

Lightsource Test Report

Product Information

Product Category: LED-Röhre Product Type: LED-Röhre-SCE
 Product Spec: LEDtube-120-8CWM-20W-SCE-RM-175 Product Number: 1
 Manufacturer: METOLIGHT Submitted Unit: 102583
 Buyer: 6961

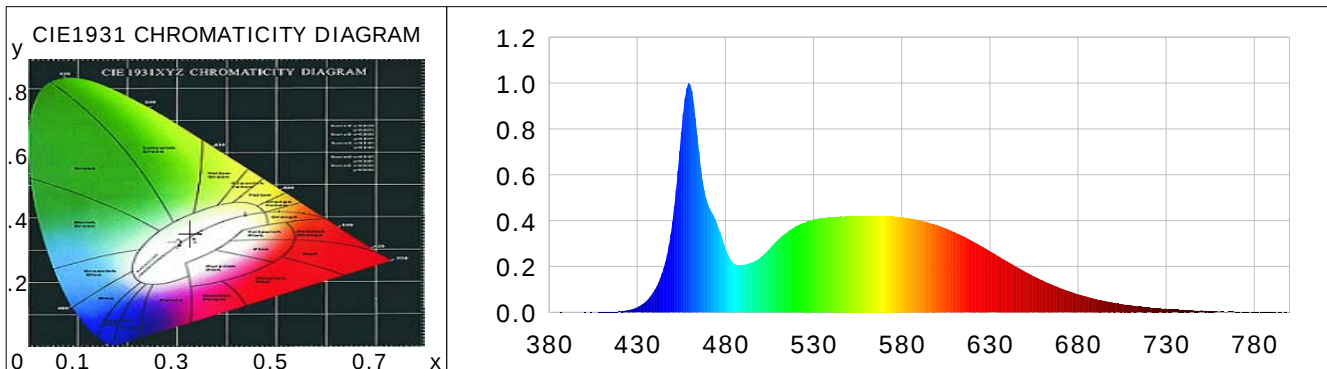
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3264$ $y=0.3529$ $u(u')=0.1984$ $v=0.3217$ $v'=0.4825$
 CCT: $T_c=5756K$ ($duv=0.00861$) Color Ratio: $R=0.140$ $G=0.803$ $B=0.058$
 Peak Wavelength: 459.3nm Half Bandwidth: 17.4nm
 Dominant Wavelength: 531.9nm Color Purity: 0.042
 CRI: $R_a=81.7$, $avgR(1\sim14)=74.4$, $avgR(1\sim15)=74.4$ TM30: $R_f=79$, $R_g=88$
 GAI: $GAI_BB_8=83.4$, $GAI_BB_15=91.3$, $GAI_EES=78.1$

R1 =80	R2 =92	R3 =94	R4 =74	R5 =78	R6 =87	R7 =84	R8 =65
R9 =5	R10=78	R11=73	R12=51	R13=84	R14=97	R15=75	

Color Quality Scale: $Q_a=79.8$, $Q_f=80.3$, $Q_p=77.5$, $Q_g=87.2$

Q1 =76	Q2 =93	Q3 =83	Q4 =70	Q5 =72	Q6 =72	Q7 =79	Q8 =87
Q9 =96	Q10=93	Q11=87	Q12=86	Q13=85	Q14=72	Q15=75	



Photometric Parameters

Luminous Flux: 3011.7 lm Efficiency: 163.86 lm/W Radiant Power: 9.328 W
 Total mains efficacy: 192.70 lm/W Energy Efficiency Class: B (EU 2019/2015)
 Pupil Flux: 5533.15 Plm Pupil Lumens Per Watt: 301.04 Plm/W Pupil Factor (K_p): 1.837
 Circopic Flux: 12680.99 lm

Electric Parameters

Voltage: 230.60V Current: 0.0860A Power: 18.38W
 Power Factor: 0.9160 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: 48255 (2234) CCD Integration Time: 58.68 ms

