

Lightsource Test Report

Product Information

Product Category: LED-PL-Röhre
 Product Spec: LED-PL-2G11-I-15-NWM-360
 Manufacturer: METOLIGHT
 Buyer: 4493

Product Type: LED-PL-Röhre-2G11
 Product Number: 1
 Submitted Unit: 104617

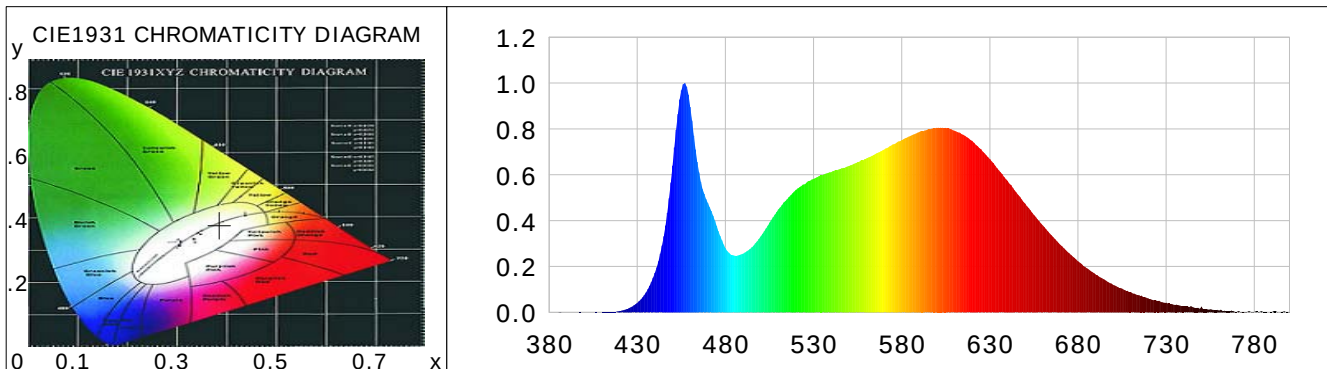
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3857$ $y=0.3792$ $u(u')=0.2276$ $v=0.3356$ $v'=0.5034$
 CCT: $T_c=3879K$ ($duv=-0.00035$) Color Ratio: $R=0.194$ $G=0.768$ $B=0.038$
 Peak Wavelength: 456.7nm Half Bandwidth: 20.7nm
 Dominant Wavelength: 579.7nm Color Purity: 0.296
 CRI: $R_a=86.3$, $avgR(1\sim14)=80.7$, $avgR(1\sim15)=80.8$ TM30: $R_f=84$, $R_g=94$
 GAI: $GAI_BB_8=93.3$, $GAI_BB_15=101.7$, $GAI_EES=71.7$

R1 =86	R2 =93	R3 =96	R4 =84	R5 =85	R6 =90	R7 =87	R8 =70
R9 =28	R10=82	R11=83	R12=60	R13=89	R14=98	R15=81	

Color Quality Scale: $Q_a=84.8$, $Q_f=84.9$, $Q_p=84.4$, $Q_g=93.2$

Q1 =83	Q2 =97	Q3 =82	Q4 =76	Q5 =80	Q6 =83	Q7 =87	Q8 =90
Q9 =98	Q10=92	Q11=89	Q12=88	Q13=87	Q14=79	Q15=81	



Photometric Parameters

Luminous Flux: 1597.7 lm	Efficiency: 104.08 lm/W	Radiant Power: 4.929 W
Total mains efficacy: 122.40 lm/W	Energy Efficiency Class: E (EU 2019/2015)	
Pupil Flux: 2418.32 Plm	Pupil Lumens Per Watt: 157.55 Plm/W	Pupil Factor (Kp): 1.514
Cirtpic Flux: 4969.13 lm		

