IES LM-79-08

MEASUREMENT AND TEST REPORT

For

GREEN CREATIVE LTD

756 North Zhongshan Rd., Unit B301 Zhabei District, Shanghai, China

Test Model: 22.5STRIPDIM/830/277V

Report Type:	Electrical and Photometric tests including: Luminous Flux, Chromaticity, Luminous Intensity Distribution, THD
Test Engineer:	Carl Du
Report Number:	RKS170109001-10
Test Date:	2017-01-13 to 2017-01-16
Report Date:	2017-01-17
Reviewed By:	Blake Zhang
Prepared By:	Bay Area Compliance Laboratories Corp. (Dongguan). Pu Long Cun 69, Puxinghu Industrial Area, Tangxia Town, Dongguan, Guangdong, P.R.China. Tel: +86-0769-86858888 Fax:+86-0769-86858588
Test Facility:	Test facility was located at Pu Long Cun 69, Puxinghu Industrial Area, Tangxia Town, Dongguan, Guangdong, P.R.China.
Accreditation:	The IAS Accreditation Number TL-460.

1. Product Description

General Information:

One sample was received on 2017-01-12 and used for testing.

Model Tested:	22.5STRIPDIM/830/277V
Manufacturer:	GREEN CREATIVE LTD
Brand Name:	GREEN CREATIVE
Product Designation:	Direct Linear Ambient Luminaires
Dimmable:	Continuous
Dimming Range:	10% to 100%
Burning Time Before Test:	0hour(For New Products)

Rated Values:

Rated Voltage/Frequency:	120-277VAC, 60Hz
Rated Power:	22.5W
Nominal CCT:	3000K
Nominal Lumen Output:	2500 lm
Nominal CRI:	80
Luminaire length:	4 ft

2. Standards Used

- IES LM-79-08: Approved Method: Electrical & Photometric Measurement of Solid-state Lighting Products
- ANSI C82.77-2002: Harmonic Emission Limits – Related Power Quality Requirements for Lighting
- IES TM-30-15: IES Method for Evaluating Light Source Color Rendition (This method is not in IAS accreditation scope)

3. Description of Test Equipment

Device	Manufacture	Model No	Serial No	Test Range	Calibration date	Calibration due date
2.0m integrating sphere	EVERFINE	R98	11010018	R98	2016-11-18	2017-11-17
High accuracy array spectroradiometer	EVERFINE	HAAS-2000	1012016T	380-780nm	2016-03-10	2017-03-09
Digital Power Meter	EVERFINE	PF2010A	1011004	600V/20A	2016-07-11	2017-07-10
Digital CC&CV DC Power Supply	EVERFINE	WY305-V1	1101047	30V/5A	2016-07-07	2017-07-06
Temperature/humidity/clock	Victor	VC230	EE023	0~40°C0~90%	2016-03-21	2017-03-20
Standard Light Source	SENSING	N/A	LSD090808	N/A	2016-09-25	2017-09-24
Special zero-voltage synchronous switching AC	EVERFINE	DPS1010-YF	1011001T	30V/5A	2016-03-04	2017-03-03
AC Power Supply	EVERFINE	VPS1030 PWM	1012017	0-150V， 0-300V	2016-03-04	2017-03-03
DC Power Supply	EVERFINE	WY12010	1009009	30V/5A	2016-03-04	2017-03-03
Power Meter	YOKOGAWA	WT-210	91KB35700	15/30/60/150/300/600V	2016-03-04	2017-03-03
Goniophotometer	EVERFINE	GO-R5000	YG108492N10120001	1600mm,3000W/10A	2016-03-10	2017-03-09

Device	Manufacture	Model No	Serial No	Test Range	Calibration date	Calibration due date
Wireless Remote Sensor	N/A	433MHz	N/A	0°C~50°C;-20°C~60°C	2016-03-21	2017-03-20
Standard Light Source	EVERFINE	D908	1012003	N/A	2016-09-08	2017-09-07

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Dongguan) 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.

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=1.8% (K=2), at the 95% confidence level. The uncertainty of the correlated color temperature measurements is U=20K (K=2), at the 95% confidence level. The uncertainty of the CRI is U=1.8(K=2), at the 95% confidence level.

The uncertainty of power meter AC current U=0.19 % of rdg, AC Voltage U=0.15% of rdg, Power U=0.20%) (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=1.6% (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°C±1°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=0.15% of rdg, Power U=0.20%) (K=2), at the 95% confidence level.

Fidelity Index and Gamut Index Calculation

The R_f, R_g was calculated according to IES TM-30-15 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]

Total operating time for integrating sphere test: **0.5 hour**

Test orientation: **Downward**

Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.1848	21.99	0.9916	2543.6	115.65

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
7.803	3110	0.00108	0.4308	0.4045	0.2464	0.5207

