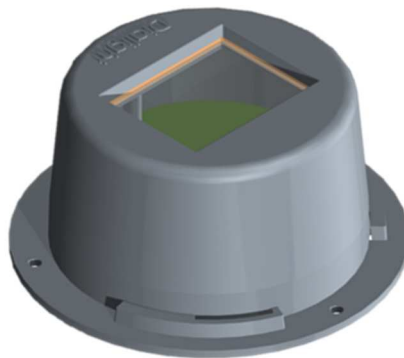# Dialight

9100-127-2988-99 Rev B

Dialight
Daylight Harvesting Sensor
User Guide

Dialight Catalog Number: DLHU124UG2

Safety Instructions

Dialight Daylight Harvester Sensor (DLH) User Guide
READ AND FOLLOW ALL SAFETY INSTRUCTIONS

- *DO NOT let any supply cords touch hot surfaces higher than cord ratings.*

- *DO NOT mount near gas or electric heaters*

- *DO NOT mount near Wi-Fi routers or other wireless devices*

- *Equipment should be mounted in locations and at heights where it will not be subjected to tampering by unauthorized personnel.*

- *The use of accessory equipment not recommended by the manufacturer may cause unsafe conditions.*

- *DO NOT use this equipment for other than intended use.*

    SAVE THESE INSTRUCTIONS!!

- *The operation and maintenance must be carried out by authorized personnel.*

- *Repairs and Installation must only be carried out by a qualified electrician.*

- *Only genuine Dialight replacement parts must be used when unforeseen repairs are required.*

- *Observe the national safety rules and regulations during installation!*

- *Earth Grounding is required throughout the install process. Failure to do so could void all warranties!*

- *No alterations should be done without the agreement from Dialight Corp. Alterations other than written in this manual will void all warranties.*

    SAVE THESE INSTRUCTIONS!!

Contents

Introduction

Welcome to the Dialight Daylight Harvesting Sensor (DLH) overview. This product allows you to customize your entire lighting network using independent Daylight Harvesting Sensors throughout your facility while maintaining your desired light levels throughout the day.

Gathering ambient light readings and dimming your light fixtures ensures that the customer reduces power consumption and saves money.

The DLH sensor can be used in single sensor or multi-sensor mode.
Single sensor mode, light output is controlled directly by a single sensor to deliver the user's desired light level.

Multi-sensor mode, the user is able to adjust their desired light level by using the lowest LUX reading, average LUX reading, or highest LUX reading from two or more sensors.

End users and installers are responsible for installing these fixtures in an appropriate and safe environment.

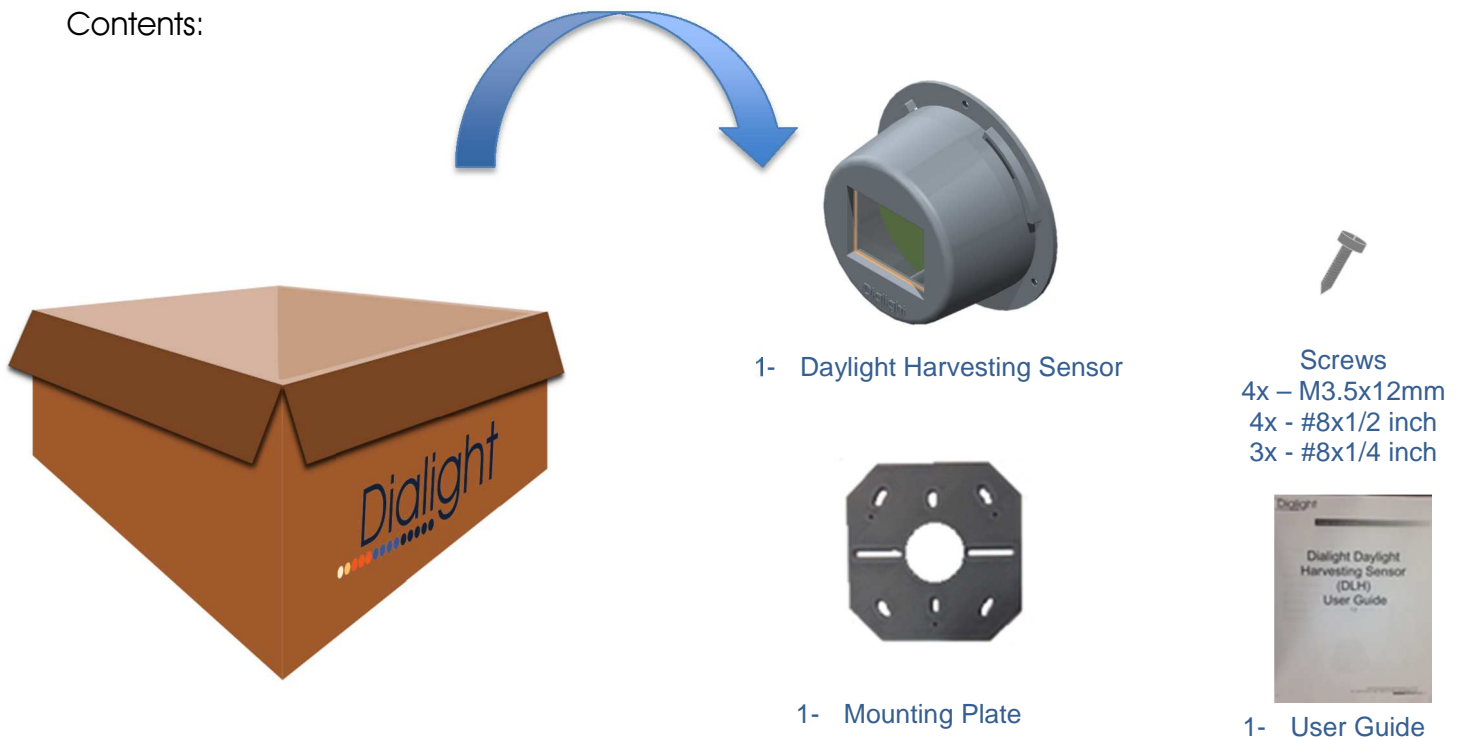It is recommended that DLH sensors be mounted away from direct sunlight.

This guide provides you with the information you need to get started.

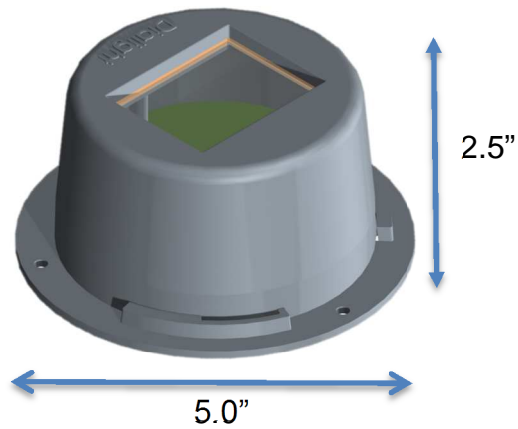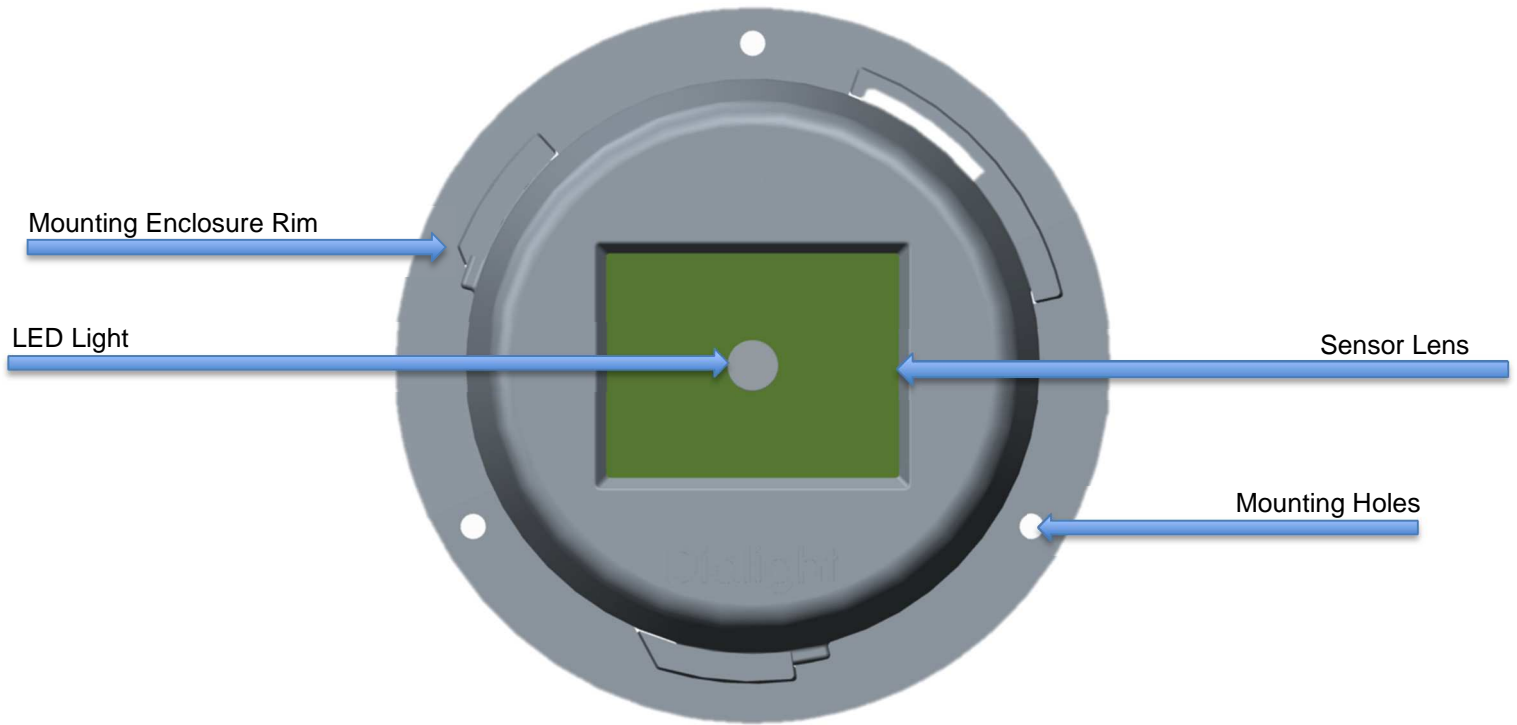## Technical Specifications

