

# Lighting Fixture Requirements

This is the LOIN requirement for lighting simulation developed by resusing existing ontologies such as Lighting Fixture Product Ontology (LPPO), LOIN, Isoprops, Data Template Ontology (TempO) to address the use case in a master's thesis by Mohamad Monir Taktak & Nischal Bhattarai. The thesis project Lifting Heterogeneous Data into RDF/OWL Knowledge Graph: A Semantic Approach conducted as part of the Master's program in Sustainable Building Information Management at Jönköping University.

<b>Author email</b>	tamo23uk@student.ju.se
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<b>Version</b>	1,0
<b>Milestone</b>	DesignPhase
<b>Purpose</b>	LightingSimulation

## SPECIFICATION

# LightingFixtureSpecification

IDS for LOIN

IFC Version IFC4

## APPLICABILITY

the model SHOULD HAVE:

- All components of entity **IFCLIGHTFIXTURE**

## REQUIREMENT

that meets the following criteria:

- A IFC property **illuminanceRange** and in the property set **FunctionalReq\_PropertySet** and with **Any value** MUST exist
- A IFC property **GlareIndexUGR** and in the property set **FunctionalReq\_PropertySet** and with **Any value** MUST exist
- A IFC property **SimulatedIlluminance** and in the property set **SimulationReq\_PropertySet** and with **Any value** MUST exist
- A IFC property **DaylightAutonomy** and in the property set **SimulationReq\_PropertySet** and with **Any value** MUST exist
- A IFC property **AnnualSunlightExposure** and in the property set **SimulationReq\_PropertySet** and with **Any value** MUST exist
- A IFC property **luminousFlux** and in the property set **ProductReq\_PropertySet** and with **Any value** MUST exist
- A IFC property **powerConsumption** and in the property set **ProductReq\_PropertySet** and with **Any value** MUST exist
- A IFC property **mountingType** and in the property set **ProductReq\_PropertySet** and with value that is **minimum 1 characters long** MUST exist
- A IFC property **correlatedColorTemperature** and in the property set **ProductReq\_PropertySet** and with **Any value** MUST exist
- A IFC property **colorRenderingIndex** and in the property set **ProductReq\_PropertySet** and with **Any value** MUST exist
- A IFC property **averageRatedLifeOfLightSource** and in the property set **ProductReq\_PropertySet** and with **Any value** MUST exist

