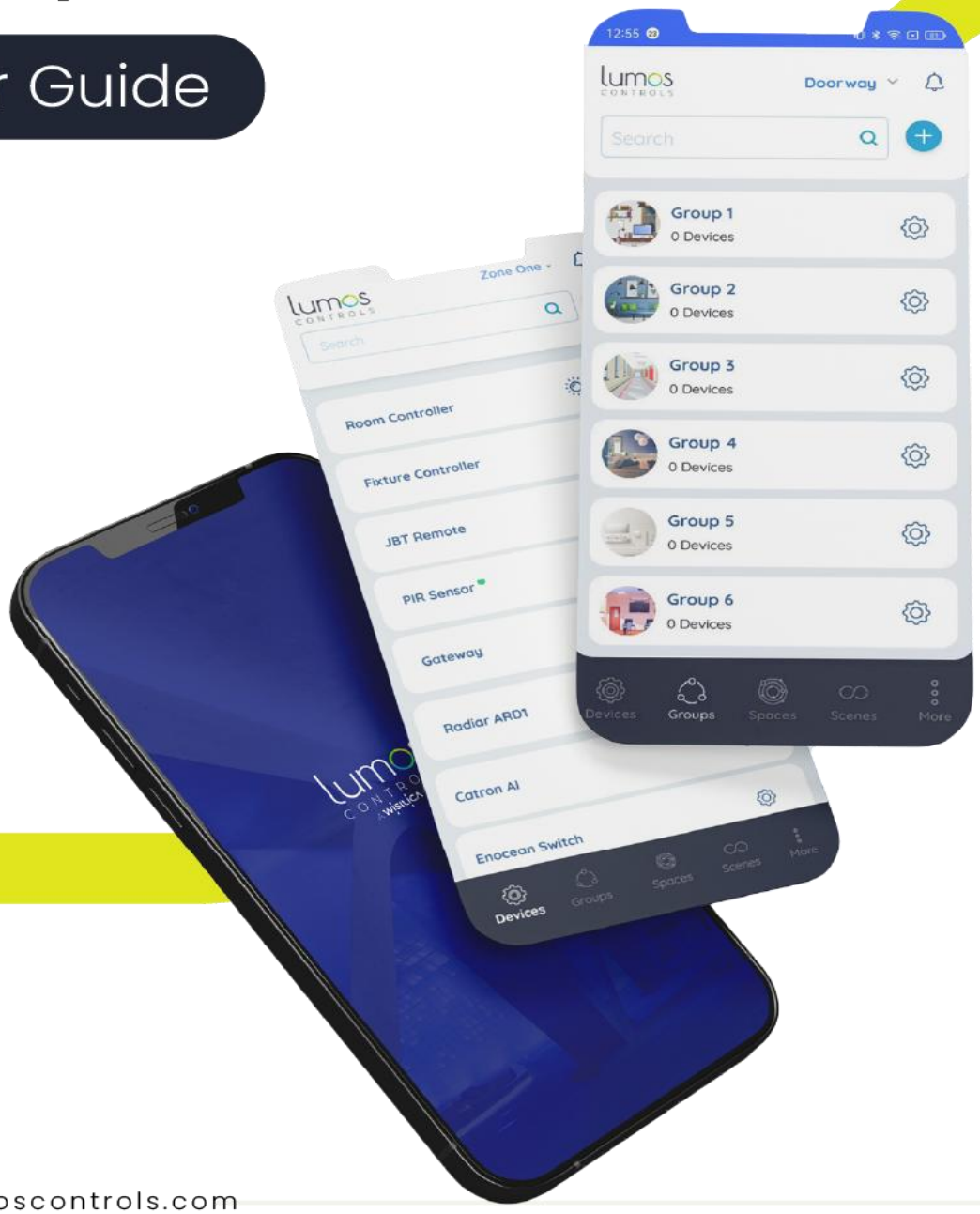
lumos CONTROLS
A WISILICA BRAND

Mobile Application

User Guide



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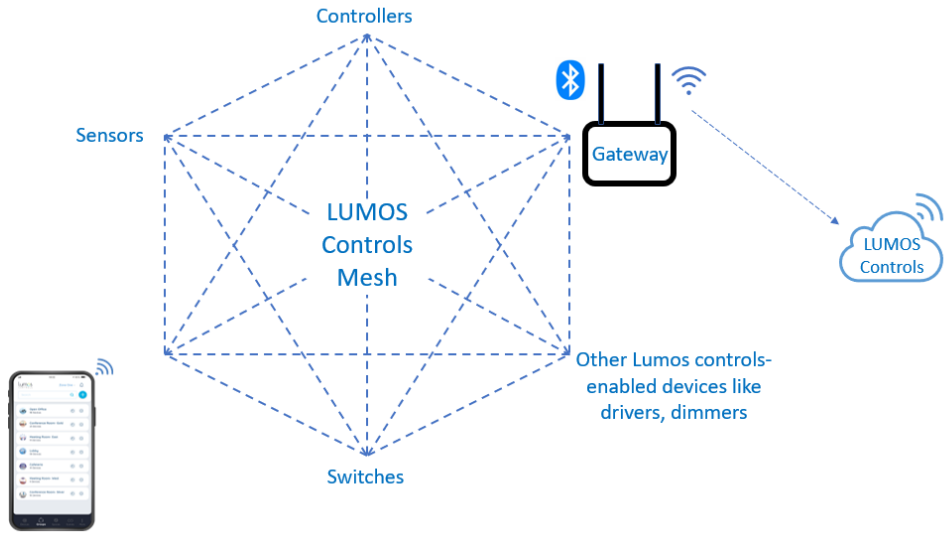
1 Introduction

Lumos Controls has a wide range of innovative wireless lighting controllers, drivers, sensors, switches, gateways. These are designed to make lighting energy-efficient and human-centric. Let us understand the ecosystem and how to configure these using the Lumos Controls mobile app.

2 About the Lumos Controls Ecosystem

Lumos controls is built on an IoT platform, Arixa, that integrates control and sensing capabilities to provide highly scalable, enterprise-grade solutions.

The smart lighting solution, Lumos Controls, comprises controllers, drivers, sensors, switches, and gateways that form a resilient non-flooding Bluetooth low energy mesh. These devices communicate amongst themselves over our own proprietary BLE Mesh protocol. They are powered by an intelligent Cloud/on-premise server with an analytics engine that enables Lumos Controls to offer extensive user, building, device, and data management capabilities. Along with the support of user-friendly and feature-rich mobile and web interfaces, Lumos Controls provides the user with enriched visualization, actionable lighting insights, and adaptive automation. Should you require a centralized control panel or touch screen, the mobile application can be seamlessly run off a tablet that runs iOS/Android OS.



The mobile app and gateway communicate with the devices in the mesh wirelessly using Bluetooth Low Energy. The gateway communicates with the cloud using the building's internet connection over WiFi/Ethernet.

The controllers communicate either via 0-10V wired connections when used with 0-10V drivers or the DALI bus when used with DALI drivers.

Additionally, Lumos Controls BLE mesh can seamlessly communicate to Bluetooth Low Energy self-powered Enocean sensors and switches - No additional programming is required to enable this.

The ecosystem has the capability to update all components to incorporate latest features. The mesh devices support over-the-air (OTA) update and the Cloud / On-Premise Server can be updated securely over the internet.

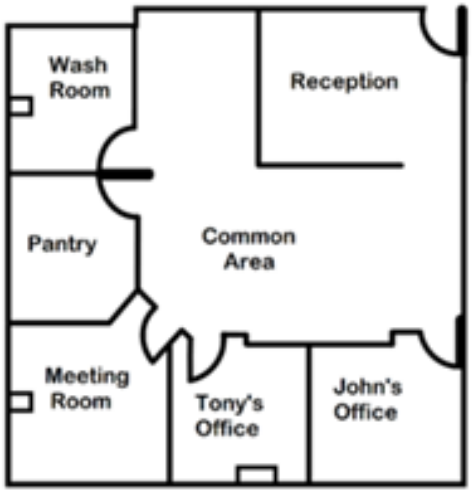
3 Recommended practices before commissioning of Lumos Controls' devices

Following a good commissioning plan is invaluable for control, reconfiguring, and troubleshooting at later stages. Here's how we recommend proceeding with commissioning-

1. Ensure that the building hierarchy is properly set according to how you intend to configure & control it. Lumos Controls provides Buildings, Floors, and Zones. So why not take advantage of that?

2. When you commission devices, make sure to give them recognizable names so that they are easy to identify during configuration. Examples of device names could be "Amy's office Light -1", "Pantry Light -1" and so on. You can also rename devices later

To illustrate this, imagine the Office layout image on the 1st floor of a building with 3 floors



If you are the facility manager, you would have created a building with 3 floors in it

On the 1st floor, this particular office can be considered a zone. Let us assume each room in this office has 4 lights (and 4 controllers)

While commissioning devices in this office to the zone, make sure to give them recognizable names - for example,
The 4 devices in John's office could be called JOL-1, JOL-2, JOL-3, and JOL-4
The 4 devices in Tony's office could be called TOL-1, TOL-2, TOL-3, and TOL-4

This will ensure that when you are trying to create groups or scenes, it is easy to identify and add the right lights to the configurations

4 Getting Started

4.1 Create a new User account in Lumos Controls mobile app

1. Install the **Lumos Controls** mobile app from Play store or App store
2. In the login page, click on 'Sign Up' option
3. Enter username & email ID and click on the 'Check' button to ensure that the entered username is unique in the system
4. Click on the option 'Verify E-mail' to receive an OTP in the email ID
5. On the next page, enter OTP, choose the country in which the solution is implemented, enter password and then click on 'Create Account'

Note: The Username once created cannot be changed. Please choose a Username relevant to the Building / Organization name.

4.2 Login to the Lumos Controls mobile app

1. In the **Lumos Controls** mobile app login page, enter the username and password.
2. Click on the 'Sign In' button to login. By default, the 'Devices' tab will be displayed.

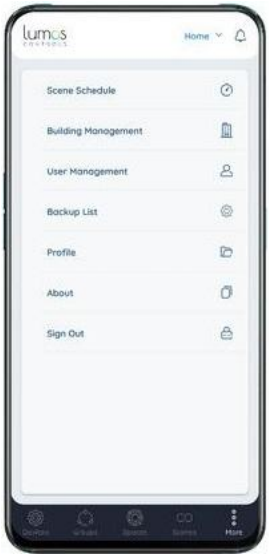
4.3 Building Management- Create Buildings, Floors, and Zones

By default, the application will provide a building (Default Building), a floor (Default Floor), and zone (Home). User can create additional buildings, floors, and zones as per requirement. Let us create a floor and zone under default building.

Also, please refer Section 3 of this document- "Recommended practices to be followed during the commissioning of Lumos Controls' devices".

To create a Building:

1. In the app home page, click on the ⋮ (More) icon. Select 'Building Management'
2. Click on the '+' button
3. Enter the desired building name and click ‘Ok’
4. The new building will be listed under Building Management



To create a Floor:

1. Under 'Building Management', select the building in which the floor is to be created.
2. Click on the '+' button
3. Enter the desired floor name and click ‘Ok’. The new floor will be then displayed under the building

To create a Zone:

1. Under 'Building Management', select the building and then the floor in which the zone is to be created
2. Click on the '+' button
3. Enter the desired zone name and click ‘Ok’. The new zone will be then listed under the selected floor

5 Commission the Devices to Lumos Controls mobile app

In this section, we will understand how to commission devices such as Controller, Driver, Sensor, Gateway and Switches.

5.1 Output Channel Settings and Modes

Output Channel Settings of a device determine the types of controls it shall have. These controls include:

- On/Off
- Intensity change
- CCT change

To configure Output Channel settings:

1. Go to the 'Devices' tab and click on the  icon of the Controller
2. Select 'Additional Settings' and choose 'Output Channel Settings'
3. Choose any of the Output Channel modes:
    - Single Channel
    - Single Channel + Relay
    - Driver-Based Color Tuning
    - Controller-Based Color Tuning
    - 2 Single Channels
    - Relay

Single Channel (Radiar AF10): Choose 'Single Channel' as the output channel mode if only one channel of the controller is connected. This mode will support On/Off and intensity control.

Single Channel + Relay (Radiar AR10, Radiar AF10, Radiar D10): Choose 'Single Channel + Relay' as the output channel mode if only one channel of the controller/driver is connected. The second channel will act as an external relay input. This mode will support On/Off and intensity control of the device. This is the default output channel mode for the controllers.

Driver-Based Color Tuning (Radiar AR10, Radiar AF10, Radiar D10): Choose 'Driver-Based Color Tuning' as the output channel mode if both channels of the controller are connected and when the connected driver has the capability to perform color tuning. This mode will support On/Off, intensity, and CCT control.

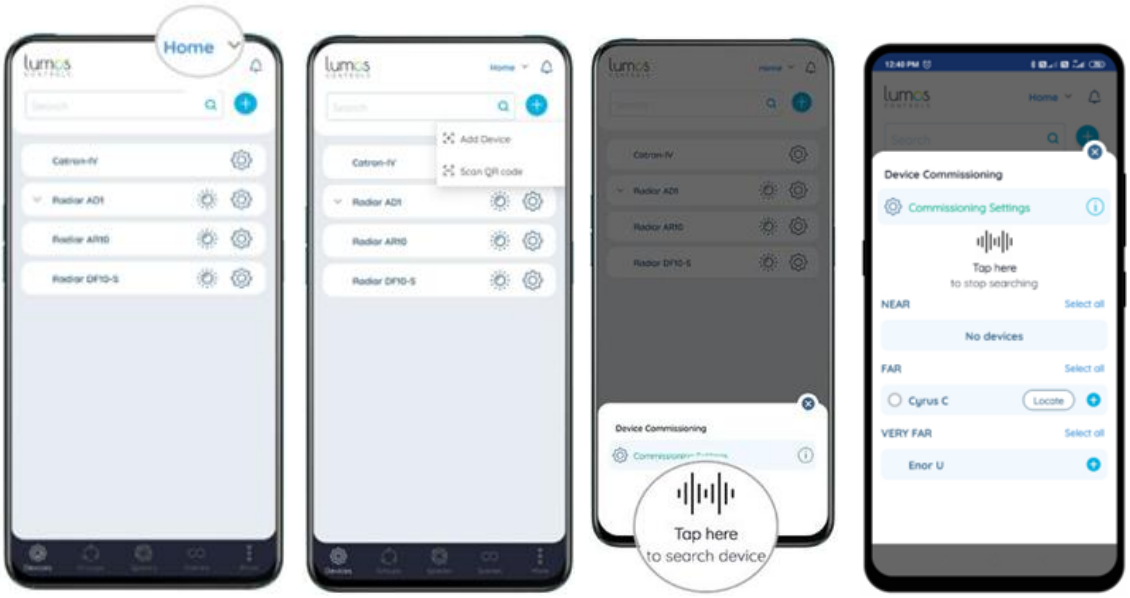
Controller-Based Color Tuning (Radiar AR10, Radiar AF10, Radiar D10)**:** Choose 'Controller-Based Color Tuning' as the output channel mode if both controller channels are connected and when the connected driver does not have the capability to perform color tuning. In this mode, the controller will perform color tuning. This mode will support On/Off, intensity, and CCT control.

2 Single Channels (Radiar AR10, Radiar AF10, Ldrive 32W, Ldrive 42W, Ldrive 36W, Ldrive 60W): Choose '2 Single Channels' as the output channel mode if both channels of the controller/driver are connected to control the intensities of two individual luminaires independently. This mode will support On/Off and intensity control through both controller channels.

