# nTune™ - User Programming Guide

The nTune programming guide provides an overview of the Tunable White application in SensorView™ with programming instructions for an nLight® enabled Acuity Brands luminaire with nTune technology.

Features

- Full control over color productivity range (3000-5000K)

- Works with all existing nLight network switches, sensors, and controls

The Classroom Application Layout:
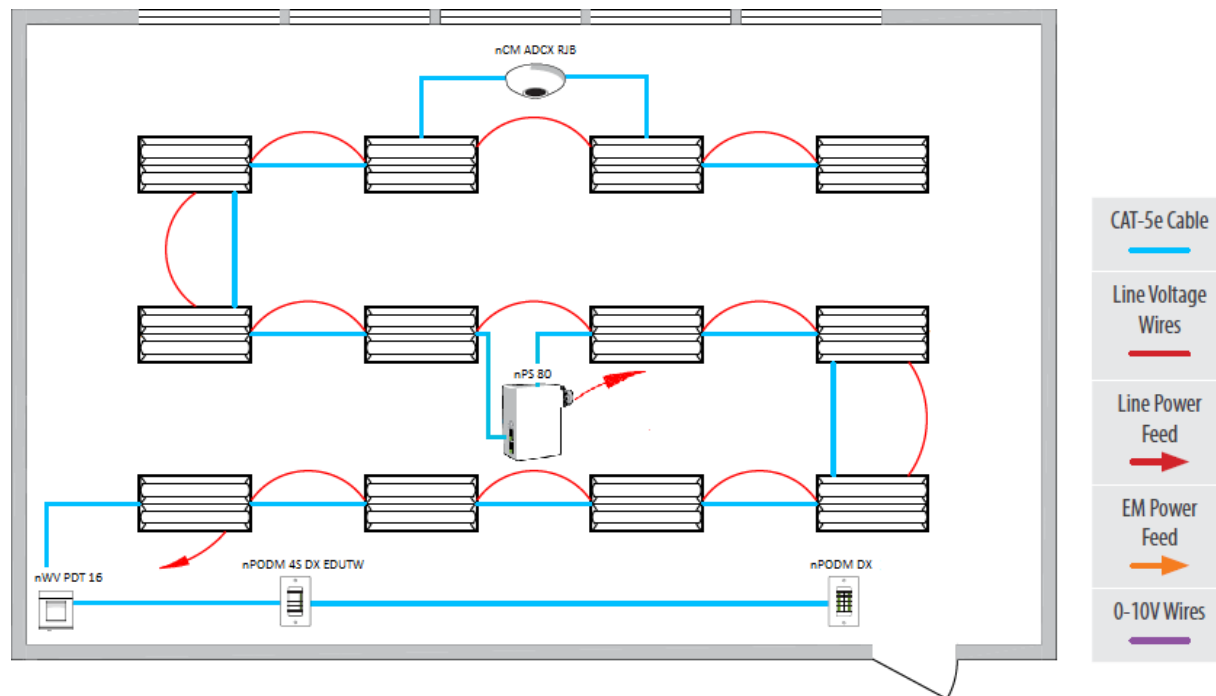
Bill of Materials

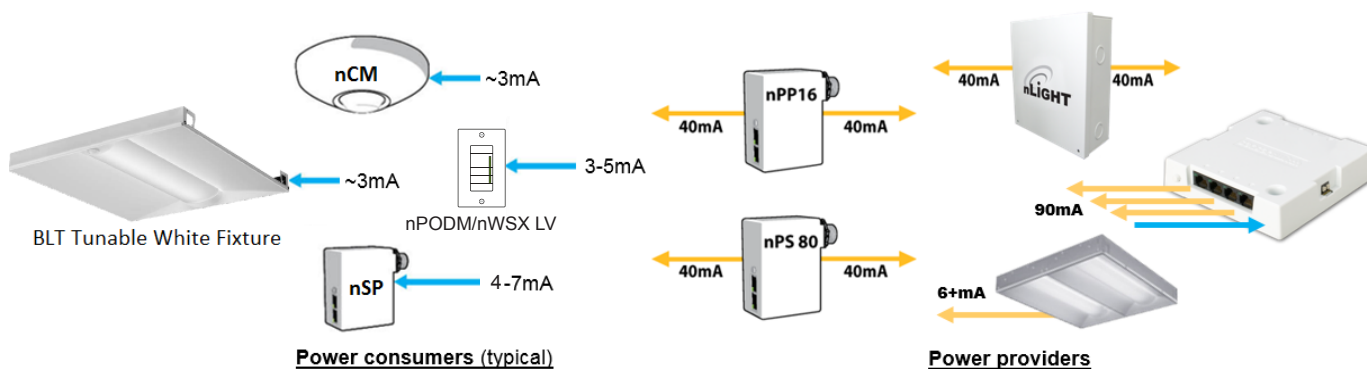| Symbol	Qty	Product #	Description
	12	BLT with TUWH & NLT Option	nLight Enabled TUWH BLT Fixture (available in 1'x4', 2'x2', 2'x4')
	1	nPODM 4S DX EDUTW	Teacher Station - 4 TW Scene Control Master On/Off & Raise/Lower
	1	nPODM DX	On/Off & Raise/Lower WallPod
	1	nWV PDT 16	Dual Technology Wide View Occupancy Sensor
	1	nPS 80	Bus Power Supply (80mA)

