Wall Grazing and Wall Washing

selux



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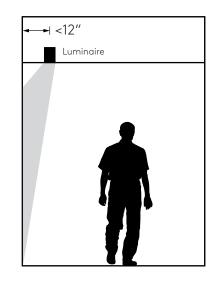
Illuminating a wall is typically done in one of two ways: Wall Grazing or Wall Washing

What is Wall Grazing?

Wall grazing is a technique where the luminaire is typically positioned 12" or less to the wall such that the beam angle will hit the wall at a narrow angle. This steep angle accentuates the eye to the texture or surface of the wall by creating a dramatic lighting effect through the use of shadows. The grazing effect can be deepened or diminished by moving the luminaire closer to or further away from the wall.

Typical Applications:

• Textured Walls (i.e. - stone, brick, wood)

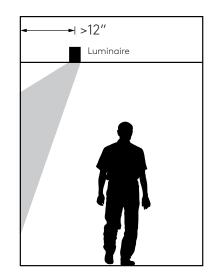


What is Wall Washing?

Wall washing is a technique where the luminaire is typically positioned 12" or more from the wall in order to enhance the smoothness of a wall by eliminating shadows or to highlight a wall to create visual interest. By illuminating the vertical surface, the architectural space will feel brighter and more open.

Typical Applications:

- Wall with artwork or decor
- Smooth accent wall

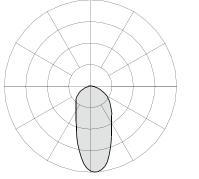


Things to Consider:

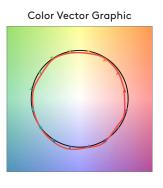
- Wall grazing is ideal for creating a textured aesthetic for materials such as brick and stone.
- Wall washing is ideal for creating a visually smooth, flat surface.
- Consider what is being lit and its color characteristics. Use TM-30 data to evaluate color quality and color temperature to select the appropriate luminaire for the application.
- Reflective and specular surfaces such as glass, polished stone, tile, etc. can be difficult to illuminate and may cause a reflection of the light source. A mock-up is usually recommended.

M36 LED with A5 lens (5° Wall Grazer)

M-Series LED products utilize our proprietary optical system -Light Modulation Optics (LMO). The A5 lens has been designed to project light with a maximum luminous intensity at 5° from nadir. Use the A5 lens to highlight textured or accent walls, providing a continuous illumination across the entire vertical surface (available with fully luminous corners).



<u>IES TM-30</u> CCT: 3000K Ra = 93 R9 = 61 Rf = 90 Rg = 97



up to **118** lm/W

Light Engine:	1C20	1C25	1C30	1C35	1C40	1C45
lm/ft:	541	676	817	1,049	1,162	1,296
W/ft:	4.8	6.1	7.3	8.6	9.8	11

*Values calculated from a 4' luminaire at 3500K and 90 CRI (80 CRI available - approximately 19% more light output)

6″ (Recomm	ended)	Illu	minance c	on Wall (fc)
		+99	+99	⁺ 99	+99
		+87	⁺ 87	⁺ 87	+87
		+53	+53	+53	+53
		+39	+39	+39	⁺ 39
	9'-0"	+26	+26	+26	+26
		+21	+21	+21	+21
		⁺ 18	⁺ 18	⁺ 18	⁺ 18
: 45 fc		⁺ 16	⁺ 16	⁺ 16	⁺ 16
/min: 4 /min: 9		+11	+11	+11	+11
	H		4'-0)″	



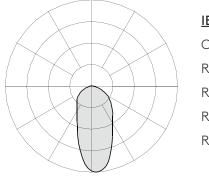
Oliver's Yard, London, United Kingdom Photo courtesy of James Newton

Analysis: L36-1C20-935-A5, 0.90 LLF (6" setback distance, wall-to-wall)

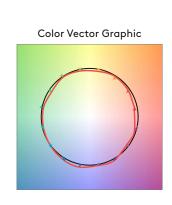
Avg Avg Ma

M36 LED Perimeter with A5 lens (5° Wall Grazer)

M-Series LED products utilize our proprietary optical system -Light Modulation Optics (LMO). The A5 lens has been designed to project light with a maximum luminous intensity at 5° from nadir. Use the A5 lens with perimeter mounting to keep the luminaire tight to the vertical surface and to highlight textured or accent walls(available with fully luminous corners).



<u>IES TM-30</u> CCT: 3000K Ra = 93 R9 = 61 Rf = 90 Rg = 97





up to **118** lm/W

Light Engine:	1C20	1C25	1C30	1C35	1C40	1C45
lm/ft:	541	676	817	1,049	1,162	1,296
W/ft:	4.8	6.1	7.3	8.6	9.8	11

*Values calculated from a 4' luminaire at 3500K and 90 CRI (80 CRI available - approximately 19% more light output)

Perimeter N	lount	Illur	minance o	n Wall (fc)	
	Ī	+220	+220	+220	+220
		+51	+51	⁺ 51	⁺ 51
		+31	+31	+31	+31
		+25	+25	+25	+25
	9'-0″	+17	+17	+17	⁺ 17
		+15	⁺ 15	⁺ 15	⁺ 15
		+14	⁺ 14	+ 14	+14
7 fc		+12	+12	⁺ 12	+12
in: 5 iin: 27		+9	+9	+ ₉	+9
	_ F		4'-0	11	



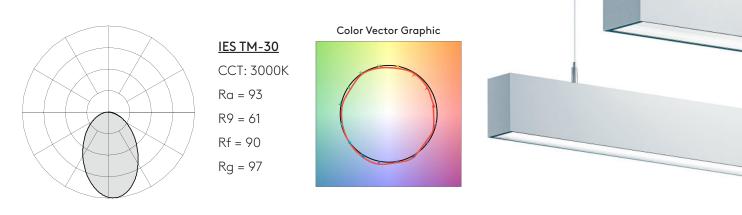
HVB Tower Munich, Germany Photo courtesy of Henn Architekten/Hans-GeorgEsch

Analysis: L36-1C20-935-A5, 0.90 LLF (perimeter mount, wall-to-wall)

Avg Avg Ma

M60 LED/M100 LED with A5 lens (5° Wall Grazer)

M-Series LED products utilize our proprietary optical system - Light Modulation Optics (LMO). The A5 lens has been designed to project light with a maximum luminous intensity at 5° from nadir. All of the proprietary Light Modulation Optics (LMO) are tucked behind a Satine Lens for a more uniform appearance and illumination to the top of the wall without protrusion from the ceiling.



Light Engine:	1C20	1C25	1C30	1C35	1C40	1C45
lm/ft:	456	549	689	771	881	940
W/ft:	4.8	6.1	7.3	8.6	9.8	11

*Values calculated from an M60 LED 4' luminaire at 3500K and 90 CRI (80 CRI available - approximately 19% more light output)

6" (Recomm		Illu	minance o	n Wall (fc)	
		+101	+101	+101	+101
		+86	⁺ 86	⁺ 86	+86
		+52	+52	+52	+52
		+36	+36	+36	+36
	9'-0″	+25	+25	+25	+25
		+21	+21	+21	+21
		⁺ 19	⁺ 19	⁺ 19	+19
g: 37 fc		⁺ 16	⁺ 16	⁺ 16	+16
g/min: 4 x/min: 9		+11	+11	+11	+11
	ŀ		4'-0	"	1



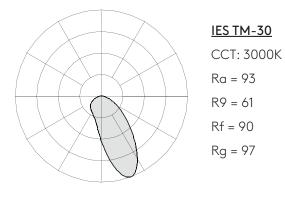
50 Cannon Street, United Kingdom Photo courtesy of Gensler/Ryan Gobuty

Analysis: L60-1C20-935-A5, 0.90 LLF (6" setback distance, wall-to-wall)

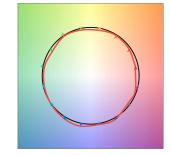
Avg Avg Max

M36 LED with A2 lens (20° Wall Washer)

M-Series LED products utilize our proprietary optical system -Light Modulation Optics (LMO). The A2 lens has been designed to project light with a maximum luminous intensity at 20° from nadir. Use the A2 lens to uniformly highlight accent walls, while creating just the right amount of visual interest at eye level (available with fully luminous corners).



Color Vector Graphic



up to **118** lm/W

Light Engine:	1C20	1C25	1C30	1C35	1C40	1C45
lm/ft:	540	674	815	1,046	1,159	1,293
W/ft:	4.8	6.1	7.3	8.6	9.8	11

*Values calculated from a 4' luminaire at 3500K and 90 CRI (80 CRI available - approximately 19% more light output)

30" (Recommen	ded)	Illu	minance o	on Wall (fc)
		+23	+23	+23	+23
		+38	⁺ 38	+38	+38
		+42	+42	+42	+42
		+40	+40	⁺ 40	+40
	9'-0"	+33	+33	+33	+33
		+27	+27	+27	+27
		+24	+24	+24	+24
vg: 27 fc		+21	+21	+21	+21
/g/min: 2 ax/min: 3		⁺ 15	⁺ 15	+15	⁺ 15
	ŀ		4'-0)″	

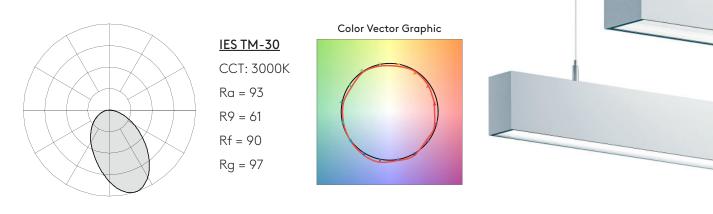


Oliver's Yard, London, United Kingdom Photo courtesy of James Newton

Analysis: L36-1C20-935-A2, 0.90 LLF (30" setback distance, wall-to-wall)

M60 LED/M100 LED with A2 lens (20° Wall Washer)

M-Series LED products utilize our proprietary optical system - Light Modulation Optics (LMO). The A2 lens has been designed to project light with a maximum luminous intensity at 20° from nadir. All of the proprietary Light Modulation Optics (LMO) are tucked behind a Satine Lens for a more uniform appearance and illumination to the top of the wall without protrusion from the ceiling.



up to **93** lm/W

Light Engine:	1C20	1C25	1C30	1C35	1C40	1C45
lm/ft:	448	540	678	758	866	924
W/ft:	4.8	6.1	7.3	8.6	9.8	11

*Values calculated from an M60 LED 4' luminaire at 3500K and 90 CRI (80 CRI available - approximately 19% more light output)

30″ (Recommen	ided)	Illu	minance o	on Wall (fc)
		+25	+25	+25	+25
		+41	+41	+41	+41
		+42	+42	+42	+42
		+37	+37	+37	+37
	9'-0"	+29	+29	+29	+29
		+25	+25	+25	+25
		+22	+22	+22	+22
g: 26 fc		⁺ 19	⁺ 19	⁺ 19	+19
g/min: 2 ix/min: 3		⁺ 14	⁺ 14	+14	+14
	H		4'-0)″	



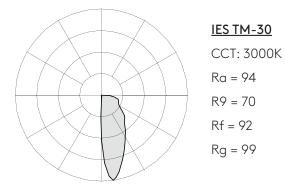
Canary Wharf, London, United Kingdom Photo courtesy of James Newton

Analysis: L60-1C25-935-A2, 0.90 LLF (30" setback distance, wall-to-wall)

A A N

M36 MRC Wall Washer

The M36 MRC Wall Washer utilizes our Micro Reflector Cell (MRC) Technology allowing for exceptional optical control. It is a discrete, exceedingly low glare fixture with very narrow lateral throw which allows for precise light placement. A soft and even distribution illuminates the top of the wall to the floor, providing an excellent uniformity ratio.



Color Vector Graphic





up to 79 lm/W

Light Engine:	A15	A25	A35	A45
lm/ft:	241	402	563	724
W/ft:	3.1	5.1	7.2	9.2

*Values calculated from a 4' luminaire at 3500K and 90 CRI

24″ - 30″ (Recom 		IIIu	minance o	on Wall (fc)
		+35	+42	+42	+35
		+43	⁺ 54	⁺ 54	+43
		+38	+48	+48	+38
		+33	+40	+ 40	+33
	9'-0"	+25	+31	+31	+25
		+22	+25	+25	+22
		+18	+21	+21	+18
Avg: 30 fc		⁺ 16	⁺ 19	⁺ 19	+16
Avg/min: 2 Max/min: 4		+13	⁺ 15	⁺ 15	+13
	F		4'-0)″	

Analysis: L36-A25-WW-35-X-03-XX-UNV, 0.90 LLF (30" setback distance, 8" from sidewall)

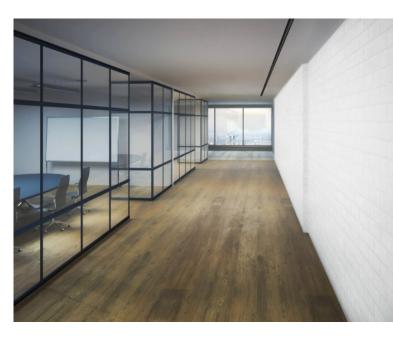


Photo rendering of M36 MRC Wall Washer

Applications

Lighting vertical surfaces can make spaces appear brighter and more spacious, and in some cases, create visual interest by highlighting texture. Wall washing and grazing are two techniques for controlling how these surfaces and spaces are perceived.

Below are three examples that show the same textured accent wall, but with a different lighting technique and luminaire type. Notice how the setback distance, luminaire type, and optical distribution can affect the visual outcome and how the space is experienced.

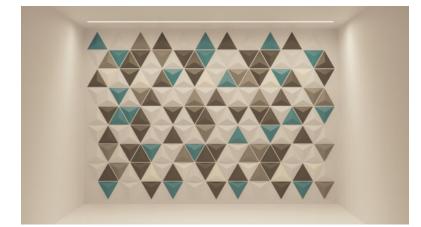


Example 1

Luminaire: M36 LED with the A5 lens Setback Distance: 6" setback

Lighting Effect:

The beam of light strikes the wall at a narrower angle, producing shadowing that reveals and accentuates texture. This type of luminaire creates a luminous line of light in the ceiling plane.



Example 2

Luminaire: M36 LED with the A2 lens Setback Distance: 24" setback

Lighting Effect:

The beam of light strikes the wall at a broader angle, producing a more evenly illuminated wall, but flatter in appearance. This type of luminaire creates a luminous line of light in the ceiling plane.



Example 3

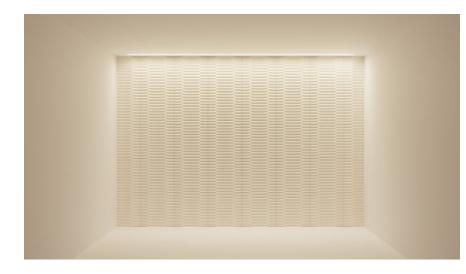
Luminaire: M36 MRC Wall Washer Setback Distance: 24" setback

Lighting Effect:

The wall is uniformly lit from the top of the wall to the floor with a narrow lateral throw and less back spill. This type of luminaire does not create a luminous line of light in the ceiling plane.

Applications - Wall Grazing

Below are examples of other applications where a wall grazer could be used.



Textured Walls

Use M-Series LED with the A5 lens to create visual interest and accentuate texture walls.

Organically Shaped Walls

Use M-Series LED with the A5 lens to highlight variances in the wall and to pull out dimensional aspects.



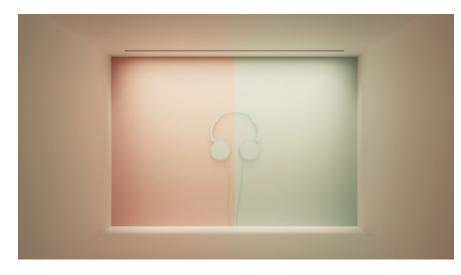


Decorative Panels

Use M-Series LED with the A5 lens to illuminate the wall behind a decorative panel. This will create a beautiful backlighting effect.

Applications - Wall Washer

Below are examples of other applications where a wall washer could be used.



Graphic Walls

Use the M36 MRC Wall Washer to uniformly light a graphic wall without a luminous line in the ceiling. Keep the attention on the wall, not the luminaire.

Living Green Walls

Use M-Series LED with the A2 lens to illuminate a living green wall from floor to ceiling.





Focal Walls with Artwork

Use M-Series LED with the A2 lens to create a focal point by highlighting artwork.

Publisher

Selux Corporation 5 Lumen Lane Highland, NY 12528 www.selux.us

Edited by (responsible) Selux Corporation

Concept and Design

Selux Corporation www.selux.us

Print

Selux Corporation 5 Lumen Lane Highland, NY 12528

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06/2020