

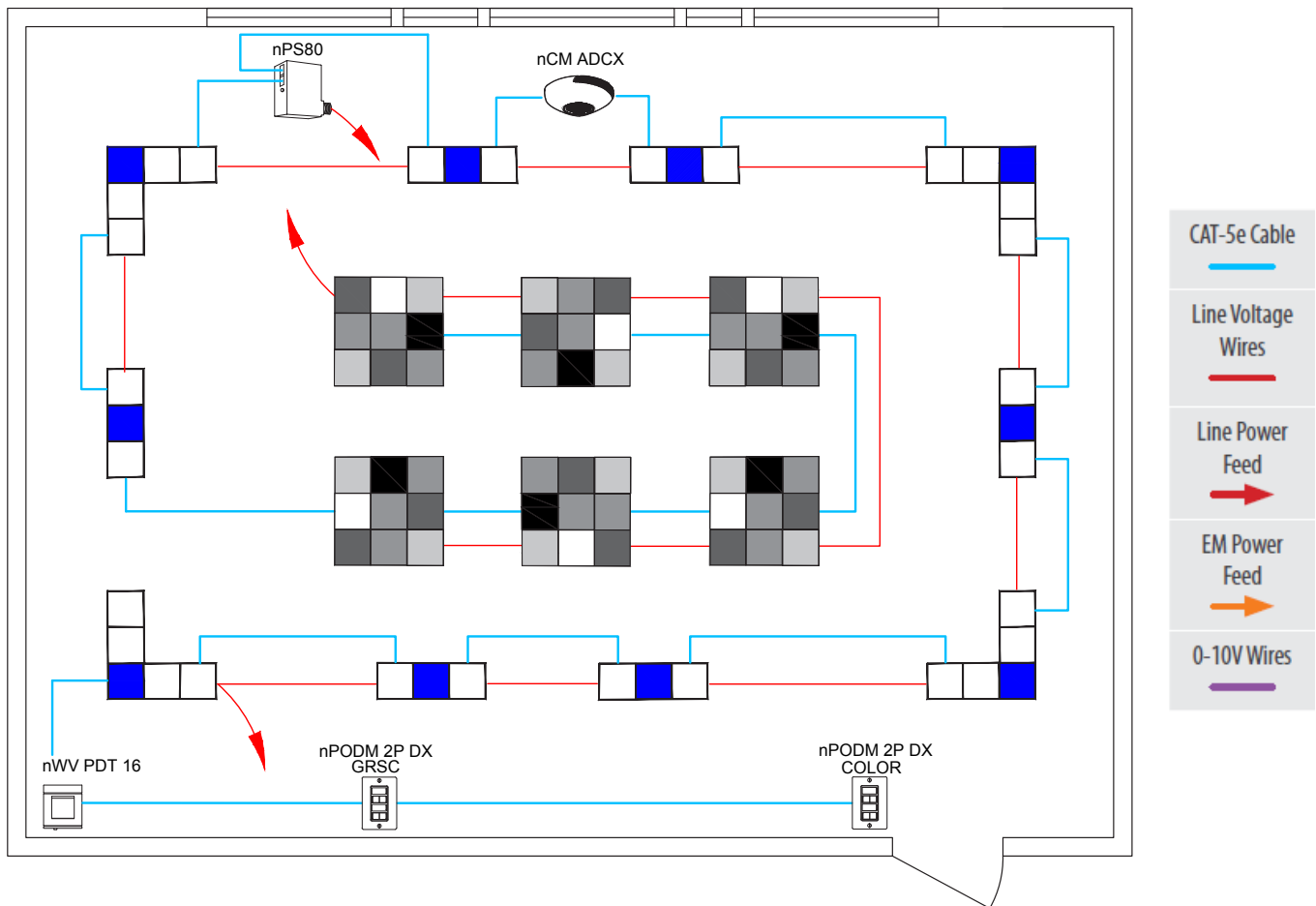
## nTune™ – Rubik Grayscale & Color Accent User Programming Guide

The nTune programming guide provides an overview of the Grayscale and Color Accent Mainstream Dynamic Features application in SensorView™ with programming instructions for an nLight® enabled Acuity Brands Rubik luminaire with nTune technology.

