

Lightsource Test Report

Product Information

Product Category: LED-PL-Röhre
 Product Spec: LED-PL-2G11-I-15-WWM-360
 Manufacturer: METOLIGHT
 Buyer: 4493

Product Type: LED-PL-Röhre-2G11
 Product Number: 1
 Submitted Unit: 104618

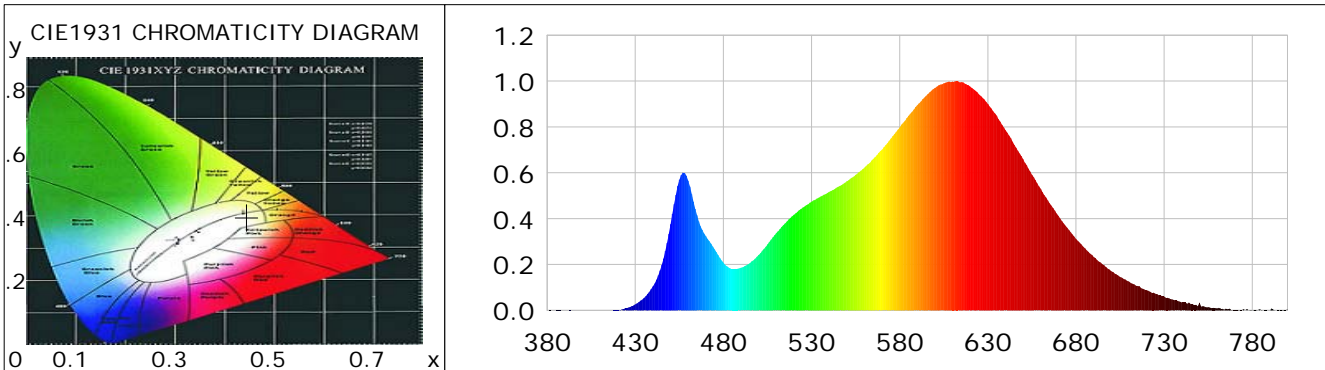
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.4449$ $y=0.3973$ $u(u')=0.2587$ $v=0.3466$ $v'=0.5199$
 CCT: $T_c=2815K$ ($duv=-0.00365$) Color Ratio: $R=0.251$ $G=0.723$ $B=0.026$
 Peak Wavelength: 612.3nm Half Bandwidth: 126.1nm
 Dominant Wavelength: 585.0nm Color Purity: 0.528
 CRI: $R_a=85.8$, $avgR(1\sim14)=81.6$, $avgR(1\sim15)=81.5$ TM30: $R_f=85$, $R_g=96$
 GAI: $GAI_BB_8=105.8$, $GAI_BB_15=114.6$, $GAI_EES=55.1$

R1 =86	R2 =95	R3 =95	R4 =83	R5 =86	R6 =94	R7 =82	R8 =64
R9 =25	R10=87	R11=83	R12=74	R13=89	R14=99	R15=80	

Color Quality Scale: $Q_a=83.7$, $Q_f=84.6$, $Q_p=87.9$, $Q_g=94.4$

Q1 =81	Q2 =94	Q3 =83	Q4 =78	Q5 =82	Q6 =85	Q7 =84	Q8 =85
Q9 =95	Q10=90	Q11=86	Q12=84	Q13=84	Q14=78	Q15=79	



Photometric Parameters

Luminous Flux: 1479.4 lm	Efficiency: 94.83 lm/W	Radiant Power: 4.668 W
Total mains efficacy: 111.52 lm/W	Energy Efficiency Class: E (EU 2019/2015)	
Pupil Flux: 1835.40 Plm	Pupil Lumens Per Watt: 117.65 Plm/W	Pupil Factor (Kp): 1.241
Cirtopic Flux: 3386.35 lm		

Electric Parameters

Voltage: 230.80V	Current: 0.0750A	Power: 15.60W
Power Factor: 0.8950	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: 46372 (2570)	CCD Integration Time: 276.70 ms

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

Test Device: Lisun LMS-9000B
 Test Time: 2021-02-25 15:47:11
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0003	0.0081	525	0.4483	14.2826	670	0.4127	13.1481
385	0.0012	0.0381	530	0.4734	15.0818	675	0.3607	11.4900
390	0.0006	0.0206	535	0.4960	15.8004	680	0.3115	9.9234
395	0.0001	0.0028	540	0.5167	16.4613	685	0.2710	8.6346
400	0.0005	0.0173	545	0.5388	17.1657	690	0.2328	7.4159
405	0.0001	0.0028	550	0.5628	17.9301	695	0.2008	6.3962
410	0.0002	0.0070	555	0.5911	18.8311	700	0.1708	5.4414
415	0.0011	0.0362	560	0.6224	19.8294	705	0.1452	4.6261
420	0.0025	0.0811	565	0.6610	21.0574	710	0.1259	4.0124
425	0.0089	0.2840	570	0.7014	22.3451	715	0.1066	3.3946
430	0.0259	0.8247	575	0.7492	23.8687	720	0.0882	2.8090
435	0.0542	1.7281	580	0.7982	25.4281	725	0.0730	2.3249
440	0.1043	3.3234	585	0.8486	27.0352	730	0.0606	1.9321
445	0.1983	6.3181	590	0.8952	28.5189	735	0.0471	1.5020
450	0.3761	11.9808	595	0.9360	29.8203	740	0.0347	1.1045
455	0.5701	18.1634	600	0.9698	30.8953	745	0.0274	0.8738
460	0.5655	18.0172	605	0.9902	31.5464	750	0.0329	1.0477
465	0.4150	13.2221	610	0.9982	31.7996	755	0.0143	0.4554
470	0.3241	10.3239	615	0.9956	31.7177	760	0.0089	0.2843
475	0.2660	8.4739	620	0.9764	31.1047	765	0.0071	0.2260
480	0.2081	6.6295	625	0.9415	29.9936	770	0.0015	0.0484
485	0.1802	5.7422	630	0.9005	28.6870	775	0.0044	0.1408
490	0.1857	5.9170	635	0.8490	27.0462	780	0.0009	0.0298
495	0.2058	6.5564	640	0.7858	25.0350	785	0.0030	0.0968
500	0.2417	7.7017	645	0.7220	23.0019	790	0.0005	0.0171
505	0.2876	9.1634	650	0.6596	21.0140	795	0.0011	0.0337
510	0.3376	10.7567	655	0.5919	18.8577	800	0.0049	0.1561
515	0.3791	12.0766	660	0.5299	16.8816			
520	0.4170	13.2855	665	0.4676	14.8976			

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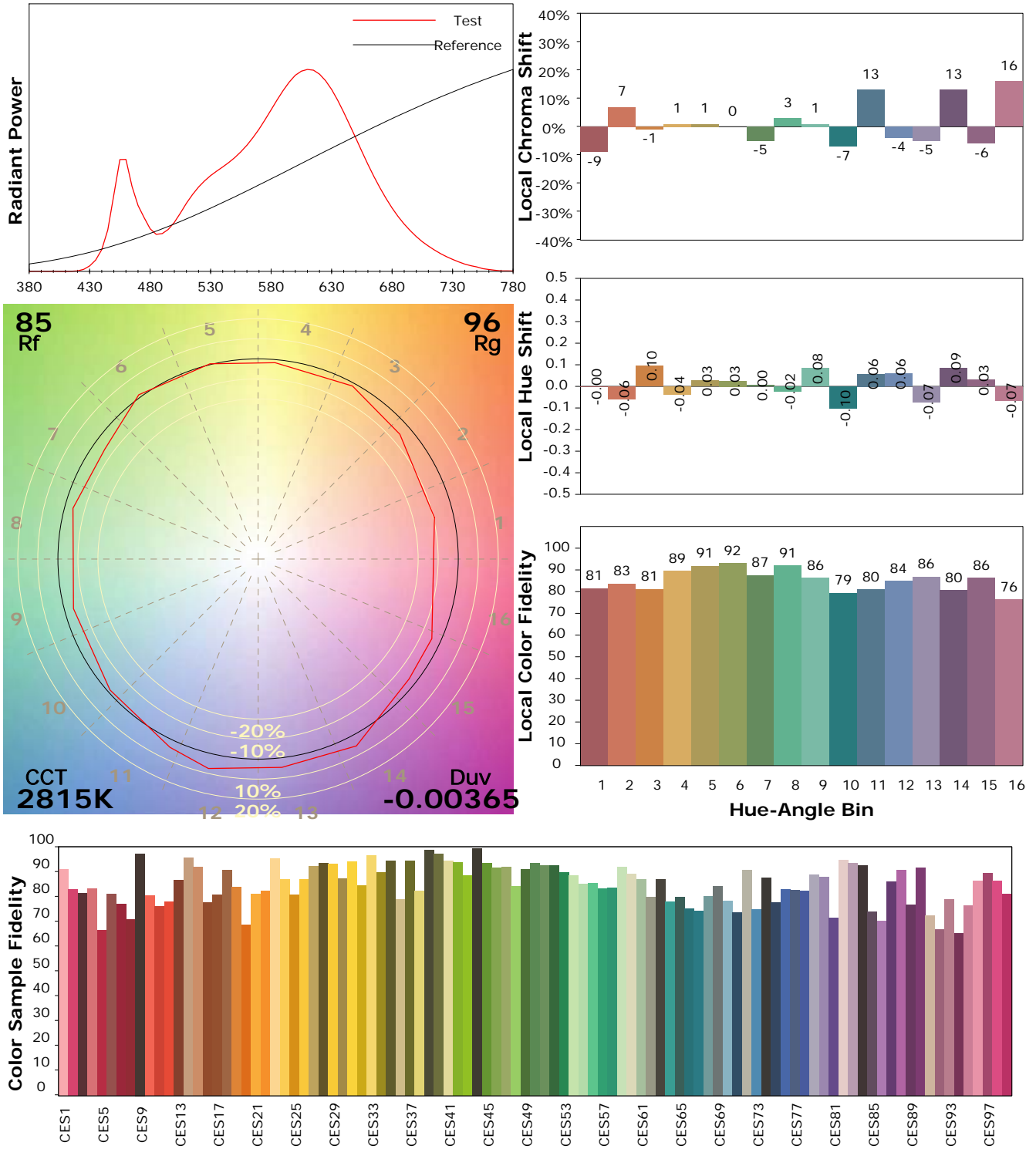
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IES TM-30-18 Color Rendition Report

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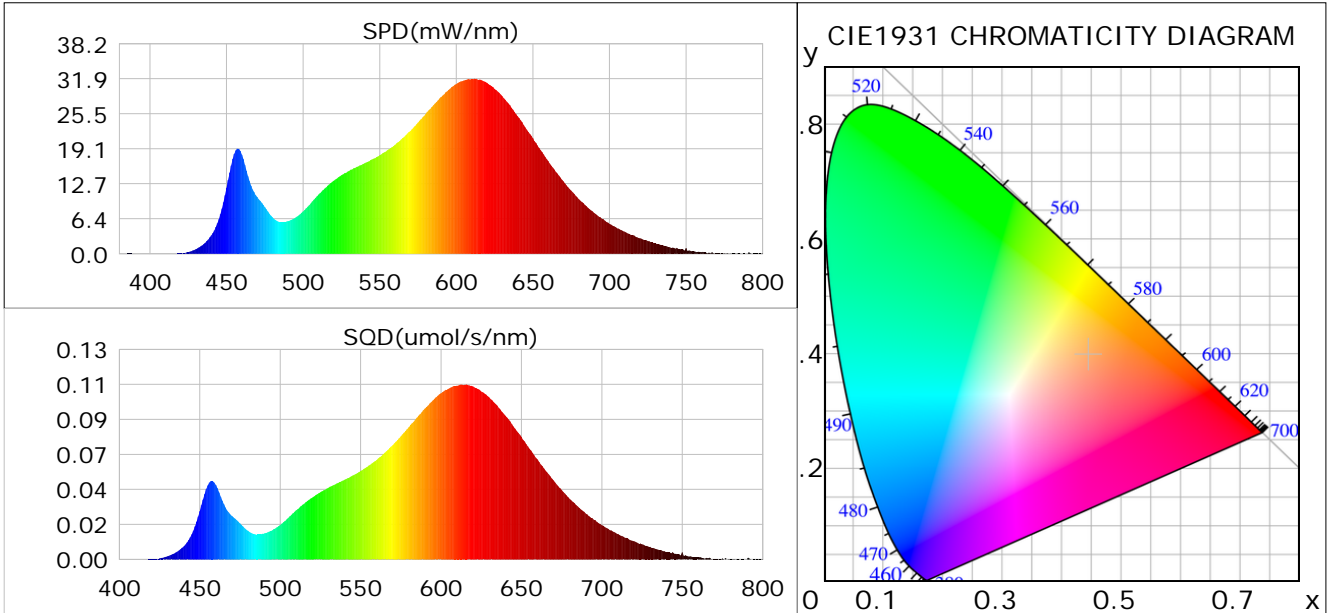
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Plant optical param data

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 CRI: $R_a=85.8$



Plant Optical Param

$ \mu_v(lm): 1479.38$	$Q_v(lm.s): 1479.38$
$ \mu_e, \dot{E}(W/nm): 4.67$	$Q_e(J): 4.67$
$ \mu_e(W): 4.53$	$ \mu_{fr}(W): 0.14$
$ \dot{C}_e: 0.29$	$ \dot{C}_{fr}: 0.01$
$PPE(umol/s/w): 1.41$	$K_{fr}: 0.05$
$Erb_Ratio: 3.31$	$PPF(umol/s): 22.06$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 2.38$
$PPF(500-600)(umol/s): 8.90$	$PPF(600-700)(umol/s): 10.78$
$PPF_{fr}(700-800)(umol/s): 0.81$	$PPF.t(umol): 22.06$
$ \mu_{ch-A.t}(J): 0.36$	$ \mu_{ch-A}(W): 0.36$
$ \mu_{ch-B.t}(J): 0.19$	$ \mu_{ch-B}(W): 0.19$
$ \mu_b.t(J): 0.61$	$ \mu_b(W): 0.61$
$ \mu_y.t(J): 1.91$	$ \mu_y(W): 1.91$
$ \mu_r.t(J): 2.05$	$ \mu_r(W): 2.05$

Electric Parameters

Voltage: 230.80V	Current: 0.0750A	Power: 15.60W
Power Factor: 0.8950	Frequency: 49.99Hz	

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