

LM-79-08 Test Report

for

GREEN CREATIVE LTD

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

Horizontally-Mounted Lamps

Model: 14.5PLH/830/DIR

Laboratory: Leading Testing Laboratories

NVLAP CODE: 200960-0

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Report No.: HZ18050045b

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

Review by:



Engineer: April Zou
Jun. 05, 2018

Approved by:



Manager: Jim Zhang
Jun. 05, 2018

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: 14.5PLH/830/DIR

Luminous Efficacy (Lumens /Watt)	Total Luminous Flux (Lumens)	Power (Watts)/2	Power Factor
107.7	1845.0	17.13	0.9957
CCT (K)	CRI	Stabilization Time (Light & Power)	
3003	83.4	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 : May 25, 2018

Date of Test : May 30, 2018

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 Photos

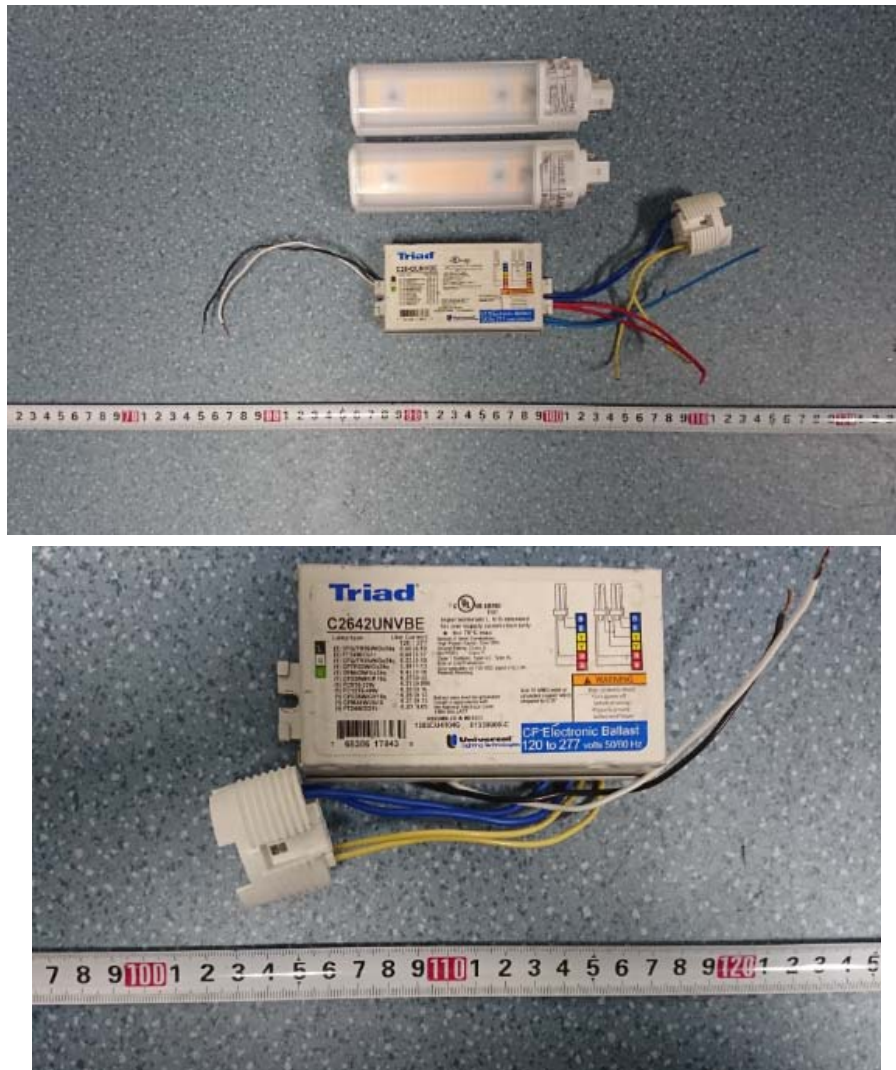


Figure 1- Overview of the sample

Equipment Under Test (EUT)

Name	: Horizontally-Mounted Lamps
Model	: 14.5PLH/830/DIR
Electrical Ratings	: 120-277V, 50/60Hz, 14.5W
Product Description	: 3000K LED Tubes supplied by a high frequency fluorescent lamp ballast:
	C2642UNVBE
Manufacturer	: GREEN CREATIVE LTD
Address	: 756 North Zhongshan Rd., Unit B301 Zhabei District, Shanghai

TEST RESULTS

Test ambient temperature was 25.0°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)	0.287	0.124
Power Factor	0.9957	0.9875
Test Power (W)/2	17.13	16.98
THD A%	6.46	7.42
Luminous Efficacy (lm/W)	107.7	108.7
Total Luminous Flux (lm)	1845.0	1845.0
Color Rendering Index (CRI)	83.4	
R9	12.2	
Correlated Color Temperature (CCT)(K)	3003	
Chromaticity Chroma x	0.4337	
Chromaticity Chroma y	0.3981	
Chromaticity Chroma u	0.2511	
Chromaticity Chroma v	0.3457	
Duv	0.0021	
Chromaticity Chroma u'	0.2511	
Chromaticity Chroma v'	0.5185	

