

Lightsource Test Report

Product Information

Product Category: LED-Röhre Product Type: LED-Röhre-SCE
 Product Spec: LEDtube-120-8CWM-18W-SCE-RM-160 Product Number: 1
 Manufacturer: METOLIGHT Submitted Unit: 105044
 Buyer: 6961-20888

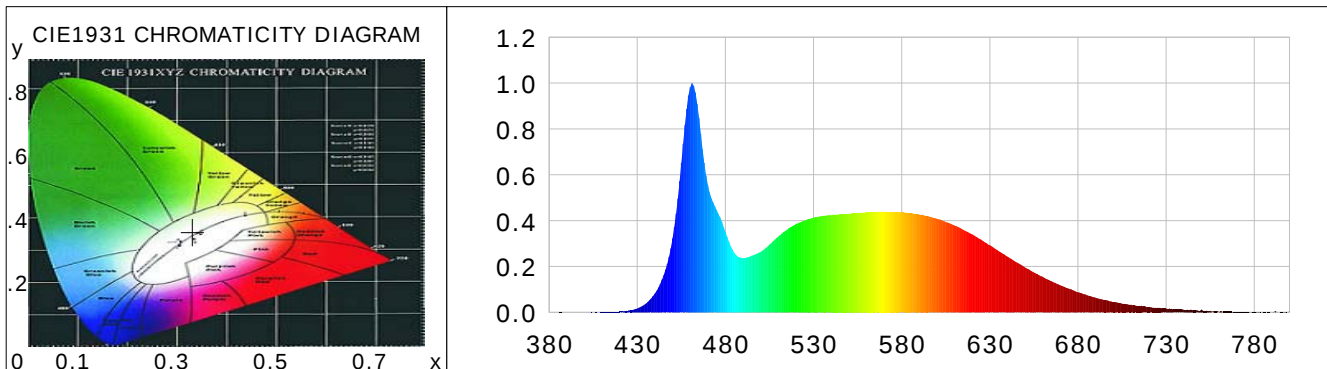
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3313$ $y=0.3577$ $u(u')=0.1999$ $v=0.3237$ $v'=0.4856$
 CCT: $T_c=5550K$ ($duv=0.00880$) Color Ratio: $R=0.145$ $G=0.794$ $B=0.061$
 Peak Wavelength: 461.1nm Half Bandwidth: 18.9nm
 Dominant Wavelength: 550.4nm Color Purity: 0.069
 CRI: $R_a=82.4$, $avgR(1\sim14)=76.0$, $avgR(1\sim15)=76.0$ TM30: $R_f=79$, $R_g=87$
 GAI: $GAI_BB_8=82.6$, $GAI_BB_15=90.5$, $GAI_EES=76.3$

R1 =82	R2 =94	R3 =93	R4 =73	R5 =80	R6 =90	R7 =82	R8 =65
R9 =10	R10=84	R11=73	R12=55	R13=87	R14=97	R15=76	

Color Quality Scale: $Q_a=80.5$, $Q_f=81.1$, $Q_p=78.1$, $Q_g=86.6$

Q1 =74	Q2 =90	Q3 =87	Q4 =73	Q5 =72	Q6 =72	Q7 =79	Q8 =86
Q9 =95	Q10=95	Q11=90	Q12=88	Q13=86	Q14=73	Q15=75	



Photometric Parameters

Luminous Flux: 2786.5 lm Efficiency: 154.63 lm/W Radiant Power: 8.656 W
 Total mains efficacy: 181.85 lm/W Energy Efficiency Class: C (EU 2019/2015)
 Pupil Flux: 5124.76 Plm Pupil Lumens Per Watt: 284.39 Plm/W Pupil Factor (K_p): 1.839
 Cirtopic Flux: 11804.17 lm

Electric Parameters

Voltage: 230.60V Current: 0.0820A Power: 18.02W
 Power Factor: 0.9490 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: 44710 (2910) CCD Integration Time: 62.90 ms

Condition: $T_x:26.1^{\circ}C$, $T_i:0.0^{\circ}C$, R.H.:60%
 Test Lab: Asmetec GmbH
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2020-11-11 13:22:55
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0004	0.0344	525	0.3994	38.5677	670	0.1181	11.4063
385	0.0007	0.0639	530	0.4120	39.7837	675	0.1029	9.9399
390	0.0001	0.0139	535	0.4204	40.5995	680	0.0877	8.4738
395	0.0002	0.0193	540	0.4237	40.9179	685	0.0753	7.2672
400	0.0001	0.0138	545	0.4282	41.3521	690	0.0641	6.1877
405	0.0003	0.0326	550	0.4309	41.6086	695	0.0542	5.2310
410	0.0008	0.0785	555	0.4347	41.9741	700	0.0451	4.3558
415	0.0020	0.1951	560	0.4363	42.1376	705	0.0381	3.6768
420	0.0037	0.3536	565	0.4387	42.3602	710	0.0341	3.2883
425	0.0080	0.7755	570	0.4387	42.3655	715	0.0282	2.7266
430	0.0170	1.6382	575	0.4375	42.2517	720	0.0227	2.1919
435	0.0389	3.7558	580	0.4361	42.1165	725	0.0199	1.9233
440	0.0822	7.9373	585	0.4327	41.7851	730	0.0168	1.6267
445	0.1631	15.7493	590	0.4272	41.2507	735	0.0130	1.2575
450	0.3228	31.1728	595	0.4191	40.4690	740	0.0118	1.1383
455	0.6522	62.9852	600	0.4081	39.4069	745	0.0093	0.8951
460	0.9821	94.8449	605	0.3943	38.0810	750	0.0125	1.2038
465	0.8493	82.0195	610	0.3787	36.5714	755	0.0069	0.6656
470	0.5570	53.7889	615	0.3602	34.7823	760	0.0025	0.2422
475	0.4462	43.0936	620	0.3401	32.8455	765	0.0041	0.3914
480	0.3512	33.9104	625	0.3171	30.6217	770	0.0023	0.2184
485	0.2601	25.1183	630	0.2930	28.2979	775	0.0019	0.1859
490	0.2362	22.8140	635	0.2673	25.8143	780	0.0020	0.1898
495	0.2473	23.8771	640	0.2425	23.4194	785	0.0022	0.2170
500	0.2644	25.5326	645	0.2187	21.1228	790	0.0003	0.0306
505	0.2954	28.5281	650	0.1959	18.9225	795	0.0016	0.1545
510	0.3309	31.9526	655	0.1745	16.8523	800	0.0045	0.4342
515	0.3605	34.8092	660	0.1551	14.9747			
520	0.3849	37.1692	665	0.1359	13.1207			

Condition: Tx:26.1'C, Ti:0.0'C, R.H.:60%
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IES TM-30-18 Color Rendition Report

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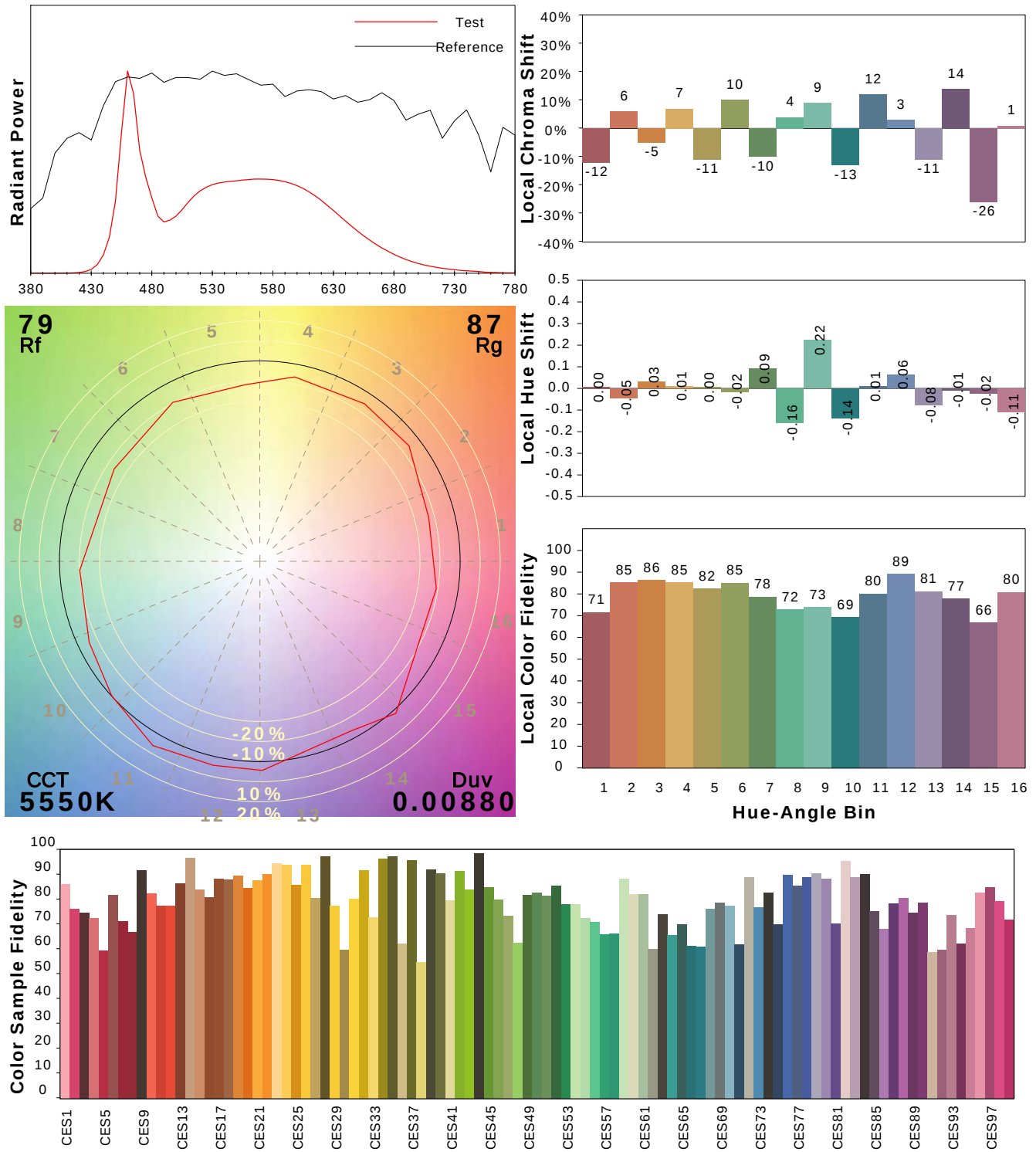
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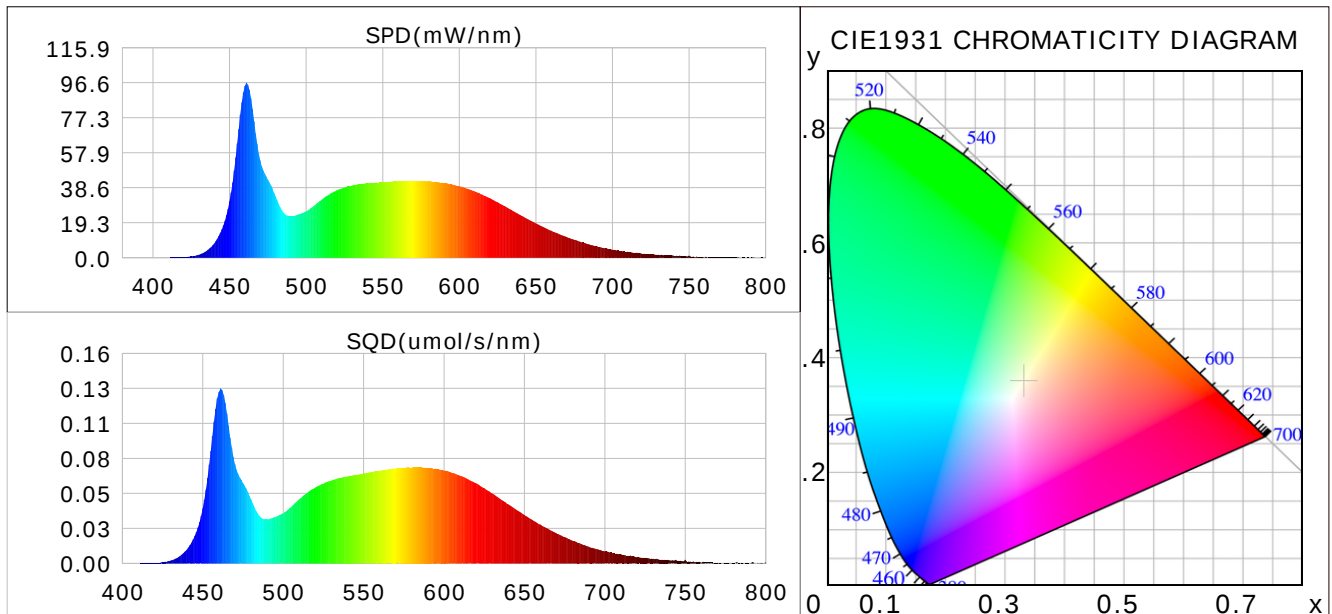
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Plant optical param data

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 Dominant Wavelength: 550.4nm Color Purity: 0.069
 CRI: Ra= 82.4



Plant Optical Param

$\mu_v(lm)$: 2786.50	$Q_v(lm.s)$: 2786.50
$\mu_e, \dot{E}(W/nm)$: 8.66	$Q_e(J)$: 8.66
$\mu_e(W)$: 8.54	$\mu_{fr}(W)$: 0.12
$\dot{C}_e$: 0.47	$\dot{C}_{fr}$: 0.01
$PPE(umol/s/w)$: 2.16	K_{fr} : 0.04
E_{rb_Ratio} : 0.77	$PPF(umol/s)$: 38.98
$PF_{uv}(360-400)(umol/s)$: 0.00	$PPF(400-500)(umol/s)$: 10.15
$PPF(500-600)(umol/s)$: 18.17	$PPF(600-700)(umol/s)$: 10.67
$PF_{fr}(700-800)(umol/s)$: 0.72	$PPF.t(umol)$: 38.98
$\mu_{ch-A.t}(J)$: 0.59	$\mu_{ch-A}(W)$: 0.59
$\mu_{ch-B.t}(J)$: 0.50	$\mu_{ch-B}(W)$: 0.50
$\mu_{b.t}(J)$: 2.60	$\mu_b(W)$: 2.60
$\mu_{y.t}(J)$: 3.96	$\mu_y(W)$: 3.96
$\mu_{r.t}(J)$: 2.05	$\mu_r(W)$: 2.05

Electric Parameters

Voltage: 230.60V	Current: 0.0820A	Power: 18.02W
Power Factor: 0.9490	Frequency: 49.99Hz	

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