

# Using the RevitWorks Lighting Families

Documentation for the RevitWorks lighting families.

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## Special Features

All of the RevitWorks Lights have additional features above and beyond out-of-the-box (OOTB) standard Revit lights; making them the perfect starting point for all your lighting fixture requirements. In particular:

1. Relevant lighting families are face based to ensure the user has the option of placing lights on the underside of beams, roofs or on work planes etc.
2. Pendants, suspended lights and floor based lighting (bollards, floor lamps etc) are work plane based to ensure they are always vertical (as expected)
3. They work on any vertical, horizontal, or sloped surface (and their symbols still show correctly on sloped ceilings)
4. They come with different wall and ceiling symbols depending on the type of light
5. If the light is rotated 90 ° on walls (i.e. placed vertically instead of horizontally) symbols still show correctly.
6. Initial placement of wiring generally will default to the centre of the ceiling light fittings (it normally defaults to the extent of the fitting), allowing for efficient, neat and tidy wiring diagrams.
7. Lights snap to ceiling grids.
8. All useful parameters are schedulable.
9. They come preloaded with generic IES files for better rendering.
10. Cut-plane extension parameters included to allow low wall fittings to be shown on ceiling plans.

Because of the methodology required to create the above special-features, the lights work in a prescribed way which needs to be understood and taken on board.

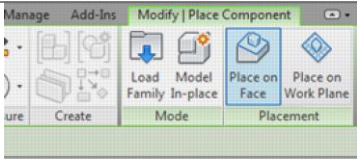
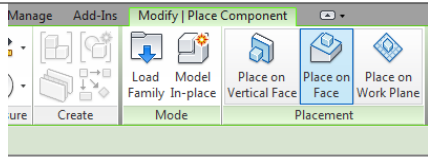
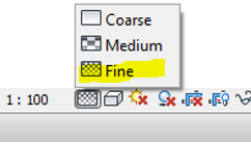
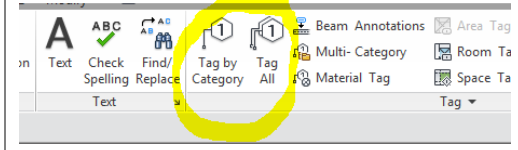
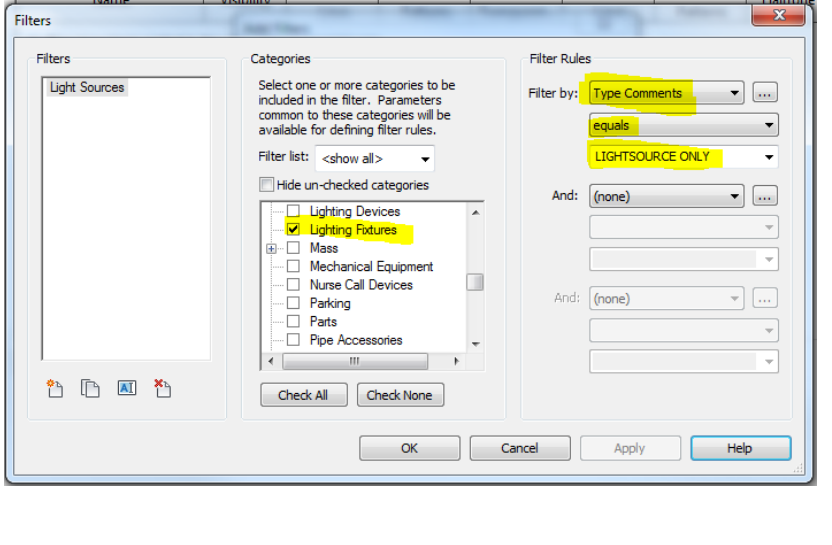
Refer to the Lighting Specification documents for explanations of Object Styles, Detail Levels and all parameters as well as other relevant information.

# General Use

- The RevitWorks Lighting families are delivered within a Revit project within 2023 format. Open up the project in Revit and either save out the families to your library or “Edit Family” and then load into your current project. Older versions are available on request, but please note the functionality is not as user friendly (there has been an enhancement to Revit 2023 which allowed us to update all the families to take advantage of)
- **Lighting Fixture Detail Level Summary:**
  - **No models in Coarse** (model shows in Medium and Fine)
  - **No symbols in Fine** (symbols show in Medium and Coarse)

Change your view setting (or view templates) to suit the detail level above: generally in plans one would change the visibility graphic detail levels of Light fittings to be “coarse” (i.e. symbol only) and for 3d views set to “fine” (i.e. model only)

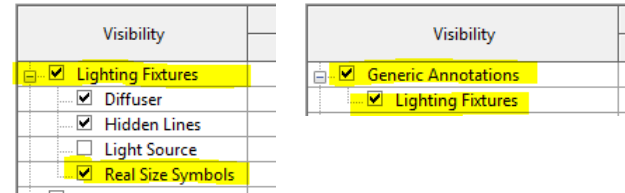
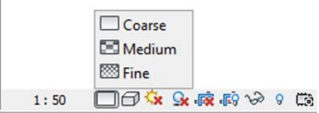
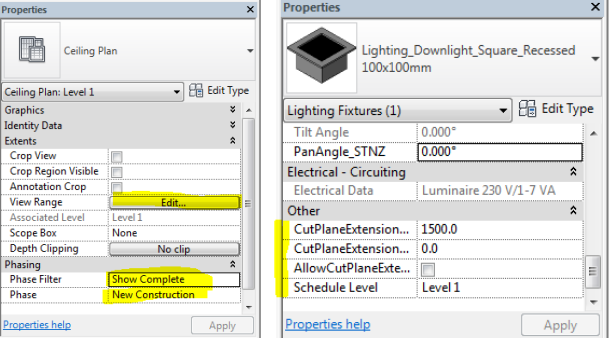
## Using the Lights:

<p>1. <b>To place pendants, suspended lights and floorlamps</b> (including bollards, table lamps etc)</p> <p>Use standard Revit methods to place a light</p> <p>Choose “Place on Face” or “Place on Work Plane” as required.</p>	
<p>2. <b>To place other lights</b></p> <p>Use standard Revit methods to place a light</p> <p>Revit will default to try to place the light onto a vertical surface - select "Place on Face" instead (unless you want it on a vertical wall)</p>	
<p>3. <b>To Tag Lights</b></p> <p>It is important to tag the 3d modelled part of the light fitting, not the 2d symbol. If you temporarily change the views Detail Level to “Fine” the 2d symbol will be turned off and it will be easier to select the 3d light fitting</p> <p>You will also need to create a view filter and apply it to your visibility graphics to turn off the light source families, otherwise you will be tagging all the nested light sources.</p> <p>Once above has been done, Tag by Category (or Tag All to tag all the light fittings in your view)</p>	<div style="display: flex; justify-content: space-between;"> <div data-bbox="692 1135 1007 1330"> <p><i>Detail Level:</i></p>  </div> <div data-bbox="1007 1135 1527 1330"> <p><i>Tagging:</i></p>  </div> </div> <div data-bbox="692 1330 1527 1917"> <p><i>View Filters:</i></p>  </div>

# Troubleshooting

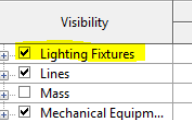
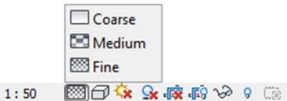
## Light gone missing in plan?

Common Causes:

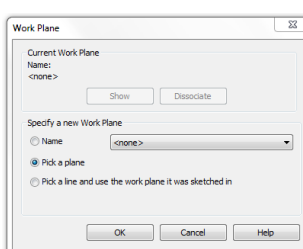
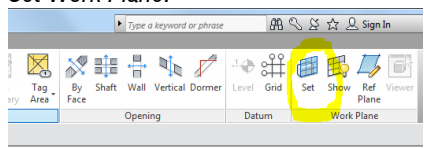
<p>1. <b>Check Visibility Graphics:</b></p> <p>Lighting Fixtures and Generic Annotations should be on <i>including</i> the symbol subcategories as shown:</p>	
<p>2. <b>Ensure detail level of view is correct:</b></p> <p>Course &amp; Medium: Symbol should show Medium &amp; Fine: Modelled elements should show.</p>	
<p>3. <b>Check the views view range and phasing are correct.</b></p> <p>Especially important where you have sloping ceilings: If the bottom of the sloped ceiling is within the view range then the whole ceiling will show – but not the lights which are on that ceiling but beyond the view range</p> <p><i>Hint: If a wall light is below (or above) the required view range, turn on the "cut plane extensions" on the light and amend the values until it shows correctly:</i></p>	

## Light gone missing in 3d/ elevations/ sections?

Common Causes:

<p>1. <b>Check Visibility Graphics:</b></p> <p>Lighting Fixtures category should be on.</p>																																														
<p>2. <b>Ensure detail level of view is on "Fine"</b></p> <p>The light fixture modelled elements only show if the detail level is set to "Fine" or "Medium"</p> <p>If it is set to medium, symbolic components of the lights will show as well (which will be unwanted)</p>	 <p><i>Tip: Ensure that in all 3d views, elevations and sections, the light fixtures category has the detail level overridden always set to fine:</i></p> <table border="1" data-bbox="805 1545 1508 1646"> <thead> <tr> <th rowspan="2">Visibility</th> <th colspan="3">Projection/Surface</th> <th colspan="2">Cut</th> <th rowspan="2">Halftone</th> <th rowspan="2">Detail Level</th> </tr> <tr> <th>Lines</th> <th>Patterns</th> <th>Transparency</th> <th>Lines</th> <th>Patterns</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Lighting Fixtures</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><input type="checkbox"/></td> <td>Fine</td> </tr> <tr> <td><input checked="" type="checkbox"/> Lines</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><input type="checkbox"/></td> <td>By View</td> </tr> <tr> <td><input type="checkbox"/> Mass</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><input type="checkbox"/></td> <td>By View</td> </tr> <tr> <td><input type="checkbox"/> Mechanical Equipm...</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td><input type="checkbox"/></td> <td>By View</td> </tr> </tbody> </table>	Visibility	Projection/Surface			Cut		Halftone	Detail Level	Lines	Patterns	Transparency	Lines	Patterns	<input checked="" type="checkbox"/> Lighting Fixtures						<input type="checkbox"/>	Fine	<input checked="" type="checkbox"/> Lines						<input type="checkbox"/>	By View	<input type="checkbox"/> Mass						<input type="checkbox"/>	By View	<input type="checkbox"/> Mechanical Equipm...						<input type="checkbox"/>	By View
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## Odd Work Plane message comes up?

