

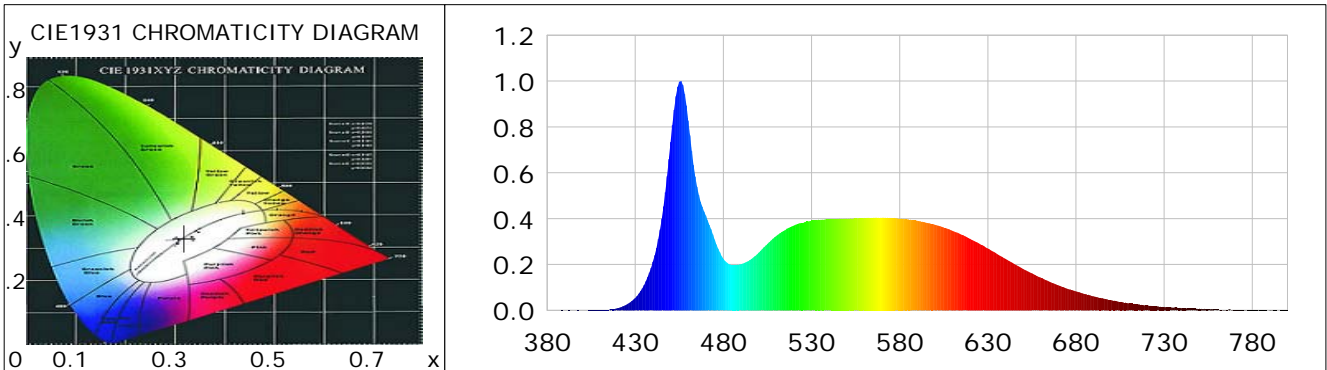
Lightsource Test Report

Product Information

Product Category: LED-PL-Röhre	Product Type: LED-PL-Röhre-2G11
Product Spec: LED-PL-2G11B-25W-CWM-TRF	Product Number: 1
Manufacturer: METOLIGHT	Submitted Unit: 105229
Buyer: 7709	

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3183$ $y=0.3316$ $u(u')=0.2007$ $v=0.3137$ $v'=0.4705$
 CCT: $T_c=6194K$ ($duv=0.00175$) Color Ratio: $R=0.144$ $G=0.799$ $B=0.058$
 Peak Wavelength: 455.6nm Half Bandwidth: 19.4nm
 Dominant Wavelength: 490.3nm Color Purity: 0.052
 CRI: $R_a=85.5$, $avgR(1\sim14)=79.2$, $avgR(1\sim15)=79.4$ TM30: $R_f=83$, $R_g=94$
 GAI: $GAI_BB_8=91.8$, $GAI_BB_15=97.9$, $GAI_EES=88.2$
 R1 =85 R2 =92 R3 =93 R4 =83 R5 =84 R6 =86 R7 =88 R8 =73
 R9 =24 R10=78 R11=82 R12=55 R13=88 R14=97 R15=82
 Color Quality Scale: $Q_a=82.0$, $Q_f=81.9$, $Q_p=82.1$, $Q_g=92.1$
 Q1 =83 Q2 =98 Q3 =78 Q4 =70 Q5 =76 Q6 =80 Q7 =87 Q8 =90
 Q9 =97 Q10=89 Q11=84 Q12=84 Q13=84 Q14=76 Q15=79



Photometric Parameters

Luminous Flux: 2591.6 lm	Efficiency: 112.48 lm/W	Radiant Power: 8.382 W
Total mains efficacy: 132.28 lm/W	Energy Efficiency Class: E (EU 2019/2015)	
Pupil Flux: 4857.79 Plm	Pupil Lumens Per Watt: 210.84 Plm/W	Pupil Factor (Kp): 1.874
Cirtopic Flux: 11249.67 lm		

Electric Parameters

Voltage: 230.60V	Current: 0.1030A	Power: 23.04W
Power Factor: 0.9610	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: 44964 (2099)	CCD Integration Time: 62.97 ms

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

Test Device: Lisun LMS-9000B
 Test Time: 2021-02-26 11:03:45
 Inspector:

Lightsource Test Report

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0003	0.0284	525	0.3811	36.9078	670	0.1092	10.5798
385	0.0009	0.0851	530	0.3919	37.9502	675	0.0948	9.1853
390	0.0006	0.0557	535	0.3945	38.2025	680	0.0827	8.0087
395	0.0013	0.1244	540	0.3970	38.4520	685	0.0715	6.9245
400	0.0002	0.0233	545	0.3989	38.6333	690	0.0608	5.8853
405	0.0012	0.1155	550	0.3995	38.6877	695	0.0526	5.0918
410	0.0013	0.1297	555	0.4020	38.9362	700	0.0441	4.2755
415	0.0034	0.3277	560	0.4032	39.0473	705	0.0366	3.5455
420	0.0097	0.9429	565	0.4039	39.1129	710	0.0306	2.9644
425	0.0248	2.3993	570	0.4045	39.1752	715	0.0265	2.5708
430	0.0541	5.2421	575	0.4033	39.0532	720	0.0220	2.1265
435	0.1103	10.6784	580	0.4003	38.7677	725	0.0178	1.7230
440	0.2118	20.5158	585	0.3963	38.3818	730	0.0150	1.4514
445	0.4000	38.7383	590	0.3909	37.8568	735	0.0112	1.0859
450	0.7343	71.1160	595	0.3822	37.0184	740	0.0097	0.9357
455	0.9972	96.5760	600	0.3731	36.1349	745	0.0079	0.7609
460	0.8280	80.1891	605	0.3616	35.0163	750	0.0076	0.7401
465	0.5395	52.2468	610	0.3464	33.5476	755	0.0049	0.4744
470	0.4135	40.0411	615	0.3303	31.9884	760	0.0043	0.4139
475	0.3092	29.9455	620	0.3119	30.2071	765	0.0032	0.3120
480	0.2249	21.7798	625	0.2916	28.2421	770	0.0018	0.1784
485	0.1979	19.1676	630	0.2697	26.1169	775	0.0013	0.1212
490	0.2013	19.4936	635	0.2471	23.9275	780	0.0015	0.1472
495	0.2198	21.2877	640	0.2245	21.7409	785	0.0014	0.1363
500	0.2517	24.3755	645	0.2021	19.5704	790	0.0023	0.2249
505	0.2904	28.1218	650	0.1801	17.4437	795	0.0004	0.0339
510	0.3248	31.4561	655	0.1614	15.6317	800	0.0009	0.0881
515	0.3504	33.9341	660	0.1425	13.8003			
520	0.3706	35.8888	665	0.1243	12.0413			

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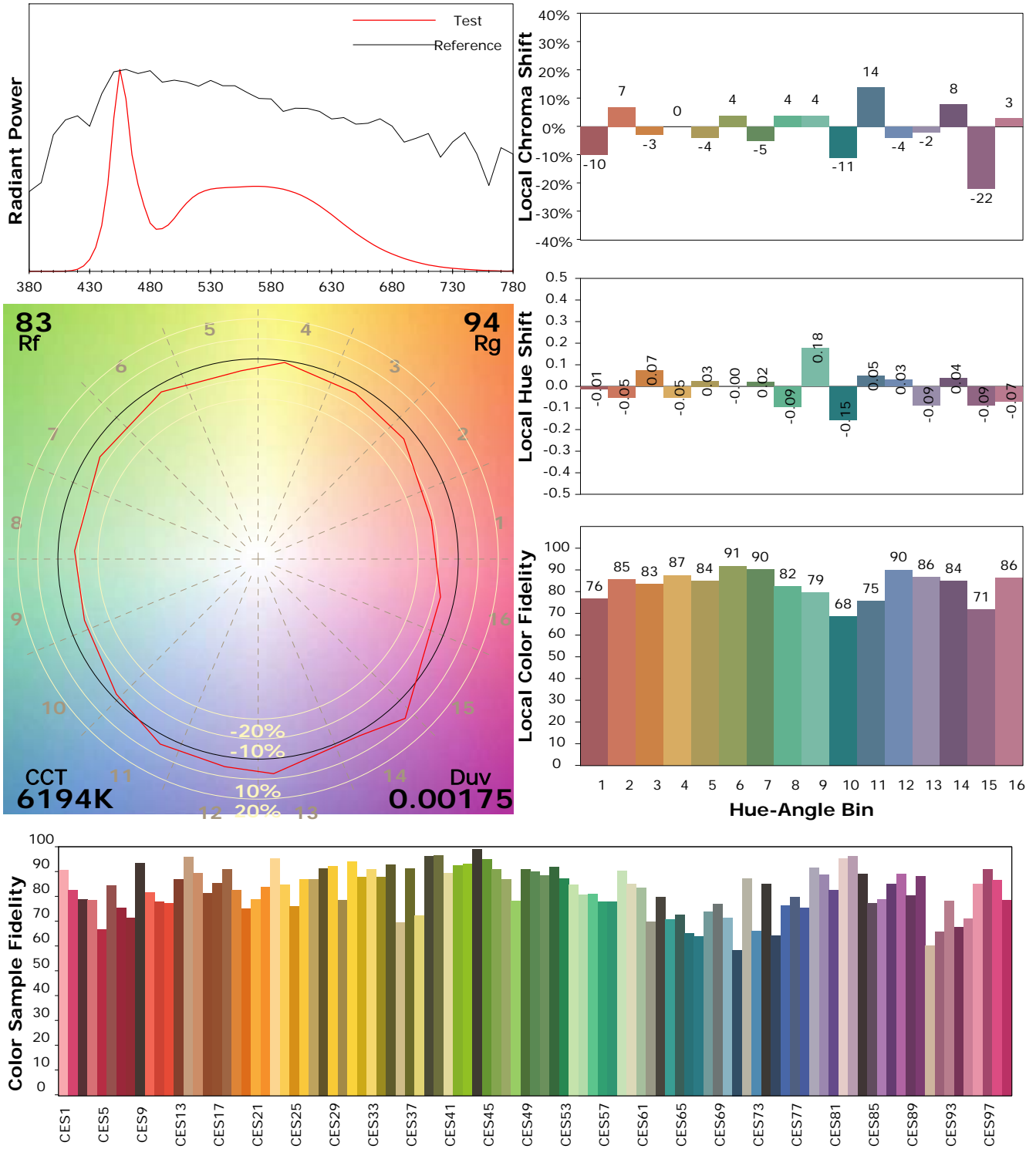
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IES TM-30-18 Color Rendition Report

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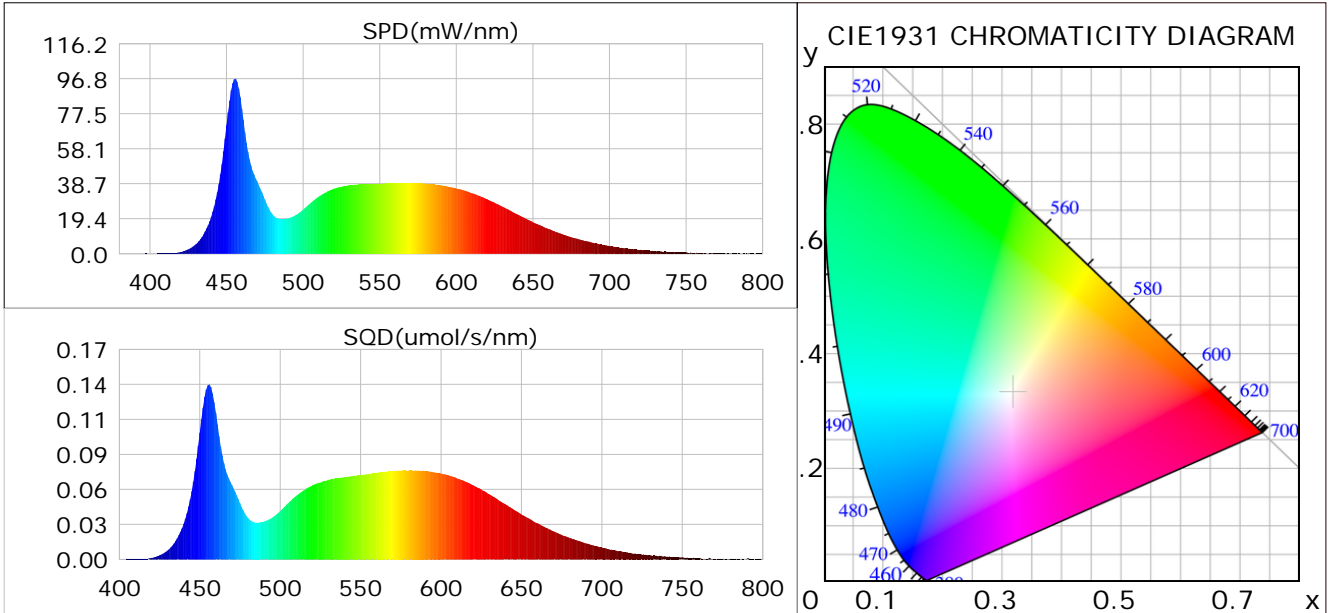
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 Operator: CRE

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

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 Dominant Wavelength: 490.3nm Color Purity: 0.052
 CRI: $R_a=85.5$



Plant Optical Param

$ \mu_v(lm): 2591.60$	$Q_v(lm.s): 2591.60$
$ \mu_e, \dot{E}(W/nm): 8.38$	$Q_e(J): 8.38$
$ \mu_e(W): 8.27$	$ \mu_{fr}(W): 0.11$
$ \zeta_e: 0.36$	$ \zeta_{fr}: 0.00$
$PPE(umol/s/w): 1.62$	$K_{fr}: 0.03$
$Erb_Ratio: 0.68$	$PPF(umol/s): 37.42$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 10.53$
$PPF(500-600)(umol/s): 17.02$	$PPF(600-700)(umol/s): 9.87$
$PPF_r(700-800)(umol/s): 0.66$	$PPF.t(umol): 37.42$
$ \mu_{ch-A.t}(J): 0.65$	$ \mu_{ch-A}(W): 0.65$
$ \mu_{ch-B.t}(J): 0.50$	$ \mu_{ch-B}(W): 0.50$
$ \mu_b.t(J): 2.73$	$ \mu_b(W): 2.73$
$ \mu_y.t(J): 3.71$	$ \mu_y(W): 3.71$
$ \mu_r.t(J): 1.90$	$ \mu_r(W): 1.90$

Electric Parameters

Voltage: 230.60V	Current: 0.1030A	Power: 23.04W
Power Factor: 0.9610	Frequency: 49.99Hz	

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