

# 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/940FL40/SL+SL25D**

<b>Report Type:</b>	Electrical and Photometric tests including: Luminous Flux, Chromaticity, Luminous Intensity Distribution, THD
<b>Reviewed By:</b>	Hill Liu <span style="float: right;">Hill Liu</span>
<b>Report Number:</b>	KS2230727-43658E-EE-1
<b>Test Date:</b>	2023-08-09 to 2023-08-11
<b>Report Date:</b>	2023-08-25
<b>Approved by:</b>	Blake Zhang / EE Engineer
<b>Prepared By:</b>	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
<b>Test Facility:</b>	Test facility was located at No.12, Pulong East 1 <sup>st</sup> 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 2023-07-27, and used for testing. One was tested in integrating sphere and the other was tested in goniophotometer

Model Tested: 11PAR30SNDIM/940FL40/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: AC 120V 60Hz  
Rated Power: 11 W  
Nominal CCT: 4000K  
Nominal Lumen Output: 1030 lm

### Family Declaration

The Model	Multiple Models	Differences Items	Details
11PAR30SNDIM/940FL40/SL+SL25D	11PAR30SNDIM/940NF25/SL	Model Number	11PAR30SNDIM/940FL40/SL+SL25D & 11PAR30SNDIM/940NF25/SL are the same product except for the model number.

## 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

Device	Manufacture	Model No	Serial No	Calibration date	Calibration due date
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  $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$  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.

$4\pi$  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  $U=22\text{K}$  ( $K=2$ ), 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  $U=0.19\%$  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 ( $\gamma$ ) 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]

The Stabilization time: **30 minutes**

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

Test orientation: **Base Up**

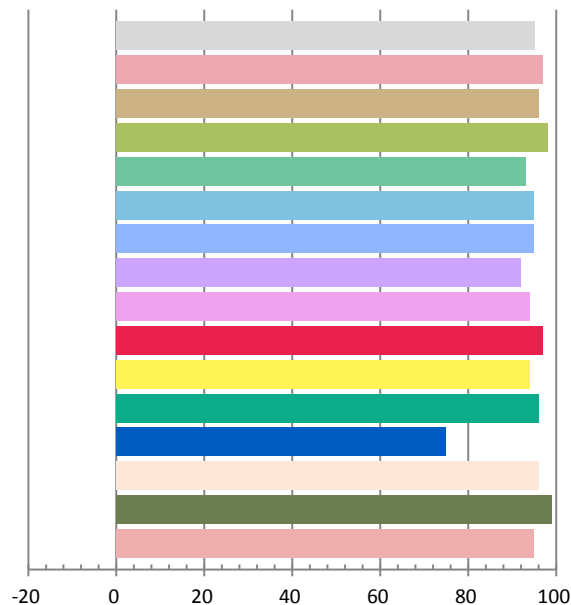
### Photometric and Electrical Measurement Result

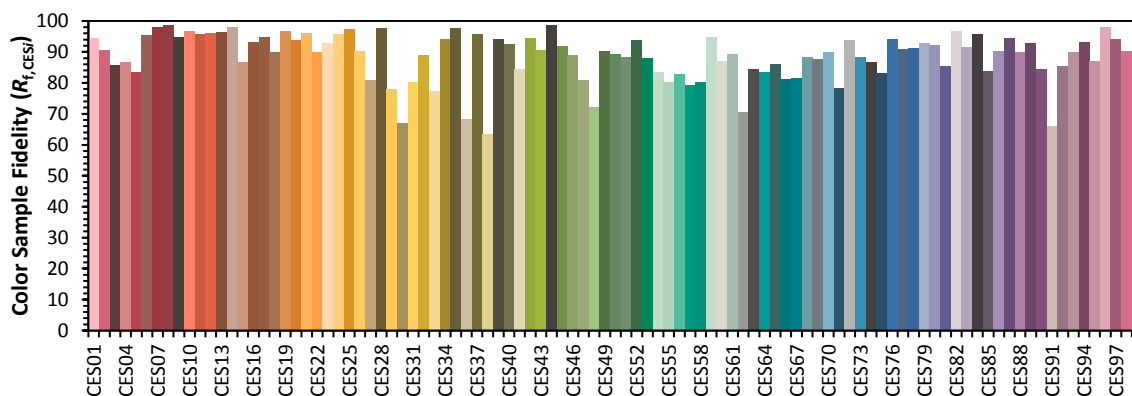
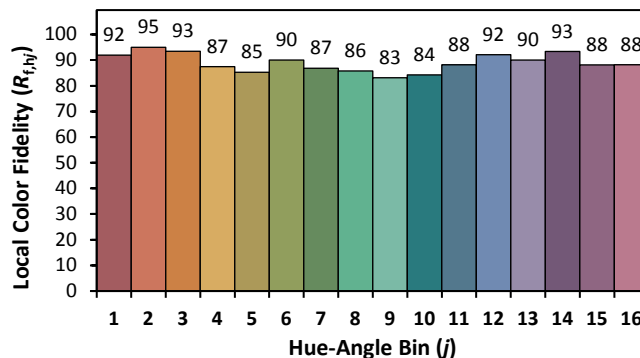
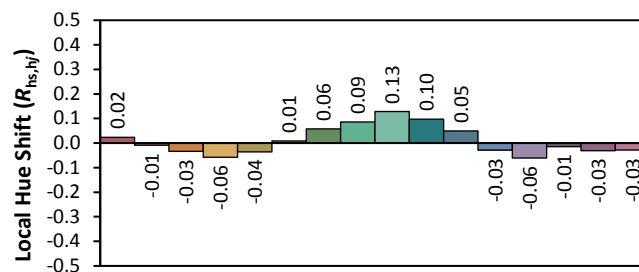
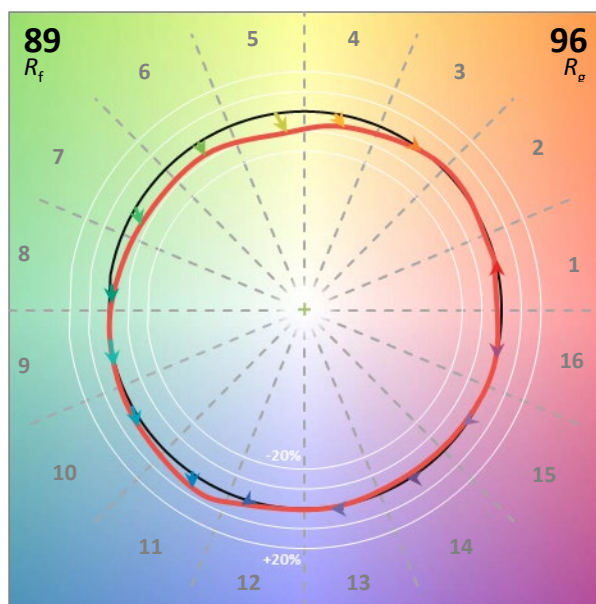
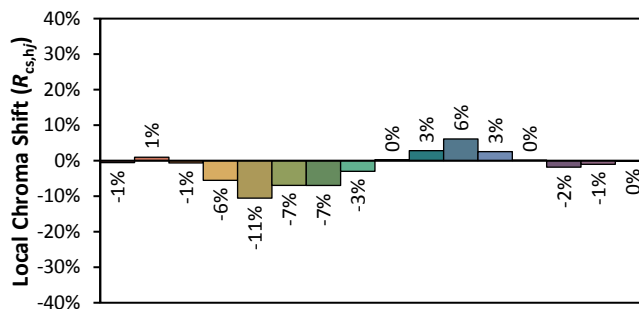
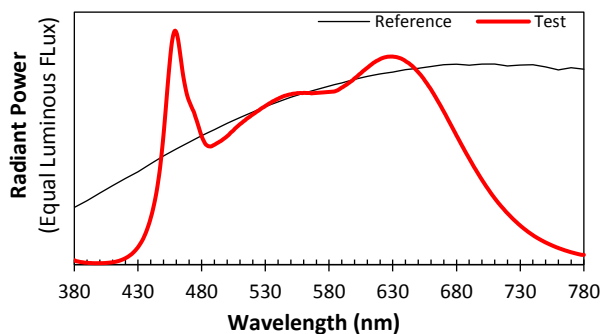
Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.1	60	0.09142	10.47	0.9541	1085.3	103.64

