

# Myth-Busting LED Lighting

*Reality vs. Theory Wins Every Time*  
*John Gates*



# What The Heck is an LED?

*“LEDs are semiconductors releasing energy in the form of photons.*

This effect is called *electroluminescence*

Add phosphors, which fluoresce, and you have colored LED lights via photoluminescence”



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# LED Myth #1

## LED Lights are SO Different from my Legacy lights

NO - Not Different

What Do You Want a Light to Do?



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# LED Myth #1

## LED Lights are SO Different from my Legacy lights

YES - Different

Form Follows Technology

Plus, Color-Changing

Plus, Extended “*Lamp Life*”



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# LED Myth #2

## I Have To Change Everything

NO

Good LED lights match your lights:

Brightness  
Beam/Field  
Control  
Color



# LED Myth #2

## I Have To Change Everything

Maybe

Do you really need to buy another incandescent light?

Why would you want to buy another incandescent light?



# LED Myth #3

## LED = Crappy Color

No & Yes

Not all LED's are created equal:

phosphors & combinations of phosphors  
software algorithms  
power supplies



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# LED Myth #3

## LED = Crappy Color

Full Spectrum

Discontinuous Spectrum

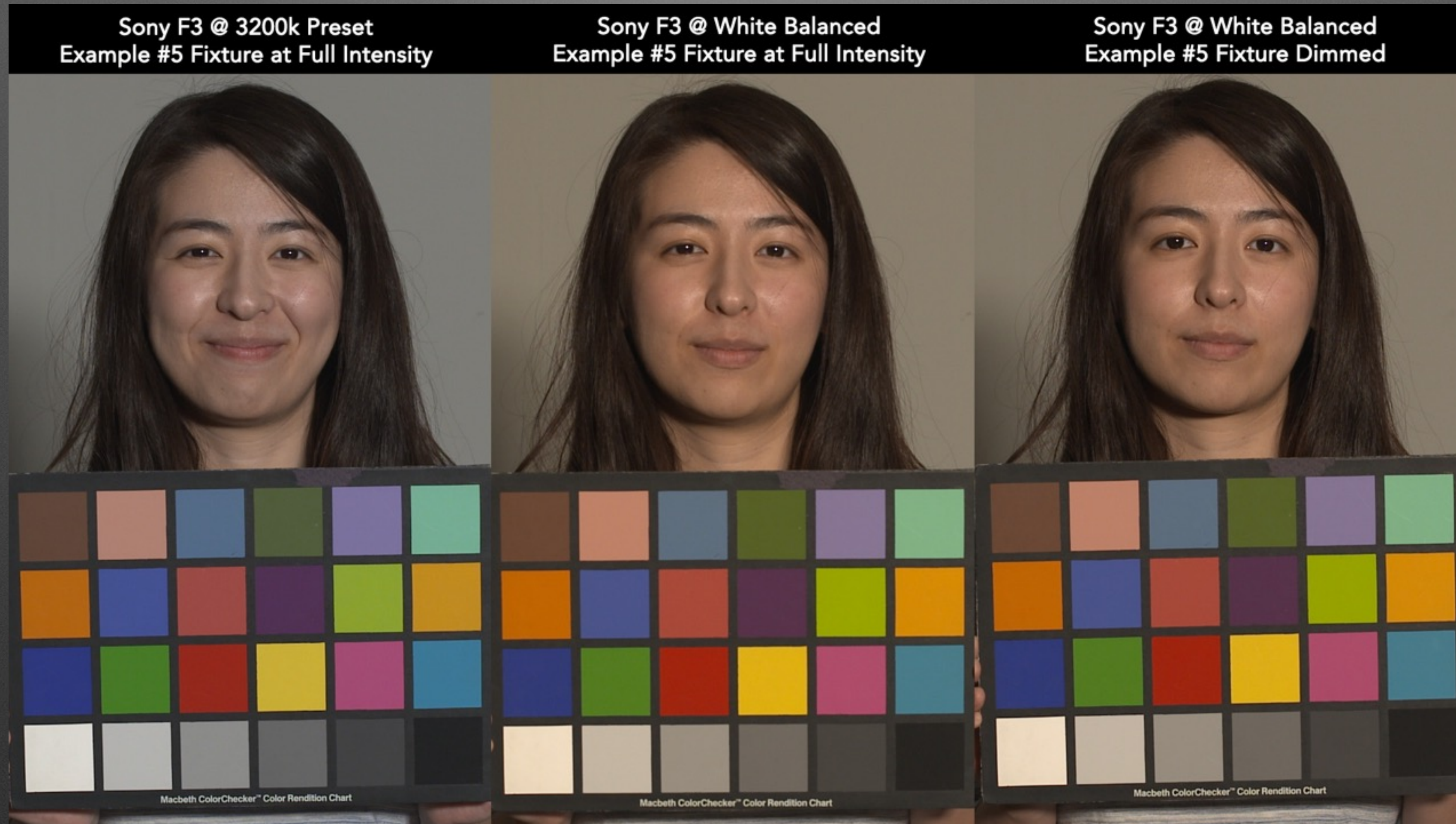


# What's With The Alphabet Soup Color Things?

CRI vs CQS vs TLCI  
Color Rendering Index  
Color Quality Scale  
Television Lighting Consistency Index  
(*a.k.a. EBU Tech 3355*)



# Check Them On Camera





# Check Them On Camera





# Check Them On Camera





# MYTH #4

## LEDs Will Change My Lighting Style

A definite unqualified NO

You have LED lights that work just like your lights  
plus color changing capability “*Look Ma, No Gels!*”



# MYTH #4





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# MYTH #4

## LEDs Will Change My Lighting Style

A definite PERHAPS  
A New Form May Better Suit Your Work





## Myth-Busting LED Lighting

# MYTH #4





## MYTH #4

# LEDs Will Change My Lighting Style



The Weather Company  
SL6410





# MYTH #5

## Replace All Your Dimming & Control

*In Most Cases - More Upgrade Than Replace*

Fixture Control - it's pretty easy - DMX

Controllable non-dim power

*My afternoon presentation deals with this specifically*



# MYTH #6

## Sticker Shock

Pay Me Now, or Pay Me Later

cheapest light = false economy

Major long-term cost savings



# MYTH #6

## Sticker Shock





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# MYTH #6

## Speaking of Maintenance





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# MYTH #6

## Sticker Shock

No Color Temperature Penalty

daylight \$ = tungsten \$



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