

Recessed and surface-mounted LED luminaire

The most advanced type of louvre luminaire: visible energy efficiency.

**MIREL evolution design**Modernisation of the louvre luminaire



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"MIREL evolution is the next generation of louvre luminaires. By giving the luminaire a distinct appearance, Zumtobel has mastered the challenge of integrating energy-efficient LED technology into a tried-and-tested stylistic idiom: the LED modules of MIREL evolution remain visible to the user. Its design being clear, unobtrusive and universally applicable, the luminaire comes with great potential for lighting quality and energy efficiency."

### MIREL evolution with visible LED lenses

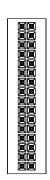
Ideal for Offices and Education



Only 52 mm high, MIREL evolution is the flattest surface-mounted luminaire in the Zumtobel range. When it comes to luminaire efficiency, it is exemplary, too: up to 112 lumens per watt result in short payback periods. Light distribution is effected via the lenses at a rate of 95 per cent; only 5 per cent are accounted for by the reflections from the lighting chamber. The lumen packages and module sizes, however, have not changed as compared to the classic recessed luminaire. Accordingly, conventional luminaires can simply be replaced by exchanging them 1:1.

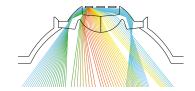
Another benefit: MIREL evolution is available in many versions, for instance as an emergency luminaire with separate battery supply.

112 Im/W





Module 600	598 x 598	1198 x 298
Module 625	623 x 623	1248 x 310
Module 675	673 x 673	1348 x 298



**Standard-compliant office lighting** The unique LED lenses combine directional light distribution with a brilliant look. The requirements made on high lighting quality are met through excellent glare control according to EN 12464:2011 (UGR<16 and L65<1500 cd/m²), high luminaire efficiency and a batwing beam pattern.



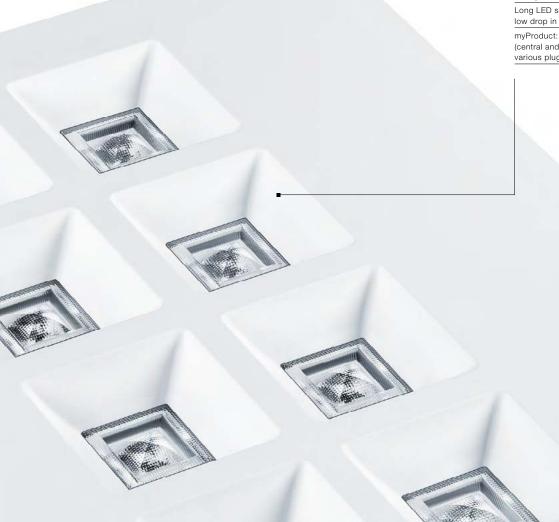
Luminaire efficiency: up to 112 lm/W

Higher protection: IP40

Very good LED binning: MacAdam 3

Long LED service life: 50,000 hours with a low drop in luminous flux (L80)

myProduct: configuration as emergency lighting (central and separate battery supply NT1, NT3), various plugs such as WT3, WT5 and FP



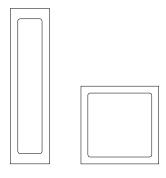
### MIREL evolution with opal diffuser

Ideal for corridors, side rooms, offices and education



Following up on the character of the lens luminaire, the opal variant of MIREL evolution continues the family concept. Square luminaires and linear luminaires position themselves as attractive lighting solutions for corridors and side rooms through quality and price. Additionally, MIREL opal luminaires with small lumen packages are ideally suited for offices and educational facilities. At glare control of UGR <19 and luminance levels of L65 < 3000 cd/m², the luminaires provide standard-compliant glare limitation. Luminaire efficiency of 123 lm/W is a convincing argument for all applications. Thanks to the great variety of versions available, MIREL evolution may also be used as an emergency luminaire with separate battery supply, for instance.

123 lm/W



Module 600	598 x 598	1198 x 298
Module 625	623 x 623	1248 x 310
Module 675	673 x 673	1348 x 298



**3Dprotect® reflector with multiple functions**The innovative 3Dprotect® reflector serves as an insulating element of the LED modules, increasing the light output ratio at the same time.

### MIREL evolution

Luminaire efficiency: up to 123 lm/W

Higher protection: IP40

Very good LED binning: MacAdam 3

Long LED service life: 50,000 hours with a low drop in luminous flux (L80)

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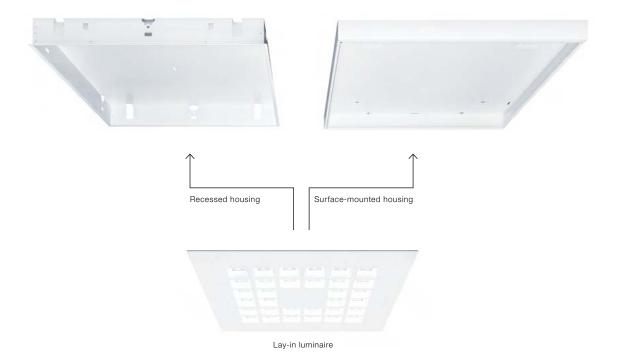
### **MIREL** evolution installation

Surface-mounting, recessing or simply lay-in

# Dopal luminaires Lay-in luminaire for modular ceilings with exposed carrier system Lay-in luminaire for modular ceilings with exposed carrier system Recessed luminaire with levelling option for modular ceilings or for sawn ceiling cut-outs

### Surface-mounted luminaire

High-quality luminaire housing, powder-coated in white with 52 mm visible height



### Modular design

In all versions of MIREL evolution, the same lay-in luminaire is used. Combined with the respective recessed or surface-mounted housing, the luminaire is supplied ready for installation. The look is accordingly always the same - regardless of the rooms and ceiling carriers of the building in which the luminaire is used. Even directly on the building site, the lay-in luminaire can still be turned into a surface-mounted luminaire. This is a very future-proof approach, since retrofitting is possible even after years.

Lighting refurbishment made easy





### Refurbishment of a team office

MIREL evolution as compared to conventional louvre luminaires



MIREL evolution creates perfect lighting conditions for the most varied visual tasks in offices while meeting all relevant standards. In combination with a lighting control system, daylight is used to optimum effect, additionally enhancing lighting quality while reducing energy consumption and  $\rm CO_2$  emissions. Several pre-defined lighting scenes can be called up quickly and easily to create an appropriate atmosphere as required. The lighting is also used to create various zones within the room.

### **Underlying conditions**

### Luminaires before

15 louvre luminaires 4 x 14W T16 Luminous flux of luminaire: 3869 lm Light output of luminaire: 60 lm/W

### Luminaires after

15 MIREL evolution recessed luminaires Q625 37.2W Luminous flux of MIREL evolution luminaire: 3834 lm Light ouput of MIREL evolution luminaire: 103 lm/W

### Lighting management

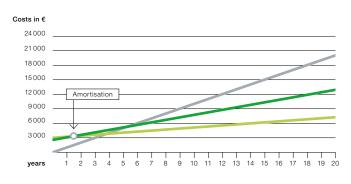
DIMLITE 4ch multifunctional control unit with daylight-based control and presence detection. CIRCLE control point

### Calculation period

20 years

All calculations are based on an annual increase of energy and operating costs of 5%.

### Amortisation of costs



■ Existing lighting system 4 x 14 W T16

■ MIREL evolution

■ MIREL evolution + lighting management



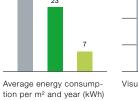
It is estimated that in Europe 106 million T26 luminaires are still being used. This corresponds to about 60 per cent of all luminaires. MIREL evolution is able to reduce these energy costs to one third. As the LED luminaires require hardly any maintenance, short payback periods are ensured. Lighting quality is increased even further by their soft beam pattern and brilliant appearance.



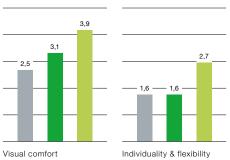
### Energy consumption and costs:

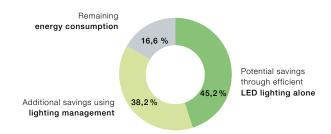
## $\begin{array}{c} 23740 \\ \hline \\ 12781 \\ \hline \\ 4090 \\ \hline \\ Total \ CO_2 \\ throughout \ service \ life \ (kg) \\ \hline \\ Total \ costs \\ (operating \ costs \\ + investment \ costs) \\ \end{array}$

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### Lighting quality:





- Existing lighting system 4 x 14 W T16
- LED lighting
- LED lighting + lighting management

### **ecocalc**

### 14 MIREL evolution lens optic

### |...| Shared properties MIREL Evolution

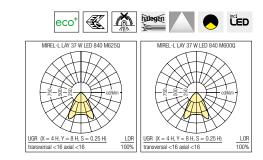
- LED recessed ceiling luminaire with lens optic
- Light guided via square lens optic for maximum luminaire efficiency, perfect glare reduction and batwing light distribution
- High luminaire efficiency of up to 112 lm/W
- ral white) and 3000 K (warm white)
- LED service life: 50,000 h before luminous flux drops to 80 % of initial level
- Colour rendering Ra>80 for office applications
- Colour temperature 4000 K (neut- Chromaticity tolerance between multiple luminaires of up to 3 MacAdam ellipses
  - Low sensitivity to soiling and simple cleaning
  - Halogen-free wiring used in luminaire
  - Deliverable from September 2014

### MIREL evolution lay-in luminaire with lens optic



- Housing made of white polycarbo-
- Installation as pure lay-in luminaire for modular ceilings with visible grid system

	L/W/H	kg	Order no.	Order no.
LED luminaire for module 600			electronic	dimmable Dali only
26 W LED 830 L	1198/298/38	4,3	42 925 921	42 925 922
26 W LED 830 Q	598/598/38	4,1	42 925 915	42 925 916
26 W LED 840 L	1198/298/38	4,3	42 182 364	42 925 923
26 W LED 840 Q	598/598/38	4,1	42 182 362	42 925 917
37 W LED 830 L	1198/298/38	4,3	42 925 918	42 925 919
37 W LED 830 Q	598/598/38	4,1	42 925 912	42 925 913
37 W LED 840 L	1198/298/38	4,3	42 182 363	42 925 920
07 W LED 040 0	E00/E00/00	4.1	40 100 001	40.005.014
37 W LED 840 Q	598/598/38	4,1	42 182 361	42 925 914
LED luminaire for module 625	598/598/38	4,1	electronic	dimmable Dali only
	1248/310/38	4,1		
LED luminaire for module 625		ĺ	electronic	dimmable Dali only
LED luminaire for module 625 26 W LED 830 L	1248/310/38	4,5	electronic 42 925 620	dimmable Dali only 42 925 622
LED luminaire for module 625 26 W LED 830 L 26 W LED 830 Q	1248/310/38 623/623/38	4,5 4,3	electronic 42 925 620 42 925 623	dimmable Dali only 42 925 622 42 925 625
LED luminaire for module 625 26 W LED 830 L 26 W LED 830 Q 26 W LED 840 L	1248/310/38 623/623/38 1248/310/38	4,5 4,3 4,5	electronic 42 925 620 42 925 623 42 182 121	dimmable Dali only 42 925 622 42 925 625 42 925 621
LED luminaire for module 625 26 W LED 830 L 26 W LED 830 Q 26 W LED 840 L 26 W LED 840 Q	1248/310/38 623/623/38 1248/310/38 623/623/38	4,5 4,3 4,5 4,3	electronic 42 925 620 42 925 623 42 182 121 42 182 119	dimmable Dali only 42 925 622 42 925 625 42 925 621 42 925 624
LED luminaire for module 625 26 W LED 830 L 26 W LED 830 Q 26 W LED 840 L 26 W LED 840 Q 37 W LED 830 L	1248/310/38 623/623/38 1248/310/38 623/623/38 1248/310/38	4,5 4,3 4,5 4,3 4,5	electronic 42 925 620 42 925 623 42 182 121 42 182 119 42 925 626	dimmable Dali only 42 925 622 42 925 625 42 925 621 42 925 624 42 925 628
LED luminaire for module 625 26 W LED 830 L 26 W LED 830 Q 26 W LED 840 L 26 W LED 840 Q 37 W LED 830 L 37 W LED 830 Q	1248/310/38 623/623/38 1248/310/38 623/623/38 1248/310/38 623/623/38	4,5 4,3 4,5 4,3 4,5 4,3	electronic 42 925 620 42 925 623 42 182 121 42 182 119 42 925 626 42 925 629	dimmable Dali only 42 925 622 42 925 625 42 925 621 42 925 624 42 925 628 42 925 631



MIREL evolution lens optic

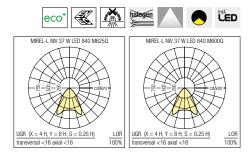
### MIREL evolution levelling-in luminaire with lens optic



- |...|
- Housing made of sheet steel, painted white
- Installation as levelling-in luminaire for cut ceiling apertures and modular ceilings with concealed or visible grid system

	L/W/H	kg	Order no.	Order no.
LED luminaire for module 600			electronic	dimmable Dali only
26 W LED 830 L	1198/298/74	6,8	42 925 930	42 925 931
26 W LED 830 Q	598/598/74	6,6	42 925 927	42 925 928
26 W LED 840 L	1198/298/74	6,8	42 182 368	42 925 932
26 W LED 840 Q	598/598/74	6,6	42 182 366	42 925 929
37 W LED 830 L	1198/298/74	6,8	42 925 981	42 925 982
37 W LED 830 Q	598/598/74	6,6	42 925 924	42 925 925
37 W LED 840 L	1198/298/74	6,8	42 182 367	42 925 983
37 W LED 840 Q	598/598/74	6,6	42 182 365	42 925 926
LED luminaire for module 625			electronic	dimmable Dali only
26 W LED 830 L	1248/310/74	7,0	42 925 632	42 925 634
26 W LED 830 Q	623/623/74	6,8	42 925 635	42 925 637
26 W LED 840 L	1248/310/74	7,0	42 182 125	42 925 633
26 W LED 840 Q	623/623/74	6,8	42 182 123	42 925 636
37 W LED 830 L	1248/310/74	7,0	42 925 638	42 925 640
37 W LED 830 Q	623/623/74	6,8	42 925 641	42 925 643
37 W LED 840 L	1248/310/74	7,0	42 182 124	42 925 639
37 W LED 840 Q	623/623/74	6,8	42 182 122	42 925 642
Accessory				
LFE E NIV SET ceiling fixing kit				22 168 977

Please order levelling set separately.



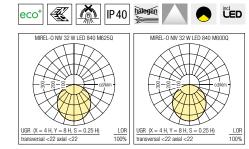


MIREL evolution levelling-in luminaire with opal optic

- LED recessed ceiling luminaire with opal optic
- Housing made of sheet steel, painted white
- Cover of opal PMMA
- Light guided via opal PMMA optic for maximum luminaire efficiency and glare reduction
- High luminaire efficiency of up to 123 lm/W
- Colour temperature 4000 K (neutral white) and 3000 K (warm white)
- LED service life: 50,000 h before luminous flux drops to 80 % of initial
- Colour rendering Ra>80 for office applications
- Chromaticity tolerance between multiple luminaires of up to 3 MacAdam ellipses
- Installation as levelling-in luminaire for cut ceiling apertures and modular ceilings with concealed or visible grid system
- · Low sensitivity to soiling and simple cleaning
- · Halogen-free wiring used in lumi-

	L/W/H	kg	Order no.	Order no.
LED luminaire for module 625			electronic	dimmable Dali only
20 W LED 830 L	1248/310/85	5,4	42 925 656	42 925 658
20 W LED 830 Q	623/623/85	5,1	42 925 659	42 925 661
20 W LED 840 L	1248/310/85	5,4	42 182 137	42 925 657
20 W LED 840 Q	623/623/85	5,1	42 182 135	42 925 660
32 W LED 830 L	1248/310/85	5,4	42 925 662	42 925 664
32 W LED 830 Q	623/623/85	5,1	42 925 665	42 925 667
32 W LED 840 L	1248/310/85	5,4	42 182 136	42 925 663
32 W LED 840 Q	623/623/85	5,1	42 182 134	42 925 666
LED luminaire for module 600			electronic	dimmable Dali only
20 W LED 830 L	1198/298/85	5,1	42 925 966	42 925 967
20 W LED 830 Q	598/598/85	4,8	42 925 960	42 925 961
20 W LED 840 L	1198/298/85	5,1	42 182 372	42 925 968
20 W LED 840 Q	598/598/85	4,8	42 182 370	42 925 962
32 W LED 830 L	1198/298/85	5,1	42 925 963	42 925 964
32 W LED 830 Q	598/598/85	4,8	42 925 957	42 925 958
32 W LED 840 L	1198/298/85	5,1	42 182 371	42 925 965
32 W LED 840 Q	598/598/85	4,8	42 182 369	42 925 959
Accessory				
LFE E NIV SET ceiling fixing kit				22 168 977

Please order levelling set separately.

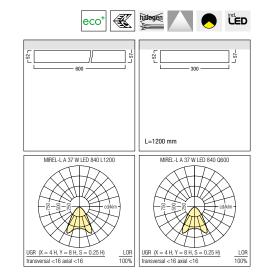


### MIREL evolution surface-mounted luminaire with lens optic



- LED surface-mounted ceiling luminaire with lens optic
- High quality white powder-coated flat luminaire housing with visible luminaire height of 52 mm
- Light guided via square lens optic for maximum luminaire efficiency, perfect glare reduction and batwing light distribution
- High luminaire efficiency of up to 112 lm/W
- Colour temperature 4000 K (neutral white) and 3000 K (warm white)
- LED service life: 50,000 h before luminous flux drops to 80 % of initial level
- Colour rendering Ra>80 for office applications
- Chromaticity tolerance between multiple luminaires of up to 3 MacAdam ellipses
- Low sensitivity to soiling and simple cleaning
- Halogen-free wiring used in luminaire

	L/W/H	kg	Order no.	Order no.
LED luminaires			electronic	dimmable Dali only
26 W LED 830 L1200	1200/300/52	7,0	42 925 608	42 925 610
26 W LED 830 Q600	600/600/52	6,6	42 925 611	42 925 613
26 W LED 840 L1200	1200/300/52	7,0	42 182 129	42 925 609
26 W LED 840 Q600	600/600/52	6,6	42 182 127	42 925 612
37 W LED 830 L1200	1200/300/52	7,0	42 925 614	42 925 616
37 W LED 830 Q600	600/600/52	6,6	42 925 617	42 925 619
37 W LED 840 L1200	1200/300/52	7,0	42 182 128	42 925 615
37 W LED 840 Q600	600/600/52	6,6	42 182 126	42 925 618





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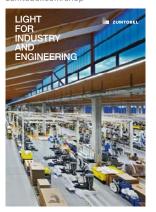
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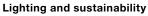


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### Zumtobel is the internationally leading supplier of integral lighting solutions for professional interior and exterior lighting applications.

- Offices and Communication
- Education and Science
- Presentation and Retail
- Hotel and Wellness
- Art and Culture
- Health and Care
- Industry and Engineering
- Façades and Architecture

We provide unique customer benefits by integrating technology, design, emotion and energy efficiency. Under the Humanergy Balance concept, we combine the best possible ergonomic lighting quality for an individual's well-being with the responsible use of energy resources. The company's own sales organisations in twenty countries, as well as commercial agencies in fifty other countries, form an international network of experts and design partners providing professional lighting consulting, design assistance and comprehensive services.



In line with our corporate philosophy "We want to use light to create worlds of experience, make work easier and improve communications and safety while remaining fully aware of our responsibility to the environment", Zumtobel offers energy-efficient high-quality products, while at the same time making sure that our production processes based on the considerate use of resources are environmentally compatible.

zumtobel.com/sustainability

Order no. 04946378-EN 09/2014 © Zumtobel Lighting GmbH Technical data was correct at time of going to press. We reserve the right to make technical changes without notice. Please contact your local sales office for further information. For the sake of the environment: Luxo Light is chlorine-free paper from sustainably managed forests and certified sources.



### Top quality – with a five-year guarantee.

As a globally leading luminaire manufacturer, Zumtobel provides a five year manufacturer's guarantee on all Zumtobel branded products subject to registration within 90 days from the invoice date and in accordance with the terms of guarantee at zumtobel.com/guarantee.





### **ZUMTOBEL**



Tracks and spots



Modular lighting systems



Downlights



Recessed luminaires



Surface-mounted and pendant luminaires



Free-standing and wall-mounted luminaires



Continuous-row systems and individual batten luminaires



High-bay luminaires and floodlight reflector systems



Luminaires with extra protection



Façade, media and outdoor luminaires



Lighting management systems



**Emergency lighting** 



Medical supply systems

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### zumtobel.com



Recessed and surface-mounted LED luminaire

The most advanced type of louvre luminaire: visible energy efficiency.

