

Lightsource Test Report

Product Information

Product Category: LED-PL-Röhre
 Product Spec: LED-PL-2G11-I-23-NWM-360
 Manufacturer: METOLIGHT
 Buyer: 4493

Product Type: LED-PL-Röhre-2G11
 Product Number: 1
 Submitted Unit: 101261

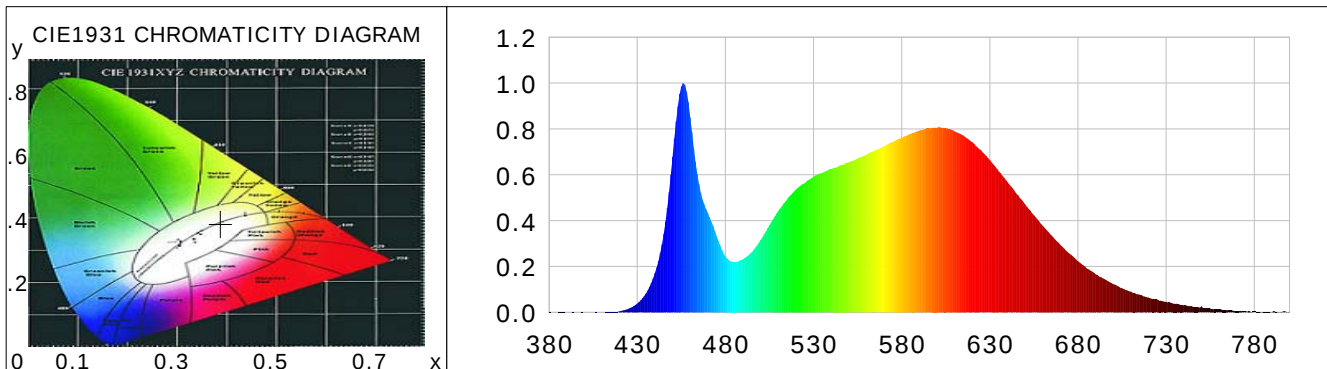
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3878$ $y=0.3829$ $u(u')=0.2275$ $v=0.3369$ $v'=0.5054$
 CCT: $T_c=3852K$ ($duv=0.00078$) Color Ratio: $R=0.192$ $G=0.773$ $B=0.035$
 Peak Wavelength: 456.1nm Half Bandwidth: 19.1nm
 Dominant Wavelength: 579.2nm Color Purity: 0.313
 CRI: $R_a=84.8$, $avgR(1\sim14)=78.5$, $avgR(1\sim15)=78.5$ TM30: $R_f=83$, $R_g=94$
 GAI: $GAI_BB_8=91.5$, $GAI_BB_15=100.4$, $GAI_EES=69.9$

R1 =84	R2 =91	R3 =95	R4 =82	R5 =83	R6 =87	R7 =87	R8 =69
R9 =22	R10=78	R11=81	R12=57	R13=86	R14=97	R15=79	

Color Quality Scale: $Q_a=83.7$, $Q_f=83.9$, $Q_p=83.2$, $Q_g=92.8$

Q1 =83	Q2 =97	Q3 =80	Q4 =74	Q5 =79	Q6 =82	Q7 =86	Q8 =89
Q9 =98	Q10=90	Q11=87	Q12=87	Q13=86	Q14=77	Q15=80	



Photometric Parameters

Luminous Flux: 2439.8 lm	Efficiency: 106.45 lm/W	Radiant Power: 7.447 W
Total mains efficacy: 125.18 lm/W	Energy Efficiency Class: E (EU 2019/2015)	
Pupil Flux: 3624.02 Plm	Pupil Lumens Per Watt: 158.12 Plm/W	Pupil Factor (Kp): 1.485
Cirtpic Flux: 7327.49 lm		

Electric Parameters

Voltage: 230.50V	Current: 0.1050A	Power: 22.92W
Power Factor: 0.9410	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: 46628 (2340)	CCD Integration Time: 120.72 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 12:06:33
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0008	0.0440	525	0.5630	29.3389	670	0.2942	15.3299
385	0.0009	0.0478	530	0.5919	30.8473	675	0.2570	13.3911
390	0.0006	0.0303	535	0.6079	31.6779	680	0.2234	11.6405
395	0.0004	0.0186	540	0.6235	32.4934	685	0.1919	9.9993
400	0.0004	0.0184	545	0.6403	33.3646	690	0.1657	8.6373
405	0.0004	0.0225	550	0.6547	34.1175	695	0.1447	7.5403
410	0.0007	0.0347	555	0.6709	34.9608	700	0.1235	6.4382
415	0.0013	0.0700	560	0.6881	35.8576	705	0.1053	5.4884
420	0.0046	0.2371	565	0.7075	36.8671	710	0.0905	4.7166
425	0.0156	0.8117	570	0.7242	37.7401	715	0.0769	4.0060
430	0.0380	1.9812	575	0.7442	38.7797	720	0.0646	3.3676
435	0.0829	4.3226	580	0.7616	39.6897	725	0.0564	2.9408
440	0.1705	8.8848	585	0.7784	40.5617	730	0.0468	2.4364
445	0.3433	17.8902	590	0.7931	41.3304	735	0.0378	1.9688
450	0.6785	35.3560	595	0.8027	41.8277	740	0.0310	1.6145
455	0.9851	51.3357	600	0.8049	41.9458	745	0.0249	1.2964
460	0.8512	44.3601	605	0.8032	41.8552	750	0.0261	1.3615
465	0.5595	29.1540	610	0.7894	41.1365	755	0.0171	0.8935
470	0.4341	22.6193	615	0.7717	40.2159	760	0.0124	0.6458
475	0.3326	17.3319	620	0.7427	38.7025	765	0.0088	0.4608
480	0.2437	12.7007	625	0.7065	36.8163	770	0.0056	0.2917
485	0.2195	11.4383	630	0.6633	34.5680	775	0.0052	0.2728
490	0.2318	12.0773	635	0.6154	32.0680	780	0.0037	0.1916
495	0.2626	13.6839	640	0.5681	29.6046	785	0.0024	0.1260
500	0.3160	16.4663	645	0.5186	27.0228	790	0.0009	0.0473
505	0.3806	19.8346	650	0.4710	24.5447	795	0.0025	0.1324
510	0.4429	23.0790	655	0.4236	22.0753	800	0.0028	0.1465
515	0.4926	25.6682	660	0.3782	19.7112			
520	0.5366	27.9623	665	0.3352	17.4686			

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 Operator: CRE

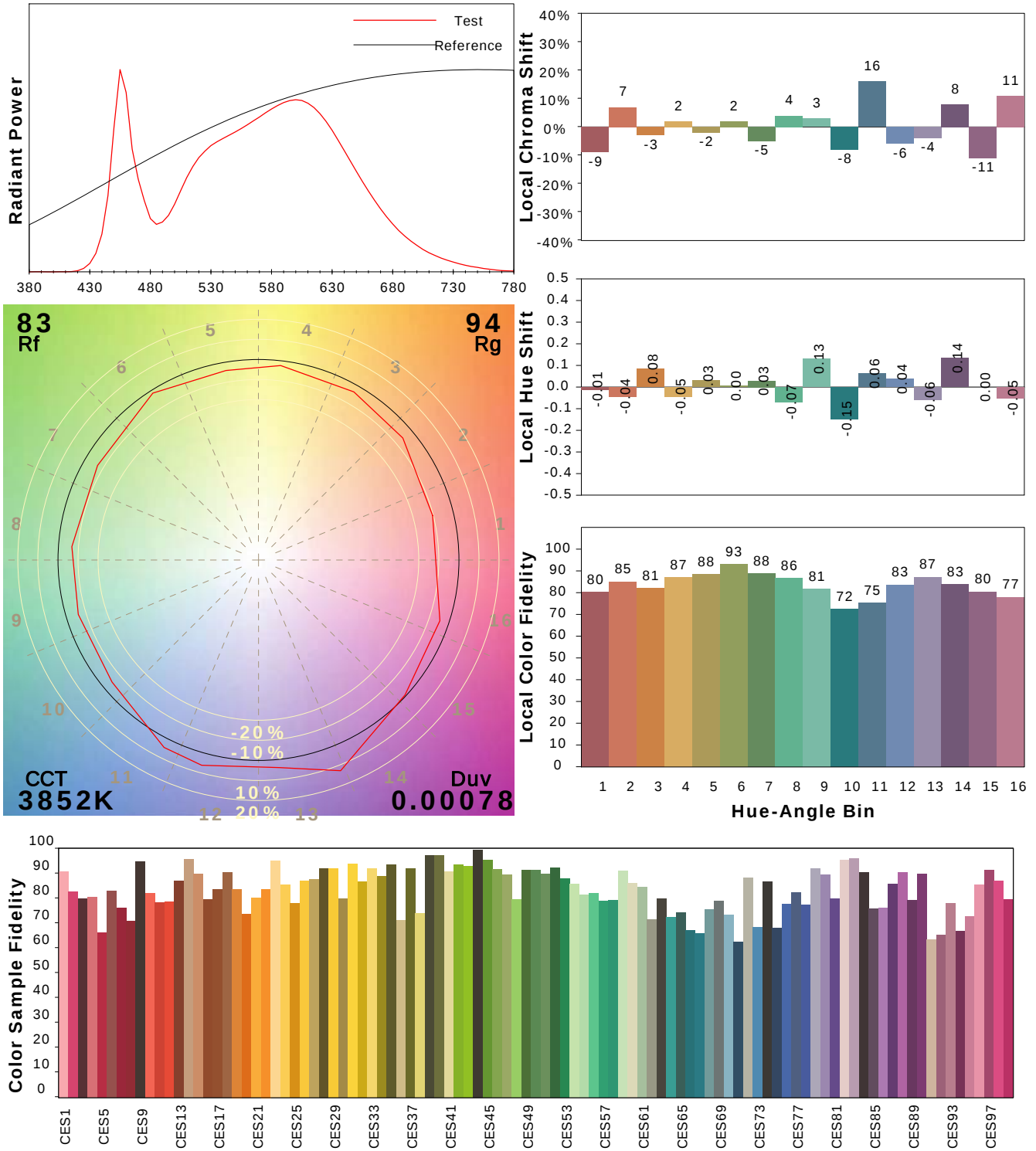
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IES TM-30-18 Color Rendition Report

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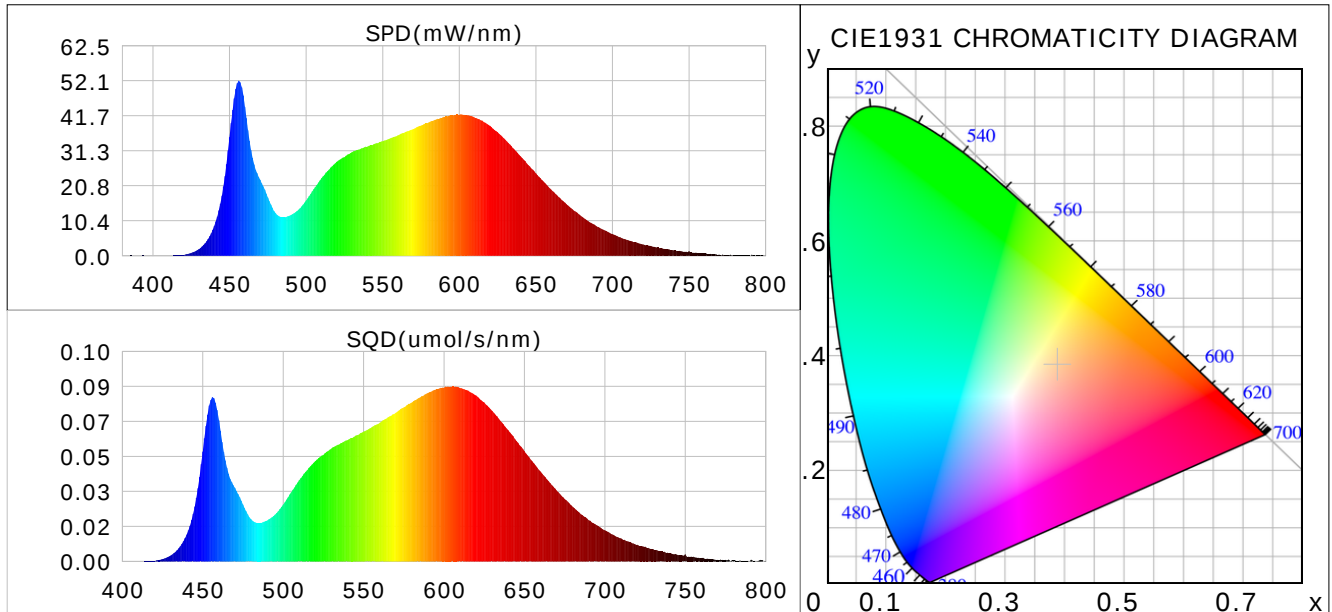
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Test Device: Lisun LMS-9000B
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Plant optical param data

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 Dominant Wavelength: 579.2nm Color Purity: 0.313
 CRI: Ra= 84.8



Plant Optical Param

$\mu_v(lm): 2439.80$	$Q_v(lm.s): 2439.80$
$\mu_e, \dot{E}(W/nm): 7.45$	$Q_e(J): 7.45$
$\mu_e(W): 7.28$	$\mu_{fr}(W): 0.18$
$\dot{C}_e: 0.32$	$\dot{C}_{fr}: 0.01$
$PPE(umol/s/w): 1.50$	$K_{fr}: 0.05$
$Erb_Ratio: 1.68$	$PPF(umol/s): 34.35$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 5.70$
$PPF(500-600)(umol/s): 15.53$	$PPF(600-700)(umol/s): 13.12$
$PF_{fr}(700-800)(umol/s): 1.04$	$PPF.t(umol): 34.35$
$\mu_{ch-A.t}(J): 0.55$	$\mu_{ch-A}(W): 0.55$
$\mu_{ch-B.t}(J): 0.34$	$\mu_{ch-B}(W): 0.34$
$\mu_b.t(J): 1.47$	$\mu_b(W): 1.47$
$\mu_y.t(J): 3.36$	$\mu_y(W): 3.36$
$\mu_r.t(J): 2.51$	$\mu_r(W): 2.51$

Electric Parameters

Voltage: 230.50V	Current: 0.1050A	Power: 22.92W
Power Factor: 0.9410	Frequency: 49.99Hz	