

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: 11PAR30DIM/927FL40/SL+SL15D

Report Type:	Electrical and Photometric tests including: Luminous Flux, Chromaticity, Luminous Intensity Distribution, THD
Reviewed By:	Hill Liu Hill Liu
Report Number:	KS2220221-43611E-EE-1-M1
Test Date:	2022-02-22 to 2022-03-10
Report Date:	2023-08-26
Approved by:	Blake Zhang / EE Engineer
Revised Note:	The previous report KS2220221-43611E-EE-1 is replaced by this report on 2023-08-26
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 2022-02-21. One was tested in integrating sphere and the other was tested in goniophotometer

Model Tested: 11PAR30DIM/927FL40/SL+SL15D
 Manufacturer: GREEN CREATIVE LTD
 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: 950lm

Family Declaration

Test Model	Multiple Models	Differences Items	Details
11PAR30DIM/927FL40/SL+SL15D	11PAR30DIM/927SP15/SL	Model Number	11PAR30DIM/927FL40/SL+SL15D & 11PAR30DIM/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.

4π 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 (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_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**

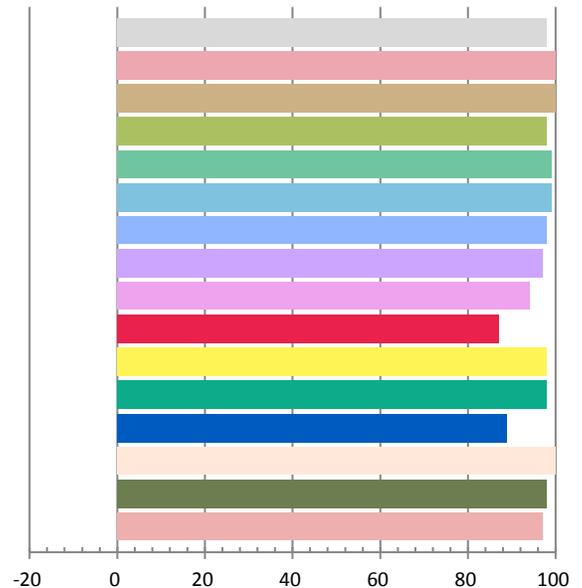
Photometric and Electrical Measurement Result

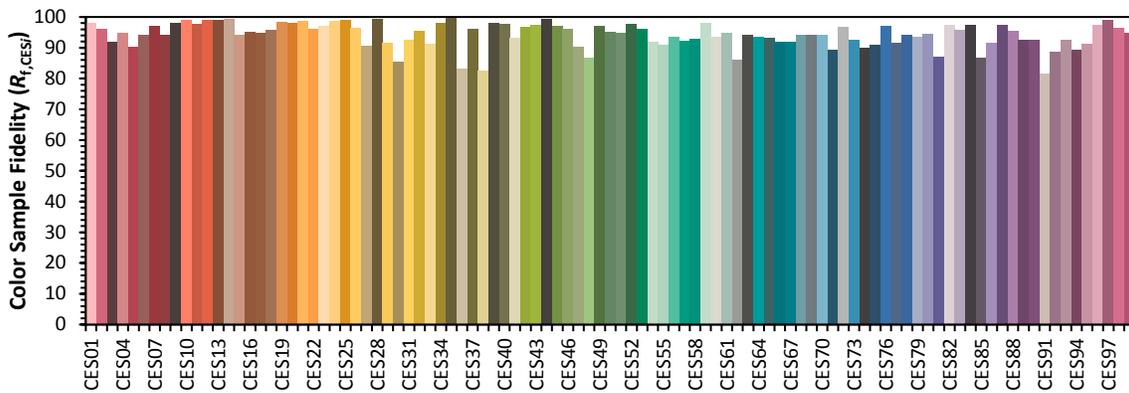
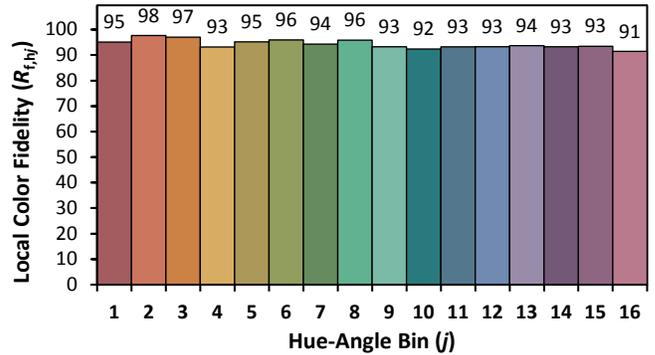
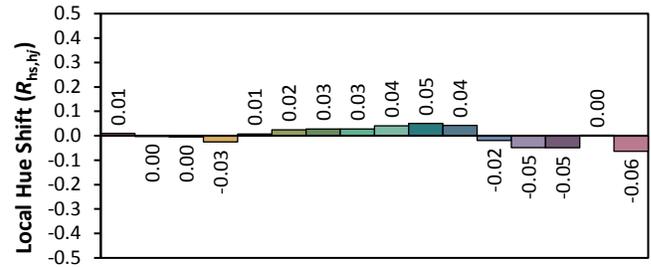
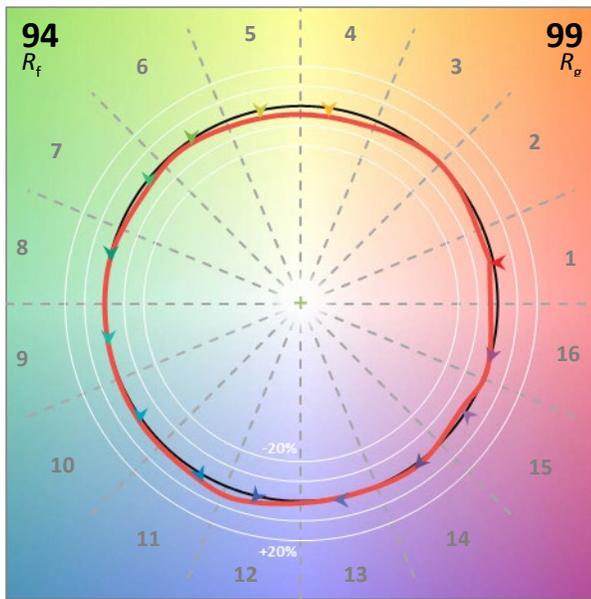
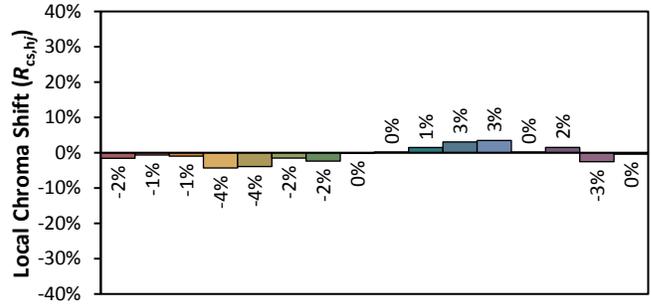
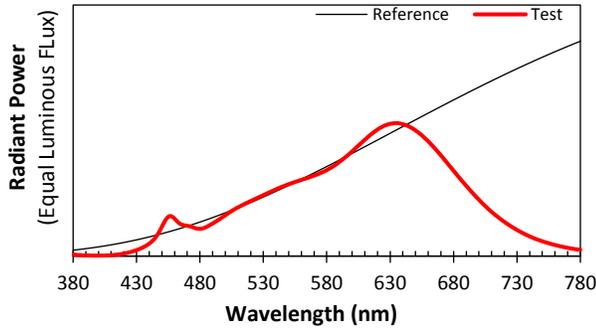
Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.09196	10.52	0.9533	952.96	90.55

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
3.6475	2701	0.0010700	0.4617	0.4139	0.2622	0.5289

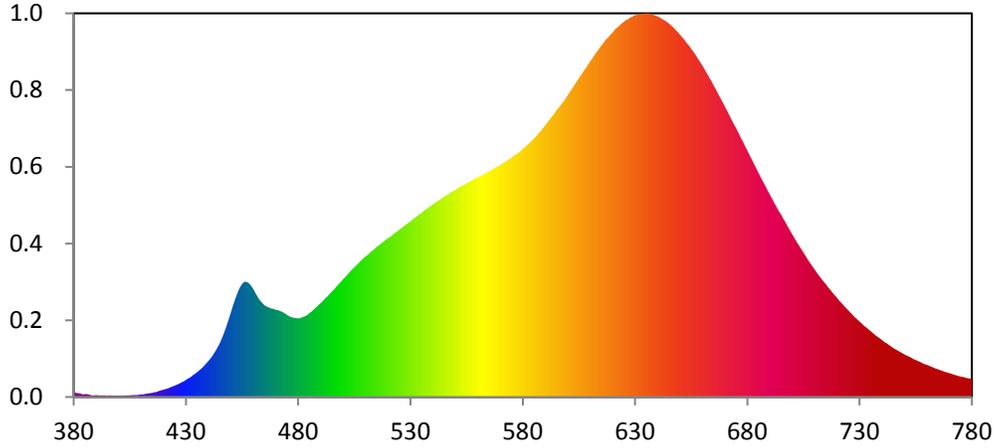
Color Rendering Index

Ra			
98.0			
R1	R2	R3	R4
100	100	98	99
R5	R6	R7	R8
99	98	97	94
R9	R10	R11	R12
87	98	98	89
R13	R14	R15	
100	98	97	





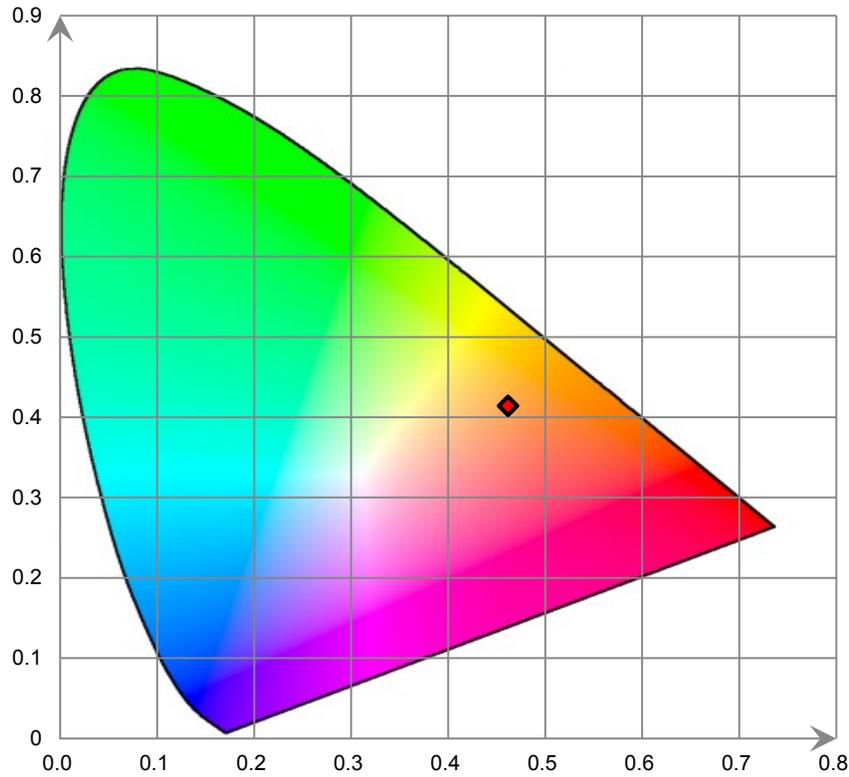
Relative Spectral Power Distribution



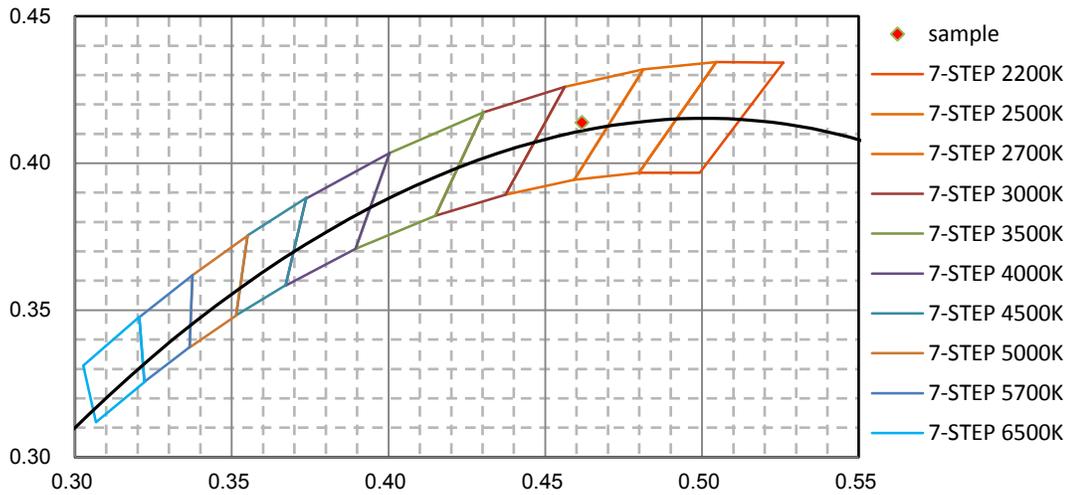
nm	mW								
380	2.910E-01	421	4.667E-01	462	5.793E+00	503	7.242E+00	544	1.149E+01
381	2.463E-01	422	5.038E-01	463	5.595E+00	504	7.378E+00	545	1.158E+01
382	2.145E-01	423	5.488E-01	464	5.435E+00	505	7.505E+00	546	1.165E+01
383	1.984E-01	424	6.052E-01	465	5.295E+00	506	7.641E+00	547	1.174E+01
384	1.576E-01	425	6.609E-01	466	5.217E+00	507	7.763E+00	548	1.182E+01
385	1.707E-01	426	7.175E-01	467	5.162E+00	508	7.881E+00	549	1.190E+01
386	1.694E-01	427	7.771E-01	468	5.108E+00	509	8.013E+00	550	1.198E+01
387	1.271E-01	428	8.515E-01	469	5.086E+00	510	8.120E+00	551	1.207E+01
388	8.356E-02	429	9.112E-01	470	5.047E+00	511	8.227E+00	552	1.213E+01
389	1.020E-01	430	9.942E-01	471	5.013E+00	512	8.340E+00	553	1.220E+01
390	1.149E-01	431	1.068E+00	472	4.958E+00	513	8.457E+00	554	1.227E+01
391	1.007E-01	432	1.149E+00	473	4.904E+00	514	8.552E+00	555	1.236E+01
392	1.006E-01	433	1.243E+00	474	4.841E+00	515	8.671E+00	556	1.242E+01
393	1.013E-01	434	1.334E+00	475	4.750E+00	516	8.771E+00	557	1.249E+01
394	8.876E-02	435	1.439E+00	476	4.678E+00	517	8.874E+00	558	1.256E+01
395	7.158E-02	436	1.550E+00	477	4.622E+00	518	8.969E+00	559	1.262E+01
396	1.003E-01	437	1.662E+00	478	4.575E+00	519	9.082E+00	560	1.270E+01
397	7.428E-02	438	1.788E+00	479	4.555E+00	520	9.174E+00	561	1.278E+01
398	8.229E-02	439	1.927E+00	480	4.541E+00	521	9.276E+00	562	1.284E+01
399	6.819E-02	440	2.076E+00	481	4.560E+00	522	9.368E+00	563	1.290E+01
400	7.564E-02	441	2.235E+00	482	4.609E+00	523	9.481E+00	564	1.298E+01
401	7.746E-02	442	2.413E+00	483	4.667E+00	524	9.565E+00	565	1.304E+01
402	7.518E-02	443	2.621E+00	484	4.750E+00	525	9.665E+00	566	1.311E+01
403	9.207E-02	444	2.836E+00	485	4.853E+00	526	9.769E+00	567	1.319E+01
404	9.308E-02	445	3.100E+00	486	4.950E+00	527	9.872E+00	568	1.327E+01
405	9.287E-02	446	3.399E+00	487	5.074E+00	528	9.964E+00	569	1.333E+01
406	1.104E-01	447	3.724E+00	488	5.184E+00	529	1.005E+01	570	1.342E+01
407	1.146E-01	448	4.092E+00	489	5.307E+00	530	1.016E+01	571	1.350E+01
408	1.194E-01	449	4.480E+00	490	5.432E+00	531	1.026E+01	572	1.357E+01
409	1.343E-01	450	4.885E+00	491	5.556E+00	532	1.036E+01	573	1.366E+01
410	1.515E-01	451	5.310E+00	492	5.694E+00	533	1.046E+01	574	1.375E+01
411	1.549E-01	452	5.689E+00	493	5.819E+00	534	1.055E+01	575	1.383E+01
412	1.858E-01	453	6.036E+00	494	5.956E+00	535	1.064E+01	576	1.394E+01
413	1.987E-01	454	6.324E+00	495	6.083E+00	536	1.075E+01	577	1.402E+01
414	2.230E-01	455	6.528E+00	496	6.223E+00	537	1.085E+01	578	1.411E+01
415	2.478E-01	456	6.649E+00	497	6.371E+00	538	1.094E+01	579	1.422E+01
416	2.823E-01	457	6.656E+00	498	6.515E+00	539	1.103E+01	580	1.433E+01
417	3.015E-01	458	6.576E+00	499	6.648E+00	540	1.112E+01	581	1.445E+01
418	3.479E-01	459	6.443E+00	500	6.807E+00	541	1.124E+01	582	1.457E+01
419	3.788E-01	460	6.244E+00	501	6.939E+00	542	1.131E+01	583	1.469E+01
420	4.217E-01	461	6.022E+00	502	7.097E+00	543	1.141E+01	584	1.481E+01

