



HARKNESS SCREENS™
EVENT SCREENS
TECHNICAL INFORMATION

GLOBAL LEADERS IN
SCREEN TECHNOLOGY

WORLD-LEADING EVENT SCREENS

With state-of-the-art imagery, lighting effects and projection technology, the use of projection screens is becoming increasingly popular within the events industry.

Serving over sixty countries, Harkness has enjoyed long-standing client relationships by providing high class customer service and premium products. Worldwide, Harkness Screens is the number one choice for event organisers and set designers.

Harkness' event screens are constructed using the highest quality materials, with a stringent manufacturing process in place.

WHY A HARKNESS EVENT SCREEN?

Often, screens are required at short notice for forthcoming events and although every screen manufactured by Harkness is hand-crafted, the company prides itself on fast lead times which can where required, be hours rather than days or even weeks.

Dynamic manufacturing capabilities allow Harkness to offer a truly customised solution for event screens of any shape and size, through to a large range of high quality surfaces and over a dozen edge finishes.

Harkness' event screens are constructed using the highest quality materials with a stringent manufacturing process in place.

Harkness' products feature a proprietary and unique seam welding process that ensures screens have virtually invisible seams under normal projection conditions. Advanced manufacturing processes ensure a smooth finish and consistent performance across the entire screen surface, whilst minimising visible hot spotting. Only the highest quality materials are used, guaranteeing Harkness' screens avoid discolouration or loss of structural integrity over time.

Harkness produce bespoke screens in a variety of sizes, suitable for front and rear projection, for special and ambient lighting effects in applications such as:

- Live Theatre / Opera
- Television Studios
- Fashion Shows
- Trade Shows
- Conference Sets
- Touring Shows
- Film Premieres
- Home Entertainment
- Education
- Roller Screens
- Air Screens



Awards
ceremony

GAIN AND TRANSMITTANCE EXPLAINED

Gain is a measurement of screen reflectivity and affects the brightness of projected imagery onto a screen surface. The figure represents a ratio of the light back from the screen compared to that of a standard reference screen normally a uniform matt white surface with a gain of 1.0.

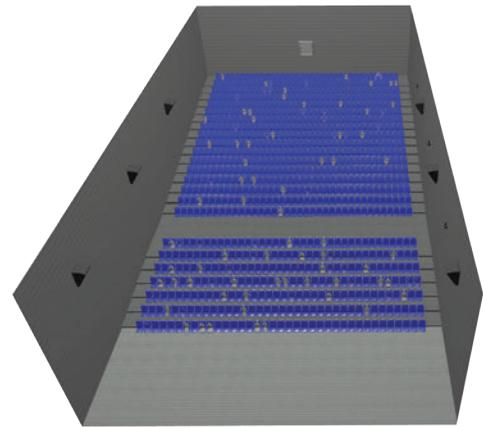
Transmittance differs from gain in that it is a measurement of light passing through a screen and therefore only applies to rear projection surfaces. The transmittance value is the ratio of light passed through a screen compared to light reflected from a reference matt white surface.

Transmittance and gain perform in similar ways - a high gain (front projection) or transmittance (rear projection) screen will ultimately produce a brighter image in the centre of the viewing area. The higher the gain or transmittance, the brighter the image will be, making it more suitable for lower power projectors and environments with higher ambient light conditions. A high gain or transmittance screen will narrow the viewing angle with an increased chance of hot spotting and lower brightness uniformity.

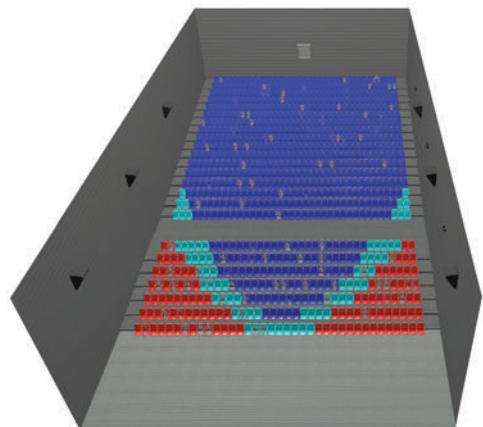
Low gain or transmittance provide wider viewing angles and a more even light distribution, ensuring a uniform brightness across the screen, suitable for low ambient light conditions.



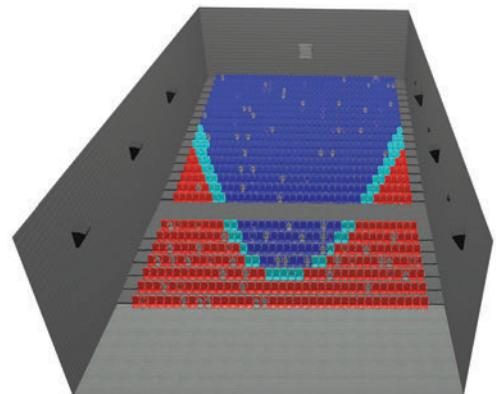
VIEWING PERFORMANCE



Unity Gain



Mid Gain



High Gain

- Good
- Ok
- Below Standard

TRANSLITE™ WHITE

Translite™ White is a low gain, low transmittance flexible projection surface with built-in diffusion to overcome hotspotting in low ambient light or dark conditions. Translite™ White provides a wide viewing angle under both front and rear projection conditions. Translite™ White is an ideal choice when the same image brightness is needed on both sides of the projection surface, it is also suitable for edge blending or dual projection.

Translite™ White has excellent colour rendition and contrast; is an alternative to Translite™ Cream, for combined front and rear projection and is excellent for edge blending images on short and ultra-short throw multiple projectors. It is whiter than Translite™ Cream and may be preferable if an unlit white backdrop is required.

APPLICATIONS:

- Live theatre/events
- TV studios and control centres
- Exhibitions and conferences
- Theme park attractions

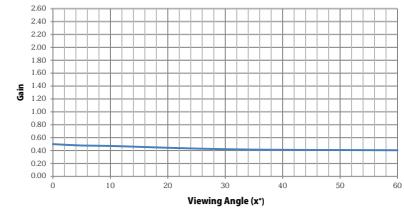
Translite™ White screens can be custom manufactured to any shape and size.



HARKNESS SCREENS™

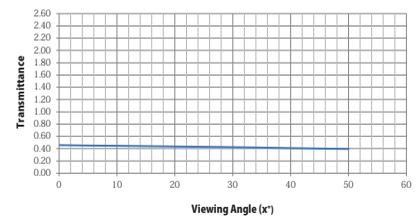
TECHNICAL INFORMATION

Translite White



Gain 0.5

Translite White



Transmittance 0.45

TECHNICAL INFORMATION

TRANSLITE™ CREAM

Translite™ Cream is a low gain, flexible front and rear projection surface similar to Translite™ White.

It has built-in diffusion to overcome hot spotting and provides a wide viewing angle under both front and rear projection conditions. A low transmittance value means edge blending and short throw projection achieve good results.

Translite™ Cream has excellent colour rendition, a warm feel and good contrast and is recommended for use in dark or low ambient light conditions; suitable for cycloramas. Translite™ Cream is the most popular surface for multi-purpose and combined front and rear projection.

APPLICATIONS:

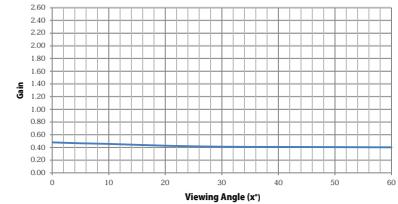
- Live theatre/events
- TV studios and control centres
- Exhibitions and conferences
- Theme park attractions

Translite™ Cream screens can be custom manufactured to any shape and size.



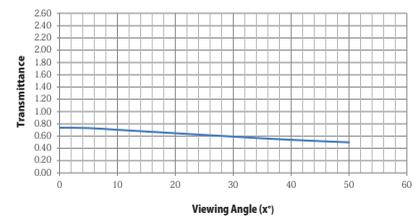
HARKNESS SCREENS™

Translite Cream



Gain 0.5

Translite Cream



Transmittance 0.75

TECHNICAL INFORMATION

TRANSLITE™ BLUE

Translite™ Blue is a flexible rear projection surface. It has built-in diffusion to overcome hot spotting and provides a wide viewing angle, even with ultra-short throw projection lending itself to edge blending. White content will appear cool, particularly for theatrical effect.

Often backlit and used to create a sky effect, Translite™ Blue gives an excellent contrast when used for rear projection, ideal for dark conditions and suitable for edge blending.

APPLICATIONS:

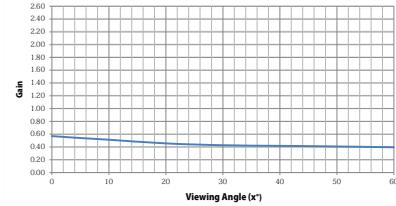
- TV studios and control centres
- Exhibitions and conferences
- Theme park attractions

Translite™ Blue screens can be custom manufactured to any shape and size.



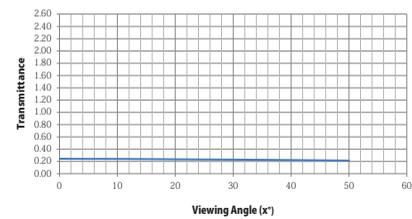
HARKNESS SCREENS™

Translite Blue



Gain 0.55

Translite Blue



Transmittance 0.25

TECHNICAL INFORMATION

TRANSLITE™ MIDNIGHT

Translite™ Midnight is designed as a rear projection screen which can hold a rich and colourful image in dark or low level ambient conditions, suitable for use with a single projector used in a non-short throw setting.

Translite™ Midnight can also be used as a low gain front projection screen, offering very high contrast.

It has built-in diffusion to overcome hot spotting and provides a wide viewing angle, making it ideal for video, film or slide projection. Translite™ Midnight also prevents interference from ambient lighting and works well as a special effects backdrop.

APPLICATIONS:

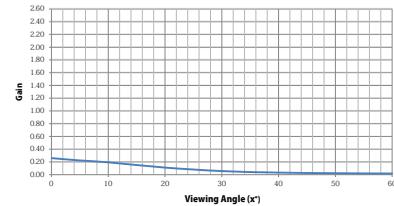
- Live theatre/events
- TV studios and control centres
- Exhibitions and conferences
- Theme park attractions

Translite™ Midnight screens can be custom manufactured to any shape and size.



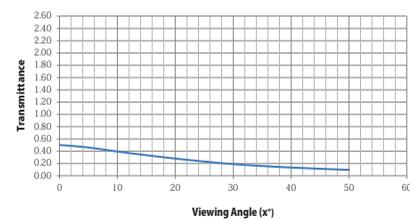
HARKNESS SCREENS™

Translite Midnight



Gain 0.25

Translite Midnight



Transmittance 0.5

TECHNICAL INFORMATION

TRANSLITE™ GREY 230

Translite™ Grey 230 is the highest transmittance rear projection screen available in the Harkness range.

Neutral grey in colour, the surface offers high transmission and low reflectance values, for viewing in high lighting conditions where high contrast screens are required. Translite Grey 230 projects excellent colours and contrast and is suitable for single-use low-powered projection.

APPLICATIONS:

- Live theatre/events
- TV studios and control centres
- Exhibitions and conferences
- Theme park attractions

Translite™ Grey 230 screens can be custom manufactured to any shape and size.

