

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:

L24T8/835/9P-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:	L24T8/835/9P-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:	3500K
Declared Light Output:	1000 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:	201212002-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.:	NTCLR21010178
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:

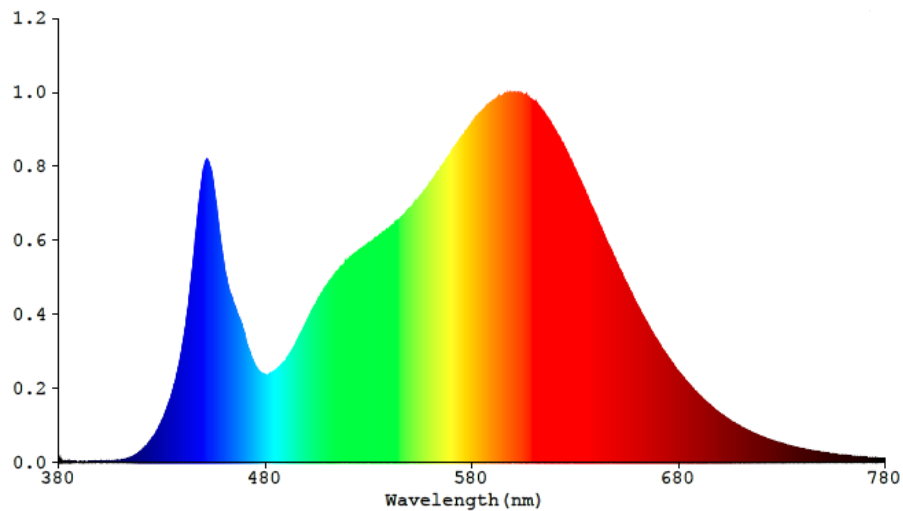
Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor
120.0	60	0.0729	8.560	0.9729

Color Data:

Parameter	Result
CCT(K)	3434
R _a	83.2
R _f	84
R _g	96
R _{cs, h1}	-12%
Chromaticity, (x, y)	(0.4075, 0.3885)
Chromaticity, (u', v')	(0.2381, 0.5107)
Duv	-0.0015

Special Color Rendering			
R1	82	R9	9
R2	91	R10	78
R3	96	R11	81
R4	81	R12	68
R5	82	R13	84
R6	88	R14	98
R7	84	R15	75
R8	62	-	-

Spectrum Diagram:



IES TM-30-18 Color Rendition Result:

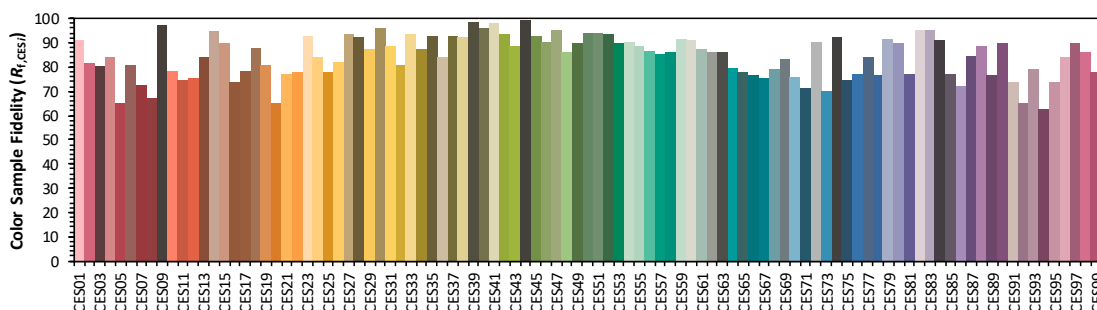
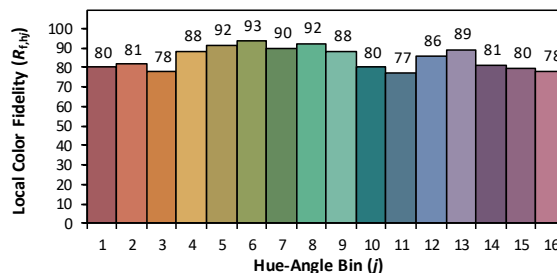
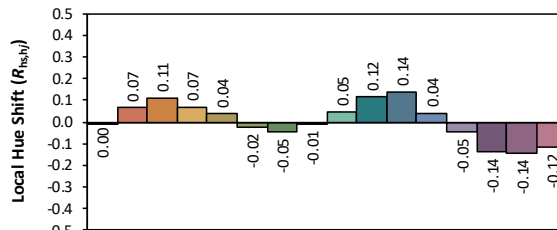
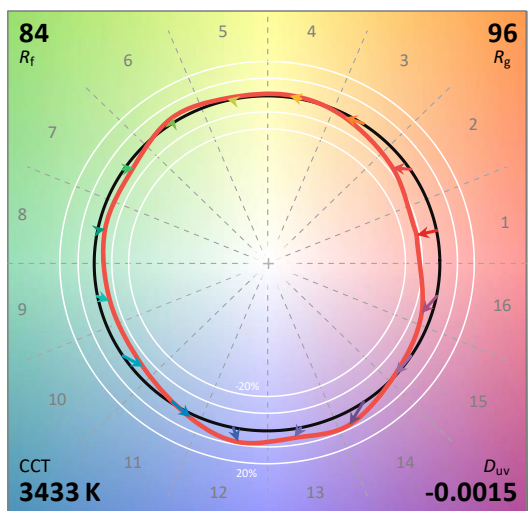
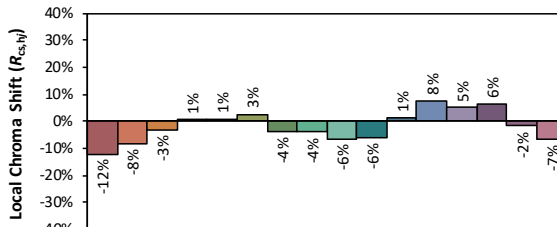
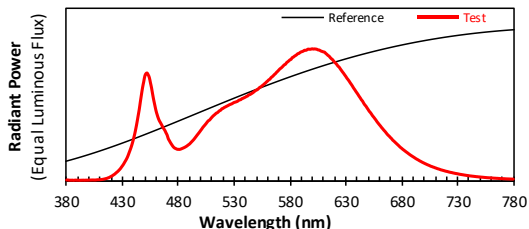
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Date: 2021/2/2

Manufacturer: ESPEN TECHNOLOGY INC

Model: L24T8/835/9P-ID DE RF



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

x 0.4075
 y 0.3884
 u' 0.2381
 v' 0.5106

CIE 13.3-1995
(CRI)

R_a 83
 R_9 9

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	0.0036	447	0.6539	514	0.5112	581	0.9201	648	0.5649	715	0.0818
381	0.0044	448	0.7070	515	0.5153	582	0.9324	649	0.5516	716	0.0796
382	0.0025	449	0.7498	516	0.5229	583	0.9364	650	0.5391	717	0.0771
383	0.0027	450	0.7931	517	0.5304	584	0.9436	651	0.5258	718	0.0748
384	0.0020	451	0.8108	518	0.5343	585	0.9488	652	0.5162	719	0.0721
385	0.0030	452	0.8158	519	0.5447	586	0.9548	653	0.5042	720	0.0700
386	0.0014	453	0.8020	520	0.5472	587	0.9625	654	0.4913	721	0.0684
387	0.0023	454	0.7823	521	0.5539	588	0.9648	655	0.4813	722	0.0656
388	0.0033	455	0.7430	522	0.5578	589	0.9714	656	0.4698	723	0.0636
389	0.0023	456	0.7035	523	0.5625	590	0.9762	657	0.4586	724	0.0617
390	0.0025	457	0.6541	524	0.5667	591	0.9790	658	0.4458	725	0.0602
391	0.0020	458	0.6094	525	0.5713	592	0.9826	659	0.4352	726	0.0579
392	0.0018	459	0.5693	526	0.5760	593	0.9886	660	0.4244	727	0.0562
393	0.0023	460	0.5303	527	0.5793	594	0.9881	661	0.4144	728	0.0542
394	0.0024	461	0.5006	528	0.5826	595	0.9908	662	0.4031	729	0.0528
395	0.0029	462	0.4742	529	0.5881	596	0.9967	663	0.3934	730	0.0512
396	0.0020	463	0.4539	530	0.5926	597	0.9967	664	0.3828	731	0.0495
397	0.0029	464	0.4391	531	0.5950	598	0.9960	665	0.3738	732	0.0475
398	0.0029	465	0.4234	532	0.5979	599	0.9977	666	0.3634	733	0.0463
399	0.0029	466	0.4074	533	0.6015	600	0.9996	667	0.3524	734	0.0447
400	0.0033	467	0.3927	534	0.6079	601	0.9977	668	0.3433	735	0.0435
401	0.0035	468	0.3796	535	0.6121	602	0.9990	669	0.3356	736	0.0420
402	0.0038	469	0.3611	536	0.6142	603	0.9977	670	0.3258	737	0.0406
403	0.0042	470	0.3445	537	0.6215	604	0.9965	671	0.3179	738	0.0392
404	0.0040	471	0.3173	538	0.6242	605	0.9918	672	0.3070	739	0.0381
405	0.0037	472	0.3023	539	0.6289	606	0.9907	673	0.2998	740	0.0369
406	0.0041	473	0.2869	540	0.6327	607	0.9866	674	0.2915	741	0.0352
407	0.0051	474	0.2739	541	0.6382	608	0.9819	675	0.2836	742	0.0345
408	0.0060	475	0.2611	542	0.6415	609	0.9795	676	0.2755	743	0.0333
409	0.0056	476	0.2514	543	0.6498	610	0.9761	677	0.2678	744	0.0326
410	0.0067	477	0.2450	544	0.6523	611	0.9741	678	0.2593	745	0.0314
411	0.0075	478	0.2413	545	0.6569	612	0.9652	679	0.2512	746	0.0306
412	0.0086	479	0.2373	546	0.6623	613	0.9583	680	0.2447	747	0.0293
413	0.0103	480	0.2368	547	0.6679	614	0.9498	681	0.2372	748	0.0288
414	0.0121	481	0.2363	548	0.6750	615	0.9442	682	0.2309	749	0.0276
415	0.0144	482	0.2383	549	0.6819	616	0.9340	683	0.2243	750	0.0271
416	0.0165	483	0.2417	550	0.6865	617	0.9250	684	0.2178	751	0.0260
417	0.0200	484	0.2454	551	0.6910	618	0.9186	685	0.2117	752	0.0254
418	0.0229	485	0.2491	552	0.6993	619	0.9080	686	0.2051	753	0.0246
419	0.0276	486	0.2534	553	0.7072	620	0.8984	687	0.1987	754	0.0237
420	0.0320	487	0.2584	554	0.7113	621	0.8896	688	0.1928	755	0.0230
421	0.0370	488	0.2642	555	0.7190	622	0.8799	689	0.1871	756	0.0222
422	0.0431	489	0.2710	556	0.7251	623	0.8682	690	0.1817	757	0.0214
423	0.0486	490	0.2769	557	0.7331	624	0.8611	691	0.1764	758	0.0209
424	0.0564	491	0.2857	558	0.7399	625	0.8485	692	0.1706	759	0.0203
425	0.0636	492	0.2948	559	0.7485	626	0.8366	693	0.1650	760	0.0194
426	0.0709	493	0.3036	560	0.7555	627	0.8249	694	0.1602	761	0.0196
427	0.0800	494	0.3132	561	0.7644	628	0.8140	695	0.1556	762	0.0185
428	0.0891	495	0.3241	562	0.7692	629	0.8016	696	0.1501	763	0.0178
429	0.1010	496	0.3351	563	0.7806	630	0.7901	697	0.1458	764	0.0175
430	0.1126	497	0.3465	564	0.7872	631	0.7767	698	0.1411	765	0.0168
431	0.1251	498	0.3572	565	0.7950	632	0.7661	699	0.1366	766	0.0166
432	0.1401	499	0.3681	566	0.8042	633	0.7543	700	0.1326	767	0.0156
433	0.1543	500	0.3799	567	0.8113	634	0.7410	701	0.1282	768	0.0153
434	0.1703	501	0.3911	568	0.8215	635	0.7290	702	0.1245	769	0.0145
435	0.1900	502	0.4036	569	0.8292	636	0.7160	703	0.1203	770	0.0144
436	0.2130	503	0.4135	570	0.8385	637	0.7017	704	0.1169	771	0.0140
437	0.2354	504	0.4234	571	0.8475	638	0.6899	705	0.1133	772	0.0137
438	0.2603	505	0.4338	572	0.8536	639	0.6765	706	0.1089	773	0.0131
439	0.2887	506	0.4452	573	0.8614	640	0.6646	707	0.1063	774	0.0125
440	0.3207	507	0.4543	574	0.8703	641	0.6519	708	0.1028	775	0.0122
441	0.3562	508	0.4594	575	0.8787	642	0.6384	709	0.1002	776	0.0120
442	0.3969	509	0.4697	576	0.8829	643	0.6264	710	0.0966	777	0.0116
443	0.4420	510	0.4795	577	0.8949	644	0.6127	711	0.0938	778	0.0113
444	0.4910	511	0.4887	578	0.9011	645	0.6027	712	0.0903	779	0.0111
445	0.5401	512	0.4961	579	0.9084	646	0.5874	713	0.0879	780	0.0111
446	0.5981	513	0.5033	580	0.9163	647	0.5745	714	0.0852	N/A	N/A

Goniophotometer Test Results:

Test Condition:

Test Ambient (°C)	Test Humidity (%)	Orientation	Stabilization Time (minute)	Test Time (minute)
24.6	49.0	Face Down	90	25

Electrical Data:

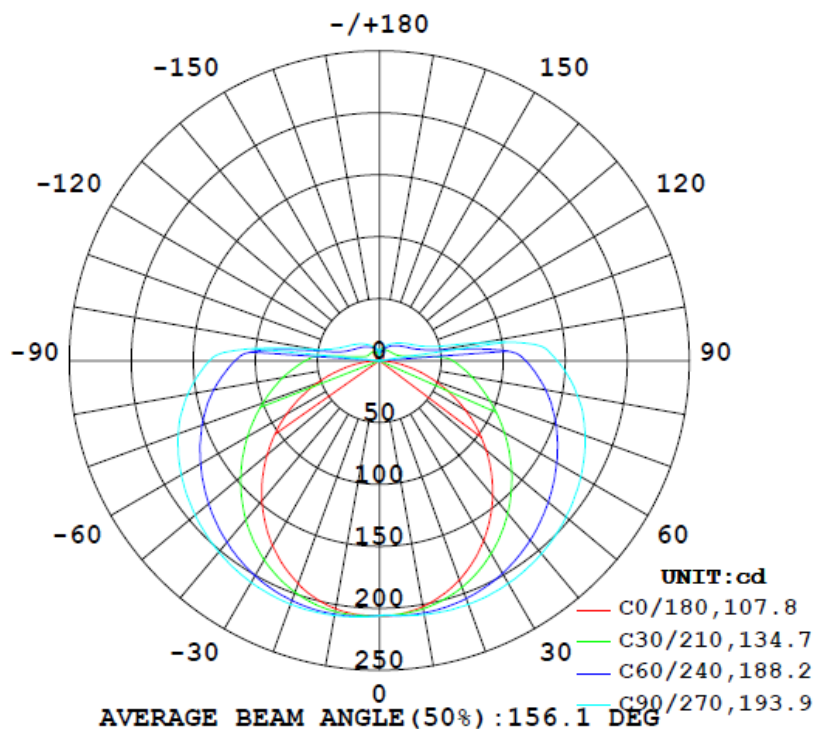
Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor
120.0	60	0.0729	8.560	0.9729

Goniophotometer Data:

Parameter	Results
Total Luminous (lm)	1043.6
Luminous Efficacy (lm/w)	121.92
Zonal Lumens Distribution (0-60°)	52.4%
Beam Angle (°)	193.9

Luminous Intensity Distribution Diagram:

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

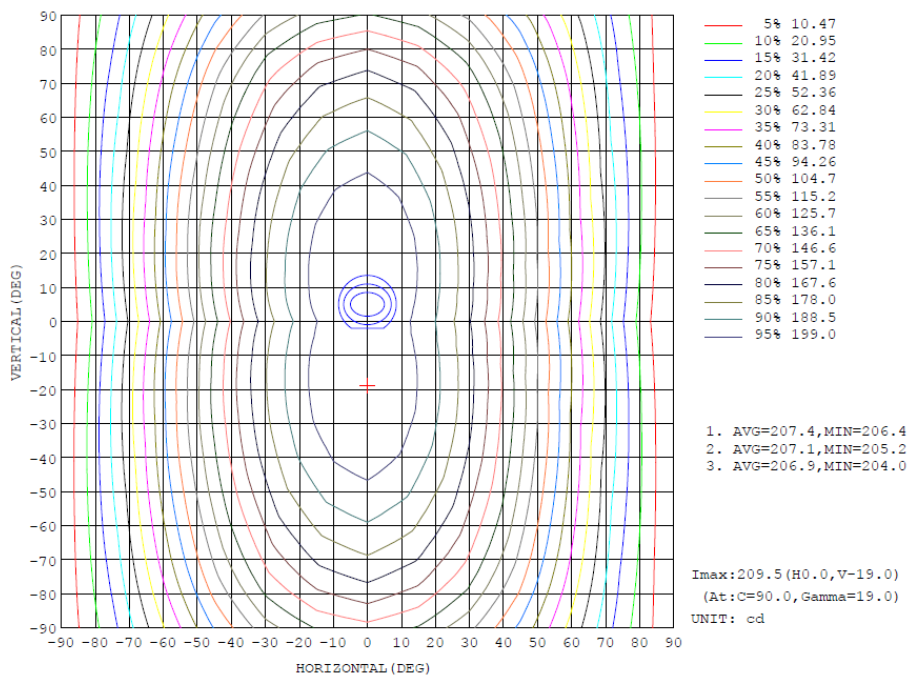


Zonal Flux Diagram:

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total	lum, lamp
10	201.7	205.1	208.2	206.1	203.4	206.8	208.8	205.8	0- 10	19.68	19.68	1.89,1.89
20	188.4	199.7	209.4	202.6	191.6	202.8	209.3	199.9	10- 20	57.66	77.34	7.41,7.41
30	168.0	189.6	207.7	194.0	172.5	193.5	206.7	189.1	20- 30	90.57	167.9	16.1,16.1
40	142.1	175.7	203.5	181.0	147.4	179.9	201.6	174.7	30- 40	115.2	283.1	27.1,27.1
50	112.4	159.4	196.5	165.2	118.3	163.7	194.0	158.1	40- 50	129.9	413.0	39.6,39.6
60	80.34	142.5	187.6	148.0	86.57	146.1	184.5	140.8	50- 60	134.3	547.3	52.4,52.4
70	47.59	125.8	176.5	130.6	53.75	128.3	172.8	123.6	60- 70	129.6	676.9	64.9,64.9
80	18.19	109.3	162.2	119.5	23.33	110.3	157.0	106.2	70- 80	117.7	794.6	76.1,76.1
90	0.5210	91.75	143.4	95.06	1.177	91.06	137.1	87.23	80- 90	100.5	895.1	85.8,85.8
100	1.483	34.58	84.91	42.99	0.9242	29.47	52.68	28.84	90-100	68.34	963.4	92.3,92.3
110	2.537	20.27	34.85	19.10	1.716	17.82	31.83	18.67	100-110	25.37	988.8	94.7,94.7
120	3.712	16.21	27.08	16.08	2.693	15.17	25.50	15.21	110-120	16.96	1006	96.4,96.4
130	4.526	13.87	22.31	14.21	3.798	13.40	21.06	13.04	120-130	13.15	1019	97.6,97.6
140	5.379	12.25	18.39	12.74	4.905	11.97	17.34	11.60	130-140	9.999	1029	98.6,98.6
150	5.422	11.20	15.06	11.48	5.957	10.50	14.19	10.75	140-150	7.208	1036	99.3,99.3
160	5.816	10.20	12.34	10.42	6.023	9.726	11.65	9.815	150-160	4.657	1041	99.7,99.7
170	4.476	8.407	9.914	9.131	2.962	7.850	9.320	6.903	160-170	2.330	1043	99.9,99.9
180	0.0000	0.0000	0.0000	0	2.003	2.003	2.003	2.003	170-180	0.5707	1044	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	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206	206
5	205	205	205	206	206	206	207	207	206	206	206	206	206	206	206	206	207	207	208
10	202	202	203	205	207	208	208	208	207	206	205	204	203	205	206	207	208	209	209
15	196	197	200	203	206	208	209	209	207	205	203	200	199	201	203	205	208	209	209
20	188	190	195	200	204	208	209	209	206	203	199	195	192	196	199	203	206	208	209
25	179	182	188	195	202	207	209	208	204	199	193	187	183	188	193	199	204	207	208
30	168	172	180	190	198	205	208	206	201	194	186	179	172	179	186	193	201	205	207
35	156	161	171	183	194	202	206	204	198	188	178	168	161	169	177	187	196	202	204
40	142	149	161	176	189	199	203	200	193	181	168	157	147	157	168	180	191	199	202
45	128	135	150	168	184	195	200	197	188	173	158	144	133	145	157	172	186	195	198
50	112	122	139	159	178	191	196	192	182	165	147	131	118	131	146	164	180	190	194
55	96.6	107	128	151	171	186	192	188	176	157	136	117	103	117	134	155	173	185	190
60	80.3	93.0	117	142	165	181	188	182	169	148	124	103	86.6	102	123	146	166	179	184
65	63.8	78.5	105	134	159	175	182	177	162	139	113	88.2	70.2	87.8	111	137	160	174	179
70	47.6	64.6	94.7	126	152	169	177	171	155	131	102	73.8	53.8	73.3	100.0	128	152	167	173
75	32.1	51.7	84.9	118	144	162	170	164	148	122	90.9	60.1	37.9	59.4	89.2	120	144	160	165
80	18.2	40.7	75.8	109	136	154	162	156	140	114	81.0	47.6	23.3	46.8	79.1	110	136	151	157
85	6.75	31.9	67.1	100	127	145	153	147	131	104	71.4	37.0	10.8	36.0	69.0	101	126	141	147
90	0.52	24.8	59.1	91.7	118	135	143	137	122	95.1	62.2	27.8	1.18	26.6	59.6	91.1	116	131	137
95	1.06	14.6	39.8	69.5	98.5	118	132	125	111	84.5	52.7	20.7	0.66	18.1	44.2	69.9	95.3	102	108
100	1.48	8.66	21.6	34.6	50.6	68.2	84.9	78.7	70.0	43.0	23.7	8.93	0.92	7.77	13.2	29.5	43.4	50.6	52.7
105	2.01	7.13	16.3	24.7	34.9	40.7	44.3	40.1	33.8	23.5	14.8	6.00	1.32	5.49	13.2	20.7	29.1	34.4	37.6
110	2.54	6.97	14.3	20.3	28.9	33.2	34.9	31.9	26.8	19.1	11.9	5.28	1.72	4.90	11.0	17.8	24.7	29.3	31.8
115	3.14	7.03	13.1	17.8	25.4	29.0	30.2	27.9	23.6	17.3	10.8	5.29	2.17	4.95	10.2	16.3	22.2	26.1	28.2
120	3.71	7.23	12.3	16.2	22.9	26.0	27.1	25.1	21.5	16.1	10.4	5.59	2.69	5.25	9.83	15.2	20.3	23.7	25.5
125	4.17	7.50	11.8	14.9	20.8	23.5	24.5	22.8	19.7	15.1	10.2	5.96	3.23	5.56	9.55	14.2	18.7	21.6	23.2
130	4.53	7.77	11.3	13.9	19.0	21.4	22.3	20.9	18.2	14.2	9.97	6.08	3.80	5.64	9.33	13.4	17.2	19.7	21.1
135	5.09	8.05	10.9	13.0	17.3	19.4	20.3	19.1	16.8	13.4	9.80	6.19	4.38	5.75	9.13	12.6	15.9	18.0	19.1
140	5.38	8.29	10.6	12.3	15.7	17.6	18.4	17.4	15.6	12.7	9.66	6.71	4.91	6.30	8.99	12.0	14.7	16.4	17.3
145	5.25	8.46	10.3	11.7	14.2	16.0	16.6	15.9	14.4	12.1	9.46	7.10	5.43	6.67	8.77	11.3	13.5	14.9	15.7
150	5.42	8.60	10.1	11.2	12.7	14.5	15.1	14.4	13.3	11.5	8.85	7.22	5.96	6.88	7.33	10.5	12.5	13.6	14.2
155	5.65	8.63	9.85	10.8	11.3	13.1	13.6	13.2	12.3	10.9	7.00	6.99	6.39	7.01	6.83	9.87	11.6	12.4	12.8
160	5.82	8.47	9.55	10.2	9.91	11.8	12.3	12.0	11.4	10.4	8.64	6.48	6.02	5.61	7.83	9.73	10.8	11.3	11.6
165	5.01	5.91	7.41	7.48	7.09	8.29	11.2	11.0	10.6	9.84	8.87	6.70	3.57	5.33	7.67	9.01	9.91	10.3	10.5
170	4.48	4.97	7.01	8.41	8.92	9.47	9.91	9.69	9.45	9.13	8.59	6.84	2.96	4.39	6.14	7.85	8.86	9.22	9.32
175	2.50	3.07	4.58	6.92	8.37	8.90	9.24	8.94	8.41	6.98	5.37	4.36	3.38	3.34	3.37	3.87	4.46	5.24	6.80
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00

