

Lightsource Test Report

Product Information

Product Category: LED-Lampen
 Product Spec: LED-AR111-12-WW-C-45
 Manufacturer: METOLIGHT
 Buyer: 2320

Product Type: LED-Lampen-AR111
 Product Number: 1
 Submitted Unit: 102487

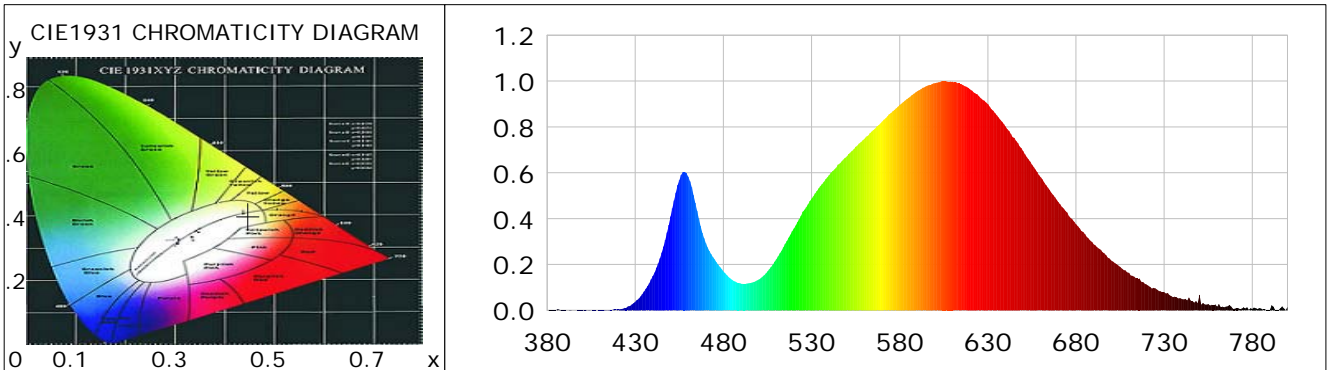
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.4473$ $y=0.4010$ $u(u')=0.2587$ $v=0.3478$ $v'=0.5217$
 CCT: $T_c=2807K$ ($duv=-0.00247$) Color Ratio: $R=0.237$ $G=0.742$ $B=0.020$
 Peak Wavelength: 605.8nm Half Bandwidth: 136.1nm
 Dominant Wavelength: 584.6nm Color Purity: 0.546
 CRI: $R_a=78.1$, $avgR(1\sim14)=70.9$, $avgR(1\sim15)=71.0$ TM30: $R_f=78$, $R_g=95$
 GAI: $GAI_BB_8=101.1$, $GAI_BB_15=111.5$, $GAI_EES=52.4$

R1 =77	R2 =87	R3 =93	R4 =72	R5 =74	R6 =80	R7 =82	R8 =59
R9 =9	R10=67	R11=64	R12=53	R13=79	R14=95	R15=73	

Color Quality Scale: $Q_a=76.0$, $Q_f=76.6$, $Q_p=80.5$, $Q_g=92.6$

Q1 =79	Q2 =96	Q3 =72	Q4 =64	Q5 =71	Q6 =73	Q7 =73	Q8 =79
Q9 =95	Q10=83	Q11=77	Q12=77	Q13=79	Q14=72	Q15=74	



Photometric Parameters

Luminous Flux: 663.61 lm	Efficiency: 56.43 lm/W	Radiant Power: 2.072 W
Total mains efficacy: 61.45 lm/W	Energy Efficiency Class: G (EU 2019/2015)	
Pupil Flux: 759.54 Plm	Pupil Lumens Per Watt: 64.59 Plm/W	Pupil Factor (Kp): 1.145
Cirtopic Flux: 1318.22 lm		

Electric Parameters

Voltage: 10.660V	Current: 1.1040A	Power: 11.76W
Power Factor: 0.8360	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: 46985 (3123)	CCD Integration Time: 651.26 ms

Condition: $T_x:0.0^{\circ}C$, $T_i:0.0^{\circ}C$, R.H.: 60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-08-17 10:17:44
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0005	0.0067	525	0.4301	5.7798	670	0.4720	6.3438
385	0.0018	0.0247	530	0.4867	6.5411	675	0.4267	5.7352
390	0.0020	0.0264	535	0.5420	7.2848	680	0.3763	5.0567
395	0.0003	0.0042	540	0.5901	7.9311	685	0.3330	4.4748
400	0.0013	0.0180	545	0.6355	8.5410	690	0.2881	3.8716
405	0.0002	0.0032	550	0.6713	9.0222	695	0.2535	3.4063
410	0.0014	0.0190	555	0.7129	9.5806	700	0.2173	2.9204
415	0.0033	0.0438	560	0.7483	10.0568	705	0.1897	2.5491
420	0.0056	0.0747	565	0.7863	10.5683	710	0.1640	2.2045
425	0.0116	0.1560	570	0.8232	11.0630	715	0.1392	1.8709
430	0.0370	0.4975	575	0.8606	11.5666	720	0.1125	1.5118
435	0.0819	1.1005	580	0.8967	12.0511	725	0.0962	1.2928
440	0.1500	2.0155	585	0.9264	12.4505	730	0.0791	1.0628
445	0.2521	3.3877	590	0.9562	12.8512	735	0.0577	0.7749
450	0.4097	5.5067	595	0.9778	13.1413	740	0.0497	0.6685
455	0.5679	7.6327	600	0.9911	13.3204	745	0.0432	0.5811
460	0.5833	7.8394	605	0.9990	13.4269	750	0.0674	0.9056
465	0.4343	5.8368	610	0.9970	13.3996	755	0.0275	0.3698
470	0.2928	3.9356	615	0.9868	13.2619	760	0.0163	0.2197
475	0.2222	2.9861	620	0.9639	12.9551	765	0.0161	0.2159
480	0.1698	2.2815	625	0.9330	12.5395	770	0.0076	0.1016
485	0.1327	1.7840	630	0.8993	12.0870	775	0.0129	0.1728
490	0.1168	1.5703	635	0.8512	11.4393	780	0.0065	0.0873
495	0.1189	1.5981	640	0.8016	10.7739	785	0.0080	0.1077
500	0.1343	1.8054	645	0.7519	10.1060	790	0.0031	0.0413
505	0.1696	2.2801	650	0.6941	9.3292	795	0.0020	0.0268
510	0.2233	3.0013	655	0.6357	8.5438	800	0.0158	0.2118
515	0.2900	3.8978	660	0.5801	7.7970			
520	0.3571	4.7995	665	0.5255	7.0627			

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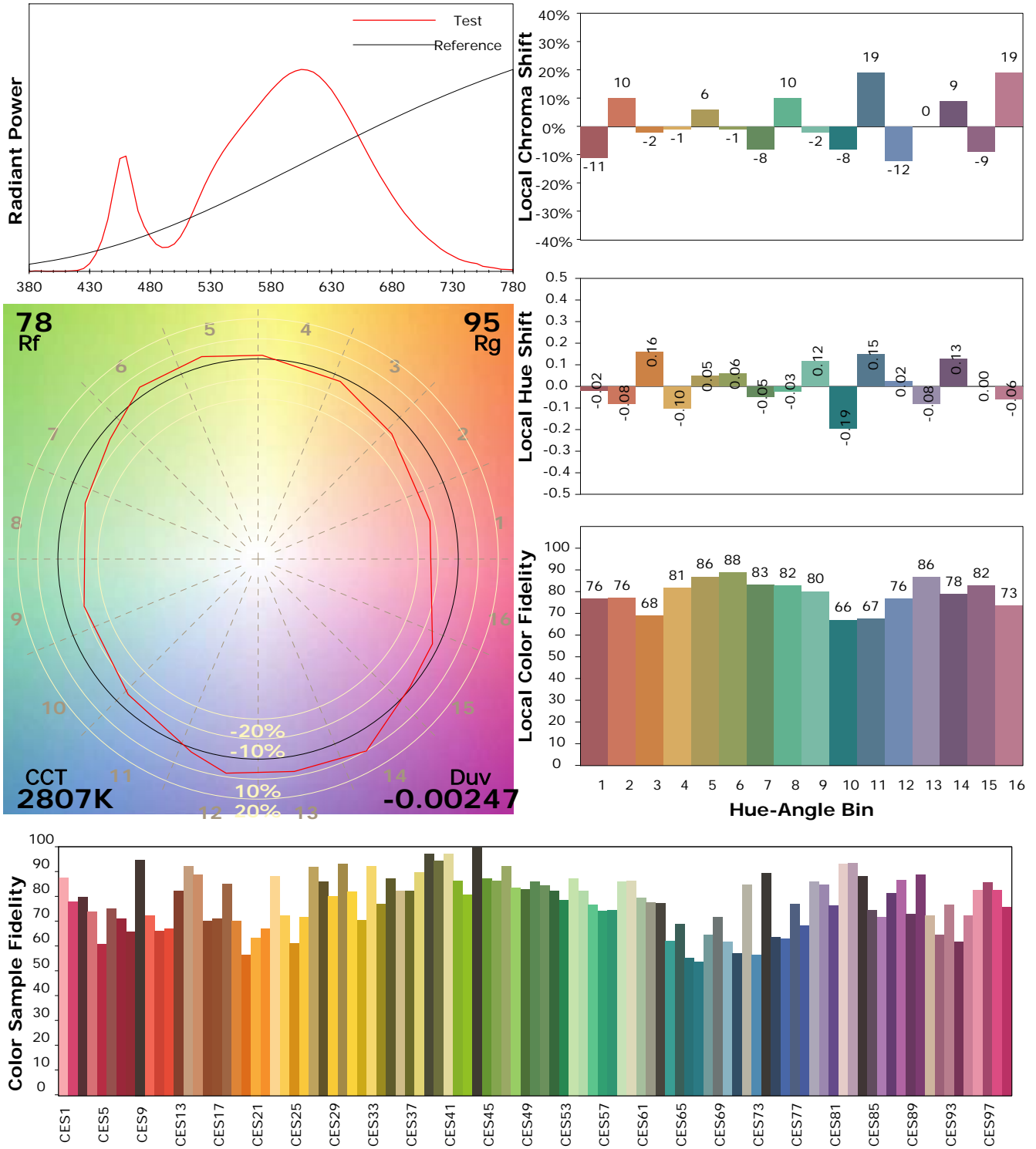
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IES TM-30-18 Color Rendition Report

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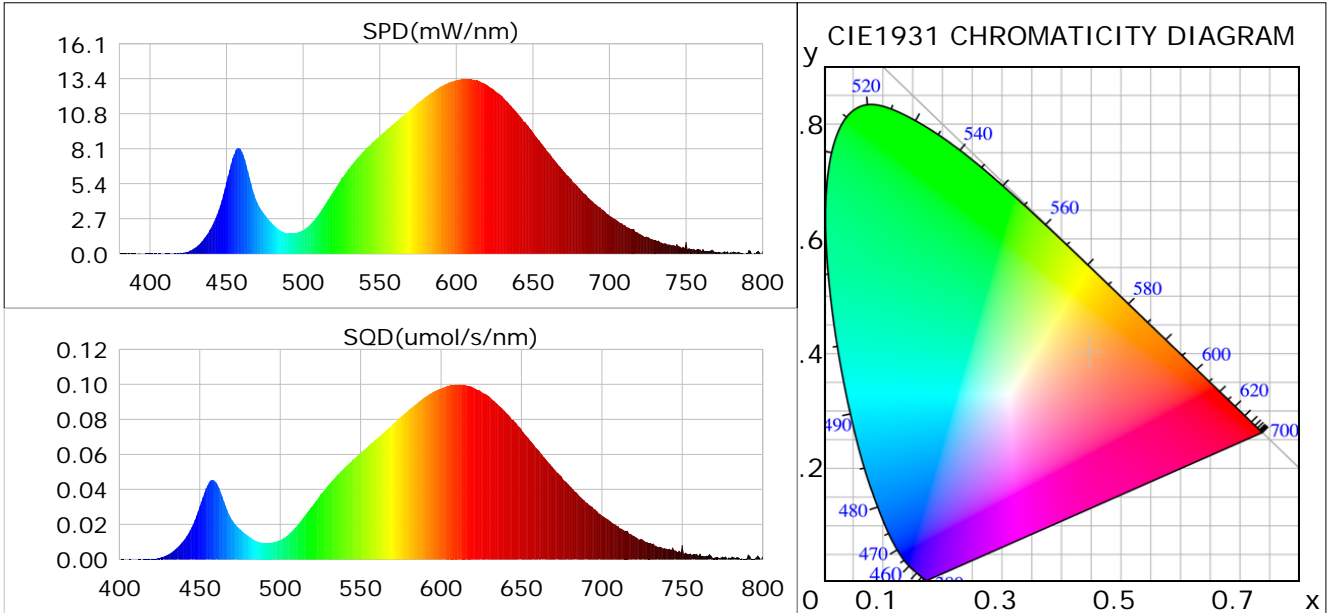
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Plant optical param data

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 CRI: $R_a=78.1$



Plant Optical Param

$ \mu_v(lm): 663.61$	$Q_v(lm.s): 663.61$
$ \mu_e, \dot{E}(W/nm): 2.07$	$Q_e(J): 2.07$
$ \mu_e(W): 2.00$	$ \mu_{fr}(W): 0.08$
$ \zeta_e: 0.17$	$ \zeta_{fr}: 0.01$
$PPE(umol/s/w): 0.83$	$K_{fr}: 0.04$
$Erb_Ratio: 3.62$	$PPF(umol/s): 9.74$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 0.95$
$PPF(500-600)(umol/s): 4.02$	$PPF(600-700)(umol/s): 4.77$
$PPF_r(700-800)(umol/s): 0.47$	$PPF.t(umol): 9.74$
$ \mu_{ch-A.t}(J): 0.16$	$ \mu_{ch-A}(W): 0.16$
$ \mu_{ch-B.t}(J): 0.08$	$ \mu_{ch-B}(W): 0.08$
$ \mu_b.t(J): 0.25$	$ \mu_b(W): 0.25$
$ \mu_y.t(J): 0.86$	$ \mu_y(W): 0.86$
$ \mu_r.t(J): 0.91$	$ \mu_r(W): 0.91$

Electric Parameters

Voltage: 10.660V	Current: 1.1040A	Power: 11.76W
Power Factor: 0.8360	Frequency: 49.99Hz	

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