SALT LAKE CITY AIRPORT

10,000 Light fixtures which includes over 17,000 lamps
9 SMGCS Controllable stop-bar intersections
450 Miles of underground cable
150 Constant current regulators
20 Circuit selector switches
1000 Addressable lighting control units (BRITE, AGLAS)
3 Main lighting vaults
8 Wind cones
6 4 Box PAPI's
1 Airport beacon
450 Airfield signs
3 Roaming maintenance laptop
TVA AND SVRA

TOOELE VALLEY AIRPORT
354 LIGHT Fixtures
3 CONSTANT CURRENT REGULATORS
PAPI'S
REIL LIGHTS
ROTATING BEACON
WIND-CONES
LIGHTING VAULT

SOUTH VALLEY REGIONAL AIRPORT
543 LIGHT Fixtures
3 CONSTANT CURRENT REGULATORS
PAPI's
REIL LIGHTS
ROTATING BEACON
WIND-CONES
LIGHTING VAULT
EARLY AVIONIC LIGHTING HISTORY
WHERE IT STARTED
EARLY AVIONIC LIGHTING HISTORY
WHERE IT STARTED
EARLY AVIONIC LIGHTING HISTORY
WHERE IT STARTED
EARLY AVIONIC LIGHTING HISTORY
WHERE IT STARTED
EARLY AVIONIC LIGHTING HISTORY
WHERE IT STARTED

• Early emergency landing strips were marked with smudge pots
TODAY’S LIGHTING FIXTURES
PROGRESS OF LIGHTING SOURCE

• Early years of runway lighting were accomplished with Incandescent lamps with filter for color

• Then came quarts lamps
  • Longer lamp life but still using filters for color
  • More control of focus

• Today the industry is moving towards LED
  • Longer Lamp life
  • Truer color quality at all levels of intensity
  • Cost of fixtures
SCIENCE OF PHOTOMETRIC

• Color
• Configuration
• Candela
• Coverage
PHOTOMETRIC TESTING: COLOR

Newly recommended chromaticity boundaries resulting from the LRC studies.
PHOTOMETRIC TESTING: COLOR
PHOTOMETRIC TESTING: CANDELA
PHOTOMETRIC TESTING: COVERAGE
PAST PHOTOMETRIC TESTING AT SLC

• New construction commissioning
• Annual testing
• Run to fail
• Rebuild fixture without photometric testing
• Reinstall of fixture in the field and run to fail
TODAYS TESTING

• Post Construction Commissioning

• Summer months we test monthly
  • Weather affects
  • Chemicals
  • Need for cleaning
TODAY’S TESTING
BENCH TEST OF ALL NEW AND REBUILT FIXTURES

• Lessons learned
  • Prisms have become the new “weak link” in fixture performance
  • Lamp focusing problems
  • Prism and Light source alignment
  • New fixture Testing
TODAY’S TESTING
TODAY’S TESTING
• New fixture do not always meet standards
• New fixtures can develop problems at initial running
• New fixtures are not always assembled correctly from the manufacturer
• Fixtures can be installed too high and too low
• Azimuth or plumb incorrect
TODAY’S TESTING
TODAY’S TESTING
CLOSING

• Overall performance of our airfield lighting has greatly improved with the use of Photometric Test Equipment.
QUESTIONS?