

Lightsource Test Report

Product Information

Product Category: LED-Lampen
 Product Spec: LED-E27-A60-4FS-4W-WWC
 Manufacturer: METOLIGHT
 Buyer: 4961
 Product Type: LED-Lampen-E27
 Product Number: 1
 Submitted Unit: 100356

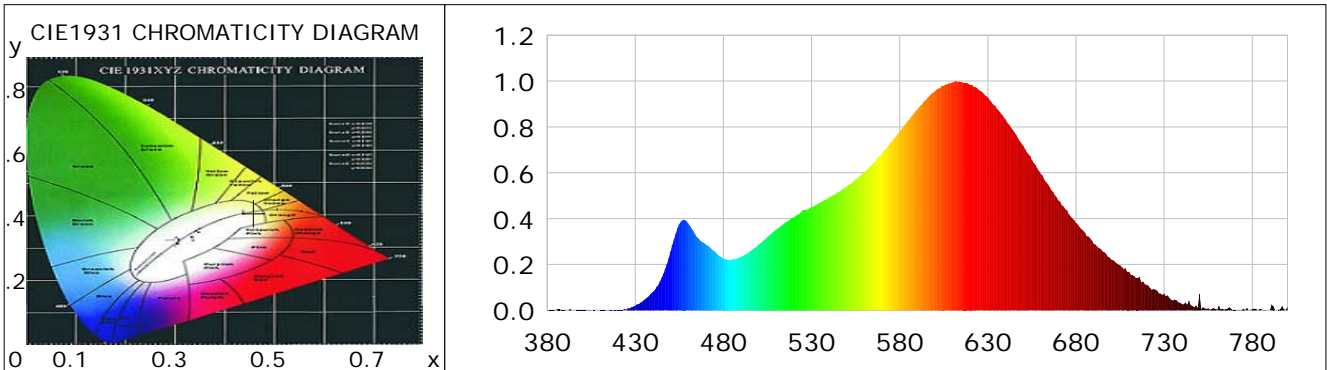
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.4589$ $y=0.4104$ $u(u')=0.2619$ $v=0.3514$ $v'=0.5271$
 CCT: $T_c=2713K$ ($duv=0.00003$) Color Ratio: $R=0.258$ $G=0.715$ $B=0.026$
 Peak Wavelength: 612.0nm Half Bandwidth: 126.5nm
 Dominant Wavelength: 584.1nm Color Purity: 0.610
 CRI: $R_a=87.5$, $avgR(1\sim14)=84.1$, $avgR(1\sim15)=83.8$ TM30: $R_f=87$, $R_g=94$
 GAI: $GAI_BB_8=93.1$, $GAI_BB_15=102.1$, $GAI_EES=45.6$

R1 =88	R2 =96	R3 =95	R4 =86	R5 =88	R6 =96	R7 =84	R8 =67
R9 =32	R10=91	R11=86	R12=80	R13=90	R14=98	R15=81	

Color Quality Scale: $Q_a=86.7$, $Q_f=89.1$, $Q_p=87.7$, $Q_g=90.9$

Q1 =82	Q2 =93	Q3 =89	Q4 =85	Q5 =85	Q6 =87	Q7 =88	Q8 =90
Q9 =95	Q10=94	Q11=92	Q12=89	Q13=88	Q14=79	Q15=80	



Photometric Parameters

Luminous Flux: 344.83 lm Efficiency: 108.44 lm/W Radiant Power: 1.113 W
 Total mains efficacy: 108.44 lm/W Energy Efficiency Class: F (EU 2019/2015)
 Pupil Flux: 419.33 Plm Pupil Lumens Per Watt: 131.86 Plm/W Pupil Factor (Kp): 1.216
 Circopic Flux: 759.86 lm

