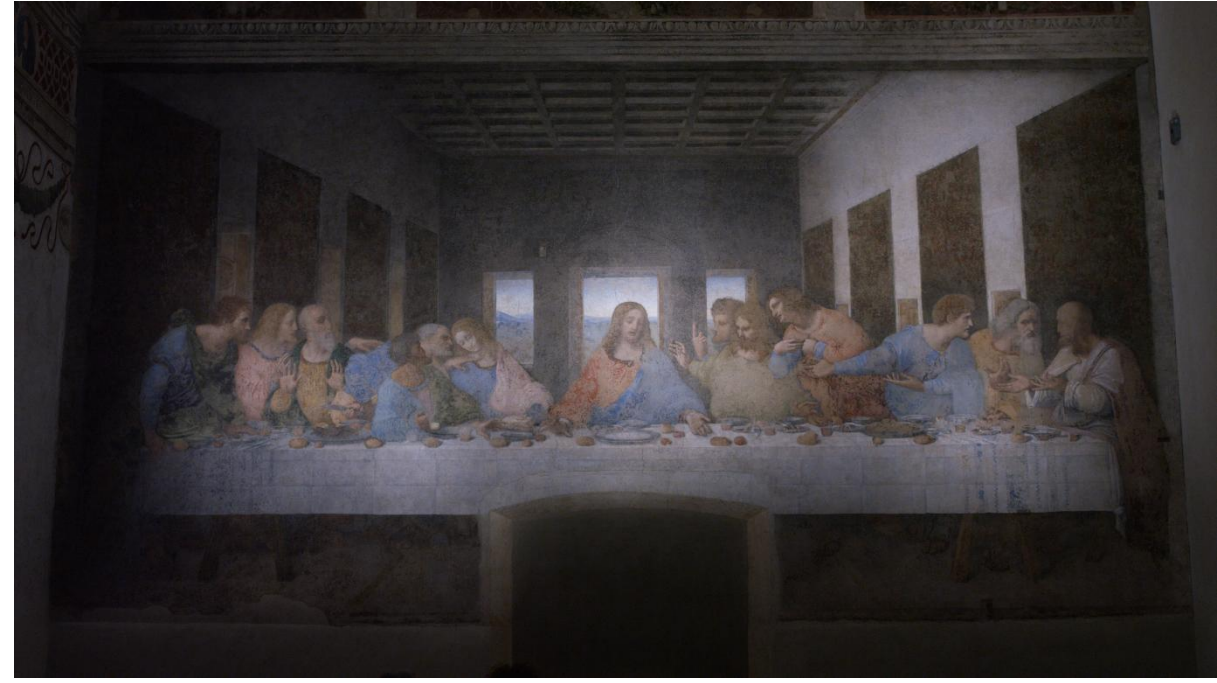
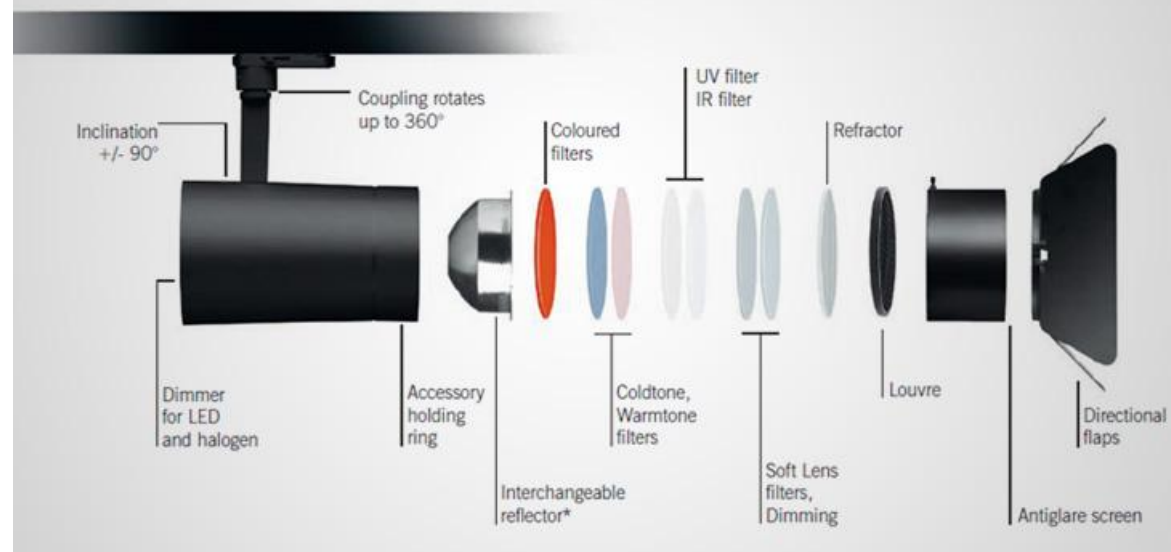
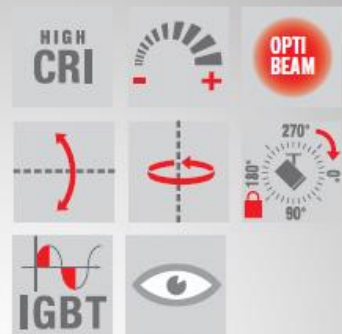


Old



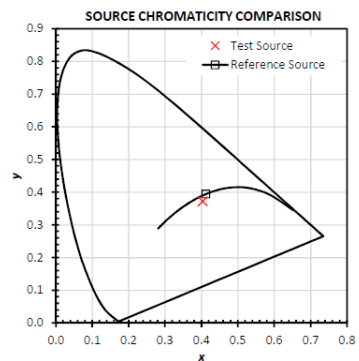
New



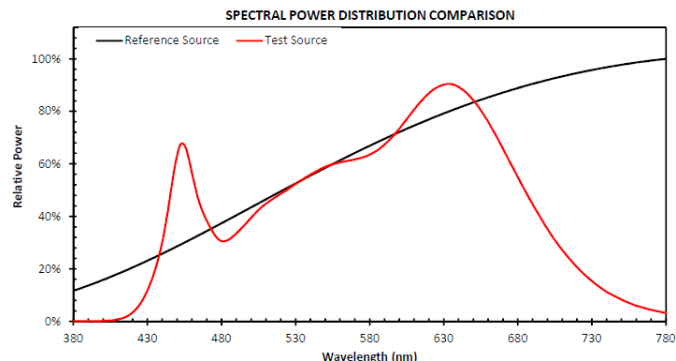


| Summary Results | | | | | | | |
|-----------------|------|-----------|---|----------|---------|-----------|-----------------------------------|
| Metric | Test | Reference | Notes | Metric | Test | Reference | Notes |
| R_f | 94 | 100 | IES TM-30-15 Fidelity Index | CCT | 3384 | 3383 | Correlated Color Temperature |
| R_g | 104 | 100 | IES TM-30-15 Gamut Index | D_{uv} | -0.0082 | 0.0000 | Distance from the blackbody locus |
| CIE R_a | 96 | 100 | CIE Test Color Method General Index | x | 0.4030 | 0.4120 | CIE 1931 chromaticity coordinate |
| R_9 | 90 | 100 | CIE Test Color Method Sample Nine Score | y | 0.3713 | 0.3940 | CIE 1931 chromaticity coordinate |
| LER | 261 | 177 | Luminous Efficacy of Radiation | u | 0.2424 | 0.2387 | CIE 1960 chromaticity coordinate |
| R_{fskin} | 96 | 100 | Average of CES15 and CES18 (skin) | v | 0.3350 | 0.3424 | CIE 1960 chromaticity coordinate |
| | | | | u' | 0.2424 | 0.2387 | CIE 1976 chromaticity coordinate |
| | | | | v' | 0.5025 | 0.5136 | CIE 1976 chromaticity coordinate |

Source Properties



This chart plots the chromaticity of the test and reference sources in the CIE 1931 chromaticity diagram.



This chart displays the spectral power distributions for the test and reference source. Each SPD has been normalized so that the maximum values is 100%.

La nuova normativa europea **UNI CEN/TS16163** recepisce la *Harrison's Damage function* (CIE 157/2004) e consente una variazione della **dose annua di luce** in relazione al **Potenziale di Danno Relativo** della sorgente usata sull'opera.

Il **Potenziale di danno relativo** è il rapporto tra il potenziale di danno della sorgente usata opera e quello dell'illuminante standard A (2856 K) CIE (valore = 1)

Potenziale danno relativo COB 3400K = 0.87 significa un incremento della dose annua di luce del **13%**.