TRANSLITE™ GREY 160

Translite™ Grey 160 is a flexible rear projection surface ideal for low ambient light conditions, offering vibrant colours and good contrast in areas with ambient light.

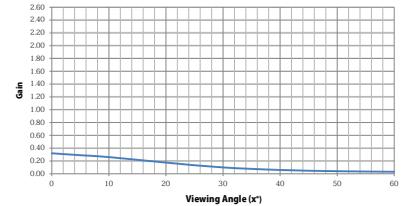
Suitable for single projection or in non-short throw installations, it has a built-in diffusion to reduce hot spotting. Translite™ Grey 160 projects excellent colours and contrast and is an alternative to Translite™ Grey 65 and Translite™ Grey 100. Translite™ Grey 160 has a higher transmittance, making it more suitable with low powered projectors or with higher ambient light conditions.

APPLICATIONS:

- Live theatre/events
- TV studios and control centres
- Exhibitions and conferences
- Theme park attractions

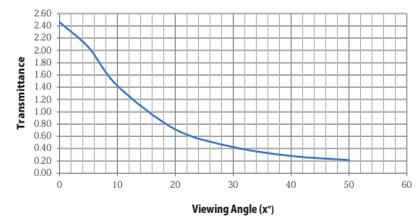
Translite™ Grey 160 screens can be custom manufactured to any shape and size.

Translite Grey 230



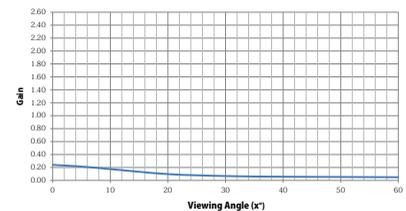
Gain 0.3

Translite Grey 230



Transmittance 2.3

Translite Grey 160



Gain 0.25

Translite Grey 160



Transmittance 1.6

TECHNICAL INFORMATION

TRANSLITE™ GREY 100

Translite™ Grey 100 is a very flexible rear projection screen which offers vibrant colours and good contrast in areas with ambient light. It has built-in diffusion to overcome hot spotting and provides a wider viewing angle.

Translite™ Grey 100 has excellent colour rendition and contrast. An alternative to Translite™ Grey 65, Translite™ Grey 100 has a higher transmittance, making it suitable for lower power projectors or with more ambient light present.

APPLICATIONS:

- Live theatre/events
- TV studios and control centres
- Exhibitions and conferences
- Theme park attractions

Translite™ Grey 100 screens can be custom manufactured to any shape and size.

TRANSLITE™ GREY 65

Translite™ Grey 65 is a flexible rear projection surface with the lowest transmittance of the Translite range making it ideal for short throw projection or edge blending multiple projectors with longer throw lenses.

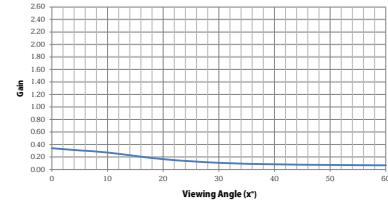
The surface offers good contrast in higher ambient light conditions resulting in rich and vibrant projected blacks. In low ambient light environments colours remain vibrant and distinctive.

APPLICATIONS:

- Live theatre/events
- TV studios and control centres
- Exhibitions and conferences
- Theme park attractions

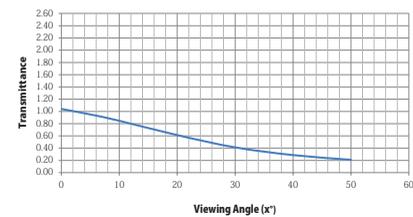
Translite™ Grey 65 screens can be custom manufactured to any shape and size.

Translite Grey 100



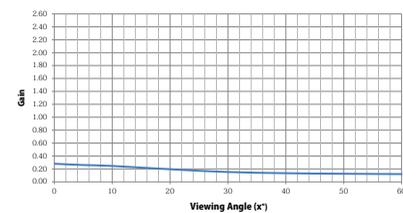
Gain 0.4

Translite Grey 100



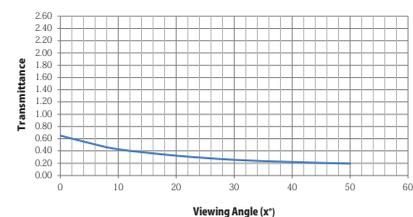
Transmittance 1

Translite Grey 65



Gain 0.3

Translite Grey 65



Transmittance 0.65

TECHNICAL INFORMATION

TRANSLITE™ STEREO

Translite™ Stereo is a rear projection surface specifically designed for polarised (passive) 3D applications. It works most effectively with linear polarisation filters in the vertical and horizontal planes but it can also work with circular polarisation deployments with a reduced 3D effect.

The base material provides high transmission characteristics, very low depolarisation level (extinction ratio) and excellent colour temperature. Whilst particularly suitable for polarised 3D systems, Translite Stereo also supports conventional 2D pictures and is easy to clean.

APPLICATIONS:

- Live events
- Exhibitions and conferences
- Theme park attractions

Translite™ Stereo screens can be custom manufactured to any shape and size.

TRANSLITE™ CRYSTAL & TRANSLITE™ CLEAR

Translite™ Crystal and Translite™ Clear are flexible screen surfaces designed for creating lighting and scenic effects, illuminated ceilings, painted backdrops or as a diffusion screen for LED's.

Translite™ Crystal has a frosted surface, while Translite™ Clear is completely translucent.

APPLICATIONS:

- Lighting effects
- Materials can be painted

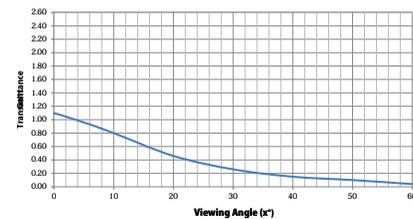
Translite™ Crystal & Translite™ Clear screens can be custom manufactured to any shape and size.

Translite Stereo



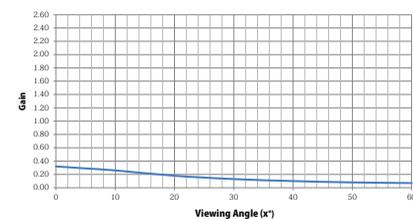
Gain 0.13

Translite Stereo



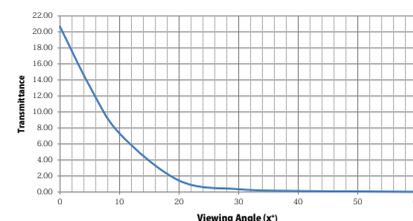
Transmittance 1.2

Translite Crystal



Gain N/A

Translite Crystal



Transmittance N/A

TECHNICAL INFORMATION

STAGELITE CONTRAST GREY 70

Stagelite Contrast Grey is a popular front projection surface with enhanced contrast ratios for use in environments where higher ambient light is present. Light grey in appearance, it is suitable for multiple projectors and edge blending and short throw projection.

It is generally intended to be used in low ambient or ambient light conditions as the surface can minimise the effects of unwanted ambient light from the environment.

APPLICATIONS:

- Live theatre/events
- TV studios and control centres
- Exhibitions and conferences
- Theme park attractions

Stagelite Contrast Grey 70 screens can be custom manufactured to any shape and size.



HARKNESS SCREENS™

Stagelite Contrast Grey 70



Gain 0.7

TECHNICAL INFORMATION

STAGELITE WHITE AND WHITE/BLACK SCREENS

Stagelite White event screens are flexible front projection surfaces designed to distribute projected light evenly thus maximising viewing angles. The surface is designed to allow for multiple projection installations and edge-blending. Available as made up screens or off roll.

