

Lightsource Test Report

Product Information

Product Category: LED-PL-Röhren	Product Type: LED-PL-Röhren-2G11
Product Spec: LED-PL-2G11-12W-WWM-TRF	Product Number: 1
Manufacturer: METOLIGHT	Submitted Unit: 104974
Buyer: 7709	

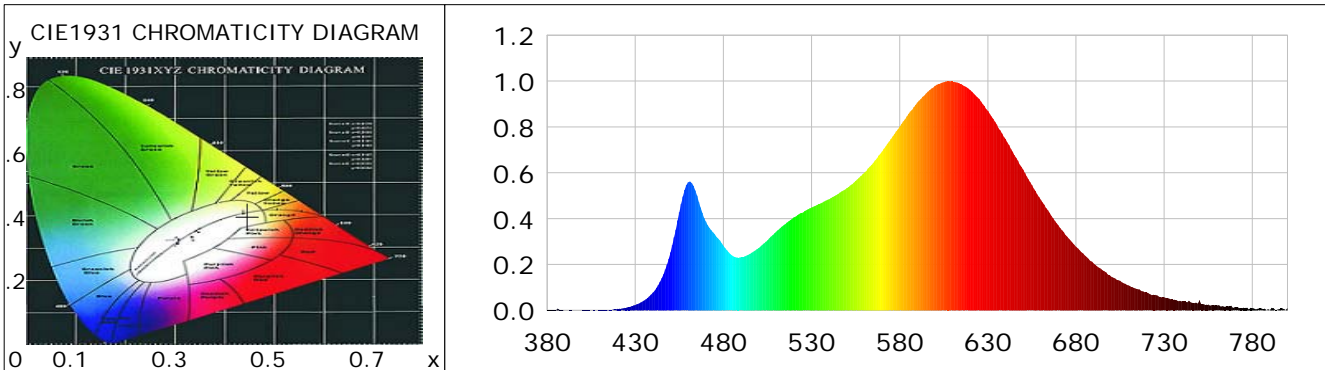
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.4461$ $y=0.3996$ $u(u')=0.2585$ $v=0.3473$ $v'=0.5210$
 CCT: $T_c=2815K$ ($duv=-0.00289$) Color Ratio: $R=0.250$ $G=0.720$ $B=0.030$
 Peak Wavelength: 607.9nm Half Bandwidth: 115.1nm
 Dominant Wavelength: 584.7nm Color Purity: 0.538
 CRI: $R_a=84.5$, $avgR(1\sim14)=80.9$, $avgR(1\sim15)=80.7$ TM30: $R_f=84$, $R_g=93$
 GAI: $GAI_BB_8=100.2$, $GAI_BB_15=109.4$, $GAI_EES=52.2$

R1 =86	R2 =97	R3 =91	R4 =82	R5 =87	R6 =95	R7 =79	R8 =60
R9 =19	R10=93	R11=82	R12=78	R13=89	R14=96	R15=78	

 Color Quality Scale: $Q_a=83.8$, $Q_f=85.5$, $Q_p=86.1$, $Q_g=91.2$

Q1 =79	Q2 =92	Q3 =88	Q4 =81	Q5 =81	Q6 =83	Q7 =86	Q8 =87
Q9 =94	Q10=93	Q11=89	Q12=85	Q13=84	Q14=76	Q15=77	



Photometric Parameters

Luminous Flux: 1455.6 lm	Efficiency: 116.82 lm/W	Radiant Power: 4.554 W
Total mains efficacy: 137.38 lm/W	Energy Efficiency Class: D (EU 2019/2015)	
Pupil Flux: 1841.53 Plm	Pupil Lumens Per Watt: 147.80 Plm/W	Pupil Factor (Kp): 1.265
Cirtpopic Flux: 3470.72 lm		

Electric Parameters

Voltage: 230.80V	Current: 0.0640A	Power: 12.46W
Power Factor: 0.8420	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: 46543 (2677)	CCD Integration Time: 319.39 ms

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

Test Device: Lisun LMS-9000B
 Test Time: 2021-03-03 15:25:26
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0014	0.0454	525	0.4265	13.5718	670	0.3709	11.8047
385	0.0014	0.0453	530	0.4487	14.2789	675	0.3216	10.2342
390	0.0006	0.0204	535	0.4663	14.8397	680	0.2774	8.8263
395	0.0003	0.0085	540	0.4851	15.4378	685	0.2393	7.6151
400	0.0008	0.0267	545	0.5073	16.1431	690	0.2044	6.5051
405	0.0002	0.0073	550	0.5333	16.9723	695	0.1751	5.5713
410	0.0013	0.0410	555	0.5644	17.9611	700	0.1471	4.6821
415	0.0030	0.0954	560	0.6007	19.1176	705	0.1286	4.0909
420	0.0064	0.2024	565	0.6435	20.4786	710	0.1086	3.4564
425	0.0117	0.3732	570	0.6928	22.0483	715	0.0927	2.9511
430	0.0233	0.7405	575	0.7475	23.7875	720	0.0785	2.4971
435	0.0429	1.3656	580	0.8019	25.5196	725	0.0673	2.1417
440	0.0774	2.4622	585	0.8571	27.2747	730	0.0566	1.8008
445	0.1408	4.4791	590	0.9063	28.8413	735	0.0470	1.4951
450	0.2529	8.0479	595	0.9463	30.1128	740	0.0389	1.2395
455	0.4282	13.6266	600	0.9791	31.1582	745	0.0350	1.1154
460	0.5588	17.7815	605	0.9948	31.6578	750	0.0434	1.3800
465	0.5006	15.9315	610	0.9983	31.7700	755	0.0256	0.8160
470	0.3875	12.3316	615	0.9867	31.3993	760	0.0211	0.6709
475	0.3323	10.5764	620	0.9612	30.5879	765	0.0172	0.5468
480	0.2827	8.9968	625	0.9226	29.3592	770	0.0133	0.4248
485	0.2393	7.6162	630	0.8703	27.6955	775	0.0117	0.3736
490	0.2311	7.3550	635	0.8110	25.8090	780	0.0101	0.3200
495	0.2459	7.8263	640	0.7476	23.7917	785	0.0088	0.2801
500	0.2721	8.6583	645	0.6777	21.5660	790	0.0017	0.0526
505	0.3057	9.7277	650	0.6140	19.5395	795	0.0043	0.1373
510	0.3439	10.9442	655	0.5463	17.3843	800	0.0110	0.3504
515	0.3761	11.9679	660	0.4830	15.3694			
520	0.4059	12.9182	665	0.4252	13.5322			

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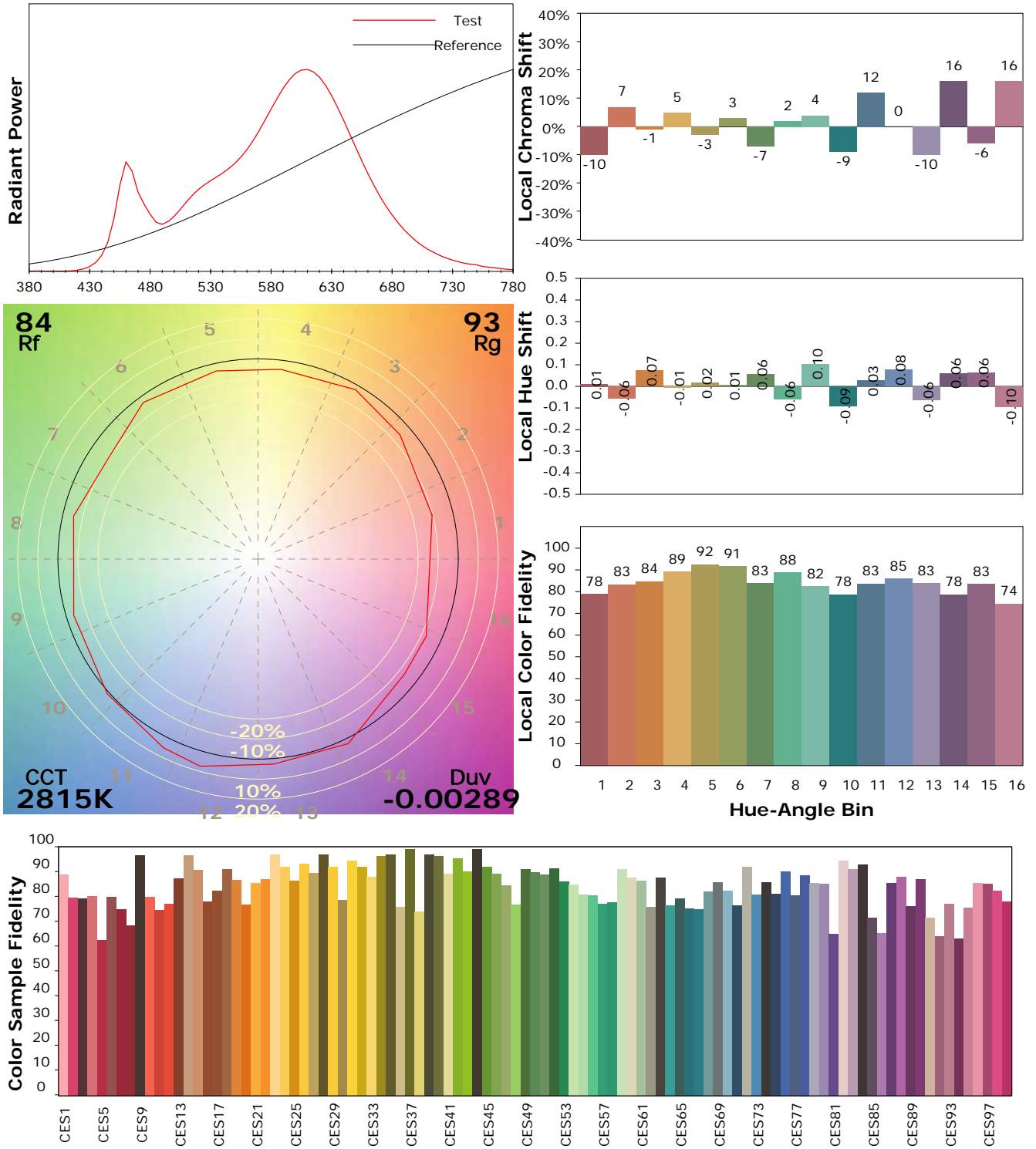
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IES TM-30-18 Color Rendition Report

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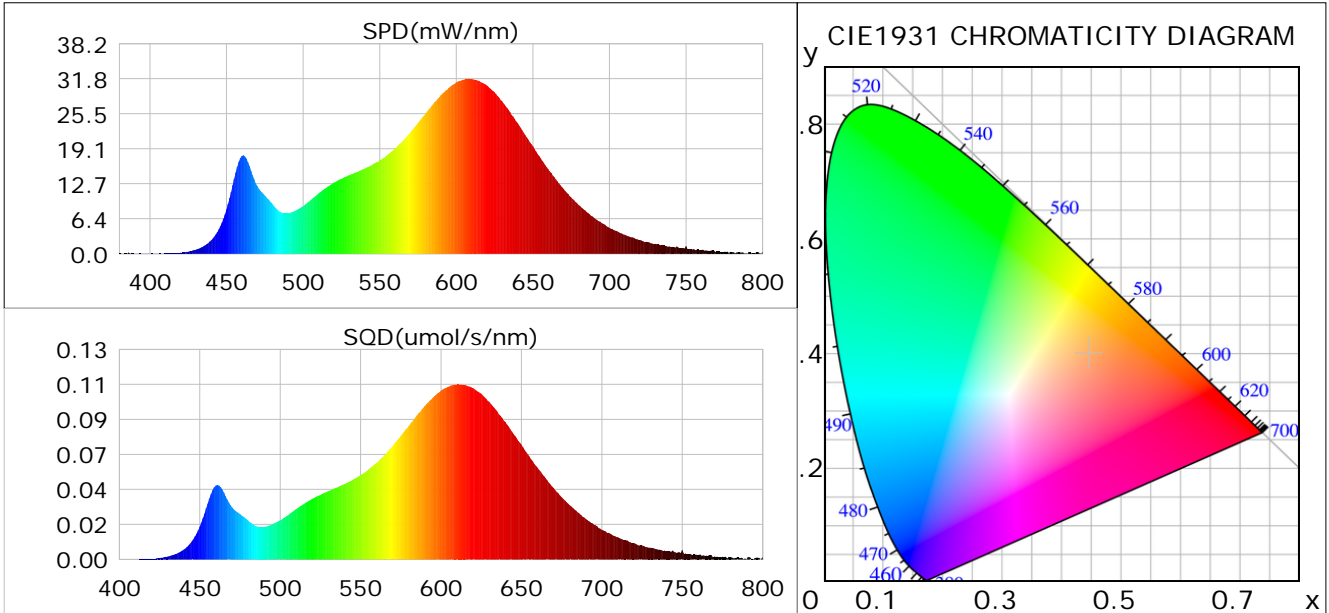
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Plant optical param data

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 CRI: $R_a=84.5$



Plant Optical Param

$ \mu_v(lm): 1455.60$	$Q_v(lm.s): 1455.60$
$ \mu_e, \dot{E}(W/nm): 4.55$	$Q_e(J): 4.55$
$ \mu_e(W): 4.42$	$ \mu_{fr}(W): 0.14$
$ \zeta_e: 0.35$	$ \zeta_{fr}: 0.01$
$PPE(umol/s/w): 1.72$	$K_{fr}: 0.07$
$Erb_Ratio: 3.08$	$PPF(umol/s): 21.45$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 2.45$
$PPF(500-600)(umol/s): 8.76$	$PPF(600-700)(umol/s): 10.25$
$PPF_r(700-800)(umol/s): 0.82$	$PPF.t(umol): 21.45$
$ \mu_{ch-A.t}(J): 0.34$	$ \mu_{ch-A}(W): 0.34$
$ \mu_{ch-B.t}(J): 0.18$	$ \mu_{ch-B}(W): 0.18$
$ \mu_b.t(J): 0.62$	$ \mu_b(W): 0.62$
$ \mu_y.t(J): 1.88$	$ \mu_y(W): 1.88$
$ \mu_r.t(J): 1.96$	$ \mu_r(W): 1.96$

Electric Parameters

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Power Factor: 0.8420	Frequency: 49.99Hz	

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