Lighting Specification

Object Styles Used

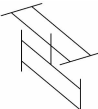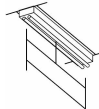|	
Lighting Fixtures	All lighting fixtures
<Hidden Lines>	
Diffuser	All diffusers within lighting fixtures
Light Source	All light sources within fixtures (unchangable)
Real Size Symbols	All real-size symbols within the light fixtures
Real Size Symbols - Dotted	All real-size symbol dotted lines where used within the light fixtures
Generic Annotations	
Lighting Symbols	All annotative-sized "standard" lighting symbols.

The real-size and annotative-sized lighting symbols are on there own sub-categories (as above).
This allows for amendments to the lineweights and colours of all the linework within the symbols.

Detail Levels - Lights with standard symbols

3d

Elevation

Plan

Coarse **Medium** **Fine**

All plan representation is as follows:
Coarse detail level: Symbol only
Medium detail level: Symbol and object
Fine detail level: Object only

Detail Levels - Lights with real-size symbols

3d

Elevation

Plan

Coarse **Medium** **Fine**

All 3d representation is as follows:
Coarse detail level: Symbol only
Medium detail level: Symbol and object
Fine detail level: Object only

All plan representation is as follows:
Coarse detail level: Symbol only
Medium detail level: Symbol and object
Fine detail level: Object only

Allowing real-size symbols means the symbol lines need to show in 3d views if
the detail level is set to Coarse or Medium.
Because of this, we recommend all 3d views have the light fixture category to
always show in detail level "Fine".

Lighting Specification

Use of Materials

All solid elements within RevitWorks Lights are tied to logically named material parameters within the lighting families. As well as this, all these material parameters are linked to a few relevant RevitWorks materials to ensure all the light fittings wotk out-of-the-box. (generally all fittings come as white plastic)
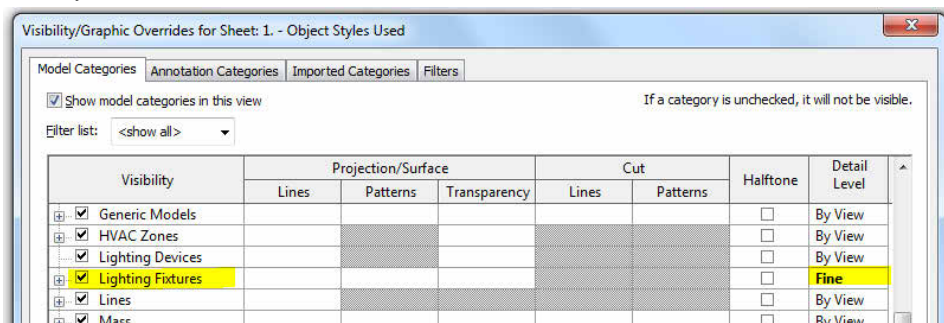
	RevitWorks Glass, Clear
	RevitWorks Glass, Opaque
	RevitWorks Glass, Opaque Green
	RevitWorks Glass, Opaque Green Illuminated
	RevitWorks Glass, Opaque White Illuminated
	RevitWorks Lightbulb Filament
	RevitWorks Plastic, White

Generally all fittings come as white plastic by default.
Illuminated materials (as above) are used for light bulbs, glowing (i.e. white glass) lightshades and exit signs (hence the green ones) for rendering purposes.

Please note that illuminated materials may give incorrect results for lighting calculations; if this is important to your processes, amend the material to suit.

If these materials are deleted (from within the users project or from within the Lighting Store) all materials will default back to <By Category>

Use of Shared Symbol Families, Shared Light Sources and Schedules

All the symbols within the families require a certain set-up process to allow them to show on walls as well as on ceilings. As well as this, to enable easy amendments to them (to suit your company standards) requires them to be shared families.

As well as this, for light sources to "stick " to families that have rotational heads (i.e. within spotlights) some of them need to be nested into the families.

A lot of third party lighting applications will not recognize nested light sources unless they are shared, so all our nested light sources are shared to ensure maximum compatibility with other lighting applications.

Refer to the Lighting Documentation.pdf for instructions on use (including parameter values included to allow for filtering within scheduling etc.)
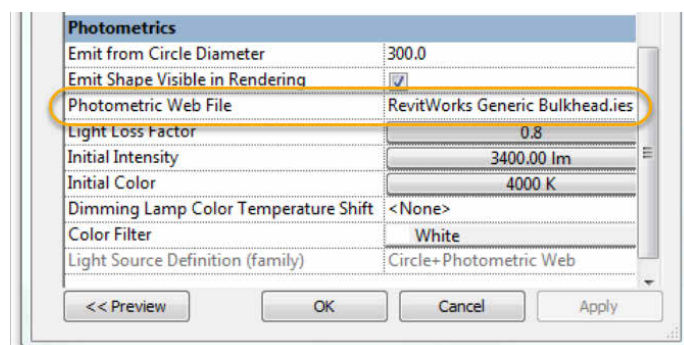
Sloping Ceilings

All RevitWorks lighting families built for Revit 2023 onwards work on sloping ceilings: Pendants and other suspended light fittings will always be vertical and all other light fittings will follow the slope of the ceiling. All symbols will work as expexted.
Contact support@revitworks.com for pre-Revit 2023 way forwards with our older lighting families

IES File Usage

All RevitWorks Lights come preloaded with generic photometric web files (IES files) suitable for use with the different types of light fittings to enable good out-of-the-box initial renderings.
They are NOT verified manufacturer specific IES files so should not be used for lighting calculations or where exact lighting effects of a specific light are required: they should be replaced with the specified light manufacturers IES file in these cases through the type properties of the light family.

| Photometrics	
Emit from Circle Diameter	300.0
Emit Shape Visible in Rendering	☑
Photometric Web File	RevitWorks Generic Bulkhead.ies
Light Loss Factor	0.8
Initial Intensity	3400.00 lm
Initial Color	4000 K
Dimming Lamp Color Temperature Shift	<None>
Color Filter	White
Light Source Definition (family)	Circle+Photometric Web

[<< Preview] [OK] [Cancel] [Apply]

Lighting Specification

IES File Descriptions

Descritpion of IES files loaded into relevant RevitWorks Lighting families. If you require them for other lighting families you have created, please request them by emailing us at support@revitworks.com
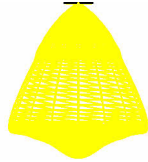
RevitWorks **Generic Bulkhead.ies**
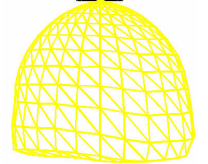Suitable for surfacemounted bulkhead lights
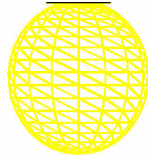
RevitWorks **Generic Pendant Ball.ies**
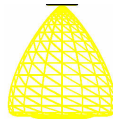Suitable for spherical pendants and / or floor lamps
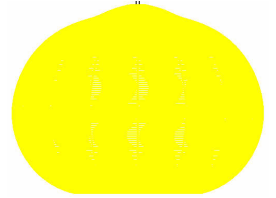
RevitWorks **Generic Downlight.ies**
Suitable for medium sized surfacemounted / recessed downlights

RevitWorks **Generic Pendant.ies**
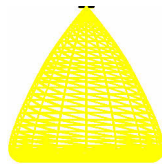Suitable for pendants and / or floor lamps

RevitWorks **Generic Downlight Large.ies**
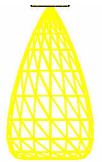Suitable for large surfacemounted / recessed downlights

RevitWorks **Generic Spotlight.ies**
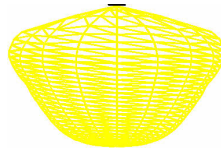Suitable for surface mounted spotlights

Revitaworks **Generic Downlight Small.ies**
Suitable for small surfacemounted / recessed downlights

RevitWorks **Generic Spot Floodlight.ies**
Suitable for surface mounted floodlights

RevitWorks **Generic Emergency Light.ies**
Suitable for emergency lighting

RevitWorks **Generic Spot Wallwash.ies**
Suitable for surface mounted wall-washing spotlight

RevitWorks **Generic Exit Sign.ies**
Suitable for backlit exit signage
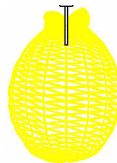
RevitWorks **LED Decorative Extrusion.ies**
Suitable for LED strip decorative lighting
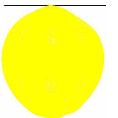
RevitWorks **Generic Fluorescent.ies**
Suitable for surface mounted fluorescent tube lighting

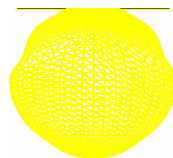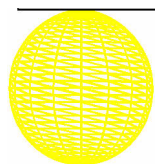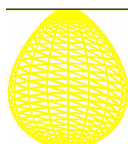RevitWorks **LED Functional Extrusion.ies**
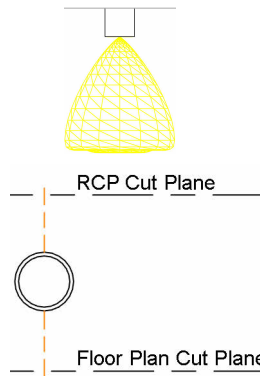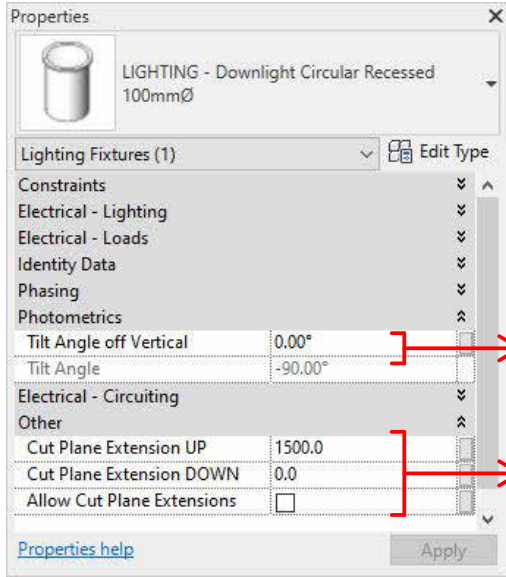Suitable for LED strip general lighting

RevitWorks **Generic Pan.ies**
Suitable for recessed fluorescent pan lighting
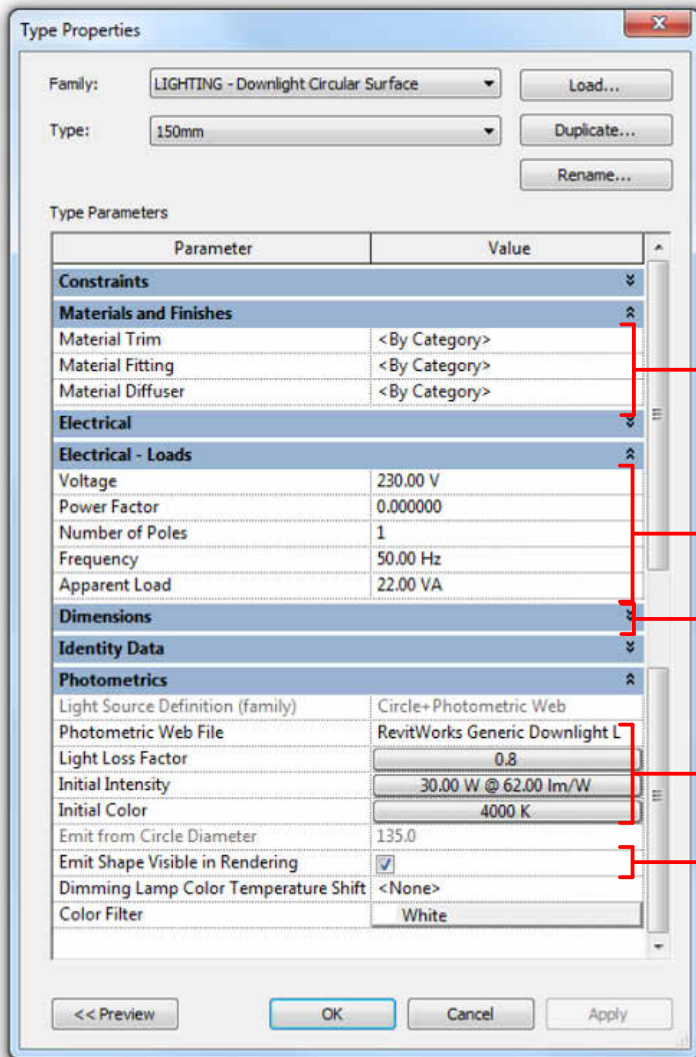
Lighting Specification

Common Instance Parameters

The angle of the light source in relation to the fitting. Defaults to 0° (which is perpendicular to the fitting). This is used instead of the out-of-the-box (OOTB) "Tilt Angle" parameter because for facebased and workplane based components the OOTB "Tilt Angle" parameter when set at 0° is parallel to the light fitting (confusing) and doesnt work correctly in lighting calculation programs like Elumtools

Cut Plane Extensions allow you to show low level wall lights on your Reflected Ceiling Plans and high level wall lights on your Floor Plans.

Common Type Parameters

DISCLAIMER!
All Electrical load parameter values and photometric data are not to be used for any electrical calculations or specifications.
They are intended as a starting point only (and are based on an arbitrary generic fitting) and need to be updated to a "real" light fitting.
User to amend to desired values if needed for any calculations and/or specification documents.
The "Photometric Web File" is for a generic fitting only and should only be used for initial rendering. It is not a verified IES file and should definitely not be used for lighting calculations: it should be replaced with the specified light manufacturers IES file.

All RevitWorks light fittings have one or more of these materials.
They are shared parameters and can be scheduled.

All RevitWorks light fittings have these electrical loads.
They are shared parameters and can be scheduled.
Refer Disclaimer above for use.

RevitWorks light fittings have simple dimensions to change the size/shape of most light fittings (not including within special one-off floorlamps and pendants)

Refer Disclaimer above for use.

When ticked, allows the light fitting to look more realistic within Revit rendering

Content that works

www.revitworks.com
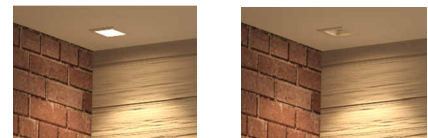
Lighting Specification

Additional Functionality for Spotlights

All spotlight heads rotate with the tilt angle parameter allowing for a more realistic look:

All spotlights have a lot more dimensional parameters, allowing for greater parametric changes to the fittings (including splayed heads):

LIGHTING - Spotlight

Floodlight

SpotLight

WallWash

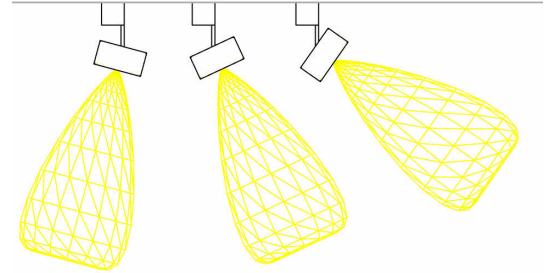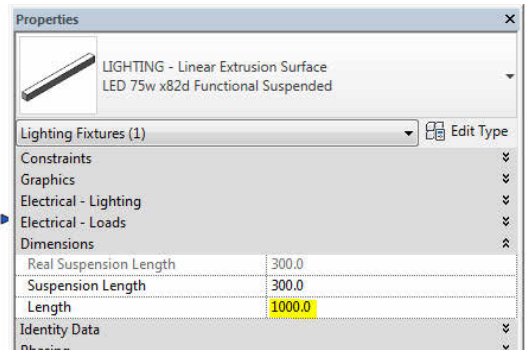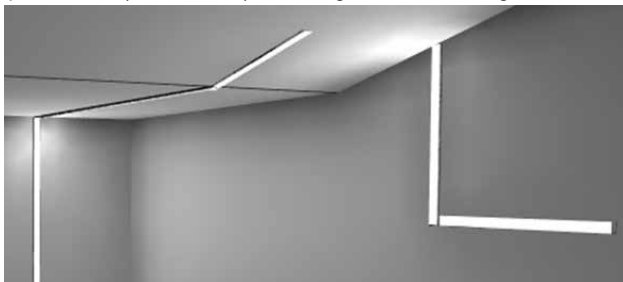| Dimensions	
Leg Width	10.0
Leg Length	25.0
Leg Height	35.0
Head Offset Off Leg	10.0
Head Diameter Top	66.0
Head Diameter Inside Top	63.0
Head Diameter Base	66.0
Head Depth	70.0
Head Body Thickness	3.0
Base Width	25.0
Base Offset Off Leg	10.0
Base Length	90.0
Base Height	50.0

Additional Functionality for Linear Extrusions (Premium version only)

All linear exterusion families have push/pull instance length parameters (schedulable) - allowing for ease of design.

Lighting
2 VA
230 V
#1

Properties		×
LIGHTING - Linear Extrusion Surface LED 75w x82d Functional Suspended		
Lighting Fixtures (1)		Edit Type
Constraints		»
Graphics		»
Electrical - Lighting		»
Electrical - Loads		»
Dimensions		«
Real Suspension Length	300.0	
Suspension Length	300.0	
Length	1000.0	
Identity Data		»
Phasing		

Additional Features for Exit Lights (Premium version only)

All exit lights have instance based tickboxes for showing arrows in either direction.
This feature changes the 3d model as well as changing the plan symbols to indicate the correct direction of travel.

Properties		×
LIGHTING - Exit Luminaire Ceiling Letters Recessed		
Lighting Fixtures (1)		Edit Type
Constraints		»
Electrical - Lighting		»
Electrical - Loads		»
Dimensions		»
Identity Data		»
Phasing		»
Photometrics		»
Electrical - Circuiting		»
Visibility		«
Show Right Arrow		☐
Show Left Arrow		☐
Other		»

Properties help   Apply