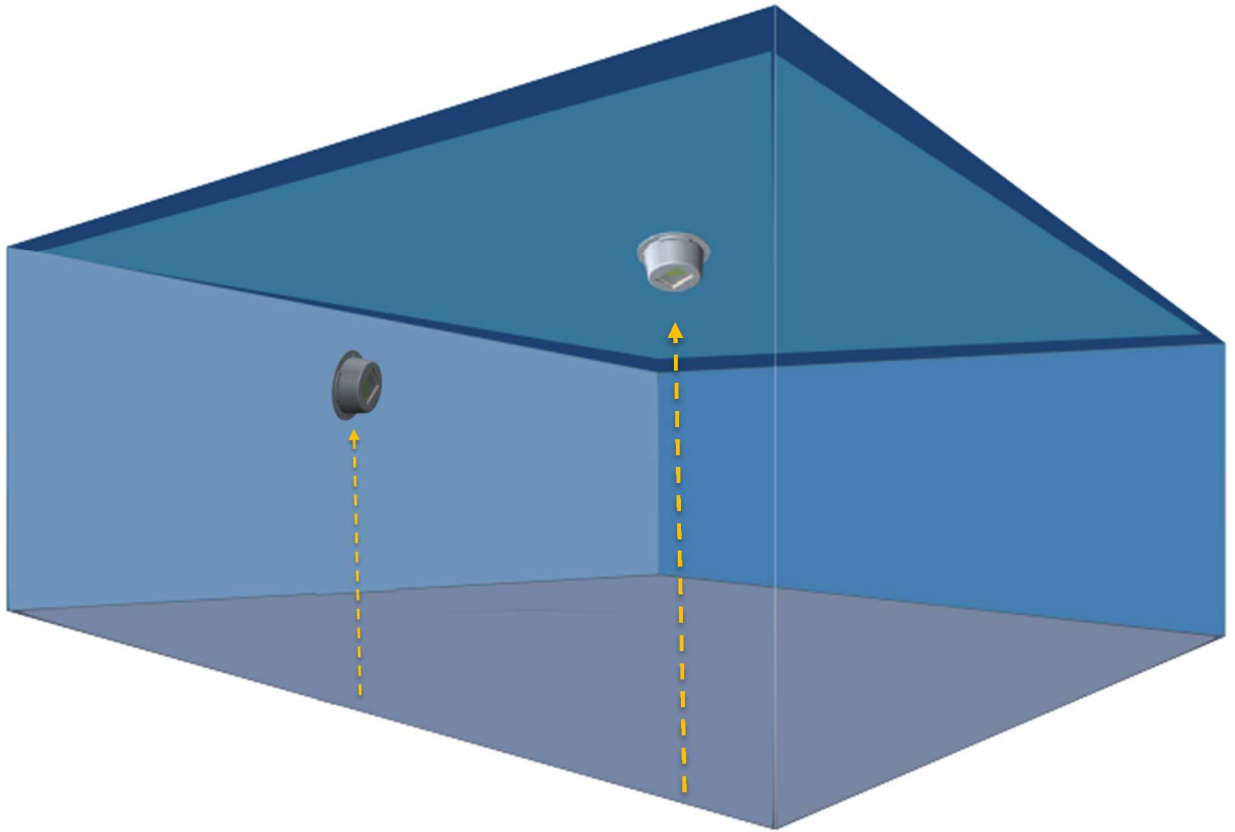| Certification	UL 916 - Energy Management Equipment CSA C22.2 No. 205 - Signal Equipment Electromagnetic Compatibility Directive 2004/108/EC EN 55022: 2008 EN 61000-4-5: 2014 EN61000-4-6: 2014 EN 61000-4-11: 2004
AC Power Input	100-277VAC 50/60Hz, 100mA Max.
Operating Temperature For Indoor Use Only	Operating Temperature: -25°C to +65°C
RF Frequency	2.4Ghz
Object Detection	Light
Dimensions	5"D x 2.5"H
Weight	10 oz.
Green LED	Ready to join network: Light blinks twice quickly Identify: Light will blink steadily on/off
Dialight Part #	DLHU124UG2
Lens Material	Polycarbonate
Housing Material	Grey Polycarbonate

Unboxing

Contents:

1- Daylight Harvesting Sensor

Screws
4x – M3.5x12mm
4x - #8x1/2 inch
3x - #8x1/4 inch

1- Mounting Plate

1- User Guide

Sensor Overview

Mounting Enclosure Rim

LED Light

Sensor Lens

Mounting Holes

2.5"

5.0"

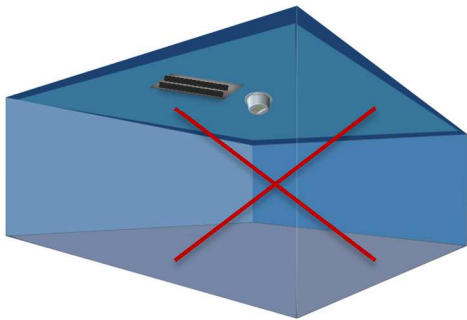## Where to Mount

The DLH sensor can be used as a ceiling or wall mount sensor. This will be user defined depending on the layout of the facility and available ambient light sources.

Sensor should be mounted away from direct sunlight.

How to Mount

Installation to be performed in accordance with applicable local, regional, and federal regulations.

⚠️   **Warning:**   ⚠️

To avoid the risk of fire, explosion, or electric shock, this product should be installed, inspected, and maintained by a qualified electrician only, in accordance with all applicable electrical codes.

To avoid electric shock be certain electrical power is OFF before and during installation and maintenance.

Make sure the supply voltage is the same as the rated device voltage.

1. Install the mounting plate to a suitable outlet/junction box using flat head screws. (#8-1/2" or M3.5x12mm screws provided)

2. Connect the power cable conductors as follows:
   Black wire connects to Line
   White wire connects to Neutral

3. Feed wires into outlet/junction box through mounting plate and affix device using 3x #8x1/4" long screws.

4. Restore power and verify operation. The sensor will begin to flash green twice indicating it's ready to be added to your gateway. (The green led will flash in a pattern, flash twice, off, flash twice and repeat.)

It is advised to mount the sensor before discovering it in your network.

NOTE: in order for the DLH to function, a schedule needs to be created which turns the DLH feature ON. The DLH will only function when this "ON" condition is met.

