



Date of issue 2021-05-25

Version 1.0

Total pages 39

Test report of

IES LM-79-08

Approved Method: Electrical and Photometric

Measurements of Solid-State Lighting Products

Applicant:

LIGHT EFFICIENT DESIGN

Address:

188 S. Northwest Highway Cary, IL 60013 USA

For Product:

3'T8 Lamps -- 1-Lamp External Driver (UL Type C) Lamps

Product Model No.:

RP-T8C-G2-6W-3FT-1L-830-[OCN, Blank]-10V,
RP-T8C-G2-6W-3FT-1L-850-[OCN, Blank]-10V,
RP-T8C-G2-8W-3FT-1L-830-[OCN, Blank]-10V,
RP-T8C-G2-8W-3FT-1L-850-[OCN, Blank]-10V,
RP-T8C-G2-10W-3FT-1L-830-[OCN, Blank]-10V,
RP-T8C-G2-10W-3FT-1L-850-[OCN, Blank]-10V,
RP-T8C-G2-12W-3FT-1L-830-[OCN, Blank]-10V,
RP-T8C-G2-12W-3FT-1L-850-[OCN, Blank]-10V

Test laboratory: Shenzhen Belling Efficiency Testing Lab Co.,Ltd, 1Floor, No.1 Building, Meibaohe Industrial Park, Dalang Street, Longhua District, Shenzhen, Guangdong Prov.518101 China.

Jarvis zhang

Jason zhou

Complied by: Jarvis zhang

Review by: Jason zhou

Project Engineer

Technical Manager

Note: The test data was only valid for the test sample(s). This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or use in part without prior written consent from Shenzhen Belling Efficiency Testing Lab Co.,Ltd. This report must not be used by the customer to claim product certification, approval, or endorsement By NVLAP, NIST, or any agency of the U.S. Government.



1 General

1.1 Product Information

Manufacturer	LIGHT EFFICIENT DESIGN
Manufacturer Address	188 S. Northwest Highway Cary, IL 60013 USA
Brand Name	REMPHOS OR LIGHT EFFICIENT DESIGN
Luminaire Type	3'T8 Lamps -- 1-Lamp External Driver (UL Type C) Lamps
Test Model Number	RP-T8C-G2-6W-3FT-1L-830-[OCN, Blank]-10V, RP-T8C-G2-6W-3FT-1L-850-[OCN, Blank]-10V, RP-T8C-G2-8W-3FT-1L-830-[OCN, Blank]-10V, RP-T8C-G2-8W-3FT-1L-850-[OCN, Blank]-10V, RP-T8C-G2-10W-3FT-1L-830-[OCN, Blank]-10V, RP-T8C-G2-10W-3FT-1L-850-[OCN, Blank]-10V, RP-T8C-G2-12W-3FT-1L-830-[OCN, Blank]-10V, RP-T8C-G2-12W-3FT-1L-850-[OCN, Blank]-10V
Rated Inputs	AC 100-277V 50/60Hz
Field-Adjustable Product	Yes, Wattage setting: 6W, 8W, 10W, 12W
Nominal CCT	3000K, 5000K
Dimming Capability	Continuous
Integral Control Sensors	Optional
Date of Receipt Samples	2020-12-21
Date of test	2020-12-23 to 2021-05-17
Burning Time Before Test	0hour(For New Products)

1.2 Standards or methods

- ANSI C78.377-2017:Specifications for the Chromaticity of Solid State Lighting Products
- ANSI C82.77-10:2014:Harmonic Emission Limits - Related Power Quality Requirements for Lighting Equipment - Solid State
- CIE Publication No.13.3-1995:Method of Measuring and Specifying Color Rendering of Light Sources
- IESNA LM-79-08 Approved Method: Electric & Photometric Measurement of Solid-state Lighting Products



1.3 Equipment list

Device	Manufacture	Model No.	Serial No.	Calibration due date
Goniophotometric System	SENSING	GMS-3000	N.A	2022-03-31
AC Power Source	ALL POWER	APW-110N	992257	2022-03-31
Total Luminous Flux Standard Lamp	SENSING	110V/100W	S1510065	2022-04-07
Total Spectral Radiant Flux Standard Lamp	SENSING	12V/20W	LSD12201731	2022-04-07
Digital Power Meter	YOKOGAWA	WT310	C2QM02030V	2022-03-31
Integral Sphere	SENSING	SPR-600M	N.A	2022-03-31
Digital Power Meter	YOKOGAWA	WT210	91L929742	2022-03-31
Optical Color and Electrical Measurement System	SENSING	SPR-3000	S1101108	2022-03-31
Environment Measurer	XUYAO	HS-1	N/A	2022-04-03
Environment Measurer	XUYAO	HS-1	N/A	2022-04-03
Stop watch	KISLO	K610	N/A	2022-04-20
Digital Anemometer	TECMAN	TD8901	026141	2021-09-09

Statement of Traceability: Shenzhen Belling Efficiency Testing Lab Co.,Ltd attests that all calibration has been performed using suitable standards traceable to national primary standards and International System of Unit (SI).

1.4 Report Revision

Original report BL210126002-9 dated at 2021-02-20 was recalled and declared as invalid by Shenzhen Belling Efficiency Testing Laboratory Co.,Ltd. Report BL210126002-9A was issued on to replace report BL210126002-9.

Report Number	Report Data	Contents
BL210126002-9	2021-02-20	Original report
BL210126002-9A	2021-05-25	Updated the Light distribution data,



2 Test conducted and method

2.1 Ambient Condition

The ambient temperature in which measurements are being taken was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, the air flow around the sample(s) being tested did not affect the performance.

2.2 Power Supply Characteristics

The AC power supply had a sinusoidal voltage wave shape at the prescribed frequency (60 Hz) such that the RMS summation of the harmonic components does not exceed 3 percent of the fundamental during operation of the test item.

The voltage of AC power supply (RMS voltage) applied to the device under test was regulated to within ± 0.2 percent under load.

2.3 Seasoning and Stabilization

No seasoning was performed in accordance with IESNA LM-79-08. And before the measurement, the sample was stabilized until the light output and power variations were less than 0.5% in 30 minutes intervals (3 readings, 15 minutes apart).

2.4 Integrating Sphere System

The system includes AC power source, digital power meter, DC power supply, spectrophotometer, and integrating sphere. The integrating sphere system is calibrated by standard light source before measurement. The system and standard light source has been calibrated regularly and traceable to the National Primary Standards. 4π geometry was used during measurement. The product was operated in its intended orientation in application and was recorded in this report.

Integrating Sphere Uncertainty: 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 $U=20\text{K}$ ($K=2$), 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 $U=0.18\%$ of rdg, AC Voltage $U=0.16\%$ of rdg, Power $U=0.20\%$ ($K=2$), at the 95% confidence level.



2.5 Goniophotometer System

The goniophotometer system is calibrated by standard light source before measurement. The standard light source has been calibrated regularly and traceable to the National Primary Standards.

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 method according to IESNA LM-79-08 following chapter.

Goniophotometer Uncertainty :The uncertainty of the luminous intensity is $U=1.6\%$ ($K=2$), at the 95% confidence level.



3 Test Result Summary

3.1 Integrating Sphere System (Total operating time for integrating sphere test: 1.0 hour)

3.1.1 Model Number: RP-T8C-G2-6W-3FT-1L-830-[OCN, Blank]-10V(Bare lamp)

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.13	60	0.049	5.76	0.977

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
707.77	122.88	2964

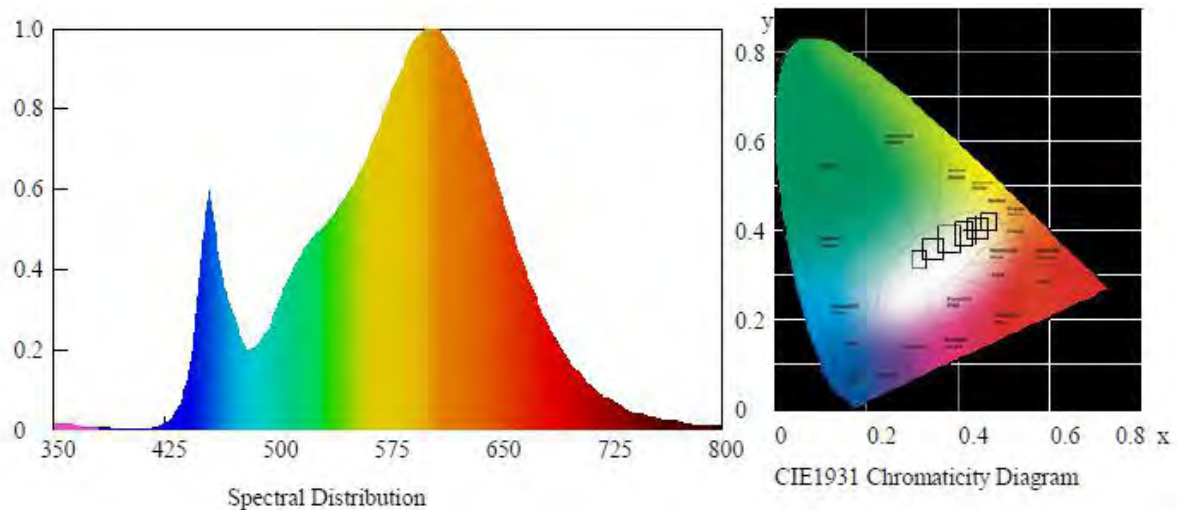
Chromaticity Coordinate

Duv	x	y	u'	v'
-0.00033	0.4390	0.4040	0.2520	0.5217

Color Rendering

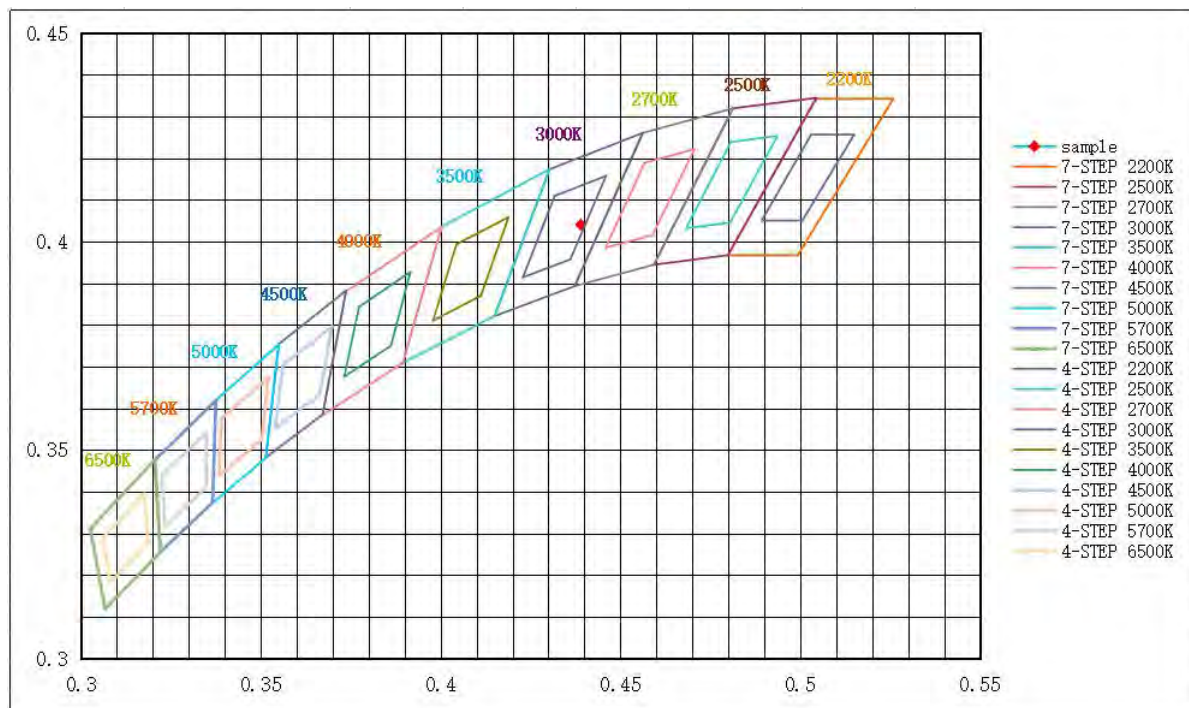
CRI	R9	Rf	Rg	Rcs,h1(%)
83.3	11	84	95	-11

Spectral Distribution





7/4 Step Quadrangle





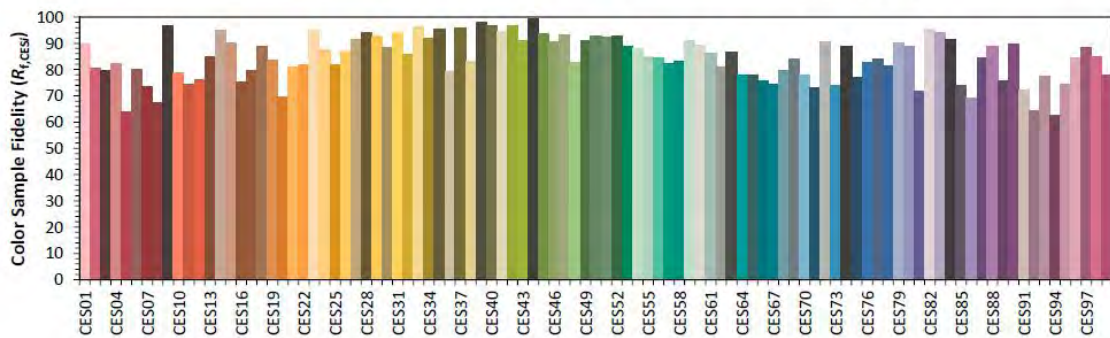
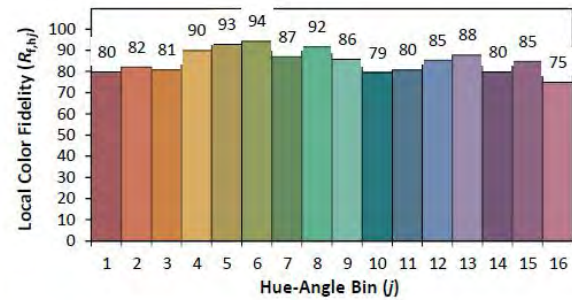
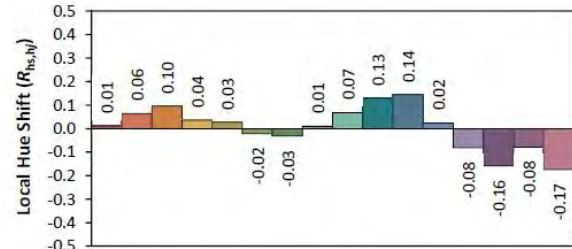
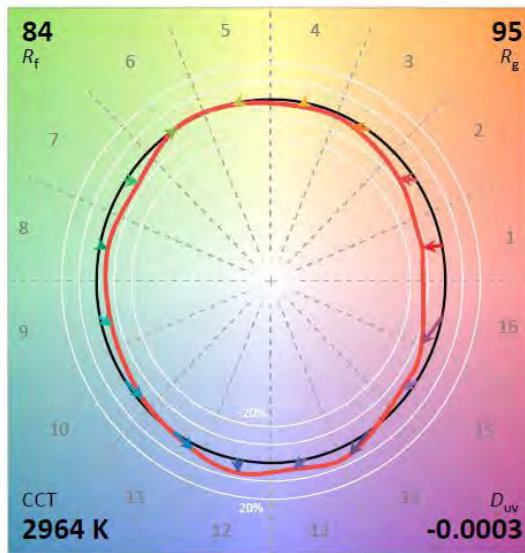
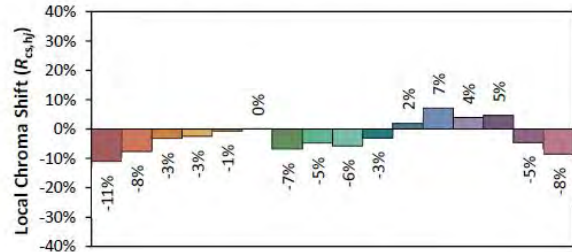
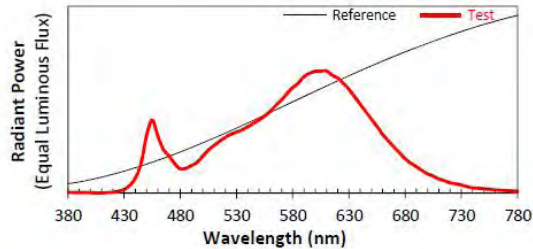
ANSI/IES TM-30-18 Color Rendition Report

Source: BL210126002-9

Manufacturer: LIGHT EFFICIENT DESIGN

Date: 2020/1/27

Model: RP-T8C-G2-6W-3FT-1L-830-[OCN, Blank]-10V



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4390
 y 0.4039
 u' 0.2520
 v' 0.5216

CIE 13.3-1995
(CRI)

R_a 83
 R_g 11

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

**3.1.2 Model Number: RP-T8C-G2-6W-3FT-1L-850-[OCN, Blank]-10V(Bare lamp)****Electrical data**

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.10	60	0.049	5.76	0.977

Photometric data

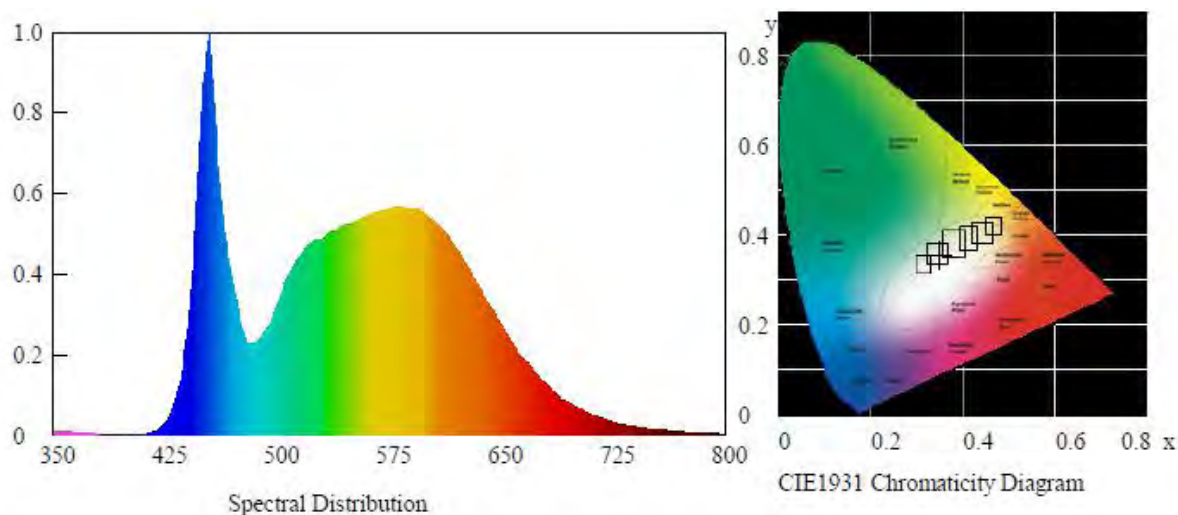
Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
719.77	124.91	4975

Chromaticity Coordinate

Duv	x	y	u'	v'
+0.0025	0.3463	0.3576	0.2099	0.4878

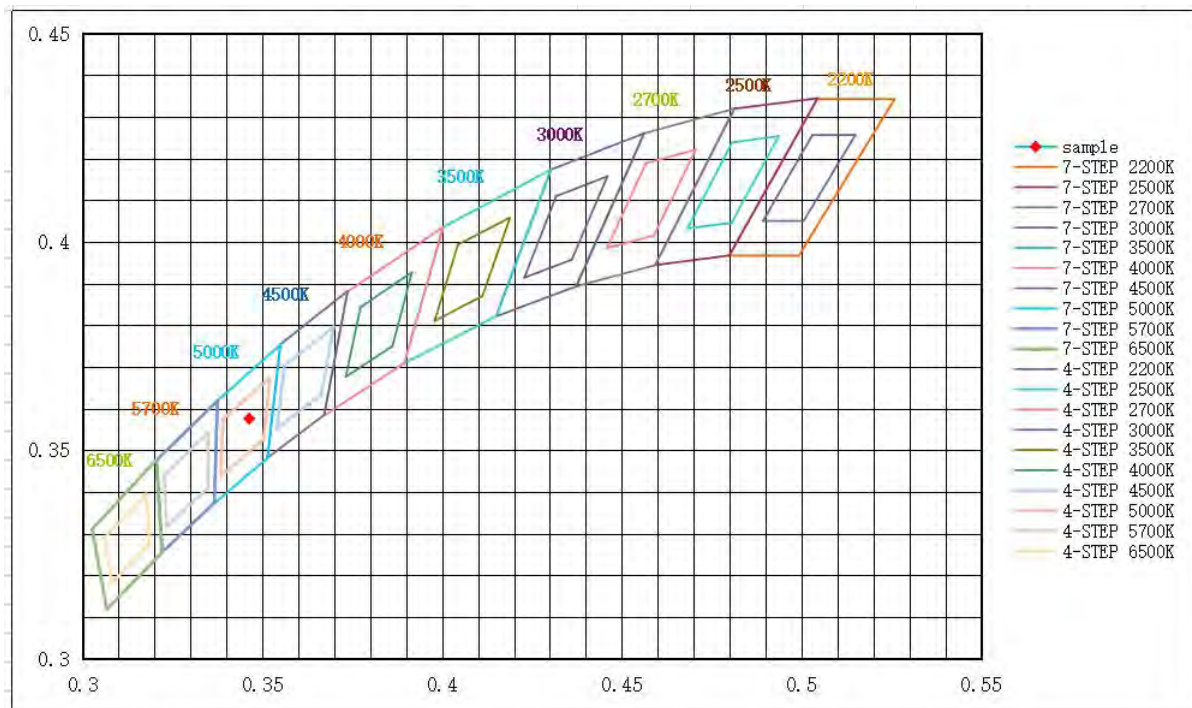
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
83.7	14	84	95	-12

Spectral Distribution



7/4 Step Quadrangle





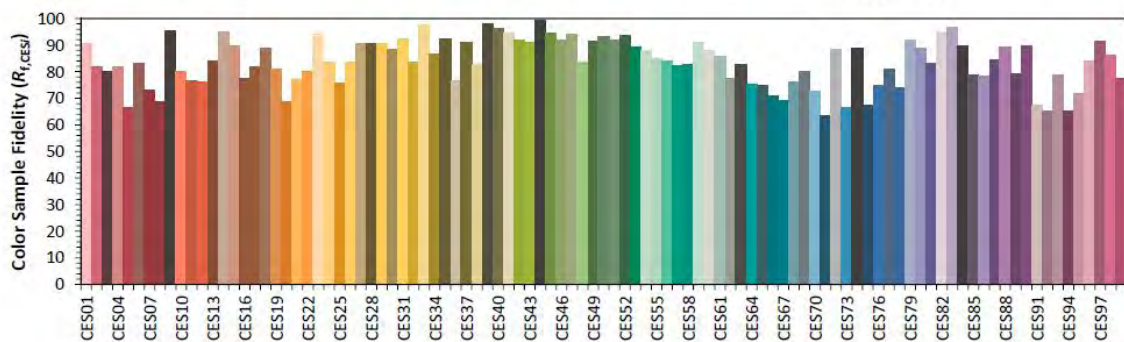
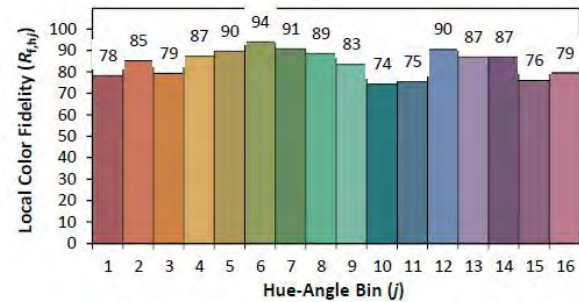
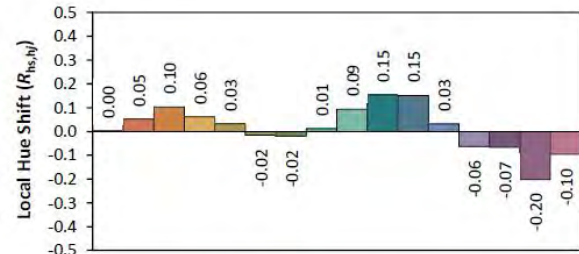
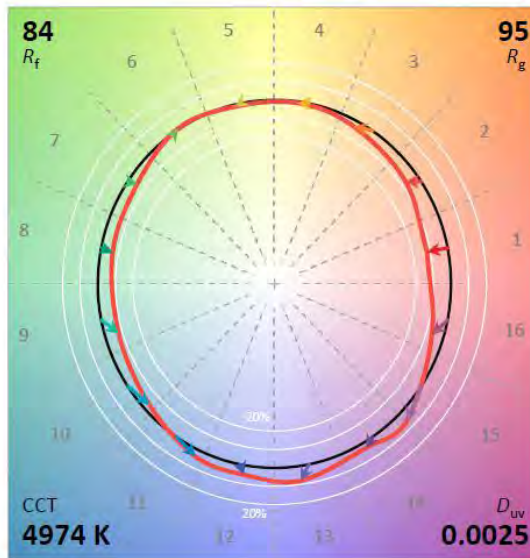
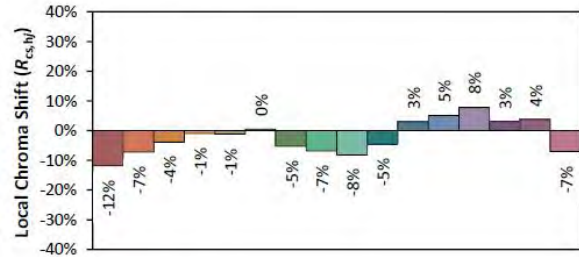
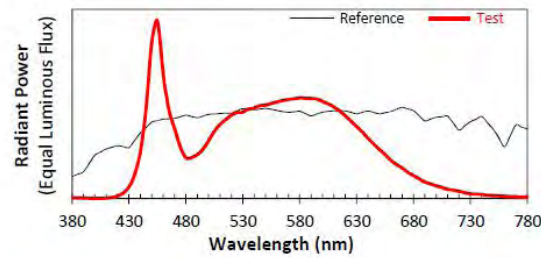
ANSI/IES TM-30-18 Color Rendition Report

Source: BL210126002-9

Manufacturer: LIGHT EFFICIENT DESIGN

Date: 2020/1/27

Model: RP-T8C-G2-6W-3FT-1L-850-[OCN, Blank]-10V



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.3463
 y 0.3576
 u' 0.2099
 v' 0.4878

CIE 13.3-1995
(CRI)

