

# 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

**Test Model: 15.5PAR38DIM/927FL40/SL+SL15D**

<b>Report Type:</b>	Electrical and Photometric tests including: Luminous Flux, Chromaticity, Luminous Intensity Distribution, THD
<b>Reviewed By:</b>	Hill Liu 
<b>Report Number:</b>	KS2220221-43669E-EE-1
<b>Test Date:</b>	2022-02-22 to 2022-03-12
<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 2022-02-21. One was tested in integrating sphere and the other was tested in goniophotometer

Model Tested: 15.5PAR38DIM/927FL40/SL+SL15D  
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: 15.5W  
Nominal CCT: 2700K  
Nominal Lumen Output: 1320lm

### Family Declaration

The Model	Multiple Models	Differences Items	Details
15.5PAR38DIM/927FL40/SL+SL15D	15.5PAR38DIM/927SP15/SL	Model Number	15.5PAR38DIM/927FL40/SL+SL15D & 15.5PAR38DIM/927SP15/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	2021-09-27	2022-09-26
spectroradiometer	EVERFINE	HAAS-2000	G112048TS81331121	2021-09-27	2022-09-26
Digital Power Meter	EVERFINE	PF2010A	1011004	2022-01-12	2023-01-11
Digital CC&CV DC Power Supply	EVERFINE	WY305-V1	1101047	2022-01-06	2023-01-05
Standard Light Source	EVERFINE	D204	N/A	2021-10-15	2022-10-14
Special zero-voltage synchronous switching AC	EVERFINE	DPS1010-YF	1011001T	2022-01-06	2023-01-05
AC POWER SUPPLY	EVERFINE	VPS1030 PWM	1012017	2022-01-06	2023-01-05
Digital CC&CV DC Power Supply	EVERFINE	WY12010	1009009	2022-01-06	2023-01-05

Device	Manufacture	Model No	Serial No	Calibration date	Calibration due date
Digital power meter	YOKOGAWA	WT-210	91j926132	2022-01-06	2023-01-05
full-field speed goniophotometer	EVERFINE	GO-R5000	YG108492N10120001	2021-10-26	2022-10-25
wireless remote thermohygrometer	N/A	433MHz	N/A	2022-01-10	2023-01-09
Standard Light Source	EVERFINE	D908	1012003	2021-10-15	2022-10-14

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  $R_f$ ,  $R_g$  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**

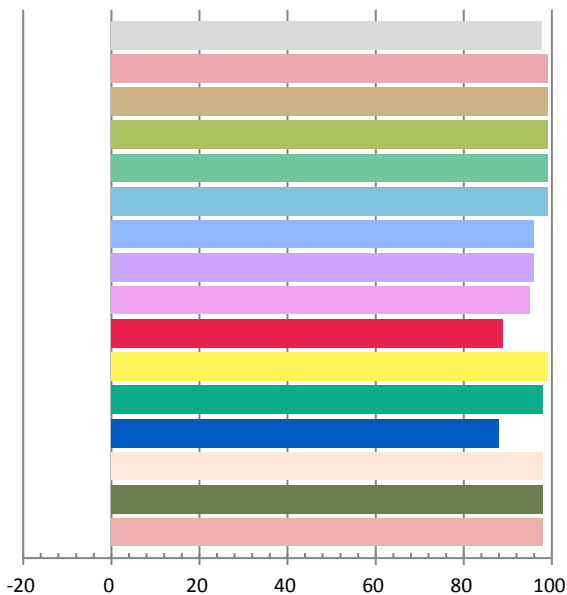
### Photometric and Electrical Measurement Result