Adding Sensor to Gateway: Gateway required during these steps

1. Go to Configure Devices page

2. Turn discovery on and discover DLH device. (Please refer to your gateway owner's manual for further instructions.)
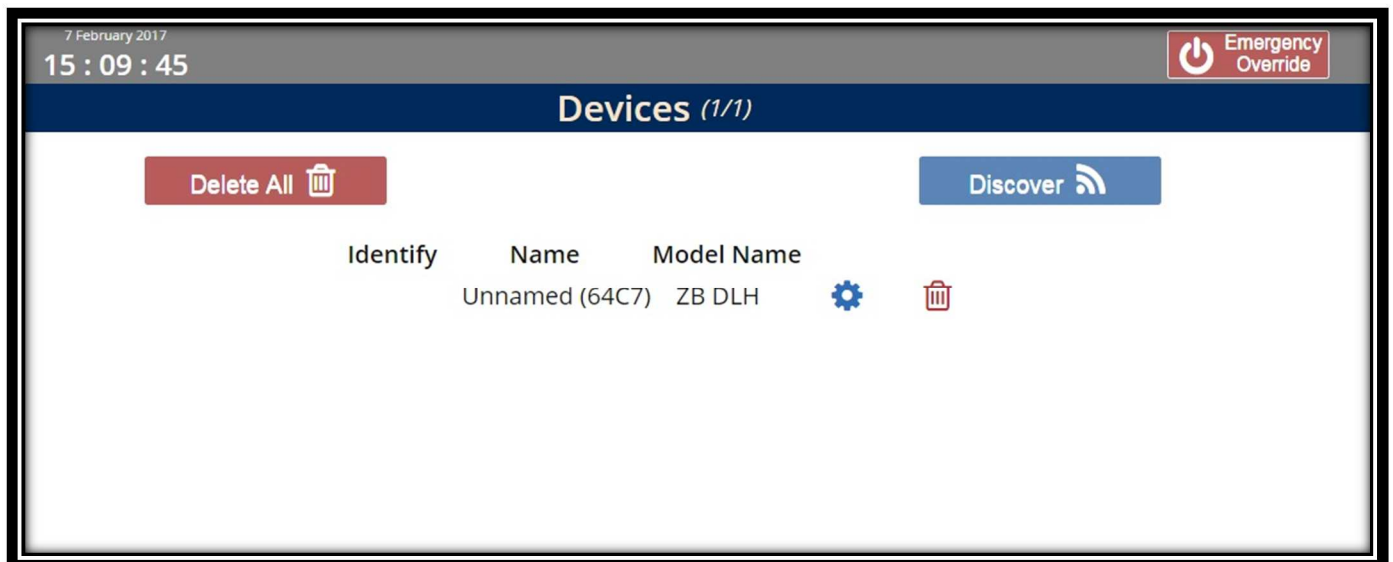
NOTE: DLH sensor information displayed
    Identify: Will display yellow antenna and will flash when identifying
    Name: This can be a user friendly name and the (64C7) should remain as part of the name
    Model Name: ZB DLH (short description)
    Gear: Provides additional information
    Delete: Deletes the device from being used or needs replacing
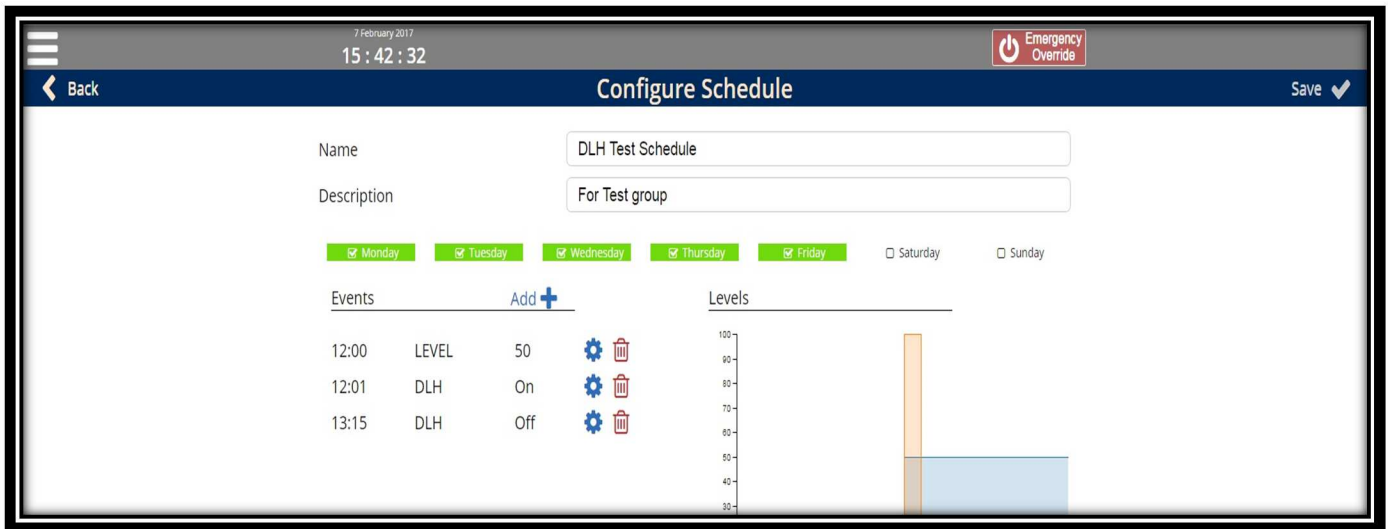
Dialight