Electric Parameters

Voltage: 230.90V	Current: 0.0740A	Power: 15.35W
Power Factor: 0.8890	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: 46958 (2509)	CCD Integration Time: 183.75 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 15:42:07
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0007	0.0230	525	0.5590	19.2267	670	0.2946	10.1336
385	0.0006	0.0213	530	0.5820	20.0173	675	0.2582	8.8802
390	0.0005	0.0178	535	0.5986	20.5868	680	0.2232	7.6765
395	0.0001	0.0045	540	0.6118	21.0410	685	0.1926	6.6238
400	0.0005	0.0171	545	0.6252	21.5037	690	0.1650	5.6746
405	0.0001	0.0037	550	0.6383	21.9529	695	0.1429	4.9141
410	0.0009	0.0305	555	0.6552	22.5325	700	0.1199	4.1223
415	0.0018	0.0619	560	0.6710	23.0774	705	0.1034	3.5570
420	0.0058	0.1991	565	0.6906	23.7496	710	0.0877	3.0146
425	0.0172	0.5926	570	0.7106	24.4385	715	0.0737	2.5359
430	0.0415	1.4257	575	0.7325	25.1933	720	0.0605	2.0819
435	0.0871	2.9954	580	0.7514	25.8419	725	0.0499	1.7148
440	0.1721	5.9175	585	0.7699	26.4780	730	0.0420	1.4445
445	0.3319	11.4148	590	0.7872	27.0743	735	0.0330	1.1337
450	0.6401	22.0145	595	0.7979	27.4432	740	0.0266	0.9149
455	0.9686	33.3129	600	0.8055	27.7020	745	0.0233	0.8021
460	0.8959	30.8135	605	0.8045	27.6681	750	0.0248	0.8538
465	0.6102	20.9860	610	0.7922	27.2443	755	0.0133	0.4575
470	0.4771	16.4100	615	0.7743	26.6302	760	0.0080	0.2757
475	0.3776	12.9874	620	0.7477	25.7140	765	0.0052	0.1798
480	0.2805	9.6465	625	0.7107	24.4419	770	0.0031	0.1079
485	0.2481	8.5334	630	0.6682	22.9824	775	0.0037	0.1264
490	0.2561	8.8089	635	0.6205	21.3404	780	0.0025	0.0872
495	0.2839	9.7639	640	0.5733	19.7165	785	0.0025	0.0864
500	0.3313	11.3940	645	0.5233	17.9965	790	0.0016	0.0537
505	0.3916	13.4669	650	0.4740	16.3033	795	0.0025	0.0870
510	0.4490	15.4414	655	0.4251	14.6211	800	0.0041	0.1420
515	0.4941	16.9947	660	0.3792	13.0403			
520	0.5341	18.3679	665	0.3364	11.5681			

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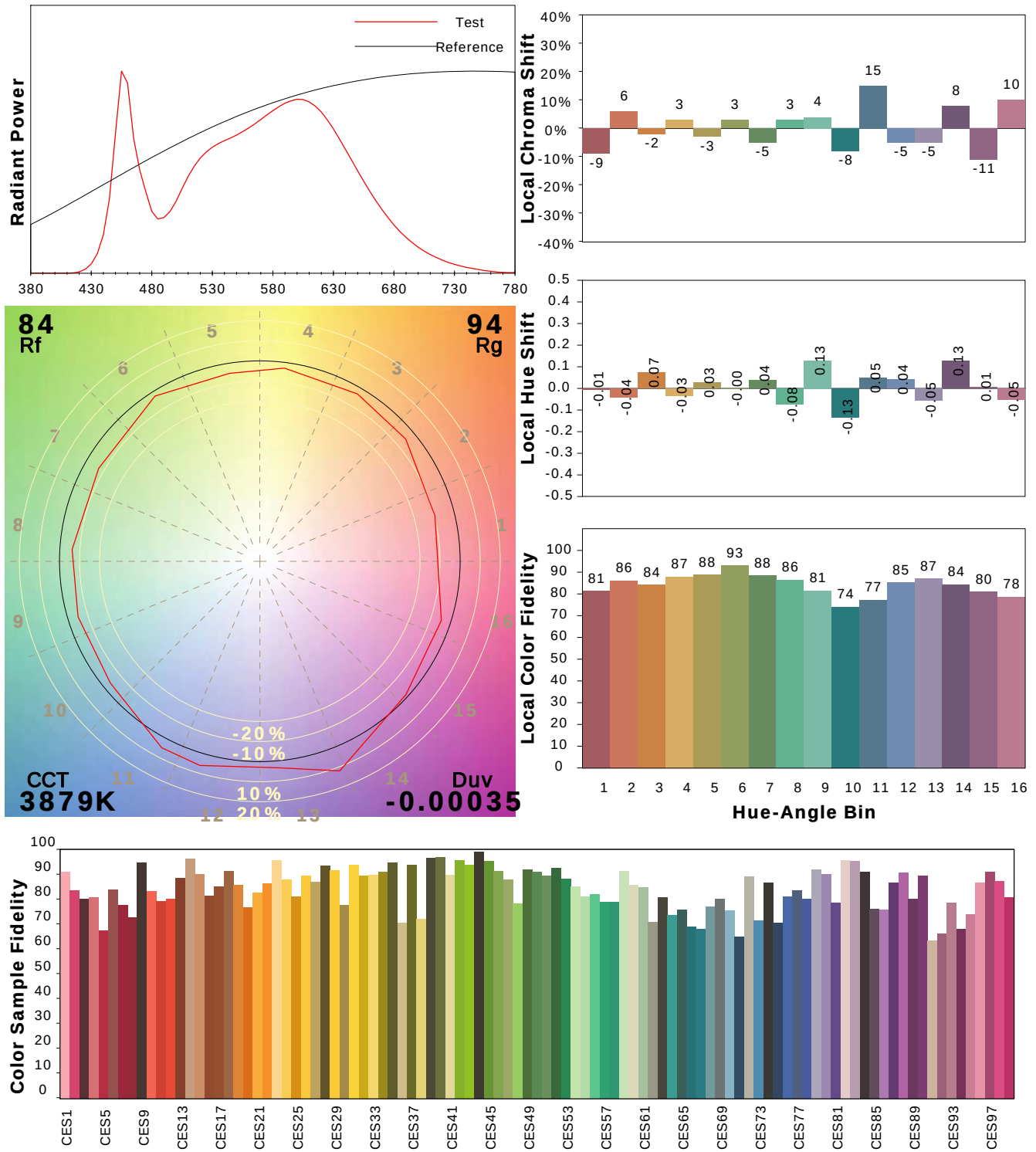
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IES TM-30-18 Color Rendition Report

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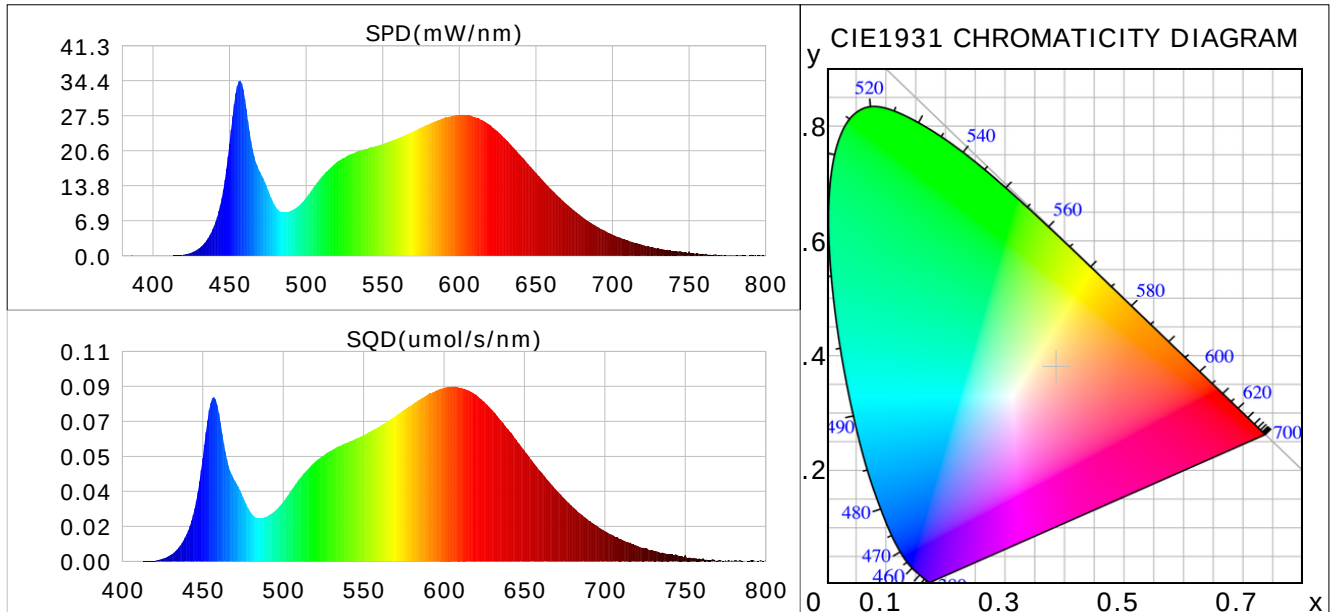
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Plant optical param data

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 CRI: Ra= 86.3



Plant Optical Param

$\mu_v(lm)$: 1597.70	$Q_v(lm.s)$: 1597.70
$\mu_e, \dot{E}(W/nm)$: 4.93	$Q_e(J)$: 4.93
$\mu_e(W)$: 4.83	$\mu_{fr}(W)$: 0.11
$\dot{C}_e$: 0.31	$\dot{C}_{fr}$: 0.01
$PPE(umol/s/w)$: 1.48	K_{fr} : 0.04
Erb_Ratio : 1.61	$PPF(umol/s)$: 22.75
$PF_{uv}(360-400)(umol/s)$: 0.00	$PPF(400-500)(umol/s)$: 3.93
$PPF(500-600)(umol/s)$: 10.12	$PPF(600-700)(umol/s)$: 8.69
$PF_{fr}(700-800)(umol/s)$: 0.63	$PPF.t(umol)$: 22.75
$\mu_{ch-A.t}(J)$: 0.37	$\mu_{ch-A}(W)$: 0.37
$\mu_{ch-B.t}(J)$: 0.23	$\mu_{ch-B}(W)$: 0.23
$\mu_b.t(J)$: 1.01	$\mu_b(W)$: 1.01
$\mu_y.t(J)$: 2.19	$\mu_y(W)$: 2.19
$\mu_r.t(J)$: 1.66	$\mu_r(W)$: 1.66

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