



Guangdong Meide Testing Technology Co., Ltd.



TEST REPORT OF ANSI/IES LM-79-19

APPROVED METHOD FOR OPTICAL AND ELECTRICAL MEASUREMENTS OF SOLID-STATE LIGHTING PRODUCTS

Client : IKIO LED LIGHTING

Address 8470 Allison Pointe Blvd, Suite 128 Indianapolis, IN 46250

Test Model IK-BL14-40/30/20-354050-YL

Brand Name IKIO

Testing Laboratory Guangdong Meide Testing Technology Co., Ltd.

Address 1st floor, B Area, Jinbaisheng Industrial Park, Headquarters 2 Road, Songshan Lake Hi-tech Industrial Development Zone, Dongguan City, Guangdong Pr., China

Testing location As above

Report No. C02A21060127L00101

Date of receipt June 11,2020

Date of test June 11,2022- June 16, 2020

Date of report June 16, 2020

Tested by:

Jarvis Zhang

Jarvis Zhang/ Test Engineer

Checked by:

Ken

Ken Mo/ Project Engineer

Approved by:

Jessie

Jessie Li/ Technical Manager



Note 1: 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 Guangdong Meide Testing Technology 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 Federal Government.

Note 2: This report does not imply product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.



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1. Product Description for Equipment under Test(EUT)

The client submitted 1 sample of model IK-BL14-40/30/20-354050-YL. The sample was received on 2021-06-10, is in undamaged condition.

Model Tested:	IK-BL14-40/30/20-354050-YL
Manufacturer:	IKIO
Address:	8470 Allison Pointe Blvd, Suite 128 Indianapolis, IN 46250
Product Type:	1X4 Luminaires for Ambient Lighting of Interior Commercial Spaces
Rated Voltage/Frequency:	120-277V AC,50/60Hz
Rated Power:	40W,30W,20W
Nominal CCT:	3500K,4000K,5000K
LED Driver Manufacturer:	HUNAN XIEZHEN ELECTRONICS CO.,LTD.
LED Driver Model No:	XZ-SE40B-380100-077053-W-D
LED Manufacturer:	KAISTAR LIGHTING(XIAMEN) CO.,LTD
LED Model No:	BXEN-27E-13H 99N



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2. Standards Used

- ANSI/IES LM-79-19:APPROVED METHOD:OPTICAL AND ELECTRICAL MEASUREMENTS OF SOLID-STATE LIGHTING PRODUCTS
- IES TM-30-18 IES Method for Evaluating Light Source Color Rendition (This Method is not in Nvlap accreditation scope)
- ANSI C82.77-10:2014 Harmonic Emission Limits – Related Power Quality Requirements for Lighting Equipment-Solid State

3. Test equipment list

Test Equipment	Serial No	Model No	Calibration due date
Full-field Speed Goniophotometer	MD-E028	GO-R5000	2021/09/29
Digital Power Meter	MD-E001	PF2010	2021/09/29
AC Testing Power Source	MD-E002	DPS1060	2021/09/29
Total Spectral Radiant Flux Standard Lamp	MD-E007	D908S	2021/09/29
Integrating Sphere System	MD-E029	2M	2021/09/29
High Accuracy Array Spectroradio Meter	MD-E011	HAAS-3000	2021/09/29
Digital Power Meter	MD-E008	PF310	2021/09/29
AC Testing Power Source	MD-E010	DPS1010	2021/09/29
Standard Lamp	MD-E012	D204	2022/05/18

Statement of Traceability: Guangdong Meide Testing Technology Co., Ltd. attested that all calibration has been performed using suitable standards traceable to national primary standards and International System of Unit(SI).



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4. Test Method

Requirements of Ambient Condition

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 between 10% and 65%.

Goniophotometer System

The sample was tested according to the ANSI/IES LM-79-19.

Photometric parameters were measured using a type C goniophotometer and software. The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, Luminous efficacy, zonal flux were calculated from the software taken at 1° vertical intervals and 22.5° horizontal intervals. Photometric distance was more than five times of the Largest dimension of the test SSL product.

Integrating Sphere System

The sample was tested according to the ANSI/IES LM-79-19.

The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. Coating reflectance of the integrating sphere was 90% to 98%. Photometric measurement conditions was using 4π geometry. The self-absorption factor is applied in the final test result. The sample was operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780 nm.

Fidelity Index (R_f) and Gamut Index (R_g) Calculation

The R_f , R_g was calculated according to IES TM-30-18 by using calculation tools. The calculation was based on the measured SPD from 380nm to 780nm with 1nm intervals. All the colors in this report is for reference only.

THD and PF Test

The sample was tested according to the ANSI C82.77-10:2014.

The sample was operated at rated voltage and was stabilized before measurement. The total harmonic distortion were calculated from the digital power meter.