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
3.9994	4053	0.000233	0.3783	0.3759	0.2240	0.5009

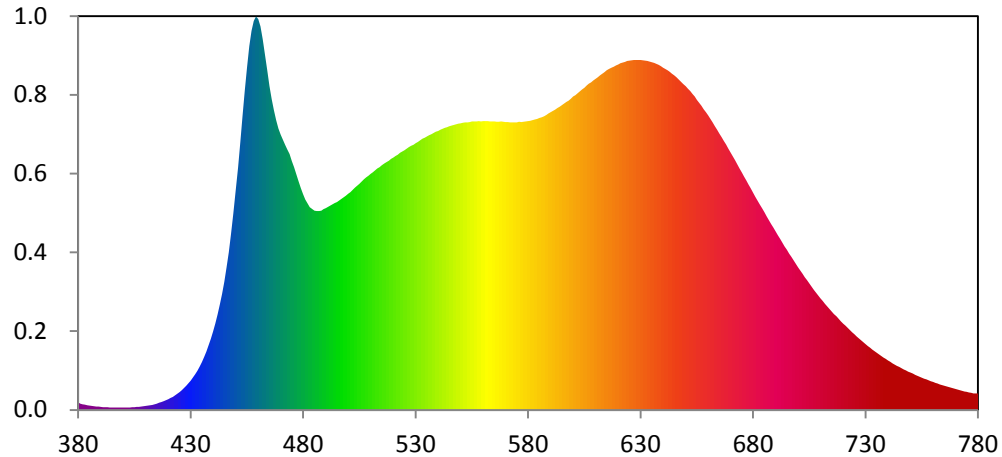
### Color Rendering Index

Ra			
95.1			
R1	R2	R3	R4
97	96	98	93
R5	R6	R7	R8
95	95	92	94
R9	R10	R11	R12
97	94	96	75
R13	R14	R15	
96	99	95	





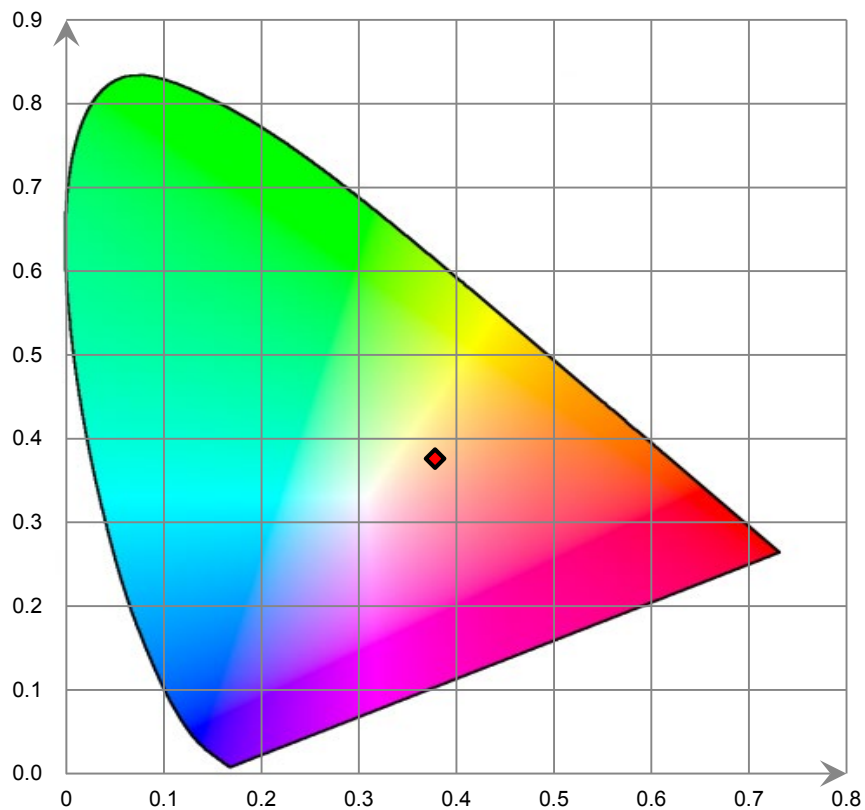
**Relative Spectral Power Distribution**



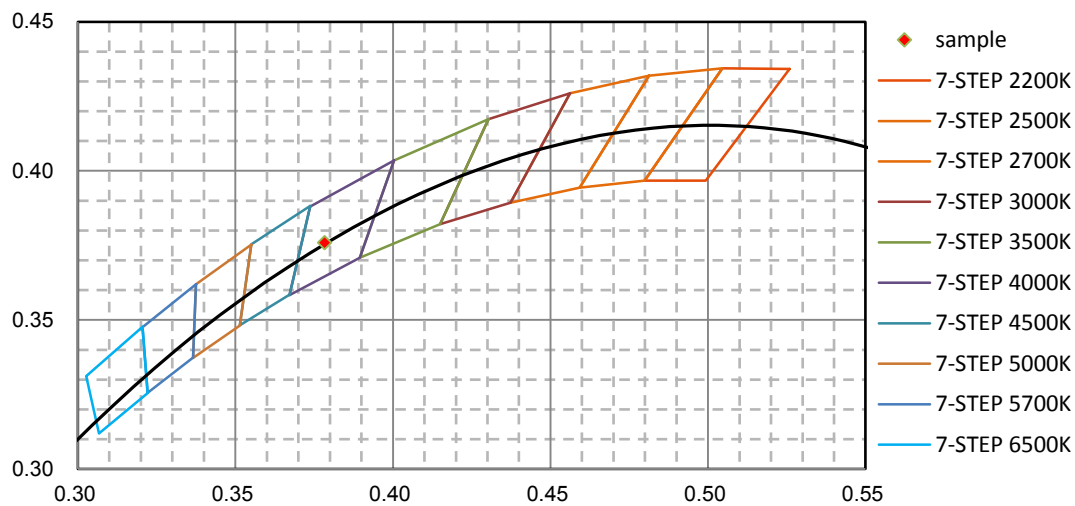
nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	3.903E-01	421	6.213E-01	462	1.943E+01	503	1.165E+01	544	1.482E+01
381	3.268E-01	422	6.850E-01	463	1.862E+01	504	1.174E+01	545	1.487E+01
382	2.967E-01	423	7.628E-01	464	1.780E+01	505	1.184E+01	546	1.489E+01
383	2.787E-01	424	8.438E-01	465	1.697E+01	506	1.197E+01	547	1.493E+01
384	2.458E-01	425	9.272E-01	466	1.629E+01	507	1.207E+01	548	1.496E+01
385	2.263E-01	426	1.033E+00	467	1.570E+01	508	1.217E+01	549	1.499E+01
386	2.126E-01	427	1.142E+00	468	1.517E+01	509	1.227E+01	550	1.500E+01
387	1.988E-01	428	1.263E+00	469	1.475E+01	510	1.237E+01	551	1.504E+01
388	1.752E-01	429	1.397E+00	470	1.443E+01	511	1.245E+01	552	1.506E+01
389	1.692E-01	430	1.535E+00	471	1.416E+01	512	1.254E+01	553	1.507E+01
390	1.665E-01	431	1.702E+00	472	1.389E+01	513	1.264E+01	554	1.508E+01
391	1.499E-01	432	1.875E+00	473	1.364E+01	514	1.271E+01	555	1.511E+01
392	1.392E-01	433	2.061E+00	474	1.340E+01	515	1.282E+01	556	1.511E+01
393	1.455E-01	434	2.268E+00	475	1.303E+01	516	1.290E+01	557	1.512E+01
394	1.275E-01	435	2.515E+00	476	1.271E+01	517	1.298E+01	558	1.512E+01
395	1.289E-01	436	2.773E+00	477	1.235E+01	518	1.305E+01	559	1.511E+01
396	1.242E-01	437	3.067E+00	478	1.199E+01	519	1.315E+01	560	1.513E+01
397	1.248E-01	438	3.388E+00	479	1.162E+01	520	1.322E+01	561	1.513E+01
398	1.242E-01	439	3.729E+00	480	1.130E+01	521	1.330E+01	562	1.512E+01
399	1.268E-01	440	4.122E+00	481	1.103E+01	522	1.337E+01	563	1.512E+01
