

Lightsource Test Report

Product Information

Product Category: LED-Röhre Product Type: LED-Röhre SCE
 Product Spec: LEDtube-060-8-CWM-09W-SCE-RM-17! Product Number: 1
 Manufacturer: METOLIGHT Submitted Unit: 102587
 Buyer: 6961

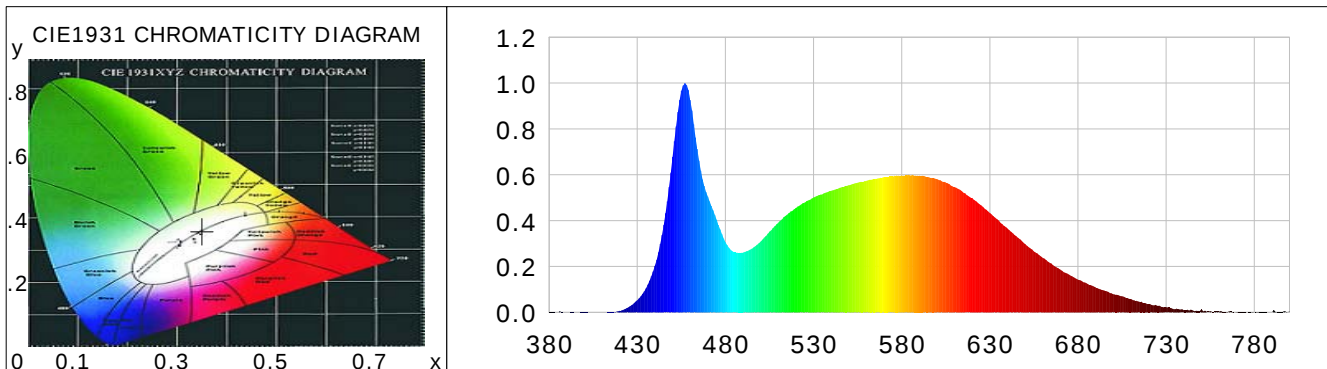
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3506$ $y=0.3600$ $u(u')=0.2119$ $v=0.3263$ $v'=0.4895$
 CCT: $T_c=4831K$ ($duv=0.00200$) Color Ratio: $R=0.162$ $G=0.789$ $B=0.049$
 Peak Wavelength: 457.0nm Half Bandwidth: 23.0nm
 Dominant Wavelength: 572.8nm Color Purity: 0.132
 CRI: $R_a=83.5$, $avgR(1\sim14)=76.7$, $avgR(1\sim15)=76.8$ TM30: $R_f=81$, $R_g=91$
 GAI: $GAI_BB_8=87.8$, $GAI_BB_15=95.9$, $GAI_EES=78.6$

R1 =82	R2 =92	R3 =95	R4 =78	R5 =81	R6 =86	R7 =86	R8 =68
R9 =16	R10=78	R11=76	R12=53	R13=86	R14=98	R15=78	

Color Quality Scale: $Q_a=81.5$, $Q_f=81.9$, $Q_p=80.0$, $Q_g=89.9$

Q1 =80	Q2 =96	Q3 =80	Q4 =71	Q5 =74	Q6 =76	Q7 =83	Q8 =89
Q9 =97	Q10=91	Q11=86	Q12=85	Q13=85	Q14=75	Q15=78	



Photometric Parameters

Luminous Flux: 1571.4 lm Efficiency: 170.06 lm/W Radiant Power: 4.871 W
 Total mains efficacy: 200.00 lm/W Energy Efficiency Class: B (EU 2019/2015)
 Pupil Flux: 2650.66 Plm Pupil Lumens Per Watt: 286.87 Plm/W Pupil Factor (K_p): 1.687
 Cirtopic Flux: 5801.11 lm

Electric Parameters

Voltage: 231.20V Current: 0.0390A Power: 9.24W
 Power Factor: 0.9000 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: 46942 (2467) CCD Integration Time: 228.09 ms

Condition: Tx:19.9'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-01-06 11:40:08
 Inspector:

Lightsource Test Report

Product Information

Product Category: LED-Röhre

Product Type: LED-Röhre SCE

Product Spec: LEDtube-060-8-CWM-09W-SCE-RM-175

Product Number: 1

Manufacturer: METOLIGHT

Submitted Unit: 102587

Buyer: 6961

WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0007	0.0306	525	0.4791	20.0193	670	0.1865	7.7919
385	0.0006	0.0269	530	0.5008	20.9244	675	0.1645	6.8750
390	0.0011	0.0471	535	0.5151	21.5221	680	0.1429	5.9706
395	0.0002	0.0083	540	0.5299	22.1400	685	0.1260	5.2633
400	0.0007	0.0293	545	0.5437	22.7173	690	0.1089	4.5499
405	0.0000	0.0012	550	0.5547	23.1785	695	0.0947	3.9565
410	0.0007	0.0273	555	0.5654	23.6257	700	0.0793	3.3150
415	0.0014	0.0586	560	0.5736	23.9687	705	0.0699	2.9201
420	0.0065	0.2706	565	0.5819	24.3145	710	0.0582	2.4336
425	0.0221	0.9246	570	0.5901	24.6565	715	0.0455	1.9014
430	0.0529	2.2113	575	0.5925	24.7591	720	0.0360	1.5023
435	0.1049	4.3842	580	0.5974	24.9608	725	0.0288	1.2031
440	0.2031	8.4854	585	0.5959	24.9018	730	0.0227	0.9481
445	0.3822	15.9708	590	0.5956	24.8884	735	0.0134	0.5591
450	0.6782	28.3400	595	0.5901	24.6594	740	0.0100	0.4167
455	0.9663	40.3786	600	0.5814	24.2939	745	0.0086	0.3609
460	0.9261	38.6959	605	0.5668	23.6819	750	0.0144	0.6022
465	0.6619	27.6593	610	0.5459	22.8106	755	0.0056	0.2329
470	0.5048	21.0936	615	0.5223	21.8236	760	0.0038	0.1570
475	0.4039	16.8763	620	0.4989	20.8472	765	0.0031	0.1305
480	0.3059	12.7823	625	0.4670	19.5123	770	0.0029	0.1219
485	0.2624	10.9664	630	0.4334	18.1108	775	0.0023	0.0949
490	0.2608	10.8957	635	0.4006	16.7395	780	0.0004	0.0160
495	0.2778	11.6067	640	0.3652	15.2601	785	0.0009	0.0361
500	0.3087	12.8974	645	0.3320	13.8706	790	0.0005	0.0196
505	0.3519	14.7043	650	0.2975	12.4309	795	0.0009	0.0397
510	0.3914	16.3530	655	0.2653	11.0859	800	0.0052	0.2162
515	0.4259	17.7975	660	0.2378	9.9349			
520	0.4555	19.0338	665	0.2127	8.8888			

Condition: Tx:19.9'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-01-06 11:40:08
 Inspector:

IES TM-30-18 Color Rendition Report

Product Information

Product Category: LED-Röhre

Product Spec: LEDtube-060-8-CWM-09W-SCE-RM-179

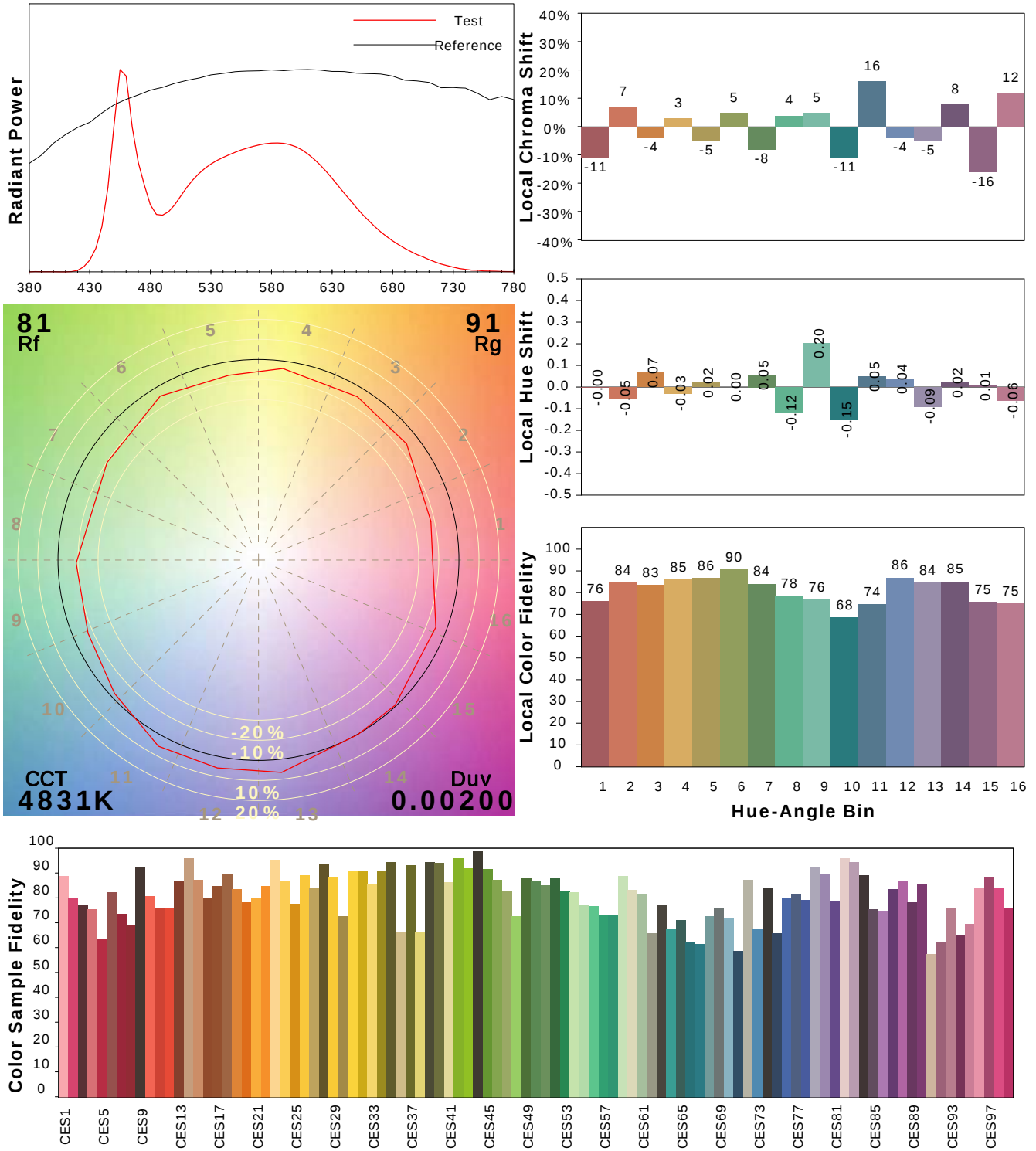
Manufacturer: METOLIGHT

Buyer: 6961

Product Type: LED-Röhre SCE

Product Number: 1

Submitted Unit: 102587



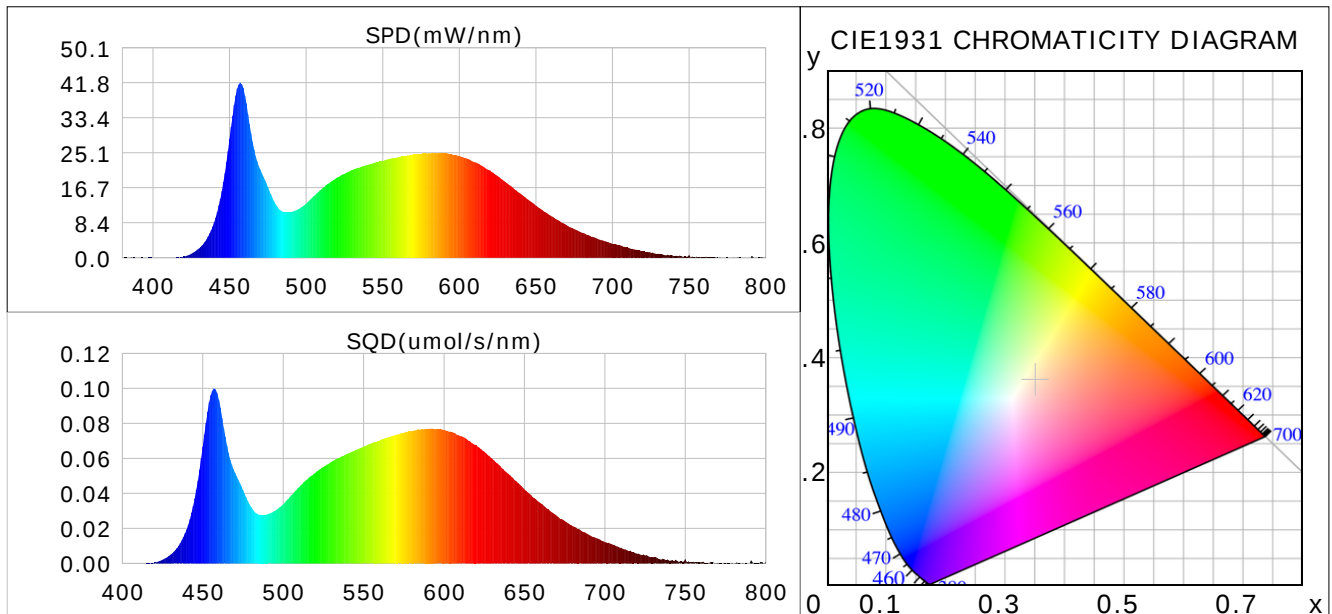
Condition: Tx:19.9'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-01-06 11:40:08
 Inspector:

Plant optical param data

CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3506$ $y=0.3600$ $u(u')=0.2119$ $v=0.3263$ $v'=0.4895$
 CCT: $T_c=4831K$ ($duv=0.00200$) Color Ratio: $R=0.162$ $G=0.789$ $B=0.049$
 Peak Wavelength: 457.0nm Half Bandwidth: 23.0nm
 Dominant Wavelength: 572.8nm Color Purity: 0.132
 CRI: Ra= 83.5



Plant Optical Param

$\mu_v(\text{lm})$: 1571.40	$Q_v(\text{lm.s})$: 1571.40
$\mu_e, \dot{E}(\text{W/nm})$: 4.87	$Q_e(\text{J})$: 4.87
$\mu_e(\text{W})$: 4.80	$\mu_{fr}(\text{W})$: 0.08
$\dot{C}_e$: 0.52	$\dot{C}_{fr}$: 0.01
$PPE(\mu\text{mol/s/w})$: 2.40	K_{fr} : 0.05
E_{rb_Ratio} : 1.01	$PPF(\mu\text{mol/s})$: 22.14
$PF_{uv}(360-400)(\mu\text{mol/s})$: 0.00	$PPF(400-500)(\mu\text{mol/s})$: 5.03
$PPF(500-600)(\mu\text{mol/s})$: 10.18	$PPF(600-700)(\mu\text{mol/s})$: 6.93
$PF_{fr}(700-800)(\mu\text{mol/s})$: 0.45	$PPF.t(\mu\text{mol})$: 22.14
$\mu_{ch-A.t}(\text{J})$: 0.36	$\mu_{ch-A}(\text{W})$: 0.36
$\mu_{ch-B.t}(\text{J})$: 0.26	$\mu_{ch-B}(\text{W})$: 0.26
$\mu_{b.t}(\text{J})$: 1.30	$\mu_b(\text{W})$: 1.30
$\mu_{y.t}(\text{J})$: 2.21	$\mu_y(\text{W})$: 2.21
$\mu_{r.t}(\text{J})$: 1.33	$\mu_r(\text{W})$: 1.33

Electric Parameters

Voltage: 231.20V	Current: 0.0390A	Power: 9.24W
Power Factor: 0.9000	Frequency: 49.99Hz	

Condition: Tx:19.9'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-01-06 11:40:08
 Inspector: