Deep Frame

Last information update: April 2018

Deep Frame - 3 elements - CoB warm LED - medium beam

Product code
P904

Technical description
Three element recessed luminaire for LED lamps. Version with a perimeter frame. Shaped sheet steel structural frame. Die-cast aluminium, twin swivel universal joints 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 bodies designed to optimise heat dispersal. High efficiency aluminium reflectors - medium angle. High color rendering index, warm white LED lamps. Each lamp unit has its own glass cover. The installation system is toolfree. Control gear unit included.

Installation
Recessed in 1 to 30 mm thick false ceilings. Steel wire fixing springs. Preparation hole 102 x 272.

Dimension (mm)
280x110x89

Colour
White (01) | Grey/Black (74)

Weight (Kg)
1.21

Mounting
ceiling recessed

Wiring
Complete with electronic 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.

Complies with EN60598-1 and pertinent regulations

IP20   IP23   On the visible part of
the product once installed
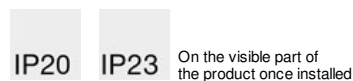
Product configuration: P904
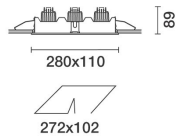
Product characteristics
Total lighting output [Lm]: 1995
Total power [W]: 30.4
Luminous efficacy [Lm/W]: 65.6
Life Time: > 50,000h - L80 - B10 (Ta 25°C)

Total luminous flux at or above an angle of 90° [Lm]: 0
Emergency luminous flux [Lm]: /
Voltage [V]: -
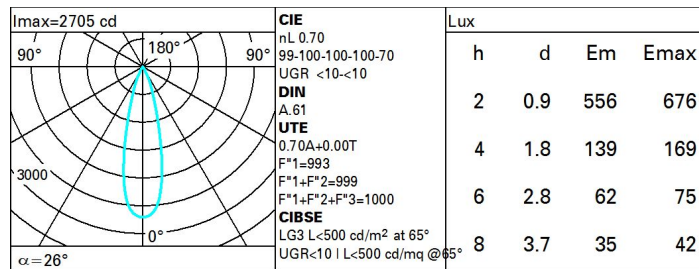Number of optical assemblies: 3

Optical assembly Characteristics Type 1
Light Output Ratio (L.O.R.) [%]: 70
Lamp code: LED
ZVEI Code: LED
Nominal power [W]: 8.4
Nominal luminous [Lm]: 950
Lamp maximum intensity [cd]: /
Beam angle [°]: 26°

Number of lamps for optical assembly: 1
Socket: /
Ballast losses [W]: 1.7
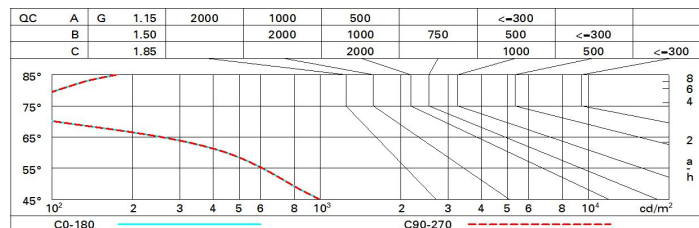Colour temperature [K]: 3000
CRI: 90
Wavelength [Nm]: /
MacAdam Step: 3

Polar

Imax=2705 cd			CIE	Lux			
			nL 0.70				
90°	180°	90°	99-100-100-100-70	h	d	Em	Emax
			UGR <10-<10				
			DIN	2	0.9	556	676
			A.61				
			UTE				
			0.70A+0.00T	4	1.8	139	169
3000			F"1=993				
			F"1+F"2=999				
			F"1+F"2+F"3=1000	6	2.8	62	75
	0°		**CIBSE**				
			LG3 L<500 cd/m² at 65°	8	3.7	35	42
α=26°			UGR<10 l L<500 cd/mq @65°				

Utilisation factors

R	77	75	73	71	55	53	33	00	DRR
K0.8	63	60	58	56	59	57	57	55	78
1.0	66	63	61	59	62	60	60	58	83
1.5	69	67	65	64	66	65	64	62	88
2.0	71	70	68	67	69	68	67	65	93
2.5	73	71	70	70	70	70	69	67	96
3.0	73	73	72	71	72	71	70	68	98
4.0	74	74	73	73	73	72	71	69	99
5.0	75	74	74	74	73	73	72	70	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 – – – – –

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UGR diagram

Corrected UGR values (at 950 lm bare lamp luminous flux)

Riflect.: ceil/cav	walls	work pl.	0.70 0.50 0.20	0.70 0.30 0.20	0.50 0.50 0.20	0.50 0.30 0.20	0.30 0.30 0.20	0.70 0.50 0.20	0.70 0.30 0.20	0.50 0.50 0.20	0.50 0.30 0.20	0.30 0.30 0.20
Room dim x	y				viewed crosswise					viewed endwise		
2H	2H		-1.7	0.5	-1.3	0.8	1.2	-1.7	0.5	-1.3	0.8	1.2
	3H		-1.7	-0.0	-1.3	0.3	0.6	-1.7	0.0	-1.3	0.4	0.7
	4H		-1.8	-0.4	-1.4	-0.0	0.3	-1.7	-0.3	-1.3	0.0	0.4
	6H		-1.8	-0.7	-1.4	-0.4	-0.0	-1.7	-0.6	-1.3	-0.3	0.0
	8H		-1.8	-0.7	-1.4	-0.4	-0.0	-1.8	-0.7	-1.4	-0.4	0.0
	12H		-1.8	-0.8	-1.4	-0.4	-0.0	-1.8	-0.8	-1.4	-0.4	-0.0
4H	2H		-1.7	-0.3	-1.3	0.0	0.4	-1.8	-0.4	-1.4	-0.0	0.3
	3H		-1.7	-0.7	-1.3	-0.3	0.1	-1.7	-0.7	-1.3	-0.3	0.1
	4H		-1.8	-0.8	-1.4	-0.4	-0.0	-1.8	-0.8	-1.4	-0.4	-0.0
	6H		-2.1	-0.4	-1.6	0.0	0.5	-2.1	-0.4	-1.7	-0.0	0.5
	8H		-2.2	-0.3	-1.7	0.1	0.6	-2.3	-0.4	-1.8	0.1	0.6
	12H		-2.3	-0.3	-1.8	0.2	0.7	-2.4	-0.4	-1.9	0.1	0.6
8H	4H		-2.3	-0.4	-1.8	0.1	0.6	-2.2	-0.3	-1.7	0.1	0.6
	6H		-2.3	-0.5	-1.8	-0.0	0.5	-2.3	-0.5	-1.8	-0.0	0.5
	8H		-2.3	-0.7	-1.8	-0.2	0.3	-2.3	-0.7	-1.8	-0.2	0.3
	12H		-2.1	-1.0	-1.6	-0.5	-0.0	-2.1	-1.1	-1.6	-0.6	-0.1
12H	4H		-2.4	-0.4	-1.9	0.1	0.6	-2.3	-0.3	-1.8	0.2	0.7
	6H		-2.4	-0.7	-1.8	-0.2	0.3	-2.3	-0.6	-1.8	-0.1	0.4
	8H		-2.1	-1.1	-1.6	-0.6	-0.1	-2.1	-1.0	-1.6	-0.5	-0.0

Variations with the observer position at spacing:

S =			
	1.0H	3.9 / -2.7	3.9 / -2.7
	1.5H	6.3 / -4.6	6.3 / -4.6
	2.0H	8.2 / -7.3	8.2 / -7.3