400	1.260E-01	441	4.532E+00	482	1.081E+01	523	1.346E+01	564	1.512E+01
401	1.275E-01	442	5.005E+00	483	1.061E+01	524	1.353E+01	565	1.512E+01
402	1.288E-01	443	5.516E+00	484	1.052E+01	525	1.360E+01	566	1.509E+01
403	1.333E-01	444	6.078E+00	485	1.044E+01	526	1.369E+01	567	1.510E+01
404	1.381E-01	445	6.718E+00	486	1.042E+01	527	1.377E+01	568	1.511E+01
405	1.478E-01	446	7.467E+00	487	1.041E+01	528	1.384E+01	569	1.509E+01
406	1.585E-01	447	8.259E+00	488	1.044E+01	529	1.390E+01	570	1.509E+01
407	1.664E-01	448	9.224E+00	489	1.051E+01	530	1.398E+01	571	1.508E+01
408	1.814E-01	449	1.027E+01	490	1.056E+01	531	1.405E+01	572	1.507E+01
409	1.915E-01	450	1.141E+01	491	1.063E+01	532	1.412E+01	573	1.506E+01
410	2.067E-01	451	1.269E+01	492	1.070E+01	533	1.420E+01	574	1.507E+01
411	2.252E-01	452	1.403E+01	493	1.076E+01	534	1.425E+01	575	1.506E+01
412	2.448E-01	453	1.542E+01	494	1.083E+01	535	1.433E+01	576	1.509E+01
413	2.689E-01	454	1.673E+01	495	1.089E+01	536	1.440E+01	577	1.509E+01
414	3.018E-01	455	1.794E+01	496	1.097E+01	537	1.444E+01	578	1.509E+01
415	3.264E-01	456	1.905E+01	497	1.106E+01	538	1.451E+01	579	1.511E+01
416	3.687E-01	457	1.986E+01	498	1.114E+01	539	1.457E+01	580	1.513E+01
417	4.075E-01	458	2.038E+01	499	1.122E+01	540	1.461E+01	581	1.515E+01
418	4.529E-01	459	2.061E+01	500	1.132E+01	541	1.468E+01	582	1.518E+01
419	5.033E-01	460	2.048E+01	501	1.141E+01	542	1.472E+01	583	1.521E+01
420	5.585E-01	461	2.008E+01	502	1.153E+01	543	1.478E+01	584	1.525E+01

