

Lightsource Test Report

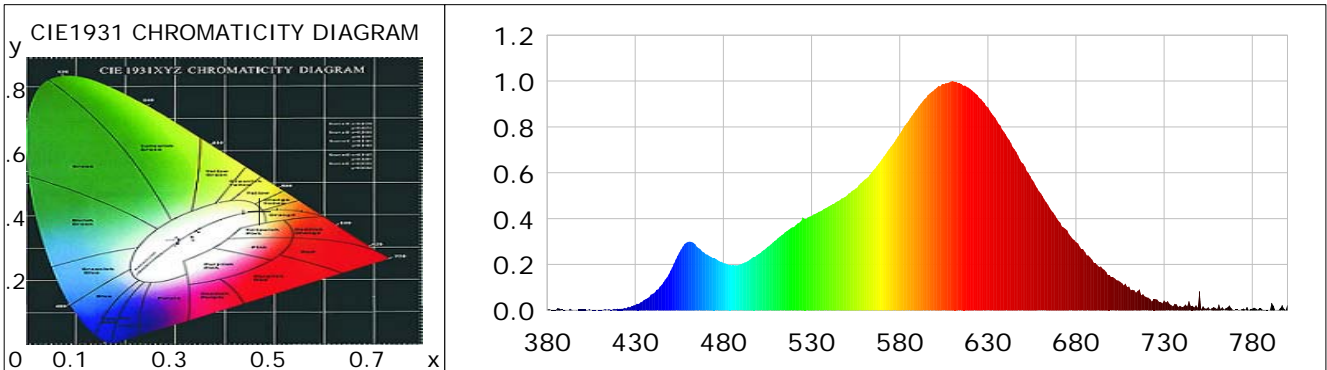
Product Information

Product Category: LED-Lampen
 Product Spec: LED-E14-Kerze-2FS-2W-WWC
 Manufacturer: METOLIGHT
 Buyer: 4545

Product Type: LED-Lampen-E14
 Product Number: 1
 Submitted Unit: 100925

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.4706$ $y=0.4167$ $u(u')=0.2667$ $v=0.3542$ $v'=0.5312$
 CCT: $T_c=2603K$ ($duv=0.00140$) Color Ratio: $R=0.263$ $G=0.713$ $B=0.024$
 Peak Wavelength: 610.0nm Half Bandwidth: 110.9nm
 Dominant Wavelength: 584.3nm Color Purity: 0.663
 CRI: $R_a=84.0$, $avgR(1\sim14)=79.8$, $avgR(1\sim15)=79.4$ TM30: $R_f=85$, $R_g=92$
 GAI: $GAI_BB_8=85.5$, $GAI_BB_15=95.3$, $GAI_EES=38.9$
 R1 =83 R2 =94 R3 =94 R4 =82 R5 =84 R6 =95 R7 =80 R8 =59
 R9 =13 R10=87 R11=82 R12=79 R13=86 R14=98 R15=75
 Color Quality Scale: $Q_a=83.9$, $Q_f=86.9$, $Q_p=84.3$, $Q_g=86.9$
 Q1 =78 Q2 =91 Q3 =89 Q4 =83 Q5 =83 Q6 =83 Q7 =84 Q8 =88
 Q9 =93 Q10=93 Q11=90 Q12=87 Q13=85 Q14=74 Q15=76



Photometric Parameters

Luminous Flux: 280.69 lm Efficiency: 98.14 lm/W Radiant Power: 0.863 W
 Total mains efficacy: 115.42 lm/W Energy Efficiency Class: E (EU 2019/2015)
 Pupil Flux: 323.91 Plm Pupil Lumens Per Watt: 113.26 Plm/W Pupil Factor (Kp): 1.154
 Circopic Flux: 567.05 lm

Electric Parameters

Voltage: 231.00V Current: 0.0250A Power: 2.86W
 Power Factor: 0.4940 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: 33250 (3322) CCD Integration Time: 1000.00 ms

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

Test Device: Lisun LMS-9000B
 Test Time: 2021-04-28 11:20:52
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0025	0.0160	525	0.4051	2.6016	670	0.3916	2.5149
385	0.0034	0.0217	530	0.4118	2.6449	675	0.3488	2.2403
390	0.0029	0.0184	535	0.4320	2.7746	680	0.2974	1.9102
395	0.0003	0.0022	540	0.4550	2.9218	685	0.2545	1.6343
400	0.0031	0.0200	545	0.4765	3.0599	690	0.2082	1.3372
405	0.0005	0.0033	550	0.5002	3.2121	695	0.1818	1.1677
410	0.0015	0.0098	555	0.5312	3.4114	700	0.1438	0.9234
415	0.0055	0.0356	560	0.5690	3.6539	705	0.1244	0.7991
420	0.0075	0.0483	565	0.6114	3.9264	710	0.1041	0.6684
425	0.0081	0.0522	570	0.6598	4.2371	715	0.0846	0.5434
430	0.0232	0.1488	575	0.7140	4.5855	720	0.0571	0.3668
435	0.0453	0.2906	580	0.7696	4.9427	725	0.0491	0.3156
440	0.0723	0.4640	585	0.8258	5.3034	730	0.0430	0.2759
445	0.1111	0.7138	590	0.8798	5.6503	735	0.0178	0.1144
450	0.1728	1.1100	595	0.9267	5.9516	740	0.0149	0.0955
455	0.2522	1.6196	600	0.9644	6.1936	745	0.0196	0.1258
460	0.2994	1.9230	605	0.9856	6.3299	750	0.0831	0.5338
465	0.2760	1.7725	610	1.0000	6.4221	755	0.0138	0.0887
470	0.2449	1.5729	615	0.9874	6.3411	760	0.0050	0.0322
475	0.2275	1.4609	620	0.9659	6.2032	765	0.0094	0.0606
480	0.2063	1.3249	625	0.9264	5.9496	770	0.0037	0.0240
485	0.1955	1.2556	630	0.8858	5.6885	775	0.0078	0.0499
490	0.2013	1.2930	635	0.8278	5.3160	780	0.0071	0.0456
495	0.2206	1.4169	640	0.7682	4.9332	785	0.0078	0.0498
500	0.2459	1.5792	645	0.7035	4.5178	790	0.0005	0.0032
505	0.2768	1.7775	650	0.6399	4.1097	795	0.0028	0.0180
510	0.3075	1.9746	655	0.5706	3.6643	800	0.0261	0.1676
515	0.3412	2.1914	660	0.5107	3.2799			
520	0.3631	2.3322	665	0.4479	2.8764			

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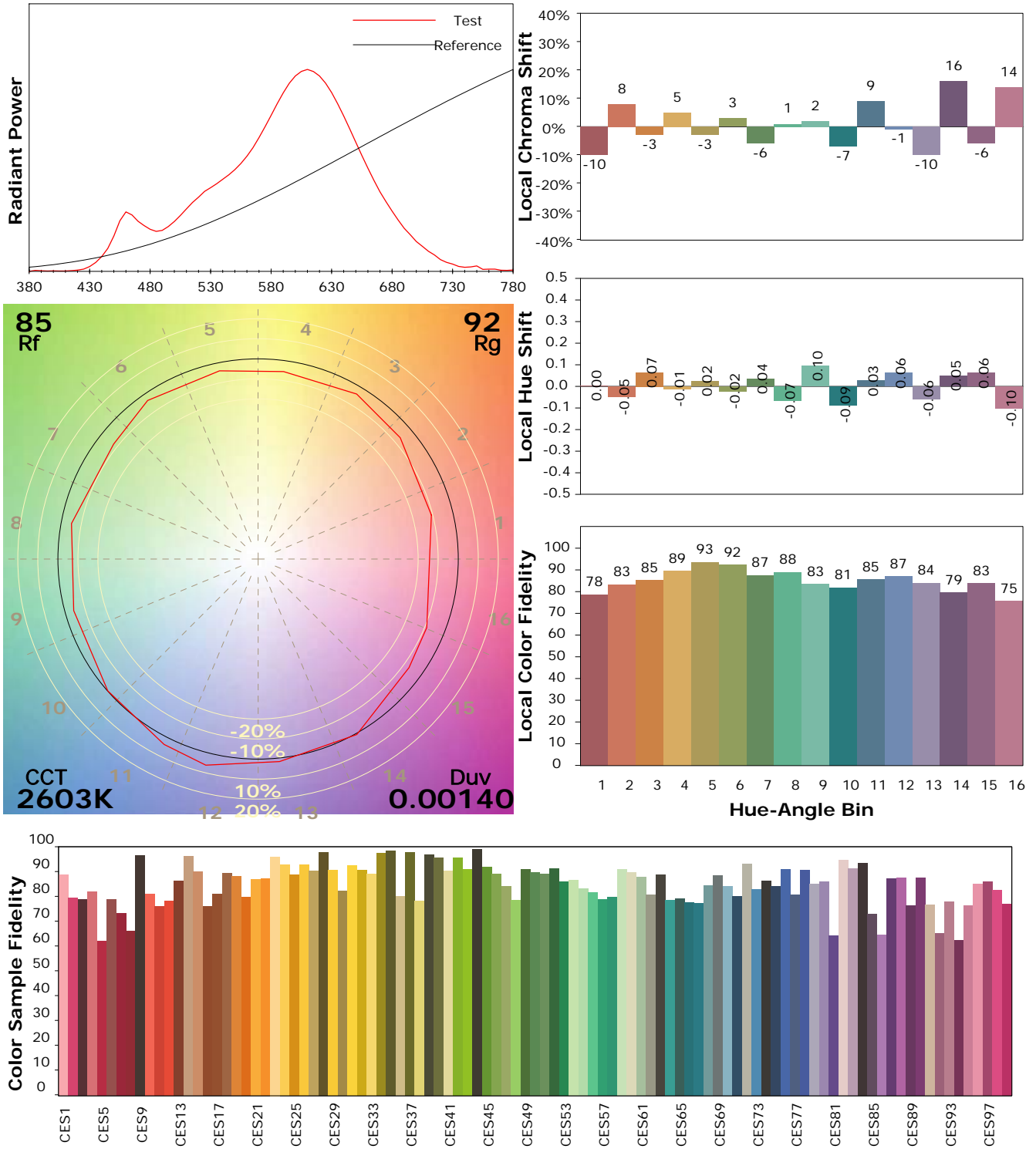
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IES TM-30-18 Color Rendition Report

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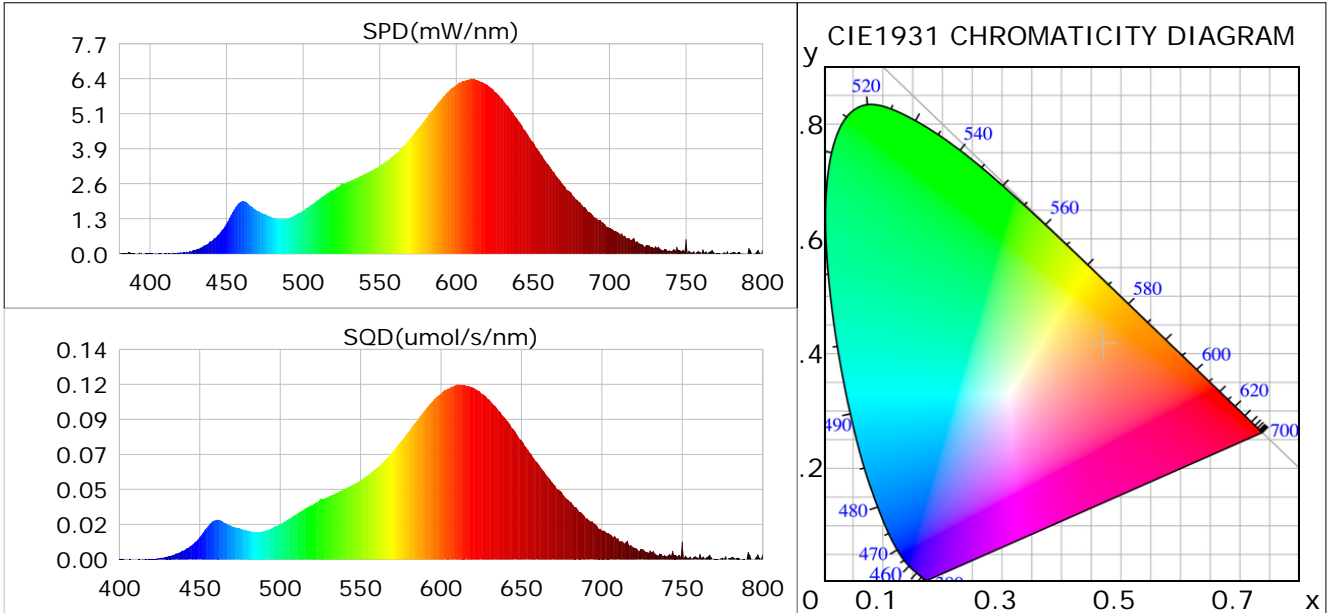
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Plant optical param data

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 CRI: $R_a=84.0$



Plant Optical Param

$ \mu_v(lm)$: 280.69	$Q_v(lm.s)$: 280.69
$ \mu_e, \dot{E}(W/nm)$: 0.86	$Q_e(J)$: 0.86
$ \mu_e(W)$: 0.84	$ \mu_{fr}(W)$: 0.02
$ \zeta_e$: 0.29	$ \zeta_{fr}$: 0.01
$PPE(umol/s/w)$: 1.45	K_{fr} : 0.05
Erb_Ratio : 4.54	$PPF(umol/s)$: 4.13
$PF_{uv}(360-400)(umol/s)$: 0.00	$PPF(400-500)(umol/s)$: 0.34
$PPF(500-600)(umol/s)$: 1.68	$PPF(600-700)(umol/s)$: 2.11
$PPF_{fr}(700-800)(umol/s)$: 0.13	$PPF.t(umol)$: 4.13
$ \mu_{ch-A.t}(J)$: 0.07	$ \mu_{ch-A}(W)$: 0.07
$ \mu_{ch-B.t}(J)$: 0.03	$ \mu_{ch-B}(W)$: 0.03
$ \mu_b.t(J)$: 0.09	$ \mu_b(W)$: 0.09
$ \mu_y.t(J)$: 0.36	$ \mu_y(W)$: 0.36
$ \mu_r.t(J)$: 0.40	$ \mu_r(W)$: 0.40

Electric Parameters

Voltage: 231.00V	Current: 0.0250A	Power: 2.86W
Power Factor: 0.4940	Frequency: 50.00Hz	

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