

Lightsource Test Report

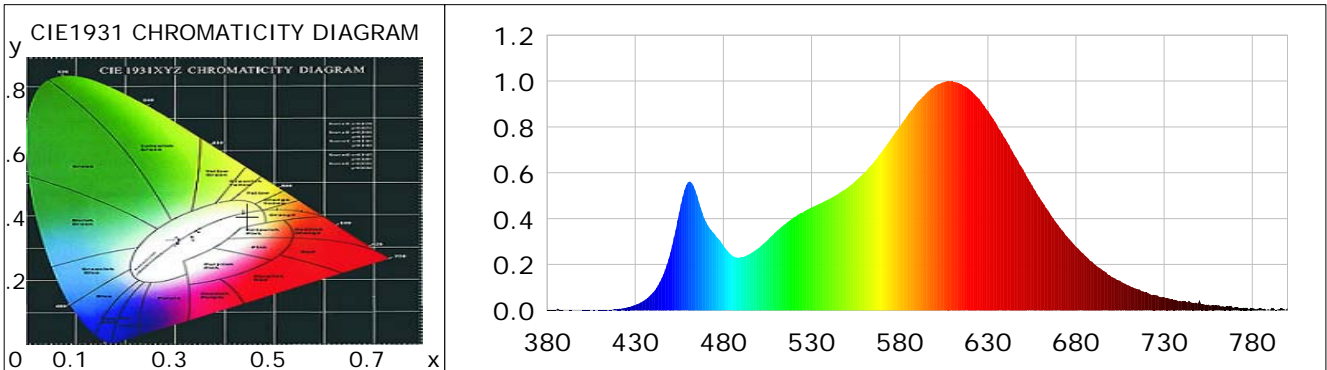
Product Information

Product Category: LED-PL-Röhren
 Product Spec: LED-PL-G24-12W-WWM-TRF
 Manufacturer: METOLIGHT
 Buyer: 6852

Product Type: LED-PL-Röhren-G24
 Product Number: 1
 Submitted Unit: 104971

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: 1255.6 lm Efficiency: 100.77 lm/W Radiant Power: 3.928 W
 Total mains efficacy: 118.51 lm/W Energy Efficiency Class: E (EU 2019/2015)
 Pupil Flux: 1588.50 Plm Pupil Lumens Per Watt: 127.49 Plm/W Pupil Factor (Kp): 1.265
 Circopic Flux: 2993.83 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:

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	0.0014	0.0392	525	0.4265	11.7070	670	0.3709	10.1827
385	0.0014	0.0391	530	0.4487	12.3170	675	0.3216	8.8280
390	0.0006	0.0176	535	0.4663	12.8007	680	0.2774	7.6135
395	0.0003	0.0073	540	0.4851	13.3166	685	0.2393	6.5688
400	0.0008	0.0230	545	0.5073	13.9250	690	0.2044	5.6113
405	0.0002	0.0063	550	0.5333	14.6402	695	0.1751	4.8058
410	0.0013	0.0354	555	0.5644	15.4932	700	0.1471	4.0388
415	0.0030	0.0823	560	0.6007	16.4908	705	0.1286	3.5288
420	0.0064	0.1746	565	0.6435	17.6648	710	0.1086	2.9815
425	0.0117	0.3220	570	0.6928	19.0188	715	0.0927	2.5456
430	0.0233	0.6388	575	0.7475	20.5190	720	0.0785	2.1540
435	0.0429	1.1779	580	0.8019	22.0132	725	0.0673	1.8474
440	0.0774	2.1239	585	0.8571	23.5271	730	0.0566	1.5533
445	0.1408	3.8637	590	0.9063	24.8784	735	0.0470	1.2897
450	0.2529	6.9421	595	0.9463	25.9752	740	0.0389	1.0692
455	0.4282	11.7543	600	0.9791	26.8770	745	0.0350	0.9621
460	0.5588	15.3383	605	0.9948	27.3079	750	0.0434	1.1904
465	0.5006	13.7425	610	0.9983	27.4047	755	0.0256	0.7039
470	0.3875	10.6372	615	0.9867	27.0850	760	0.0211	0.5787
475	0.3323	9.1232	620	0.9612	26.3850	765	0.0172	0.4717
480	0.2827	7.7606	625	0.9226	25.3251	770	0.0133	0.3664
485	0.2393	6.5698	630	0.8703	23.8900	775	0.0117	0.3223
490	0.2311	6.3444	635	0.8110	22.2628	780	0.0101	0.2760
495	0.2459	6.7510	640	0.7476	20.5226	785	0.0088	0.2416
500	0.2721	7.4686	645	0.6777	18.6028	790	0.0017	0.0454
505	0.3057	8.3911	650	0.6140	16.8547	795	0.0043	0.1184
510	0.3439	9.4405	655	0.5463	14.9956	800	0.0110	0.3022
515	0.3761	10.3235	660	0.4830	13.2576			
520	0.4059	11.1432	665	0.4252	11.6729			

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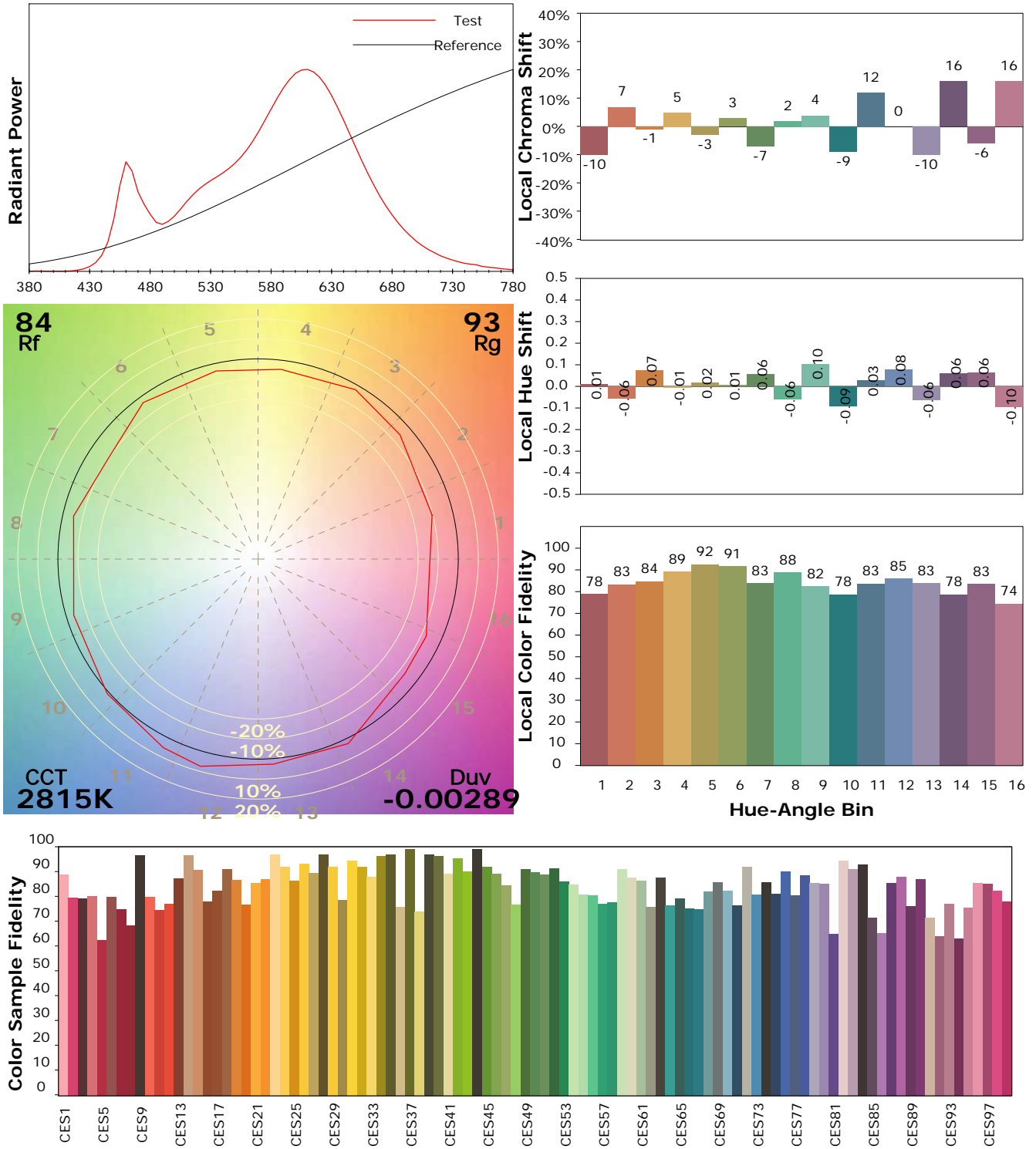
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IES TM-30-18 Color Rendition Report

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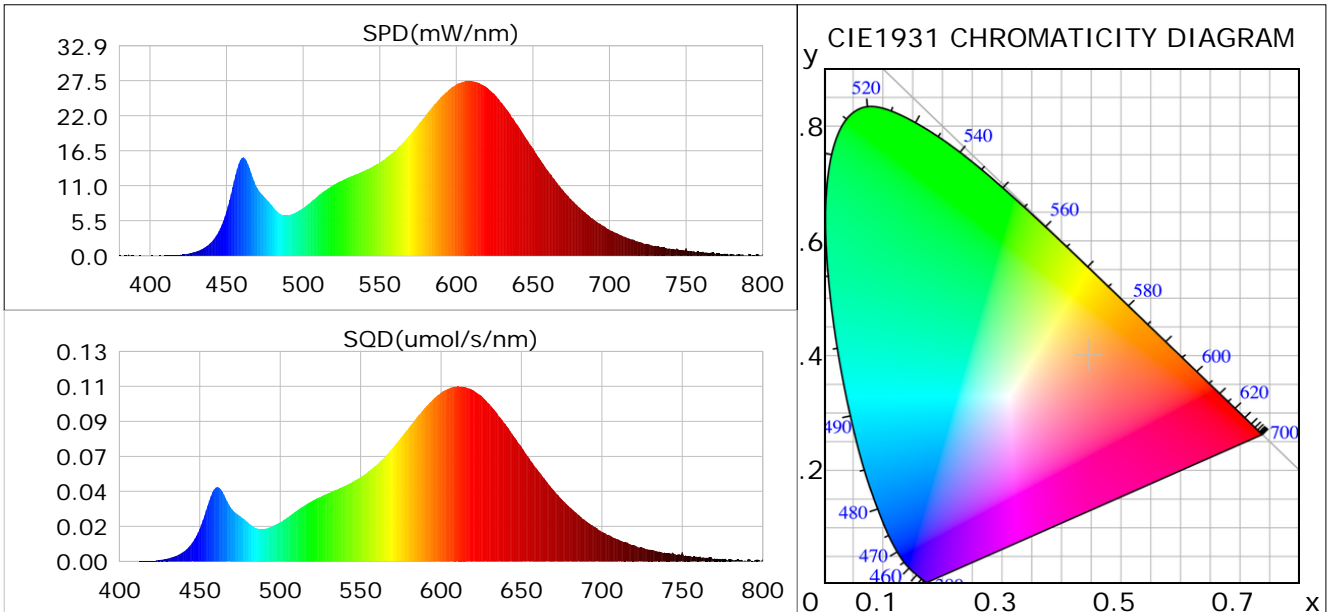
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Plant optical param data

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 CRI: $R_a=84.5$



Plant Optical Param

$ \mu_v(lm): 1255.60$	$Q_v(lm.s): 1255.60$
$ \mu_e, \dot{E}(W/nm): 3.93$	$Q_e(J): 3.93$
$ \mu_e(W): 3.81$	$ \mu_{fr}(W): 0.12$
$ \zeta_e: 0.31$	$ \zeta_{fr}: 0.01$
$PPE(umol/s/w): 1.49$	$K_{fr}: 0.06$
$Erb_Ratio: 3.08$	$PPF(umol/s): 18.51$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 2.11$
$PPF(500-600)(umol/s): 7.56$	$PPF(600-700)(umol/s): 8.84$
$PPF_{fr}(700-800)(umol/s): 0.71$	$PPF.t(umol): 18.51$
$ \mu_{ch-A.t}(J): 0.30$	$ \mu_{ch-A}(W): 0.30$
$ \mu_{ch-B.t}(J): 0.16$	$ \mu_{ch-B}(W): 0.16$
$ \mu_b.t(J): 0.54$	$ \mu_b(W): 0.54$
$ \mu_y.t(J): 1.62$	$ \mu_y(W): 1.62$
$ \mu_r.t(J): 1.69$	$ \mu_r(W): 1.69$

Electric Parameters

Voltage: 230.80V	Current: 0.0640A	Power: 12.46W
Power Factor: 0.8420	Frequency: 49.99Hz	

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