared. This ensures all project contributors will see the latest information. Additionally, syncing a project to the cloud creates a backup in case the project needs to be restored.

If synchronization of a project with the cloud is required, a reminder will appear on the project icon, at the top of the project menu screen, and at the top of the project screen.

Clicking “Sync” will initiate the synchronization process. A progress screen will be shown, and after a few moments the process will be complete and you will be returned to your previous screen.



NOTE: When opening a project, you may be notified that the data in the cloud is more recent than the data on your device. In this case, a project contributor likely made changes to the project, such as uploading test data. It is recommended you sync the project so your device has the latest information.

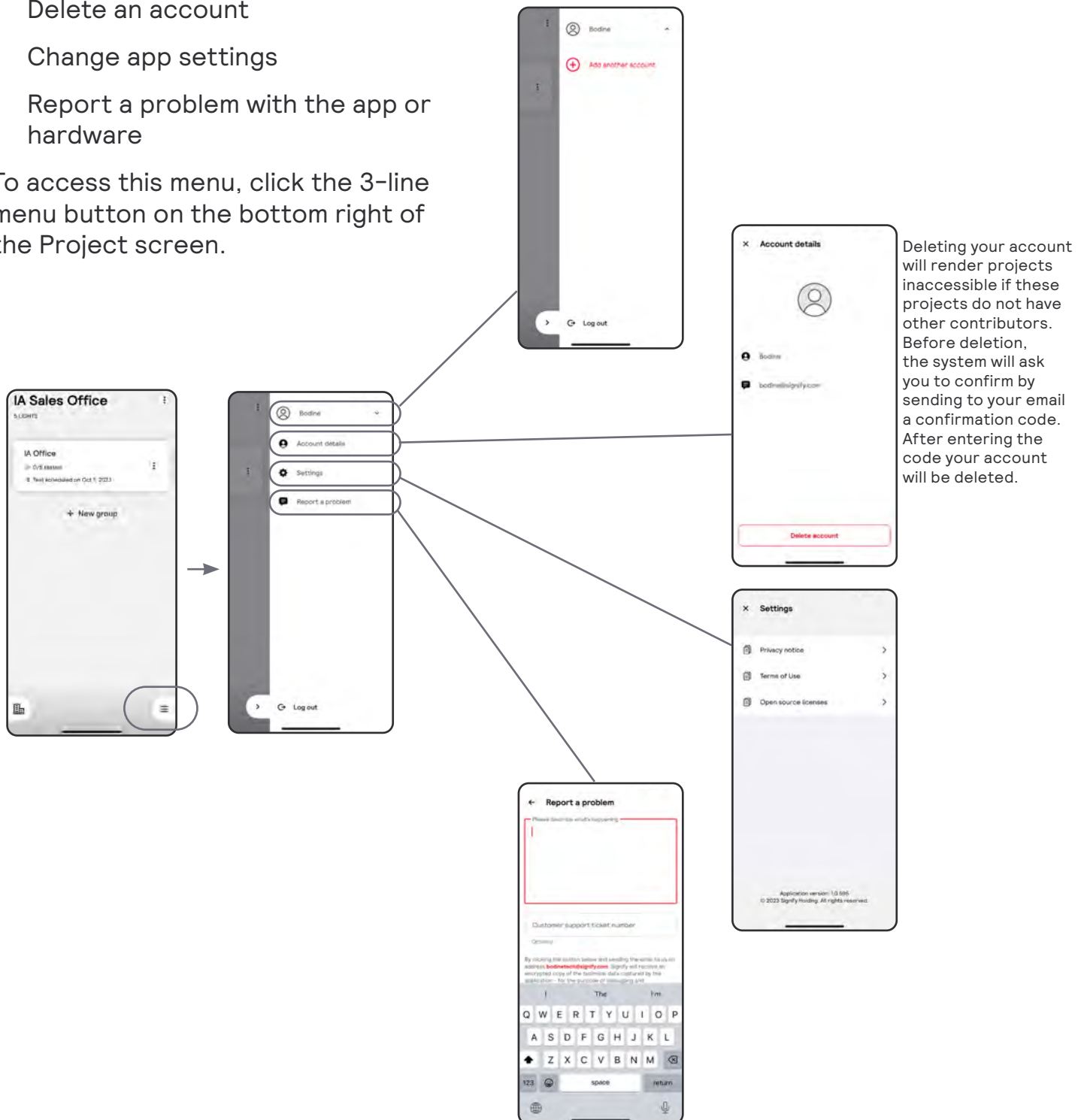
Miscellaneous operation and maintenance

Account maintenance and settings

The account menu allows you to:

- Add a user account to the app
- Delete an account
- Change app settings
- Report a problem with the app or hardware

To access this menu, click the 3-line menu button on the bottom right of the Project screen.

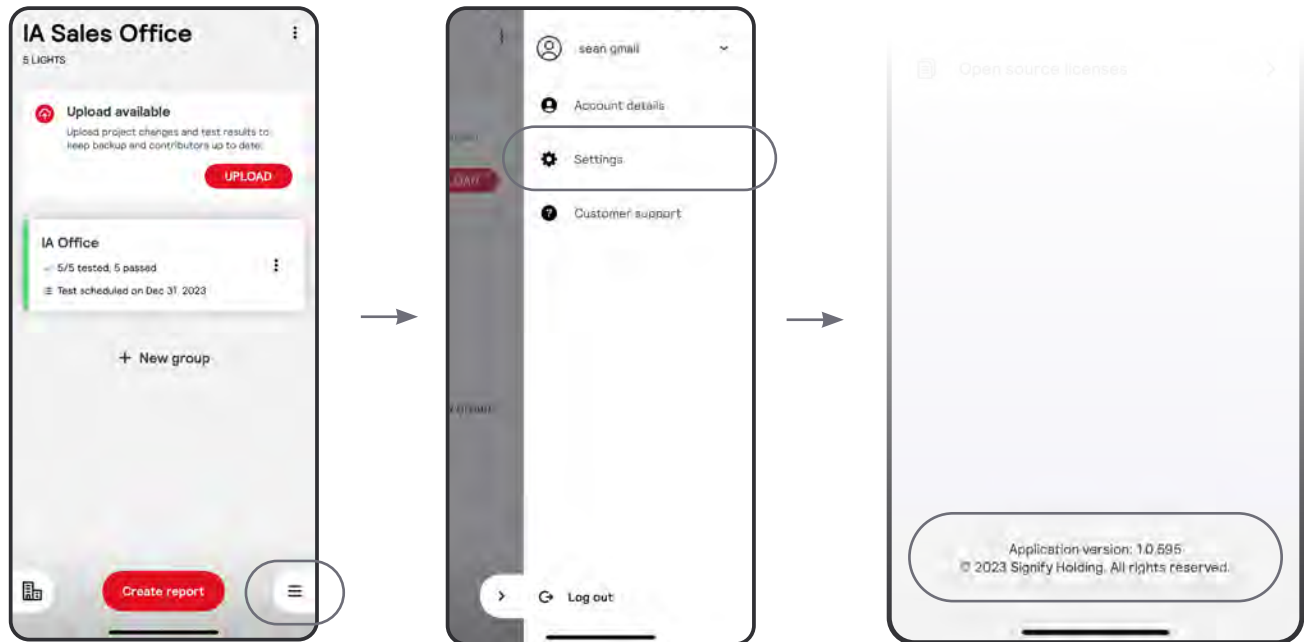


Miscellaneous operation and maintenance

App version check

The FirstLink application's version number can be checked by doing the following:

Click the 3-line menu on the bottom right of the project overview screen, select "Settings", and view the app version at the bottom of the page.

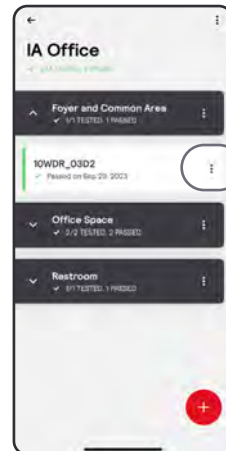


Miscellaneous operation and maintenance

Upgrading firmware

FirstLink lights contain firmware which, at times, may need to be updated to take advantage of the latest features.

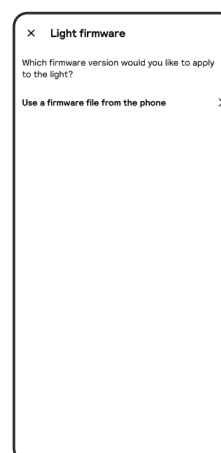
To update firmware, navigate to the light information screen, by clicking on the 3-dot menu button for that light.



Once here, the firmware revision can be checked and, if necessary, you can update the firmware by clicking "Update".



Find the new firmware file required on your light, and click okay. After a few seconds, the firmware update will be complete.



NOTE: Firmware updates are not generally necessary for normal operation. Typically, firmware updates would be reserved for troubleshooting with FirstLink Tech Support or to take advantage of new features released in the future.