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
585	1.529E+01	626	1.832E+01	667	1.410E+01	708	6.147E+00	749	2.005E+00
586	1.533E+01	627	1.832E+01	668	1.390E+01	709	5.996E+00	750	1.951E+00
587	1.538E+01	628	1.833E+01	669	1.369E+01	710	5.845E+00	751	1.897E+00
588	1.545E+01	629	1.833E+01	670	1.349E+01	711	5.702E+00	752	1.844E+00
589	1.553E+01	630	1.833E+01	671	1.329E+01	712	5.559E+00	753	1.792E+00
590	1.560E+01	631	1.831E+01	672	1.308E+01	713	5.418E+00	754	1.742E+00
591	1.566E+01	632	1.830E+01	673	1.286E+01	714	5.289E+00	755	1.691E+00
592	1.574E+01	633	1.828E+01	674	1.265E+01	715	5.151E+00	756	1.641E+00
593	1.581E+01	634	1.825E+01	675	1.244E+01	716	5.026E+00	757	1.597E+00
594	1.588E+01	635	1.821E+01	676	1.223E+01	717	4.903E+00	758	1.547E+00
595	1.597E+01	636	1.818E+01	677	1.202E+01	718	4.769E+00	759	1.504E+00
596	1.604E+01	637	1.813E+01	678	1.181E+01	719	4.639E+00	760	1.464E+00
597	1.613E+01	638	1.807E+01	679	1.160E+01	720	4.525E+00	761	1.419E+00
598	1.620E+01	639	1.801E+01	680	1.138E+01	721	4.411E+00	762	1.383E+00
599	1.630E+01	640	1.793E+01	681	1.118E+01	722	4.298E+00	763	1.340E+00
600	1.641E+01	641	1.785E+01	682	1.097E+01	723	4.179E+00	764	1.303E+00
601	1.649E+01	642	1.779E+01	683	1.076E+01	724	4.063E+00	765	1.261E+00
602	1.658E+01	643	1.771E+01	684	1.055E+01	725	3.957E+00	766	1.227E+00
603	1.669E+01	644	1.761E+01	685	1.035E+01	726	3.851E+00	767	1.193E+00
604	1.679E+01	645	1.753E+01	686	1.014E+01	727	3.751E+00	768	1.156E+00
605	1.687E+01	646	1.742E+01	687	9.937E+00	728	3.644E+00	769	1.123E+00
606	1.698E+01	647	1.731E+01	688	9.738E+00	729	3.543E+00	770	1.090E+00
607	1.708E+01	648	1.719E+01	689	9.543E+00	730	3.447E+00	771	1.060E+00
608	1.716E+01	649	1.707E+01	690	9.349E+00	731	3.349E+00	772	1.030E+00
609	1.726E+01	650	1.695E+01	691	9.151E+00	732	3.258E+00	773	1.001E+00
610	1.734E+01	651	1.682E+01	692	8.955E+00	733	3.167E+00	774	9.715E-01
611	1.743E+01	652	1.670E+01	693	8.755E+00	734	3.080E+00	775	9.436E-01
612	1.753E+01	653	1.655E+01	694	8.560E+00	735	2.993E+00	776	9.169E-01
613	1.761E+01	654	1.641E+01	695	8.384E+00	736	2.908E+00	777	8.907E-01
614	1.770E+01	655	1.624E+01	696	8.196E+00	737	2.825E+00	778	8.671E-01
615	1.779E+01	656	1.608E+01	697	8.013E+00	738	2.748E+00	779	8.596E-01
616	1.785E+01	657	1.593E+01	698	7.830E+00	739	2.672E+00	780	8.612E-01
617	1.793E+01	658	1.575E+01	699	7.647E+00	740	2.596E+00		
618	1.798E+01	659	1.560E+01	700	7.472E+00	741	2.517E+00		
619	1.804E+01	660	1.543E+01	701	7.295E+00	742	2.447E+00		
620	1.810E+01	661	1.524E+01	702	7.129E+00	743	2.379E+00		
621	1.816E+01	662	1.506E+01	703	6.949E+00	744	2.313E+00		
622	1.820E+01	663	1.487E+01	704	6.792E+00	745	2.250E+00		
623	1.824E+01	664	1.468E+01	705	6.629E+00	746	2.188E+00		
624	1.827E+01	665	1.448E+01	706	6.466E+00	747	2.125E+00		
625	1.829E+01	666	1.429E+01	707	6.301E+00	748	2.068E+00		

