

Lightsource Test Report

Product Information

Product Category: LED-Röhre
 Product Spec: LEDtube-120-8CWM-20W-SCE-RM
 Manufacturer: METOLIGHT
 Buyer: 2105

Product Type: LED-Röhre-SCE
 Product Number: 1
 Submitted Unit: 101084

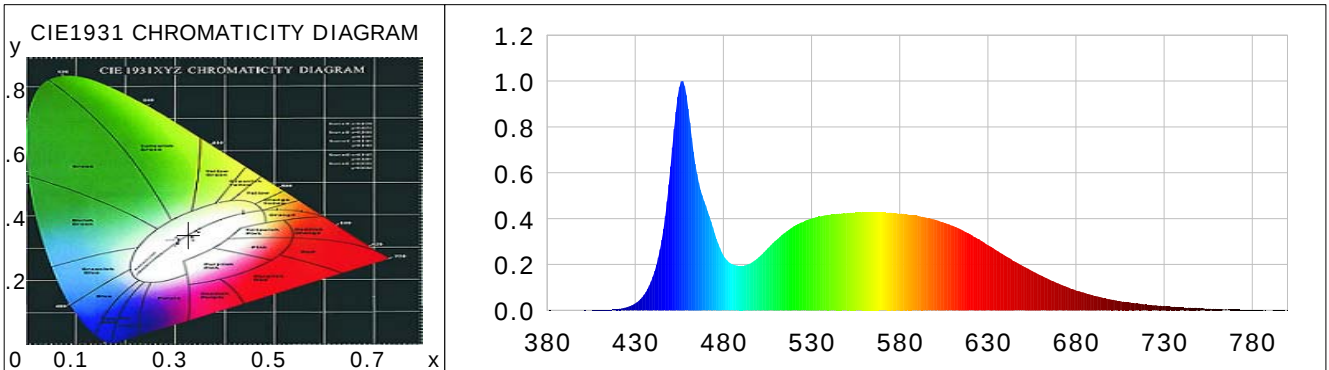
CIE Colorimetric Parameters

Chromaticity coordinates: $x=0.3269$ $y=0.3419$ $u(u')=0.2027$ $v=0.3181$ $v'=0.4771$
 CCT: $T_c=5748K$ ($duv=0.00295$) Color Ratio: $R=0.146$ $G=0.799$ $B=0.055$
 Peak Wavelength: 456.5nm Half Bandwidth: 19.7nm
 Dominant Wavelength: 510.5nm Color Purity: 0.020
 CRI: $R_a=83.7$, $avgR(1\sim14)=76.9$, $avgR(1\sim15)=77.1$ TM30: $R_f=81$, $R_g=92$
 GAI: $GAI_BB_8=89.6$, $GAI_BB_15=96.7$, $GAI_EES=83.9$

R1 =83	R2 =92	R3 =93	R4 =79	R5 =81	R6 =85	R7 =86	R8 =70
R9 =17	R10=77	R11=77	R12=52	R13=86	R14=97	R15=80	

Color Quality Scale: $Q_a=80.3$, $Q_f=80.4$, $Q_p=79.7$, $Q_g=90.5$

Q1 =81	Q2 =97	Q3 =78	Q4 =68	Q5 =73	Q6 =76	Q7 =83	Q8 =89
Q9 =97	Q10=89	Q11=83	Q12=83	Q13=83	Q14=74	Q15=77	



Photometric Parameters

Luminous Flux: 2478.8 lm	Efficiency: 124.69 lm/W	Radiant Power: 7.850 W
Total mains efficacy: 146.63 lm/W	Energy Efficiency Class: D (EU 2019/2015)	
Pupil Flux: 4503.65 Plm	Pupil Lumens Per Watt: 226.54 Plm/W	Pupil Factor (Kp): 1.817
Cirtpic Flux: 10279.07 lm		

Electric Parameters

Voltage: 230.40V	Current: 0.0880A	Power: 19.88W
Power Factor: 0.9750	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: 47957 (2293)	CCD Integration Time: 70.10 ms

Condition: Tx:19.2'C, Ti:0.0'C, R.H.:60%
 Test Lab:
 Operator: CRE

Test Device: Lisun LMS-9000B
 Test Time: 2021-01-25 15:03:02
 Inspector:

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WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0002	0.0212	525	0.3840	34.1910	670	0.1174	10.4521
385	0.0006	0.0496	530	0.4002	35.6297	675	0.1013	9.0205
390	0.0005	0.0431	535	0.4095	36.4624	680	0.0872	7.7628
395	0.0002	0.0193	540	0.4163	37.0629	685	0.0754	6.7141
400	0.0005	0.0469	545	0.4214	37.5202	690	0.0638	5.6807
405	0.0010	0.0892	550	0.4239	37.7482	695	0.0548	4.8758
410	0.0015	0.1367	555	0.4272	38.0367	700	0.0473	4.2087
415	0.0026	0.2343	560	0.4287	38.1686	705	0.0404	3.6016
420	0.0062	0.5553	565	0.4290	38.1988	710	0.0352	3.1384
425	0.0132	1.1764	570	0.4273	38.0432	715	0.0302	2.6872
430	0.0306	2.7282	575	0.4259	37.9230	720	0.0255	2.2692
435	0.0678	6.0409	580	0.4225	37.6236	725	0.0229	2.0408
440	0.1469	13.0791	585	0.4163	37.0640	730	0.0198	1.7664
445	0.3072	27.3543	590	0.4134	36.8110	735	0.0151	1.3454
450	0.6271	55.8350	595	0.4047	36.0305	740	0.0128	1.1359
455	0.9732	86.6519	600	0.3957	35.2358	745	0.0116	1.0284
460	0.8791	78.2769	605	0.3831	34.1150	750	0.0111	0.9859
465	0.5952	52.9991	610	0.3691	32.8610	755	0.0074	0.6546
470	0.4567	40.6660	615	0.3520	31.3388	760	0.0057	0.5045
475	0.3363	29.9447	620	0.3317	29.5321	765	0.0051	0.4575
480	0.2396	21.3383	625	0.3100	27.6036	770	0.0031	0.2755
485	0.2013	17.9203	630	0.2845	25.3311	775	0.0024	0.2143
490	0.1942	17.2938	635	0.2605	23.1988	780	0.0014	0.1260
495	0.2034	18.1139	640	0.2367	21.0770	785	0.0022	0.1997
500	0.2315	20.6147	645	0.2142	19.0735	790	0.0000	0.0011
505	0.2697	24.0107	650	0.1923	17.1246	795	0.0016	0.1429
510	0.3068	27.3140	655	0.1719	15.3087	800	0.0015	0.1340
515	0.3388	30.1700	660	0.1523	13.5605			
520	0.3665	32.6339	665	0.1338	11.9109			

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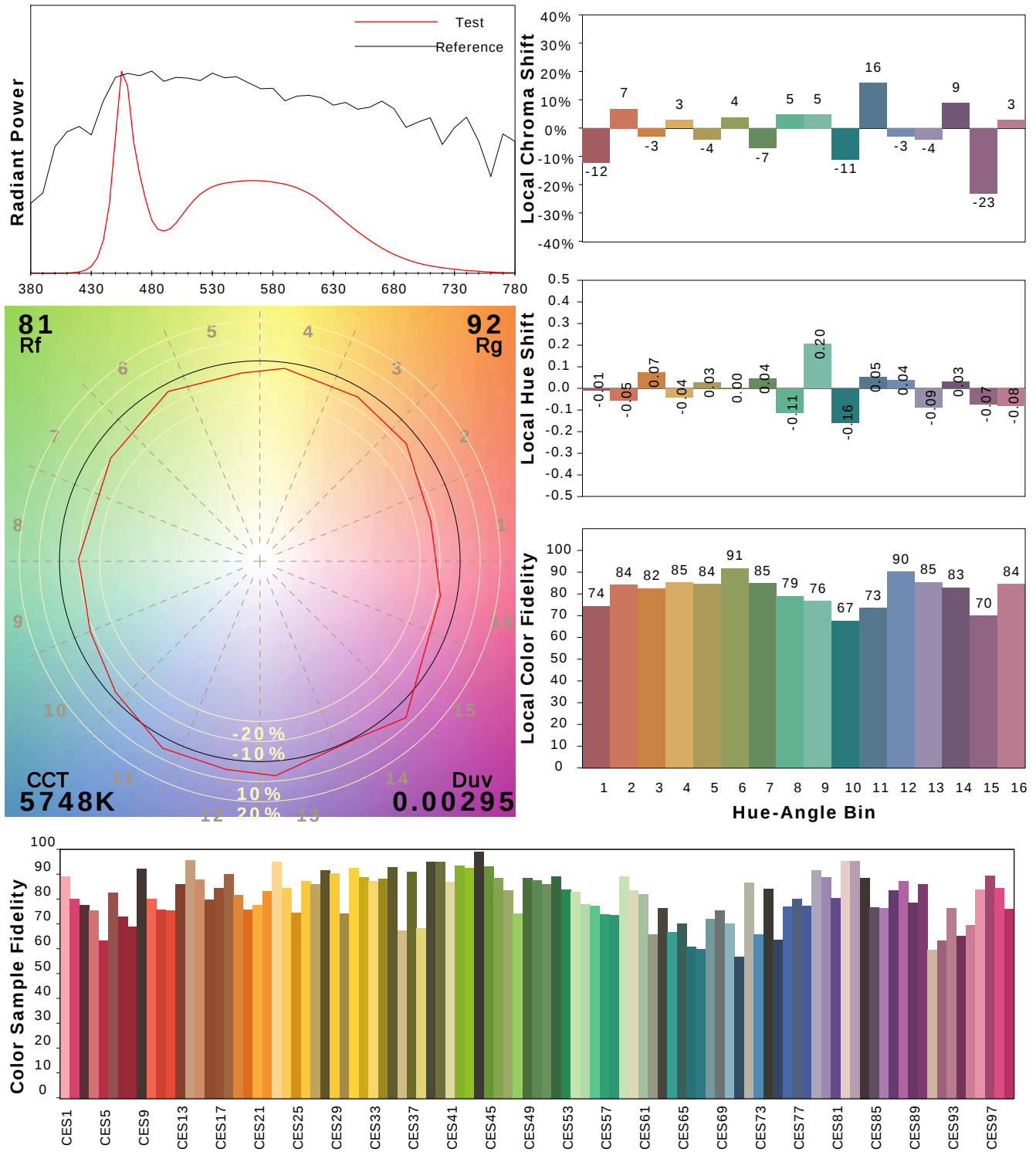
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IES TM-30-18 Color Rendition Report

