we-ef

PRECISION PROJECTION

BY WE-EF

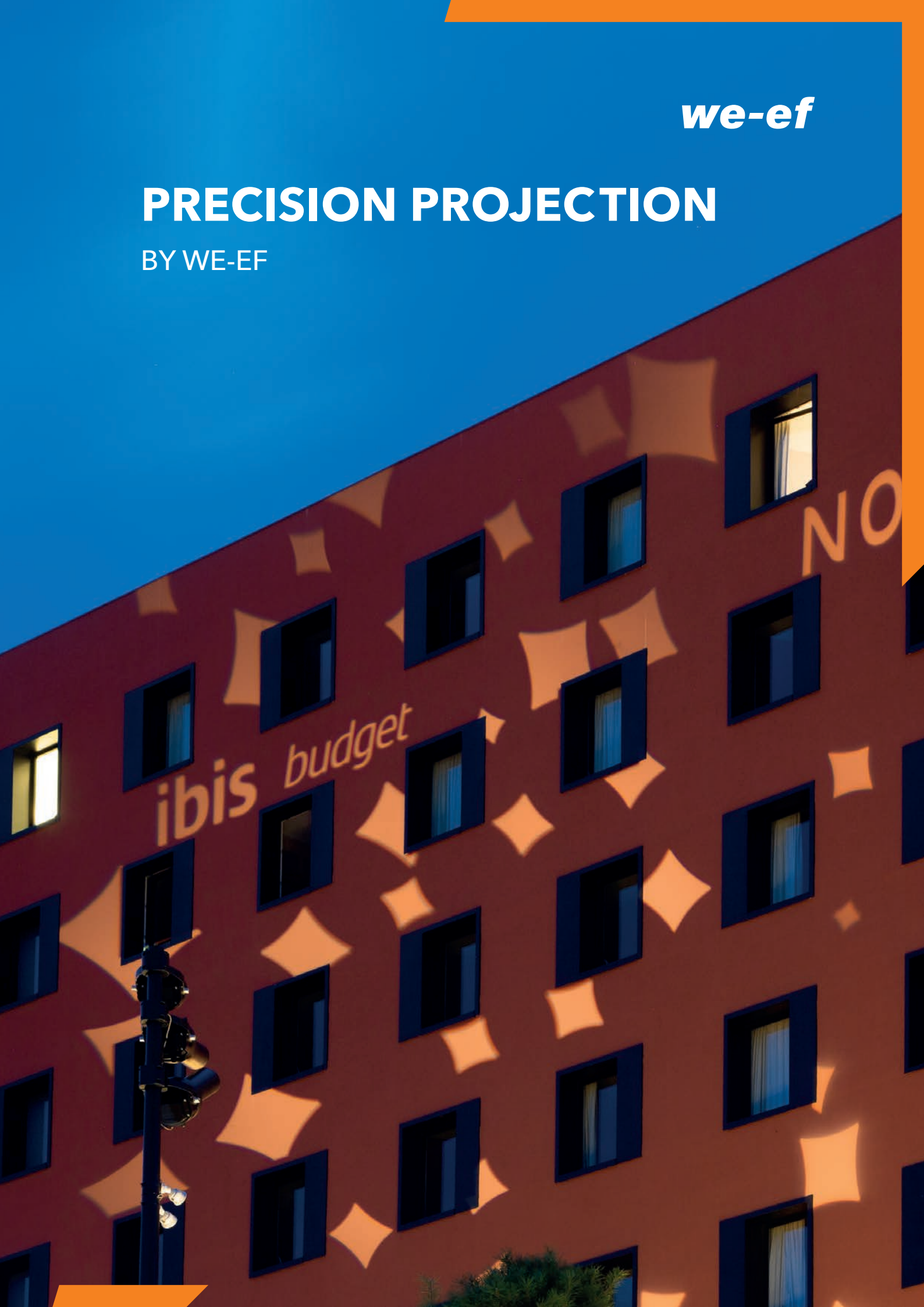


TABLE OF CONTENTS

PROJECT CLASSIFICATION KEY

Basic

Example: Plain floral pattern projecting straight down to the ground

Intermediate

Example: Artwork projecting straight on / straight down (no angles, no anamorphisis)

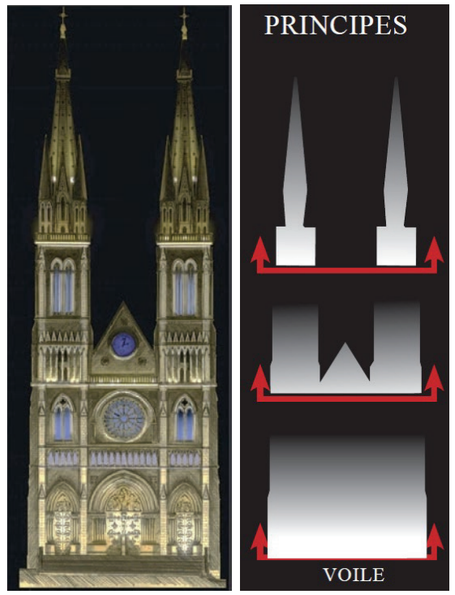
Advanced

Example: Illuminating a building façade with multiple surfaces and overlapping projectors.
Example: Projecting a logo where angle adjustments and anamorphisis is required

PROCESS STEPS

Step 1.
Creative concept

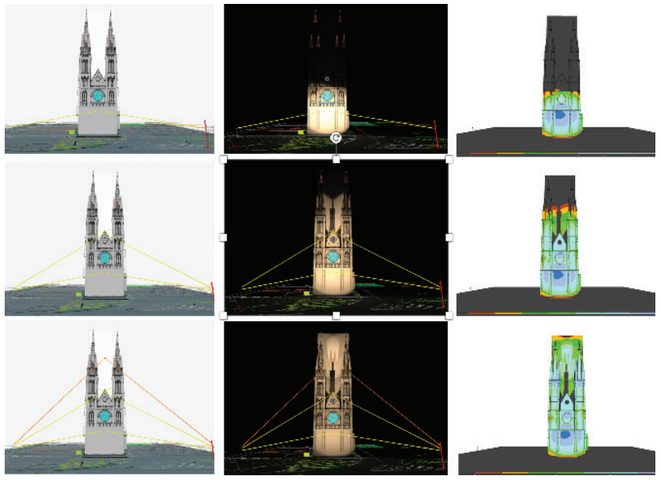
Define the desired effects you wish to achieve. Whether it's framing, highlighting architectural features, projecting an artwork, or showcasing a logo or pattern, let your imagination soar! Collaborate with Graphic Designers and/or Lighting Designers who can help you bring your vision to life. This process forms the foundation of your lighting design creation.



Step 2.
Site Planning: Sizing the Project

Assess the surroundings, considering existing luminaires, trees, and advertising panels. Ensure clear visibility of elements to be illuminated. Obtain accurate measurements of the project area's length, height, and width. Evaluate fixing positions, accessibility, and projector angles (ideally, the projectors should be set between 0 to 30 degrees for optimal projection). Verify the projector's aperture covers the entire building or area. Careful site planning ensures a successful gobo projection installation.

PROCESS STEPS (CONT.)



Step 3:
Lighting Calculations

Conduct accurate lighting calculations using tools like Dialux, Relux, or 3Dsmax to incorporate all the gathered measurements and sizing information of the project. Determine the precise location of the projector and its setback installation to define the opening angle required for the desired lighting effect.

