

IES LM-79-08

MEASUREMENT AND TEST REPORT

For

GREEN CREATIVE LTD

Room 3603, Level 36, Tower 1, Enterprise Square Five, 38 Wang Chiu Road, Kowloon Bay, KL, Hong Kong, China

Test Model: 11PAR30SNDIM/927FL40/SL+SL25D

Report Type:	Electrical and Photometric tests including: Luminous Flux, Chromaticity, Luminous Intensity Distribution, THD
Reviewed By:	Hill Liu 
Report Number:	KS2230727-43643E-EE-1
Test Date:	2023-07-28 to 2023-08-11
Report Date:	2023-08-25
Approved by:	Blake Zhang / EE Engineer
Prepared By:	Bay Area Compliance Laboratories Corp. (Shenzhen) 5/F(B-West) -7/F, the 3rd Phase of Wan Li Industrial Building D, Shihua Road, Futian Free Trade Zone Shenzhen, Guangdong, China. Tel: +86-755-33320018 Fax: +86-755-33320008
Test Facility:	Test facility was located at No.12, Pulong East 1 st Road, Tangxia Town, Dongguan, Guangdong, China.

Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp.(Shenzhen). This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, or any agency of the U.S. Government.

1. Product Description#

General Information:

Two test samples were in good condition and received on date,2023-07-27 and used for testing. One was tested in integrating sphere and the other was tested in goniophotometer

Model Tested: 11PAR30SNDIM/927FL40/SL+SL25D
Manufacturer: GREEN CREATIVE LTD
Brand Name: GREEN CREATIVE
Product Designation: Directional LED Lamp
Burning Time Before Test: 0hour(For New Products)

Rated Values:

Rated Voltage/Frequency: 120VAC 60Hz
Rated Power: 11W
Nominal CCT: 2700K
Nominal Lumen Output: 950 lm

Family Declaration

The Model	Multiple Models	Differences Items	Details
11PAR30SNDIM/927FL40/SL+SL25D	11PAR30SNDIM/927NF25/SL	Model Number & Finishing color	11PAR30SNDIM/927FL40/SL+S L25D & 11PAR30SNDIM/927NF25/SL are the same product except for the model number.
	11PAR30SNDIM/927FL40/B/SL+SL25D & 11PAR30SNDIM/927NF25/B/SL		11PAR30SNDIM/927FL40/B/SL+SL25D & 11PAR30SNDIM/927NF25/B/SL are the same product except for the model number.
	11PAR30SNDIM/927FL40/B/SL+SL25D & 11PAR30SNDIM/927NF25/B/SL		The finishing color of model 11PAR30SNDIM/927FL40/SL+S L25D & 11PAR30SNDIM/927NF25/SL is White; The finishing color of model 11PAR30SNDIM/927FL40/B/SL+SL25D & 11PAR30SNDIM/927NF25/B/SL is Black.

2. Standards Used

- IES LM-79-08: Approved Method: Electrical & Photometric Measurement of Solid-state Lighting Products
- ANSI C82.77-10-2014: Harmonic Emission Limits – Related Power Quality Requirements for Lighting
- *IES TM-30-18: IES Method for Evaluating Light Source Color Rendition (This method is not in NVLAP accreditation scope)

3. Description of Test Equipment

Device	Manufacture	Model No	Serial No	Calibration date	Calibration due date
2.0m integrating sphere	EVERFINE	R98	11010018	2022-11-10	2023-11-09
spectroradiometer	EVERFINE	HAAS-2000	G112048TS81331121	2022-11-10	2023-11-09
Digital Power Meter	EVERFINE	PF2010A	1011004	2022-11-10	2023-11-09
Digital CC&CV DC Power Supply	EVERFINE	WY305-V1	1101047	2022-11-10	2023-11-09
Standard Light Source	EVERFINE	D204	N/A	2023-05-12	2025-05-11
Special zero-voltage synchronous switching AC	EVERFINE	DPS1010-YF	1011001T	2022-11-10	2023-11-09
AC POWER SUPPLY	EVERFINE	VPS1030 PWM	1012017	2022-11-16	2023-11-15
Digital CC&CV DC Power Supply	EVERFINE	WY12010	1009009	2022-11-10	2023-11-09
Digital power meter	YOKOGAWA	WT-210	91j926132	2022-11-10	2023-11-09
full-field speed goniophotometer	EVERFINE	GO-R5000	YG108492N10120001	2022-11-10	2023-11-09
wireless remote thermohygrometer	N/A	AOK-5017B	N/A	2022-11-10	2023-11-09
Standard Light Source	EVERFINE	D908	1012003	2023-05-12	2025-05-11

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Shenzhen) attested that all calibration has been performed using suitable standards traceable to National Primary Standards and International System of Units (SI).

4. Test Method

Product was tested with no seasoning. All stabilization and measurements were made in compliance with IES LM-79-08. The product was operated at rated voltage or at voltage required by manufacturer. The ambient temperature of the sample was maintained at 25°C±1°C during measurement. And relative humidity is less than 65%.

Integrating Sphere System

The system includes AC power source, digital power meter, DC power supply, Spectroradiometer, and integrating sphere. The integrating sphere system is calibrated by standard spectrum light source before measurement.

4 π geometry was used during measurement. The product was operated in its intended orientation in application and was recorded in this report.

The uncertainty of the light output (luminous flux) measurements is U=2.1% (K=2), at the 95% confidence level. The uncertainty of the correlated color temperature measurements is U=22K (K=2), at the 95% confidence level. The uncertainty of the CRI is U=2.1(K=2), at the 95% confidence level.

The uncertainty of power meter AC current U=0.39 % of rdg, AC Voltage U=0.25% of rdg, Power U=0.42% (K=2), at the 95% confidence level. The uncertainty of power meter AC current U=0.19 % of rdg, AC Voltage U=0.18% of rdg, Power U=0.46% (K=2), at the 95% confidence level.

Goniophotometer System

The goniophotometer system is calibrated by standard light source before measurement.

Type C goniophotometer was used for measuring total luminous flux, luminous intensity distribution, and color spatial uniformity. The product was operated in its intended orientation in application and was recorded in this report. The

vertical angle (γ) test intervals were set no more than 1 degree while data for 5 degree intervals is reported. The horizontal angle (C plane) test intervals were set no more than 22.5 degree.

The uncertainty of the luminous intensity is $U=2.00\%$ ($K=2$), at the 95% confidence level.

Additional Test

The Additional Test item may not be covered by IESNA LM-79-2008. Additional test including power factor, off-state power and THD, was measured by Digital Power Meter after stabilized at $25^{\circ}\text{C}\pm 1^{\circ}\text{C}$. Test voltage for THD and power factor test would be equal to rated voltage or, in case of a voltage range, maximum value of that range.

The uncertainty of power meter AC current $U=0.19\%$ of rdg, AC Voltage $U=0.18\%$ of rdg, Power $U=0.46\%$ ($K=2$), at the 95% confidence level.

Fidelity Index and Gamut Index Calculation

The R_i , R_g was calculated according to IES TM-30-18 by using calculation tools. The calculation was based on the measured SPD from 380nm to 780nm with 1nm intervals. All the colors in this report is for reference only.

5. Test Result

[Integrating Sphere System]

Model: 11PAR30SNDIM/927FL40/SL+SL25D

The Stabilization time: **30 minutes**

Total operating time for integrating sphere test: **1.0 hour**

Test orientation: **Base Up**

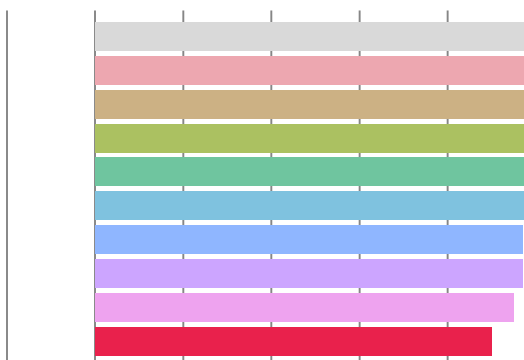
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.1	60	0.09084	10.39	0.9526	977.82	94.12

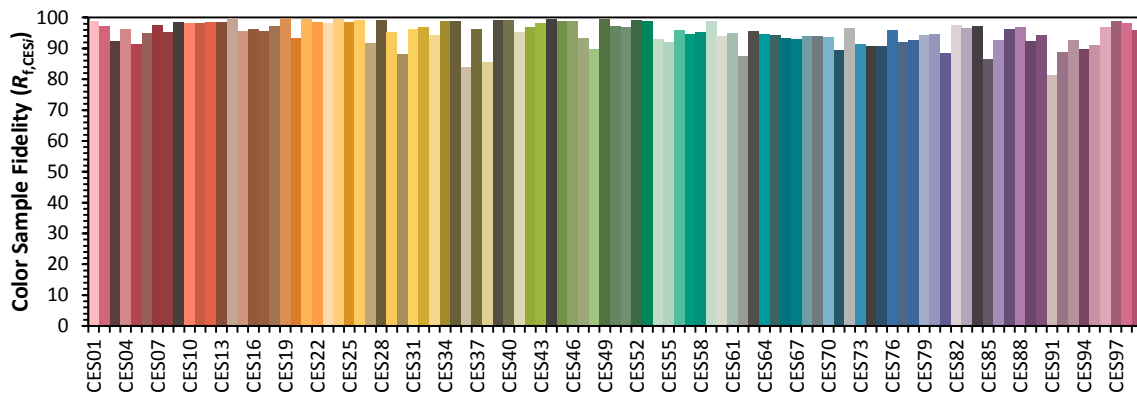
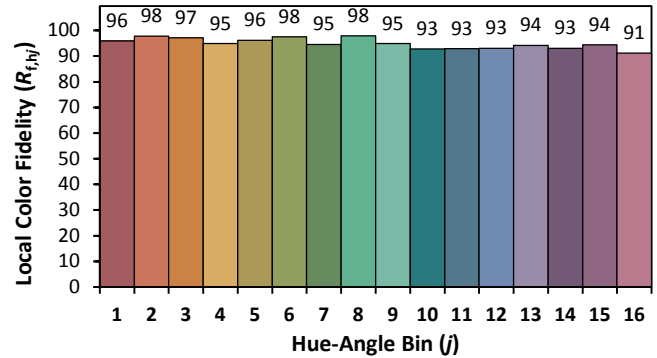
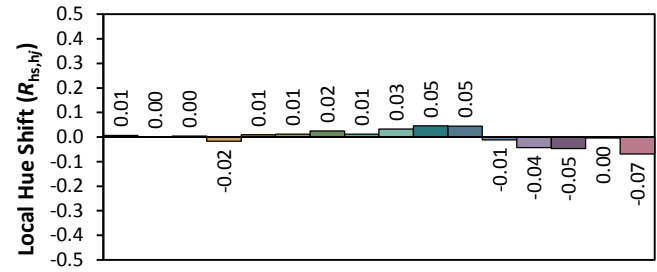
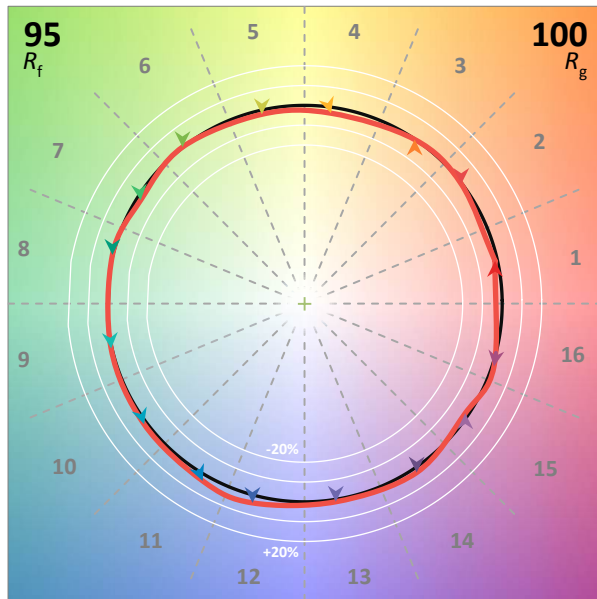
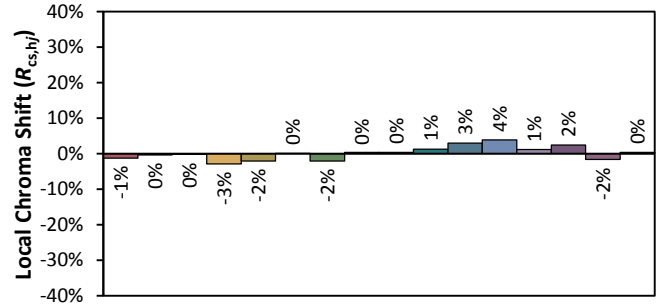
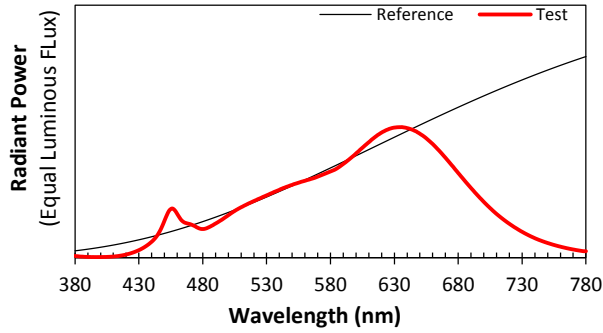
Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
3.7535	2781	-0.00066	0.4523	0.4070	0.2592	0.5248

Color Rendering Index

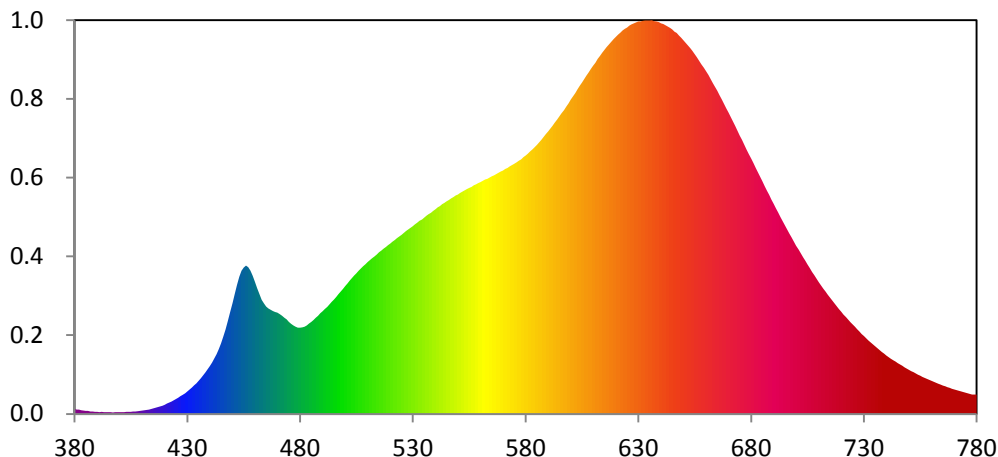
Ra			
98.0			
R1	R2	R3	R4
99	99	98	99
R5	R6	R7	R8
99	97	97	95



