

Lightsource Test Report

Product Information

Product Category: LED-PL-Röhre
 Product Spec: LED-PL-2G10-4-15W-DWM
 Manufacturer: METOLIGHT
 Buyer: 3258

Product Type: LED-PL-Röhren-2G10
 Product Number: 1
 Submitted Unit: 103324

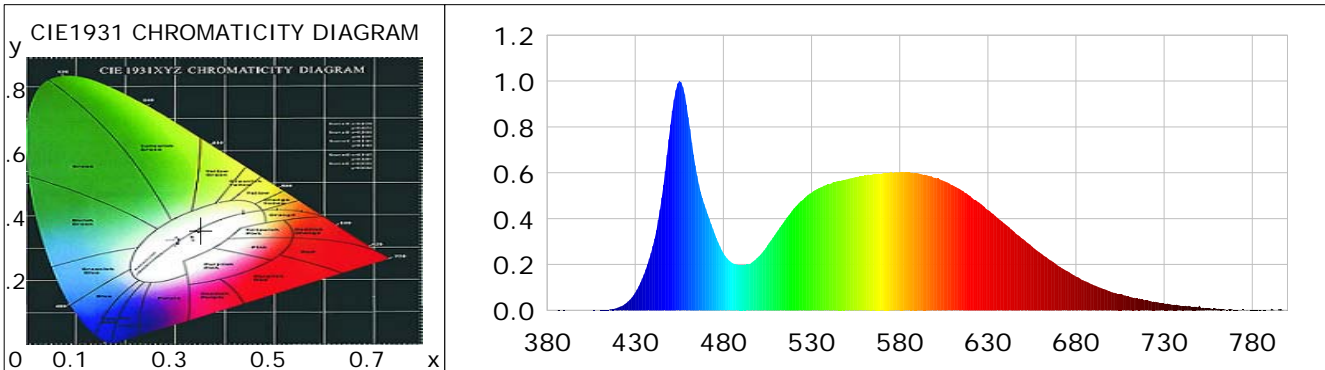
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3522$ $y=0.3559$ $u(u')=0.2146$ $v=0.3252$ $v'=0.4878$
 CCT: $T_c=4754K$ ($duv=-0.00064$) Color Ratio: $R=0.163$ $G=0.794$ $B=0.042$
 Peak Wavelength: 455.2nm Half Bandwidth: 22.5nm
 Dominant Wavelength: 575.9nm Color Purity: 0.125
 CRI: $R_a = 81.8$, $avgR(1\sim14) = 74.1$, $avgR(1\sim15) = 74.4$ TM30: $R_f = 80$, $R_g = 93$
 GAI: $GAI_BB_8=91.2$, $GAI_BB_15=99.2$, $GAI_EES=81.0$

R1 =81	R2 =88	R3 =91	R4 =78	R5 =79	R6 =81	R7 =87	R8 =69
R9 =14	R10=69	R11=74	R12=49	R13=83	R14=95	R15=78	

Color Quality Scale: $Q_a = 79.0$, $Q_f = 78.9$, $Q_p = 79.3$, $Q_g = 91.6$

Q1 =83	Q2 =98	Q3 =73	Q4 =65	Q5 =72	Q6 =76	Q7 =82	Q8 =88
Q9 =95	Q10=85	Q11=80	Q12=81	Q13=82	Q14=74	Q15=78	



Photometric Parameters

Luminous Flux: 1500.5 lm Efficiency: 89.85 lm/W Radiant Power: 4.654 W
 Total mains efficacy: 105.66 lm/W Energy Efficiency Class: F (EU 2019/2015)
 Pupil Flux: 2440.59 Plm Pupil Lumens Per Watt: 146.14 Plm/W Pupil Factor (Kp): 1.627
 Circopic Flux: 5215.03 lm

Electric Parameters

Voltage: 231.10V Current: 0.0770A Power: 16.70W
 Power Factor: 0.9360 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: 46862 (2455) CCD Integration Time: 140.42 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 11:19:37
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0004	0.0149	525	0.4814	19.2165	670	0.1936	7.7284
385	0.0006	0.0252	530	0.5128	20.4723	675	0.1711	6.8299
390	0.0010	0.0382	535	0.5355	21.3789	680	0.1477	5.8950
395	0.0004	0.0172	540	0.5499	21.9510	685	0.1275	5.0899
400	0.0013	0.0517	545	0.5647	22.5440	690	0.1098	4.3817
405	0.0002	0.0086	550	0.5716	22.8198	695	0.0943	3.7629
410	0.0010	0.0384	555	0.5814	23.2108	700	0.0799	3.1894
415	0.0033	0.1298	560	0.5881	23.4770	705	0.0704	2.8089
420	0.0117	0.4663	565	0.5943	23.7238	710	0.0602	2.4047
425	0.0324	1.2945	570	0.5962	23.7986	715	0.0521	2.0781
430	0.0771	3.0772	575	0.6042	24.1188	720	0.0430	1.7185
435	0.1570	6.2693	580	0.6028	24.0630	725	0.0373	1.4907
440	0.2806	11.2012	585	0.6022	24.0404	730	0.0299	1.1948
445	0.4915	19.6212	590	0.5987	23.9013	735	0.0238	0.9503
450	0.8101	32.3409	595	0.5912	23.5987	740	0.0191	0.7624
455	1.0000	39.9196	600	0.5781	23.0767	745	0.0169	0.6743
460	0.8424	33.6267	605	0.5646	22.5378	750	0.0202	0.8069
465	0.5883	23.4838	610	0.5455	21.7778	755	0.0091	0.3624
470	0.4429	17.6820	615	0.5241	20.9200	760	0.0057	0.2267
475	0.3346	13.3585	620	0.4987	19.9078	765	0.0028	0.1135
480	0.2493	9.9527	625	0.4704	18.7765	770	0.0035	0.1382
485	0.2067	8.2501	630	0.4372	17.4523	775	0.0042	0.1661
490	0.1976	7.8863	635	0.4061	16.2117	780	0.0017	0.0691
495	0.2021	8.0666	640	0.3744	14.9447	785	0.0035	0.1390
500	0.2346	9.3663	645	0.3424	13.6679	790	0.0005	0.0212
505	0.2834	11.3145	650	0.3100	12.3732	795	0.0044	0.1739
510	0.3388	13.5261	655	0.2790	11.1392	800	0.0026	0.1021
515	0.3931	15.6929	660	0.2491	9.9425			
520	0.4440	17.7247	665	0.2203	8.7937			

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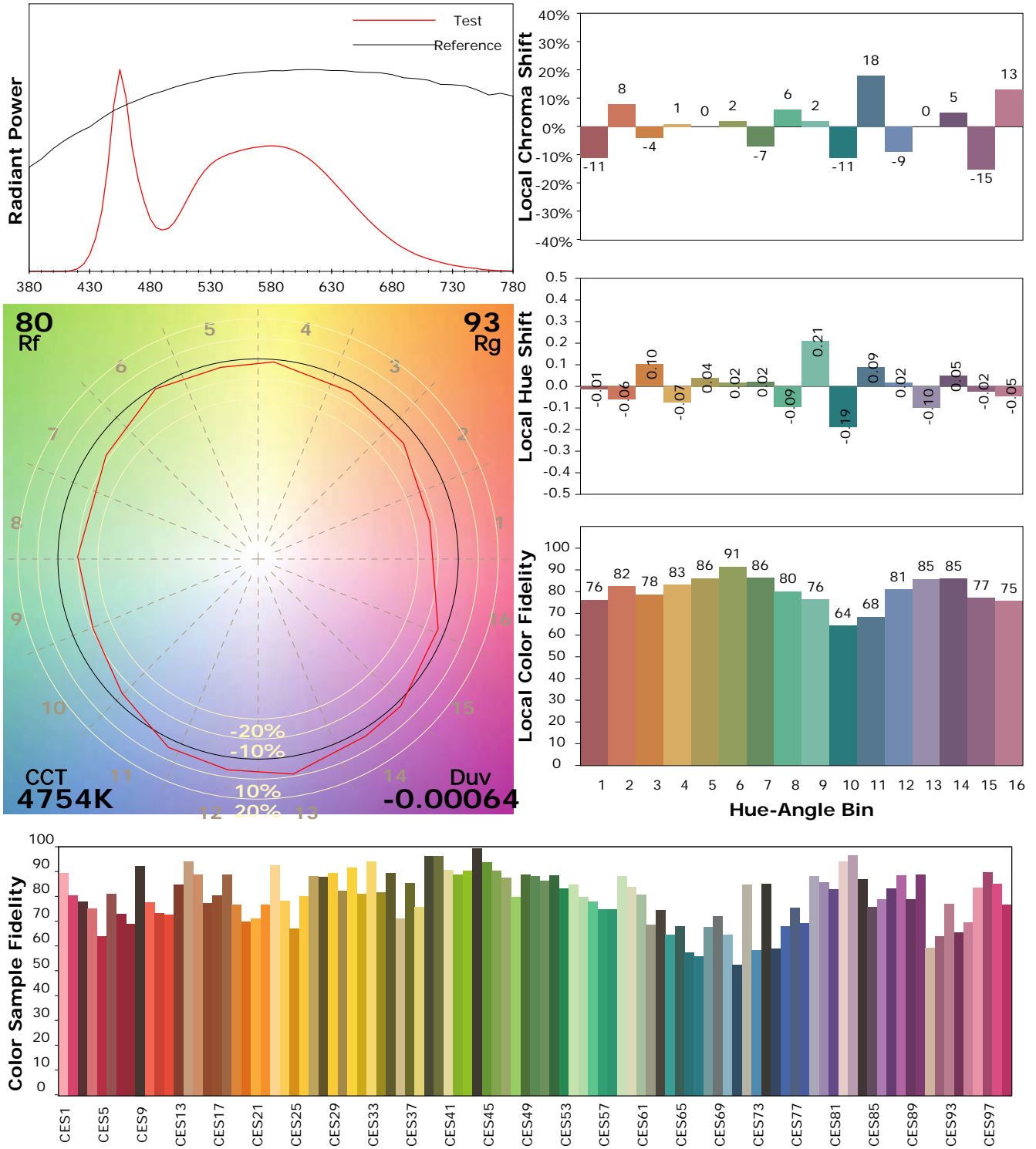
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IES TM-30-18 Color Rendition Report

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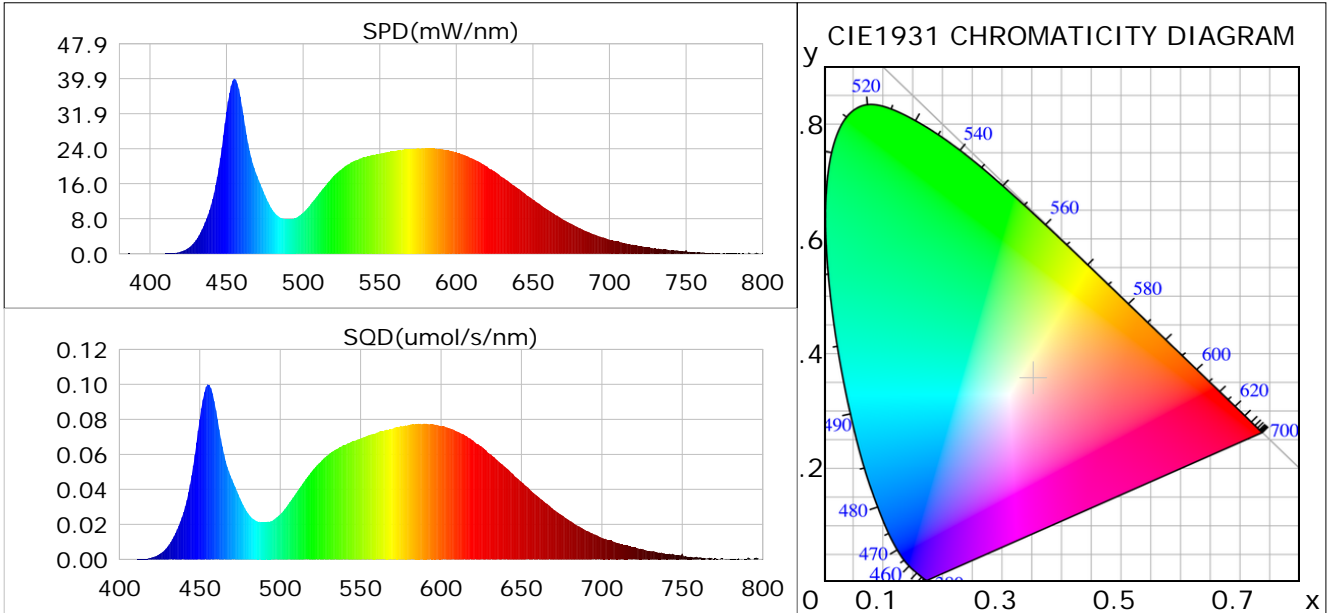
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Plant optical param data

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 Dominant Wavelength: 575.9nm Color Purity: 0.125
 CRI: $R_a=81.8$



Plant Optical Param

$ \mu_v(lm): 1500.50$	$Q_v(lm.s): 1500.50$
$ \mu_e, \dot{E}(W/nm): 4.65$	$Q_e(J): 4.65$
$ \mu_e(W): 4.57$	$ \mu_{fr}(W): 0.09$
$ \zeta_e: 0.27$	$ \zeta_{fr}: 0.01$
$PPE(umol/s/w): 1.26$	$K_{fr}: 0.03$
$Erb_Ratio: 1.05$	$PPF(umol/s): 21.11$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 4.67$
$PPF(500-600)(umol/s): 9.70$	$PPF(600-700)(umol/s): 6.74$
$PPF_{fr}(700-800)(umol/s): 0.52$	$PPF.t(umol): 21.11$
$ \mu_{ch-A.t}(J): 0.36$	$ \mu_{ch-A}(W): 0.36$
$ \mu_{ch-B.t}(J): 0.24$	$ \mu_{ch-B}(W): 0.24$
$ \mu_b.t(J): 1.21$	$ \mu_b(W): 1.21$
$ \mu_y.t(J): 2.10$	$ \mu_y(W): 2.10$
$ \mu_r.t(J): 1.29$	$ \mu_r(W): 1.29$

Electric Parameters

Voltage: 231.10V	Current: 0.0770A	Power: 16.70W
Power Factor: 0.9360	Frequency: 49.99Hz	

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