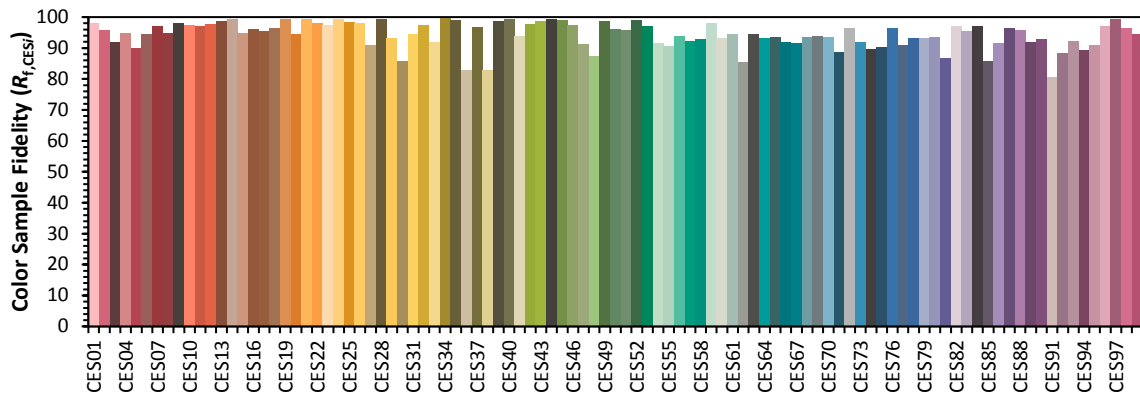
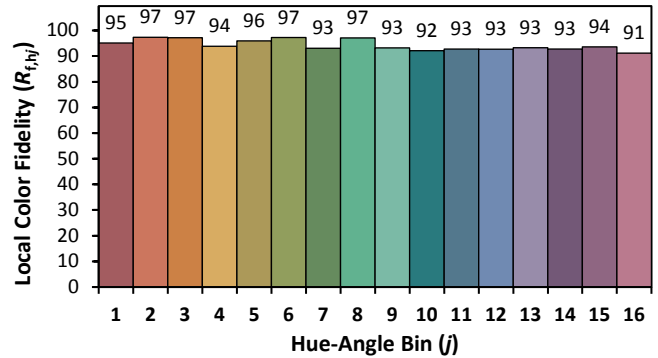
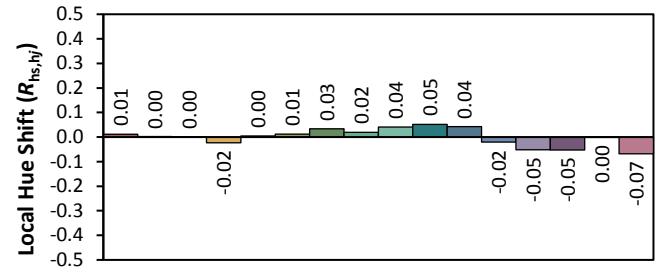
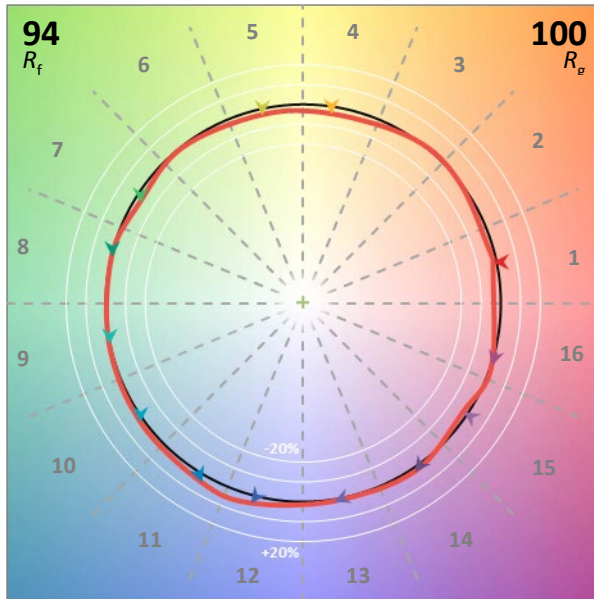
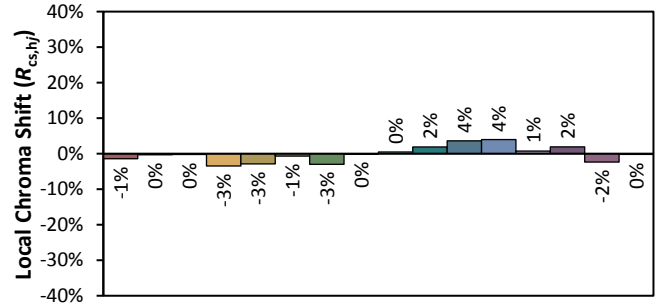
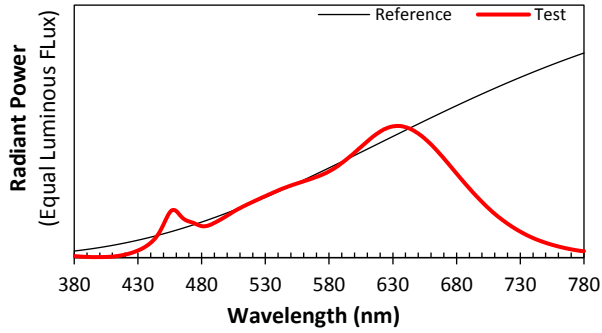
Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.1329	15.37	0.9633	1345.6	87.57

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
5.1751	2761	-0.001080	0.4531	0.4061	0.2602	0.5246

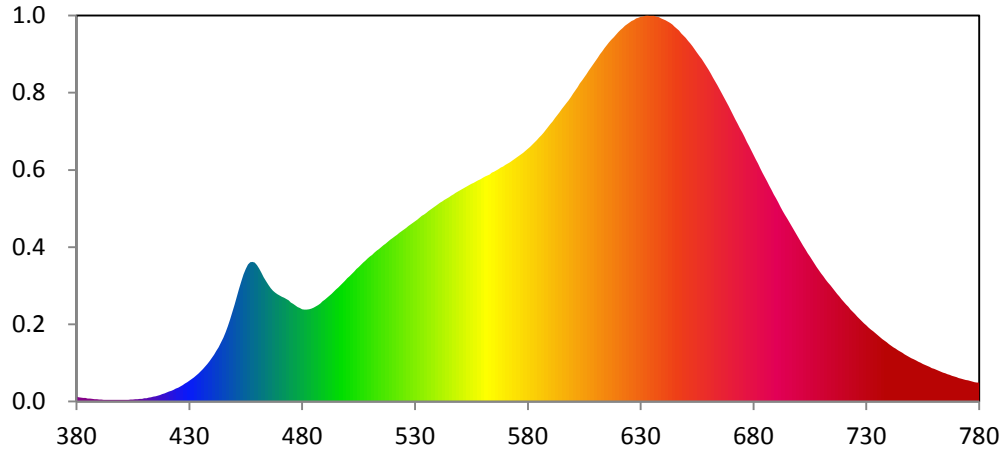
### Color Rendering Index

Ra			
97.7			
R1	R2	R3	R4
99	99	99	99
R5	R6	R7	R8
99	96	96	95
R9	R10	R11	R12
89	99	98	88
R13	R14	R15	
98	98	98	





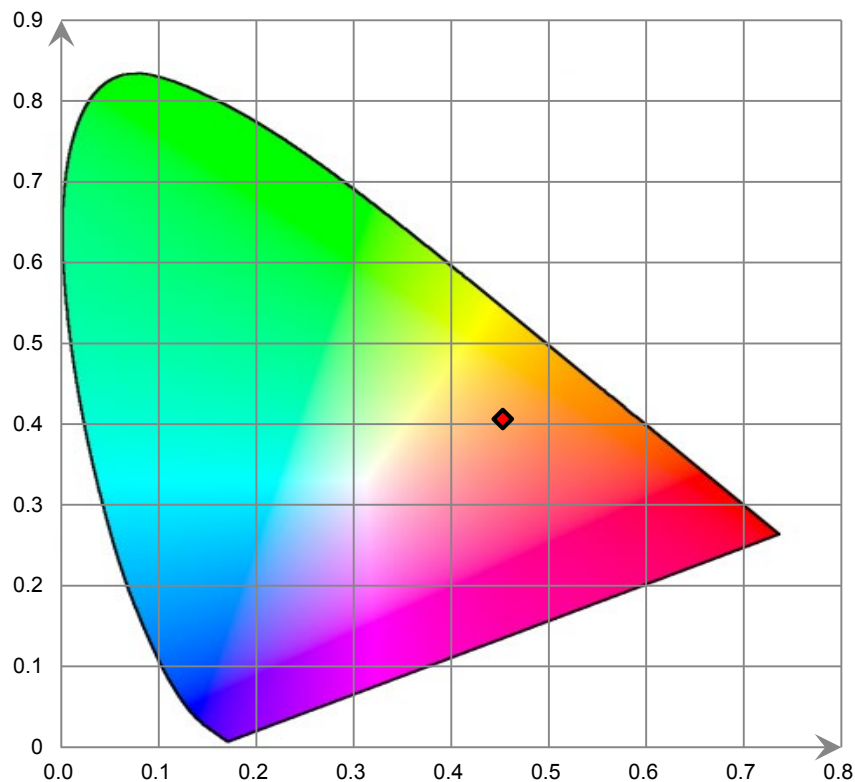
### Relative Spectral Power Distribution



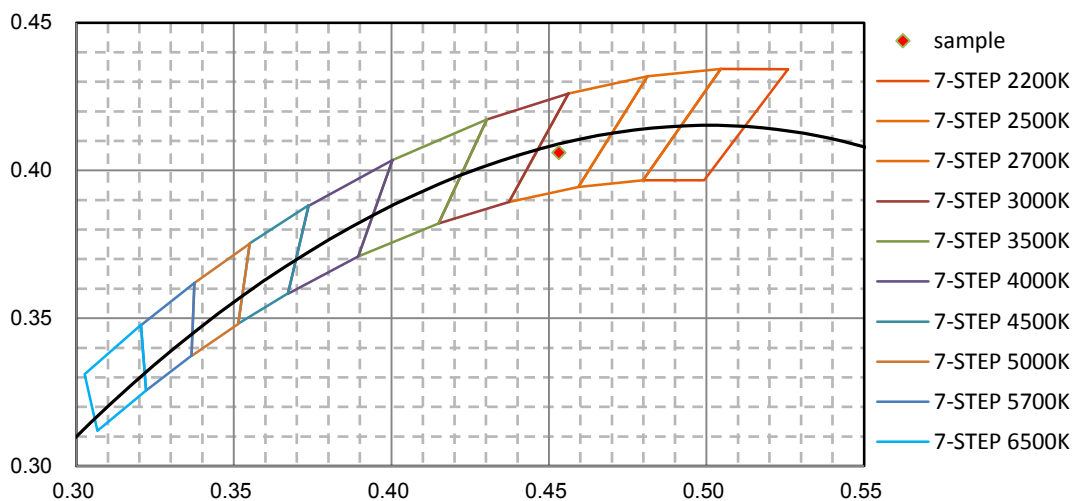
nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	3.842E-01	421	7.835E-01	462	1.027E+01	503	1.039E+01	544	1.621E+01
381	3.324E-01	422	8.571E-01	463	9.915E+00	504	1.057E+01	545	1.632E+01
382	3.098E-01	423	9.331E-01	464	9.592E+00	505	1.075E+01	546	1.643E+01
383	2.783E-01	424	1.022E+00	465	9.293E+00	506	1.092E+01	547	1.655E+01
384	2.732E-01	425	1.108E+00	466	9.048E+00	507	1.110E+01	548	1.666E+01
385	2.249E-01	426	1.209E+00	467	8.852E+00	508	1.126E+01	549	1.676E+01
386	2.351E-01	427	1.309E+00	468	8.706E+00	509	1.143E+01	550	1.687E+01
387	1.935E-01	428	1.425E+00	469	8.574E+00	510	1.157E+01	551	1.698E+01
388	1.833E-01	429	1.545E+00	470	8.474E+00	511	1.172E+01	552	1.709E+01
389	1.867E-01	430	1.658E+00	471	8.373E+00	512	1.189E+01	553	1.717E+01
390	1.587E-01	431	1.799E+00	472	8.277E+00	513	1.204E+01	554	1.727E+01
391	1.492E-01	432	1.927E+00	473	8.183E+00	514	1.217E+01	555	1.737E+01
392	1.421E-01	433	2.079E+00	474	8.079E+00	515	1.233E+01	556	1.747E+01
393	1.398E-01	434	2.232E+00	475	7.910E+00	516	1.248E+01	557	1.756E+01
394	1.219E-01	435	2.404E+00	476	7.795E+00	517	1.261E+01	558	1.767E+01
395	1.163E-01	436	2.589E+00	477	7.672E+00	518	1.275E+01	559	1.775E+01
396	1.192E-01	437	2.781E+00	478	7.549E+00	519	1.290E+01	560	1.786E+01
397	1.232E-01	438	2.996E+00	479	7.452E+00	520	1.303E+01	561	1.796E+01
398	1.253E-01	439	3.227E+00	480	7.373E+00	521	1.318E+01	562	1.806E+01
399	1.287E-01	440	3.472E+00	481	7.328E+00	522	1.331E+01	563	1.814E+01
400	1.271E-01	441	3.734E+00	482	7.335E+00	523	1.346E+01	564	1.827E+01
401	1.334E-01	442	4.031E+00	483	7.356E+00	524	1.359E+01	565	1.835E+01
402	1.263E-01	443	4.334E+00	484	7.416E+00	525	1.372E+01	566	1.845E+01
403	1.407E-01	444	4.687E+00	485	7.489E+00	526	1.387E+01	567	1.855E+01
404	1.450E-01	445	5.088E+00	486	7.597E+00	527	1.401E+01	568	1.868E+01
405	1.536E-01	446	5.515E+00	487	7.704E+00	528	1.415E+01	569	1.877E+01
406	1.702E-01	447	5.998E+00	488	7.826E+00	529	1.426E+01	570	1.889E+01
407	1.850E-01	448	6.542E+00	489	7.995E+00	530	1.440E+01	571	1.899E+01
408	2.005E-01	449	7.128E+00	490	8.134E+00	531	1.453E+01	572	1.910E+01
409	2.182E-01	450	7.727E+00	491	8.287E+00	532	1.467E+01	573	1.922E+01
410	2.527E-01	451	8.362E+00	492	8.445E+00	533	1.482E+01	574	1.935E+01
411	2.638E-01	452	8.992E+00	493	8.602E+00	534	1.493E+01	575	1.947E+01
412	2.959E-01	453	9.586E+00	494	8.778E+00	535	1.507E+01	576	1.962E+01
413	3.331E-01	454	1.014E+01	495	8.935E+00	536	1.522E+01	577	1.974E+01
414	3.762E-01	455	1.058E+01	496	9.111E+00	537	1.533E+01	578	1.987E+01
415	4.176E-01	456	1.093E+01	497	9.288E+00	538	1.546E+01	579	2.004E+01
416	4.754E-01	457	1.111E+01	498	9.469E+00	539	1.560E+01	580	2.019E+01
417	5.217E-01	458	1.115E+01	499	9.626E+00	540	1.572E+01	581	2.036E+01
418	5.839E-01	459	1.109E+01	500	9.832E+00	541	1.587E+01	582	2.053E+01
419	6.435E-01	460	1.090E+01	501	1.001E+01	542	1.597E+01	583	2.070E+01
420	7.117E-01	461	1.062E+01	502	1.019E+01	543	1.611E+01	584	2.088E+01