Color Rendering Index

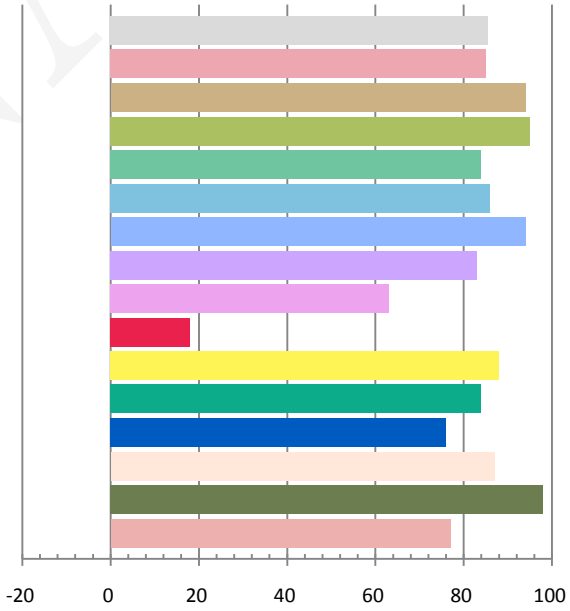
Ra
85.5

R1	R2	R3	R4
85	94	95	84

R5	R6	R7	R8
86	94	83	63

R9	R10	R11	R12
18	88	84	76

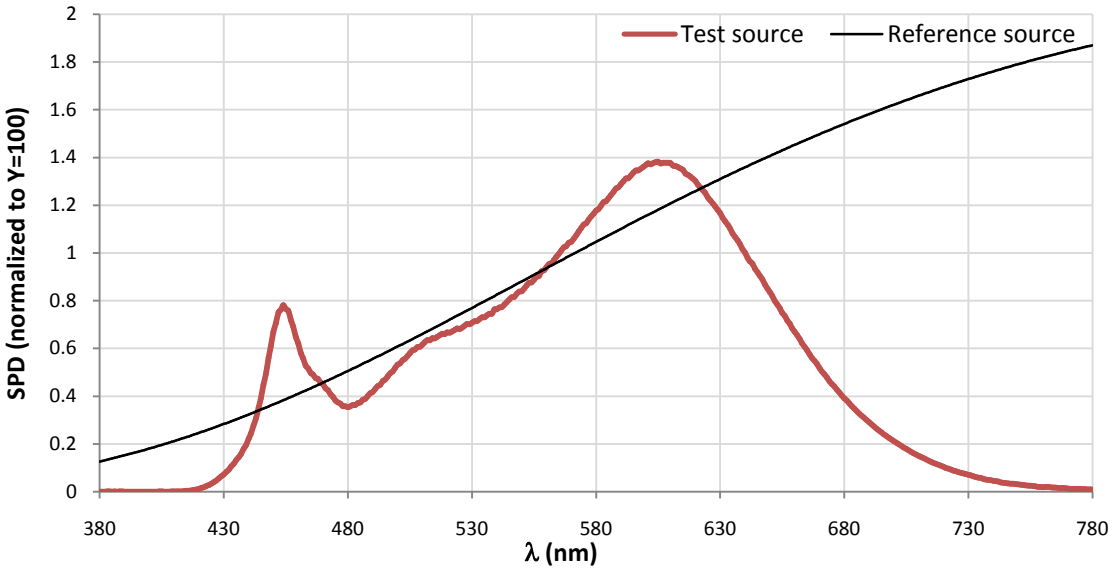
R13	R14	R15
87	98	77



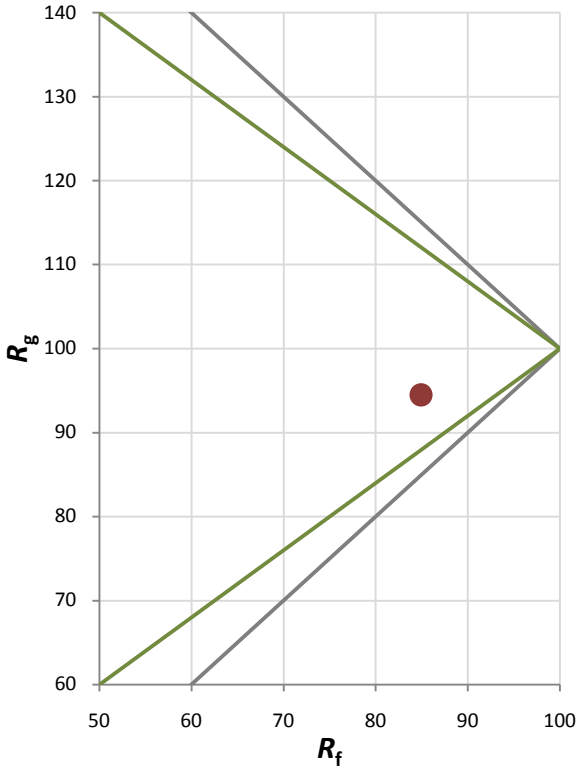
Fidelity Index and Gamut Index

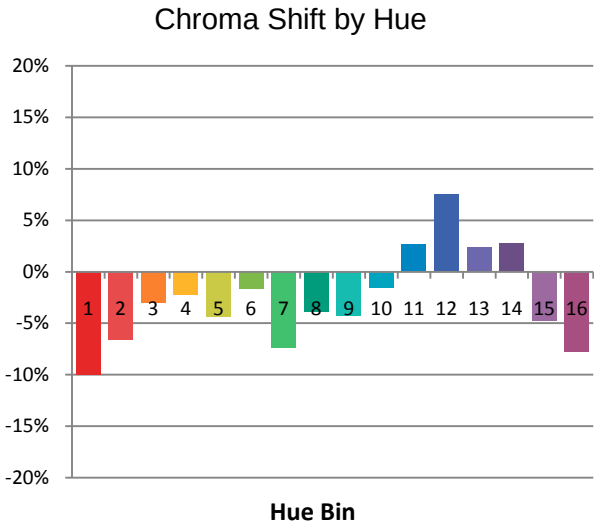
Fidelity Index R_f	85
Gamut Index R_g	95