Appendix

Troubleshooting

FirstLink Application

In general, troubleshooting FirstLink application errors is simple.

If an application error seems to be related to communication between the device and FirstLink lights, please move closer to the lights and try again.

If you are still having trouble close the FirstLink application, restart the device, and try again.

The table below shows possible errors that might be experienced when using the FirstLink application. If any of these issues are observed, please try the steps give above and/or follow the suggested corrective action in the table.

Feature	Potential Issue	SUGGESTED CORRECTIVE ACTION
Login	Occasionally an error message is received, or no confirmation code is received via email.	<ul style="list-style-type: none">• A re-try with a new account with same email address and username typically resolves the problem• Otherwise re-try with another email address
Adding Lights	At times, app reports an error in adding the lights to a group	<ul style="list-style-type: none">• A re-try typically resolves the problem• Ensure the smartphone is within range during commissioning• Ensure the phone in use is from the recommended phone list
Test Schedule	Testing is not occurring at the time set in the app	<ul style="list-style-type: none">• Verify the schedule in the application is correctly set.• FirstLink light(s) may have incorrect time. Connect the FirstLink application to the network. Ensure the problem light is connected to the network.
Removing Light from a Project	Failure to delete a light from a project	If a device isn't responsive, it can be forcibly removed from the network by attempting deletion twice. After the second try, the app will request confirmation that the device should be removed.

Appendix

Troubleshooting

FirstLink Test Error Code Troubleshooting

FirstLink Test error messages related to hardware:

The FirstLink Application will show when an error has been encountered during testing. These errors and possible corrective actions are given in the table below.

ERROR MESSAGE	MEANING	SUGGESTED CORRECTIVE ACTION
Battery Duration Failure	Light failed the 30-second or 90-minute test*.	Check input AC mains wiring of Unswitched Hot, Neutral and Ground, Verify Voltage and Frequency are stable and match the product's input rating on the label. Then, ensure the battery charges for 24 hours and retest.
Battery Failure	The light's battery is dead or disconnected.	Verify the charging indicator on the light shows the product is charging. If not charging, check input AC mains wiring of Unswitched Hot, Neutral and Ground, Verify Voltage and Frequency are stable and match the product's input rating on the label. If charging voltage is good, the battery may be past its useful life and should be replaced.
Emergency Lamp Failure	During a self-test, the unit detected the LED load has changed more than 25% from the initial commissioned value.	<ol style="list-style-type: none">1. Verify the LED load is functional. Replace if necessary and perform a manual self-diagnostic.2. If error is still present, then recalibrate the commission value by 1) deactivating the unit and 2) apply AC mains to activate unit. It will recommission itself after one hour.3. Check for Open or Short circuit on the output connections.
Interrupted	Test was stopped by user	Repeat test, if test results are necessary.

*A failure of the 90-minute test will set a flag in the FirstLink app and in the hardware which can only be cleared when the 90-minute test is run again and passed or the unit is reset by removing power and holding the test switch. Passing a 30-second test will not clear this flag.

Appendix

Troubleshooting

Hardware Status Indication

Emergency lighting hardware status is communicated to the user through the FirstLink application and blinking of the charge indicator LED.

If errors are encountered, the reason for the error will be identified in the application as well as the charge indicator LED will flash with a pattern that indicates the potential issue the hardware is encountering. The FirstLink application error is correlated to the LED flash pattern in the table below.

Bi-Color indicator (color/flash-ing)	ERROR	SUGGESTED CORRECTIVE ACTION
Green/ No Flashes	None	The unit is operating correctly, and the internal battery is fully charged
Green/ Slow Flashes	None	<ol style="list-style-type: none">1. The unit is charging. The main light is operating normal.2. The unit is running a self-diagnostic test. The LED Load is operating in Emergency level.
OFF	None	In emergency mode or emergency run-time is ended and unit is de-activated.
Red / 2x Flashes	Battery	<p>Indicates that a self-test/self-diagnostic test did not meet full duration</p> <ol style="list-style-type: none">1. Charge the unit for the rated recharge time and perform a manual self-diagnostic test.2. If error is still present, then the battery is past its useful life and should be replaced.
Red / 3x Flashes	Charging	<ol style="list-style-type: none">1. Check input AC mains wiring of Unswitched Hot, Neutral and Ground.2. Verify Voltage and Frequency are stable and match the product's input rating on the label.
Red / 4x Flashes	LED Load, Commissioning	<p>During a self-test/self-diagnostic test, the unit detected the LED load has changed more than 25% from the initial commissioned value.</p> <ol style="list-style-type: none">1. Replace the LED Load and perform a manual self-diagnostic.2. If error is still present, then recalibrate the commission value by deactivating the unit. Apply AC mains to activate unit and it will recommission itself after one hour.3. Check for Open or Short circuit on the output connections.
Red / 5x Flashes	Temperature	<p>Product temperature is beyond its rated temperature range.</p> <ol style="list-style-type: none">1. Ensure unit is within the rated temperature range stated on the product label.2. Confirm by measuring at the Tc point on the product label.