Relay (Radiar AR10, Radiar AF10): Choose 'Relay' as the output channel mode if the controller set up needs to behave as a plug load control or if you only want it to perform On/Off operations

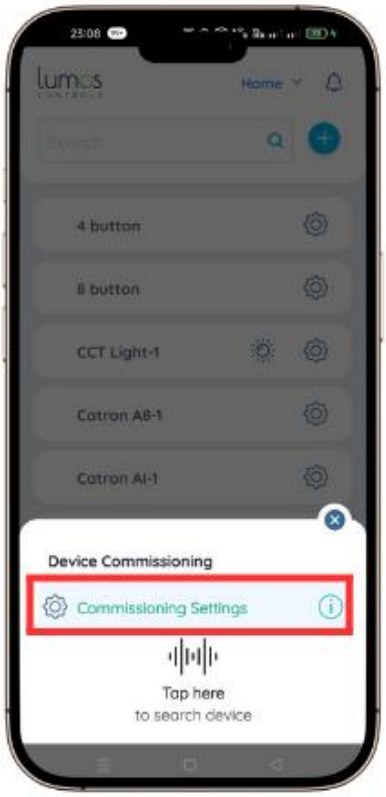
5.2 Commission Controller, Driver & Sensor

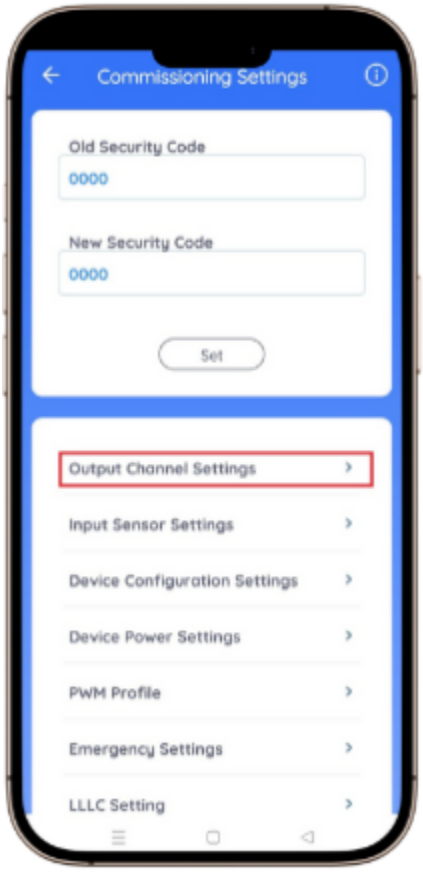
1. Power the device. The device remains in pairing mode for 3 minutes from the time of powering
2. Choose the zone into which you want to commission the device from the top right corner of the app
3. Go to the 'Devices' tab in the app. Click on the '+' button and choose the 'Add Device' option
4. Under ‘Device Commissioning’ option, click on 'Tap here' to list the corresponding device
5. Click on 'Locate', and the luminaire connected to the associated device will start blinking and can be easily identified
6. To commission the device, click the '+' button corresponding to the device and enter security code (default “0000”)
7. By default, devices will be commissioned with settings configured in the 'Commissioning Settings'

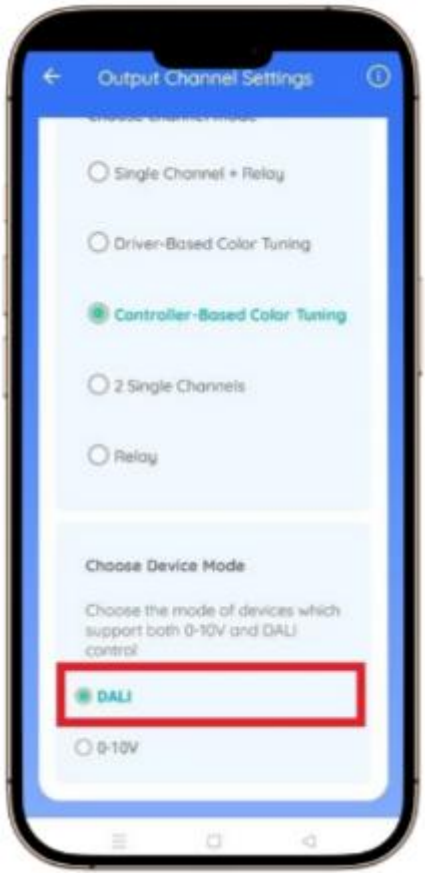


5.3 Commissioning DALI Controllers

1. Power the device. The device remains in pairing mode for 3 minutes from the time of powering
2. Choose the zone into which you want to commission the device from the top right corner of the app
3. Go to the 'Devices' tab in the app. Click on the '+' button and choose the 'Add Device' option
4. Under ‘Device Commissioning’ option, click on 'Tap here' to list the corresponding device
5. Select ‘Commissioning settings’
6. Select ‘Output Channel Settings’
7. In the page, scroll down to the ‘Choose Device Mode’ section.
8. Select ‘Dali’

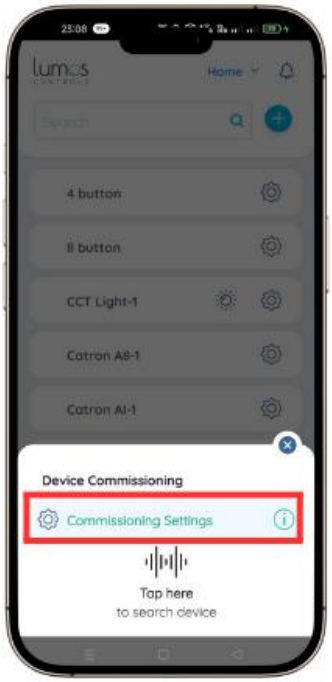


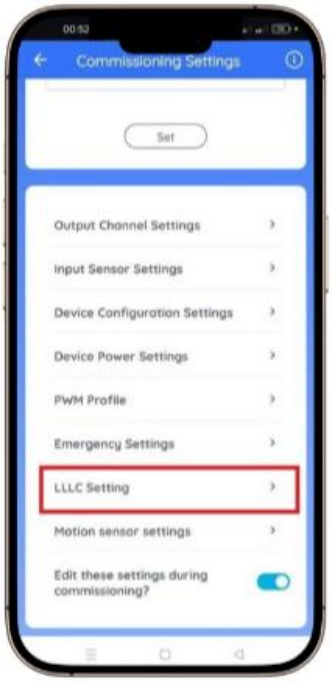




5.4 Commissioning devices like Cyrus F having sensor and dimmer

1. Power the device. The device remains in pairing mode for 3 minutes from the time of powering
2. Choose the zone into which you want to commission the device from the top right corner of the app
3. Go to the 'Devices' tab in the app. Click on the '+' button and choose the 'Add Device' option
4. Under ‘Device Commissioning’ option, click on 'Tap here' to list the corresponding device
5. Select ‘Commissioning settings’
6. Scroll down to select ‘LLLC Setting’ option.
7. Select the required configuration for the device.

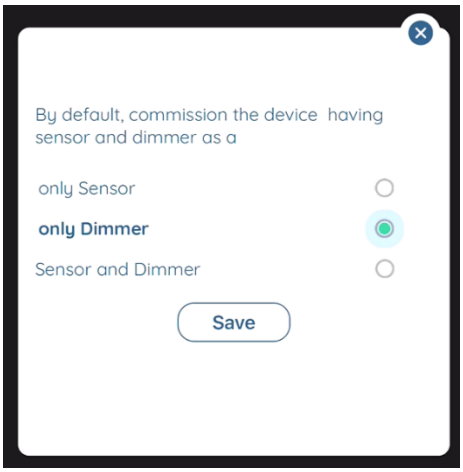


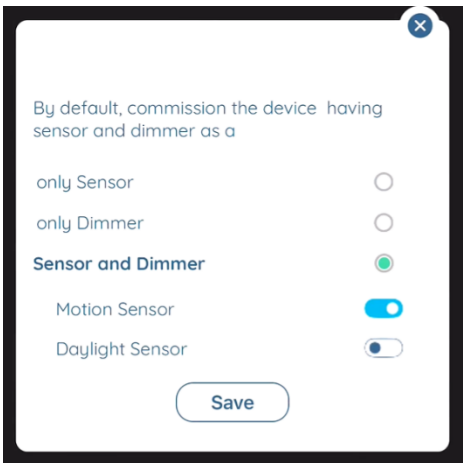


8. By default, Sensor and Dimmer & Motion Sensor option will be selected.

   The user can select the required mode for the device.

   Only Sensor: If the user wants the device to act as sensor only
   Only Dimmer: If the user wants the device to work as a dimmer only
   Sensor and Dimmer: If the user wants the device to work as a sensor and dimmer both
   Motion Sensor: If the user wants the device to work only as a 'Motion sensor'.
   Daylight Sensor: If the user wants the device to work only as a Daylight sensor.





5.5 Commissioning Radiar DP5 (5 Channel PWM Controller)

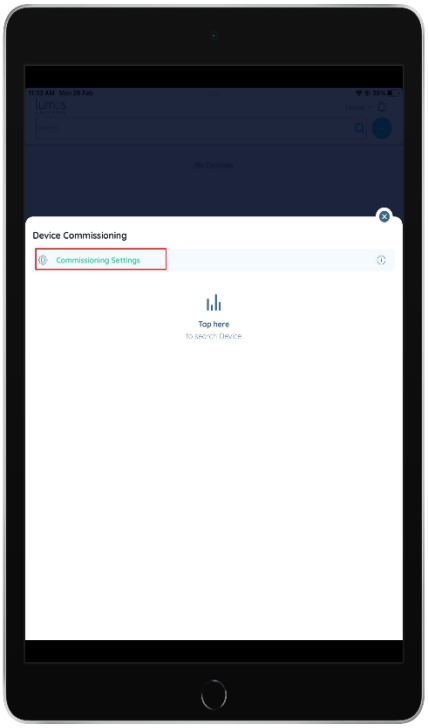
Radiar DP5 is a 5 channel constant voltage dimming module. It provides excellent color adjustment performance and is based on manual input/automated control to adjust LED light color and brightness. The device has 11 profiles which can be selected as per the use case.

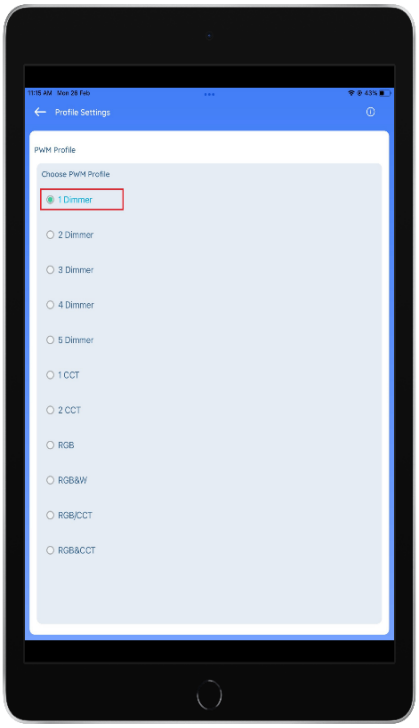
Note: The required PWM profile has to be selected prior to the commissioning of the device. Once the commissioning is done, the PWM profile cannot be changed. User cannot edit the profile once commissioned, but can be viewed the type of profile chosen from the profile settings.

- **Commissioning the Device**

9. Power the device. The device remains in pairing mode for 3 minutes from the time of powering
10. Choose the zone into which you want to commission the device from the top right corner of the app
11. Go to the 'Devices' tab in the app. Click on the '+' button and choose the 'Add Device' option
12. Under ‘Device Commissioning’ option, click on 'Tap here' to list the corresponding device

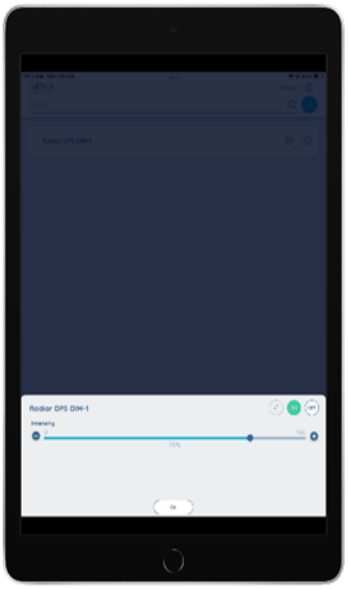
13. Select ‘Commissioning settings’
14. Select ‘PWM Profile’
15. Select the desired PWM profile





The different PWM profiles for Radiar DP5 are as follows:

- **1 Dimmer**



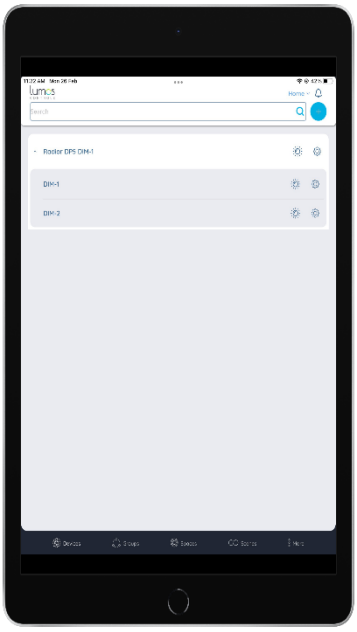
Single Channel Intensity controller

This profile is used to control the intensity of one dimmable LED strip.

This profile shall be represented only as a parent (without any child) with the

following controls - ON/OFF & Intensity control of the channel.

- **2 Dimmer**



One parent device with two independent child devices.

This profile has a parent control and two corresponding Child controls.
The parent shall have the following controls - ON/OFF control & Intensity control of the channel – which will simultaneously control intensity of all the child devices.

Each child device shall have the following controls - ON/OFF control for that child & Intensity control of the channel – which shall control intensity of that particular child device

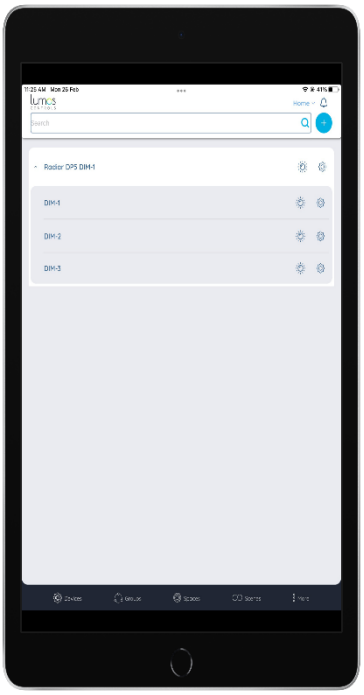
- **3 Dimmer**

One parent device with three independent child devices.

This profile has a parent control and three corresponding child controls.

The parent shall have the following controls - ON/OFF control & Intensity control of the channel – which will simultaneously control intensity of all the child devices.

Each child device shall have the following controls ON/OFF control for that child & Intensity control of the channel – which shall control intensity of that particular child device.



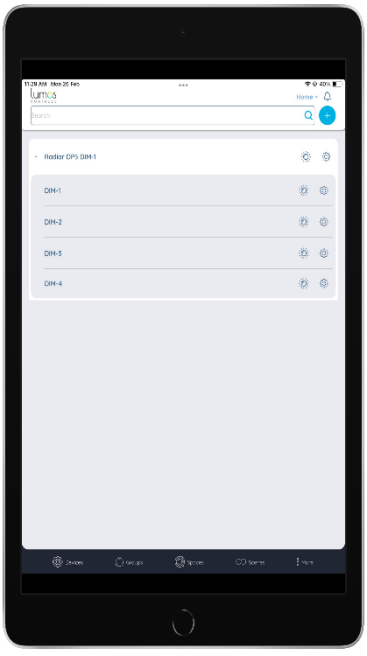
- **4 Dimmer**

One parent device with four independent child devices.

This profile has a parent control and four corresponding child controls.

The parent shall have the following controls - ON/OFF control & Intensity control of the channel – which will simultaneously control intensity of all the child devices.

Each child device shall have the following controls ON/OFF control for that child & Intensity control of the channel – which shall control intensity of that particular child device.

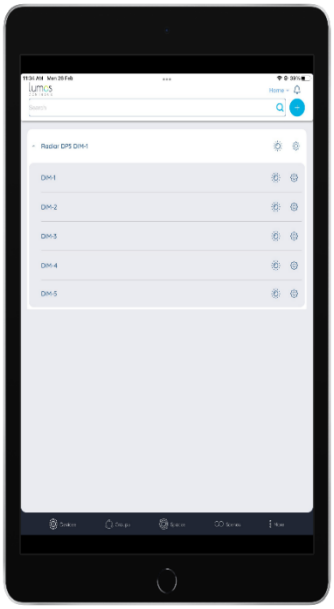


- **5 Dimmer**

One parent device with five independent child devices.

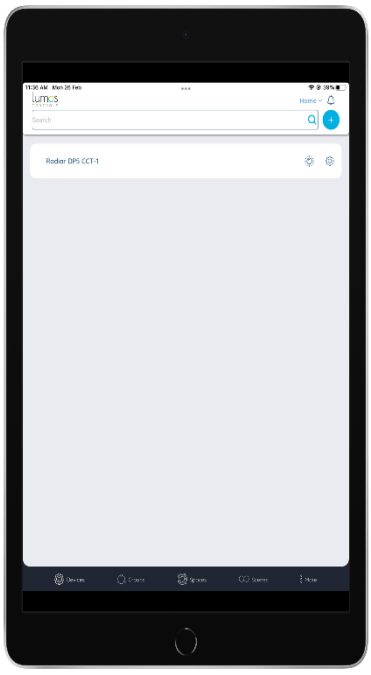
This profile will have a parent control and five corresponding child controls.
The parent will have the following controls - ON/OFF control & Intensity control of the channel – which will simultaneously control intensity of all the child devices.

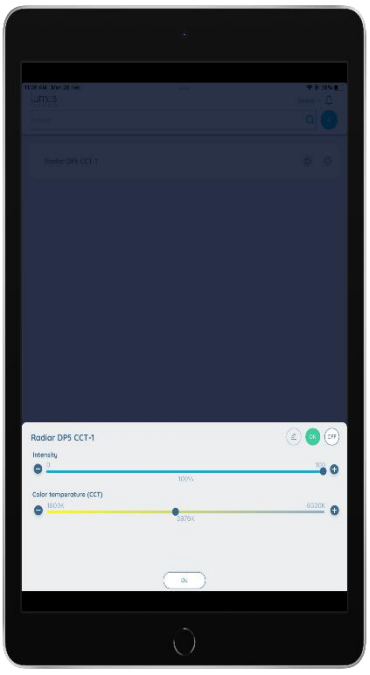
Each child device will have the following controls ON/OFF control for that child & Intensity control of the channel – which shall control intensity of that particular child device.



