

Aurelia Berger / MA Thesis 2023/2024 / ABSTRACT

MUSEUM LIGHTING WITH LIGHT EMITTING DIODES.

A Concept for Light Damage Mitigation in the Ruam Samai Museum (RSM), Chiang Mai, Thailand

Abstract:

An approach is presented to mitigate light damage in museums, focusing on the use of LED exhibition lighting at the RSM. Research on the methodology of light- and UV-vulnerability categorisation of collections forms the basis for the assessment of the collections' light sensitivity.

Scientific foundations of object illumination are elaborated, followed by a comparison of the benefits and disadvantages of conventional light sources and LEDs. Light-induced deterioration processes are discussed.

Solutions are presented for the control of natural and artificial light in exhibition rooms and in showcases. Finally, the thesis offers a sustainable strategy for light damage mitigation at RSM.

Keywords: light damage mitigation, LEDs, light-vulnerability assessment, photodegradation, modern art