Condition: $T_x=18.2^{\circ}C$, $T_i=0.0^{\circ}C$, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-01-18 14:59:48
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0005	0.0522	525	0.3901	42.6951	670	0.1051	11.5027
385	0.0004	0.0430	530	0.4054	44.3643	675	0.0917	10.0394
390	0.0005	0.0575	535	0.4110	44.9819	680	0.0795	8.6977
395	0.0004	0.0406	540	0.4145	45.3675	685	0.0685	7.5001
400	0.0007	0.0772	545	0.4184	45.7888	690	0.0583	6.3857
405	0.0006	0.0663	550	0.4190	45.8535	695	0.0502	5.4956
410	0.0011	0.1193	555	0.4215	46.1311	700	0.0423	4.6241
415	0.0023	0.2530	560	0.4219	46.1745	705	0.0364	3.9786
420	0.0041	0.4516	565	0.4225	46.2377	710	0.0312	3.4198
425	0.0098	1.0765	570	0.4214	46.1209	715	0.0260	2.8477
430	0.0223	2.4433	575	0.4189	45.8508	720	0.0217	2.3696
435	0.0478	5.2277	580	0.4144	45.3498	725	0.0187	2.0460
440	0.0987	10.7986	585	0.4098	44.8460	730	0.0154	1.6891
445	0.1950	21.3383	590	0.4024	44.0412	735	0.0132	1.4418
450	0.3972	43.4744	595	0.3922	42.9199	740	0.0113	1.2351
455	0.7880	86.2455	600	0.3812	41.7164	745	0.0087	0.9559
460	0.9934	108.7226	605	0.3668	40.1451	750	0.0089	0.9785
465	0.7023	76.8673	610	0.3498	38.2846	755	0.0058	0.6394
470	0.4736	51.8351	615	0.3318	36.3110	760	0.0028	0.3044
475	0.3909	42.7863	620	0.3108	34.0180	765	0.0041	0.4493
480	0.2805	30.7051	625	0.2892	31.6466	770	0.0023	0.2487
485	0.2115	23.1518	630	0.2662	29.1297	775	0.0020	0.2164
490	0.2055	22.4874	635	0.2438	26.6791	780	0.0019	0.2053
495	0.2178	23.8324	640	0.2213	24.2217	785	0.0012	0.1330
500	0.2405	26.3199	645	0.1988	21.7572	790	0.0019	0.2044
505	0.2771	30.3237	650	0.1773	19.4067	795	0.0018	0.1948
510	0.3181	34.8135	655	0.1574	17.2313	800	0.0033	0.3590
515	0.3487	38.1584	660	0.1392	15.2315			
520	0.3760	41.1512	665	0.1219	13.3443			

Condition: Tx:18.2'C, Ti:0.0'C, R.H.:60%
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IES TM-30-18 Color Rendition Report

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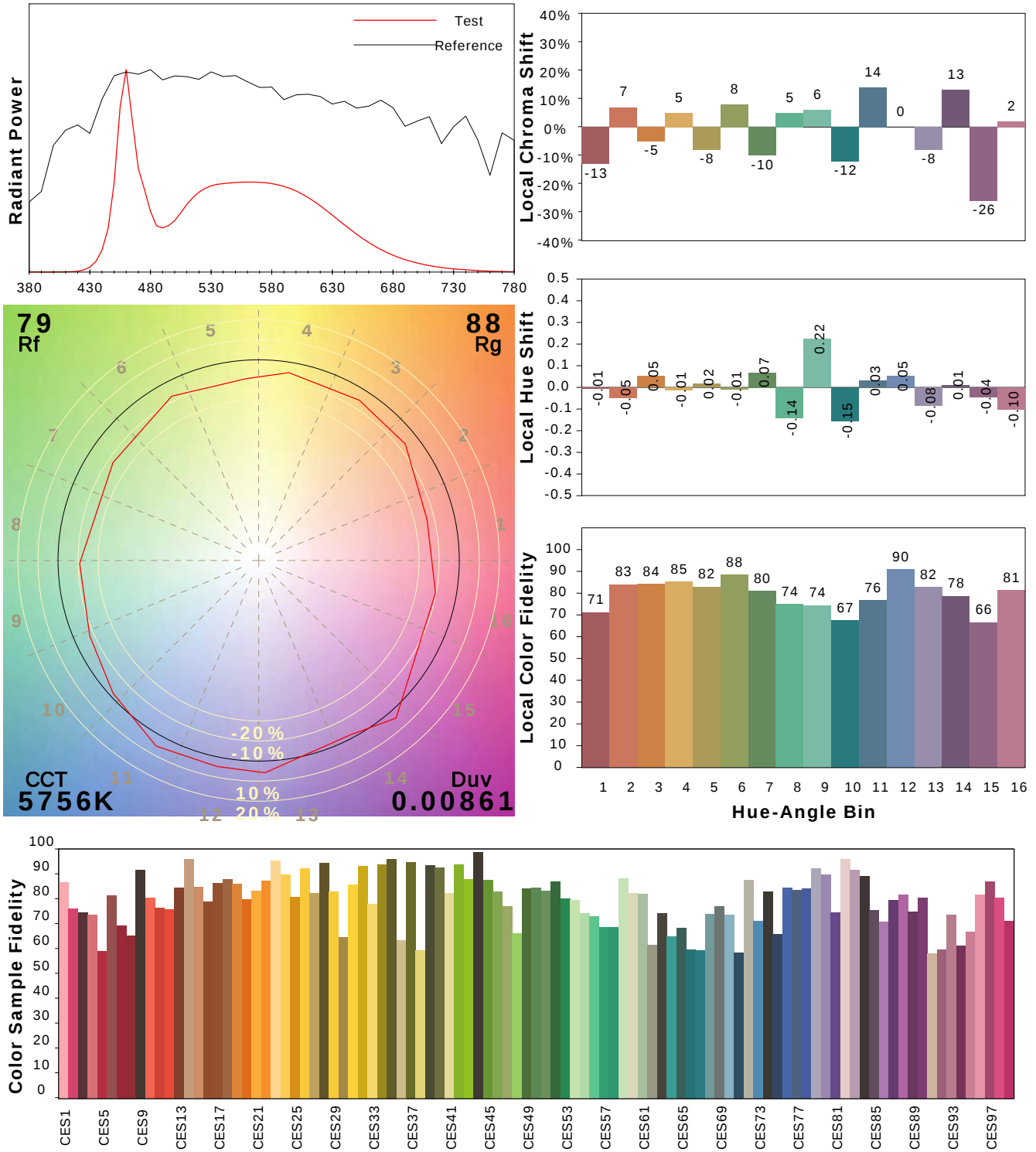
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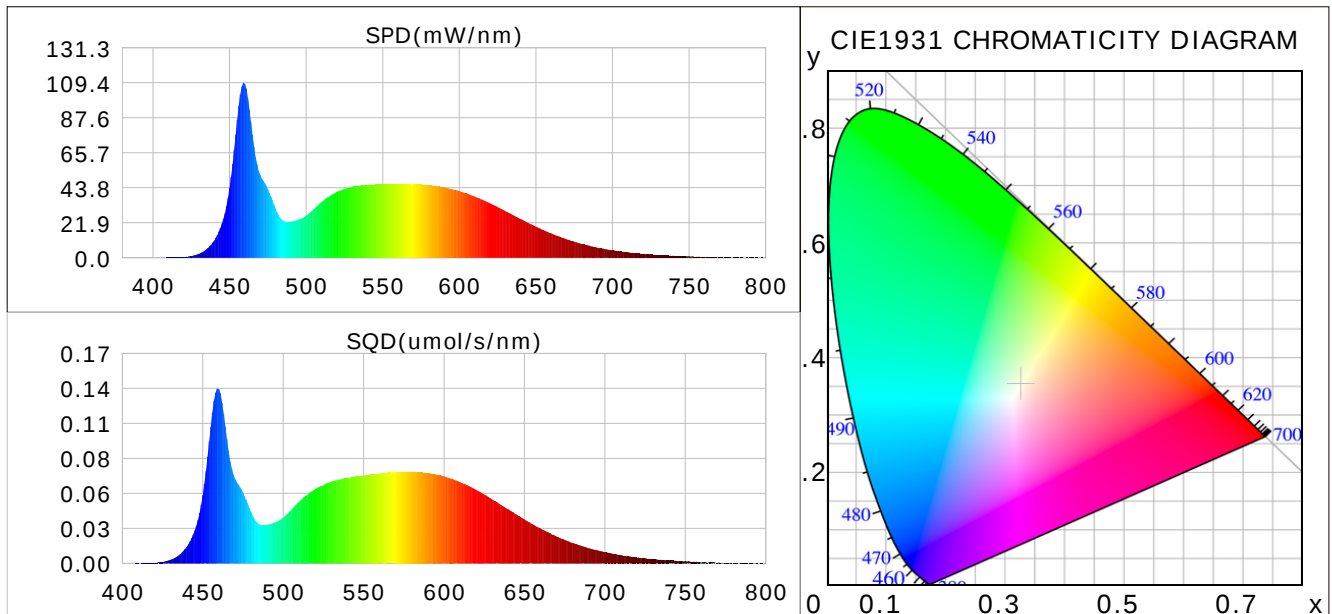
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Plant optical param data

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 CRI: Ra= 81.7



Plant Optical Param

$\mu_v(lm): 3011.70$	$Q_v(lm.s): 3011.70$
$\mu_e, \dot{E}(W/nm): 9.33$	$Q_e(J): 9.33$
$\mu_e(W): 9.20$	$\mu_{fr}(W): 0.13$
$\dot{C}_e: 0.50$	$\dot{C}_{fr}: 0.01$
$PPE(umol/s/w): 2.28$	$K_{fr}: 0.04$
$Erb_Ratio: 0.73$	$PPF(umol/s): 41.87$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 11.05$
$PPF(500-600)(umol/s): 19.79$	$PPF(600-700)(umol/s): 11.04$
$PF_{fr}(700-800)(umol/s): 0.76$	$PPF.t(umol): 41.87$
$\mu_{ch-A.t}(J): 0.65$	$\mu_{ch-A}(W): 0.65$
$\mu_{ch-B.t}(J): 0.54$	$\mu_{ch-B}(W): 0.54$
$\mu_b.t(J): 2.84$	$\mu_b(W): 2.84$
$\mu_y.t(J): 4.31$	$\mu_y(W): 4.31$
$\mu_r.t(J): 2.12$	$\mu_r(W): 2.12$

Electric Parameters

Voltage: 230.60V	Current: 0.0860A	Power: 18.38W
Power Factor: 0.9160	Frequency: 49.99Hz	

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