Appendix

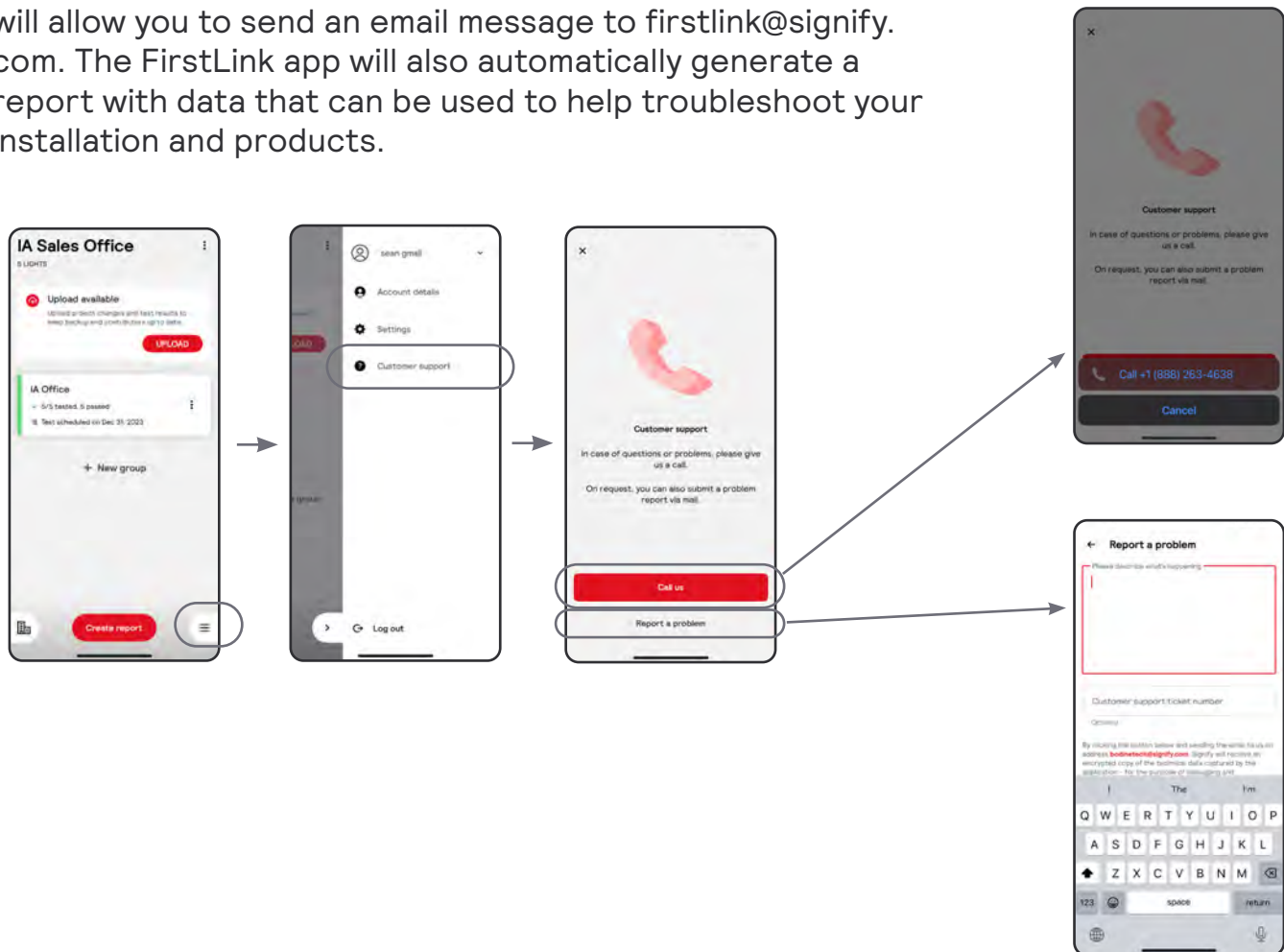
Contact information

Reporting a Problem

If you have questions about the FirstLink system, there are two ways to talk with us.

Select the 3-bar system menu from the Project screen and select “Customer Support”.

Choose to either “Call us”, which will initiate a phone call with FirstLink Tech Support, or “Report a problem”, which will allow you to send an email message to firstlink@signify.com. The FirstLink app will also automatically generate a report with data that can be used to help troubleshoot your installation and products.



Appendix

Report formatting

The FirstLink application provides the report of your emergency lighting in a comma separated value file (*.csv). Here are some tips to help in importing these results into a spreadsheet application, like Microsoft Excel.

First, save the file to your computer and then open your spreadsheet program. (The screenshots here are for Microsoft Excel. What you see may vary but the process should be similar.

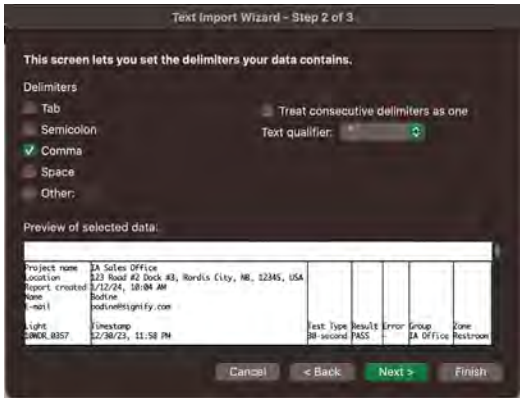
Next, use the programs “Import” option to find your report and begin the process of importing it into the spreadsheet program. When given the option, select the option to import the file as a “CSV File”.



Here you should be presented with options. Ensure the “Delimited” option is selected. Set the File Origin option to “Unicode (UTF-8)” and click next.



On the next page, ensure the delimiter is set to “Comma”.



Finally, you can click “Finish”.

Now you are finished. You can save the file as a spreadsheet file type native to the program you are using or export the report to a PDF or document type of your choosing.

A1						
	A	B	C	D	E	F
1	Project name	IA Sales Office				
2	Location	123 Road #2 Dock #3, Rordis City, NB, 12345, USA				
3	Report created	1/12/24, 10:04 AM				
4	Name	Bodine				
5	E-mail	bodine@signify.com				
6						
7	Light	Timestamp	Test Type	Result	Error	Group
8	10WDR_0357	12/30/23, 11:58 PM	30-second	PASS	-	IA Office Restroom
9	10WDR_0357	12/6/23, 1:29 PM	30-second	PASS	-	IA Office Restroom
10	10WDR_0357	12/4/23, 1:29 AM	90-minute	PASS	-	IA Office Restroom
11	10WDR_0357	12/3/23, 12:00 AM	30-second	PASS	-	IA Office Restroom
12	10WDR_0357	11/29/23, 3:03 PM	30-second	PASS	-	IA Office Restroom
13	10WDR_0357	11/28/23, 4:00 PM	30-second	PASS	-	IA Office Restroom

Appendix

Security

The FirstLink system was designed from the ground up to ensure the system is as secure as it can be to avoid unauthorized users to control lights or see the systems communications.

- FirstLink devices, when manufactured, are created with a BLE claiming certificate, ensuring that only a genuine FirstLink app can claim, connect and communicate with the FirstLink devices.
- When a device is commissioned into a project, BLE and Zigbee device communications become encrypted with secret keys, locking that device to the project and hiding all communications to the outside world.
- Once commissioned, the FirstLink devices will only be available to users or contributors managing that project.
- Project configuration and test data is stored in the FirstLink Cloud but no personally identifiable information (other than the users email address) nor payment information is collected or stored.

User Control

- Users must register with the FirstLink servers to login to the app. Registration and subsequent logins use 2-factor authentication to verify the user's identity.
- Control is limited – There is no way to inhibit emergency lighting.
- FirstLink devices communicate only to the FirstLink application. They cannot communicate with other systems and the FirstLink app cannot connect to any other devices.
- Removal of a FirstLink light from the FirstLink network doesn't affect the charging or emergency operation nor the self-testing functionality.
- There are safeguards in place to ensure a project is not accidentally deleted, but if a project is deleted, the lights return to standard self-testing functionality and will continue to provide emergency lighting upon power failure. The lights will continue their last self-testing schedule until they are reconnected to a project and told to do otherwise. If there is an error, the light will indicate that error through flashing of the charging indicator light.

Appendix

Disclaimer

Note that the information provided in this document is subject to change.

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