

LM-79-08 Test Report

For

ETI Solid State Lighting (Zhuhai) Ltd

No.1, Zhongzhu Road South, Science & Technology Innovation Coast, High Tech District, Zhuhai City,
Guangdong Prov., China 519085

Plasma Ceiling Light

Model Name(s):

559031###

558121###

Representative (Tested) Model:

559031010

Model Difference:

1. The first and second # represents Color tunable, can be 00-99 for tunable from 2700K, 3000K, 3500K, 4000K and 5000K;
2. The third # represents factory code, can be 0-9;
3. All is the same construction, except color of indicator light and model design.

Prepared by:

Alan Wang

Engineer: Alan Wang

Date: 2022-02-21

Reviewed by:

Vincent Yuan

Technical Lead: Vincent Yuan

Issue Date: 2022-03-08

Revised Date: N/A

Note:

1. The results contained in this report pertain only to the tested samples.
2. This report shall not be reproduced, no limited part or full, without approval of Dongguan New Testing Centre Co., Ltd
3. This report d not imply product certification, approval, or endorsement by NVLAP, or any agency of the Federal Government.

Laboratory: Dongguan New Testing Centre Co., Ltd

Address: 3F, No. 1 the 1st North Industry Road, Songshan Lake Science & Technology Park, Dongguan, Guangdong, China

Tel: 86-769-22212079

Website: <http://www.ntc-cert.com>

Client Information:

Applicant Name:	ETI Solid State Lighting (Zhuhai) Ltd
Brand Name:	ETI, Silentaire, Cleanaire, Cleanaire Pro, NVC, Blue Halo
Factory 1 Name:	ETI Solid State Lighting (Zhuhai) Ltd
Factory 1 Address:	No.1, Zhongzhu Road South, Science & Technology Innovation Coast, High tech District, Zhuhai City, Guangdong Prov., China 519085
Factory 2 Name:	NVC VIETNAM TECHNOLOGY AND LIGHTING COMPANY LIMITED
Factory 2 Address 1:	Lot CN23-1, Yen Phong Industrial Park, Dong Phong commune, Yen Phong district, Bac Ninh province, Vietnam
Factory 2 Address 2:	Lot CN9-6, Yen Phong Industrial Park, Yen Trung commune, Yen Phong district, 16000 Vietnam

Product Information:

Model Number:	559031####, 558121#### (##=00-99, #-0-9)
Product Type:	Plasma Ceiling Light
Rating Input:	120-277Vac, 50/60Hz, 17W
Declared CCT:	2700K/3000K/3500K/4000K/5000K
Declared Light Output:	1000 lm
LED Manufacturer:	Samsung Electronics Co., Ltd.
LED Model:	SPMWH1228FD7XXWXXX and SPMWH1228FD5XXRXXX
LED Quantity:	SPMWH1228FD7XXWXXX: 100 pcs SPMWH1228FD5XXRXXX: 100 pcs

Test Information:

Standard Lamp:	Total Spectral Radiant Flux Standard Lamp, trace to NIST. 1. D908S for Gonio 2. D215S for Integrating Sphere
Date of Receipt Samples:	2022-01-21
Quantity of Receipt Samples:	1 pc
Sample Number:	220121002-S1
Test Representation:	1. All CCTs conducted IS and Electrical test; 2. The lowest CCT conducted Gonio test.

Laboratory Information:

Test Laboratory:	Dongguan New Testing Centre Co., Ltd
Laboratory Address:	3F, No. 1 the 1 st North Industry Road, Songshan Lake Science & Technology Park, Dongguan, Guangdong, China
Laboratory Contact Name:	Neil Zhong
Laboratory Contact E-mail:	Neil_zhong@ntc-cert.com

Report Information:

Test Report Form:	LM-79-08_TRF_V1.5
Issued Date of Test Report:	2022-03-08
Revised Date of Test Report:	N/A
Test Report No.:	NTCLR22020084
Remark (If applicable):	N/A

Laboratory: Dongguan New Testing Centre Co., Ltd

Address: 3F, No. 1 the 1st North Industry Road, Songshan Lake Science & Technology Park, Dongguan, Guangdong, China

Tel: 86-769-22212079

Website: <http://www.ntc-cert.com>

Test Specification:	
Date of Test	2022-01-24
Test Item	1. Total Luminous Flux 2. Luminous Distribution Intensity 3. Luminous Efficacy 4. Correlated Color Temperature 5. Color Rendering Index 6. Chromaticity Coordinate 7. Fidelity Index 8. Gamut Index 9. Local Chroma Shift
Reference Standard	IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products ANSI C78.377-2017 Specifications for the Chromaticity of Solid State Lighting Products CIE 13.3-1995 Method of Measuring and Specifying Color Rendering Properties of Light Sources CIE 15-2004 Technical Report Colorimetry ANSI IES TM-30-18 IES Method for Evaluating Light Source Color Rendition IES TM-15-11 Luminaire Classification System for Outdoor Luminaires Addendum A for IES TM-15-11 Backlight, Uplight, and Glare (BUG) Ratings

Test Methods:
1. Photometric and Electrical Measurements – Light Distribution Method: Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at $25\text{ }^{\circ}\text{C} \pm 1^{\circ}\text{C}$, measured at a point not more than 1 m from the sample and at the same height as the sample. The sample was operated at required Voltage and Frequency. It was stabilized before measurement was made. Luminous Flux, Luminaire Efficacy and Zonal Lumen were calculated from the software taken at 1° vertical intervals and 15° horizontal intervals.
2. Photometric and Electrical Measurements – Integrating Sphere Method: Photometric parameters were measured using an integrating sphere, as spectroradiometer and software. The ambient temperature condition inside the sphere was measured at $25\text{ }^{\circ}\text{C} \pm 1^{\circ}\text{C}$. The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. The sample was operated at require Voltage and Frequency. It was stabilized before measurement was made. Chromaticity Coordinates, Correlated Color Temperature and Color Rendering Index were calculated from the spectral radiant flux measurements taken at least 1 nm intervals over the rage of 380 to 780 nm.

Integrating Sphere Test Results:

Test Condition:

Test Ambient (°C)	Test Humidity (%)	Orientation	Stabilization Time (minute)	Test Time (minute)
25.4	41.0	Face Down	90	10

Electrical Data:

CCT Setting	Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor
2700K	120.0	60	0.1232	13.82	0.9349
3000K	120.0	60	0.1214	13.74	0.9427
3500K	120.0	60	0.1204	13.61	0.9414
4000K	120.0	60	0.1196	13.51	0.9409
5000K	120.0	60	0.1219	13.81	0.9436

Color Data:

CCT Setting	Test CCT (K)	R _a	R ₉	R _f	R _g	R _{cs, h1}	Chromaticity		
							(x, y)	(u', v')	Duv
2700K	2737	95.0	69	93	100	-4%	(0.4531, 0.4030)	(0.2615, 0.5234)	-0.0023
3000K	3021	94.3	70	92	100	-4%	(0.4294, 0.3909)	(0.2514, 0.5149)	-0.0043
3500K	3469	93.2	66	90	98	-5%	(0.4016, 0.3775)	(0.2388, 0.5051)	-0.0051
4000K	3871	92.2	61	88	97	-6%	(0.3828, 0.3679)	(0.2303, 0.4979)	-0.0049
5000K	5108	87.2	27	85	94	-11%	(0.3422, 0.3499)	(0.2101, 0.4834)	0.0003

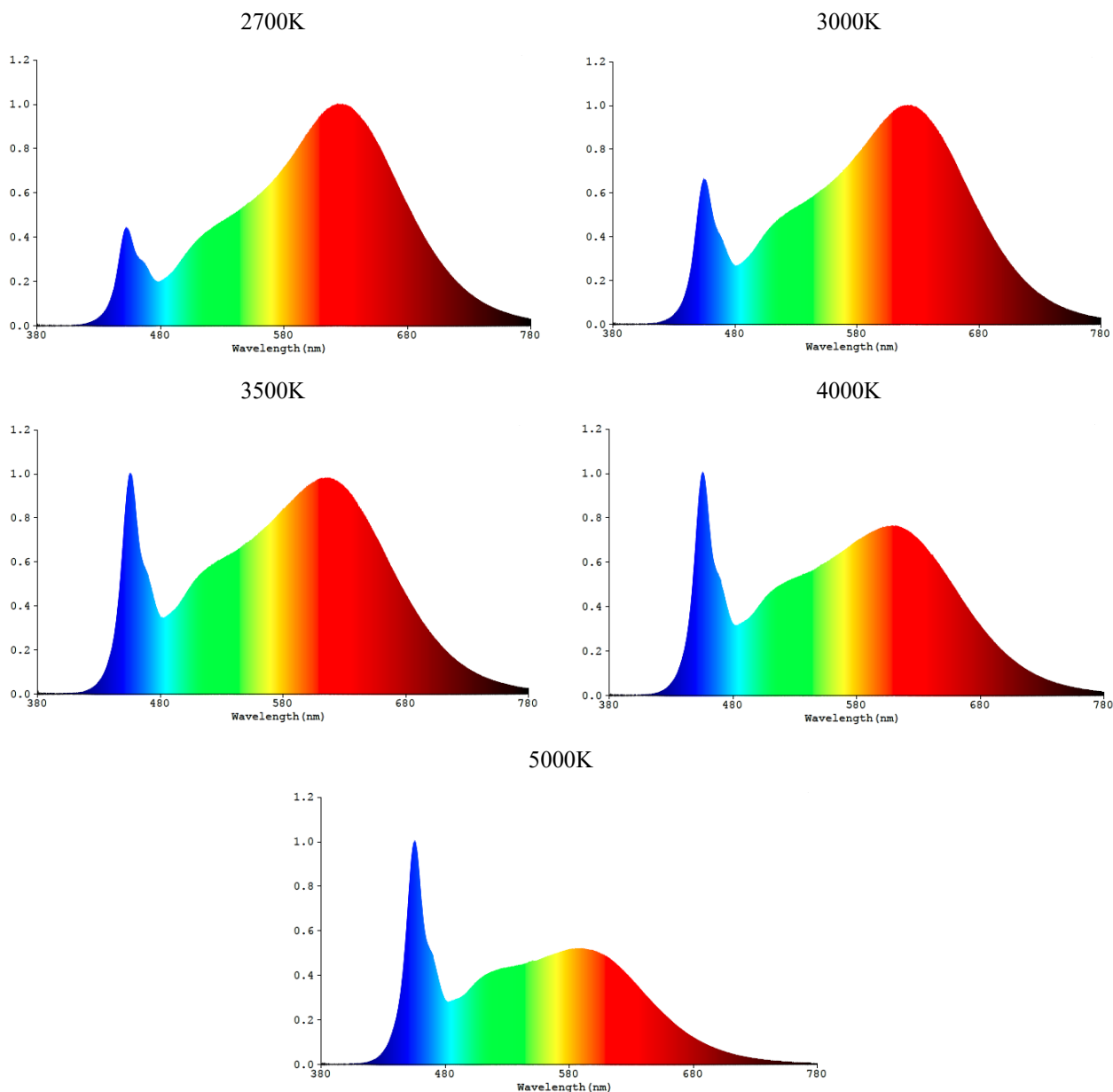
Specify Color Rendering:

CCT Setting	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
2700K	97	99	98	96	97	96	92	85	69	98	97	87	98	99	93
3000K	97	99	97	95	97	95	91	85	70	98	96	82	98	99	94
3500K	96	98	96	92	95	94	90	84	66	98	93	76	98	99	93
4000K	94	99	96	91	93	94	89	82	61	97	91	72	97	99	92
5000K	87	96	95	84	87	91	86	71	27	88	85	66	91	98	83

Output Data:

CCT Setting	Luminous (lm)	Efficacy (lm/W)
2700K	1031.6	74.65
3000K	1058.2	77.02
3500K	1136.9	83.53
4000K	1189.6	88.05
5000K	1317.5	95.40

Spectrum Diagram:



IES TM-30-18 Color Rendition Result (2700K):

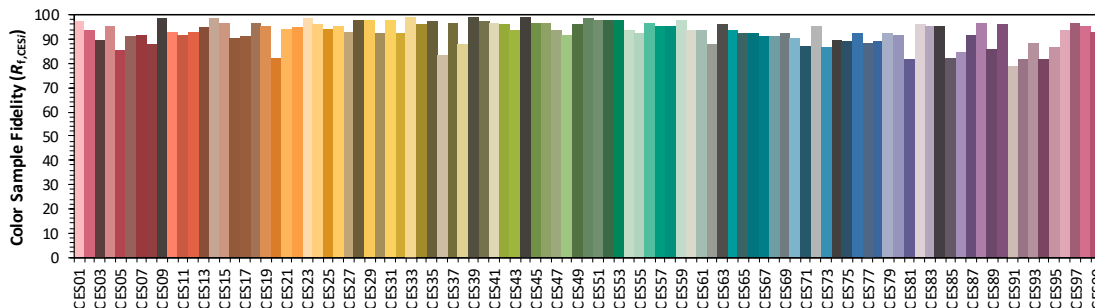
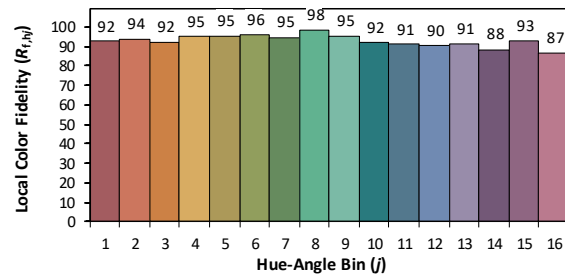
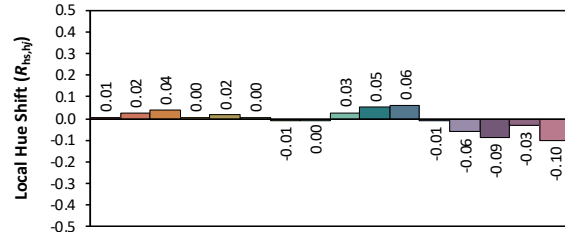
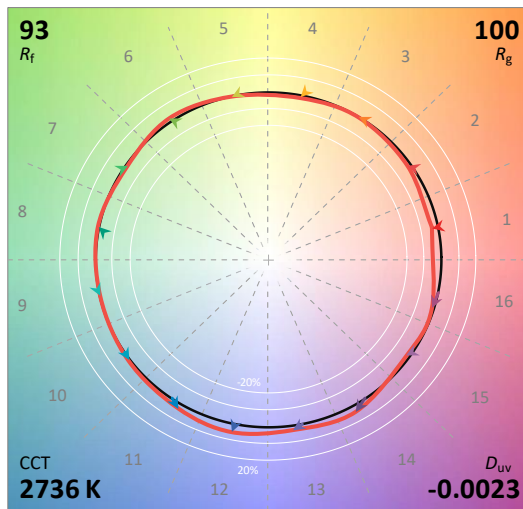
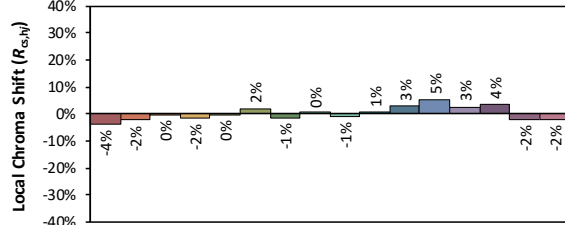
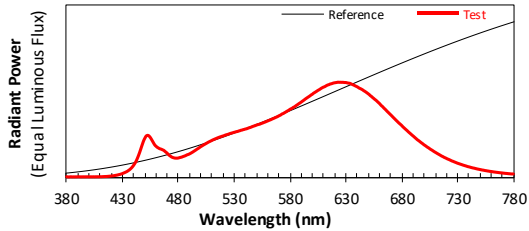
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: ETI Solid State Lighting (2

Date: 2022/2/21

Model: 559031###



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

x 0.4531
 y 0.4029
 u' 0.2616
 v' 0.5233

CIE 13.3-1995
(CRI)

R_a 95
 R_g 69

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

Spectrum Data (2700K):

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0028	447	0.3171	514	0.4060	581	0.7190	648	0.8950	715	0.2265
381	0.0005	448	0.3512	515	0.4113	582	0.7248	649	0.8865	716	0.2194
382	0.0000	449	0.3839	516	0.4159	583	0.7338	650	0.8775	717	0.2144
383	0.0012	450	0.4080	517	0.4205	584	0.7389	651	0.8685	718	0.2071
384	0.0016	451	0.4286	518	0.4240	585	0.7480	652	0.8569	719	0.2021
385	0.0004	452	0.4372	519	0.4284	586	0.7562	653	0.8485	720	0.1964
386	0.0010	453	0.4374	520	0.4319	587	0.7642	654	0.8375	721	0.1902
387	0.0007	454	0.4288	521	0.4356	588	0.7728	655	0.8280	722	0.1857
388	0.0012	455	0.4141	522	0.4411	589	0.7805	656	0.8176	723	0.1803
389	0.0009	456	0.3952	523	0.4447	590	0.7885	657	0.8089	724	0.1747
390	0.0018	457	0.3748	524	0.4479	591	0.7975	658	0.7980	725	0.1687
391	0.0020	458	0.3544	525	0.4515	592	0.8058	659	0.7868	726	0.1650
392	0.0012	459	0.3357	526	0.4566	593	0.8148	660	0.7763	727	0.1597
393	0.0010	460	0.3244	527	0.4601	594	0.8237	661	0.7631	728	0.1551
394	0.0012	461	0.3136	528	0.4634	595	0.8319	662	0.7504	729	0.1502
395	0.0014	462	0.3067	529	0.4669	596	0.8399	663	0.7411	730	0.1454
396	0.0011	463	0.2995	530	0.4706	597	0.8477	664	0.7275	731	0.1413
397	0.0016	464	0.2953	531	0.4734	598	0.8556	665	0.7167	732	0.1373
398	0.0015	465	0.2913	532	0.4776	599	0.8652	666	0.7050	733	0.1334
399	0.0019	466	0.2853	533	0.4794	600	0.8717	667	0.6922	734	0.1294
400	0.0008	467	0.2802	534	0.4840	601	0.8821	668	0.6809	735	0.1252
401	0.0014	468	0.2696	535	0.4870	602	0.8892	669	0.6690	736	0.1216
402	0.0015	469	0.2603	536	0.4919	603	0.8967	670	0.6575	737	0.1179
403	0.0012	470	0.2505	537	0.4942	604	0.9041	671	0.6461	738	0.1145
404	0.0019	471	0.2376	538	0.4985	605	0.9122	672	0.6337	739	0.1101
405	0.0012	472	0.2272	539	0.5010	606	0.9187	673	0.6218	740	0.1074
406	0.0020	473	0.2189	540	0.5053	607	0.9260	674	0.6101	741	0.1044
407	0.0019	474	0.2105	541	0.5075	608	0.9344	675	0.5981	742	0.1008
408	0.0023	475	0.2054	542	0.5117	609	0.9409	676	0.5870	743	0.0976
409	0.0019	476	0.2016	543	0.5168	610	0.9471	677	0.5749	744	0.0947
410	0.0026	477	0.1989	544	0.5203	611	0.9512	678	0.5641	745	0.0925
411	0.0024	478	0.1984	545	0.5244	612	0.9581	679	0.5540	746	0.0893
412	0.0031	479	0.1983	546	0.5293	613	0.9649	680	0.5433	747	0.0865
413	0.0038	480	0.1999	547	0.5340	614	0.9702	681	0.5304	748	0.0835
414	0.0044	481	0.2034	548	0.5380	615	0.9736	682	0.5195	749	0.0813
415	0.0048	482	0.2065	549	0.5417	616	0.9797	683	0.5086	750	0.0787
416	0.0054	483	0.2091	550	0.5468	617	0.9821	684	0.4979	751	0.0765
417	0.0065	484	0.2141	551	0.5509	618	0.9861	685	0.4876	752	0.0735
418	0.0076	485	0.2183	552	0.5538	619	0.9904	686	0.4758	753	0.0720
419	0.0087	486	0.2226	553	0.5570	620	0.9926	687	0.4656	754	0.0695
420	0.0099	487	0.2280	554	0.5622	621	0.9946	688	0.4554	755	0.0671
421	0.0115	488	0.2341	555	0.5665	622	0.9963	689	0.4447	756	0.0655
422	0.0129	489	0.2376	556	0.5710	623	0.9989	690	0.4349	757	0.0630
423	0.0151	490	0.2431	557	0.5759	624	0.9977	691	0.4249	758	0.0616
424	0.0173	491	0.2494	558	0.5801	625	0.9983	692	0.4141	759	0.0589
425	0.0194	492	0.2565	559	0.5857	626	0.9974	693	0.4041	760	0.0580
426	0.0222	493	0.2634	560	0.5902	627	0.9977	694	0.3933	761	0.0560
427	0.0252	494	0.2715	561	0.5955	628	0.9970	695	0.3850	762	0.0541
428	0.0279	495	0.2789	562	0.6001	629	0.9955	696	0.3762	763	0.0522
429	0.0319	496	0.2870	563	0.6048	630	0.9955	697	0.3665	764	0.0507
430	0.0361	497	0.2952	564	0.6108	631	0.9926	698	0.3577	765	0.0490
431	0.0413	498	0.3022	565	0.6158	632	0.9901	699	0.3492	766	0.0479
432	0.0462	499	0.3103	566	0.6210	633	0.9883	700	0.3394	767	0.0460
433	0.0518	500	0.3190	567	0.6265	634	0.9854	701	0.3318	768	0.0447
434	0.0576	501	0.3258	568	0.6316	635	0.9796	702	0.3233	769	0.0433
435	0.0655	502	0.3331	569	0.6371	636	0.9738	703	0.3144	770	0.0422
436	0.0736	503	0.3403	570	0.6441	637	0.9690	704	0.3078	771	0.0405
437	0.0836	504	0.3468	571	0.6495	638	0.9630	705	0.2991	772	0.0393
438	0.0951	505	0.3535	572	0.6561	639	0.9571	706	0.2908	773	0.0378
439	0.1084	506	0.3606	573	0.6648	640	0.9516	707	0.2840	774	0.0371
440	0.1240	507	0.3673	574	0.6686	641	0.9448	708	0.2763	775	0.0357
441	0.1420	508	0.3732	575	0.6766	642	0.9365	709	0.2682	776	0.0344
442	0.1619	509	0.3789	576	0.6828	643	0.9315	710	0.2611	777	0.0337
443	0.1877	510	0.3851	577	0.6907	644	0.9254	711	0.2544	778	0.0321
444	0.2163	511	0.3909	578	0.6972	645	0.9188	712	0.2469	779	0.0317
445	0.2474	512	0.3962	579	0.7042	646	0.9099	713	0.2404	780	0.0318
446	0.2812	513	0.4014	580	0.7128	647	0.9030	714	0.2334	N/A	N/A

