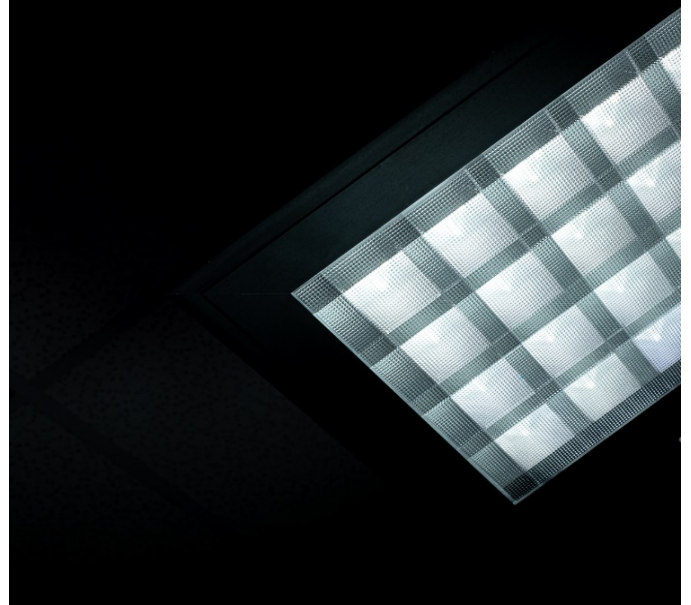


## LIBUS SBL13WB LSP-MC IP40

**DESCRIPTION** : Libus® basic - performance version luminaire configuration with pre-anodized specular angled reflector louver and PMMA clear micro-prismatic underlay cover, characterized by ecodesign efficacy, low glare levels and precise beam control.

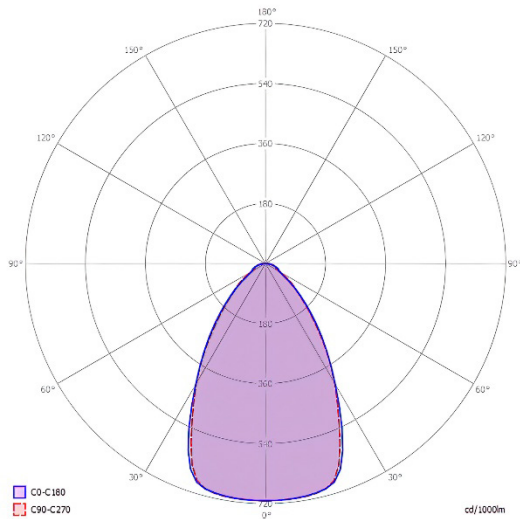
Light output ratio - L.O.R.	72,2%
Efficacy - lm/w <small>(range depending on the luminaire driving power)</small>	116 - 125
Utilization factor <small>(TM5 UF table average)</small>	86,1
Glare level - UGR <small>(4Hx8H - refl. 70-50-20)</small>	10,2
Beam angle	2x32.7° = 65.4°
Degree of protection	IP40



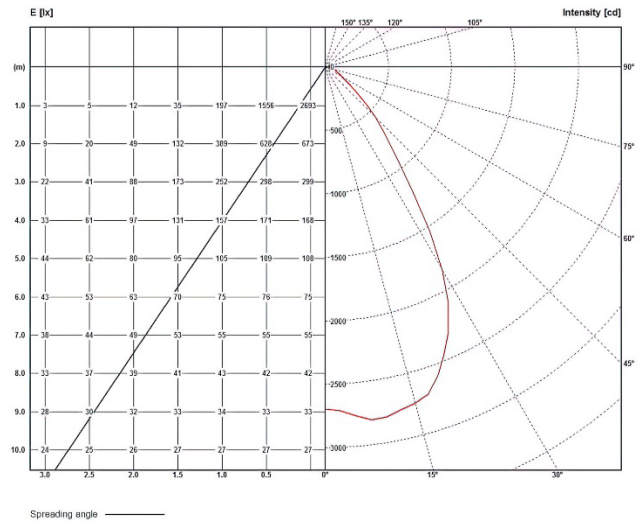
LSP_MC IP40		BEAM ANGLE		L.O.R.		DIMENSIONS / POWER OPTIONS											OPTIMAL	SAFE	NOT AVAILABLE	
		2 x 32.7° <sup>d</sup>		%		EFFICACY / LUMEN OUTPUT											lm/w	lm/w	-	
		65.4°		72,2													lumens	lumens	-	
ROW LED STRIPS	WIDTH mm		LENGTH mm		3 - 8 w nominal DIPswitch				11 - 21 w nominal DIPswitch				21 - 30 w nominal DIPswitch							
	OPTIMAL	MINIMUM	OPTIMAL	MINIMUM	3,8 w	5 w	6,3 w	7,6 w	11 w	15 w	19 w	21 w	21 w	25 w	27 w	30 w				
1 x 13	595	563	595	563	-	-	-	-	-	124	121	120	120	120	118	117				
	620	588			-	-	-	-	-	1779	2215	2454	2403	2868	3060	3398				
1 x 6	310	278			-	-	-	120	119	118	117	116	-	-	-	-	-	-	-	-
	334	302			-	-	888	1243	1700	2130	2334	-	-	-	-	-	-	-	-	-
1 x 5	269	237			-	-	-	120	119	118	117	116	-	-	-	-	-	-	-	-
	293	261			-	-	736	878	1234	1682	2111	-	-	-	-	-	-	-	-	-
1 x 4	228	197			595	563	-	120	118	117	116	115	-	-	-	-	-	-	-	-
	252	220			620	588	-	580	722	852	1217	1652	-	-	-	-	-	-	-	-
1 x 3	187	156			-	-	-	120	118	116	115	-	-	-	-	-	-	-	-	-
	212	180			-	-	574	714	848	1214	-	-	-	-	-	-	-	-	-	-
1 x 2	147	115			120	118	117	116	-	-	-	-	-	-	-	-	-	-	-	-
	171	139			431	567	706	845	-	-	-	-	-	-	-	-	-	-	-	-
1 x 1	106	74			118	117	116	-	-	-	-	-	-	-	-	-	-	-	-	-
	130	98			429	561	700	-	-	-	-	-	-	-	-	-	-	-	-	-
2 x 6	310	278	-	-	-	-	-	-	125	124	121	120	120	118	117	117				
	334	302	-	-	-	-	-	-	1303	1779	2215	2454	2391	2834	3042	3381				
2 x 5	269	237	-	-	-	-	-	-	123	121	121	120	118	117	117	116				
	293	261	-	-	-	-	-	-	1282	1749	2202	2422	2380	2817	3027	3334				
2 x 4	228	197	-	-	-	122	121	120	120	118	117	116	116	-	-	-	-	-		
	252	220	1125	1093	-	898	1269	1735	2180	2405	2342	2778	-	-	-	-	-	-		
2 x 3	187	156	1150	1118	-	120	120	118	117	116	-	-	-	-	-	-	-	-		
	212	180	-	-	-	884	1255	1700	2130	2334	-	-	-	-	-	-	-	-		
2 x 2	147	115	-	-	120	118	117	116	115	-	-	-	-	-	-	-	-	-		
	171	139	-	-	574	714	799	1216	1652	-	-	-	-	-	-	-	-	-		
2 x 1	106	74	119	118	117	116	-	-	-	-	-	-	-	-	-	-	-	-		
	130	98	429	567	706	845	-	-	-	-	-	-	-	-	-	-	-	-		

• Due to material properties and processing condition tolerances, photometric data may vary in different production batches within EU directive.

POLAR DIAGRAMME (cd / 1000lm)



ILLUMINANCE – CANDELA DIAGRAMME (lux/cd)



**UGR GLARE RATIOS**

Ceiling reflectance		0.7		0.5		0.3		0.7		0.5		0.3	
Wall reflectance		0.5		0.3		0.5		0.3		0.5		0.3	
Floor cavity reflectance		0.2											
Room dimensions		Viewed crosswise						Viewed endwise					
2H	2H	7,9	9,2	8,2	9,5	9,8	7,9	9,3	8,3	9,6	9,8		
	3H	8,4	9,6	8,8	10,1	10,3	8,7	9,9	9,1	10,1	10,6		
	4H	8,8	9,9	9,2	10,2	10,5	9,1	10,3	9,5	10,6	11,0		
	6H	9,2	10,2	9,6	10,5	10,8	9,6	10,6	10,0	10,9	11,3		
	8H	9,4	10,2	9,7	10,5	10,9	9,7	10,7	10,1	11,1	11,5		
	12H	9,3	10,1	9,8	10,5	11,0	9,9	10,7	10,3	11,1	11,5		
4H	2H	8,0	9,3	8,3	9,5	9,9	8,2	9,2	8,6	9,6	10,0		
	3H	8,8	9,9	9,4	10,3	10,7	9,2	10,1	9,6	10,5	10,9		
	4H	9,5	10,2	9,8	10,7	11,1	9,7	10,7	10,2	10,9	11,4		
	6H	9,9	10,7	10,5	11,0	11,6	10,6	11,1	10,9	11,6	12,0		
	8H	10,2	10,8	10,7	11,2	11,7	10,7	11,5	11,1	11,9	12,2		
	12H	10,2	10,9	10,8	11,2	11,8	11,0	11,8	11,5	12,1	12,6		
8H	4H	9,7	10,2	10,0	10,6	11,1	11,0	10,6	10,3	11,0	11,5		
	6H	10,2	10,7	10,7	11,2	11,7	10,7	11,2	11,2	11,7	12,2		
	8H	10,6	10,9	11,0	11,5	12,0	11,4	11,8	11,9	12,3	12,7		
	12H	10,8	11,2	11,3	11,7	12,1	11,6	12,1	12,2	12,6	13,1		
12H	4H	9,5	10,3	10,0	10,5	11,0	10,0	10,6	10,4	11,0	11,5		
	6H	10,3	10,7	10,8	11,3	11,8	10,8	11,3	11,4	11,9	12,4		
	8H	10,7	11,2	11,1	11,6	12,0	11,3	11,8	11,9	12,3	12,8		

**TMS UTILISATION FACTORS**

Utilization factors			LOR = 100.0%			DLOR = 100.0%			ULOR = 0.0%		
Room reflection			Room index								
C	W	F	0,75	1,00	1,25	1,50	2,00	2,50	3,00	4,00	5,00
0.7	0.5	0.2	73	81	87	90	96	99	102	105	107
	0.3		67	75	81	85	91	95	98	102	105
	0.1		63	71	77	81	88	92	95	99	102
0.5	0.5	0.2	71	79	84	88	93	96	98	91	103
	0.3		66	74	80	84	89	93	95	99	101
	0.1		62	70	76	80	86	90	93	97	99
0.3	0.5	0.2	70	78	82	86	90	93	95	98	99
	0.3		65	73	78	82	87	90	93	96	98
	0.1		62	70	75	79	84	88	90	94	96
0.0	0.0	0.0	60	68	73	76	81	84	87	90	91
			SHR NOM. = 1,00			SHR MAX. = 1,21			SHR MAX TR = 1,26		

### Technical Specifications

Rectangular or square shaped, anodized aluminum body, IP40 LED ceiling luminaire, characterized by:

1. **pre-anodized specular aluminum** sight blocking, light distribution and glare control angled cubic louver **with clear micro-prismatic PMMA cover**.
2. suitability for recessing in T24 600 x 600 and 625 x 625 mm grid ceilings as well as plaster & clip-in system ceilings and pendant, surface and rail track mounting with accessories to be ordered separately
3. providing precise light distribution control over **32,7°** ensures excellent low glare-free (**UGR<12**) visual comfort and photometric performance guaranteeing average **+86.1%** (TM5 utilization factors table average) of generated light to be conveyed directly to working plane
4. eco-friendly construction enabling easy disassembly & re-cycling of components and easy replacement of lamp unit as required by *ecodesign*.
5. energy efficacy level ranging between **116 to 125 lm/w** combined with high UF values enabling the driving of the luminaires at low current levels which in turn provides low LED junction temperature promising **luminaire efficient service life / L80B10** ( $t_{j,25^{\circ}\text{C}}$ ) **>50.000h.** and chromatic stability / color consistency over the entire luminaire life
6. 10µm natural anodized aluminum body. Further color anodized and RAL colors painted finishes on request
7. open-circuit proof control gear unit, protected against faulty connection, short circuit, overload and over-temperature
8. replaceable control gear and PCB lamp unit
9. control gear unit **output ripple <5% - PSTLM ≤1 - SVM ≤0.4** for effective control of the LED system and for flicker-free light
10. complying with fundamental requirements of applicable EU regulations and product safety legislation and bears the CE symbol. The luminaire is part of a range of recessed, surface-mounted and suspended luminaires with a harmonized appearance. Project-specific versions with varying luminaire characteristics are possible on request.

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Rectangular and square anodized aluminum body IP40 LED ceiling luminaire **with pre-anodized specular aluminum** sight blocking, light distribution and glare control angled cubic louver **with clear micro-prismatic PMMA underlay**. Suitable for recessing in T24 600 x 600 and 625 x 625 mm grid ceilings as well as plaster & clip-in system ceilings and pendant, surface and rail track mounting with accessories to be ordered separately. Precise light distribution control over **32,7°** ensures excellent glare-free (**UGR<12**) visual comfort and photometric performance guaranteeing average **+86.1%** (TM5 utilization factors table average) of generated light to be conveyed directly to working plane. Eco-friendly construction enables easy disassembly & re-cycling of components and easy replacement of lamp unit as required by *ecodesign*. Energy efficacy level ranging between **116 to 125 lm/w** coupled with high UF values enable driving luminaires at low current which in turn provides low LED junction temperature promising **luminaire efficient service life / L80B10** ( $t_{j,25^{\circ}\text{C}}$ ) **>50.000 h.** and chromatic stability / color consistency over the entire luminaire life. Luminaire body of 10µm anodized aluminum. Further color anodized and RAL colors painted finishes on request. Control gear unit is open-circuit proof and protected against faulty connection, short circuit, overload and over-temperature. The control gear and PCB lamp unit are replaceable. **Output ripple** of the control gear unit **<5% - PSTLM ≤1 - SVM ≤0.4** for effective control of the LED system and for flicker-free light. The luminaire complies with fundamental requirements of applicable EU regulations and product safety legislation and bears the CE symbol. The luminaire is part of a range of recessed, surface-mounted and suspended luminaires with a harmonized appearance. Project-specific versions with varying luminaire characteristics are possible on request.