



Date of issue 2023-09-05

Version 1.0

Total pages 29

Test report of

IES LM-79-08

Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Applicant:

Beyond LED Technology

Address:

1939 Parker Court, Stone Mountain, GA 30087

For Product:

2x4 Luminaires for Ambient Lighting of Interior Commercial Spaces

Model No.: BLT-PL2X4-72W-A5C5-P

PL2X4-72W-A5C5-P-[Blank;M;l;B;MB;IB;EM;EMS],

PL2X4-60W-A5C5-P-[Blank;M;l;B;MB;IB;EM;EMS]

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.



Complied by: Sam Chen

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 used 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	Beyond LED Technology
Manufacturer Address	1939 Parker Court, Stone Mountain, GA 30087
Brand Name	Beyond LED Technology
Luminaire Type	2x4 Luminaires for Ambient Lighting of Interior Commercial Spaces
Model Number	BLT-PL2X4-72W-A5C5-P
Rated Inputs	AC 120-277V, 50/60Hz
Field-Adjustable Product	Yes, Watting setting: 30W, 40W, 50W, 60W, 72W
Color-Tunable Product	Yes, CCT setting: 3000K, 3500K, 4000K, 5000K, 6500K
Dimming Capability	Continuous
Integral Control Sensors	Optional
Date of Receipt Samples	2023-08-03
Date of test	2023-08-04 to 2023-08-11
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	M101758514120 011	2024-03-27
AC Power Source	ALL POWER	APW-105N	N.A	2024-03-27
Total Luminous Flux Standard Lamp	SENSING	110V/100W	S13100188	2024-04-03
Total Luminous Flux Standard Lamp	OSRAM	12V/20W	LSD12201737	2024-04-03
Total Spectral Radiant Flux Standard Lamp	Everfine	D204	M133806CA141 1205	2024-04-03
Digital Power Meter	YOKOGAWA	WT310	N.A	2024-03-27
Thermostatic stabilized photometric sphere	SENSING	SPR-600M	N.A	2024-03-27
Plant spectral photosynthetically radiometer	Everfine	SP-20	P612946CF1411 115	2024-03-27
Digital Power Meter	YOKOGAWA	WT210	N.A	2024-03-27
Spectral radiometer	SENSING	SPR-3000	S1101108	2024-03-27
Environment Measurer	XUYAO	HS-1	N/A	2024-03-31
Environment Measurer	XUYAO	HS-1	N/A	2024-03-31
Stop watch	KISLO	K610	N/A	2024-04-19
Digital Anemometer	TECMAN	TD8901	026141	2023-09-07

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).



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: PL2X4-72W-A5C5-P-[Blank;M;I;B;MB;IB;EM;EMS], 3000K

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.05	60	0.594	70.25	0.985

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
8893.85	126.6	2978

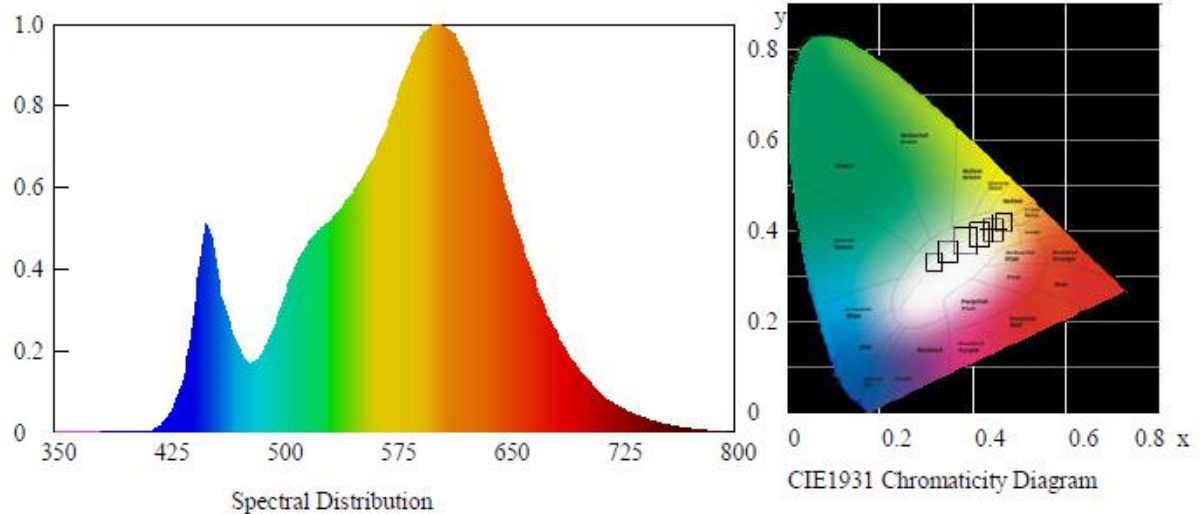
Chromaticity Coordinate

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

Color Rendering

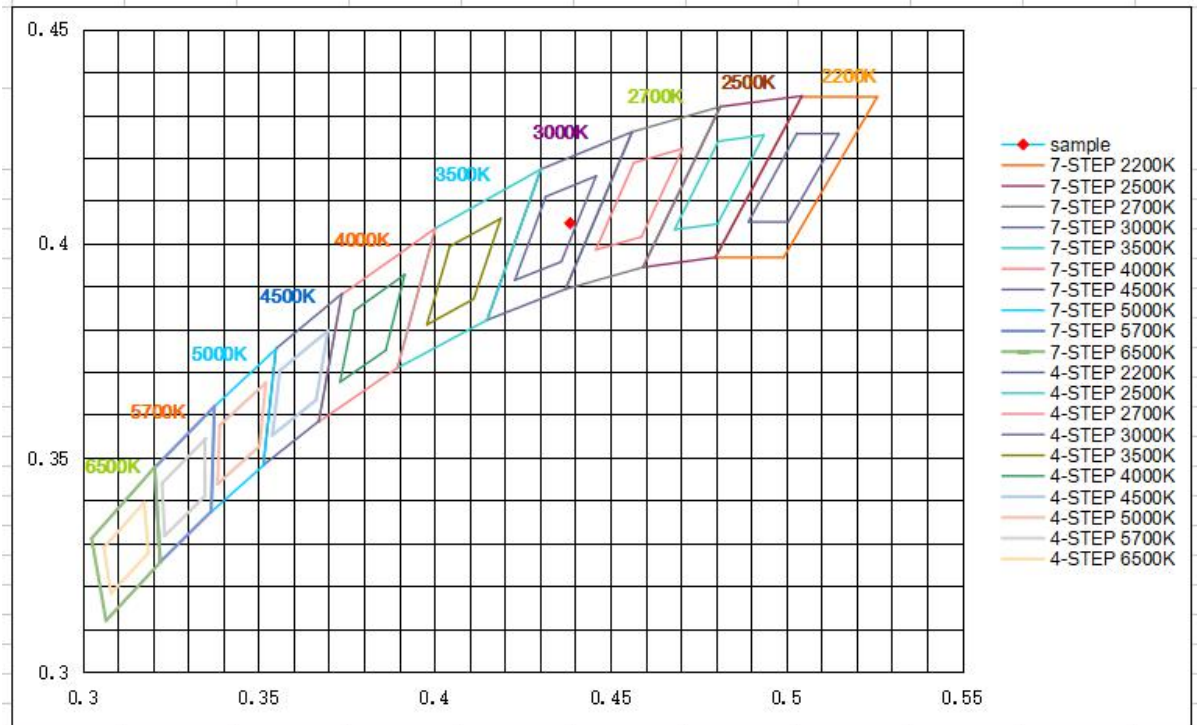
CRI	R9	Rf	Rg	Rcs,h1(%)
83.4	9	85	96	-11

Spectral Distribution





7/4 Step Quadrangle

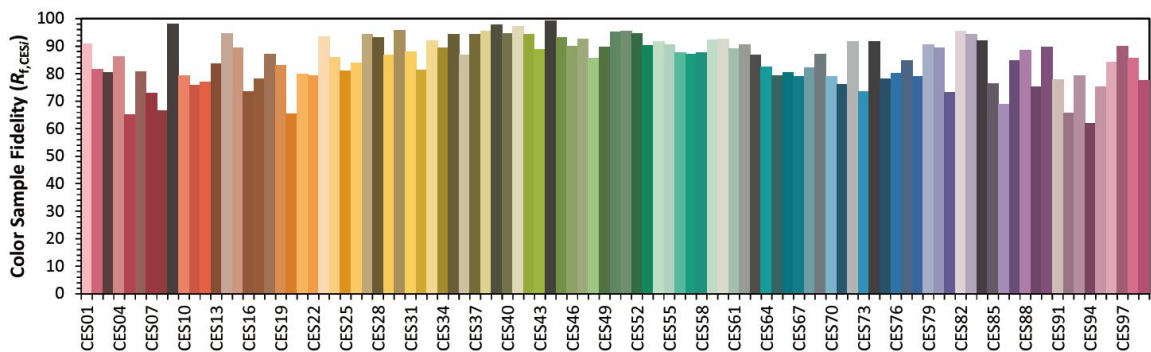
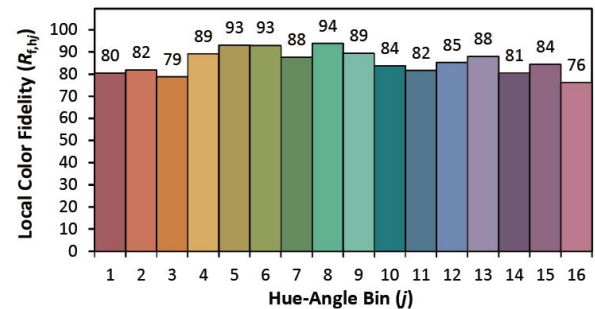
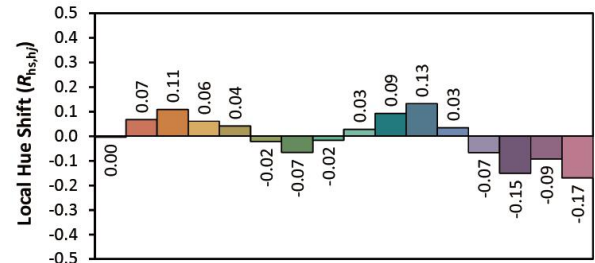
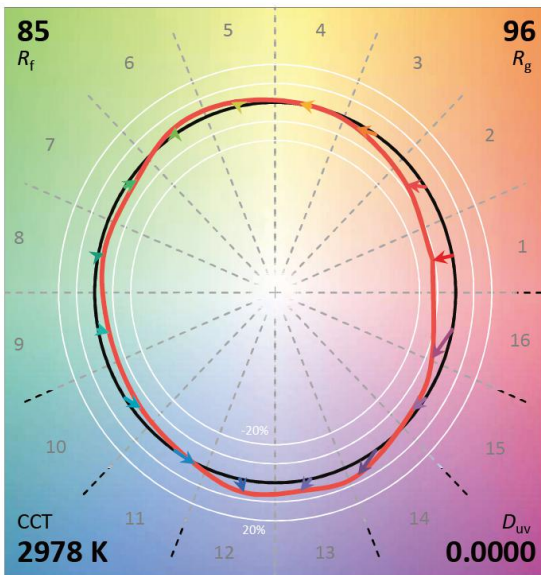
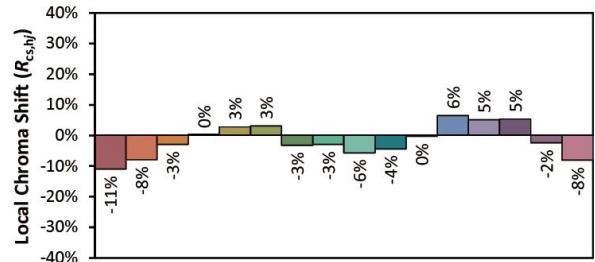
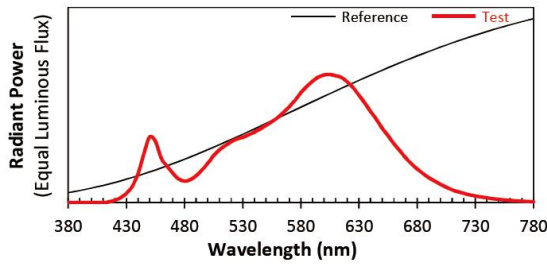




ANSI/IES TM-30-18 Color Rendition Report

Source: BL230803003-9
Date: 2023-09-05

Manufacturer: Beyond LED Technology
Model: BLT-PL2X4-72W-A5C5-P



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	9

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



3.1.2 Model Number: PL2X4-72W-A5C5-P-[Blank;M;I;B;MB;IB;EM;EMS], 3500K

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.10	60	0.592	70.02	0.985

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
9081.63	129.7	3404

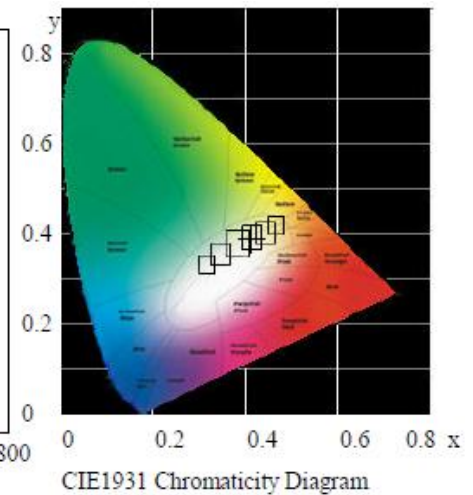
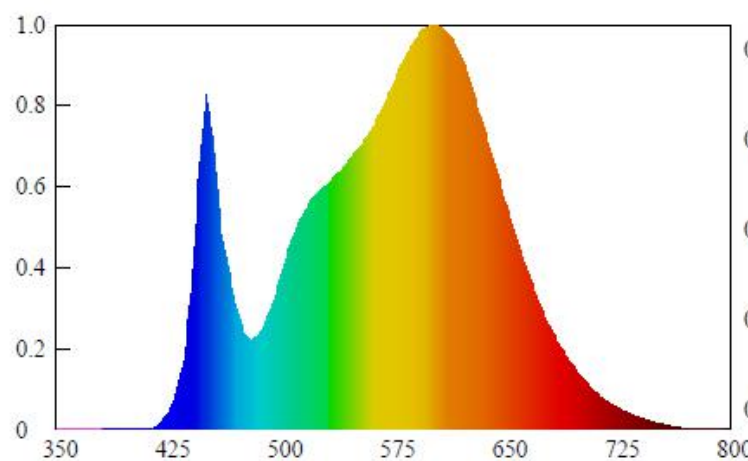
Chromaticity Coordinate

Duv	x	y	u'	v'
-0.00173	0.4089	0.3885	0.2390	0.5109

Color Rendering

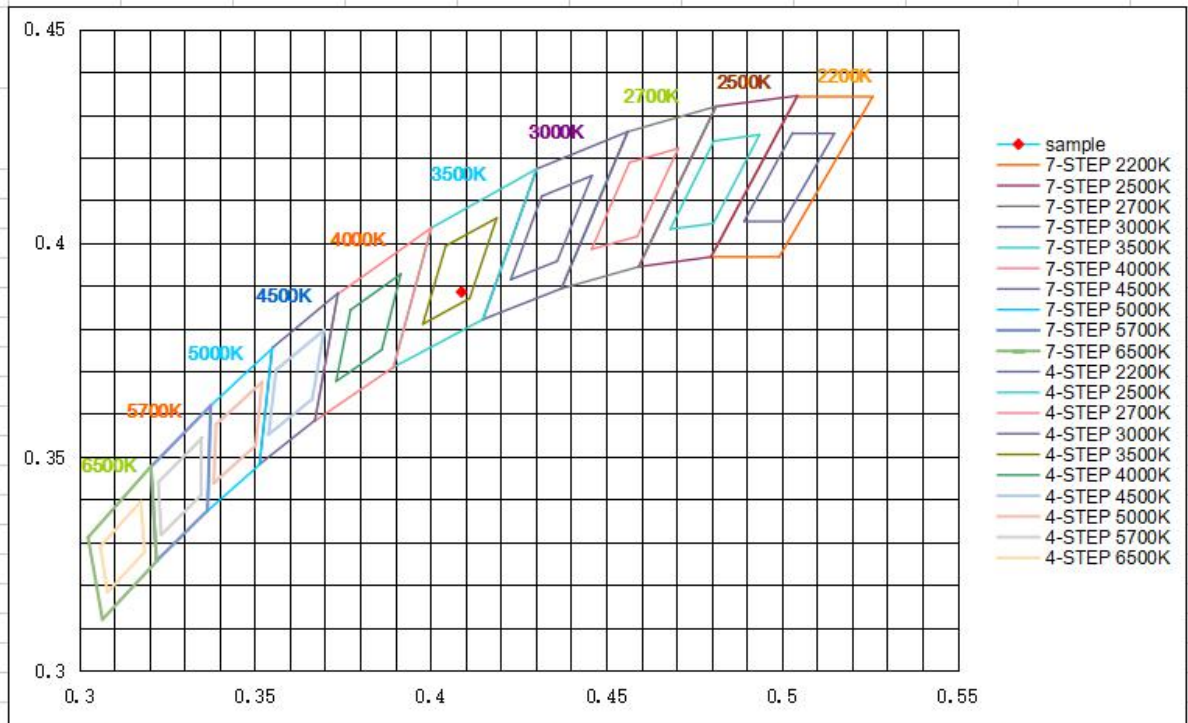
CRI	R9	Rf	Rg	Rcs,h1(%)
84.9	16	85	97	-11

Spectral Distribution





7/4 Step Quadrangle

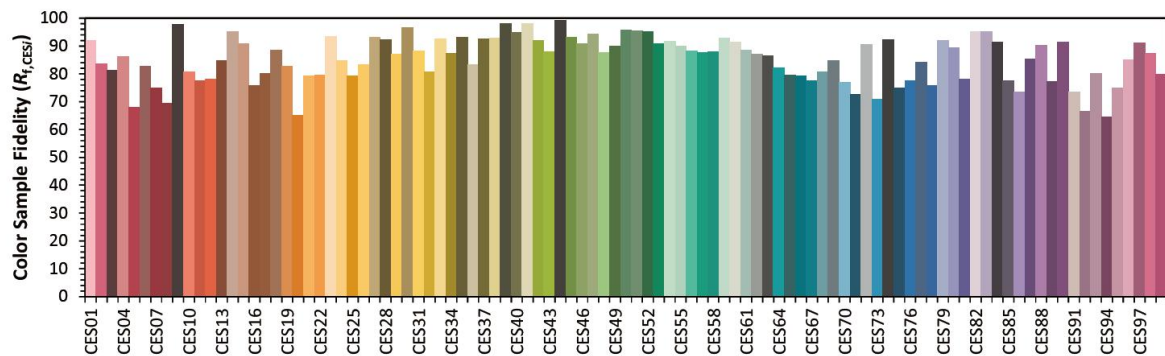
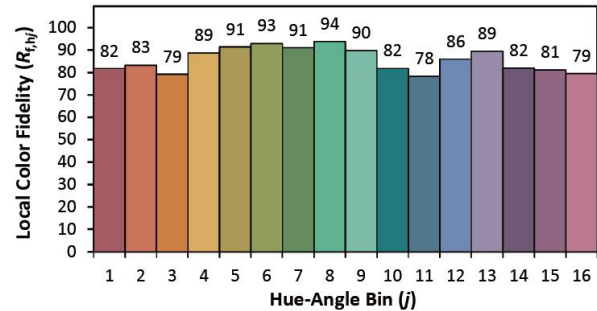
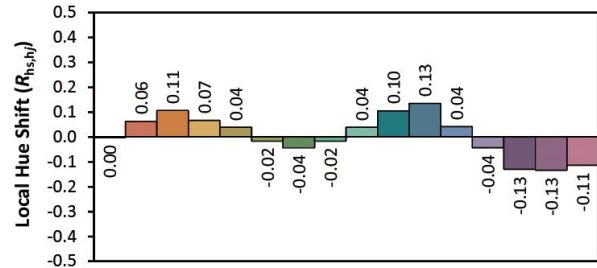
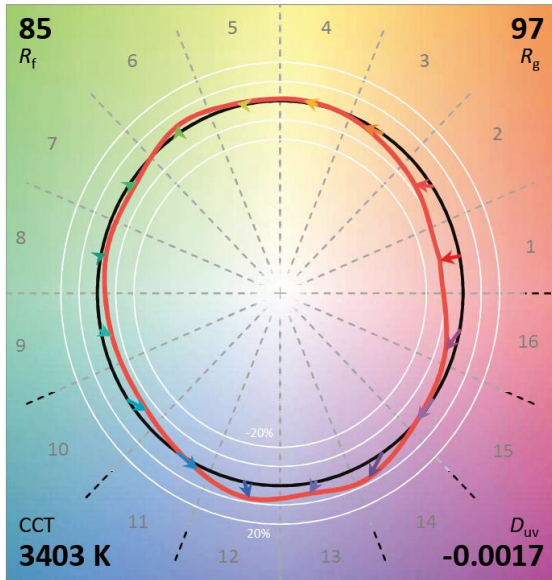
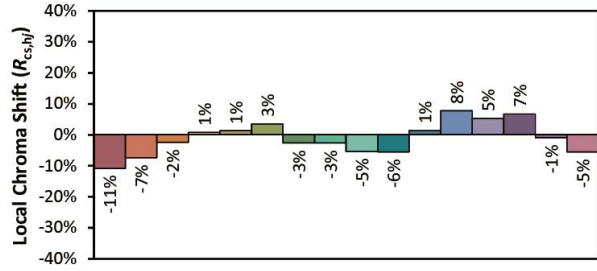
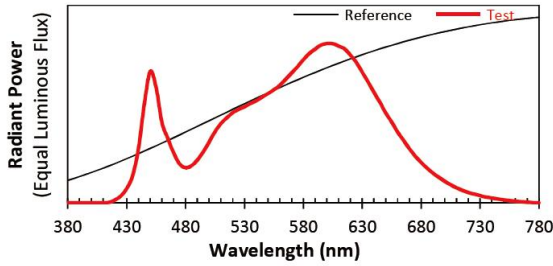




ANSI/IES TM-30-18 Color Rendition Report

Source: BL230803003-9
 Date: 2023-09-05

Manufacturer: Beyond LED Technology
 Model: BLT-PL2X4-72W-A5C5-P



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

x 0.4089
 y 0.3885
 u' 0.2390
 v' 0.5109

CIE 13.3-1995 (CRI)	
R_a	85
R_g	16

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



3.1.3 Model Number: PL2X4-72W-A5C5-P-[Blank;M;I;B;MB;IB;EM;EMS], 4000K

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.05	60	0.595	70.31	0.984

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
9224.20	131.2	3896

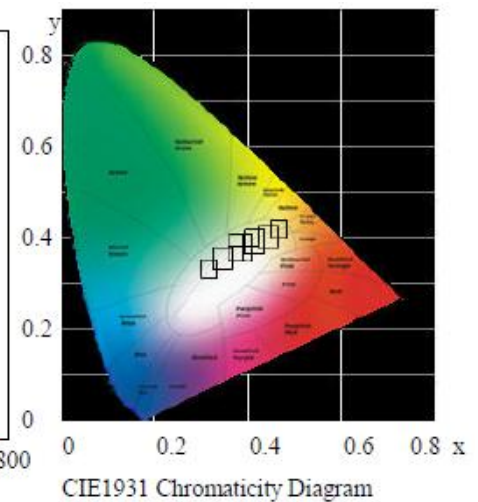
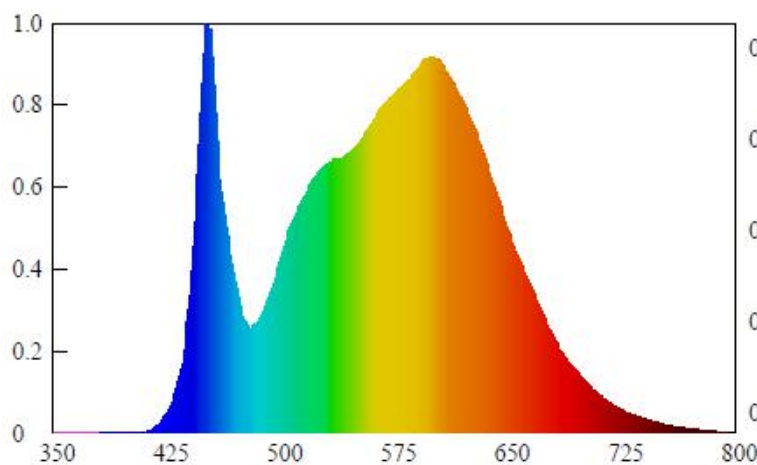
Chromaticity Coordinate

Duv	x	y	u'	v'
-0.00038	0.3849	0.3787	0.2273	0.5031

Color Rendering

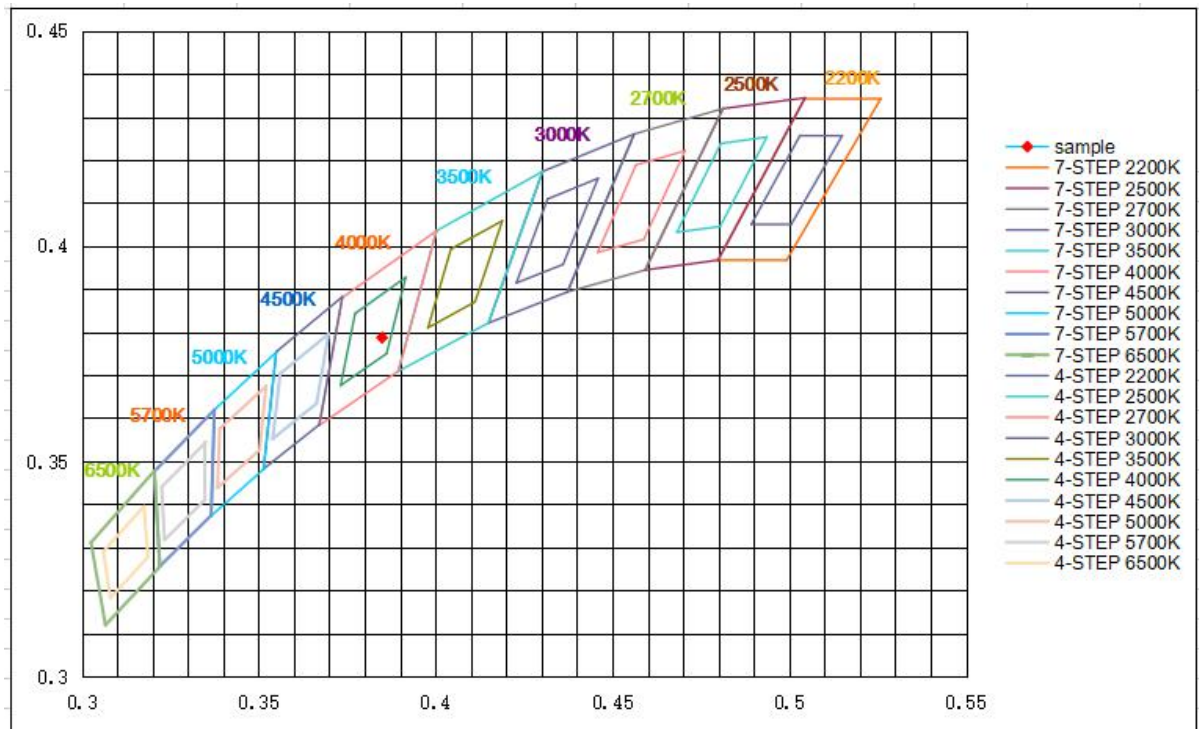
CRI	R9	Rf	Rg	Rcs,h1(%)
85.8	22	86	96	-10

Spectral Distribution





7/4 Step Quadrangle

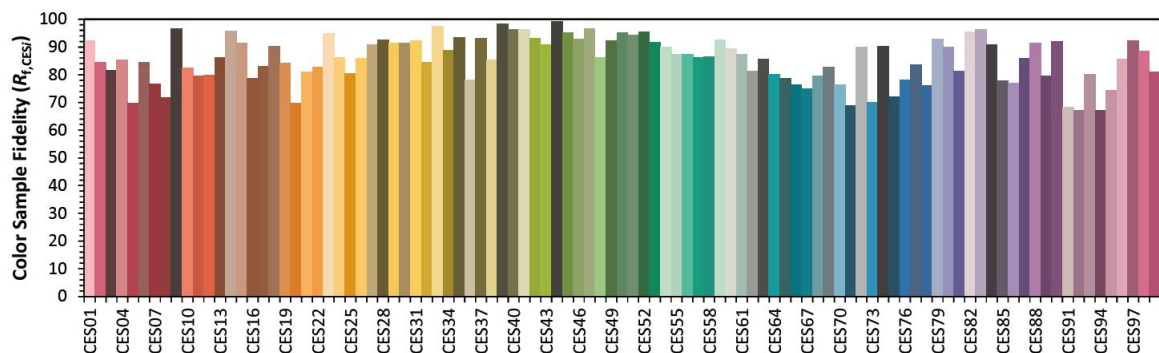
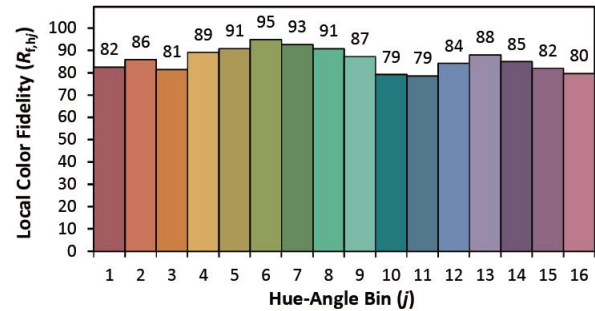
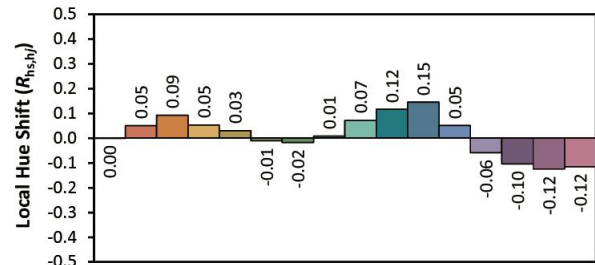
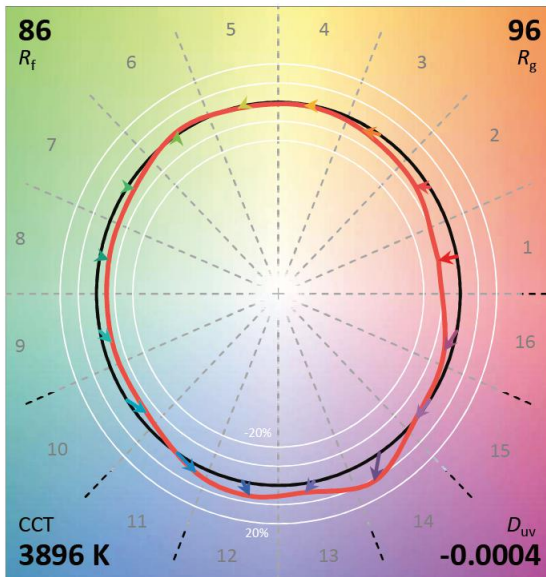
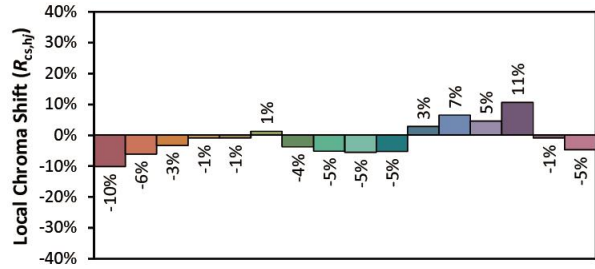
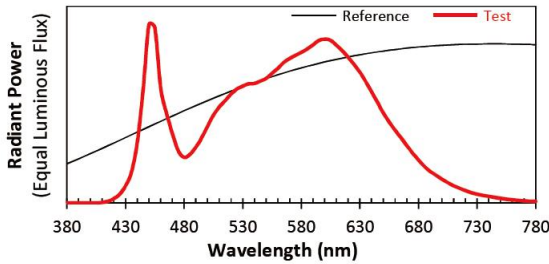




ANSI/IES TM-30-18 Color Rendition Report

Source: BL230803003-9
 Date: 2023-09-05

Manufacturer: Beyond LED Technology
 Model: BLT-PL2X4-72W-A5C5-P



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

x 0.3849
 y 0.3787
 u' 0.2273
 v' 0.5031

CIE 13.3-1995 (CRI)	
R_a	86
R_g	22

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



3.1.4 Model Number: PL2X4-72W-A5C5-P-[Blank;M;I;B;MB;IB;EM;EMS], 5000K

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.10	60	0.595	70.24	0.983

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
9299.87	132.4	5098

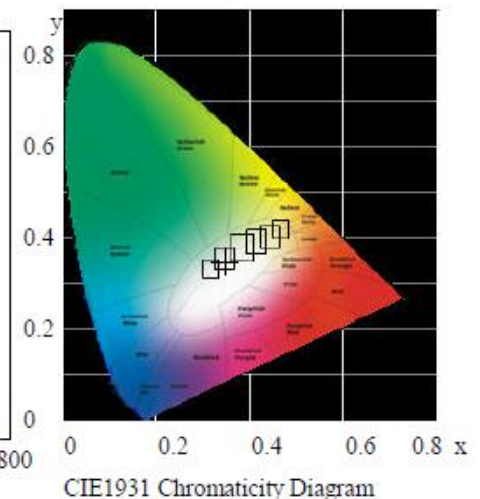
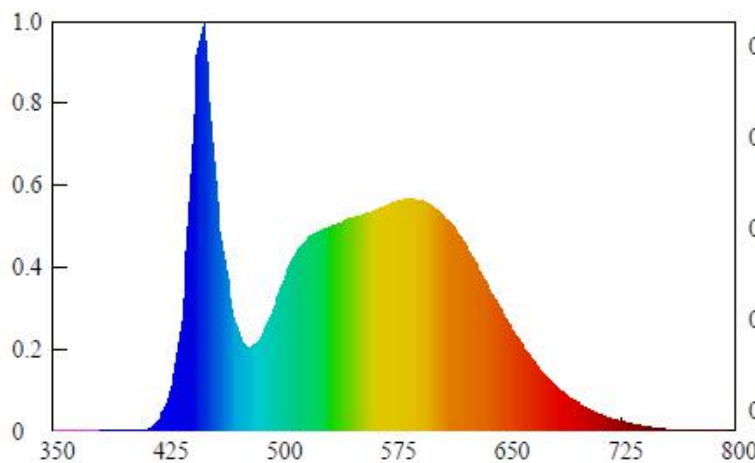
Chromaticity Coordinate

Duv	x	y	u'	v'
-0.00088	0.3423	0.3476	0.2111	0.4823

Color Rendering

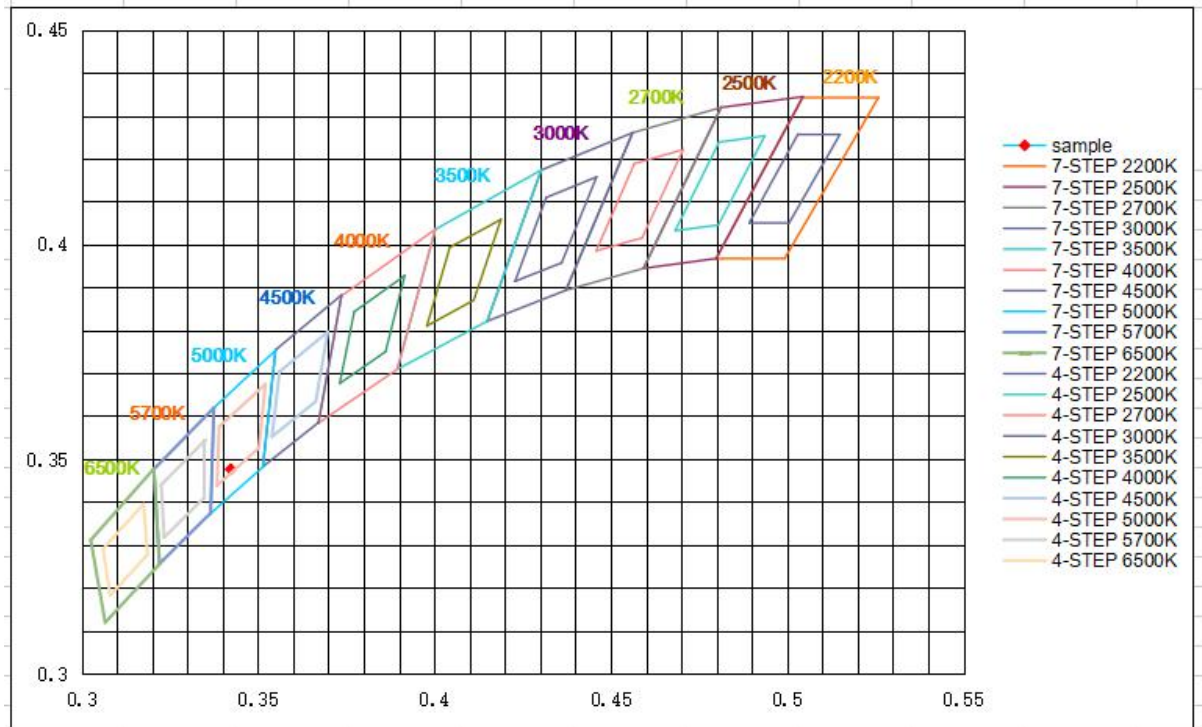
CRI	R9	Rf	Rg	Rcs,h1(%)
84.2	16	84	99	-11

Spectral Distribution





7/4 Step Quadrangle

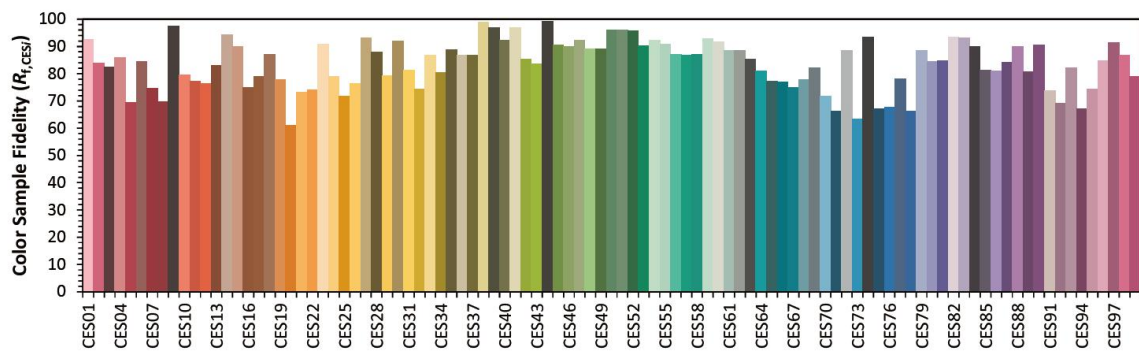
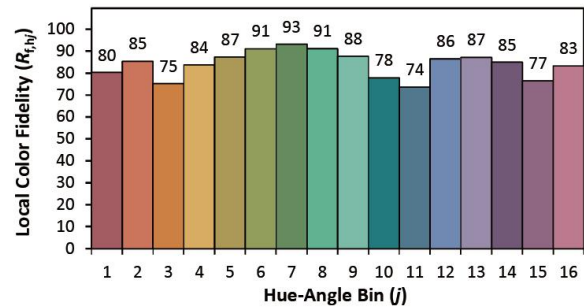
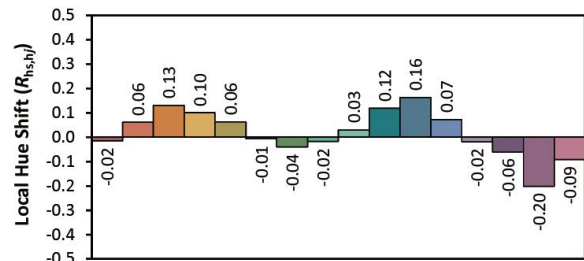
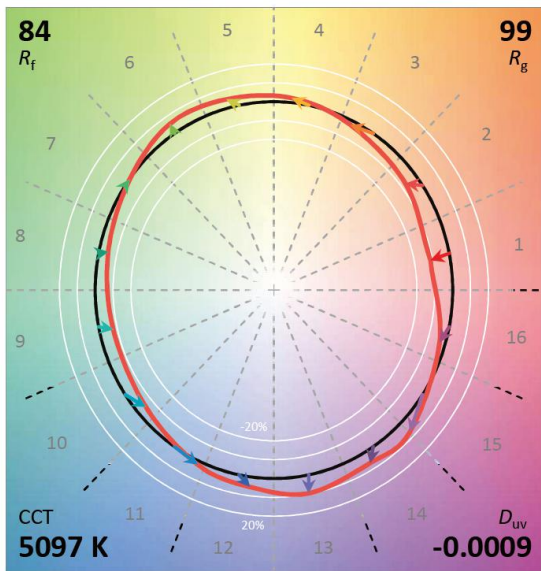
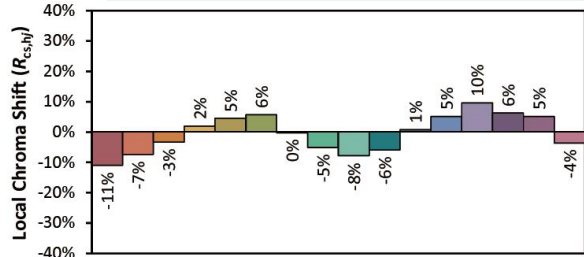
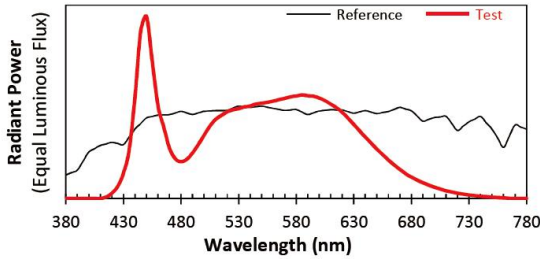




ANSI/IES TM-30-18 Color Rendition Report

Source: BL230803003-9
 Date: 2023-09-05

Manufacturer: Beyond LED Technology
 Model: BLT-PL2X4-72W-A5C5-P



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

x 0.3423
 y 0.3476
 u' 0.2111
 v' 0.4823

CIE 13.3-1995 (CRI)	
R_a	84
R_9	16

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



3.1.5 Model Number: PL2X4-72W-A5C5-P-[Blank;M;I;B;MB;IB;EM;EMS], 6500K

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.06	60	0.595	70.38	0.984

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
9064.90	128.8	6482

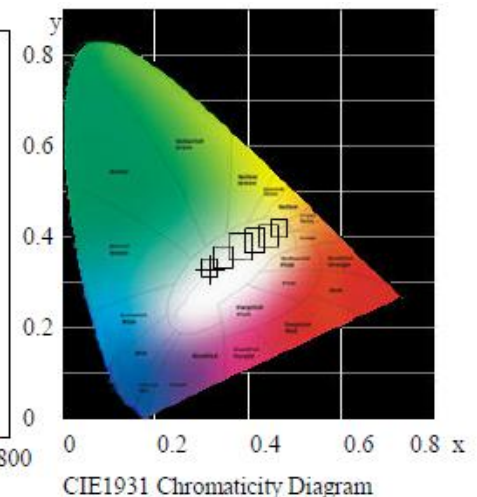
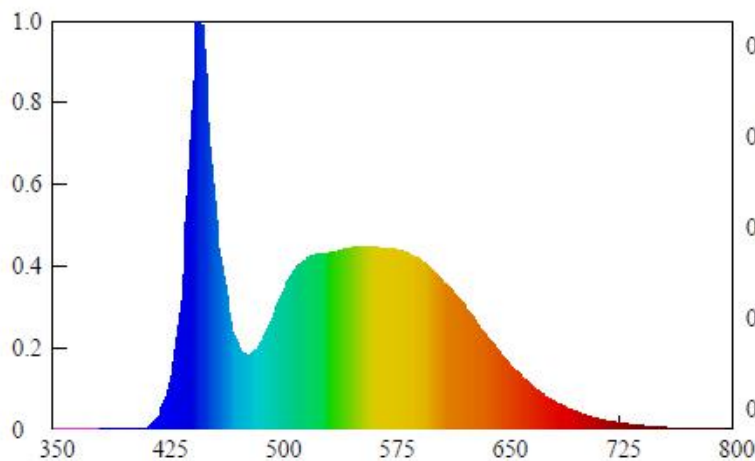
Chromaticity Coordinate

Duv	x	y	u'	v'
+0.00201	0.3134	0.3273	0.1989	0.4675

Color Rendering

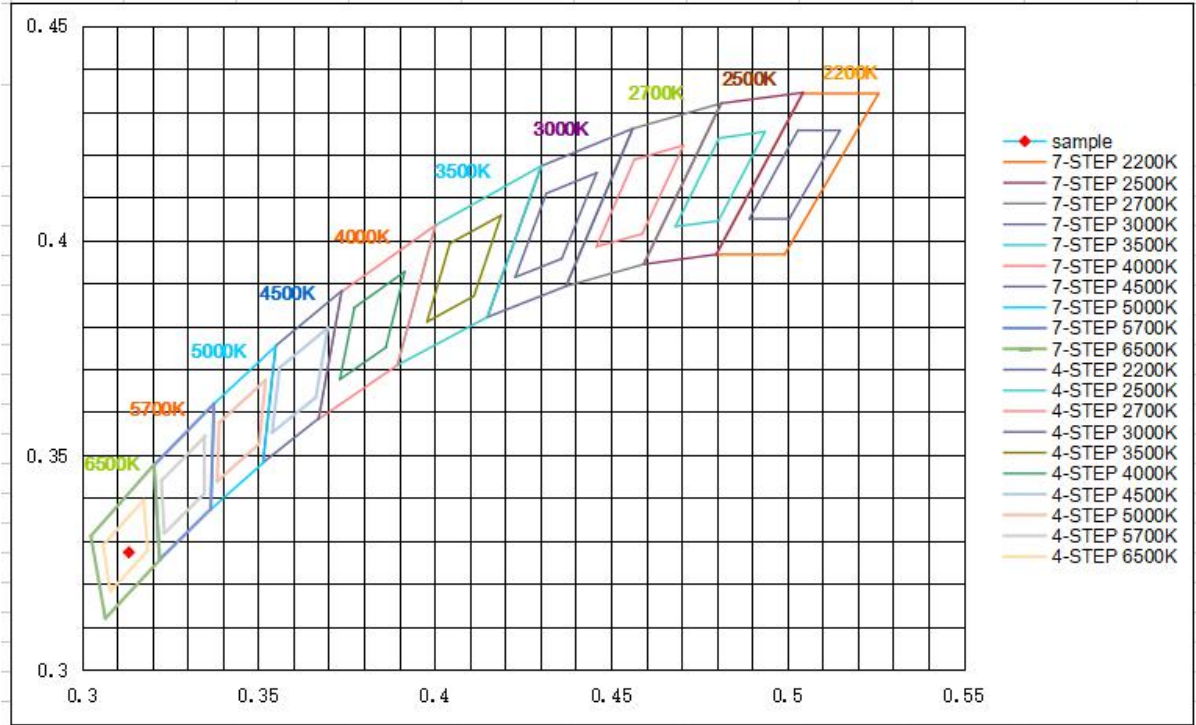
CRI	R9	Rf	Rg	Rcs,h1(%)
82.0	7	82	97	-13

Spectral Distribution





7/4 Step Quadrangle

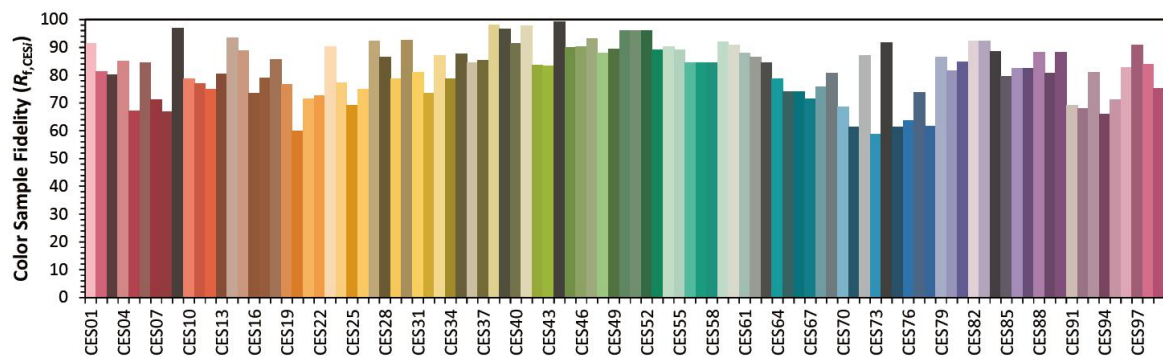
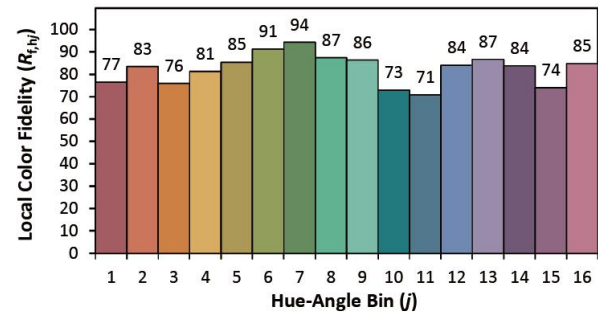
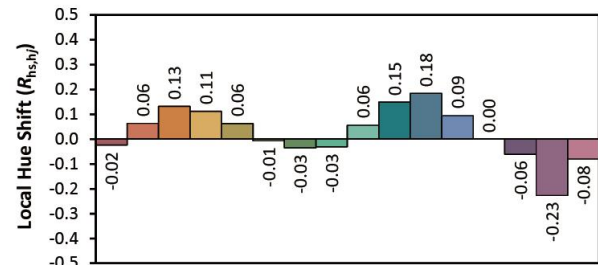
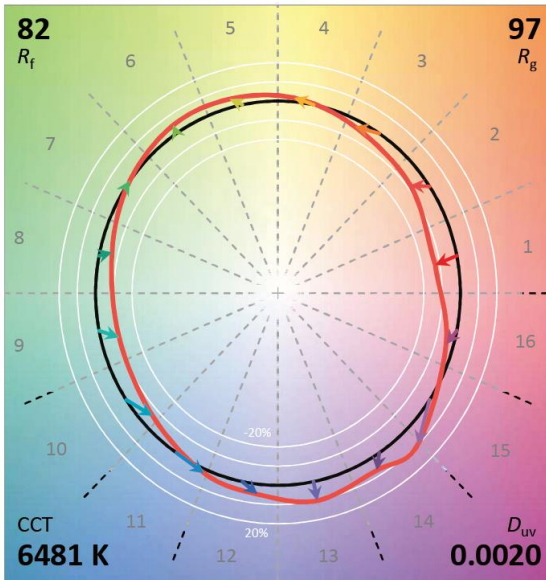
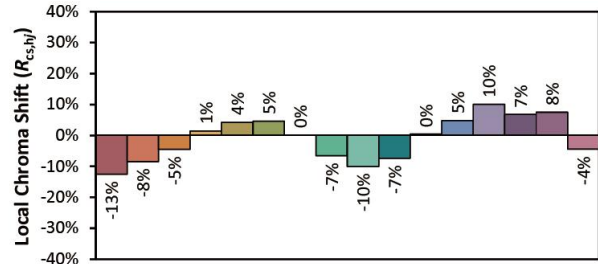
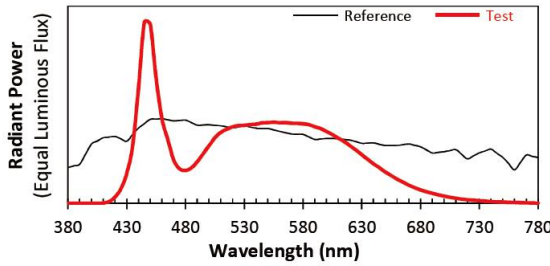




ANSI/IES TM-30-18 Color Rendition Report

Source: BL230803003-9
 Date: 2023-09-05

Manufacturer: Beyond LED Technology
 Model: BLT-PL2X4-72W-A5C5-P



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

x 0.3134
 y 0.3273
 u' 0.1989
 v' 0.4675

CIE 13.3-1995 (CRI)	
R_a	82
R_g	7

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



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

3.2.1 Model Number: PL2X4-72W-A5C5-P-[Blank;M;I;B;MB;IB;EM;EMS], 3000K

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.11	60	0.5930	70.13	0.9844

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	S/MH (C0/180)	S/MH (C90/270)	Zonal Lumen in 0-60°(%lm)
8897.59	126.87	1.20	1.34	78.33



Zonal Flux Diagram

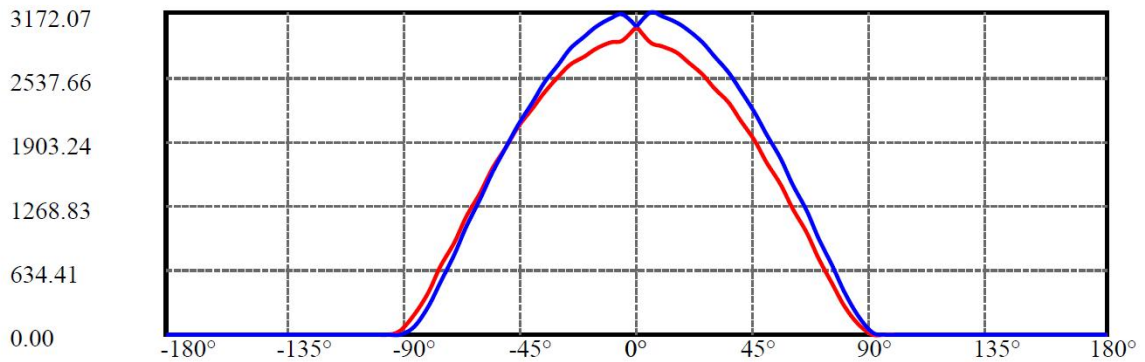
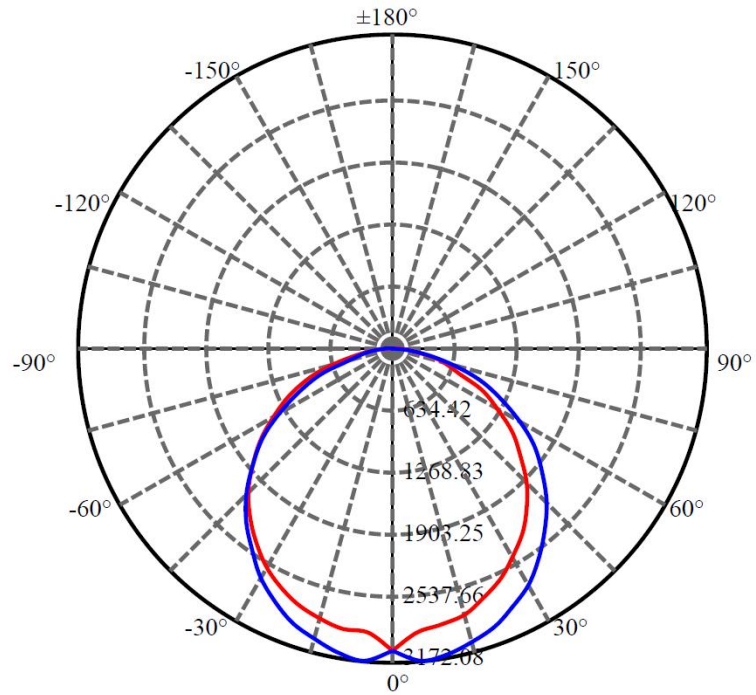
Zonal flux distribution table

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	3043.287	0.000	0	0.00%	0.00%
5.0	3041.879	72.746	72.746	0.00%	0.82%
10.0	3007.329	216.399	289.146	0.00%	3.25%
15.0	2946.023	353.149	642.294	0.00%	7.22%
20.0	2858.750	478.395	1120.689	0.00%	12.60%
25.0	2746.325	587.869	1708.558	0.00%	19.20%
30.0	2610.514	677.912	2386.471	0.00%	26.82%
35.0	2451.076	745.355	3131.825	0.00%	35.20%
40.0	2272.936	788.166	3919.991	0.00%	44.06%
45.0	2073.879	804.848	4724.839	0.00%	53.10%
50.0	1855.991	794.088	5518.927	0.00%	62.03%
55.0	1624.550	756.786	6275.712	0.00%	70.53%
60.0	1376.587	693.704	6969.417	0.00%	78.33%
65.0	1117.557	606.331	7575.748	0.00%	85.14%
70.0	850.154	498.237	8073.985	0.00%	90.74%
75.0	589.262	376.240	8450.225	0.00%	94.97%
80.0	344.299	249.795	8700.02	0.00%	97.78%
85.0	139.885	131.564	8831.584	0.00%	99.26%
90.0	17.628	43.128	8874.713	0.00%	99.74%
95.0	2.310	5.459	8880.172	0.00%	99.80%
100.0	2.085	1.194	8881.366	0.00%	99.82%
105.0	2.245	1.159	8882.525	0.00%	99.83%
110.0	2.342	1.199	8883.724	0.00%	99.84%
115.0	2.582	1.247	8884.97	0.00%	99.86%
120.0	2.887	1.330	8886.3	0.00%	99.87%
125.0	3.224	1.413	8887.713	0.00%	99.89%
130.0	3.336	1.426	8889.139	0.00%	99.91%
135.0	3.513	1.384	8890.523	0.00%	99.92%
140.0	3.673	1.331	8891.854	0.00%	99.94%
145.0	3.818	1.250	8893.103	0.00%	99.95%
150.0	3.914	1.138	8894.242	0.00%	99.96%
155.0	4.074	1.011	8895.253	0.00%	99.97%
160.0	3.962	0.843	8896.096	0.00%	99.98%
165.0	3.930	0.650	8896.746	0.00%	99.99%
170.0	3.930	0.466	8897.212	0.00%	100.00%
175.0	3.882	0.279	8897.492	0.00%	100.00%
180.0	4.016	0.094	8897.586	0.00%	100.00%



Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]



C0/C180: —

C90/C270: —

Field angle(10%Imax):C0/180Left:82.6 Right:79.2

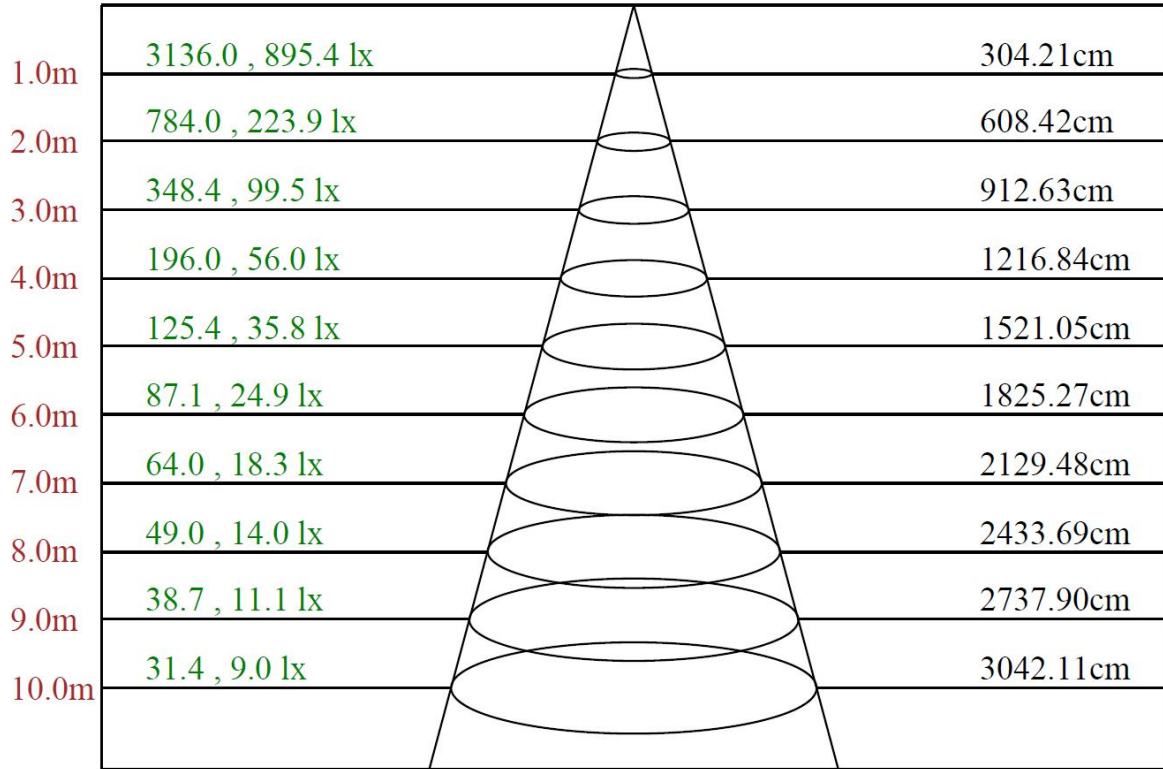
:C90/270Left:79.0 Right:82.1

Beam Angle(50%Imax):C0/180Left:57.4 Right:53.9

:C90/270Left:55.1 Right:58.0



Lux distance Curve



Max , Ave Beam angle of C90 plane 113.36



UGR Glare

Illumination assessment according UGR											
Rf of Ceiling	70	70	50	50	30	70	70	50	50	30	
Rf of Wall	50	30	50	30	30	50	30	50	30	30	
Rf of Floor	20	20	20	20	20	20	20	20	20	20	
Room dimensions		Viewed crosswise					Viewed endwise				
X	Y										
2H	2H	16.41	18.05	16.77	18.37	18.69	16.89	18.54	17.26	18.86	19.18
	3H	18.07	19.56	18.46	19.91	20.25	18.74	20.24	19.13	20.58	20.92
	4H	18.66	20.06	19.05	20.42	20.78	19.46	20.87	19.86	21.22	21.59
	6H	19.05	20.36	19.46	20.73	21.13	20.02	21.33	20.43	21.70	22.10
	8H	19.14	20.40	19.55	20.78	21.18	20.20	21.46	20.61	21.84	22.24
	12H	19.16	20.37	19.58	20.76	21.17	20.31	21.52	20.73	21.91	22.33
4H	2H	17.04	18.45	17.44	18.80	19.17	17.43	18.83	17.82	19.19	19.55
	3H	18.89	20.09	19.31	20.48	20.89	19.42	20.62	19.84	21.01	21.42
	4H	19.64	20.71	20.08	21.13	21.57	20.27	21.33	20.70	21.75	22.19
	6H	20.10	21.05	20.56	21.49	21.94	20.87	21.82	21.33	22.26	22.71
	8H	20.25	21.14	20.72	21.58	22.05	21.11	22.00	21.59	22.45	22.92
	12H	20.32	21.15	20.80	21.59	22.09	21.29	22.12	21.77	22.56	23.06
8H	4H	19.90	20.79	20.37	21.23	21.70	20.46	21.35	20.93	21.80	22.26
	6H	20.46	21.20	20.95	21.67	22.17	21.14	21.88	21.63	22.35	22.85
	8H	20.71	21.36	21.22	21.87	22.36	21.47	22.12	21.98	22.63	23.12
	12H	20.82	21.37	21.34	21.88	22.39	21.68	22.23	22.20	22.74	23.25
12H	4H	19.92	20.75	20.40	21.19	21.69	20.47	21.30	20.95	21.74	22.25
	6H	20.55	21.20	21.06	21.71	22.20	21.21	21.87	21.73	22.38	22.87
	8H	20.78	21.34	21.31	21.85	22.36	21.52	22.07	22.04	22.58	23.10
Variation with the observer position at spacings:											
S = 1.0H	0.3/-0.6					0.3/-0.6					
S = 1.5H	0.6/-0.5					0.6/-0.7					
S = 2.0H	0.9/-0.8					0.8/-0.9					
Standard tables:	BK3					BK3					
Uncorrected UGR	3.0					2.2					

UGR calculation is based on CIE Publ. 117 ,S/H = 1

**Luminous Intensity Distribution Data**

<i>C/γ</i> (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	3043.29	2875.40	2837.93	2774.54	2681.12	2567.43	2429.87	2276.91	2103.43
22.5	3043.29	2940.84	2896.96	2828.18	2734.50	2616.96	2480.43	2322.08	2141.41
45.0	3043.29	3038.62	2993.71	2918.77	2825.61	2701.91	2556.40	2391.38	2210.19
67.5	3043.29	3113.56	3067.62	2994.48	2896.19	2771.97	2624.15	2458.36	2265.62
90.0	3043.29	3172.08	3138.97	3077.63	2992.17	2883.61	2743.23	2580.26	2401.90
112.5	3043.29	3166.94	3134.61	3078.15	2991.91	2880.02	2747.59	2588.48	2405.75
135.0	3043.29	3090.21	3057.61	3001.15	2924.16	2816.37	2681.38	2526.88	2356.47
157.5	3043.29	2966.76	2942.64	2891.05	2819.20	2718.59	2590.27	2447.07	2282.30
180.0	3043.29	2887.46	2871.81	2821.25	2747.34	2658.54	2536.89	2389.84	2232.52
202.5	3043.29	2943.67	2923.39	2883.36	2810.98	2715.77	2596.94	2451.43	2284.10
225.0	3043.29	3042.99	3016.30	2969.59	2890.28	2786.09	2662.90	2508.15	2332.61
247.5	3043.29	3126.39	3092.00	3036.06	2950.85	2839.98	2709.10	2550.49	2369.82
270.0	3043.29	3158.22	3109.71	3034.52	2936.74	2809.96	2658.80	2482.23	2294.11
292.5	3043.29	3146.16	3102.78	3028.10	2924.67	2800.20	2655.20	2481.46	2286.15
315.0	3043.29	3061.98	3021.94	2953.16	2858.97	2734.76	2591.30	2420.89	2238.16
337.5	3043.29	2938.79	2909.28	2846.40	2755.29	2639.03	2503.78	2341.33	2162.45
360.0	3043.29	2875.40	2837.93	2774.54	2681.12	2567.43	2429.87	2276.91	2103.43
<i>C/γ</i> (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1909.15	1695.37	1474.14	1241.11	997.82	740.66	495.57	270.24	89.82
22.5	1938.41	1724.37	1510.59	1270.11	1013.47	760.43	507.89	276.92	88.03
45.0	2001.28	1780.57	1548.31	1296.80	1040.68	772.23	512.25	282.82	89.82
67.5	2059.54	1832.41	1586.55	1325.80	1064.03	790.20	522.01	279.48	81.36
90.0	2196.07	1971.26	1739.00	1482.87	1212.37	936.74	670.60	409.60	184.78
112.5	2200.95	1985.37	1745.16	1490.31	1230.08	954.45	686.26	415.24	195.82
135.0	2160.40	1945.08	1714.10	1473.37	1213.65	942.13	679.07	422.94	198.90
157.5	2095.47	1889.64	1675.09	1432.05	1180.03	928.01	664.70	418.32	204.80
180.0	2053.38	1851.92	1636.60	1398.18	1156.68	904.14	663.67	415.24	199.41
202.5	2097.52	1891.70	1674.58	1434.62	1177.72	917.75	662.65	414.73	196.07
225.0	2144.49	1933.02	1700.24	1461.05	1198.00	929.04	658.54	406.01	192.22
247.5	2167.33	1952.52	1714.87	1460.28	1196.20	922.11	657.00	399.08	179.14
270.0	2077.76	1843.19	1591.17	1333.25	1057.62	779.67	507.64	271.27	80.59
292.5	2079.04	1847.55	1595.79	1330.42	1064.80	786.86	514.56	271.01	84.69
315.0	2031.31	1803.41	1568.84	1316.82	1049.15	774.80	518.16	278.46	85.46
337.5	1969.97	1748.49	1517.77	1278.33	1028.62	763.25	507.64	277.43	87.26
360.0	1909.15	1695.37	1474.14	1241.11	997.82	740.66	495.57	270.24	89.82
<i>C/γ</i> (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	3.08	2.31	2.31	2.05	2.57	2.57	3.08	3.08	3.08
22.5	3.59	2.31	1.80	2.31	2.57	3.08	2.82	3.34	3.34
45.0	3.08	2.57	2.31	2.82	2.57	3.08	3.34	3.59	3.59
67.5	2.82	2.31	2.31	2.57	2.82	3.08	3.34	3.59	3.85
90.0	25.15	2.05	2.05	2.57	2.57	2.82	3.08	3.59	3.59
112.5	31.05	2.05	1.80	1.80	2.05	2.57	2.82	3.08	3.34
135.0	33.88	2.05	1.54	1.80	2.31	2.05	2.57	3.08	3.08
157.5	38.75	2.31	1.80	1.80	1.80	2.05	2.57	2.82	2.82
180.0	36.70	2.05	1.80	1.80	1.80	1.80	2.31	2.57	2.57
202.5	36.19	2.05	2.05	1.54	1.80	2.05	2.05	2.57	2.82
225.0	29.51	2.31	1.80	1.80	1.80	2.05	2.31	2.82	2.82
247.5	25.41	2.05	1.54	2.05	2.05	2.05	2.57	2.82	3.34
270.0	3.34	2.82	2.82	3.34	3.34	3.85	4.11	4.36	4.62
292.5	2.82	2.82	2.57	2.82	2.82	3.08	3.34	3.59	3.85
315.0	3.34	2.57	2.31	2.31	2.31	2.57	3.34	3.59	3.34
337.5	3.34	2.31	2.57	2.57	2.31	2.57	2.57	3.08	3.34
360.0	3.08	2.31	2.31	2.05	2.57	2.57	3.08	3.08	3.08



C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	3.59	3.59	3.34	3.59	3.59	3.85	3.59	3.59	3.85
22.5	3.59	3.59	3.85	3.59	3.85	3.59	3.59	3.59	3.85
45.0	3.85	3.85	4.11	4.11	3.85	4.36	4.36	3.85	3.85
67.5	3.85	4.11	4.11	4.36	4.62	4.11	4.11	3.85	3.59
90.0	3.59	4.11	4.11	4.36	4.62	4.62	4.36	4.11	4.11
112.5	3.34	3.85	4.11	4.11	4.36	4.11	4.36	4.11	3.85
135.0	3.34	3.34	3.59	3.85	4.11	3.85	4.36	4.36	4.11
157.5	3.08	3.34	3.34	3.59	3.59	3.85	3.34	3.59	3.59
180.0	2.82	3.59	3.08	3.08	3.34	3.59	3.59	3.85	3.85
202.5	3.34	3.08	3.34	3.34	3.85	3.34	3.34	3.34	3.59
225.0	3.34	3.34	3.59	3.59	4.11	3.59	3.34	3.85	3.34
247.5	3.34	3.34	3.85	4.11	3.85	3.85	3.85	3.59	3.85
270.0	4.62	4.62	4.88	5.39	5.13	4.88	5.13	5.39	4.88
292.5	3.85	3.85	4.62	4.11	4.36	4.11	4.11	4.11	4.11
315.0	3.08	3.85	3.85	3.85	4.11	4.11	3.85	4.11	3.85
337.5	3.59	3.34	3.34	3.59	3.85	3.59	3.59	3.59	3.85
360.0	3.59	3.59	3.34	3.59	3.59	3.85	3.59	3.59	3.85
C/γ(°)	180.0								
0.0	4.02								
22.5	4.02								
45.0	4.02								
67.5	4.02								
90.0	4.02								
112.5	4.02								
135.0	4.02								
157.5	4.02								
180.0	4.02								
202.5	4.02								
225.0	4.02								
247.5	4.02								
270.0	4.02								
292.5	4.02								
315.0	4.02								
337.5	4.02								
360.0	4.02								



4 Additional Test

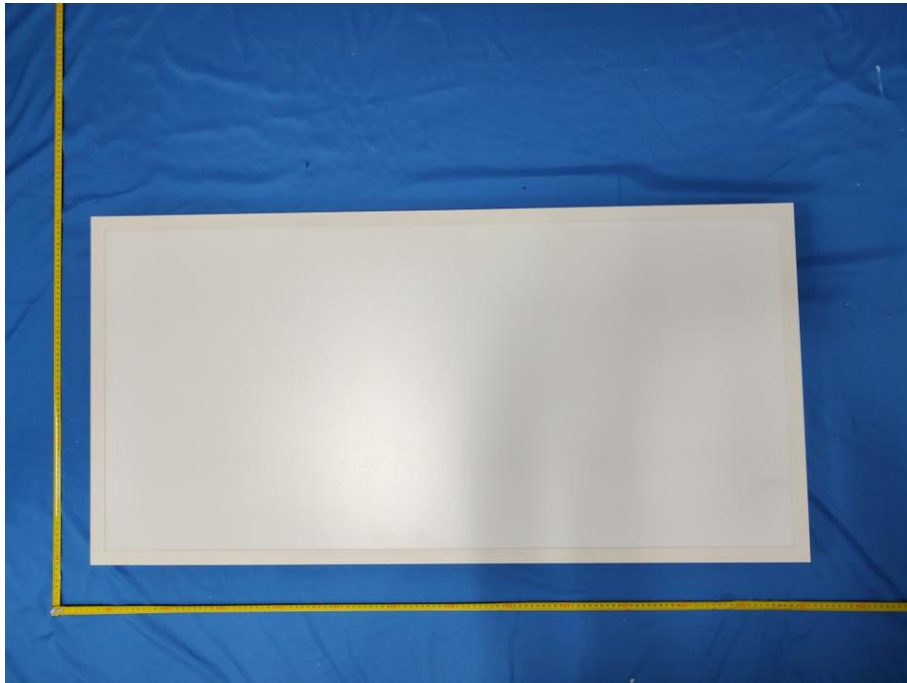
Model Number	CCT(K)	Test Voltage (V)	Frequency (Hz)	Power Factor	THD(%)
PL2X4-72W-A5C5-P-[Blank;M;I;B;MB;IB;E M;EMS]	3000	120	60	0.995	6.9
		277	60	0.949	12.9
	3500	277	60	0.951	12.7
	4000	277	60	0.953	12.6
	5000	277	60	0.954	12.3
	6500	277	60	0.956	12.2

5 Data reporting for white-tunable submissions

ANSI CCT Quadrangle (omit any outside product range) / Worst-Case Value	Actual CCT (K)	Power Consumption (W)	Lumen Output (lm)	Input Control Signal Applied
3000K	2978	70.25	8893.85	0%
3500K	3404	70.02	9081.63	25%
4000K	3896	70.31	9224.20	50%
5000K	5098	70.24	9299.87	75%
6500K	6482	70.38	9064.90	100%
Lowest Efficacy	2978	70.25	8893.85	0%
Maximum Power	6482	70.38	9064.90	100%



Photo Document



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