Stagelite White/Black is similar to Stagelite White with a black reverse side for blocking ambient light making it ideal for outdoor installations and is suitable for edge blending.

APPLICATIONS:

- Live theatre/events
- TV studios and control centres
- Exhibitions and conferences
- Theme park attractions

Stagelite White screens can be custom manufactured to any shape and size.

STAGELITE STEREO

Stagelite Stereo is a front projection surface specifically designed for polarised (passive) 3D applications.

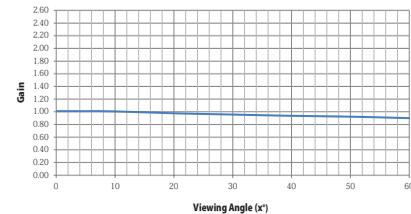
A completely foldable and cleanable surface, Stagelite Stereo contains a silver aluminium flake base for 3D applications where superior durability compared to typical coated 3D screens is required.

APPLICATIONS:

- Live events
- Exhibitions and conferences
- Theme park attractions

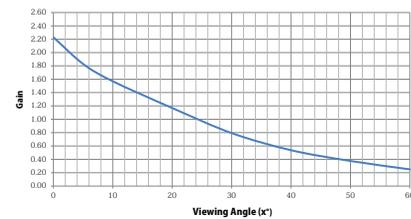
Stagelite Stereo screens can be custom manufactured to any shape and size.

Stagelite White and White/Black



Gain 1

Stagelite Stereo



Gain 2.2

EDGE FINISHES

Harkness Screens provide an array of edge finishes for the cinema and event industry enabling a bespoke screen finish for any requirement.

Harkness projection screens are available either off the roll or with a bespoke finish. Depending on requirement, there are a variety of edge finishes.

- **Webbed with eyelets** - 50mm hemmed edge with a standard spacing of 150mm between eyelets, which allows for the most tension to be applied; non-reflective plastic eyelets are an option.
- **Cut Square** - No edge finishing, cut to a specific dimension.
- **Pocket** - Commonly used at the top to hang the screen and/or at the bottom/sides to provide screen tension (bar or chain). Scallop shaped cut-outs can be added for inserting a bar for tensioning or flying points.
- **Pocket And Skirt** - Normally a 100mm lay flat pocket with a 200mm flap over the pocket for a neater finish.
- **Dual Lock** - Similar to Velcro, but attached with an adhesive backing to the screen.
- **Velcro** - Available in either black or white at 25mm or 50mm; the loop half of the Velcro can be welded to the screen.
- **Keder** - Commonly welded to the screen, Keder is ideal for bespoke frames and fast installations.
- **Black Plastic Webbing** - provides a border to the screen, prevents image bleeding.
- **Black Painted Masking** - provides a border to the screen, prevents image bleeding.
- **Tie Tapes** - Black or white and pre-tied to eyelets in the screen.
- **Webbed** - A standard of 50mm hemmed edge.
- **Press Studs** - Screen surface with studs to match those of customer's own frame.
- **Cut Oversize** - Ideal for stapling to a frame. Approximately 200mm additional fabric on the height and width.

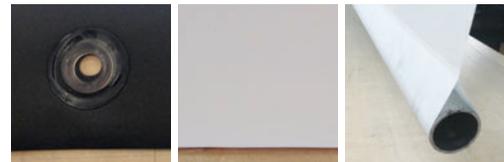
EDGE FINISHES



Web and Metal Eyelets

Web and Plastic Eyelets

Black Web and Metal Eyelets



Black Web and Plastic Eyelets

Cut Square

Pocket



Pocket / Skirt

Pocket with Scallops

Dual Lock



Velcro Welded

Keder

Welded Black Masking



Tie Tapes

Webbed with Press Studs

SMART-VIEW

Smart-View, the fixed-frame wall-mounted projection screen solution from Harkness is a fuss-free, low maintenance system which can be either free-hanging, built in to a set, hung from a truss frame or mounted flush to the wall.

