

## LIBUS SBL13WB LSP-BL IP20

**DESCRIPTION** : Libus® basic - performance version luminaire configuration with pre-anodized satin matt angled reflector louver and without underlay cover, characterized by *ecodesign* efficacy, low glare levels and precise beam control.

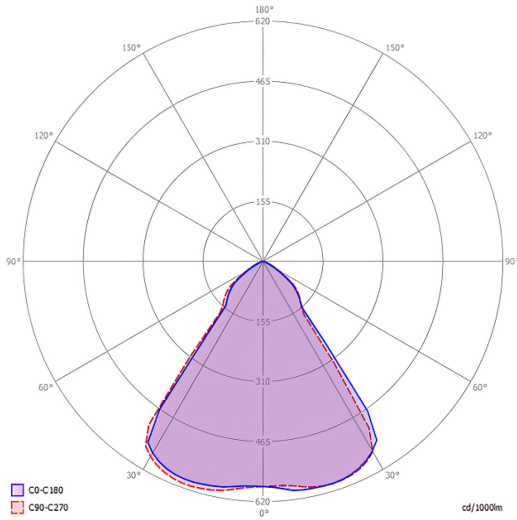
Light output ratio – L.O.R.	73,8%
Efficacy – lm/w <small>(range depending on the luminaire driving power)</small>	122 – 132
Utilization factor <small>(TM5 UF table average)</small>	91,6
Glare level – UGR <small>(4Hx8H – refl. 70-50-20)</small>	8,6
Beam angle	2x42.1° = 84.2°
Degree of protection	IP20



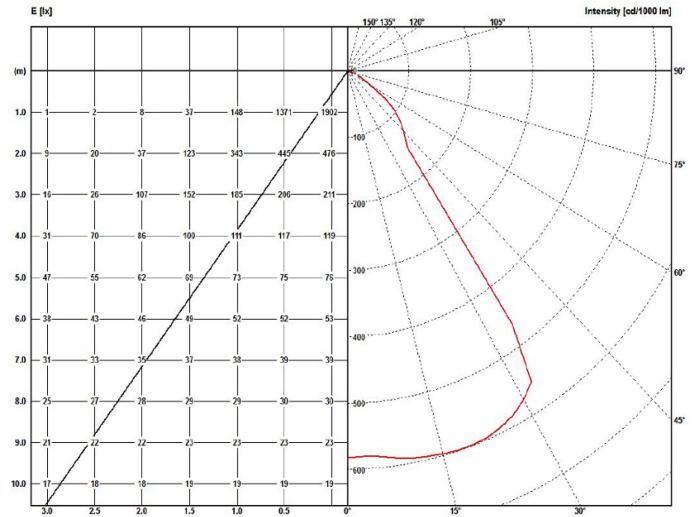
LSP_BL IP20		BEAM ANGLE		L.O.R.	DIMENSIONS / POWER OPTIONS												OPTIMAL	SAFE	NOT AVAILABLE	
		2 x 42.1°		%	EFFICACY / LUMEN OUTPUT												lm/w	lm/w	-	
		84.2°		73,8	lm/w	lumens	lumens	-												
ROW LED STRIPS	WIDTH mm		LENGTH mm		3 - 8 w nominal DIPswitch				11 - 21 w nominal DIPswitch				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	-	-	-	-	-	131	128	127	127	126	125	124				
	620	588			-	-	-	-	-	1882	2343	2595	2542	3033	3236	3594				
1 x 6	310	278			-	-	-	127	126	125	124	122	-	-	-	-	-	-	-	-
	334	302			-	-	939	1321	1798	2253	2468	-	-	-	-	-	-	-	-	-
1 x 5	269	237			-	-	-	127	126	125	124	122	-	-	-	-	-	-	-	-
	293	261			-	-	779	932	1305	1778	2233	-	-	-	-	-	-	-	-	-
1 x 4	228	197			595	563	-	126	125	124	122	121	-	-	-	-	-	-	-	-
	252	220			620	588	-	613	763	901	1279	1747	-	-	-	-	-	-	-	-
1 x 3	187	156			-	-	-	126	125	123	122	-	-	-	-	-	-	-	-	-
	212	180			-	-	607	755	897	1293	-	-	-	-	-	-	-	-	-	-
1 x 2	147	115			126	125	124	122	-	-	-	-	-	-	-	-	-	-	-	-
	171	139			456	599	747	893	-	-	-	-	-	-	-	-	-	-	-	-
1 x 1	106	74	125	124	122	-	-	-	-	-	-	-	-	-	-	-	-	-		
	130	98	454	593	740	-	-	-	-	-	-	-	-	-	-	-	-	-		
2 x 6	310	278	-	-	-	-	-	-	132	131	128	127	127	125	124	124				
	334	302	-	-	-	-	-	-	1378	1882	2343	2595	2528	2997	3217	3575				
2 x 5	269	237	-	-	-	-	-	-	130	128	128	126	125	124	124	122				
	293	261	-	-	-	-	-	-	1355	1849	2328	2561	2517	2979	3201	3526				
2 x 4	228	197	-	-	-	128	127	127	126	125	124	122	-	-	-	-	-	-		
	252	220	1125	1093	-	947	1338	1835	2305	2543	2477	2938	-	-	-	-	-	-		
2 x 3	187	156	1150	1118	-	-	-	127	126	125	124	122	-	-	-	-	-	-		
	212	180	-	-	-	934	1328	1798	2253	2468	-	-	-	-	-	-	-	-		
2 x 2	147	115	-	-	126	125	124	122	121	-	-	-	-	-	-	-	-	-		
	171	139	-	-	607	755	845	1286	1747	-	-	-	-	-	-	-	-	-		
2 x 1	106	74	126	125	124	122	-	-	-	-	-	-	-	-	-	-	-	-		
	130	98	454	599	747	893	-	-	-	-	-	-	-	-	-	-	-	-		

• 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	8,9	10,2	9,3	10,5	10,8	9,0	10,2	9,3	10,5	10,8	8,9	10,2	9,3	10,4	10,7
	3H	8,9	10,2	9,3	10,3	10,7	8,9	10,0	9,3	10,4	10,7	8,9	10,0	9,3	10,4	10,7
	4H	8,8	9,8	9,2	10,2	10,6	8,9	9,9	9,3	10,3	10,6	8,9	9,9	9,3	10,3	10,6
	6H	8,8	9,7	9,2	10,1	10,5	8,8	9,8	9,3	10,1	10,5	8,8	9,8	9,3	10,1	10,5
	8H	8,7	9,6	9,1	10,0	10,4	8,8	9,7	9,2	10,0	10,4	8,8	9,7	9,2	10,0	10,4
	12H	8,7	9,5	9,1	9,9	10,3	8,7	9,6	9,1	10,0	10,4	8,7	9,6	9,1	10,0	10,4
4H	2H	8,8	9,8	9,2	10,2	10,5	8,8	9,8	9,2	10,2	10,6	8,8	9,8	9,2	10,2	10,6
	3H	8,7	9,6	9,2	10,0	10,4	8,8	9,6	9,2	10,0	10,5	8,8	9,6	9,2	10,0	10,5
	4H	8,7	9,5	9,2	9,9	10,3	8,8	9,5	9,2	9,9	10,4	8,8	9,5	9,2	9,9	10,4
	6H	8,6	9,3	9,1	9,7	10,2	8,7	9,3	9,2	9,8	10,2	8,7	9,3	9,2	9,8	10,2
	8H	8,6	9,2	9,1	9,6	10,1	8,7	9,2	9,1	9,7	10,2	8,7	9,2	9,1	9,7	10,2
	12H	8,5	9,1	9,0	9,5	10,1	8,6	9,2	9,1	9,6	10,1	8,6	9,2	9,1	9,6	10,1
8H	4H	8,6	9,2	9,1	9,6	10,1	8,6	9,2	9,1	9,7	10,2	8,6	9,2	9,1	9,7	10,2
	6H	8,5	9,0	9,0	9,4	9,9	8,5	9,0	9,0	9,5	10,0	8,5	9,0	9,0	9,5	10,0
	8H	8,5	8,9	9,0	9,4	9,9	8,5	9,0	9,1	9,5	10,0	8,5	9,0	9,1	9,5	10,0
	12H	8,4	8,8	9,0	9,3	9,8	8,5	8,8	9,0	9,4	9,9	8,5	8,8	9,0	9,4	9,9
12H	4H	8,5	9,1	9,0	9,5	10,1	8,6	9,2	9,1	9,6	10,1	8,6	9,2	9,1	9,6	10,1
	6H	8,5	8,9	9,0	9,4	9,9	8,5	9,0	9,1	9,5	10,0	8,5	9,0	9,1	9,5	10,0
	8H	8,4	8,8	9,0	9,3	9,8	8,5	8,8	9,0	9,4	9,9	8,5	8,8	9,0	9,4	9,9

TM5 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	80	88	92	96	100	103	105	108	109
	0.3		75	83	88	92	97	100	102	105	107
	0.1		71	79	84	88	94	97	100	103	105
0.5	0.5	0.2	79	86	90	93	97	100	102	104	105
	0.3		74	82	87	90	94	97	99	102	104
	0.1		71	78	84	87	92	95	97	100	102
0.3	0.5	0.2	78	84	88	91	95	97	99	100	102
	0.3		74	81	85	88	92	95	97	99	100
	0.1		71	78	83	86	90	93	95	98	97
0.0	0.0	0.0	69	76	80	83	87	90	91	93	95
			SHR NOM. = 1,25			SHR MAX. = 1,41			SHR MAX TR = 1,46		

## Technical Specifications

Rectangular or square shaped, anodized aluminum body, IP20 LED ceiling luminaire, characterized by:

1. **pre-anodized satin matt aluminum** sight blocking light distribution and glare control angled cubic louver **without underlay** diffusing elements.
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 **42.1°** ensures excellent glare-free (**UGR<10**) visual comfort and photometric performance guaranteeing average **+91.6%** (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 **122 to 132 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.

---

Rectangular and square anodized aluminum body IP20 LED ceiling luminaire **with pre-anodized satin matt aluminum** sight blocking light distribution and glare control angled cubic louver **without underlay** diffusing elements. 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 **42.1°** ensures excellent glare-free (**UGR<10**) visual comfort and photometric performance guaranteeing average **+91.6%** (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 **122 to 132 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** ( $t_{j,25^{\circ}\text{C}}$ ) **>50.000h.** 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.