IES TM-30-18 Color Rendition Result (3000K):

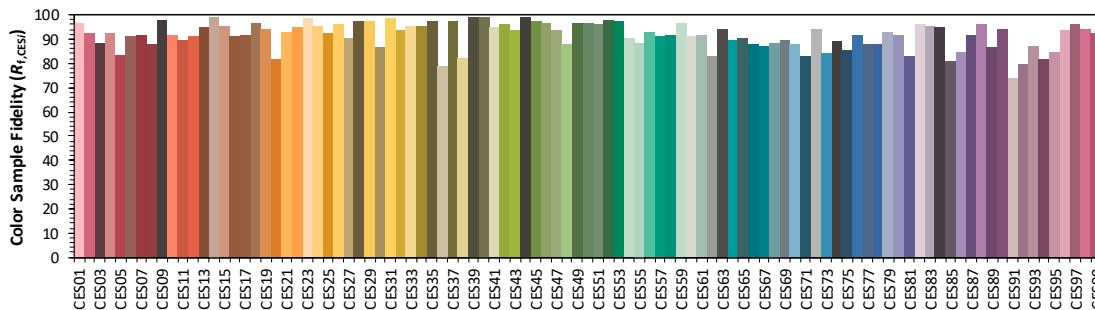
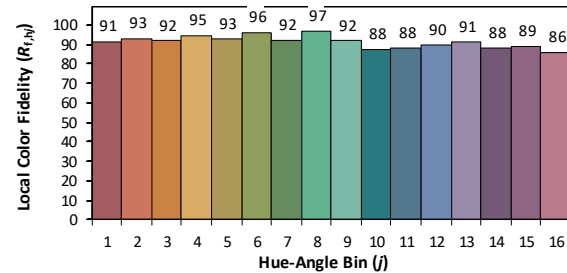
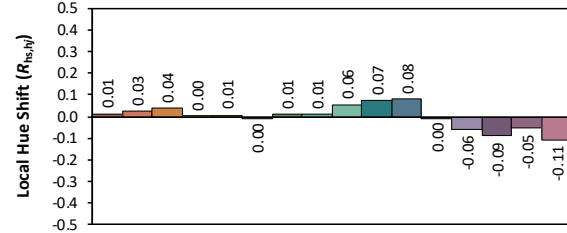
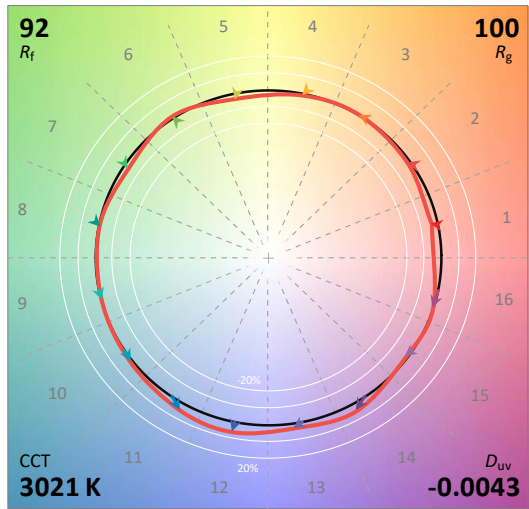
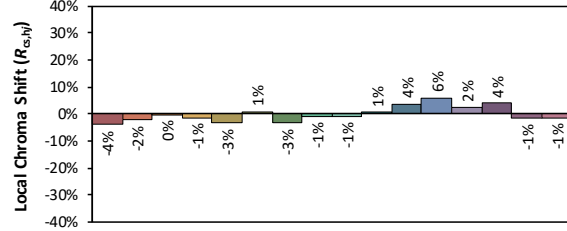
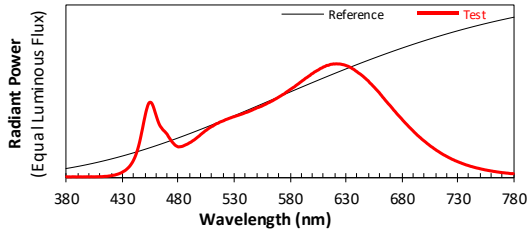
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Date: 2022/2/21

Manufacturer: ETI Solid State Lighting (2

Model: 559031###



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

x 0.4294
 y 0.3908
 u' 0.2514
 v' 0.5149

CIE 13.3-1995
(CRI)

R_a 94
 R_g 70

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

Spectrum Data (3000K):

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0035	447	0.3853	514	0.4698	581	0.7771	648	0.8665	715	0.2119
381	0.0008	448	0.4317	515	0.4729	582	0.7837	649	0.8568	716	0.2059
382	0.0019	449	0.4825	516	0.4765	583	0.7905	650	0.8496	717	0.1996
383	0.0012	450	0.5291	517	0.4837	584	0.7956	651	0.8369	718	0.1941
384	0.0009	451	0.5737	518	0.4874	585	0.8047	652	0.8266	719	0.1895
385	0.0024	452	0.6101	519	0.4911	586	0.8118	653	0.8179	720	0.1834
386	0.0021	453	0.6402	520	0.4947	587	0.8189	654	0.8070	721	0.1788
387	0.0019	454	0.6563	521	0.4985	588	0.8256	655	0.7969	722	0.1728
388	0.0017	455	0.6593	522	0.5047	589	0.8343	656	0.7868	723	0.1681
389	0.0007	456	0.6532	523	0.5080	590	0.8410	657	0.7754	724	0.1632
390	0.0018	457	0.6356	524	0.5116	591	0.8492	658	0.7653	725	0.1576
391	0.0020	458	0.6097	525	0.5152	592	0.8555	659	0.7545	726	0.1536
392	0.0018	459	0.5781	526	0.5196	593	0.8631	660	0.7439	727	0.1495
393	0.0018	460	0.5467	527	0.5222	594	0.8715	661	0.7306	728	0.1439
394	0.0012	461	0.5159	528	0.5264	595	0.8771	662	0.7194	729	0.1409
395	0.0016	462	0.4874	529	0.5301	596	0.8839	663	0.7058	730	0.1361
396	0.0018	463	0.4639	530	0.5324	597	0.8915	664	0.6952	731	0.1326
397	0.0016	464	0.4458	531	0.5364	598	0.8969	665	0.6824	732	0.1280
398	0.0021	465	0.4333	532	0.5393	599	0.9069	666	0.6706	733	0.1251
399	0.0024	466	0.4191	533	0.5428	600	0.9123	667	0.6596	734	0.1205
400	0.0015	467	0.4091	534	0.5457	601	0.9186	668	0.6476	735	0.1172
401	0.0017	468	0.3999	535	0.5493	602	0.9270	669	0.6374	736	0.1134
402	0.0029	469	0.3882	536	0.5525	603	0.9314	670	0.6264	737	0.1098
403	0.0019	470	0.3771	537	0.5557	604	0.9378	671	0.6145	738	0.1061
404	0.0020	471	0.3594	538	0.5595	605	0.9425	672	0.6029	739	0.1037
405	0.0017	472	0.3445	539	0.5632	606	0.9483	673	0.5897	740	0.1003
406	0.0023	473	0.3301	540	0.5679	607	0.9557	674	0.5799	741	0.0972
407	0.0025	474	0.3158	541	0.5703	608	0.9604	675	0.5677	742	0.0937
408	0.0028	475	0.3037	542	0.5735	609	0.9644	676	0.5559	743	0.0919
409	0.0029	476	0.2931	543	0.5776	610	0.9716	677	0.5452	744	0.0887
410	0.0034	477	0.2825	544	0.5818	611	0.9739	678	0.5348	745	0.0859
411	0.0030	478	0.2753	545	0.5858	612	0.9793	679	0.5242	746	0.0833
412	0.0036	479	0.2703	546	0.5900	613	0.9846	680	0.5136	747	0.0805
413	0.0044	480	0.2657	547	0.5947	614	0.9848	681	0.5014	748	0.0784
414	0.0058	481	0.2668	548	0.5999	615	0.9878	682	0.4909	749	0.0766
415	0.0059	482	0.2678	549	0.6028	616	0.9928	683	0.4800	750	0.0739
416	0.0063	483	0.2694	550	0.6088	617	0.9948	684	0.4700	751	0.0714
417	0.0075	484	0.2723	551	0.6124	618	0.9953	685	0.4600	752	0.0691
418	0.0093	485	0.2769	552	0.6149	619	0.9983	686	0.4490	753	0.0672
419	0.0102	486	0.2817	553	0.6193	620	0.9967	687	0.4388	754	0.0647
420	0.0123	487	0.2861	554	0.6226	621	0.9984	688	0.4295	755	0.0626
421	0.0135	488	0.2901	555	0.6270	622	0.9985	689	0.4194	756	0.0611
422	0.0161	489	0.2957	556	0.6322	623	0.9972	690	0.4098	757	0.0590
423	0.0171	490	0.3022	557	0.6370	624	0.9976	691	0.3993	758	0.0573
424	0.0205	491	0.3066	558	0.6413	625	0.9968	692	0.3894	759	0.0557
425	0.0232	492	0.3131	559	0.6460	626	0.9947	693	0.3804	760	0.0535
426	0.0263	493	0.3207	560	0.6524	627	0.9922	694	0.3700	761	0.0525
427	0.0297	494	0.3263	561	0.6564	628	0.9908	695	0.3620	762	0.0502
428	0.0340	495	0.3336	562	0.6607	629	0.9878	696	0.3529	763	0.0490
429	0.0379	496	0.3416	563	0.6669	630	0.9844	697	0.3451	764	0.0477
430	0.0440	497	0.3496	564	0.6709	631	0.9806	698	0.3353	765	0.0459
431	0.0500	498	0.3573	565	0.6765	632	0.9774	699	0.3274	766	0.0444
432	0.0554	499	0.3649	566	0.6828	633	0.9724	700	0.3194	767	0.0432
433	0.0624	500	0.3748	567	0.6882	634	0.9673	701	0.3119	768	0.0415
434	0.0711	501	0.3822	568	0.6933	635	0.9623	702	0.3037	769	0.0406
435	0.0802	502	0.3905	569	0.6998	636	0.9551	703	0.2949	770	0.0389
436	0.0903	503	0.3975	570	0.7055	637	0.9506	704	0.2880	771	0.0381
437	0.1025	504	0.4071	571	0.7121	638	0.9435	705	0.2797	772	0.0370
438	0.1168	505	0.4124	572	0.7170	639	0.9351	706	0.2720	773	0.0358
439	0.1322	506	0.4202	573	0.7242	640	0.9294	707	0.2652	774	0.0346
440	0.1510	507	0.4275	574	0.7296	641	0.9206	708	0.2592	775	0.0341
441	0.1723	508	0.4341	575	0.7344	642	0.9142	709	0.2507	776	0.0326
442	0.1971	509	0.4400	576	0.7432	643	0.9080	710	0.2448	777	0.0311
443	0.2257	510	0.4462	577	0.7505	644	0.9002	711	0.2370	778	0.0301
444	0.2585	511	0.4497	578	0.7569	645	0.8924	712	0.2309	779	0.0302
445	0.2957	512	0.4577	579	0.7636	646	0.8840	713	0.2250	780	0.0302
446	0.3376	513	0.4630	580	0.7708	647	0.8748	714	0.2184	N/A	N/A

IES TM-30-18 Color Rendition Result (3500K):

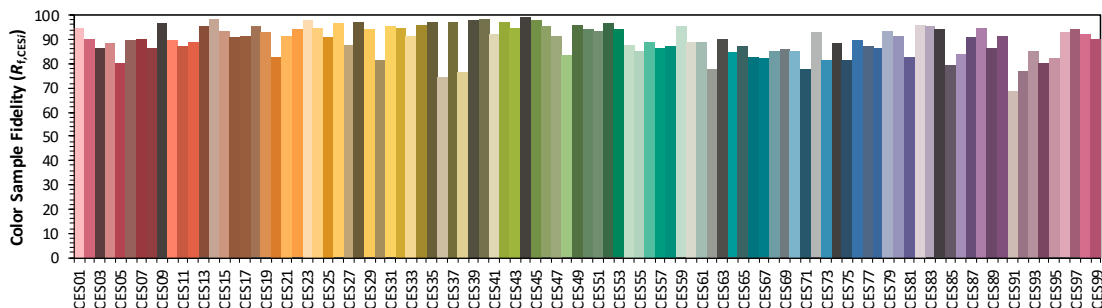
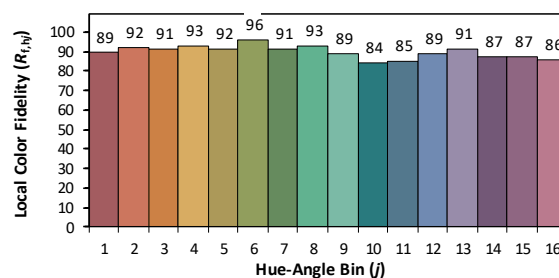
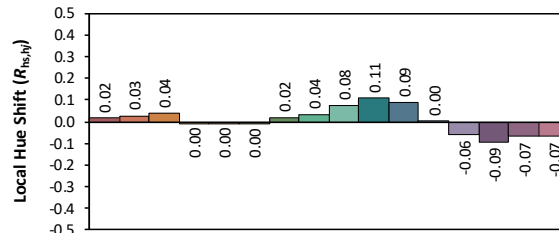
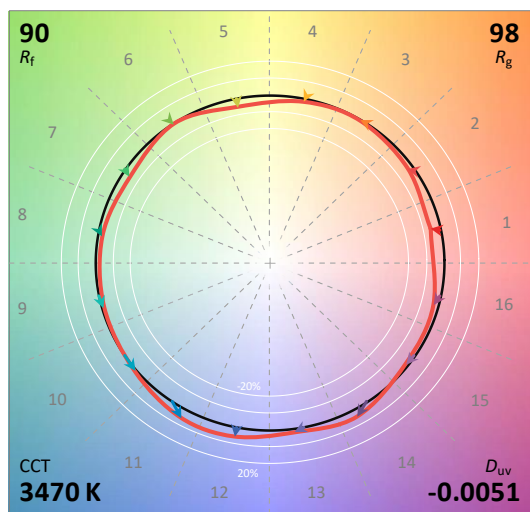
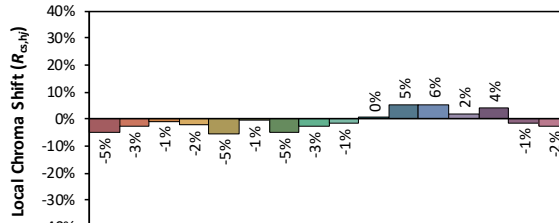
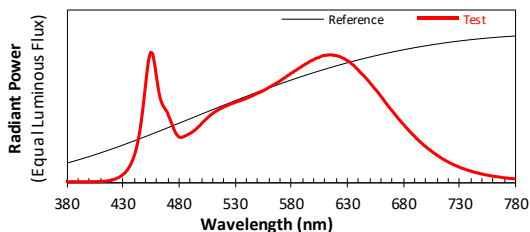
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: ETI Solid State Lighting (2

Date: 2022/2/21

Model: 559031###



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

x 0.4016
 y 0.3774
 u' 0.2389
 v' 0.5050

CIE 13.3-1995
(CRI)
 R_a 93
 R_g 67

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

Spectrum Data (3500K):

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0066	447	0.4950	514	0.5491	581	0.8405	648	0.7919	715	0.1811
381	0.0005	448	0.5648	515	0.5545	582	0.8450	649	0.7818	716	0.1764
382	0.0015	449	0.6397	516	0.5587	583	0.8525	650	0.7726	717	0.1716
383	0.0027	450	0.7155	517	0.5641	584	0.8578	651	0.7604	718	0.1666
384	0.0023	451	0.7960	518	0.5678	585	0.8630	652	0.7513	719	0.1621
385	0.0032	452	0.8676	519	0.5718	586	0.8677	653	0.7407	720	0.1578
386	0.0033	453	0.9308	520	0.5766	587	0.8751	654	0.7301	721	0.1527
387	0.0016	454	0.9729	521	0.5794	588	0.8797	655	0.7189	722	0.1479
388	0.0029	455	0.9976	522	0.5864	589	0.8851	656	0.7098	723	0.1438
389	0.0013	456	0.9959	523	0.5877	590	0.8911	657	0.6998	724	0.1395
390	0.0025	457	0.9770	524	0.5919	591	0.8974	658	0.6889	725	0.1347
391	0.0029	458	0.9317	525	0.5951	592	0.9026	659	0.6776	726	0.1317
392	0.0024	459	0.8817	526	0.5999	593	0.9083	660	0.6657	727	0.1281
393	0.0021	460	0.8197	527	0.6045	594	0.9124	661	0.6552	728	0.1243
394	0.0020	461	0.7616	528	0.6062	595	0.9171	662	0.6432	729	0.1202
395	0.0025	462	0.7078	529	0.6082	596	0.9224	663	0.6320	730	0.1162
396	0.0020	463	0.6623	530	0.6119	597	0.9287	664	0.6189	731	0.1131
397	0.0020	464	0.6314	531	0.6148	598	0.9327	665	0.6084	732	0.1092
398	0.0024	465	0.6074	532	0.6184	599	0.9381	666	0.5971	733	0.1065
399	0.0027	466	0.5875	533	0.6214	600	0.9395	667	0.5854	734	0.1029
400	0.0017	467	0.5752	534	0.6243	601	0.9460	668	0.5750	735	0.1011
401	0.0028	468	0.5607	535	0.6281	602	0.9509	669	0.5642	736	0.0972
402	0.0031	469	0.5483	536	0.6293	603	0.9537	670	0.5541	737	0.0939
403	0.0025	470	0.5344	537	0.6341	604	0.9568	671	0.5430	738	0.0912
404	0.0028	471	0.5080	538	0.6369	605	0.9590	672	0.5326	739	0.0886
405	0.0028	472	0.4885	539	0.6387	606	0.9634	673	0.5215	740	0.0857
406	0.0032	473	0.4680	540	0.6428	607	0.9673	674	0.5110	741	0.0838
407	0.0032	474	0.4461	541	0.6468	608	0.9713	675	0.4994	742	0.0799
408	0.0036	475	0.4226	542	0.6497	609	0.9737	676	0.4890	743	0.0782
409	0.0037	476	0.4012	543	0.6537	610	0.9761	677	0.4798	744	0.0757
410	0.0041	477	0.3839	544	0.6576	611	0.9746	678	0.4698	745	0.0737
411	0.0042	478	0.3684	545	0.6610	612	0.9776	679	0.4594	746	0.0715
412	0.0050	479	0.3575	546	0.6650	613	0.9788	680	0.4494	747	0.0691
413	0.0060	480	0.3478	547	0.6687	614	0.9790	681	0.4409	748	0.0670
414	0.0065	481	0.3452	548	0.6755	615	0.9794	682	0.4298	749	0.0651
415	0.0075	482	0.3435	549	0.6775	616	0.9805	683	0.4206	750	0.0633
416	0.0085	483	0.3446	550	0.6848	617	0.9793	684	0.4104	751	0.0609
417	0.0098	484	0.3483	551	0.6863	618	0.9762	685	0.4007	752	0.0597
418	0.0113	485	0.3517	552	0.6888	619	0.9754	686	0.3920	753	0.0572
419	0.0127	486	0.3563	553	0.6945	620	0.9753	687	0.3825	754	0.0552
420	0.0150	487	0.3601	554	0.6965	621	0.9745	688	0.3738	755	0.0537
421	0.0173	488	0.3647	555	0.7012	622	0.9696	689	0.3646	756	0.0522
422	0.0201	489	0.3689	556	0.7059	623	0.9672	690	0.3567	757	0.0507
423	0.0219	490	0.3738	557	0.7106	624	0.9658	691	0.3480	758	0.0490
424	0.0257	491	0.3790	558	0.7164	625	0.9614	692	0.3379	759	0.0472
425	0.0295	492	0.3843	559	0.7197	626	0.9569	693	0.3298	760	0.0461
426	0.0332	493	0.3908	560	0.7268	627	0.9528	694	0.3218	761	0.0444
427	0.0380	494	0.3966	561	0.7316	628	0.9498	695	0.3146	762	0.0431
428	0.0433	495	0.4034	562	0.7360	629	0.9440	696	0.3057	763	0.0419
429	0.0493	496	0.4117	563	0.7412	630	0.9368	697	0.2986	764	0.0409
430	0.0564	497	0.4204	564	0.7456	631	0.9326	698	0.2911	765	0.0394
431	0.0638	498	0.4290	565	0.7509	632	0.9278	699	0.2823	766	0.0383
432	0.0706	499	0.4370	566	0.7552	633	0.9211	700	0.2762	767	0.0372
433	0.0810	500	0.4459	567	0.7614	634	0.9122	701	0.2684	768	0.0361
434	0.0913	501	0.4554	568	0.7655	635	0.9066	702	0.2619	769	0.0347
435	0.1045	502	0.4651	569	0.7703	636	0.9004	703	0.2543	770	0.0334
436	0.1177	503	0.4729	570	0.7763	637	0.8910	704	0.2480	771	0.0322
437	0.1336	504	0.4820	571	0.7822	638	0.8825	705	0.2428	772	0.0316
438	0.1524	505	0.4884	572	0.7879	639	0.8730	706	0.2352	773	0.0302
439	0.1724	506	0.4974	573	0.7942	640	0.8668	707	0.2285	774	0.0297
440	0.1958	507	0.5056	574	0.7998	641	0.8536	708	0.2225	775	0.0286
441	0.2220	508	0.5130	575	0.8050	642	0.8468	709	0.2164	776	0.0277
442	0.2529	509	0.5201	576	0.8117	643	0.8366	710	0.2102	777	0.0271
443	0.2886	510	0.5254	577	0.8186	644	0.8289	711	0.2041	778	0.0259
444	0.3300	511	0.5327	578	0.8239	645	0.8215	712	0.1985	779	0.0257
445	0.3792	512	0.5388	579	0.8282	646	0.8113	713	0.1928	780	0.0257
446	0.4333	513	0.5442	580	0.8369	647	0.8023	714	0.1874	N/A	N/A

IES TM-30-18 Color Rendition Result (4000K):

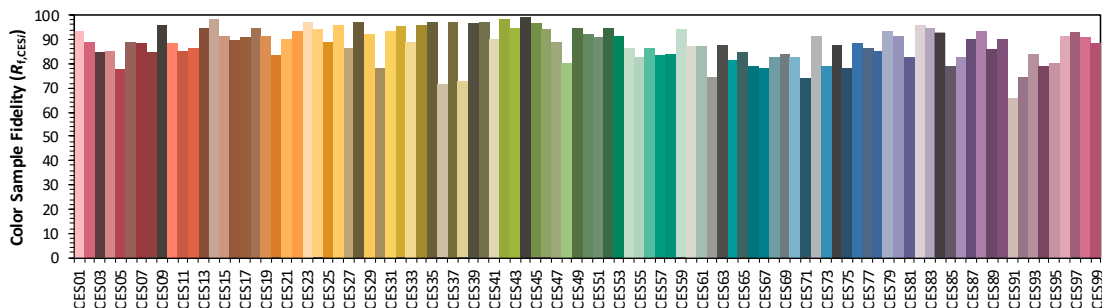
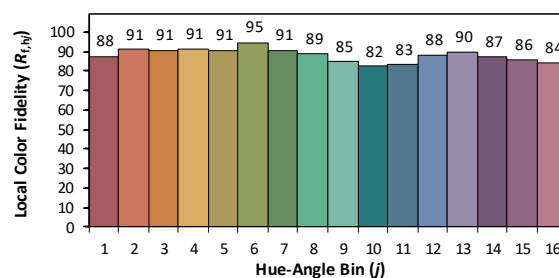
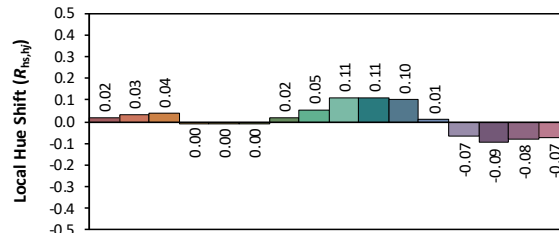
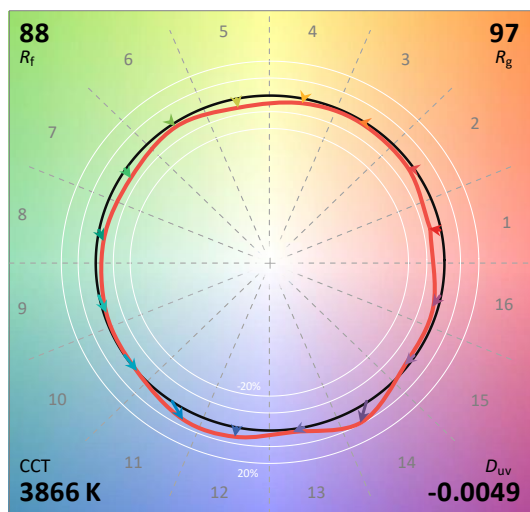
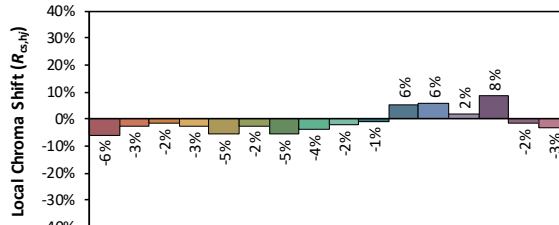
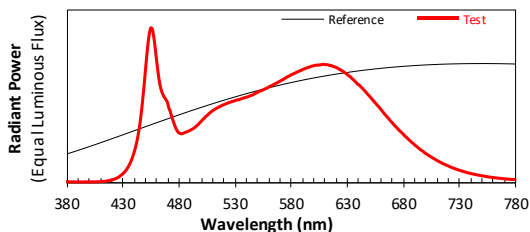
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: ETI Solid State Lighting (2

Date: 2022/2/21

Model: 559031###



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

x 0.3827
 y 0.3677
 u' 0.2303
 v' 0.4979

CIE 13.3-1995
(CRI)
 R_a 92
 R_g 61

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

Spectrum Data (4000K):

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0023	447	0.4745	514	0.4796	581	0.6967	648	0.5751	715	0.1233
381	0.0050	448	0.5465	515	0.4832	582	0.7001	649	0.5669	716	0.1201
382	0.0022	449	0.6190	516	0.4880	583	0.7040	650	0.5594	717	0.1167
383	0.0021	450	0.6986	517	0.4908	584	0.7065	651	0.5509	718	0.1133
384	0.0026	451	0.7810	518	0.4945	585	0.7109	652	0.5425	719	0.1101
385	0.0018	452	0.8570	519	0.4979	586	0.7138	653	0.5346	720	0.1073
386	0.0027	453	0.9222	520	0.5013	587	0.7171	654	0.5250	721	0.1046
387	0.0029	454	0.9699	521	0.5035	588	0.7209	655	0.5166	722	0.1004
388	0.0013	455	0.9973	522	0.5077	589	0.7224	656	0.5100	723	0.0975
389	0.0016	456	0.9963	523	0.5099	590	0.7273	657	0.4998	724	0.0947
390	0.0017	457	0.9719	524	0.5137	591	0.7308	658	0.4922	725	0.0918
391	0.0018	458	0.9260	525	0.5151	592	0.7331	659	0.4843	726	0.0895
392	0.0023	459	0.8685	526	0.5184	593	0.7366	660	0.4754	727	0.0864
393	0.0012	460	0.8045	527	0.5204	594	0.7387	661	0.4665	728	0.0840
394	0.0018	461	0.7430	528	0.5235	595	0.7412	662	0.4574	729	0.0819
395	0.0016	462	0.6876	529	0.5245	596	0.7436	663	0.4484	730	0.0785
396	0.0018	463	0.6411	530	0.5280	597	0.7461	664	0.4389	731	0.0767
397	0.0031	464	0.6078	531	0.5300	598	0.7497	665	0.4311	732	0.0741
398	0.0022	465	0.5829	532	0.5324	599	0.7514	666	0.4226	733	0.0722
399	0.0019	466	0.5658	533	0.5338	600	0.7522	667	0.4151	734	0.0700
400	0.0022	467	0.5511	534	0.5348	601	0.7557	668	0.4060	735	0.0677
401	0.0026	468	0.5417	535	0.5382	602	0.7567	669	0.3973	736	0.0656
402	0.0025	469	0.5293	536	0.5402	603	0.7571	670	0.3898	737	0.0639
403	0.0029	470	0.5160	537	0.5430	604	0.7587	671	0.3811	738	0.0617
404	0.0026	471	0.4851	538	0.5451	605	0.7579	672	0.3734	739	0.0597
405	0.0025	472	0.4668	539	0.5477	606	0.7594	673	0.3651	740	0.0580
406	0.0028	473	0.4440	540	0.5499	607	0.7597	674	0.3582	741	0.0561
407	0.0028	474	0.4202	541	0.5512	608	0.7623	675	0.3494	742	0.0541
408	0.0033	475	0.3979	542	0.5540	609	0.7627	676	0.3423	743	0.0528
409	0.0034	476	0.3765	543	0.5568	610	0.7620	677	0.3346	744	0.0510
410	0.0040	477	0.3567	544	0.5602	611	0.7610	678	0.3281	745	0.0501
411	0.0043	478	0.3414	545	0.5621	612	0.7604	679	0.3207	746	0.0481
412	0.0051	479	0.3288	546	0.5654	613	0.7599	680	0.3140	747	0.0468
413	0.0053	480	0.3209	547	0.5690	614	0.7580	681	0.3057	748	0.0454
414	0.0060	481	0.3163	548	0.5739	615	0.7554	682	0.2984	749	0.0437
415	0.0069	482	0.3138	549	0.5764	616	0.7557	683	0.2925	750	0.0426
416	0.0083	483	0.3139	550	0.5804	617	0.7521	684	0.2851	751	0.0413
417	0.0097	484	0.3166	551	0.5849	618	0.7486	685	0.2779	752	0.0401
418	0.0108	485	0.3198	552	0.5883	619	0.7470	686	0.2716	753	0.0389
419	0.0122	486	0.3227	553	0.5900	620	0.7443	687	0.2651	754	0.0376
420	0.0139	487	0.3256	554	0.5941	621	0.7413	688	0.2579	755	0.0363
421	0.0163	488	0.3287	555	0.5963	622	0.7375	689	0.2522	756	0.0353
422	0.0186	489	0.3318	556	0.6004	623	0.7321	690	0.2462	757	0.0339
423	0.0212	490	0.3348	557	0.6040	624	0.7289	691	0.2392	758	0.0330
424	0.0239	491	0.3393	558	0.6063	625	0.7244	692	0.2339	759	0.0322
425	0.0279	492	0.3431	559	0.6102	626	0.7203	693	0.2276	760	0.0314
426	0.0315	493	0.3470	560	0.6147	627	0.7152	694	0.2213	761	0.0300
427	0.0370	494	0.3525	561	0.6186	628	0.7105	695	0.2157	762	0.0291
428	0.0420	495	0.3584	562	0.6217	629	0.7058	696	0.2096	763	0.0281
429	0.0479	496	0.3647	563	0.6255	630	0.7001	697	0.2051	764	0.0276
430	0.0538	497	0.3710	564	0.6294	631	0.6932	698	0.1999	765	0.0267
431	0.0611	498	0.3788	565	0.6330	632	0.6889	699	0.1944	766	0.0258
432	0.0689	499	0.3864	566	0.6367	633	0.6832	700	0.1882	767	0.0252
433	0.0782	500	0.3935	567	0.6411	634	0.6771	701	0.1834	768	0.0246
434	0.0885	501	0.4019	568	0.6441	635	0.6689	702	0.1787	769	0.0235
435	0.1001	502	0.4094	569	0.6487	636	0.6628	703	0.1741	770	0.0229
436	0.1144	503	0.4156	570	0.6522	637	0.6560	704	0.1699	771	0.0221
437	0.1293	504	0.4244	571	0.6564	638	0.6482	705	0.1651	772	0.0212
438	0.1468	505	0.4300	572	0.6601	639	0.6407	706	0.1605	773	0.0207
439	0.1670	506	0.4366	573	0.6643	640	0.6336	707	0.1566	774	0.0201
440	0.1890	507	0.4439	574	0.6681	641	0.6298	708	0.1518	775	0.0199
441	0.2140	508	0.4502	575	0.6735	642	0.6216	709	0.1479	776	0.0188
442	0.2430	509	0.4559	576	0.6775	643	0.6145	710	0.1432	777	0.0181
443	0.2761	510	0.4616	577	0.6825	644	0.6078	711	0.1387	778	0.0176
444	0.3158	511	0.4665	578	0.6856	645	0.5994	712	0.1352	779	0.0176
445	0.3608	512	0.4710	579	0.6887	646	0.5920	713	0.1315	780	0.0176
446	0.4137	513	0.4752	580	0.6940	647	0.5842	714	0.1276	N/A	N/A

IES TM-30-18 Color Rendition Result (5000K):

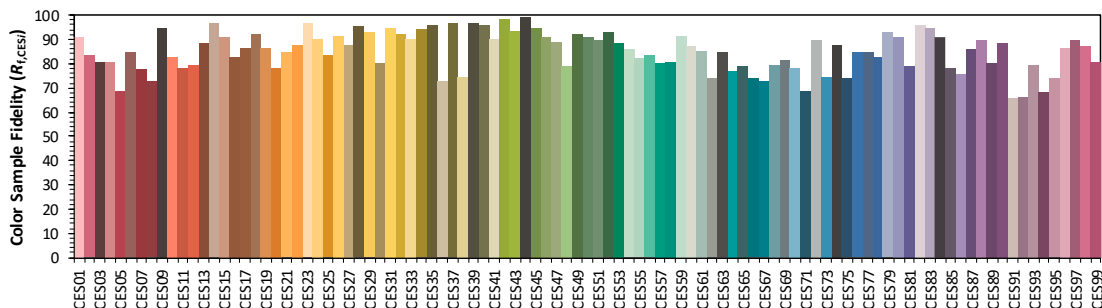
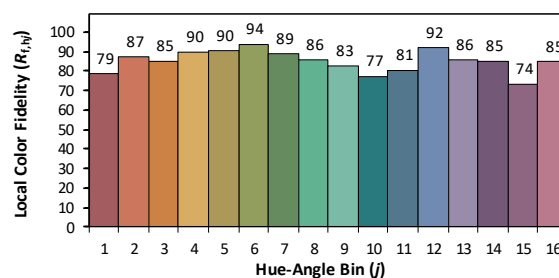
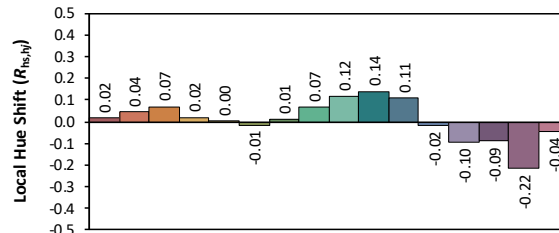
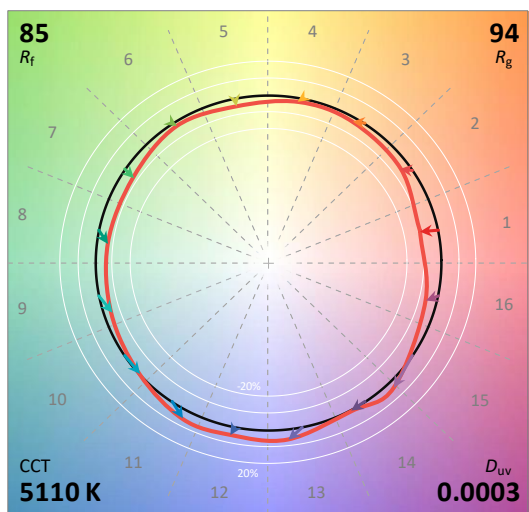
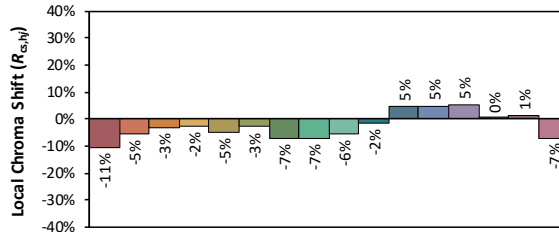
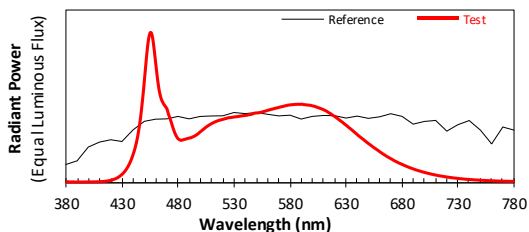
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: ETI Solid State Lighting (2

Date: 2022/2/21

Model: 559031###



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

x 0.3421
 y 0.3498
 u' 0.2101
 v' 0.4833

CIE 13.3-1995
(CRI)
 R_a 87
 R_g 27

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

Spectrum Data (5000K):

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0020	447	0.4848	514	0.4050	581	0.5157	648	0.2709	715	0.0416
381	0.0042	448	0.5529	515	0.4080	582	0.5160	649	0.2651	716	0.0404
382	0.0018	449	0.6287	516	0.4105	583	0.5169	650	0.2592	717	0.0393
383	0.0024	450	0.7112	517	0.4134	584	0.5175	651	0.2542	718	0.0380
384	0.0019	451	0.7925	518	0.4145	585	0.5184	652	0.2482	719	0.0370
385	0.0020	452	0.8707	519	0.4169	586	0.5183	653	0.2431	720	0.0358
386	0.0027	453	0.9352	520	0.4190	587	0.5193	654	0.2368	721	0.0348
387	0.0018	454	0.9771	521	0.4208	588	0.5191	655	0.2317	722	0.0336
388	0.0015	455	0.9968	522	0.4233	589	0.5183	656	0.2265	723	0.0326
389	0.0015	456	0.9905	523	0.4249	590	0.5191	657	0.2216	724	0.0314
390	0.0018	457	0.9586	524	0.4272	591	0.5192	658	0.2163	725	0.0305
391	0.0020	458	0.9056	525	0.4297	592	0.5173	659	0.2113	726	0.0295
392	0.0018	459	0.8411	526	0.4297	593	0.5162	660	0.2057	727	0.0286
393	0.0014	460	0.7747	527	0.4307	594	0.5159	661	0.2003	728	0.0277
394	0.0019	461	0.7096	528	0.4323	595	0.5144	662	0.1953	729	0.0271
395	0.0017	462	0.6521	529	0.4329	596	0.5137	663	0.1900	730	0.0261
396	0.0020	463	0.6056	530	0.4344	597	0.5131	664	0.1854	731	0.0253
397	0.0025	464	0.5736	531	0.4355	598	0.5122	665	0.1805	732	0.0243
398	0.0022	465	0.5485	532	0.4359	599	0.5111	666	0.1758	733	0.0237
399	0.0022	466	0.5331	533	0.4372	600	0.5085	667	0.1713	734	0.0229
400	0.0023	467	0.5189	534	0.4383	601	0.5066	668	0.1668	735	0.0221
401	0.0026	468	0.5086	535	0.4392	602	0.5059	669	0.1628	736	0.0215
402	0.0021	469	0.4980	536	0.4409	603	0.5020	670	0.1582	737	0.0207
403	0.0028	470	0.4847	537	0.4417	604	0.5007	671	0.1546	738	0.0202
404	0.0028	471	0.4566	538	0.4433	605	0.4962	672	0.1501	739	0.0195
405	0.0026	472	0.4364	539	0.4440	606	0.4950	673	0.1454	740	0.0190
406	0.0028	473	0.4147	540	0.4451	607	0.4915	674	0.1417	741	0.0185
407	0.0033	474	0.3912	541	0.4456	608	0.4894	675	0.1381	742	0.0178
408	0.0034	475	0.3674	542	0.4471	609	0.4857	676	0.1339	743	0.0174
409	0.0036	476	0.3455	543	0.4492	610	0.4836	677	0.1305	744	0.0167
410	0.0041	477	0.3256	544	0.4503	611	0.4789	678	0.1266	745	0.0161
411	0.0044	478	0.3102	545	0.4517	612	0.4759	679	0.1238	746	0.0155
412	0.0048	479	0.2971	546	0.4533	613	0.4719	680	0.1203	747	0.0155
413	0.0054	480	0.2883	547	0.4566	614	0.4669	681	0.1171	748	0.0148
414	0.0061	481	0.2832	548	0.4591	615	0.4618	682	0.1138	749	0.0143
415	0.0071	482	0.2800	549	0.4607	616	0.4584	683	0.1105	750	0.0140
416	0.0083	483	0.2797	550	0.4618	617	0.4529	684	0.1073	751	0.0135
417	0.0093	484	0.2820	551	0.4612	618	0.4471	685	0.1041	752	0.0131
418	0.0109	485	0.2842	552	0.4626	619	0.4425	686	0.1015	753	0.0127
419	0.0125	486	0.2861	553	0.4643	620	0.4387	687	0.0981	754	0.0124
420	0.0142	487	0.2882	554	0.4648	621	0.4327	688	0.0955	755	0.0119
421	0.0166	488	0.2907	555	0.4675	622	0.4274	689	0.0928	756	0.0116
422	0.0187	489	0.2923	556	0.4699	623	0.4217	690	0.0898	757	0.0112
423	0.0217	490	0.2951	557	0.4719	624	0.4159	691	0.0876	758	0.0110
424	0.0244	491	0.2957	558	0.4737	625	0.4103	692	0.0847	759	0.0105
425	0.0283	492	0.2989	559	0.4761	626	0.4044	693	0.0821	760	0.0102
426	0.0322	493	0.3021	560	0.4785	627	0.3998	694	0.0797	761	0.0098
427	0.0379	494	0.3056	561	0.4805	628	0.3932	695	0.0776	762	0.0097
428	0.0429	495	0.3097	562	0.4825	629	0.3869	696	0.0756	763	0.0094
429	0.0493	496	0.3142	563	0.4849	630	0.3814	697	0.0730	764	0.0091
430	0.0556	497	0.3194	564	0.4864	631	0.3755	698	0.0707	765	0.0089
431	0.0637	498	0.3249	565	0.4882	632	0.3688	699	0.0687	766	0.0085
432	0.0721	499	0.3318	566	0.4907	633	0.3628	700	0.0665	767	0.0082
433	0.0820	500	0.3377	567	0.4922	634	0.3572	701	0.0647	768	0.0080
434	0.0936	501	0.3432	568	0.4947	635	0.3509	702	0.0629	769	0.0078
435	0.1055	502	0.3501	569	0.4958	636	0.3448	703	0.0608	770	0.0077
436	0.1204	503	0.3553	570	0.4980	637	0.3380	704	0.0589	771	0.0073
437	0.1359	504	0.3621	571	0.5003	638	0.3319	705	0.0574	772	0.0070
438	0.1542	505	0.3677	572	0.5016	639	0.3251	706	0.0553	773	0.0070
439	0.1744	506	0.3730	573	0.5039	640	0.3194	707	0.0533	774	0.0067
440	0.1968	507	0.3781	574	0.5051	641	0.3121	708	0.0523	775	0.0064
441	0.2212	508	0.3827	575	0.5073	642	0.3062	709	0.0507	776	0.0064
442	0.2501	509	0.3870	576	0.5092	643	0.3005	710	0.0488	777	0.0061
443	0.2831	510	0.3915	577	0.5106	644	0.2946	711	0.0476	778	0.0059
444	0.3226	511	0.3947	578	0.5128	645	0.2892	712	0.0458	779	0.0059
445	0.3691	512	0.3992	579	0.5137	646	0.2834	713	0.0443	780	0.0060
446	0.4205	513	0.4020	580	0.5147	647	0.2769	714	0.0429	N/A	N/A

