

LIBUS SBL13WB LSP-CT IP40

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

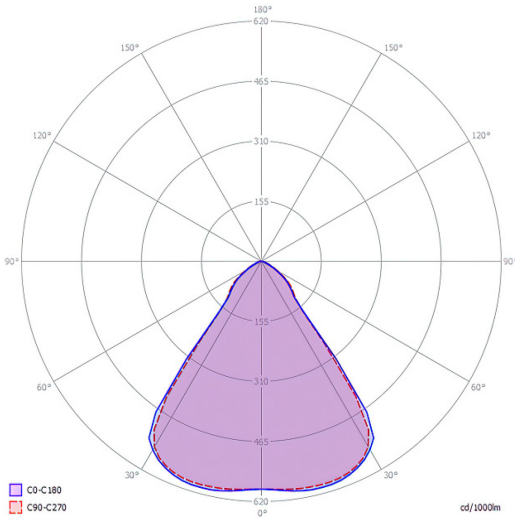
Light output ratio – L.O.R.	72,7%
Efficacy – lm/w (range depending on the luminaire driving power)	121 - 130
Utilization factor (TM5 UF table average)	87,3
Glare level – UGR (4Hx8H – refl. 70-50-20)	9,4
Beam angle	2x41.5° = 83.0°
Degree of protection	IP40



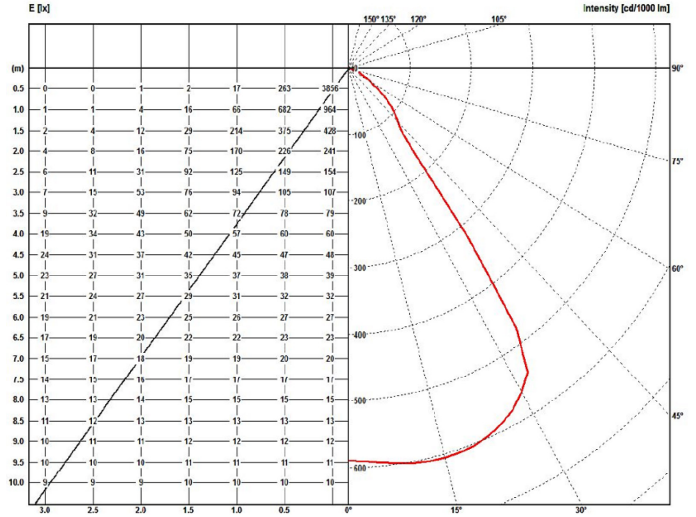
LSP_CT IP40	BEAM ANGLE		L.O.R.		DIMENSIONS / POWER OPTIONS												OPTIMAL	SAFE	NOT AVAILABLE
	2 x 41.5°		%		EFFICACY / LUMEN OUTPUT												lm/w	lm/w	-
	83.0°		72,7														lumens	lumens	-
ROW LED STRIPS	WIDTH mm		LENGTH mm		3 - 8 w nominal DIPswitch				11 - 21 w nominal DIPswitch				21 - 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	-	-	-	-	-	129	127	125	125	124	123	122			
	620	588			-	-	-	-	-	1853	2307	2556	2504	2988	3188	3540			
1 x 6	310	278			-	-	-	125	124	123	122	121	-	-	-	-	-	-	-
	334	302			-	-	925	1301	1771	2219	2431	-	-	-	-	-	-	-	-
1 x 5	269	237			-	-	-	125	124	123	122	121	-	-	-	-	-	-	-
	293	261			-	-	767	918	1285	1752	2199	-	-	-	-	-	-	-	-
1 x 4	228	197			595	563	-	124	123	122	121	120	-	-	-	-	-	-	-
	252	220			620	588	-	604	752	888	1260	1721	-	-	-	-	-	-	-
1 x 3	187	156			-	-	-	124	123	121	121	-	-	-	-	-	-	-	-
	212	180			-	-	598	744	883	1273	-	-	-	-	-	-	-	-	-
1 x 2	147	115			124	123	122	121	-	-	-	-	-	-	-	-	-	-	-
	171	139			449	590	736	880	-	-	-	-	-	-	-	-	-	-	-
1 x 1	106	74	123	122	121	-	-	-	-	-	-	-	-	-	-	-	-		
	130	98	447	584	729	-	-	-	-	-	-	-	-	-	-	-	-		
2 x 6	310	278	-	-	-	-	-	-	130	129	127	125	125	123	122	122			
	334	302	-	-	-	-	-	-	1358	1853	2307	2556	2490	2952	3169	3522			
2 x 5	269	237	-	-	-	-	-	-	128	127	126	124	123	122	122	121			
	293	261	-	-	-	-	-	-	1335	1822	2293	2523	2479	2934	3153	3473			
2 x 4	228	197	-	-	-	-	127	125	125	124	123	122	121	-	-	-			
	252	220	1125	1093	-	-	933	1318	1807	2271	2505	2440	2894	-	-	-			
2 x 3	187	156	1150	1118	-	-	125	124	123	122	121	-	-	-	-	-			
	212	180	-	-	-	-	920	1308	1771	2219	2431	-	-	-	-	-			
2 x 2	147	115	-	-	-	124	123	122	121	120	-	-	-	-	-	-			
	171	139	-	-	598	744	832	1267	1721	-	-	-	-	-	-	-			
2 x 1	106	74	124	123	122	121	-	-	-	-	-	-	-	-	-	-			
	130	98	447	590	736	880	-	-	-	-	-	-	-	-	-	-			

• 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	9,6	10,9	10,0	11,3	11,6	9,6	10,8	9,9	11,1	11,4	9,6	10,8	9,9	11,1	11,4
	3H	9,6	11,0	10,0	11,0	11,5	9,5	10,7	9,9	11,0	11,4	9,5	10,7	9,9	11,0	11,4
	4H	9,6	10,6	10,0	11,0	11,4	9,6	10,5	9,9	11,0	11,3	9,6	10,5	9,9	11,0	11,3
	6H	9,5	10,5	9,9	10,9	11,3	9,5	10,5	9,9	10,8	11,2	9,5	10,5	9,9	10,8	11,2
	8H	9,4	10,4	9,9	10,8	11,2	9,4	10,4	9,8	10,7	11,1	9,4	10,4	9,8	10,7	11,1
	12H	9,5	10,3	9,9	10,7	11,1	9,4	10,3	9,8	10,7	11,1	9,4	10,3	9,8	10,7	11,1
4H	2H	9,5	10,5	9,9	11,0	11,3	9,4	10,5	9,8	10,9	11,7	9,4	10,5	9,8	10,9	11,7
	3H	9,5	10,3	9,9	10,8	11,2	9,5	10,3	9,9	10,7	10,8	9,5	10,3	9,9	10,7	10,8
	4H	9,5	10,3	10,0	10,7	11,1	9,5	10,2	9,9	10,6	11,0	9,5	10,2	9,9	10,6	11,0
	6H	9,4	10,1	9,9	10,6	11,0	9,4	10,0	9,9	10,5	10,9	9,4	10,0	9,9	10,5	10,9
	8H	9,4	10,0	9,9	10,4	10,9	9,4	10,2	9,8	10,4	10,9	9,4	10,2	9,8	10,4	10,9
	12H	9,3	9,9	9,8	10,3	10,9	9,3	9,9	9,8	10,3	10,8	9,3	9,9	9,8	10,3	10,8
8H	4H	9,4	10,0	9,9	10,5	10,9	9,3	9,9	9,8	10,4	10,9	9,3	9,9	9,8	10,4	10,9
	6H	9,3	9,8	9,8	10,3	10,8	9,2	9,8	9,7	10,2	10,7	9,2	9,8	9,7	10,2	10,7
	8H	9,3	9,7	9,8	10,2	10,7	9,2	9,7	9,8	10,2	10,7	9,2	9,7	9,8	10,2	10,7
	12H	9,2	9,6	9,8	10,1	10,6	9,2	9,6	9,7	10,1	10,6	9,2	9,6	9,7	10,1	10,6
12H	4H	9,3	9,9	9,8	10,3	10,9	9,3	9,9	9,8	10,3	10,8	9,3	9,9	9,8	10,3	10,8
	6H	9,3	9,7	9,8	10,2	10,7	9,2	9,7	9,8	10,2	10,7	9,2	9,7	9,8	10,2	10,7
	8H	9,2	9,6	9,8	10,1	10,6	9,2	9,6	9,8	10,1	10,6	9,2	9,6	9,8	10,1	10,6

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	72	82	88	91	97	101	103	106	108
	0.3		66	76	82	87	93	97	100	103	106
	0.1		62	72	79	83	89	94	96	101	103
0.5	0.5	0.2	70	80	86	88	94	98	100	102	104
	0.3		65	76	81	84	90	94	97	101	101
	0.1		62	71	78	81	87	92	94	98	101
0.3	0.5	0.2	69	79	83	87	92	95	96	99	101
	0.3		64	74	80	83	88	92	93	97	99
	0.1		62	70	77	80	86	90	93	95	98
0.0	0.0	0.0	60	69	75	78	83	85	88	91	92
			SHR NOM. = 1,25			SHR MAX. = 1,45			SHR MAX TR = 1,52		

Technical Specifications

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

1. **pre-anodized satin matt aluminum** sight blocking light distribution and glare control angled cubic louver **with clear transparent PMMA or PC underlay 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 **41,5°** ensures excellent glare-free (**UGR<10**) visual comfort and photometric performance guaranteeing average **+87.3%** (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 **121 to 130 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** ($t_{c,25^{\circ}\text{C}}$) **>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 IP40 LED ceiling luminaire **with pre-anodized satin matt aluminum** sight blocking light distribution and glare control angled cubic louver **with clear transparent PMMA or PC 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 **41,5°** ensures excellent glare-free (**UGR<10**) visual comfort and photometric performance guaranteeing average **+87.3%** (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 **121 to 130 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** ($t_{c,25^{\circ}\text{C}}$) **>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.