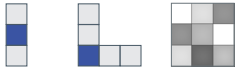




### Features – Grayscale and Color Accent

- Full control over Grayscale speed on second pole
- Full control over Color Accent color on second pole
- Works with all existing nLight networks switches, sensors, and controls


Application Layout:



## Bill of Materials

Symbol	Qty	Product	
	16	Rubik	nLight Enabled Fixtures
	1	nPODM 2P DX GRSC	On/Off, Raise/Lower Intensity, Grayscale Speed Control
	1	nPODM 2P DX COLOR	On/Off, Raise/Lower Intensity, Color Accent Color Control
	1	nWV PDT 16	Dual Technology Wide View Occupancy Sensor
	1	nPS 80	Bus Power Supply (80mA)

## Options

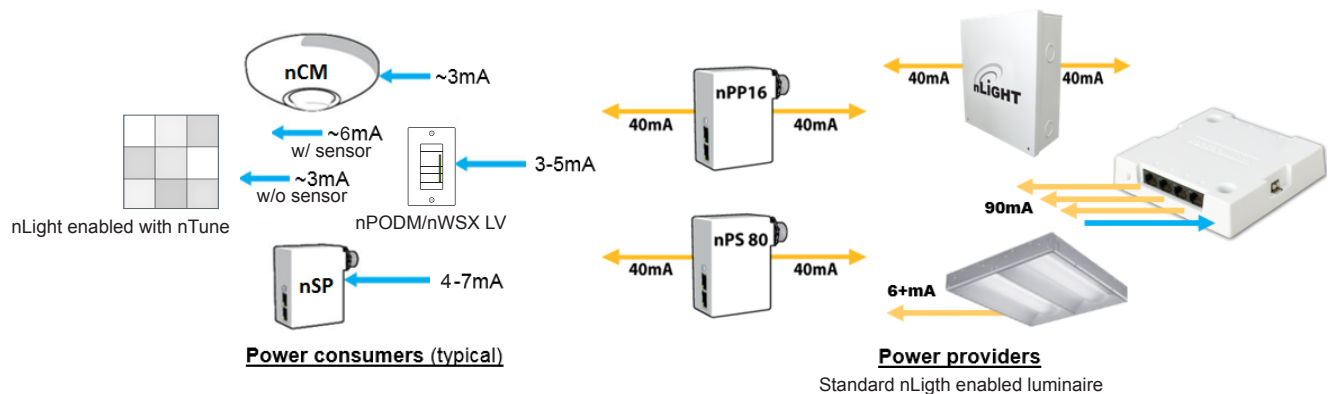
	1	nCM ADCX (RJB)	Automatic Dimming Control Photocell
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NOTE: nLight enabled fixtures each consume either ~3mA of nLight bus power without a sensor or ~6mA of nLight bus power with a sensor:

- 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

nLight enabled luminaires with nTune



## Available nLight Wallpods with default Rubik control



nPODM 2P DX GRSC



nPODM 4S DX GRSC



nPODM 2P DX COLOR



nPODM 4S DX COLOR

### nPODM 4S DX GRSC factory default programming

Label	Grayscale Speed	Percentage
White	Static White (all cells at the same luminance)	Off (0%)
Gray	Static Grayscale	1%
Slow	Dynamic Grayscale with a slow speed	2%
Fast	Dynamic Grayscale with a fast speed	100%

### nPODM 4S DX COLOR factory default programming

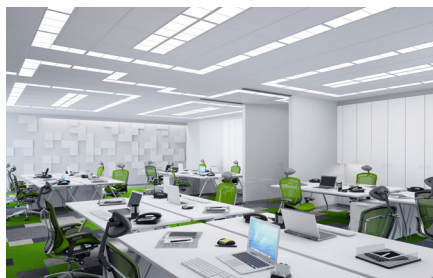
Label	Color		Percentage
White	Static White (Color Accent cell matches other cells)	#FFFFFF	Off (0%)
Color 1	Ferrari Red	#FF1C00	2%
Color 2	Dark Pastel Green	#03C03C	52%
Color 3	Denim	#1560BD	68%