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
585	2.108E+01	626	3.039E+01	667	2.425E+01	708	1.075E+01	749	3.562E+00
586	2.128E+01	627	3.048E+01	668	2.392E+01	709	1.049E+01	750	3.460E+00
587	2.147E+01	628	3.059E+01	669	2.359E+01	710	1.023E+01	751	3.369E+00
588	2.170E+01	629	3.065E+01	670	2.324E+01	711	9.988E+00	752	3.269E+00
589	2.193E+01	630	3.073E+01	671	2.287E+01	712	9.742E+00	753	3.180E+00
590	2.216E+01	631	3.074E+01	672	2.253E+01	713	9.502E+00	754	3.091E+00
591	2.238E+01	632	3.079E+01	673	2.219E+01	714	9.274E+00	755	3.002E+00
592	2.261E+01	633	3.082E+01	674	2.183E+01	715	9.040E+00	756	2.916E+00
593	2.284E+01	634	3.082E+01	675	2.146E+01	716	8.819E+00	757	2.835E+00
594	2.308E+01	635	3.081E+01	676	2.112E+01	717	8.596E+00	758	2.757E+00
595	2.334E+01	636	3.081E+01	677	2.074E+01	718	8.374E+00	759	2.672E+00
596	2.357E+01	637	3.074E+01	678	2.040E+01	719	8.164E+00	760	2.600E+00
597	2.381E+01	638	3.070E+01	679	2.003E+01	720	7.957E+00	761	2.523E+00
598	2.406E+01	639	3.061E+01	680	1.968E+01	721	7.749E+00	762	2.454E+00
599	2.431E+01	640	3.052E+01	681	1.933E+01	722	7.557E+00	763	2.378E+00
600	2.460E+01	641	3.046E+01	682	1.898E+01	723	7.344E+00	764	2.312E+00
601	2.485E+01	642	3.033E+01	683	1.862E+01	724	7.160E+00	765	2.242E+00
602	2.510E+01	643	3.024E+01	684	1.827E+01	725	6.973E+00	766	2.177E+00
603	2.540E+01	644	3.010E+01	685	1.793E+01	726	6.781E+00	767	2.114E+00
604	2.565E+01	645	2.994E+01	686	1.758E+01	727	6.593E+00	768	2.054E+00
605	2.590E+01	646	2.978E+01	687	1.723E+01	728	6.427E+00	769	1.990E+00
606	2.616E+01	647	2.963E+01	688	1.690E+01	729	6.245E+00	770	1.939E+00
607	2.643E+01	648	2.941E+01	689	1.655E+01	730	6.083E+00	771	1.879E+00
608	2.668E+01	649	2.923E+01	690	1.622E+01	731	5.912E+00	772	1.825E+00
609	2.694E+01	650	2.904E+01	691	1.589E+01	732	5.755E+00	773	1.776E+00
610	2.721E+01	651	2.882E+01	692	1.555E+01	733	5.592E+00	774	1.727E+00
611	2.746E+01	652	2.861E+01	693	1.521E+01	734	5.435E+00	775	1.676E+00
612	2.773E+01	653	2.837E+01	694	1.490E+01	735	5.282E+00	776	1.628E+00
613	2.796E+01	654	2.813E+01	695	1.458E+01	736	5.140E+00	777	1.579E+00
614	2.822E+01	655	2.787E+01	696	1.426E+01	737	4.994E+00	778	1.533E+00
615	2.845E+01	656	2.760E+01	697	1.395E+01	738	4.859E+00	779	1.521E+00
616	2.867E+01	657	2.735E+01	698	1.364E+01	739	4.725E+00	780	1.524E+00
617	2.890E+01	658	2.706E+01	699	1.333E+01	740	4.589E+00		
618	2.908E+01	659	2.678E+01	700	1.303E+01	741	4.457E+00		
619	2.929E+01	660	2.650E+01	701	1.273E+01	742	4.331E+00		
620	2.949E+01	661	2.620E+01	702	1.243E+01	743	4.214E+00		
621	2.967E+01	662	2.588E+01	703	1.214E+01	744	4.094E+00		
622	2.983E+01	663	2.557E+01	704	1.185E+01	745	3.989E+00		
623	3.002E+01	664	2.525E+01	705	1.158E+01	746	3.877E+00		
624	3.014E+01	665	2.492E+01	706	1.130E+01	747	3.765E+00		
625	3.026E+01	666	2.459E+01	707	1.102E+01	748	3.661E+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: **1.0 hour**

Test orientation: **Base up**

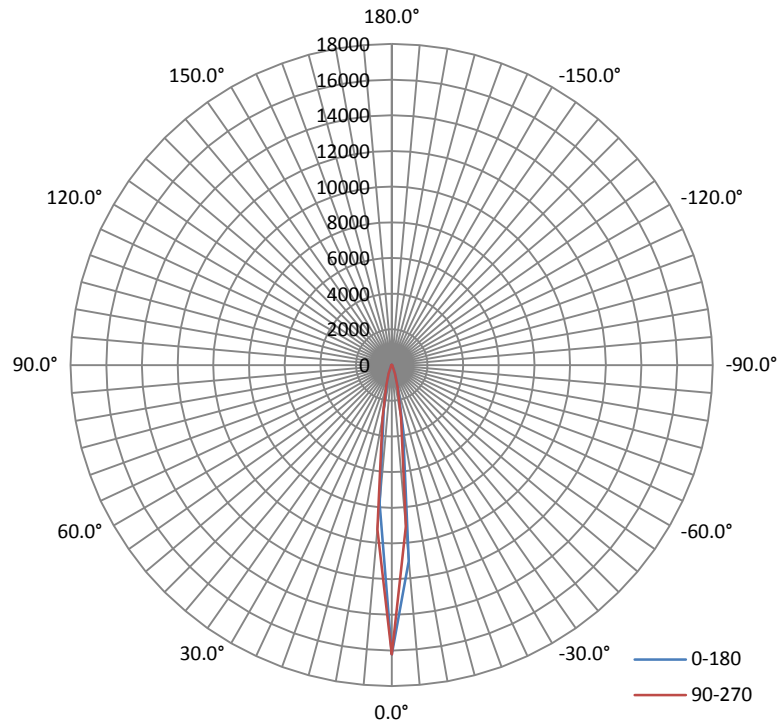
**Electrical Measurement**

Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.01	60	0.1330	15.390	0.9642

**Photometric Measurement**

Luminous Flux (lm)	Efficacy (lm/W)	I <sub>max</sub> (cd)	S/MH (C0/180)	S/MH (C90/270)
1351.404	87.81	19177	0.23	0.19

**Luminous Intensity Distribution**



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% I <sub>max</sub> ):	11.3	11.2	11.1	11.2	11.2
Field Angle (10% I <sub>max</sub> ):	26.2	26.5	26.6	26.2	26.4

**Luminous Intensity (cd) Distribution Data**

C y	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	16232	16232	16232	16232	16232	16232	16232	16232
5.0°	7812	7927	8281	8716	9253	12375	12847	16742
10.0°	2525	2556	2675	2838	3008	4363	4576	6583
15.0°	1031	1044	1080	1131	1175	1509	1554	2151
20.0°	471	478	491	507	513	623	645	875
25.0°	195	201	205	215	219	270	273	371
30.0°	94	96	98	101	105	127	129	168
35.0°	69	69	70	71	72	80	82	100
40.0°	56	56	57	57	59	64	65	76
45.0°	46	46	47	46	47	52	53	63
50.0°	37	37	38	38	38	42	42	51
55.0°	29	29	30	30	31	33	33	40
60.0°	23	23	24	24	24	26	26	31
65.0°	19	19	19	19	19	21	21	25
70.0°	15	15	15	15	15	17	17	20
75.0°	11	11	11	11	11	12	13	15
80.0°	7	7	7	7	7	9	9	11
85.0°	3	3	3	4	4	5	5	7
90.0°	1	1	1	1	1	2	2	3
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°	3	3	2	2	2	2	2	2
150.0°	4	4	4	4	4	3	3	4
155.0°	5	5	5	5	5	5	5	5
160.0°	5	5	5	5	5	5	5	6
165.0°	5	5	5	5	5	5	5	6
170.0°	4	4	4	4	4	4	4	5
175.0°	2	2	2	2	3	3	3	4
180.0°	1	1	1	1	1	2	2	2

