

Lightsource Test Report

Product Information

Product Category: LED-PL-Röhre
 Product Spec: LED-PL-2G10-4-11W-DWM
 Manufacturer: METOLIGHT
 Buyer: 3258

Product Type: LED-PL-Röhren-2G10
 Product Number: 1
 Submitted Unit: 103390

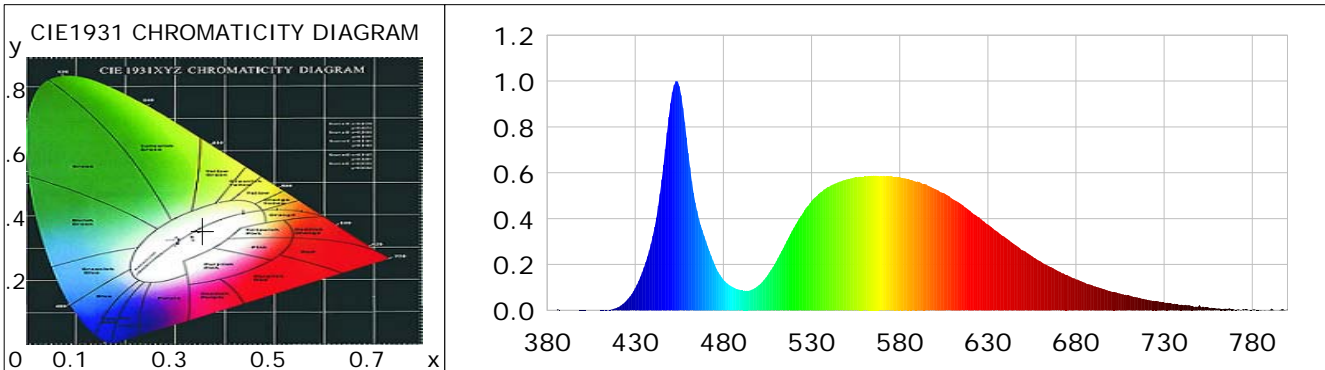
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3553$ $y=0.3546$ $u(u')=0.2172$ $v=0.3251$ $v'=0.4876$
 CCT: $T_c=4636K$ ($duv=-0.00249$) Color Ratio: $R=0.156$ $G=0.812$ $B=0.032$
 Peak Wavelength: 453.4nm Half Bandwidth: 19.5nm
 Dominant Wavelength: 578.5nm Color Purity: 0.130
 CRI: $R_a=73.7$, $avgR(1\sim14)=64.0$, $avgR(1\sim15)=64.5$ TM30: $R_f=72$, $R_g=92$
 GAI: $GAI_BB_8=91.0$, $GAI_BB_15=100.0$, $GAI_EES=79.6$

R1 =72	R2 =80	R3 =82	R4 =71	R5 =70	R6 =69	R7 =84	R8 =62
R9 =0	R10=48	R11=63	R12=34	R13=74	R14=89	R15=71	

Color Quality Scale: $Q_a=70.3$, $Q_f=69.5$, $Q_p=72.7$, $Q_g=90.2$

Q1 =82	Q2 =96	Q3 =60	Q4 =50	Q5 =62	Q6 =67	Q7 =74	Q8 =83
Q9 =90	Q10=75	Q11=68	Q12=70	Q13=74	Q14=66	Q15=72	



Photometric Parameters

Luminous Flux: 870.10 lm	Efficiency: 86.92 lm/W	Radiant Power: 2.631 W
Total mains efficacy: 94.66 lm/W	Energy Efficiency Class: F (EU 2019/2015)	
Pupil Flux: 1311.72 Plm	Pupil Lumens Per Watt: 131.04 Plm/W	Pupil Factor (Kp): 1.508
Cirtpopic Flux: 2661.88 lm		

Electric Parameters

Voltage: 231.00V	Current: 0.0480A	Power: 10.01W
Power Factor: 0.8880	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: 46207 (2448)	CCD Integration Time: 190.93 ms

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

Test Device: Lisun LMS-9000B
 Test Time: 2021-03-05 10:49:00
 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	0.0177	525	0.4224	10.6370	670	0.1707	4.2978
385	0.0010	0.0258	530	0.4766	11.9996	675	0.1544	3.8885
390	0.0006	0.0148	535	0.5139	12.9395	680	0.1352	3.4032
395	0.0003	0.0074	540	0.5394	13.5817	685	0.1207	3.0384
400	0.0011	0.0266	545	0.5578	14.0444	690	0.1061	2.6717
405	0.0003	0.0070	550	0.5712	14.3824	695	0.0940	2.3681
410	0.0007	0.0189	555	0.5808	14.6251	700	0.0817	2.0575
415	0.0028	0.0711	560	0.5842	14.7100	705	0.0735	1.8502
420	0.0130	0.3284	565	0.5876	14.7945	710	0.0652	1.6418
425	0.0420	1.0564	570	0.5854	14.7397	715	0.0559	1.4078
430	0.0972	2.4483	575	0.5867	14.7737	720	0.0473	1.1919
435	0.1875	4.7208	580	0.5813	14.6380	725	0.0402	1.0125
440	0.3250	8.1845	585	0.5736	14.4419	730	0.0348	0.8751
445	0.5705	14.3649	590	0.5623	14.1577	735	0.0277	0.6963
450	0.9028	22.7325	595	0.5496	13.8379	740	0.0247	0.6220
455	0.9778	24.6210	600	0.5297	13.3380	745	0.0198	0.4994
460	0.6856	17.2635	605	0.5119	12.8893	750	0.0223	0.5627
465	0.4349	10.9496	610	0.4856	12.2271	755	0.0129	0.3254
470	0.3034	7.6386	615	0.4627	11.6502	760	0.0075	0.1888
475	0.2000	5.0357	620	0.4337	10.9208	765	0.0077	0.1947
480	0.1333	3.3574	625	0.4057	10.2159	770	0.0032	0.0804
485	0.1030	2.5925	630	0.3744	9.4285	775	0.0055	0.1395
490	0.0877	2.2087	635	0.3450	8.6872	780	0.0033	0.0837
495	0.0866	2.1806	640	0.3164	7.9675	785	0.0021	0.0536
500	0.1093	2.7516	645	0.2882	7.2579	790	0.0021	0.0532
505	0.1527	3.8445	650	0.2614	6.5820	795	0.0011	0.0270
510	0.2146	5.4033	655	0.2362	5.9483	800	0.0055	0.1383
515	0.2871	7.2283	660	0.2129	5.3616			
520	0.3606	9.0793	665	0.1912	4.8140			

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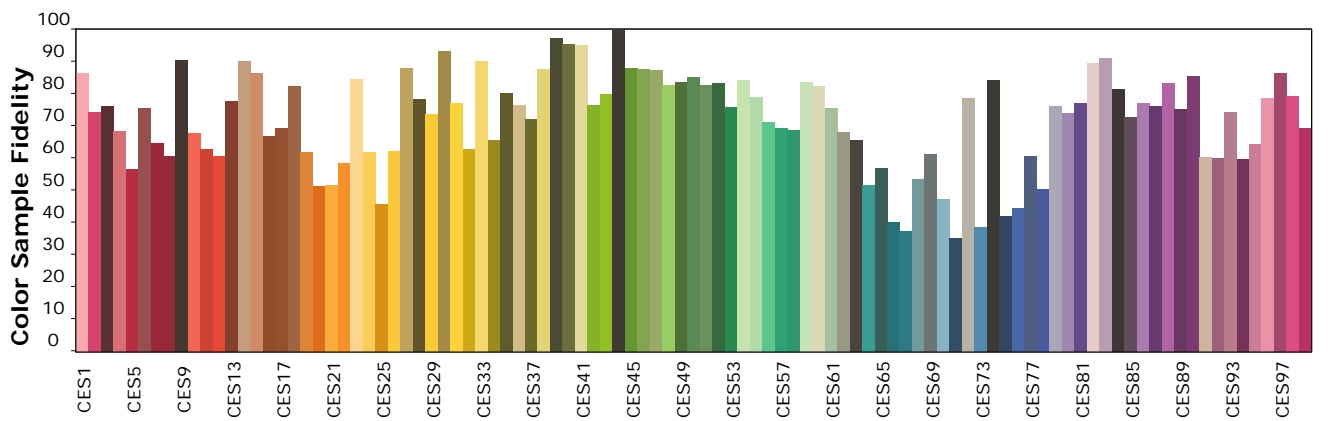
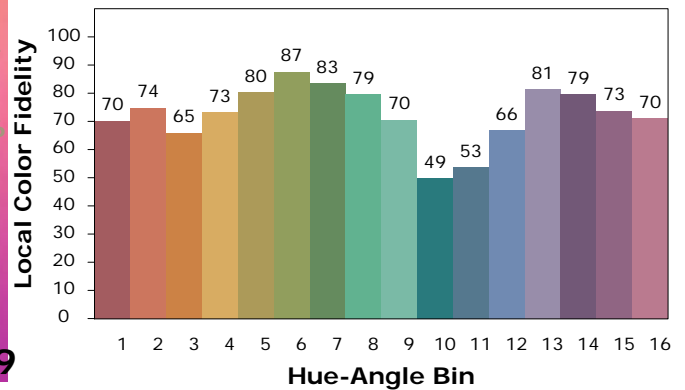
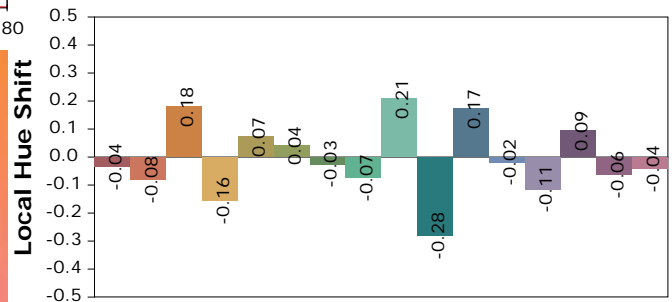
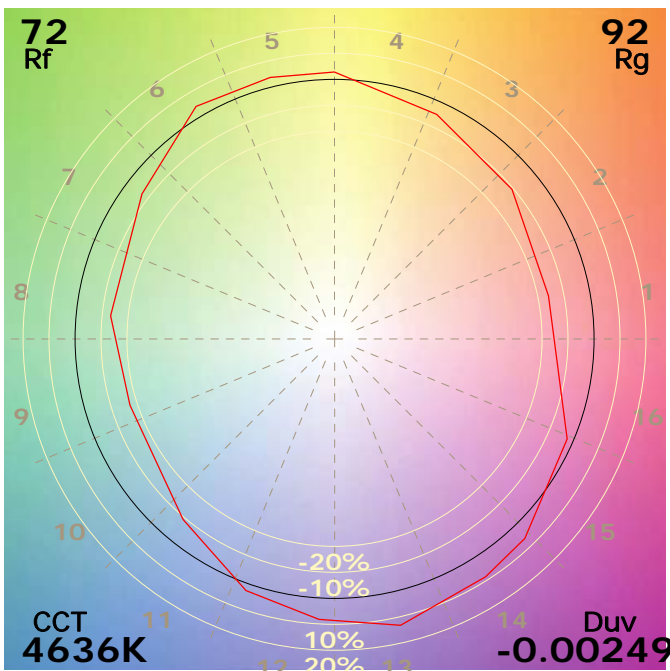
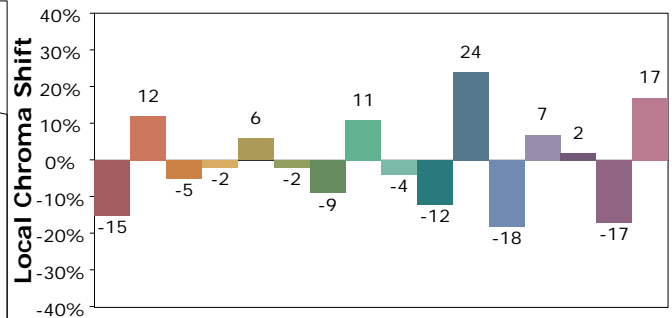
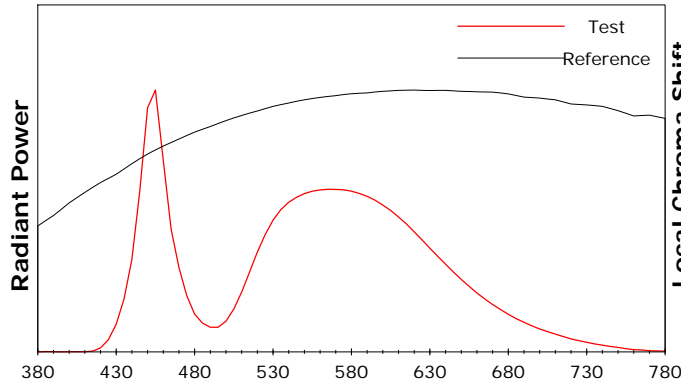
Test Device: Lisun LMS-9000B
 Test Time: 2021-03-05 10:49:00
 Inspector:

IES TM-30-18 Color Rendition Report

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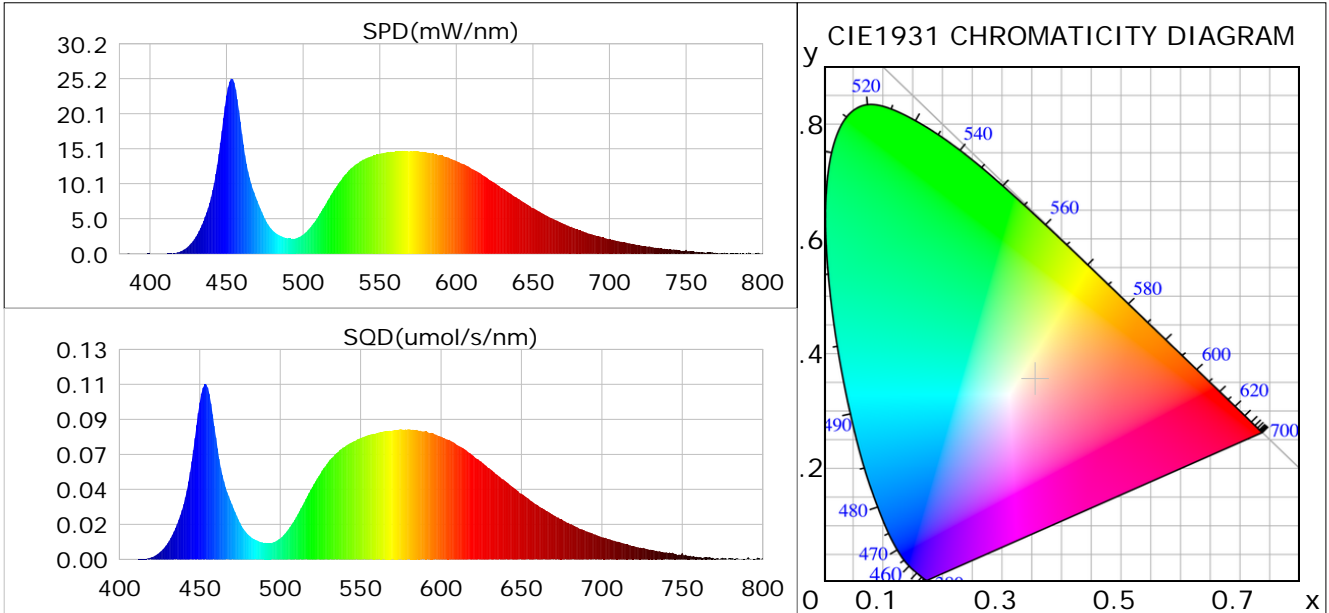
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Plant optical param data

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 CRI: $R_a=73.7$



Plant Optical Param

$ \mu_v(lm): 870.10$	$Q_v(lm.s): 870.10$
$ \mu_e, E(W/nm): 2.63$	$Q_e(J): 2.63$
$ \mu_e(W): 2.57$	$ \mu_{fr}(W): 0.06$
$ \zeta_e: 0.26$	$ \zeta_{fr}: 0.01$
$PPE(umol/s/w): 1.19$	$K_{fr}: 0.04$
$Erb_Ratio: 1.07$	$PPF(umol/s): 11.89$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 2.51$
$PPF(500-600)(umol/s): 5.66$	$PPF(600-700)(umol/s): 3.72$
$PPF_r(700-800)(umol/s): 0.37$	$PPF.t(umol): 11.89$
$ \mu_{ch-A.t}(J): 0.21$	$ \mu_{ch-A}(W): 0.21$
$ \mu_{ch-B.t}(J): 0.14$	$ \mu_{ch-B}(W): 0.14$
$ \mu_b.t(J): 0.66$	$ \mu_b(W): 0.66$
$ \mu_y.t(J): 1.22$	$ \mu_y(W): 1.22$
$ \mu_r.t(J): 0.71$	$ \mu_r(W): 0.71$

Electric Parameters

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Power Factor: 0.8880	Frequency: 49.99Hz	

Condition: $T_x:0.0^\circ C$, $T_i:0.0^\circ C$, R.H.: 60%
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