

This document provides an overview of the Revit content library provided by Unios in collaboration with IGS BIM Solutions.



The parametric content in each family is created natively in Revit, allowing users the ability to design and document a range of ceiling mounted, wall mounted, suspended or landscape based lighting systems. Each family is built to a consistent standard offering a robust and lightweight solution for any Revit user without over-encumbering even the largest of models. The Revit families are ready for immediate use in project models, but have been constructed so they can be integrated into firm-specific BIM libraries with minimal modification.

Read on to learn more about how the Unios Revit content is built and how it can be used in your next Revit project.

Family Specifications

Unios Revit families have been created to a consistent, high standard with the objective of finding a balance between complexity of use, functionality, documentation output, file size and performance in a project environment. Unios Revit content has been created with the following considerations:

Provided as Revit 2016 version content for backwards compatibility across currently active Revit projects. For future updates Unios plans to support, at a minimum, the Revit version 3 years prior to the current release.

Native Revit geometry, including nested families. No embedded DWG or SAT files.

Where appropriate, 3D geometry has been hidden in 2D views with Masking Regions and 2D line work applied to ensure documentation consistency and regeneration speed in Plan, Section and Elevation views.

Families have been created as both non-hosted and face-based to provide maximum flexibility. The intent is to use either the non-hosted or face-based libraries depending on modeler or company preference.

Consistent family and shared parameters (to ANZRS and IGS standards) have been used allowing for Unios product attributes to be scheduled in the Revit project environment.

Reference Planes have been applied, named and set to the correct 'Is Reference'. Thought has been given to the likely end user requirements in placement/alignment and dimensioning of the families. The Origin Point has also been set accordingly.

Detail Level settings applied to 2D line work and 3D geometry improving model performance.

All Warnings have been reviewed and removed where possible.

The families have been fully purged and all additional Materials, Line Patterns and Fill Patterns removed.

Logical and consistent Type naming has been applied across all families.

Omni Classification has been set appropriately.

The family file sizes have been optimised to be relatively small ensuring large Revit projects are not burdened by Unios families.

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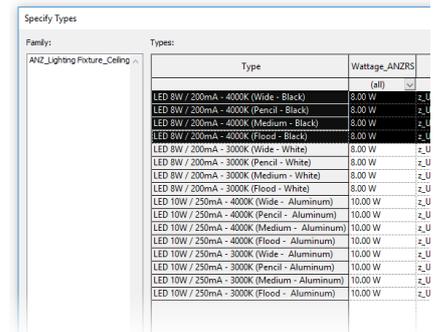
Type Catalogues

To ensure scheduling data is accurate, a family type is included in product families for each possible product specification including wattage, beam angle, colour finish and LED colour temperature. To reduce the number of types that are loaded into a Revit project causing clutter, the family files are setup as type catalogues.

A type catalogue Revit family consists of the regular RFA file with an identically named TXT file containing all the different family variations or types. When such a family is loaded into Revit, a selection window pops up allowing the user to select only the variations required for the project. For example, you may only want the black finish and 4000K LED options for the Apex downlight when designing a commercial project. Properties can be filtered at the top to narrow down your selection.

To load a type catalogue, you must load the family through the Revit ribbon bar and browse to the file location. Dragging and dropping the RFA file into a Revit model will cause Revit to load the family with only a single generic type ignoring the associated type catalogue list.