R9 90	R10 99	R11 97	R12 88
R13 99	R14 98	R15 98	



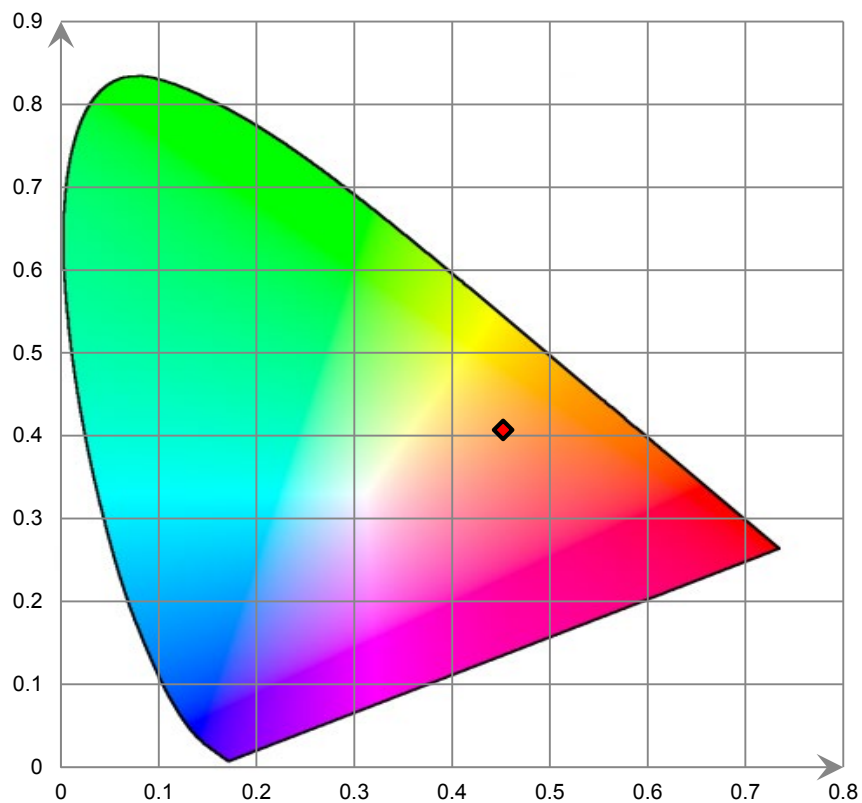
Relative Spectral Power Distribution



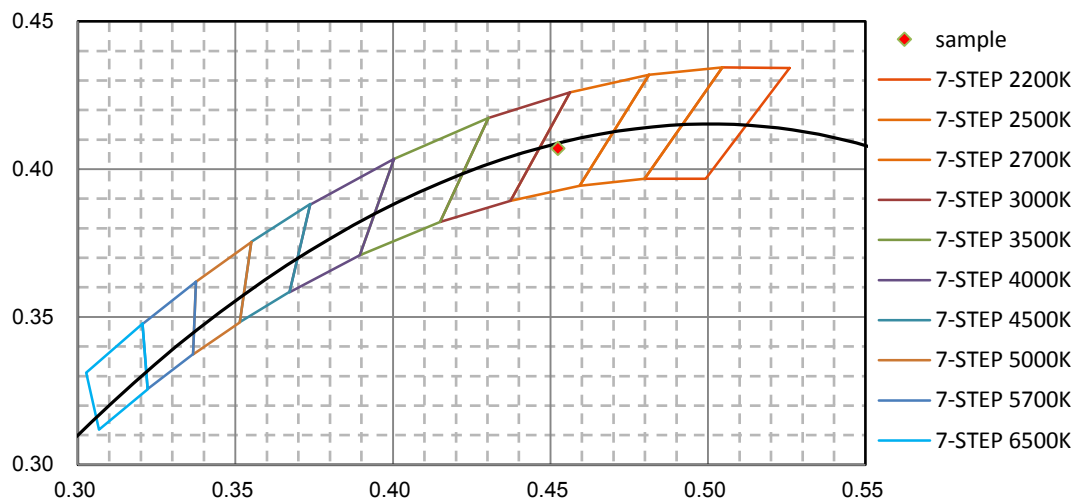
nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	2.996E-01	421	5.791E-01	462	6.754E+00	503	7.656E+00	544	1.190E+01
381	2.428E-01	422	6.347E-01	463	6.441E+00	504	7.804E+00	545	1.199E+01
382	2.408E-01	423	6.945E-01	464	6.226E+00	505	7.933E+00	546	1.207E+01
383	2.079E-01	424	7.646E-01	465	6.060E+00	506	8.080E+00	547	1.214E+01
384	1.838E-01	425	8.372E-01	466	5.942E+00	507	8.199E+00	548	1.223E+01
385	1.722E-01	426	9.111E-01	467	5.873E+00	508	8.328E+00	549	1.231E+01
386	1.686E-01	427	9.938E-01	468	5.809E+00	509	8.443E+00	550	1.237E+01
387	1.426E-01	428	1.082E+00	469	5.755E+00	510	8.564E+00	551	1.247E+01
388	1.308E-01	429	1.173E+00	470	5.703E+00	511	8.662E+00	552	1.254E+01
389	1.243E-01	430	1.270E+00	471	5.623E+00	512	8.784E+00	553	1.260E+01
390	1.119E-01	431	1.373E+00	472	5.532E+00	513	8.895E+00	554	1.267E+01
391	1.063E-01	432	1.487E+00	473	5.430E+00	514	8.996E+00	555	1.274E+01
392	1.079E-01	433	1.607E+00	474	5.330E+00	515	9.112E+00	556	1.281E+01
393	9.093E-02	434	1.732E+00	475	5.192E+00	516	9.219E+00	557	1.289E+01
394	1.007E-01	435	1.873E+00	476	5.087E+00	517	9.316E+00	558	1.295E+01
395	9.224E-02	436	2.016E+00	477	4.988E+00	518	9.415E+00	559	1.301E+01
396	9.220E-02	437	2.172E+00	478	4.915E+00	519	9.520E+00	560	1.307E+01
397	8.973E-02	438	2.334E+00	479	4.870E+00	520	9.616E+00	561	1.314E+01
398	9.496E-02	439	2.517E+00	480	4.866E+00	521	9.716E+00	562	1.321E+01
399	9.286E-02	440	2.697E+00	481	4.875E+00	522	9.805E+00	563	1.326E+01
400	9.402E-02	441	2.898E+00	482	4.926E+00	523	9.923E+00	564	1.333E+01
401	1.008E-01	442	3.128E+00	483	4.993E+00	524	1.001E+01	565	1.340E+01
402	1.037E-01	443	3.373E+00	484	5.092E+00	525	1.010E+01	566	1.346E+01
403	1.091E-01	444	3.657E+00	485	5.190E+00	526	1.020E+01	567	1.353E+01
404	1.082E-01	445	3.978E+00	486	5.293E+00	527	1.031E+01	568	1.360E+01
405	1.201E-01	446	4.355E+00	487	5.416E+00	528	1.040E+01	569	1.366E+01
406	1.310E-01	447	4.754E+00	488	5.524E+00	529	1.049E+01	570	1.373E+01
407	1.384E-01	448	5.225E+00	489	5.670E+00	530	1.059E+01	571	1.381E+01
408	1.510E-01	449	5.719E+00	490	5.790E+00	531	1.068E+01	572	1.387E+01
409	1.654E-01	450	6.253E+00	491	5.917E+00	532	1.078E+01	573	1.396E+01
410	1.840E-01	451	6.780E+00	492	6.045E+00	533	1.089E+01	574	1.403E+01
411	2.003E-01	452	7.274E+00	493	6.189E+00	534	1.097E+01	575	1.410E+01
412	2.253E-01	453	7.735E+00	494	6.322E+00	535	1.107E+01	576	1.419E+01
413	2.467E-01	454	8.069E+00	495	6.451E+00	536	1.118E+01	577	1.428E+01
414	2.758E-01	455	8.259E+00	496	6.602E+00	537	1.126E+01	578	1.436E+01
415	3.134E-01	456	8.358E+00	497	6.758E+00	538	1.135E+01	579	1.448E+01
416	3.463E-01	457	8.278E+00	498	6.906E+00	539	1.144E+01	580	1.458E+01
417	3.845E-01	458	8.076E+00	499	7.050E+00	540	1.153E+01	581	1.468E+01
418	4.260E-01	459	7.794E+00	500	7.208E+00	541	1.165E+01	582	1.480E+01
419	4.696E-01	460	7.436E+00	501	7.352E+00	542	1.173E+01	583	1.492E+01
420	5.180E-01	461	7.089E+00	502	7.518E+00	543	1.183E+01	584	1.504E+01

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
585	1.516E+01	626	2.190E+01	667	1.773E+01	708	7.814E+00	749	2.559E+00
586	1.531E+01	627	2.196E+01	668	1.748E+01	709	7.618E+00	750	2.483E+00
587	1.545E+01	628	2.203E+01	669	1.723E+01	710	7.431E+00	751	2.419E+00
588	1.561E+01	629	2.208E+01	670	1.699E+01	711	7.251E+00	752	2.347E+00
589	1.577E+01	630	2.212E+01	671	1.673E+01	712	7.072E+00	753	2.281E+00
590	1.593E+01	631	2.214E+01	672	1.648E+01	713	6.897E+00	754	2.212E+00
591	1.609E+01	632	2.217E+01	673	1.622E+01	714	6.723E+00	755	2.153E+00
592	1.625E+01	633	2.218E+01	674	1.596E+01	715	6.555E+00	756	2.089E+00
593	1.643E+01	634	2.219E+01	675	1.570E+01	716	6.387E+00	757	2.031E+00
594	1.660E+01	635	2.219E+01	676	1.546E+01	717	6.227E+00	758	1.971E+00
595	1.678E+01	636	2.220E+01	677	1.518E+01	718	6.064E+00	759	1.914E+00
596	1.696E+01	637	2.216E+01	678	1.491E+01	719	5.908E+00	760	1.864E+00
597	1.714E+01	638	2.213E+01	679	1.466E+01	720	5.760E+00	761	1.804E+00
598	1.732E+01	639	2.209E+01	680	1.439E+01	721	5.608E+00	762	1.754E+00
599	1.751E+01	640	2.203E+01	681	1.414E+01	722	5.465E+00	763	1.703E+00
600	1.772E+01	641	2.198E+01	682	1.387E+01	723	5.317E+00	764	1.653E+00
601	1.791E+01	642	2.191E+01	683	1.362E+01	724	5.173E+00	765	1.601E+00
602	1.809E+01	643	2.184E+01	684	1.336E+01	725	5.042E+00	766	1.559E+00
603	1.831E+01	644	2.176E+01	685	1.310E+01	726	4.910E+00	767	1.510E+00
604	1.850E+01	645	2.167E+01	686	1.284E+01	727	4.770E+00	768	1.467E+00
605	1.869E+01	646	2.156E+01	687	1.259E+01	728	4.642E+00	769	1.423E+00
606	1.888E+01	647	2.148E+01	688	1.234E+01	729	4.508E+00	770	1.382E+00
607	1.908E+01	648	2.133E+01	689	1.209E+01	730	4.392E+00	771	1.345E+00
608	1.926E+01	649	2.121E+01	690	1.184E+01	731	4.269E+00	772	1.301E+00
609	1.945E+01	650	2.107E+01	691	1.160E+01	732	4.148E+00	773	1.265E+00
610	1.963E+01	651	2.092E+01	692	1.136E+01	733	4.035E+00	774	1.228E+00
611	1.981E+01	652	2.079E+01	693	1.110E+01	734	3.924E+00	775	1.192E+00
612	2.002E+01	653	2.063E+01	694	1.087E+01	735	3.812E+00	776	1.158E+00
613	2.019E+01	654	2.047E+01	695	1.063E+01	736	3.705E+00	777	1.124E+00
614	2.036E+01	655	2.029E+01	696	1.040E+01	737	3.598E+00	778	1.093E+00
615	2.053E+01	656	2.010E+01	697	1.016E+01	738	3.500E+00	779	1.086E+00
616	2.069E+01	657	1.991E+01	698	9.944E+00	739	3.402E+00	780	1.088E+00
617	2.086E+01	658	1.972E+01	699	9.713E+00	740	3.300E+00		
618	2.099E+01	659	1.952E+01	700	9.485E+00	741	3.206E+00		
619	2.114E+01	660	1.933E+01	701	9.262E+00	742	3.119E+00		
620	2.127E+01	661	1.911E+01	702	9.050E+00	743	3.028E+00		
621	2.140E+01	662	1.889E+01	703	8.831E+00	744	2.947E+00		
622	2.150E+01	663	1.866E+01	704	8.628E+00	745	2.866E+00		
623	2.162E+01	664	1.843E+01	705	8.417E+00	746	2.783E+00		
624	2.172E+01	665	1.821E+01	706	8.219E+00	747	2.709E+00		
625	2.180E+01	666	1.797E+01	707	8.008E+00	748	2.629E+00		

CIE 1931 x y Chromaticity Diagram



7-Step Chromaticity Quadrangles



Model: 11PAR30SNDIM/927FL40/B/SL+SL25D

[Integrating Sphere System]

The Stabilization time: **30 minutes**

Total operating time for integrating sphere test: **1.0 hour**

Test orientation: **Base Up**

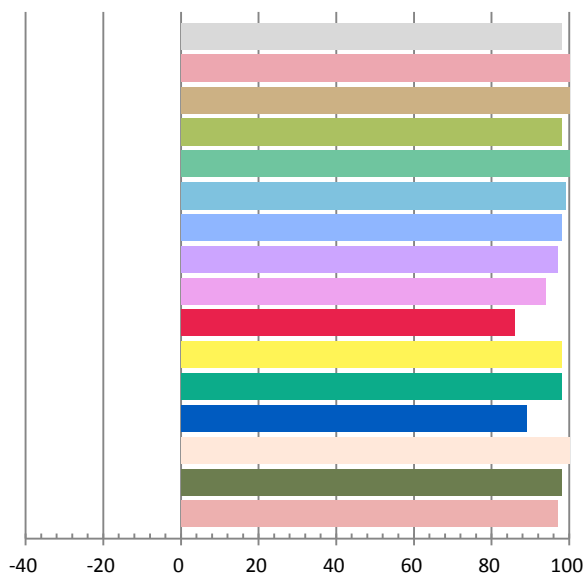
Photometric and Electrical Measurement Result

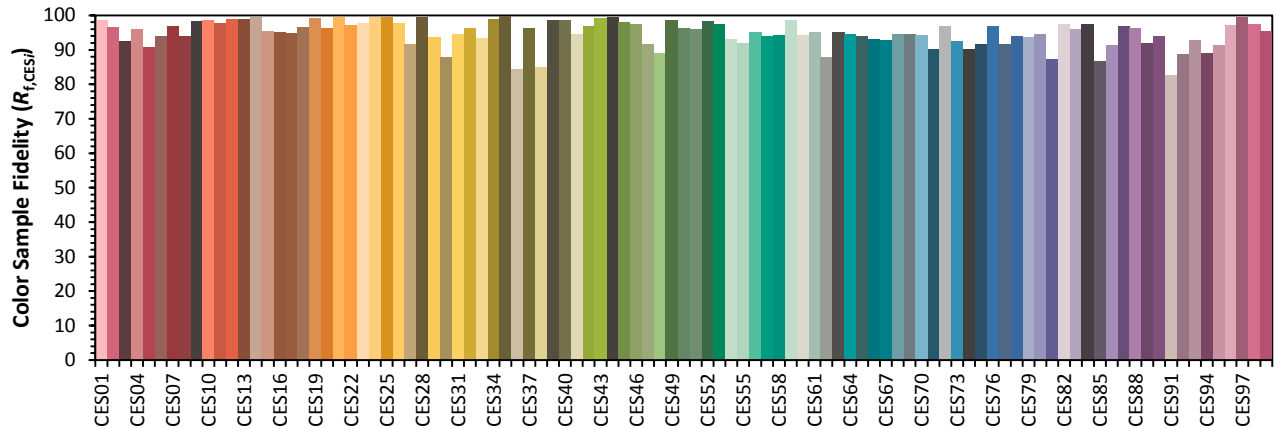
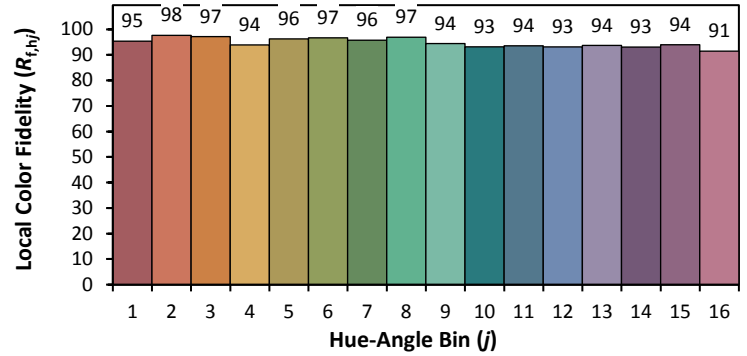
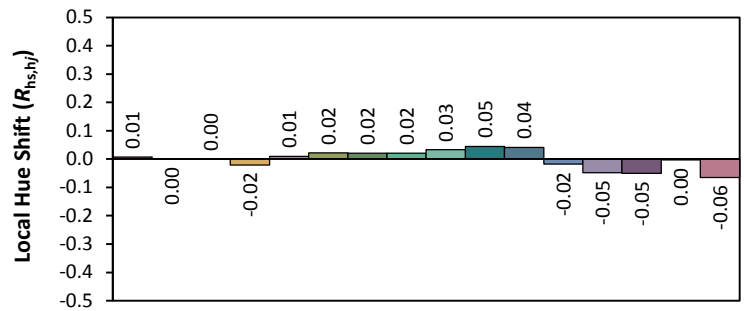
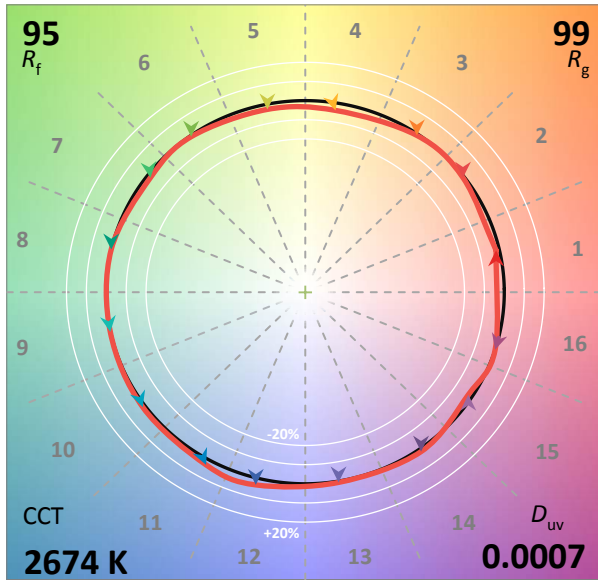
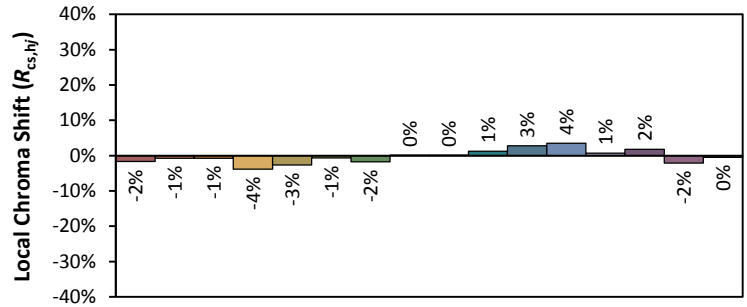
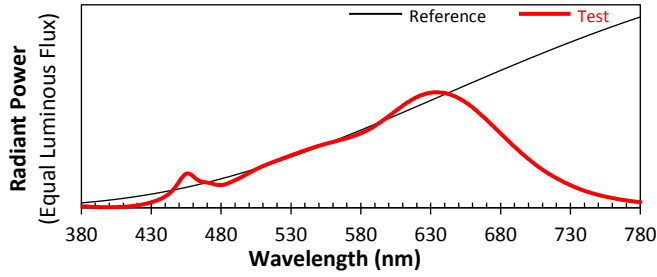
Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.09026	10.41	0.9611	954.83	91.72

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
3.660	2674	0.000693	0.4632	0.4132	0.2635	0.5289

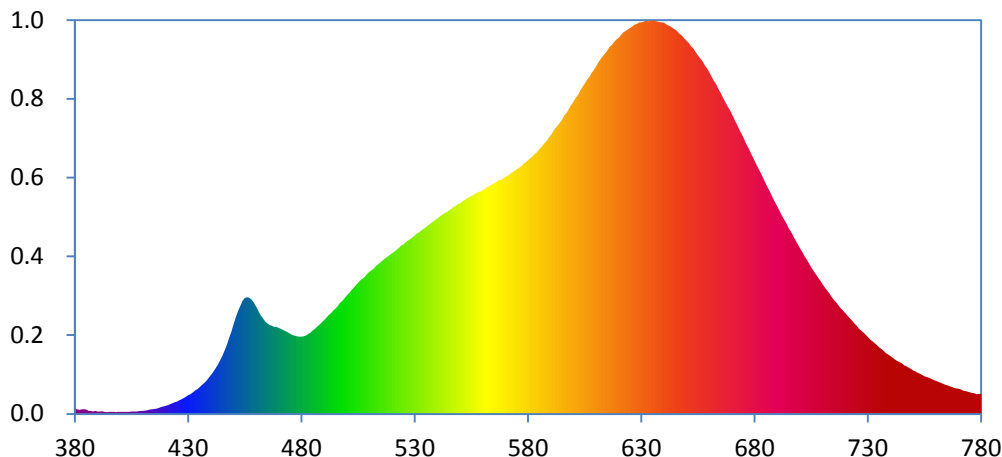
Color Rendering Index

Ra			
98.0			
R1	R2	R3	R4
100	100	98	100
R5	R6	R7	R8
99	98	97	94
R9	R10	R11	R12
86	98	98	89
R13	R14	R15	
100	98	97	





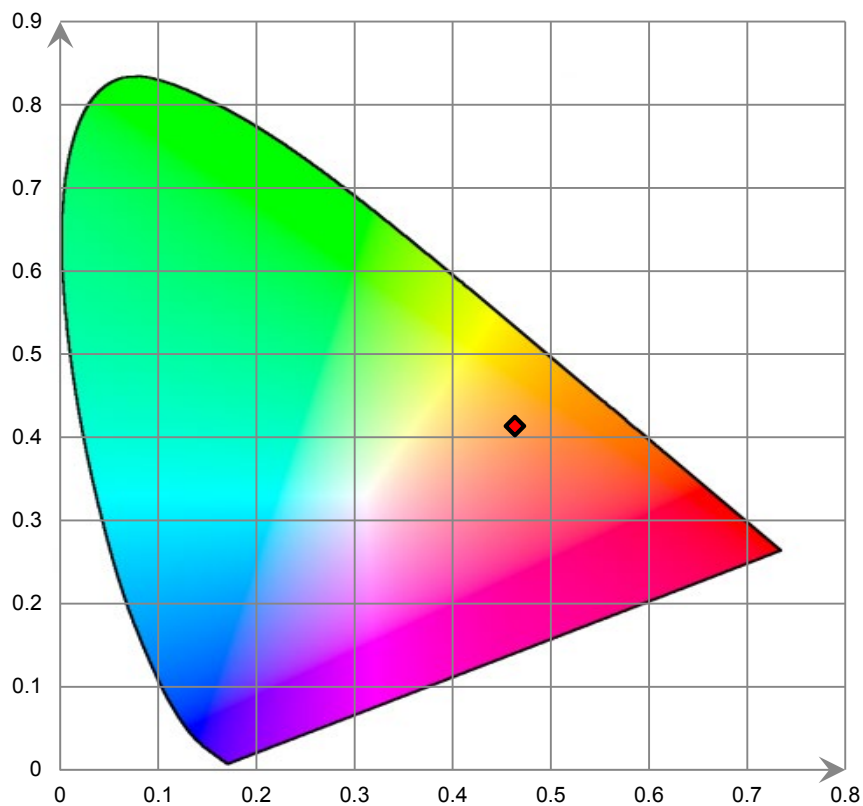
Relative Spectral Power Distribution



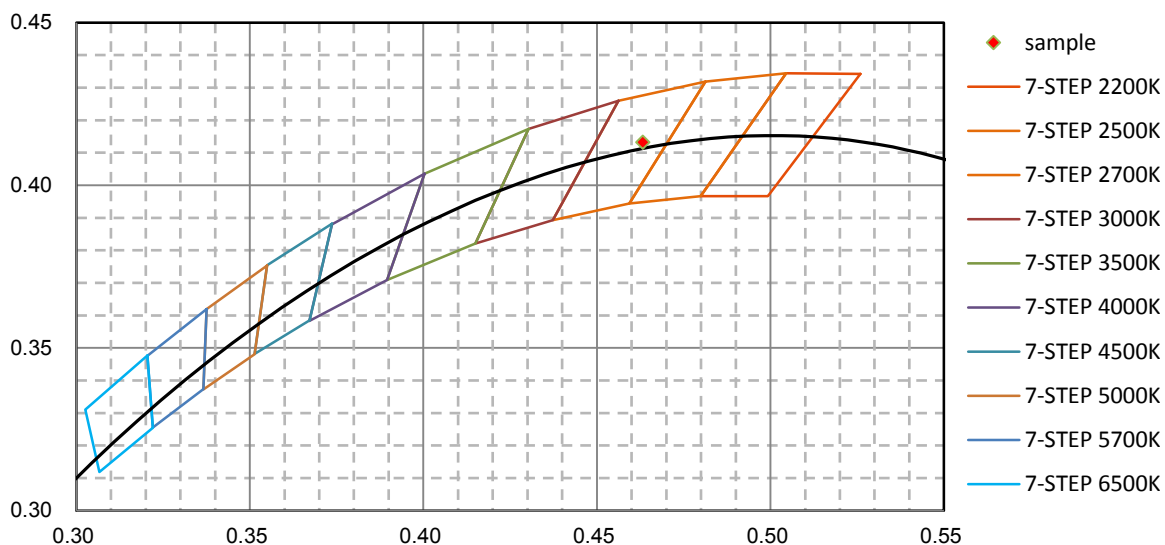
nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	3.234E-01	421	5.029E-01	462	5.576E+00	503	7.127E+00	544	1.142E+01
381	2.601E-01	422	5.454E-01	463	5.415E+00	504	7.296E+00	545	1.151E+01
382	2.308E-01	423	6.049E-01	464	5.227E+00	505	7.424E+00	546	1.161E+01
383	2.547E-01	424	6.547E-01	465	5.115E+00	506	7.558E+00	547	1.172E+01
384	2.632E-01	425	7.022E-01	466	5.026E+00	507	7.681E+00	548	1.179E+01
385	2.432E-01	426	7.756E-01	467	4.988E+00	508	7.778E+00	549	1.188E+01
386	1.739E-01	427	8.296E-01	468	4.917E+00	509	7.944E+00	550	1.194E+01
387	1.776E-01	428	9.009E-01	469	4.919E+00	510	8.046E+00	551	1.202E+01
388	1.293E-01	429	9.761E-01	470	4.865E+00	511	8.143E+00	552	1.211E+01
389	1.645E-01	430	1.061E+00	471	4.816E+00	512	8.261E+00	553	1.220E+01
390	1.356E-01	431	1.122E+00	472	4.747E+00	513	8.390E+00	554	1.227E+01
391	1.368E-01	432	1.219E+00	473	4.684E+00	514	8.483E+00	555	1.233E+01
392	1.587E-01	433	1.330E+00	474	4.618E+00	515	8.599E+00	556	1.241E+01
393	1.208E-01	434	1.399E+00	475	4.532E+00	516	8.703E+00	557	1.249E+01
394	9.461E-02	435	1.506E+00	476	4.462E+00	517	8.817E+00	558	1.256E+01
395	1.139E-01	436	1.635E+00	477	4.426E+00	518	8.911E+00	559	1.261E+01
396	1.265E-01	437	1.749E+00	478	4.397E+00	519	9.012E+00	560	1.268E+01
397	1.170E-01	438	1.870E+00	479	4.372E+00	520	9.108E+00	561	1.277E+01
398	1.056E-01	439	2.033E+00	480	4.368E+00	521	9.202E+00	562	1.283E+01
399	1.181E-01	440	2.194E+00	481	4.396E+00	522	9.297E+00	563	1.290E+01
400	1.231E-01	441	2.370E+00	482	4.448E+00	523	9.410E+00	564	1.300E+01
401	1.154E-01	442	2.560E+00	483	4.547E+00	524	9.533E+00	565	1.306E+01
402	1.107E-01	443	2.766E+00	484	4.618E+00	525	9.601E+00	566	1.313E+01
403	1.201E-01	444	3.030E+00	485	4.736E+00	526	9.716E+00	567	1.324E+01
404	1.247E-01	445	3.286E+00	486	4.837E+00	527	9.809E+00	568	1.326E+01
405	1.292E-01	446	3.590E+00	487	4.958E+00	528	9.897E+00	569	1.335E+01
406	1.421E-01	447	3.902E+00	488	5.071E+00	529	9.997E+00	570	1.344E+01
407	1.354E-01	448	4.304E+00	489	5.198E+00	530	1.011E+01	571	1.348E+01
408	1.579E-01	449	4.655E+00	490	5.316E+00	531	1.022E+01	572	1.360E+01
409	1.752E-01	450	5.075E+00	491	5.439E+00	532	1.031E+01	573	1.368E+01
410	1.640E-01	451	5.479E+00	492	5.581E+00	533	1.041E+01	574	1.376E+01
411	1.862E-01	452	5.834E+00	493	5.699E+00	534	1.049E+01	575	1.386E+01
412	2.092E-01	453	6.122E+00	494	5.857E+00	535	1.059E+01	576	1.395E+01
413	2.353E-01	454	6.400E+00	495	5.970E+00	536	1.069E+01	577	1.404E+01
414	2.546E-01	455	6.559E+00	496	6.122E+00	537	1.079E+01	578	1.415E+01
415	2.791E-01	456	6.608E+00	497	6.292E+00	538	1.088E+01	579	1.425E+01
416	3.063E-01	457	6.560E+00	498	6.408E+00	539	1.098E+01	580	1.436E+01
417	3.433E-01	458	6.458E+00	499	6.557E+00	540	1.106E+01	581	1.448E+01
418	3.840E-01	459	6.272E+00	500	6.711E+00	541	1.116E+01	582	1.460E+01
419	4.212E-01	460	6.061E+00	501	6.846E+00	542	1.125E+01	583	1.473E+01
420	4.669E-01	461	5.804E+00	502	7.003E+00	543	1.136E+01	584	1.482E+01

