

Lightsource Test Report

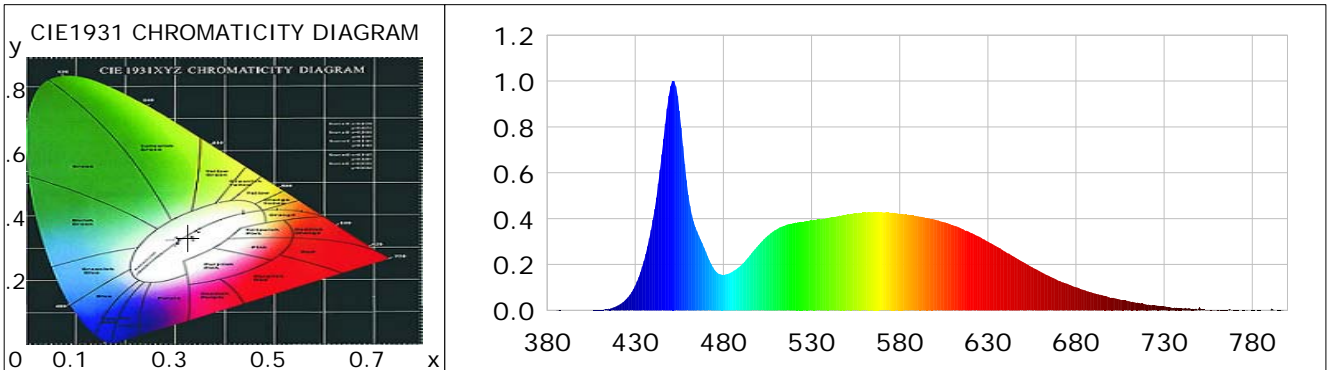
Product Information

Product Category: LED-PL-Röhren
 Product Spec: LED-PL-G24D-10-CW
 Manufacturer: METOLIGHT
 Buyer: 2320

Product Type: LED-PL-Röhren-G24
 Product Number: 1
 Submitted Unit: 100475

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3260$ $y=0.3331$ $u(u')=0.2055$ $v=0.3150$ $v'=0.4725$
 CCT: $T_c=5806K$ ($duv=-0.00117$) Color Ratio: $R=0.150$ $G=0.801$ $B=0.049$
 Peak Wavelength: 451.5nm Half Bandwidth: 17.9nm
 Dominant Wavelength: 491.3nm Color Purity: 0.025
 CRI: $R_a=85.3$, $avgR(1\sim14)=79.2$, $avgR(1\sim15)=79.4$ TM30: $R_f=83$, $R_g=98$
 GAI: $GAI_BB_8=97.1$, $GAI_BB_15=101.9$, $GAI_EES=91.3$
 R1 =85 R2 =88 R3 =89 R4 =87 R5 =86 R6 =83 R7 =89 R8 =76
 R9 =28 R10=71 R11=86 R12=60 R13=86 R14=94 R15=83
 Color Quality Scale: $Q_a=82.2$, $Q_f=81.4$, $Q_p=84.5$, $Q_g=95.7$
 Q1 =88 Q2 =97 Q3 =74 Q4 =71 Q5 =81 Q6 =85 Q7 =88 Q8 =92
 Q9 =94 Q10=84 Q11=81 Q12=81 Q13=82 Q14=77 Q15=81



Photometric Parameters

Luminous Flux: 866.30 lm Efficiency: 92.95 lm/W Radiant Power: 2.810 W
 Total mains efficacy: 109.31 lm/W Energy Efficiency Class: F (EU 2019/2015)
 Pupil Flux: 1550.65 Plm Pupil Lumens Per Watt: 166.38 Plm/W Pupil Factor (Kp): 1.790
 Circopic Flux: 3458.26 lm

Electric Parameters

Voltage: 230.60V Current: 0.0420A Power: 9.32W
 Power Factor: 0.9480 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: 49156 (2439) CCD Integration Time: 179.19 ms

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

Test Device: Lisun LMS-9000B
 Test Time: 2021-03-03 13:47:19
 Inspector:

Lightsource Test Report

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0002	0.0064	525	0.3849	11.9568	670	0.1297	4.0300
385	0.0012	0.0364	530	0.3920	12.1749	675	0.1161	3.6054
390	0.0005	0.0169	535	0.3967	12.3213	680	0.1007	3.1278
395	0.0002	0.0066	540	0.4039	12.5446	685	0.0873	2.7104
400	0.0008	0.0238	545	0.4112	12.7715	690	0.0752	2.3354
405	0.0006	0.0179	550	0.4185	13.0004	695	0.0656	2.0363
410	0.0016	0.0512	555	0.4234	13.1526	700	0.0550	1.7092
415	0.0073	0.2275	560	0.4277	13.2843	705	0.0471	1.4638
420	0.0205	0.6372	565	0.4292	13.3303	710	0.0400	1.2428
425	0.0497	1.5433	570	0.4278	13.2867	715	0.0340	1.0567
430	0.1078	3.3488	575	0.4253	13.2106	720	0.0251	0.7781
435	0.2162	6.7169	580	0.4211	13.0799	725	0.0219	0.6798
440	0.3950	12.2689	585	0.4173	12.9633	730	0.0175	0.5429
445	0.6805	21.1372	590	0.4107	12.7560	735	0.0102	0.3153
450	0.9774	30.3595	595	0.4033	12.5284	740	0.0095	0.2959
455	0.8712	27.0596	600	0.3956	12.2870	745	0.0066	0.2053
460	0.5041	15.6581	605	0.3851	11.9606	750	0.0141	0.4381
465	0.3447	10.7060	610	0.3716	11.5415	755	0.0039	0.1214
470	0.2556	7.9393	615	0.3574	11.1005	760	0.0030	0.0928
475	0.1765	5.4828	620	0.3399	10.5577	765	0.0026	0.0820
480	0.1548	4.8083	625	0.3216	9.9898	770	0.0018	0.0553
485	0.1680	5.2195	630	0.3001	9.3210	775	0.0016	0.0500
490	0.1957	6.0791	635	0.2779	8.6321	780	0.0016	0.0508
495	0.2392	7.4288	640	0.2554	7.9326	785	0.0011	0.0340
500	0.2853	8.8627	645	0.2333	7.2464	790	0.0001	0.0024
505	0.3247	10.0850	650	0.2105	6.5390	795	0.0010	0.0296
510	0.3524	10.9473	655	0.1891	5.8736	800	0.0013	0.0419
515	0.3701	11.4966	660	0.1679	5.2156			
520	0.3809	11.8309	665	0.1486	4.6143			

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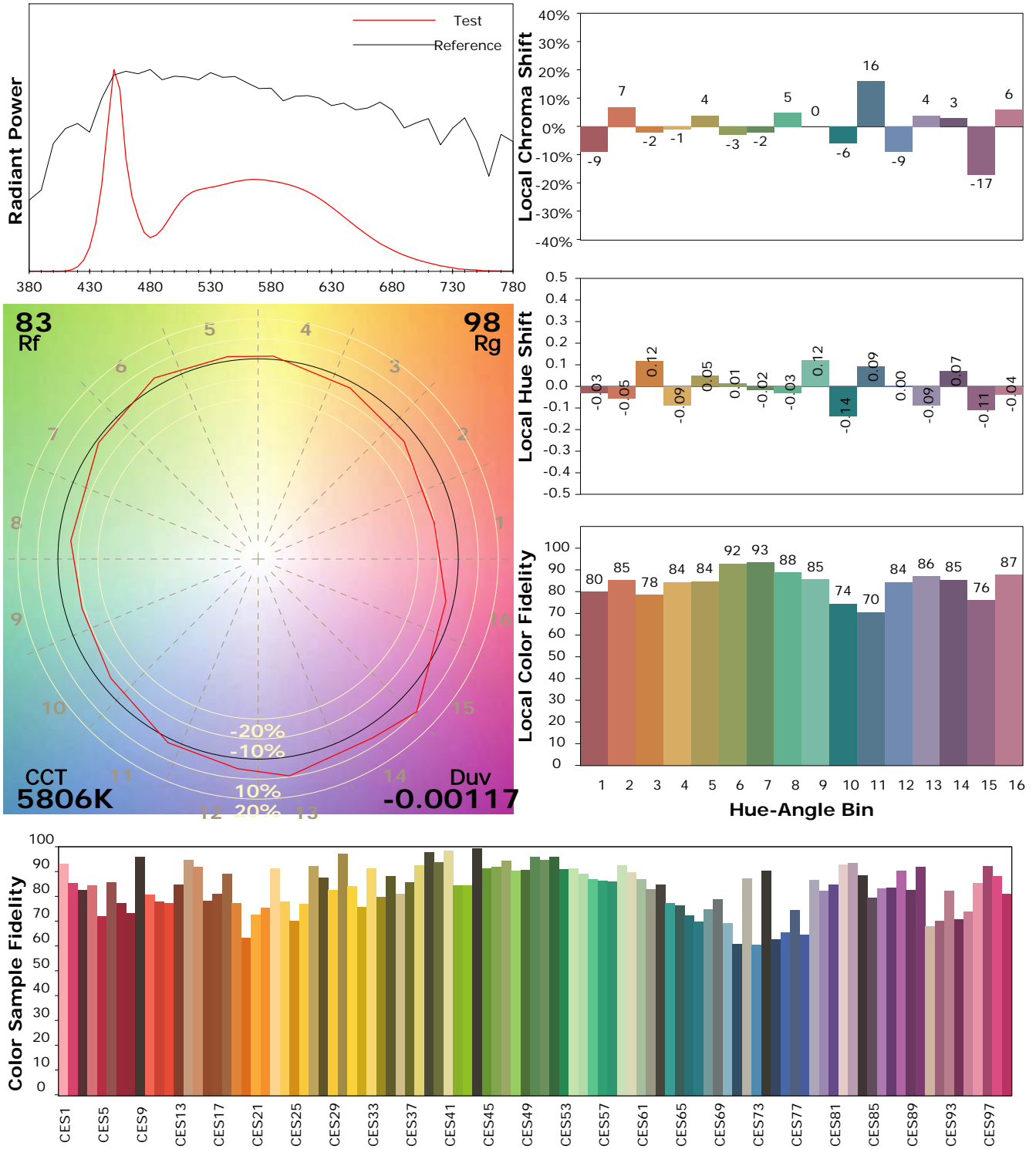
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IES TM-30-18 Color Rendition Report

