

Lightsource Test Report

Product Information

Product Category: LED-PL-Röhre
 Product Spec: LED-PL-2G11-18W-CWM-TRF
 Manufacturer: METOLIGHT
 Buyer: 7709

Product Type: LED-PL-Röhre-2G11
 Product Number: 1
 Submitted Unit: 104979

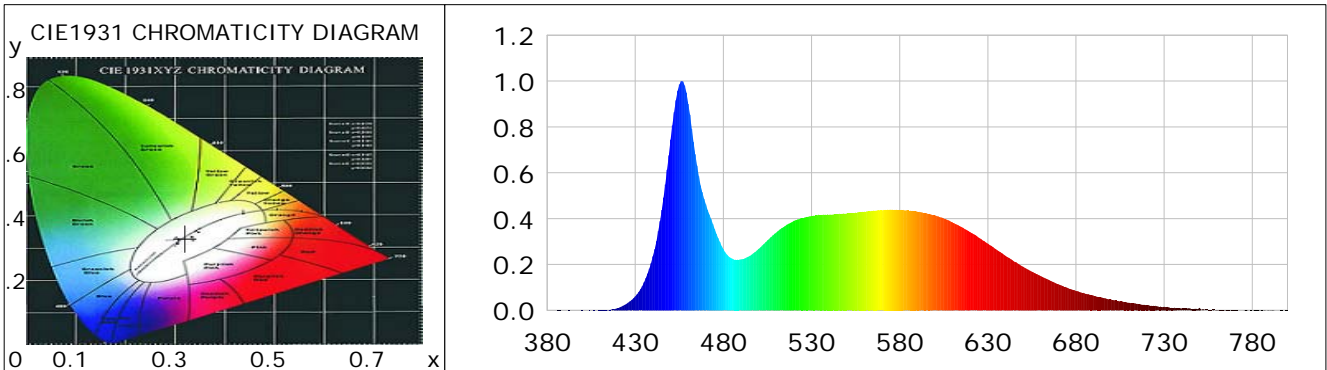
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3203$ $y=0.3311$ $u(u')=0.2024$ $v=0.3137$ $v'=0.4706$
 CCT: $T_c=6092K$ ($duv=0.00048$) Color Ratio: $R=0.146$ $G=0.795$ $B=0.059$
 Peak Wavelength: 456.4nm Half Bandwidth: 22.4nm
 Dominant Wavelength: 489.5nm Color Purity: 0.045
 CRI: $R_a=85.7$, $avgR(1\sim14)=79.6$, $avgR(1\sim15)=79.8$ TM30: $R_f=83$, $R_g=93$
 GAI: $GAI_BB_8=92.2$, $GAI_BB_15=98.1$, $GAI_EES=88.1$

R1 =86	R2 =93	R3 =94	R4 =83	R5 =84	R6 =87	R7 =87	R8 =72
R9 =23	R10=81	R11=82	R12=57	R13=89	R14=97	R15=82	

Color Quality Scale: $Q_a=81.7$, $Q_f=81.7$, $Q_p=81.7$, $Q_g=91.9$

Q1 =82	Q2 =98	Q3 =79	Q4 =70	Q5 =75	Q6 =79	Q7 =86	Q8 =90
Q9 =97	Q10=89	Q11=84	Q12=83	Q13=83	Q14=75	Q15=79	



Photometric Parameters

Luminous Flux: 1851.1 lm	Efficiency: 105.90 lm/W	Radiant Power: 5.983 W
Total mains efficacy: 124.54 lm/W	Energy Efficiency Class: E (EU 2019/2015)	
Pupil Flux: 3461.97 Plm	Pupil Lumens Per Watt: 198.05 Plm/W	Pupil Factor (Kp): 1.870
Cirtopic Flux: 8039.09 lm		

Electric Parameters

Voltage: 230.90V	Current: 0.0780A	Power: 17.48W
Power Factor: 0.9580	Frequency: 49.99Hz	

Test Information

Scan Range: 380~800:1nm	Photometric Method: sphere-spectroradiometer
Stabilization Time: 0 ms ALC.: 1.0000	Photometric Condition: Sphere diameter: 2.00m, 4PI
Max of Signal: 47106 (2456)	CCD Integration Time: 110.81 ms

Condition: Tx:0.0°C, Ti:0.0°C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-02-25 15:18:43
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0006	0.0418	525	0.4016	25.8421	670	0.1144	7.3635
385	0.0004	0.0279	530	0.4112	26.4561	675	0.0989	6.3621
390	0.0002	0.0125	535	0.4154	26.7280	680	0.0850	5.4721
395	0.0005	0.0327	540	0.4180	26.8967	685	0.0734	4.7253
400	0.0008	0.0540	545	0.4199	27.0205	690	0.0637	4.0990
405	0.0004	0.0283	550	0.4229	27.2122	695	0.0545	3.5057
410	0.0014	0.0879	555	0.4262	27.4260	700	0.0470	3.0246
415	0.0029	0.1845	560	0.4307	27.7099	705	0.0391	2.5128
420	0.0100	0.6438	565	0.4350	27.9916	710	0.0336	2.1615
425	0.0283	1.8228	570	0.4361	28.0632	715	0.0281	1.8068
430	0.0613	3.9453	575	0.4392	28.2607	720	0.0226	1.4557
435	0.1223	7.8697	580	0.4373	28.1363	725	0.0201	1.2927
440	0.2358	15.1751	585	0.4356	28.0286	730	0.0158	1.0171
445	0.4378	28.1713	590	0.4306	27.7080	735	0.0099	0.6377
450	0.7443	47.8937	595	0.4241	27.2912	740	0.0082	0.5292
455	0.9852	63.3931	600	0.4144	26.6636	745	0.0072	0.4627
460	0.9012	57.9849	605	0.4013	25.8216	750	0.0108	0.6926
465	0.6314	40.6240	610	0.3835	24.6752	755	0.0036	0.2298
470	0.4627	29.7729	615	0.3638	23.4059	760	0.0018	0.1178
475	0.3552	22.8526	620	0.3407	21.9225	765	0.0039	0.2493
480	0.2673	17.2019	625	0.3156	20.3095	770	0.0013	0.0828
485	0.2256	14.5132	630	0.2906	18.7014	775	0.0014	0.0874
490	0.2220	14.2859	635	0.2644	17.0128	780	0.0014	0.0893
495	0.2379	15.3087	640	0.2377	15.2951	785	0.0013	0.0809
500	0.2682	17.2581	645	0.2127	13.6846	790	0.0008	0.0534
505	0.3057	19.6681	650	0.1902	12.2353	795	0.0004	0.0233
510	0.3393	21.8327	655	0.1686	10.8451	800	0.0025	0.1577
515	0.3681	23.6853	660	0.1494	9.6123			
520	0.3906	25.1302	665	0.1308	8.4136			

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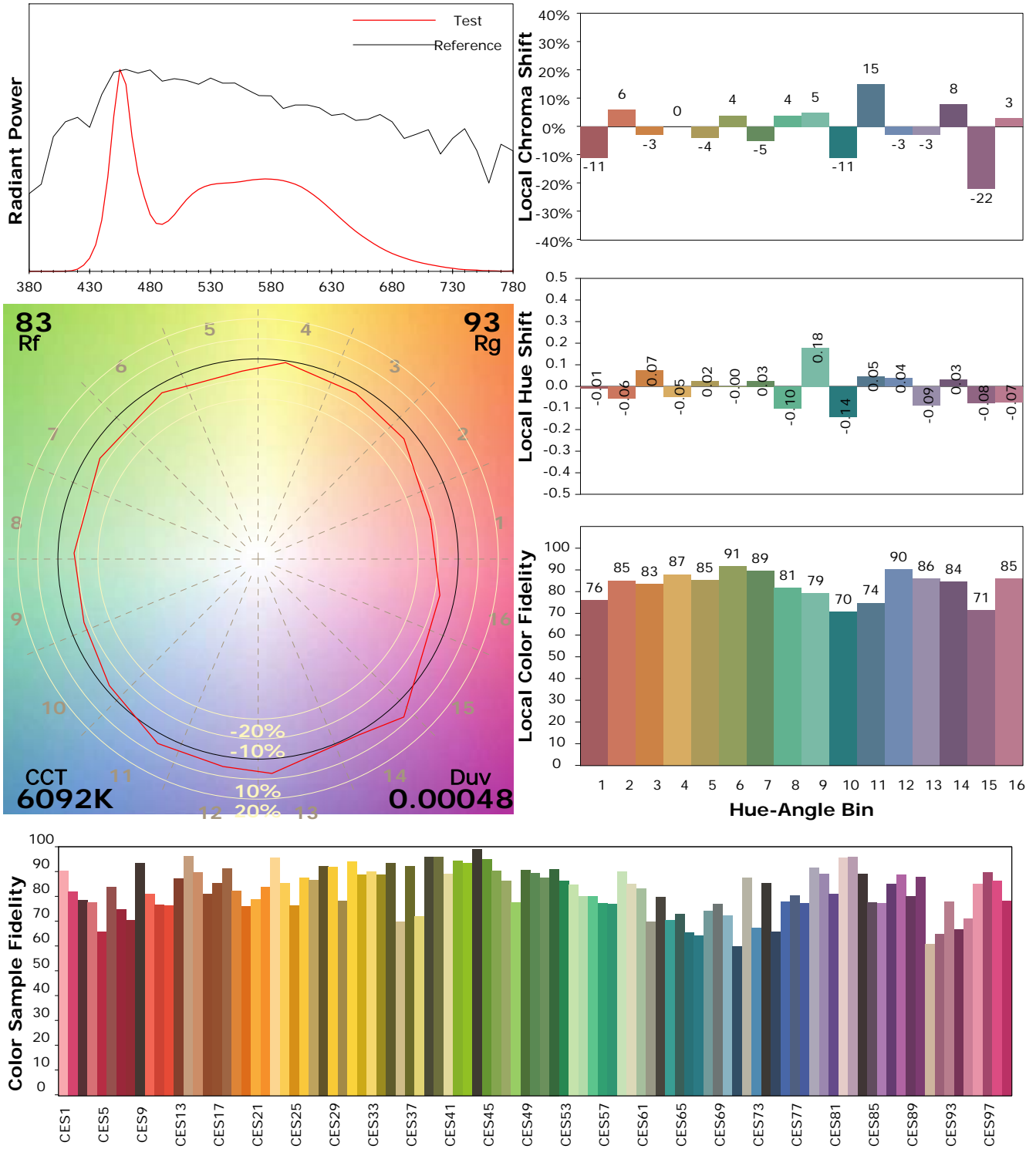
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IES TM-30-18 Color Rendition Report

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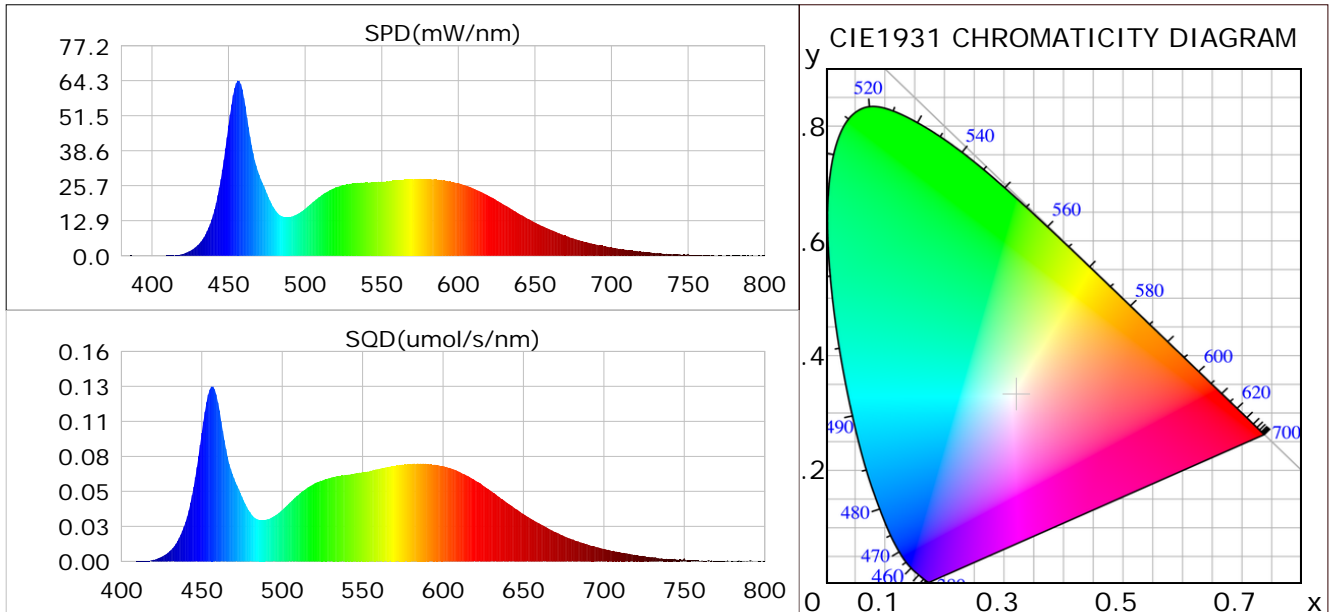
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Test Device: Lisun LMS-9000B
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Plant optical param data

CIE Colorimetric Parameters

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 CCT: $T_c=6092K$ ($duv=0.00048$) Color Ratio: $R=0.146$ $G=0.795$ $B=0.059$
 Peak Wavelength: 456.4nm Half Bandwidth: 22.4nm
 Dominant Wavelength: 489.5nm Color Purity: 0.045
 CRI: $R_a=85.7$



Plant Optical Param

$ \mu_v(lm): 1851.10$	$Q_v(lm.s): 1851.10$
$ \mu_e, \dot{E}(W/nm): 5.98$	$Q_e(J): 5.98$
$ \mu_e(W): 5.91$	$ \mu_{fr}(W): 0.08$
$ \zeta_e: 0.34$	$ \zeta_{fr}: 0.00$
$PPE(umol/s/w): 1.53$	$K_{fr}: 0.03$
$Erb_Ratio: 0.68$	$PPF(umol/s): 26.74$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 7.57$
$PPF(500-600)(umol/s): 12.11$	$PPF(600-700)(umol/s): 7.05$
$PPF_{fr}(700-800)(umol/s): 0.45$	$PPF.t(umol): 26.74$
$ \mu_{ch-A.t}(J): 0.46$	$ \mu_{ch-A}(W): 0.46$
$ \mu_{ch-B.t}(J): 0.36$	$ \mu_{ch-B}(W): 0.36$
$ \mu_b.t(J): 1.96$	$ \mu_b(W): 1.96$
$ \mu_y.t(J): 2.64$	$ \mu_y(W): 2.64$
$ \mu_r.t(J): 1.36$	$ \mu_r(W): 1.36$

Electric Parameters

Voltage: 230.90V	Current: 0.0780A	Power: 17.48W
Power Factor: 0.9580	Frequency: 49.99Hz	

Condition: $T_x:0.0^\circ C$, $T_i:0.0^\circ C$, R.H.: 60%
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