Table--2

UNIT: cd

C (DEG)	285	300	315	330	345														
γ (DEG)	0	206	206	206	206														
5	208	207	207	206	206														
10	208	207	206	204	203														
15	208	206	203	200	198														
20	208	204	200	195	191														
25	206	201	195	188	183														
30	204	198	189	180	172														
35	201	193	182	171	161														
40	197	188	175	161	149														
45	193	182	167	150	135														
50	188	176	158	138	122														
55	183	169	150	127	107														
60	178	163	141	116	92.7														
65	172	156	132	104	78.1														
70	165	149	124	93.5	64.2														
75	158	141	115	83.6	51.1														
80	149	132	106	74.2	40.1														
85	140	122	96.9	65.1	31.2														
90	129	112	87.2	56.5	23.0														
95	90.5	72.7	49.7	31.2	12.7														
100	46.8	39.8	28.8	19.0	7.92														
105	35.6	31.1	22.2	15.1	6.71														
110	30.5	26.7	18.7	13.4	6.55														
115	27.1	23.8	16.6	12.4	6.61														
120	24.4	21.5	15.2	11.7	6.80														
125	22.2	19.5	14.0	11.2	7.04														
130	20.1	17.8	13.0	10.8	7.28														
135	18.3	16.2	12.2	10.4	7.54														
140	16.6	14.6	11.6	10.1	7.72														
145	15.0	13.1	11.1	9.85	7.78														
150	13.5	11.7	10.8	9.60	7.82														
155	12.2	10.4	10.4	9.35	7.74														
160	8.99	8.29	9.81	8.94	7.33														
165	9.21	7.04	6.24	5.71	4.79														
170	9.32	8.92	6.90	4.35	4.28														
175	4.90	3.09	2.11	1.73	1.88														
180	2.00	2.00	2.00	2.00	2.00														

THD and PF Measurement Test Results:

Electrical Measurement:

Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor	iTHD (%)
277.0	60	0.0034	8.430	0.9005	18.11

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*******