

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 downlight

Model Name(s):

559011###

Representative (Tested) Model:

559011010

Model Difference:

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

Prepared by:

Alan Wang

Engineer: Alan Wang

Date: 2022-03-08

Reviewed by:

Vincent Yuan

Technical Lead: Vincent Yuan

Issue Date: 2022-03-11

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:	559011#### (##=00-99, #=0-9)
Product Type:	Plasma downlight
Rating Input:	120-277Vac, 50/60Hz, 23W
Declared CCT:	2700K/3000K/3500K/4000K/5000K
Declared Light Output:	2000 lm
LED Manufacturer:	Samsung Electrics Co., Ltd.
LED Model:	SPMWH1228MD7XXWXXX and SPMWH1228FD5XXRXXX
LED Quantity:	SPMWH1228MD7XXWXXX: 140 pcs SPMWH1228FD5XXRXXX: 140 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:	2021-12-10
Quantity of Receipt Samples:	1 pc
Sample Number:	210121018-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:	2022-03-11
Revised Date of Test Report:	N/A
Test Report No.:	NTCLR22030096
Remark (<i>If applicable</i>):	N/A

Test Specification:	
Date of Test	2022-02-22
Test Item	<ol style="list-style-type: none"> 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	<p>IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products</p> <p>ANSI C78.377-2017 Specifications for the Chromaticity of Solid State Lighting Products</p> <p>CIE 13.3-1995 Method of Measuring and Specifying Color Rendering Properties of Light Sources</p> <p>CIE 15-2004 Technical Report Colorimetry</p> <p>ANSI IES TM-30-18 IES Method for Evaluating Light Source Color Rendition</p> <p>IES TM-15-11 Luminaire Classification System for Outdoor Luminaires</p> <p>Addendum A for IES TM-15-11 Backlight, Uplight, and Glare (BUG) Ratings</p>

Test Methods:
<p>1. Photometric and Electrical Measurements – Light Distribution Method:</p> <p>Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at 25 °C ± 1°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.</p>
<p>2. Photometric and Electrical Measurements – Integrating Sphere Method:</p> <p>Photometric parameters were measured using an integrating sphere, as spectroradiometer and software. The ambient temperature condition inside the sphere was measured at 25 °C± 1°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.</p>

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	0.1867	21.93	0.9789
3000K	120.0	60	0.1845	21.76	0.9825
3500K	120.0	60	0.1829	21.58	0.9827
4000K	120.0	60	0.1844	21.75	0.9825
5000K	120.0	60	0.1883	22.23	0.9835

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	2760	93.1	59	92	100	-5%	(0.4538, 0.4071)	(0.2601, 0.5251)	-0.0008
3000K	3009	93.0	60	91	99	-5%	(0.4320, 0.3950)	(0.2513, 0.5170)	-0.0030
3500K	3458	92.3	58	90	98	-6%91	(0.4028, 0.3788)	(0.2390, 0.5058)	-0.0048
4000K	4028	90.7	50	88	97	-7%	(0.3764, 0.3651)	(0.2271, 0.4957)	-0.0044
5000K	5067	86.5	20	85	95	-11%	(0.3431, 0.3486)	(0.2112, 0.4829)	-0.0007

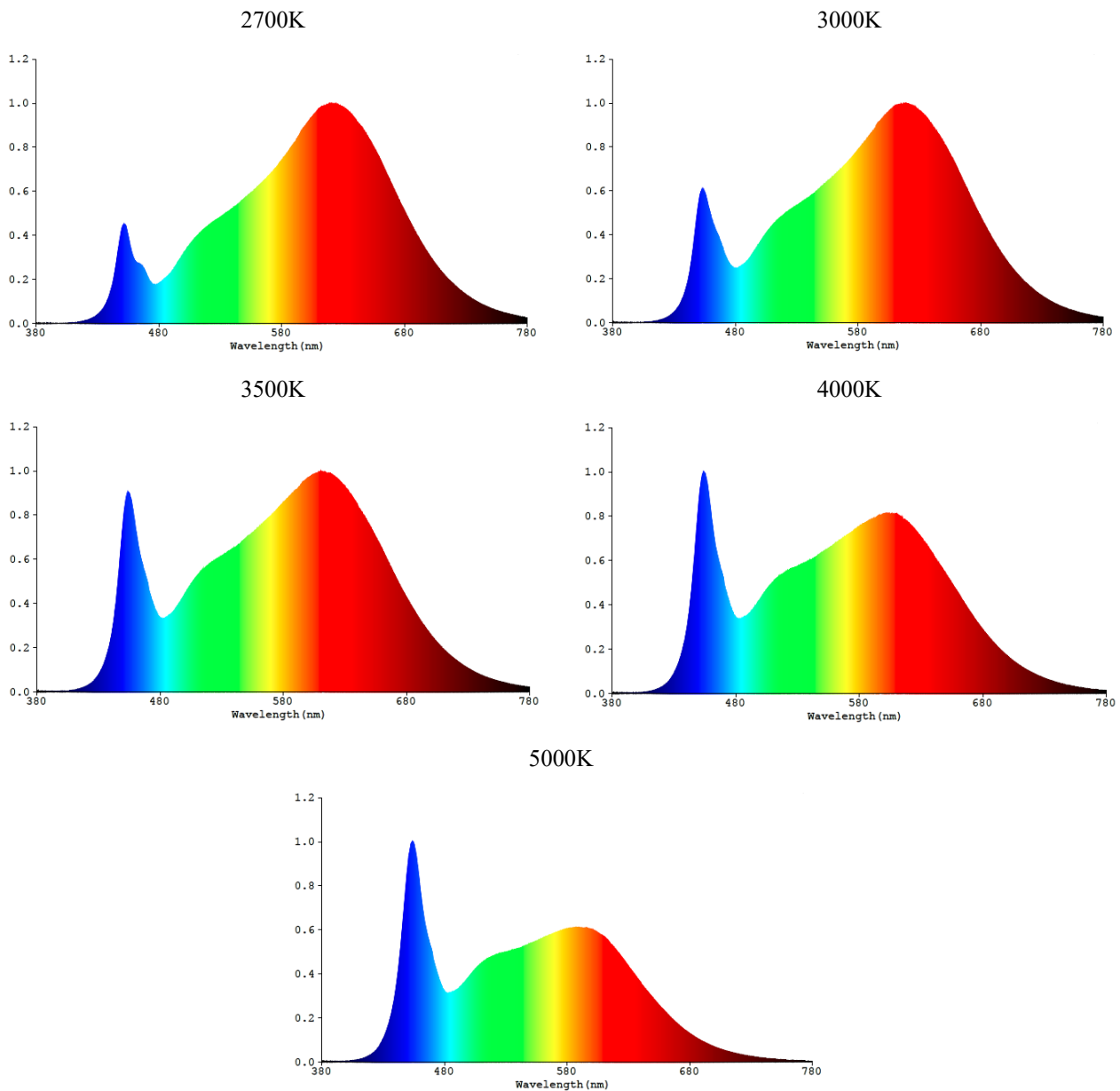
Specify Color Rendering:

CCT Setting	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
2700K	94	97	99	93	94	97	91	81	59	92	95	84	95	99	89
3000K	94	98	97	92	94	96	90	81	60	95	94	81	96	100	91
3500K	94	98	97	91	93	94	89	81	58	95	92	77	96	99	91
4000K	92	97	97	89	91	93	89	78	50	92	89	71	94	99	89
5000K	86	94	95	85	87	89	86	70	20	84	85	68	89	98	81

Output Data:

CCT Setting	Luminous (lm)	Efficacy (lm/W)
2700K	2221.6	101.30
3000K	2294.8	105.46
3500K	2404.1	111.40
4000K	2508.9	115.35
5000K	2632.0	118.40

Spectrum Diagram:

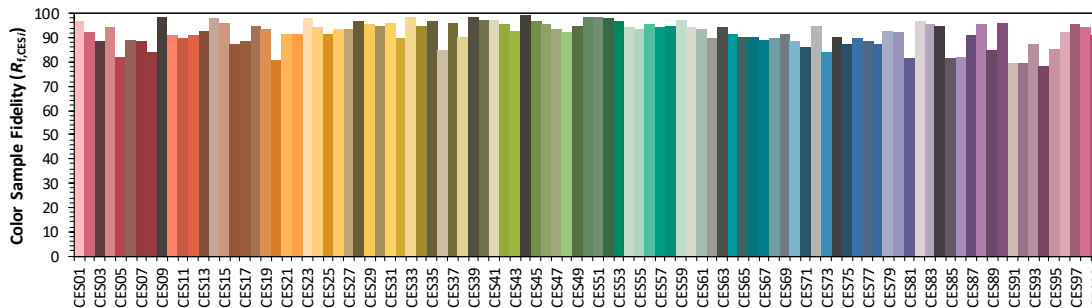
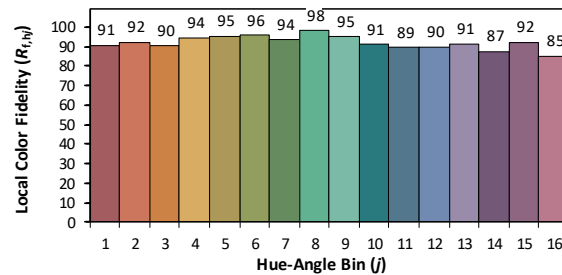
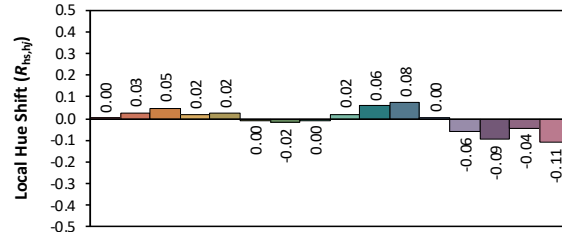
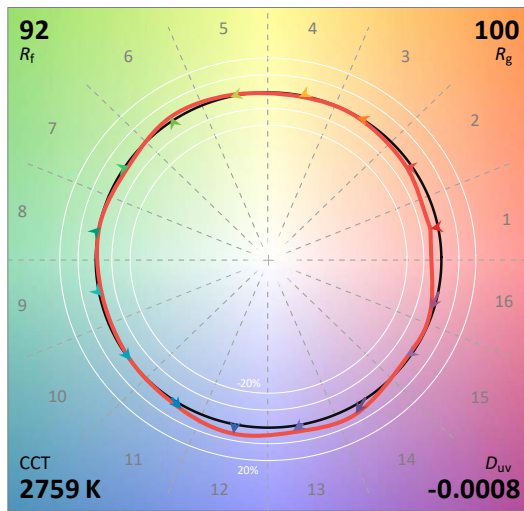
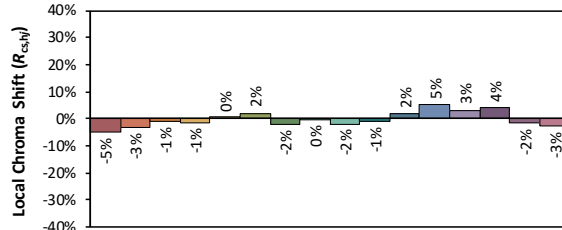
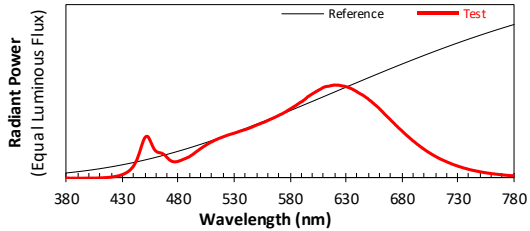


IES TM-30-18 Color Rendition Result (2700K):

ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1
Date: 2022/3/8

Manufacturer: ETI Solid State Lighting (2
Model: 559011###



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

x 0.4538
 y 0.4070
 u' 0.2602
 v' 0.5250

CIE 13.3-1995 (CRI)	
R_a	93
R_9	59

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

Spectrum Data (2700K):

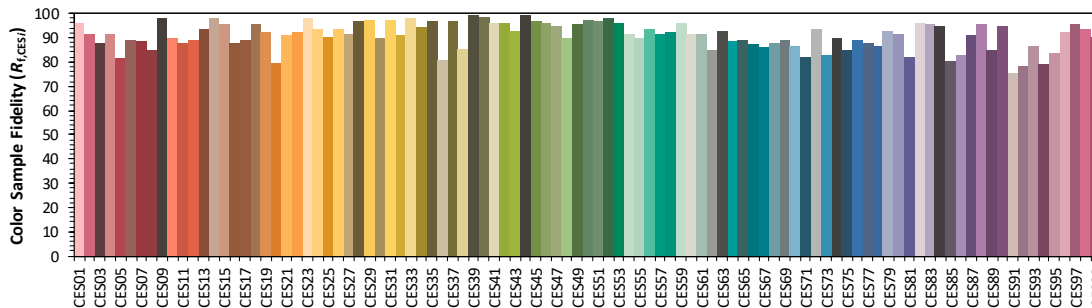
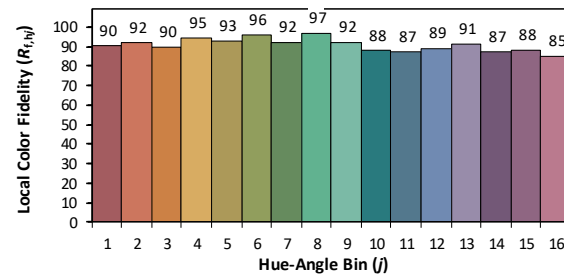
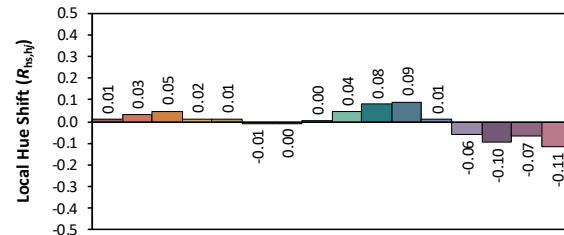
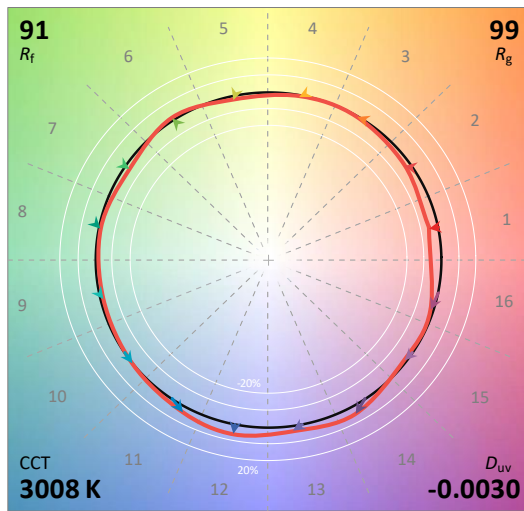
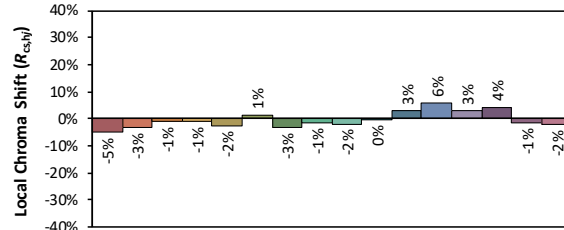
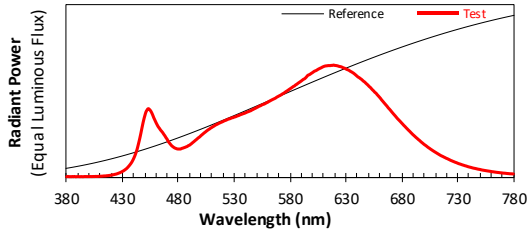
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381	0.0013	448	0.3785	515	0.4195	582	0.7557	649	0.8593	716	0.1995
382	0.0035	449	0.4113	516	0.4255	583	0.7629	650	0.8498	717	0.1947
383	0.0000	450	0.4338	517	0.4296	584	0.7709	651	0.8389	718	0.1884
384	0.0008	451	0.4466	518	0.4341	585	0.7771	652	0.8309	719	0.1839
385	0.0021	452	0.4491	519	0.4387	586	0.7864	653	0.8212	720	0.1790
386	0.0013	453	0.4431	520	0.4430	587	0.7945	654	0.8097	721	0.1724
387	0.0020	454	0.4220	521	0.4483	588	0.8025	655	0.8003	722	0.1683
388	0.0010	455	0.3974	522	0.4521	589	0.8106	656	0.7892	723	0.1636
389	0.0006	456	0.3706	523	0.4567	590	0.8180	657	0.7797	724	0.1585
390	0.0009	457	0.3439	524	0.4615	591	0.8234	658	0.7691	725	0.1529
391	0.0017	458	0.3203	525	0.4646	592	0.8339	659	0.7591	726	0.1490
392	0.0001	459	0.3026	526	0.4691	593	0.8418	660	0.7470	727	0.1439
393	0.0011	460	0.2904	527	0.4725	594	0.8516	661	0.7350	728	0.1401
394	0.0012	461	0.2823	528	0.4760	595	0.8621	662	0.7227	729	0.1360
395	0.0004	462	0.2771	529	0.4792	596	0.8742	663	0.7110	730	0.1321
396	0.0017	463	0.2744	530	0.4827	597	0.8804	664	0.6980	731	0.1276
397	0.0020	464	0.2720	531	0.4871	598	0.8892	665	0.6847	732	0.1237
398	0.0014	465	0.2686	532	0.4903	599	0.8962	666	0.6739	733	0.1204
399	0.0020	466	0.2630	533	0.4950	600	0.9041	667	0.6621	734	0.1169
400	0.0013	467	0.2553	534	0.4985	601	0.9114	668	0.6508	735	0.1122
401	0.0018	468	0.2478	535	0.5039	602	0.9182	669	0.6386	736	0.1091
402	0.0020	469	0.2348	536	0.5074	603	0.9258	670	0.6271	737	0.1062
403	0.0019	470	0.2223	537	0.5106	604	0.9325	671	0.6141	738	0.1030
404	0.0023	471	0.2097	538	0.5146	605	0.9392	672	0.6028	739	0.0994
405	0.0018	472	0.1979	539	0.5189	606	0.9468	673	0.5912	740	0.0960
406	0.0023	473	0.1906	540	0.5217	607	0.9527	674	0.5795	741	0.0931
407	0.0028	474	0.1834	541	0.5257	608	0.9587	675	0.5662	742	0.0903
408	0.0032	475	0.1789	542	0.5317	609	0.9670	676	0.5565	743	0.0873
409	0.0036	476	0.1772	543	0.5339	610	0.9731	677	0.5427	744	0.0849
410	0.0045	477	0.1758	544	0.5396	611	0.9784	678	0.5323	745	0.0826
411	0.0045	478	0.1776	545	0.5440	612	0.9817	679	0.5218	746	0.0799
412	0.0050	479	0.1786	546	0.5486	613	0.9842	680	0.5114	747	0.0771
413	0.0059	480	0.1824	547	0.5544	614	0.9853	681	0.4987	748	0.0753
414	0.0067	481	0.1870	548	0.5591	615	0.9870	682	0.4879	749	0.0724
415	0.0072	482	0.1901	549	0.5640	616	0.9901	683	0.4763	750	0.0703
416	0.0081	483	0.1958	550	0.5696	617	0.9935	684	0.4662	751	0.0677
417	0.0092	484	0.2007	551	0.5743	618	0.9942	685	0.4549	752	0.0662
418	0.0107	485	0.2058	552	0.5784	619	0.9989	686	0.4454	753	0.0638
419	0.0114	486	0.2105	553	0.5831	620	0.9974	687	0.4348	754	0.0614
420	0.0131	487	0.2148	554	0.5881	621	0.9989	688	0.4237	755	0.0599
421	0.0150	488	0.2214	555	0.5942	622	0.9964	689	0.4137	756	0.0580
422	0.0166	489	0.2259	556	0.5965	623	0.9984	690	0.4026	757	0.0559
423	0.0183	490	0.2318	557	0.6010	624	0.9965	691	0.3942	758	0.0546
424	0.0210	491	0.2405	558	0.6082	625	0.9927	692	0.3850	759	0.0533
425	0.0227	492	0.2474	559	0.6117	626	0.9927	693	0.3746	760	0.0512
426	0.0256	493	0.2567	560	0.6183	627	0.9888	694	0.3645	761	0.0490
427	0.0281	494	0.2650	561	0.6236	628	0.9874	695	0.3562	762	0.0481
428	0.0318	495	0.2750	562	0.6296	629	0.9849	696	0.3470	763	0.0467
429	0.0363	496	0.2831	563	0.6349	630	0.9803	697	0.3374	764	0.0447
430	0.0403	497	0.2919	564	0.6397	631	0.9793	698	0.3293	765	0.0434
431	0.0445	498	0.3002	565	0.6451	632	0.9742	699	0.3201	766	0.0426
432	0.0511	499	0.3093	566	0.6507	633	0.9701	700	0.3123	767	0.0410
433	0.0567	500	0.3182	567	0.6556	634	0.9652	701	0.3036	768	0.0401
434	0.0637	501	0.3266	568	0.6620	635	0.9593	702	0.2953	769	0.0383
435	0.0713	502	0.3342	569	0.6680	636	0.9539	703	0.2871	770	0.0371
436	0.0810	503	0.3425	570	0.6737	637	0.9475	704	0.2796	771	0.0357
437	0.0908	504	0.3489	571	0.6802	638	0.9412	705	0.2720	772	0.0346
438	0.1043	505	0.3576	572	0.6857	639	0.9340	706	0.2650	773	0.0337
439	0.1171	506	0.3649	573	0.6907	640	0.9273	707	0.2573	774	0.0323
440	0.1340	507	0.3713	574	0.6982	641	0.9177	708	0.2504	775	0.0311
441	0.1541	508	0.3785	575	0.7045	642	0.9119	709	0.2429	776	0.0306
442	0.1768	509	0.3861	576	0.7110	643	0.9045	710	0.2368	777	0.0293
443	0.2020	510	0.3906	577	0.7182	644	0.8984	711	0.2302	778	0.0287
444	0.2344	511	0.3973	578	0.7271	645	0.8925	712	0.2238	779	0.0281
445	0.2679	512	0.4029	579	0.7341	646	0.8841	713	0.2172	780	0.0282
446	0.3048	513	0.4097	580	0.7414	647	0.8761	714	0.2111	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: 2022/3/8

Manufacturer: ETI Solid State Lighting (2
Model: 559011###



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

x 0.4320
 y 0.3949
 u' 0.2514
 v' 0.5170

CIE 13.3-1995 (CRI)	
R_a	93
R_9	60

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

Spectrum Data (3000K):

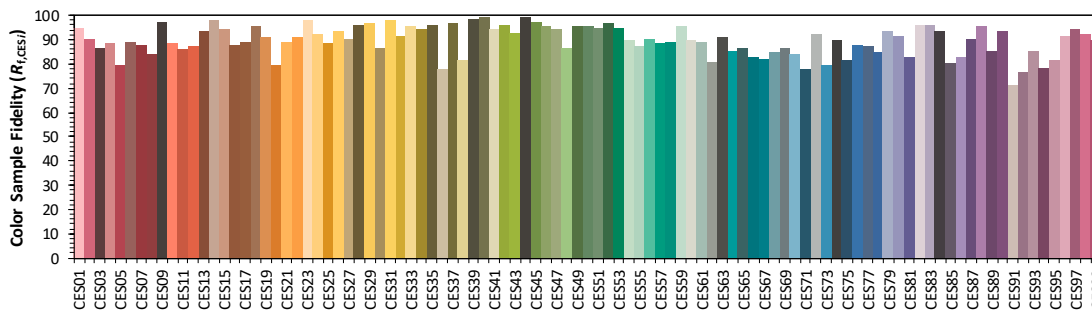
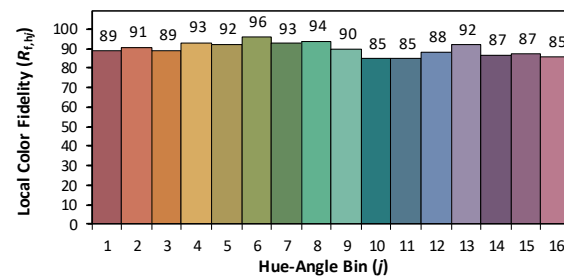
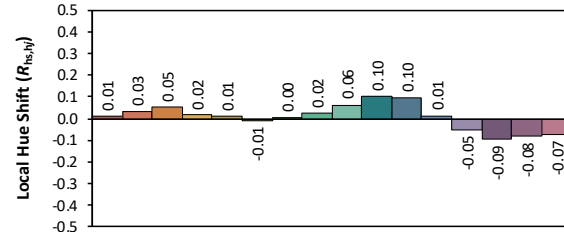
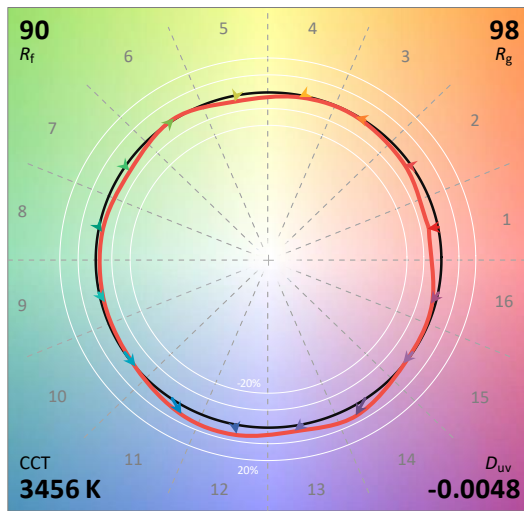
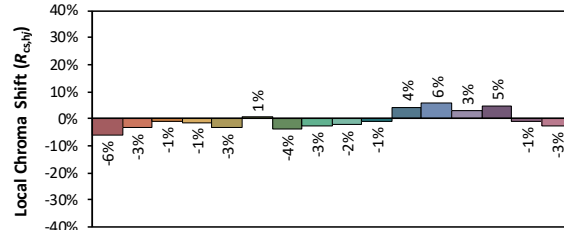
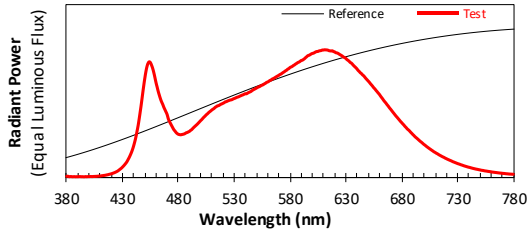
nm	mW	nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0000	447	0.4165	514	0.4664	581	0.7937	648	0.8371	715	0.1907
381	0.0033	448	0.4648	515	0.4710	582	0.8006	649	0.8282	716	0.1857
382	0.0007	449	0.5093	516	0.4769	583	0.8080	650	0.8188	717	0.1811
383	0.0017	450	0.5472	517	0.4814	584	0.8127	651	0.8078	718	0.1758
384	0.0004	451	0.5799	518	0.4862	585	0.8221	652	0.7996	719	0.1711
385	0.0024	452	0.5975	519	0.4902	586	0.8277	653	0.7881	720	0.1656
386	0.0006	453	0.6098	520	0.4948	587	0.8358	654	0.7773	721	0.1619
387	0.0030	454	0.6039	521	0.5001	588	0.8427	655	0.7680	722	0.1567
388	0.0001	455	0.5928	522	0.5040	589	0.8496	656	0.7563	723	0.1519
389	0.0014	456	0.5758	523	0.5076	590	0.8567	657	0.7488	724	0.1468
390	0.0018	457	0.5539	524	0.5129	591	0.8643	658	0.7365	725	0.1428
391	0.0014	458	0.5288	525	0.5165	592	0.8721	659	0.7255	726	0.1384
392	0.0007	459	0.5073	526	0.5193	593	0.8769	660	0.7143	727	0.1345
393	0.0017	460	0.4855	527	0.5232	594	0.8855	661	0.7028	728	0.1300
394	0.0009	461	0.4660	528	0.5280	595	0.8967	662	0.6892	729	0.1268
395	0.0009	462	0.4476	529	0.5295	596	0.9079	663	0.6776	730	0.1224
396	0.0022	463	0.4347	530	0.5344	597	0.9126	664	0.6656	731	0.1182
397	0.0021	464	0.4195	531	0.5367	598	0.9179	665	0.6538	732	0.1150
398	0.0019	465	0.4076	532	0.5407	599	0.9253	666	0.6424	733	0.1118
399	0.0018	466	0.3952	533	0.5454	600	0.9314	667	0.6308	734	0.1080
400	0.0020	467	0.3799	534	0.5480	601	0.9387	668	0.6174	735	0.1049
401	0.0022	468	0.3662	535	0.5530	602	0.9454	669	0.6068	736	0.1018
402	0.0020	469	0.3493	536	0.5571	603	0.9492	670	0.5952	737	0.0983
403	0.0020	470	0.3356	537	0.5606	604	0.9545	671	0.5829	738	0.0959
404	0.0026	471	0.3155	538	0.5645	605	0.9610	672	0.5709	739	0.0920
405	0.0023	472	0.3030	539	0.5676	606	0.9664	673	0.5593	740	0.0892
406	0.0035	473	0.2904	540	0.5716	607	0.9714	674	0.5480	741	0.0864
407	0.0028	474	0.2786	541	0.5764	608	0.9759	675	0.5363	742	0.0842
408	0.0035	475	0.2703	542	0.5808	609	0.9817	676	0.5240	743	0.0811
409	0.0044	476	0.2629	543	0.5843	610	0.9862	677	0.5134	744	0.0783
410	0.0050	477	0.2569	544	0.5884	611	0.9899	678	0.5034	745	0.0762
411	0.0053	478	0.2531	545	0.5920	612	0.9923	679	0.4927	746	0.0744
412	0.0059	479	0.2495	546	0.5985	613	0.9932	680	0.4816	747	0.0719
413	0.0071	480	0.2486	547	0.6030	614	0.9948	681	0.4710	748	0.0695
414	0.0076	481	0.2488	548	0.6088	615	0.9954	682	0.4599	749	0.0674
415	0.0080	482	0.2487	549	0.6130	616	0.9951	683	0.4503	750	0.0659
416	0.0096	483	0.2537	550	0.6190	617	0.9971	684	0.4392	751	0.0634
417	0.0103	484	0.2564	551	0.6235	618	0.9970	685	0.4293	752	0.0608
418	0.0119	485	0.2603	552	0.6297	619	0.9998	686	0.4186	753	0.0592
419	0.0129	486	0.2635	553	0.6337	620	0.9971	687	0.4094	754	0.0573
420	0.0150	487	0.2681	554	0.6382	621	0.9960	688	0.3989	755	0.0557
421	0.0171	488	0.2717	555	0.6441	622	0.9943	689	0.3886	756	0.0540
422	0.0187	489	0.2791	556	0.6479	623	0.9918	690	0.3787	757	0.0524
423	0.0216	490	0.2830	557	0.6513	624	0.9882	691	0.3696	758	0.0509
424	0.0235	491	0.2908	558	0.6568	625	0.9863	692	0.3605	759	0.0493
425	0.0266	492	0.2985	559	0.6624	626	0.9836	693	0.3511	760	0.0478
426	0.0303	493	0.3072	560	0.6669	627	0.9793	694	0.3428	761	0.0457
427	0.0341	494	0.3150	561	0.6736	628	0.9744	695	0.3336	762	0.0447
428	0.0381	495	0.3240	562	0.6785	629	0.9717	696	0.3258	763	0.0431
429	0.0429	496	0.3319	563	0.6844	630	0.9656	697	0.3164	764	0.0416
430	0.0486	497	0.3407	564	0.6895	631	0.9606	698	0.3077	765	0.0402
431	0.0540	498	0.3494	565	0.6946	632	0.9568	699	0.2998	766	0.0390
432	0.0613	499	0.3562	566	0.6992	633	0.9519	700	0.2911	767	0.0380
433	0.0686	500	0.3659	567	0.7041	634	0.9447	701	0.2841	768	0.0365
434	0.0771	501	0.3747	568	0.7115	635	0.9395	702	0.2769	769	0.0355
435	0.0879	502	0.3828	569	0.7171	636	0.9334	703	0.2687	770	0.0344
436	0.0994	503	0.3918	570	0.7225	637	0.9267	704	0.2612	771	0.0329
437	0.1121	504	0.3991	571	0.7279	638	0.9188	705	0.2546	772	0.0324
438	0.1262	505	0.4074	572	0.7332	639	0.9102	706	0.2472	773	0.0314
439	0.1436	506	0.4151	573	0.7404	640	0.9013	707	0.2406	774	0.0301
440	0.1638	507	0.4225	574	0.7457	641	0.8928	708	0.2338	775	0.0291
441	0.1870	508	0.4283	575	0.7521	642	0.8873	709	0.2274	776	0.0283
442	0.2137	509	0.4364	576	0.7598	643	0.8794	710	0.2211	777	0.0271
443	0.2438	510	0.4421	577	0.7662	644	0.8725	711	0.2151	778	0.0270
444	0.2825	511	0.4488	578	0.7727	645	0.8634	712	0.2088	779	0.0259
445	0.3238	512	0.4541	579	0.7802	646	0.8545	713	0.2028	780	0.0259
446	0.3678	513	0.4611	580	0.7869	647	0.8475	714	0.1965	N/A	N/A

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

ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1
Date: 2022/3/8

Manufacturer: ETI Solid State Lighting (2
Model: 559011###



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

x 0.4027
 y 0.3787
 u' 0.2391
 v' 0.5058

CIE 13.3-1995 (CRI)	
R_a	92
R_g	58

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

Spectrum Data (3500K):

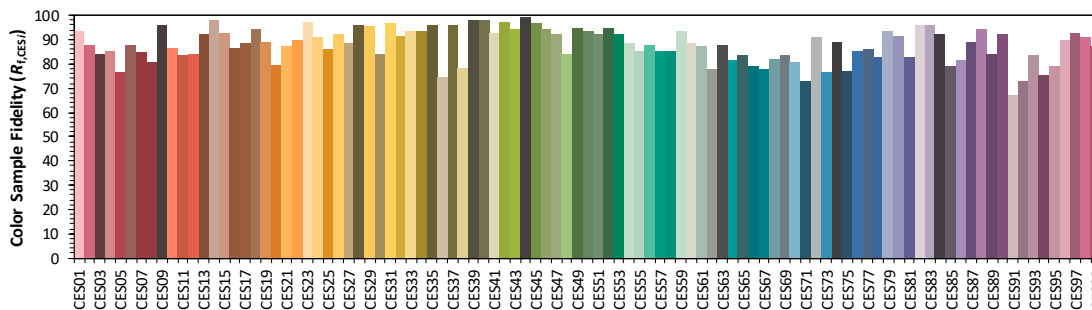
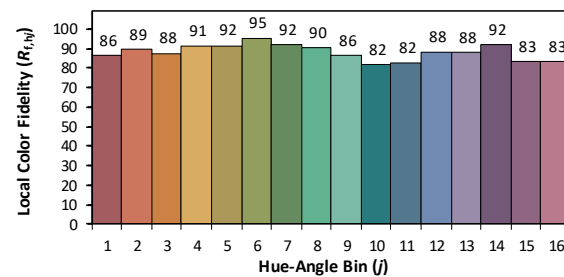
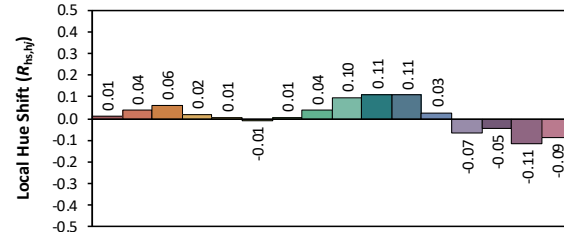
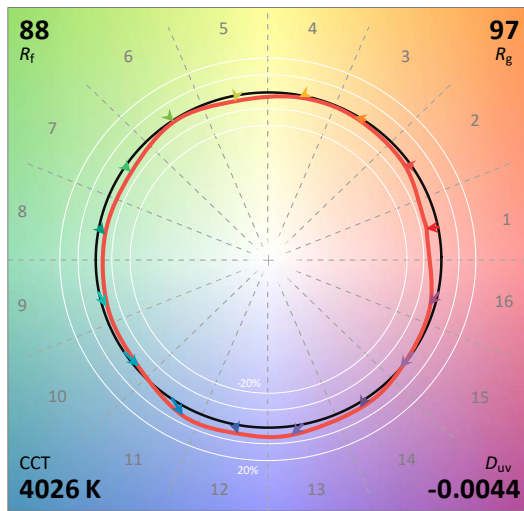
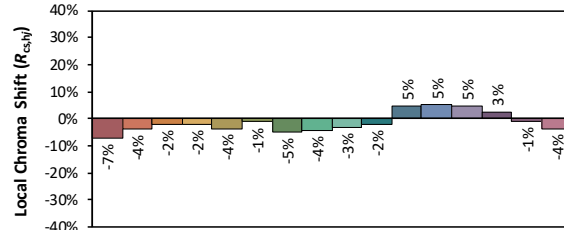
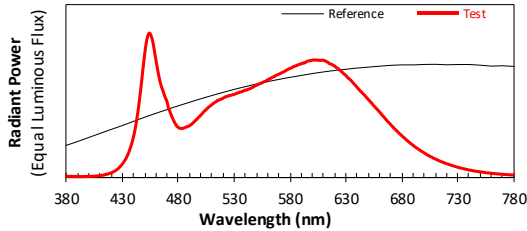
nm	mW	nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0061	447	0.5826	514	0.5516	581	0.8626	648	0.7726	715	0.1676
381	0.0075	448	0.6501	515	0.5581	582	0.8670	649	0.7629	716	0.1627
382	0.0037	449	0.7155	516	0.5598	583	0.8739	650	0.7533	717	0.1583
383	0.0042	450	0.7761	517	0.5648	584	0.8787	651	0.7438	718	0.1542
384	0.0045	451	0.8283	518	0.5703	585	0.8857	652	0.7324	719	0.1490
385	0.0030	452	0.8689	519	0.5739	586	0.8908	653	0.7224	720	0.1450
386	0.0034	453	0.8933	520	0.5784	587	0.8972	654	0.7121	721	0.1405
387	0.0038	454	0.9031	521	0.5828	588	0.9009	655	0.7003	722	0.1366
388	0.0028	455	0.8965	522	0.5894	589	0.9061	656	0.6915	723	0.1327
389	0.0036	456	0.8771	523	0.5911	590	0.9132	657	0.6800	724	0.1291
390	0.0031	457	0.8524	524	0.5958	591	0.9153	658	0.6699	725	0.1250
391	0.0040	458	0.8200	525	0.5991	592	0.9212	659	0.6590	726	0.1207
392	0.0043	459	0.7814	526	0.6027	593	0.9275	660	0.6492	727	0.1174
393	0.0033	460	0.7405	527	0.6047	594	0.9360	661	0.6362	728	0.1138
394	0.0035	461	0.7060	528	0.6070	595	0.9432	662	0.6245	729	0.1104
395	0.0028	462	0.6708	529	0.6117	596	0.9511	663	0.6130	730	0.1067
396	0.0028	463	0.6413	530	0.6156	597	0.9540	664	0.6002	731	0.1037
397	0.0041	464	0.6132	531	0.6188	598	0.9588	665	0.5895	732	0.1010
398	0.0031	465	0.5897	532	0.6234	599	0.9644	666	0.5791	733	0.0973
399	0.0043	466	0.5705	533	0.6267	600	0.9685	667	0.5670	734	0.0946
400	0.0041	467	0.5476	534	0.6293	601	0.9707	668	0.5566	735	0.0915
401	0.0048	468	0.5287	535	0.6341	602	0.9752	669	0.5440	736	0.0883
402	0.0047	469	0.5095	536	0.6377	603	0.9803	670	0.5335	737	0.0856
403	0.0044	470	0.4896	537	0.6419	604	0.9834	671	0.5225	738	0.0830
404	0.0052	471	0.4574	538	0.6448	605	0.9843	672	0.5109	739	0.0803
405	0.0054	472	0.4375	539	0.6494	606	0.9881	673	0.5001	740	0.0778
406	0.0061	473	0.4199	540	0.6533	607	0.9901	674	0.4887	741	0.0760
407	0.0064	474	0.4033	541	0.6528	608	0.9916	675	0.4779	742	0.0732
408	0.0076	475	0.3869	542	0.6580	609	0.9954	676	0.4681	743	0.0708
409	0.0085	476	0.3714	543	0.6629	610	0.9954	677	0.4575	744	0.0684
410	0.0084	477	0.3610	544	0.6668	611	0.9972	678	0.4473	745	0.0664
411	0.0104	478	0.3494	545	0.6707	612	0.9965	679	0.4365	746	0.0642
412	0.0114	479	0.3413	546	0.6774	613	0.9960	680	0.4274	747	0.0624
413	0.0129	480	0.3357	547	0.6833	614	0.9942	681	0.4173	748	0.0608
414	0.0139	481	0.3334	548	0.6880	615	0.9904	682	0.4083	749	0.0586
415	0.0156	482	0.3317	549	0.6927	616	0.9889	683	0.3973	750	0.0570
416	0.0176	483	0.3333	550	0.6976	617	0.9880	684	0.3887	751	0.0549
417	0.0192	484	0.3353	551	0.7028	618	0.9893	685	0.3782	752	0.0532
418	0.0218	485	0.3375	552	0.7067	619	0.9832	686	0.3706	753	0.0522
419	0.0238	486	0.3414	553	0.7103	620	0.9810	687	0.3626	754	0.0500
420	0.0263	487	0.3471	554	0.7162	621	0.9746	688	0.3525	755	0.0485
421	0.0293	488	0.3498	555	0.7202	622	0.9729	689	0.3438	756	0.0474
422	0.0324	489	0.3545	556	0.7240	623	0.9694	690	0.3344	757	0.0458
423	0.0359	490	0.3588	557	0.7303	624	0.9636	691	0.3260	758	0.0444
424	0.0400	491	0.3666	558	0.7347	625	0.9583	692	0.3166	759	0.0433
425	0.0445	492	0.3723	559	0.7418	626	0.9531	693	0.3091	760	0.0419
426	0.0496	493	0.3820	560	0.7450	627	0.9473	694	0.3018	761	0.0400
427	0.0565	494	0.3907	561	0.7503	628	0.9405	695	0.2938	762	0.0390
428	0.0634	495	0.3988	562	0.7570	629	0.9357	696	0.2858	763	0.0378
429	0.0702	496	0.4068	563	0.7605	630	0.9300	697	0.2783	764	0.0366
430	0.0789	497	0.4149	564	0.7675	631	0.9207	698	0.2717	765	0.0356
431	0.0881	498	0.4242	565	0.7716	632	0.9148	699	0.2637	766	0.0343
432	0.0983	499	0.4332	566	0.7763	633	0.9073	700	0.2561	767	0.0332
433	0.1091	500	0.4428	567	0.7820	634	0.8982	701	0.2499	768	0.0322
434	0.1215	501	0.4510	568	0.7874	635	0.8930	702	0.2423	769	0.0313
435	0.1378	502	0.4611	569	0.7925	636	0.8837	703	0.2358	770	0.0303
436	0.1540	503	0.4705	570	0.7974	637	0.8739	704	0.2293	771	0.0293
437	0.1731	504	0.4785	571	0.8036	638	0.8654	705	0.2229	772	0.0286
438	0.1936	505	0.4882	572	0.8076	639	0.8570	706	0.2168	773	0.0273
439	0.2175	506	0.4952	573	0.8141	640	0.8477	707	0.2105	774	0.0264
440	0.2456	507	0.5041	574	0.8202	641	0.8359	708	0.2048	775	0.0258
441	0.2782	508	0.5115	575	0.8257	642	0.8277	709	0.1981	776	0.0247
442	0.3142	509	0.5183	576	0.8327	643	0.8176	710	0.1937	777	0.0240
443	0.3589	510	0.5259	577	0.8376	644	0.8109	711	0.1877	778	0.0236
444	0.4041	511	0.5321	578	0.8457	645	0.8008	712	0.1833	779	0.0227
445	0.4604	512	0.5377	579	0.8500	646	0.7939	713	0.1775	780	0.0227
446	0.5197	513	0.5465	580	0.8584	647	0.7833	714	0.1723	N/A	N/A

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

ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1
Date: 2022/3/8

Manufacturer: ETI Solid State Lighting (2
Model: 559011###



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

x 0.3764
 y 0.3650
 u' 0.2272
 v' 0.4957

CIE 13.3-1995
(CRI)
 R_a 91
 R_g 50

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

Spectrum Data (4000K):

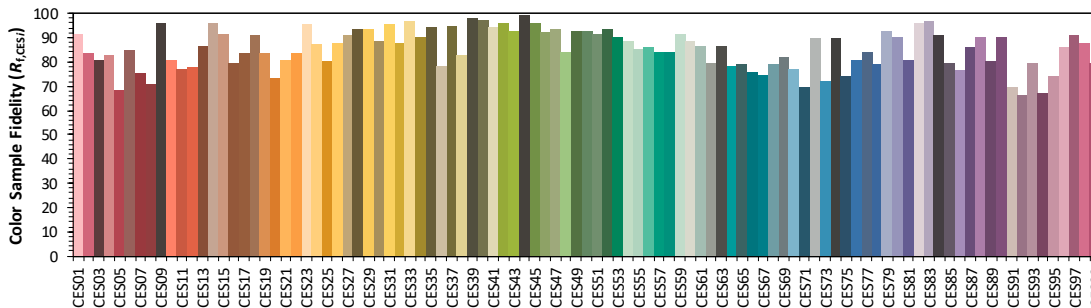
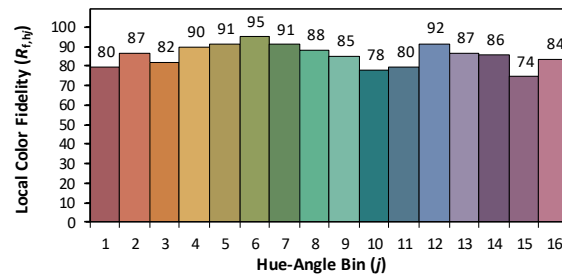
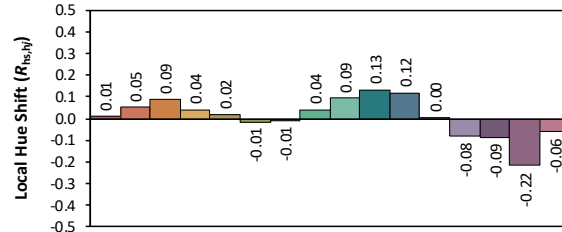
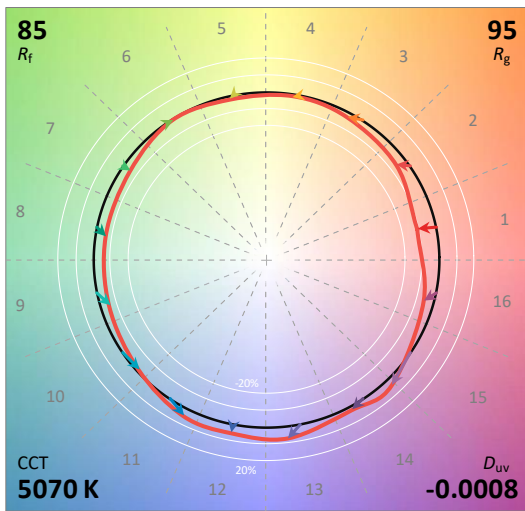
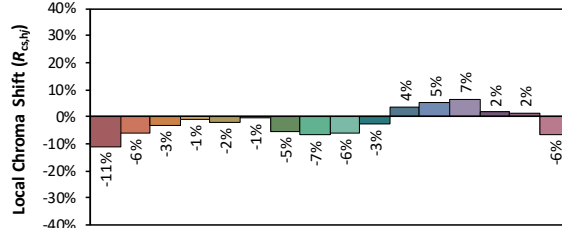
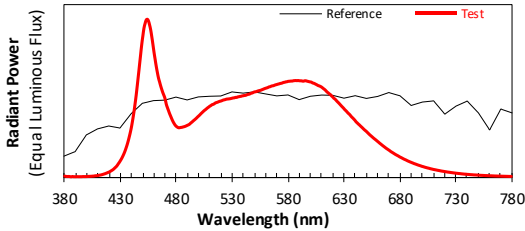
nm	mW	nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0053	447	0.6563	514	0.5242	581	0.7570	648	0.5569	715	0.1086
381	0.0061	448	0.7279	515	0.5314	582	0.7607	649	0.5492	716	0.1054
382	0.0042	449	0.7970	516	0.5331	583	0.7663	650	0.5397	717	0.1027
383	0.0047	450	0.8626	517	0.5367	584	0.7681	651	0.5320	718	0.0996
384	0.0057	451	0.9182	518	0.5401	585	0.7719	652	0.5226	719	0.0970
385	0.0020	452	0.9615	519	0.5438	586	0.7741	653	0.5145	720	0.0937
386	0.0048	453	0.9876	520	0.5471	587	0.7781	654	0.5052	721	0.0916
387	0.0044	454	0.9997	521	0.5517	588	0.7818	655	0.4958	722	0.0883
388	0.0051	455	0.9921	522	0.5568	589	0.7836	656	0.4880	723	0.0858
389	0.0034	456	0.9710	523	0.5574	590	0.7869	657	0.4788	724	0.0832
390	0.0038	457	0.9452	524	0.5610	591	0.7884	658	0.4706	725	0.0808
391	0.0040	458	0.9030	525	0.5642	592	0.7928	659	0.4628	726	0.0782
392	0.0038	459	0.8553	526	0.5658	593	0.7916	660	0.4538	727	0.0760
393	0.0029	460	0.8088	527	0.5672	594	0.7970	661	0.4452	728	0.0735
394	0.0039	461	0.7645	528	0.5705	595	0.8009	662	0.4356	729	0.0713
395	0.0034	462	0.7219	529	0.5721	596	0.8050	663	0.4256	730	0.0690
396	0.0038	463	0.6835	530	0.5741	597	0.8067	664	0.4177	731	0.0668
397	0.0049	464	0.6516	531	0.5773	598	0.8074	665	0.4090	732	0.0647
398	0.0040	465	0.6254	532	0.5805	599	0.8098	666	0.3999	733	0.0628
399	0.0048	466	0.6035	533	0.5837	600	0.8109	667	0.3906	734	0.0605
400	0.0043	467	0.5808	534	0.5848	601	0.8129	668	0.3822	735	0.0586
401	0.0051	468	0.5573	535	0.5898	602	0.8131	669	0.3743	736	0.0571
402	0.0056	469	0.5404	536	0.5909	603	0.8119	670	0.3661	737	0.0556
403	0.0052	470	0.5193	537	0.5938	604	0.8129	671	0.3576	738	0.0533
404	0.0062	471	0.4837	538	0.5976	605	0.8106	672	0.3495	739	0.0518
405	0.0065	472	0.4640	539	0.5996	606	0.8115	673	0.3404	740	0.0495
406	0.0068	473	0.4432	540	0.6042	607	0.8093	674	0.3331	741	0.0485
407	0.0079	474	0.4236	541	0.6034	608	0.8102	675	0.3248	742	0.0472
408	0.0086	475	0.4056	542	0.6073	609	0.8113	676	0.3179	743	0.0452
409	0.0097	476	0.3886	543	0.6105	610	0.8106	677	0.3103	744	0.0440
410	0.0108	477	0.3740	544	0.6126	611	0.8077	678	0.3024	745	0.0427
411	0.0113	478	0.3612	545	0.6169	612	0.8041	679	0.2953	746	0.0415
412	0.0127	479	0.3508	546	0.6208	613	0.8003	680	0.2882	747	0.0399
413	0.0140	480	0.3446	547	0.6245	614	0.7971	681	0.2805	748	0.0390
414	0.0156	481	0.3397	548	0.6296	615	0.7894	682	0.2744	749	0.0380
415	0.0176	482	0.3376	549	0.6345	616	0.7857	683	0.2674	750	0.0366
416	0.0199	483	0.3372	550	0.6374	617	0.7835	684	0.2601	751	0.0356
417	0.0217	484	0.3376	551	0.6404	618	0.7795	685	0.2536	752	0.0344
418	0.0244	485	0.3412	552	0.6450	619	0.7752	686	0.2471	753	0.0332
419	0.0272	486	0.3435	553	0.6489	620	0.7707	687	0.2405	754	0.0322
420	0.0295	487	0.3479	554	0.6511	621	0.7633	688	0.2340	755	0.0313
421	0.0333	488	0.3492	555	0.6550	622	0.7583	689	0.2278	756	0.0298
422	0.0376	489	0.3528	556	0.6593	623	0.7532	690	0.2226	757	0.0291
423	0.0419	490	0.3571	557	0.6624	624	0.7466	691	0.2162	758	0.0287
424	0.0462	491	0.3625	558	0.6649	625	0.7402	692	0.2093	759	0.0274
425	0.0519	492	0.3675	559	0.6706	626	0.7328	693	0.2047	760	0.0268
426	0.0571	493	0.3756	560	0.6746	627	0.7263	694	0.1992	761	0.0259
427	0.0656	494	0.3826	561	0.6796	628	0.7181	695	0.1939	762	0.0248
428	0.0734	495	0.3896	562	0.6829	629	0.7127	696	0.1886	763	0.0244
429	0.0818	496	0.3977	563	0.6861	630	0.7049	697	0.1833	764	0.0233
430	0.0920	497	0.4043	564	0.6917	631	0.6975	698	0.1782	765	0.0227
431	0.1031	498	0.4143	565	0.6947	632	0.6872	699	0.1733	766	0.0222
432	0.1150	499	0.4203	566	0.6983	633	0.6829	700	0.1689	767	0.0213
433	0.1275	500	0.4290	567	0.7030	634	0.6753	701	0.1640	768	0.0209
434	0.1430	501	0.4372	568	0.7081	635	0.6674	702	0.1588	769	0.0201
435	0.1598	502	0.4460	569	0.7099	636	0.6592	703	0.1540	770	0.0194
436	0.1799	503	0.4554	570	0.7143	637	0.6495	704	0.1500	771	0.0189
437	0.2029	504	0.4624	571	0.7179	638	0.6420	705	0.1461	772	0.0183
438	0.2258	505	0.4694	572	0.7212	639	0.6331	706	0.1415	773	0.0177
439	0.2532	506	0.4766	573	0.7253	640	0.6240	707	0.1384	774	0.0170
440	0.2847	507	0.4846	574	0.7292	641	0.6147	708	0.1337	775	0.0167
441	0.3215	508	0.4902	575	0.7327	642	0.6065	709	0.1293	776	0.0162
442	0.3624	509	0.4962	576	0.7383	643	0.5966	710	0.1266	777	0.0154
443	0.4114	510	0.5024	577	0.7423	644	0.5915	711	0.1226	778	0.0151
444	0.4632	511	0.5096	578	0.7464	645	0.5819	712	0.1188	779	0.0148
445	0.5239	512	0.5148	579	0.7504	646	0.5744	713	0.1156	780	0.0148
446	0.5884	513	0.5200	580	0.7542	647	0.5664	714	0.1114	N/A	N/A

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

ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1
Date: 2022/3/8

Manufacturer: ETI Solid State Lighting (2
Model: 559011###



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

x 0.3431
 y 0.3484
 u' 0.2113
 v' 0.4828

CIE 13.3-1995 (CRI)	
R_a	86
R_9	20

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	0.0078	447	0.7081	514	0.4648	581	0.6067	648	0.3034	715	0.0432
381	0.0061	448	0.7737	515	0.4699	582	0.6075	649	0.2971	716	0.0419
382	0.0051	449	0.8388	516	0.4725	583	0.6082	650	0.2914	717	0.0403
383	0.0052	450	0.8924	517	0.4748	584	0.6083	651	0.2844	718	0.0391
384	0.0053	451	0.9420	518	0.4779	585	0.6104	652	0.2775	719	0.0380
385	0.0040	452	0.9714	519	0.4804	586	0.6108	653	0.2704	720	0.0368
386	0.0034	453	0.9936	520	0.4822	587	0.6115	654	0.2642	721	0.0356
387	0.0051	454	0.9985	521	0.4849	588	0.6106	655	0.2581	722	0.0345
388	0.0038	455	0.9886	522	0.4881	589	0.6115	656	0.2518	723	0.0332
389	0.0039	456	0.9640	523	0.4897	590	0.6104	657	0.2457	724	0.0323
390	0.0036	457	0.9326	524	0.4916	591	0.6097	658	0.2401	725	0.0314
391	0.0042	458	0.8894	525	0.4941	592	0.6096	659	0.2345	726	0.0302
392	0.0040	459	0.8411	526	0.4947	593	0.6079	660	0.2284	727	0.0294
393	0.0038	460	0.7906	527	0.4955	594	0.6077	661	0.2227	728	0.0283
394	0.0040	461	0.7456	528	0.4965	595	0.6098	662	0.2164	729	0.0274
395	0.0038	462	0.7012	529	0.4980	596	0.6098	663	0.2109	730	0.0266
396	0.0045	463	0.6632	530	0.4999	597	0.6078	664	0.2051	731	0.0255
397	0.0048	464	0.6281	531	0.5016	598	0.6059	665	0.1995	732	0.0250
398	0.0045	465	0.6027	532	0.5023	599	0.6041	666	0.1942	733	0.0240
399	0.0047	466	0.5767	533	0.5050	600	0.6026	667	0.1887	734	0.0235
400	0.0049	467	0.5544	534	0.5048	601	0.6012	668	0.1832	735	0.0225
401	0.0057	468	0.5331	535	0.5078	602	0.5964	669	0.1786	736	0.0217
402	0.0059	469	0.5156	536	0.5093	603	0.5945	670	0.1736	737	0.0210
403	0.0064	470	0.4945	537	0.5110	604	0.5914	671	0.1690	738	0.0202
404	0.0067	471	0.4620	538	0.5120	605	0.5876	672	0.1633	739	0.0198
405	0.0075	472	0.4409	539	0.5144	606	0.5840	673	0.1590	740	0.0191
406	0.0078	473	0.4213	540	0.5154	607	0.5798	674	0.1546	741	0.0184
407	0.0093	474	0.4019	541	0.5173	608	0.5775	675	0.1501	742	0.0180
408	0.0100	475	0.3851	542	0.5179	609	0.5744	676	0.1456	743	0.0172
409	0.0106	476	0.3681	543	0.5209	610	0.5704	677	0.1415	744	0.0167
410	0.0114	477	0.3527	544	0.5236	611	0.5649	678	0.1378	745	0.0163
411	0.0134	478	0.3401	545	0.5249	612	0.5592	679	0.1340	746	0.0156
412	0.0144	479	0.3294	546	0.5275	613	0.5539	680	0.1294	747	0.0152
413	0.0161	480	0.3219	547	0.5314	614	0.5468	681	0.1259	748	0.0149
414	0.0180	481	0.3168	548	0.5329	615	0.5392	682	0.1224	749	0.0144
415	0.0203	482	0.3133	549	0.5364	616	0.5338	683	0.1184	750	0.0139
416	0.0226	483	0.3137	550	0.5396	617	0.5275	684	0.1148	751	0.0135
417	0.0252	484	0.3151	551	0.5404	618	0.5226	685	0.1115	752	0.0129
418	0.0282	485	0.3160	552	0.5427	619	0.5145	686	0.1084	753	0.0125
419	0.0313	486	0.3181	553	0.5453	620	0.5084	687	0.1045	754	0.0123
420	0.0341	487	0.3199	554	0.5474	621	0.5001	688	0.1016	755	0.0119
421	0.0385	488	0.3223	555	0.5490	622	0.4950	689	0.0983	756	0.0115
422	0.0426	489	0.3255	556	0.5513	623	0.4877	690	0.0955	757	0.0111
423	0.0473	490	0.3290	557	0.5544	624	0.4797	691	0.0925	758	0.0109
424	0.0529	491	0.3321	558	0.5571	625	0.4728	692	0.0898	759	0.0104
425	0.0599	492	0.3368	559	0.5603	626	0.4653	693	0.0866	760	0.0102
426	0.0664	493	0.3436	560	0.5627	627	0.4576	694	0.0844	761	0.0096
427	0.0746	494	0.3490	561	0.5650	628	0.4497	695	0.0817	762	0.0096
428	0.0852	495	0.3556	562	0.5674	629	0.4425	696	0.0790	763	0.0092
429	0.0952	496	0.3615	563	0.5712	630	0.4350	697	0.0766	764	0.0090
430	0.1066	497	0.3675	564	0.5726	631	0.4266	698	0.0743	765	0.0085
431	0.1186	498	0.3740	565	0.5759	632	0.4202	699	0.0720	766	0.0084
432	0.1327	499	0.3811	566	0.5780	633	0.4123	700	0.0693	767	0.0081
433	0.1480	500	0.3876	567	0.5790	634	0.4046	701	0.0676	768	0.0079
434	0.1654	501	0.3943	568	0.5821	635	0.3985	702	0.0652	769	0.0078
435	0.1855	502	0.4017	569	0.5845	636	0.3902	703	0.0631	770	0.0076
436	0.2073	503	0.4085	570	0.5863	637	0.3817	704	0.0612	771	0.0072
437	0.2324	504	0.4152	571	0.5886	638	0.3752	705	0.0592	772	0.0070
438	0.2605	505	0.4217	572	0.5904	639	0.3676	706	0.0577	773	0.0068
439	0.2904	506	0.4271	573	0.5928	640	0.3600	707	0.0556	774	0.0066
440	0.3253	507	0.4329	574	0.5941	641	0.3506	708	0.0537	775	0.0064
441	0.3668	508	0.4390	575	0.5963	642	0.3440	709	0.0521	776	0.0062
442	0.4110	509	0.4439	576	0.5995	643	0.3369	710	0.0503	777	0.0060
443	0.4622	510	0.4496	577	0.6004	644	0.3308	711	0.0488	778	0.0058
444	0.5163	511	0.4536	578	0.6029	645	0.3237	712	0.0475	779	0.0057
445	0.5789	512	0.4588	579	0.6037	646	0.3173	713	0.0460	780	0.0057
446	0.6426	513	0.4611	580	0.6061	647	0.3104	714	0.0445	N/A	N/A

Goniophotometer Test Results:

Test Condition:

Test Ambient (°C)	Test Humidity (%)	Orientation	Stabilization Time (minute)	Test Time (minute)
24.8	48.6	Face Down	90	25

Electrical Data:

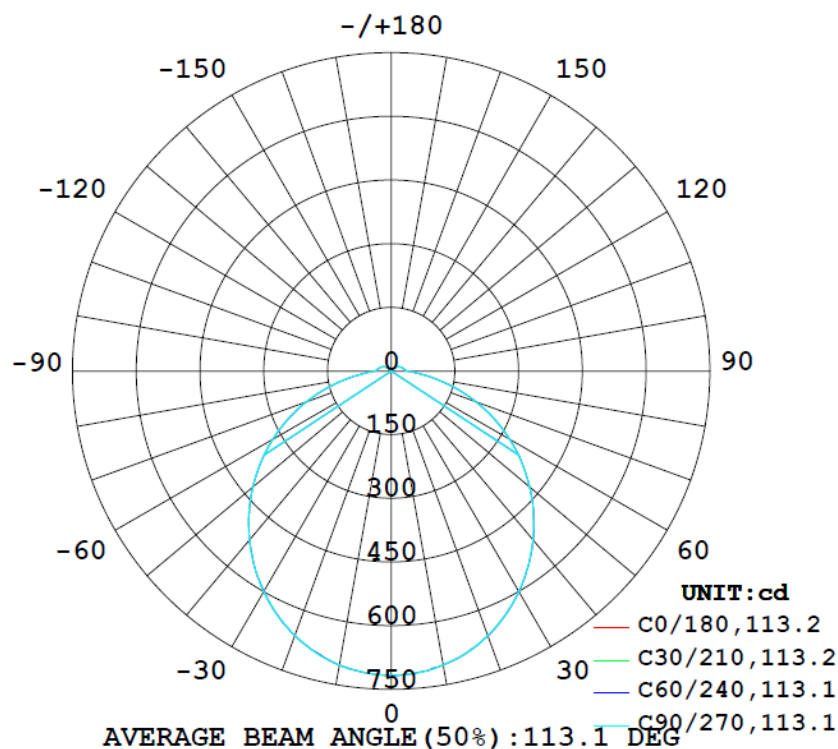
Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor
120.0	60	0.1867	21.93	0.9789

Goniophotometer Data:

Parameter	Results
Total Luminous (lm)	2221.6
Luminous Efficacy (lm/W)	101.30
Zonal Lumens Distribution (0-60°)	84.2%
Beam Angle (°)	113.1

Luminous Intensity Distribution Diagram:

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

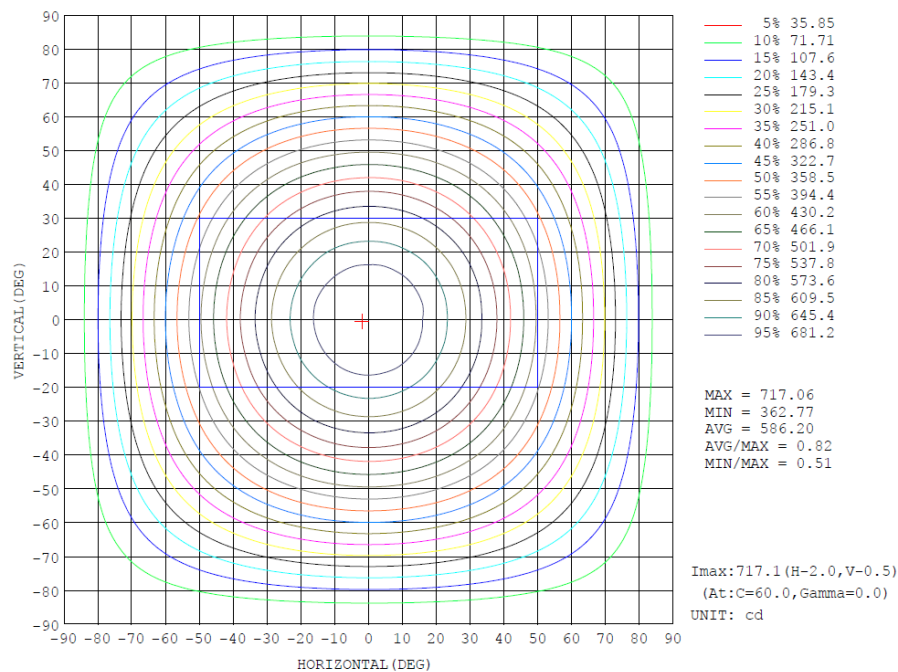


Zonal Flux Diagram:

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	φ zone	φ total	%lum,lamp
10	703.6	703.2	703.0	703.1	703.3	703.0	703.8	704.3	0- 10	67.78	67.78	3.05,3.05
20	663.1	663.9	663.3	662.8	663.1	663.0	663.3	664.9	10- 20	193.7	261.5	11.8,11.8
30	600.4	600.7	600.3	598.7	600.5	600.0	600.1	601.3	20- 30	292.4	553.9	24.9,24.9
40	519.3	519.8	518.4	518.2	518.9	518.6	519.4	520.6	30- 40	351.4	905.3	40.7,40.7
50	425.3	426.1	424.8	423.8	425.1	424.5	425.0	426.8	40- 50	365.4	1271	57.2,57.2
60	322.4	322.2	321.8	320.9	322.9	321.9	322.2	323.6	50- 60	335.0	1606	72.3,72.3
70	212.2	212.6	212.1	211.9	213.6	212.7	212.4	213.8	60- 70	265.1	1871	84.2,84.2
80	105.0	105.5	105.3	105.3	106.8	105.8	105.5	106.2	70- 80	166.8	2038	91.7,91.7
90	39.99	39.69	39.29	39.79	40.66	40.47	40.16	40.38	80- 90	72.75	2110	95,95
100	30.99	30.62	30.44	31.01	31.48	31.53	31.36	31.35	90-100	37.14	2148	96.7,96.7
110	26.20	25.83	25.64	26.11	26.63	26.65	26.54	26.56	100-110	30.36	2178	98,98
120	20.97	20.73	20.51	20.75	21.10	21.02	21.02	21.22	110-120	23.58	2201	99.1,99.1
130	12.93	13.02	12.65	12.05	11.29	10.35	11.18	12.12	120-130	15.27	2217	99.8,99.8
140	0.4893	0.4877	0.4865	0.4864	0.7027	0.7023	0.7054	0.7058	130-140	3.773	2221	100,100
150	0.5679	0.5659	0.5641	0.5656	0.8383	0.8404	0.8416	0.8427	140-150	0.4070	2221	100,100
160	0.6849	0.6791	0.6782	0.6786	0.9563	0.9579	0.9571	0.9613	150-160	0.3519	2221	100,100
170	0.7809	0.7758	0.7807	0.7746	0.9830	0.9842	0.9875	0.9865	160-170	0.2423	2222	100,100
180	0.9377	0.9317	0.9330	0.9384	0.9358	0.9323	0.9306	0.9348	170-180	0.0855	2222	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Isocandela Diagram:



Luminous Distribution Intensity Data:

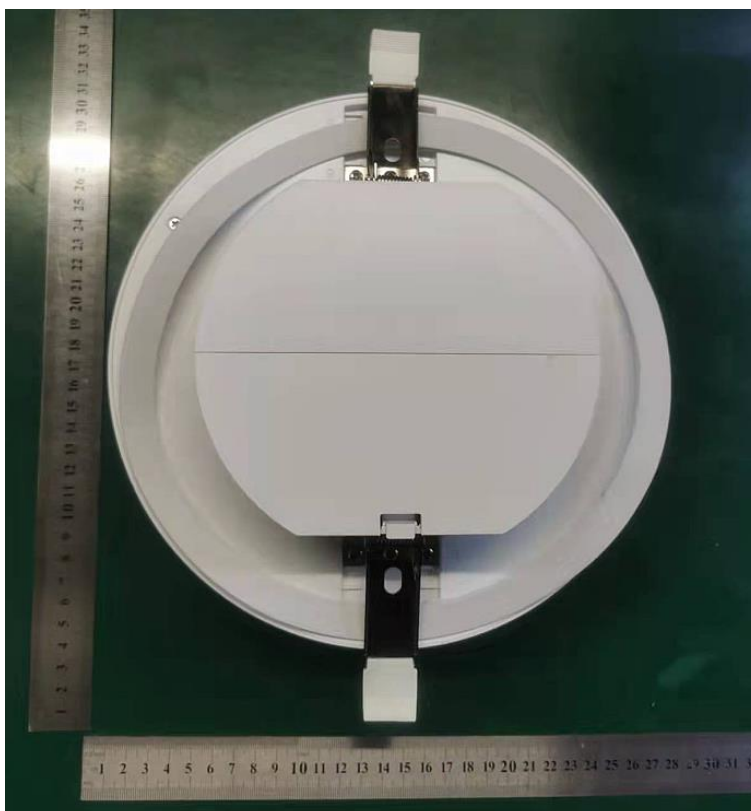
Table--1 UNIT: cd

C (DEG) γ (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	716	717	716	716	717	717	717	717	716	717	717	717	716	717	716	716	717	717	717
5	713	713	714	713	713	713	713	713	713	714	713	713	713	713	713	713	713	713	713
10	704	704	704	703	703	704	703	703	704	703	704	703	703	703	704	703	704	704	704
15	687	687	686	687	687	687	686	687	687	686	686	685	686	686	687	686	686	687	687
20	663	664	663	664	664	663	663	662	663	663	662	662	663	664	663	663	663	663	663
25	634	635	635	634	635	635	634	634	634	633	633	633	634	634	634	634	634	635	635
30	600	601	601	601	600	601	600	600	599	599	598	598	600	600	599	600	599	600	600
35	562	562	562	563	562	562	562	560	561	561	560	560	561	562	561	562	562	561	562
40	519	519	520	520	519	519	518	518	518	518	517	518	519	519	519	519	519	519	519
45	474	474	474	474	474	474	473	473	473	473	471	472	473	473	473	473	474	473	474
50	425	425	426	426	426	425	425	425	424	424	424	424	425	425	425	425	424	425	425
55	374	375	375	375	375	375	375	374	374	373	373	373	375	375	375	375	375	375	375
60	322	322	322	322	322	322	322	322	321	321	321	320	323	322	322	322	322	322	322
65	267	268	268	268	268	268	268	267	267	267	266	266	269	268	268	268	268	268	268
70	212	213	212	213	213	212	212	212	212	212	211	211	214	213	213	213	212	213	212
75	157	157	157	157	158	157	157	157	157	157	157	157	159	158	158	158	157	157	158
80	105	105	105	106	105	105	105	105	105	105	105	105	107	106	106	106	106	106	105
85	63.0	63.1	63.1	63.1	62.9	62.8	62.6	62.6	62.8	63.0	63.0	63.0	64.2	64.0	63.8	63.5	63.5	63.3	63.2
90	40.0	40.0	39.9	39.7	39.6	39.4	39.3	39.4	39.6	39.8	40.0	40.1	40.7	40.6	40.5	40.5	40.4	40.3	40.2
95	33.4	33.2	33.1	33.0	32.9	32.8	32.8	33.0	33.2	33.4	33.6	33.7	34.0	33.9	33.9	33.9	33.9	33.9	33.8
100	31.0	30.9	30.8	30.6	30.5	30.5	30.4	30.5	30.7	31.0	31.1	31.3	31.5	31.5	31.5	31.5	31.5	31.4	31.4
105	28.6	28.5	28.4	28.2	28.2	28.1	28.0	28.1	28.3	28.6	28.7	28.8	29.1	29.0	29.1	29.1	29.1	29.0	28.9
110	26.2	26.1	25.9	25.8	25.8	25.7	25.6	25.7	25.9	26.1	26.2	26.3	26.6	26.6	26.6	26.6	26.7	26.6	26.5
115	23.7	23.7	23.6	23.4	23.3	23.3	23.2	23.3	23.5	23.6	23.8	23.8	24.1	24.1	24.0	24.1	24.1	24.1	24.0
120	21.0	20.9	20.8	20.7	20.6	20.6	20.5	20.6	20.7	20.8	20.9	20.9	21.1	21.1	21.1	21.0	21.0	21.0	21.0
125	17.3	17.5	17.5	17.3	17.2	17.2	17.1	17.0	17.1	17.0	17.0	17.0	17.1	17.0	17.0	16.9	16.8	16.9	17.1
130	12.9	13.1	13.1	13.0	12.8	12.7	12.6	12.5	12.3	12.0	11.7	11.3	11.3	10.7	10.5	10.4	10.4	10.8	11.2
135	5.39	5.92	6.22	6.32	6.21	5.89	5.46	4.92	4.34	3.65	2.91	2.12	1.88	1.46	1.23	1.23	1.39	1.60	1.93
140	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.49	0.70	0.70	0.70	0.70	0.70	0.70	0.71
145	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.77	0.77	0.77	0.77	0.77	0.77	0.78
150	0.57	0.57	0.57	0.57	0.56	0.57	0.56	0.56	0.56	0.57	0.57	0.56	0.84	0.84	0.84	0.84	0.84	0.84	0.84
155	0.63	0.63	0.63	0.63	0.62	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.90	0.90	0.90	0.90	0.90	0.90	0.90
160	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.96	0.96	0.96	0.96	0.96	0.96	0.96
165	0.74	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.74	0.73	0.73	0.73	0.98	0.99	0.99	0.99	0.99	0.99	0.99
170	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.77	0.77	0.77	0.77	0.98	0.98	0.98	0.98	0.99	0.99	0.99
175	0.86	0.86	0.86	0.85	0.85	0.86	0.86	0.86	0.86	0.86	0.85	0.85	0.97	0.97	0.97	0.97	0.97	0.97	0.97
180	0.94	0.94	0.94	0.93	0.93	0.93	0.93	0.93	0.93	0.94	0.94	0.94	0.94	0.94	0.93	0.93	0.93	0.93	0.93

Table--2 UNIT: cd

C (DEG) γ (DEG)	285	300	315	330	345														
0	717	716	717	717	717														
5	714	713	714	713	714														
10	704	704	704	704	704														
15	687	687	688	687	688														
20	663	665	665	664	665														
25	635	636	636	636	636														
30	601	602	601	602	602														
35	563	563	563	563	563														
40	520	520	521	521	521														
45	474	474	475	475	476														
50	426	426	427	427	427														
55	375	376	376	376	377														
60	323	323	324	324	324														
65	269	269	270	269	270														
70	213	213	214	214	215														
75	158	158	158	159	159														
80	106	106	106	106	107														
85	63.2	63.3	63.6	63.8	64.1														
90	40.1	40.2	40.4	40.5	40.6														
95	33.7	33.7	33.7	33.6	33.6														
100	31.3	31.3	31.3	31.3	31.2														
105	29.0	28.9	29.0	28.9	28.9														
110	26.5	26.5	26.6	26.5	26.5														
115	24.0	24.1	24.1	24.1	24.0														
120	21.1	21.1	21.2	21.3	21.3														
125	17.2	17.1	17.5	17.6	17.7														
130	11.6	11.8	12.1	12.6	12.9														
135	2.43	3.07	3.70	4.36	5.20														
140	0.71	0.71	0.71	0.71	0.71														
145	0.78	0.78	0.78	0.78	0.78														
150	0.84	0.84	0.84	0.84	0.84														
155	0.90	0.90	0.90	0.90	0.91														
160	0.96	0.96	0.96	0.96	0.96														
165	0.99	0.99	0.99	0.99	0.99														
170	0.99	0.99	0.99	0.99	0.99														
175	0.98	0.97	0.98	0.97	0.97														
180	0.93	0.93	0.93	0.93	0.93														

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*******