

Lightsource Test Report

Product Information

Product Category: LED-Lampen
 Product Spec: LED-AR111-12-NW-C-25
 Manufacturer: METOLIGHT
 Buyer: 2320

Product Type: LED-Lampen-AR111
 Product Number: 1
 Submitted Unit: 101997

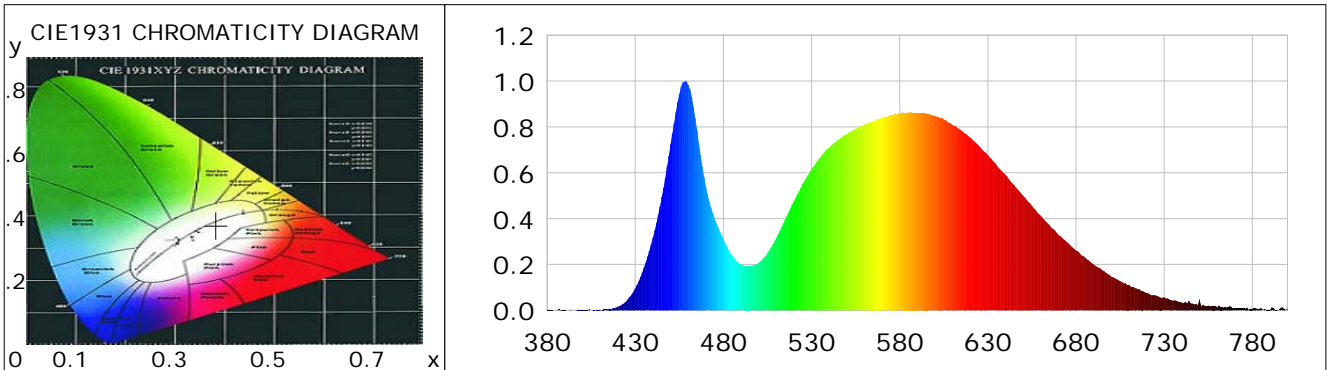
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3827$ $y=0.3718$ $u(u')=0.2286$ $v=0.3332$ $v'=0.4997$
 CCT: $T_c=3902K$ ($duv=-0.00296$) Color Ratio: $R=0.184$ $G=0.781$ $B=0.035$
 Peak Wavelength: 458.6nm Half Bandwidth: 26.0nm
 Dominant Wavelength: 581.1nm Color Purity: 0.264
 CRI: $R_a=79.4$, $avgR(1\sim14)=71.6$, $avgR(1\sim15)=71.9$ TM30: $R_f=78$, $R_g=93$
 GAI: $GAI_BB_8=94.5$, $GAI_BB_15=103.3$, $GAI_EES=73.0$

R1 =78	R2 =88	R3 =90	R4 =74	R5 =76	R6 =79	R7 =85	R8 =65
R9 =11	R10=66	R11=67	R12=49	R13=81	R14=94	R15=76	

Color Quality Scale: $Q_a=76.4$, $Q_f=76.2$, $Q_p=77.3$, $Q_g=91.8$

Q1 =83	Q2 =98	Q3 =70	Q4 =61	Q5 =68	Q6 =72	Q7 =78	Q8 =85
Q9 =94	Q10=83	Q11=76	Q12=77	Q13=79	Q14=73	Q15=77	



Photometric Parameters

Luminous Flux: 726.10 lm	Efficiency: 72.18 lm/W	Radiant Power: 2.237 W
Total mains efficacy: 78.60 lm/W	Energy Efficiency Class: G (EU 2019/2015)	
Pupil Flux: 1049.38 Plm	Pupil Lumens Per Watt: 104.31 Plm/W	Pupil Factor (Kp): 1.445
Cirtopic Flux: 2108.28 lm		

Electric Parameters

Voltage: 10.760V	Current: 0.9350A	Power: 10.06W
Power Factor: 0.8170	Frequency: 50.00Hz	

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: 46234 (2859)	CCD Integration Time: 346.53 ms

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0011	0.0164	525	0.5528	7.9625	670	0.3303	4.7580
385	0.0009	0.0136	530	0.6163	8.8767	675	0.2973	4.2818
390	0.0015	0.0217	535	0.6689	9.6343	680	0.2612	3.7623
395	0.0007	0.0094	540	0.7095	10.2192	685	0.2316	3.3360
400	0.0014	0.0201	545	0.7438	10.7129	690	0.2001	2.8825
405	0.0006	0.0080	550	0.7684	11.0672	695	0.1741	2.5079
410	0.0018	0.0254	555	0.7921	11.4083	700	0.1476	2.1254
415	0.0063	0.0909	560	0.8093	11.6564	705	0.1271	1.8307
420	0.0157	0.2268	565	0.8244	11.8733	710	0.1110	1.5992
425	0.0403	0.5805	570	0.8391	12.0855	715	0.0932	1.3431
430	0.0959	1.3817	575	0.8527	12.2809	720	0.0759	1.0938
435	0.1871	2.6955	580	0.8591	12.3732	725	0.0663	0.9547
440	0.3160	4.5512	585	0.8618	12.4128	730	0.0575	0.8276
445	0.4946	7.1233	590	0.8627	12.4259	735	0.0418	0.6022
450	0.7240	10.4277	595	0.8582	12.3601	740	0.0345	0.4972
455	0.9442	13.5990	600	0.8488	12.2256	745	0.0314	0.4521
460	0.9849	14.1859	605	0.8332	12.0006	750	0.0470	0.6774
465	0.7877	11.3448	610	0.8083	11.6420	755	0.0212	0.3048
470	0.5411	7.7929	615	0.7850	11.3064	760	0.0134	0.1934
475	0.4004	5.7672	620	0.7536	10.8547	765	0.0122	0.1762
480	0.3094	4.4559	625	0.7168	10.3237	770	0.0090	0.1298
485	0.2389	3.4401	630	0.6766	9.7448	775	0.0079	0.1131
490	0.2005	2.8872	635	0.6328	9.1146	780	0.0066	0.0955
495	0.1930	2.7794	640	0.5907	8.5082	785	0.0093	0.1338
500	0.2084	3.0011	645	0.5461	7.8656	790	0.0017	0.0242
505	0.2504	3.6067	650	0.5004	7.2068	795	0.0037	0.0528
510	0.3157	4.5465	655	0.4554	6.5588	800	0.0105	0.1508
515	0.3955	5.6968	660	0.4129	5.9466			
520	0.4765	6.8623	665	0.3703	5.3332			

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

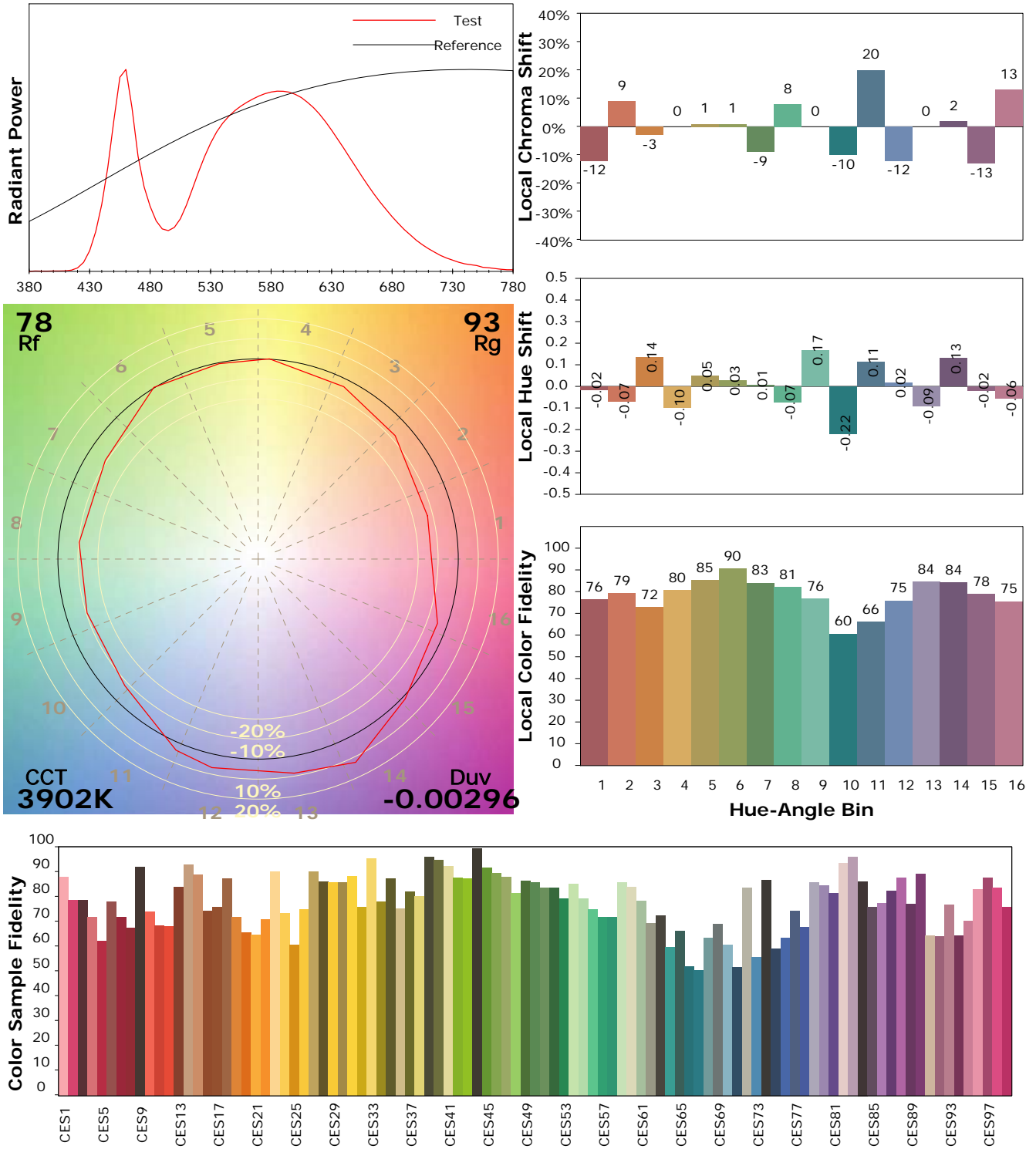
Test Device: Lisun LMS-9000B
 Test Time: 2021-08-17 10:04:36
 Inspector:

IES TM-30-18 Color Rendition Report

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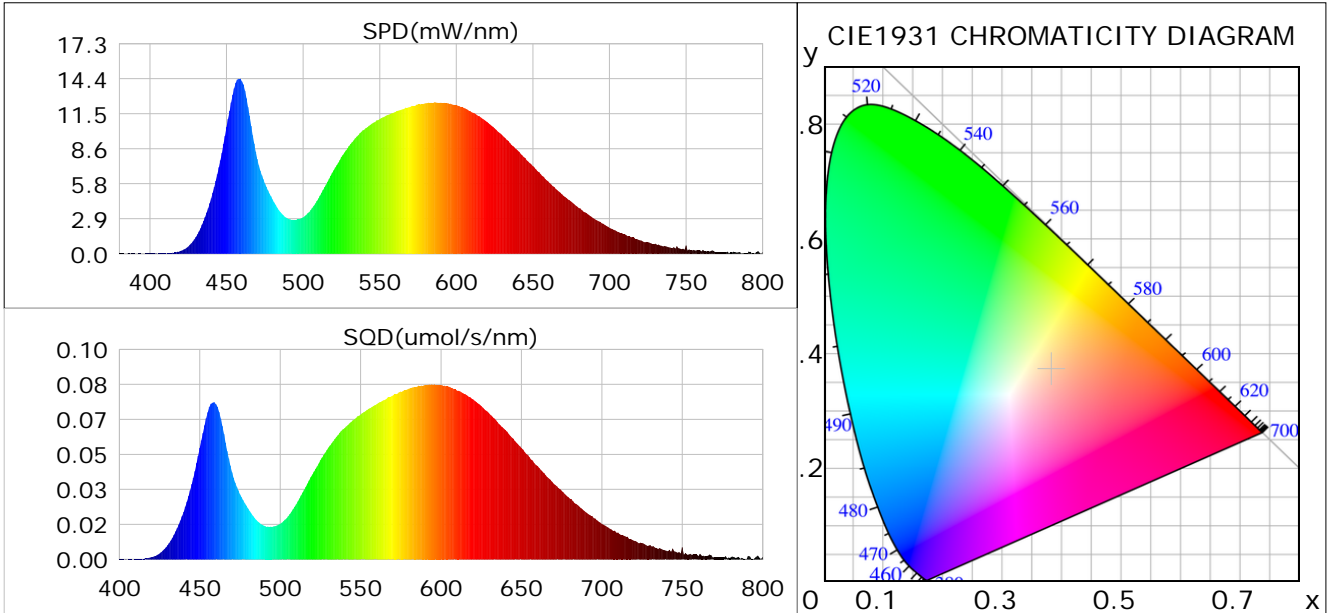
Condition: Tx:0.0°C, Ti:0.0°C, R.H.: 60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-08-17 10:04:36
 Inspector:

Plant optical param data

CIE Colorimetric Parameters

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 Peak Wavelength: 458.6nm Half Bandwidth: 26.0nm
 Dominant Wavelength: 581.1nm Color Purity: 0.264
 CRI: $R_a=79.4$



Plant Optical Param

$ \mu_v(lm): 726.10$	$Q_v(lm.s): 726.10$
$ \mu_e, \dot{E}(W/nm): 2.24$	$Q_e(J): 2.24$
$ \mu_e(W): 2.18$	$ \mu_{fr}(W): 0.06$
$ \zeta_e: 0.22$	$ \zeta_{fr}: 0.01$
$PPE(umol/s/w): 1.02$	$K_{fr}: 0.04$
$Erb_Ratio: 1.51$	$PPF(umol/s): 10.26$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 1.84$
$PPF(500-600)(umol/s): 4.59$	$PPF(600-700)(umol/s): 3.84$
$PPF_{fr}(700-800)(umol/s): 0.36$	$PPF.t(umol): 10.26$
$ \mu_{ch-A.t}(J): 0.18$	$ \mu_{ch-A}(W): 0.18$
$ \mu_{ch-B.t}(J): 0.11$	$ \mu_{ch-B}(W): 0.11$
$ \mu_b.t(J): 0.48$	$ \mu_b(W): 0.48$
$ \mu_y.t(J): 0.99$	$ \mu_y(W): 0.99$
$ \mu_r.t(J): 0.73$	$ \mu_r(W): 0.73$

Electric Parameters

Voltage: 10.760V	Current: 0.9350A	Power: 10.06W
Power Factor: 0.8170	Frequency: 50.00Hz	

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 10:04:36
 Inspector: