Deep Minimal
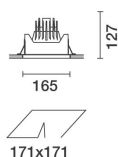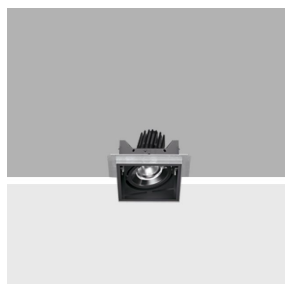
Last information update: May 2018

Deep Minimal - 1 element - CoB warm LED - wide flood beam - dimmable DALI

Product code
P938

Technical description
Individual recessed luminaire for LED lamp. Minimal (frameless) version with no contact frame. Shaped stainless steel sheet structural frame specifically designed for flush with ceiling application using the adapter supplied. Die-cast aluminium, twin swivel universal joint located in a position set back from the installation surface to guarantee a high level of visual comfort. Tilts ± 30° around both the horizontal and vertical axes. Die-cast aluminium lighting body designed to optimise heat dispersal. High efficiency aluminium reflector - wide flood angle. High color rendering index, warm white LED lamp. Glass cover Control gear unit included.

Installation
Recessed in 12.5 mm thick false ceilings. The aluminium adapter is designed for filling, smoothing and finishing the false ceiling before inserting the recessed unit. Steel wire fixing springs. Preparation hole 171 x 171.

Dimension (mm)
165x165x127

Colour
White (01) | Black (04)

Weight (Kg)
1.55

Mounting
ceiling recessed

Wiring
Complete with DALI dimmable control gear unit connected to the luminaire. Wiring for connecting to mains network on driver terminal board

Notes
Accessories available: refractor for elliptical flow distribution - interchangeable reflectors - adapter for installation in 15 mm thick false ceilings

Complies with EN60598-1 and pertinent regulations

IP20   IP23   On the visible part of the product once installed

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Product configuration: P938

Product characteristics

Total lighting output [Lm]: 2354	Total luminous flux at or above an angle of 90° [Lm]: 0
Total power [W]: 32.2	Emergency luminous flux [Lm]: /
Luminous efficacy [Lm/W]: 73.1	Voltage [V]: -
Life Time: > 50,000h - L80 - B10 (Ta 25°C)	Number of optical assemblies: 1

Optical assembly Characteristics Type 1

Light Output Ratio (L.O.R.) [%]: 76	Number of lamps for optical assembly: 1
Lamp code: LED	Socket: /
ZVEI Code: LED	Ballast losses [W]: 5.2
Nominal power [W]: 27	Colour temperature [K]: 3000
Nominal luminous [Lm]: 3100	CRI: 90
Lamp maximum intensity [cd]: /	Wavelength [Nm]: /
Beam angle [°]: 48°	MacAdam Step: 3

Polar

Imax=3773 cd	CIE nL 0.76 99-100-100-100-76 UGR 12.1-12.1 **DIN** A.61 **UTE** 0.76A+0.00T F"1=988 F"1+F"2=998 F"1+F"2+F"3=1000 **CIBSE** LG3 L<500 cd/m² at 65° UGR<16 I L<500 cd/mq @65°

Lux			
h	d	Em	Emax
2	1.8	751	942
4	3.6	188	236
6	5.3	83	105
8	7.1	47	59

α=48°
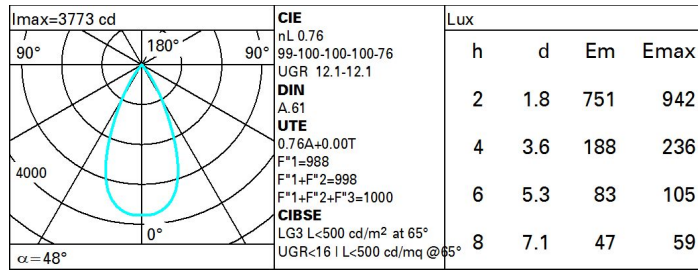
Utilisation factors

R	77	75	73	71	55	53	33	00	DRR
K0.8	68	65	62	60	64	62	61	59	78
1.0	71	68	66	64	67	65	65	62	82
1.5	75	72	71	69	72	70	69	67	88
2.0	77	75	74	73	74	73	72	70	93
2.5	79	77	76	75	76	75	74	72	95
3.0	80	79	78	77	77	77	76	74	97
4.0	81	80	79	79	79	78	77	75	99
5.0	81	81	80	80	79	79	78	76	100

Luminance curve limit

QC	A	G	1.15	2000	1000	500		<=300		
	B		1.50		2000	1000	750	500	<=300	
	C		1.85			2000		1000	500	<=300

C0-180   C90-270
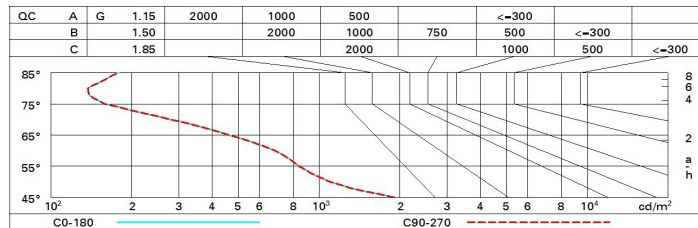
UGR diagram

Corrected UGR values (at 3100 lm bare lamp luminous flux)

Riflect.: ceil/cav		0.70	0.70	0.50	0.50	0.30	0.70	0.70	0.50	0.50	0.30
walls		0.50	0.30	0.50	0.30	0.30	0.50	0.30	0.50	0.30	0.30
work pl.		0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Room dim x	y			viewed crosswise					viewed endwise		
2H	2H	12.7	13.2	13.0	13.5	13.7	12.7	13.2	13.0	13.5	13.7
	3H	12.6	13.1	12.9	13.3	13.6	12.6	13.1	12.9	13.3	13.6
	4H	12.5	13.0	12.8	13.2	13.5	12.5	12.9	12.8	13.2	13.5
	6H	12.4	12.8	12.8	13.1	13.5	12.4	12.8	12.7	13.1	13.5
	8H	12.4	12.8	12.7	13.1	13.4	12.4	12.8	12.7	13.1	13.4
	12H	12.3	12.7	12.7	13.1	13.4	12.3	12.7	12.7	13.1	13.4
4H	2H	12.5	12.9	12.8	13.2	13.5	12.5	13.0	12.8	13.2	13.5
	3H	12.3	12.7	12.7	13.1	13.4	12.3	12.7	12.7	13.1	13.4
	4H	12.2	12.6	12.6	13.0	13.3	12.2	12.6	12.6	13.0	13.3
	6H	12.2	12.5	12.6	12.9	13.3	12.2	12.5	12.6	12.9	13.3
	8H	12.1	12.4	12.6	12.8	13.2	12.1	12.4	12.6	12.8	13.2
	12H	12.1	12.3	12.5	12.8	13.2	12.1	12.3	12.5	12.7	13.2
8H	4H	12.1	12.4	12.6	12.8	13.2	12.1	12.4	12.6	12.8	13.2
	6H	12.0	12.3	12.5	12.7	13.2	12.0	12.3	12.5	12.7	13.2
	8H	12.0	12.2	12.5	12.6	13.1	12.0	12.2	12.5	12.6	13.1
	12H	11.9	12.1	12.4	12.6	13.1	11.9	12.1	12.4	12.6	13.1
12H	4H	12.1	12.3	12.5	12.7	13.2	12.1	12.3	12.5	12.8	13.2
	6H	12.0	12.2	12.5	12.6	13.1	12.0	12.2	12.5	12.6	13.1
	8H	11.9	12.1	12.4	12.6	13.1	11.9	12.1	12.4	12.6	13.1

Variations with the observer position at spacing:

S =	1.0H	6.1 / -13.4	6.1 / -13.4
	1.5H	8.9 / -14.8	8.9 / -14.8
	2.0H	10.9 / -16.5	10.9 / -16.5