Aumento potenziale di visitatori/ore di esposizione

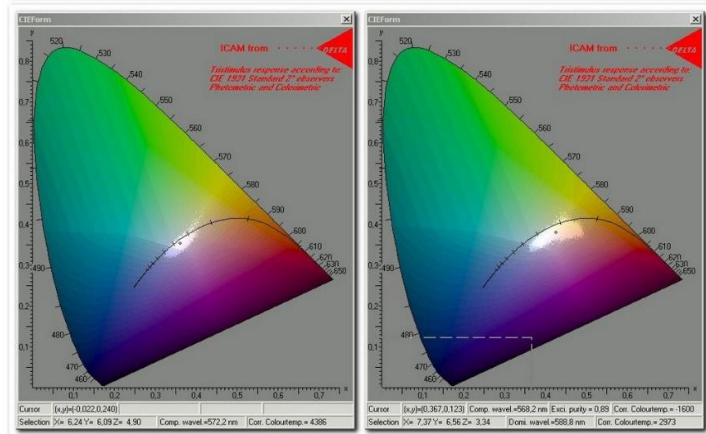
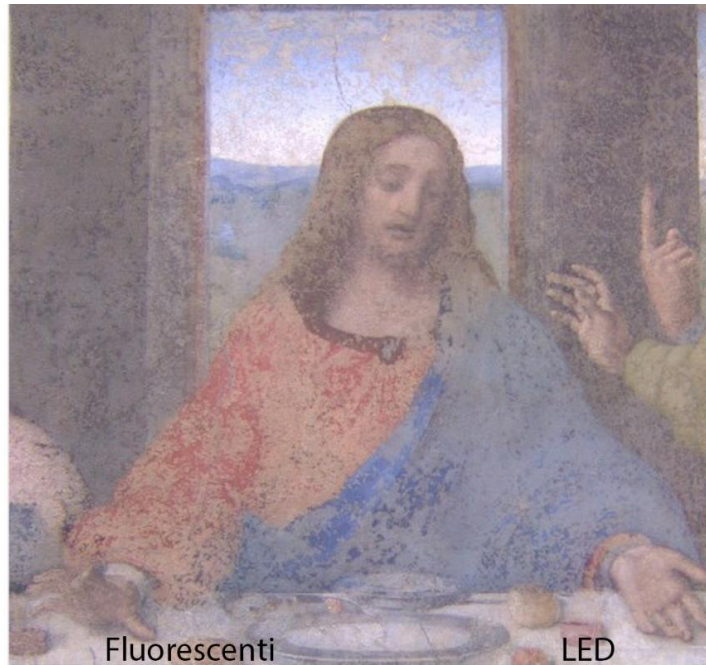
Allo stato attuale dei livelli di illuminamento rilevati sull'Ultima Cena il nuovo impianto permetterebbe **5 turni di visita in più al giorno, per complessive 45.000 visitatori l'anno.**



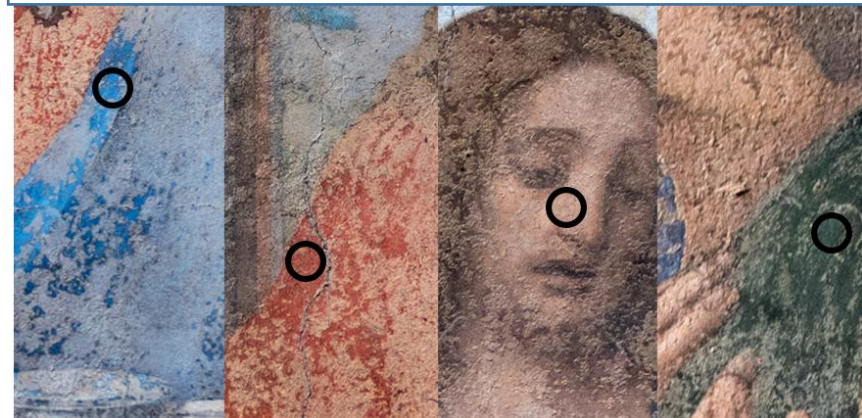
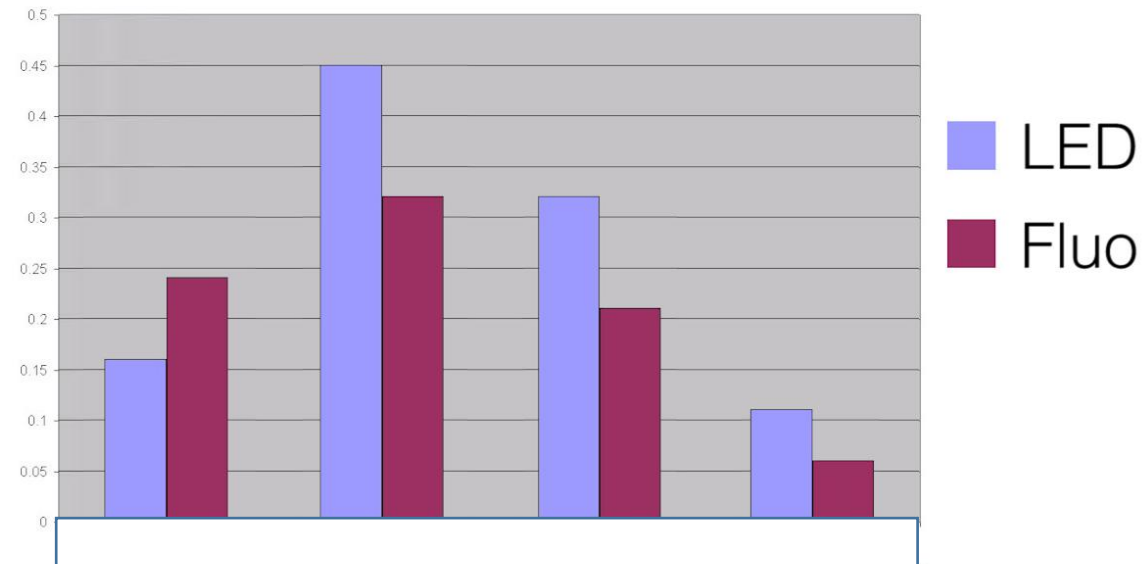
Energy saving

