

LM-79-08 Test Report

For

ESPEN TECHNOLOGY INC

12257 FLORENCE AVE SANTA FE SPRINGS, CA 90670 USA

LED Tube

Model Name(s):

L24T8/8XX/9P-ID DE RF

Representative (Tested) Model:

L24T8/830/9P-ID DE RF

Model Difference:

1. XX represents CCT, can be 30 for 3000K, 35 for 3500K, 40 for 4000K and 50 for 5000K;
2. All is the same construction, except CCT.

Prepare by:



Engineer: Alan Wang

Date: 2021-02-02

Review by:



Technical Lead: Vincent Yuan

Issue Date: 2021-04-29

Revised Date: N/A

Note:

1. The results contained in this report pertain only to the tested samples.
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3. This report does not imply product certification, approval, or endorsement by NVLAP, or any agency of the Federal Government.

Laboratory: Dongguan New Testing Centre Co., Ltd

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Client Information:

Applicant Name:	ESPEN TECHNOLOGY INC
Brand Name:	ESPEN

Product Information:

Model Number:	L24T8/830/9P-ID DE RF
Product Type:	2' T8 Lamp, Internal Driver/Line Voltage (UL Type B) Lamps
Rating Input:	100-277Vac, 50/60Hz, 9W
Declared CCT:	3000K
Declared Light Output:	900 lm
Declared Beam Angle:	180°
LED Manufacturer:	Shenzhen JuFei Optoelectronics Co., Ltd.
LED Model:	2835 3V 0.5W WhiteSMD LED
LED Quantity:	60 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:	2020-12-12
Quantity of Receipt Samples:	1 pc
Sample Number:	201212001-S1

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:

Issued Date of Test Report:	2021-04-29
Revised Date of Test Report:	N/A
Test Report No.:	NTCLR21010177
Remark (If applicable):	N/A

Test Specification:	
Date of Test	2020-12-18
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

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.
3. THD and PF Measurements: The sample was tested according to the ANSI C82.77-10-2014, 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)
25.4	41.0	Face Down	90	10

Electrical Data:

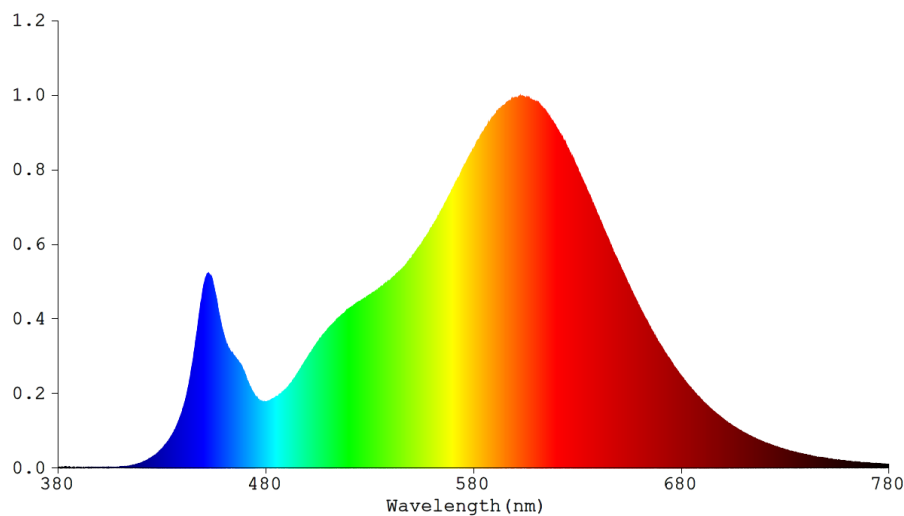
Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor
120.0	60	0.0695	8.121	0.9710

Color Data:

Parameter	Result
CCT(K)	2910
R _a	81.1
R _f	84
R _g	95
R _{cs, hl}	-12%
Chromaticity, (x, y)	(0.4428, 0.4049)
Chromaticity, (u', v')	(0.2540, 0.5226)
Duv	-0.0004

Special Color Rendering			
R1	80	R9	-0
R2	91	R10	81
R3	95	R11	78
R4	78	R12	71
R5	80	R13	82
R6	90	R14	98
R7	80	R15	71
R8	55	-	-

Spectrum Diagram:



IES TM-30-18 Color Rendition Result:

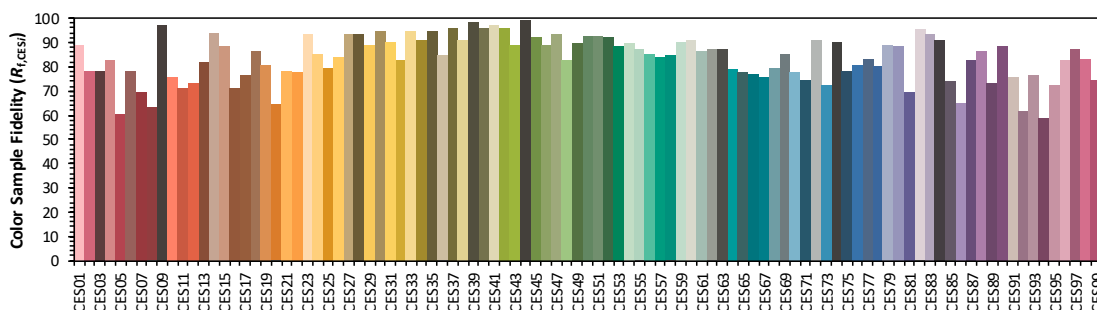
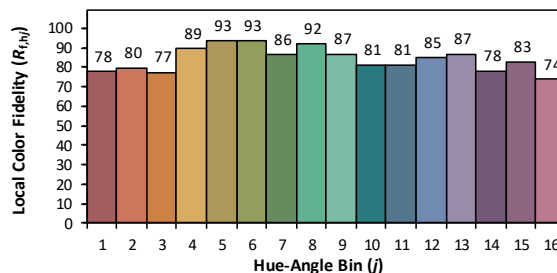
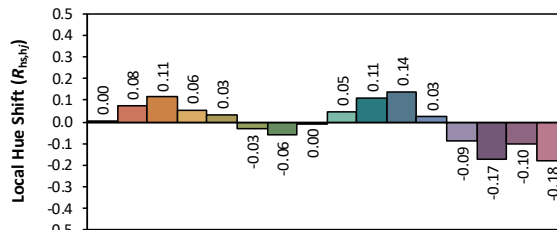
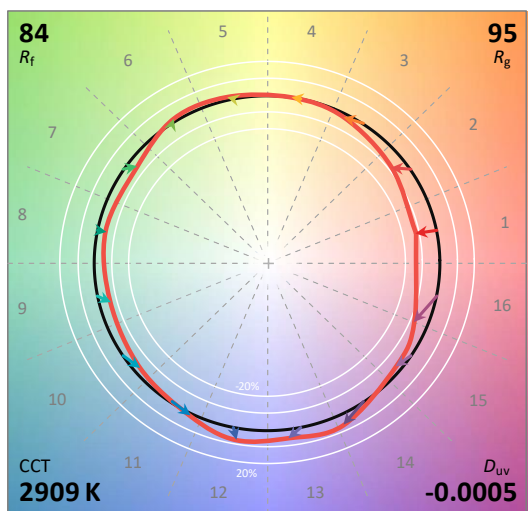
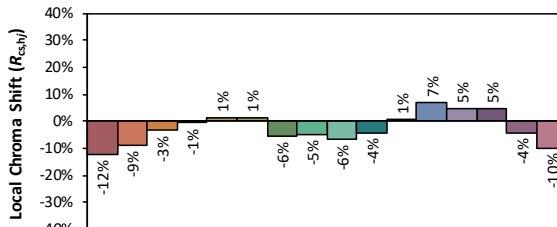
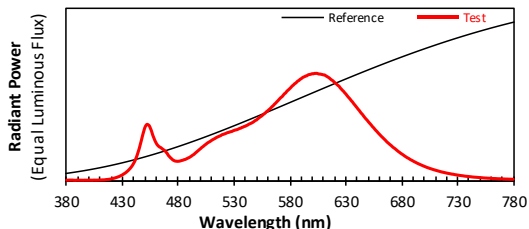
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Date: 2021/2/2

Manufacturer: ESPEN TECHNOLOGY INC

Model: L24T8/830/9P-ID DE RF



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

x 0.4428
 y 0.4048
 u' 0.2541
 v' 0.5225

CIE 13.3-1995
(CRI)
 R_a 81
 R_9 -1

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

Spectrum Data:

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0020	447	0.3770	514	0.3988	581	0.8680	648	0.5729	715	0.0809
381	0.0016	448	0.4192	515	0.4037	582	0.8800	649	0.5623	716	0.0782
382	0.0026	449	0.4563	516	0.4084	583	0.8877	650	0.5491	717	0.0759
383	0.0028	450	0.4913	517	0.4133	584	0.8990	651	0.5366	718	0.0736
384	0.0023	451	0.5114	518	0.4174	585	0.9057	652	0.5253	719	0.0713
385	0.0031	452	0.5221	519	0.4248	586	0.9154	653	0.5128	720	0.0687
386	0.0014	453	0.5176	520	0.4280	587	0.9257	654	0.4997	721	0.0667
387	0.0010	454	0.5087	521	0.4317	588	0.9309	655	0.4895	722	0.0646
388	0.0006	455	0.4850	522	0.4354	589	0.9412	656	0.4763	723	0.0627
389	0.0020	456	0.4591	523	0.4400	590	0.9471	657	0.4647	724	0.0607
390	0.0017	457	0.4244	524	0.4447	591	0.9555	658	0.4541	725	0.0582
391	0.0018	458	0.3981	525	0.4469	592	0.9622	659	0.4419	726	0.0573
392	0.0017	459	0.3720	526	0.4509	593	0.9658	660	0.4309	727	0.0552
393	0.0016	460	0.3511	527	0.4539	594	0.9720	661	0.4200	728	0.0528
394	0.0014	461	0.3332	528	0.4560	595	0.9743	662	0.4090	729	0.0515
395	0.0012	462	0.3217	529	0.4618	596	0.9817	663	0.3993	730	0.0497
396	0.0022	463	0.3119	530	0.4654	597	0.9856	664	0.3887	731	0.0482
397	0.0016	464	0.3073	531	0.4692	598	0.9876	665	0.3786	732	0.0462
398	0.0018	465	0.2991	532	0.4715	599	0.9902	666	0.3679	733	0.0451
399	0.0016	466	0.2913	533	0.4745	600	0.9942	667	0.3566	734	0.0435
400	0.0018	467	0.2834	534	0.4798	601	0.9930	668	0.3481	735	0.0426
401	0.0020	468	0.2762	535	0.4844	602	0.9968	669	0.3384	736	0.0405
402	0.0016	469	0.2629	536	0.4872	603	0.9966	670	0.3300	737	0.0389
403	0.0014	470	0.2512	537	0.4937	604	0.9974	671	0.3212	738	0.0379
404	0.0023	471	0.2338	538	0.4965	605	0.9942	672	0.3111	739	0.0369
405	0.0025	472	0.2220	539	0.5021	606	0.9910	673	0.3033	740	0.0360
406	0.0020	473	0.2105	540	0.5047	607	0.9906	674	0.2958	741	0.0344
407	0.0023	474	0.2014	541	0.5111	608	0.9881	675	0.2870	742	0.0338
408	0.0026	475	0.1915	542	0.5148	609	0.9862	676	0.2781	743	0.0319
409	0.0030	476	0.1854	543	0.5224	610	0.9829	677	0.2696	744	0.0312
410	0.0033	477	0.1806	544	0.5270	611	0.9823	678	0.2620	745	0.0300
411	0.0038	478	0.1790	545	0.5316	612	0.9752	679	0.2541	746	0.0295
412	0.0044	479	0.1776	546	0.5367	613	0.9689	680	0.2468	747	0.0285
413	0.0048	480	0.1780	547	0.5428	614	0.9628	681	0.2402	748	0.0277
414	0.0051	481	0.1794	548	0.5504	615	0.9558	682	0.2325	749	0.0269
415	0.0069	482	0.1820	549	0.5584	616	0.9470	683	0.2251	750	0.0261
416	0.0082	483	0.1855	550	0.5627	617	0.9377	684	0.2183	751	0.0248
417	0.0089	484	0.1876	551	0.5725	618	0.9316	685	0.2113	752	0.0245
418	0.0102	485	0.1923	552	0.5806	619	0.9223	686	0.2062	753	0.0232
419	0.0120	486	0.1946	553	0.5890	620	0.9125	687	0.1996	754	0.0226
420	0.0141	487	0.1992	554	0.5960	621	0.9037	688	0.1930	755	0.0215
421	0.0170	488	0.2045	555	0.6033	622	0.8945	689	0.1877	756	0.0216
422	0.0193	489	0.2095	556	0.6130	623	0.8843	690	0.1822	757	0.0203
423	0.0219	490	0.2145	557	0.6205	624	0.8771	691	0.1757	758	0.0202
424	0.0254	491	0.2211	558	0.6294	625	0.8620	692	0.1710	759	0.0196
425	0.0287	492	0.2283	559	0.6402	626	0.8509	693	0.1653	760	0.0188
426	0.0327	493	0.2361	560	0.6477	627	0.8391	694	0.1602	761	0.0182
427	0.0361	494	0.2425	561	0.6576	628	0.8297	695	0.1550	762	0.0176
428	0.0413	495	0.2524	562	0.6661	629	0.8163	696	0.1504	763	0.0171
429	0.0470	496	0.2613	563	0.6766	630	0.8056	697	0.1457	764	0.0169
430	0.0521	497	0.2703	564	0.6877	631	0.7919	698	0.1413	765	0.0160
431	0.0594	498	0.2791	565	0.6963	632	0.7790	699	0.1367	766	0.0154
432	0.0656	499	0.2883	566	0.7088	633	0.7672	700	0.1322	767	0.0149
433	0.0730	500	0.2965	567	0.7180	634	0.7556	701	0.1281	768	0.0149
434	0.0821	501	0.3069	568	0.7296	635	0.7415	702	0.1238	769	0.0144
435	0.0912	502	0.3138	569	0.7400	636	0.7308	703	0.1195	770	0.0137
436	0.1022	503	0.3229	570	0.7514	637	0.7157	704	0.1162	771	0.0131
437	0.1135	504	0.3311	571	0.7631	638	0.7037	705	0.1122	772	0.0129
438	0.1269	505	0.3392	572	0.7731	639	0.6903	706	0.1089	773	0.0122
439	0.1413	506	0.3478	573	0.7810	640	0.6774	707	0.1056	774	0.0122
440	0.1600	507	0.3544	574	0.7939	641	0.6637	708	0.1020	775	0.0119
441	0.1788	508	0.3601	575	0.8068	642	0.6521	709	0.0989	776	0.0113
442	0.2038	509	0.3669	576	0.8140	643	0.6373	710	0.0958	777	0.0111
443	0.2315	510	0.3743	577	0.8277	644	0.6243	711	0.0928	778	0.0108
444	0.2642	511	0.3807	578	0.8381	645	0.6132	712	0.0897	779	0.0104
445	0.2975	512	0.3861	579	0.8471	646	0.5989	713	0.0869	780	0.0104
446	0.3372	513	0.3918	580	0.8574	647	0.5854	714	0.0839	N/A	N/A

Goniophotometer Test Results:

Test Condition:

Test Ambient (°C)	Test Humidity (%)	Orientation	Stabilization Time (minute)	Test Time (minute)
24.4	49.0	Face Down	90	25

Electrical Data:

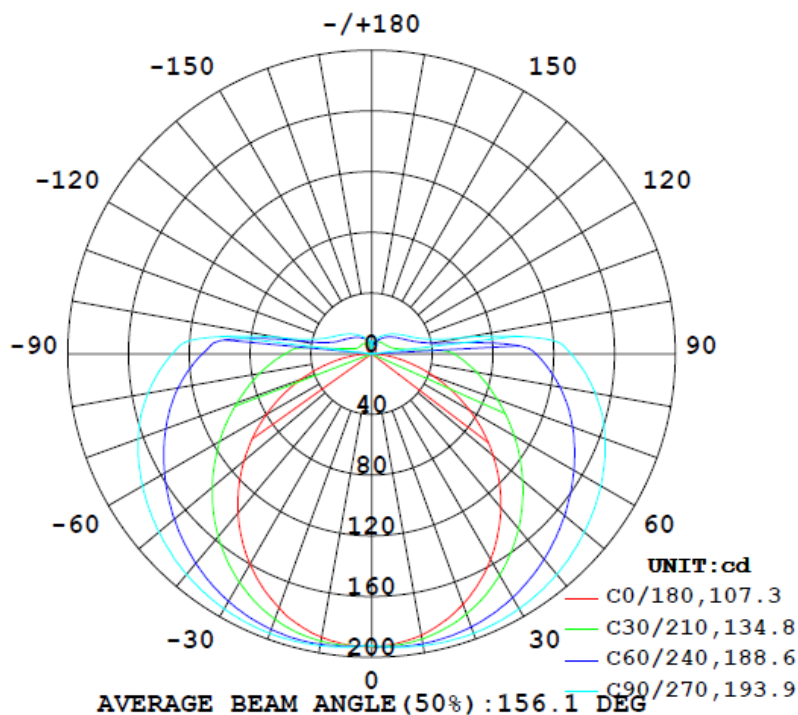
Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor
120.0	60	0.0695	8.121	0.9710

Goniophotometer Data:

Parameter	Results
Total Luminous (lm)	977.1
Luminous Efficacy (lm/w)	120.32
Zonal Lumens Distribution (0-60°)	52.4%
Beam Angle (°)	193.9

Luminous Intensity Distribution Diagram:

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

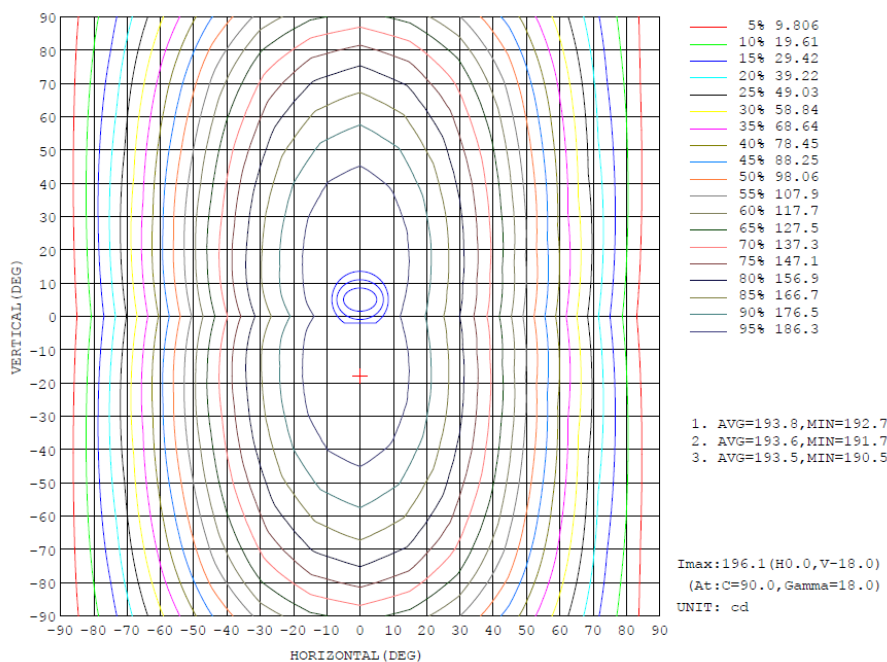


Zonal Flux Diagram:

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total	%lum, lamp
10	188.3	192.5	195.2	193.3	189.7	193.3	195.2	192.5	0- 10	18.42	18.42	1.89,1.89
20	175.7	187.1	196.0	189.9	178.2	189.9	196.0	187.1	10- 20	53.99	72.41	7.41,7.41
30	156.6	177.4	194.1	181.5	160.3	181.5	194.1	177.4	20- 30	84.80	157.2	16.1,16.1
40	132.3	164.1	189.7	169.1	136.9	169.1	189.7	164.1	30- 40	107.9	265.1	27.1,27.1
50	104.5	148.8	182.8	154.0	109.7	154.0	182.8	148.8	40- 50	121.6	386.6	39.6,39.6
60	74.55	132.8	174.2	137.8	80.18	137.8	174.2	132.8	50- 60	125.7	512.4	52.4,52.4
70	44.00	117.0	163.5	121.4	49.65	121.4	163.5	117.0	60- 70	121.4	633.7	64.9,64.9
80	16.67	101.2	149.6	105.0	21.45	105.0	149.6	101.2	70- 80	110.2	744.0	76.1,76.1
90	0.4878	83.98	131.3	87.18	1.102	87.18	131.3	83.98	80- 90	94.14	838.1	85.8,85.8
100	1.277	29.17	63.04	31.09	0.9812	31.09	63.04	29.17	90-100	64.38	902.5	92.4,92.4
110	2.229	18.06	31.07	17.22	1.714	17.22	31.07	18.06	100-110	23.27	925.8	94.7,94.7
120	3.290	14.55	24.59	14.63	2.655	14.63	24.59	14.55	110-120	15.86	941.6	96.4,96.4
130	3.983	12.42	20.29	12.94	3.697	12.94	20.29	12.42	120-130	12.31	953.9	97.6,97.6
140	4.701	11.02	16.72	11.58	4.741	11.58	16.72	11.02	130-140	9.357	963.3	98.6,98.6
150	4.509	10.25	13.69	10.45	5.726	10.45	13.69	10.25	140-150	6.749	970.1	99.3,99.3
160	4.640	9.626	11.22	9.499	5.539	9.499	11.22	9.626	150-160	4.360	974.4	99.7,99.7
170	4.496	8.571	8.637	8.390	3.577	8.390	8.637	8.571	160-170	2.182	976.6	99.9,99.9
180	4.184	0	0.9201	2.344	2.817	2.344	0.9201	0	170-180	0.5320	977.1	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
Y (DEG)	0	193	193	193	193	193	193	192	192	192	192	192	193	192	192	192	192	192	192
5	192	192	193	193	194	194	194	194	194	193	193	193	192	193	193	193	194	194	194
10	188	189	191	192	194	195	195	195	194	193	192	191	190	191	192	193	194	195	195
15	183	185	187	190	193	195	196	196	194	192	190	188	185	188	190	192	194	196	196
20	176	178	182	187	192	195	196	195	193	190	186	183	178	183	186	190	193	195	196
25	167	170	176	183	189	193	195	194	191	186	181	176	170	176	181	186	191	194	195
30	157	161	168	177	186	192	194	193	188	182	174	168	160	168	174	182	188	193	194
35	145	150	160	171	181	189	192	190	185	176	166	158	149	158	166	176	185	190	192
40	132	139	150	164	177	186	190	187	180	169	157	147	137	147	157	169	180	187	190
45	119	126	140	157	171	182	186	183	175	162	147	135	124	135	147	162	175	183	186
50	105	113	130	149	166	178	183	179	170	154	137	123	110	123	137	154	170	179	183
55	89.8	100	119	141	160	173	179	175	164	146	126	109	95.1	109	126	146	164	175	179
60	74.6	86.5	109	133	154	168	174	170	157	138	116	95.8	80.2	95.8	116	138	157	170	174
65	59.1	72.9	98.2	125	147	163	169	164	151	129	105	82.2	64.9	82.2	105	129	151	164	169
70	44.0	59.8	88.1	117	141	157	164	158	144	121	94.3	68.6	49.7	68.6	94.3	121	144	158	164
75	29.6	47.8	78.9	109	134	150	157	152	137	113	84.3	55.7	35.0	55.7	84.3	113	137	152	157
80	16.7	37.4	70.3	101	126	142	150	144	129	105	75.0	43.9	21.4	43.9	75.0	105	129	144	150
85	6.12	29.2	62.0	92.6	117	134	141	135	121	96.1	65.8	33.9	9.91	33.9	65.8	96.1	121	135	141
90	0.49	22.7	54.3	84.0	108	124	131	126	111	87.2	57.0	25.4	1.10	25.4	57.0	87.2	111	126	131
95	0.89	12.3	32.3	55.7	81.6	99.5	115	109	100	73.2	46.4	18.1	0.76	18.1	46.4	73.2	100	109	115
100	1.28	7.54	18.9	29.2	40.9	49.5	63.0	59.5	51.8	31.1	19.6	7.62	0.98	7.62	19.6	31.1	51.8	59.5	63.0
105	1.76	6.37	14.7	21.7	30.8	35.4	37.8	34.4	29.1	20.4	13.0	5.26	1.34	5.26	13.0	20.4	29.1	34.4	37.8
110	2.23	6.23	13.0	18.1	26.1	29.8	31.1	28.6	24.1	17.2	10.6	4.65	1.71	4.65	10.6	17.2	24.1	28.6	31.1
115	2.78	6.30	12.0	16.0	23.1	26.3	27.3	25.3	21.5	15.7	9.78	4.69	2.15	4.69	9.78	15.7	21.5	25.3	27.3
120	3.29	6.50	11.3	14.6	20.9	23.6	24.6	22.9	19.6	14.6	9.46	4.98	2.66	4.98	9.46	14.6	19.6	22.9	24.6
125	3.69	6.75	10.8	13.4	19.0	21.4	22.3	20.9	18.0	13.7	9.19	5.30	3.17	5.30	9.19	13.7	18.0	20.9	22.3
130	3.98	7.02	10.4	12.4	17.3	19.5	20.3	19.0	16.6	12.9	9.01	5.37	3.70	5.37	9.01	12.9	16.6	19.0	20.3
135	4.49	7.29	10.1	11.6	15.8	17.7	18.4	17.4	15.3	12.2	8.86	5.45	4.22	5.45	8.86	12.2	15.3	17.4	18.4
140	4.70	7.54	9.79	11.0	14.3	16.0	16.7	15.9	14.2	11.6	8.72	5.98	4.74	5.98	8.72	11.6	14.2	15.9	16.7
145	4.45	7.74	9.51	10.6	12.8	14.6	15.1	14.4	13.1	11.0	8.50	6.35	5.24	6.35	8.50	11.0	13.1	14.4	15.1
150	4.51	7.87	9.26	10.2	11.3	13.2	13.7	13.2	12.1	10.5	7.37	6.58	5.73	6.58	7.37	10.5	12.1	13.2	13.7
155	4.60	7.93	9.02	10.0	9.93	12.0	12.4	12.0	11.3	9.97	5.84	6.76	6.12	6.76	5.84	9.97	11.3	12.0	12.4
160	4.64	7.71	8.69	9.63	8.17	10.7	11.2	10.9	10.5	9.50	8.06	5.18	5.54	5.18	8.06	9.50	10.5	10.9	11.2
165	4.62	4.52	6.41	6.11	6.14	8.23	10.2	10.0	9.74	8.77	8.06	5.51	3.94	5.51	8.06	8.77	9.74	10.0	10.2
170	4.50	3.68	4.73	8.57	8.85	8.76	8.64	8.75	8.62	8.39	7.82	5.02	3.58	5.02	7.82	8.39	8.62	8.75	8.64
175	1.47	2.44	2.20	2.50	6.28	7.21	8.29	7.71	5.32	4.36	4.05	3.08	3.12	3.08	4.05	4.36	5.32	7.71	8.29
180	4.18	4.07	2.99	0.00	0.00	1.35	0.92	2.09	2.55	2.94	2.12	1.95	2.82	1.95	2.12	2.94	2.55	2.09	0.92

Table--2

UNIT: cd

C (DEG)	285	300	315	330	345														
Y (DEG)	0	193	193	193	193	193													
5	194	194	193	193	192														
10	195	194	192	191	189														
15	195	193	190	187	185														
20	195	192	187	182	178														
25	193	189	183	176	170														
30	192	186	177	168	161														
35	189	181	171	160	150														
40	186	177	164	150	139														
45	182	171	157	140	126														
50	178	166	149	130	113														
55	173	160	141	119	100														
60	168	154	133	109	86.5														
65	163	147	125	98.2	72.9														
70	157	141	117	88.1	59.8														
75	150	134	109	78.9	47.8														
80	142	126	101	70.3	37.4														
85	134	117	92.6	62.0	29.2														
90	124	108	84.0	54.3	22.7														
95	99.5	81.6	55.7	32.3	12.3														
100	49.5	40.9	29.2	18.9	7.54														
105	35.4	30.8	21.7	14.7	6.37														
110	29.8	26.1	18.1	13.0	6.23														
115	26.3	23.1	16.0	12.0	6.30														
120	23.6	20.9	14.6	11.3	6.50														
125	21.4	19.0	13.4	10.8	6.75														
130	19.5	17.3	12.4	10.4	7.02														
135	17.7	15.8	11.6	10.1	7.29														
140	16.0	14.3	11.0	9.79	7.54														
145	14.6	12.8	10.6	9.51	7.74														
150	13.2	11.3	10.2	9.26	7.87														
155	12.0	9.93	10.0	9.02	7.93														
160	10.7	8.17	9.63	8.69	7.71														
165	8.23	6.14	6.11	6.41	4.52														
170	8.76	8.85	8.57	4.73	3.68														
175	7.21	6.28	2.50	2.20	2.44														
180	1.35	0.00	0.00	2.99	4.07														

THD and PF Measurement Test Results:

Electrical Measurement:

Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor	iTHD (%)
277.0	60	0.0321	8.010	0.9003	18.27

Photo of Sample:



Equipment List:

Equipment ID	Equipment Name	Last Cal.	Due Cal.
NTC-F01-001	Goniophotometer System	2020-11-12	2021-11-11
NTC-F01-006	2.0 meter Integrating Sphere	2020-11-12	2021-11-11
NTC-F01-012	Standard Lamp	2020-11-12	2021-11-11
NTC-F01-013	Standard Lamp	2020-11-12	2021-11-11
NTC-F01-031	Digital Power Meter	2020-08-22	2021-08-21
NTC-F01-019	Temperature & Humidity Meter	2020-11-13	2021-11-12

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