Special Color Rendering Indices	
R1	83.2
R2	94.7
R3	92.6
R4	79.9
R5	83.7
R6	93.4
R7	80.8
R8	59.3
R9	12.2
R10	87.6
R11	79.4
R12	76
R13	86.4
R14	96.7
Rf	83
Rg	94

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 24.8°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)	0.284
Power Factor	0.9957
Test Power (W)/2	17.00
Luminous Efficacy (lm/W)	109.7
Total Luminous Flux (lm)	1864.6
Beam Angle (°)	105.6
Center Beam Candle Power (cd)	661
Spacing Criteria	1.20 (0°-180°)/ 1.26 (90°-270°)
Zonal Lumens in the 0°-60°Zone	76.29%
Zonal Lumens in the 60°-90°Zone	20.84%
Zonal Lumens in the 90°-120°Zone	2.48%
Zonal Lumens in the 120°-180°Zone	0.38%

Table 3: Test data per Goniophotometer Method

Spectral Power Distribution - Sphere Spectroradiometer Method

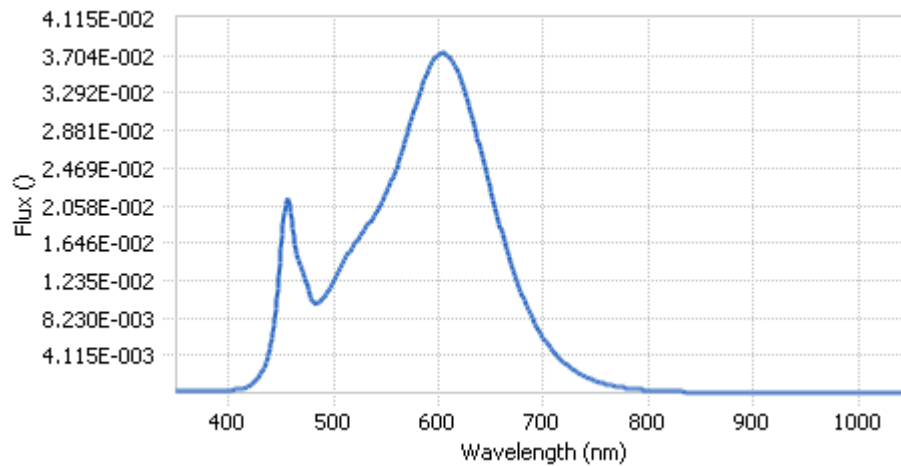
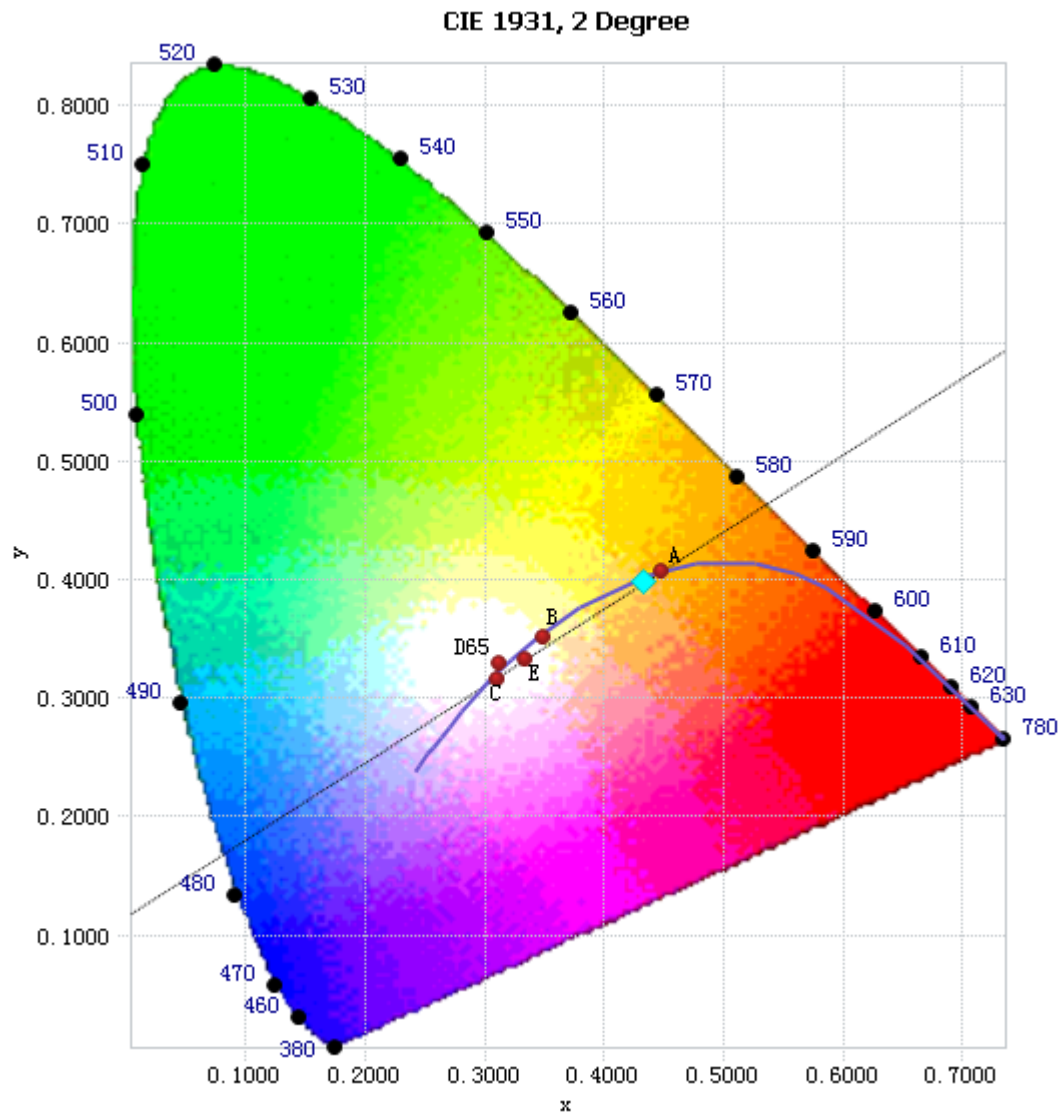


Chart 1: Spectral Power Distribution

Spectral Distribution over Visible Wavelength							
WL(nm)	Radiant(Watts)	WL(nm)	Radiant(Watts)	WL(nm)	Radiant(Watts)	WL(nm)	Radiant(Watts)
380	2.44E-04	485	9.88E-03	590	3.54E-02	695	6.94E-03
385	2.38E-04	490	1.04E-02	595	3.66E-02	700	6.02E-03
390	2.75E-04	495	1.12E-02	600	3.72E-02	705	5.19E-03
395	2.94E-04	500	1.23E-02	605	3.74E-02	710	4.45E-03
400	3.19E-04	505	1.35E-02	610	3.70E-02	715	3.82E-03
405	3.51E-04	510	1.46E-02	615	3.60E-02	720	3.29E-03
410	4.38E-04	515	1.55E-02	620	3.47E-02	725	2.83E-03
415	5.63E-04	520	1.64E-02	625	3.31E-02	730	2.43E-03
420	8.27E-04	525	1.72E-02	630	3.11E-02	735	2.06E-03
425	1.25E-03	530	1.81E-02	635	2.90E-02	740	1.78E-03
430	2.02E-03	535	1.88E-02	640	2.67E-02	745	1.52E-03
435	3.25E-03	540	1.97E-02	645	2.44E-02	750	1.31E-03
440	5.41E-03	545	2.08E-02	650	2.21E-02	755	1.12E-03
445	9.18E-03	550	2.19E-02	655	1.99E-02	760	9.64E-04
450	1.58E-02	555	2.32E-02	660	1.78E-02	765	8.18E-04
455	2.12E-02	560	2.47E-02	665	1.57E-02	770	7.06E-04
460	1.90E-02	565	2.65E-02	670	1.39E-02	775	6.08E-04
465	1.52E-02	570	2.84E-02	675	1.22E-02	780	5.29E-04
470	1.37E-02	575	3.03E-02	680	1.07E-02		
475	1.16E-02	580	3.22E-02	685	9.27E-03		
480	1.00E-02	585	3.40E-02	690	8.06E-03		

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

Chromaticity Diagram - Sphere Spectroradiometer Method



Tristimulus values(x, y): (0.4337, 0.3981)

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

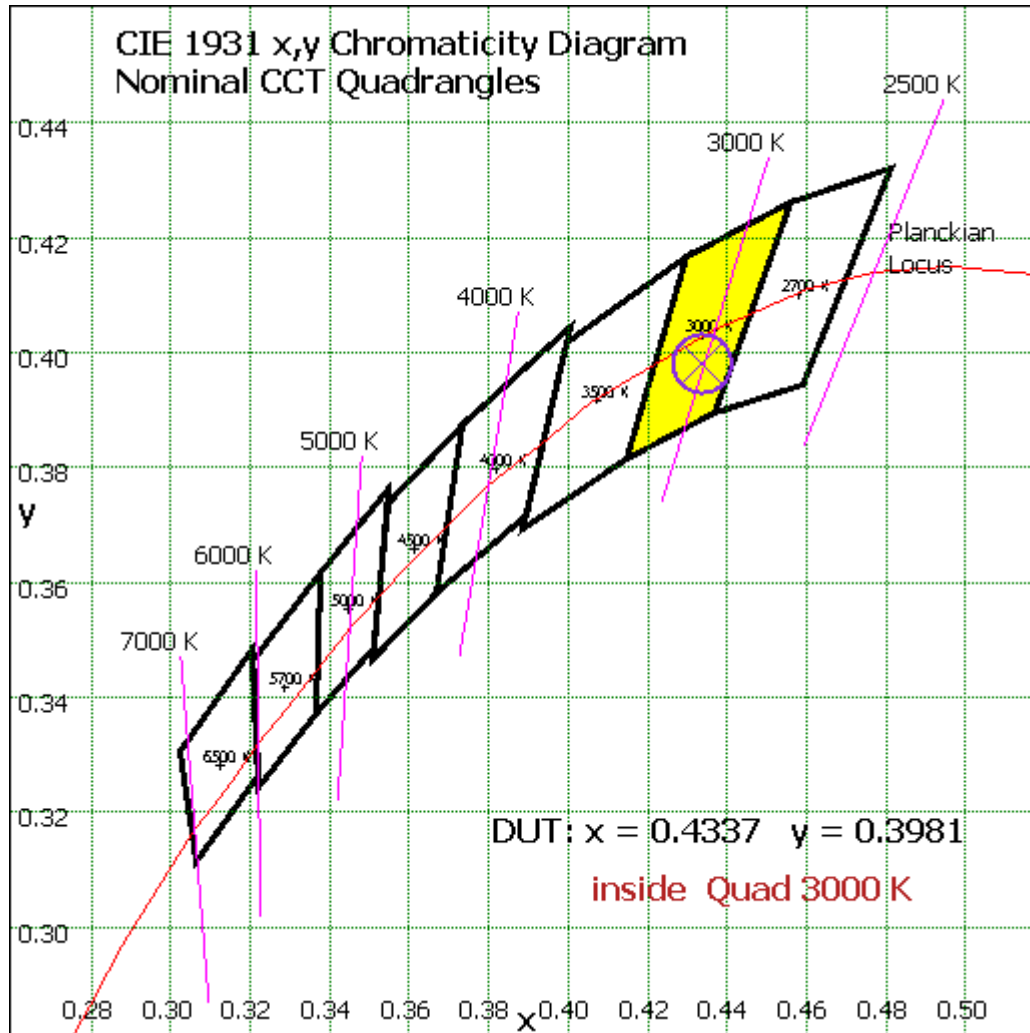


Chart 3: Plot of Lamp x/y coordinates on CIE 1931 Chromaticity Diagram

Zonal Lumen Tabulation- Goniophotometer Method

$\gamma(^{\circ})$	Lumens	% Total
0- 10	62.85	3.37%
10- 20	180.671	9.69%
20- 30	270.139	14.49%
30- 40	317.693	17.04%
40- 50	316.928	17.00%
50- 60	274.243	14.71%
60- 70	205.846	11.04%
70- 80	126.041	6.76%
80- 90	56.78	3.05%
90-100	25.017	1.34%
100-110	13.616	0.73%
110-120	7.667	0.41%
120-130	3.983	0.21%
130-140	1.821	0.10%
140-150	0.702	0.04%
150-160	0.329	0.02%
160-170	0.21	0.01%
170-180	0.074	0.00%
Total	1864.6	100%

$\gamma(^{\circ})$	Lumens	% Total
0- 60	1422.524	76.29%
60- 90	388.667	20.84%
0-90	1811.191	97.14%
90- 180	53.419	2.86%
0- 180	1864.6	100%

Table 5: Zonal Lumen Data

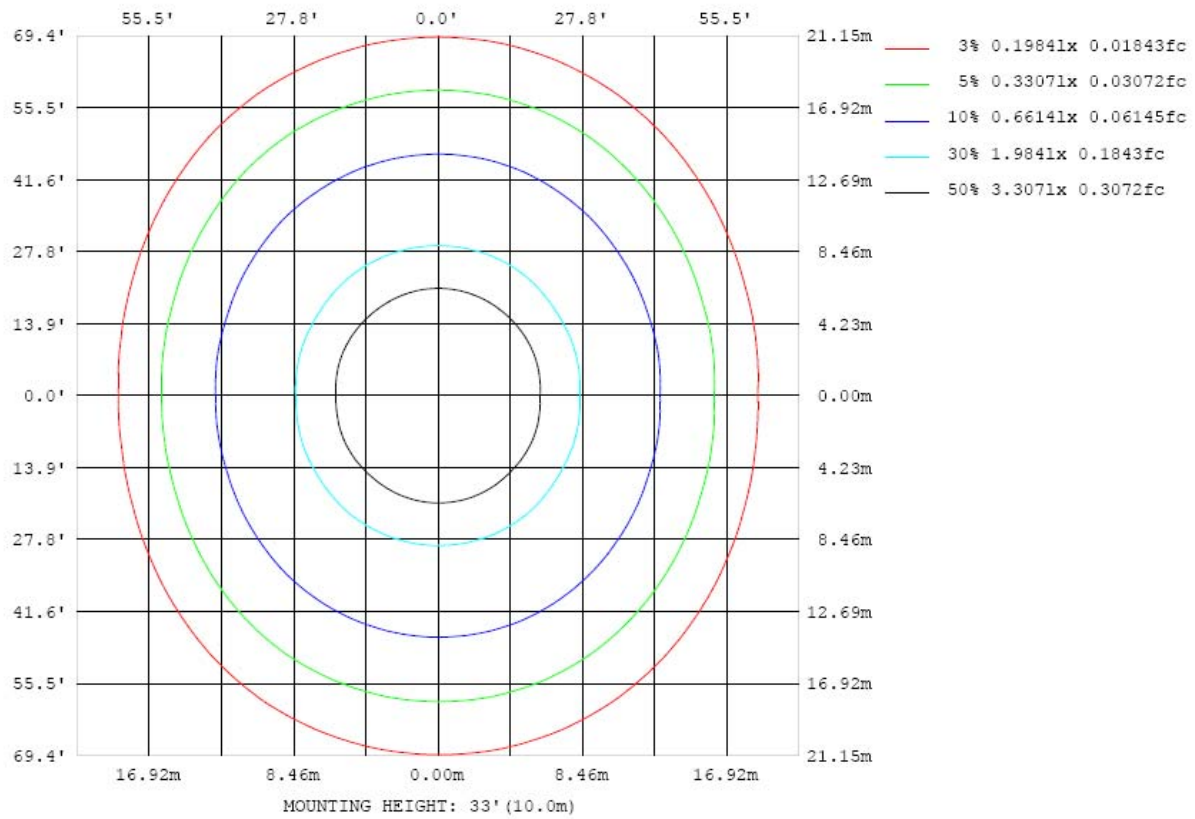


Chart 4: Illuminance Plot (Footcandles)

Luminous Intensity Distribution Plots- Goniophotometer Method

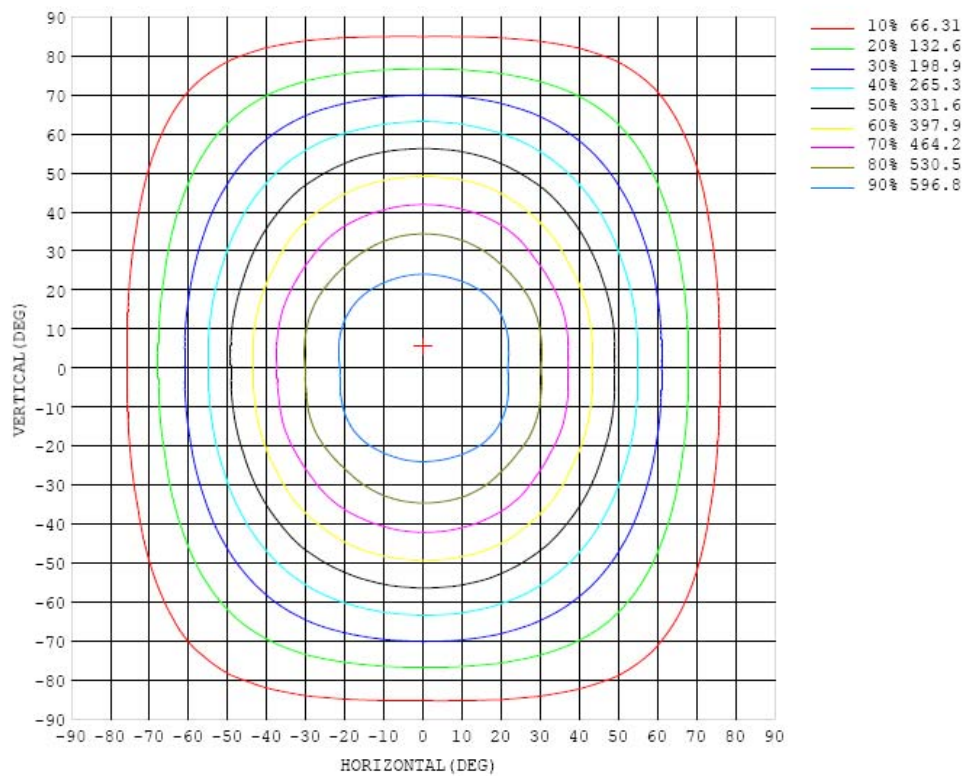


Chart 5: Isocandela Plot

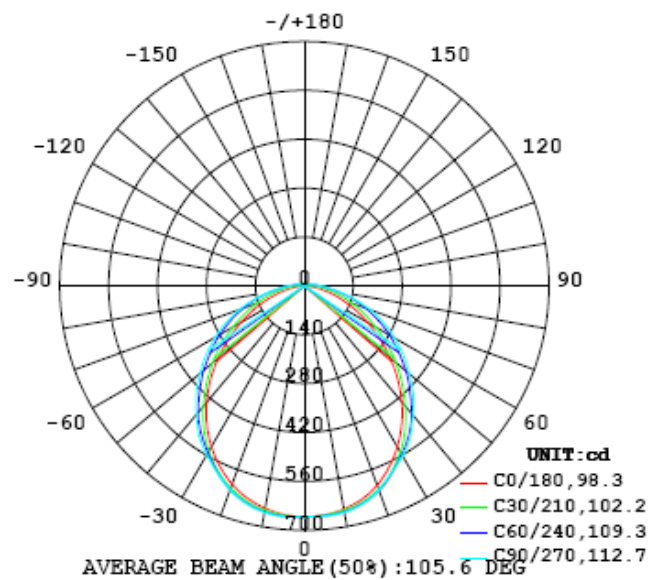


Chart 6: Polar Candela Distribution

Luminous Intensity Data- Goniophotometer Method

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180
0	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661
5	658	658	658	659	659	660	661	661	662	662	662	661	661	660	659	658	658	658	658
10	649	649	651	653	654	656	657	658	659	659	659	658	657	655	653	650	648	647	647
15	633	634	637	641	643	645	645	646	646	646	646	645	644	642	640	637	633	630	630
20	608	610	616	620	623	624	624	624	623	623	623	623	622	621	618	615	610	605	605
25	573	577	584	589	592	594	592	591	591	591	591	590	589	590	588	585	579	573	572
30	532	537	544	549	551	553	557	560	561	562	561	557	553	549	548	546	541	534	532
35	485	491	498	502	504	512	521	526	528	528	527	523	517	508	502	500	496	490	487
40	433	440	446	449	457	469	477	481	482	483	481	478	474	466	456	448	446	439	436
45	378	385	390	395	408	418	427	436	440	441	439	433	424	416	407	394	390	384	380
50	320	327	331	342	354	367	379	387	392	392	390	385	377	366	353	340	330	325	322
55	264	270	275	288	301	316	329	339	344	346	343	337	327	315	300	285	273	268	265
60	209	215	223	236	251	266	281	291	297	298	295	289	279	265	249	233	220	212	210
65	159	164	174	188	204	219	233	243	249	250	248	241	232	218	201	185	171	161	159
70	113	118	130	145	161	175	187	195	200	200	199	194	186	173	158	142	126	115	112
75	72.2	78.3	90.9	107	121	132	141	147	150	150	149	146	140	131	118	103	87.1	74.9	71.5
80	39.5	45.8	58.7	72.4	84.5	93.1	99.0	103	104	104	103	102	98.0	91.4	81.9	70.4	54.9	42.3	37.7
85	15.7	22.0	33.8	45.8	55.3	61.8	66.1	68.2	68.6	68.2	68.4	67.5	65.6	60.7	53.3	41.2	26.8	18.5	15.2
90	3.02	8.58	18.5	28.3	36.2	41.6	44.9	46.3	46.4	46.1	46.5	46.5	45.0	41.3	35.3	25.3	14.9	5.85	1.62
95	0.57	3.48	10.3	18.3	25.1	30.0	32.9	34.2	34.3	34.1	34.5	34.5	33.2	30.0	24.6	16.4	8.21	2.40	0.12
100	0.31	1.80	6.13	12.3	18.0	22.4	25.1	26.4	26.7	26.6	26.9	26.7	25.4	22.5	17.7	11.4	4.93	1.06	0.11
105	0.16	0.97	3.82	8.46	13.3	17.2	19.8	21.1	21.5	21.5	21.7	21.4	20.0	17.2	13.0	7.98	3.02	0.61	0.14
110	0.15	0.63	2.49	5.88	9.83	13.3	15.7	17.0	17.6	17.6	17.6	17.2	15.8	13.2	9.52	4.48	2.02	0.39	0.18
115	0.19	0.46	1.67	4.15	7.21	10.1	12.3	13.7	14.3	14.4	14.3	13.7	12.3	9.62	6.15	3.57	1.17	0.29	0.21
120	0.23	0.35	1.14	2.91	5.24	7.60	9.50	10.8	11.4	11.5	11.4	10.7	9.05	6.81	4.79	2.38	0.90	0.23	0.26
125	0.27	0.33	0.81	2.02	3.77	5.59	7.15	8.29	8.89	9.00	8.82	7.93	6.66	5.13	3.36	1.41	0.56	0.28	0.31
130	0.32	0.35	0.63	1.38	2.64	4.04	5.22	6.16	6.68	6.79	6.42	5.85	4.77	3.62	1.86	0.74	0.41	0.33	0.38
135	0.38	0.40	0.56	0.94	1.75	2.79	3.71	4.43	4.81	4.79	4.60	4.16	3.45	2.02	1.26	0.62	0.44	0.39	0.48
140	0.45	0.46	0.50	0.69	1.13	1.77	2.48	2.95	3.26	3.34	3.15	2.57	2.00	1.43	0.94	0.56	0.47	0.45	0.58
145	0.51	0.50	0.52	0.58	0.74	1.10	1.40	1.86	2.13	2.11	1.91	1.57	1.16	0.86	0.64	0.50	0.48	0.48	0.65
150	0.57	0.56	0.54	0.56	0.60	0.64	0.85	1.04	1.12	1.10	1.04	0.94	0.77	0.59	0.54	0.52	0.51	0.51	0.71
155	0.64	0.65	0.61	0.58	0.59	0.61	0.61	0.63	0.67	0.67	0.62	0.58	0.56	0.58	0.56	0.55	0.55	0.55	0.74
160	0.72	0.74	0.73	0.69	0.65	0.62	0.61	0.61	0.60	0.59	0.59	0.59	0.59	0.60	0.59	0.59	0.59	0.59	0.76
165	0.79	0.82	0.84	0.83	0.79	0.75	0.71	0.67	0.64	0.62	0.62	0.62	0.62	0.63	0.63	0.63	0.63	0.63	0.77
170	0.86	0.89	0.92	0.94	0.94	0.90	0.85	0.80	0.76	0.72	0.69	0.67	0.66	0.67	0.67	0.67	0.67	0.67	0.77
175	0.73	0.74	0.88	0.94	0.94	0.93	0.92	0.89	0.87	0.84	0.82	0.80	0.78	0.77	0.77	0.76	0.75	0.74	0.75
180	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68

Table 6: Luminous Intensity Data

Table--2

UNIT: cd

C (DEG) γ (DEG)	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350		
0	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661	661		
5	658	659	660	660	661	662	663	663	663	663	663	662	662	661	660	659	659		
10	648	650	652	654	656	657	658	659	659	659	658	658	657	656	654	652	650		
15	632	635	638	641	642	644	645	645	645	645	645	645	644	643	641	638	635		
20	608	613	616	619	621	621	622	622	622	622	622	623	624	622	620	616	611		
25	576	582	586	588	589	589	589	590	591	590	591	592	593	592	589	584	578		
30	538	543	547	549	550	553	555	558	559	559	557	555	553	552	549	544	538		
35	493	499	502	503	509	516	521	525	526	525	523	518	511	504	502	498	492		
40	443	448	450	456	466	473	477	479	481	480	479	476	467	455	449	447	441		
45	387	392	397	409	417	424	431	436	438	437	432	425	416	406	395	391	386		
50	329	333	343	355	367	377	383	387	389	388	384	377	364	352	341	332	328		
55	271	276	289	302	316	327	336	342	344	342	336	325	313	299	287	275	271		
60	215	223	236	251	267	280	287	293	295	294	287	277	263	248	234	223	216		
65	164	174	188	204	219	232	240	246	247	246	240	230	216	202	187	174	165		
70	118	130	145	161	174	185	192	197	198	197	192	184	172	159	144	129	119		
75	77.8	90.6	106	120	132	140	145	148	148	148	145	139	130	119	105	90.1	78.5		
80	44.6	57.7	71.9	83.7	92.2	97.8	101	102	102	102	101	97.1	91.5	83.0	71.4	57.4	45.3		
85	21.2	32.7	44.5	54.0	60.5	64.4	66.0	66.2	65.8	66.1	65.8	63.8	59.9	53.5	44.2	32.5	21.2		
90	7.79	17.8	27.6	35.5	40.9	43.9	44.9	44.7	44.1	44.5	44.4	43.0	39.9	34.5	26.8	17.2	7.69		
95	3.02	9.77	17.9	24.8	29.7	32.4	33.3	33.1	32.6	32.8	32.7	31.5	28.6	23.8	17.1	9.21	2.93		
100	1.43	5.82	11.9	17.9	22.3	24.9	25.9	25.8	25.5	25.6	25.3	24.0	21.3	17.0	11.2	5.35	1.47		
105	0.83	3.61	8.23	13.1	17.1	19.6	20.7	20.8	20.6	20.6	20.2	18.9	16.3	12.3	7.54	3.20	0.80		
110	0.64	2.27	5.72	9.63	13.0	15.5	16.7	17.0	16.9	16.9	16.3	14.9	12.4	8.98	5.20	2.04	0.54		
115	0.46	1.26	3.95	7.02	9.87	12.0	13.2	13.7	13.7	13.6	12.9	11.6	9.37	6.53	3.59	1.42	0.42		
120	0.35	0.88	2.64	5.04	7.34	9.15	10.3	10.9	11.0	10.8	10.1	8.84	6.96	4.69	2.42	0.96	0.37		
125	0.37	0.56	1.48	3.52	5.35	6.85	7.86	8.38	8.49	8.33	7.72	6.62	5.09	3.30	1.72	0.71	0.37		
130	0.43	0.54	1.01	2.30	3.79	5.00	5.85	6.30	6.41	6.27	5.75	4.85	3.63	2.23	1.14	0.58	0.39		
135	0.48	0.57	0.76	1.42	2.52	3.53	4.23	4.60	4.72	4.59	4.17	3.45	2.41	1.38	0.70	0.55	0.48		
140	0.60	0.60	0.71	0.96	1.51	2.04	2.90	3.21	3.31	3.21	2.87	2.04	1.36	0.89	0.69	0.60	0.58		
145	0.66	0.71	0.73	0.71	1.06	1.30	1.54	1.68	1.79	1.70	1.51	1.22	0.94	0.78	0.73	0.66	0.65		
150	0.71	0.72	0.73	0.79	0.85	0.89	0.94	1.01	1.05	1.03	0.96	0.87	0.81	0.77	0.74	0.77	0.77		
155	0.75	0.74	0.74	0.75	0.77	0.77	0.76	0.76	0.75	0.76	0.78	0.82	0.79	0.78	0.82	0.83	0.84		
160	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.75	0.75	0.76	0.81	0.77	0.84	0.85	0.87	0.89		
165	0.77	0.77	0.77	0.76	0.76	0.76	0.76	0.76	0.77	0.75	0.75	0.76	0.83	0.86	0.88	0.90	0.92		
170	0.77	0.77	0.77	0.77	0.76	0.76	0.75	0.75	0.77	0.75	0.75	0.75	0.76	0.86	0.90	0.92	0.94		
175	0.76	0.75	0.75	0.74	0.74	0.74	0.74	0.73	0.73	0.73	0.73	0.74	0.74	0.74	0.75	0.75	0.75		
180	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68		

