

Lightsource Test Report

Product Information

Product Category: LED-Röhre
 Product Spec: Ledtube-120-8DWC-21W80-SCE
 Manufacturer: METOLIGHT
 Buyer: 3156

Product Type: LED-Röhre-SCE
 Product Number: 1
 Submitted Unit: 104303

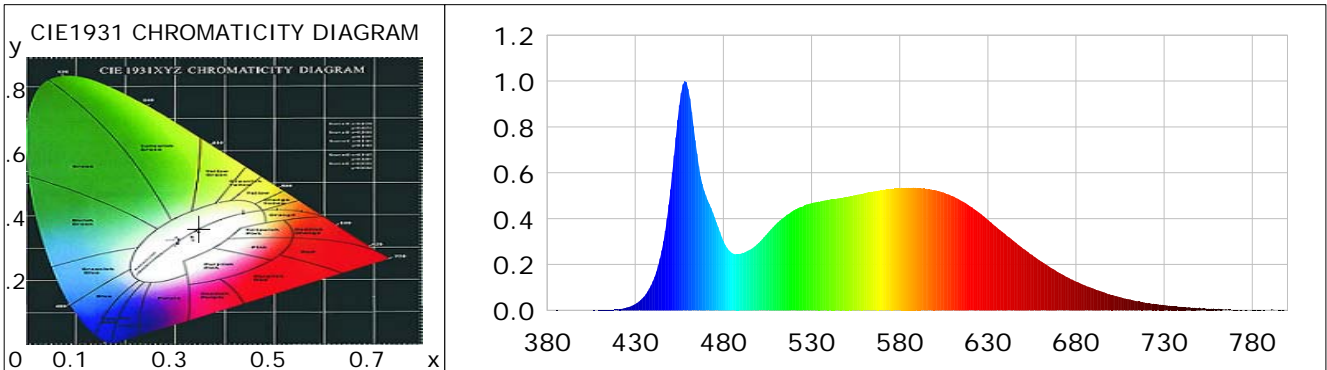
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3483$ $y=0.3614$ $u(u')=0.2098$ $v=0.3266$ $v'=0.4898$
 CCT: $T_c=4917K$ ($duv=0.00358$) Color Ratio: $R=0.162$ $G=0.787$ $B=0.051$
 Peak Wavelength: 458.3nm Half Bandwidth: 20.5nm
 Dominant Wavelength: 570.7nm Color Purity: 0.130
 CRI: $R_a=84.4$, $avgR(1\sim14)=78.1$, $avgR(1\sim15)=78.1$ TM30: $R_f=81$, $R_g=90$
 GAI: $GAI_BB_8=86.2$, $GAI_BB_15=94.6$, $GAI_EES=78.0$

R1 =84	R2 =94	R3 =95	R4 =78	R5 =82	R6 =89	R7 =85	R8 =68
R9 =20	R10=82	R11=78	R12=53	R13=88	R14=98	R15=79	

Color Quality Scale: $Q_a=82.6$, $Q_f=82.9$, $Q_p=80.7$, $Q_g=89.4$

Q1 =78	Q2 =94	Q3 =83	Q4 =73	Q5 =75	Q6 =76	Q7 =83	Q8 =89
Q9 =97	Q10=94	Q11=90	Q12=88	Q13=87	Q14=77	Q15=78	



Photometric Parameters

Luminous Flux: 2683.6 lm Efficiency: 135.53 lm/W Radiant Power: 8.337 W
 Total mains efficacy: 159.39 lm/W Energy Efficiency Class: D (EU 2019/2015)
 Pupil Flux: 4623.87 Plm Pupil Lumens Per Watt: 233.53 Plm/W Pupil Factor (Kp): 1.723
 Circopic Flux: 10251.36 lm

Electric Parameters

Voltage: 230.80V Current: 0.0950A Power: 19.80W
 Power Factor: 0.9020 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: 46056 (2365) CCD Integration Time: 88.68 ms

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0004	0.0315	525	0.4525	35.4728	670	0.1661	13.0219
385	0.0008	0.0629	530	0.4673	36.6316	675	0.1450	11.3664
390	0.0003	0.0272	535	0.4752	37.2546	680	0.1259	9.8727
395	0.0002	0.0156	540	0.4817	37.7588	685	0.1092	8.5609
400	0.0004	0.0344	545	0.4882	38.2671	690	0.0943	7.3903
405	0.0004	0.0275	550	0.4951	38.8084	695	0.0806	6.3214
410	0.0010	0.0798	555	0.5031	39.4343	700	0.0670	5.2523
415	0.0027	0.2116	560	0.5113	40.0822	705	0.0578	4.5337
420	0.0048	0.3762	565	0.5180	40.6083	710	0.0486	3.8070
425	0.0120	0.9387	570	0.5241	41.0844	715	0.0396	3.1053
430	0.0274	2.1495	575	0.5302	41.5627	720	0.0325	2.5501
435	0.0599	4.6917	580	0.5322	41.7191	725	0.0278	2.1811
440	0.1270	9.9592	585	0.5344	41.8893	730	0.0232	1.8210
445	0.2615	20.4984	590	0.5333	41.8016	735	0.0184	1.4402
450	0.5271	41.3218	595	0.5305	41.5829	740	0.0147	1.1559
455	0.8944	70.1140	600	0.5244	41.1069	745	0.0117	0.9178
460	0.9650	75.6492	605	0.5142	40.3099	750	0.0125	0.9795
465	0.6836	53.5858	610	0.4980	39.0383	755	0.0077	0.5999
470	0.5018	39.3369	615	0.4779	37.4594	760	0.0061	0.4757
475	0.4059	31.8171	620	0.4535	35.5497	765	0.0054	0.4270
480	0.3028	23.7363	625	0.4261	33.4039	770	0.0026	0.2024
485	0.2497	19.5770	630	0.3947	30.9380	775	0.0012	0.0978
490	0.2477	19.4158	635	0.3619	28.3691	780	0.0012	0.0951
495	0.2644	20.7278	640	0.3314	25.9780	785	0.0021	0.1643
500	0.2941	23.0512	645	0.3005	23.5574	790	0.0004	0.0309
505	0.3364	26.3722	650	0.2690	21.0899	795	0.0018	0.1428
510	0.3780	29.6280	655	0.2423	18.9907	800	0.0028	0.2182
515	0.4093	32.0889	660	0.2147	16.8337			
520	0.4370	34.2550	665	0.1894	14.8496			

Condition: Tx: 19.8°C, Ti: 0.0°C, R.H.: 60%
 Test Lab:
 Operator: CRE

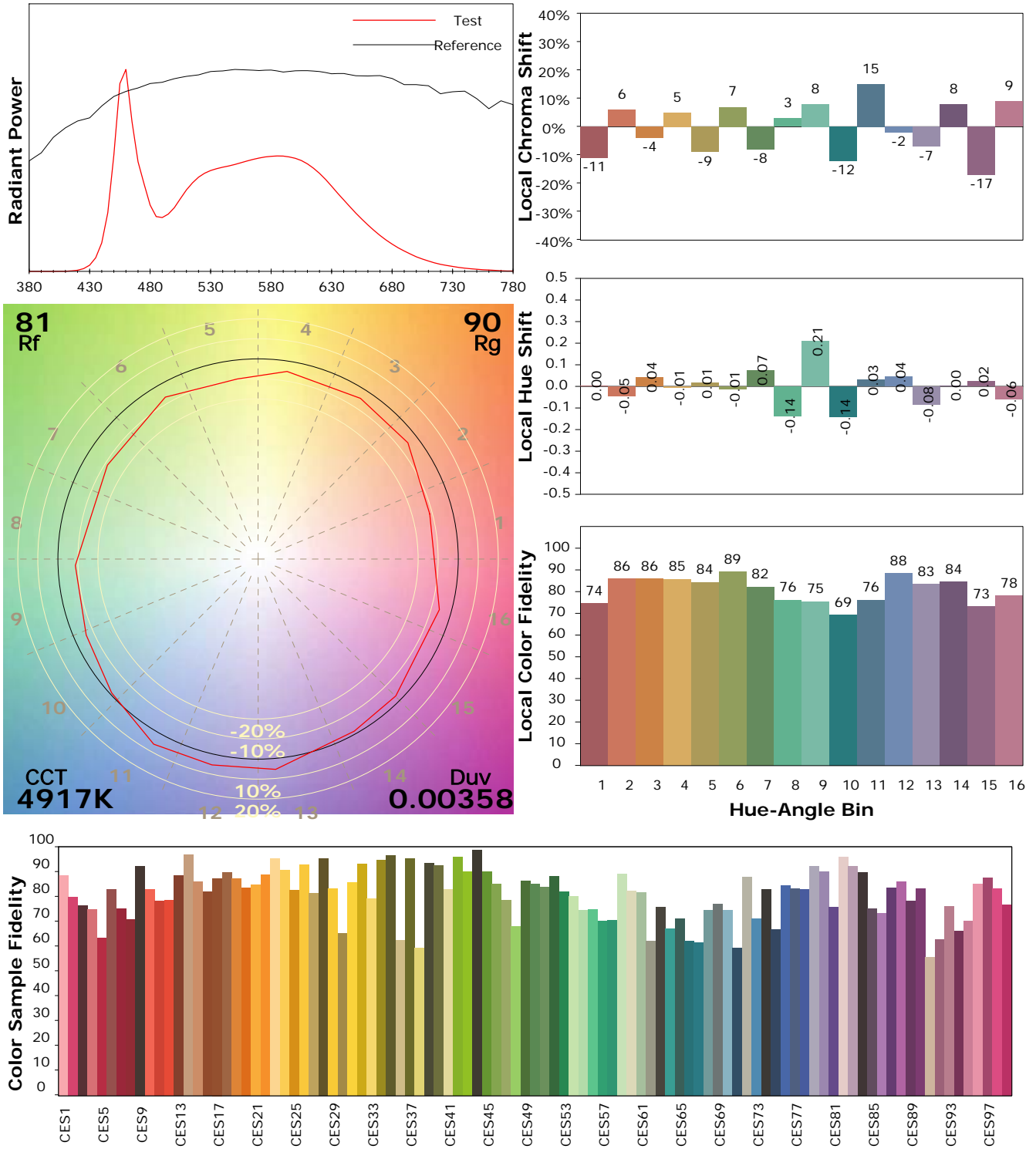
Test Device: Lisun LMS-9000B
 Test Time: 2021-01-22 11:43:03
 Inspector:

IES TM-30-18 Color Rendition Report

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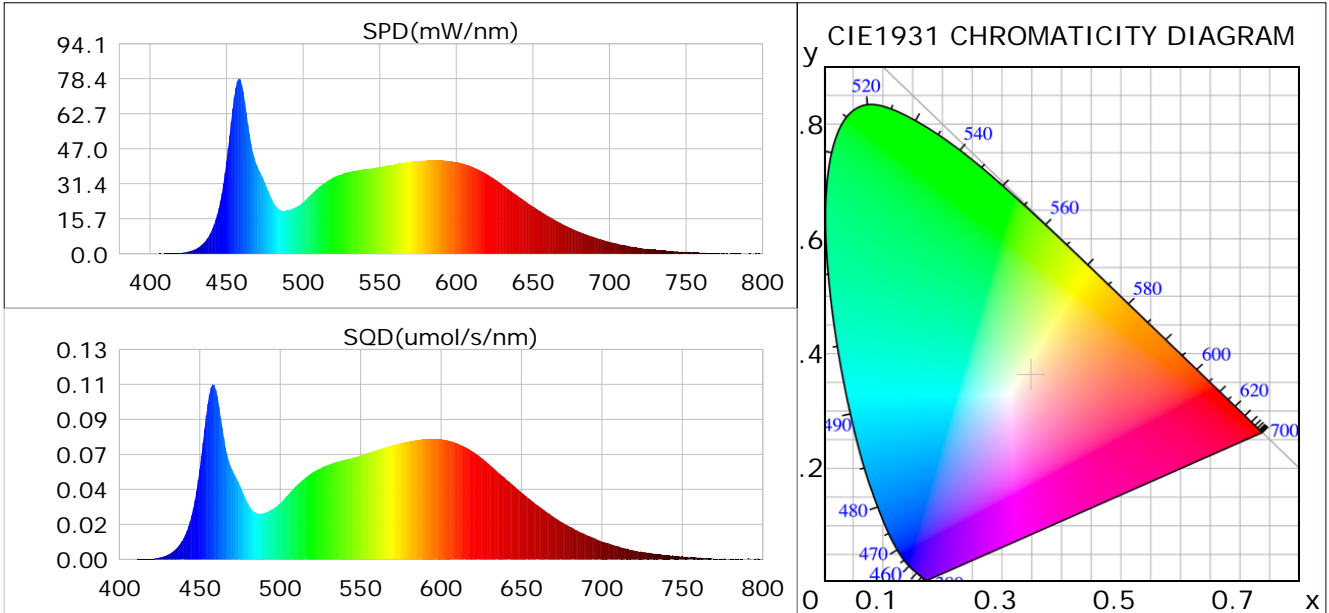
Condition: Tx: 19.8°C, Ti: 0.0°C, R.H.: 60%
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 Operator: CRE

Test Device: Lisun LMS-9000B
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Plant optical param data

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 Dominant Wavelength: 570.7nm Color Purity: 0.130
 CRI: $R_a=84.4$



Plant Optical Param

$ \mu_v(lm)$: 2683.58	$Q_v(lm.s)$: 2683.58
$ \mu_e, \dot{E}(W/nm)$: 8.34	$Q_e(J)$: 8.34
$ \mu_e(W)$: 8.21	$ \mu_{fr}(W)$: 0.14
$ \zeta_e$: 0.41	$ \zeta_{fr}$: 0.01
PPE(umol/s/w): 1.91	Kfr: 0.04
Erb_Ratio: 0.99	PPF(umol/s): 37.84
PFuv(360-400)(umol/s): 0.00	PPF(400-500)(umol/s): 8.71
PPF(500-600)(umol/s): 17.38	PPF(600-700)(umol/s): 11.75
PPfr(700-800)(umol/s): 0.81	PPF.t(umol): 37.84
$ \mu_{ch-A.t}(J)$: 0.60	$ \mu_{ch-A}(W)$: 0.60
$ \mu_{ch-B.t}(J)$: 0.45	$ \mu_{ch-B}(W)$: 0.45
$ \mu_b.t(J)$: 2.24	$ \mu_b(W)$: 2.24
$ \mu_y.t(J)$: 3.78	$ \mu_y(W)$: 3.78
$ \mu_r.t(J)$: 2.25	$ \mu_r(W)$: 2.25

Electric Parameters

Voltage: 230.80V	Current: 0.0950A	Power: 19.80W
Power Factor: 0.9020	Frequency: 49.99Hz	

Condition: $T_x=19.8^\circ C$, $T_i=0.0^\circ C$, R.H.: 60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-01-22 11:43:03
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