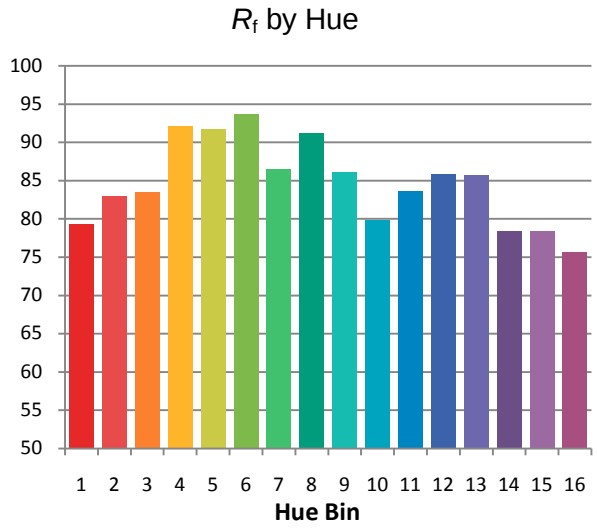
Spectral Power Distribution Comparison

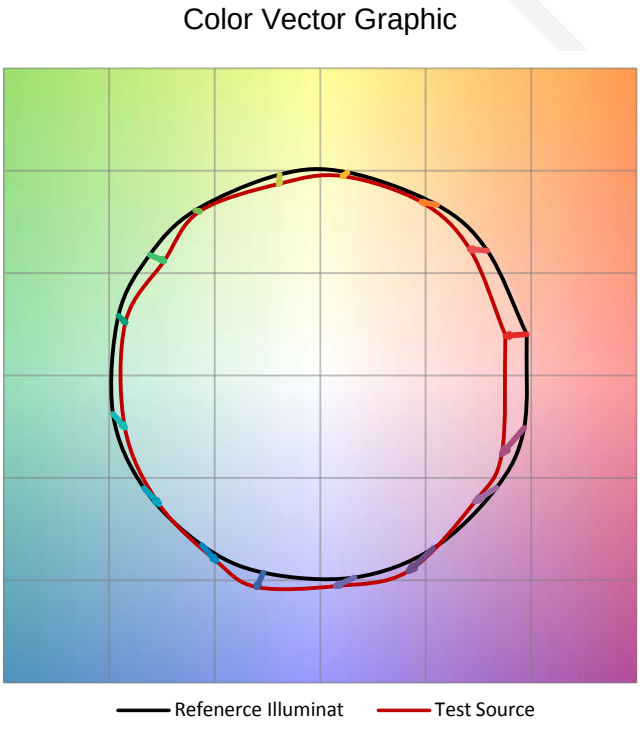


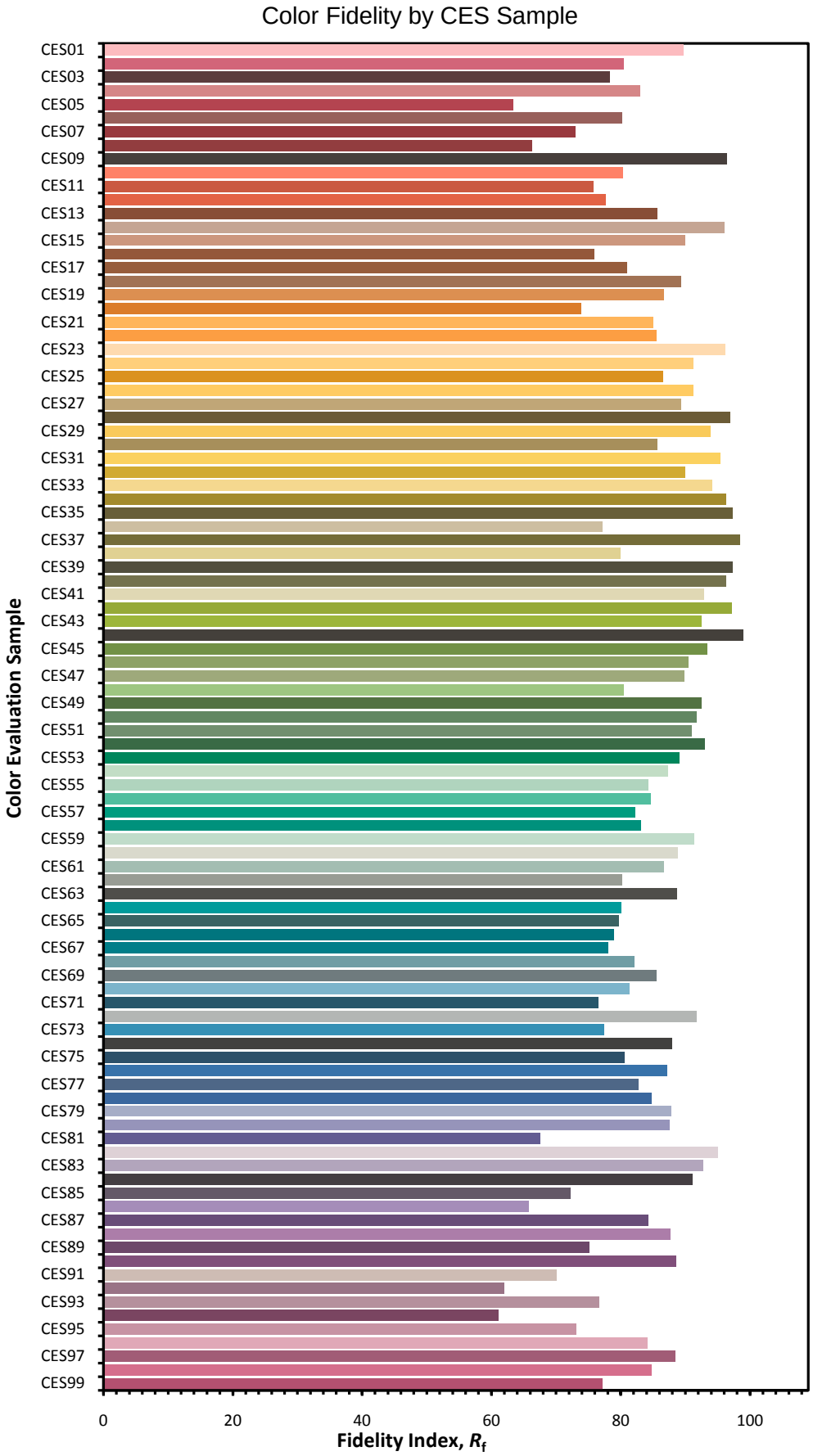
Plot of R_g versus R_f



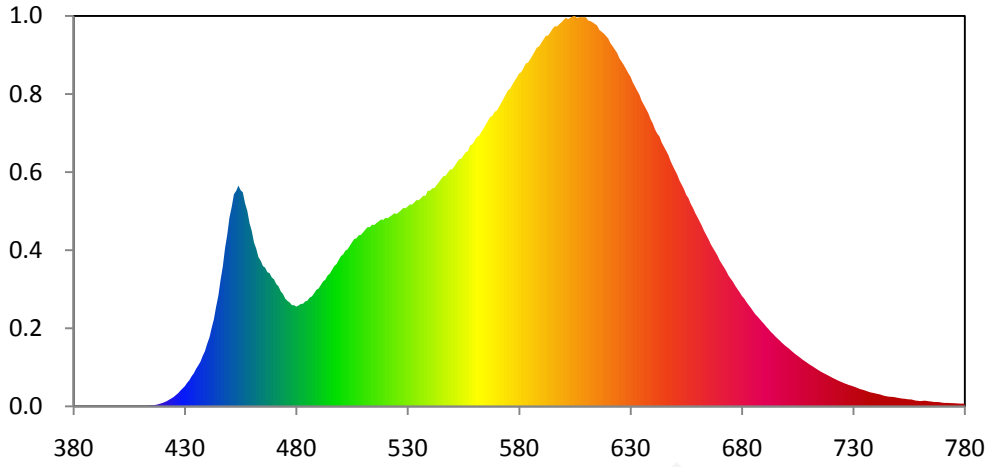

Chroma Shift by Hue
20%
15%
10%
5%
0%
-5%
-10%
-15%
-20%
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Hue Bin


R_f by Hue
100
95
90
85
80
75
70
65
60
55
50
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
Hue Bin


Color Vector Graphic
Refenerce Illuminat
Test Source


Color Fidelity by CES Sample
Color Evaluation Sample
CES01
CES03
CES05
CES07
CES09
CES11
CES13
CES15
CES17
CES19
CES21
CES23
CES25
CES27
CES29
CES31
CES33
CES35
CES37
CES39
CES41
CES43
CES45
CES47
CES49
CES51
CES53
CES55
CES57
CES59
CES61
CES63
CES65
CES67
CES69
CES71
CES73
CES75
CES77
CES79
CES81
CES83
CES85
CES87
CES89
CES91
CES93
CES95
CES97
CES99
0
20
40
60
80
100
Fidelity Index, R_f