Electric Parameters

Voltage: 230.60V Current: 0.0150A Power: 3.18W
 Power Factor: 0.8660 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: 40920 (3070) CCD Integration Time: 1000.00 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: 2021-04-28 10:11:38
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0006	0.0043	525	0.4383	3.3029	670	0.4802	3.6189
385	0.0029	0.0215	530	0.4501	3.3918	675	0.4355	3.2819
390	0.0022	0.0163	535	0.4712	3.5509	680	0.3813	2.8733
395	0.0002	0.0014	540	0.4919	3.7069	685	0.3389	2.5544
400	0.0020	0.0149	545	0.5153	3.8834	690	0.2903	2.1880
405	0.0002	0.0017	550	0.5397	4.0671	695	0.2570	1.9372
410	0.0009	0.0067	555	0.5709	4.3025	700	0.2213	1.6682
415	0.0026	0.0195	560	0.6041	4.5530	705	0.1962	1.4790
420	0.0039	0.0296	565	0.6420	4.8387	710	0.1685	1.2697
425	0.0041	0.0311	570	0.6852	5.1638	715	0.1412	1.0639
430	0.0197	0.1481	575	0.7320	5.5169	720	0.1113	0.8387
435	0.0453	0.3415	580	0.7798	5.8770	725	0.0901	0.6789
440	0.0808	0.6086	585	0.8287	6.2454	730	0.0728	0.5484
445	0.1426	1.0748	590	0.8760	6.6022	735	0.0429	0.3237
450	0.2564	1.9324	595	0.9184	6.9217	740	0.0285	0.2145
455	0.3773	2.8435	600	0.9562	7.2062	745	0.0224	0.1687
460	0.3796	2.8607	605	0.9795	7.3816	750	0.0717	0.5402
465	0.3189	2.4033	610	0.9934	7.4867	755	0.0090	0.0676
470	0.2874	2.1660	615	0.9963	7.5083	760	0.0029	0.0218
475	0.2572	1.9387	620	0.9827	7.4062	765	0.0064	0.0485
480	0.2248	1.6940	625	0.9601	7.2358	770	0.0021	0.0155
485	0.2214	1.6683	630	0.9291	7.0022	775	0.0062	0.0464
490	0.2336	1.7608	635	0.8802	6.6338	780	0.0042	0.0317
495	0.2557	1.9273	640	0.8324	6.2733	785	0.0055	0.0413
500	0.2868	2.1613	645	0.7770	5.8560	790	0.0002	0.0013
505	0.3205	2.4151	650	0.7181	5.4122	795	0.0019	0.0141
510	0.3522	2.6544	655	0.6554	4.9396	800	0.0160	0.1209
515	0.3828	2.8847	660	0.5957	4.4891			
520	0.4061	3.0604	665	0.5384	4.0577			

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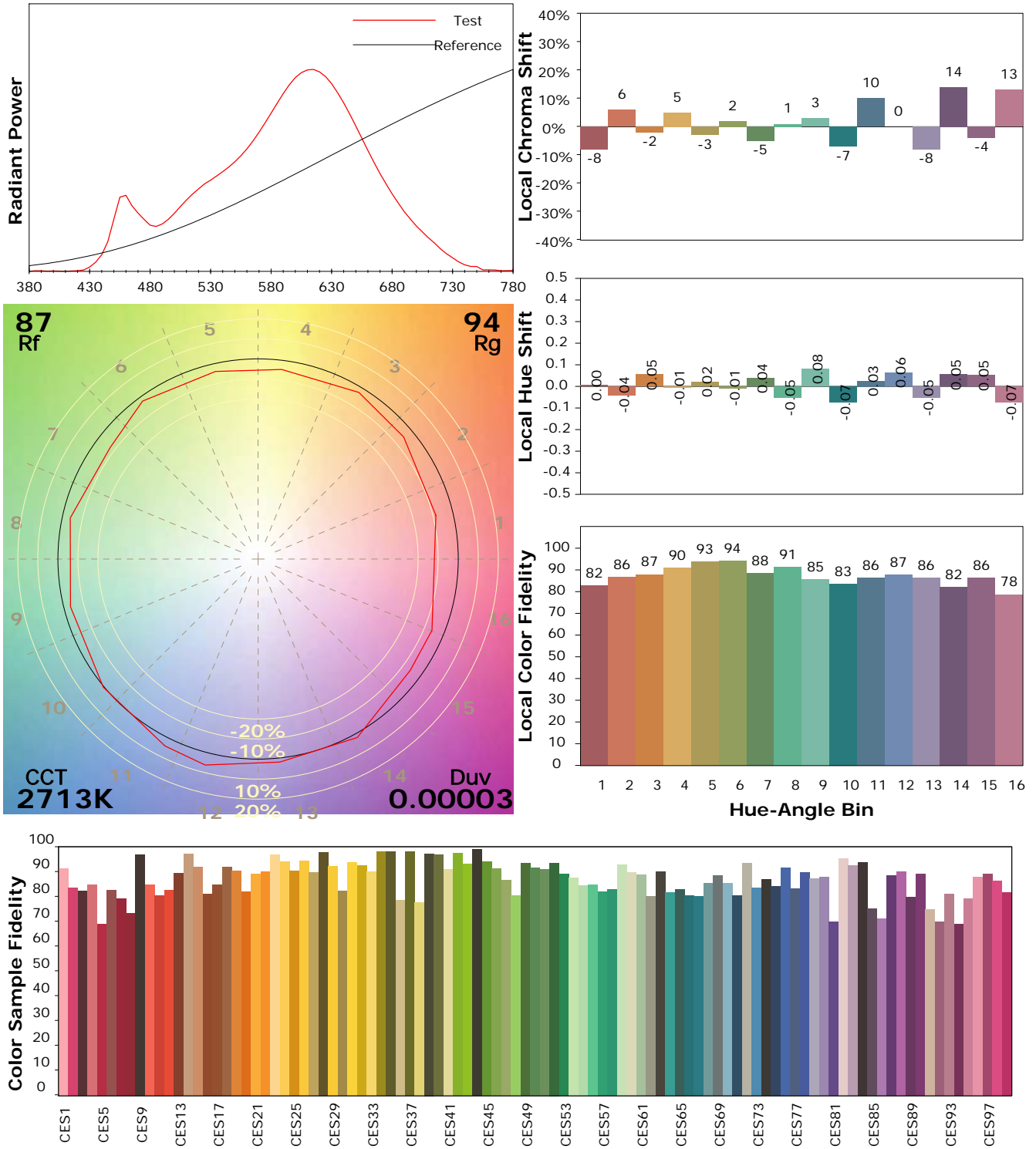
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IES TM-30-18 Color Rendition Report