CIE 1931 x y Chromaticity Diagram



7-Step Chromaticity Quadrangles





## [Goniophotometer System]

The Stabilization time: **30 minutes**

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

Test orientation: **Base Up**

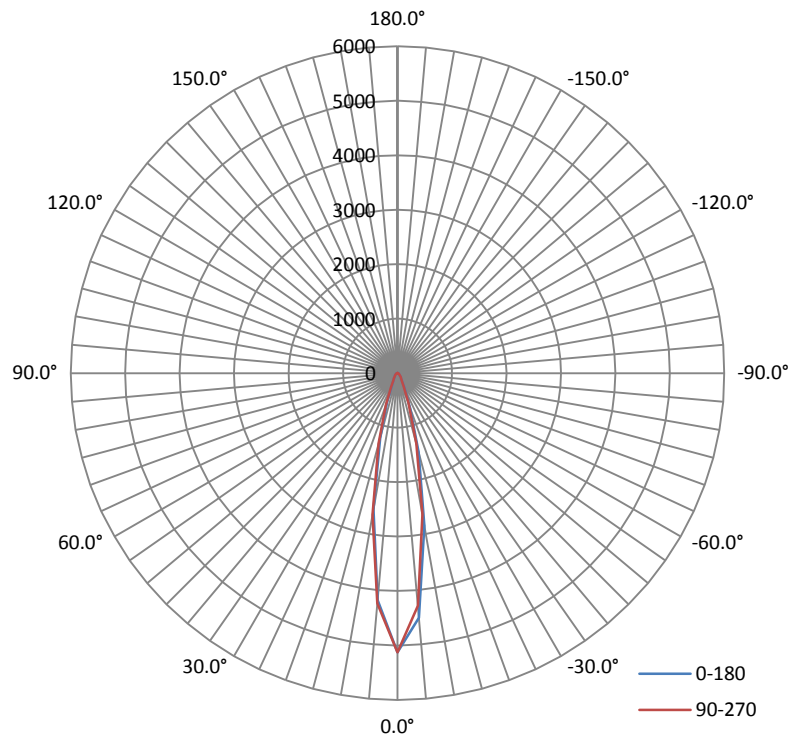
### Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.09	60	0.0913	10.460	0.9540

### Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	I <sub>max</sub> (cd)	S/MH (C0/180)	S/MH (C90/270)
1084.6	103.69	5140.0	0.37	0.35

### Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% I <sub>max</sub> ):	20.7	20.6	20.5	20.8	20.7
Field Angle (10% I <sub>max</sub> ):	42.1	41.9	41.9	42.3	42.1

**Luminous Intensity (cd) Distribution Data**

$\begin{matrix} C \\ \backslash \\ \gamma \end{matrix}$	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	5123	5123	5123	5123	5123	5123	5123	5123
5.0°	4182	4133	4141	4184	4243	4315	4383	4403
10.0°	2540	2497	2522	2583	2640	2709	2756	2746
15.0°	1232	1214	1238	1297	1334	1365	1399	1408
20.0°	553	540	564	598	615	624	641	636
25.0°	240	236	245	262	279	289	291	288
30.0°	146	145	148	153	157	161	161	159
35.0°	105	105	108	112	114	116	116	114
40.0°	83	83	84	86	87	89	89	88
45.0°	67	66	65	67	68	69	68	68
50.0°	52	52	51	52	54	55	55	54
55.0°	44	43	43	43	44	45	45	44
60.0°	35	35	34	35	35	36	36	36
65.0°	27	27	26	27	27	28	28	27
70.0°	20	20	20	20	21	21	21	21
75.0°	14	14	14	14	15	15	15	15
80.0°	9	9	9	9	9	10	10	10
85.0°	4	4	4	4	4	4	5	5
90.0°	1	1	1	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°	1	1	1	1	1	1	1	1
145.0°	2	2	2	2	2	2	2	2
150.0°	3	2	2	2	2	2	2	2
155.0°	3	3	3	3	3	3	3	3
160.0°	4	4	4	4	4	3	3	3
165.0°	3	3	3	3	3	3	3	3
170.0°	3	3	3	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.)