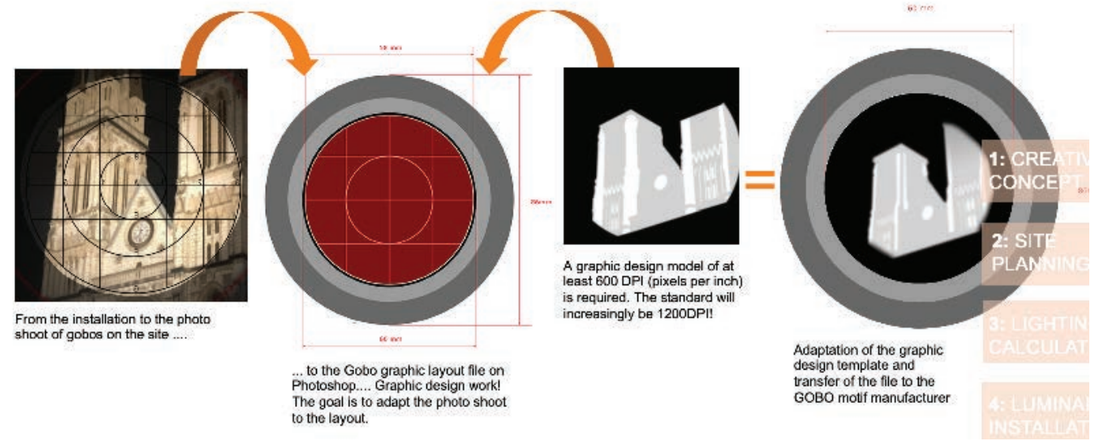
Step 4:
Luminaire Installation

Once a projector is installed, the WE-EF GOBO Specialist will remove the cylinder cover from the projector and aim it at the intended area or building, gradually adjusting it to achieve the desired inclination or orientation settings.

Next, they will set up the gobo target in the gobo holder and adjust the focus and zoom lenses to achieve the required opening aperture that covers the desired area or building, and take measurements with a laser meter at the cardinal points and the center of the target projection. Additionally, they will capture photos of each target projection using a high-resolution camera.

Step 5:
Gobo Mapping Process and Artwork

During the gobo mapping process, it is important to consider the size limitations for the patterns. The red zone represents the limit of 58 mm for GOBO size B (FLC230) and 46 mm for GOBO size M (FLC220) when incorporating the patterns*. Printing resolution should be a minimum of 600 DPI (pixels per inch) or 236 pixels/dots per cm.

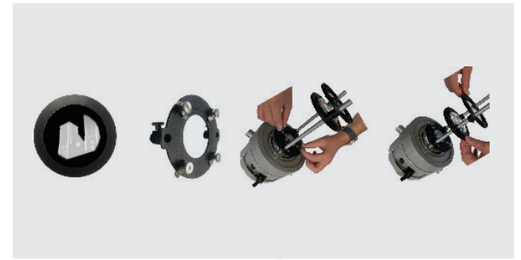


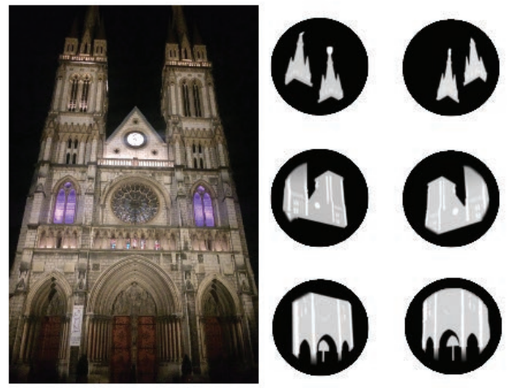
Step 6:
Final Gobo Commissioning

Carefully remove the cover without altering the previous lens settings. It's important to note that weather conditions can significantly impact this phase, so ensure the weather is clear to avoid any water or moisture interference.

Set up all the final gobo motifs on each gobo holder. Whenever possible, have all projectors switched on simultaneously to facilitate the final orientation and inclination adjustments.

Once the adjustments are complete, put the cylinder cover back on and ensure the screws are tightened properly. Now, it's time to enjoy the final result!





*Check WE-EF website for more info

What is a GOBO?

GOBO
TECHNOLOGY

GOBO PROJECTOR

Basically, the gobo, a term derived from goes before optics, is a metal plate on which a pattern is cut out, usually by laser ablation. This plate is then placed in front of a projector, making it possible to obtain a light image of the pattern. As the technology evolved, it also became possible to project patterns on glass plates with different tints and colours.