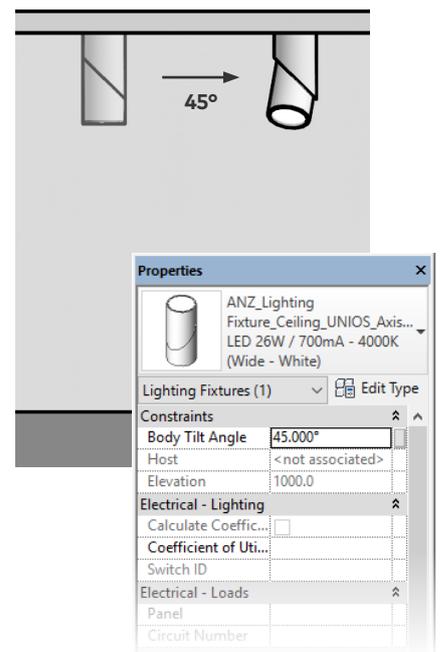
- The TXT file must be in the same directory as the RFA file, with the same filename. Take care if moving files into BIM libraries or project folders.
- The RFA family must be opened from a file menu in Revit - not through drag and drop.
- Only load variations you think will be needed to reduce the number of items in the list of available object types. Otherwise there will be lots of types to scroll through when changing a luminaire instance!



Luminaire Adjustments

Certain luminaire types have parametric adjustments that allow for changing rotation, tilt or suspension height. It is important to note that the light source embedded within each family is linked to these parameters making the controls useful for not only visually showing aiming directions, but pointing light sources in the correct direction for rendering or calculation purposes.

- **Tilt**
Any fitting with a tilt or aiming adjustment has a parameter that will angle the fitting the desired number of degrees. Use this when aiming track lights, adjustable downlights, or adjustable surface mount fittings.
- **Rotation**
Round shaped products can be easily rotated within a model using the built in Revit rotate function due to the symmetrical nature of the product. Other products, such as square or rectangular fittings, which have an independently aim-able component, are provided with additional tilt and rotation options to allow for full freedom for aiming.
- **Multiple Components**
Double and Triple head products have duplicated control parameters to allow for independent aiming of each head.



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Rendering

Each Unios product family utilises the built-in Revit light source definitions including lumen output, beam angle, beam type and colour temperature. This feature can be leveraged to produce photo-realistic renders of models with representative lighting of the actual products. Whether you are using the integrated Revit rendering, Autodesk Cloud Rendering, or one of many third-party rendering plugin, the Unios Revit library will allow you to achieve realistic renderings.

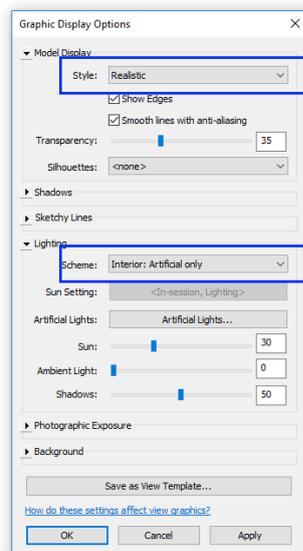


Light source visualisation can be enabled in 3D views to assist with design layouts giving a rudimentary visual appearance of the lighting effect. To enable this, ensure that artificial light sources are enabled in the Visual Style properties and that the style is set to Realistic.

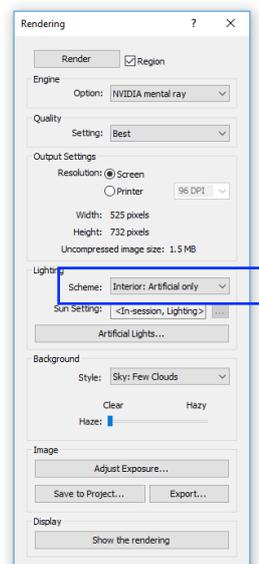
Refer to *Graphic Display Options window*

When using the built in Revit renderer, ensure that Artificial Lighting is enabled (internal or external). For best results, Unios recommends disabling Sun lighting.

Refer to *Rendering window*



Graphic Display Options window



Rendering Window

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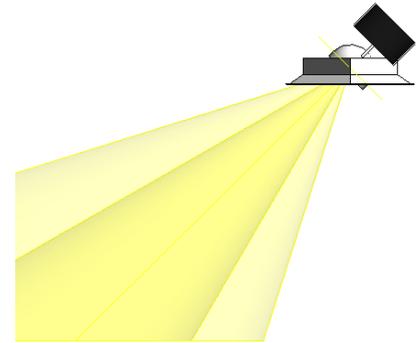
Calculations

Unios product families can also be modified to use IES files instead of the built-in Revit light sources. This enables photometrically accurate lighting calculations to be performed utilising a third-party tool such as Lighting Analysts Elumtools.

To enable attachment of an IES file, the product family needs to be modified to change the light source definition to use IES data. This can be done by opening the family in the Revit family editor, clicking on

the light source web, and changing the type to IES. Third party tools like Elumtools can do this process automatically for you while at the same time attaching an IES file.

Note that Unios does not include each products IES file in the Revit families. This keeps the family file size small and lightweight. The latest IES files are available on the Unios website product pages and ensures you are using the latest data.



Scheduling Data

All Unios Revit families contain multiple type definitions, corresponding to Unios' large range of product options. When using these families in a Revit model, a number of parametric properties can be leveraged into Revit schedules or exported to other systems. This includes information such as:

- Unios Full Part Number
- Wattage
- Beam Angle
- Colour Finish
- Colour Temperature
- Product URL
- Product Description

This information is stored in standard Revit or ANZRS parameters where possible, and otherwise stored in consistently named additional parameters. This allows flexibility to only schedule useful information to meet the LOD requirements for the model. Additional shared parameters can be attached to the families where necessary.

MFG	P/N	Type	Vol
UNIOS	AKIS0600.TB30.F	LED 48W / (2x 600mA) - 3000K (Black)	240
UNIOS	AKIS0600.TW30.F	LED 48W / (2x 600mA) - 3000K (White)	240
UNIOS	APEX0105.TB40.W-PC030001	LED 13W / 300mA - 4000K (Wide - Black)	240
UNIOS	APEX0105.TW40.P-PC035001	LED 15W / 350mA - 4000K (Pencil - White)	240
UNIOS	LUNA0089.TB40.M	LED 10W / 280mA - 4000K (Medium - Black)	240
UNIOS	LUNA0089.TB40.N	LED 10W / 280mA - 4000K (Narrow - Black)	240
UNIOS	LUNA0089.TW30.M	LED 10W / 280mA - 3000K (Medium - White)	240
UNIOS	LUNA0089.TW30.N	LED 10W / 280mA - 3000K (Narrow - White)	240
UNIOS	LXBI7822.TW40.F	LED 60W - 4000K (White)	240
UNIOS	PNLP0306.MW30.FCC075001	LED 30W / 750mA - Flood	240
UNIOS	PNLP0306.MW30.FCC090001	LED 36W / 900mA - Flood	240
UNIOS	PNLP0312.MW30.FCC100001	LED 40W / 1000mA - Flood	240
UNIOS	PNLP0312.MW30.FCC130001	LED 50W / 1300mA - Flood	240
UNIOS	QFIX0151.TB30.MPC105001	LED 43W / 1050mA - Medium - 3000K (Black)	240
UNIOS	QFIX0151.TB30.NPC070002	LED 28W / 700mA - Narrow - 3000K (Black)	240
UNIOS	QFIX0151.TW40.FPC070002	LED 28W / 700mA - Flood - 4000K (White)	240
UNIOS	QFIX0151.TW40.MPC105001	LED 43W / 1050mA - Medium - 4000K (White)	240
UNIOS	TISM0215.TB30.F	LED 13W / 350mA - 3000K (Flood - Black)	240
UNIOS	TISM0215.TW40.M	LED 13W / 350mA - 4000K (Medium - White)	240
UNIOS	TISM0215.WG30.W	LED 13W / 350mA - 3000K (Wide - White/Gold)	240
UNIOS	TISM0215.WG40.W	LED 13W / 350mA - 4000K (Wide - White/Gold)	240
UNIOS	TITA0134.TW40.N-PC070002	LED 25W / 700mA - 4000K (Narrow - White)	240