- **1 CCT**
  The profile can be used to control the intensity and CCT of a tuneable LED strip.

  The profile is represented only as a parent with the following controls - ON/OFF control for the device; Intensity & CCT control of the channel.



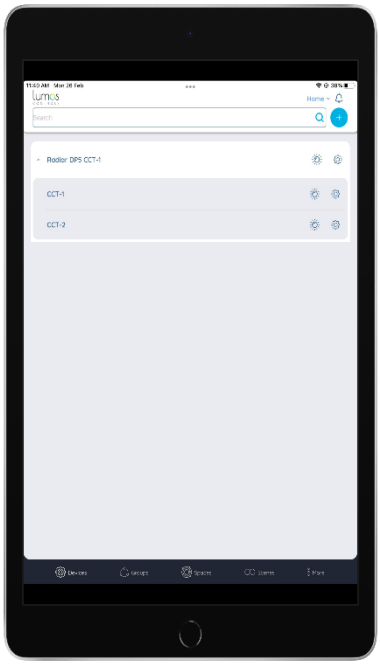


- **2 CCT**

  The profile can be used to control the intensity of 2 tuneable LED strips.

  The DALI parent will have the following controls - ON/OFF control for the parent & Intensity control of the channel –
  which can simultaneously control intensity & CCT of all the child devices.

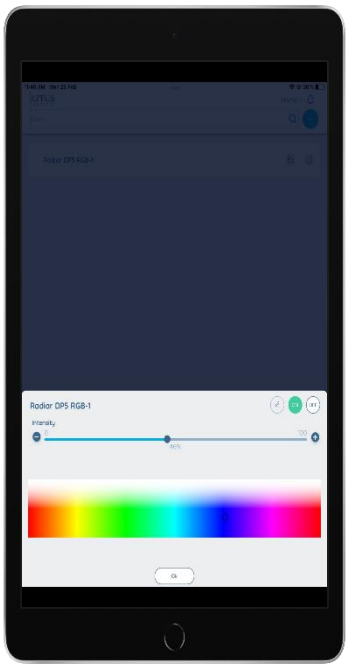
  Each DALI child device will have the following controls - ON/OFF control for that child & Intensity & CCT control of the specific child device.



- **RGB**

  The profile can be used to control the intensity and color of RGB LED strip.

  This profile will be represented only as a parent with following controls - ON/OFF control for the device & Intensity control of the RGB – to select a color.



- **RGBW**

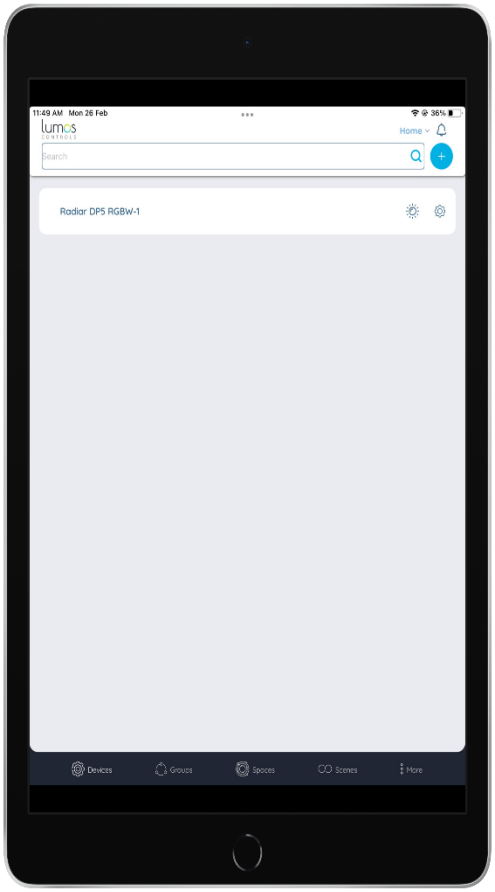
  The profile can be used to control the intensity and color of RGBW LED strips.

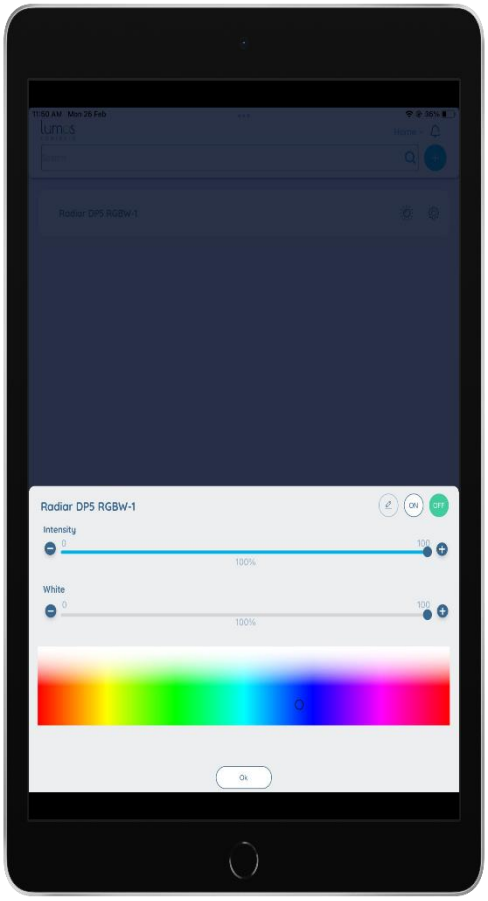
  This profile will be represented only as a parent with following controls - ON/OFF control for the device & Intensity control of the RGBW

  - Intensity control for White component – to adjust the intensity of white component

  The overall intensity of white component will be the product (or percentage) of the both the common intensity and White intensity sliders. i.e., if both sliders are at 100% - then white component will lit in its max intensity. If one slider is at 50% and other at 100%, then the white component will be lit at 50% (50% of 100% = 50%)

  - RGB color control – to select a color





- **RGB/CCT**

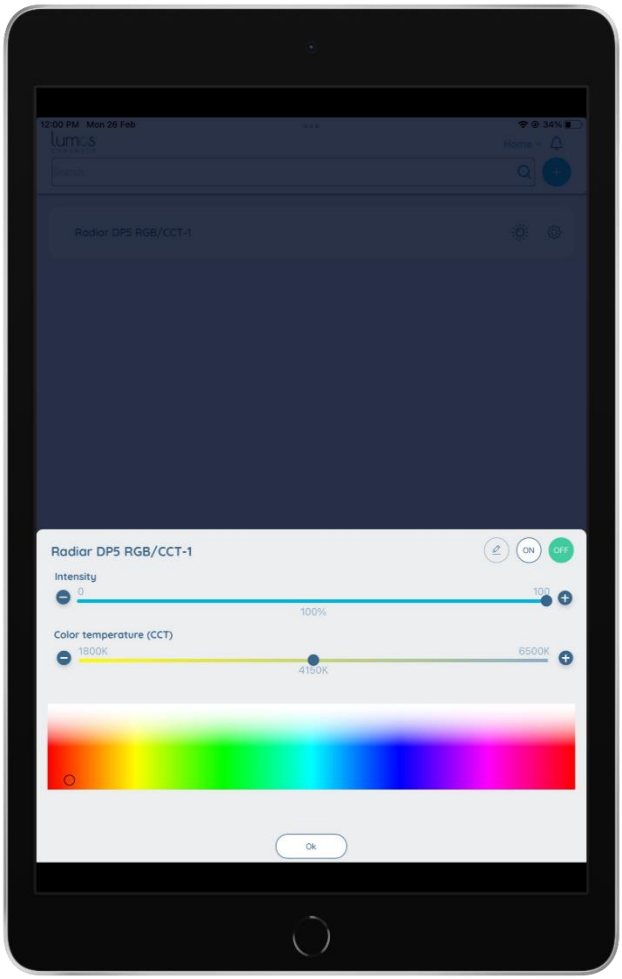
  The profile can be used to control the intensity and color of RGBCCT LED strips.

  This profile will be represented only as a parent with following controls - ON/OFF control for the device & Intensity control of the last adjusted component (RGB or CCT).

  CCT control – to adjust the CCT

  RGB color control

  Note: In RGB/CCT profile, only either RGB or CCT shall be lit at a time. When RGB is adjusted, the CCT component shall be OFF and vice versa.



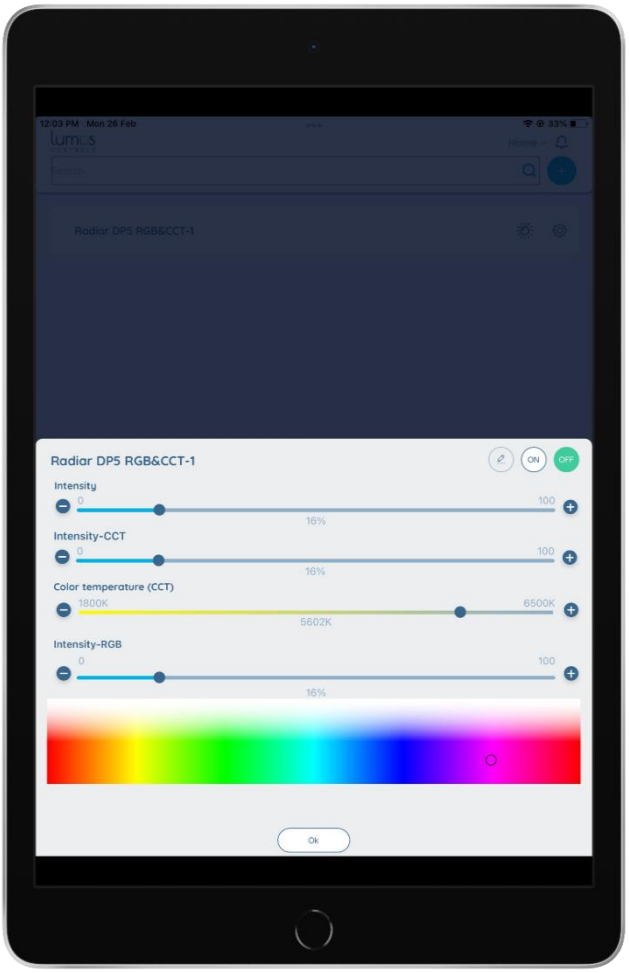
- **RGB&CCT**

  The profile can be used to control the intensity and color of RGBCCT LED strips.

  This profile will be represented only as a parent with following controls - ON/OFF control for the device & Intensity control of the RGB&CCT

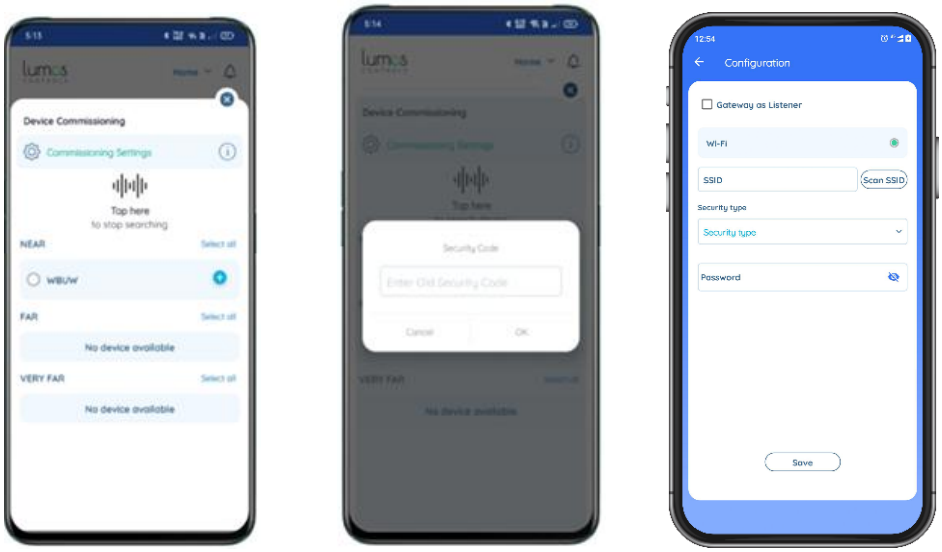
  Adjusting the intensity slider shall automatically adjust the CCT intensity and RGB intensity sliders in tandem.

  - Intensity control for CCT component
  - CCT control – to adjust the CCT
  - Intensity control for RGB component
  - RGB color control



5.6 Commission Gateway in Wi-Fi mode

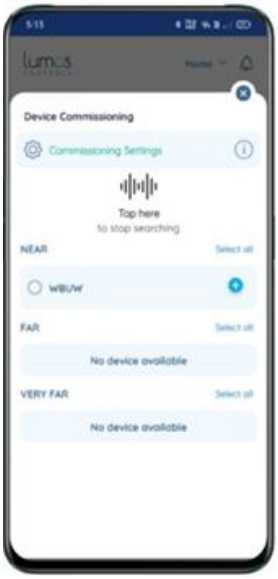
1. Power the device and it will be in pairing mode, ready to be commissioned
2. Choose the zone from the top right corner in the app into which you want to commission the device
3. Go to the 'Devices' tab, click on the '+' button and choose the option 'Add Device'
4. Click on 'Tap here' and the device will be listed. Press '+' button corresponding to the device
5. Enter the security code. The default security code will be ‘0000’
6. In the Configuration page, select the Wi-Fi option (by default, the Wi-Fi option will be selected). The option ‘Gateway as Listener’ can remain unselected. Enter configuration details like SSID, password, security type etc.
7. Click on the Save button to commission the device
8. Enter the display name of the device

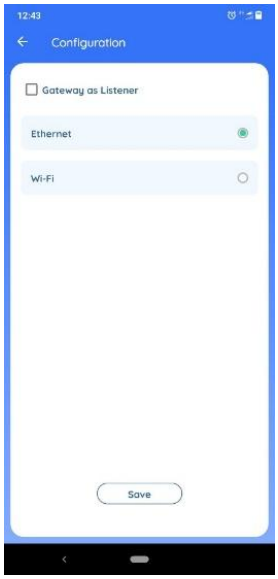


5.7 Commission Gateway in Ethernet mode

1. Power the device and it will be in pairing mode, ready to be commissioned
2. Choose the zone from the top right corner in the app into which you want to commission the device
3. Go to the 'Devices' tab, click on the '+' button and choose the option 'Add Device'
4. Click on 'Tap here' and the device will be listed. Press '+' button corresponding to the device
5. Enter the security code. The default security code will be ‘0000’
6. In the Configuration page, select the Ethernet option (by default, the Wi-Fi option will be selected). The option ‘Gateway as Listener’ can remain unselected

7. Click on the Save button to commission the device
8. Enter the display name of the device





5.8 Identify Gateway Status

Gateway malfunction can be identified by checking the status of the LEDs on it. The Gateway contains 3 LEDs – Blue, Green, and Red. The status is as follows:

1. **Power ON** Mode- Red LED will be ON. It would take approximately 30 seconds to shift to Pairing mode.
2. **Pairing** Mode- In this mode, the Green LED will blink fast
3. **Connected** Mode- In this mode, the Green and Blue LEDs will blink in 1-second interval
4. **OTA** Mode- In this mode, the Blue and Green LEDs will be stable during the OTA update and then shift to Connected Mode.
5. **Hang / No IP** Mode- In this mode, the Blue and Green LEDs will blink fast.

5.9 Commission EDRPB Switch

1. Put the device in pairing mode by:
   a) Long pressing on any of the buttons for 10 seconds, b) short press for 2 seconds, c) another long press for 10 seconds, and d) and a short press for 1 second

2. Choose the zone. Under 'Devices' tab, click on the '+' button and choose 'Add Device'. Click on 'Tap here' to list the devices
3. Press '+' button corresponding to the device and the device will be successfully commissioned
4. You can also commission this switch by scanning the QR code by following the below steps:
   a. Go to the 'Devices' tab
   b. Click on the '+' button and choose the option 'Scan QR code'
   c. Scan the QR code on the device with the app and click on the option 'Add Now'
5. Choose if the switch should act as 'Double Rocker' or 'Single Rocker'
6. Enter the name to be displayed

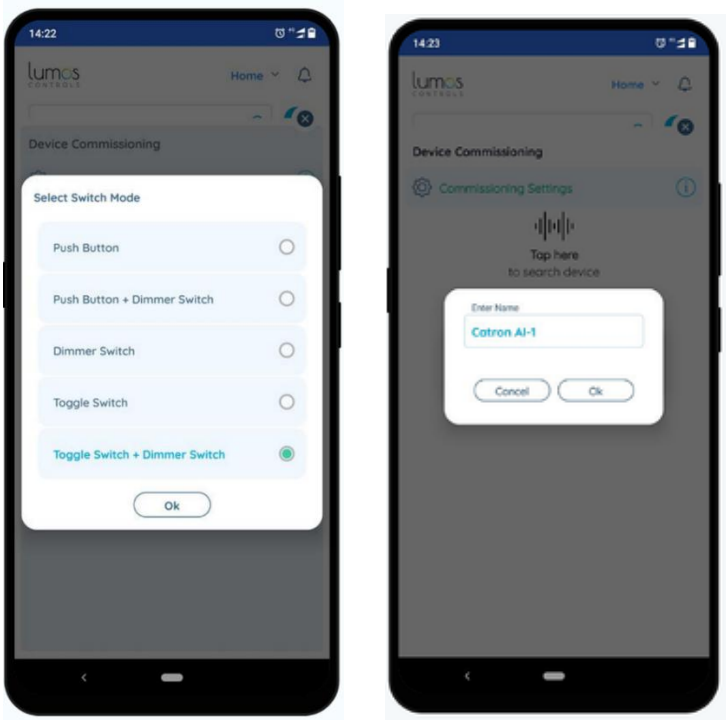
Note: EDRPB can be added to a Group only in “Default” mode and not in “Custom” mode. In Custom mode, we can configure each of the buttons to control All Luminaires, Favorite Luminaire, Group, Scene, or Animation created under the Zone.

5.10 Commission Catron V Switch

1. Put the device in pairing mode by:
   a. Pressing the ON and OFF buttons simultaneously for 10 seconds
   b. A green LED will light up when the device enters pairing mode
2. Choose Zone. Under 'Devices' tab, click on the '+' button and choose the 'Add Device' option. Click on 'Tap here' to list the device
3. Press the '+' button corresponding to the device and the device will be successfully commissioned

5.11 Commission Catron AI Switch Interface

1. Power the device, and it will be in pairing mode, ready to be commissioned
2. Choose Zone. Under 'Devices' tab, click on the '+' button and choose the 'Add Device' option. Click on 'Tap here' to list the device
3. Press '+' button corresponding to the device
4. Select any of the Switch Mode options. Click on the 'Ok' button to commission the device
   The Switch Mode options are Push Button, Push Button + Dimmer Switch, Dimmer Switch, Toggle Switch, and Toggle Switch + Dimmer Switch



5.12 Commission Kinetic Switch (4 Button)

1. To put the Kinetic Switch in pairing mode:
   a. Press the 1 & 4 buttons simultaneously
   b. Press the 2 & 3 buttons simultaneously
   c. Repeat the Steps a & b for 3 times
2. Under 'Devices' tab, click on the '+' button and choose the 'Add Device' option. Click on 'Tap here' to list the device. The display name will be “Kinetic Switch”
3. Press '+' button corresponding to the device to commission
4. After commissioning, click on the ⚙ icon to open the “Device Settings” page
5. Select “Rocker Configuration” option to configure each of the Switch buttons

In Kinetic Switch, only the Custom mode is available and Default mode is not available.

5.13 Commission AC Powered Switch (4 & 8 Button)

1. Power the device, and it will be in pairing mode, ready to be commissioned
2. Under 'Devices' tab, click on the '+' button and choose the 'Add Device' option. Click on 'Tap here' to list the device. The display name will be “AC Switch”
3. Press '+' button corresponding to the device to commission
4. After commissioning, click on the ⚙ icon to open the “Device Settings” page
5. Select “Rocker Configuration” option to configure each of the Switch buttons

In AC Powered Switch, only the Custom mode is available and Default mode is not available.

5.14 Commission Mando Rotary Hub

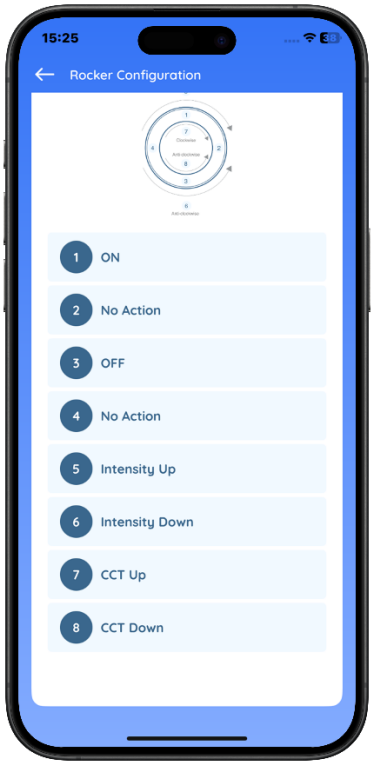
1. Long press button 4 for more than 5 seconds to bring the rotary control hub to enter the commissioning mode, and all indicator lights will blink.

2. Choose the zone. Under 'Devices' tab, click on the '+' button and choose 'Add Device'. Click on 'Tap here' to list the devices

3. Press '+' button corresponding to the device and the device will be successfully commissioned

   Note: Once commissioned, the remote can be configured to operate in default mode or custom mode with the required functionalities from rotary control hub configuration within the Device settings

4. Click on the icon to open the “Device Settings” page
5. Select “Rocker Configuration” option to configure each of the Switch buttons



5.15 Understand Light Configuration Settings

High-End Trim: Defines the highest light intensity a device shall give out. For instance, when high-end trim is configured at 80%, a device shall never glow above 80% intensity. Configuring high-end trim to a lower value than 100% helps in significant energy savings in areas that do not require the lights to be glowing at maximum possible intensity.

Low-End Trim: Defines the lowest light intensity, other than zero, that a device shall give out. When low-end trim is configured at 1%, you can ensure that your lights don't turn Off when they are dimmed to their lowest setting.

Transition Time: Defines the duration during which a light device changes its light level from the current level to the new level when there is a change in its state.

Transition Rate: Defines the number of steps with which the DALI device attains the required light level. Applicable for DALI devices.

Dim curve: Determines if the change in the light levels of a device occurs instantly or gradually. For instance, when the Dim curve is set as 'Logarithmic' and the intensity of the light device is changed from 50% to 80%, the light device instantly attains this 80%. On the other hand, if the Dim curve is set as 'Linear', the transition from 50% to 80% intensity will occur gradually. The default option will be 'Linear' for Non-DALI devices and 'Logarithmic' for DALI devices.

CCT Range: Display the CCT range (Min Warm & Max Cool) configured by the user while commissioning the device. The configured values should be within the CCT range the device can support

When powered, turn ON with: Defines the state that the light should adopt while powered ON.

- Previous state: In this option, the light will adopt the previously lit state
- Scene: In this option, the light will adopt settings from a preconfigured scene. This option is available only for Radiar ARD4 and ARD32.
- Custom: In this option, the light will turn ON with a custom intensity level. This option is available only for Radiar AR10, AF10, D10, AFD1 and Ldrive 32W, 42W, 36W, 60W.

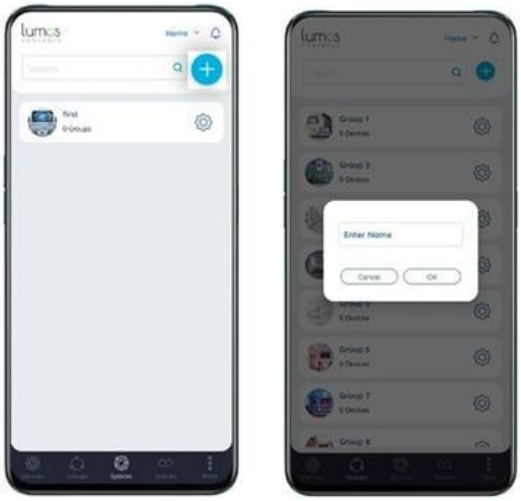
6 Groups

6.1 Create Groups

Using Groups, we can control multiple devices instantly. Under each Zone, A device can be added to 32 groups.
Up to 32 sensors or switches (all together) can be added to a Group. We can add multiple motion sensors to a Group, but can add only one daylight sensor.

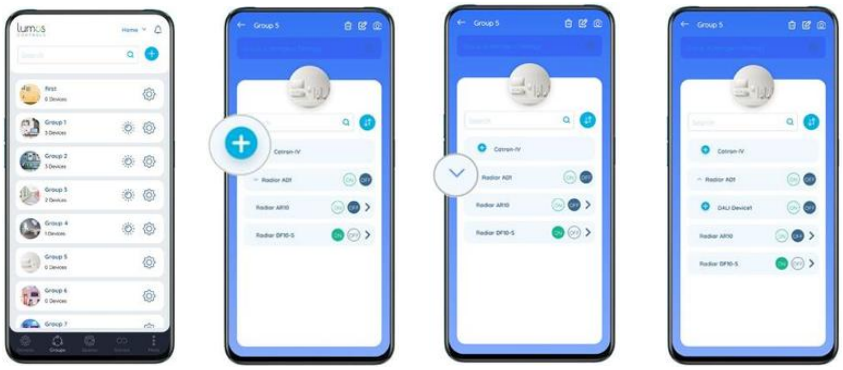
To create group:

1. Go to the 'Groups' tab
2. Click on the '+' button
3. Enter a name for the group and click on the 'Ok' button



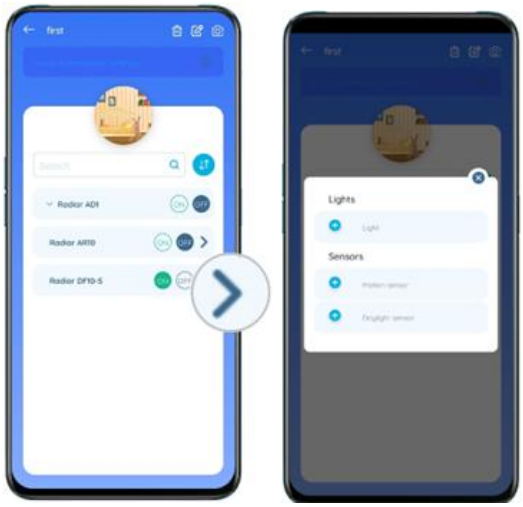
6.2 Add Devices to a Group

1. Go to the 'Groups' tab. Click on the ⚙ icon of the group to which the devices are to be added
2. All the devices commissioned to the active zone will be listed
3. Click on the '+' button corresponding to the devices to be added to the group
4. The devices added to the group will be listed at the top
5. For adding DALI drivers to the group, click '⌄' corresponding to the DALI controller
6. A list of all the drivers connected to the DALI controller will be displayed
7. Click on the '+' button corresponding to the drivers to be added to the group



6.3 Add Switch / Sensor to a Group

1. Go to the 'Groups' tab. Click on the ⚙ icon of the group to which the Switch / Sensor is to be added
2. All the devices commissioned to the active zone will be listed
3. Click on the '+' button corresponding to the Switch to add
4. To add Cyrus AP and Cyrus AM to the group, click on the '›' button, and from the pop-up, choose if the motion sensor element or daylight sensor element of the sensor is to be added to the group
5. To add Radiar SD10 and Cyrus C, click on the '›' button, and from the pop-up, choose if the motion sensor element or daylight sensor element of the sensor is to be added to the group
6. To add AC powered sensors connected to the input channels of Radiar AR10, Radiar AF10 or Ldrive to the group, click on the '›' corresponding to the device and choose if the motion sensor element or daylight sensor element of the device is to be added



Note: Catron IV (4 button Switch in Custom mode) and Catron AI cannot be added to a Group. We can Custom configure each of the buttons to control All Luminaires, Favorite Luminaire, Group, Scene, or Animation created under the Zone.

7 Spaces

A Space is a collection of multiple groups for easily accessing the devices within them.

7.1 Create Space

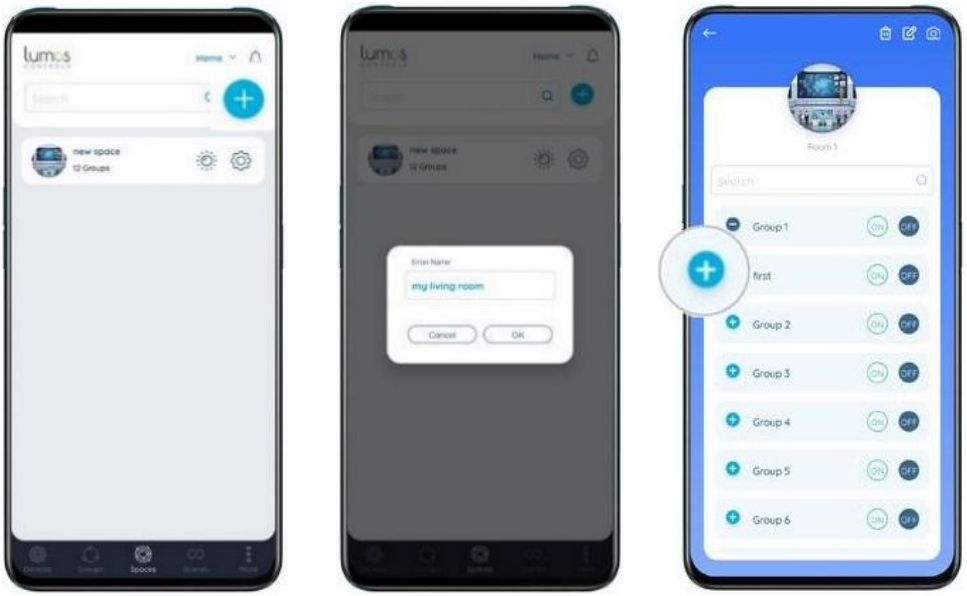
To create a Space:

1. Go to the 'Spaces' tab
2. Click on the '+' button in the top right corner
3. Enter a name for the Space and click on 'Ok' button

7.2 Add Groups to Space

To add Groups to a Space:

1. Choose the Space to which Groups are to be added. All the Groups created in the active zone will be listed
2. Click on the '+' button corresponding to the Group to be added to this Space
3. The Groups added to the Space will be listed at the top

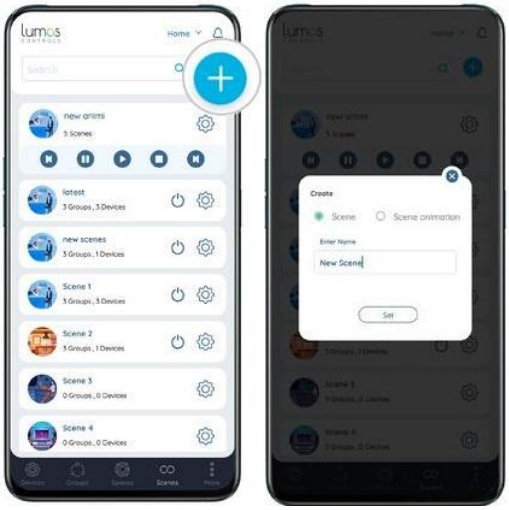


8 Scene and Animation

8.1 Create Scene

To create a Scene:

1. Go to the 'Scenes' tab
2. Click on the '+' button in the top right corner
3. Choose whether you want to create a Scene or Scene animation
4. Enter the name and click on the 'Set' button



8.2 Add Devices / Groups to a Scene

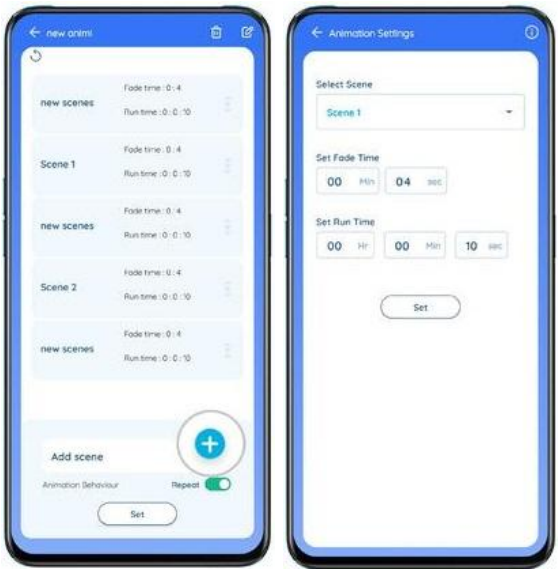
To add devices to a Scene:

1. Choose the Scene to add devices and click on the 'Devices' tab
2. Click on the '+' button corresponding to the devices to be added to the Scene
3. Configure settings for the device by clicking on the Controls ( ) icon corresponding to it
4. Alternately, you may configure settings for all the devices added simultaneously by clicking the Light Settings ( ) icon on the top right corner of the screen

To add groups to a Scene:

1. Choose the Scene and click on the 'Groups' tab
2. Click on the '+' button corresponding to the groups to be added
3. Configure settings for the group

8.3 Create and Configure a Scene Animation



To create a Scene Animation:

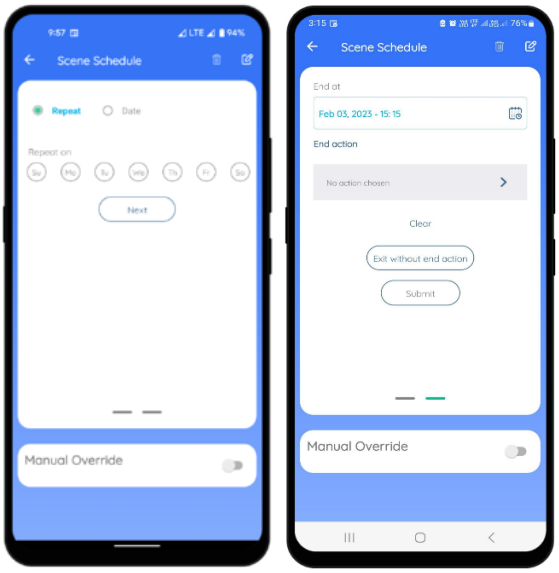
1. Go to the 'Scenes' tab
2. Click on the '+' button. Choose the 'Scene animation' option
3. Enter a name for the animation and click on the 'Set' button

To configure a Scene Animation:

1. Choose an animation
2. Click on '+' icon displayed against 'Add scene'
3. Choose a scene from the ‘Select Scene’ list
4. Configure:
   a. Set Fade Time: Fade time is the time within which the scene settings are attained (Default: 4 Sec)
   b. Set Run Time: Run time is the duration for which the chosen scene should be maintained (Default: 10 Sec)
   c. Click on the ‘Set’ button to add the selected scene to the animation
5. Choose the next scene to be added and repeat step 4
6. When the animation is played, the scenes will be maintained in the order in which they are added
7. To change the order of the scenes, click on list Move icon on the scene card and drag it to the desired position
8. Enable 'Repeat' option if the animation needs to be repeated

9 Scene Schedule

9.1 How to automate a Scene with a Schedule



1. Go to the 'More' tab and choose the 'Scene Schedule' option
2. Click on the '+' button, enter the desired schedule name and click on the 'Ok' button
3. Open the schedule. By default, 'Date' option will be selected
   a. Enter the Start date and time for the scheduled operation
   b. Under 'Start Action', choose the scene to be activated when the schedule starts
   c. Click on the 'Save start action' button
   d. Enter the End time and under 'End action', choose the scene to be activated when the schedule ends
   e. Click on the 'Submit' button to save the changes
4. Choose the 'Repeat' option if the schedule is to be repeated on multiple days
5. Select the days on which the schedule must be activated
6. Enable the 'Manual Override' option to configure the duration after which the light devices in the schedule should respond to the schedule if someone manually controlled during a scheduled operation. During this period, the lights will not respond to the scheduled operation

10 Motion Based Automation

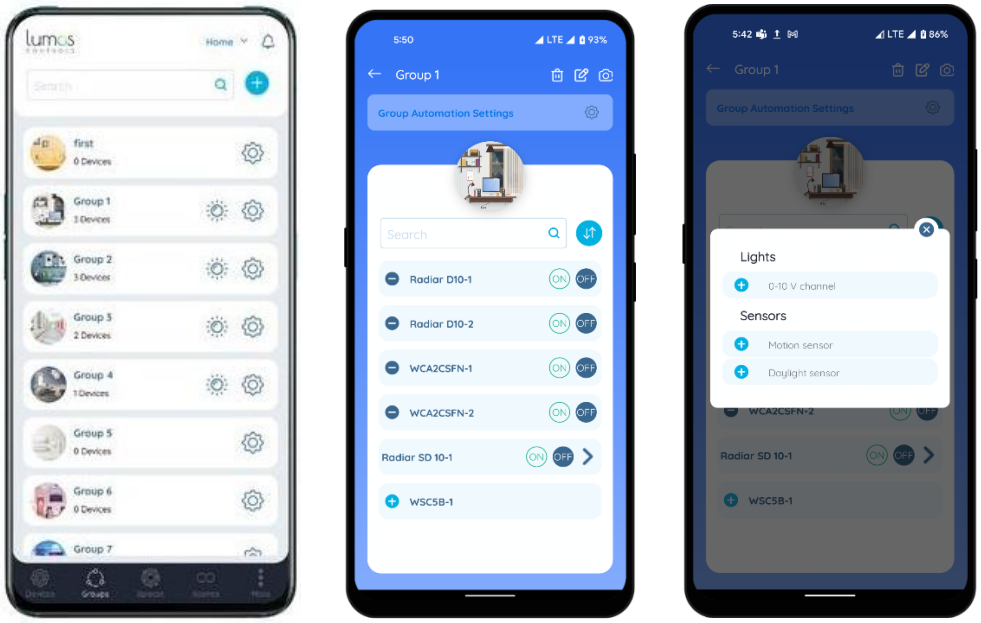
Lighting can be automated based on motion detection using the Radiar SD10, Cyrus AP, Cyrus C, Cyrus F or Cyrus AM sensors. While Cyrus C, Cyrus F, Cyrus AP, and Radiar SD10 are PIR-based motion sensors, Cyrus AM is a microwave-based motion sensor.
Up to 32 motion sensors can be associated with a light device or a Group unless they are already associated with switches or daylight sensors. The Lumos controls system allows a light device to be associated with a total of 32 sensors/switches.

10.1 Steps to automate lighting with motion sensors

1. Install light devices and motion sensors in the location where you want to automate lighting with motion sensors
2. Commission the installed light devices and motion sensors
3. Configure settings for the motion sensor to define how it should send a trigger on detecting motion
4. Associate the motion sensor to the light device that should respond to the motion sensor trigger
5. Configure settings for the light device to define how it should respond to the motion sensor triggers
6. Add the light devices and the motion sensor to a group if you want multiple light devices to respond to the motion sensor triggers
7. Configure Motion sensor settings for the group to define how a group of lights should respond to the motion sensor triggers

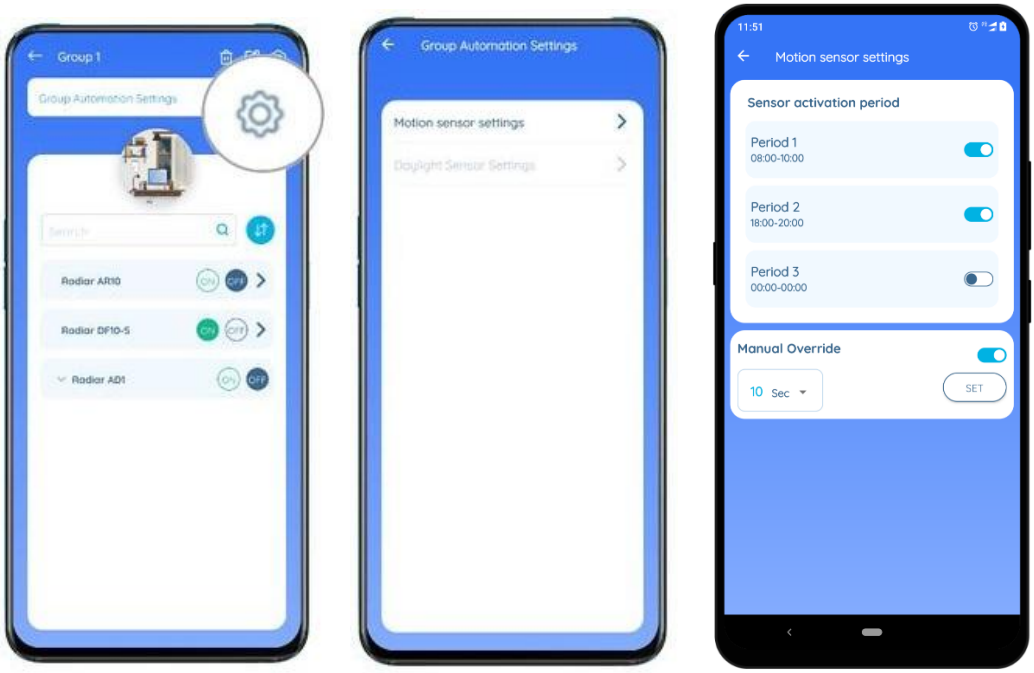
10.2 How to associate motion sensors to a Group

1. Go to the 'Groups' tab
2. Choose the group to which the lights and sensors are to be added
3. Add lights to the Group
4. For adding Cyrus C, Radiar SD10, Cyrus AP and Cyrus AM sensors to the group, click on the '>' button corresponding to them and from the pop-up, click on the '+' button corresponding to the option 'Motion sensor'
5. For adding AC powered sensors connected to the input channels of Radiar AR10 or Ldrive 36W / 60W drivers to the group, click on the '>' button on the device and click on the '+' button corresponding to the sensor

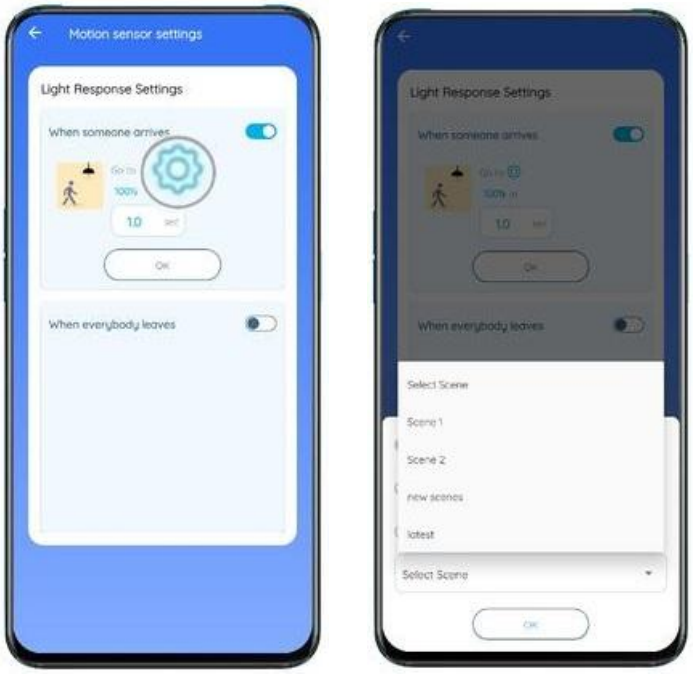


10.3 How to automate a Group with motion sensors

1. Go to the 'Groups' tab
2. Click on the icon of the Group that should respond to the motion sensor triggers
3. Click on 'Group Automation Settings'. 'Group Automation Settings' will be enabled only if a motion/light sensor is added to it
4. Click on the 'Motion sensor settings' option and select the sensor activation period (can configure up to 3 activation periods- Period 1, Period 2, and Period 3). The ‘Motion sensor settings’ page will be displayed.



- 'When someone arrives': Defines the action to be performed when presence is detected
    i. Click on the ⚙ icon to choose if a scene, or a custom intensity level is to be maintained on detecting presence
    ii. If you choose the 'Scene' option, a list of all the scenes to which this group is added will be listed. Choose a scene to be activated
    The group must have been added to at least one scene beforehand to choose the' Scene' option.
    iii. Also, configure the time within which the group should attain the chosen state
    iv. Click on the ‘OK’ button to save the changes

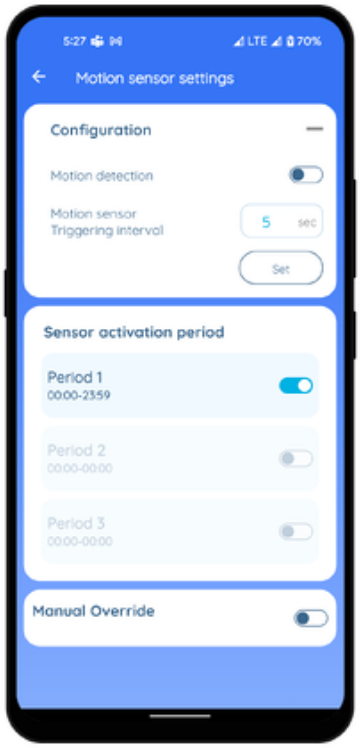


- 'When everybody leaves': Defines the action to be performed when absence is detected
  i. Configure the time duration for which the group should remain in the state configured for 'When someone arrives'
  ii. Click on the ⚙ icon to choose if a scene, or a custom intensity level is to be maintained on detecting absence
  iii. Also, configure the time within which the group should attain the chosen state
  iv. Click on the 'OK' button to save the changes

- 'Then': Defines the action to be performed later
  i. Configure the time duration for which the group should remain in the state configured for 'When everybody leaves'
  ii. Click on the ⚙ icon to choose if a scene, or a custom intensity level is to be maintained later
  iii. Also, configure the time within which the group should attain the chosen state
  iv. Click on the 'OK' button to save the changes

10.4 How to configure Motion Sensor Triggering Interval

1. Go to the 'Devices' tab
2. Choose the sensor and click on the ⚙ icon
3. Select the 'Motion sensor settings' option in Device settings



4. Configure 'Motion sensor Triggering Interval', which is the interval between which the sensor must send triggers if it is detecting motion continuously. The default value of this interval will be 5 sec and can be customized between 5-245 sec

11 Daylight Harvesting

Lumos Controls support 3 Daylight harvesting modes- Open Loop, Closed Loop and Custom.

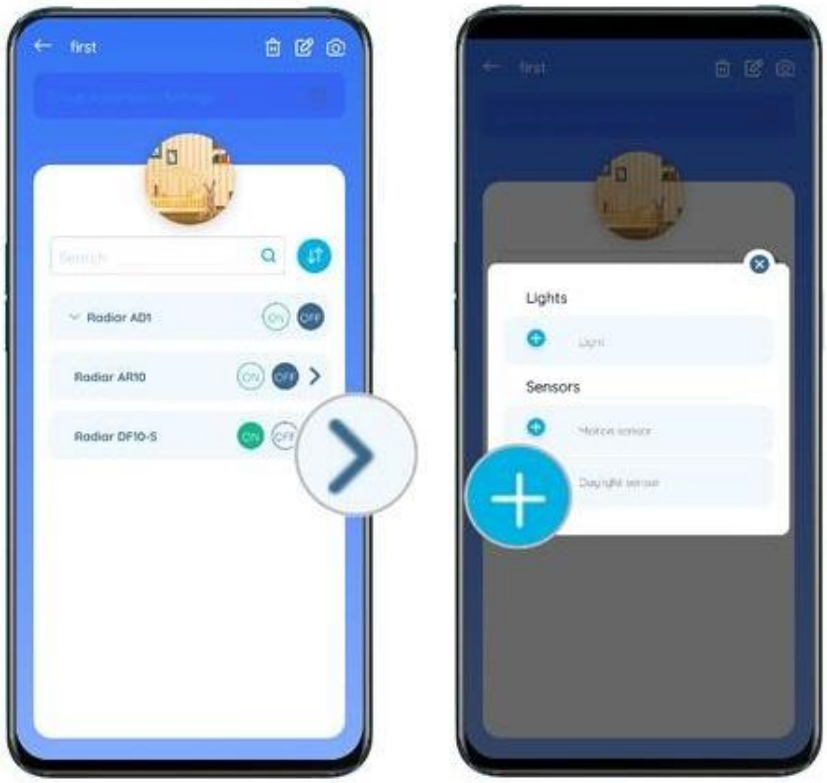
- **Open Loop**- Open Loop systems measure only the incoming daylight, not the contribution from the electric lighting. The daylight sensor should not see any electric light, and therefore it shall be mounted outside the building or inside near a daylight aperture. Open loop mode shall be chosen when a group of light devices is controlled with a single daylight sensor.

- **Closed Loop**- Closed Loop systems measure the combined contribution to light level from both daylight and the electric lighting system and then adjust the light output to maintain the desired illumination level. Since the daylight sensor measures the electric lighting system's light output, it "sees" the results of its adjustment and may make further adjustments based on this feedback. This mode shall be chosen when there are multiple daylight sensors available for the control of different groups.

- **Custom**- Custom mode can be chosen as the daylight harvesting mode if the requirement is to activate a scene when daylight sensor detects an ambient light level:
  - Less than a configured light level
  - In between a range of configured light levels
  - Greater than a configured light level

11.1 How to associate a Daylight Sensor to a Group

1. Go to the 'Groups' tab
2. Choose the group to which the daylight sensor is to be added
3. Click on the '>' button next to the sensor name
4. From the pop-up, click the '+' button corresponding to the 'Daylight sensor' option



11.2 How to configure a Group for Daylight harvesting

1. Go to the 'Groups' tab
2. Click on icon of the group that should respond to the daylight sensor triggers
3. Associate a daylight sensor with the group.
4. Click on the option 'Group Automation Settings' and choose 'Daylight Sensor Settings'
5. Minimum Dim Level-Closed Loop
   - Configure an intensity value below which the electric lights should not be dimmed while trying to maintain a configured light level
   - With a non-zero value configured as the minimum dim level, the electric lights will never be turned off even if the sensor detects a light level greater than the light level configured to it
   - This value will be applicable to the light device only when the associated daylight sensor is configured in Closed Loop

6. Daylight Gain-Open Loop
    - Configure daylight gain to determine how much the lights will dim based on their distance from the daylight source
    - The default value will be 100% and can be configured between 0-100%
    - This value will be applicable to the light device only when the associated daylight sensor is configured in Open Loop

7. Manual Override
    - Enable manual override option and configure a time duration during which sensor triggers will not be considered by the devices
    - The default value for this is 30 min and can be configured between 0-254 min

For example: The manual override option is enabled for a device and is configured with a duration of 20 min. Consider that a device is currently maintaining an intensity of 100% on receiving a daylight sensor trigger. While the device is being controlled based on the sensor trigger, a user turns OFF the device manually using the mobile/web app or a switch. Though the daylight sensor sends a trigger to the device requesting it to maintain 100% intensity, the device will not consider sensor triggers and will be in OFF state for 20 min. After 20 min, if the daylight sensor still sends a trigger, the device will go to 100% intensity.

