



LM-79-08 Test Report

for

GREEN CREATIVE LTD

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

LED Tube

Model: 14.5PLL/835/GL/DIR

Laboratory: Leading Testing Laboratories

NVLAP CODE: 200960-0

3rd Floor, Bld. 2, NO. 96 Longchuanwu Rd Qianjiang Economy Dev. Zone, YuhangDist,
Hangzhou, Zhejiang Province, China 311100

Tel: +86571 86376106

www.ledtestlab.com

Report No.: HZ19020002q

The laboratory that conducted the testing detailed in this report has been accredited for SSL by NVLAP.

Review by:

Engineer: April Zou
Feb. 21, 2019

Approved by:



Manager: Jim Zhang
Feb. 21, 2019

Note: This report does not imply product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Test Summary

Sample Tested: 14.5PLL/835/GL/DIR

Luminous Efficacy (Lumens /Watt)	Total Luminous Flux (Lumens)	Power (Watts)/2	Power Factor
103.9	2050.0	19.74	0.9929
CCT (K)	CRI	Stabilization Time (Light & Power)	
3436	82.8	60	

Table 1: Executive Data Summary

Note: The above results are recorded/ derived from measurements made using an Integrating Sphere.

Test specifications:

Date of Receipt : Feb. 01, 2019

Date of Test : Feb. 14, 2019

Test item : Total Luminous Flux, Luminous Distribution Intensity, Luminous Efficacy, Correlated Color Temperature, Color Rendering Index, Chromaticity Coordinate, Electrical parameters

Reference Standard : IESNA LM-79-2008 Approved Method for the Electrical and Photometric Measurements of Solid-State Lighting Products

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Sample Photo

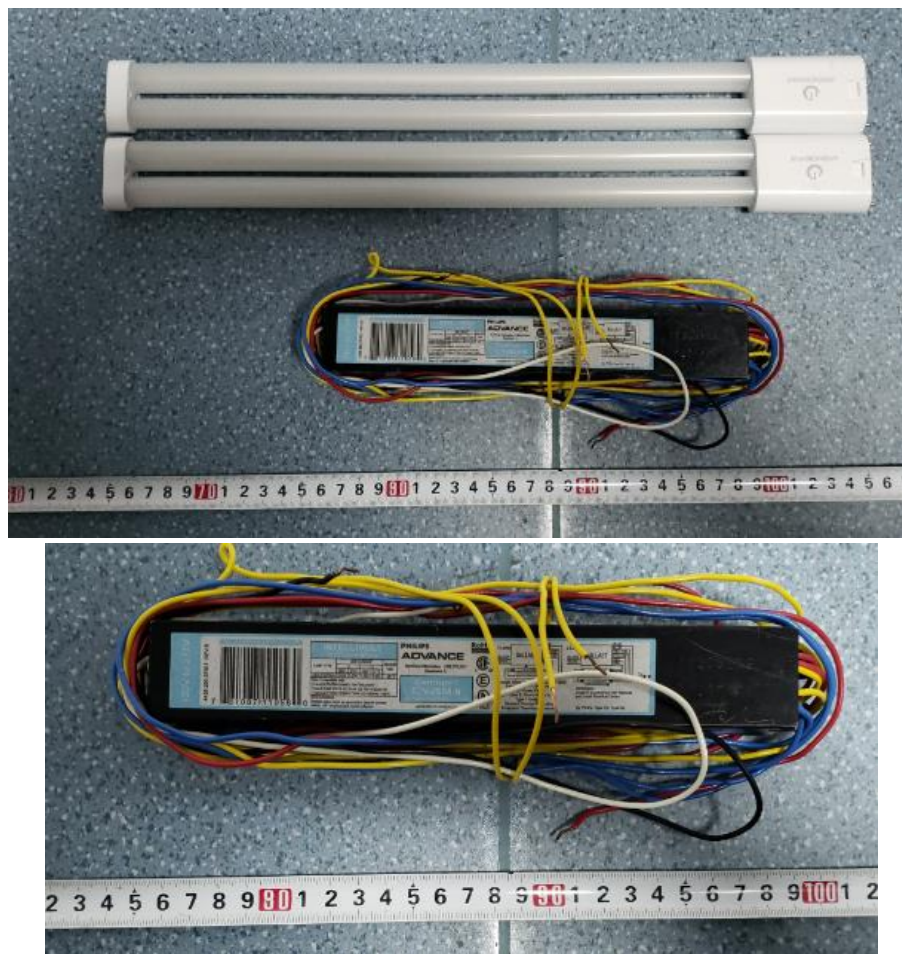


Figure 1- Overview of the sample

Equipment Under Test(EUT)

Name	: LED Tube
Model	: 14.5PLL/835/GL/DIR
Electrical Ratings	: 120-277V, 50/60Hz, 14.5W
Product Description	: 3500K LED Tubes supplied by a high frequency fluorescent lamp ballast: ICN-2S54-N
Manufacturer	: GREEN CREATIVE LTD
Address	: 756 North Zhongshan Rd., Unit B301 Zhabei District, Shanghai

TEST RESULTS

Test ambient temperature was 26.0°C.

Base orientation was Light down. Test was conducted without a dimmer in the circuit.

The stabilization time of the sample was 60 minutes, and the total operating time including stabilization was 70 minutes.

Sphere-Spectroradiometer Method

Parameter	Result	
Test Voltage (V)	120.0	277.0
Voltage frequency (Hz)	60	60
Test Current (A)	0.331	0.152
Power Factor	0.9929	0.9541
Test Power (W)/2	19.74	20.05
THD A%	9.59	12.90
Luminous Efficacy (lm/W)	103.9	103.2
Total Luminous Flux (lm)	2050.0	2069.0
Color Rendering Index (CRI)	82.8	
R9	6.6	
Correlated Color Temperature (CCT)(K)	3436	
Chromaticity Chroma x	0.4101	
Chromaticity Chroma y	0.3957	
Chromaticity Chroma u	0.2367	
Chromaticity Chroma v	0.3427	
Duv	0.0008	
Chromaticity Chroma u'	0.2367	
Chromaticity Chroma v'	0.5140	

Special Color Rendering Indices	
R1	81.2
R2	91.6
R3	95.8
R4	79.7
R5	81.3
R6	89.1
R7	83.4
R8	60.4
R9	6.6
R10	80.3
R11	78.5
R12	67.7
R13	84
R14	98.3
Rf	84
Rg	93

Table 2: Test data per Sphere-Spectroradiometer Method

Note: According to CIE 1976 (u',v') diagram, $u' = u = 4x/(-2x+12y+3)$, $v' = 3v/2 = 9y/(-2x+12y+3)$.

Goniophotometer Method

Test ambient temperature was 24.9°C.

The photometric distance is 2.47m.

Luminous data was taken at 0.5 °vertical intervals and 10 °horizontal intervals.

Parameter	Result
Test Voltage (V)	120.0
Voltage frequency (Hz)	60
Test Current (A)	0.331
Power Factor	0.9927
Test Power (W)/2	19.73
Luminous Efficacy (lm/W)	102.5
Total Luminous Flux (lm)	2022.6
Beam Angle (°)	111.5
Center Beam Candle Power (cd)	583
Spacing Criteria	1.21 (0 °-180 °)/ 1.39 (90 °-270 °)
Zonal Lumens in the 0 °-60 °Zone	65.78%
Zonal Lumens in the 60 °-90 °Zone	22.17%
Zonal Lumens in the 90 °-120 °Zone	7.29%
Zonal Lumens in the 120 °-180 °Zone	4.76%

Table 3: Test data per Goniophotometer Method

Spectral Power Distribution - Sphere Spectroradiometer Method

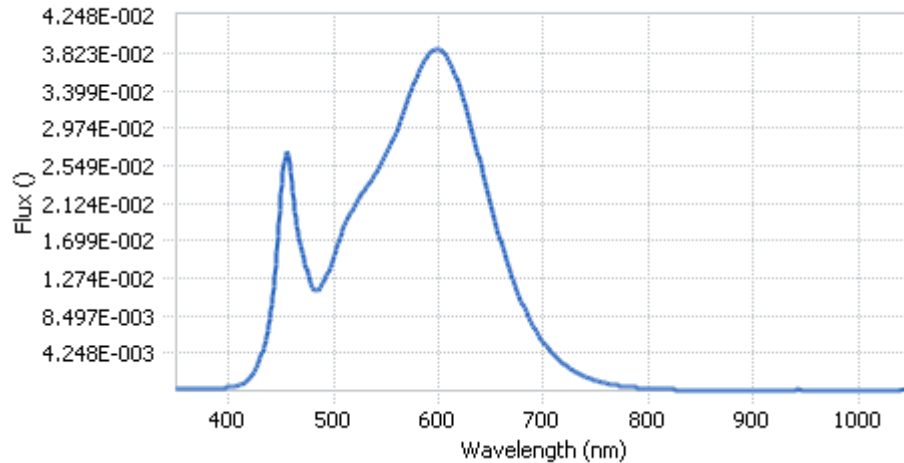
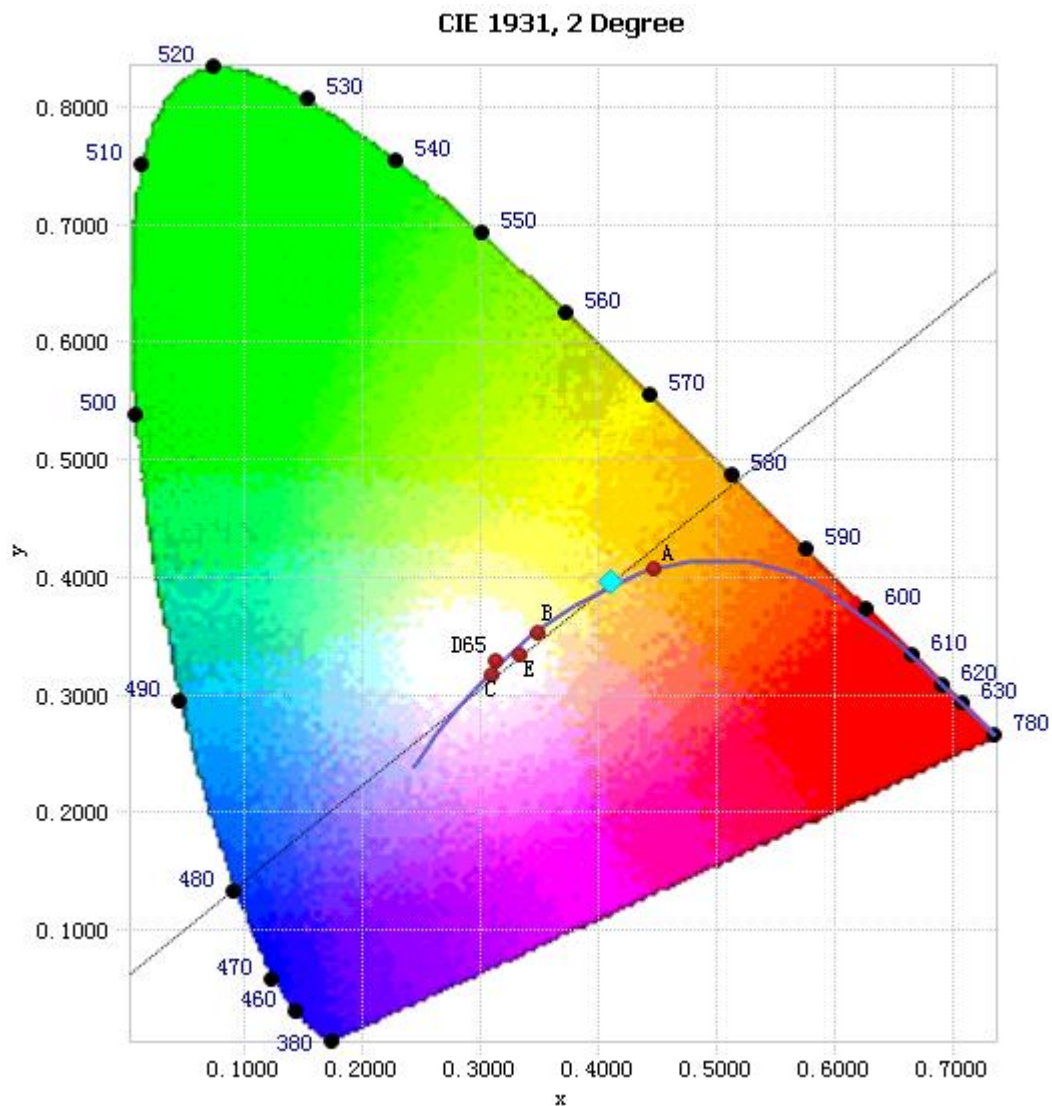