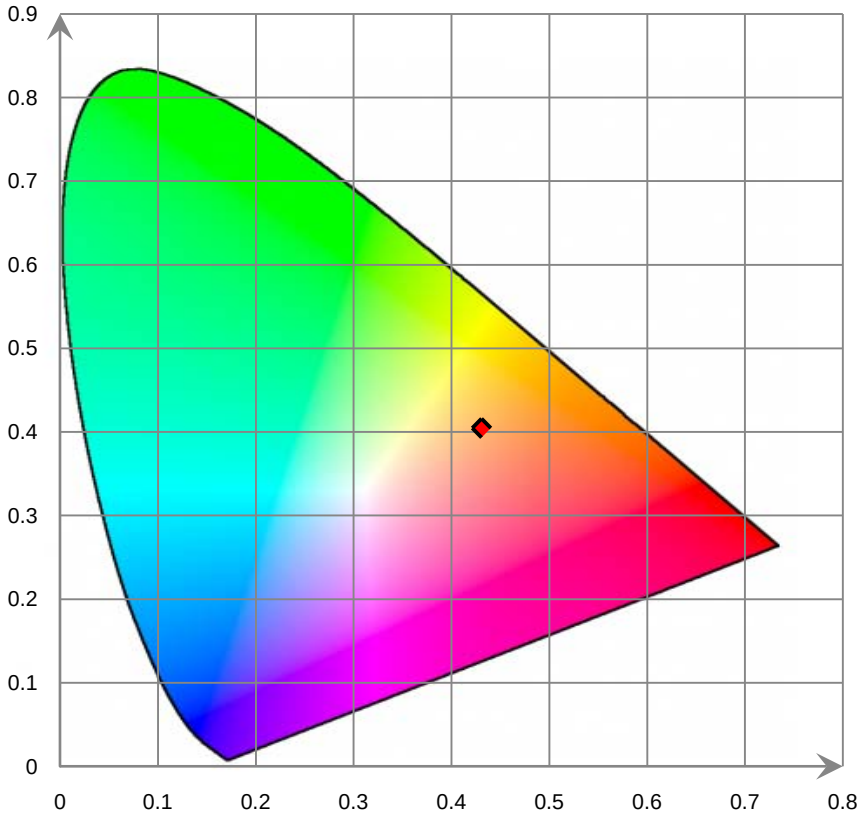
Relative Spectral Power Distribution



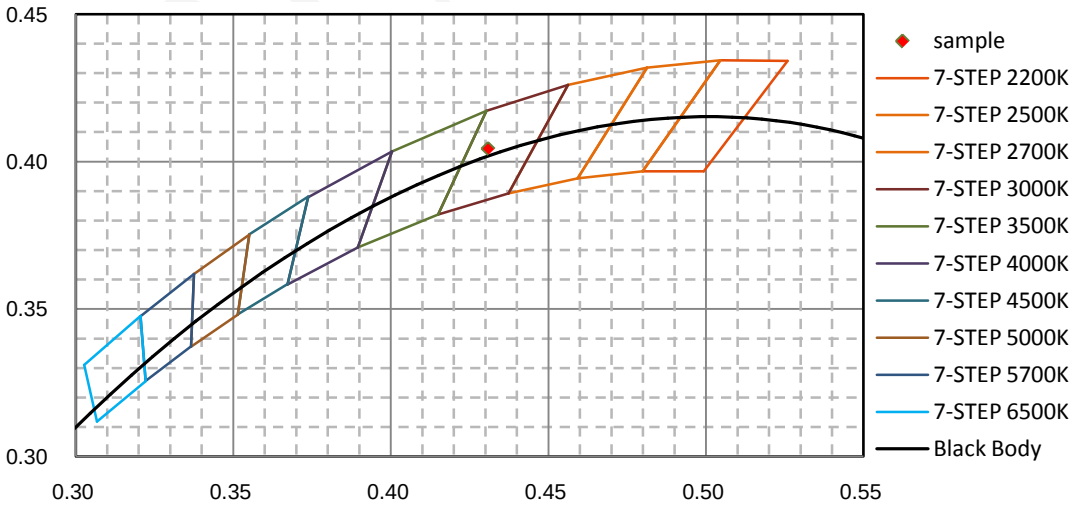
nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	2.070E-02	421	5.834E-01	462	2.081E+01	503	2.070E+01	544	2.956E+01
381	1.210E-02	422	7.089E-01	463	1.967E+01	504	2.117E+01	545	2.997E+01
382	1.130E-02	423	8.975E-01	464	1.921E+01	505	2.163E+01	546	3.034E+01
383	2.660E-02	424	1.066E+00	465	1.850E+01	506	2.206E+01	547	3.039E+01
384	3.250E-02	425	1.250E+00	466	1.829E+01	507	2.215E+01	548	3.082E+01
385	2.040E-02	426	1.510E+00	467	1.770E+01	508	2.255E+01	549	3.121E+01
386	2.380E-02	427	1.746E+00	468	1.756E+01	509	2.260E+01	550	3.127E+01
387	2.120E-02	428	2.084E+00	469	1.699E+01	510	2.295E+01	551	3.167E+01
388	2.230E-02	429	2.377E+00	470	1.674E+01	511	2.330E+01	552	3.213E+01
389	2.560E-02	430	2.675E+00	471	1.612E+01	512	2.364E+01	553	3.257E+01
390	2.130E-02	431	3.108E+00	472	1.583E+01	513	2.363E+01	554	3.265E+01
391	1.260E-02	432	3.456E+00	473	1.517E+01	514	2.395E+01	555	3.308E+01
392	1.110E-02	433	3.962E+00	474	1.482E+01	515	2.391E+01	556	3.351E+01
393	1.270E-02	434	4.362E+00	475	1.421E+01	516	2.417E+01	557	3.362E+01
394	1.750E-02	435	4.946E+00	476	1.391E+01	517	2.439E+01	558	3.440E+01
395	1.940E-02	436	5.406E+00	477	1.370E+01	518	2.464E+01	559	3.454E+01
396	2.070E-02	437	5.907E+00	478	1.335E+01	519	2.458E+01	560	3.501E+01
397	1.540E-02	438	6.667E+00	479	1.333E+01	520	2.485E+01	561	3.551E+01
398	1.220E-02	439	7.290E+00	480	1.316E+01	521	2.480E+01	562	3.566E+01
399	9.000E-03	440	8.259E+00	481	1.330E+01	522	2.501E+01	563	3.615E+01
400	1.580E-02	441	9.072E+00	482	1.350E+01	523	2.522E+01	564	3.662E+01
401	1.730E-02	442	1.035E+01	483	1.352E+01	524	2.546E+01	565	3.711E+01
402	1.610E-02	443	1.149E+01	484	1.384E+01	525	2.536E+01	566	3.763E+01
403	1.720E-02	444	1.315E+01	485	1.394E+01	526	2.560E+01	567	3.816E+01
404	2.180E-02	445	1.460E+01	486	1.434E+01	527	2.586E+01	568	3.830E+01
405	2.320E-02	446	1.666E+01	487	1.449E+01	528	2.616E+01	569	3.882E+01
406	2.140E-02	447	1.843E+01	488	1.492E+01	529	2.611E+01	570	3.899E+01
407	2.050E-02	448	2.085E+01	489	1.536E+01	530	2.635E+01	571	3.950E+01
408	1.660E-02	449	2.264E+01	490	1.554E+01	531	2.662E+01	572	4.003E+01
409	3.470E-02	450	2.491E+01	491	1.600E+01	532	2.661E+01	573	4.057E+01
410	4.460E-02	451	2.629E+01	492	1.647E+01	533	2.691E+01	574	4.112E+01
411	4.100E-02	452	2.797E+01	493	1.669E+01	534	2.720E+01	575	4.167E+01
412	4.250E-02	453	2.841E+01	494	1.724E+01	535	2.718E+01	576	4.189E+01
413	5.620E-02	454	2.910E+01	495	1.749E+01	536	2.748E+01	577	4.242E+01
414	8.370E-02	455	2.849E+01	496	1.799E+01	537	2.776E+01	578	4.291E+01
415	1.218E-01	456	2.820E+01	497	1.849E+01	538	2.777E+01	579	4.337E+01
416	1.640E-01	457	2.675E+01	498	1.874E+01	539	2.843E+01	580	4.389E+01
417	2.059E-01	458	2.577E+01	499	1.929E+01	540	2.842E+01	581	4.407E+01
418	2.765E-01	459	2.415E+01	500	1.980E+01	541	2.874E+01	582	4.462E+01
419	3.680E-01	460	2.312E+01	501	2.002E+01	542	2.879E+01	583	4.519E+01
420	4.594E-01	461	2.161E+01	502	2.053E+01	543	2.918E+01	584	4.532E+01