Adding a Schedule with a DLH event

1. Configure Schedule

    a. Go to Configure Schedule's page

    b. Select Add Schedule Icon
        i. Name Schedule
        ii. Give Schedule a description

    c. Select Configure Icon for schedule
        i. User can change Name of Schedule
        ii. User can change Description of Schedule

    d. Select Days for Schedule to run (Mon-Sun)

    e. Ensure Schedule has a DLH "ON" event

    e. Save Selections

        a. **NOTE:** for a more in-depth guide on scheduling, please see Gateway User Manual

Dialight

Adding a Group

1. Go to Configure Groups page

    a. Select Add Group Icon

    b. Name Group

    c. Give Group a description

    d. Save Changes
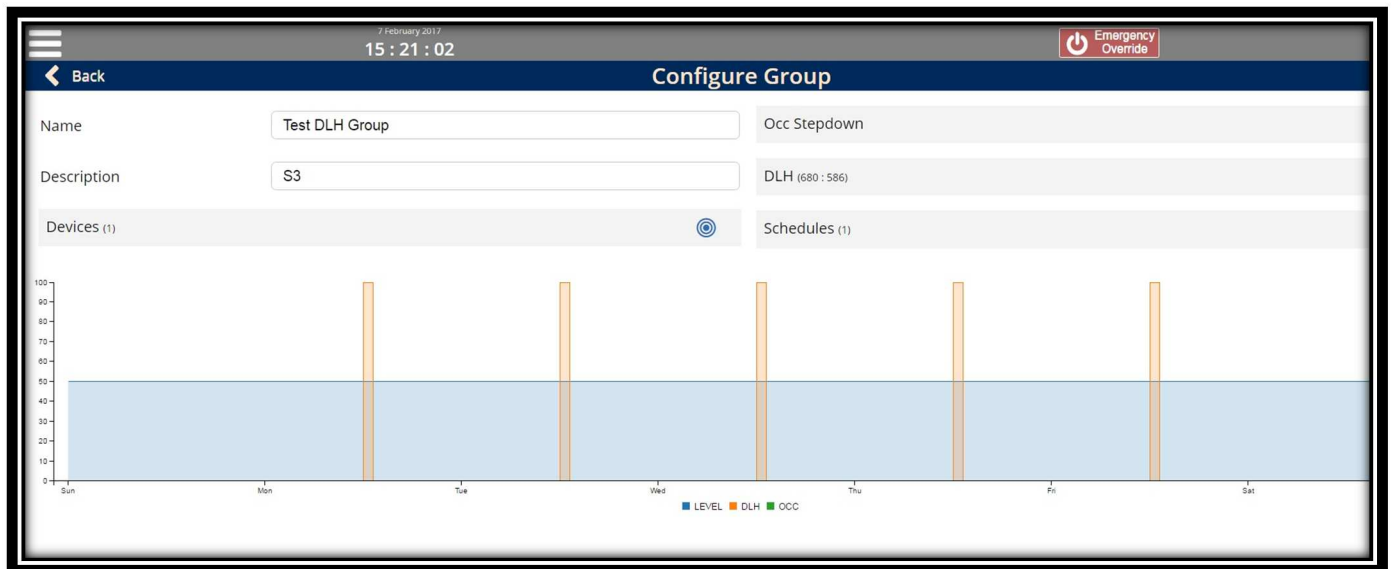
Dialight

2. Go to Configure Groups page and select configure icon for desired group

   a. User can change Name of Group

   b. User can change Group Description

   c. Configure Devices

      i. Add DLH to Group

      ii. Add desired lighting devices to group

      iii. Save Selections

3. Select Configure icon for DLH on Configure Group page

  i. **TIP:** an easy way to commission a DLH profile is to set desired light level at night. With no ambient light influencing readings, this will ensure that your system is always at an acceptable and safe working conditions light level.