<p>1. The view you are working in has no Work Plane associated with it. You will need to setup a Work Plane for the view before placing your light (even if you intend to place the light on a "face"). You will only need to do this once within that view. You can also do this by using the "Set Work Plane" tool as shown and either set it to a plane or a named Work Plane</p>	<p><b>Work Plane Message:</b></p> 	<p><b>Set Work Plane:</b></p> 
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# Managing “Shared” Families

All the RevitWorks lighting families require a certain set-up process involving shared components:

All nested lighting symbols are shared to:

- Allows for different lighting symbols to show on walls compared to ceilings.
- Allows for a user to amend the symbols for all light fittings to their own standards without having to edit every light

Some lights require light sources to be nested within the family for the light sources to "stick" to families that have rotational heads (i.e. within spotlights).

Some third party lighting calculation applications (i.e. Elum Tools) will not work as expected unless nested light sources are shared, so all of the RevitWorks nested light sources are shared to ensure maximum compatibility.

A (generally) unwanted implication of this is that these shared symbols and light sources will schedule with the real fittings (resulting in double counting).

To counter this:

1. All of the shared symbol families have as many of their parameter values as possible assigned to "SYMBOL ONLY" - allowing you to filter them out from within your schedule so they are disregarded. (All of these shared symbols appear within your project browser: their names all begin with "Symbol\_").
2. All of the shared light sources have as many of their parameter values as possible assigned to "LIGHTSOURCE ONLY" allowing you to filter them out from within your schedule as well. (All of these shared light sources appear within your project browser: their names all begin with "LightSource\_").

Example of shared symbol family naming	Example of shared symbol parameter values	Example of shared light source family naming	Example of shared light source parameter values																																								
<ul style="list-style-type: none"> <li>⊕ Symbol_Lighting Fixture Ceiling Exit Light</li> <li>⊕ Symbol_Lighting Fixture Ceiling Master</li> <li>⊕ Symbol_Lighting Fixture Wall Master</li> </ul>	<table border="1"> <tr><th colspan="2">Electrical</th></tr> <tr><td>Wattage Comments</td><td>SYMBOL ONLY</td></tr> <tr><td>Lamp</td><td>SYMBOL ONLY</td></tr> <tr><th colspan="2">Electrical - Loads</th></tr> <tr><th colspan="2">Identity Data</th></tr> <tr><td>Type Comments</td><td>SYMBOL ONLY</td></tr> <tr><td>Model</td><td>SYMBOL ONLY</td></tr> <tr><td>Manufacturer</td><td>SYMBOL ONLY</td></tr> <tr><td>Keynote</td><td>SYMBOL ONLY</td></tr> <tr><td>Description</td><td>SYMBOL ONLY</td></tr> </table>	Electrical		Wattage Comments	SYMBOL ONLY	Lamp	SYMBOL ONLY	Electrical - Loads		Identity Data		Type Comments	SYMBOL ONLY	Model	SYMBOL ONLY	Manufacturer	SYMBOL ONLY	Keynote	SYMBOL ONLY	Description	SYMBOL ONLY	<ul style="list-style-type: none"> <li>⊕ LightSource_Circle</li> <li>⊕ LightSource_Point</li> </ul>	<table border="1"> <tr><th colspan="2">Electrical</th></tr> <tr><td>Wattage Comments</td><td>LIGHTSOURCE ONLY</td></tr> <tr><td>Lamp</td><td>LIGHTSOURCE ONLY</td></tr> <tr><th colspan="2">Electrical - Loads</th></tr> <tr><th colspan="2">Identity Data</th></tr> <tr><td>Type Comments</td><td>LIGHTSOURCE ONLY</td></tr> <tr><td>Model</td><td>LIGHTSOURCE ONLY</td></tr> <tr><td>Manufacturer</td><td>LIGHTSOURCE ONLY</td></tr> <tr><td>Keynote</td><td>LIGHTSOURCE ONLY</td></tr> <tr><td>Description</td><td>LIGHTSOURCE ONLY</td></tr> </table>	Electrical		Wattage Comments	LIGHTSOURCE ONLY	Lamp	LIGHTSOURCE ONLY	Electrical - Loads		Identity Data		Type Comments	LIGHTSOURCE ONLY	Model	LIGHTSOURCE ONLY	Manufacturer	LIGHTSOURCE ONLY	Keynote	LIGHTSOURCE ONLY	Description	LIGHTSOURCE ONLY
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