Chart 1: Spectral Power Distribution

Spectral Distribution over Visible Wavelength							
WL(nm)	Radiant(Watts)	WL(nm)	Radiant(Watts)	WL(nm)	Radiant(Watts)	WL(nm)	Radiant(Watts)
380	3.13E-04	485	1.14E-02	590	3.79E-02	695	6.37E-03
385	3.06E-04	490	1.22E-02	595	3.85E-02	700	5.47E-03
390	3.39E-04	495	1.35E-02	600	3.86E-02	705	4.71E-03
395	3.70E-04	500	1.52E-02	605	3.82E-02	710	4.04E-03
400	4.02E-04	505	1.69E-02	610	3.73E-02	715	3.47E-03
405	4.87E-04	510	1.86E-02	615	3.60E-02	720	2.98E-03
410	6.61E-04	515	1.99E-02	620	3.43E-02	725	2.55E-03
415	9.38E-04	520	2.10E-02	625	3.24E-02	730	2.18E-03
420	1.44E-03	525	2.19E-02	630	3.03E-02	735	1.86E-03
425	2.29E-03	530	2.29E-02	635	2.79E-02	740	1.59E-03
430	3.67E-03	535	2.37E-02	640	2.57E-02	745	1.36E-03
435	5.78E-03	540	2.46E-02	645	2.32E-02	750	1.16E-03
440	9.03E-03	545	2.56E-02	650	2.09E-02	755	1.00E-03
445	1.44E-02	550	2.68E-02	655	1.87E-02	760	8.64E-04
450	2.22E-02	555	2.81E-02	660	1.66E-02	765	7.48E-04
455	2.71E-02	560	2.94E-02	665	1.47E-02	770	6.39E-04
460	2.35E-02	565	3.11E-02	670	1.29E-02	775	5.52E-04
465	1.86E-02	570	3.27E-02	675	1.13E-02	780	4.79E-04
470	1.59E-02	575	3.43E-02	680	9.83E-03		
475	1.34E-02	580	3.58E-02	685	8.53E-03		
480	1.16E-02	585	3.72E-02	690	7.37E-03		

Table 4: Spectral Power Distribution Numerical Data per Sphere - Spectroradiometer Method

Chromaticity Diagram - Sphere Spectroradiometer Method



Tristimulus values(x, y): (0.4101, 0.3957)

Chart 2: Chromaticity Diagram per Sphere - Spectroradiometer Method

Note: The location on the diagram of the tristimulus coordinates are indicated by the blue diamond.

Nominal CCT Quadrangles – Sphere Spectroradiometer Method

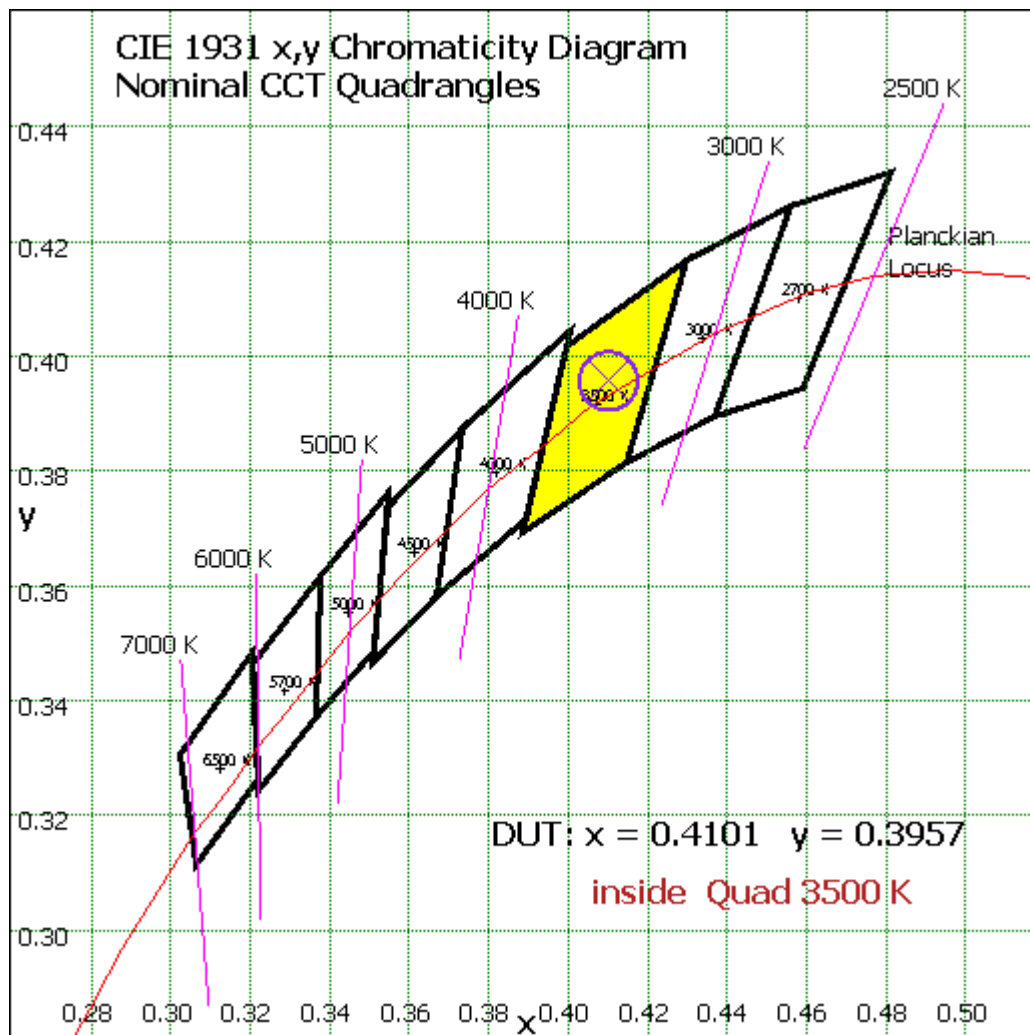


Chart 3: Plot of Lamp x/y coordinates on CIE 1931 Chromaticity Diagram

Color Vector – Sphere Spectroradiometer Method

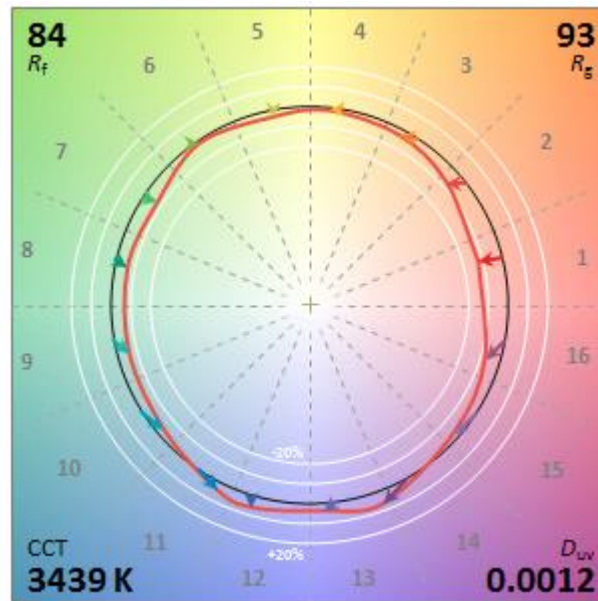


Chart 4: Color Vector Diagram of TM-30-18

Note: The values in this diagram might be a little different from the values in Table 2 due to rounding.

Zonal Lumen Tabulation- Goniophotometer Method

$\gamma(^{\circ})$	Lumens	% Total
0- 10	55.19	2.73%
10- 20	158.453	7.83%
20- 30	241.854	11.96%
30- 40	294.588	14.56%
40- 50	306.975	15.18%
50- 60	273.412	13.52%
60- 70	210.286	10.40%
70- 80	146.213	7.23%
80- 90	91.982	4.55%
90-100	61.701	3.05%
100-110	47.329	2.34%
110-120	38.394	1.90%
120-130	32.405	1.60%
130-140	25.955	1.28%
140-150	18.69	0.92%
150-160	11.809	0.58%
160-170	5.899	0.29%
170-180	1.452	0.07%
Total	2022.6	100%

$\gamma(^{\circ})$	Lumens	% Total
0- 60	1330.472	65.78%
60- 90	448.481	22.17%
0-90	1778.953	87.95%
90- 180	243.634	12.05%
0- 180	2022.6	100%

Table 5: Zonal Lumen

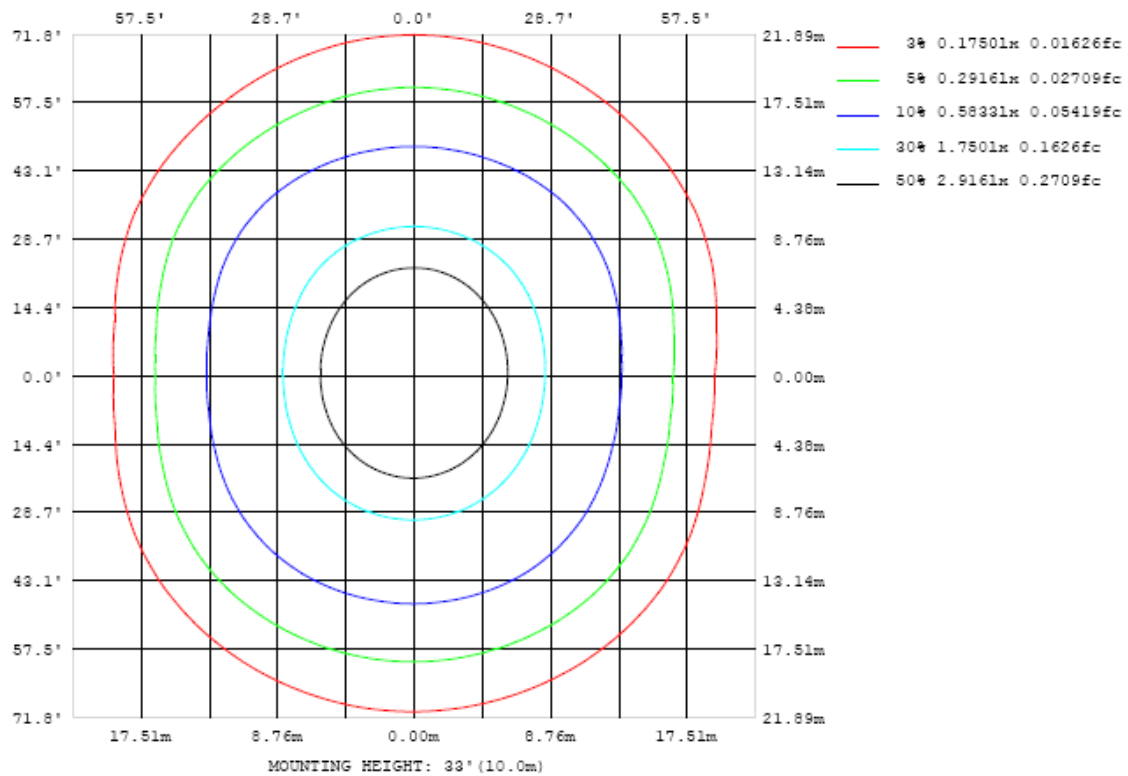


Chart 5: Illuminance Plot (Footcandles)