5.Integrating Sphere Test Results

5.1 Test Data

Test Ambient Temperature	25.1°C	Test orientation	Downward
Operate time(Min.)	75	stabilization time(Min.)	60

Model # IK-BL14-40/30/20-354050-YL Optical and Electrical Measurement Result

Mode	Voltage (V)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	Luminous Flux(lm)	Efficacy (lm/W)	CCT (K)
40W-3500K	119.97	60	0.3182	37.13	0.9726	4694.3	126.43	3472
40W-4000K	119.98	60	0.3344	38.88	0.9691	4975.2	127.96	4141
40W-5000K	120.07	60	0.317	36.85	0.9681	5170.9	140.31	4994
30W-3500K	119.99	60	0.2465	28.65	0.9685	3627.4	126.63	3465
30W-4000K	119.99	60	0.249	28.88	0.9663	3798.9	131.56	4139
30W-5000K	120.08	60	0.2436	28.37	0.9698	4096.4	144.38	4996
20W-3500K	120	60	0.1762	19.98	0.9451	2555.4	127.89	3461
20W-4000K	119.97	60	0.173	19.56	0.9426	2633.5	134.65	4149
20W-5000K	120.1	60	0.1693	19.27	0.948	2855.3	148.17	5001

Mode	Ra	R9	Rf	Rg	x	y	u'	v'	Duv
40W-3500K	84.3	13	86	95	0.4072	0.3924	0.2363	0.5122	3.02E-04
40W-4000K	86.2	23	85	94	0.3749	0.3747	0.2222	0.4998	7.09E-04
40W-5000K	85.7	23	85	94	0.346	0.3598	0.2089	0.4887	3.70E-03
30W-3500K	84.5	14	86	95	0.4076	0.3925	0.2365	0.5123	2.67E-04
30W-4000K	86.3	23	85	94	0.3749	0.3747	0.2223	0.4998	6.81E-04
30W-5000K	85.8	23	85	94	0.3459	0.3596	0.2089	0.4886	3.64E-03
20W-3500K	84.7	15	86	95	0.4077	0.3922	0.2367	0.5122	1.14E-04
20W-4000K	86.4	24	85	94	0.3744	0.3742	0.2221	0.4996	6.15E-04
20W-5000K	86.3	23	85	94	0.3458	0.3592	0.209	0.4884	3.50E-03



5.2 Model # IK-BL14-40/30/20-354050-YL(Mode:40W-3500K) Color Rendering Index

Ra				
84.3				
R1	R2	R3	R4	R5
83	91	97	83	83
R6	R7	R8	R9	R10
89	85	64	13	80
R11	R12	R13	R14	R15
82	68	85	99	76



5.3.1 Model # IK-BL14-40/30/20-354050-YL(Mode:40W-3500K) ANSI/IES TM-30-18 Color Rendition Report

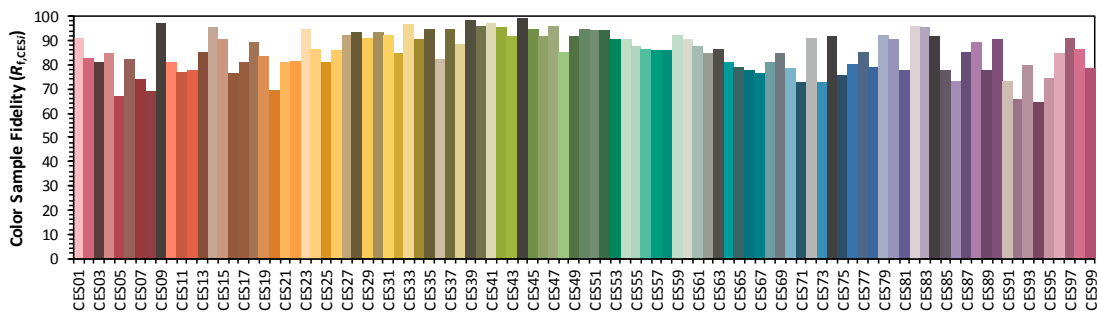
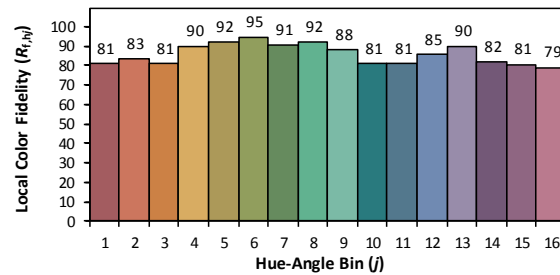
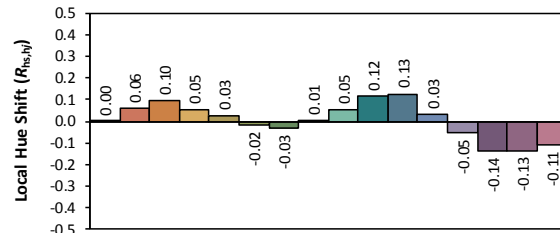
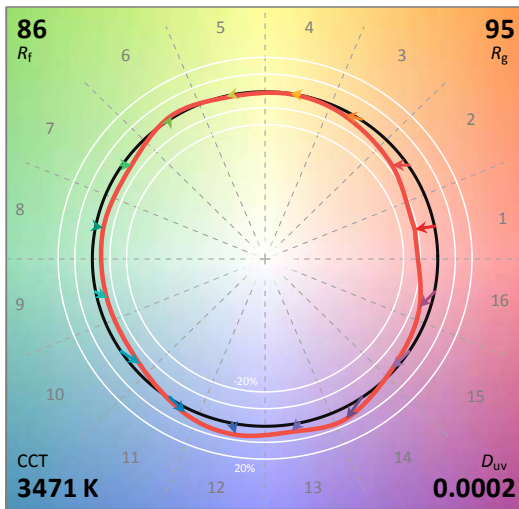
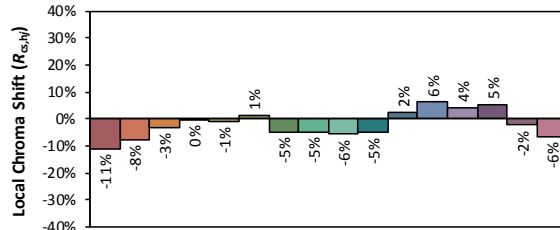
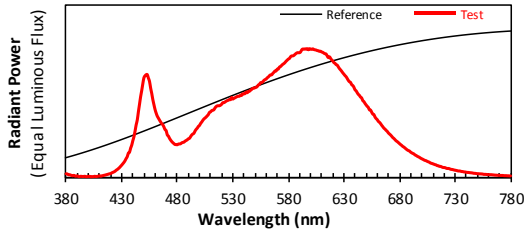
ANSI/IES TM-30-18 Color Rendition Report