Black & white glass GOBO



Black & white glass with dichroic GOBO


Full colour glass GOBO

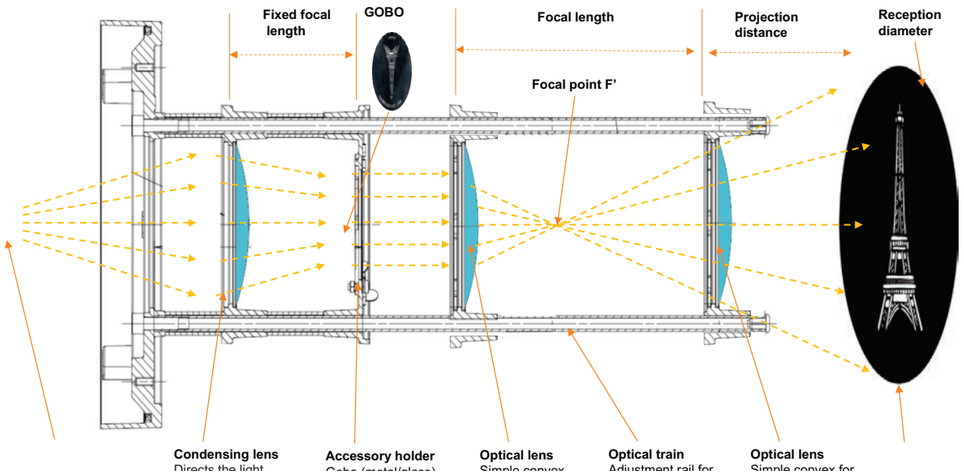

Spot colour glass GOBO



Steel GOBO



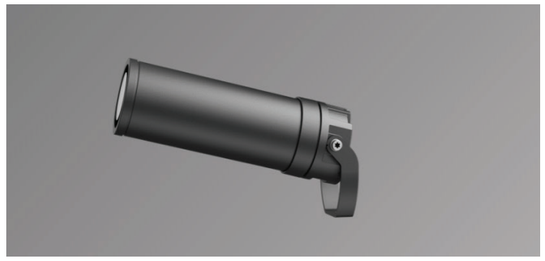
In the lighting industry today, Gobos have taken on a more creative role as advancements in technology enable the creation of detailed and impressive projections. They also play an increasingly vital role in addressing light pollution by allowing targeted illumination of specific surfaces without unnecessary light spill.



FLC200 PP [GP] SERIES

The WE-EF profile projectors with white LEDs, with tunable white or colour changer technology are suitable for numerous applications – such as subtly presenting buildings with warm to cool white light or the expressive illumination of facades with coloured light – from a distance as well. This means that in addition to outdoor use, the luminaires can be used for effective lighting scenarios in transitional or indoor areas such as atriums, halls and foyers.

FLC201 [ZP] [GP] [FP]

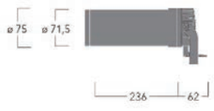


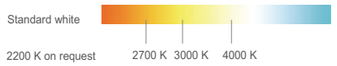
6W
1082-1476lm

Luminaire housing
Marine-grade, die-cast aluminium construction

Control options
Class III, 1-10V, DALI

IK07 IP66 GOBO TECHNOLOGY





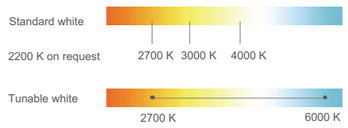
FLC210 [ZP] [GP] [FP]

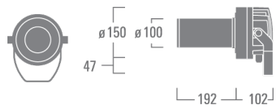
18W - 26W
2320-3470lm

Luminaire housing
Marine-grade, die-cast aluminium construction

Control options
Class I, 1-10V, DALI, CC,TW

IK07 IP66 GOBO TECHNOLOGY GOBO–TW TECHNOLOGY GOBO–CC TECHNOLOGY





FLC220 [ZP] [GP] [FP]

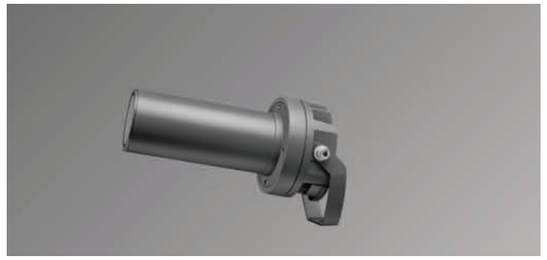
24W-37W
3365 - 4900lm

Luminaire housing
Marine-grade, die-cast aluminium construction

Control options
Class I, 1-10V, DALI, CC, TW

IK07 IP66 GOBO TECHNOLOGY GOBO–TW TECHNOLOGY GOBO–CC TECHNOLOGY

FLC230 [ZP] [GP] [FP]

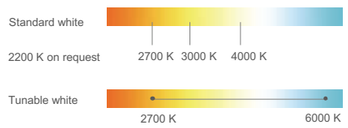


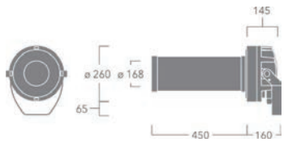
36W - 52W
4440-6907lm

Luminaire housing
Marine-grade, die-cast aluminium construction

Control options
Class I, 1-10V, DALI, CC,TW

IK07 IP66 GOBO TECHNOLOGY GOBO–TW TECHNOLOGY GOBO–CC TECHNOLOGY





GOBO PROJECTOR OPTIONS

Framing and cropping

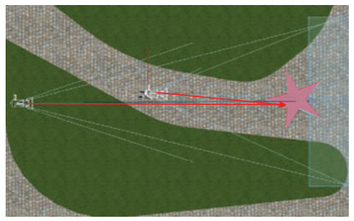
Framing is a specific lighting technic to isolate shape of an object, architecture details to be cut out. This technic is very valuable to avoid light pollution by allowing targeted illumination.
There are two types of framing:

Framing by knife accessory

Framing by GOBO cropping

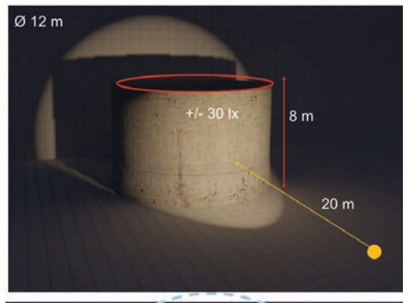
Anamorphosis

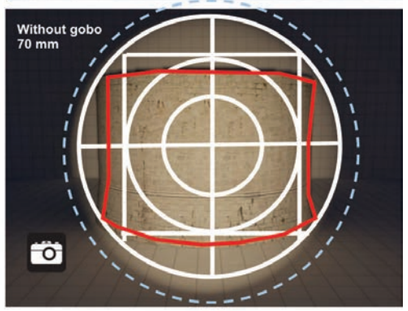
Anamorphosis is a distorted projection requiring the viewer to occupy a specific vantage point, use special devices, or both to view a recognizable image. It is used in painting, photography, sculpture and installation, toys, and film special effects….and also Gobo. The image must be calibrated and sized in order to be relevant from an accurate point of view or must be calculated to rectify a keystone effect when the projector position target has an angle.



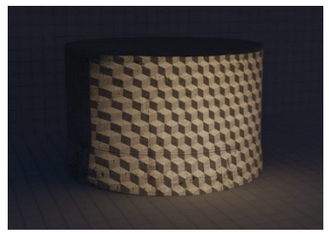
Creating a cut-out or pattern using 3D Gobo Mapping

It is possible to use 3D in order to create GOBO mapping effect with simple 3D geometric form. In this case we use 3Dsmax to import ies file.





- Projection distance? (ex: 20 m)
- Geometry of the space or area to be illuminated
- Choice of aperture (e.g. version 2- max. 41°)/ intensity and illumination
- Check that the space is fully illuminated.
- Margin of +17% on the periphery between the space and the total aperture for 3D
- Or projection of the sight pattern on the space or surface
- Superimpose a camera in place and instead of the 3D projection
- Or take a picture with the same focal length
- Generate the locking and mapping template
- Generate/create the pattern in the template
- The template can then be used for other types of mapped patterns.



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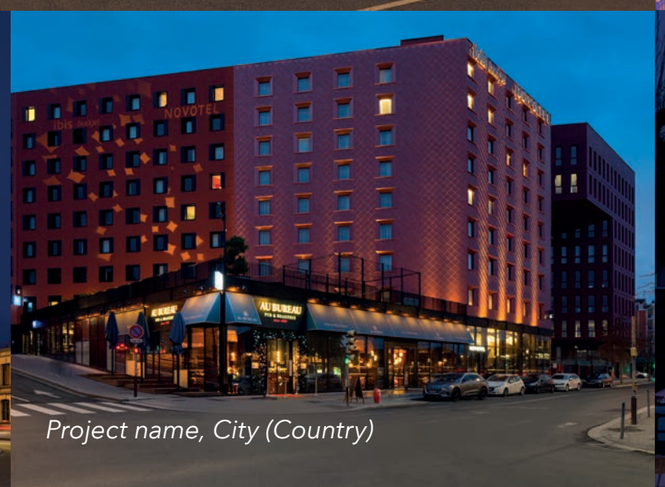

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