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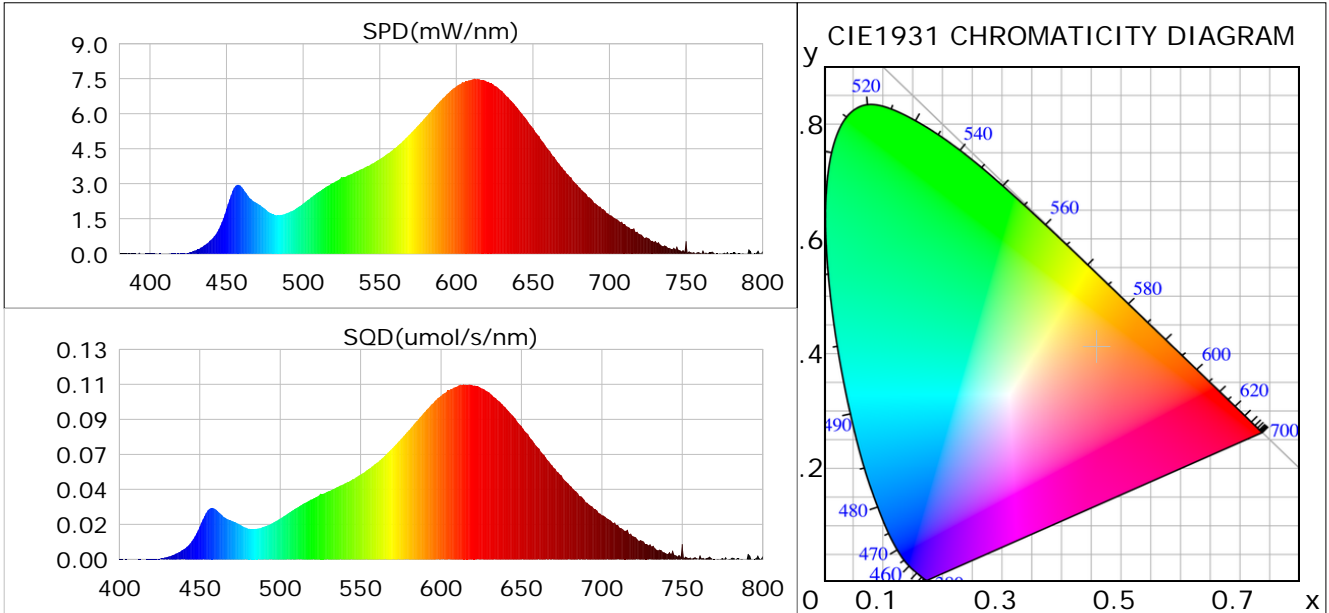
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Plant optical param data

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 CRI: $R_a=87.5$



Plant Optical Param

$ \mu_v(lm): 344.83$	$Q_v(lm.s): 344.83$
$ \mu_e, \dot{E}(W/nm): 1.11$	$Q_e(J): 1.11$
$ \mu_e(W): 1.07$	$ \mu_{fr}(W): 0.04$
$ \zeta_e: 0.34$	$ \zeta_{fr}: 0.01$
$PPE(umol/s/w): 1.66$	$K_{fr}: 0.07$
$Erb_Ratio: 4.13$	$PPF(umol/s): 5.27$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 0.49$
$PPF(500-600)(umol/s): 2.06$	$PPF(600-700)(umol/s): 2.73$
$PPF_{fr}(700-800)(umol/s): 0.23$	$PPF.t(umol): 5.27$
$ \mu_{ch-A.t}(J): 0.09$	$ \mu_{ch-A}(W): 0.09$
$ \mu_{ch-B.t}(J): 0.04$	$ \mu_{ch-B}(W): 0.04$
$ \mu_b.t(J): 0.12$	$ \mu_b(W): 0.12$
$ \mu_y.t(J): 0.44$	$ \mu_y(W): 0.44$
$ \mu_r.t(J): 0.52$	$ \mu_r(W): 0.52$

Electric Parameters

Voltage: 230.60V	Current: 0.0150A	Power: 3.18W
Power Factor: 0.8660	Frequency: 49.99Hz	

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