## Application Examples

Grayscale



Static White Mode



Color Accent

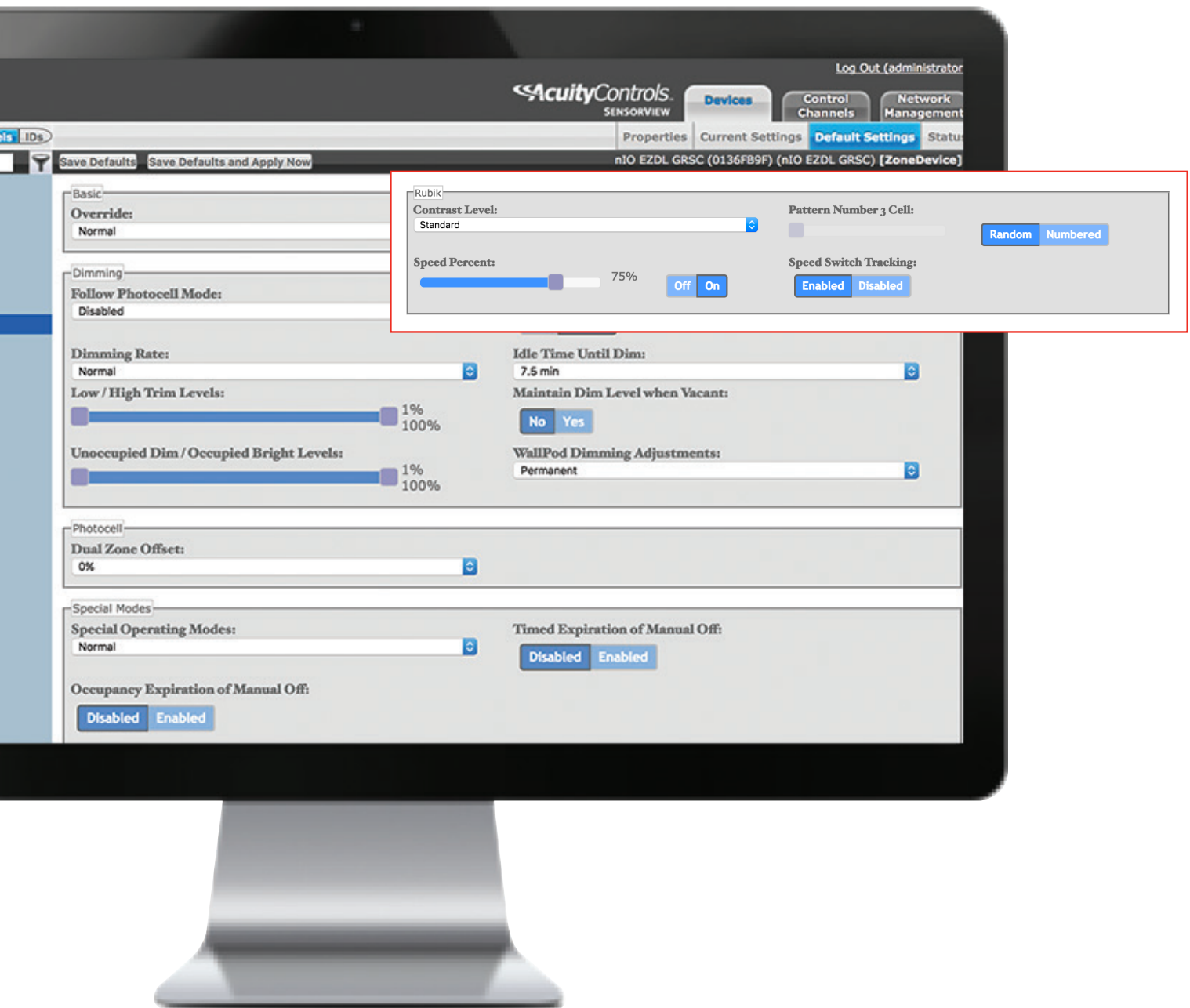


# Programming Rubik through SensorView

Acuity Brands Rubik luminaires with nTune technology have an nLight model nIO EZDL/EZDA GRSC or nIO EZDL/EZDA COLOR embedded device which displays as a dual pole device within SensorView.