$\begin{matrix} C \\ \backslash \\ \gamma \end{matrix}$	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	5123	5123	5123	5123	5123	5123	5123	5123
5.0°	4511	4478	4439	4343	4286	4243	4253	4251
10.0°	2841	2835	2807	2698	2635	2615	2626	2631
15.0°	1502	1489	1450	1367	1340	1320	1327	1331
20.0°	675	662	637	599	575	563	571	575
25.0°	302	293	281	266	261	257	257	256
30.0°	163	160	157	156	155	154	154	152
35.0°	115	114	113	114	114	113	112	109
40.0°	89	88	88	88	88	88	88	87
45.0°	70	70	69	68	69	70	70	68
50.0°	55	55	56	55	55	54	54	54
55.0°	45	45	46	45	44	44	45	45
60.0°	37	37	37	36	36	35	36	36
65.0°	28	28	28	28	28	27	27	27
70.0°	21	21	21	21	21	20	20	20
75.0°	15	15	15	15	15	14	14	14
80.0°	10	10	10	10	10	9	9	9
85.0°	5	5	5	5	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)	%	Deg	Flux (lm)	%
0-5	112.2	10.34	0-5	112.2	10.34
5-10	243.6	22.46	0-10	355.8	32.80
10-15	227.3	20.96	0-15	583.0	53.76
15-20	150.4	13.87	0-20	733.5	67.63
20-25	85.4	7.87	0-25	818.9	75.50
25-30	50.3	4.64	0-30	869.2	80.14
30-35	38.6	3.56	0-35	907.8	83.70
35-40	32.8	3.03	0-40	940.7	86.73
40-45	28.4	2.62	0-45	969.1	89.35
45-50	24.6	2.27	0-50	993.7	91.62
50-55	21.4	1.97	0-55	1015.1	93.59
55-60	18.5	1.70	0-60	1033.6	95.29
60-65	15.3	1.41	0-65	1048.8	96.70
65-70	12.1	1.12	0-70	1061.0	97.82
70-75	9.1	0.84	0-75	1070.1	98.66
75-80	6.4	0.59	0-80	1076.5	99.25
80-85	3.8	0.35	0-85	1080.2	99.60
85-90	1.5	0.14	0-90	1081.7	99.74
90-95	0.3	0.02	0-95	1082.0	99.76
95-100	0.0	0.00	0-100	1082.0	99.76
100-105	0.0	0.00	0-105	1082.0	99.76
105-110	0.0	0.01	0-110	1082.1	99.77
110-115	0.0	0.00	0-115	1082.1	99.77
115-120	0.0	0.00	0-120	1082.1	99.77
120-125	0.0	0.00	0-125	1082.1	99.77
125-130	0.0	0.00	0-130	1082.1	99.77
130-135	0.1	0.01	0-135	1082.2	99.78
135-140	0.1	0.01	0-140	1082.3	99.79
140-145	0.3	0.02	0-145	1082.6	99.81
145-150	0.4	0.04	0-150	1083.0	99.85
150-155	0.4	0.04	0-155	1083.4	99.89
155-160	0.4	0.04	0-160	1083.9	99.93
160-165	0.4	0.03	0-165	1084.2	99.96
165-170	0.2	0.03	0-170	1084.5	99.99
170-175	0.1	0.01	0-175	1084.6	100.00
175-180	0.0	0.00	0-180	1084.6	100.00

**[Additional Test]**

Test Item	Test Voltage (V)	Frequency (Hz)	Test Result
Total Harmonic Distortion:	120.0	60	16.83%

**6. Product Photo**



## 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\*\*\*\*\*