nm	mW								
585	1.495E+01	626	2.179E+01	667	1.753E+01	708	7.740E+00	749	2.542E+00
586	1.508E+01	627	2.184E+01	668	1.729E+01	709	7.555E+00	750	2.467E+00
587	1.523E+01	628	2.194E+01	669	1.704E+01	710	7.373E+00	751	2.396E+00
588	1.538E+01	629	2.199E+01	670	1.679E+01	711	7.189E+00	752	2.332E+00
589	1.554E+01	630	2.206E+01	671	1.655E+01	712	7.004E+00	753	2.262E+00
590	1.571E+01	631	2.208E+01	672	1.629E+01	713	6.837E+00	754	2.198E+00
591	1.586E+01	632	2.211E+01	673	1.603E+01	714	6.665E+00	755	2.136E+00
592	1.603E+01	633	2.214E+01	674	1.578E+01	715	6.506E+00	756	2.077E+00
593	1.620E+01	634	2.215E+01	675	1.551E+01	716	6.335E+00	757	2.018E+00
594	1.636E+01	635	2.215E+01	676	1.526E+01	717	6.178E+00	758	1.955E+00
595	1.655E+01	636	2.217E+01	677	1.499E+01	718	6.020E+00	759	1.902E+00
596	1.671E+01	637	2.212E+01	678	1.474E+01	719	5.858E+00	760	1.851E+00
597	1.689E+01	638	2.209E+01	679	1.449E+01	720	5.719E+00	761	1.796E+00
598	1.707E+01	639	2.204E+01	680	1.423E+01	721	5.564E+00	762	1.740E+00
599	1.725E+01	640	2.199E+01	681	1.398E+01	722	5.421E+00	763	1.695E+00
600	1.746E+01	641	2.193E+01	682	1.372E+01	723	5.278E+00	764	1.639E+00
601	1.765E+01	642	2.185E+01	683	1.346E+01	724	5.133E+00	765	1.591E+00
602	1.783E+01	643	2.178E+01	684	1.320E+01	725	5.005E+00	766	1.545E+00
603	1.805E+01	644	2.169E+01	685	1.295E+01	726	4.866E+00	767	1.505E+00
604	1.824E+01	645	2.159E+01	686	1.269E+01	727	4.735E+00	768	1.457E+00
605	1.842E+01	646	2.147E+01	687	1.244E+01	728	4.604E+00	769	1.414E+00
606	1.862E+01	647	2.137E+01	688	1.221E+01	729	4.481E+00	770	1.373E+00
607	1.881E+01	648	2.123E+01	689	1.196E+01	730	4.355E+00	771	1.334E+00
608	1.899E+01	649	2.109E+01	690	1.171E+01	731	4.241E+00	772	1.294E+00
609	1.920E+01	650	2.095E+01	691	1.148E+01	732	4.125E+00	773	1.256E+00
610	1.938E+01	651	2.079E+01	692	1.124E+01	733	4.003E+00	774	1.223E+00
611	1.956E+01	652	2.065E+01	693	1.100E+01	734	3.894E+00	775	1.184E+00
612	1.976E+01	653	2.047E+01	694	1.075E+01	735	3.790E+00	776	1.152E+00
613	1.995E+01	654	2.031E+01	695	1.053E+01	736	3.679E+00	777	1.119E+00
614	2.012E+01	655	2.013E+01	696	1.029E+01	737	3.571E+00	778	1.086E+00
615	2.030E+01	656	1.993E+01	697	1.007E+01	738	3.473E+00	779	1.074E+00
616	2.046E+01	657	1.974E+01	698	9.840E+00	739	3.380E+00	780	1.077E+00
617	2.064E+01	658	1.954E+01	699	9.620E+00	740	3.284E+00		
618	2.078E+01	659	1.935E+01	700	9.397E+00	741	3.185E+00		
619	2.094E+01	660	1.914E+01	701	9.168E+00	742	3.102E+00		
620	2.107E+01	661	1.892E+01	702	8.964E+00	743	3.009E+00		
621	2.123E+01	662	1.870E+01	703	8.751E+00	744	2.919E+00		
622	2.135E+01	663	1.846E+01	704	8.542E+00	745	2.841E+00		
623	2.147E+01	664	1.825E+01	705	8.343E+00	746	2.765E+00		
624	2.158E+01	665	1.800E+01	706	8.150E+00	747	2.690E+00		
625	2.169E+01	666	1.778E+01	707	7.930E+00	748	2.610E+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**

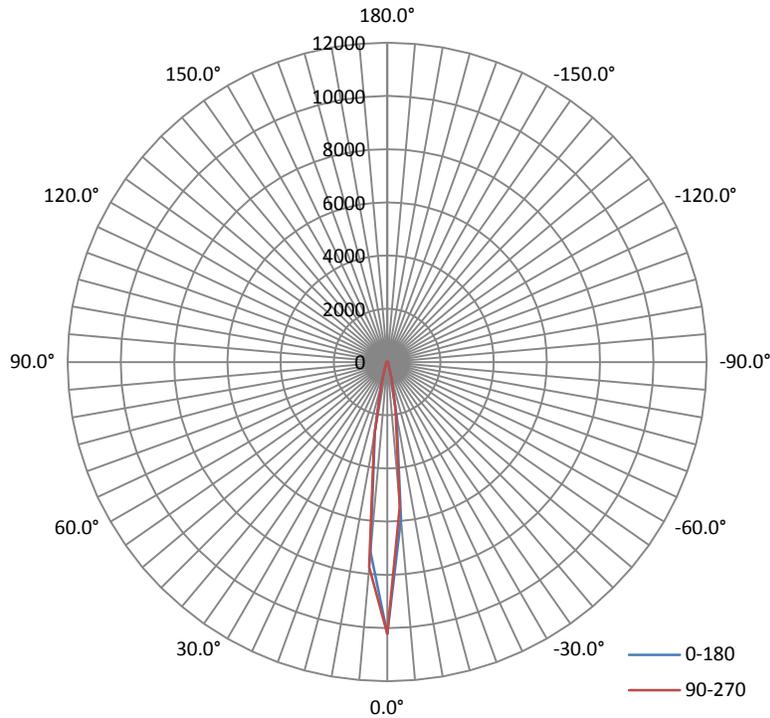
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.03	60	0.0921	10.540	0.9534

Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	I _{max} (cd)	S/MH (C0/180)	S/MH (C90/270)
954.63	90.57	10540	0.2	0.19

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% I _{max}):	12.6	12.4	12.4	12.6	12.5
Field Angle (10% I _{max}):	27.2	26.9	26.7	27.2	27.0

Luminous Intensity (cd) Distribution Data

C \ Y	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	10213	10213	10213	10213	10213	10213	10213	10213
5.0°	7145	7624	7970	8016	7735	7186	6625	6060
10.0°	2666	2865	2997	2969	2823	2601	2345	2101
15.0°	845	889	906	882	830	775	717	654
20.0°	305	306	298	284	271	261	248	240
25.0°	143	144	142	136	132	127	122	119
30.0°	103	103	102	98	95	93	92	93
35.0°	86	87	85	83	80	78	76	77
40.0°	70	71	72	70	68	66	66	67
45.0°	56	56	57	56	54	53	52	51
50.0°	44	45	46	46	44	44	44	43
55.0°	37	38	38	38	38	38	38	37
60.0°	31	32	32	32	31	31	30	29
65.0°	23	24	24	24	24	23	23	22
70.0°	18	18	18	19	18	18	17	17
75.0°	13	13	13	13	13	13	12	12
80.0°	9	9	9	9	9	8	8	8
85.0°	4	4	5	5	5	4	4	4
90.0°	1	1	2	2	2	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	1	1	1	1	2	2	2
150.0°	2	2	2	2	2	2	3	3
155.0°	3	3	3	3	3	3	3	3
160.0°	4	4	4	4	4	4	4	4
165.0°	4	4	3	3	3	3	3	3
170.0°	3	3	3	3	3	3	3	2
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°	10213	10213	10213	10213	10213	10213	10213	10213
5.0°	5909	5532	5330	5306	5469	5810	6372	7046
10.0°	2054	1889	1793	1785	1856	2041	2307	2643
15.0°	665	620	594	595	619	683	773	878
20.0°	247	234	227	229	241	263	295	325
25.0°	120	121	122	123	125	129	144	155
30.0°	96	97	99	100	98	99	102	103
35.0°	78	79	79	78	76	76	80	85
40.0°	66	65	64	63	65	66	69	71
45.0°	52	51	50	50	50	51	54	56
50.0°	43	42	41	40	41	42	43	45
55.0°	36	36	36	36	35	36	37	38
60.0°	29	28	28	27	28	28	30	31
65.0°	22	21	21	21	21	22	23	23
70.0°	17	16	16	16	16	16	17	18
75.0°	12	11	11	11	11	11	12	13
80.0°	8	7	7	7	7	7	8	8
85.0°	3	3	3	3	3	3	3	4
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°	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	0	0	0	0
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	196.9	20.62
5-10	286.5	30.02
10-15	161.9	16.95
15-20	75.0	7.86
20-25	38.5	4.03
25-30	27.9	2.92
30-35	26.3	2.76
35-40	24.7	2.58
40-45	22.2	2.33
45-50	19.4	2.03
50-55	17.4	1.82
55-60	15.6	1.63
60-65	12.6	1.32
65-70	10.0	1.05
70-75	7.6	0.79
75-80	5.3	0.55
80-85	3.2	0.34
85-90	1.2	0.13
90-95	0.2	0.02
95-100	0.0	0.00
100-105	0.0	0.00
105-110	0.0	0.00
110-115	0.0	0.01
115-120	0.0	0.00
120-125	0.0	0.00
125-130	0.0	0.00
130-135	0.0	0.00
135-140	0.1	0.01
140-145	0.2	0.03
145-150	0.4	0.03
150-155	0.5	0.05
155-160	0.4	0.05
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	196.9	20.62
0-10	483.4	50.64
0-15	645.3	67.59
0-20	720.3	75.45
0-25	758.7	79.48
0-30	786.6	82.40
0-35	812.9	85.16
0-40	837.6	87.74
0-45	859.9	90.07
0-50	879.2	92.10
0-55	896.6	93.92
0-60	912.2	95.55
0-65	924.8	96.87
0-70	934.7	97.92
0-75	942.3	98.71
0-80	947.6	99.26
0-85	950.8	99.60
0-90	952.0	99.73
0-95	952.3	99.75
0-100	952.3	99.75
0-105	952.3	99.75
0-110	952.3	99.75
0-115	952.3	99.76
0-120	952.3	99.76
0-125	952.3	99.76
0-130	952.3	99.76
0-135	952.4	99.76
0-140	952.5	99.77
0-145	952.7	99.80
0-150	953.1	99.83
0-155	953.5	99.88
0-160	953.9	99.93
0-165	954.3	99.96
0-170	954.5	99.99
0-175	954.6	100.00
0-180	954.6	100.00

[Additional Test]

Test Item	Test Voltage (V)	Frequency (Hz)	Test Result
Total Harmonic Distortion:	120.0	60	16.70%

6. Product Photo



7. Report Revision

Report Number	Report Date	Contents
KS2220221-43611E-EE-1	2023-08-25	Original report
KS2220221-43611E-EE-1-M1	2023-08-26	Update the Nominal Lumen Output on page 2

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*****