Durable, yet lightweight, Smart-View technology encompasses a black powder coated non-reflective extruded aluminium frame (which can be finished in black or coloured velour) and easily attachable screen surface. The two elements combine to create a screen solution that is quick to assemble.

APPLICATIONS:

- Home cinema
- Office boardrooms
- Educational institutions
- Preview theatres
- Live events
- Theme park attractions
- Art galleries
- Photo studios

Each Smart-View is custom made for 2D and 3D presentation with any Harkness screen product including Translite, Stagelite and Harkness' coated 2D and 3D surfaces usually found in cinema environments. Available in a range of sizes up to 5.5m, in either 16:9 (full HD) or 4:3 format and screens can be made to any format required.



Smart-View Production
Studio Use

GALLERY-FRAME

Assembled in just minutes, Harkness' 1" square Gallery-Frame creates a borderless screen finish, ideal for wall mounting or a suspended image illusion.

Gallery-Frames are a bespoke frame solution, recommended for art galleries, exhibitions and entertainment venues requiring:

- Wrap around screen mounting
- A suspended or flying screen and frame solution
- Multiple image projection solution; including front and back (using two surfaces to project back to back)
- An elegant screen finish with no visible frame or mounting ties

Gallery Frames are suitable for all Harkness screen surfaces.



Gallery-Frame House
of Worship Project

QUALITY ASSURED PRODUCTS

Regardless of where a Harkness projection screen is manufactured, it is always consistently produced to the same high quality standard.

Each manufacturing facility operates strict quality procedures from personnel training and material handling, through to cleanliness procedures and post production conformance testing. All of these are aimed at ensuring that the quality of the final product remains the same. Part of assuring quality within manufacturing facilities involves utilising the same proprietary raw materials to create screens. These raw materials are subject to regular checks and each batch is dependent on a certificate of conformance testing before entering the manufacturing process. This stringent control on raw materials enables Harkness to boast a quality rate of 98.5% on screens installed around the world.

FIRE AND SAFETY TESTING

All of Harkness' event screen products are independently tested and certified to meet local safety and fire regulations.

Fire certificates for individual products are available on request, Harkness is also able to provide small samples for local fire testing should this be required. For regional certificates, contact Harkness Screens or visit www.harkness-screens.com for further information.



HARKNESS SCREENS™



EVENT SCREEN TECHNICAL INFORMATION TABLE

SCREEN SURFACE	FRONT / REAR	LIGHTING CONDITIONS	MULTIPLE PROJECTORS	SHORT THROW <1:1	LONG THROW >1:1	GAIN	TRANSMITTANCE
Translite™ White	Front / Rear	Dark Or Low	✓	✓	✓	0.5	0.45
Translite™ Cream	Front / Rear	Dark Or Low	✓	✓	✓	0.5	0.75
Translite™ Blue	Rear	Dark Or Low	✓	✓	✓	0.55	0.25
Translite™ Midnight	Rear	Dark Or Low	✓		✓	0.25	0.5
Translite™ Grey 230	Rear	Any			✓	0.3	2.3
Translite™ Grey 160	Rear	Any			✓	0.25	1.6
Translite™ Grey 100	Rear	Any			✓	0.4	1.0
Translite™ Grey 65	Rear	Dark Or Low	✓		✓	0.3	0.65
Translite™ Stereo	Rear	Any	✓		✓	0.13	1.2
Translite™ Crystal & Translite™ Clear	Rear	N/A	N/A	N/A	✓	N/A	N/A
Stagelite Contrast Grey 70	Front	Any	✓	✓	✓	0.7	N/A
Stagelite White	Front	Dark Or Low	✓	✓	✓	1.0	N/A
Stagelite White/Black	Front	Dark Or Low	✓	✓	✓	1.0	N/A
Stagelite Stereo	Front	Dark	✓		✓	2.2	N/A