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
585	1.501E+01	626	2.193E+01	667	1.768E+01	708	7.705E+00	749	2.542E+00
586	1.513E+01	627	2.204E+01	668	1.744E+01	709	7.526E+00	750	2.456E+00
587	1.530E+01	628	2.208E+01	669	1.720E+01	710	7.338E+00	751	2.404E+00
588	1.543E+01	629	2.216E+01	670	1.695E+01	711	7.152E+00	752	2.328E+00
589	1.561E+01	630	2.217E+01	671	1.668E+01	712	6.984E+00	753	2.283E+00
590	1.577E+01	631	2.221E+01	672	1.643E+01	713	6.815E+00	754	2.202E+00
591	1.597E+01	632	2.227E+01	673	1.615E+01	714	6.623E+00	755	2.133E+00
592	1.616E+01	633	2.223E+01	674	1.590E+01	715	6.465E+00	756	2.084E+00
593	1.632E+01	634	2.227E+01	675	1.567E+01	716	6.315E+00	757	2.033E+00
594	1.650E+01	635	2.228E+01	676	1.536E+01	717	6.160E+00	758	1.982E+00
595	1.669E+01	636	2.225E+01	677	1.512E+01	718	5.994E+00	759	1.920E+00
596	1.691E+01	637	2.221E+01	678	1.487E+01	719	5.845E+00	760	1.872E+00
597	1.706E+01	638	2.219E+01	679	1.460E+01	720	5.704E+00	761	1.825E+00
598	1.727E+01	639	2.218E+01	680	1.433E+01	721	5.549E+00	762	1.772E+00
599	1.748E+01	640	2.215E+01	681	1.406E+01	722	5.409E+00	763	1.717E+00
600	1.768E+01	641	2.207E+01	682	1.381E+01	723	5.281E+00	764	1.667E+00
601	1.789E+01	642	2.198E+01	683	1.354E+01	724	5.125E+00	765	1.620E+00
602	1.806E+01	643	2.192E+01	684	1.328E+01	725	4.990E+00	766	1.565E+00
603	1.829E+01	644	2.182E+01	685	1.300E+01	726	4.834E+00	767	1.539E+00
604	1.850E+01	645	2.174E+01	686	1.274E+01	727	4.730E+00	768	1.478E+00
605	1.870E+01	646	2.162E+01	687	1.251E+01	728	4.608E+00	769	1.445E+00
606	1.891E+01	647	2.150E+01	688	1.222E+01	729	4.479E+00	770	1.414E+00
607	1.908E+01	648	2.140E+01	689	1.199E+01	730	4.355E+00	771	1.378E+00
608	1.930E+01	649	2.124E+01	690	1.174E+01	731	4.222E+00	772	1.314E+00
609	1.949E+01	650	2.111E+01	691	1.151E+01	732	4.109E+00	773	1.299E+00
610	1.970E+01	651	2.098E+01	692	1.124E+01	733	4.003E+00	774	1.254E+00
611	1.989E+01	652	2.080E+01	693	1.102E+01	734	3.889E+00	775	1.220E+00
612	2.008E+01	653	2.069E+01	694	1.076E+01	735	3.767E+00	776	1.179E+00
613	2.027E+01	654	2.049E+01	695	1.051E+01	736	3.677E+00	777	1.161E+00
614	2.041E+01	655	2.030E+01	696	1.032E+01	737	3.553E+00	778	1.121E+00
615	2.057E+01	656	2.013E+01	697	1.006E+01	738	3.443E+00	779	1.123E+00
616	2.078E+01	657	1.996E+01	698	9.831E+00	739	3.364E+00	780	1.125E+00
617	2.089E+01	658	1.973E+01	699	9.607E+00	740	3.266E+00		
618	2.106E+01	659	1.956E+01	700	9.377E+00	741	3.180E+00		
619	2.121E+01	660	1.933E+01	701	9.184E+00	742	3.077E+00		
620	2.131E+01	661	1.909E+01	702	8.942E+00	743	3.007E+00		
621	2.147E+01	662	1.886E+01	703	8.739E+00	744	2.932E+00		
622	2.161E+01	663	1.867E+01	704	8.519E+00	745	2.848E+00		
623	2.169E+01	664	1.840E+01	705	8.304E+00	746	2.750E+00		
624	2.176E+01	665	1.818E+01	706	8.108E+00	747	2.692E+00		
625	2.186E+01	666	1.791E+01	707	7.898E+00	748	2.615E+00		

CIE 1931 x y Chromaticity Diagram



7-Step Chromaticity Quadrangles



Model: 11PAR30SNDIM/927FL40/SL+SL25D

[Goniophotometer System]

The Stabilization time: **30 minutes**

Total operating time for luminous intensity distribution: **1.0hour**

Test orientation: **Base Up**

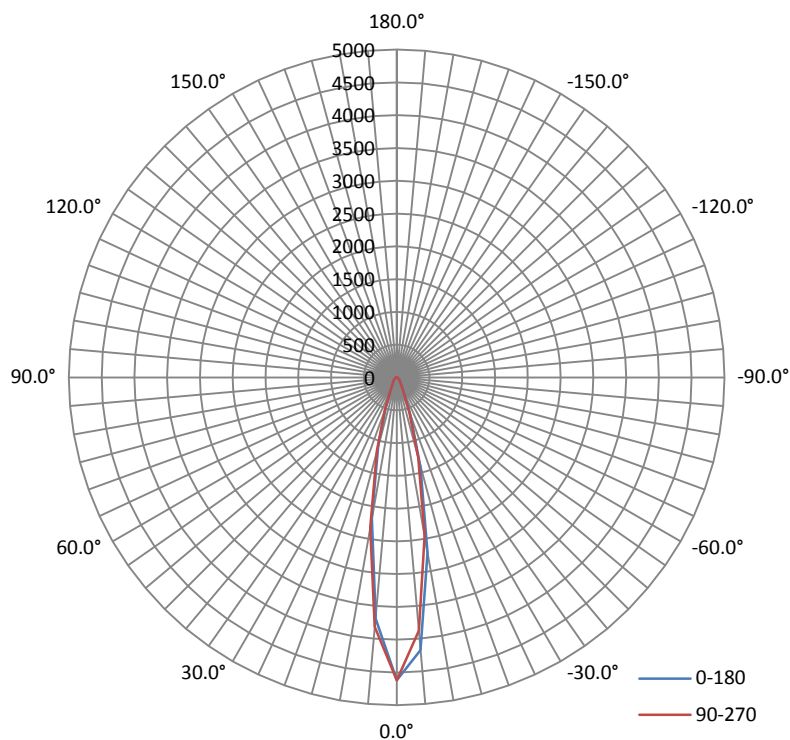
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.10	60	0.0908	10.400	0.9537

Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	I _{max} (cd)	S/MH (C0/180)	S/MH (C90/270)
978.438	94.08	4650.0	0.39	0.36

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% I _{max}):	20.8	20.7	20.5	20.5	20.6
Field Angle (10% I _{max}):	42.1	42.1	41.8	41.8	42.0

Luminous Intensity (cd) Distribution Data

C y	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	4616	4616	4616	4616	4616	4616	4616	4616
5.0°	3696	3689	3701	3751	3818	3895	3994	4086
10.0°	2172	2184	2203	2271	2325	2410	2517	2609
15.0°	1076	1083	1098	1124	1153	1193	1257	1317
20.0°	498	500	507	512	520	530	562	588
25.0°	221	223	226	226	226	231	242	251
30.0°	129	130	132	132	132	137	140	142
35.0°	94	95	96	97	98	102	105	105
40.0°	76	75	76	77	79	79	81	82
45.0°	57	58	58	59	59	62	65	65
50.0°	47	47	47	48	48	49	50	51
55.0°	39	39	39	39	40	40	41	41
60.0°	31	30	31	31	32	32	33	33
65.0°	23	23	24	24	25	25	25	26
70.0°	17	17	18	18	19	19	19	19
75.0°	12	12	12	13	13	13	14	14
80.0°	8	8	8	8	9	9	9	9
85.0°	3	3	3	4	4	4	4	5
90.0°	1	1	1	1	1	1	2	2
95.0°	0	0	0	0	0	0	0	0
100.0°	0	0	0	0	0	0	0	0
105.0°	0	0	0	0	0	0	0	0
110.0°	0	0	0	0	0	0	0	0
115.0°	0	0	0	0	0	0	0	0
120.0°	0	0	0	0	0	0	0	0
125.0°	0	0	0	0	0	0	0	0
130.0°	0	0	0	0	0	0	0	0
135.0°	0	0	0	0	0	0	0	0
140.0°	1	1	1	1	1	1	1	1
145.0°	2	2	2	2	2	1	1	1
150.0°	2	2	2	2	2	2	2	2
155.0°	3	3	3	3	3	3	3	3
160.0°	3	3	3	3	3	3	3	3
165.0°	3	3	3	3	3	3	3	3
170.0°	2	2	2	3	3	3	3	3
175.0°	2	2	2	2	2	2	2	2
180.0°	1	1	1	1	1	1	1	1

Luminous Intensity (cd) Distribution Data (cont.)

C Y	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	4616	4616	4616	4616	4616	4616	4616	4616
5.0°	4174	4168	4096	3997	3877	3784	3730	3732
10.0°	2719	2730	2652	2563	2448	2338	2265	2218
15.0°	1414	1429	1374	1331	1263	1181	1129	1105
20.0°	618	629	607	586	561	535	511	501
25.0°	269	276	265	255	244	235	229	228
30.0°	148	149	146	143	137	136	134	131
35.0°	104	102	101	102	102	100	98	96
40.0°	82	79	78	78	78	77	76	76
45.0°	66	64	63	62	61	60	59	59
50.0°	52	50	50	49	48	48	49	48
55.0°	42	42	41	41	40	39	39	39
60.0°	34	34	33	32	32	31	31	31
65.0°	26	26	26	25	24	24	24	24
70.0°	20	20	20	19	18	18	18	18
75.0°	14	14	14	13	13	13	12	12
80.0°	9	9	9	9	8	8	8	8
85.0°	5	5	5	4	4	4	4	4
90.0°	2	2	2	1	1	1	1	1
95.0°	0	0	0	0	0	0	0	0
100.0°	0	0	0	0	0	0	0	0
105.0°	0	0	0	0	0	0	0	0
110.0°	0	0	0	0	0	0	0	0
115.0°	0	0	0	0	0	0	0	0
120.0°	0	0	0	0	0	0	0	0
125.0°	0	0	0	0	0	0	0	0
130.0°	0	0	0	0	0	0	0	0
135.0°	0	0	0	0	0	0	0	0
140.0°	0	0	0	0	0	0	0	0
145.0°	0	0	0	0	0	0	0	0
150.0°	1	1	1	1	1	1	1	1
155.0°	1	1	1	1	1	1	1	1
160.0°	1	1	1	1	1	1	1	1
165.0°	1	1	1	1	1	1	1	1
170.0°	1	1	1	1	1	1	1	1
175.0°	1	1	1	1	1	1	1	1
180.0°	1	1	1	1	1	1	1	1

Zonal Lumen Density Measurement

Deg	Flux (lm)	%
0-5	101.4	10.36
5-10	220.2	22.51
10-15	206.2	21.07
15-20	136.1	13.91
20-25	76.7	7.84
25-30	44.8	4.58
30-35	34.2	3.50
35-40	29.4	3.01
40-45	25.5	2.60
45-50	22.0	2.25
50-55	19.2	1.96
55-60	16.7	1.71
60-65	13.7	1.40
65-70	10.9	1.11
70-75	8.2	0.84
75-80	5.8	0.59
80-85	3.4	0.35
85-90	1.4	0.14
90-95	0.3	0.03
95-100	0.0	0.00
100-105	0.0	0.00
105-110	0.0	0.00
110-115	0.0	0.00
115-120	0.0	0.01
120-125	0.0	0.00
125-130	0.0	0.00
130-135	0.1	0.01
135-140	0.1	0.01
140-145	0.2	0.02
145-150	0.3	0.04
150-155	0.4	0.04
155-160	0.4	0.04
160-165	0.3	0.03
165-170	0.2	0.03
170-175	0.1	0.01
175-180	0.0	0.00

Deg	Flux (lm)	%
0-5	101.4	10.36
0-10	321.6	32.87
0-15	527.8	53.94
0-20	663.9	67.85
0-25	740.6	75.69
0-30	785.4	80.27
0-35	819.6	83.77
0-40	849.0	86.78
0-45	874.5	89.38
0-50	896.5	91.63
0-55	915.7	93.59
0-60	932.4	95.30
0-65	946.1	96.70
0-70	957.0	97.81
0-75	965.3	98.65
0-80	971.0	99.24
0-85	974.4	99.59
0-90	975.8	99.73
0-95	976.1	99.76
0-100	976.1	99.76
0-105	976.1	99.76
0-110	976.1	99.76
0-115	976.1	99.76
0-120	976.1	99.77
0-125	976.2	99.77
0-130	976.2	99.77
0-135	976.3	99.78
0-140	976.4	99.79
0-145	976.6	99.81
0-150	977.0	99.85
0-155	977.4	99.89
0-160	977.8	99.93
0-165	978.1	99.96
0-170	978.3	99.99
0-175	978.4	100.00
0-180	978.4	100.00

[Additional Test]

Model: 11PAR30SNDIM/927FL40/SL+SL25D

Test Item	Test Voltage (V)	Frequency (Hz)	Test Result
Total Harmonic Distortion:	120.0	60	16.76%

Model: 11PAR30SNDIM/927FL40/B/SL+SL25D

Test Item	Test Voltage (V)	Frequency (Hz)	Test Result
Total Harmonic Distortion:	120.0	60	16.43%

6. Product Photo

Photo for 11PAR30SNDIM/927FL40/SL+SL25D



Photo for 11PAR30SNDIM/927FL40/B/SL+SL25D



Directions

1. The information marked "superscript #" is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report.
2. This report includes some test methods are not in NVLAP accreditation scope marked *.
3. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
4. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
5. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor $K=2$ with the 95% confidence interval.
6. This report cannot be reproduced except in full, without prior written approval of the Company.
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*****END OF REPORT*****