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
585	4.578E+01	626	4.545E+01	667	2.088E+01	708	6.011E+00	749	1.182E+00
586	4.626E+01	627	4.499E+01	668	2.040E+01	709	5.800E+00	750	1.129E+00
587	4.678E+01	628	4.447E+01	669	1.989E+01	710	5.599E+00	751	1.077E+00
588	4.731E+01	629	4.392E+01	670	1.926E+01	711	5.405E+00	752	1.025E+00
589	4.745E+01	630	4.346E+01	671	1.877E+01	712	5.225E+00	753	1.002E+00
590	4.795E+01	631	4.273E+01	672	1.831E+01	713	5.027E+00	754	9.572E-01
591	4.840E+01	632	4.217E+01	673	1.781E+01	714	4.836E+00	755	9.218E-01
592	4.886E+01	633	4.161E+01	674	1.724E+01	715	4.651E+00	756	9.143E-01
593	4.888E+01	634	4.108E+01	675	1.682E+01	716	4.483E+00	757	8.318E-01
594	4.931E+01	635	4.029E+01	676	1.641E+01	717	4.332E+00	758	7.615E-01
595	4.976E+01	636	3.975E+01	677	1.590E+01	718	4.177E+00	759	7.344E-01
596	5.011E+01	637	3.920E+01	678	1.546E+01	719	4.024E+00	760	6.969E-01
597	5.009E+01	638	3.864E+01	679	1.504E+01	720	3.873E+00	761	7.209E-01
598	5.037E+01	639	3.786E+01	680	1.456E+01	721	3.715E+00	762	7.501E-01
599	5.064E+01	640	3.729E+01	681	1.422E+01	722	3.579E+00	763	7.150E-01
600	5.095E+01	641	3.651E+01	682	1.377E+01	723	3.422E+00	764	6.701E-01
601	5.122E+01	642	3.595E+01	683	1.337E+01	724	3.299E+00	765	6.400E-01
602	5.105E+01	643	3.557E+01	684	1.298E+01	725	3.168E+00	766	5.858E-01
603	5.123E+01	644	3.477E+01	685	1.256E+01	726	3.043E+00	767	5.720E-01
604	5.139E+01	645	3.423E+01	686	1.215E+01	727	2.934E+00	768	5.776E-01
605	5.147E+01	646	3.369E+01	687	1.184E+01	728	2.823E+00	769	5.348E-01
606	5.119E+01	647	3.312E+01	688	1.151E+01	729	2.738E+00	770	4.842E-01
607	5.131E+01	648	3.232E+01	689	1.116E+01	730	2.629E+00	771	4.591E-01
608	5.130E+01	649	3.169E+01	690	1.085E+01	731	2.527E+00	772	4.569E-01
609	5.130E+01	650	3.110E+01	691	1.048E+01	732	2.405E+00	773	4.494E-01
610	5.128E+01	651	3.052E+01	692	1.016E+01	733	2.287E+00	774	4.293E-01
611	5.086E+01	652	2.976E+01	693	9.814E+00	734	2.206E+00	775	4.230E-01
612	5.079E+01	653	2.920E+01	694	9.540E+00	735	2.119E+00	776	4.039E-01
613	5.061E+01	654	2.862E+01	695	9.212E+00	736	2.018E+00	777	3.877E-01
614	5.042E+01	655	2.788E+01	696	8.938E+00	737	1.902E+00	778	3.607E-01
615	5.020E+01	656	2.745E+01	697	8.672E+00	738	1.828E+00	779	3.687E-01
616	4.963E+01	657	2.671E+01	698	8.373E+00	739	1.770E+00	780	3.311E-01
617	4.939E+01	658	2.618E+01	699	8.112E+00	740	1.697E+00		
618	4.915E+01	659	2.551E+01	700	7.866E+00	741	1.630E+00		
619	4.882E+01	660	2.497E+01	701	7.656E+00	742	1.573E+00		
620	4.849E+01	661	2.439E+01	702	7.376E+00	743	1.468E+00		
621	4.786E+01	662	2.381E+01	703	7.125E+00	744	1.382E+00		
622	4.747E+01	663	2.314E+01	704	6.884E+00	745	1.327E+00		
623	4.701E+01	664	2.258E+01	705	6.663E+00	746	1.279E+00		
624	4.659E+01	665	2.203E+01	706	6.454E+00	747	1.263E+00		
625	4.589E+01	666	2.139E+01	707	6.206E+00	748	1.237E+00		

CIE 1931 x y Chromaticity Diagram



7-Step Chromaticity Quadrangles



[Goniophotometer System]

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

Test orientation: **Downward**

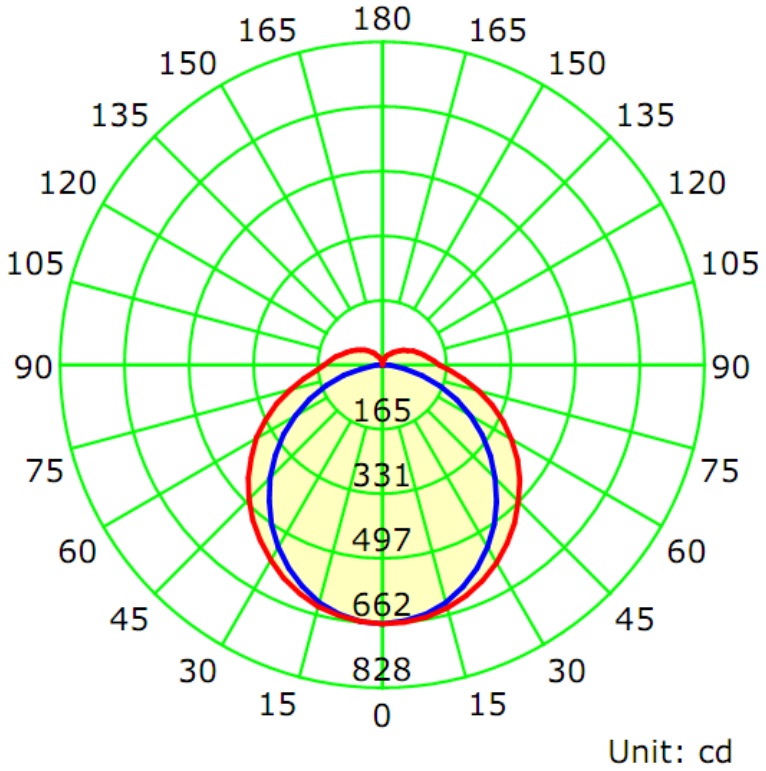
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.0	60	0.1850	22.04	0.9950

Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	I_{max} (cd)	S/MH (C0/180)	S/MH (C90/270)
2554.4	115.90	707.4	1.21	1.30

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% I_{max}):	105.9	119.5	131.0	117.7	118.5
Field Angle (10% I_{max}):	158.2	214.3	251.5	203.4	206.9

Luminous Intensity (cd) Distribution Data

C / γ	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0.0°	707	707	707	707	707	707	707	707
5.0°	704	705	704	706	705	704	703	704
10.0°	692	695	696	697	697	697	694	693
15.0°	674	677	680	685	686	683	678	676
20.0°	648	653	659	667	669	664	656	649
25.0°	616	623	634	643	645	641	628	619
30.0°	579	588	602	615	619	614	595	583
35.0°	536	549	567	584	589	581	559	542
40.0°	491	506	528	550	556	546	519	498
45.0°	441	461	487	513	520	508	477	451
50.0°	390	414	443	473	482	468	434	402
55.0°	337	364	399	432	443	426	389	352
60.0°	283	313	352	389	401	381	342	300
65.0°	228	262	305	344	356	337	295	248
70.0°	171	211	258	297	311	291	247	197
75.0°	116	162	210	250	264	244	200	146
80.0°	65	115	165	205	220	198	155	99
85.0°	24	76	128	168	181	160	116	60
90.0°	4	53	104	143	157	136	93	39
95.0°	2	44	93	129	142	123	82	31
100.0°	2	38	84	116	128	110	73	26
105.0°	2	32	74	104	115	99	64	22
110.0°	2	28	66	94	103	88	57	20
115.0°	2	26	61	86	95	81	52	18
120.0°	2	23	51	74	80	69	45	16
125.0°	2	21	45	65	70	61	39	15
130.0°	2	19	40	57	62	53	35	14
135.0°	3	17	35	49	53	46	31	12
140.0°	3	15	30	42	46	40	27	11
145.0°	3	13	26	36	38	34	23	9
150.0°	3	11	22	30	32	28	18	8
155.0°	4	10	18	24	26	23	14	7
160.0°	4	8	14	19	20	17	11	6
165.0°	4	6	11	14	15	12	8	5
170.0°	5	5	7	9	10	7	6	4
175.0°	5	5	5	5	6	5	5	5
180.0°	0	0	0	0	0	0	0	0

Luminous Intensity (cd) Distribution Data (cont.)

C / γ	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0.0°	707	707	707	707	707	707	707	707
5.0°	703	705	704	705	705	705	705	704
10.0°	690	693	695	699	698	697	694	693
15.0°	670	675	679	684	686	684	679	675
20.0°	644	650	658	666	669	666	656	650
25.0°	610	619	631	643	648	643	630	619
30.0°	571	584	601	616	622	616	597	583
35.0°	529	544	565	584	592	584	560	542
40.0°	483	500	527	550	559	548	521	498
45.0°	433	455	485	513	523	510	479	451
50.0°	380	407	441	473	485	471	436	402
55.0°	327	358	397	432	445	428	390	351
60.0°	273	307	351	389	404	385	343	299
65.0°	217	256	304	344	361	341	296	248
70.0°	162	204	255	298	315	293	249	196
75.0°	108	156	209	252	269	247	201	146
80.0°	58	110	165	207	225	201	156	99
85.0°	19	71	127	168	185	163	118	61
90.0°	3	50	103	143	158	137	94	39
95.0°	3	43	92	129	144	124	83	32
100.0°	2	37	83	117	130	112	75	28
105.0°	2	33	74	106	118	102	66	24
110.0°	3	29	67	95	106	91	59	22
115.0°	3	26	59	85	95	81	53	20
120.0°	3	24	53	76	84	72	47	19
125.0°	3	22	47	67	74	64	42	17
130.0°	3	20	41	59	65	56	38	16
135.0°	3	18	37	52	56	49	33	15
140.0°	4	16	32	45	49	43	29	14
145.0°	4	14	28	38	42	37	26	13
150.0°	4	12	23	32	35	31	22	11
155.0°	4	11	18	27	28	26	19	10
160.0°	4	9	14	21	23	21	16	9
165.0°	4	8	11	15	17	16	12	8
170.0°	4	7	8	10	12	12	9	7
175.0°	4	6	7	6	8	8	7	6
180.0°	0	0	0	0	0	0	0	0

Zonal Lumen Density Measurement

Deg	Flux (lm)	%
0-5	16.9	0.66
5-10	50.1	1.96
10-15	81.5	3.19
15-20	110.2	4.31
20-25	135.1	5.29
25-30	155.6	6.09
30-35	171.1	6.70
35-40	181.3	7.10
40-45	186.1	7.29
45-50	185.7	7.27
50-55	180.3	7.06
55-60	170.2	6.66
60-65	155.8	6.10
65-70	137.6	5.39
70-75	116.5	4.56
75-80	94.0	3.68
80-85	72.5	2.84
85-90	56.1	2.20
90-95	47.1	1.84
95-100	41.7	1.63
100-105	36.8	1.44
105-110	32.1	1.26
110-115	28.0	1.10
115-120	24.0	0.94
120-125	20.1	0.79
125-130	16.7	0.66
130-135	13.7	0.54
135-140	11.0	0.43
140-145	8.6	0.34
145-150	6.5	0.25
150-155	4.7	0.18
155-160	3.2	0.12
160-165	2.0	0.08
165-170	1.1	0.04
170-175	0.5	0.02
175-180	0.1	0.00

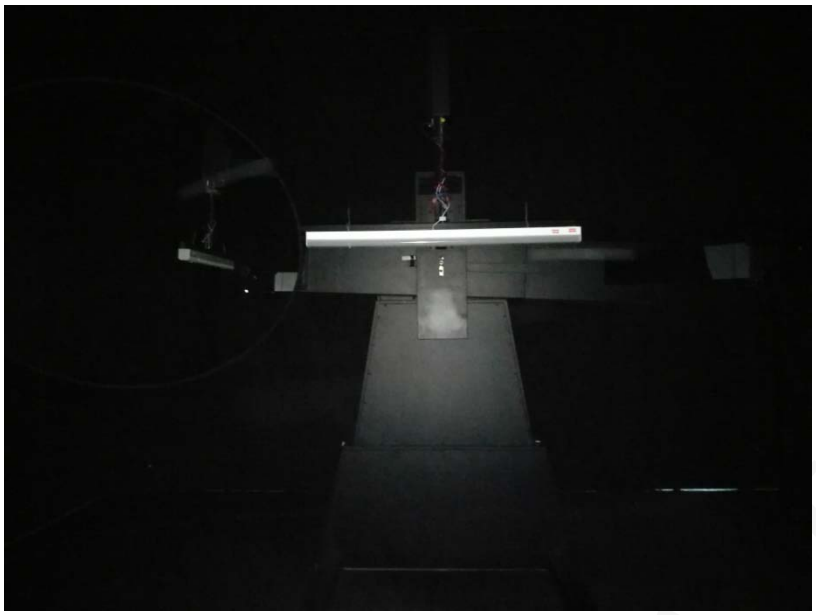
Deg	Flux (lm)	%
0-5	16.9	0.66
0-10	66.9	2.62
0-15	148.5	5.81
0-20	258.7	10.13
0-25	393.8	15.42
0-30	549.4	21.51
0-35	720.5	28.20
0-40	901.8	35.30
0-45	1087.9	42.59
0-50	1273.6	49.86
0-55	1454.0	56.92
0-60	1624.2	63.58
0-65	1779.9	69.68
0-70	1917.5	75.07
0-75	2034.0	79.63
0-80	2128.1	83.31
0-85	2200.6	86.15
0-90	2256.7	88.35
0-95	2303.8	90.19
0-100	2345.5	91.82
0-105	2382.3	93.26
0-110	2414.4	94.52
0-115	2442.4	95.62
0-120	2466.4	96.56
0-125	2486.5	97.34
0-130	2503.2	98.00
0-135	2516.9	98.53
0-140	2528.0	98.96
0-145	2536.6	99.30
0-150	2543.0	99.56
0-155	2547.7	99.74
0-160	2550.8	99.86
0-165	2552.8	99.94
0-170	2553.9	99.98
0-175	2554.3	100.00
0-180	2554.4	100.00

[THD&PF Test]

Test Item	Test Voltage (V)	Frequency (Hz)	Test Result
Total Harmonic Distortion:	120.0	60	6.79%
Total Harmonic Distortion:	277.0	60	8.72%
Power Factor:	277.0	60	0.9267

6. Product Photo

7. Product Test orientation in the Goniophotometer



**********END OF REPORT**********