a. Adjust the Level on Slider bar until the desired light level is reached.
  i. **Note:** The slider bar controls the group lights dimmer level. This will allow the user to achieve to the proper dim level the slider may adjust the lights slowly to allow for observation time.

b. Select Mode

  i. **Average**- This mode will use an average of multiple DLH sensors to reach desired light level

  ii. **Maximum**- This mode will use the highest reading from multiple DLH sensors to reach desired light level

  iii. **Minimum**- This mode with use the lowest reading from multiple DLH sensors to reach desired light level

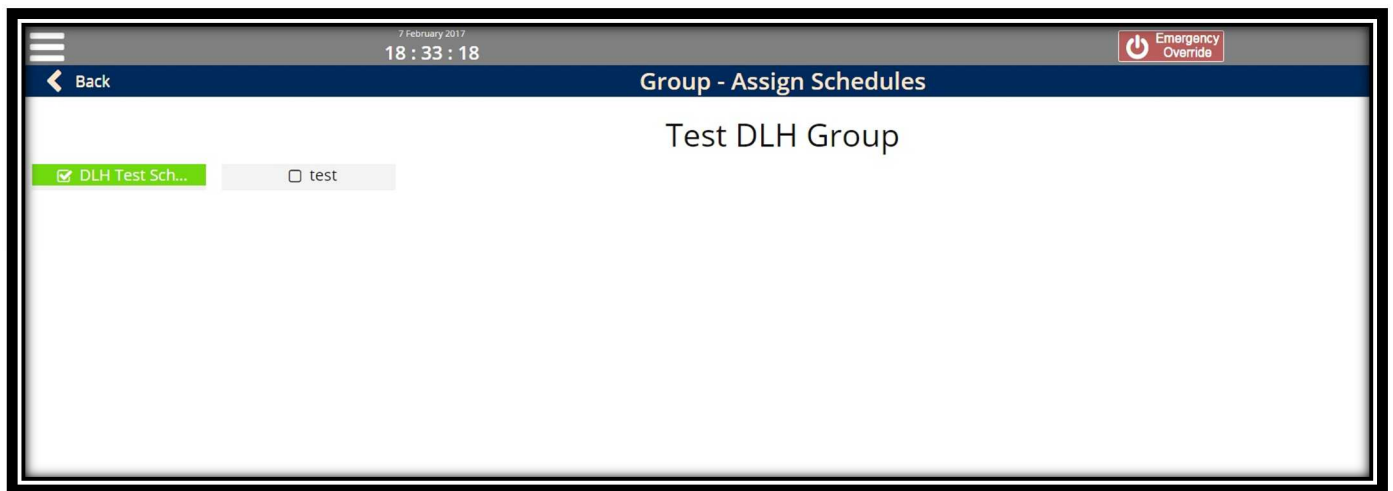c. Verify DLH sensor is giving a Measured Illuminance Reading in Lux

d. Save Selections

Assigning Schedule to a Group

1. Go to Configure Groups page

2. Select Configure Icon for desired Group

3. Select Assign Schedules Icon

4. Select Desired Schedule

5. Save selection

Your DLH sensor is fully commissioned and is ready to use. For a more in-depth guide on scheduling, grouping and gateway commissioning, please see Gateway User Manual.

Troubleshooting

<u>Sensor is not discovered by the Gateway.</u>

Steps to solve:

1. On the Gateway's lighting controller web page turn discovery on.

2. Check the condition of the LED light through the front lens of the sensor.

3. If the green light is flashing twice then the sensor is still trying to join a network, then:

   a. Verify that it is within 70 ft. of a light that has already joined the network.

   b. Verify the nearby lights are powered by commanding them to turn on from the web page.

   c. If the DLH sensor still doesn't discover, replace the sensor.

4. If the green light is not blinking at all then:

   d. Unplug sensor and plug in again. You should see the green LED double blink at least once.

   e. Try a node release from the gateway administration page on the gateway. (Contact Dialight sales for the appropriate manual)

   f. If it does not blink then replace the sensor.

   g. If it blinks and stops then it has joined a gateway. See if it has joined the gateway you intend. If it has not then check to see if it has joined another gateway in the building.