Luminous Intensity Distribution Plots- Goniophotometer Method

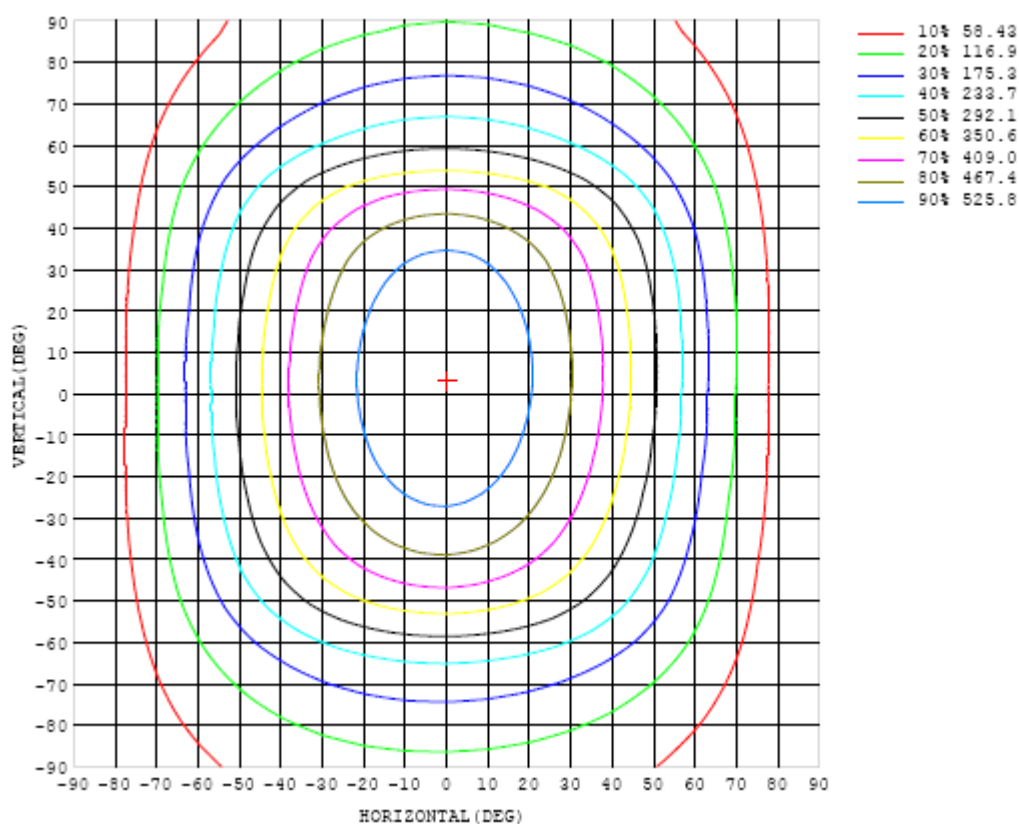


Chart 6: Isocandela Plot

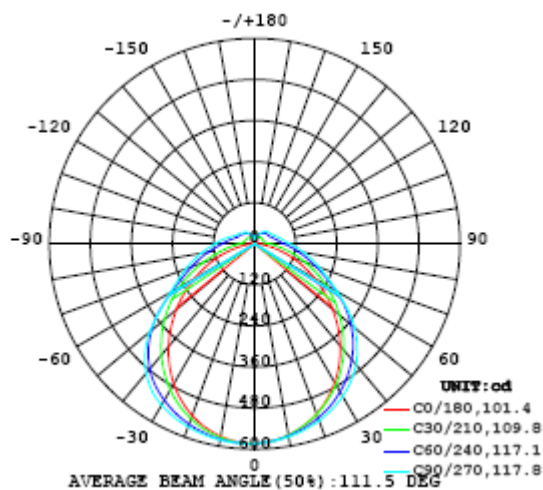


Chart 7: Polar Candela Distribution

Luminous Intensity Data- Goniophotometer Method

Table--1

UNIT: cd

C (DEG) y (DEG)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	583	583	583	583	583	583	583	583	583	583	583	583	583	583	583	583	583	583	583
5	579	579	578	578	578	578	579	579	579	579	579	579	580	579	579	580	580	580	581
10	568	567	567	567	568	569	570	571	572	572	572	572	572	571	571	570	570	571	571
15	551	549	550	551	553	555	558	560	562	563	563	562	561	559	557	556	555	555	556
20	528	527	528	530	534	538	542	546	548	550	550	549	546	543	540	536	534	533	534
25	500	499	501	505	510	516	522	528	532	534	534	532	528	523	518	512	508	506	506
30	468	467	469	475	483	491	499	506	511	514	514	511	506	499	491	483	476	473	473
35	430	429	434	442	452	462	472	480	486	490	489	486	480	471	461	450	440	435	434
40	389	388	394	405	418	430	442	450	457	460	460	456	450	440	427	413	401	393	392
45	344	344	352	365	381	395	407	415	421	424	423	420	414	404	390	374	359	349	346
50	297	298	308	324	342	356	367	373	378	381	381	378	373	364	350	333	315	302	299
55	250	251	263	282	300	314	323	327	329	330	330	330	327	320	308	291	270	255	251
60	203	205	219	239	257	268	274	276	277	278	278	278	276	272	263	247	227	209	203
65	157	160	177	197	212	221	227	230	233	235	234	233	230	225	217	204	185	165	158
70	115	119	138	157	170	180	188	194	199	201	200	197	191	184	174	161	145	124	114
75	76.1	82.3	102	119	133	146	156	164	169	172	171	167	160	150	138	123	107	88.2	75.1
80	42.8	51.5	69.4	86.5	103	117	129	138	143	146	145	141	133	122	108	92.3	74.4	56.9	41.3
85	16.6	25.5	43.0	61.6	78.2	93.3	106	115	121	123	122	118	110	98.7	84.0	68.0	49.0	30.1	16.3
90	1.39	8.90	25.2	42.9	59.6	73.9	86.1	95.1	100	103	102	98.1	90.6	79.3	65.6	49.0	31.4	14.3	1.17
95	1.49	5.04	18.6	34.5	50.0	63.7	74.4	82.8	87.6	89.9	89.4	85.7	78.9	69.3	56.3	41.3	25.1	10.1	2.08
100	3.03	6.34	15.4	29.7	43.7	56.6	67.2	74.4	79.0	81.1	80.7	77.4	71.4	62.1	50.0	36.3	22.0	10.3	3.94
105	3.84	6.73	15.7	26.6	39.2	50.7	60.3	67.4	71.7	72.9	73.6	70.4	64.5	56.0	45.3	33.2	21.5	12.8	5.51
110	5.25	9.58	17.2	25.8	36.1	46.2	54.7	61.0	65.1	67.0	66.6	63.9	58.8	51.3	42.0	31.9	23.3	14.8	7.18
115	6.61	11.1	18.4	26.7	34.8	43.2	50.4	55.9	59.4	61.2	60.8	58.6	54.3	48.0	40.4	33.1	24.2	15.3	8.79
120	7.85	12.3	19.1	27.5	35.1	42.0	47.7	52.3	55.2	56.6	56.5	54.8	51.3	46.5	40.7	33.9	24.5	17.4	10.5
125	9.08	13.5	19.5	26.7	35.1	41.7	46.8	50.4	52.9	54.1	54.0	52.6	50.1	46.1	40.7	34.2	25.2	17.3	11.4
130	10.0	14.2	19.7	26.1	33.8	40.8	45.9	49.2	51.4	52.5	52.5	51.3	48.9	45.1	40.2	33.8	24.4	17.2	12.3
135	10.8	14.3	19.2	25.8	31.6	38.6	43.8	47.3	49.5	50.6	50.5	49.4	47.1	43.7	39.3	32.6	24.0	16.8	12.5
140	11.1	14.3	19.0	24.7	30.8	35.4	40.4	43.9	46.0	47.3	47.1	46.5	44.7	41.8	36.7	30.1	22.6	17.1	13.2
145	11.5	14.7	18.9	22.8	29.1	33.5	36.8	40.0	42.0	43.1	43.3	43.3	41.6	38.2	33.6	28.2	20.6	16.3	13.8
150	11.9	14.9	18.2	21.4	26.9	31.3	34.1	36.3	37.7	38.5	38.7	38.3	36.8	34.3	31.0	24.7	20.6	18.6	14.7
155	11.9	14.1	17.8	21.0	24.2	28.3	31.3	32.9	34.1	34.8	34.8	34.2	33.1	31.1	28.5	23.9	21.4	19.5	15.5
160	12.3	14.7	17.8	20.7	22.7	24.8	26.9	28.4	29.7	30.5	30.5	29.9	28.0	26.5	25.1	23.4	21.6	18.7	15.5
165	14.4	16.6	18.1	19.8	21.7	22.3	22.4	22.0	20.9	21.2	21.1	22.0	23.8	24.7	24.2	21.7	19.9	17.4	15.2
170	12.5	14.4	17.8	19.7	21.1	21.9	22.3	22.7	22.9	23.4	23.7	23.1	22.4	21.8	21.0	20.2	19.4	16.8	14.2
175	10.9	11.0	11.3	12.9	17.3	20.1	20.7	21.0	21.2	21.2	20.9	20.6	20.2	19.2	16.8	14.3	12.9	12.6	12.4
180	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05

Table 6: Luminous Intensity Data

Table--2

UNIT: cd

C (DEG) y (DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	583	583	583	583	583	583	583	583	583	583	583	583	583	583	583	583	583		
5	581	581	582	583	583	584	584	584	584	584	584	583	582	581	581	580	580		
10	572	573	575	577	578	580	581	582	582	581	580	579	577	575	572	571	569		
15	557	559	562	566	569	572	575	576	577	576	574	571	567	563	559	555	553		
20	536	540	544	550	556	561	565	568	569	568	564	559	553	547	541	535	531		
25	509	514	521	530	538	546	552	557	558	556	552	544	536	527	518	510	504		
30	476	483	493	505	517	528	536	542	544	542	536	526	515	503	491	481	473		
35	439	448	461	476	492	506	516	522	524	522	515	504	491	476	461	447	436		
40	397	408	424	444	463	477	486	492	494	491	485	476	463	446	426	409	396		
45	352	366	386	408	427	440	448	452	454	451	446	439	427	411	389	368	352		
50	306	322	345	367	383	394	400	401	401	400	398	394	385	370	349	325	307		
55	258	277	302	321	334	339	338	337	337	336	336	338	335	324	306	282	261		
60	211	232	255	271	278	280	282	284	285	283	282	280	278	273	260	238	215		
65	166	188	207	219	226	233	240	245	246	244	240	234	227	221	211	194	171		
70	124	145	161	172	184	196	206	212	214	212	207	198	187	176	165	151	130		
75	85.3	105	120	136	151	165	176	183	185	183	177	167	155	140	125	110	92.4		
80	52.2	69.2	87.0	105	122	138	150	157	160	157	151	141	126	110	92.4	74.8	58.2		
85	24.6	42.0	61.0	80.0	97.8	113	125	132	135	133	127	116	102	85.0	66.6	47.9	30.0		
90	9.31	26.4	45.1	63.7	80.9	95.8	107	114	116	114	109	98.3	84.5	67.9	49.8	31.2	13.8		
95	6.47	20.3	37.2	54.4	70.3	83.8	93.9	100	102	101	95.3	86.1	73.5	58.2	41.3	23.9	8.45		
100	8.80	18.4	32.0	46.6	60.2	71.9	80.9	86.3	88.2	86.7	82.0	73.8	62.6	49.2	34.6	19.8	8.45		
105	8.48	18.5	30.1	41.9	53.3	63.1	70.3	74.7	76.2	75.0	71.0	64.2	54.8	43.3	30.6	18.5	8.32		
110	8.60	18.4	30.2	39.7	47.9	56.4	62.7	66.3	67.5	66.4	63.0	57.0	48.6	39.6	29.0	17.2	7.60		
115	9.15	18.1	28.8	39.6	46.9	51.9	56.0	58.8	59.8	58.7	55.9	51.8	46.1	37.7	27.2	16.9	8.14		
120	9.91	16.9	28.2	37.7	45.5	50.9	53.9	55.9	56.6	56.0	53.8	49.9	43.8	35.4	27.4	16.9	8.46		
125	10.7	16.3	27.7	35.7	42.2	48.1	52.1	53.8	54.3	53.4	50.9	46.4	40.7	34.7	27.4	16.6	8.83		
130	11.6	15.8	25.8	35.3	40.5	44.2	47.8	49.4	49.7	48.7	46.5	43.3	39.7	35.1	25.8	16.3	9.38		
135	12.0	15.7	24.2	32.7	39.4	43.0	44.5	45.8	46.2	45.5	44.3	42.6	39.4	32.9	24.5	15.8	9.84		
140	12.6	15.5	22.7	30.2	36.1	40.6	43.3	44.7	45.1	44.6	43.3	40.7	36.3	30.5	23.4	15.3	10.3		
145	12.9	15.3	21.6	28.1	33.1	36.9	39.3	40.9	41.4	40.9	39.3	36.8	33.3	28.6	22.2	14.9	10.8		
150	13.3	15.0	20.1	26.2	30.4	33.6	35.5	36.5	36.9	36.5	35.4	33.6	31.0	27.1	21.1	14.4	11.1		
155	13.7	14.8	18.1	23.5	28.1	30.6	32.2	33.0	33.3	33.0	32.3	31.0	29.1	25.6	19.8	13.7	11.3		
160	14.1	14.7	15.6	19.0	24.2	26.2	28.5	30.0	30.4	30.3	29.9	29.1	27.2	23.2	17.6	13.0	11.6		
165	14.3	14.5	15.2	16.1	20.4	24.5	25.1	24.3	24.2	26.5	26.3	25.3	23.2	19.9	15.6	12.5	11.8		
170	13.4	13.7	13.7	14.0	14.0	15.2	18.1	22.4	23.0	21.9	21.3	20.8	16.5	12.7	12.0	11.6	11.9		
175	12.2	12.5	12.4	12.3	12.4	12.5	12.3	10.8	5.60	3.22	8.17	9.38	10.2	10.7	11.1	11.1	11.0		
180	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05	5.05		