11.3 How to configure 'Open Loop' as the daylight harvesting mode

1. Go to the 'Devices' tab and click on the  icon of the sensor
2. Choose the option 'Daylight sensor settings'. Scroll down to 'Daylight harvesting mode'. Open Loop will be enabled by default

3. With the default configuration of open loop, the light devices associated to this sensor will be:

    1. Turned OFF when this sensor detects daylight level greater than or equal to 512 lux
    2. Turned On (with 100% intensity) when this sensor detects daylight level less than or equal to 19 lux
    3. The intensity of the device will be linearly varied when sensor detects daylight level between this range 19-512 lux
       For example: When daylight level closer to 500 lux is detected by the sensor, the intensity of the devices will be reduced but not turned OFF. And when daylight level closer to 25 lux is detected by the sensor, the intensity of the lights will be increased but not to 100%
    4. This is depicted using the 'Light response curve'

4. To customize the values of open loop, click on  icon near the 'Light response curve'. This will lead to a page which displays the default values (19 lux and 512 lux) of open loop
5. The default min, max lux values and the light intensity to be maintained at these values can be edited
6. To add more lux values and intensities to maintained at these lux values, click on the '+' button and enter them
   Click on the 'Read' button to make an entry with the current lux value detected by the sensor and the intensity maintained by the light device
7. The light intensities will be then again linearly varied between two consecutive lux values
8. Click on the 'Ok' button after entering the values
9. Click on the  icon to delete any of the entries
10. The open loop values can also be customized automatically using the Auto Calibration option rather than manually entering multiple values. Once enabled, auto calibration will be completed in 24 hours. When auto calibration is completed, the least and the greatest values from the lot will be automatically configured as the Min and Max lux values

Note: The values are configured in terms of Lux for the sensors Radiar SD10, Cyrus C, Cyrus AP, Cyrus AM and Cyrus F and in terms of 'V' for the AC powered sensors connected to the input channel of Radiar AR10, Radiar AF10, Ldrive 36W, or Ldrive 60W.

11.4 Methods of Closed Loop daylight harvesting mode

Closed Loop configurations can be performed using three different methods

1. **Maintain Current Light Level:** This method is intended for users who want to maintain the ambient lighting they are currently exposed to but are unaware of the exact Lux values to be configured to the daylight sensor.

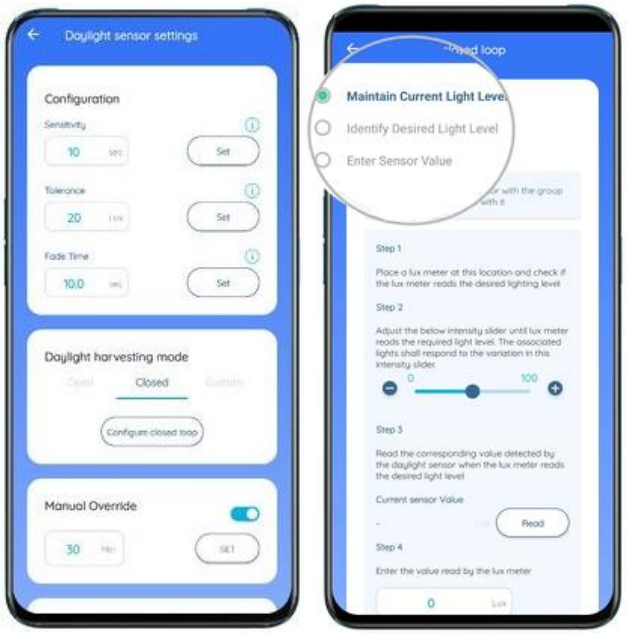
2. **Identify Desired Light Level:** This method can be used if the user knows what Lux value is to be maintained at his workstation (the area where he wants his desired lighting) but is unaware of the Lux value to be configured to the daylight sensor.

3. **Enter Sensor Value:** This method can be used if the user is well aware of the exact Lux value to be configured to the daylight sensor.

Note: The light level that the sensor is exposed to and the light level falling on the workstation will be different as the sensor is usually mounted above the workstation.

11.5 How to configure Closed Loop with the 'Maintain Current Light Level' method

1. Go to the 'Devices' tab and click on the ⚙ icon of the sensor
2. Choose the 'Daylight sensor settings' option
3. Go to 'Daylight harvesting mode' and click on the 'Closed Loop' tab
4. Click on the 'Configure Closed Loop' button. The option 'Maintain Current Light Level'' will be selected by default
5. Ensure that the light devices or group to be controlled by the daylight sensor are associated with it
6. Click on the 'Read' button to read the current light level detected by the sensor. The light falling on the sensor will be different from the light falling on the workstation



7. Note down the light that is falling on the workstation now
   - To do this, place a lux meter at the workstation
   - Note down the lux meter reading and enter it in the app
   - This value is noted only for future purposes to identify the light at the workstation when the sensor reads a particular value
8. Click on the 'Set' button, and the value to be maintained by the sensor will be configured

11.6 How to configure Closed Loop with the 'Identify Desired Light Level' method

Choose this method if the user clearly knows what Lux value is to be maintained at his workstation (area where he wants his desired lighting) but is unaware of the Lux value to be configured to the daylight sensor.

1. Select the option 'Identify Desired Light Level'
2. Place a lux meter at the workstation and note the reading
3. Verify if desired light level is detected at the workstation

4. If not, use the intensity slider shown in the app screen to adjust the electric lighting until lux meter placed at the workstation reads the desired level
5. As the lux meter reads the desired light level, click on the 'Read' button to read the light level detected by the sensor at this point
6. The light falling on the sensor and the light falling on the workstation will be different
7. Enter the lux meter reading in the app.
   Note: This value is noted only for futuristic purpose to identify the light detected by the sensor when desired light falls on the workstation
8. Click on the 'Set' button and the value to be maintained by the sensor will be configured

11.7 How to configure Closed Loop with the 'Enter Sensor Value' method

1. Go to the 'Devices' tab and click on ⚙ icon of the sensor
2. Choose the 'Daylight sensor settings' option
3. Go to 'Daylight harvesting mode' and click on the 'Closed Loop' tab
4. Click on the 'Configure Closed Loop' button
5. Select the 'Enter Sensor Value' option
6. Manually enter the light level to be maintained by the sensor and click on the 'Set' button

11.8 How to configure Custom daylight harvesting mode

Custom mode can be chosen as the daylight harvesting mode if the requirement is to activate a scene when daylight sensor detects an ambient light level:

- Less than a configured light level
- In between a range of configured light levels
- Greater than a configured light level

1. From 'Daylight harvesting mode', click on the 'Custom' tab
2. Click on the 'Configure' button corresponding to the lower limit of the option 'When ambient light level is between'
3. Configure the lower limit of the range using any of the three methods

- Maintain Current Light Level
- Identify Desired Light Level
- Enter Sensor Value

4. Repeat the same for the configuration of upper limit
5. Choose the scene and click on the 'Save' button

12 Building Management

Building Management defines the control hierarchy of Lumos controls solution. The hierarchy goes as:

- A building can have floors in it
- Floors can have zones in it
- Zones can have devices, groups, spaces, scenes, and animations in it

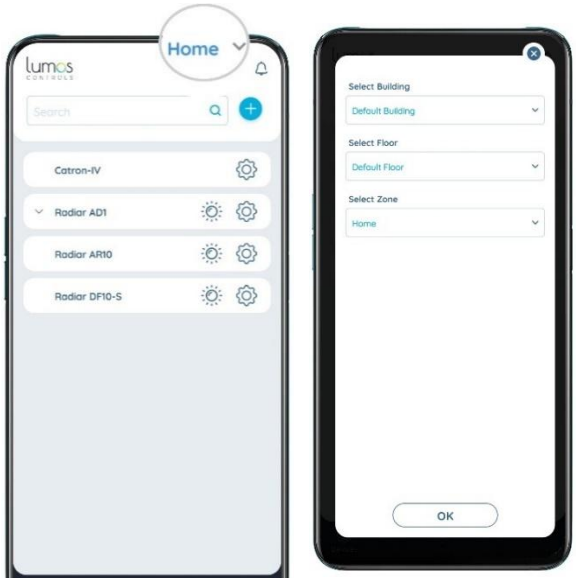
By default, when a new account is created, the admin will be accessing a default zone that is created inside a default floor in a default building. With Building Management, a user can use the same account to access devices installed in different buildings.

Details on how to create Buildings, Floors, and Zones are covered under Section 4.3 of this document.

12.1 How to access devices in a particular zone

To switch zone and access the devices in another zone:

1. Go to the 'Devices' tab
2. All the devices belonging to the currently active zone will be displayed here
3. The name of the currently active zone will be shown in the top right corner of the mobile screen
4. To access devices in another zone, click on the drop-down menu next to the zone name
5. Choose the building and floor in which your desired zone resides and click OK
6. You will be now able to access the devices, groups, scenes, and spaces in this zone



12.2 How to edit / delete Building, Floor, and Zone

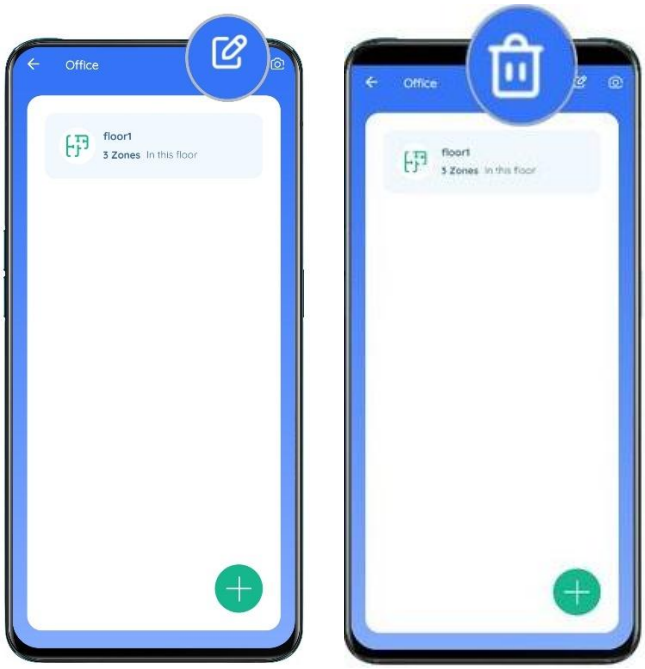
To edit:

1. Go to 'Building Management' in the 'More' tab
2. Choose the Building, Floor or Zone to edit
3. Click on the edit icon to rename

To delete:

1. Choose the Building, Floor or Zone to delete
2. Click on the delete icon
3. Enter the account password

You can only delete buildings that are currently inactive. That is, on the home page, if the devices are being listed for a Zone which is in this building, the delete icon will be not accessible. On deleting a building, all the devices commissioned, groups/scenes/spaces created for that building will also be deleted.



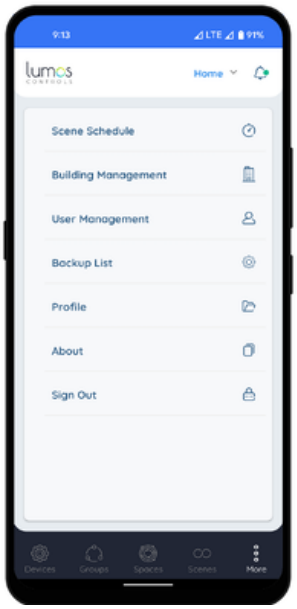
13 User Management

User management can be utilized by an account admin to create Sub-users and assign their access to devices in different buildings, floors, and zones.

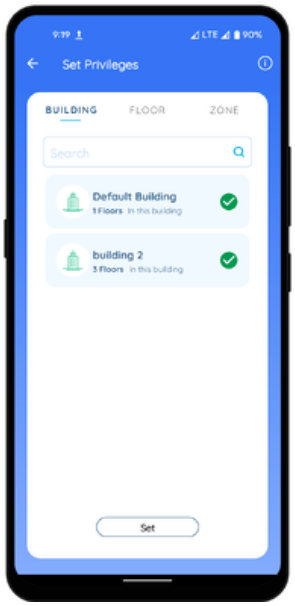
The privileges that can be set are ‘Control’ and ‘Configure’. Sub-users can be set with 'Control' privilege to some buildings and 'Configure' privilege to others at the same time.

13.1 How to create a sub-user and set their privileges

To create sub-users and to set privileges:



1. Click on the more icon ⋮ on the home page
2. Select 'User Management'. All the sub-users created by admins will be listed
3. Click on the '+' button at the bottom-right to create a new user
4. Enter a username, email ID, and password for the sub-user
5. Click on the 'Set privileges' option. A sub-user can have three types of privileges
   - Control: A sub-user with 'Control' privilege can only control the operation of devices, groups, scenes, and spaces and will not be permitted to commission or configure devices, create or configure groups, spaces, and scenes
   - Configure: A sub-user with 'Configure' privilege can commission, configure and control the operations of devices, groups, scenes, spaces and also create them



Choose the type of privilege to be set.

6. If the chosen type of privilege is to be set for buildings, click on the 'Building' tab. Select that building(s) from the list
7. If the chosen type of privilege is to be set for floors, click on the 'Floor' tab
   - Choose the building in which the floor resides
   - Select the floor(s)
8. If the chosen type of privilege is to be set for zones, click on the 'Zone' tab
   - Choose the building and floor in which the zone resides
   - Select the zones(s)

9. Click on the 'Set' button once you have selected the buildings/floors/zones for which the chosen type of privilege is to be applied

13.2 How to disable a sub-user

To disable a sub-user:

1. Select 'User Management' and choose the sub-user
2. Click on the  icon at the top
3. This user will be then disabled

14 OTA Update

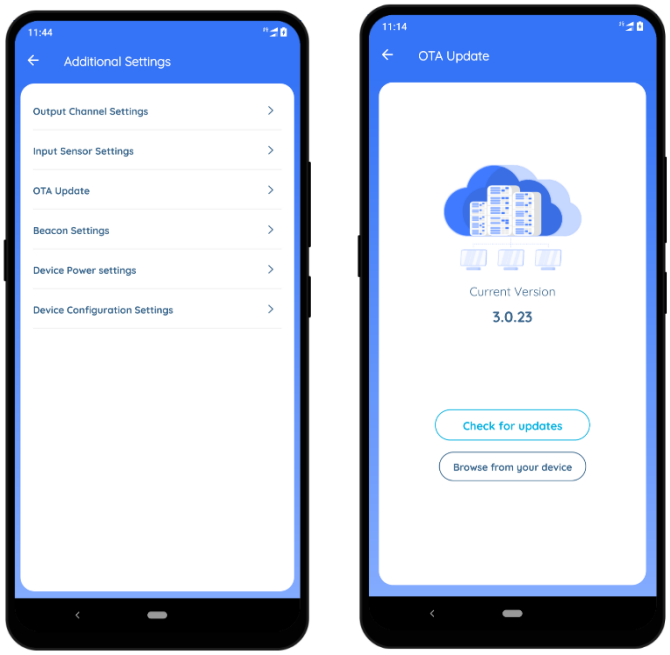
It is recommended to regularly check the new firmware update available for Controller, Sensor, Smart LED Driver, Catron AI Switch interface, Repeater etc. Using Lumos Controls mobile app, we can update device firmware via OTA either:

- by Cloud update
- by using an OTA file stored on your mobile device.

Note: Gateway firmware will get updated automatically. Whenever a Gateway is repowered, as part of the initial communication with Cloud, it will check for the availability of a new firmware version and, if available, will get updated to the same.

14.1 OTA Update via the Cloud

1. Go to the 'Devices' tab and click on the ⚙ icon of the device
2. Select the 'Additional Settings' option and choose 'OTA Update'



3. In the ‘OTA Update’ page, click on 'Check for updates'. The app will check a new OTA file is available on the Cloud for this device type. If the device is already updated to the new version, a message will be displayed ‘Already updated’
4. If an update is available, click on the 'Update' button to initiate the OTA update
5. Please wait while the OTA update is completed

14.2 OTA Update using an OTA file stored on the Mobile device

1. Go to the 'Devices' tab and click on the icon of the device
2. Select the 'Additional Settings' option and choose 'OTA Update'
3. In the ‘OTA Update’ page, click on the option 'Browse from your device'
4. Select the OTA file and initiate OTA
5. Please wait while the OTA update is completed

15 Lumos Controls and Human Centric Lighting

The Right Light at the Light Time has a significant role to play in everyone's lives. This has widespread applications ranging from increasing productivity in offices to improving wellness in old-age homes! Advanced Lighting Controls not only help automate human-centric lighting but allow you to do so with the flexibility to design it for every kind of space and requirement.

