

LIBUS SBL13WB LEP-CT IP40

DESCRIPTION : Libus® *high efficacy - performance* version luminaire configuration with TR95% PVD satin matt aluminum reflector & *clear transparent PMMA or PC underlay cover* characterized by *high energy efficiency, no glare, and effective beam control*.

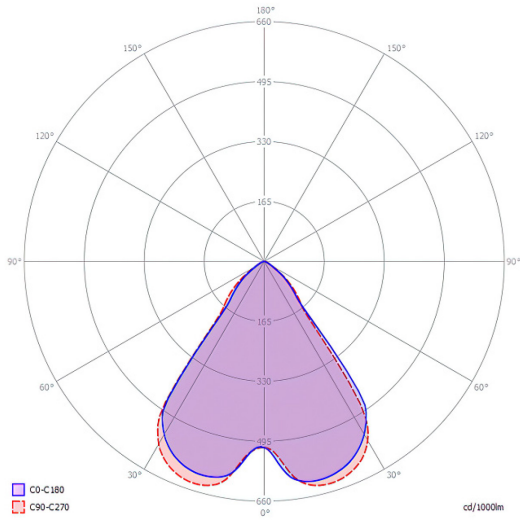
Light output ratio - L.O.R.	85,5%
Efficacy - lm/w (range depending on the luminaire driving power)	141 - 152
Utilization factor (TM5 UF table average)	92,7
Glare level - UGR (4Hx8H - refl. 70-50-20)	8,4
Beam angle	2x41.1° = 82.2°
Degree of protection	IP40



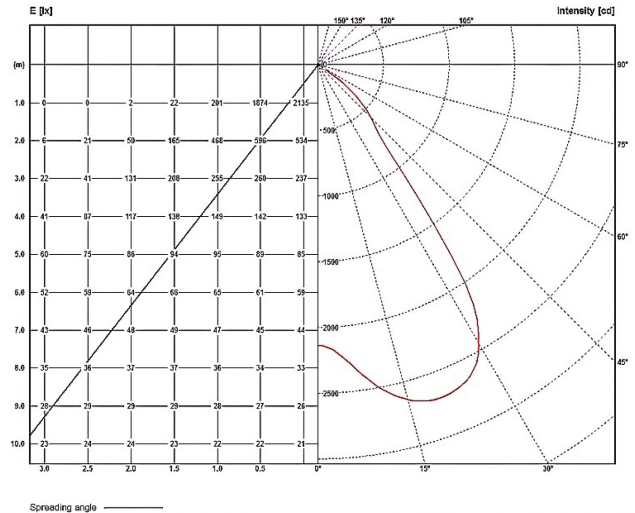
LEP_CT IP40		BEAM ANGLE		L.O.R.		DIMENSIONS / POWER OPTIONS											OPTIMAL	SAFE	NOT AVAILABLE	
		2 x 41.1°		%		EFFICACY / LUMEN OUTPUT											lm/w	lm/w	-	
		82.2°		85,5													lumens	lumens	-	
ROW LED STRIPS	WIDTH mm		LENGTH mm		3 - 8 w nominal DIPswitch				11 - 21 w nominal DIPswitch				21 - 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	-	-	-	-	-	150	148	146	146	145	144	142				
	620	588			-	-	-	-	-	2163	2693	2984	2922	3487	3721	4132				
1 x 6	310	278			-	-	-	146	145	144	142	141	-	-	-	-	-	-		
	334	302			-	-	-	1080	1518	2067	2590	2837	-	-	-	-	-	-		
1 x 5	269	237			-	-	-	146	145	144	142	141	-	-	-	-	-	-		
	293	261			-	-	-	895	1071	1500	2045	2567	-	-	-	-	-	-		
1 x 4	228	197			595	563	-	145	144	142	141	139	-	-	-	-	-	-		
	252	220			620	588	-	705	877	1036	1471	2009	-	-	-	-	-	-		
1 x 3	187	156			-	-	-	145	144	142	141	-	-	-	-	-	-	-		
	212	180			-	-	-	697	868	1036	1486	-	-	-	-	-	-	-		
1 x 2	147	115			145	144	142	141	-	-	-	-	-	-	-	-	-	-		
	171	139			525	689	859	1027	-	-	-	-	-	-	-	-	-	-		
1 x 1	106	74			144	142	141	-	-	-	-	-	-	-	-	-	-	-		
	130	98			521	682	851	-	-	-	-	-	-	-	-	-	-	-		
2 x 6	310	278	-	-	-	-	-	-	152	150	148	146	146	144	143	142				
	334	302	-	-	-	-	-	-	1585	2163	2693	2984	2907	3445	3699	4111				
2 x 5	269	237	-	-	-	-	-	-	149	148	145	145	144	143	142	141				
	293	261	-	-	-	-	-	-	1558	2126	2650	2945	2894	3425	3680	4053				
2 x 4	228	197	-	-	-	148	146	146	145	144	142	142	141	-	-	-				
	252	220	1125	1093	-	1089	1539	2109	2650	2924	2848	3378	-	-	-	-				
2 x 3	187	156	1150	1118	-	146	145	144	142	141	-	-	-	-	-	-				
	212	180	-	-	-	1074	1526	2067	2590	2837	-	-	-	-	-	-				
2 x 2	147	115	-	-	-	145	144	142	141	139	-	-	-	-	-	-				
	171	139	-	-	-	697	868	971	1479	2009	-	-	-	-	-	-				
2 x 1	106	74	145	144	142	141	-	-	-	-	-	-	-	-	-	-				
	130	98	522	689	859	1027	-	-	-	-	-	-	-	-	-	-				

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

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	82	89	94	97	101	104	106	108	110
	0.3		77	84	89	93	98	101	103	106	108
	0.1		73	81	86	90	95	98	100	104	106
0.5	0.5	0.2	80	87	92	94	98	101	102	104	106
	0.3		76	84	88	91	95	98	100	103	104
	0.1		73	80	85	88	93	96	98	101	103
0.3	0.5	0.2	79	86	90	92	96	98	99	101	102
	0.3		75	82	87	89	93	96	97	99	101
	0.1		73	79	84	87	91	94	96	98	100
0.0	0.0	0.0	71	78	82	85	88	90	92	94	95
			SHR NOM. = 1,25			SHR MAX. = 1,47			SHR MAX TR = 1,57		

TECHNICAL SPECIFICATIONS

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

1. **TR95% PVD satin matt aluminum** sight blocking light distribution and glare control angled cubic louver **with clear transparent PMMA or PC 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 **41.1°** ensures glare-free (**UGR<9**) visual comfort and photometric performance guaranteeing average **92.7%** (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 **141 to 152 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_a 25°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 TR95% PVD satin matt aluminum** sight blocking light distribution and glare control angled cubic louver **with clear transparent PMMA or PC 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 **41.1°** ensures glare-free (**UGR<9**) visual comfort and photometric performance guaranteeing average **92.7%** (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 **141 to 152 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_a 25°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.