Table 7: Luminous Intensity Data

EQUIPMENT LIST

Test Equipment	Model	Equipment No.	Calibration Date	Calibration Due date
Goniophotometer system	GO-R5000	HZTE011-01	Aug. 14, 2018	Aug. 13, 2019
Digital Power Meter	PF2010A	HZTE028-01	Sep. 12, 2018	Sep. 11, 2019
AC Power Supply	DPS1060	HZTE001-06	Aug. 09, 2018	Aug. 08, 2019
DC Power Supply	WY12010	HZTE004-03	Aug. 09, 2018	Aug. 08, 2019
Temperature recorder	JM624U	HZTE018-08	Aug. 09, 2018	Aug. 08, 2019
Temperature and humidity recorder	JR900	HZTE018-01	Aug. 09, 2018	Aug. 08, 2019
Standard source	D908	HZTE012-01	Aug. 14, 2018	Aug. 13, 2019
Integrate Sphere system	3M	HZTE015-04	Aug. 16, 2018	Aug. 15, 2019
Digital Power Meter	WT210	HZTE008-01	Aug. 02, 2018	Aug. 01, 2019
AC Power Supply	PCR 500L	HZTE001-07	Aug. 09, 2018	Aug. 08, 2019
DC Power Supply	IT6154	HZTE004-04	Aug. 09, 2018	Aug. 08, 2019
Standard source	SCL-1400	HZTE012-02	Aug. 16, 2018	Aug. 15, 2019
Temperature and humidity recorder	JR900	HZTE018-02	Aug. 09, 2018	Aug. 08, 2019
Temperature Meter	TES1310	HZTE017-01	Aug. 09, 2018	Aug. 08, 2019

Table 8: Test Equipment List

TEST METHODS

Seasoning of SSL Product

For the purpose of rating new SSL products, SSL products shall be tested with no seasoning. Therefore, no seasoning was performed.

Sphere-Spectroradiometer Method- Photometric and Electrical Measurements

A Labsphere Model CDS 2100 Spectroradiometer and Two Meter Sphere was used to measure correlated color temperature, chromaticity coordinates, and the color rendering index for each SSL unit. The coating reflectance of each sphere is 98%. The measure geometry is 4π . Self-absorption correction is conducted in testing. Bandwidth of spectroradiometer is 350nm-1050nm.

Ambient temperature was measured at a position inside the sphere. Each SSL unit was operated on the client provided driver at the rated input voltage in its designated orientation.

The stabilization time typically ranges from 30 min (small integrated LED lamps) to 2 or more hours for large SSL luminaires). It can be judged that stability is reached when the variation (maximum – minimum) of at least 3 readings of the light output and electrical power over a period of 30 min, taken 15 minutes apart, is less than 0.5 %.

Electrical measurements including voltage, current, and power were measured using the Yokogawa Power Analyzer.

The standard reference of the integrated sphere system is halogen incandescent lamp, the intensity distribution type is omni-directional, and is traceable to the National Institute of Standards and Technology.

The uncertainty of integrating sphere system reported in this document is expanded uncertainty is 2.1% with a coverage factor $k=2$.

Goniophotometer Method

Photometric and Electrical Measurements

An EVERFINE Type C Model GO-R5000 Goniophotometer was used to measure the intensity at each angle of distribution for each sample. The photometric distance is 2.475m for near-field measurement or 30m for far-field measurement. Bandwidth of spectroradiometer is 380nm-780nm.

Ambient temperature was measured at the same height of the sample mounted on the Goniophotometer equipment. Each SSL unit was operated on the client provided driver at the rated input voltage in its designated orientation.

The stabilization time typically ranges from 30 min (small integrated LED lamps) to 2 or more hours for large SSL luminaires). It can be judged that stability is reached when the variation (maximum – minimum) of at least 3 readings of the light output and electrical power over a period of 30 min, taken 15 minutes apart, is less than 0.5 %.

Electrical measurements including voltage, current, and power were measured using the Everfine Digital Power Meter.

Some graphics were created with Photometric Plus software.

The standard reference of the Goniophotometer system is halogen incandescent lamp, the intensity distribution type is omni-directional, and is traceable to the National Institute of Metrology P.R. China.

The uncertainty of goniophotometer system reported in this document is expanded uncertainty is 2.3% with a coverage factor $k=2$.

Color Characteristics Measurements

The color characteristics of SSL products include chromaticity coordinates, correlated color temperature, and color rendering index. These characteristics of SSL products may be spatially non-uniform, and thus, in order that they can be specified accurately, the color quantities shall be measured as values that are spatially average, weighted to intensity, over the angular range where light is intentionally emitted from the SSL product. The color characteristics measurements are using gonio-spectroradiometer.

Color Spatial Uniformity

The characteristics of SSL products may be spatially non-uniform, the chromaticity coordinate shall be measured at two vertical planes ($C=0^\circ/180^\circ$ and $C=90^\circ/270^\circ$) and at 10° or less intervals for vertical angle until the light output dropped to below 10% of the peak intensity. The averaged weighted chromaticity coordinate

was calculated from these points. The data was then analyzed to check for delta color differences of the u' , v' chromaticity coordinates. The spatial non-uniformity of chromaticity, $\Delta u'v'$, is determined as the maximum deviation (distance on the CIE (u' , v') diagram) among all measured points from the spatially averaged chromaticity coordinate.

The geometry for the chromaticity measurement using gonio-spectroradiometer is shown as following.



*** End of Report ***

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