

Lightsource Test Report

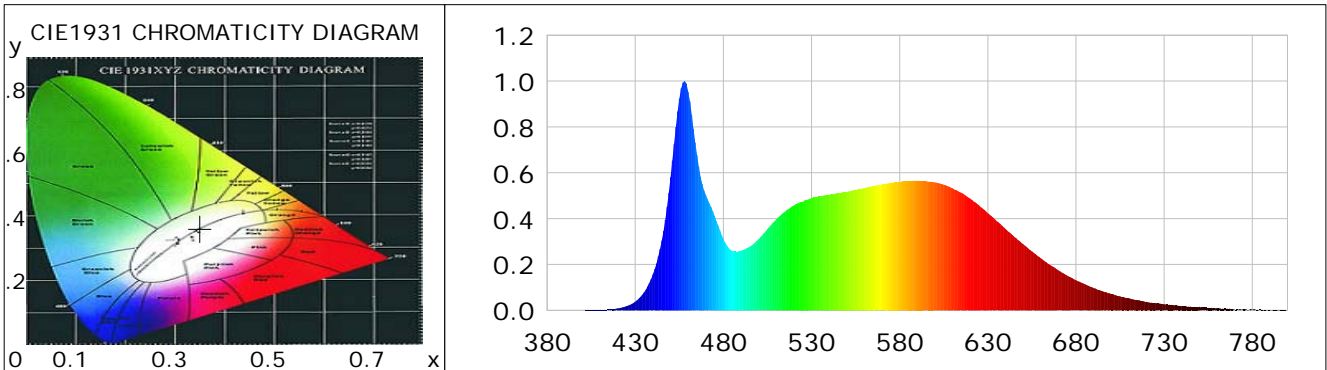
Product Information

Product Category: LED-Röhre
 Product Spec: LEDtube-150-8DWC-29W80-SCE
 Manufacturer: METOLIGHT
 Buyer: 3156

Product Type: LED-Röhre-SCE
 Product Number: 1
 Submitted Unit: 104301

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3504$ $y=0.3615$ $u(u')=0.2112$ $v=0.3268$ $v'=0.4902$
 CCT: $T_c=4843K$ ($duv=0.00283$) Color Ratio: $R=0.165$ $G=0.785$ $B=0.050$
 Peak Wavelength: 457.8nm Half Bandwidth: 21.4nm
 Dominant Wavelength: 572.1nm Color Purity: 0.136
 CRI: $R_a=85.0$, $avgR(1\sim14)=78.8$, $avgR(1\sim15)=78.9$ TM30: $R_f=82$, $R_g=91$
 GAI: $GAI_BB_8=87.5$, $GAI_BB_15=95.6$, $GAI_EES=78.4$
 R1 =85 R2 =94 R3 =96 R4 =80 R5 =83 R6 =89 R7 =85 R8 =69
 R9 =21 R10=83 R11=79 R12=55 R13=88 R14=98 R15=79
 Color Quality Scale: $Q_a=83.2$, $Q_f=83.5$, $Q_p=81.5$, $Q_g=90.1$
 Q1 =79 Q2 =95 Q3 =83 Q4 =74 Q5 =76 Q6 =78 Q7 =84 Q8 =90
 Q9 =98 Q10=94 Q11=89 Q12=88 Q13=87 Q14=77 Q15=79



Photometric Parameters

Luminous Flux: 3260.1 lm Efficiency: 109.77 lm/W Radiant Power: 10.151 W
 Total mains efficacy: 129.09 lm/W Energy Efficiency Class: E (EU 2019/2015)
 Pupil Flux: 5575.27 Plm Pupil Lumens Per Watt: 187.72 Plm/W Pupil Factor (Kp): 1.710
 Circopic Flux: 12299.40 lm

Electric Parameters

Voltage: 230.90V Current: 0.1370A Power: 29.70W
 Power Factor: 0.9350 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: 48516 (2193) CCD Integration Time: 57.91 ms

