

Lightsource Test Report

Product Information

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

Product Type: LED-PL-Röhren-G24
 Product Number: 1
 Submitted Unit: 104972

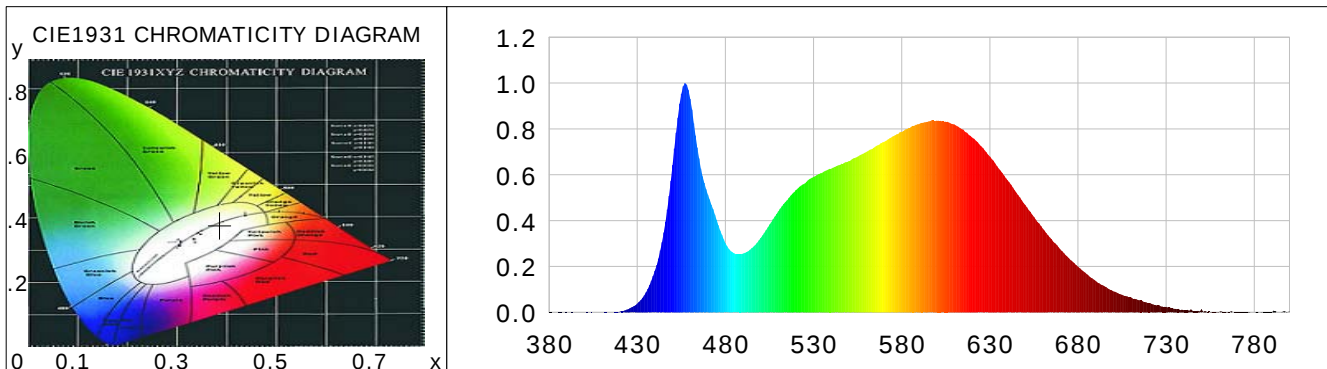
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3862$ $y=0.3788$ $u(u')=0.2280$ $v=0.3356$ $v'=0.5033$
 CCT: $T_c=3863K$ ($duv=-0.00065$) Color Ratio: $R=0.193$ $G=0.769$ $B=0.038$
 Peak Wavelength: 457.2nm Half Bandwidth: 22.8nm
 Dominant Wavelength: 579.9nm Color Purity: 0.296
 CRI: $R_a=84.9$, $avgR(1\sim14)=78.9$, $avgR(1\sim15)=79.0$ TM30: $R_f=83$, $R_g=94$
 GAI: $GAI_BB_8=92.7$, $GAI_BB_15=101.3$, $GAI_EES=71.0$

R1 =85	R2 =93	R3 =96	R4 =81	R5 =83	R6 =89	R7 =85	R8 =67
R9 =21	R10=81	R11=80	R12=59	R13=87	R14=98	R15=80	

Color Quality Scale: $Q_a=83.2$, $Q_f=83.5$, $Q_p=82.7$, $Q_g=92.3$

Q1 =82	Q2 =97	Q3 =81	Q4 =74	Q5 =78	Q6 =81	Q7 =86	Q8 =89
Q9 =98	Q10=91	Q11=87	Q12=86	Q13=86	Q14=77	Q15=79	



Photometric Parameters

Luminous Flux: 1440.5 lm	Efficiency: 120.54 lm/W	Radiant Power: 4.354 W
Total mains efficacy: 141.76 lm/W	Energy Efficiency Class: D (EU 2019/2015)	
Pupil Flux: 2166.08 Plm	Pupil Lumens Per Watt: 181.26 Plm/W	Pupil Factor (Kp): 1.504
Cirtpic Flux: 4445.85 lm		

Electric Parameters

Voltage: 230.90V	Current: 0.0610A	Power: 11.95W
Power Factor: 0.8430	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: 44879 (2588)	CCD Integration Time: 225.81 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 15:29:34
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0010	0.0312	525	0.5623	16.9239	670	0.2748	8.2704
385	0.0010	0.0309	530	0.5911	17.7903	675	0.2350	7.0739
390	0.0007	0.0220	535	0.6092	18.3353	680	0.1995	6.0061
395	0.0002	0.0046	540	0.6264	18.8529	685	0.1667	5.0187
400	0.0005	0.0158	545	0.6433	19.3621	690	0.1371	4.1262
405	0.0002	0.0047	550	0.6595	19.8500	695	0.1132	3.4068
410	0.0002	0.0048	555	0.6792	20.4420	700	0.0916	2.7573
415	0.0013	0.0396	560	0.6996	21.0560	705	0.0761	2.2917
420	0.0041	0.1240	565	0.7226	21.7498	710	0.0650	1.9567
425	0.0143	0.4318	570	0.7439	22.3898	715	0.0526	1.5846
430	0.0379	1.1419	575	0.7677	23.1080	720	0.0412	1.2386
435	0.0874	2.6315	580	0.7874	23.6996	725	0.0307	0.9240
440	0.1812	5.4544	585	0.8065	24.2742	730	0.0238	0.7177
445	0.3489	10.5014	590	0.8218	24.7340	735	0.0155	0.4662
450	0.6423	19.3336	595	0.8328	25.0661	740	0.0102	0.3080
455	0.9530	28.6857	600	0.8369	25.1903	745	0.0069	0.2075
460	0.9313	28.0306	605	0.8316	25.0298	750	0.0133	0.4003
465	0.6716	20.2141	610	0.8189	24.6491	755	0.0037	0.1115
470	0.5138	15.4634	615	0.7971	23.9926	760	0.0022	0.0664
475	0.4035	12.1441	620	0.7630	22.9642	765	0.0037	0.1126
480	0.3019	9.0869	625	0.7239	21.7901	770	0.0017	0.0497
485	0.2575	7.7511	630	0.6798	20.4621	775	0.0023	0.0680
490	0.2565	7.7192	635	0.6271	18.8758	780	0.0004	0.0108
495	0.2802	8.4339	640	0.5760	17.3375	785	0.0013	0.0403
500	0.3242	9.7582	645	0.5224	15.7230	790	0.0008	0.0234
505	0.3831	11.5322	650	0.4687	14.1068	795	0.0003	0.0090
510	0.4410	13.2743	655	0.4161	12.5252	800	0.0049	0.1490
515	0.4888	14.7119	660	0.3656	11.0053			
520	0.5335	16.0574	665	0.3195	9.6168			

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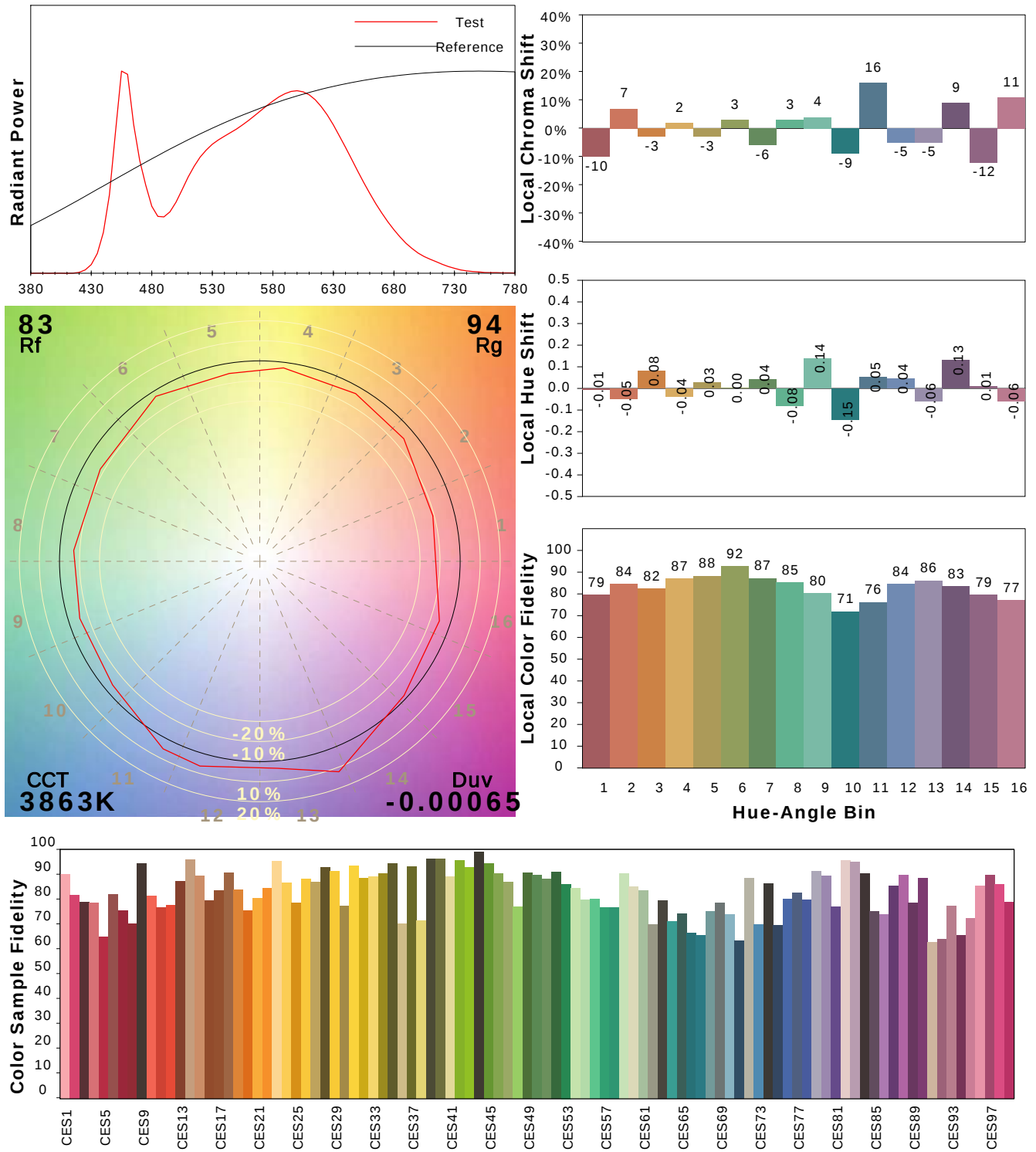
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IES TM-30-18 Color Rendition Report

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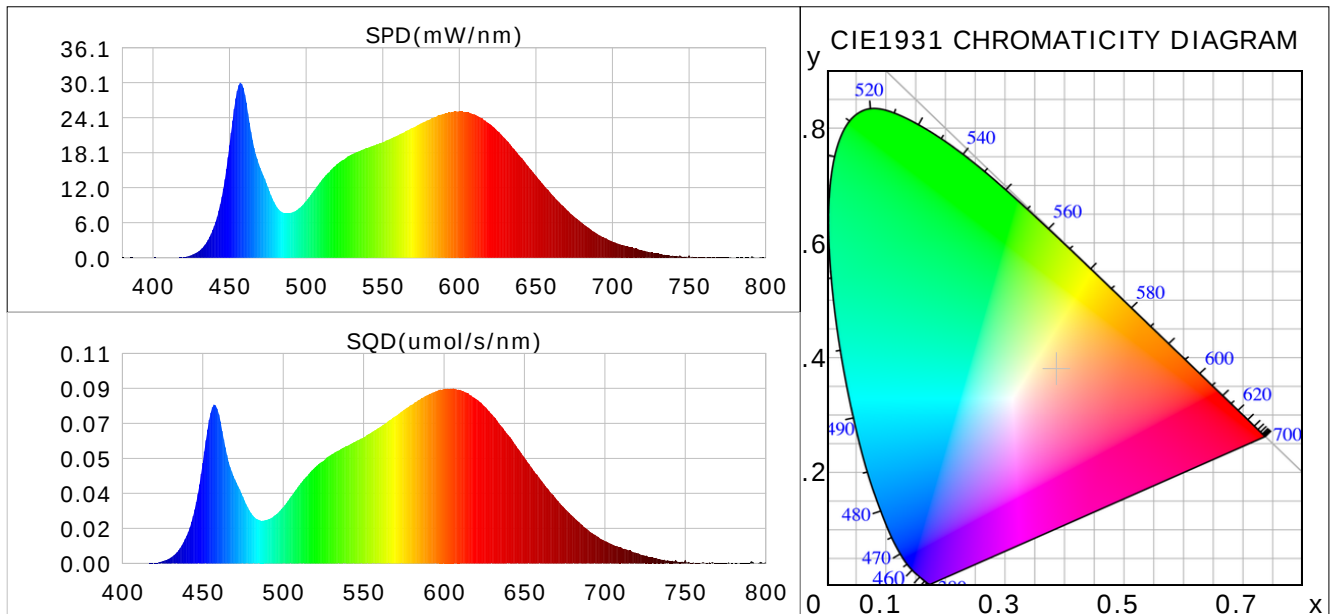
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Plant optical param data

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 CRI: Ra= 84.9



Plant Optical Param

$\mu_v(lm)$: 1440.50	$Q_v(lm.s)$: 1440.50
$\mu_e, \dot{E}(W/nm)$: 4.35	$Q_e(J)$: 4.35
$\mu_e(W)$: 4.30	$\mu_{fr}(W)$: 0.06
$\dot{C}_e$: 0.36	$\dot{C}_{fr}$: 0.01
$PPE(umol/s/w)$: 1.69	K_{fr} : 0.03
Erb_Ratio : 1.55	$PPF(umol/s)$: 20.21
$PF_{uv}(360-400)(umol/s)$: 0.00	$PPF(400-500)(umol/s)$: 3.55
$PPF(500-600)(umol/s)$: 9.13	$PPF(600-700)(umol/s)$: 7.53
$PF_{fr}(700-800)(umol/s)$: 0.35	$PPF.t(umol)$: 20.21
$\mu_{ch-A.t}(J)$: 0.32	$\mu_{ch-A}(W)$: 0.32
$\mu_{ch-B.t}(J)$: 0.21	$\mu_{ch-B}(W)$: 0.21
$\mu_{b.t}(J)$: 0.91	$\mu_b(W)$: 0.91
$\mu_{y.t}(J)$: 1.97	$\mu_y(W)$: 1.97
$\mu_{r.t}(J)$: 1.44	$\mu_r(W)$: 1.44

Electric Parameters

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