Goniophotometer Test Results:

Test Condition:

Test Ambient (°C)	Test Humidity (%)	Orientation	Stabilization Time (minute)	Test Time (minute)
25.1	48.8	Face Down	90	25

Electrical Data:

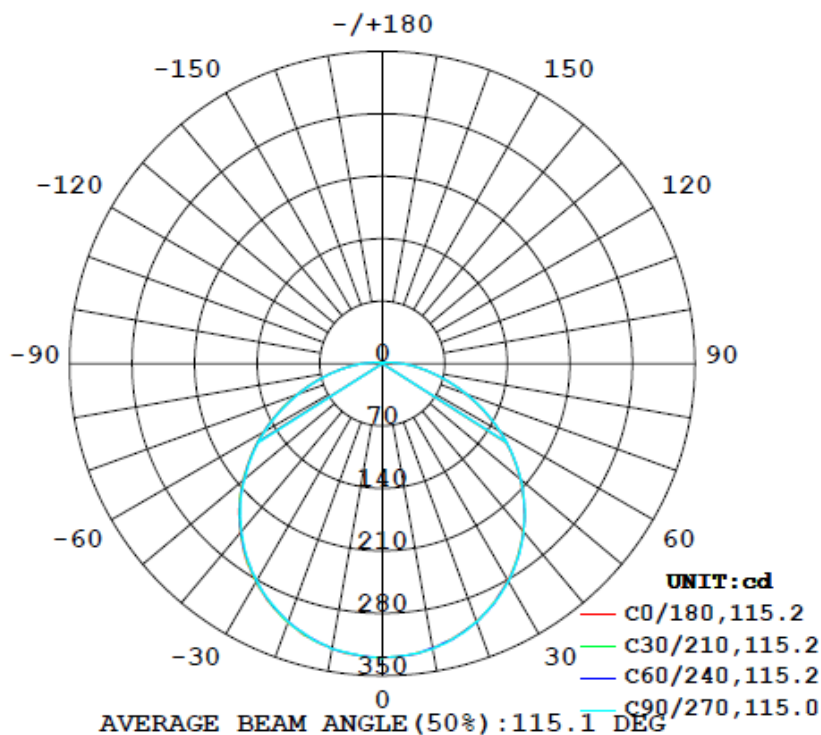
Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor
120.0	60	0.1232	13.82	0.9349

Goniophotometer Data:

Parameter	Results
Total Luminous (lm)	1031.6
Luminous Efficacy (lm/W)	74.65
Zonal Lumens Distribution (0-60°)	73.2%
Beam Angle (°)	115.1

Luminous Intensity Distribution Diagram:

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

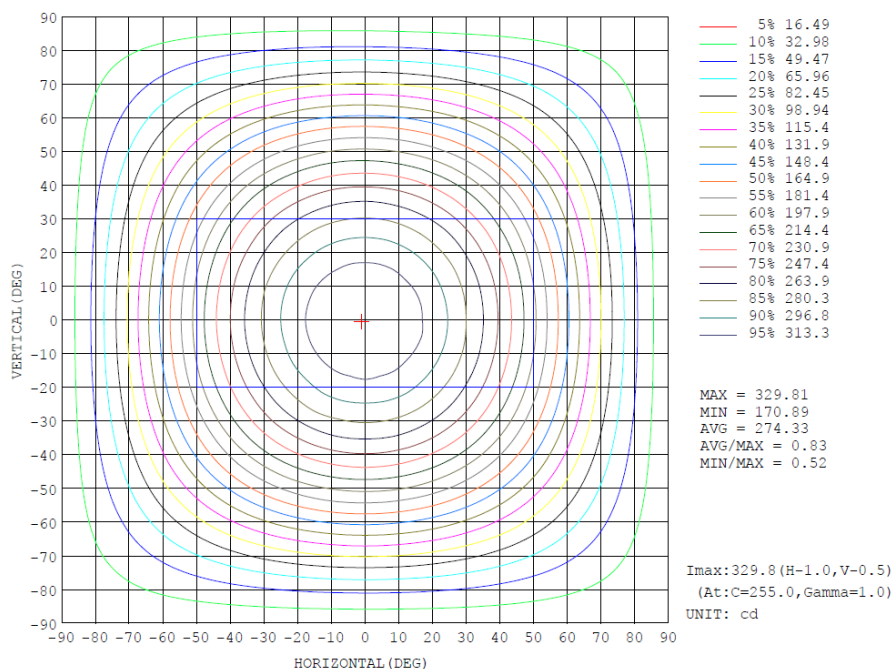


Zonal Flux Diagram:

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	323.7	323.3	324.8	324.1	324.2	324.9	324.6	323.6	0- 10	31.19	31.19	3.02,3.02
20	306.9	307.6	308.2	308.5	309.3	308.2	308.1	306.9	10- 20	89.58	120.8	11.7,11.7
30	280.2	281.6	282.3	282.0	282.6	281.8	280.9	280.3	20- 30	136.4	257.2	24.9,24.9
40	245.1	245.8	246.0	246.4	247.2	246.8	245.4	245.2	30- 40	165.7	422.9	41,41
50	201.4	202.0	202.5	203.1	203.5	202.7	201.2	200.3	40- 50	173.5	596.4	57.8,57.8
60	150.9	152.0	152.5	153.0	153.8	153.1	151.7	150.8	50- 60	158.8	755.3	73.2,73.2
70	98.87	100.4	100.3	100.7	101.9	101.1	99.65	98.95	60- 70	124.8	880.1	85.3,85.3
80	52.68	53.67	53.71	53.74	54.98	54.66	53.68	52.74	70- 80	80.32	960.4	93.1,93.1
90	21.66	22.29	22.20	21.99	22.44	22.64	22.00	21.43	80- 90	39.61	1000	96.9,96.9
100	8.096	8.219	8.104	7.940	7.804	8.085	7.684	7.577	90-100	15.07	1015	98.4,98.4
110	4.604	4.620	4.408	4.382	4.244	4.282	4.231	4.212	100-110	5.992	1021	99,99
120	3.740	3.775	3.583	3.584	3.503	3.480	3.446	3.410	110-120	3.917	1025	99.4,99.4
130	2.961	2.987	2.862	2.880	2.865	2.828	2.765	2.727	120-130	2.893	1028	99.6,99.6
140	2.177	2.179	2.119	2.156	2.207	2.140	2.074	2.031	130-140	1.947	1030	99.8,99.8
150	1.404	1.417	1.375	1.429	1.565	1.450	1.407	1.353	140-150	1.125	1031	99.9,99.9
160	0.6327	0.7175	0.5953	0.7021	0.8334	0.7180	0.7153	0.7186	150-160	0.5049	1031	100,100
170	0.3639	0.3646	0.3661	0.3646	0.4684	0.4681	0.4658	0.4677	160-170	0.1313	1032	100,100
180	0.4403	0.4402	0.4402	0.4398	0.4412	0.4415	0.4395	0.4395	170-180	0.0404	1032	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Isocandela Diagram:



Luminous Distribution Intensity Data:

Table--1

UNIT: cd

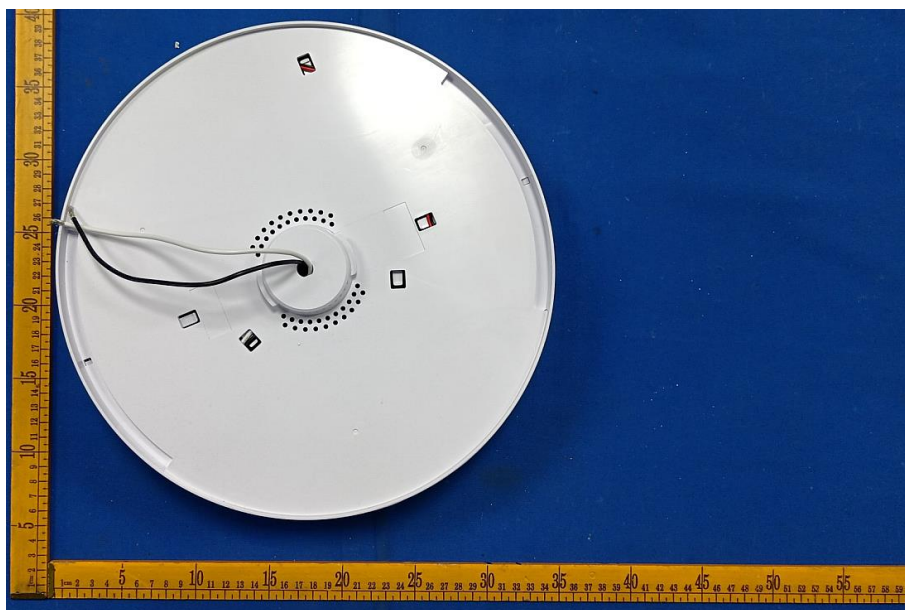
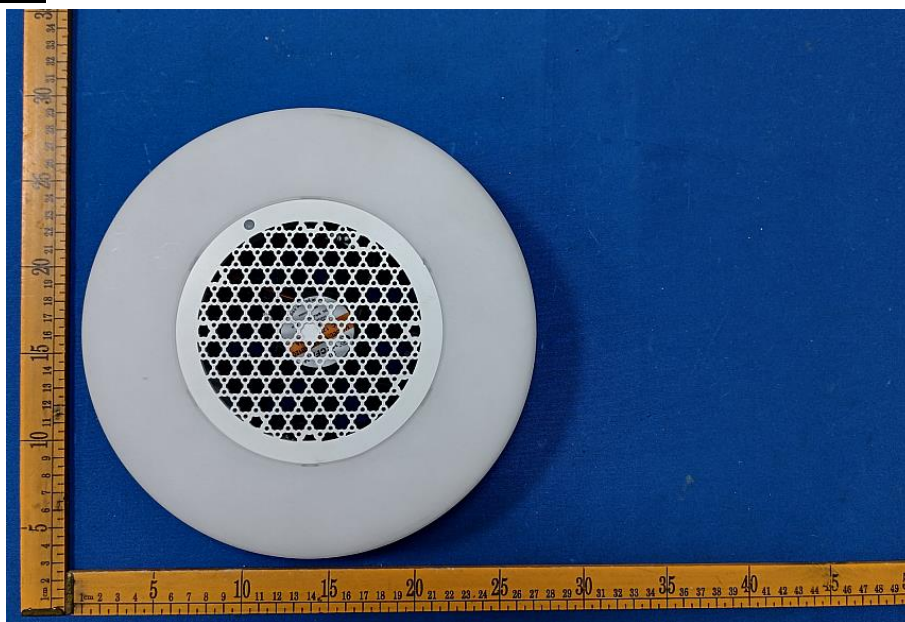
C (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
γ (DEG)	0	329	329	330	330	329	329	329	330	330	329	330	329	329	330	330	329	329	329
5	328	328	328	328	328	328	328	328	328	328	329	329	328	328	328	328	328	328	328
10	324	324	324	323	324	325	325	324	324	324	324	324	324	324	325	325	325	324	325
15	317	317	317	317	318	317	317	317	318	318	318	317	318	317	317	318	317	317	317
20	307	307	308	308	309	308	308	308	308	309	308	308	309	309	309	308	308	308	308
25	296	296	296	296	297	296	296	296	297	296	296	296	297	297	297	296	296	296	296
30	280	281	281	282	282	282	282	281	282	282	282	282	283	283	282	282	282	281	281
35	264	265	264	265	265	266	265	265	266	265	266	266	267	266	265	266	265	265	265
40	245	245	246	246	246	246	246	246	246	246	246	247	247	247	247	247	246	246	245
45	224	225	224	225	225	225	225	225	226	225	226	226	227	226	226	226	225	225	224
50	201	201	202	202	203	202	202	203	202	203	203	203	203	204	203	203	202	201	201
55	177	177	177	178	178	178	178	178	178	179	179	179	179	180	179	178	178	178	177
60	151	151	152	152	152	152	152	153	153	153	153	154	154	153	153	153	152	152	152
65	125	125	126	126	126	126	126	126	126	127	127	127	128	128	127	127	127	126	126
70	98.9	99.6	99.7	100	100.0	100	100	100	100	101	101	101	102	102	101	101	101	100	99.6
75	74.5	74.9	75.4	75.5	75.7	75.6	75.7	75.5	75.5	75.7	76.0	76.1	77.1	77.1	76.8	76.8	76.4	75.9	75.6
80	52.7	53.2	53.6	53.7	53.9	53.8	53.7	53.7	53.5	53.7	53.8	54.0	55.0	55.0	54.7	54.7	54.4	54.2	53.7
85	34.7	35.2	35.5	35.6	35.8	35.8	35.6	35.5	35.5	35.5	35.6	35.5	36.3	36.4	36.4	36.4	36.2	36.0	35.5
90	21.7	21.9	22.1	22.3	22.2	22.2	22.2	22.1	22.1	22.0	21.9	21.9	22.4	22.5	22.6	22.6	22.5	22.6	22.0
95	13.1	13.4	13.5	13.5	13.4	13.3	13.3	13.3	13.3	13.1	12.9	12.8	13.2	13.3	13.5	13.5	13.4	13.2	12.9
100	8.10	8.28	8.28	8.22	8.15	8.10	8.10	8.10	8.04	7.94	7.77	7.65	7.80	7.92	8.04	8.08	8.08	7.92	7.68
105	5.61	5.72	5.71	5.63	5.55	5.50	5.48	5.48	5.46	5.39	5.27	5.16	5.24	5.27	5.33	5.38	5.38	5.32	5.19
110	4.60	4.70	4.71	4.62	4.52	4.45	4.41	4.41	4.41	4.38	4.32	4.24	4.24	4.23	4.24	4.28	4.31	4.30	4.23
115	4.13	4.24	4.25	4.17	4.07	3.99	3.94	3.94	3.96	3.94	3.90	3.84	3.83	3.79	3.80	3.82	3.86	3.85	3.80
120	3.74	3.83	3.85	3.77	3.69	3.63	3.58	3.59	3.60	3.58	3.56	3.50	3.50	3.46	3.46	3.48	3.50	3.50	3.45
125	3.35	3.44	3.45	3.38	3.32	3.25	3.23	3.24	3.26	3.24	3.21	3.16	3.18	3.15	3.15	3.15	3.18	3.16	3.10
130	2.96	3.04	3.04	2.99	2.93	2.89	2.86	2.88	2.90	2.88	2.85	2.82	2.87	2.84	2.83	2.83	2.84	2.82	2.76
135	2.57	2.63	2.64	2.58	2.54	2.50	2.49	2.51	2.53	2.52	2.50	2.47	2.54	2.51	2.50	2.49	2.50	2.48	2.42
140	2.18	2.24	2.23	2.18	2.14	2.13	2.12	2.14	2.16	2.16	2.14	2.13	2.21	2.18	2.15	2.14	2.14	2.11	2.07
145	1.79	1.83	1.82	1.79	1.75	1.74	1.75	1.77	1.78	1.79	1.78	1.78	1.89	1.85	1.82	1.80	1.78	1.76	1.73
150	1.40	1.43	1.43	1.42	1.38	1.35	1.37	1.39	1.40	1.43	1.44	1.43	1.57	1.51	1.47	1.45	1.43	1.41	1.41
155	1.02	1.06	1.08	1.07	1.03	0.99	1.00	1.02	1.04	1.08	1.11	1.12	1.22	1.18	1.13	1.10	1.08	1.07	1.07
160	0.63	0.68	0.72	0.72	0.70	0.65	0.60	0.60	0.65	0.70	0.73	0.72	0.83	0.80	0.74	0.72	0.71	0.71	0.72
165	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.47	0.47	0.47	0.47	0.47	0.47	0.47
170	0.36	0.36	0.36	0.36	0.37	0.36	0.37	0.36	0.36	0.36	0.37	0.37	0.47	0.47	0.47	0.47	0.47	0.47	0.47
175	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.46	0.46	0.46	0.46	0.46	0.46	0.46
180	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44

Table--2

UNIT: cd

C (DEG)	285	300	315	330	345														
γ (DEG)	0	330	330	329	330	329													
5	328	327	328	328	328														
10	324	323	324	324	324														
15	316	317	317	316	317														
20	308	307	307	307	308														
25	295	295	295	296	295														
30	281	280	280	281	281														
35	264	264	264	264	265														
40	245	245	245	246	246														
45	224	224	224	224	224														
50	201	201	200	201	202														
55	177	176	177	176	177														
60	151	151	151	151	152														
65	125	125	125	125	125														
70	99.3	99.2	99.0	99.1	99.5														
75	75.2	74.6	74.4	74.7	75.0														
80	53.1	53.0	52.7	52.8	53.3														
85	34.9	34.7	34.6	34.8	35.1														
90	21.6	21.4	21.4	21.6	22.0														
95	12.6	12.4	12.6	12.8	13.1														
100	7.52	7.50	7.58	7.77	8.01														
105	5.12	5.10	5.19	5.34	5.54														
110	4.19	4.16	4.21	4.34	4.51														
115	3.75	3.74	3.77	3.88	4.04														
120	3.39	3.39	3.41	3.52	3.66														
125	3.05	3.05	3.06	3.17	3.30														
130	2.72	2.71	2.73	2.82	2.94														
135	2.38	2.36	2.38	2.47	2.58														
140	2.04	2.01	2.03	2.10	2.21														
145	1.70	1.68	1.69	1.74	1.84														
150	1.37	1.34	1.35	1.39	1.46														
155	1.06	1.03	1.02	1.05	1.11														
160	0.71	0.72	0.72	0.72	0.74														
165	0.47	0.47	0.47	0.47	0.47														
170	0.47	0.47	0.47	0.47	0.47														
175	0.46	0.46	0.46	0.46	0.46														
180	0.44	0.44	0.44	0.44	0.44														

Photo of Sample:



Equipment List:

Equipment ID	Equipment Name	Last Cal.	Due Cal.
NTC-F01-001	Goniophotometer System	2021-11-10	2022-11-09
NTC-F01-006	2.0 meter Integrating Sphere	2021-11-10	2022-11-09
NTC-F01-012	Standard Lamp	2021-11-10	2022-11-09
NTC-F01-013	Standard Lamp	2021-11-10	2022-11-09
NTC-F01-031	Digital Power Meter	2021-08-22	2022-08-21
NTC-F01-020	Temperature & Humidity Meter	2021-11-15	2022-11-14

*******End of Report*******