Options

Symbol	Qty	Product #	Description
	1	nCM ADCX (RJB)	Automatic Dimming Control Photocell

NOTE: nLight enabled BLT Tunable White fixtures each consume ~3mA of nLight bus power and ~6mA with an onboard nES sensor. It is important to use the following bus powering notes to ensure appropriate power for all nLight devices:

- Bus power is supplied by power/relay packs (nPP16 family and nPS 80), power supplies (PP20 PL BP and nPANELS), nLight enabled fixtures (non-EMG or TUWH options), and bridges
- nPP16 D ER and nPP20 PL are self-powered and do not contribute bus power to the nLight zone
- Power for all bus power consuming devices is delivered via the CAT-5e
- nLight zones need to have a net positive amount of bus power

Typical nLight Bus Power Calculations

nCM ~3mA

~3mA

3-5mA

nPODM/nWSX LV

BLT Tunable White Fixture

nSP 4-7mA

Power consumers (typical)

nPP16 40mA 40mA

nPS 80 40mA 40mA

40mA nLIGHT 40mA

90mA

6+mA

Power providers

Available nLight Wallpods with default Tunable White control:

nPODM 2P DX CCT

nPODM 4S DX EDUTW

nPODM 4S EDUTW

Recommended Color Temperatures for Classroom Environments:

3000K = Recommended for Reading

3500K = Recommended for Test Taking

4200K = Recommended for General Collaboration

5000K = Energy Up!

Programming Tunable White through SensorView

Acuity Brands Tunable White fixtures with nTune technology have an nLight model nIO EZDL/EZDA CCT embedded device which displays as a dual pole device within SensorView.

- Pole 1: Intensity control - maintains all of the same settings as the current nIO EZ PH device, including capability to track switch/photocell/occupancy channels.
- Pole 2: Color temperature control – ONLY tracks switch channels; does not have settings to track photocell/occupancy channels.

These devices show with an additional group of settings on the device default settings page:

These settings each have the following operation:

- **Color Temperature Global Switch Tracking Enabled**: Allows user to enable/disable global switch tracking commands
- **Color Temperature Local Switch Tracking Enabled**: Allows user to enable/disable local switch tracking commands
- **Color Temperature Percent:** Current color temperature of fixture as a percentage. The color temperature percentage maps to fixture color temperature via the following chart:
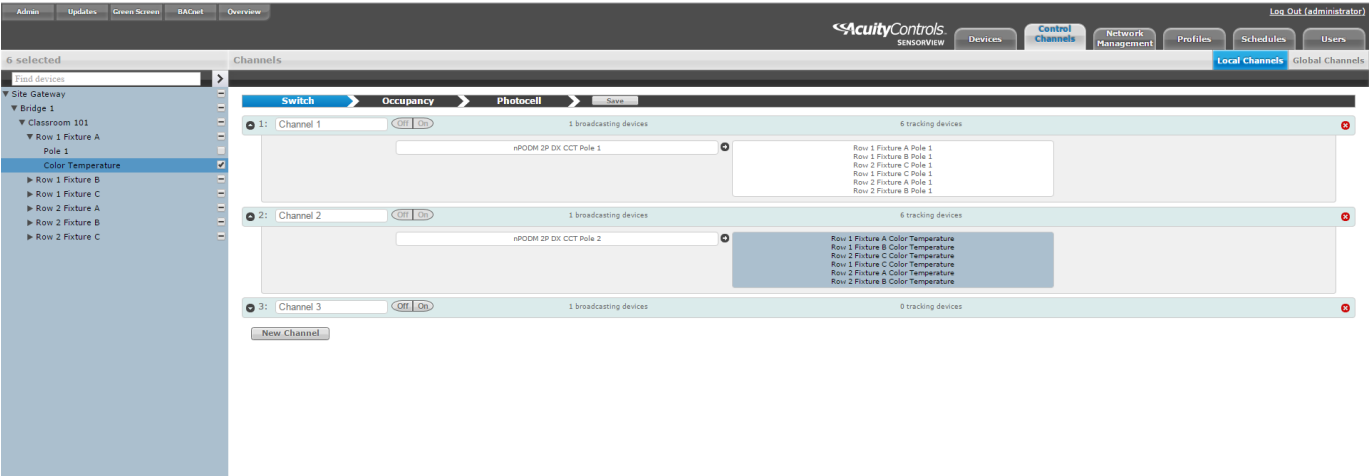
Percentage	Color Temperature
1%	3000K
5%	3100K
10%	3200K
15%	3300K
20%	3400K
25%	3500K
30%	3600K
35%	3700K
40%	3800K
45%	3900K
50%	4000K
55%	4100K
60%	4200K
65%	4300K
70%	4400K
75%	4500K
80%	4600K
85%	4700K
90%	4800K
95%	4900K
100%	5000K

Color temperature is available via local/global switch channels for assigning to switch control or preset scene control; also available as a device setting for profile scene control. The nIO EZDL/EZDA CCT will display as a 2-pole device when completing this programming:

Local Switch Channel Tracking Screenshot

Global Switch Channel Tracking Screenshot
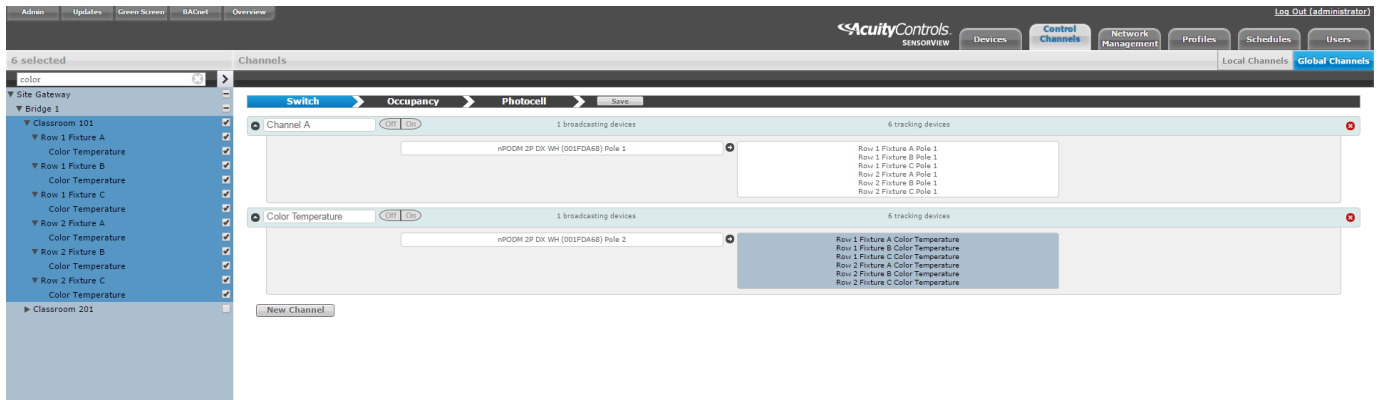
System scheduling can be used to adjust the color temperature through the day – this is accomplished by creating "global profile scenes" at scheduled times of the day.

There are two notes that should be applied/considered when using this feature:

1. "Global profile scenes" modify all device settings to defaults, except for those added in the settings window. Therefore, if the fixture intensity ("occupied bright level") has been modified by the end user from a dimming wallpod, the "wallpod dimming adjustments" setting should be set to "permanent" to stop the fixture intensity from changing when each scheduled event implements. The same process applies to the "override" setting if the lights were overridden off by a wallpod device.

2. The "dimming rate" setting on the nIO device can be used to adjust the amount of time to transfer from one color temperature to another when a "profile scene" implements.

   a. Slowest - 300 seconds
   b. Slow - 15 seconds
   c. Normal - 5 seconds
   d. Faster - 2 seconds
   e. Fastest - 1 second
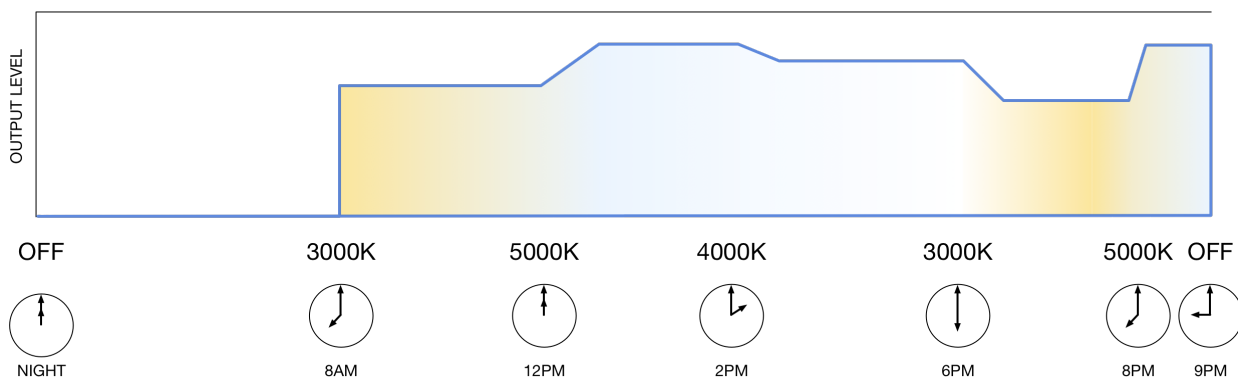
Example of "global profile scenes" created in SensorView: