

Lightsource Test Report

Product Information

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

Product Type: LED-Lampen-AR111
 Product Number: 1
 Submitted Unit: 102488

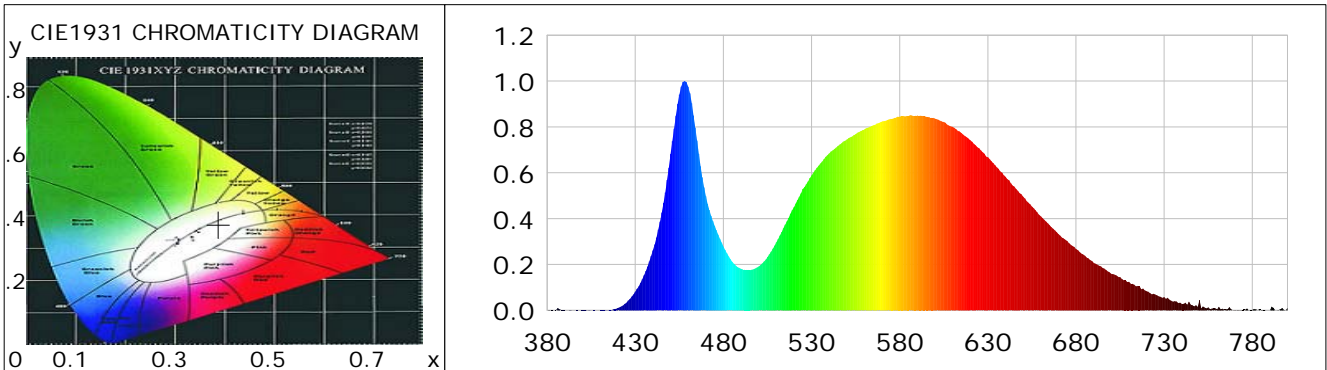
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3875$ $y=0.3748$ $u(u')=0.2305$ $v=0.3345$ $v'=0.5018$
 CCT: $T_c=3797K$ ($duv=-0.00289$) Color Ratio: $R=0.187$ $G=0.780$ $B=0.033$
 Peak Wavelength: 457.9nm Half Bandwidth: 23.3nm
 Dominant Wavelength: 581.4nm Color Purity: 0.288
 CRI: $R_a=78.8$, $avgR(1\sim14)=70.8$, $avgR(1\sim15)=71.1$ TM30: $R_f=77$, $R_g=93$
 GAI: $GAI_BB_8=94.5$, $GAI_BB_15=103.8$, $GAI_EES=71.3$

R1 =77	R2 =87	R3 =91	R4 =73	R5 =75	R6 =79	R7 =85	R8 =64
R9 =9	R10=65	R11=65	R12=48	R13=80	R14=94	R15=75	

Color Quality Scale: $Q_a=75.9$, $Q_f=75.7$, $Q_p=76.9$, $Q_g=91.7$

Q1 =83	Q2 =98	Q3 =70	Q4 =60	Q5 =67	Q6 =71	Q7 =77	Q8 =84
Q9 =94	Q10=83	Q11=76	Q12=77	Q13=79	Q14=72	Q15=76	



Photometric Parameters

Luminous Flux: 683.38 lm	Efficiency: 60.00 lm/W	Radiant Power: 2.100 W
Total mains efficacy: 65.34 lm/W	Energy Efficiency Class: G (EU 2019/2015)	
Pupil Flux: 968.74 Plm	Pupil Lumens Per Watt: 85.05 Plm/W	Pupil Factor (Kp): 1.418
Cirtopic Flux: 1924.56 lm		

Electric Parameters

Voltage: 10.660V	Current: 1.0730A	Power: 11.39W
Power Factor: 0.8200	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: 46773 (2941)	CCD Integration Time: 483.64 ms

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

Test Device: Lisun LMS-9000B
 Test Time: 2021-08-17 10:11:20
 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	0.0075	525	0.5294	7.3788	670	0.3336	4.6491
385	0.0014	0.0198	530	0.5884	8.2002	675	0.3029	4.2221
390	0.0011	0.0153	535	0.6401	8.9221	680	0.2680	3.7351
395	0.0002	0.0027	540	0.6847	9.5432	685	0.2386	3.3255
400	0.0013	0.0182	545	0.7175	10.0006	690	0.2066	2.8800
405	0.0002	0.0033	550	0.7452	10.3865	695	0.1857	2.5876
410	0.0008	0.0109	555	0.7685	10.7108	700	0.1596	2.2238
415	0.0027	0.0381	560	0.7895	11.0036	705	0.1445	2.0141
420	0.0099	0.1386	565	0.8073	11.2524	710	0.1243	1.7324
425	0.0333	0.4648	570	0.8238	11.4822	715	0.1064	1.4826
430	0.0813	1.1328	575	0.8352	11.6403	720	0.0832	1.1593
435	0.1534	2.1384	580	0.8452	11.7803	725	0.0697	0.9718
440	0.2611	3.6389	585	0.8476	11.8139	730	0.0575	0.8011
445	0.4270	5.9513	590	0.8500	11.8471	735	0.0377	0.5255
450	0.6820	9.5060	595	0.8440	11.7640	740	0.0282	0.3933
455	0.9412	13.1174	600	0.8366	11.6598	745	0.0256	0.3575
460	0.9756	13.5982	605	0.8221	11.4574	750	0.0452	0.6298
465	0.7410	10.3271	610	0.8006	11.1588	755	0.0127	0.1770
470	0.4991	6.9559	615	0.7739	10.7861	760	0.0052	0.0726
475	0.3687	5.1395	620	0.7427	10.3521	765	0.0047	0.0649
480	0.2791	3.8900	625	0.7071	9.8557	770	0.0022	0.0313
485	0.2116	2.9490	630	0.6678	9.3078	775	0.0035	0.0493
490	0.1809	2.5210	635	0.6243	8.7016	780	0.0022	0.0300
495	0.1754	2.4443	640	0.5824	8.1175	785	0.0038	0.0530
500	0.1917	2.6717	645	0.5401	7.5276	790	0.0013	0.0176
505	0.2331	3.2494	650	0.4959	6.9115	795	0.0022	0.0303
510	0.2969	4.1378	655	0.4524	6.3058	800	0.0118	0.1638
515	0.3739	5.2106	660	0.4108	5.7259			
520	0.4502	6.2748	665	0.3718	5.1816			

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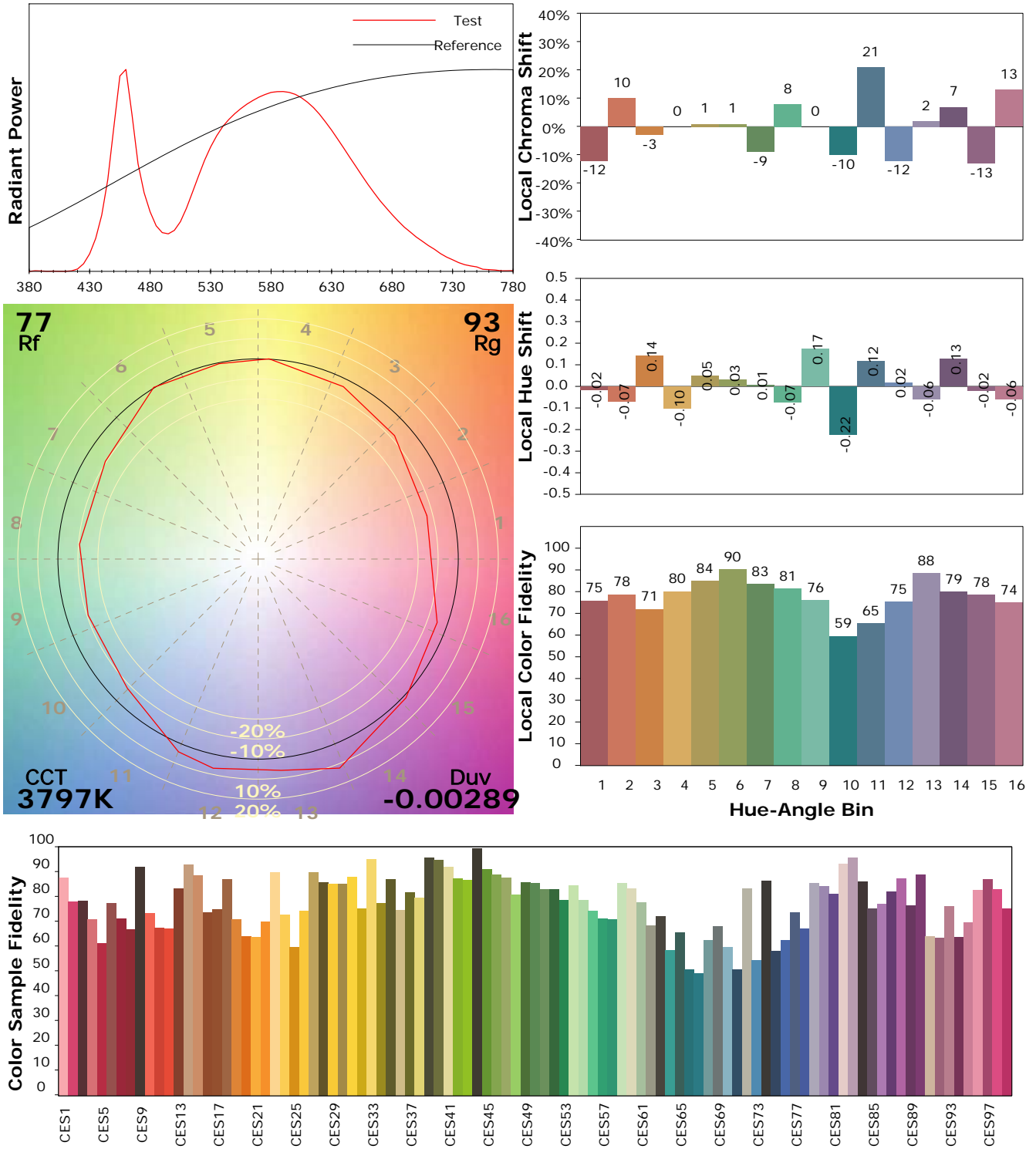
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IES TM-30-18 Color Rendition Report

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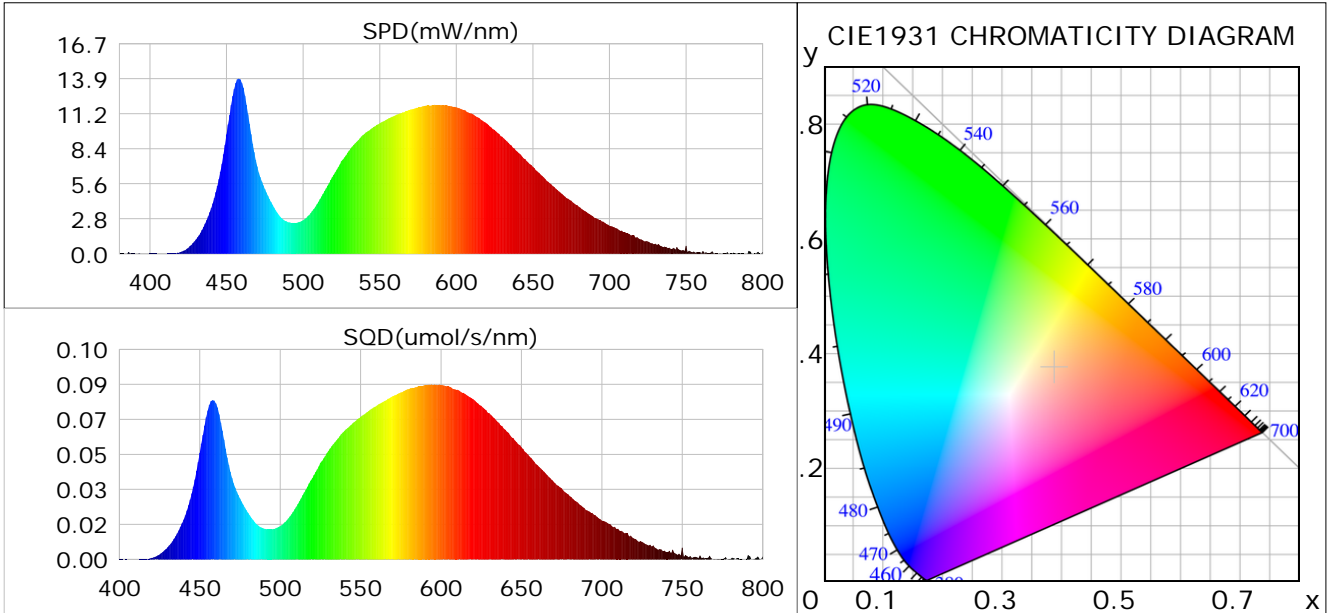
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Plant optical param data

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 CRI: $R_a=78.8$



Plant Optical Param

$ \mu_v(lm): 683.38$	$Q_v(lm.s): 683.38$
$ \mu_e, \dot{E}(W/nm): 2.10$	$Q_e(J): 2.10$
$ \mu_e(W): 2.04$	$ \mu_{fr}(W): 0.06$
$ \dot{C}_e: 0.18$	$ \dot{C}_{fr}: 0.01$
$PPE(\mu mol/s/w): 0.85$	$K_{fr}: 0.03$
$Erb_Ratio: 1.62$	$PPF(\mu mol/s): 9.66$
$PF_{uv}(360-400)(\mu mol/s): 0.00$	$PPF(400-500)(\mu mol/s): 1.65$
$PPF(500-600)(\mu mol/s): 4.31$	$PPF(600-700)(\mu mol/s): 3.70$
$PPF_{fr}(700-800)(\mu mol/s): 0.34$	$PPF.t(\mu mol): 9.66$
$ \mu_{ch-A.t}(J): 0.16$	$ \mu_{ch-A}(W): 0.16$
$ \mu_{ch-B.t}(J): 0.10$	$ \mu_{ch-B}(W): 0.10$
$ \mu_b.t(J): 0.43$	$ \mu_b(W): 0.43$
$ \mu_y.t(J): 0.93$	$ \mu_y(W): 0.93$
$ \mu_r.t(J): 0.71$	$ \mu_r(W): 0.71$

Electric Parameters

Voltage: 10.660V	Current: 1.0730A	Power: 11.39W
Power Factor: 0.8200	Frequency: 49.99Hz	

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