designing with LED

PURDUE ROAD SCHOOL – MARCH 2018
Longer Lasting/
Lower Maintenance

No ballasts to replace
Expect 20 years
Not all created equally*

White Light
vs
Yellow Light

Better visibility/peripheral vision
More represents daylight

Numerous
Possibilities

Tilt
Symmetric/Asymmetric
Different Lumen packages
EARLY LED

- Used much less energy
  - > produced less light
- Not good distributions
- No High Mast Options
- Much more expensive than HPS

CURRENT

- Use slightly more energy
  - > better light output
- Better coverage
- High Mast Options
- Price is evening out

Improvement in Technology . Good for ALL applications
IES RP-8-14 updates

- Luminaire Classification System (LCS/BUG Ratings)
- Luminance vs Illuminance
- Increased Pedestrian Guidance
- Veiling Luminance
- Adaptive Lighting
- **luminaire classification system**

BUG Ratings
LED
unique
design
challenges

- Glare
  Case Study
- LLF and Design Life
- Multiple Options
  Requires more coordination
- Utility Rates
  Metered services points
LED unique lighting benefits

- Dimming
- Adaptive/ Controls
- Color Control
Amanda Johnson, PE, PTOE
Traffic Services Manager

ajohnson@emcsinc.com
317.343.2923