## Rubik Grayscale

- **Pole 1:** Intensity control - maintains all of the same settings as the current nIO EZ PH/nIO EZDL CCT device, including capability to track switch/photo cell/occupancy channels.
- **Pole 2:** Grayscale Speed – ONLY tracks switch channels; does not have settings to track photocell/occupancy channels. Grayscale Speed pole does not support global channels



These settings each have the following operation:

- **Contrast Level:** Allows the user to set the contrast of the grayscale luminaire to Standard, Enhanced, or Maximum



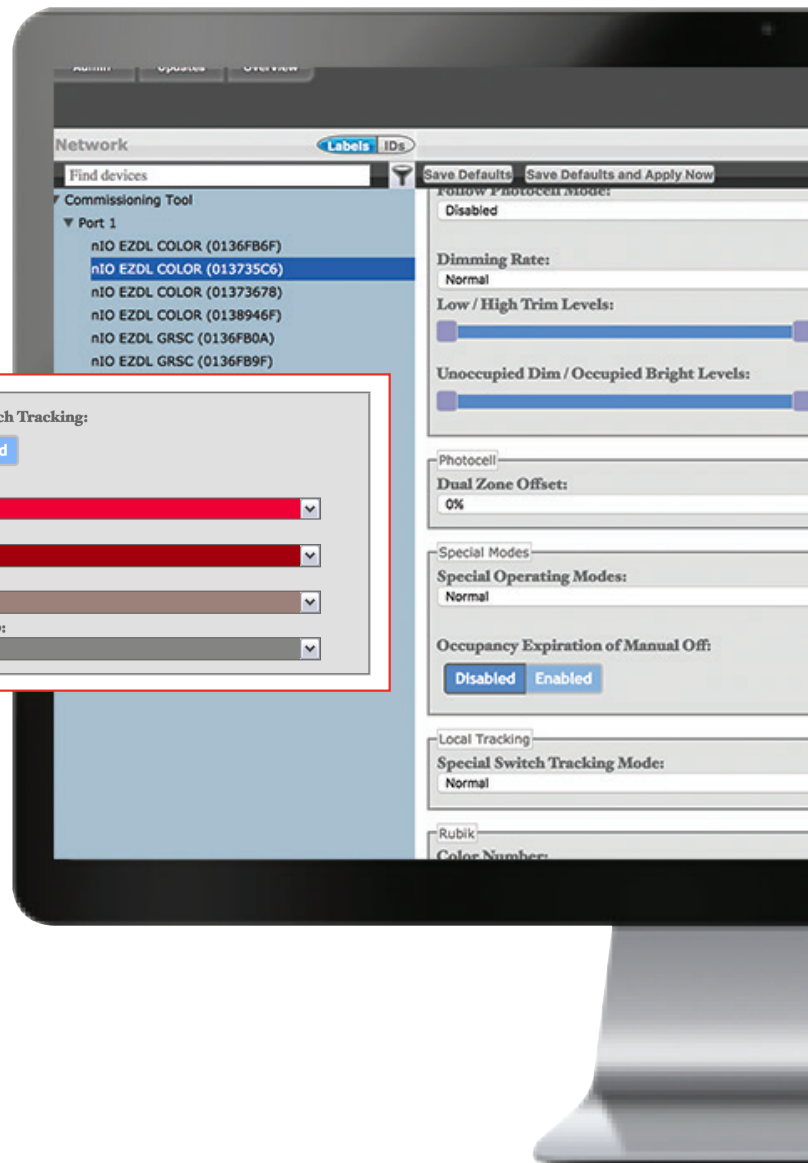
- **Grayscale Speed Percent:** Current grayscale speed of luminaire as a percentage. The grayscale speed percentage maps to luminaire behavior via the following chart:

- **Speed Switch Tracking:** Allows user to enable/disable switch tracking commands for the grayscale speed
- **Pattern Number 3/5/9 Cell:** Sets the luminaire to display a Random grayscale pattern when in static grayscale mode (default) or a particular pattern number (to assist with patterning in an installation). The pattern number has no effect in dynamic gray mode (2%-100%)

Percentage	Behavior
Off (0%)	Static White (all cells at the same luminance)
1%	Static Grayscale Pattern
2%	Dynamic Grayscale with a slow speed
100%	Dynamic Grayscale with a fast speed

### Rubik Color Accent

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



Rubik

**Color Number:**  54%

**Color Number Switch Tracking:**

**Custom Color 93%:** #cc4e5c

**Custom Color 94%:** #dc143c

**Custom Color 96%:** #960018

**Custom Color 98%:** #98817b

**Custom Color 100%:** #848482

Hue

Saturation

Brightness

#c1c1c4

These settings each have the following operation:

- **Color Number:** Current color accent color of luminaire as a percentage. The color will map to luminaire behavior via the following chart
- **Color Number Switch Tracking:** Allows user to enable/disable switch tracking commands for the color accent color
- **Custom Color:** Allows the user to replace color numbers 93-100 with custom colors

## Programming Rubik through SensorView – Rubik Color Number Chart

Percentage	Color Name	Color
1%	Pastel Red	#FF6961
2%	Ferrari Red	#FF1C00
3%	Chestnut	#CD5C5C
4%	Jasper	#D73B3E
5%	Maroon	#800000
6%	Manual Maroon	#5A1414
7%	Dark Sienna	#3C1414
8%	Atomic Tangerine	#FF9966
9%	Flame	#E25822
10%	Dark Coral	#CD5B45
11%	Dark Chestnut	#986960
12%	Dark Pastel Red	#C23B22
13%	Rust	#B7410E
14%	Burnt Umber	#8A3324
15%	Auburn	#6D351A
16%	Sunset	#FAD6A5
17%	Pastel Orange	#FFB347
18%	Fawn	#E5AA70
19%	Dark Orange	#FF8C00
20%	Gamboge	#E49B0F
21%	Desert	#C19A6B
22%	Safety Orange	#FF6700
23%	Copper	#B87333
24%	Burnt Orange	#CC5500
25%	Golden Brown	#996515

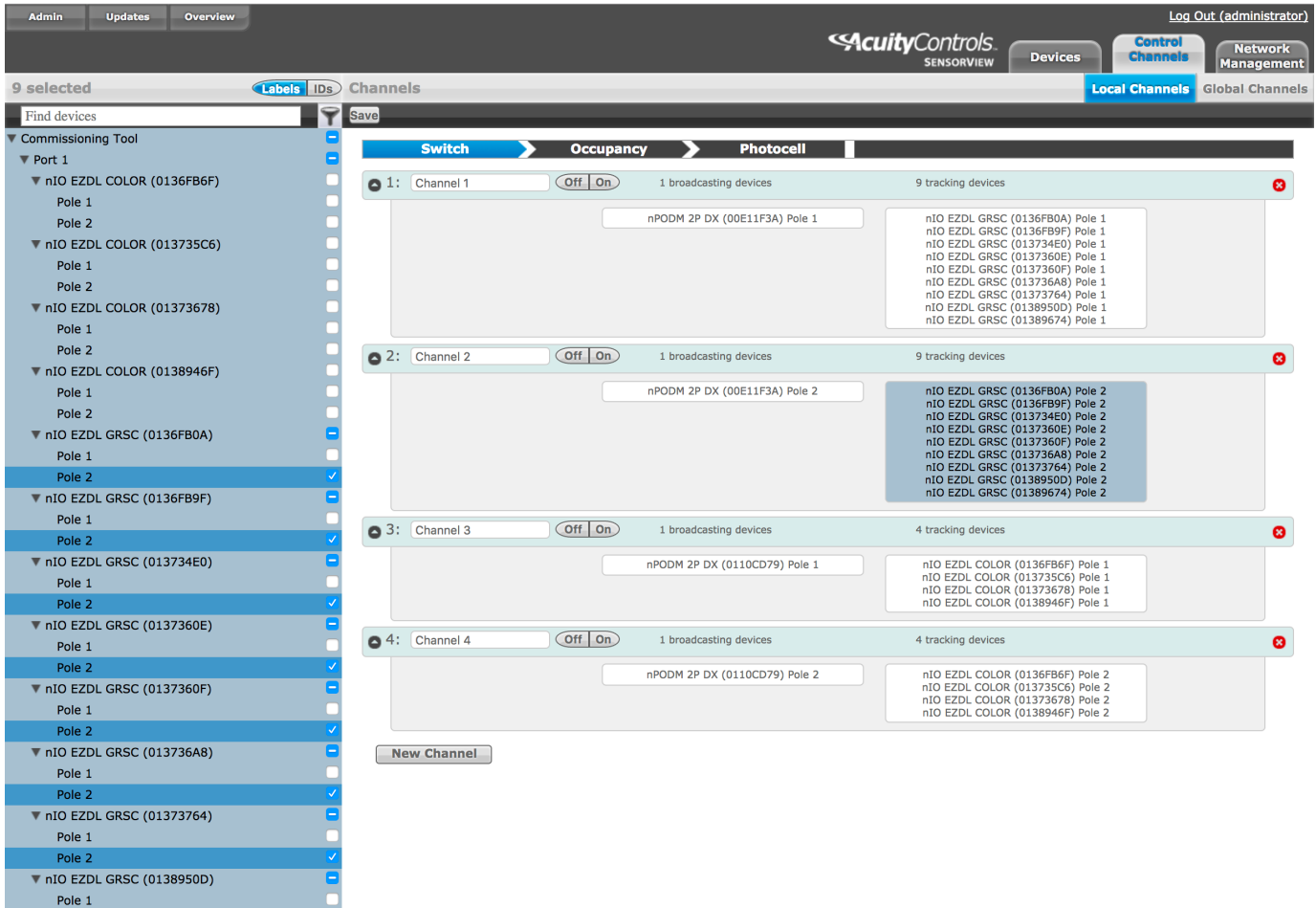
Percentage	Color Name	Color
26%	Pastel Brown	#836953
27%	Brown	#964B00
28%	Sepia	#704214
29%	Dark Brown	#654321
30%	Dark Lava	#483C32
31%	Saffron	#F4C430
32%	Amber	#FFBF00
33%	Dark Goldenrod	#B8860B
34%	Lemon	#FFF700
35%	Dandelion	#F0E130
36%	Citrine	#E4D00A
37%	Dark Khaki	#BDB76B
38%	Lime	#BFFF00
39%	Pear	#D1E231
40%	Apple Green	#8DB600
41%	Olive	#808000
42%	Army Green	#4B5320
43%	Inchworm	#B2EC5D
44%	Celadon	#ACE1AF
45%	Dollar Bill	#85BB65
46%	Camouflage Green	#78866B
47%	Green	#008000
48%	Aquamarine	#7FFFD4
49%	Clover	#00FF6F
50%	Ash Grey	#B2BEB5

## Programming Rubik through SensorView – Rubik Color Number Chart

Percentage	Color Name	Color
51%	Caribbean Green	#00CC99
52%	Dark Pastel Green	#03C03C
53%	Jade	#00A86B
54%	Cadmium Green	#006B3C
55%	British Racing Green	#004225
56%	Cyan	#00FFFF
57%	Sky Blue	#87CEEB
58%	Pastel Blue	#AEC6CF
59%	Dark Cyan	#008B8B
60%	Cerulean	#007BA7
61%	Dark Slate Gray	#2F4F4F
62%	Alice Blue	#F0F8FF
63%	Cornflower Blue	#6495ED
64%	Azure	#007FFF
65%	Air Force Blue	#5D8AA8
66%	Glauous	#6082B6
67%	Steel Blue	#4682B4
68%	Denim	#1560BD
69%	Cadet	#536878
70%	Cobalt	#0047AB
71%	Dark Cerulean	#08457E
72%	Oxford Blue	#002147
73%	Blue	#0000FF
74%	Duke Blue	#00009C
75%	Royal Blue	#002366