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0005	0.0436	525	0.4728	42.7985	670	0.1747	15.8167
385	0.0005	0.0441	530	0.4896	44.3189	675	0.1516	13.7180
390	0.0007	0.0600	535	0.4971	44.9932	680	0.1317	11.9219
395	0.0004	0.0351	540	0.5037	45.5927	685	0.1138	10.2999
400	0.0005	0.0496	545	0.5109	46.2472	690	0.0971	8.7884
405	0.0010	0.0939	550	0.5176	46.8492	695	0.0834	7.5516
410	0.0023	0.2071	555	0.5264	47.6507	700	0.0708	6.4120
415	0.0044	0.3965	560	0.5333	48.2711	705	0.0609	5.5091
420	0.0086	0.7754	565	0.5425	49.1087	710	0.0526	4.7630
425	0.0183	1.6550	570	0.5497	49.7602	715	0.0449	4.0642
430	0.0378	3.4198	575	0.5570	50.4157	720	0.0373	3.3749
435	0.0783	7.0910	580	0.5618	50.8522	725	0.0322	2.9177
440	0.1570	14.2071	585	0.5634	50.9988	730	0.0269	2.4310
445	0.3047	27.5792	590	0.5658	51.2126	735	0.0232	2.0972
450	0.5804	52.5385	595	0.5632	50.9812	740	0.0186	1.6873
455	0.9239	83.6281	600	0.5581	50.5130	745	0.0162	1.4671
460	0.9529	86.2565	605	0.5474	49.5494	750	0.0156	1.4119
465	0.6771	61.2907	610	0.5321	48.1648	755	0.0108	0.9772
470	0.5033	45.5589	615	0.5131	46.4484	760	0.0099	0.8919
475	0.4119	37.2839	620	0.4874	44.1164	765	0.0080	0.7272
480	0.3115	28.1972	625	0.4574	41.3997	770	0.0030	0.2720
485	0.2599	23.5248	630	0.4235	38.3354	775	0.0050	0.4516
490	0.2600	23.5367	635	0.3894	35.2517	780	0.0036	0.3302
495	0.2779	25.1516	640	0.3553	32.1598	785	0.0037	0.3310
500	0.3105	28.1044	645	0.3206	29.0181	790	0.0010	0.0936
505	0.3549	32.1266	650	0.2883	26.0993	795	0.0030	0.2714
510	0.3974	35.9756	655	0.2571	23.2710	800	0.0003	0.0232
515	0.4309	39.0057	660	0.2277	20.6109			
520	0.4575	41.4097	665	0.1991	18.0218			

Condition: Tx: 17.4'C, Ti: 0.0'C, R.H.: 60%
 Test Lab:
 Operator: CRE

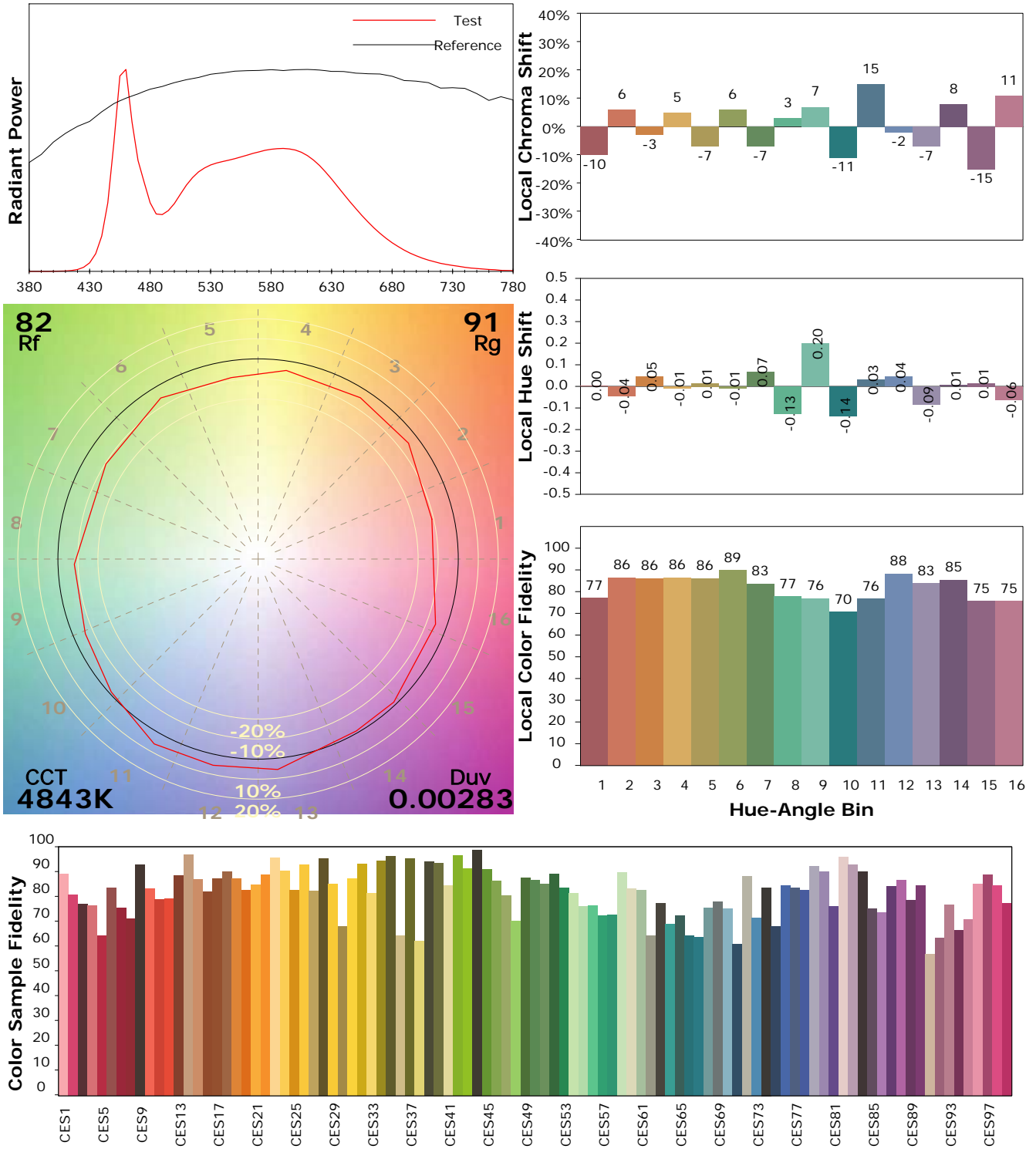
Test Device: Lisun LMS-9000B
 Test Time: 2021-02-19 10:44:41
 Inspector:

IES TM-30-18 Color Rendition Report

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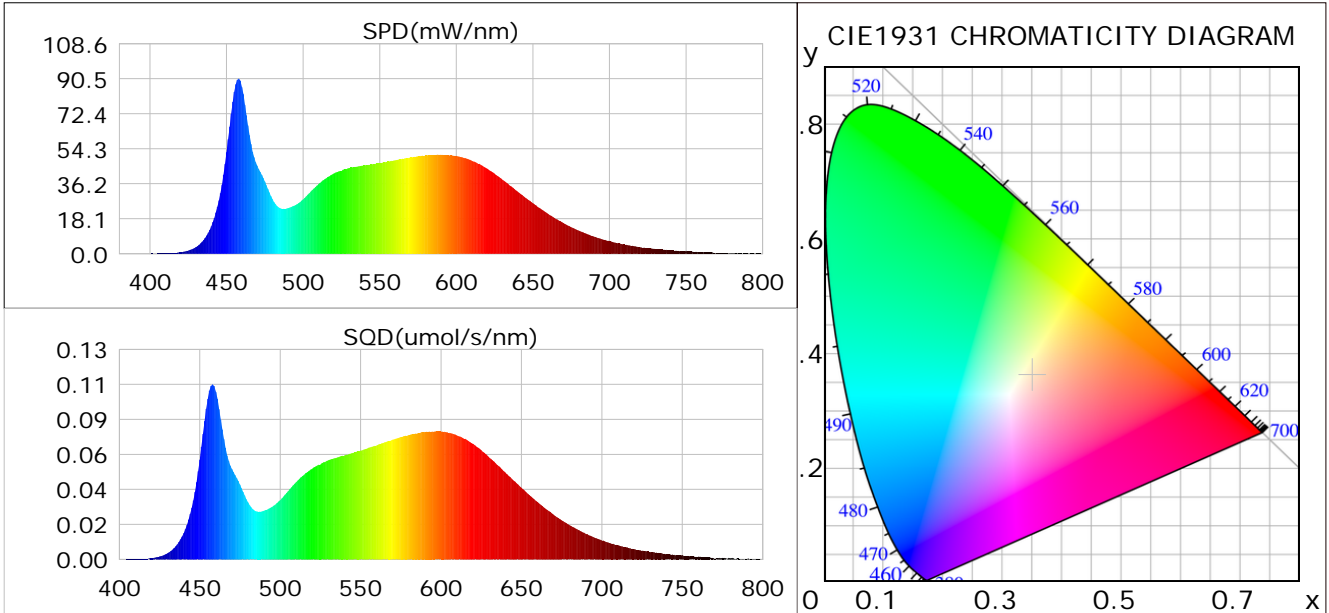
Condition: Tx: 17.4°C, Ti: 0.0°C, R.H.: 60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-02-19 10:44: 41
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Plant optical param data

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 CRI: $R_a=85.0$



Plant Optical Param

$ \mu_v(lm)$: 3260.10	$Q_v(lm.s)$: 3260.10
$ \mu_e, \dot{E}(W/nm)$: 10.15	$Q_e(J)$: 10.15
$ \mu_e(W)$: 9.97	$ \mu_{fr}(W)$: 0.19
$ \zeta_e$: 0.34	$ \zeta_{fr}$: 0.01
PPE(umol/s/w): 1.55	Kfr: 0.04
Erb_Ratio: 1.01	PPF(umol/s): 46.02
PFuv(360-400)(umol/s): 0.00	PPF(400-500)(umol/s): 10.47
PPF(500-600)(umol/s): 21.08	PPF(600-700)(umol/s): 14.47
PPfr(700-800)(umol/s): 1.10	PPF.t(umol): 46.02
$ \mu_{ch-A.t}(J)$: 0.74	$ \mu_{ch-A}(W)$: 0.74
$ \mu_{ch-B.t}(J)$: 0.54	$ \mu_{ch-B}(W)$: 0.54
$ \mu_b.t(J)$: 2.69	$ \mu_b(W)$: 2.69
$ \mu_y.t(J)$: 4.58	$ \mu_y(W)$: 4.58
$ \mu_r.t(J)$: 2.77	$ \mu_r(W)$: 2.77

Electric Parameters

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Power Factor: 0.9350	Frequency: 49.99Hz	

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