R_a 84
 R_g 14

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

**3.1.3 Model Number: RP-T8C-G2-8W-3FT-1L-830-[OCN, Blank]-10V(Bare lamp)****Electrical data**

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.09	60	0.067	7.88	0.986

Photometric data

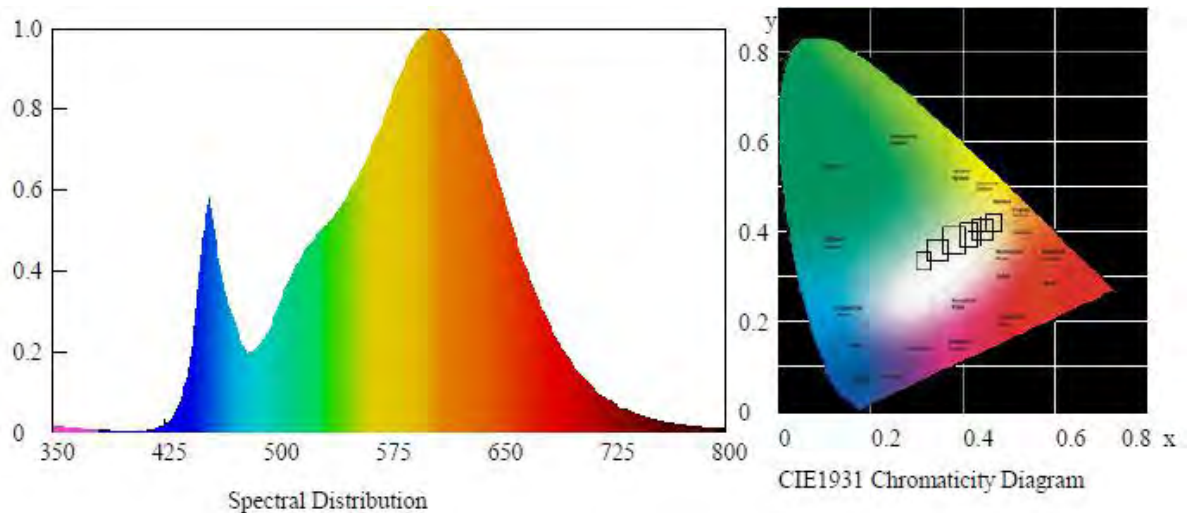
Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
956.99	121.45	2970

Chromaticity Coordinate

Duv	x	y	u'	v'
0.00034	0.4386	0.4038	0.2518	0.5215

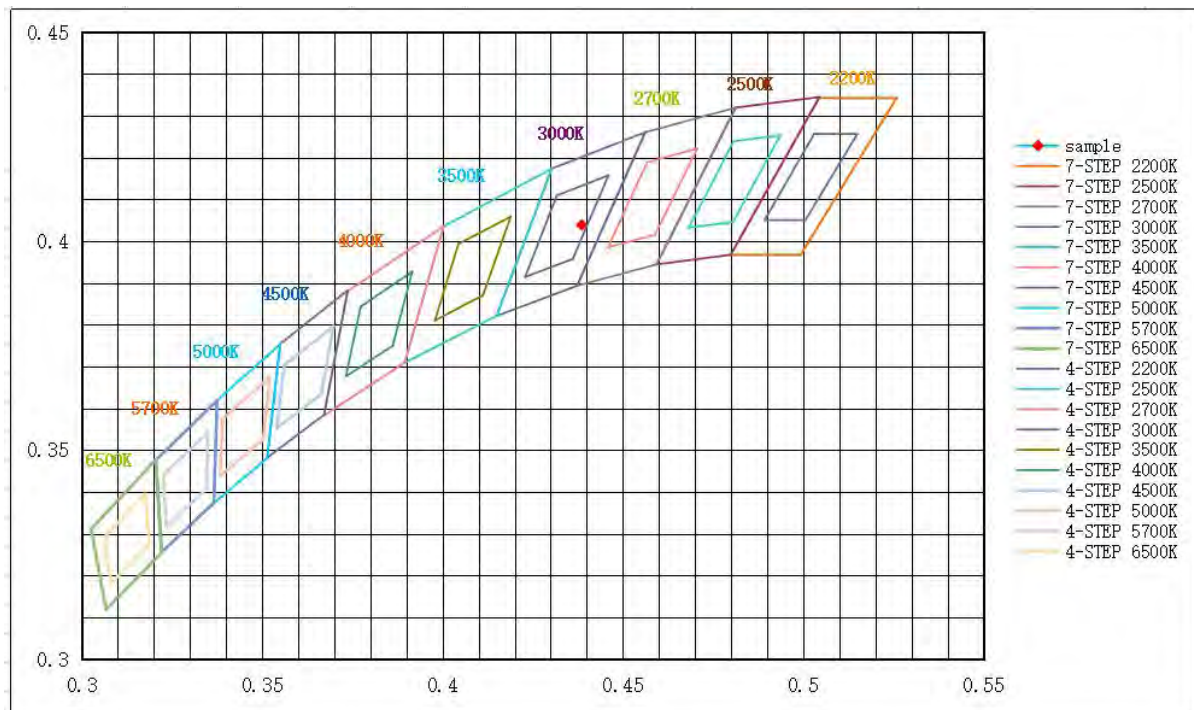
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
83.2	11	85	95	-11

Spectral Distribution



7/4 Step Quadrangle





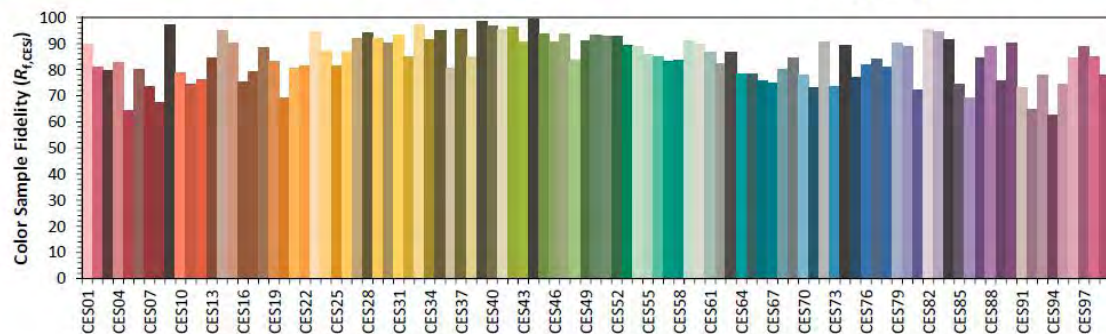
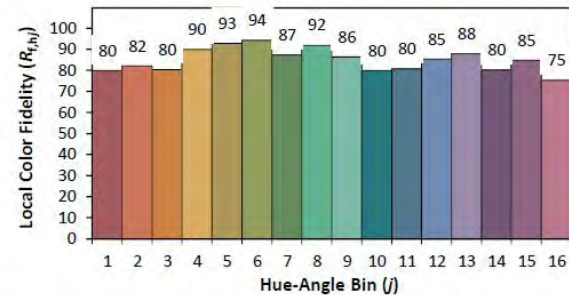
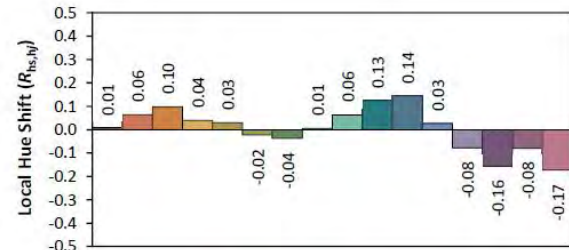
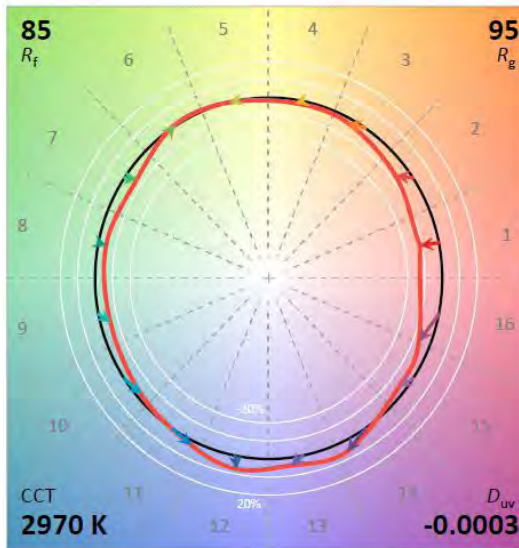
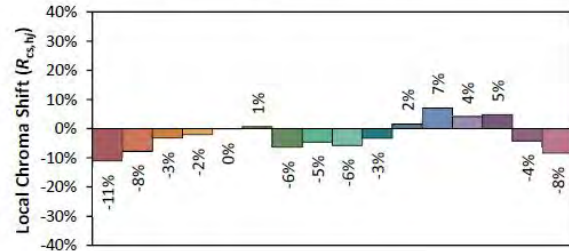
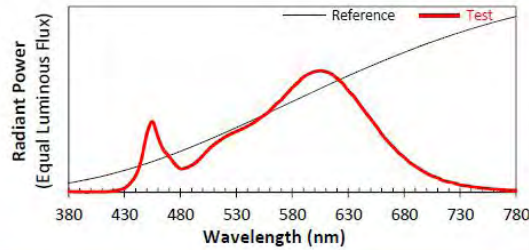
ANSI/IES TM-30-18 Color Rendition Report

Source: BL210126002-9

Manufacturer: LIGHT EFFICIENT DESIGN

Date: 2020/1/27

Model: RP-T8C-G2-8W-3FT-1L-830-[OCN, Blank]-10V



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4386
 y 0.4038
 u' 0.2518
 v' 0.5215

CIE 13.3-1995
(CRI)

R_a 83
 R_g 11

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

**3.1.4 Model Number: RP-T8C-G2-8W-3FT-1L-850-[OCN, Blank]-10V(Bare lamp)****Electrical data**

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.09	60	0.067	7.90	0.986

Photometric data

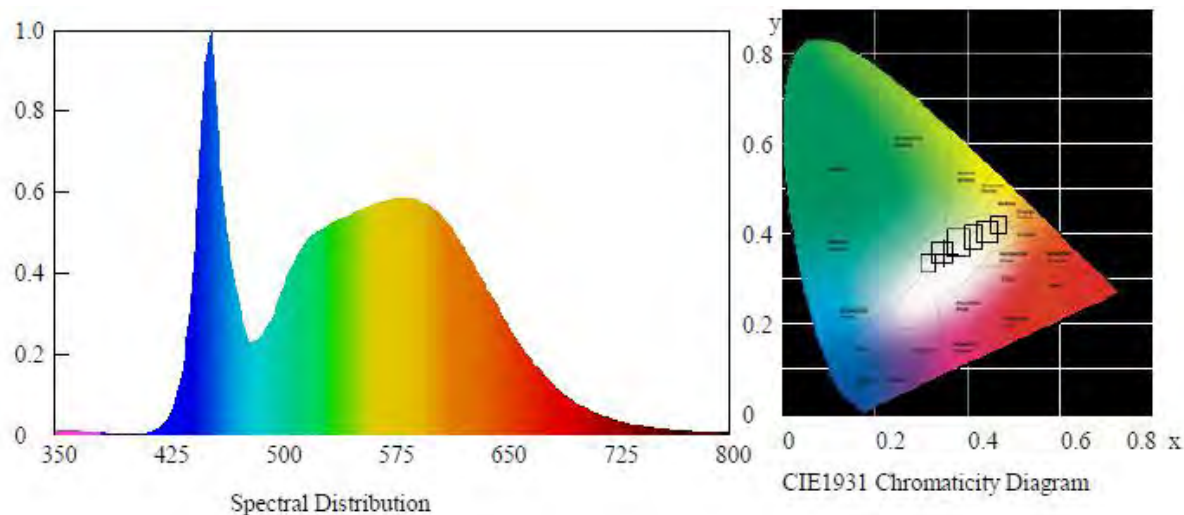
Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
972.20	123.06	4957

Chromaticity Coordinate

Duv	x	y	u'	v'
+0.00262	0.3469	0.3583	0.2100	0.4882

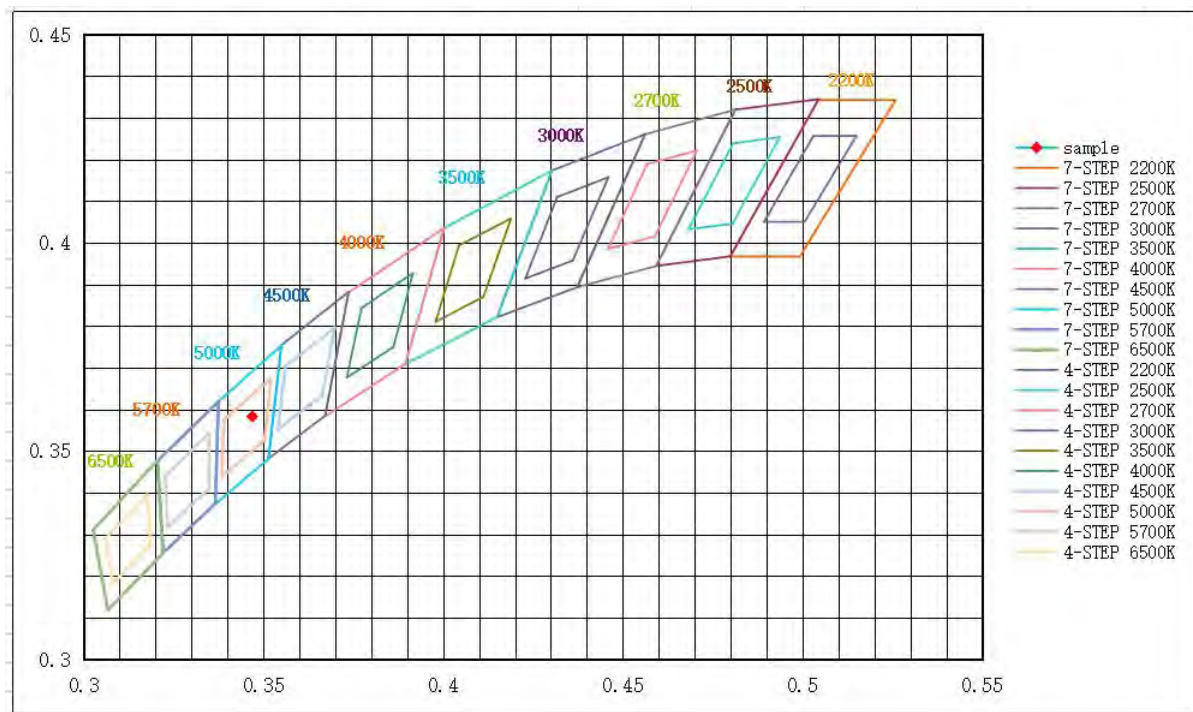
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
83.5	13	84	95	-12

Spectral Distribution



7/4 Step Quadrangle





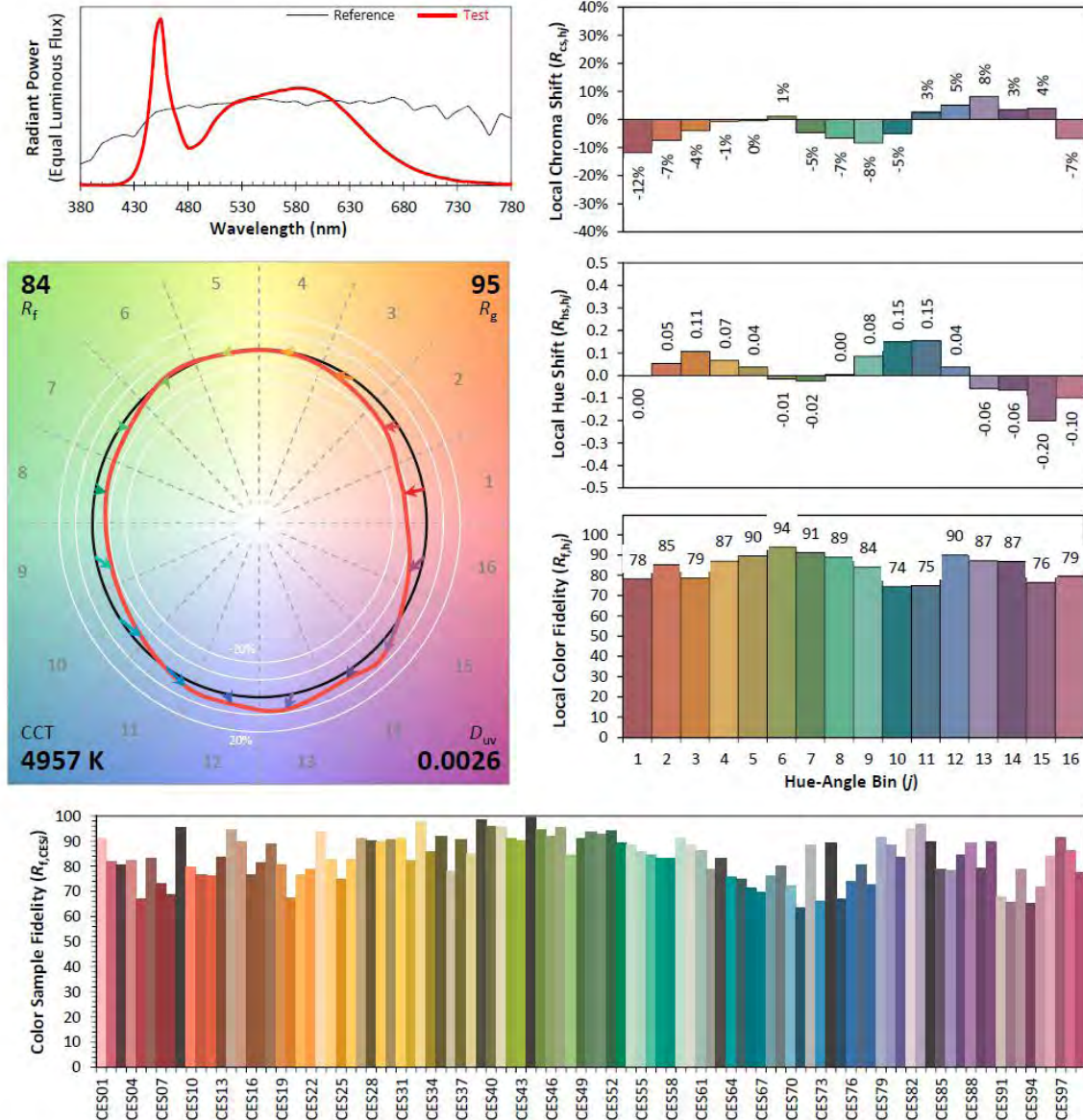
ANSI/IES TM-30-18 Color Rendition Report

Source: BL210126002-9

Manufacturer: LIGHT EFFICIENT DESIGN

Date: 2020/1/27

Model: RP-T8C-G2-8W-3FT-1L-850-[OCN, Blank]-10V



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

 x 0.3469 y 0.3583 u' 0.2100 v' 0.4882CIE 13.3-1995
(CRI) R_a 84 R_g 13

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

**3.1.5 Model Number: RP-T8C-G2-10W-3FT-1L-830-[OCN, Blank]-10V(Bare lamp)****Electrical data**

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.05	60	0.082	9.77	0.988

Photometric data

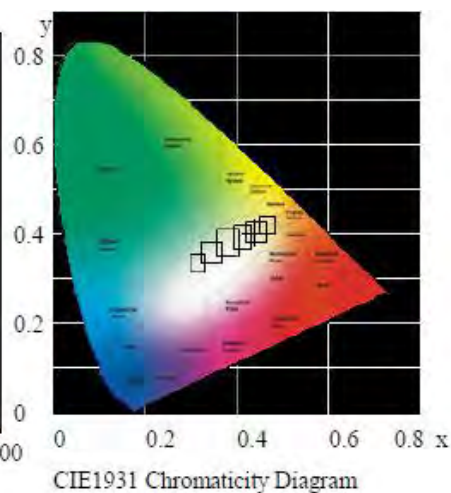
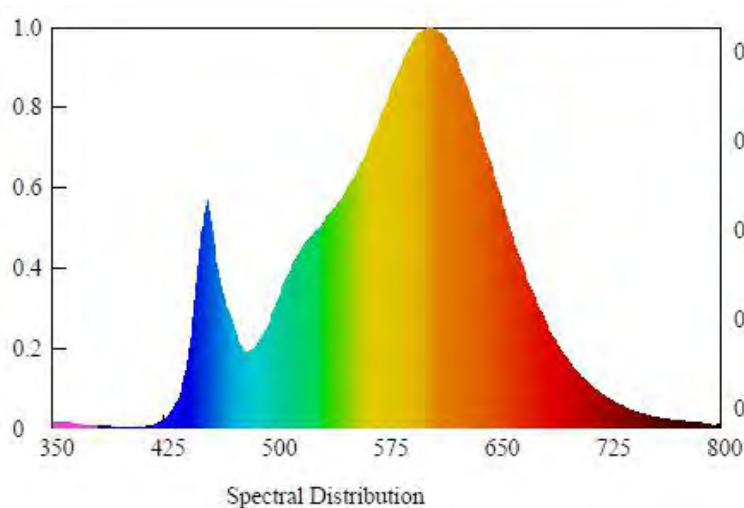
Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
1156.60	118.38	2971

Chromaticity Coordinate

Duv	x	y	u'	v'
-0.00003	0.4390	0.4047	0.2516	0.5219

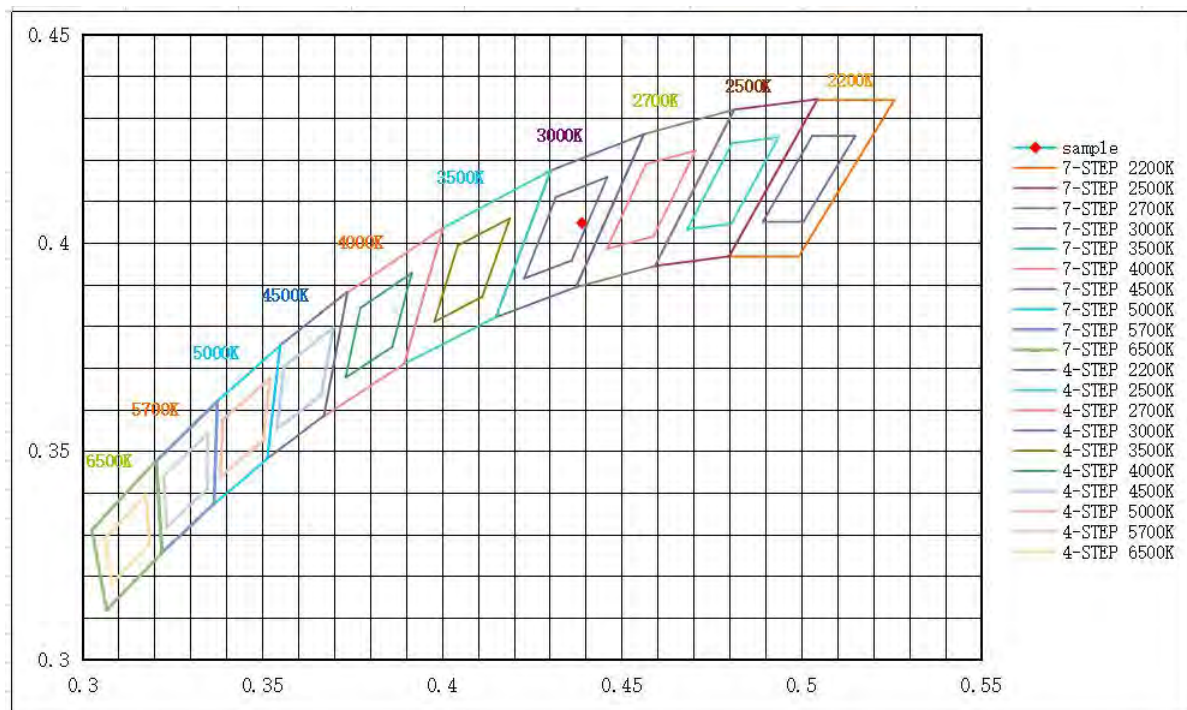
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
83.2	11	85	95	-11

Spectral Distribution



7/4 Step Quadrangle





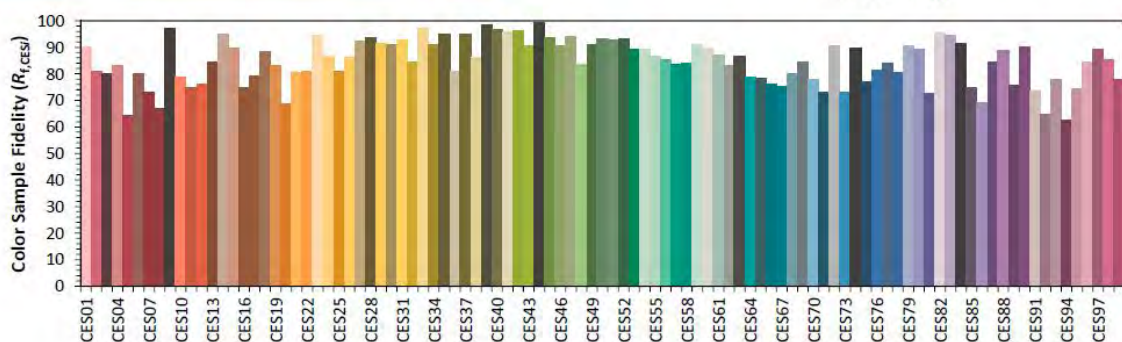
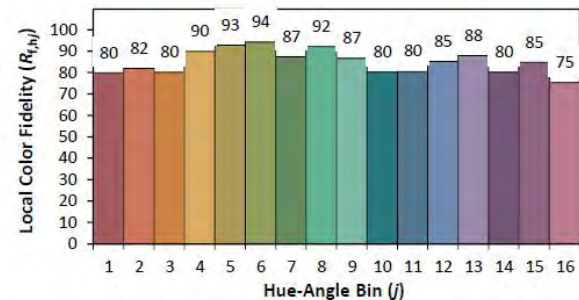
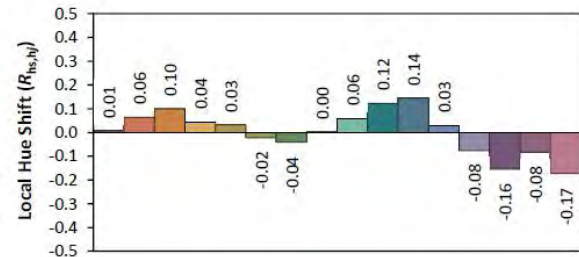
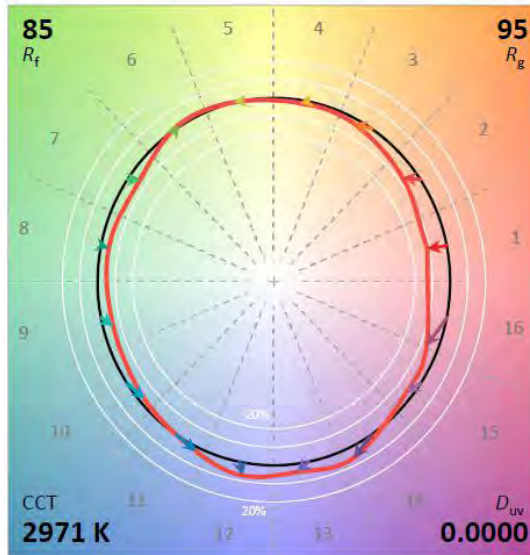
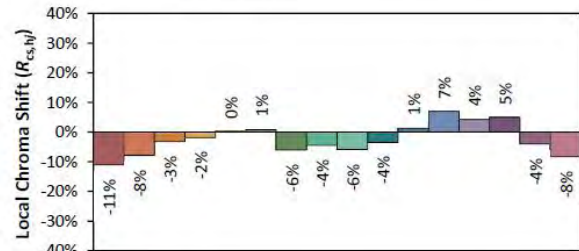
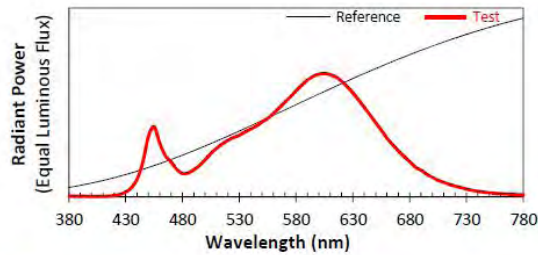
ANSI/IES TM-30-18 Color Rendition Report

Source: BL210126002-9

Manufacturer: LIGHT EFFICIENT DESIGN

Date: 2020/1/27

Model: RP-T8C-G2-10W-3FT-1L-830-[OCN, Blank]-10V



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4390
 y 0.4047
 u' 0.2516
 v' 0.5219

CIE 13.3-1995
(CRI)

R_a 83
 R_g 11

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

**3.1.6 Model Number: RP-T8C-G2-10W-3FT-1L-850-[OCN, Blank]-10V(Bare lamp)****Electrical data**

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.05	60	0.082	9.78	0.988

Photometric data

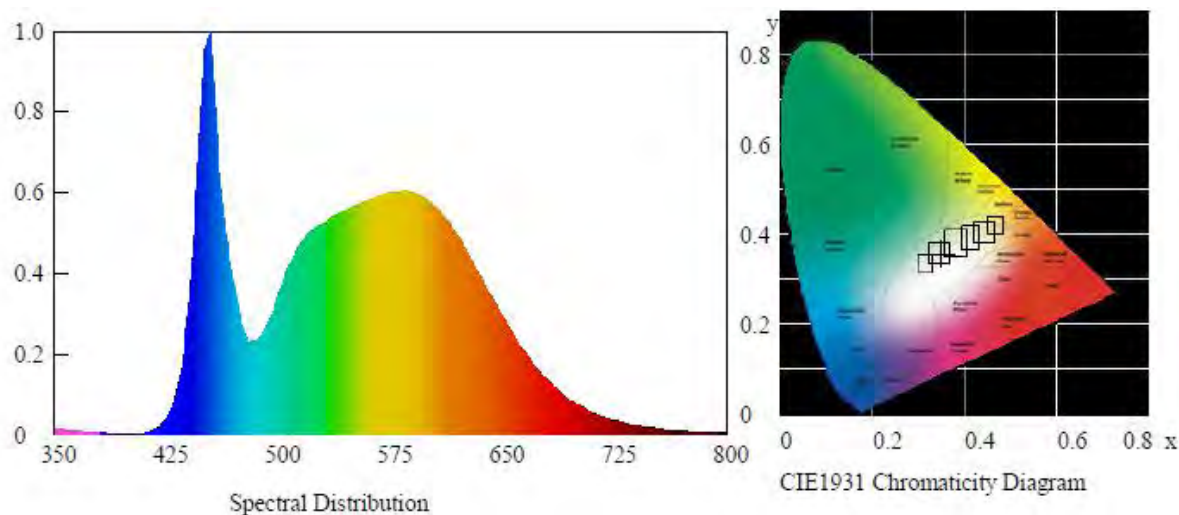
Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
1190.13	121.69	4946

Chromaticity Coordinate

Duv	x	y	u'	v'
+0.00268	0.3472	0.3587	0.2101	0.4884

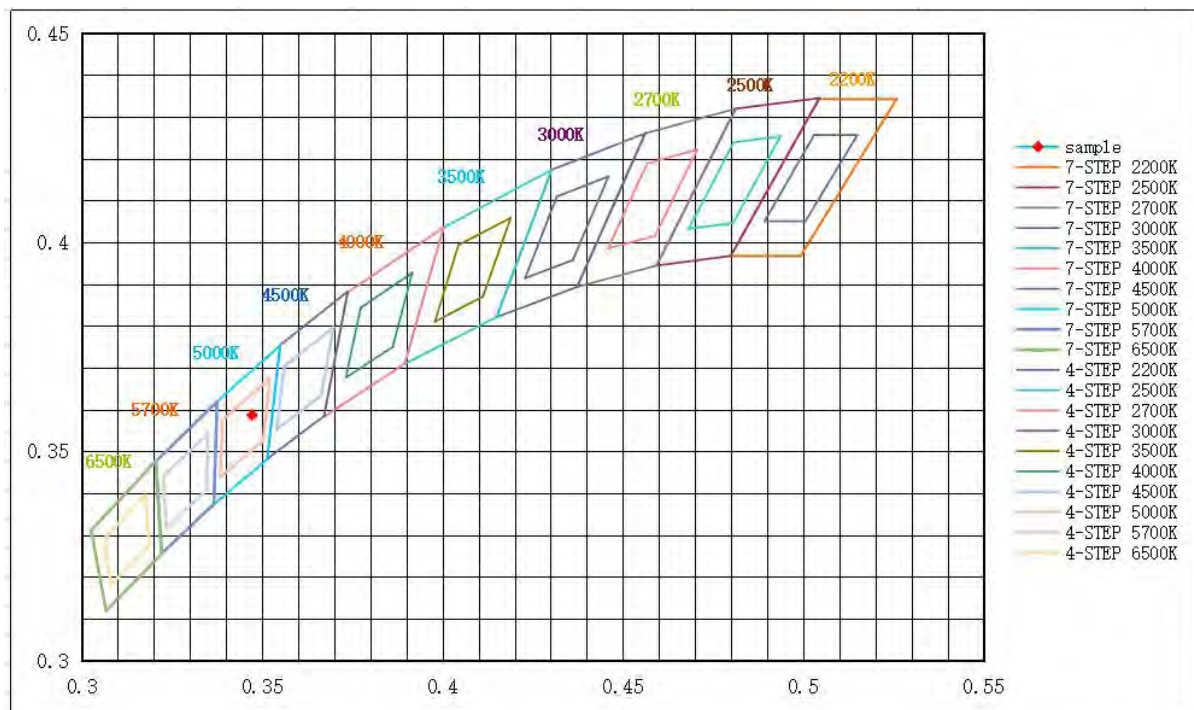
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
83.3	13	84	95	-12

Spectral Distribution



7/4 Step Quadrangle





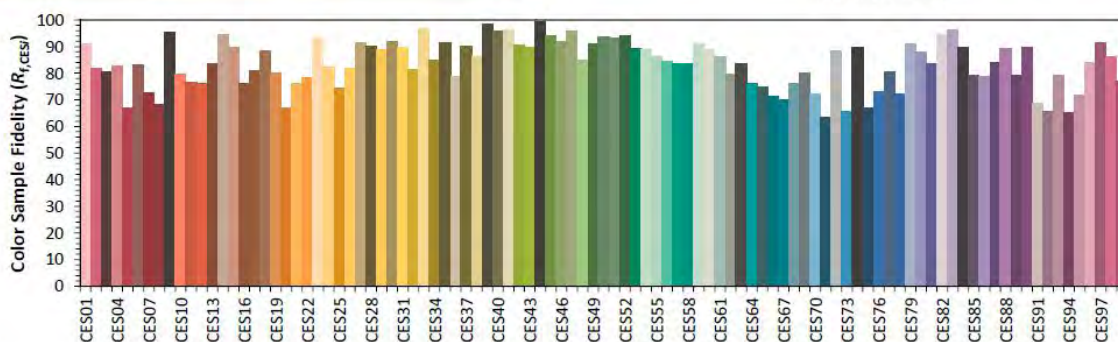
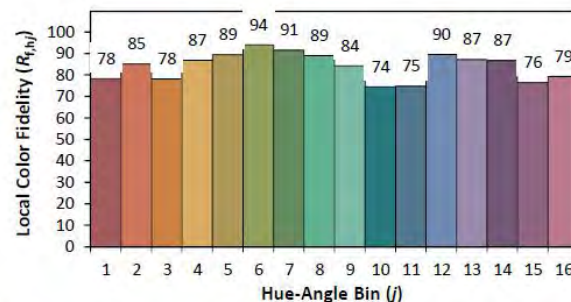
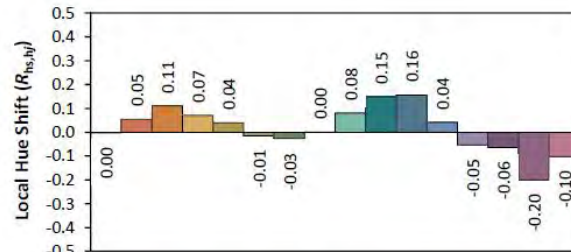
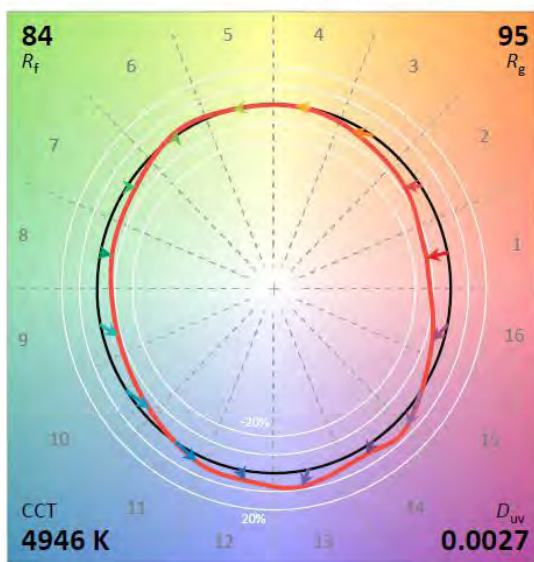
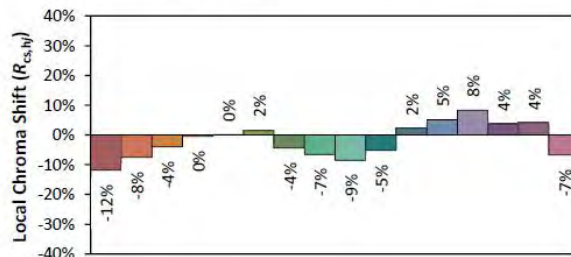
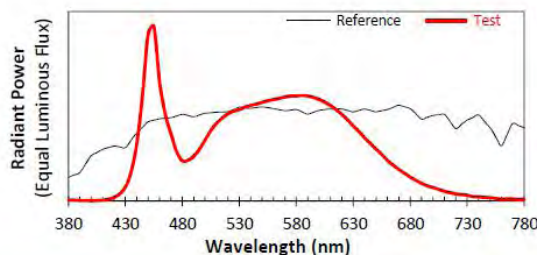
ANSI/IES TM-30-18 Color Rendition Report

Source: BL210126002-9

Manufacturer: LIGHT EFFICIENT DESIGN

Date: 2020/1/27

Model: RP-T8C-G2-10W-3FT-1L-850-[OCN, Blank]-10V



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.3472
 y 0.3587
 u' 0.2101
 v' 0.4884

CIE 13.3-1995
(CRI)

R_a 83
 R_g 12

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

**3.1.7 Model Number: RP-T8C-G2-12W-3FT-1L-830-[OCN, Blank]-10V(Bare lamp)****Electrical data**

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
119.97	60	0.101	12.01	0.992

Photometric data

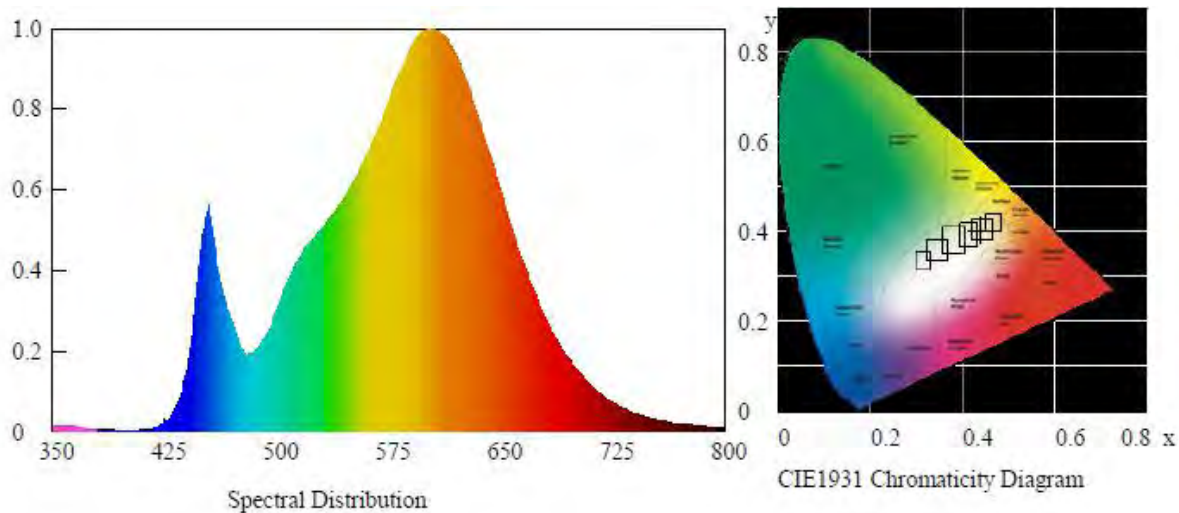
Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
1399.50	116.53	2978

Chromaticity Coordinate

Duv	x	y	u'	v'
+0.00002	0.4386	0.4047	0.2514	0.5219

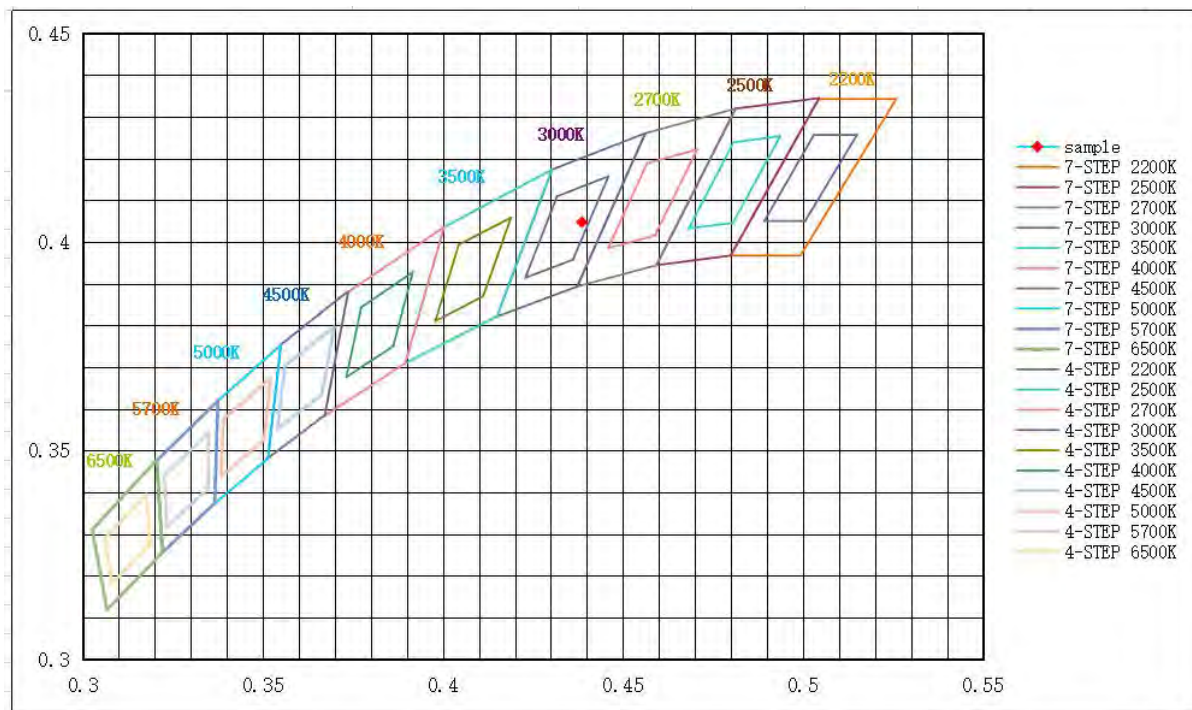
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
83.0	10	85	95	-11

Spectral Distribution



7/4 Step Quadrangle





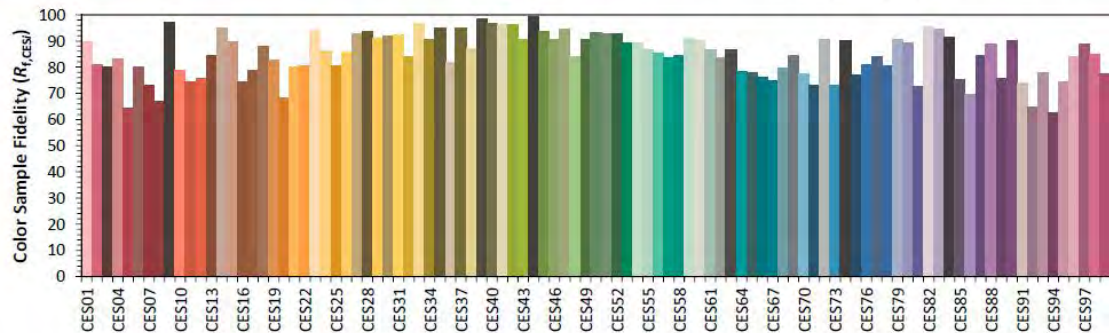
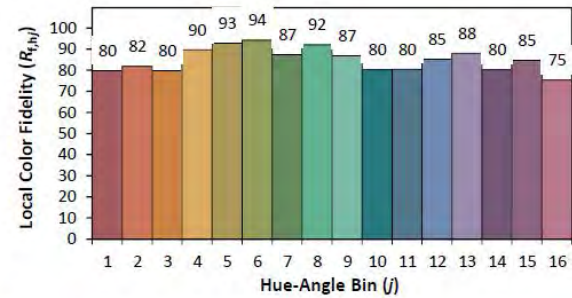
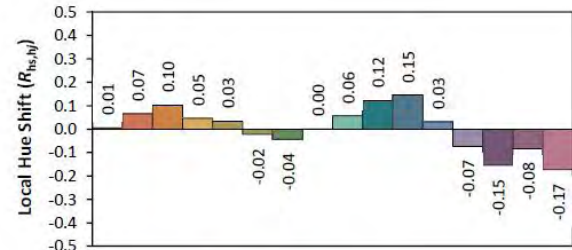
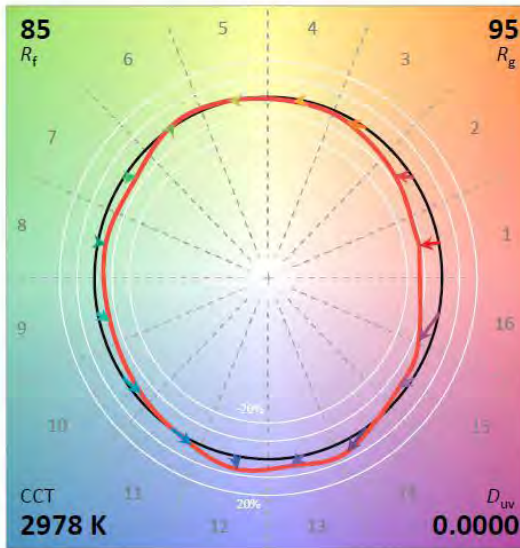
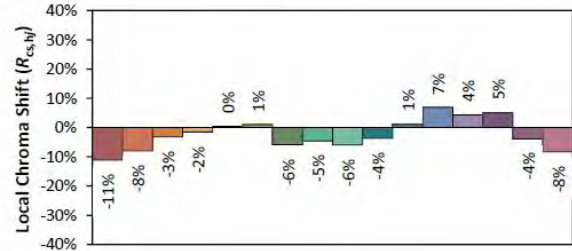
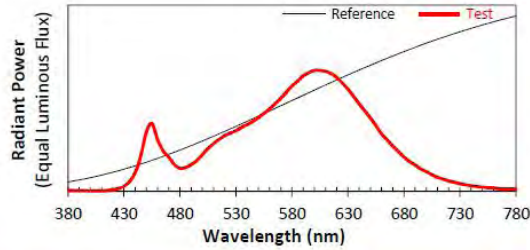
ANSI/IES TM-30-18 Color Rendition Report

Source: BL210126002-9

Manufacturer: LIGHT EFFICIENT DESIGN

Date: 2020/1/27

Model: RP-T8C-G2-12W-3FT-1L-830-[OCN, Blank]-10V



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.4386
 y 0.4047
 u' 0.2514
 v' 0.5219

CIE 13.3-1995
(CRI)

R_a 83
 R_g 10

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

**3.1.8 Model Number: RP-T8C-G2-12W-3FT-1L-850-[OCN, Blank]-10V(Bare lamp)****Electrical data**

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
119.99	60	0.101	12.00	0.992

Photometric data

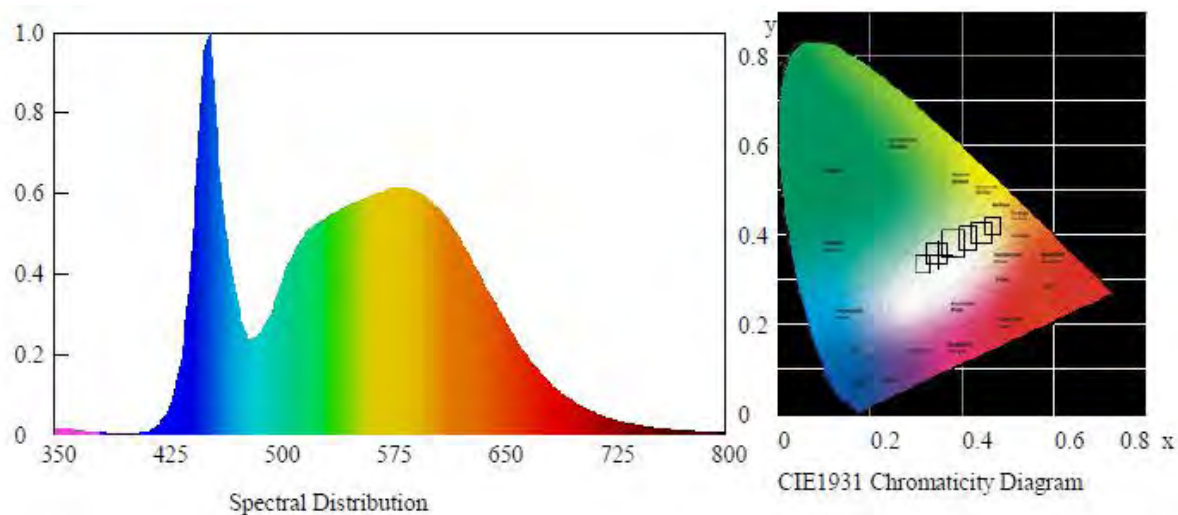
Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
1423.60	118.63	4969

Chromaticity Coordinate

Duv	x	y	u'	v'
+0.00237	0.3465	0.3575	0.2101	0.4877

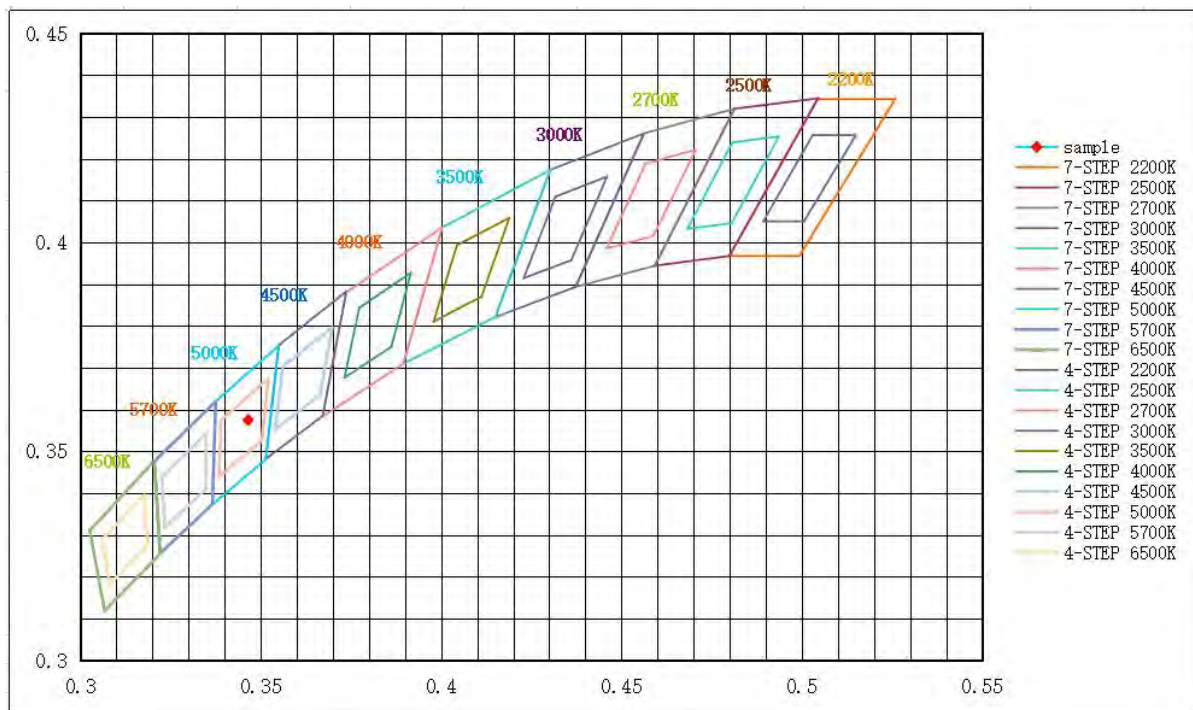
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
83.3	13	84	96	-12

Spectral Distribution



7/4 Step Quadrangle





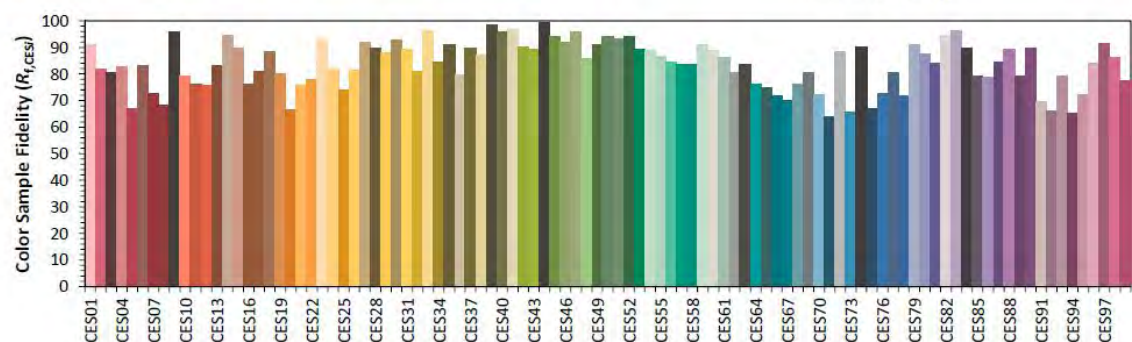
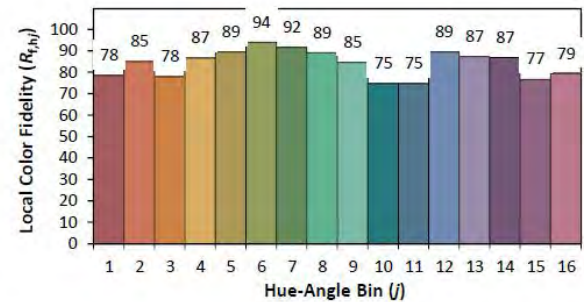
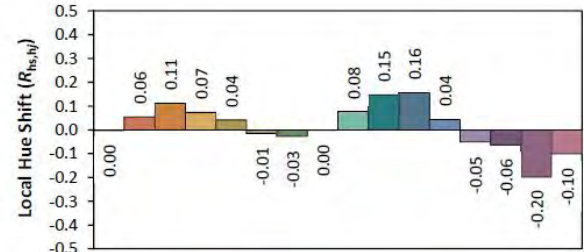
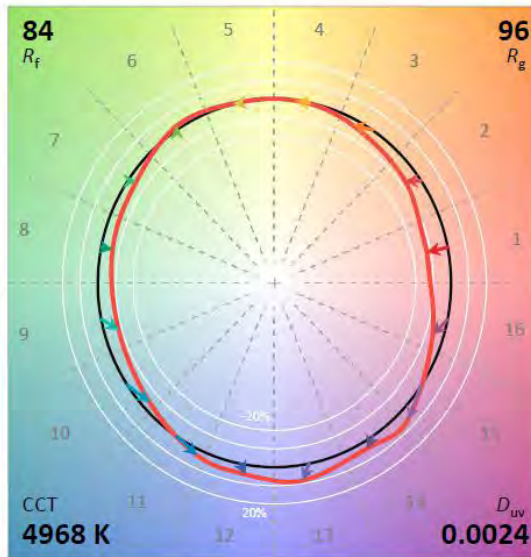
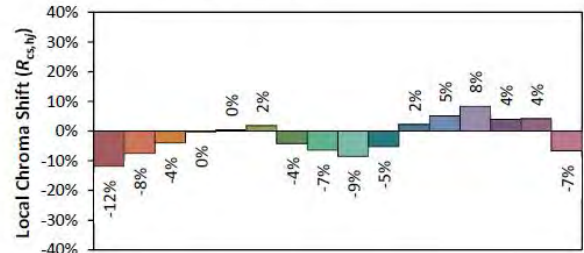
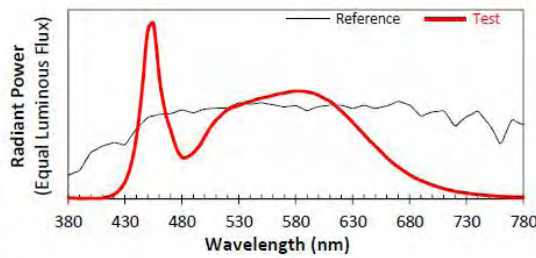
ANSI/IES TM-30-18 Color Rendition Report

Source: BL210126002-9

Manufacturer: LIGHT EFFICIENT DESIGN

Date: 2020/1/27

Model: RP-T8C-G2-12W-3FT-1L-850-[OCN, Blank]-10V



Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.3465
 y 0.3575
 u' 0.2101
 v' 0.4877

CIE 13.3-1995
(CRI)

R_a 83
 R_9 13

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3.2 Goniophotometer System (Total operating time for luminous intensity distribution: 1.0 hour)

3.2.1 Model Number: RP-T8C-G2-12W-3FT-1L-830-[OCN, Blank]-10V(Bare lamp)

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.08	60	0.1000	11.91	0.9908

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Beam Angle(°)
1391.83	116.86	193.4

**Zonal Flux Diagram**

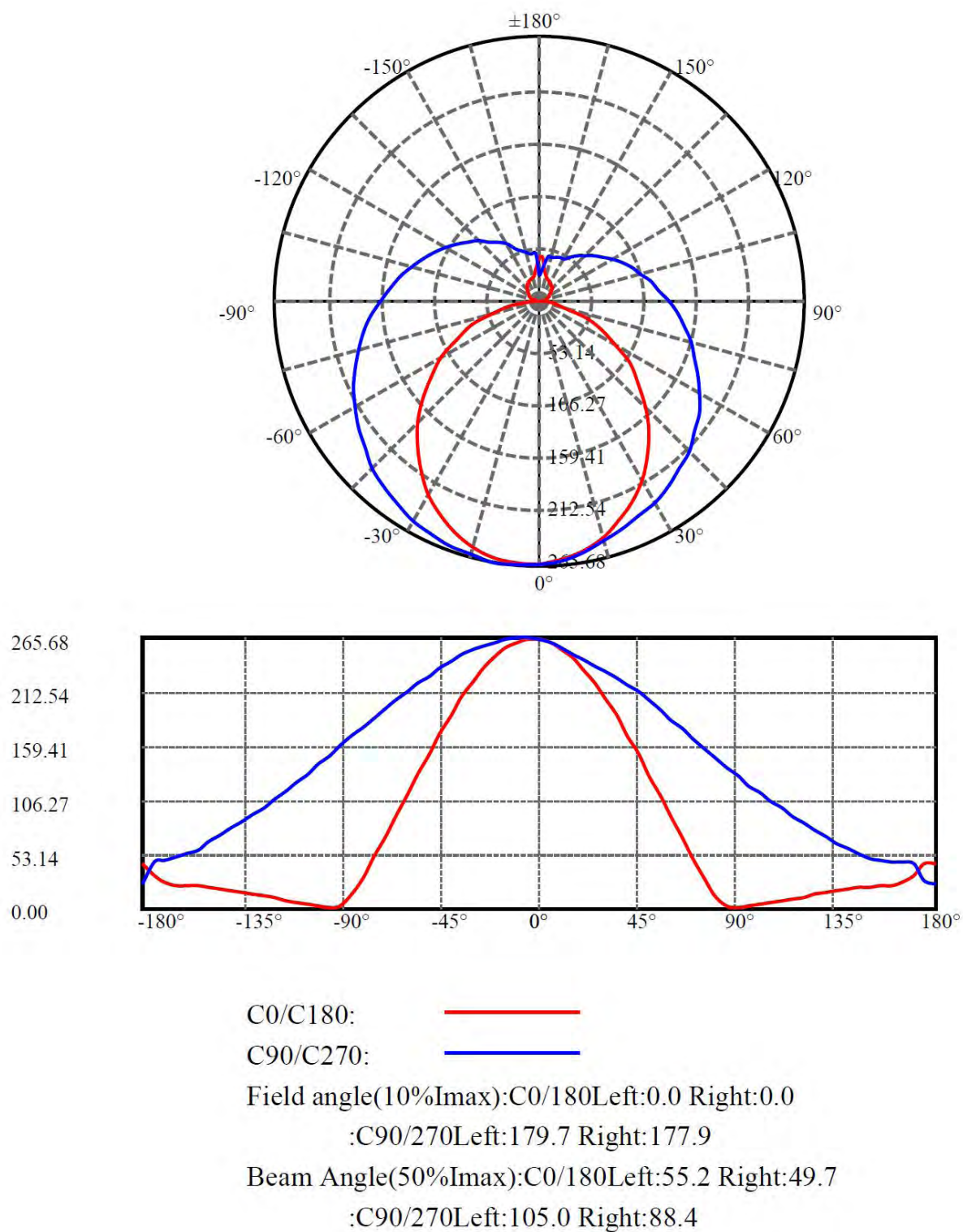
Zonal flux distribution table

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	263.369	0.000	0	0.00%	0.00%
5.0	262.279	6.285	6.285	0.00%	0.45%
10.0	259.181	18.666	24.951	0.00%	1.79%
15.0	254.050	30.473	55.424	0.00%	3.98%
20.0	247.184	41.364	96.788	0.00%	6.95%
25.0	238.730	51.049	147.837	0.00%	10.62%
30.0	229.149	59.330	207.167	0.00%	14.88%
35.0	218.202	66.034	273.201	0.00%	19.63%
40.0	206.205	71.009	344.21	0.00%	24.73%
45.0	193.618	74.266	418.475	0.00%	30.07%
50.0	180.350	75.832	494.307	0.00%	35.51%
55.0	166.962	75.815	570.122	0.00%	40.96%
60.0	153.537	74.406	644.528	0.00%	46.31%
65.0	140.505	71.820	716.348	0.00%	51.47%
70.0	128.064	68.348	784.696	0.00%	56.38%
75.0	115.992	64.140	848.836	0.00%	60.99%
80.0	105.049	59.465	908.301	0.00%	65.26%
85.0	95.577	54.762	963.063	0.00%	69.19%
90.0	87.481	50.235	1013.299	0.00%	72.80%
95.0	80.973	46.129	1059.428	0.00%	76.12%
100.0	75.448	42.479	1101.907	0.00%	79.17%
105.0	70.620	39.050	1140.957	0.00%	81.98%
110.0	66.304	35.755	1176.713	0.00%	84.54%
115.0	62.316	32.536	1209.248	0.00%	86.88%
120.0	58.801	29.421	1238.67	0.00%	89.00%
125.0	55.627	26.431	1265.101	0.00%	90.89%
130.0	52.821	23.560	1288.661	0.00%	92.59%
135.0	50.356	20.831	1309.493	0.00%	94.08%
140.0	48.140	18.223	1327.715	0.00%	95.39%
145.0	46.239	15.737	1343.452	0.00%	96.52%
150.0	44.682	13.384	1356.836	0.00%	97.49%
155.0	43.450	11.152	1367.988	0.00%	98.29%
160.0	41.951	8.958	1376.946	0.00%	98.93%
165.0	40.165	6.760	1383.706	0.00%	99.42%
170.0	37.700	4.601	1388.306	0.00%	99.75%
175.0	36.557	2.636	1390.943	0.00%	99.94%
180.0	37.887	0.886	1391.829	0.00%	100.00%



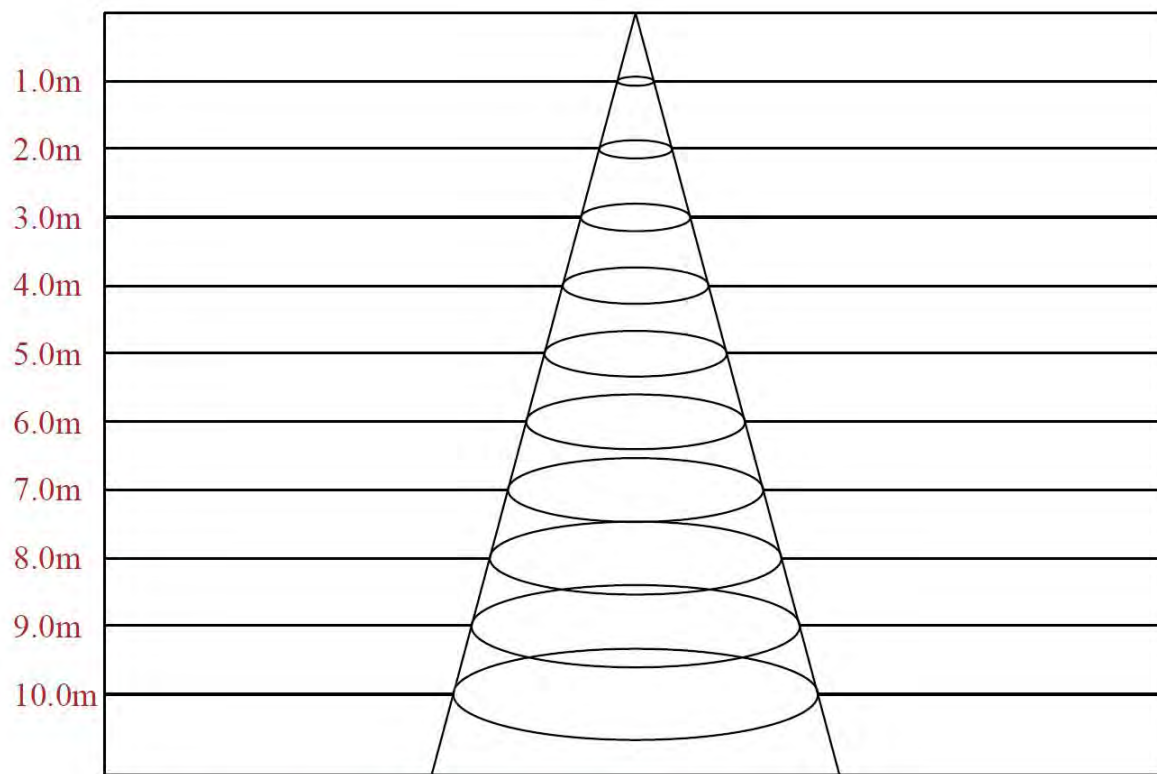
Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