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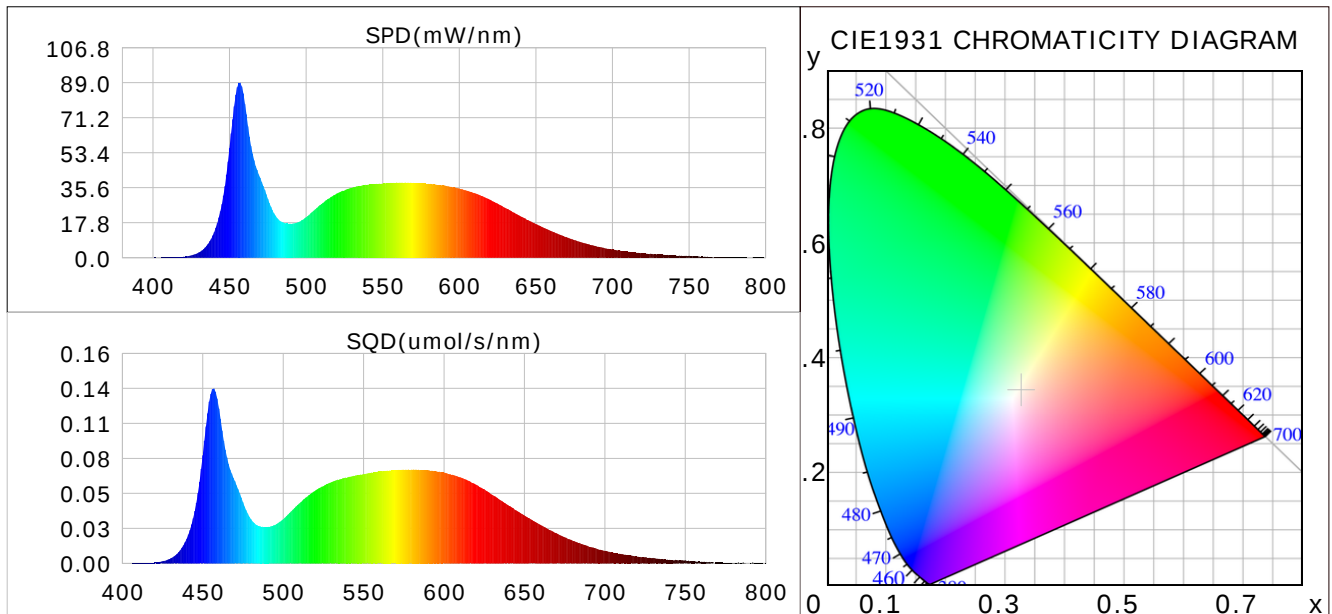
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Plant optical param data

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 CRI: Ra= 83.7



Plant Optical Param

$\mu_v(lm): 2478.80$	$Q_v(lm.s): 2478.80$
$\mu_e, \dot{E}(W/nm): 7.85$	$Q_e(J): 7.85$
$\mu_e(W): 7.73$	$\mu_{fr}(W): 0.12$
$\dot{C}_e: 0.39$	$\dot{C}_{fr}: 0.01$
$PPE(umol/s/w): 1.77$	$K_{fr}: 0.04$
$E_{rb_Ratio}: 0.75$	$PPF(umol/s): 35.18$
$PF_{uv}(360-400)(umol/s): 0.00$	$PPF(400-500)(umol/s): 9.35$
$PPF(500-600)(umol/s): 16.19$	$PPF(600-700)(umol/s): 9.64$
$PF_{fr}(700-800)(umol/s): 0.73$	$PPF.t(umol): 35.18$
$\mu_{ch-A.t}(J): 0.58$	$\mu_{ch-A}(W): 0.58$
$\mu_{ch-B.t}(J): 0.46$	$\mu_{ch-B}(W): 0.46$
$\mu_b.t(J): 2.41$	$\mu_b(W): 2.41$
$\mu_y.t(J): 3.52$	$\mu_y(W): 3.52$
$\mu_r.t(J): 1.85$	$\mu_r(W): 1.85$

Electric Parameters

Voltage: 230.40V	Current: 0.0880A	Power: 19.88W
Power Factor: 0.9750	Frequency: 49.99Hz	

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