

Lightsource Test Report

Product Information

Product Category: LED-PL-Röhre
 Product Spec: LED-PL-2G11-I-20-WWS
 Manufacturer: METOLIGHT
 Buyer: 4169

Product Type: LED-PL-Röhre-2G11
 Product Number: 1
 Submitted Unit: 103670

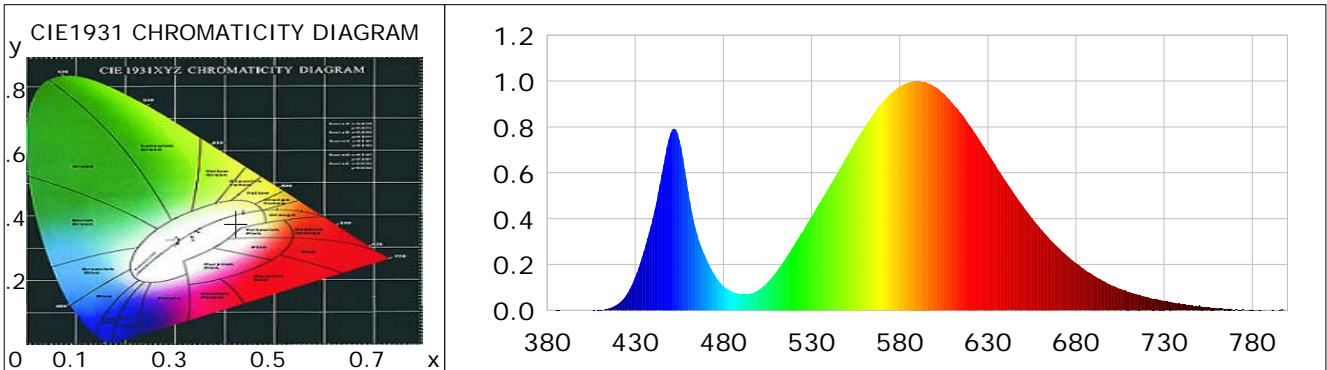
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.4230$ $y=0.3771$ $u(u')=0.2534$ $v=0.3388$ $v'=0.5081$
 CCT: $T_c=3015K$ ($duv=-0.00926$) Color Ratio: $R=0.208$ $G=0.773$ $B=0.019$
 Peak Wavelength: 588.4nm Half Bandwidth: 108.7nm
 Dominant Wavelength: 587.0nm Color Purity: 0.401
 CRI: $R_a=66.1$, $avgR(1\sim14)=58.8$, $avgR(1\sim15)=58.9$ TM30: $R_f=66$, $R_g=93$
 GAI: $GAI_BB_8=109.1$, $GAI_BB_15=117.0$, $GAI_EES=63.1$

R1 =62	R2 =80	R3 =91	R4 =56	R5 =60	R6 =69	R7 =72	R8 =38
R9 =0	R10=51	R11=43	R12=40	R13=66	R14=95	R15=59	

Color Quality Scale: $Q_a=62.8$, $Q_f=61.4$, $Q_p=70.3$, $Q_g=89.8$

Q1 =68	Q2 =95	Q3 =57	Q4 =46	Q5 =57	Q6 =59	Q7 =60	Q8 =70
Q9 =93	Q10=72	Q11=62	Q12=59	Q13=63	Q14=56	Q15=60	



Photometric Parameters

Luminous Flux: 2001.0 lm Efficiency: 95.20 lm/W Radiant Power: 5.816 W
 Total mains efficacy: 111.95 lm/W Energy Efficiency Class: E (EU 2019/2015)
 Pupil Flux: 2289.25 Plm Pupil Lumens Per Watt: 108.91 Plm/W Pupil Factor (Kp): 1.144
 Circopic Flux: 4000.06 lm

Electric Parameters

Voltage: 230.60V Current: 0.0960A Power: 21.02W
 Power Factor: 0.9420 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: 45923 (2280) CCD Integration Time: 197.52 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 11:33:43
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0002	0.0079	525	0.3441	14.4616	670	0.2734	11.4887
385	0.0008	0.0343	530	0.4094	17.2029	675	0.2386	10.0250
390	0.0004	0.0186	535	0.4730	19.8784	680	0.2060	8.6551
395	0.0004	0.0162	540	0.5379	22.6059	685	0.1771	7.4419
400	0.0006	0.0255	545	0.6034	25.3557	690	0.1520	6.3888
405	0.0002	0.0080	550	0.6698	28.1467	695	0.1298	5.4529
410	0.0019	0.0789	555	0.7366	30.9554	700	0.1095	4.6018
415	0.0091	0.3813	560	0.7975	33.5138	705	0.0945	3.9707
420	0.0269	1.1289	565	0.8557	35.9612	710	0.0814	3.4200
425	0.0675	2.8382	570	0.9048	38.0228	715	0.0690	2.8976
430	0.1456	6.1182	575	0.9470	39.7987	720	0.0578	2.4306
435	0.2589	10.8802	580	0.9751	40.9787	725	0.0506	2.1247
440	0.4024	16.9087	585	0.9929	41.7279	730	0.0421	1.7694
445	0.5942	24.9720	590	0.9996	42.0059	735	0.0346	1.4538
450	0.7719	32.4393	595	0.9950	41.8133	740	0.0260	1.0935
455	0.7436	31.2473	600	0.9749	40.9683	745	0.0221	0.9269
460	0.5196	21.8374	605	0.9463	39.7664	750	0.0235	0.9863
465	0.3339	14.0313	610	0.9029	37.9437	755	0.0126	0.5298
470	0.2293	9.6376	615	0.8584	36.0757	760	0.0087	0.3656
475	0.1550	6.5145	620	0.8041	33.7919	765	0.0060	0.2523
480	0.1059	4.4525	625	0.7456	31.3331	770	0.0040	0.1676
485	0.0816	3.4296	630	0.6845	28.7638	775	0.0035	0.1486
490	0.0711	2.9872	635	0.6238	26.2153	780	0.0023	0.0951
495	0.0723	3.0372	640	0.5642	23.7094	785	0.0022	0.0920
500	0.0893	3.7541	645	0.5075	21.3291	790	0.0005	0.0214
505	0.1222	5.1370	650	0.4538	19.0704	795	0.0013	0.0531
510	0.1680	7.0585	655	0.4024	16.9106	800	0.0024	0.1000
515	0.2219	9.3249	660	0.3552	14.9270			
520	0.2838	11.9273	665	0.3111	13.0739			

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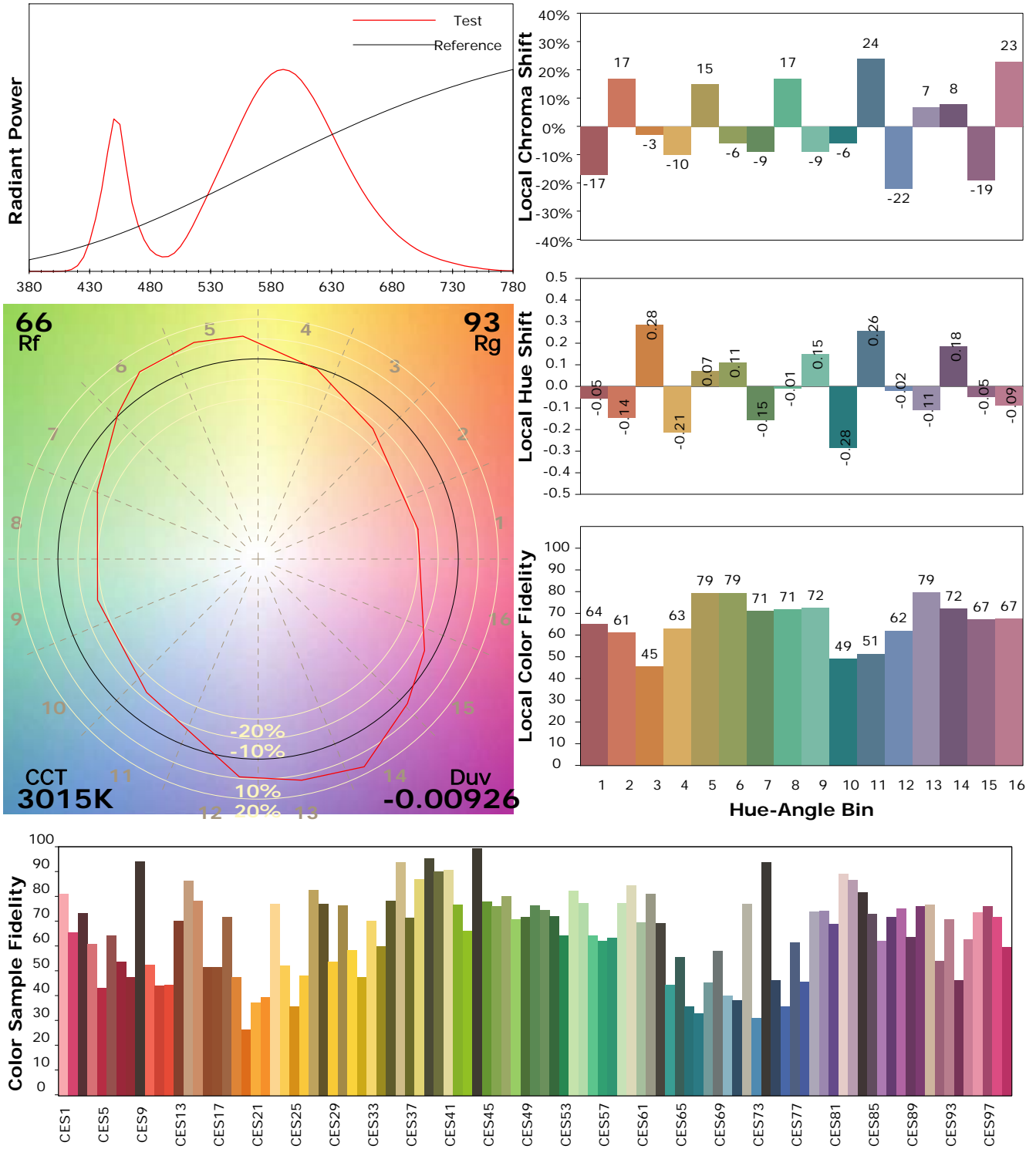
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IES TM-30-18 Color Rendition Report

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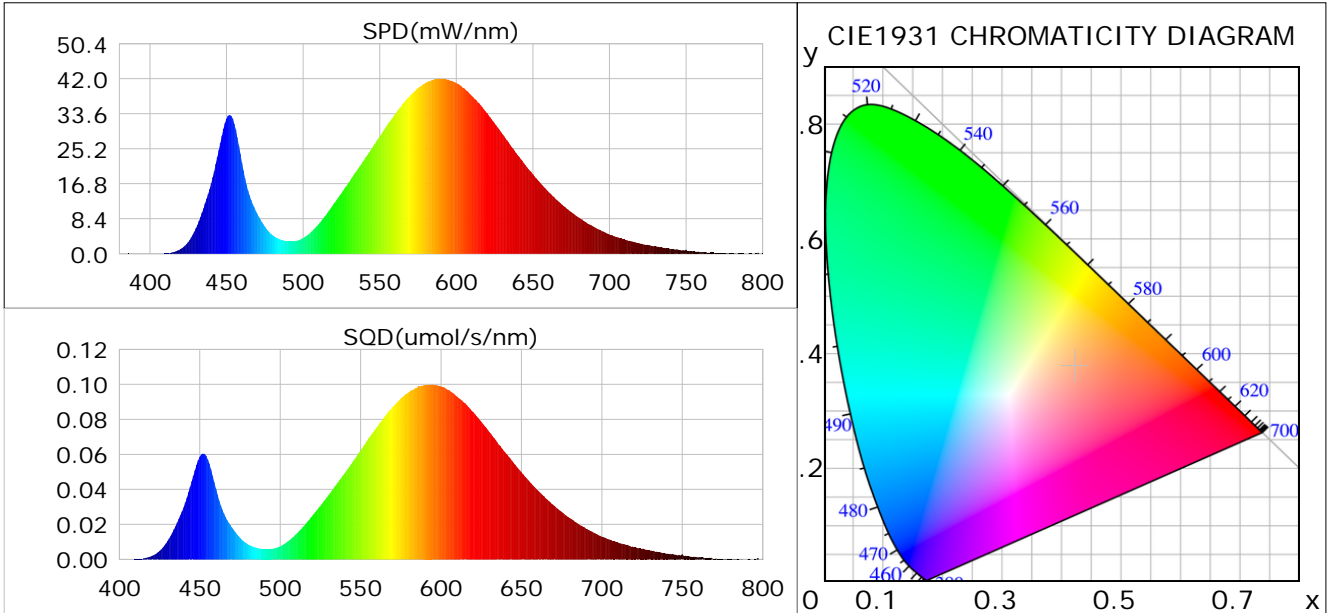
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Test Device: Lisun LMS-9000B
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Plant optical param data

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 Dominant Wavelength: 587.0nm Color Purity: 0.401
 CRI: $R_a=66.1$



Plant Optical Param

$ \mu_v(lm)$: 2001.00	$Q_v(lm.s)$: 2001.00
$ \mu_e, \dot{E}(W/nm)$: 5.82	$Q_e(J)$: 5.82
$ \mu_e(W)$: 5.69	$ \mu_{fr}(W)$: 0.13
$ \zeta_e$: 0.27	$ \zeta_{fr}$: 0.01
$PPE(umol/s/w)$: 1.29	K_{fr} : 0.04
Erb_Ratio : 2.11	$PPF(umol/s)$: 27.17
$PF_{uv}(360-400)(umol/s)$: 0.00	$PPF(400-500)(umol/s)$: 3.70
$PPF(500-600)(umol/s)$: 12.55	$PPF(600-700)(umol/s)$: 10.91
$PPF_{fr}(700-800)(umol/s)$: 0.74	$PPF.t(umol)$: 27.17
$ \mu_{ch-A.t}(J)$: 0.48	$ \mu_{ch-A}(W)$: 0.48
$ \mu_{ch-B.t}(J)$: 0.25	$ \mu_{ch-B}(W)$: 0.25
$ \mu_b.t(J)$: 0.98	$ \mu_b(W)$: 0.98
$ \mu_y.t(J)$: 2.66	$ \mu_y(W)$: 2.66
$ \mu_r.t(J)$: 2.10	$ \mu_r(W)$: 2.10

Electric Parameters

Voltage: 230.60V	Current: 0.0960A	Power: 21.02W
Power Factor: 0.9420	Frequency: 49.99Hz	

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