Lux distance Curve



Max , Ave

Beam angle of C270 plane 195.96

**Luminous Intensity Distribution Data**

$C/\gamma(^{\circ})$	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	263.37	260.23	254.57	245.98	234.66	221.46	206.17	189.20	170.13
22.5	263.37	259.82	253.76	245.83	234.76	221.81	207.60	192.57	176.48
45.0	263.37	259.60	254.58	247.26	238.89	229.27	218.81	207.93	196.43
67.5	263.37	260.03	256.28	250.44	244.39	237.30	228.96	220.41	210.82
90.0	263.37	261.06	255.59	249.29	243.82	237.94	232.26	225.96	219.44
112.5	263.37	260.44	256.26	251.04	244.77	237.24	229.09	220.31	211.11
135.0	263.37	260.81	256.54	250.56	242.45	233.06	222.60	211.08	198.27
157.5	263.37	260.63	255.56	248.39	238.05	225.81	212.09	197.10	180.64
180.0	263.37	264.00	260.85	255.20	246.82	235.50	222.30	207.43	190.25
202.5	263.37	264.20	261.91	257.31	250.21	240.39	229.33	216.17	201.13
225.0	263.37	264.62	263.79	261.07	256.47	249.77	241.61	231.57	220.69
247.5	263.37	264.62	265.04	263.37	260.87	256.70	251.27	244.60	237.72
270.0	263.37	265.26	265.68	263.58	260.85	258.11	254.75	248.87	242.56
292.5	263.37	264.62	264.62	262.74	259.40	255.01	249.36	242.68	234.52
315.0	263.37	263.80	262.09	258.46	252.70	244.80	236.48	226.02	215.35
337.5	263.37	262.74	259.78	254.29	245.85	235.51	223.70	209.34	193.73
360.0	263.37	260.23	254.57	245.98	234.66	221.46	206.17	189.20	170.13
$C/\gamma(^{\circ})$	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	151.28	130.74	110.63	90.09	69.56	49.66	30.17	13.83	3.77
22.5	159.15	142.23	125.94	108.82	94.20	80.20	68.30	57.44	49.08
45.0	184.09	170.91	158.98	146.43	134.72	123.42	113.17	103.97	96.85
67.5	201.85	192.05	182.25	171.83	162.65	153.27	144.30	136.17	126.99
90.0	212.29	203.89	195.48	185.39	175.93	166.47	157.22	147.76	138.94
112.5	201.29	191.47	181.01	171.40	161.37	151.96	142.14	133.98	125.83
135.0	185.47	172.66	159.64	146.62	134.46	123.79	112.90	103.30	95.19
157.5	163.76	146.67	129.57	112.69	95.81	79.77	66.26	54.87	45.58
180.0	171.81	152.32	132.84	112.72	91.35	71.45	50.91	31.43	15.30
202.5	184.84	167.71	149.96	133.46	117.38	101.71	86.26	73.10	62.66
225.0	208.77	196.01	183.04	170.91	159.61	148.94	138.48	128.23	118.61
247.5	229.80	221.04	211.86	202.27	192.89	183.50	174.54	165.15	155.77
270.0	236.04	228.48	221.12	213.13	204.73	196.32	187.07	178.03	169.20
292.5	226.37	217.80	208.40	198.99	189.79	180.81	171.40	162.20	152.59
315.0	203.61	191.66	179.49	168.18	156.44	144.70	133.82	124.64	115.46
337.5	177.48	159.96	141.18	123.67	107.21	93.07	78.93	66.69	57.40
360.0	151.28	130.74	110.63	90.09	69.56	49.66	30.17	13.83	3.77
$C/\gamma(^{\circ})$	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	2.10	2.72	4.40	6.50	8.59	10.48	12.36	14.46	16.34
22.5	41.77	36.76	32.58	31.12	29.03	28.41	28.61	28.82	30.28
45.0	88.07	80.12	73.63	67.78	62.76	58.15	54.81	51.25	48.11
67.5	118.44	109.48	101.34	94.05	87.37	80.91	74.65	69.23	63.60
90.0	129.90	121.28	113.71	105.94	98.37	91.43	84.29	77.77	71.47
112.5	117.89	110.16	102.84	94.69	87.58	80.68	74.41	68.77	63.54
135.0	87.93	80.89	74.06	68.51	63.17	58.69	55.28	51.44	48.66
157.5	39.46	34.40	31.02	28.70	27.22	26.59	26.59	28.49	29.97
180.0	3.77	1.68	2.51	4.40	6.50	8.59	11.31	12.99	14.88
202.5	54.30	48.04	44.28	41.35	38.85	36.76	35.09	34.04	33.84
225.0	110.24	102.08	95.60	88.91	83.26	78.03	73.22	68.41	63.59
247.5	147.22	138.04	129.29	121.15	113.65	105.93	98.42	91.75	85.29
270.0	159.54	150.29	141.46	132.84	124.01	115.40	107.41	99.63	92.27
292.5	143.60	135.66	127.30	119.14	111.62	104.51	97.61	91.34	84.86
315.0	106.50	100.10	92.84	87.08	82.17	77.26	72.35	68.08	64.03
337.5	48.96	43.90	40.31	37.78	36.72	35.24	34.40	33.55	34.40
360.0	2.10	2.72	4.40	6.50	8.59	10.48	12.36	14.46	16.34



C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	18.02	19.49	20.74	21.79	22.42	23.26	26.82	33.10	44.00
22.5	31.96	34.04	35.92	37.18	39.27	40.94	38.85	33.84	41.77
45.0	45.81	43.30	43.30	42.88	43.09	42.88	43.51	39.54	38.49
67.5	58.39	53.59	49.42	47.54	46.29	45.04	44.42	44.42	30.03
90.0	64.53	59.27	54.23	49.82	48.34	46.87	45.40	44.98	28.38
112.5	58.32	53.93	49.96	47.66	46.61	45.99	43.27	31.14	31.56
135.0	45.89	43.97	43.54	43.54	43.75	39.06	32.65	27.75	38.63
157.5	32.29	34.40	36.72	38.41	36.09	31.44	29.76	29.97	40.94
180.0	16.76	18.23	20.11	21.37	22.63	23.26	23.89	26.19	32.90
202.5	35.09	36.97	38.22	39.27	40.10	36.97	32.16	29.66	31.75
225.0	59.62	55.64	51.25	48.95	47.28	46.02	39.33	32.42	27.20
247.5	78.82	72.57	66.52	59.85	54.63	51.30	49.00	44.83	30.03
270.0	85.13	78.40	72.31	65.58	57.80	53.81	50.87	48.34	46.87
292.5	78.80	72.74	66.89	59.78	55.39	52.05	50.17	48.28	47.03
315.0	60.61	56.56	51.86	50.16	49.09	48.66	48.02	47.38	39.06
337.5	35.67	37.14	38.83	41.15	42.42	43.68	44.53	41.36	36.30
360.0	18.02	19.49	20.74	21.79	22.42	23.26	26.82	33.10	44.00
C/γ(°)	180.0								
0.0	44.63								
22.5	41.77								
45.0	39.33								
67.5	31.91								
90.0	25.22								
112.5	32.82								
135.0	42.69								
157.5	44.74								
180.0	44.63								
202.5	41.77								
225.0	39.33								
247.5	31.91								
270.0	25.22								
292.5	32.82								
315.0	42.69								
337.5	44.74								
360.0	44.63								



4 Additional Test

Electrical data at 277V

Model Number	Test Item	Test Voltage (V)	Frequency (Hz)	Test Result
RP-T8C-G2-12W-3FT-1L-830-[OCN, Blank]-10V	Power Factor	277	60	0.914
	THD	277	60	11.7%

5 Performance Assessment

Model name	CCT(K)	Total Luminous(lm)	Power(W)	Luminous Efficacy(lm/W)
RP-T8C-G2-6W-3FT-1L-830-[OCN, Blank]-10V	3000	707.77	5.76	122.88
RP-T8C-G2-6W-3FT-1L-835-[OCN, Blank]-10V	3500	710.77 * ¹	5.76 * ²	123.40 * ³
RP-T8C-G2-6W-3FT-1L-840-[OCN, Blank]-10V	4000	713.77 * ¹	5.76 * ²	123.92 * ³
RP-T8C-G2-6W-3FT-1L-850-[OCN, Blank]-10V	5000	719.77	5.76	124.91

*1: This value is calculated and the calculation formula is as below:

$$710.77 = (719.77 - 707.77) / 4 + 707.77$$

$$713.77 = (719.77 - 707.77) / 4 + 710.77$$

*2: This value is calculated and the calculation formula is as below:

$$5.76 = (5.76 + 5.76) / 2$$

*3: This value is calculated and the calculation formula is as below:

$$123.40 = 710.77 / 5.76$$

$$123.92 = 713.77 / 5.76$$



Model name	CCT(K)	Total Luminous(lm)	Power(W)	Luminous Efficacy(lm/W)
RP-T8C-G2-8W-3FT-1L-830-[OCN, Blank]-10V	3000	956.99	7.88	121.45
RP-T8C-G2-8W-3FT-1L-835-[OCN, Blank]-10V	3500	960.79 ^{*1}	7.89 ^{*2}	121.77 ^{*3}
RP-T8C-G2-8W-3FT-1L-840-[OCN, Blank]-10V	4000	964.60 ^{*1}	7.89 ^{*2}	122.26 ^{*3}
RP-T8C-G2-8W-3FT-1L-850-[OCN, Blank]-10V	5000	972.20	7.90	123.06

*1: This value is calculated and the calculation formula is as below:

$$960.79 = (972.20 - 956.99) / 4 + 956.99$$

$$964.60 = (972.20 - 956.99) / 4 + 960.79$$

*2: This value is calculated and the calculation formula is as below:

$$7.89 = (7.88 + 7.90) / 2$$

*3: This value is calculated and the calculation formula is as below:

$$121.77 = 960.79 / 7.89$$

$$122.26 = 964.60 / 7.89$$

Model name	CCT(K)	Total Luminous(lm)	Power(W)	Luminous Efficacy(lm/W)
RP-T8C-G2-10W-3FT-1L-830-[OCN, Blank]-10V	3000	1156.60	9.77	118.38
RP-T8C-G2-10W-3FT-1L-835-[OCN, Blank]-10V	3500	1164.98 ^{*1}	9.78 ^{*2}	119.18 ^{*3}
RP-T8C-G2-10W-3FT-1L-840-[OCN, Blank]-10V	4000	1173.37 ^{*1}	9.78 ^{*2}	120.04 ^{*3}
RP-T8C-G2-10W-3FT-1L-850-[OCN, Blank]-10V	5000	1190.13	9.78	121.69

*1: This value is calculated and the calculation formula is as below:

$$1164.98 = (1190.13 - 1156.60) / 4 + 1156.60$$

$$1173.37 = (1190.13 - 1156.60) / 4 + 1164.98$$

*2: This value is calculated and the calculation formula is as below:

$$9.78 = (9.77 + 9.78) / 2$$

*3: This value is calculated and the calculation formula is as below:

$$119.18 = 1164.98 / 9.78$$

$$120.04 = 1173.37 / 9.78$$



Model name	CCT(K)	Total Luminous(lm)	Power(W)	Luminous Efficacy(lm/W)
RP-T8C-G2-12W-3FT-1L -830-[OCN, Blank]-10V	3000	1399.50	12.01	116.53
RP-T8C-G2-12W-3FT-1L -835-[OCN, Blank]-10V	3500	1405.53 ^{*1}	12.01 ^{*2}	117.08 ^{*3}
RP-T8C-G2-12W-3FT-1L -840-[OCN, Blank]-10V	4000	1411.55 ^{*1}	12.01 ^{*2}	117.58 ^{*3}
RP-T8C-G2-12W-3FT-1L -850-[OCN, Blank]-10V	5000	1423.60	12.00	118.63

*1: This value is calculated and the calculation formula is as below:

$$1405.53 = (1423.60 - 1399.50) / 4 + 1399.50$$

$$1411.55 = (1423.60 - 1399.50) / 4 + 1405.53$$

*2: This value is calculated and the calculation formula is as below:

$$12.01 = (12.01 + 12.00) / 2$$

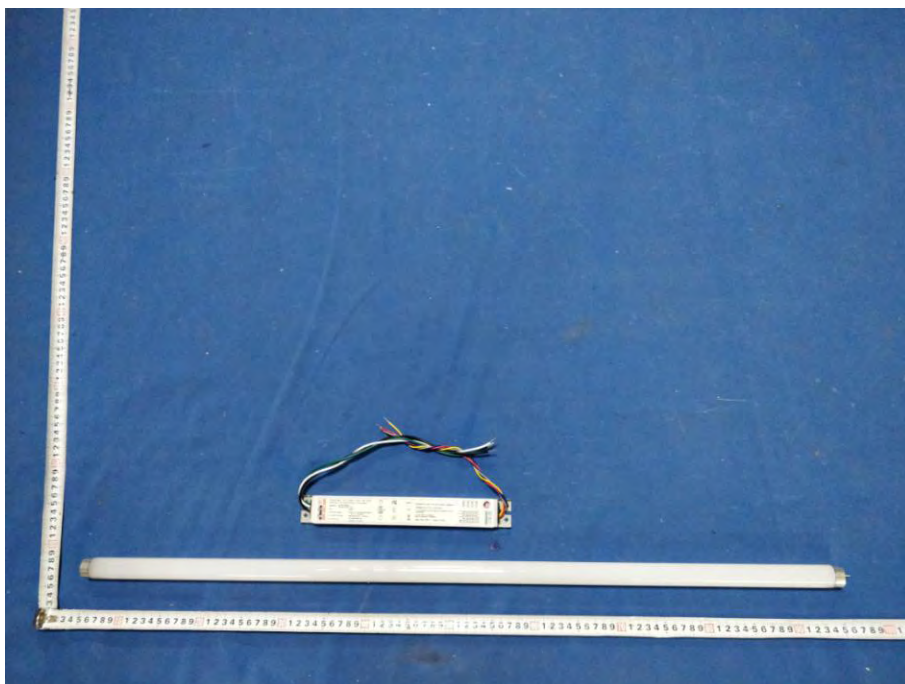
*3: This value is calculated and the calculation formula is as below:

$$117.08 = 1405.53 / 12.01$$

$$117.58 = 1411.55 / 12.01$$



Photo Document



****End of test report****