**Luminous Intensity (cd) Distribution Data (cont.)**

C Y	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	16232	16232	16232	16232	16232	16232	16232	16232
5.0°	11035	10786	10203	9591	9071	7201	6957	6113
10.0°	3626	3529	3379	3206	3032	2448	2354	2150
15.0°	1415	1408	1377	1335	1265	1026	985	928
20.0°	587	601	584	562	533	445	430	406
25.0°	251	252	247	238	223	186	180	173
30.0°	118	115	110	106	103	95	93	96
35.0°	77	76	74	73	72	70	70	75
40.0°	61	60	60	59	58	57	57	62
45.0°	51	50	50	48	48	46	47	51
50.0°	40	40	40	39	38	37	37	40
55.0°	32	32	31	31	30	30	29	32
60.0°	25	25	24	24	24	23	23	25
65.0°	20	20	19	19	19	18	19	20
70.0°	16	16	15	15	15	14	14	15
75.0°	12	12	11	11	11	10	10	11
80.0°	8	8	8	7	7	6	6	6
85.0°	5	4	4	4	4	3	3	3
90.0°	2	2	1	1	1	1	1	0
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	1	1	1	1	1	1
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	2	2	2

### Zonal Lumen Density Measurement

Deg	Flux (lm)	%	Deg	Flux (lm)	%
0-5	300.8	22.26	0-5	300.8	22.26
5-10	403.1	29.83	0-10	703.9	52.09
10-15	239.1	17.69	0-15	943.0	69.78
15-20	138.0	10.21	0-20	1081.0	79.99
20-25	76.0	5.63	0-25	1157.1	85.62
25-30	40.0	2.95	0-30	1197.0	88.57
30-35	26.1	1.93	0-35	1223.1	90.50
35-40	22.3	1.65	0-40	1245.3	92.15
40-45	20.2	1.49	0-45	1265.5	93.64
45-50	17.9	1.32	0-50	1283.4	94.96
50-55	15.3	1.14	0-55	1298.7	96.10
55-60	12.8	0.95	0-60	1311.5	97.05
60-65	10.7	0.79	0-65	1322.2	97.84
65-70	8.9	0.66	0-70	1331.1	98.50
70-75	7.0	0.52	0-75	1338.2	99.02
75-80	5.1	0.37	0-80	1343.3	99.39
80-85	3.1	0.23	0-85	1346.3	99.62
85-90	1.3	0.10	0-90	1347.7	99.72
90-95	0.3	0.02	0-95	1348.0	99.74
95-100	0.0	0.00	0-100	1348.0	99.74
100-105	0.0	0.00	0-105	1348.0	99.74
105-110	0.0	0.00	0-110	1348.0	99.74
110-115	0.0	0.00	0-115	1348.0	99.74
115-120	0.0	0.01	0-120	1348.0	99.75
120-125	0.0	0.00	0-125	1348.0	99.75
125-130	0.0	0.00	0-130	1348.0	99.75
130-135	0.1	0.00	0-135	1348.1	99.75
135-140	0.1	0.01	0-140	1348.2	99.76
140-145	0.3	0.02	0-145	1348.5	99.78
145-150	0.6	0.05	0-150	1349.1	99.83
150-155	0.7	0.05	0-155	1349.8	99.88
155-160	0.6	0.04	0-160	1350.4	99.92
160-165	0.5	0.04	0-165	1350.9	99.96
165-170	0.3	0.03	0-170	1351.2	99.99
170-175	0.2	0.01	0-175	1351.4	100.00
175-180	0.0	0.00	0-180	1351.4	100.00

**[Additional Test]**

Test Item	Test Voltage (V)	Frequency (Hz)	Test Result
Total Harmonic Distortion:	120.0	60	15.80%

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