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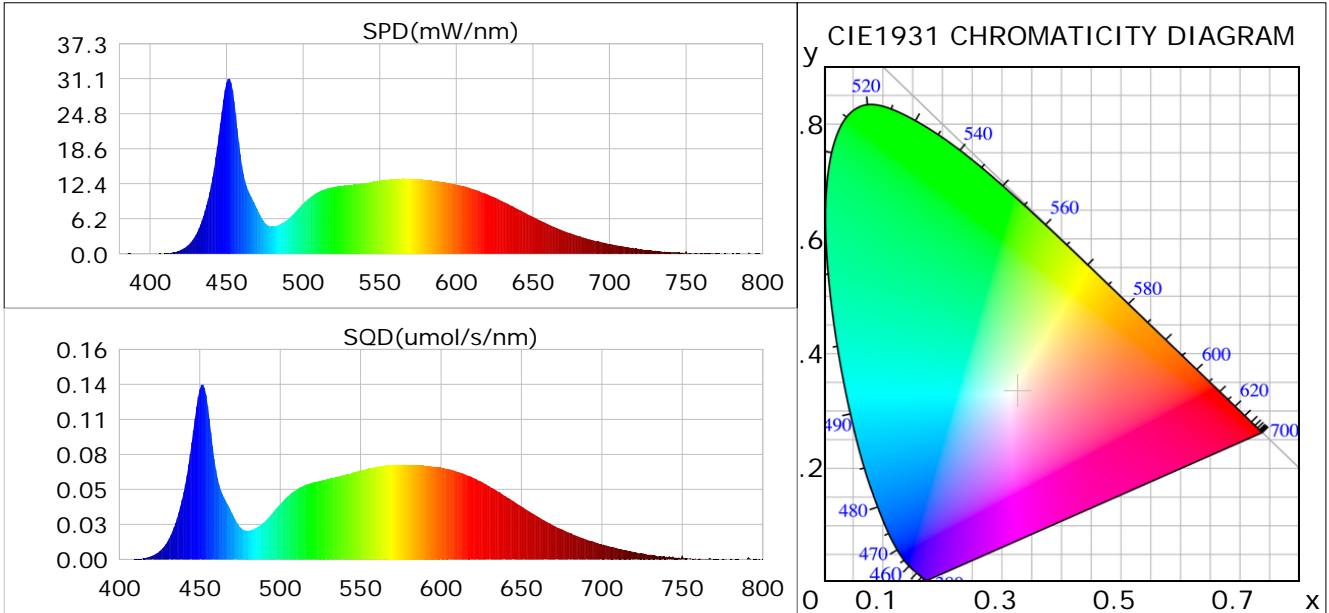
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Plant optical param data

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 Dominant Wavelength: 491.3nm Color Purity: 0.025
 CRI: $R_a=85.3$



Plant Optical Param

$ \mu_v(lm): 866.30$	$Q_v(lm.s): 866.30$
$ \mu_e, \dot{E}(W/nm): 2.81$	$Q_e(J): 2.81$
$ \mu_e(W): 2.77$	$ \mu_{fr}(W): 0.04$
$ \zeta_e: 0.30$	$ \zeta_{fr}: 0.00$
$PPE(umol/s/w): 1.35$	$K_{fr}: 0.03$
$Erb_Ratio: 0.78$	$PPF(umol/s): 12.58$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 3.29$
$PPF(500-600)(umol/s): 5.72$	$PPF(600-700)(umol/s): 3.57$
$PPF_{fr}(700-800)(umol/s): 0.24$	$PPF.t(umol): 12.58$
$ \mu_{ch-A.t}(J): 0.24$	$ \mu_{ch-A}(W): 0.24$
$ \mu_{ch-B.t}(J): 0.15$	$ \mu_{ch-B}(W): 0.15$
$ \mu_b.t(J): 0.86$	$ \mu_b(W): 0.86$
$ \mu_y.t(J): 1.25$	$ \mu_y(W): 1.25$
$ \mu_r.t(J): 0.68$	$ \mu_r(W): 0.68$

Electric Parameters

Voltage: 230.60V	Current: 0.0420A	Power: 9.32W
Power Factor: 0.9480	Frequency: 49.99Hz	

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