Table 7: Luminous Intensity Data

EQUIPMENT LIST

Test Equipment	Model	Equipment No.	Calibration Date	Calibration Due date
Goniophotometer system	GO-R5000	HZTE011-01	Aug. 23, 2017	Aug. 22, 2018
Digital Power Meter	PF2010A	HZTE028-01	Aug. 10, 2017	Aug. 09, 2018
AC Power Supply	DPS1060	HZTE001-06	Aug. 10, 2017	Aug. 09, 2018
DC Power Supply	WY12010	HZTE004-03	Aug. 10, 2017	Aug. 09, 2018
Temperature recorder	JM624U	HZTE018-08	Aug. 17, 2017	Aug. 16, 2018
Temperature and humidity recorder	JR900	HZTE018-01	Aug. 16, 2017	Aug. 15, 2018
Standard source	D908	HZTE012-01	Aug. 20, 2017	Aug. 19, 2018
Integrate Sphere system	2M	HZTE015-01	Aug. 23, 2017	Aug. 22, 2018
Digital Power Meter	WT210	HZTE008-01	Aug. 10, 2017	Aug. 09, 2018
AC Power Supply	PCR 500L	HZTE001-07	Aug. 10, 2017	Aug. 09, 2018
DC Power Supply	IT6154	HZTE004-04	Aug. 10, 2017	Aug. 09, 2018
Standard source	SCL-1400	HZTE012-02	Aug. 20, 2017	Aug. 19, 2018
Temperature and humidity recorder	JR900	HZTE018-02	Aug. 16, 2017	Aug. 15, 2018
Temperature Meter	TES1310	HZTE017-01	Aug. 17, 2017	Aug. 16, 2018

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

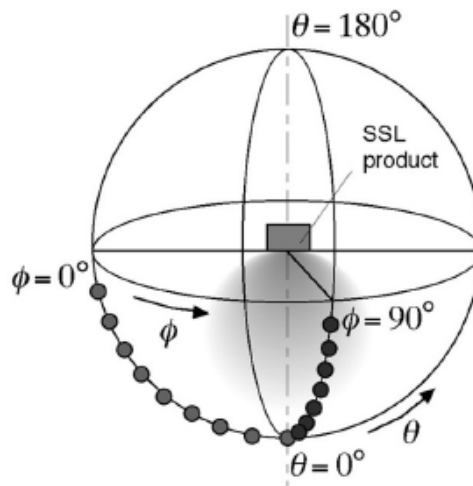
The color characteristics of SSL products include chromaticity coordinates, correlated color temperature, and color rendering index. These characteristics of SSL products may be spatially non-uniform, and thus, in order that they can be specified accurately, the color quantities shall be measured as 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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