Source: HL-AS-2835DW-3C-S1-08L-PCT-HR3

Manufacturer: IKIO LED LIGHTING

Date: 2021/6/15

Model: IK-BL14-40/30/20-354050-YL



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

x 0.4072
y 0.3922
u' 0.2363
v' 0.5122

CIE 13.3-1995 (CRI)
Ra 84
R9 13

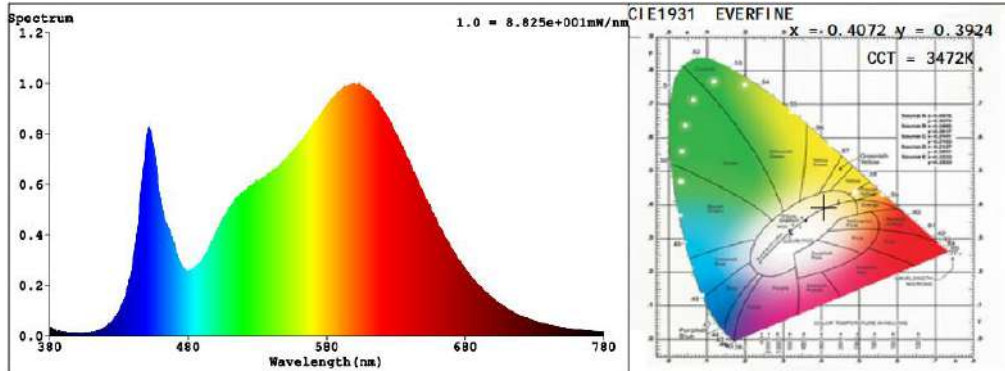
Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.



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Model # IK-BL14-40/30/20-354050-YL(Mode:40W-3500K) Relative Spectral Power Distribution



nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0307	414	0.0188	448	0.6707	482	0.2603	516	0.5528
381	0.0293	415	0.0206	449	0.7235	483	0.2616	517	0.554
382	0.0234	416	0.0231	450	0.7695	484	0.2684	518	0.5542
383	0.0237	417	0.0254	451	0.7838	485	0.2719	519	0.5587
384	0.0206	418	0.0279	452	0.7924	486	0.2741	520	0.5662
385	0.0179	419	0.0306	453	0.7931	487	0.2815	521	0.5775
386	0.0151	420	0.0321	454	0.7663	488	0.2867	522	0.5778
387	0.0191	421	0.0376	455	0.7422	489	0.2921	523	0.5828
388	0.0131	422	0.0413	456	0.6912	490	0.2997	524	0.589
389	0.0127	423	0.0454	457	0.6493	491	0.3035	525	0.5935
390	0.0146	424	0.0503	458	0.6015	492	0.3163	526	0.5964
391	0.0099	425	0.0581	459	0.5623	493	0.3287	527	0.6021
392	0.0089	426	0.0635	460	0.5251	494	0.3365	528	0.6008
393	0.0113	427	0.0708	461	0.4971	495	0.3423	529	0.6173
394	0.0105	428	0.0786	462	0.4742	496	0.3592	530	0.6053
395	0.0097	429	0.0882	463	0.459	497	0.3722	531	0.6118
396	0.0105	430	0.0975	464	0.4437	498	0.3816	532	0.615
397	0.0113	431	0.108	465	0.4296	499	0.3949	533	0.6206
398	0.0077	432	0.1186	466	0.4164	500	0.4024	534	0.6246
399	0.0093	433	0.1316	467	0.4071	501	0.4175	535	0.6269
400	0.0104	434	0.1483	468	0.3904	502	0.4285	536	0.6275
401	0.0116	435	0.1628	469	0.3704	503	0.4414	537	0.6357
402	0.0072	436	0.1901	470	0.3626	504	0.4522	538	0.6337
403	0.0094	437	0.1961	471	0.3298	505	0.4595	539	0.6458
404	0.0081	438	0.2277	472	0.3209	506	0.4673	540	0.6458
405	0.0102	439	0.2505	473	0.3037	507	0.4767	541	0.6474
406	0.0112	440	0.2853	474	0.2904	508	0.4862	542	0.6594
407	0.0089	441	0.3153	475	0.279	509	0.5029	543	0.6538
408	0.0112	442	0.359	476	0.2702	510	0.5067	544	0.6641
409	0.0122	443	0.4073	477	0.2626	511	0.5164	545	0.6653
410	0.0154	444	0.4445	478	0.2557	512	0.5192	546	0.6735
411	0.0119	445	0.5071	479	0.2557	513	0.5236	547	0.6798
412	0.0146	446	0.5643	480	0.2539	514	0.5372	548	0.6875
413	0.0164	447	0.6231	481	0.2591	515	0.5474	549	0.6889



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nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
550	0.6927	599	0.9926	648	0.586	697	0.1615	746	0.0364
551	0.6956	600	0.9894	649	0.572	698	0.157	747	0.0344
552	0.7019	601	0.9877	650	0.5604	699	0.1512	748	0.0341
553	0.7139	602	0.9917	651	0.5493	700	0.1465	749	0.0328
554	0.7183	603	0.9862	652	0.5409	701	0.1424	750	0.0314
555	0.7316	604	0.984	653	0.5225	702	0.1376	751	0.0313
556	0.732	605	0.9821	654	0.5205	703	0.1335	752	0.0302
557	0.7385	606	0.9782	655	0.5048	704	0.1312	753	0.03
558	0.7484	607	0.9768	656	0.49	705	0.1263	754	0.0294
559	0.7547	608	0.9723	657	0.4861	706	0.1229	755	0.0284
560	0.7593	609	0.9731	658	0.4678	707	0.1191	756	0.0261
561	0.769	610	0.9672	659	0.4556	708	0.1134	757	0.0264
562	0.7753	611	0.9644	660	0.4473	709	0.1107	758	0.0257
563	0.7849	612	0.9585	661	0.4339	710	0.1078	759	0.025
564	0.7914	613	0.9537	662	0.4268	711	0.1044	760	0.0243
565	0.7912	614	0.9517	663	0.4167	712	0.1011	761	0.0239
566	0.8026	615	0.9367	664	0.4041	713	0.0988	762	0.0236
567	0.8112	616	0.9241	665	0.3933	714	0.0936	763	0.0234
568	0.8213	617	0.9306	666	0.3817	715	0.0924	764	0.0224
569	0.8215	618	0.9183	667	0.3744	716	0.0878	765	0.0216
570	0.8353	619	0.9064	668	0.3648	717	0.0875	766	0.0204
571	0.8363	620	0.8983	669	0.3571	718	0.0837	767	0.0201
572	0.8514	621	0.8856	670	0.3454	719	0.0799	768	0.0193
573	0.8556	622	0.8804	671	0.337	720	0.0789	769	0.0188
574	0.8646	623	0.87	672	0.3293	721	0.0779	770	0.0187
575	0.8725	624	0.8662	673	0.3197	722	0.074	771	0.0178
576	0.8783	625	0.8528	674	0.3095	723	0.0714	772	0.0176
577	0.8864	626	0.8397	675	0.3024	724	0.0716	773	0.0177
578	0.8966	627	0.8299	676	0.2933	725	0.0696	774	0.0165
579	0.9044	628	0.8191	677	0.2843	726	0.0657	775	0.016
580	0.9128	629	0.8071	678	0.2784	727	0.0642	776	0.0162
581	0.9177	630	0.7968	679	0.2711	728	0.0629	777	0.0153
582	0.9306	631	0.786	680	0.2632	729	0.0602	778	0.0153
583	0.9368	632	0.7771	681	0.2557	730	0.0584	779	0.0143
584	0.9373	633	0.7634	682	0.2491	731	0.0567	780	0.0143
585	0.9412	634	0.7487	683	0.2411	732	0.0547		
586	0.949	635	0.7385	684	0.236	733	0.0522		
587	0.9561	636	0.7333	685	0.2287	734	0.0523		
588	0.9612	637	0.7162	686	0.2214	735	0.0506		
589	0.9618	638	0.7094	687	0.2147	736	0.0481		
590	0.9617	639	0.6966	688	0.2095	737	0.0477		
591	0.9676	640	0.6768	689	0.2059	738	0.0452		
592	0.9827	641	0.6688	690	0.1978	739	0.0446		
593	0.9902	642	0.6541	691	0.1922	740	0.0429		
594	0.9884	643	0.6415	692	0.1874	741	0.0413		
595	0.9911	644	0.6332	693	0.1834	742	0.041		
596	0.9891	645	0.6203	694	0.1759	743	0.0397		
597	0.9928	646	0.6141	695	0.1716	744	0.0387		
598	0.9845	647	0.5936	696	0.1658	745	0.0379		



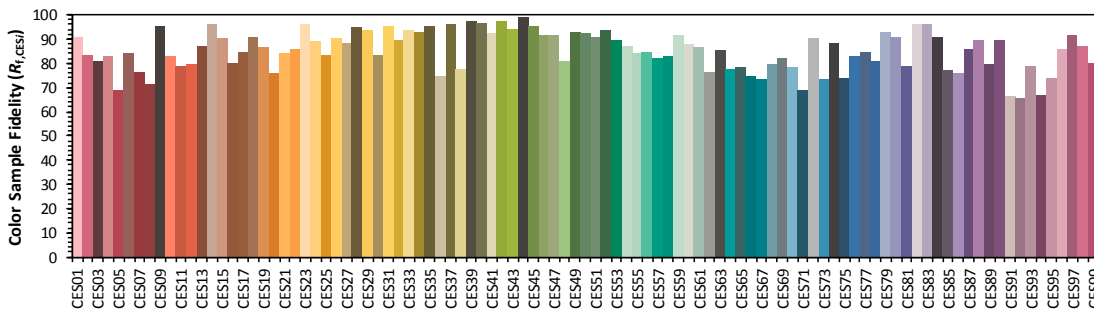
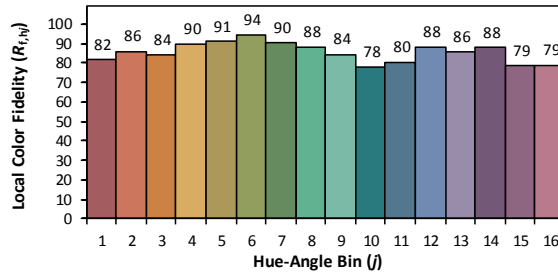
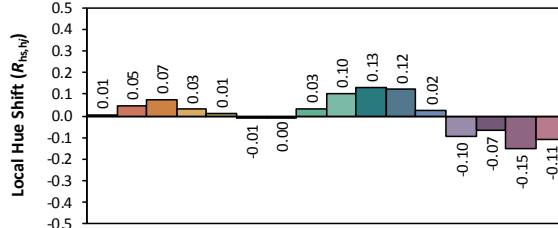
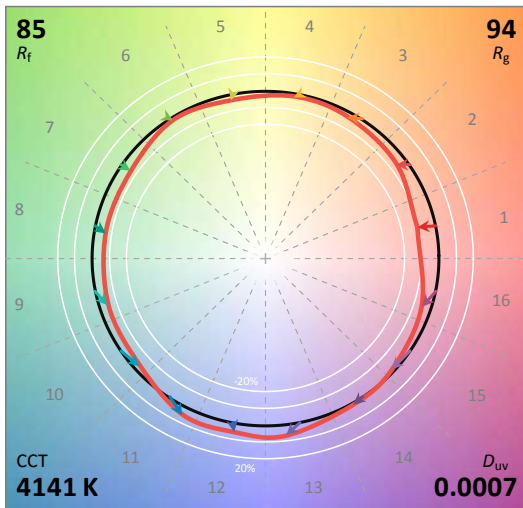
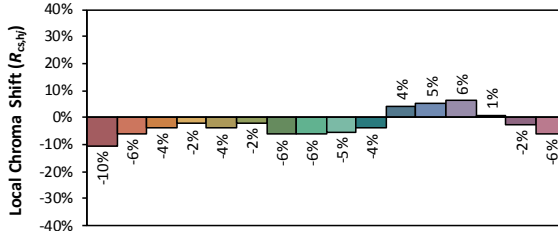
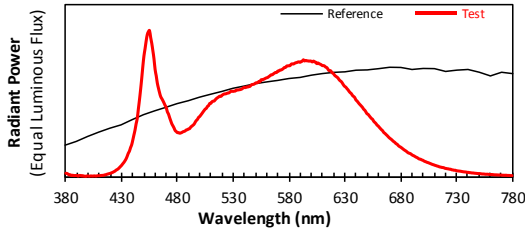
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5.3.2 Model # IK-BL14-40/30/20-354050-YL(Mode:40W-4000K) ANSI/IES TM-30-18 Color Rendition Report
ANSI/IES TM-30-18 Color Rendition Report

Source: HL-AS-2835DW-3C-S1-08L-PCT-HR3
Date: 2021/6/15

Manufacturer: IKIO LED LIGHTING
Model: IK-BL14-40/30/20-354050-YL



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

x 0.3748
 y 0.3746
 u' 0.2223
 v' 0.4998

CIE 13.3-1995 (CRI)	
R_a	86
R_9	23

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



5.3.3 Model # IK-BL14-40/30/20-354050-YL(Mode:40W-5000K) ANSI/IES TM-30-18 Color Rendition Report

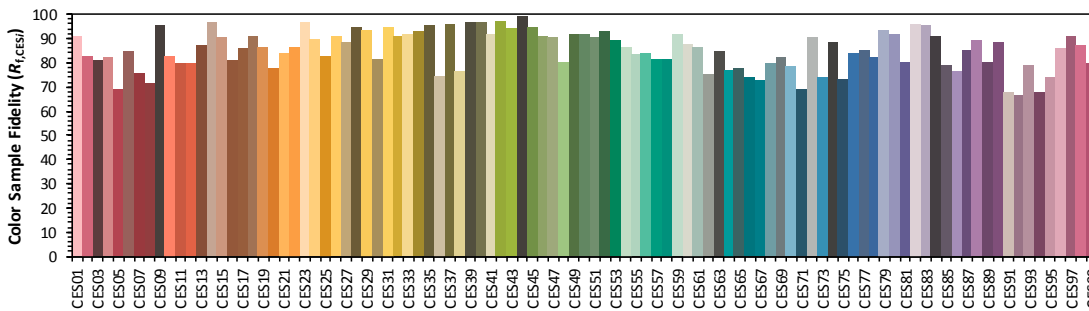
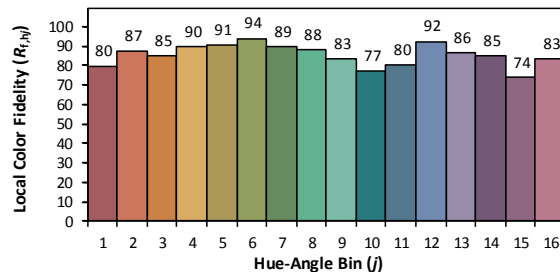
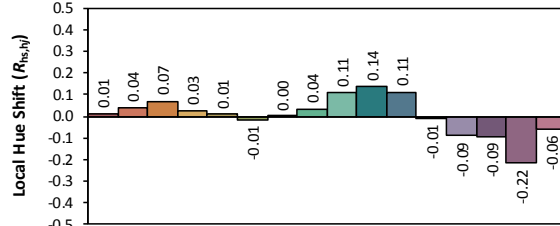
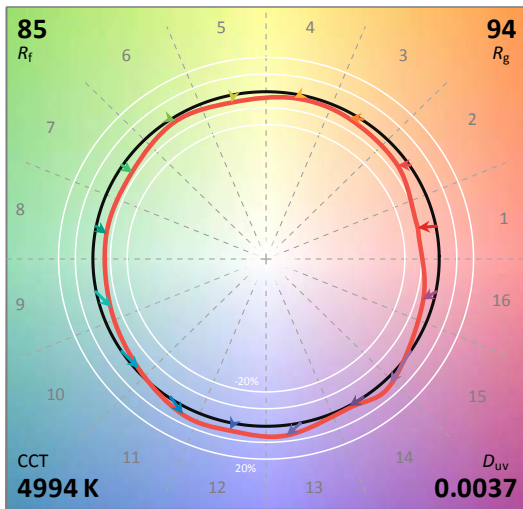
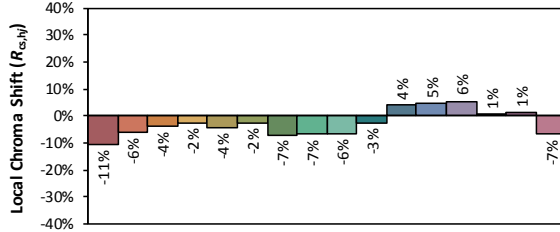
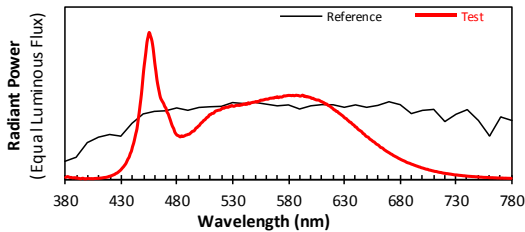
ANSI/IES TM-30-18 Color Rendition Report

Source: HL-AS-2835DW-3C-S1-08L-PCT-HR3

Manufacturer: IKIO LED LIGHTING

Date: 2021/6/15

Model: IK-BL14-40/30/20-354050-YL



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

x 0.3460
 y 0.3597
 u' 0.2089
 v' 0.4887

CIE 13.3-1995 (CRI)	
R_a	86
R_g	23

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



6. Goniophotometer Test results for model # IK-BL14-40/30/20-354050-YL(Mode:40W-3500K)

6.1 Test Data

Test Ambient Temperature	25.1°C	Test orientation	Downward
Operate time(Min.)	90	stabilization time(Min.)	60

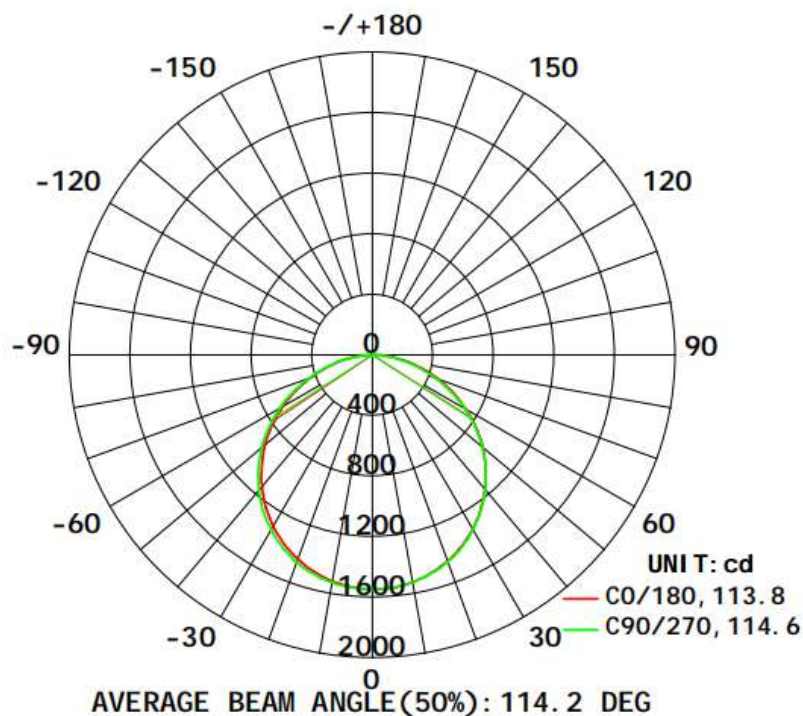
Electrical Measurement

Input Voltage (V)	Frequency (Hz)	Input Current(A)	Power Factor	Power(W)
120.2	60	0.3023	0.9926	36.33

Optical Measurement

Luminous Flux (lm)	Efficacy(lm/W)	ZL (0-60°)	Spacing Criteria (C0/180°)	Spacing Criteria (C90/270°)
4543.56	125.06	78.1%	1.26	1.28

6.2 Luminous Intensity Distribution





6.3 Zonal Flux Diagram

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum, lamp
10	1526	1523	1526	1526	1519	1521	1527	1528	0- 10	146.7	146.7	3.23,3.23
20	1452	1448	1455	1457	1437	1443	1460	1461	10- 20	421.8	568.5	12.5,12.5
30	1328	1323	1332	1339	1310	1316	1337	1348	20- 30	643.6	1212	26.7,26.7
40	1159	1155	1161	1166	1135	1144	1167	1184	30- 40	781.4	1993	43.9,43.9
50	952.5	946.9	949.6	949.9	924.4	931.8	954.5	973.4	40- 50	815.3	2809	61.8,61.8
60	712.9	704.8	703.6	700.5	683.8	687.0	708.0	726.6	50- 60	740.4	3549	78.1,78.1
70	458.0	448.1	437.1	434.3	427.4	427.3	440.6	459.4	60- 70	567.1	4116	90.6,90.6
80	209.5	198.0	180.5	180.8	183.3	181.8	185.6	203.3	70- 80	330.7	4447	97.9,97.9
90	0.2086	0.2356	0.4639	0.1487	0.0825	0	0.3401	0	80- 90	92.46	4539	99.9,99.9
100	0.0836	0	0.3489	0	0.2529	0.3380	0.5101	0.3055	90-100	0.3165	4540	99.9,99.9
110	0.1673	0.0839	0.3424	0	0.6360	0.8527	0.5101	0.8567	100-110	0.3777	4540	99.9,99.9
120	0.1673	0.0839	0.3401	0.0857	0.8442	1.020	0.5101	0.9518	110-120	0.4864	4541	99.9,99.9
130	0.1673	0.3181	0.3401	0.0857	0.8810	1.098	0.5101	1.075	120-130	0.5574	4541	99.9,99.9
140	0.1673	0.4501	0.3401	0.4267	0.9178	1.175	0.7226	1.186	130-140	0.5841	4542	100,100
150	0.1673	0.5874	0.3401	0.6824	1.172	1.596	1.103	2.060	140-150	0.5801	4542	100,100
160	0.3347	1.511	0.3401	1.474	1.636	1.831	1.469	2.541	150-160	0.5784	4543	100,100
170	1.244	2.082	0.6793	2.291	2.104	2.070	1.590	2.311	160-170	0.4370	4543	100,100
180	1.506	2.604	1.523	2.741	1.840	1.931	1.445	1.542	170-180	0.1738	4544	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		



6.4 UGR (Unified Glare Rating) Table

ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	17.8	19.3	18.0	19.5	19.7	17.7	19.2	18.0	19.4	19.6
3H	19.4	20.8	19.7	21.0	21.3	19.2	20.6	19.5	20.9	21.1
4H	20.0	21.4	20.4	21.6	21.9	19.8	21.2	20.2	21.4	21.7
6H	20.6	21.8	20.9	22.1	22.4	20.3	21.5	20.6	21.8	22.1
8H	20.7	22.0	21.1	22.2	22.5	20.4	21.6	20.7	21.9	22.2
12H	20.9	22.0	21.2	22.3	22.6	20.5	21.6	20.8	21.9	22.2
4H 2H	18.4	19.7	18.7	20.0	20.2	18.3	19.7	18.6	19.9	20.2
3H	20.2	21.4	20.5	21.7	22.0	20.0	21.2	20.4	21.5	21.8
4H	21.0	22.1	21.4	22.4	22.7	20.8	21.9	21.2	22.2	22.5
6H	21.6	22.6	22.0	22.9	23.3	21.3	22.3	21.7	22.6	23.0
8H	21.9	22.8	22.3	23.1	23.5	21.5	22.4	21.9	22.8	23.2
12H	22.0	22.9	22.5	23.3	23.7	21.6	22.4	22.0	22.8	23.2
8H 4H	21.3	22.1	21.7	22.5	22.9	21.1	22.0	21.5	22.3	22.7
6H	22.1	22.8	22.5	23.2	23.6	21.8	22.5	22.2	22.9	23.4
8H	22.4	23.1	22.9	23.5	23.9	22.0	22.7	22.5	23.1	23.6
12H	22.7	23.2	23.2	23.7	24.2	22.2	22.8	22.7	23.3	23.7
12H 4H	21.3	22.1	21.7	22.5	22.9	21.1	21.9	21.5	22.3	22.7
6H	22.1	22.8	22.6	23.2	23.7	21.9	22.5	22.3	22.9	23.4
8H	22.5	23.1	23.0	23.5	24.0	22.2	22.7	22.6	23.2	23.7
Variations with the observer position at spacings:										
S = 1.0H	+ 0.1 / - 0.2					+ 0.1 / - 0.2				
1.5H	+ 0.2 / - 0.3					+ 0.2 / - 0.3				
2.0H	+ 0.1 / - 0.3					+ 0.2 / - 0.3				



Guangdong Meide Testing Technology Co., Ltd.



6.5 Luminous Distribution Intensity Data

Table--1

UNIT: cd

C(DEG) γ (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548	1548			
5	1544	1542	1542	1541	1542	1544	1544	1543	1540	1539	1540	1542	1542	1544	1545	1540			
10	1526	1523	1523	1520	1526	1528	1526	1523	1519	1519	1521	1524	1527	1532	1528	1526			
15	1493	1492	1493	1491	1494	1502	1498	1492	1483	1485	1490	1492	1500	1505	1499	1494			
20	1452	1447	1448	1447	1455	1463	1457	1447	1437	1439	1443	1446	1460	1467	1461	1452			
25	1395	1391	1391	1391	1401	1411	1404	1390	1380	1381	1385	1389	1406	1418	1412	1397			
30	1328	1322	1323	1322	1332	1344	1339	1322	1310	1311	1316	1322	1337	1353	1348	1333			
35	1248	1244	1245	1244	1251	1262	1258	1239	1228	1230	1235	1241	1258	1276	1272	1255			
40	1159	1156	1155	1152	1161	1170	1166	1149	1135	1139	1144	1150	1167	1184	1184	1167			
45	1060	1056	1055	1052	1061	1066	1061	1045	1034	1037	1043	1050	1065	1080	1083	1070			
50	952	947	947	943	950	955	950	934	924	926	932	938	955	971	973	961			
55	835	831	829	825	829	834	828	816	807	809	813	821	835	850	854	846			
60	713	710	705	700	704	706	700	690	684	685	687	694	708	721	727	720			
65	586	584	577	571	572	572	568	562	556	557	558	563	576	588	594	591			
70	458	456	448	439	437	436	434	431	427	428	427	430	441	452	459	460			
75	331	328	320	310	305	304	304	303	303	303	302	302	309	320	328	332			
80	209	206	198	187	180	179	181	182	183	183	182	181	186	195	203	209			
85	99.2	95.9	88.4	79.6	73.6	71.4	72.4	73.9	75.3	75.3	75.3	75.7	78.3	84.6	92.0	97.2			
90	0.21	0.36	0.24	0.54	0.46	0.20	0.15	0.09	0.08	0.08	0.00	0.00	0.34	9.35	0.00	0.00			
95	0.08	0.08	0.00	0.00	0.41	0.09	0.17	0.08	0.08	0.17	0.09	0.42	0.51	0.34	0.10	0.08			
100	0.08	0.08	0.00	0.08	0.35	0.09	0.00	0.00	0.25	0.26	0.34	0.62	0.51	0.71	0.31	0.34			
105	0.17	0.08	0.08	0.08	0.29	0.09	0.00	0.08	0.50	0.60	0.75	0.67	0.51	0.89	0.61	0.51			
110	0.17	0.08	0.08	0.25	0.34	0.09	0.00	0.08	0.64	0.71	0.85	0.71	0.51	0.91	0.86	0.68			
115	0.17	0.08	0.08	0.27	0.34	0.25	0.09	0.08	0.76	0.80	0.98	0.76	0.51	0.93	0.88	0.81			
120	0.17	0.08	0.08	0.38	0.34	0.26	0.09	0.25	0.84	0.84	1.02	1.10	0.51	1.12	0.95	0.90			
125	0.17	0.08	0.28	0.48	0.34	0.60	0.09	0.17	0.86	0.88	1.06	1.22	0.51	1.25	1.02	0.93			
130	0.17	0.08	0.32	0.59	0.34	1.16	0.09	0.17	0.88	0.92	1.10	1.29	0.51	1.30	1.08	0.97			
135	0.17	0.08	0.38	0.86	0.34	1.29	0.37	0.17	0.90	0.97	1.14	1.39	0.62	1.36	1.13	1.00			
140	0.17	0.08	0.45	0.90	0.34	1.39	0.43	0.17	0.92	1.07	1.18	1.60	0.72	1.41	1.19	1.10			
145	0.17	0.22	0.52	1.09	0.34	1.46	0.48	0.17	1.09	1.24	1.35	1.85	0.83	1.47	1.37	1.27			
150	0.17	0.33	0.59	1.23	0.34	1.49	0.68	0.17	1.17	1.36	1.60	2.00	1.10	1.52	2.06	1.44			
155	0.17	0.50	1.26	1.33	0.34	1.53	1.37	0.25	1.42	1.49	1.71	2.15	1.45	1.44	2.40	1.61			
160	0.33	1.00	1.51	1.38	0.34	1.54	1.47	0.51	1.64	1.54	1.83	2.21	1.47	1.41	2.54	2.00			
165	0.57	1.30	1.54	1.41	0.48	1.54	1.73	0.55	1.84	1.55	1.93	2.27	1.53	1.37	2.64	2.20			
170	1.24	1.42	2.08	1.42	0.68	1.54	2.29	1.19	2.10	1.57	2.07	2.94	1.59	1.34	2.31	3.05			
175	1.37	1.49	2.60	1.43	0.68	1.54	2.74	1.31	2.16	1.58	2.21	2.73	1.45	1.30	1.63	2.84			
180	1.51	1.93	2.60	1.43	1.52	1.54	2.74	1.36	1.84	1.42	1.93	2.69	1.45	1.29	1.54	2.71			

8. THD and PF Test for model # IK-BL14-40/30/20-354050-YL(Mode:40W)

Voltage (V AC)	Frequency (Hz)	Power Factor	THD (%)	CCT (K)
120.0	60	0.9989	11.60	3500
277.0	60	0.9921	14.13	3500
120.0	60	0.9989	11.92	4000
277.0	60	0.9921	15.75	4000
120.0	60	0.9989	11.56	5000
277.0	60	0.9921	15.24	5000



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8.Photo of sample

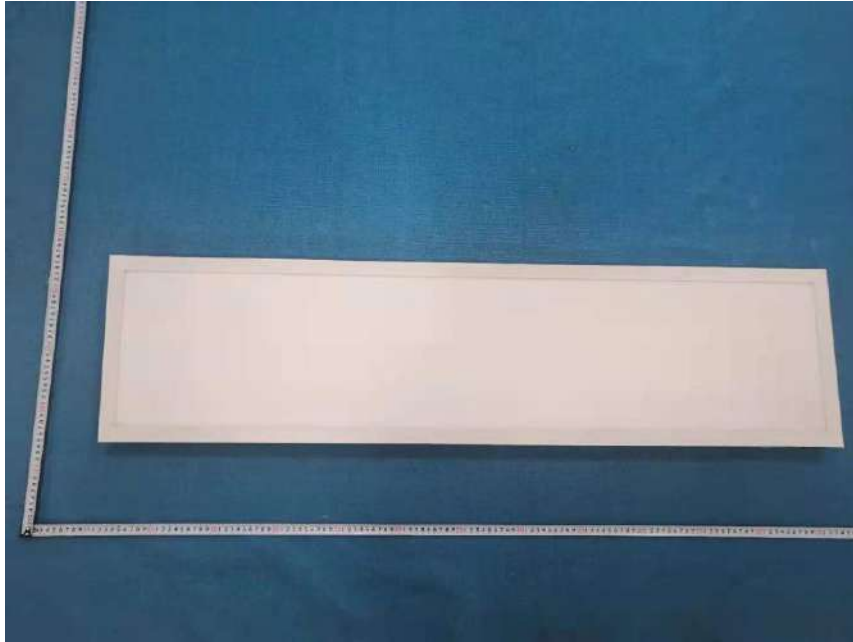


Figure 1 for model IK-BL14-40/30/20-354050-YL



Figure 2 for model IK-BL14-40/30/20-354050-YL

***** END OF THE TEST REPORT*****