Percentage	Color Name	Color
76%	Bright Lavender	#BF94E4
77%	Violet	#8F00FF
78%	Purple Heart	#69359C
79%	Magenta	#FF00FF
80%	Pastel Violet	#CB99C9
81%	Byzantine	#BD33A4
82%	Plum	#8E4585
83%	Dark Magenta	#8B008B
84%	Byzantium	#702963
85%	Classic Rose	#FBCCE7
86%	Pastel Magenta	#F49AC2
87%	Sky Magenta	#CF71AF
88%	Bright Pink	#FF007F
89%	Dark Raspberry	#872657
90%	Eggplant	#614051
91%	Dark Pink	#E75480
92%	Dark Scarlet	#560319
93%	Dark Terra Cotta	#CC4E5C
94%	Crimson	#DC143C
95%	Cordovan	#893F45
96%	Carmine	#960018
97%	Rosewood	#65000B
98%	Cinereous	#98817B
99%	Pastel Gray	#CFCFC4
100%	Battleship Grey	#848482

# Local Switch Channels Tracking Screenshot



## Scheduling Rubik Luminaire Changes Through Profiles

System scheduling can be used to adjust the grayscale speed, grayscale contrast, color accent color number, and color accent custom color 100 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:

- “Global profile scenes” modify all device settings to defaults, except for those added in the settings window. Therefore, if the luminaire 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 luminaire 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.
- The “dimming rate” setting on the nIO device can be used to adjust the amount of time to transfer from one setting to another when a “profile scene” implements.
  - Slowest - 300 seconds
  - Slow - 15 seconds
  - Normal - 5 seconds
  - Faster - 2 seconds
  - Faster - 1 second



# Example of “global profile scenes” created in SensorView

The screenshot displays the AcuityControls SensorView interface. At the top, there are navigation tabs: Admin, Updates, Green Screen, BACnet, Overview, and Log Out (administrator). Below these are main menu items: Devices, Control Channels, Network Management, Profiles (selected), Schedules, and Users.

The main area is divided into two sections. On the left, under the 'Profiles' tab, there is a list of 13 selected devices. The devices are grouped under 'Dynamic Lab' and 'Port 3'. The list includes:

- nIO EZDL COLOR (0136FB6F)
- nIO EZDL COLOR (013735C6)
- nIO EZDL COLOR (01373678)
- nIO EZDL COLOR (0138946F)
- nIO EZDL GRSC (0136FB0A)
- nIO EZDL GRSC (0136FB9F)
- nIO EZDL GRSC (013734E0)
- nIO EZDL GRSC (0137360E)
- nIO EZDL GRSC (0137360F)
- nIO EZDL GRSC (013736A8)
- nIO EZDL GRSC (01373764)
- nIO EZDL GRSC (0138950D)
- nIO EZDL GRSC (01389674)
- nPODM 2P DX (00E11F3A)
- nPODM 2P DX (0110CD79)
- nPS 80 (011D5492)

On the right, the 'Settings' panel is visible, showing configuration options for a profile scene. The 'profile name' field is empty. Below it are sections for 'Speed Percent', 'Contrast Level', 'Color Number', and 'Custom Color 100%'. Each section has a 'Revert to default' dropdown, a color selection area with 'Off' and 'On' buttons, and an 'Add Value' button. The 'Custom Color 100%' section shows a color picker with a hue slider set to #0b00ff and a dropdown menu open showing 'Hue', 'Saturation', and 'Brightness' options.

At the bottom, there is a 'Scheduler' section with a 'Priority' dropdown and a 'Schedule 1' dropdown. Below this are fields for 'Run' (daily), 'From' (8:00 AM), 'To' (5:00 PM), 'Duration' (0 d 9 h 0 m), 'Every' (1 days), and 'Begin' (3/23/2017). There are also radio buttons for 'Never end', 'End by 12:00am on 3/24/2017', and 'End after 1 occurrence'.

