



TEST REPORT

For

BEYOND LED TECHNOLOGY

1939 Parker Ct, Stone Mountain Georgia 30087

Model Number:	BLT-BPLED-2x4-40/50/60/70/D10/U/40-50-65/HL	
Report Type:	Electrical, Photometric and ISTMT tests according to the following standards and show the compliance to DLC Program SSL Technical Requirements V5.1	
Standards:	ANSI/IES LM-79-19: Approved Method: Optical and Electrical Measurements of Solid-State Lighting Products ANSI C82.77-10-2014: Harmonic Emission Limits – Related Power Quality Requirements for Lighting ANSI/UL 1598-2008: Standard for Safety of Luminaires *CIE 190:2010 Calculation and presentation of unified glare rating tables for indoor lighting luminaires (This method is not in NVLAP accreditation scope) *IES TM-30-18: IES Method for Evaluating Light Source Color Rendition (This method is not in NVLAP accreditation scope)	
Reviewed By:	Ezer Pan	<i>Ezer Pan</i>
Report Number:	KS2240102-00328E-EE	
Sample Size:	One test sample was in good condition and received on 2024-01-09 and used for testing.	
Test Date:	2024-01-09 to 2024-01-17	
Report Date:	2024-02-01	
Approved by:	Blake Zhang / EE Engineer	
Prepared By:	Bay Area Compliance Laboratories Corp. (Shenzhen) 5/F(B-West) -7/F, the 3rd Phase of Wan Li Industrial Building D, Shihua Road, Futian Free Trade Zone Shenzhen, Guangdong, China. Tel: +86-755-33320018 Fax: +86-755-33320008	
Test Location 1:	Test facility was located at No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China.	
Test Location 2:	Test facility was located at Room 301, No.113, Pingkang Road, Dalang, Dongguan, Guangdong, China.	

Note: 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 Bay Area Compliance Laboratories Corp.(Shenzhen). This report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, or any agency of the U.S. Government. *This report contains data that are not covered by the NVLAP accreditation.

1. Product Description and Rating#

Test Model	Primary Use	Rated Voltage	Power(W)	CCT(K)	LED Model	Driver Model	Test Item
BLT-BPLED-2x4-40/50/60/70/D10/U/40-50-65/HL	2x4 Luminaires for Ambient Lighting of Interior Commercial Spaces	120-277VAC 50/60Hz	40/50/60/70	4000/5000/6500	L128-xx80RC35xxxxxx	SDU60CS135V44DN3A	All

Test Model	CCT(K)	Light Output (lm)	Power(W)	Luminous Efficacy (lm/W)
BLT-BPLED-2x4-40/50/60/70/D10/U/40-50-65/HL	4000	9107	70	130.1
		7860	60	131
		6600	50	132
		5320	40	133
	5000	9310	70	133
		8040	60	134
		6750	50	135
		5360	40	134
	6500	9170	70	131
		7920	60	132
		6650	50	133
		5360	40	134

2. Product Photo (Model: BLT-BPLED-2x4-40/50/60/70/D10/U/40-50-65/HL)





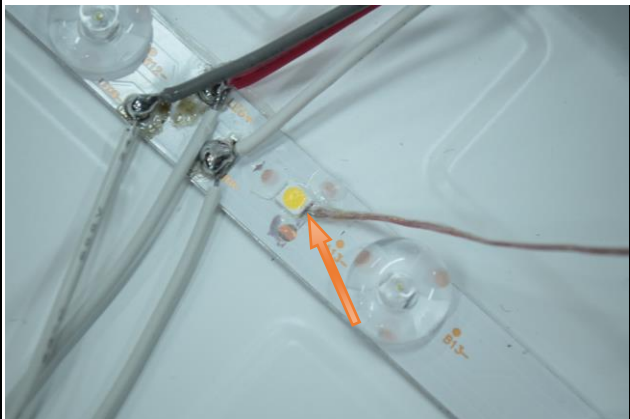
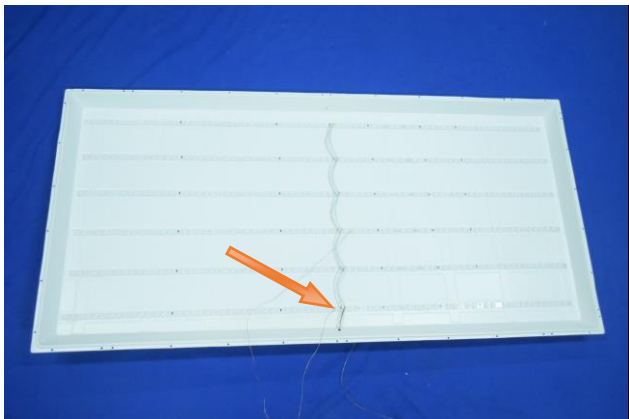

3. Test Result

Test CCT: 4000K (Input Control Signal Applied: 0%)					
Test Condition: Method: Integrating Sphere System; Orientation: Downward; Test Voltage: 120V 60Hz;					
Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion	
Light Output(lm) ^{ΔΔ}	9104.1	≥3000	≥2700	Pass	
Power(W) ^{ΔΔ}	68.78	None.	None.	N/A	
Total Efficacy(lm/W) ^{ΔΔ}	132.37	≥125	≥121.25	Pass	
CCT(K) ^{ΔΔ}	3865	3831~4139	No tolerances	Pass	
Duv ^{ΔΔ}	0.0037	-0.0023~0.0043	No tolerances	Pass	
IES Rf ^{ΔΔ}	82	70	69	Pass	
IES Rg ^{ΔΔ}	99	89	88		
IES Rcs,h1 ^{ΔΔ}	-10%	-12%~23%	-13%~22%		
Ra ^{ΔΔ}	81.8	≥80	≥79		
R9 ^{ΔΔ}	25	≥0	≥-1		
Test Condition: Method: Goniophotometer; Orientation: Downward; Test Voltage: 120.1V 60Hz;					
Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion	
Light Output(lm) ^Δ	9108.77	≥3000	≥2700	Pass	
Power(W) ^Δ	68.8	None.	None.	N/A	
Total Efficacy(lm/W) ^Δ	132.39	≥125	≥121.25	Pass	
Zonal Lumen Distribution(0-60°) ^Δ	81.99%	0-60°≥75%	0-60°≥72%	Pass	
SC:0-180° ^Δ	1.24	1.0≤SC≤2.0	0.9≤SC≤2.1	Pass	
SC:90-270° ^Δ	1.20	1.0≤SC≤2.0	0.9≤SC≤2.1	Pass	
UGR crosswiseview ^Δ	20.7	<22	No tolerances	Pass	
UGR endwise view ^Δ	20.2	<22	No tolerances	Pass	
Power Factor ^{ΔΔ}	0.9671	≥0.9	≥0.87	Pass	
THDi ^{ΔΔ}	6.97%	≤20%	≤25%	Pass	
Test Condition: Test Voltage: 120V 60Hz;					
Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion	
TMP _{LED1} (°C) ^{ΔΔ}	37.8	≤105	With tolerance of ≤ 1.1°C or 0.4%, whichever is greater due to thermocouple tolerance	Pass	
TMP _{LED2} (°C) ^{ΔΔ}	42.1	≤105	With tolerance of ≤ 1.1°C or 0.4%, whichever is greater due to thermocouple tolerance	Pass	
TMP _c (°C) ^{ΔΔ}	63.3	≤85	With tolerance of ≤ 1.1°C or 0.4%, whichever is greater due to thermocouple tolerance	Pass	
Drive Current/Individual LED source(mA) ^{ΔΔ}	48	≤100	With +5% Tolerance	Pass	
L ₉₀ Lumen Maintenance Life (Hours) ^{ΔΔ}	44000	≥36000	None.	Pass	
Color Maintenance ^{ΔΔ}	0.0024	≤0.004	≤0.0044	Pass	
Test Condition: Method: Integrating THDi, PF Test ; Orientation: Downward;					
Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion
120	Power Factor ^{ΔΔ}	0.9670	≥0.9	≥0.87	Pass
120	THDi ^{ΔΔ}	7.02%	≤20%	≤25%	Pass
277	Power Factor ^{ΔΔ}	0.9692	≥0.9	≥0.87	Pass
277	THDi ^{ΔΔ}	8.58%	≤20%	≤25%	Pass

Note:

- The test results were measured directly from the test equipment.
- The DLC requirements were listed according to DLC Technical Requirements V5.1.

3. The conclusion is only for information. When determining the compliance of the result, tolerances and/or allowances may be applied to the measured value.
4. ^Δ Test facility was located at No.12, Pulong East 1st Road, Tangxia Town, Dongguan, Guangdong, China.
5. ^{ΔΔ} Test facility was located at Room 301, No.113, Pingkang Road, Dalang, Dongguan, Guangdong, China.

