

Light Test Plans

Crestron Home Verification Points

Configuration

1. Load the driver into the import folder on the CP4-R/MC4-R, then navigate to **Third Party Devices** in the **Pair Devices** page and wait for the list to update. Verify the manufacturer shows under the device type, and all supported models from the driver show under the manufacturer. Ensure there are no typos.
2. Add the driver to a room, and verify the add device dialog appears with the appropriate connection fields (IP/Hostname field).
3. Verify any additional attributes on the driver show in subsequent dialogs with the appropriate descriptions and fields.
4. Verify the driver is successfully added to the room.
5. If light loads are required, navigate to the **Managed Platforms** section under **Device Types**. Verify that there is a folder for the light device. Verify that the proper number of items are listed within the device folder.
6. Open the light device folder and verify that all the light loads are listed properly. Verify that the loads can be added to the room by selecting the plus (+) button. Verify that the loads can be removed from the room by selecting the left carat (<) button.
7. Select the settings cog in the light load. Under the About tab, verify that all properties are displayed properly. Under the Test tab, verify that the light load is working properly by using the power buttons to power the load on and off.

Power Functions

1. From the end user UI, select the Lights tile under Controls. Verify that there are tiles grouped by room in this section. Select the bulb icon to power on all of the loads in a room. Verify that all loads in the room are powered on and that feedback is indicated by the bulb icon turning yellow. Verify that all the loads in the room power on at the same time.
2. Power off the room by selecting the bulb icon with a line through it. Verify that all loads in the room are powered off and that feedback is indicated by the bulb icon turning gray. Verify that all loads in the room power off at the same time.

Individual Lights

1. Select the body of the room tile to view all of the light loads for that room. Verify that all loads in the room appear in this list.
2. Verify that each load has a color temperature scale, intensity slider, and power button (if supported).
3. Verify that individual loads can be powered on and off by selecting the power button on different loads. Verify that the load is set to 100% when powered on. Verify that the load is set to "off" when powered off.

Brightness

1. Locate the plus (+) and minus (-) buttons under the **All Lights** section. Verify that selecting the plus button increases the brightness for all lights in the room. Verify that selecting the minus button decreases the brightness for all lights in the room.
2. On each individual load, move the brightness slider all the way to the left. Verify that the bulb is powered off. Verify that the brightness percentage reports "off".
3. On each individual load, move the brightness slider all the way to the right. Verify that the bulb is set to its maximum brightness. Verify that the brightness percentage reports as 100%.

4. On each individual load, move the brightness slider to the middle. Verify that the bulb is set to 50% brightness. Verify that the brightness percentage reports as 50%.
5. Move the brightness slider up or down slowly. Verify that the bulb brightness closely matches the reported brightness level. Perform this test along the full range of the slider.
6. Using the third-party light interface, adjust the brightness level of the bulb to its minimum brightness. Verify that the feedback is properly reported within Crestron Home for the slider and brightness percentage.
7. Using the third-party light interface, adjust the brightness level of the bulb to its maximum brightness. Verify that the feedback is properly reported within Crestron Home for the slider and brightness percentage.
8. Using the third-party light interface, adjust the brightness level of the bulb to 50% brightness. Verify that the feedback is properly reported within Crestron Home for the slider and brightness percentage.

Color Tuning

1. Locate the orange bulb and blue bulb buttons under the **All Lights** section, which control the color temperature for the whole room. Verify that selecting the orange bulb warms the color temperature for all lights in the room. Verify that selecting the blue bulb cools the color temperature for all lights in the room.
2. Select the color wheel icon to navigate to the color temperature slider. Under the tunable white section, move the slider all the way to the left. Verify that the bulb is set to its warmest color temperature. Verify that the color temperature scale is updated properly.
3. Under the tunable white section of the color temperature slider, move the slider all the way to the right. Verify that the bulb is set to its coolest color temperature. Verify that the color temperature scale is updated properly.

4. Under the tunable white section of the color temperature slider, move the slider to the middle. Verify that the bulb is set to a neutral color temperature. Verify that the color temperature scale is updated properly.
5. Under the tunable white section of the color temperature slider, move the slider up and down slowly. Verify that the bulb color temperature closely matches the reported color temperature. Perform this test along the full range of the slider.
6. Using the third-party light interface, adjust the color temperature of the bulb to its warmest color. Verify that the feedback is properly reported within Crestron Home for the slider and temperature scale.
7. Using the third-party light interface, adjust the color temperature of the bulb to its coolest color. Verify that the feedback is properly reported within Crestron Home for the slider and temperature scale.
8. Using the third-party light interface, adjust the color temperature of the bulb to the middle (neutral) color. Verify that the feedback is properly reported within Crestron Home for the slider and temperature scale.
9. Under the full color tuning section of the color temperature slider, locate the **Hue** and **Saturation** sliders. Set the **Saturation** slider for 100%, and then slowly move the **Hue** slider up and down. Verify that the color on the slider closely matches the color of the bulb. Perform this test along the full range of the slider.
10. Under the full color tuning section of the color temperature slider, set the **Hue** slider to "Color", and then slowly move the **Saturation** slider up and down. Verify that the bulb saturation closely matches the color on the slider. Perform this test along the full range of the slider.
11. Using the third-party light interface, adjust the hue and saturation levels to various points in the scale. Verify that the feedback is properly reported within Crestron Home.

Scenes

1. Within the lights section of the UI, create a new scene by selecting the pencil icon in the upper-right corner. Select **Create New**, then add lights to the scene by filling a check mark next to the desired lights. Set the light level for the scene. Once the scene has been created, select the back button. Change the fade time to 5 minutes, then select **Save**.
2. Create another scene (as described in the step above) with different load settings and a fade time of 1 second.
3. Change the light loads to a different setting, then recall the scene with a five-minute timer. Verify that the scene is recalled slowly over the next 5 minutes. Verify that the change is smooth and not abrupt.
4. Recall the scene that uses the one-second fade time. Verify that the scene is recalled within 1 second. Verify that the change is smooth.
5. Recall the five-minute scene again. Then, select the scene a second time. Verify that the scene changes immediately upon the second selection.
6. Select the Circadian Scene and monitor the light loads for various points over the next 24 hours. Verify that the brightness and color temperature are updated every 5 minutes according to the Circadian Scene settings. Verify that the transitions are smooth and do not change abruptly. Verify that all supported bulbs are included in the Circadian Scene.

System Tests

1. Simulate a power outage in the house by removing power from the processor, device, and network for at least 60 seconds, before restoring power. Verify once the program loads, the driver reconnects to the device and all functionality is restored within 60 seconds.
2. Simulate a network outage by disconnecting all network cables from the device and processor, or removing power from your router, and waiting at least 60 seconds before restoring. Verify the device and driver reconnect and all functionality is restored within 60 seconds.

3. Leave the driver connected to the device for a minimum of 24 hours, periodically checking functionality. After 24 hours, the driver should still be connected, all functionality should still work, and there should be no degradation in performance (functions should continue to work immediately and feedback should remain prompt and accurate).
4. Delete the driver from the system. The driver should no longer be listed in the room. No exceptions should be thrown in the error log.

Signature:

Date: