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

Direct Linear Ambient Luminaires

Model Name(s):
544651##-2

Representative (Tested) Model:
54465141-2

Model Difference: ##=41-50 identifies 4000K.

Prepare by:

Alan Wang

Engineer: Alan Wang
Date: 2020-04-22

Review by:

Vincent Yuan

Technical Lead: Vincent Yuan
Issue Date: 2020-05-13
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 does not imply product certification, approval, or endorsement by NVLAP, or any agency of the Federal Government.

Client Information:

Client Name:	ETI Solid State Lighting (Zhuhai) Ltd
Brand Name:	ETI
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, Guanggdong Prov., China 519085
Factory 2 Name:	NVC VIETNAM TECHNOLOGY AND LIGHTING COMPANY LIMITED
Factory 2 Address:	Lot CN23-1, Yen Phong Industrial park, Dong Phong commune, Yen Phong district, Bac Ninh province, Vietnam

Product Information:

Model Number:	544651##-2(##=41-50)
Product Type:	Direct Linear Ambient Luminaires
Rating Input:	120-277Vac, 50/60Hz, 51W
Declared CCT:	4000 K
Declared Light Output:	5865 lm
LED Manufacturer:	Samsung
LED Model:	SPMWH1228FD5WAT0XX
LED Quantity:	176 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:	2020-04-08
Quantity of Receipt Samples:	1 pc
Sample Number:	200408009-S1

Laboratory Information:

Test Laboratory:	Dongguan New Testing Centre Co., Ltd
Laboratory Address:	3F, No. 1 the 1st 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:

Issued Date of Test Report:	2020-05-13
Revised Date of Test Report:	N/A
Test Report No.:	NTCLR20040066
Remark *(If applicable)*:	N/A

Test Specification:	
Date of Test	2020-04-09
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 10. THD and PF
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 ANSI C78.77-10-2014 Harmonic Emission Limits – Related Power Quality Requirements 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 °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° horizonal 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 °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.

3. THD and PF Measurements:

The sample was tested according to the ANSI C82.77-2002, the sample was operated at requirement Voltage and Frequency, and was stabilized before measurement. The Total Harmonic Distortion was calculated from the Digital Power Meter.

Integrating Sphere Test Results:

Test Condition:

Test Ambient (°C)	Test Humidity (%)	Orientation	Stabilization Time (minute)	Test Time (minute)
24.1	59.6	Face Down	90	10

Electrical Data:

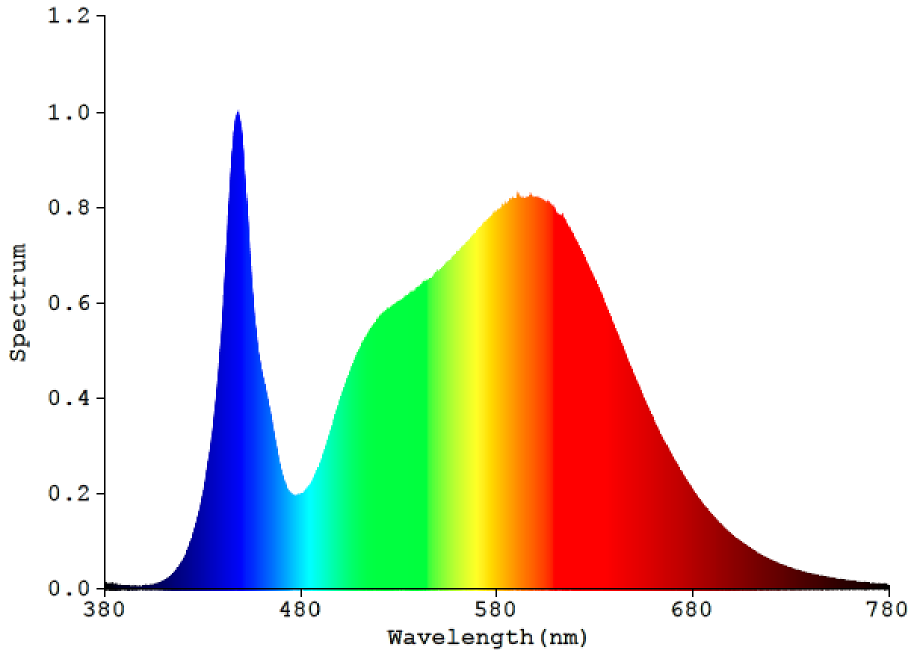
Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor
120.0	60	0.3946	46.91	0.9873

Color Data:

Parameter	Result
CCT(K)	3988
Ra	83.6
R_f	84
R_g	98
$R_{cs,\ h1}$	-11%
Chromaticity, (x, y)	(0.3802, 0.3742)
Chromaticity, (u', v')	(0.2260, 0.5004)
Duv	-0.0011

Specify Color Rendering			
R1	83	R9	15
R2	88	R10	72
R3	92	R11	84
R4	84	R12	65
R5	83	R13	84
R6	84	R14	96
R7	87	R15	77
R8	68	-	-

Spectrum Diagram:



Laboratory: Dongguan New Testing Centre Co., Ltd
Address: 3F, No. 1 the 1st North Industry Road, Songshan Lake Science & Technology Park, Dongguan, Guangdong, China
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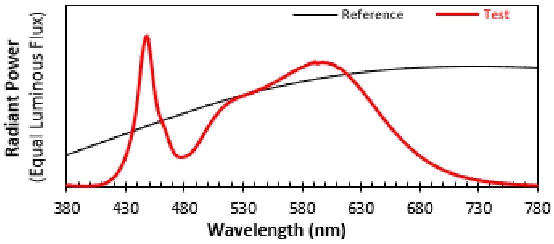
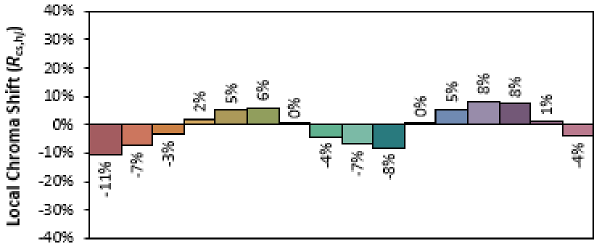
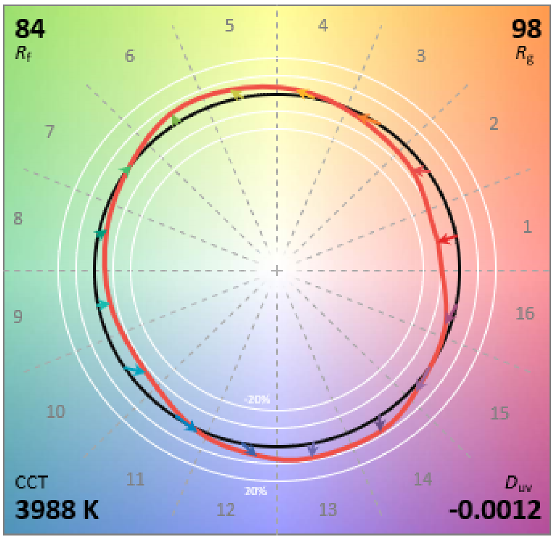
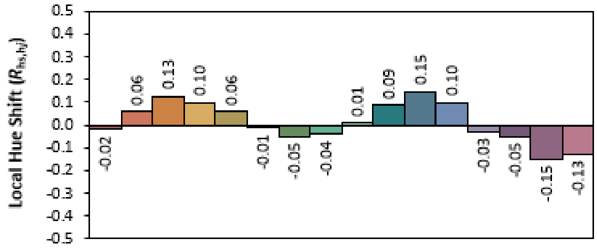
Website: http://www.ntc-cert.com

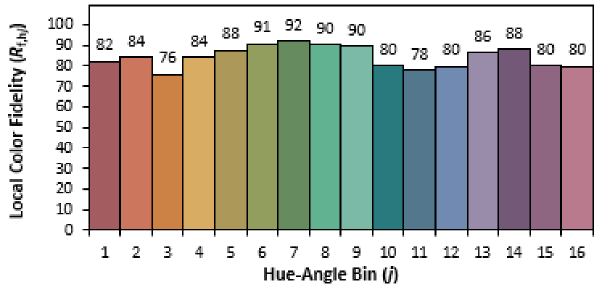
IES TM-30-18 Color Rendition Result:

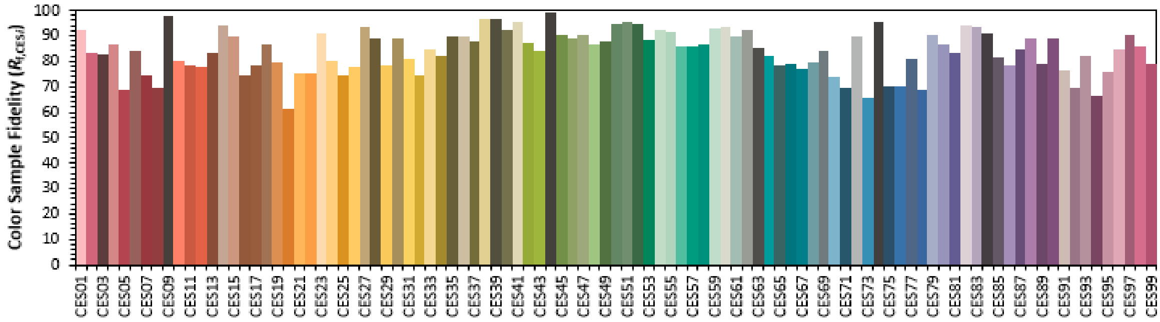












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Spectrum Data:

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0102	447	0.9880	514	0.5312	581	0.7929	648	0.4661	715	0.0706
381	0.0112	448	0.9900	515	0.5387	582	0.7938	649	0.4562	716	0.0680
382	0.0100	449	0.9734	516	0.5452	583	0.8006	650	0.4463	717	0.0665
383	0.0101	450	0.9334	517	0.5519	584	0.8019	651	0.4361	718	0.0641
384	0.0084	451	0.8714	518	0.5566	585	0.8055	652	0.4268	719	0.0622
385	0.0073	452	0.8068	519	0.5612	586	0.8095	653	0.4187	720	0.0604
386	0.0067	453	0.7383	520	0.5687	587	0.8134	654	0.4075	721	0.0589
387	0.0075	454	0.6702	521	0.5708	588	0.8174	655	0.3983	722	0.0567
388	0.0067	455	0.6157	522	0.5749	589	0.8165	656	0.3890	723	0.0551
389	0.0061	456	0.5640	523	0.5784	590	0.8163	657	0.3801	724	0.0530
390	0.0061	457	0.5260	524	0.5848	591	0.8236	658	0.3710	725	0.0511
391	0.0062	458	0.4917	525	0.5865	592	0.8198	659	0.3623	726	0.0497
392	0.0062	459	0.4693	526	0.5909	593	0.8136	660	0.3525	727	0.0484
393	0.0052	460	0.4471	527	0.5937	594	0.8176	661	0.3438	728	0.0465
394	0.0056	461	0.4288	528	0.5956	595	0.8184	662	0.3368	729	0.0451
395	0.0057	462	0.4103	529	0.5981	596	0.8200	663	0.3271	730	0.0441
396	0.0051	463	0.3895	530	0.6028	597	0.8230	664	0.3195	731	0.0425
397	0.0052	464	0.3712	531	0.6038	598	0.8197	665	0.3115	732	0.0411
398	0.0054	465	0.3467	532	0.6064	599	0.8199	666	0.3040	733	0.0398
399	0.0058	466	0.3225	533	0.6109	600	0.8198	667	0.2966	734	0.0390
400	0.0068	467	0.3011	534	0.6141	601	0.8192	668	0.2876	735	0.0374
401	0.0073	468	0.2782	535	0.6151	602	0.8162	669	0.2803	736	0.0362
402	0.0068	469	0.2579	536	0.6180	603	0.8152	670	0.2723	737	0.0353
403	0.0084	470	0.2414	537	0.6194	604	0.8123	671	0.2646	738	0.0340
404	0.0084	471	0.2254	538	0.6227	605	0.8096	672	0.2582	739	0.0329
405	0.0094	472	0.2163	539	0.6289	606	0.8097	673	0.2505	740	0.0318
406	0.0108	473	0.2079	540	0.6302	607	0.8057	674	0.2448	741	0.0310
407	0.0116	474	0.2023	541	0.6340	608	0.8004	675	0.2378	742	0.0299
408	0.0134	475	0.1985	542	0.6365	609	0.7976	676	0.2311	743	0.0291
409	0.0151	476	0.1966	543	0.6408	610	0.7894	677	0.2242	744	0.0281
410	0.0169	477	0.1949	544	0.6438	611	0.7841	678	0.2180	745	0.0272
411	0.0198	478	0.1961	545	0.6459	612	0.7824	679	0.2125	746	0.0268
412	0.0223	479	0.1974	546	0.6494	613	0.7794	680	0.2068	747	0.0257
413	0.0254	480	0.1994	547	0.6513	614	0.7743	681	0.2004	748	0.0249
414	0.0288	481	0.2005	548	0.6550	615	0.7680	682	0.1944	749	0.0243
415	0.0331	482	0.2046	549	0.6595	616	0.7603	683	0.1888	750	0.0235
416	0.0379	483	0.2089	550	0.6647	617	0.7528	684	0.1838	751	0.0229
417	0.0439	484	0.2136	551	0.6657	618	0.7468	685	0.1781	752	0.0221
418	0.0503	485	0.2185	552	0.6710	619	0.7394	686	0.1726	753	0.0215
419	0.0570	486	0.2258	553	0.6752	620	0.7310	687	0.1688	754	0.0208
420	0.0633	487	0.2358	554	0.6799	621	0.7244	688	0.1631	755	0.0203
421	0.0716	488	0.2434	555	0.6839	622	0.7156	689	0.1582	756	0.0198
422	0.0814	489	0.2529	556	0.6866	623	0.7078	690	0.1532	757	0.0189
423	0.0912	490	0.2654	557	0.6897	624	0.6997	691	0.1494	758	0.0185
424	0.1022	491	0.2777	558	0.6957	625	0.6906	692	0.1449	759	0.0177
425	0.1163	492	0.2898	559	0.6989	626	0.6818	693	0.1403	760	0.0173
426	0.1306	493	0.3026	560	0.7037	627	0.6732	694	0.1365	761	0.0167
427	0.1475	494	0.3165	561	0.7082	628	0.6637	695	0.1324	762	0.0163
428	0.1635	495	0.3293	562	0.7144	629	0.6542	696	0.1275	763	0.0157
429	0.1826	496	0.3416	563	0.7174	630	0.6456	697	0.1236	764	0.0154
430	0.2033	497	0.3571	564	0.7217	631	0.6359	698	0.1204	765	0.0151
431	0.2261	498	0.3696	565	0.7260	632	0.6254	699	0.1164	766	0.0145
432	0.2515	499	0.3816	566	0.7298	633	0.6154	700	0.1123	767	0.0140
433	0.2765	500	0.3958	567	0.7335	634	0.6069	701	0.1093	768	0.0135
434	0.3035	501	0.4080	568	0.7411	635	0.5967	702	0.1059	769	0.0133
435	0.3365	502	0.4189	569	0.7433	636	0.5868	703	0.1026	770	0.0127
436	0.3748	503	0.4315	570	0.7491	637	0.5768	704	0.0995	771	0.0125
437	0.4162	504	0.4415	571	0.7559	638	0.5672	705	0.0965	772	0.0123
438	0.4628	505	0.4531	572	0.7571	639	0.5562	706	0.0933	773	0.0115
439	0.5154	506	0.4634	573	0.7626	640	0.5461	707	0.0907	774	0.0111
440	0.5754	507	0.4745	574	0.7657	641	0.5366	708	0.0877	775	0.0109
441	0.6429	508	0.4822	575	0.7693	642	0.5260	709	0.0852	776	0.0108
442	0.7115	509	0.4940	576	0.7740	643	0.5162	710	0.0821	777	0.0105
443	0.7930	510	0.5000	577	0.7782	644	0.5050	711	0.0802	778	0.0101
444	0.8575	511	0.5109	578	0.7808	645	0.4960	712	0.0773	779	0.0094
445	0.9181	512	0.5175	579	0.7864	646	0.4864	713	0.0744	780	0.0087
446	0.9597	513	0.5261	580	0.7898	647	0.4760	714	0.0730		N/A

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Goniophotemeter Test Results:

Test Condition:

Test Ambient (°C)	Test Humidity (%)	Orientation	Stabilization Time (minute)	Test Time (minute)
24.1	59.6	Face Down	90	25

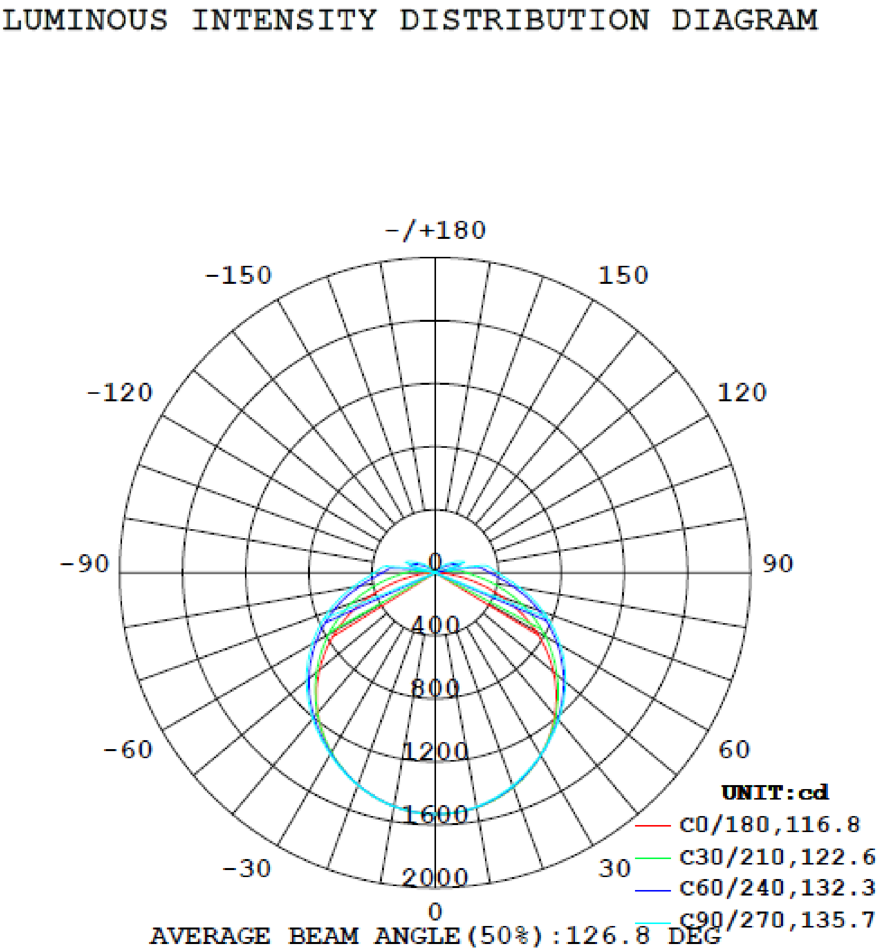
Electrical Data:

Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor
120.0	60	0.3946	46.91	0.9873

Goniophotometer Data:

Parameter	Results
Total Luminous (lm)	5690.2
Luminous per feet (lm/ft)	1422.6
Luminous Efficacy (lm/w)	121.30
Zonal Lumens Distribution (0-60°)	64.6%
Beam Angle (°)	126.8

Luminous Intensity Distribution Diagram:



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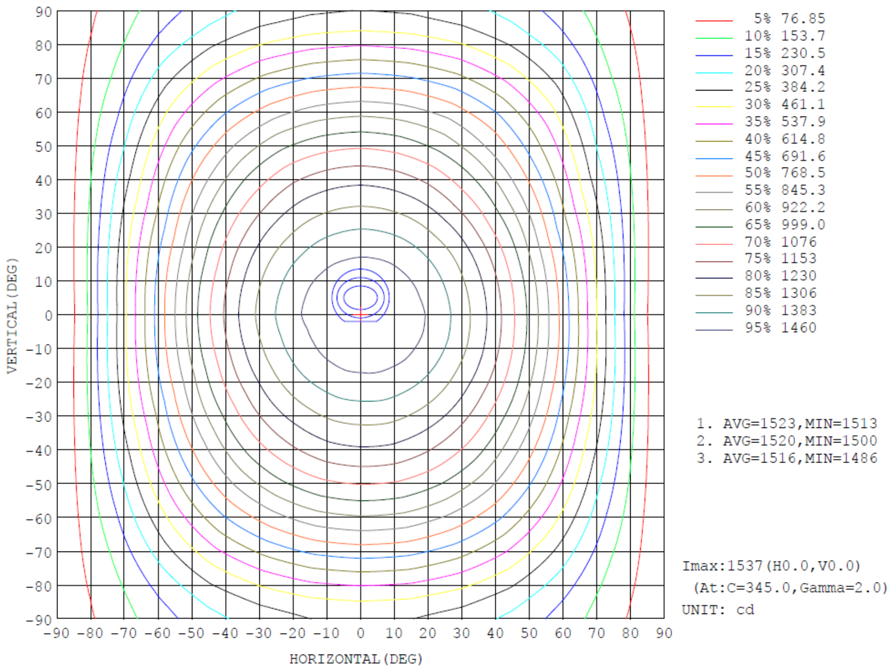
Zonal Flux Diagram:

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum,lamp
10	1513	1512	1507	1504	1506	1504	1506	1511	0- 10	145.1	145.1	2.55,2.55
20	1447	1446	1437	1432	1434	1430	1435	1442	10- 20	417.6	562.7	9.89,9.89
30	1337	1339	1336	1320	1320	1318	1332	1331	20- 30	640.4	1203	21.1,21.1
40	1180	1200	1219	1179	1160	1175	1208	1180	30- 40	790.4	1993	35,35
50	979.4	1041	1080	1020	958.2	1015	1064	1011	40- 50	855.0	2848	50.1,50.1
60	734.9	859.2	915.2	838.4	715.7	832.0	900.3	825.9	50- 60	828.2	3677	64.6,64.6
70	457.4	656.1	732.3	637.2	443.0	630.1	719.4	637.9	60- 70	715.2	4392	77.2,77.2
80	179.8	447.8	542.5	433.5	172.6	425.2	530.8	433.7	70- 80	535.6	4927	86.6,86.6
90	25.95	288.4	396.7	283.4	26.66	274.0	386.3	280.8	80- 90	344.4	5272	92.6,92.6
100	18.14	24.16	239.7	10.81	19.48	17.36	186.2	16.33	90-100	208.2	5480	96.3,96.3
110	9.952	105.7	200.2	109.5	8.241	103.2	202.0	103.0	100-110	74.49	5554	97.6,97.6
120	1.121	57.09	136.8	56.85	1.323	56.34	134.2	55.61	110-120	80.02	5634	99,99
130	2.296	15.44	70.01	15.46	2.707	16.52	69.25	15.17	120-130	39.03	5674	99.7,99.7
140	1.539	4.110	17.81	4.224	1.766	4.854	18.82	4.856	130-140	12.05	5686	99.9,99.9
150	1.440	3.217	4.266	3.324	1.833	3.891	5.014	3.831	140-150	2.663	5688	100,100
160	1.483	1.187	3.074	1.249	1.937	1.695	3.728	1.614	150-160	1.293	5690	100,100
170	1.557	1.700	1.747	1.612	1.842	2.136	2.204	2.045	160-170	0.5420	5690	100,100
180	1.750	1.739	1.656	1.680	1.751	1.737	1.656	1.679	170-180	0.1691	5690	100,100
DEG	LUMINOUS INTENSITY:cd Less than 35% Percent = 19.3 %									UNIT:lm		

Isocandela Diagram:



Luminous Distribution Intensity Data:

Table--1 UNIT: cd

γ (DEG) \ C (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532	1532
5	1528	1529	1527	1528	1527	1528	1526	1526	1524	1524	1524	1524	1524	1523	1524	1523	1524	1525	1525
10	1513	1513	1513	1512	1510	1510	1507	1508	1506	1504	1504	1505	1506	1504	1504	1504	1505	1506	1506
15	1485	1487	1485	1486	1481	1482	1477	1477	1474	1474	1473	1474	1476	1474	1474	1472	1474	1474	1476
20	1447	1449	1448	1446	1443	1443	1437	1437	1433	1432	1431	1432	1434	1432	1432	1430	1432	1434	1435
25	1398	1401	1399	1397	1394	1395	1390	1389	1382	1380	1378	1380	1382	1379	1379	1378	1382	1384	1387
30	1337	1341	1338	1339	1339	1342	1336	1335	1324	1320	1315	1317	1320	1315	1315	1318	1324	1329	1332
35	1264	1269	1268	1273	1277	1283	1279	1276	1263	1252	1243	1243	1245	1241	1244	1250	1261	1268	1272
40	1180	1187	1189	1200	1212	1222	1219	1214	1196	1179	1162	1158	1160	1156	1164	1175	1194	1204	1208
45	1085	1094	1102	1123	1141	1154	1152	1146	1126	1102	1075	1064	1064	1061	1076	1097	1124	1135	1139
50	979	990	1009	1041	1065	1080	1080	1072	1049	1020	982	961	958	957	981	1015	1045	1059	1064
55	862	879	909	953	982	1001	1000	992	966	932	884	849	841	845	883	926	961	978	984
60	735	758	806	859	893	914	915	906	877	838	783	731	716	726	781	832	871	892	900
65	599	633	698	759	799	824	826	815	783	740	676	609	582	603	674	733	777	802	812
70	457	505	586	656	701	728	732	720	686	637	565	485	443	478	563	630	680	708	719
75	314	379	472	551	602	632	637	624	587	534	454	363	304	356	453	526	581	612	624
80	180	259	362	448	503	536	542	530	491	434	348	247	173	241	345	425	484	518	531
85	76.7	157	265	355	414	450	458	445	405	345	256	151	71.4	145	253	336	398	433	447
90	26.0	93.0	199	288	349	386	397	384	345	283	196	93.5	26.7	89.3	190	274	336	372	386
95	21.7	49.2	147	245	306	344	355	343	303	217	94.7	39.8	22.8	41.6	107	232	295	332	346
100	18.1	25.9	68.6	24.2	126	214	240	181	68.8	10.8	74.5	27.1	19.5	24.6	69.5	17.4	115	155	186
105	14.5	18.3	63.7	125	65.2	39.9	82.0	15.2	80.9	131	65.8	17.6	15.9	19.0	63.0	121	80.8	38.0	16.0
110	9.95	11.3	42.0	106	161	193	200	193	161	110	42.7	6.09	8.24	7.93	39.1	103	157	190	202
115	1.37	2.14	22.7	82.0	130	160	171	160	129	83.1	24.6	1.91	1.10	2.45	23.6	80.2	128	157	168
120	1.12	1.99	12.1	57.1	98.4	127	137	127	98.2	56.8	13.0	2.58	1.32	2.79	15.5	56.3	98.4	124	134
125	3.18	4.42	6.25	33.2	68.3	94.1	103	93.8	68.3	33.2	5.32	4.25	4.35	4.84	7.16	33.6	68.9	91.8	101
130	2.30	2.55	4.31	15.4	40.5	62.7	70.0	62.6	40.5	15.5	3.84	2.47	2.71	2.69	5.10	16.5	41.5	61.3	69.3
135	1.52	2.06	3.42	5.37	19.4	34.5	40.1	34.7	19.5	5.54	3.35	1.43	1.81	1.98	4.02	6.47	20.9	34.0	40.1
140	1.54	1.85	3.09	4.11	6.23	14.4	17.8	14.6	6.49	4.22	3.04	1.89	1.77	2.30	3.54	4.85	7.27	14.6	18.8
145	1.51	1.74	2.73	3.66	4.25	4.92	5.42	5.12	4.44	3.77	2.72	1.70	1.76	2.19	3.07	4.30	5.11	5.72	6.17
150	1.44	1.67	1.16	3.22	3.71	4.11	4.27	4.20	3.89	3.32	1.14	1.53	1.83	2.03	1.51	3.89	4.52	4.87	5.01
155	1.48	1.68	2.12	2.44	3.24	3.59	3.69	3.66	3.39	2.84	1.37	1.63	1.82	2.17	2.64	3.34	4.02	4.34	4.39
160	1.48	1.63	1.83	1.19	1.22	3.00	3.07	3.08	2.18	1.25	1.81	1.57	1.94	2.17	2.41	1.70	2.07	3.68	3.73
165	1.49	1.54	1.66	1.82	1.98	1.15	1.10	1.17	1.84	1.92	1.69	1.51	1.88	2.05	2.25	2.50	2.48	1.59	1.57
170	1.56	1.59	1.65	1.70	1.68	1.70	1.75	1.76	1.79	1.61	1.54	1.52	1.84	1.97	2.09	2.14	2.23	2.23	2.20
175	1.72	1.73	1.72	1.70	1.59	1.58	1.56	1.59	1.52	1.58	1.62	1.65	1.83	1.87	1.91	1.91	1.89	1.89	1.88
180	1.75	1.76	1.75	1.74	1.69	1.67	1.66	1.58	1.64	1.68	1.67	1.72	1.75	1.76	1.76	1.74	1.69	1.66	1.66

Table--2 UNIT: cd

γ (DEG) \ C (DEG)	285	300	315	330	345
0	1532	1532	1532	1532	1532
5	1527	1527	1527	1529	1529
10	1509	1510	1511	1513	1514
15	1478	1481	1483	1485	1488
20	1438	1440	1442	1448	1450
25	1389	1391	1393	1397	1400
30	1332	1332	1331	1336	1339
35	1269	1264	1259	1263	1267
40	1204	1194	1180	1178	1183
45	1134	1120	1098	1083	1087
50	1058	1041	1011	985	978
55	978	956	921	883	860
60	894	875	826	777	734
65	805	783	738	666	606
70	711	687	638	569	477
75	615	588	535	460	350
80	520	491	434	354	245
85	435	403	344	261	152
90	375	341	281	195	92.1
95	334	299	238	129	43.4
100	163	128	16.3	71.5	26.3
105	90.8	59.2	122	63.8	17.6
110	187	155	103	42.2	9.61
115	155	127	80.1	24.3	2.40
120	123	96.4	55.6	13.6	2.26
125	91.0	67.1	32.8	6.11	4.43
130	61.3	40.7	15.2	4.48	2.28
135	34.0	20.2	6.04	3.73	1.66
140	14.3	7.23	4.86	3.47	2.16
145	5.84	5.32	4.22	3.17	2.02
150	4.90	4.45	3.83	1.52	1.91
155	4.30	3.98	3.40	2.34	2.09
160	3.66	2.27	1.61	2.35	2.12
165	1.58	2.41	2.27	2.17	1.97
170	2.19	2.05	2.05	1.93	1.75
175	1.89	1.75	1.86	1.83	1.83
180	1.58	1.64	1.68	1.67	1.72

THD and PF Measurement Test Results:

Electrical Measurement:

Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor	iTHD(%)
277.0	60	0.1871	46.52	0.8974	14.15

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

Photo of Sample:

Equipment List:

Equipment ID	Equipment Name	Last Cal.	Due Cal.
NTC-F01-001	Goniophotometer System	2019-11-13	2020-11-12
NTC-F01-006	2.0 meter Integrating Sphere	2019-11-13	2020-11-12
NTC-F01-012	Standard Lamp	2019-11-13	2020-11-12
NTC-F01-013	Standard Lamp	2019-11-13	2020-11-12
NTC-F01-031	Digital Power Meter	2019-08-22	2020-08-21
NTC-F01-019	Temperature & Humidity Meter	2019-11-15	2020-11-14

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

Laboratory: Dongguan New Testing Centre Co., Ltd
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