Test CCT:4000K (Input Control Signal Applied: 0%)	
Temperature measurement point on TMP _{LED1}	
	
Temperature measurement point on TMP _{LED2}	
	
Driver Case Measurement Point T _c	
	

[Integrating Sphere System]

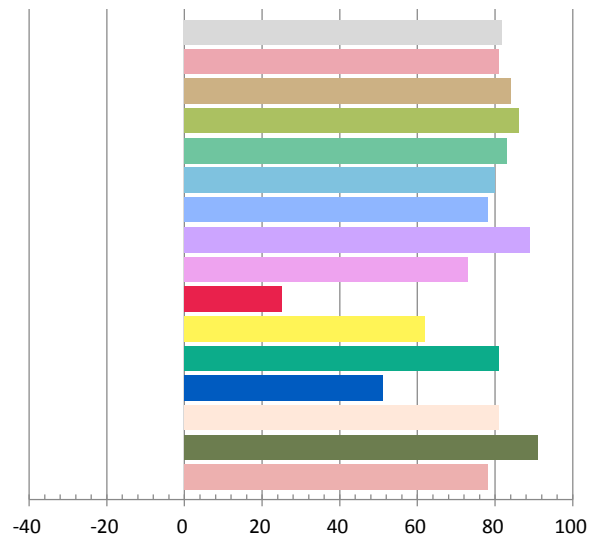
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.0	60	0.5925	68.78	0.967	9104.1	132.37

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
25.9720	3865	0.00370	0.3896	0.3904	0.2256	0.5088

Color Rendering Index

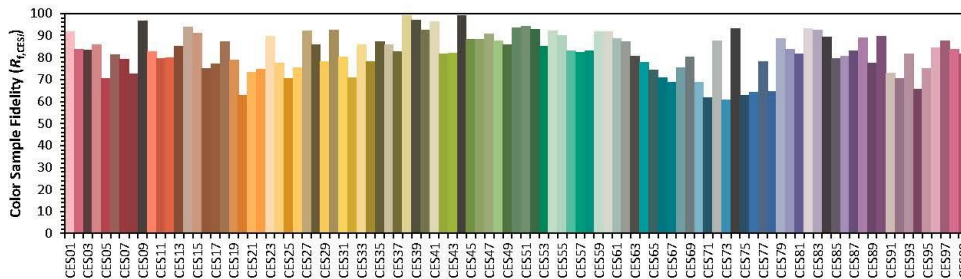
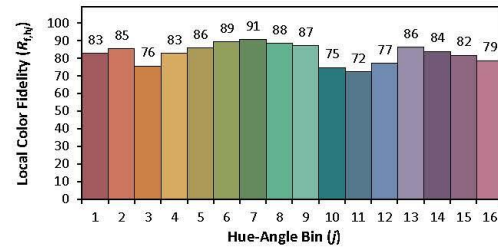
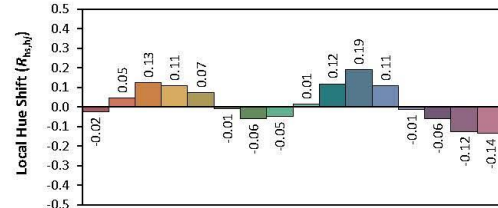
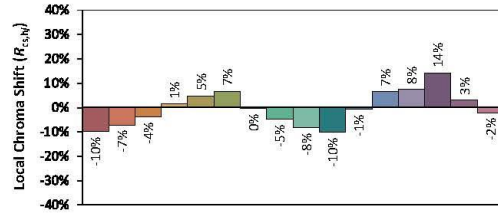
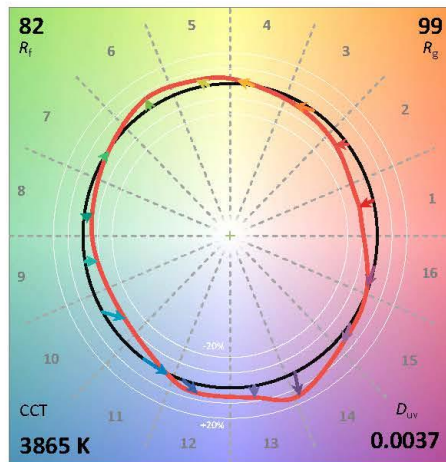
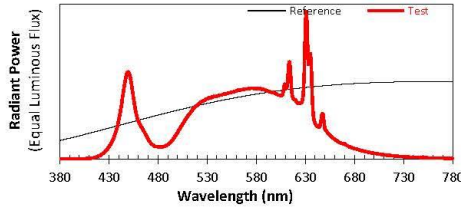
Ra			
81.8			
R1	R2	R3	R4
81	84	86	83
R5	R6	R7	R8
80	78	89	73
R9	R10	R11	R12
25	62	81	51
R13	R14	R15	
81	91	78	



ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD
Date: 2024/1/9

Manufacturer: BEYOND SIGNS INC DBA BEYOND LED TECHNOLOGY
Model: BLT-BPLED-2x4-40/50/60/70/D10/U/40-50-65/HL



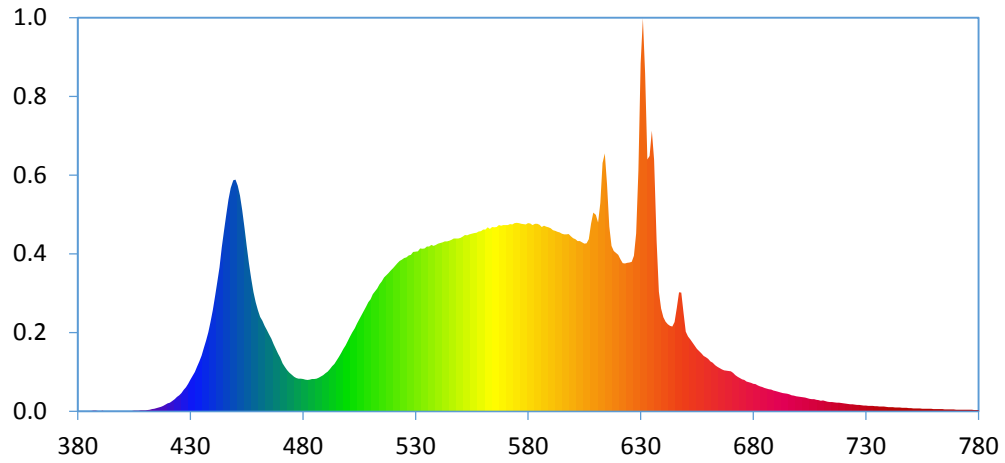
Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.3895
y 0.3903
u' 0.2257
v' 0.5087

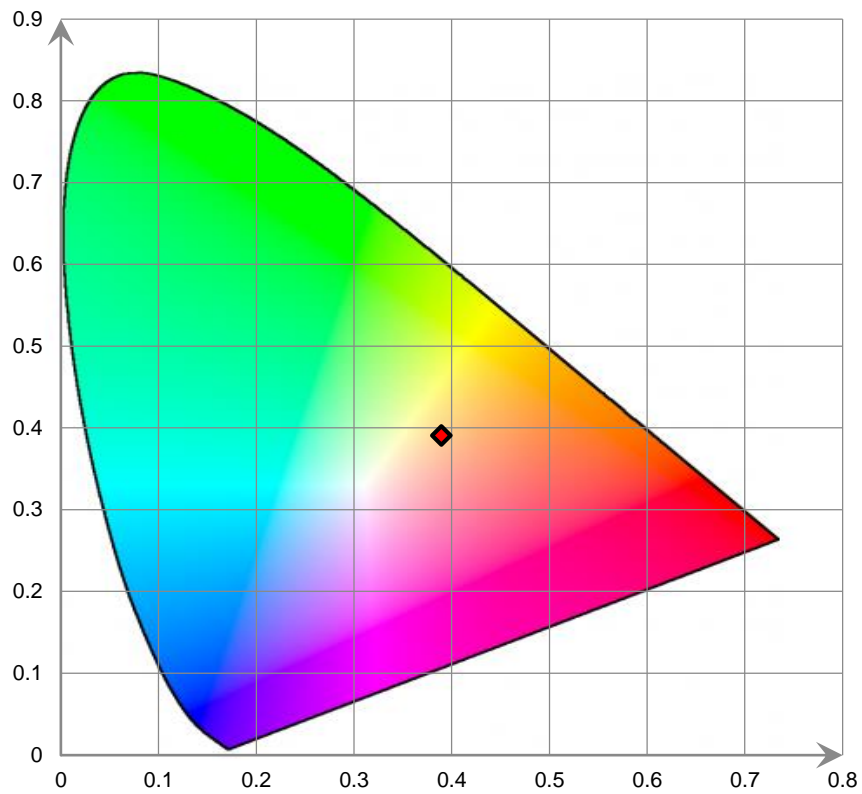
CIE 13.3-1995 (CRI)	
R _a	82
R _g	25

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

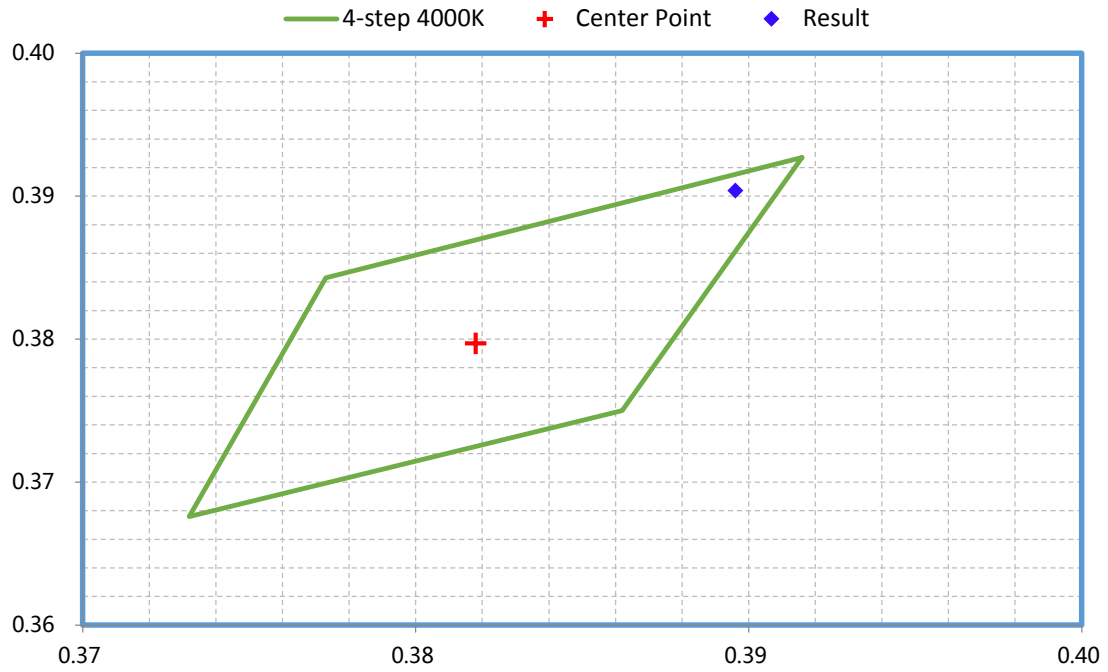
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



[Goniophotometer System]

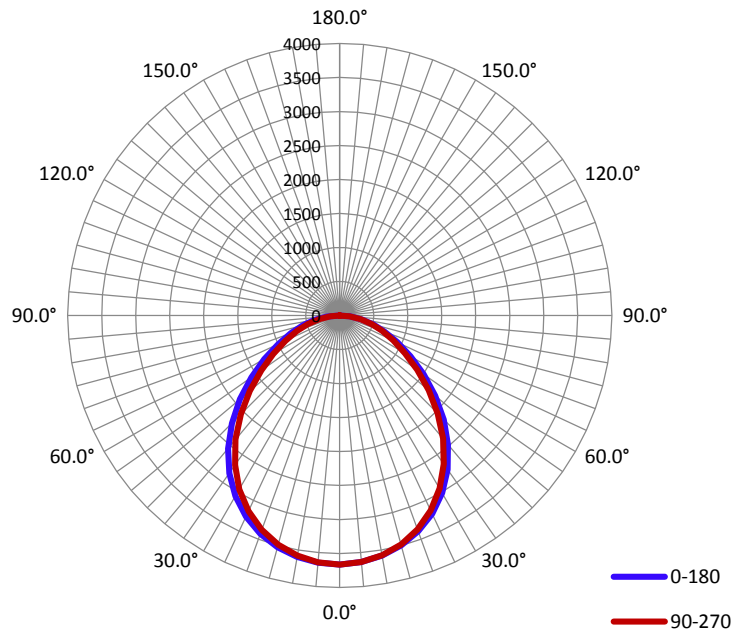
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.1	60	0.5926	68.8	0.9671

Photometric Measurement

Luminous Flux (lm)	Efficacy (lm/W)	I _{max} (cd)	S/MH (C0/180)	S/MH (C90/270)
9108.77	132.39	3661.0	1.24	1.20

Luminous Intensity Distribution



	C0/180	C45/225	C90/270	C135/315	AVG.
Beam Angle (50% I _{max}):	101.3	98.7	96.5	98.9	98.9
Field Angle (10% I _{max}):	159.1	157.9	156.6	158.1	157.9

Luminous Intensity (cd) Distribution Data

C y	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
0°	3661	3661	3661	3661	3661	3661	3661	3661
1°	3659	3659	3659	3659	3660	3659	3660	3660
2°	3656	3656	3656	3656	3657	3657	3659	3659
3°	3652	3652	3652	3652	3653	3654	3655	3656
4°	3646	3646	3647	3647	3647	3649	3651	3652
5°	3640	3640	3640	3639	3641	3642	3645	3646
6°	3632	3633	3632	3631	3632	3634	3638	3639
7°	3623	3624	3622	3621	3622	3625	3629	3632
8°	3612	3613	3610	3609	3610	3614	3619	3623
9°	3600	3601	3598	3596	3598	3601	3607	3612
10°	3587	3587	3584	3581	3583	3587	3594	3600
11°	3572	3572	3568	3566	3567	3571	3579	3586
12°	3556	3556	3550	3547	3549	3554	3563	3571
13°	3538	3538	3532	3528	3530	3535	3546	3555
14°	3520	3519	3512	3508	3509	3515	3526	3537
15°	3500	3499	3490	3486	3486	3493	3506	3518
16°	3479	3476	3467	3461	3462	3470	3484	3497
17°	3455	3452	3442	3435	3435	3444	3461	3474
18°	3431	3427	3416	3409	3408	3418	3435	3451
19°	3405	3401	3389	3379	3378	3389	3409	3425
20°	3377	3372	3359	3348	3347	3359	3380	3399
21°	3347	3342	3328	3316	3314	3327	3350	3371
22°	3317	3311	3295	3282	3280	3294	3318	3340
23°	3284	3277	3260	3245	3242	3257	3283	3309
24°	3249	3242	3224	3208	3204	3221	3249	3275
25°	3214	3206	3186	3168	3165	3181	3211	3239
26°	3176	3168	3147	3128	3124	3141	3173	3203
27°	3138	3128	3105	3084	3080	3099	3133	3165
28°	3096	3086	3061	3039	3034	3055	3090	3124
29°	3054	3043	3016	2992	2988	3008	3045	3082
30°	3010	2998	2970	2944	2939	2960	3000	3037
31°	2965	2952	2921	2894	2888	2910	2953	2993
32°	2917	2904	2872	2843	2836	2860	2904	2946
33°	2867	2853	2819	2788	2782	2806	2852	2896
34°	2816	2801	2765	2734	2726	2751	2799	2845
35°	2764	2748	2710	2678	2670	2696	2746	2793
36°	2710	2692	2654	2619	2610	2637	2690	2739
37°	2654	2637	2596	2561	2551	2580	2633	2683
38°	2597	2578	2537	2499	2490	2518	2574	2627
39°	2538	2519	2476	2439	2427	2458	2514	2567
40°	2478	2458	2415	2374	2364	2394	2453	2508
41°	2418	2397	2352	2311	2300	2331	2390	2447
42°	2355	2334	2288	2246	2235	2267	2327	2385
43°	2292	2269	2223	2181	2168	2200	2262	2320
44°	2228	2205	2158	2115	2103	2135	2198	2258
45°	2164	2141	2092	2049	2037	2069	2133	2193
46°	2098	2075	2027	1982	1969	2003	2066	2127
47°	2031	2008	1960	1916	1903	1935	1999	2061
48°	1965	1942	1894	1851	1838	1870	1934	1995
49°	1899	1875	1827	1783	1771	1803	1867	1928

Luminous Intensity (cd) Distribution Data

C y	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
50°	1833	1809	1762	1719	1706	1738	1801	1862
51°	1766	1743	1696	1653	1642	1672	1735	1796
52°	1699	1677	1631	1589	1577	1608	1669	1728
53°	1634	1611	1567	1525	1515	1544	1604	1664
54°	1569	1547	1504	1463	1452	1481	1541	1598
55°	1504	1484	1441	1402	1393	1420	1477	1535
56°	1440	1421	1380	1342	1333	1359	1416	1471
57°	1378	1360	1320	1283	1275	1300	1354	1409
58°	1317	1300	1263	1226	1219	1243	1296	1347
59°	1258	1241	1205	1170	1163	1186	1238	1288
60°	1200	1185	1150	1117	1111	1132	1182	1230
61°	1144	1130	1096	1063	1059	1079	1126	1174
62°	1088	1076	1043	1011	1007	1027	1073	1118
63°	1035	1024	992	963	960	978	1021	1065
64°	984	974	943	914	912	929	971	1013
65°	934	925	896	870	867	883	923	963
66°	885	878	850	824	822	838	875	914
67°	839	832	805	781	779	794	830	867
68°	794	788	763	740	739	753	786	821
69°	751	744	720	699	697	711	742	776
70°	709	703	681	661	659	672	702	734
71°	667	662	642	625	624	631	661	691
72°	629	624	606	589	588	598	624	650
73°	591	587	569	554	552	564	587	612
74°	553	549	533	518	516	527	551	574
75°	515	511	497	483	481	492	514	536
76°	477	474	461	447	446	457	477	498
77°	440	437	426	414	412	422	442	461
78°	402	400	390	379	378	388	406	423
79°	366	364	355	345	345	353	370	386
80°	330	328	320	312	311	320	336	350
81°	293	292	285	278	278	286	300	313
82°	257	256	251	245	244	253	266	277
83°	221	221	216	210	210	219	231	241
84°	186	186	181	176	175	183	197	205
85°	151	150	146	141	140	148	161	169
86°	116	115	111	106	106	113	124	133
87°	81	80	75	74	75	80	87	97
88°	46	64	60	59	51	55	56	61
89°	11	48	45	44	28	30	30	32
90°	7	32	30	30	4	5	5	4
91°	4	16	15	15	2	2	3	2
92°	1	1	1	1	1	1	1	1
93°	1	1	1	1	1	1	1	1
94°	1	1	1	1	1	1	1	1
95°	1	1	1	1	1	1	1	1
96°	1	1	1	1	1	1	1	1
97°	1	1	1	1	1	1	1	1
98°	1	1	1	1	1	1	1	1
99°	1	1	1	1	1	1	1	1

Luminous Intensity (cd) Distribution Data

C y	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
100°	1	1	1	1	1	1	1	1
101°	1	1	1	1	1	1	1	1
102°	1	1	1	1	1	1	1	1
103°	1	1	1	1	1	1	1	1
104°	1	1	1	1	1	1	1	1
105°	1	1	1	1	1	1	1	1
106°	1	1	1	1	1	1	1	1
107°	1	1	1	1	1	1	1	1
108°	1	1	1	1	1	1	1	1
109°	1	1	1	1	1	1	1	1
110°	1	1	1	1	1	1	1	1
111°	1	1	1	1	1	1	1	1
112°	1	1	1	1	1	1	1	1
113°	1	1	1	1	1	1	1	1
114°	1	1	1	1	1	1	1	1
115°	1	1	1	1	1	1	1	1
116°	1	1	1	1	1	1	1	1
117°	1	1	1	1	1	1	1	1
118°	1	1	1	1	1	1	1	1
119°	1	1	1	1	1	1	1	1
120°	1	1	1	1	1	1	1	1
121°	1	1	1	1	1	1	1	1
122°	1	1	1	1	1	1	1	1
123°	1	1	1	1	1	1	1	1
124°	1	1	2	2	2	1	1	1
125°	2	2	2	2	2	2	1	1
126°	2	2	2	2	2	2	2	1
127°	2	2	2	2	2	2	2	2
128°	2	2	2	2	2	2	2	2
129°	2	2	2	2	2	2	2	2
130°	2	2	2	2	2	2	2	2
131°	2	2	2	2	2	2	2	2
132°	2	2	2	2	2	2	2	2
133°	2	2	2	2	2	2	2	2
134°	2	2	2	2	2	2	2	2
135°	2	2	2	2	2	2	2	2
136°	2	2	3	3	3	2	2	2
137°	2	2	3	3	3	3	2	2
138°	2	3	3	3	3	3	2	2
139°	3	3	3	3	3	3	3	2
140°	3	3	3	3	3	3	3	3
141°	3	3	3	3	3	3	3	3
142°	3	3	3	4	4	3	3	3
143°	3	3	3	4	4	4	3	3
144°	3	3	4	4	4	4	3	3
145°	3	3	4	4	4	4	3	3
146°	3	3	4	4	4	4	3	3
147°	3	4	4	4	4	4	4	3
148°	3	4	4	4	4	4	4	3
149°	3	4	4	4	4	4	4	3

Luminous Intensity (cd) Distribution Data

$\begin{matrix} C \\ \backslash \\ \gamma \end{matrix}$	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°
150°	3	4	4	4	4	4	4	3
151°	3	4	4	4	5	4	4	3
152°	4	4	4	5	5	4	4	3
153°	4	4	4	5	5	5	4	3
154°	4	4	4	5	5	5	4	4
155°	4	4	4	5	5	5	4	4
156°	4	4	4	5	5	5	4	4
157°	4	4	4	5	5	5	4	4
158°	4	4	4	5	5	5	4	4
159°	4	4	4	5	5	5	4	4
160°	4	4	4	5	5	5	4	4
161°	4	4	4	5	5	4	4	4
162°	4	4	4	5	5	4	4	4
163°	4	4	4	5	4	4	4	4
164°	4	4	4	4	4	4	4	4
165°	4	4	4	4	4	4	4	4
166°	4	4	4	4	4	4	4	4
167°	4	4	4	4	4	4	4	4
168°	4	4	4	4	4	4	4	4
169°	4	4	4	4	4	4	4	4
170°	4	4	4	4	4	4	4	4
171°	4	4	4	4	4	4	4	4
172°	4	4	4	4	4	4	4	4
173°	4	4	4	4	4	4	4	4
174°	4	4	4	3	3	4	4	4
175°	4	4	4	3	3	4	4	4
176°	4	4	4	3	3	3	4	4
177°	4	4	4	3	3	3	4	4
178°	4	4	3	3	3	3	4	4
179°	4	4	3	3	3	3	4	4
180°	4	4	3	3	3	3	4	4

Luminous Intensity (cd) Distribution Data (cont.)

$\begin{matrix} C \\ \backslash \\ Y \end{matrix}$	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
0°	3661	3661	3661	3661	3661	3661	3661	3661
1°	3661	3661	3661	3661	3660	3660	3659	3659
2°	3660	3660	3659	3659	3658	3657	3657	3657
3°	3658	3658	3656	3655	3654	3654	3653	3653
4°	3654	3654	3651	3650	3649	3648	3648	3648
5°	3649	3650	3646	3644	3643	3641	3641	3642
6°	3643	3643	3639	3636	3635	3633	3634	3634
7°	3636	3635	3631	3628	3625	3623	3624	3626
8°	3628	3627	3621	3617	3614	3612	3614	3615
9°	3618	3617	3610	3604	3601	3600	3601	3603
10°	3606	3605	3597	3591	3587	3586	3588	3590
11°	3593	3591	3583	3575	3570	3569	3573	3575
12°	3579	3577	3567	3558	3553	3552	3556	3560
13°	3564	3560	3550	3540	3533	3533	3538	3542
14°	3547	3543	3531	3520	3514	3513	3519	3524
15°	3529	3524	3511	3498	3491	3491	3497	3504
16°	3510	3504	3489	3475	3467	3467	3474	3482
17°	3489	3482	3466	3450	3441	3442	3450	3459
18°	3466	3459	3441	3424	3414	3414	3424	3434
19°	3442	3433	3414	3395	3384	3386	3397	3408
20°	3416	3407	3385	3365	3354	3355	3367	3380
21°	3389	3379	3356	3334	3321	3324	3337	3351
22°	3360	3349	3324	3300	3288	3289	3304	3320
23°	3329	3317	3291	3265	3251	3254	3270	3287
24°	3297	3284	3255	3227	3213	3216	3234	3253
25°	3263	3249	3218	3189	3174	3179	3197	3217
26°	3228	3213	3180	3149	3132	3137	3158	3180
27°	3191	3175	3139	3106	3089	3095	3116	3141
28°	3152	3135	3098	3064	3045	3051	3075	3100
29°	3112	3094	3054	3017	2998	3005	3030	3058
30°	3069	3050	3009	2971	2951	2957	2984	3013
31°	3025	3006	2962	2922	2900	2909	2936	2968
32°	2980	2959	2914	2872	2849	2857	2887	2919
33°	2932	2911	2862	2818	2795	2805	2836	2870
34°	2883	2861	2811	2765	2742	2751	2783	2819
35°	2832	2808	2757	2708	2684	2694	2729	2766
36°	2780	2755	2702	2653	2627	2638	2673	2713
37°	2726	2699	2645	2593	2567	2579	2616	2657
38°	2670	2643	2587	2535	2508	2520	2559	2600
39°	2614	2585	2527	2473	2445	2458	2498	2541
40°	2555	2526	2467	2411	2383	2396	2438	2482
41°	2496	2466	2404	2346	2318	2332	2375	2420
42°	2434	2403	2341	2283	2254	2267	2311	2358
43°	2372	2340	2276	2217	2188	2203	2248	2295
44°	2309	2276	2211	2152	2123	2136	2182	2231
45°	2245	2212	2146	2085	2055	2071	2117	2167
46°	2180	2146	2079	2019	1988	2004	2050	2100
47°	2114	2080	2013	1952	1921	1938	1985	2036
48°	2048	2013	1945	1885	1855	1870	1917	1968
49°	1981	1945	1878	1818	1787	1805	1851	1902

Luminous Intensity (cd) Distribution Data (cont.)

C Y	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
50°	1914	1879	1813	1753	1722	1738	1785	1836
51°	1847	1812	1745	1686	1656	1672	1719	1770
52°	1780	1746	1680	1622	1592	1608	1653	1704
53°	1714	1679	1614	1556	1527	1543	1588	1640
54°	1649	1614	1551	1494	1466	1480	1525	1574
55°	1583	1549	1486	1431	1405	1418	1462	1510
56°	1518	1485	1425	1372	1350	1363	1402	1447
57°	1455	1423	1369	1318	1295	1308	1346	1387
58°	1393	1367	1314	1264	1241	1253	1291	1332
59°	1337	1311	1258	1207	1184	1195	1236	1277
60°	1281	1255	1201	1153	1130	1142	1180	1222
61°	1225	1197	1144	1098	1077	1086	1124	1165
62°	1167	1141	1090	1046	1026	1036	1072	1110
63°	1111	1087	1037	994	975	985	1019	1056
64°	1056	1034	987	945	928	937	969	1005
65°	1004	983	937	897	881	889	921	955
66°	954	933	890	852	837	845	874	906
67°	904	885	843	807	792	799	828	859
68°	856	839	798	764	751	758	784	813
69°	810	795	756	722	709	716	742	770
70°	766	751	714	682	670	676	700	727
71°	723	708	673	642	630	637	661	685
72°	681	667	633	604	592	599	621	644
73°	641	627	595	566	555	562	584	605
74°	600	587	556	529	518	525	545	565
75°	561	549	520	492	481	489	509	527
76°	522	511	483	456	445	452	472	490
77°	484	473	447	419	408	416	437	453
78°	446	436	410	384	373	380	401	416
79°	409	399	375	348	338	345	365	380
80°	372	363	338	313	304	310	329	343
81°	335	327	302	279	270	275	293	308
82°	298	291	267	245	237	241	257	272
83°	262	255	231	211	203	207	221	238
84°	225	219	196	178	170	173	186	203
85°	189	181	160	144	137	140	151	166
86°	152	144	125	110	104	106	115	130
87°	115	107	89	77	72	74	81	94
88°	79	71	56	49	45	46	50	59
89°	53	47	37	33	30	31	34	40
90°	26	24	19	16	15	16	17	20
91°	0	0	0	0	0	0	0	0
92°	0	0	0	0	0	0	0	0
93°	0	0	0	0	0	0	0	0
94°	0	0	0	0	0	0	0	0
95°	0	0	0	0	0	0	0	0
96°	0	0	0	0	0	0	0	0
97°	0	0	0	0	0	0	0	0
98°	0	0	0	0	0	0	0	0
99°	0	0	0	0	0	0	0	0

Luminous Intensity (cd) Distribution Data (cont.)

C Y	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
100°	0	0	0	0	0	0	0	0
101°	0	0	0	0	0	0	0	0
102°	0	0	0	0	0	0	0	0
103°	0	0	0	0	0	0	0	0
104°	0	0	0	0	0	0	0	0
105°	0	0	0	0	0	0	0	1
106°	0	0	0	1	1	1	0	1
107°	0	1	1	1	1	1	0	1
108°	1	1	1	1	1	1	1	1
109°	1	1	1	1	1	1	1	1
110°	1	1	1	1	1	1	1	1
111°	1	1	1	1	1	1	1	1
112°	1	1	1	1	1	1	1	1
113°	1	1	1	1	1	1	1	1
114°	1	1	1	1	1	1	1	1
115°	1	1	1	1	1	1	1	1
116°	1	1	1	1	1	1	1	1
117°	1	1	1	1	1	1	1	1
118°	1	1	1	1	1	1	1	1
119°	1	1	1	1	1	1	1	1
120°	1	1	1	1	1	1	1	1
121°	1	1	1	1	1	1	1	1
122°	1	1	1	1	1	1	1	1
123°	1	1	1	1	1	1	1	1
124°	1	1	1	1	1	1	1	1
125°	1	1	1	1	1	1	1	1
126°	1	1	1	1	1	1	1	1
127°	1	1	1	1	1	1	1	1
128°	1	1	1	1	1	1	1	1
129°	1	1	1	1	1	1	1	1
130°	1	1	1	1	1	1	1	1
131°	1	1	1	1	1	1	1	1
132°	1	1	1	1	1	1	1	1
133°	1	1	1	1	1	1	1	1
134°	1	1	1	1	1	1	1	1
135°	1	1	1	1	1	1	1	1
136°	1	1	1	1	1	1	1	1
137°	1	1	1	1	1	1	1	1
138°	1	1	1	1	1	1	1	1
139°	1	1	1	2	2	2	1	2
140°	2	1	1	2	2	2	2	2
141°	2	1	1	2	2	2	2	2
142°	2	1	1	2	2	2	2	2
143°	2	1	2	2	2	2	2	2
144°	2	2	2	2	2	2	2	2
145°	2	2	2	2	2	2	2	2
146°	2	2	2	2	2	2	2	2
147°	2	2	2	2	2	2	2	2
148°	2	2	2	2	2	2	2	2
149°	2	2	2	2	2	2	2	2

Luminous Intensity (cd) Distribution Data (cont.)

C y	180°	202.5°	225°	247.5°	270°	292.5°	315°	337.5°
150°	2	2	2	2	2	2	2	2
151°	2	2	2	2	2	2	2	2
152°	2	2	2	2	2	2	2	2
153°	2	2	2	2	2	2	2	2
154°	2	2	2	2	2	2	2	2
155°	2	2	2	2	2	2	2	2
156°	2	2	2	2	2	2	2	3
157°	2	2	2	2	2	2	2	3
158°	2	2	2	2	2	2	2	3
159°	2	2	2	2	2	2	2	3
160°	3	2	2	2	2	2	2	3
161°	3	3	2	2	2	2	2	3
162°	3	3	2	2	2	2	2	3
163°	3	3	2	2	2	2	3	3
164°	3	3	2	2	2	2	2	3
165°	3	3	2	2	2	2	2	3
166°	3	3	3	2	2	2	2	3
167°	3	3	3	2	2	2	2	3
168°	3	3	3	2	2	2	2	3
169°	3	3	3	2	2	2	3	3
170°	3	3	3	2	2	2	3	3
171°	3	3	3	3	2	2	3	3
172°	3	3	3	3	2	2	3	3
173°	3	3	3	3	2	2	3	3
174°	4	4	3	3	3	3	3	3
175°	4	4	3	3	3	3	3	3
176°	4	4	3	3	3	3	3	3
177°	4	4	3	3	3	3	3	3
178°	4	4	3	3	3	3	3	4
179°	4	4	4	3	3	3	3	4
180°	4	4	4	3	3	3	3	4

Zonal Lumen Density Measurement

Deg	Flux (lm)	%	Deg	Flux (lm)	%
0-5	87.3	0.96	0-5	87.3	0.96
5-10	258.8	2.84	0-10	346.1	3.80
10-15	420.7	4.62	0-15	766.8	8.42
15-20	566.6	6.22	0-20	1333.5	14.64
20-25	689.9	7.57	0-25	2023.4	22.21
25-30	784.2	8.61	0-30	2807.5	30.82
30-35	843.7	9.26	0-35	3651.2	40.08
35-40	864.3	9.49	0-40	4515.5	49.57
40-45	845.3	9.28	0-45	5360.8	58.85
45-50	790.2	8.68	0-50	6151.0	67.53
50-55	707.5	7.77	0-55	6858.5	75.30
55-60	610.3	6.69	0-60	7468.7	81.99
60-65	508.3	5.59	0-65	7977.1	87.58
65-70	408.6	4.48	0-70	8385.6	92.06
70-75	315.3	3.46	0-75	8700.9	95.52
75-80	224.1	2.46	0-80	8925.1	97.98
80-85	131.6	1.45	0-85	9056.7	99.43
85-90	41.9	0.46	0-90	9098.6	99.89
90-95	1.5	0.01	0-95	9100.1	99.90
95-100	0.3	0.01	0-100	9100.3	99.91
100-105	0.3	0.00	0-105	9100.6	99.91
105-110	0.3	0.00	0-110	9101.0	99.91
110-115	0.4	0.01	0-115	9101.4	99.92
115-120	0.5	0.00	0-120	9101.9	99.92
120-125	0.5	0.01	0-125	9102.4	99.93
125-130	0.6	0.01	0-130	9103.0	99.94
130-135	0.7	0.00	0-135	9103.7	99.94
135-140	0.7	0.01	0-140	9104.4	99.95
140-145	0.8	0.01	0-145	9105.2	99.96
145-150	0.8	0.01	0-150	9106.0	99.97
150-155	0.8	0.01	0-155	9106.8	99.98
155-160	0.7	0.01	0-160	9107.5	99.99
160-165	0.6	0.00	0-165	9108.0	99.99
165-170	0.4	0.01	0-170	9108.4	100.00
170-175	0.2	0.00	0-175	9108.7	100.00
175-180	0.1	0.00	0-180	9108.8	100.00

Test CCT: 5000K (Input Control Signal Applied: 50%)						
Test Condition: Method: Integrating Sphere System; Orientation: Downward; Test Voltage: 120.1V 60Hz;						
Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion		
Light Output(lm) ^{ΔΔ}	9165.6	≥3000	≥2700	Pass		
Power(W) ^{ΔΔ}	68.73	None.	None.	N/A		
Total Efficacy(lm/W) ^{ΔΔ}	133.35	≥125	≥121.25	Pass		
CCT(K) ^{ΔΔ}	4877	4809-5249	No tolerances	Pass		
Duv ^{ΔΔ}	0.00449	-0.0013~0.0053	No tolerances	Pass		
IES Rf ^{ΔΔ}	84	70	69	Pass		
IES Rg ^{ΔΔ}	98	89	88			
IES Rcs,h1 ^{ΔΔ}	-9%	-12%~23%	-13%~22%			
Ra ^{ΔΔ}	84.5	≥80	≥79			
R9 ^{ΔΔ}	38	≥0	≥-1			
Test Condition: Method: Integrating THDi、PF Test ; Orientation: Downward;						
Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion	
120	Power Factor ^{ΔΔ}	0.9901	≥0.9	≥0.87	Pass	
120	THDi ^{ΔΔ}	7.10%	≤20%	≤25%	Pass	
277	Power Factor ^{ΔΔ}	0.9698	≥0.9	≥0.87	Pass	
277	THDi ^{ΔΔ}	8.62%	≤20%	≤25%	Pass	

Note:

1. The test results were measured directly from the test equipment.
2. The DLC requirements were listed according to DLC Technical Requirements V5.1.
3. The conclusion is only for information. When determining the compliance of the result, tolerances and/or allowances may be applied to the measured value.
4. ^{ΔΔ} Test facility was located at Room 301, No.113, Pingkang Road, Dalang, Dongguan, Guangdong, China.

[Integrating Sphere System]

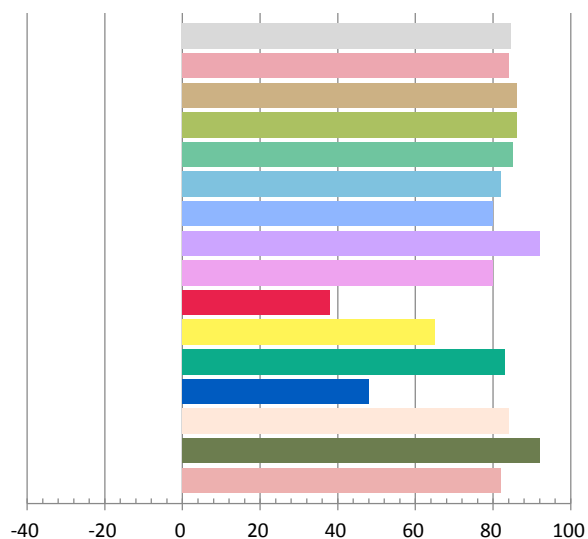
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.1	60	0.5782	68.73	0.9901	9165.6	133.35

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
27.3700	4877	0.00449	0.3497	0.3644	0.2096	0.4915

Color Rendering Index

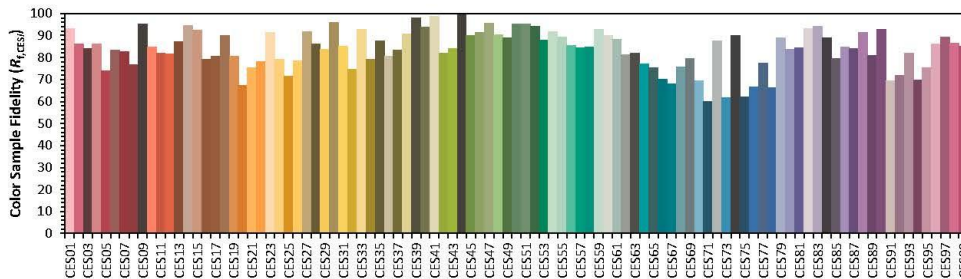
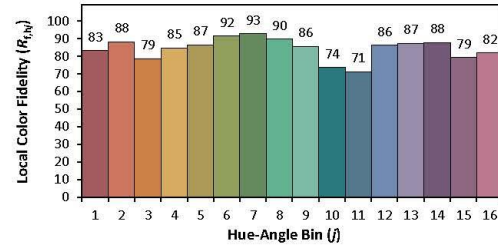
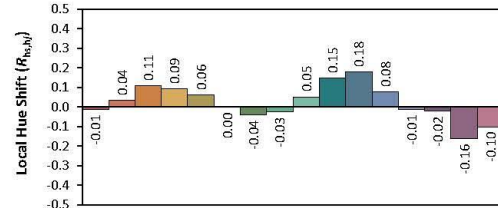
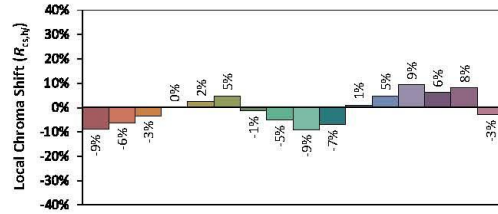
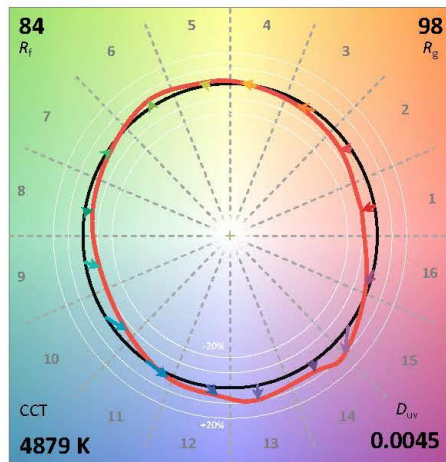
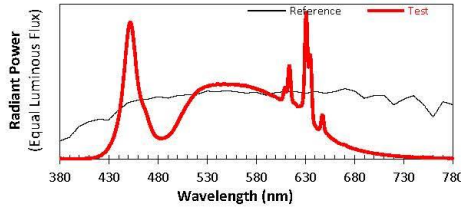
Ra			
84.5			
R1	R2	R3	R4
84	86	86	85
R5	R6	R7	R8
82	80	92	80
R9	R10	R11	R12
38	65	83	48
R13	R14	R15	
84	92	82	



ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD
Date: 2024/1/17

Manufacturer: BEYOND SIGNS INC DBA BEYOND LED TECHNOLOGY
Model: BLT-BPLED-2x4-40/50/60/70/D10/U/40-50-65/HL



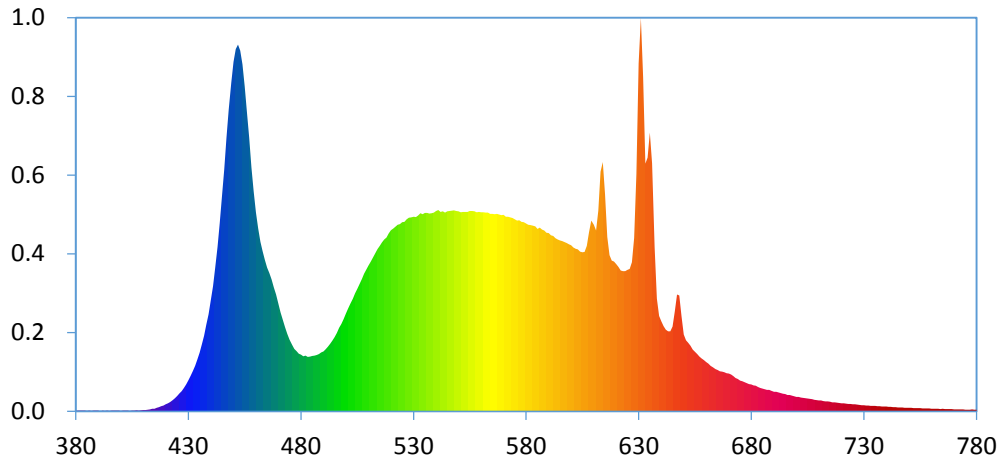
Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.3497
 y 0.3643
 u' 0.2096
 v' 0.4914

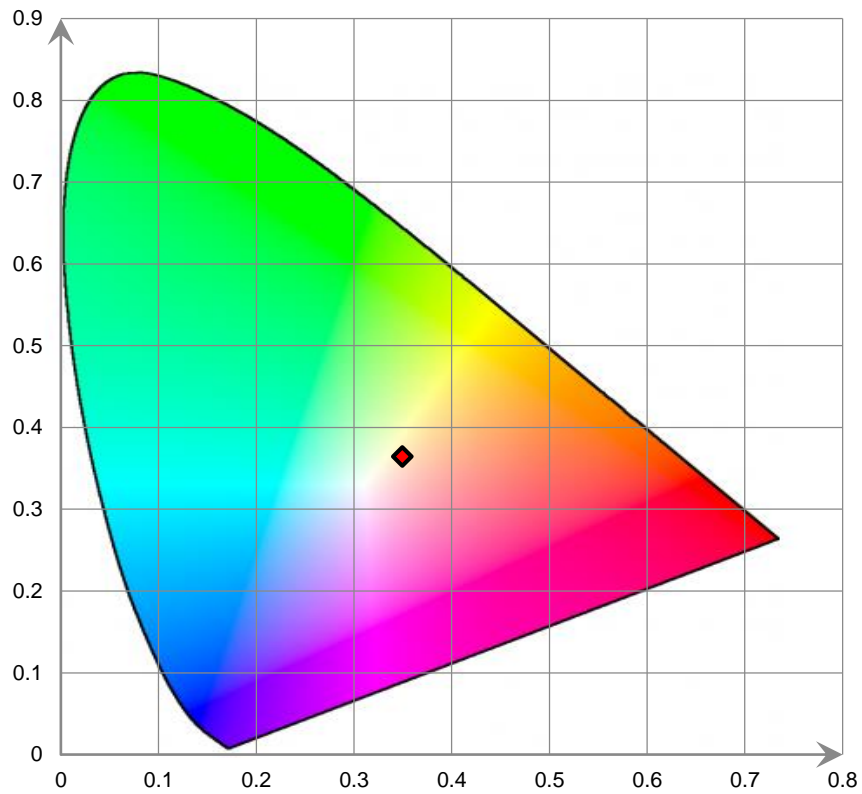
CIE 13.3-1995 (CRI)	
R_a	84
R_g	38

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

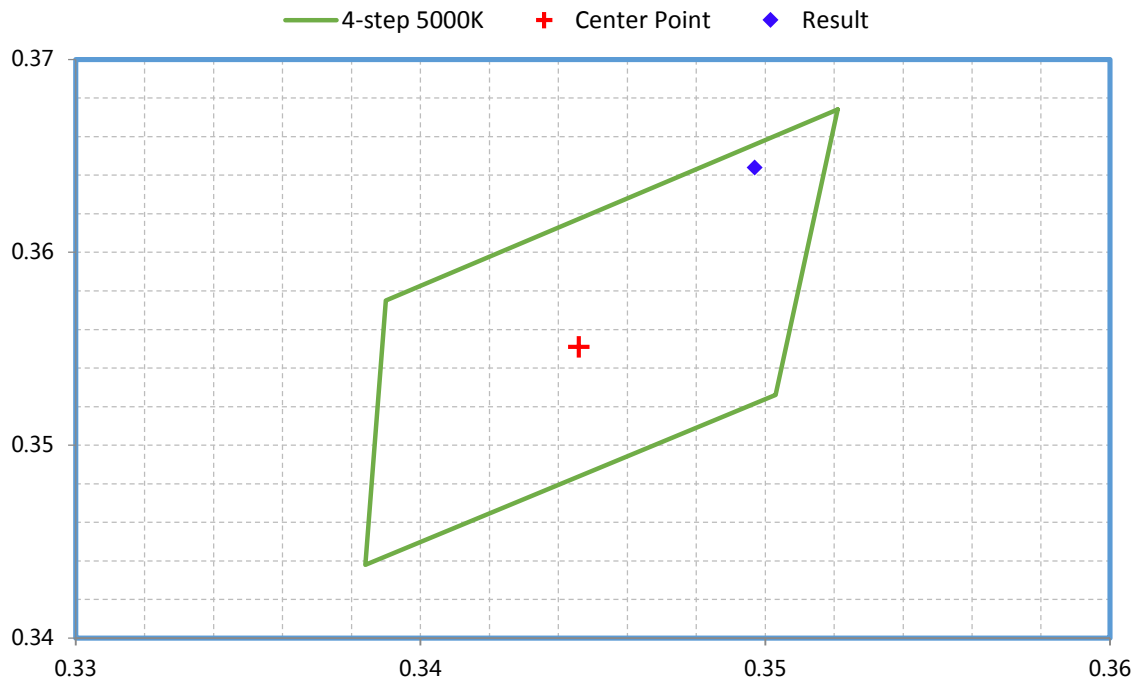
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



Test CCT: <u>6500K (Input Control Signal Applied: 100%)</u>						
Test Condition: Method: <u>Integrating Sphere System</u> ; Orientation: <u>Downward</u> ; Test Voltage: <u>120.1 V 60Hz</u> ;						
Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion		
Light Output(lm) ^{ΔΔ}	9152.4	≥3000	≥2700	Pass		
Power(W) ^{ΔΔ}	68.55	None.	None.	N/A		
Total Efficacy(lm/W) ^{ΔΔ}	133.51	≥125	≥121.25	Pass		
CCT(K) ^{ΔΔ}	6226	6192~6872	No tolerances	Pass		
Duv ^{ΔΔ}	0.00474	-0.0002~0.0064	No tolerances	Pass		
IES Rf ^{ΔΔ}	85	70	69	Pass		
IES Rg ^{ΔΔ}	98	89	88			
IES Rcs,h1 ^{ΔΔ}	-7%	-12%~23%	-13%~22%			
Ra ^{ΔΔ}	86.5	≥80	≥79			
R9 ^{ΔΔ}	52	≥0	≥-1			
Test Condition: Method: <u>Integrating THDi、PF Test</u> ; Orientation: <u>Downward</u> ;						
Test Voltage	Test Item	Test Result	DLC Requirements	DLC Requirements(With tolerances and/or allowances)	Conclusion	
120	Power Factor ^{ΔΔ}	0.9827	≥0.9	≥0.87	Pass	
120	THDi ^{ΔΔ}	7.15%	≤20%	≤25%	Pass	
277	Power Factor ^{ΔΔ}	0.9702	≥0.9	≥0.87	Pass	
277	THDi ^{ΔΔ}	8.72%	≤20%	≤25%	Pass	

Note:

- The test results were measured directly from the test equipment.
- The DLC requirements were listed according to DLC Technical Requirements V5.1.
- The conclusion is only for information. When determining the compliance of the result, tolerances and/or allowances may be applied to the measured value.
- ^{ΔΔ} Test facility was located at Room 301, No.113, Pingkang Road, Dalang, Dongguan, Guangdong, China.

[Integrating Sphere System]

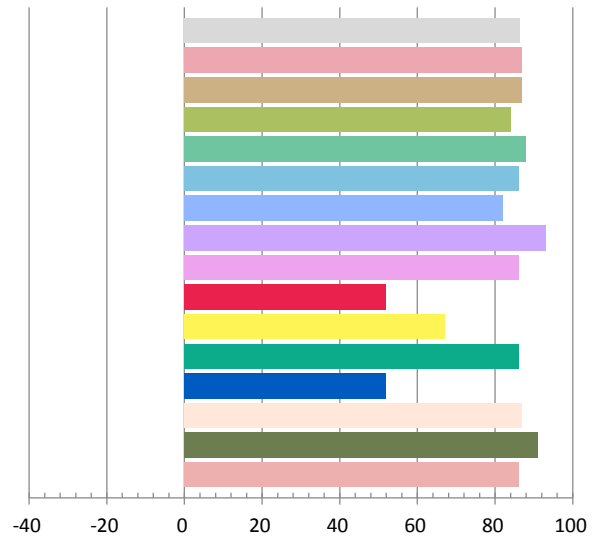
Photometric and Electrical Measurement Result

Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)
120.1	60	0.581	68.55	0.9827	9152.4	133.51

Radiant Flux (W)	CCT (K)	Duv	x	y	u'	v'
28.9490	6226	0.00474	0.3172	0.3364	0.1982	0.4729

Color Rendering Index

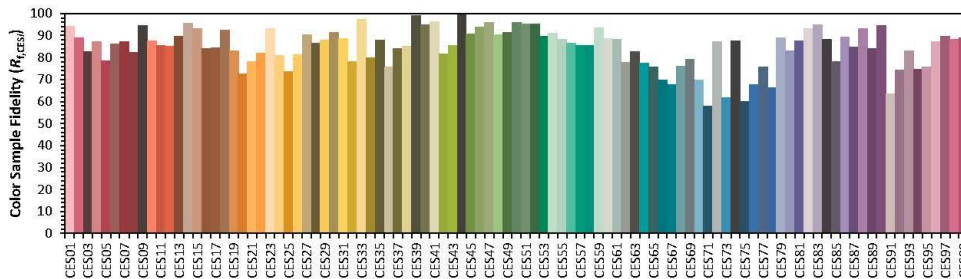
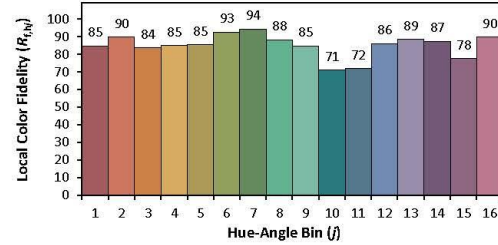
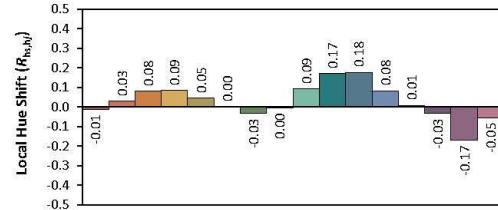
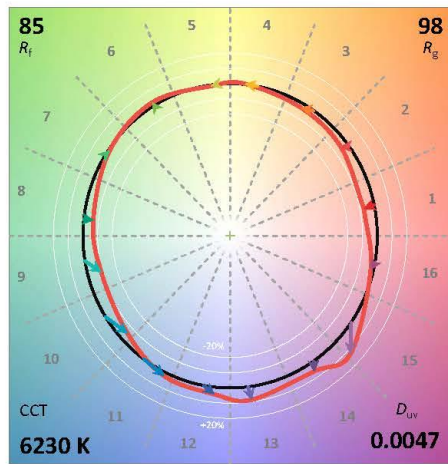
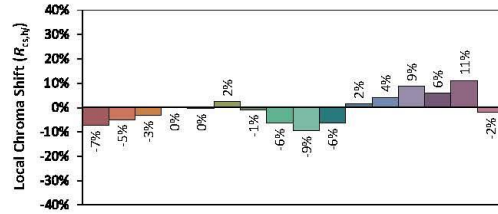
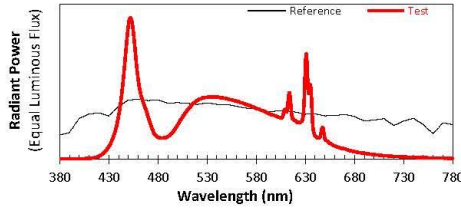
Ra			
86.5			
R1	R2	R3	R4
87	87	84	88
R5	R6	R7	R8
86	82	93	86
R9	R10	R11	R12
52	67	86	52
R13	R14	R15	
87	91	86	



ANSI/IES TM-30-18 Color Rendition Report

Source: User SPD
Date: 2024/1/9

Manufacturer: BEYOND SIGNS INC DBA BEYOND LED TECHNOLOGY
Model: BLT-BPLED-2x4-40/50/60/70/D10/U/40-50-65/HL



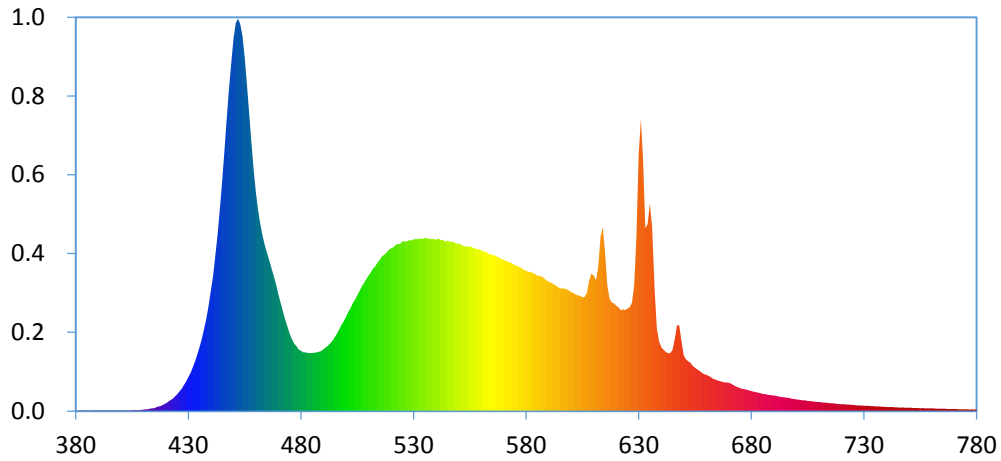
Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x 0.3171
 y 0.3362
 u' 0.1982
 v' 0.4728

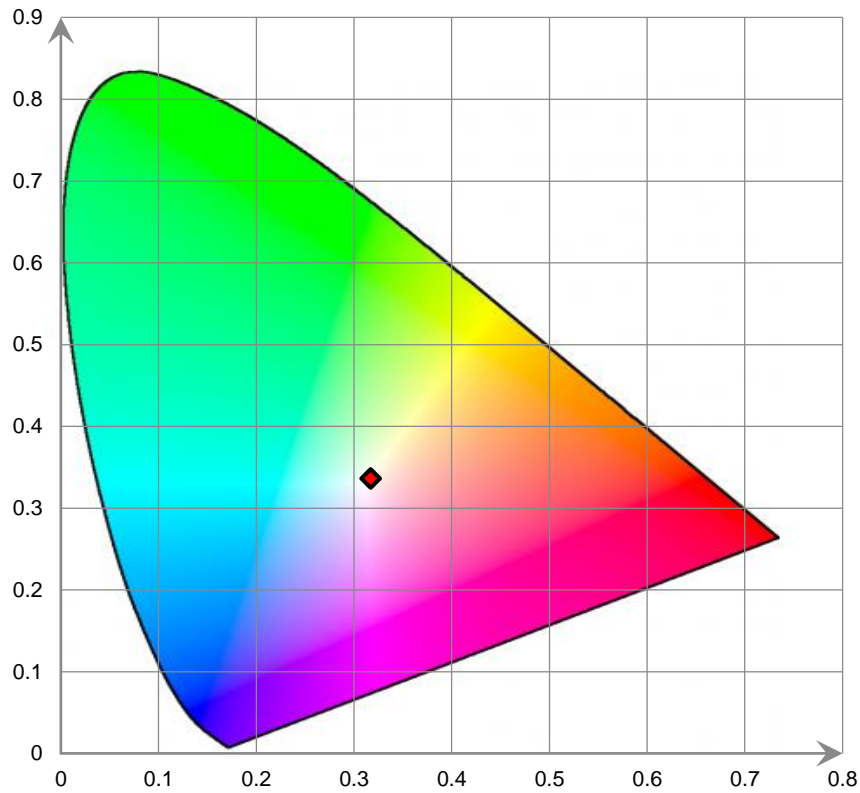
CIE 13.3-1995 (CRI)	
R_a	86
R_g	52

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

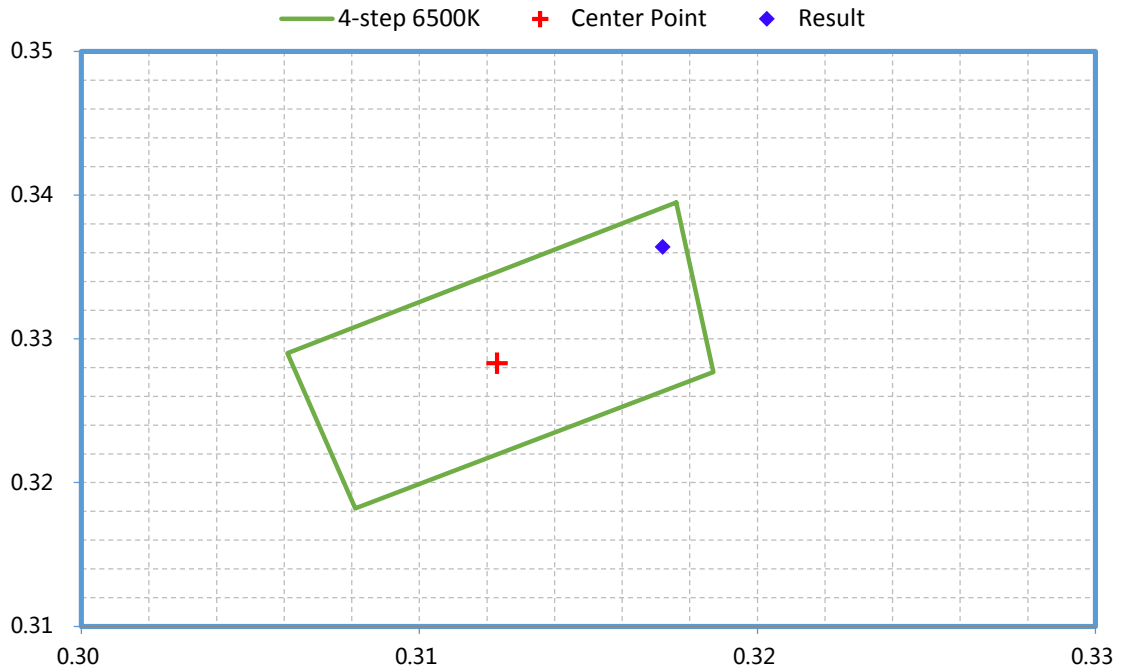
Relative Spectral Power Distribution



CIE 1931 x y Chromaticity Diagram



ANSI C78.377-2017 Chromaticity Quadrangles



4. Description of Test Equipment

Device	Manufacture	Model No	Serial No	Calibration date	Calibration due date
2.0m integrating sphere	EVERFINE	R98	11010018	2023-09-02	2024-09-01
spectroradiometer	EVERFINE	HAAS-2000	G112048TS81331121	2023-09-02	2024-09-01
Digital Power Meter	EVERFINE	PF2010A	1011004	2023-09-02	2024-09-01
Digital CC&CV DC Power Supply	EVERFINE	WY305-V1	1101047	2023-09-02	2024-09-01
Standard Light Source	EVERFINE	D204	N/A	2023-05-12	2025-05-11
Special zero-voltage synchronous switching AC	EVERFINE	DPS1010-YF	1011001T	2023-09-02	2024-09-01
AC POWER SUPPLY	EVERFINE	VPS1030 PWM	1012017	2023-09-02	2024-09-01
Digital CC&CV DC Power Supply	EVERFINE	WY12010	1009009	2023-09-02	2024-09-01
Digital power meter	YOKOGAWA	WT-210	91j926132	2023-09-02	2024-09-01
full-field speed goniophotometer	EVERFINE	GO-R5000	YG108492N10120001	2023-09-02	2024-09-01
wireless remote thermohygrometer	N/A	AOK-5017B	N/A	2023-09-02	2024-09-01
Standard Light Source	EVERFINE	D908	N/A	2023-05-12	2025-05-11
Multimeter	FLUKE	115C	N/A	2023-09-02	2024-09-01
Hybrid Recorder	YOKOGAWA	DR240	10#	2023-11-10	2024-11-09
AC POWER SUPPLY	HengPu	HPA 1103	0003394	2023-09-02	2024-09-01

Statement of Traceability: Bay Area Compliance Laboratories Corp. (Shenzhen) attested that all calibration has been performed using suitable standards traceable to National Primary Standards and International System of Units (SI).

5. Test Method

Product was tested with no seasoning. All stabilization and measurements were made in compliance with ANSI/IES LM-79-19. The product was operated at rated voltage or at voltage required by manufacturer. The ambient temperature of the sample was maintained at $25^{\circ}\text{C} \pm 1.2^{\circ}\text{C}$ during measurement. And relative humidity is maintained between 10% and 65%. The air flow around the SSL product is less than 0.2m/s.

Integrating Sphere System

The system includes AC power source, digital power meter, DC power supply, Spectroradiometer, and integrating sphere. The integrating sphere system is calibrated by standard spectrum light source before measurement. 4π geometry was used during measurement.

Goniophotometer System

Type C goniophotometer was used for measuring luminous intensity distribution. The vertical angle (γ) test intervals were set no more than 1 degree while data for 5 degree intervals is reported. The horizontal angle (C plane) test intervals were set no more than 22.5 degree.

ISTMT Test

The LED which has the highest temperature was measured at the location of LED case which is specified by LED source manufacturer and detailed by LM-80 report. The drive current of LED package/module/ array was calculated as the total output current of the driver measured by multimeter, divided by the number of branches in parallel of LEDs.

Directions

1. The information marked "superscript #" is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report.
2. This report includes some test methods are not in NVLAP accreditation scope marked *.
3. Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.
4. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.
5. The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor $K=2$ with the 95% confidence interval.
6. This report cannot be reproduced except in full, without prior written approval of the Company.
7. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

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