

# 20 Linear Features



whitegoods








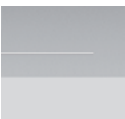



## whitegoods









Whitegoods has developed the most complete range of small scale linear fittings and integration profiles to illuminate any interior space. The 20 Linear range was conceived to apply the right quality and quantity of illumination to the space while minimizing the source of the light and eliminating obtrusive light spill - all while holding true to our brand philosophy:

- Reduction of detail
- Seamless architectural integration
- Logical, modular systems and families of products
- Ease of specification, installation and maintenance



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	20 Linear Wash Light Surface
	20 Linear Wash Light Suspended
	20 Linear Wash Light Semi-Recessed

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	20 Linear Mini Z Cove
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1925

To celebrate its 50th anniversary, ABA established the Educational Foundation with a \$500,000 endowment.

1943

ABA supports the first effort by a national organization to establish a national center for the study of the legal profession.

1963

ABA approves the first national center for the study of the legal profession.

1971

ABA approves the first national center for the study of the legal profession.

1956

ABA approves the first national center for the study of the legal profession.

1968

ABA approves the first national center for the study of the legal profession.

ABA Numbering

000000000



# 20 Linear

Whitegoods is a language of light developed to bring illumination to surfaces in the simplest way possible. We believe in 'luminous surfaces and planes of light'.

It is critical to our approach that our luminaires have a minimal visual impact. Their job is to reveal the surfaces around them, while seamlessly integrating with the architectural envelope.

Whitegoods offers the discerning specifier a range of lighting tools to facilitate this approach. The 20 Linear range is the most flexible architectural lighting tool developed to allow designers the freedom to work with light in an instinctive way.

Utilizing the small form factor, the range includes a family of profiles all based around the same high performance linear LED technology, developed by Whitegoods specifically for this product line. Coves, coffers, perimeter wash and seamless lines, all beautifully rendered with smooth even light.

This is Whitegoods: this is 20 Linear.







# 20 Linear

Applications include:

- General illumination
- Wall wash
- Wall graze
- Accent lighting
- Direct/indirect lighting
- Cove lighting
- Perimeter lighting

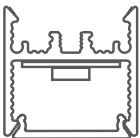
Recessed, surface,suspended and wall mounted to any surface type.

The ability to utilize the same form and technology throughout any multipurpose space to deliver a cohesive language of light.

Small scale to integrate invisibly into the architecture, close to the surface being illuminated for greater energy efficiency and minimal spill light.

Specifiable in standard and completely tailored lengths to fit any space.

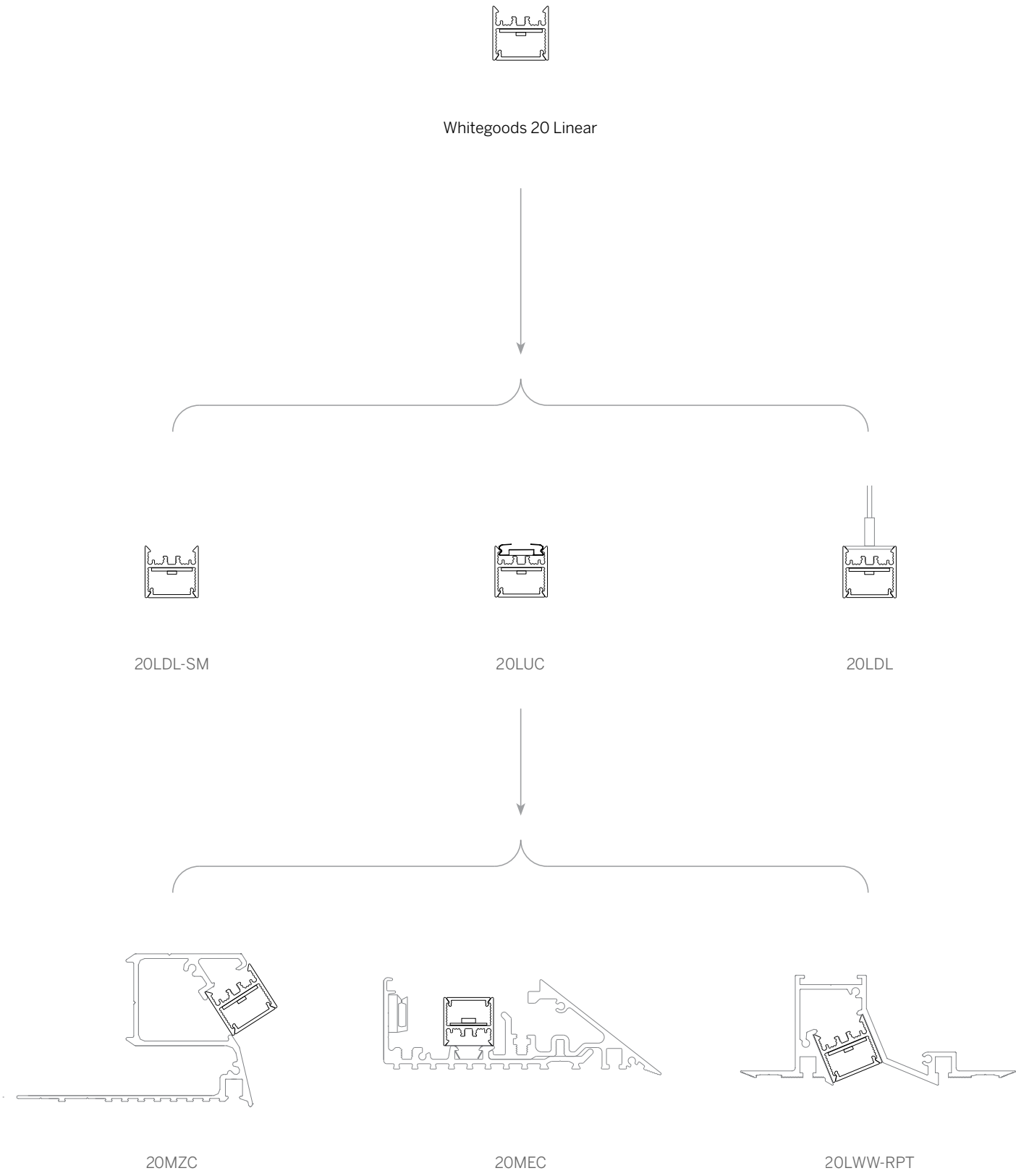
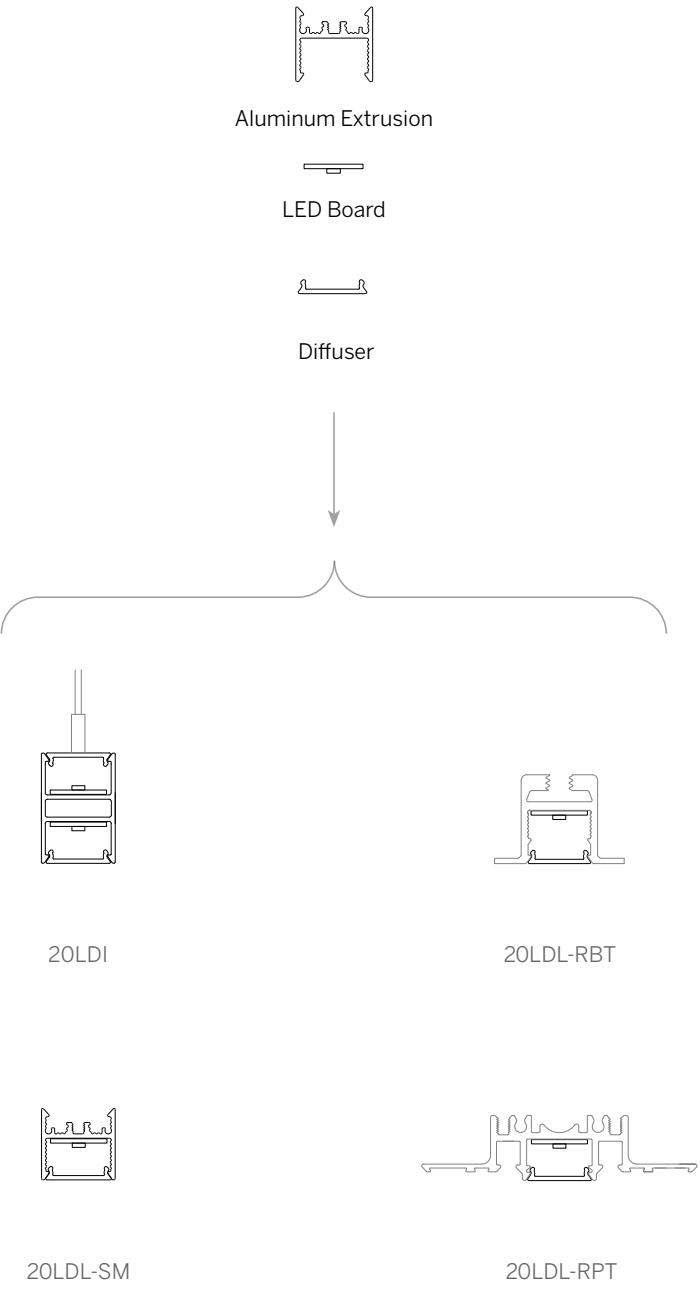
So much performance from such a small luminaire.





# 20 Linear Modularity

Whitegoods utilizes modularity throughout the range to ensure maximum efficiency of design, manufacture and maintenance. For the specifier this means absolute consistency across all product types and applications, as well as making sense economically.







Whitegoods developed a specific LED light source optimized for our linear products, using the highest performance and quality LED devices available on a form factor that best fits our product mechanically and electronically. We use this LED throughout our entire range of 20 Linear, Linear, Cove and Perimeter lighting systems. Additionally, we standardize on the highest quality drivers and control devices to ensure that our system works at peak performance and consistency mile after mile.

Whitegoods products are developed in a modular fashion that allows easy repair or replacement of the light source without upsetting the installation. We term this: future proofing.



- Replaceable light source guarantees sustainability.
- Available in any continuous length to accommodate exacting installations.
- Multiple wattages and lumen output for maximum flexibility within any application.
- Constant Voltage, 90+ CRI, 3 step MacAdam.
- Four standard color temperatures from 2700K-4000K
- Compatible with all common dimmer and control standards such as 0-10V, 3-wire, forward-phase with neutral, ELV, DALI and DMX.
- High efficiency design delivers up to 90 lumens/watt
- Used throughout Whitegoods 20 Linear, Linear, Cove and Perimeter products for color and performance consistency.
- 5-year warranty.



# 20 Linear Lenses/Accessories

To further expand the applications that can be successfully achieved with the 20 Linear, Whitegoods continues to develop optical accessories that increase efficiency, tighten the beam spread and shield the light source. The integration profiles available all accommodate optical accessories to allow the designer to combine attributes to successfully satisfy the application at hand.



Opal Diffuser provides even, continuous line of light and general illumination (OD)



Satin Clear Diffuser for high efficiency soft edge beam, general illumination (SD)



Micro-prismatic lens for high efficiency and lower brightness, general illumination (MPL)



Round Opal Diffuser, 1" diameter for general illumination (ROD)



Block Diffuser of satin acrylic for general illumination and decorative effect (BD)



45 Degree Louver in black or white for extreme low brightness (LL45B / LL45W / LL45S)



Narrow Lens optic for wall grazing applications (NL16)







20 Linear Interactive Product Overview

click images to open product pages


Direct




20LDL-RPT  
Plaster Trim  
1•2•5




20LDL-RBT  
Bezel Trim  
1•2•5•6



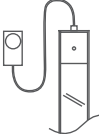
20LDL-RGT  
Grid Trim  
1•2•5•6



20LDL-SM  
Surface  
1•2•3•4•5•6•7




20LDL  
Suspended  
1•2•3•4•5•6•7




20LUC  
Under Cabinet  
1•2•5

Direct/Indirect




20LDI  
Suspended  
Direct/Indirect  
1•2•3•4•5•6•7

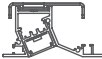


20LDI-SW  
Surface  
Wall Mounted  
Direct/Indirect  
1•2•3•4•5


Wash




20LWW-RPT  
Wash Light  
Recessed  
Plaster Trim  
1•2•5



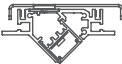
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Wash Light  
Recessed  
Bezel Trim  
1•2•5



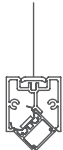
20LWW-SM  
Wash Light  
Surface  
1•2•5



20LWW-SRPT  
Wash Light  
Semi-Recessed  
Plaster Trim  
1•2•5

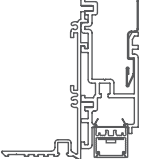


20LWW-SRBT  
Wash Light  
Semi-Recessed  
Bezel Trim  
1•2•5

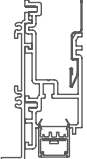


20LWW  
Wash Light  
Suspended  
1•2•5


Perimeter




20LPF-RPT  
Flush Plaster Trim  
1•2•5



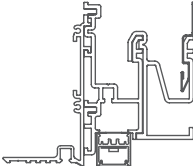
20LPF-RBT  
Flush Bezel Trim  
1•2•5



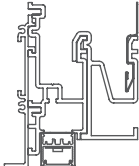
20LPF-RGT  
Flush Return Trim  
1•2•5



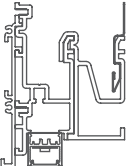
20LPF-RRT  
Flush Grid Trim  
1•2•5



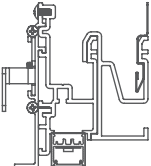
20LPFSG-RPT  
Flush Plaster Trim  
Soft-graze  
1•2•5



20LPFSG-RBT  
Flush Bezel Trim  
Soft-graze  
1•2•5

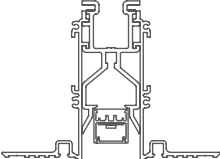


20LPFSG-RRT  
Flush Return Trim  
Soft-graze  
1•2•5

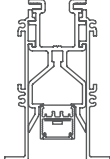


20LPFSG-RGT  
Flush Grid Trim  
Soft-graze  
1•2•5

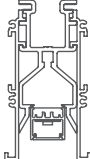
Perimeter



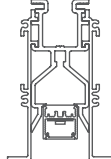
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Recessed Flush  
Plaster Trim  
1•2•3•4•5•6



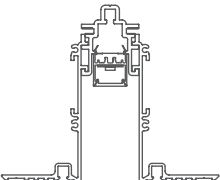
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Recessed Flush  
Bezel Trim  
1•2•3•4•5•6



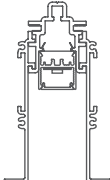
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Recessed Flush  
Return Trim  
1•2•3•4•5•6



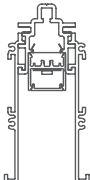
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Recessed Flush  
Grid Trim  
1•2•3•4•5•6



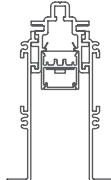
20LRR-RPT  
Recessed Regressed  
Plaster Trim  
1•2•3•4•5



20LRR-RBT  
Recessed Regressed  
Bezel Trim  
1•2•3•4•5

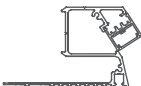


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Recessed Regressed  
Return Trim  
1•2•3•4•5

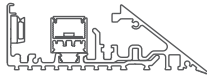


20LRF-RRT  
Recessed Regressed  
Grid Trim  
1•2•3•4•5

Cove



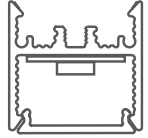
20MZC  
20 Linear  
Mini Z Cove  
1•2•5



20MEC  
20 Linear  
Mini Edgeless Cove  
1•2•5

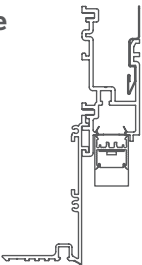
NOMINAL LUMENS [lm / ft] CV1.2 STATIC WHITE				
		POWER [W / ft]		
		L [3]	M [6]	H [10]
		CCT		
	927	303	606	1061
	930	330	659	1153
	935	391	783	1370
	940	465	930	1628
	WD <sup>1</sup>	232	482	697
	RGBW <sup>2</sup>	—	—	394

1 WD: L = 2.7 W/ft, M = 5.5 W/ft, H = 7.6 W/ft  
2 RGBW 8 W/ft, nominal lumens based on 3000K White LED

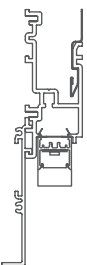


0.7" / 17mm

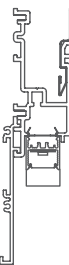
Graze



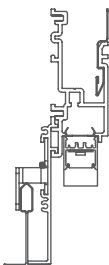
20LPR-RPT  
Regressed Plaster Trim  
1•2•3•4•5



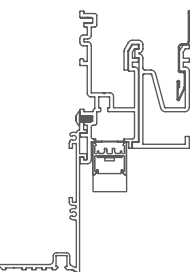
20LPR-RBT  
Regressed Bezel Trim  
1•2•3•4•5



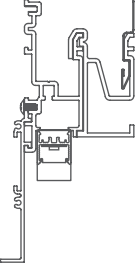
20LPR-RRT  
Regressed Return Trim  
1•2•3•4•5



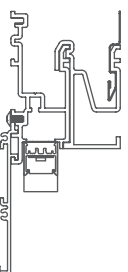
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Regressed Grid Trim  
1•2•3•4•5



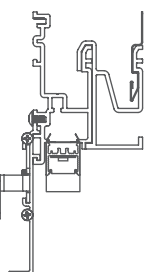
20LPRSG-RPT  
Regressed Plaster Trim  
Soft-graze  
1•2•3•4•5



20LPRSG-RBT  
Regressed Bezel Trim  
Soft-graze  
1•2•3•4•5



20LPRSG-RRT  
Regressed Return Trim  
Soft-graze  
1•2•3•4•5



20LPRSG-RGT  
Regressed Grid Trim  
Soft-graze  
1•2•3•4•5



# RGBW

The ability to add dynamic color-changing to a very small scale product is an exclusive benefit of LED lighting. When used in conjunction with the 20 Linear range, colored light can be introduced into the space for accent, health and mood-setting results.



# Warm Dim

Warm Dim lighting provides LED dimming and warm LED lights virtually indistinguishable from an incandescent light source. Designed to precisely mimic the black body curve of a standard 100W A19 lamp by gradually transitioning from 1800K to 3000K.

Color Temperature	Description	Typical Usage
3000K	Neutral Warm	Office, Residential
2700K	Warm: Halogen Incandescent	Residential, Hotel
1800K	Very Warm Incandescent	Residential







# Whitegoods Wand

The 20 Linear family of products from Whitegoods are incredibly flexible lighting tools. We have developed the Wand to allow specifiers to see for themselves just how flexible and multi talented the 20 Linear range really is. Direct it up, down, vertically, horizontally, adjacent to a wall, the floor, a frosted panel or tuck it under a shelf. You'll soon find this is an indispensable tool for roughing out your ideas with light. The Whitegoods Wand is provided with plenty of cable, a simple plug-in driver and magnets to snap to metal surfaces.





# Application Guide

Whitegoods 20 Linear products are extremely versatile and can be integrated in a multitude of ways. Within this section of the book, you will find examples of a 20 Linear luminaires used in varying applications, including examples of the detailing used to achieve them.

In the following pages, you can find out how Whitegoods 20 Linear products have been used to create minimal, continuous lines of light in the ceiling plane with illuminated corners, to integrate into a multitude of surface types, or create perimeter or indirect 'pockets' of light with the source of illumination completely concealed from view.

In short, Whitegoods 20 Linear luminaires and integration options allow the designer free reign when it comes to imagining innovative and fresh ways to breath light into a space. You bring the vision to us, and we help you realize it.

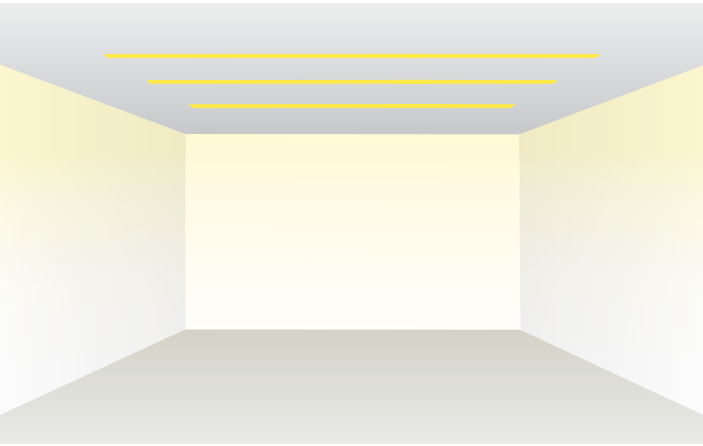
Whitegoods is seamless, architectural integration.





# Applications

## Downlight



Perhaps the most common lighting solution utilized for general area lighting, arranging a group of lights in a grid to give even illumination to the surface below. Of course, the popularity of a technique is not always a sign of best practice, and in this case it typically has more to do with economy and ease of implementation.

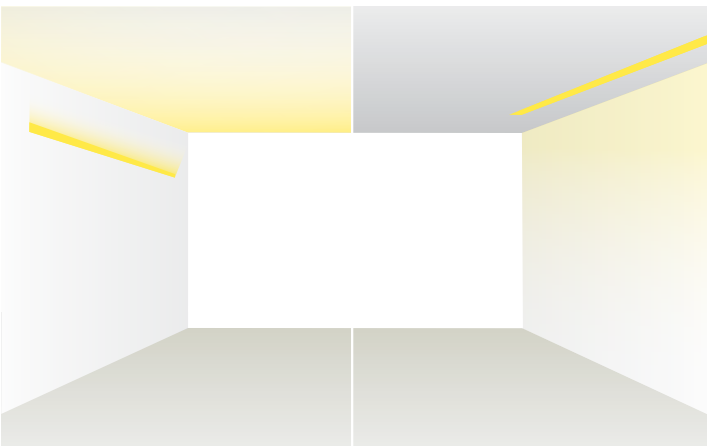
However, when applied to a space with some consideration it can be an effective technique. One thing to consider for this type of solution is "how much light will fall on the walls?". A space can have a lot of light being delivered into it, but if the walls are not sufficiently illuminated, there is a good chance that the space will feel gloomy, even though there is plenty of light falling on horizontal surfaces like desks or the floor.

Fortunately, many Whitegoods luminaires have good 'high angle distribution', which can help to deal with this common issue (see Washlight). Also note that narrow optic accessories can further concentrate or restrict the light to the intended surfaces.

### Tip

Look for Whitegoods product codes which include "LDL" and "LD", throughout this book to find products ideal for Downlight applications.

## Washlight



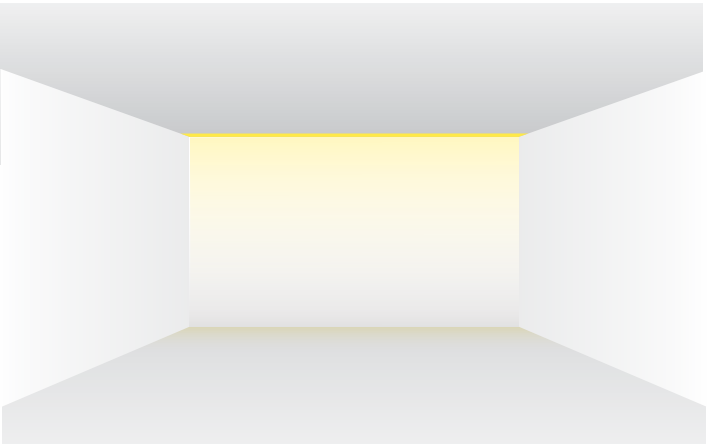
The aim of wall washing, or in fact washing any surface with light (wall, ceiling or floor), is to create an even 'wash' of light across the surface. The wall wash is a great way to introduce light into a room as the brightness of the vertical surfaces around us play a crucial role in our perception of a space. You can use linear sources which emit a wide, even beam of light directed towards the intended surface.

Consider all of the mounting opportunities afforded by the 20 Linear washlights: recessed, semi-recessed, surface and suspended

### Tip

Look for Whitegoods product codes which include "WW", "LWW", throughout this book to find products ideal for Washlight applications.

## Grazing



Surface Grazing is typically used to reveal and highlight textured feature surfaces such as stone, brick, wood and fabric to name a few. To achieve this, a focused narrow beam of light flows across the entire wall from top to bottom, delivering a sheet of light across the featured surface.

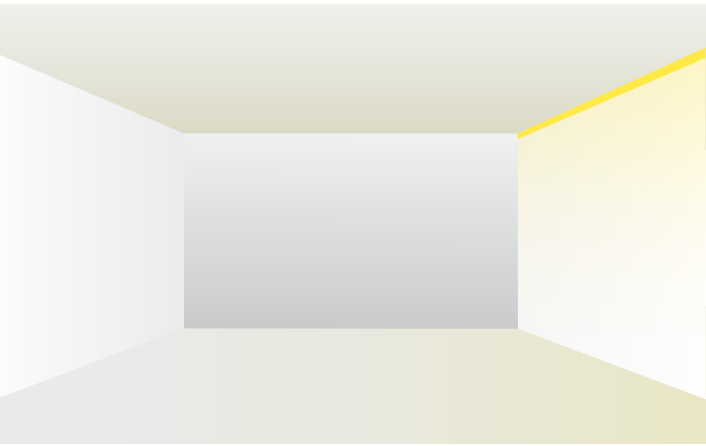
The design may be a recessed niche at the top of the wall with a surface mounted grazing luminaire, or one of several 20 Linear recessed profiles that integrate into any ceiling type and project an even sheet of light down the wall.

Either way the finished wall should be allowed to go past and above the ceiling plane so that the entire wall is illuminated top to bottom.

### Tip

Look for Whitegoods linear product codes which include "LDL", "LD", "LPR", "LRR" with "NL16" or "LL45x", throughout this book to find products ideal for Grazing applications.

## Perimeter



Another simple and highly effective way to add natural feeling light into a space is via a concealed linear light source detailed into the intersection of the wall and ceiling. This luminaire, typically recessed into the ceiling and providing an even illumination from a homogeneously illuminated lens, gives definition to the space, and functional light on the perimeter.

A perfect application to define lobby and conference space perimeters, as well as vanity light over a mirror by virtue of the fact that the source of light is hidden from normal viewing angles (including mirror reflection), while functional illumination is distributed down the wall and into the space.

The 20 Linear Perimeter, with its minimal aperture provides the perfect detail for perimeter applications.

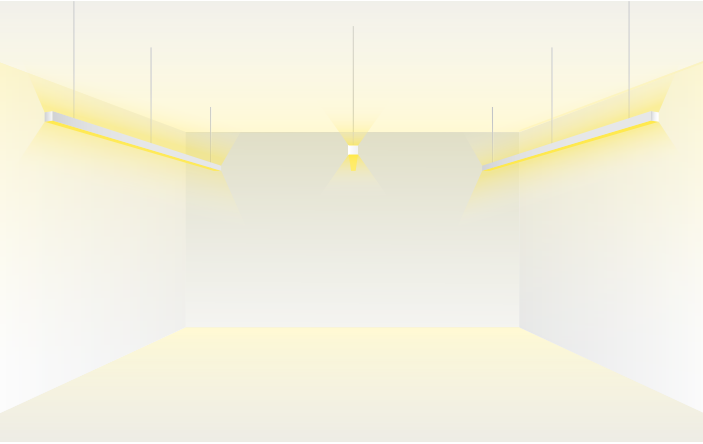
### Tip

Look for Whitegoods product codes which include "LPF", "LPR", "MEC", "MZC", throughout this book to find products ideal for Perimeter applications.



# Applications

## Direct/Indirect



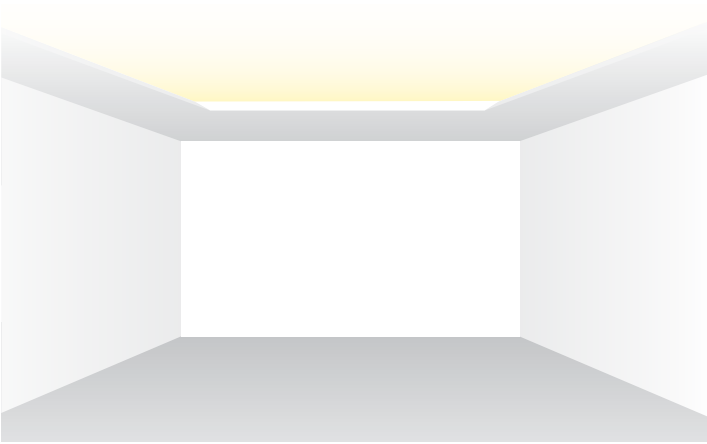
A room can be very well-lit by combining two lighting elements to achieve a perfect balance between an indirect uplight component, lifting the space and making it feel bright, and a direct component, delivering the right amount of light just where it is needed.

Pendant lights can do this well, emitting light in both directions. As long as there is enough space above them for the light to spread out, an even effect can be achieved. Also, being suspended pendant means that the direct light portion is inevitably closer to the task level, or work surface. This means that less light is required to achieve the required light levels.

Wall mounting a direct/indirect luminaire is another way to deliver volume and task lighting to a space from the perimeter. It has the added benefit of visually expanding the space horizontally as well as vertically.

**Tip**  
Look for Whitegoods product codes which include “LDI” throughout this book to find products ideal for Direct Indirect applications.

## Cove



When soft diffuse light comes from above, a natural feel is imparted to a space. It is understandable when you consider that the vast majority of natural light that we experience comes to us from above.

Creating a cove within the ceiling provides an opportunity to deliver light in this way. Although the technique does require some ceiling depth, it is no more than is typically required for recessed downlights, for example, 6" - 12" between the luminaire and the underside of the surface above will give good results.

Another way to provide reflected light into the space would be to detail a cove within 2'-3' from a wall, allowing the cove light to reflect off the ceiling plane and be redirected to the wall, evenly washing the vertical surface

This technique suits hospitality and residential settings especially well, and when controlled via a dimmer, can provide a range of moods from bright and fresh right through to cozy and intimate.

Uplighting can be a very effective way to make a space feel well-lit, even though actual light levels achieved in the room can be lower overall. This is because lighting the ceiling helps a room feel light and airy. being similar to the way we experience most natural light: coming from a wide area above. Yes, the sky! Also, much of the light reflected back from the ceiling will find its way to the walls, again helping with the sense of light within the space overall.

**Tip**  
Look for Whitegoods linear product codes which include "LDL", "MEC", "MZC", throughout this book to find products ideal for Cove applications.





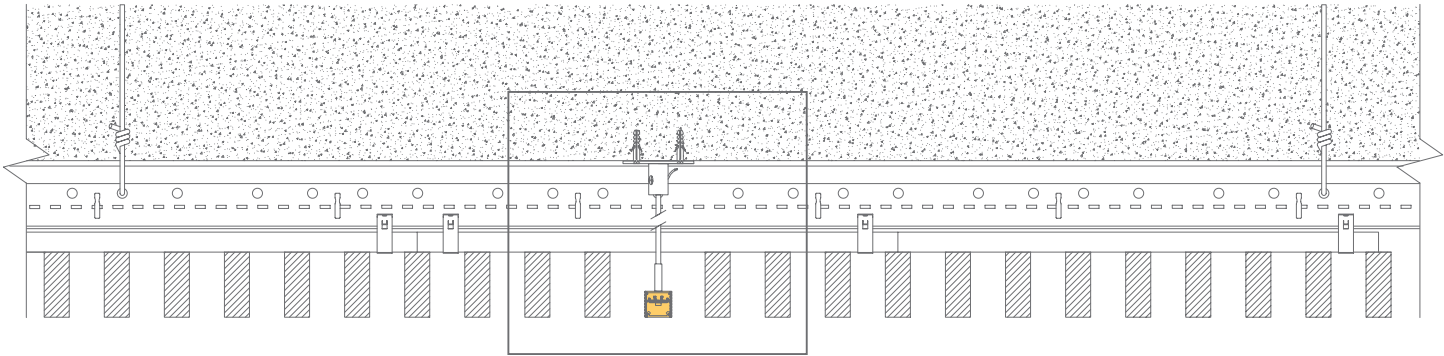
## 20 Linear Suspended, within a wood slat ceiling system

The 20 Linear family of luminaires is incredibly flexible. With a suspension mounted fixture (20LDL), the designer has the freedom to integrate it neatly in all kinds of applications.

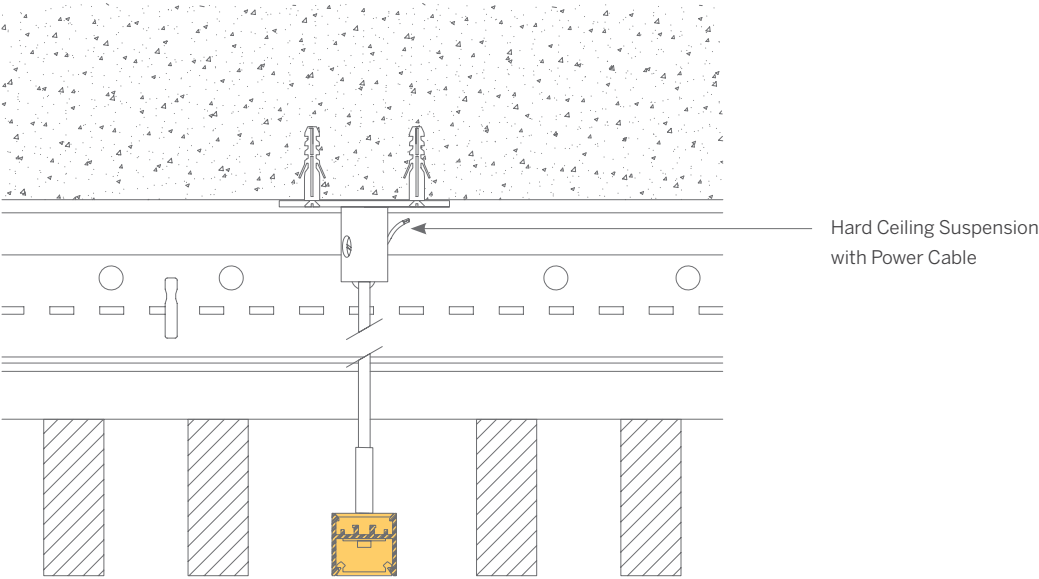
Here it has been used within a semi-open slatted ceiling system, where the luminaire replaces a wooden slat, delivering the required light from a simple clean element which compliments the architectural language and rhythm of the space.

Whitegoods: Reduction of detail.

Section of Ceiling



Detail @ 1:2







## 20 Linear Surface Mount, recessed into a 'pocket' detail

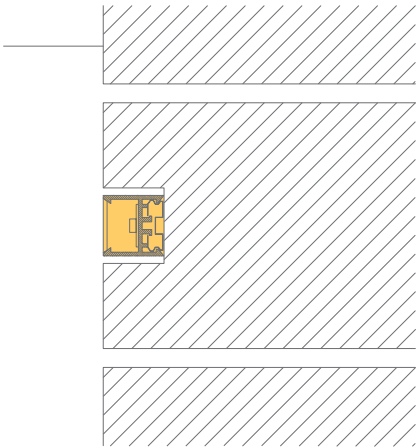
In hospitality environments, such as this restaurant, it is often preferable to keep general light levels relatively low, while still delivering the necessary light where needed. Keeping the light source close to the surface to be lit can mean less light is required overall.

As a surface mounted fixture, the 20 Linear (20LDL-SM) can be utilized in any number of ways. Here it has been mounted within a pocket detail routed into a brick surface, delivering the required light to the staircase.

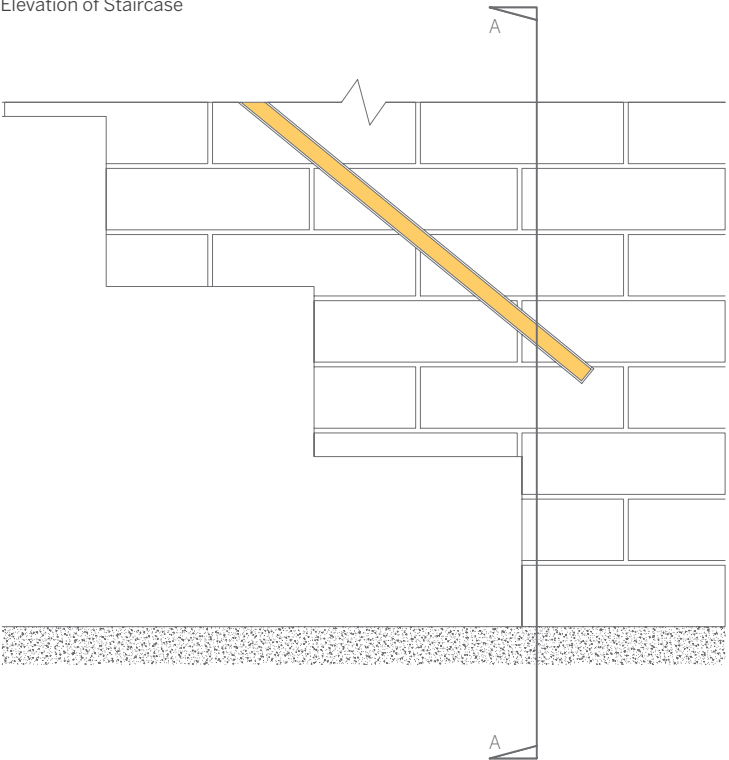
Once the pocket is formed, mounting clips are simply screw fixed in place, and the luminaire snaps into the slot, concealing the feed cables behind.

Whitegoods: Ease of Installation.

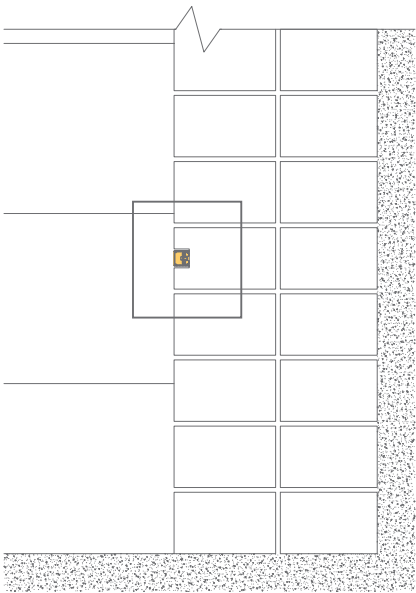
Detail @ 1:2



Elevation of Staircase



Section AA





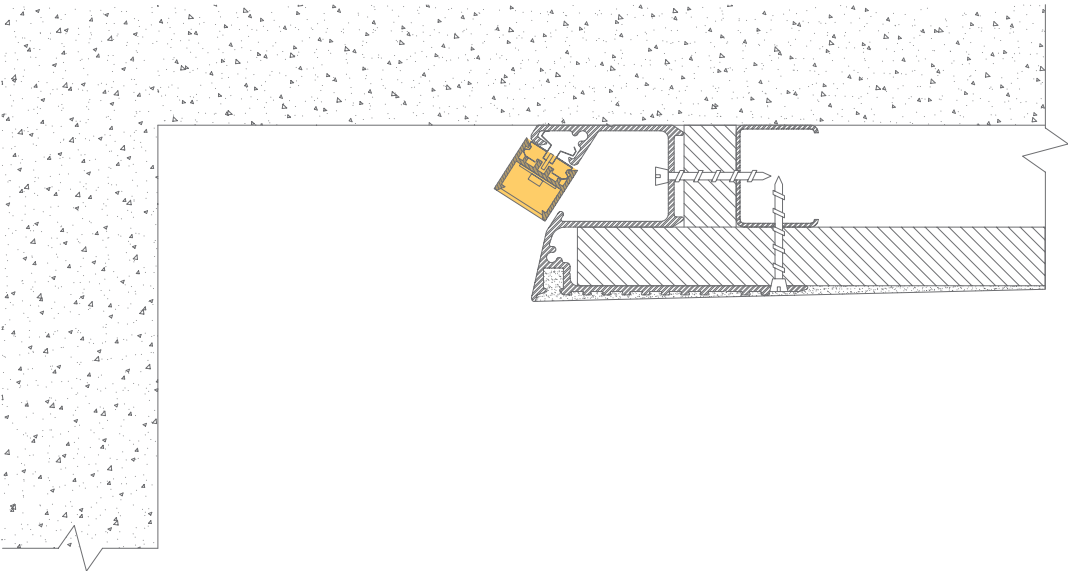
## 20 Linear Mini Z Cove, forming a perimeter wash detail

In this ultra-minimal space the architect wanted to see only the light, and none of the lighting equipment. 20 Linear Mini Z Cove with a Plaster Trim flange (20MZC-RPT) is a compact yet powerful tool where a designer wants to push a genuinely useful amount of light onto a surface, especially when there is very little space available for the luminaire.

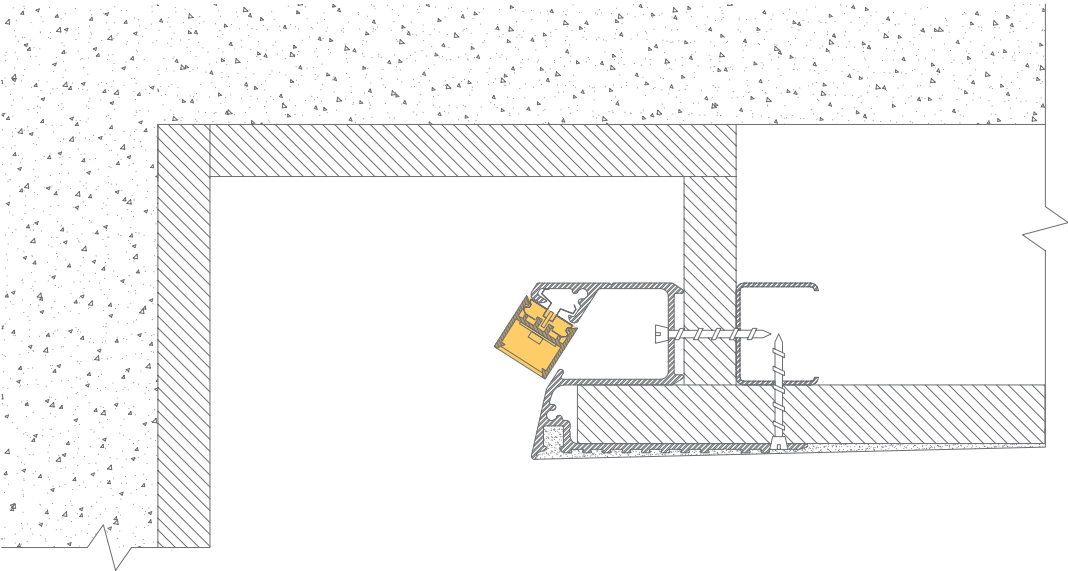
The precision extruded mounting profile has a crisp edge which completely integrates with the mounting surface to produce a perfect edge, behind which the 20 Linear 'insert' can be snapped into place, concealing all cabling in the dedicated channel behind it.

Whitegoods: Seamless architectural integration.

Ceiling Section Option A @ 1:2



Ceiling Section Option B @ 1:2







## 20 Linear Mini Edgeless Cove, in a wall-to-ceiling transition

The pressure is always on for architects and designers to create eye-catching spaces, especially within entrance lobbies. Here the architect has conceived an overlapping surface where light flows calmly from each layer of the wall and ceiling. Whitegoods helped to detail the integration of a knife edge cove luminaire, completely shielding the light source from any viewing angle.

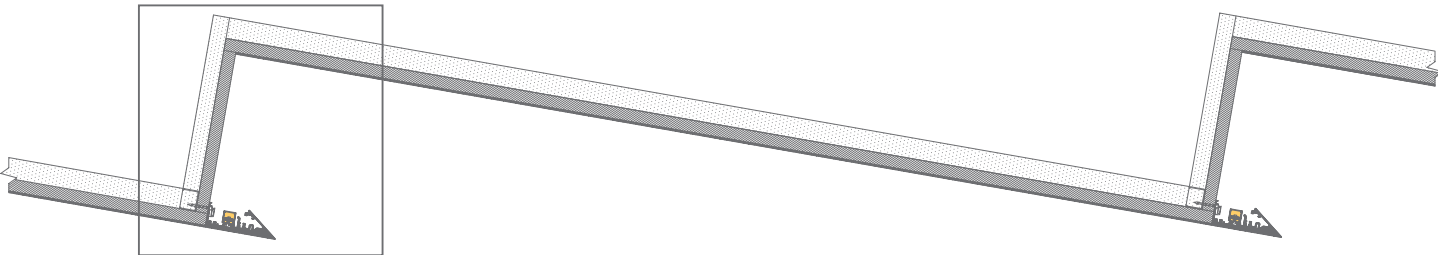
20 Linear Mini Edgeless Cove (20MEC-RPT) has been used to create the impression that the surfaces have no thickness. The mounting extrusion has a raked back front face meaning that the finished edge is perfectly straight and has no visible upstand from almost any angle.

Once the concept was agreed upon, Whitegoods produced the necessary drawings to validate the approach, and provided all the detail drawings required for the architect to complete their construction drawings.

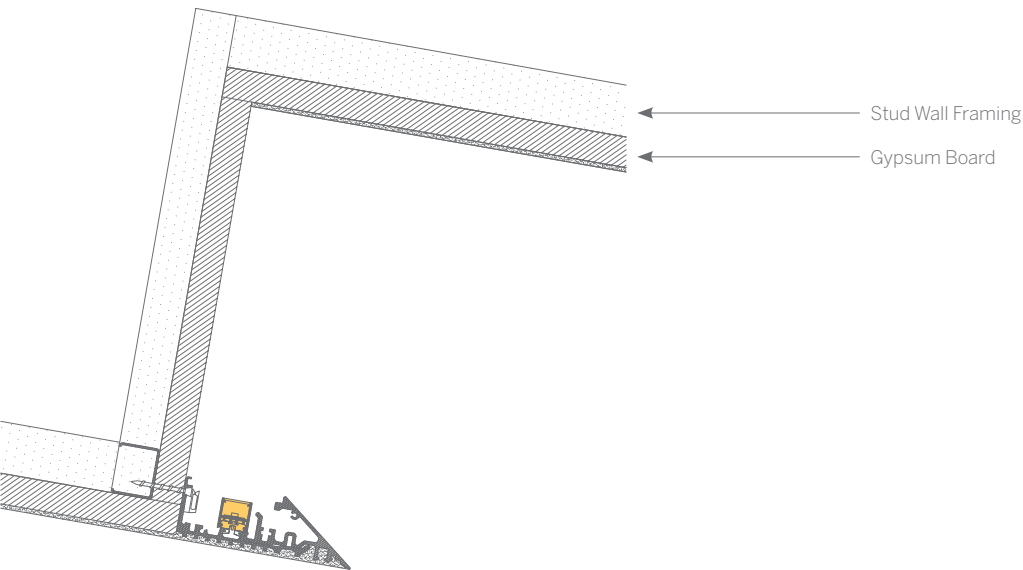
The mitered corners were prefabricated to minimize work for the contractor and ensure a perfect finish. The light unit can be easily removed if maintenance or an upgrade are ever required.

Whitegoods: Ease of specification, installation and maintenance.

Ceiling Section & Wall Plan Section



Detail of Ceiling Section @ 1:2







## 20 Linear Mini Z Cove, in concealed floor wash detail

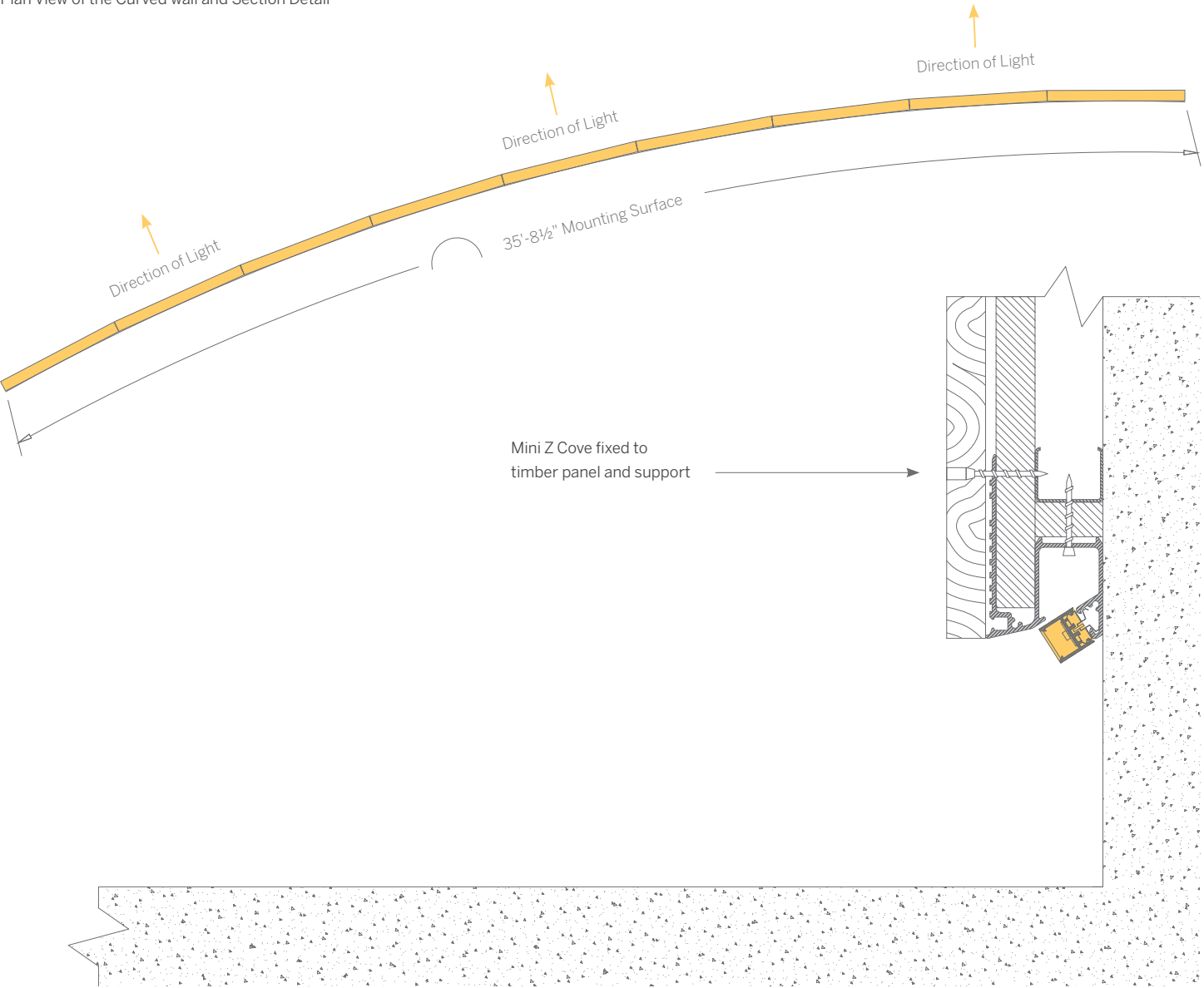
Although typically used as a perimeter wash luminaire, here the 20 Linear Mini Z Cove (20MZC) is cleverly utilized to provide a subtle floor wash from a concealed regress at the foot of a wall.

Typically a standard linear luminaire would be installed up into a recess, therefore providing light only directly downward.

Due to the fixed angle achieved by the orientation of the 20 Linear Mini Z Cove in this application, plenty of light is washed right across the floor of the corridor.

Note that, although the form factor of the product is linear, it can be provided in segments, each with custom cut mitered joints to integrate into curved elements.

Plan View of the Curved wall and Section Detail





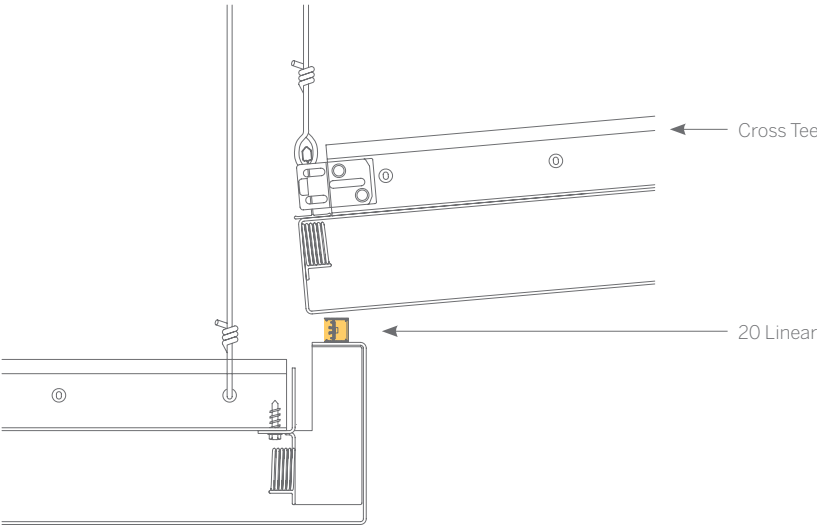
## 20 Linear, tailored to exact dimensions

In this demanding project, the designer has made good use of the 20 Linear's (20LDL-SM) ability to be supplied in any required dimension.

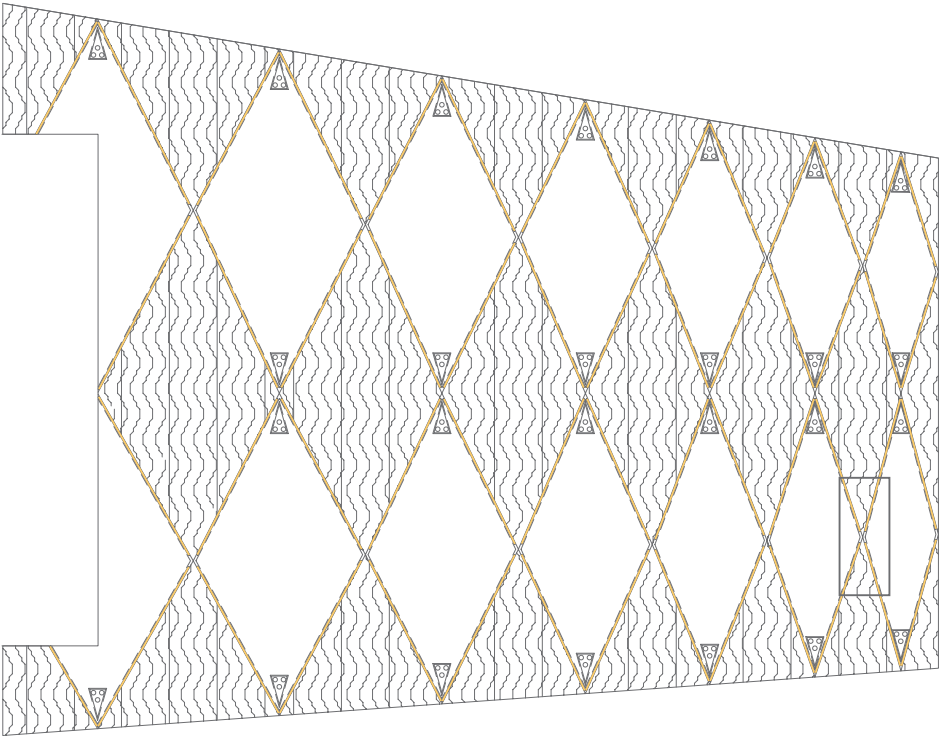
The key to this unique level of tailorability is the technology designed into the Whitegoods linear LED boards, allowing us to make a continuous luminaire to any desired length.

As the luminaires were integrated into a narrow overlap between intersecting ceiling panels, they needed to fit perfectly within each one. As can be seen from the illustration, there are 14 different lengths involved, and each luminaire was produced to a 1/4" accuracy to the available space.

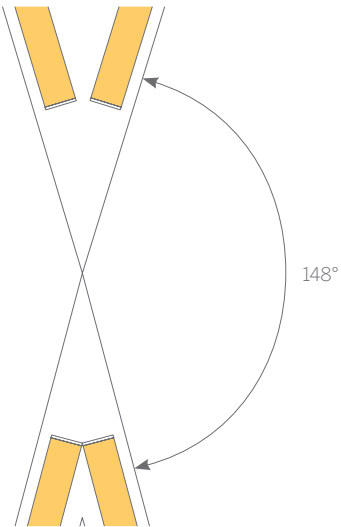
Section Detail of Ceiling



Plan of Ceiling



Close-Up of Ceiling Plan





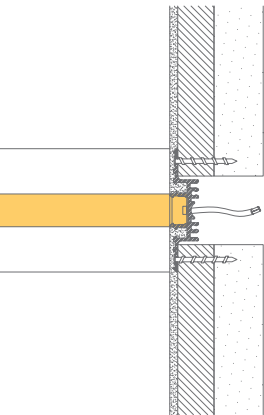
## 20 Linear, horizontal transition within skylight

A linear light source can deliver general light to a space, or specific light to a surface. It can also be used to create a deliberate visual element in a space and accentuate architecture.

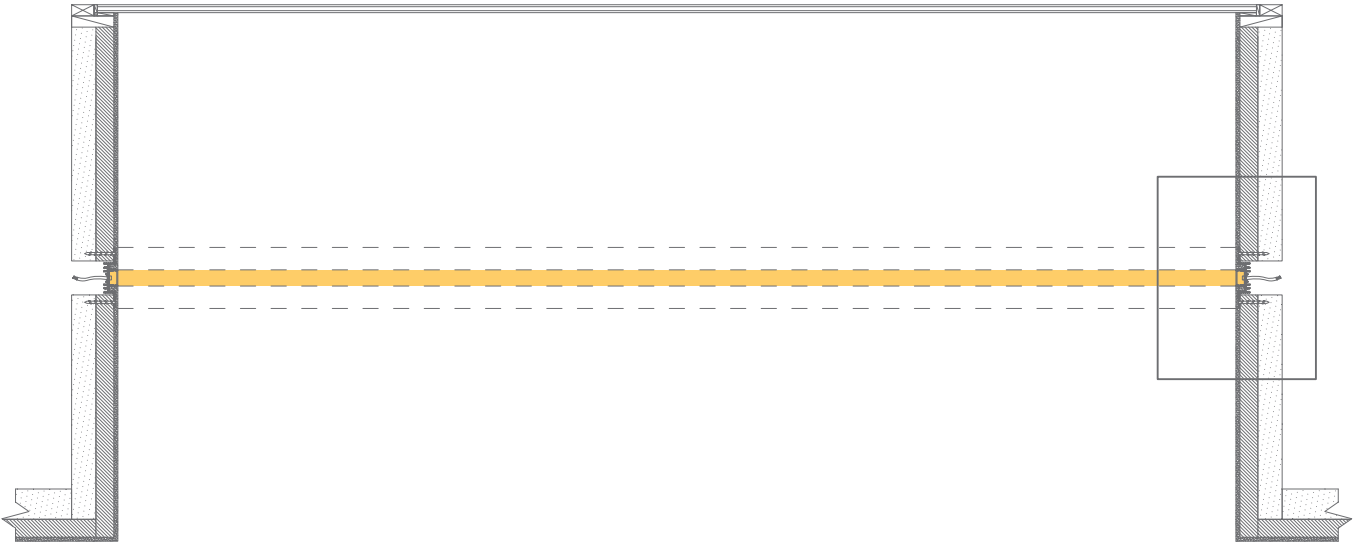
In this project, the designer has used 20 Linear with Plaster Trim which has been recessed into the vertical surface of a series of skylights. In this way, light is delivered from the same architectural element during the hours of darkness as it is during daylight.

Whitegoods can supply detailed instructions on how to achieve all sorts of details, as well as supplying product factory-cut to exact lengths and ready to install.

Detail of 20 Linear integration



Section of Skylight Showing 20 Linear with Plaster Trim



Section in Plan View Showing Overlapping Fixtures











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The application of light to the surfaces around us is a critical factor in our perception of any space.

When proper consideration is given to the architecture, function and the desired atmosphere, lighting can become a truly integrated part of the overall environment being created, often unseen although defining and enhancing the space.