| area | Old | New | % |
|-------------|--------|-------|-----|
| totale | 3300 w | 490 w | -85 |
| Ultima cena | 345 w | 47 w | -86 |

Estensione della fascia di colori percepiti (Gamut)



Saturazione cromatica

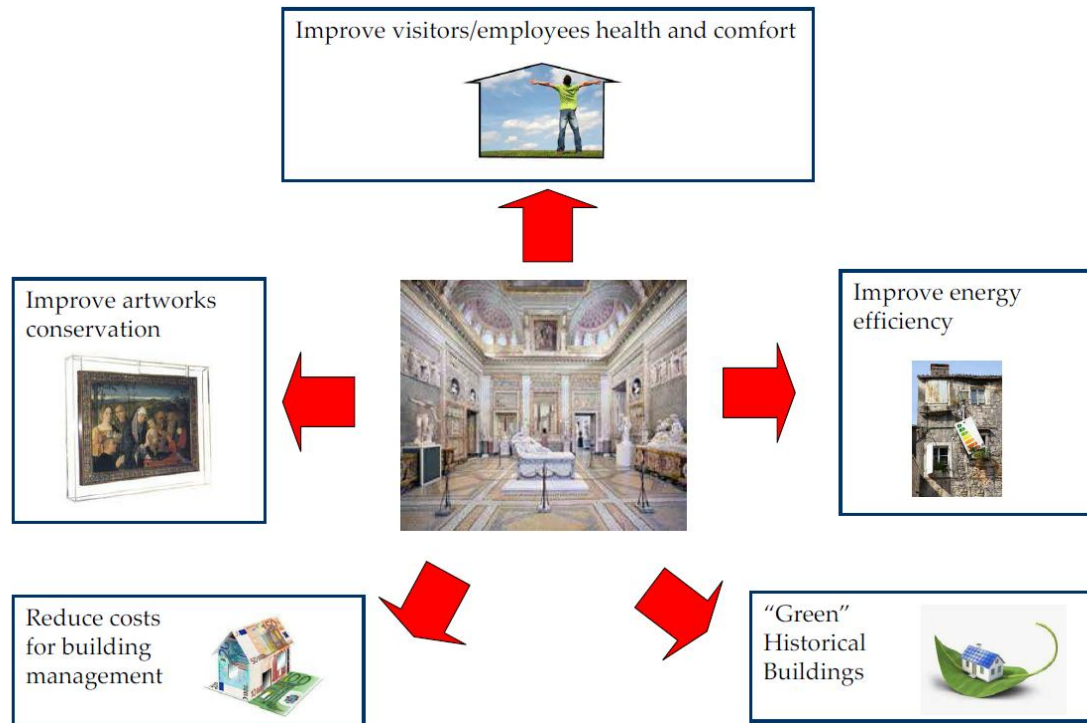


Main call title: Energy Efficiency - PPP EeB and SPIRE topics - **EE-03-2014**

Topic: *Energy strategies and solutions for deep renovation of historic buildings*

March 2014

Proposal : **aMUSEment** - *integrated Actions for MUSeum complexes Energy ManagemENT*



- iGuzzini Illuminazione Spa - IT
- Schneider Electric Spa - IT
- GDF SUEZ Energie Services - FR
- ISA - Intelligent Sensing Anywhere S.A. - PT
- Universitat Politècnica de Catalunya - ES
- Università Politecnica delle Marche - IT
- Fraunhofer Inst - DE
- Fomento de las Artes y del Diseño - ES
- Polo Museale della città di Roma - IT
- Château musée de Versailles - FR

ICT-29-2016: Photonics KET 2016

FTI Pilot-1-2016: Fast Track to Innovation Pilot

Energy

- **Smart cities and communities**
 - Smart Cities and Communities lighthouse projects

Inclusive, innovative and reflective societies

- **Understanding Europe**
 - Virtual museums and social platform on European digital heritage, memory, identity and cultural interaction
 - European cultural heritage, access and analysis for a richer interpretation of the past

together globally