It does not take a lot to get started on the way to Human Centric Lighting using LUMOS Controls. All you need are-

- LUMOS Controls-Enabled Smart Controllers
- Color-Tunable fixtures
- A Gateway
- The LUMOS Controls mobile app

LUMOS Controls achieves human-centric lighting by making use of scenes, animations, and schedules. Lighting Designers spend an enormous amount of time deciding the exact amount and type of light required for every kind of space. And LUMOS lets you realize those designs with minimum effort. Human-centric lighting is all about setting the most optimum intensities and color temperatures of light according to the time of the day. The intensity and color temperature setting can vary according to different factors like

- The type of space
- The objective that the building manager is trying to achieve
- Seasonality

Whatever these factors are, you can use LUMOS Controls by following the below steps

1. For each area, create different scenes with required light intensities and color temperatures
    a. For instance, you may want to create a scene with 100% intensity and 6500 K CCT for early morning in an office. An additional scene can be created to be used during noon time, which has a lower intensity and a warmer CCT.
    b. The exact intensity and CCT will depend on the type of space and the lighting design specifications.
2. Once the scenes are set up, you can schedule them to be invoked automatically at regular intervals.
   For instance, Scene 1 can come up at 9:00 AM, Scene 2 at 11: AM, and so on....
3. An alternative to step 2 is to arrange scenes in an animation with appropriate 'Run times' and then schedule just the animation to be played every day.

Lumos Controls lets you create up to 32 scenes in a Zone to offer you the flexibility to achieve the settings whichever way you prefer.

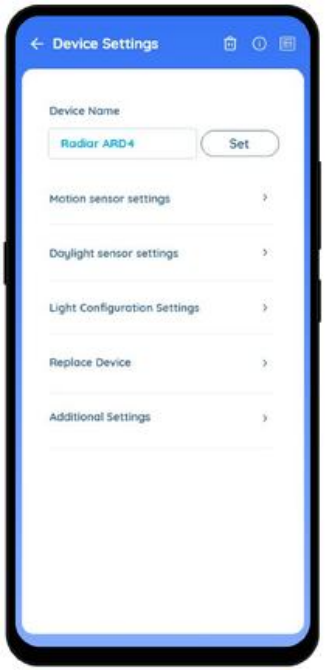
16 Device Replacement

Device replacement is an advanced feature introduced to bring in the ease of replacing a faulty device with a new one without any effort on reconfiguration.

In rare scenarios when a device is not working, this feature helps to comfortably replace with a new device (same type) in just a few minutes. The faulty device and the new device must be of same type (same product name). For example, Radiar ARD4 (Nordic) should be replaced with Radiar ARD4 (Nordic) only and not with Radiar AF-10. Also, ensure that the firmware version of the new device should be equal or greater than the faulty device.

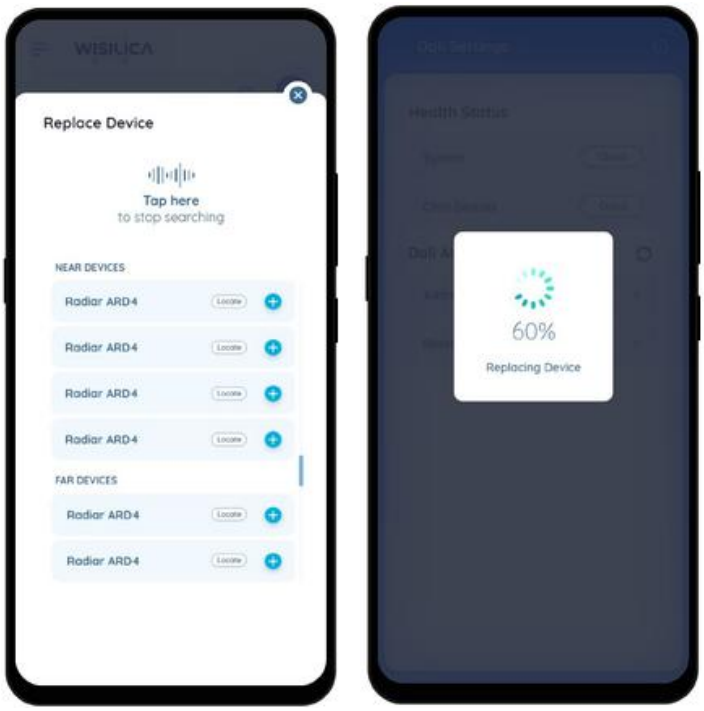
16.1 How to configure Device replacement using the Lumos Controls mobile app?

1. Commission the new device to the app and check the firmware version. Update the firmware to an equal or greater version than that of the faulty device
2. After firmware update, delete the new device
3. Change the faulty hardware device with the new one
4. Go to 'Devices' page in the Lumos Controls mobile app and click on Settings icon displayed against the faulty device
5. Click on the option ‘Replace Device’



6. Power the new device and click on ‘Tap here’ in the app screen. The new device will be listed. Click on the ‘Locate’ button to identify the correct device and then click the ‘+’ icon to initiate replacement

7. The replacement process will be initiated. Wait for the completion message



17 Emergency Test

Emergency Lighting Controls play a crucial part in the overall safety standards of a building. These systems ensure that lights remain alight during a power outage allowing occupants to easily locate the exits should they need to evacuate the building. Hence, selecting a reliable emergency lighting system is of paramount importance for builders.

Emergency lighting audit and compliance is mandatory in many countries. Using Lumos Controls Emergency Lighting solution, we can run automated schedules and conduct manual tests.

17.1 Emergency Control Device Directory

The following devices are equipped with emergency controls:

DALI based devices:-

1. **Radiar AFD1/4**
   Advanced control system featuring emergency shutdown capabilities and safety protocols.

2. **Radiar ARD32**
   Industrial-grade device with integrated emergency response mechanisms.

Note :

Radiar DALI controllers support emergency lighting solutions with DALI-202 compliant self-contained emergency lights, which include an integrated battery, driver, and light source. We provide the controller, while users are free to choose DALI-202 compliant emergency drivers from their preferred manufacturers.
Additionally, we offer recommendations for suitable Emergency DALI drivers upon request to ensure compatibility and optimal performance.

Non-DALI devices:-

1. **L Drive E**

Standard emergency control functionality with fail-safe operations.

Note : L Drive E product series offers various types of emergency luminaires such as exit signs, bug eyes, downlights, etc. . These fixtures are designed with built-in batteries and require only a power connection to operate. No external emergency control or wiring is needed—simply connect power, and the luminaire will function as intended.

Note: Always refer to the manufacturer's documentation for specific emergency control procedures and safety guidelines for each device.

17.2 Type of Emergency Tests that can be done using the Lumos Controls Smart Emergency System

Lumos Controls allows you to perform both Function and Duration Tests using the Lumos Controls system. The tests can be done from either the mobile app or from the Web UI.

Function Test: A function test is a quick test that usually takes between a few seconds to 1 min to complete. This test checks the operation of the emergency light source from the battery supply and gives quick feedback on the device, battery and lamp statuses.

Duration Test: A duration test is a longer test which takes 1-3 hours and is usually carried out annually. This test can give feedback on the device's current battery status, lamp status and ensures that the battery will be able to operate the lamp for the full rated duration.

Both the above-mentioned tests can be configured manually or automatically. Manual tests run once and the result can be viewed on the Web UI. Automated tests are done periodically and the result of each instance of the test can be viewed from the Web UI.

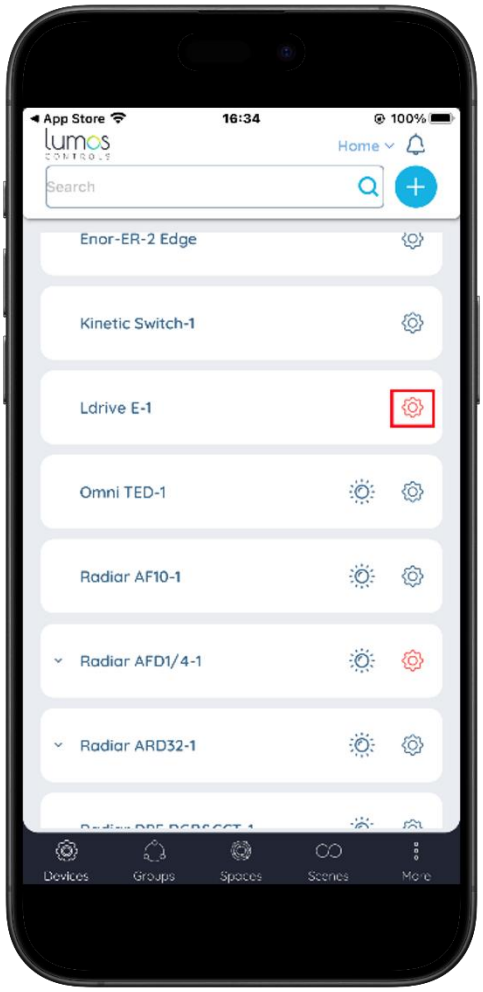
17.3 Create Emergency Tests for Ldrive E from the mobile app

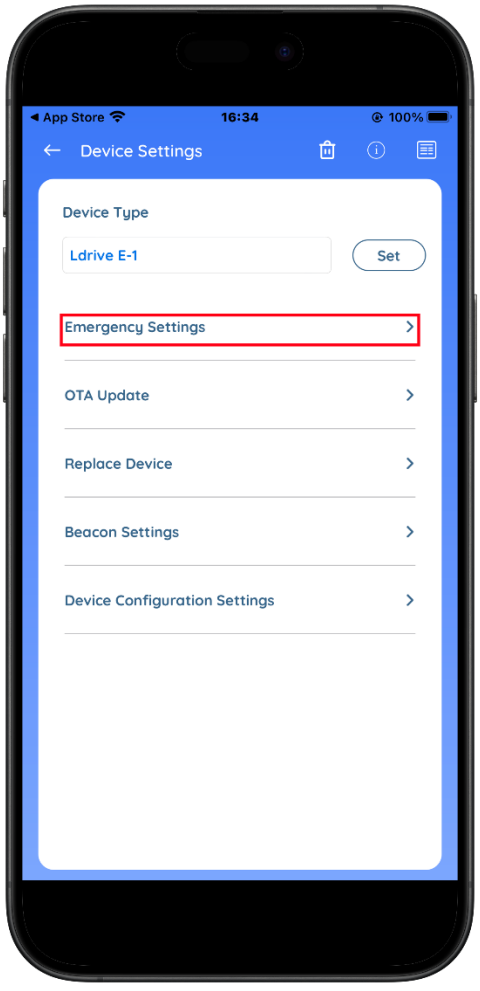
Emergency tests created in the mobile can only be configured at device level and cannot be done in groups. Internet connection is required so as to view the results of these tests in the Web UI.

1. Go to the 'Devices' tab

The icon of the Emergency Controller will be in red to indicate that at least one of its child devices supports emergency lighting

2. Click on the settings icon
3. Select 'Additional Settings' and choose 'Emergency Settings'



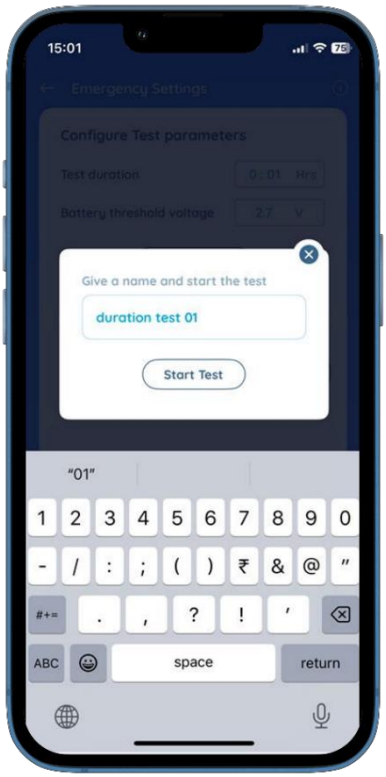


4. Configure the test parameters.

5. Select the type of test to be done
   Function Test
   Duration Test

6. Click on the 'Start' and enter a name for the test. This will immediately start the test.

   The test results will be available in the Web UI.

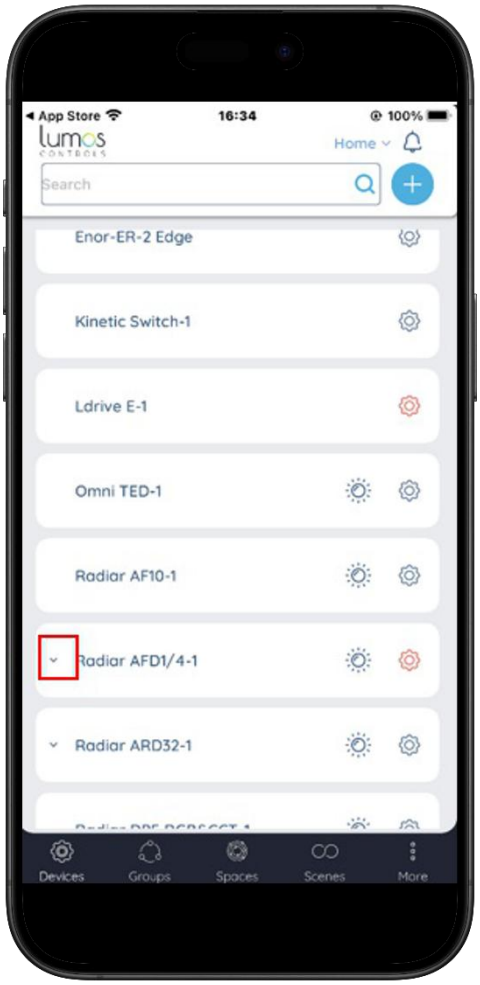


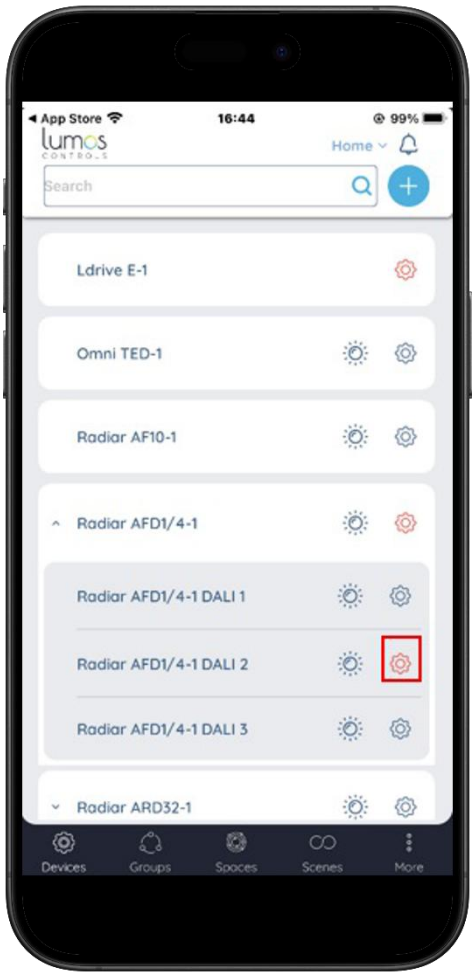
17.4 Create Emergency Tests for DALI from the mobile app

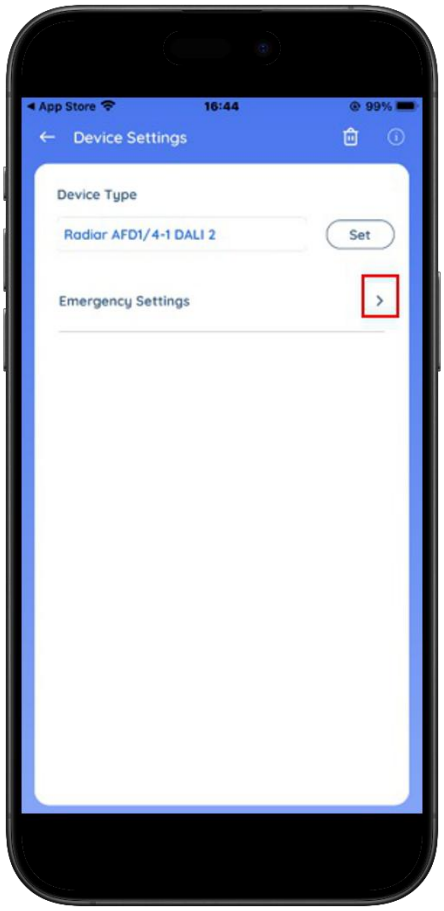
1. Go to the 'Devices' tab

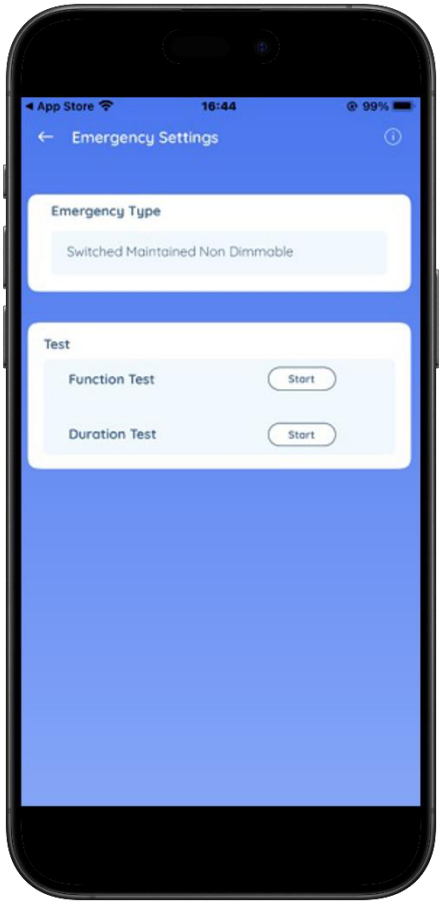
The icon of the DALI Emergency Controller will be in red to indicate that at least one of its child devices supports emergency lighting

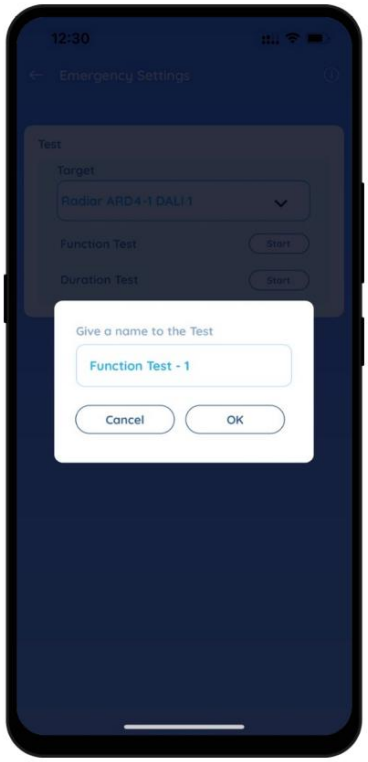
2. Click on the settings icon
3. Select 'Additional Settings' and choose 'Emergency Settings'











18 Automate Lighting with Astronomical Schedule

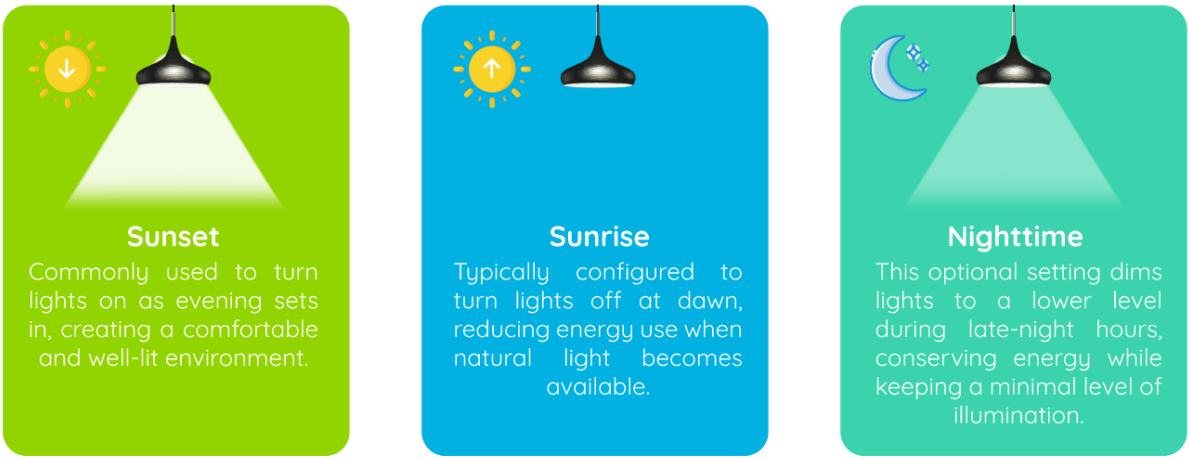
Lighting control that adapts with the day's natural rhythm brings a whole new level of automation, efficiency, and ease. With Lumos Controls' Astro Schedule feature, lighting can automatically respond to the cycles of sunrise, sunset, and nighttime, creating a seamless blend between natural and artificial lighting.

Astro Schedule leverages astronomical timing, making it possible for lighting systems to respond to precise sunset and sunrise times based on your location. Whether it's brightening up a space at sunset, dimming lights at night to conserve energy, or switching off at sunrise, Astro Schedule optimizes the lighting setup without manual intervention.

The **Enor E gateway** is at the heart of Astro Schedule, connecting the system with precise sunrise and sunset timings based on the location. It enables smooth and accurate lighting adjustments without manual input, allowing for tailored lighting responses to natural light cycles.

Astro Schedule offers three primary settings that adapt lighting to natural light transitions:
Sunset, Sunrise, and Nighttime

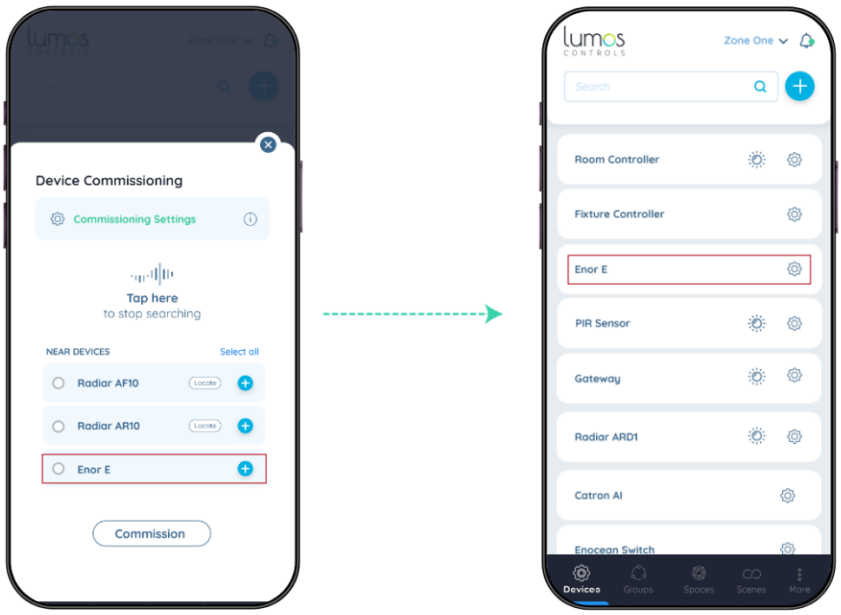
Configurations
Astro Schedule operates seamlessly within the Lumos Controls ecosystem, powered by Enor E gateway.



Enor E enables these high-level configurations with ease, allowing the lighting to align smoothly with day-to-night transitions.

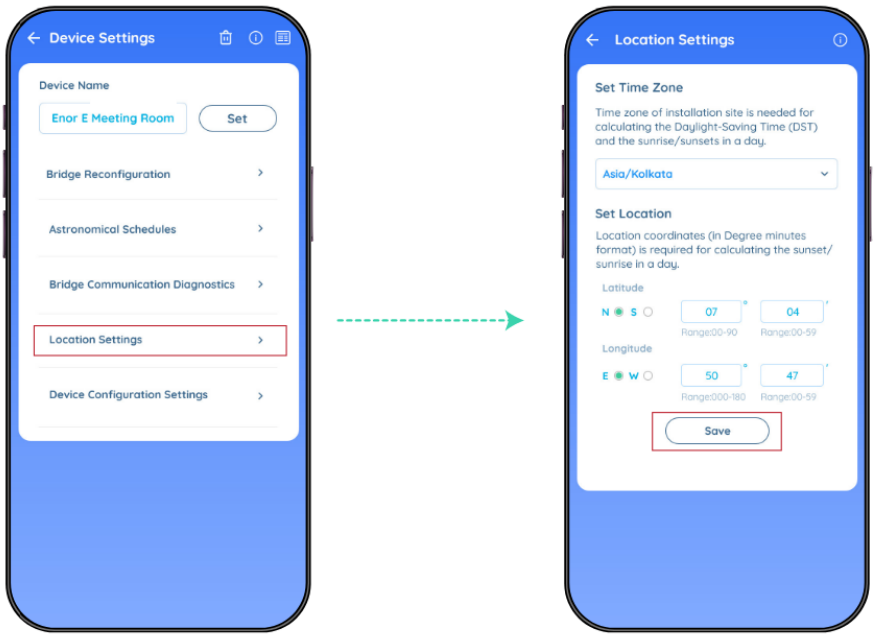
Setting Up Astro Schedule
Follow these easy steps to configure Astro Schedule for your lighting system:

1. Commissioning the Gateway
   Start by setting up a gateway within the desired zone of the Lumos Controls account.



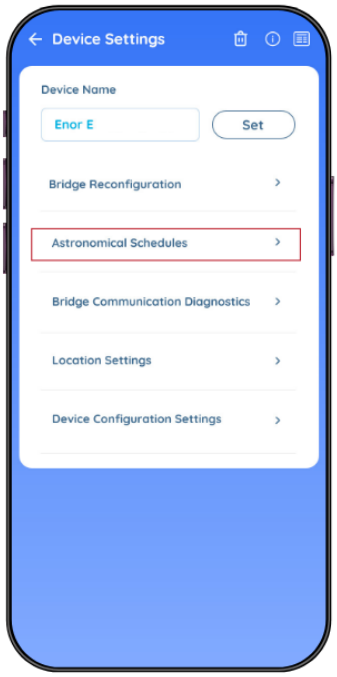
2. Access Location Settings

Under Gateway Settings, select “Location Settings” and enter the correct latitude and longitude. Click ‘Save’ to lock in your location for accurate sunrise/sunset timings.



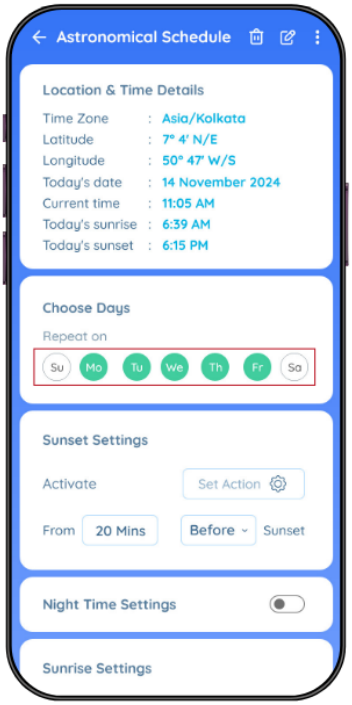
3. Enable Astronomical Schedules

Navigate back to Gateway Settings and choose “Astronomical Schedules”



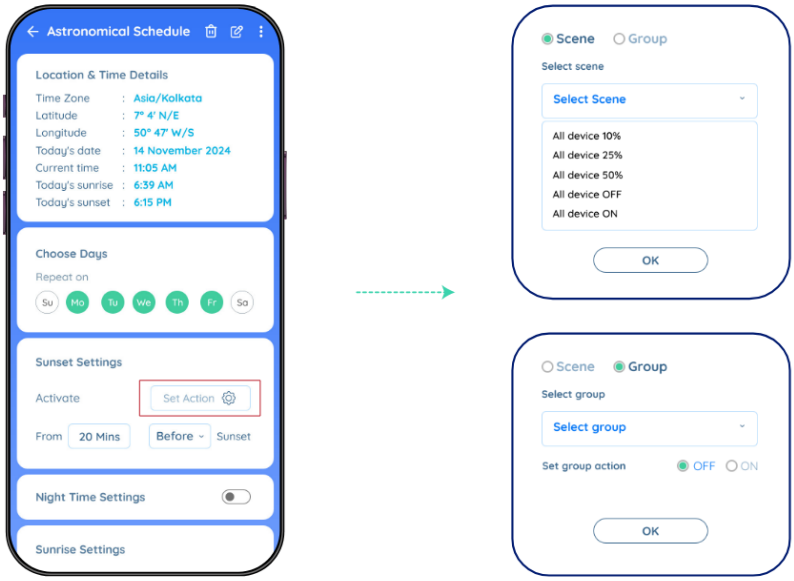
4. Select Active Days

Choose the days on which you’d like the schedule to be active.



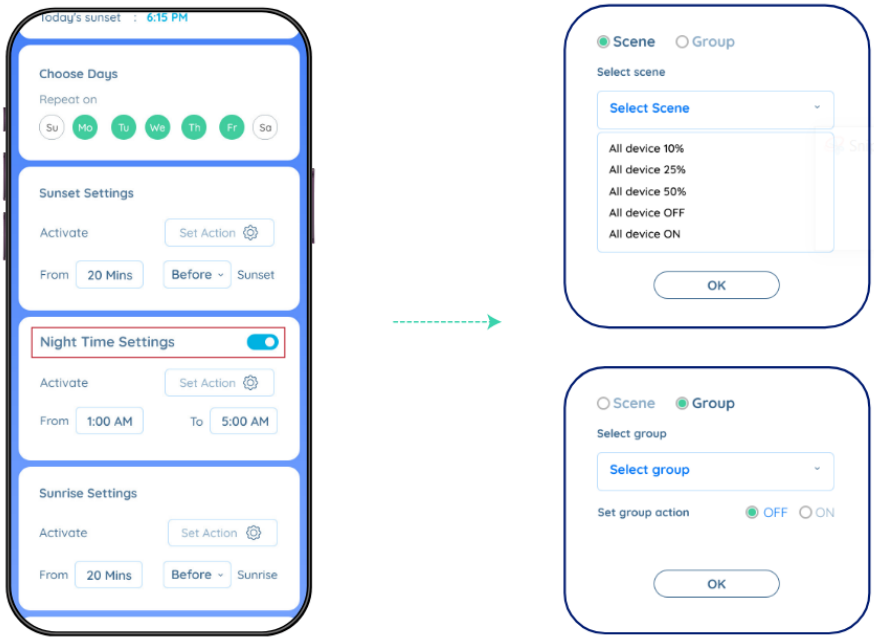
5. Configure Sunset Settings

- Choose an action for sunset, like invoking a scene or turning on/off a specific group of lights.
    - Set the time offset (before or after sunset) for when the schedule should run.



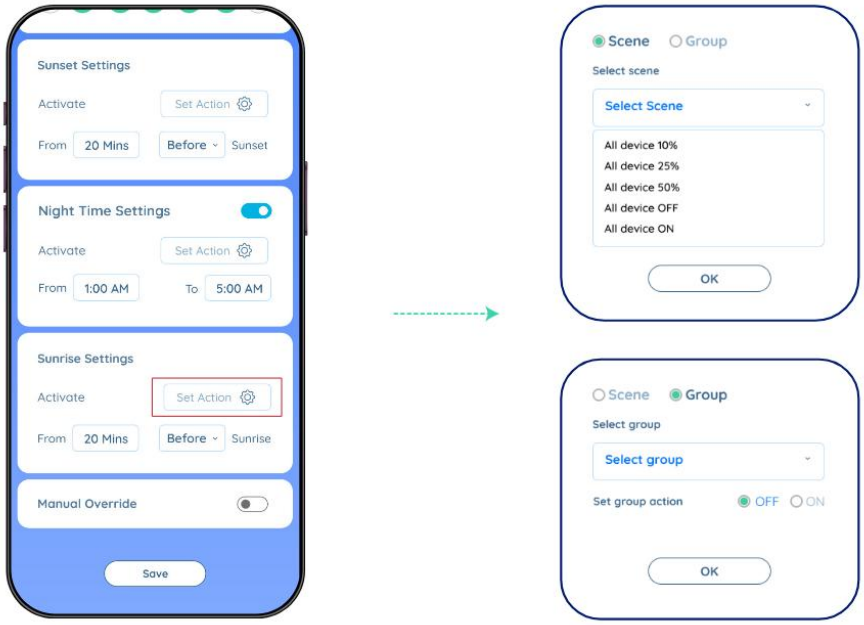
6. Set Nighttime Options (Optional)

- Decide on nighttime actions, such as dimming lights to conserve energy while maintaining a base level of illumination.
- Specify start and end times for nighttime settings.



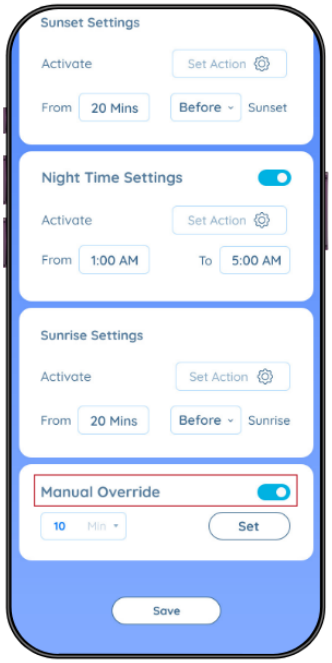
7. Configure Sunrise Settings

- Choose an action for sunrise, such as turning off lights or invoking a scene.
- Set the time offset (before or after sunrise) for when the schedule should run.



8. Manual Override

Configure “Manual Override” to set a duration after which lights will automatically return to schedule post manual operation.



9. Finalize Settings

Once all preferences are set, click “Save.”