

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:

L24T8/840/9P-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

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

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

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Client Information:

Applicant Name:	ESPEN TECHNOLOGY INC
Brand Name:	ESPEN

Product Information:

Model Number:	L24T8/840/9P-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:	4000K
Declared Light Output:	1100 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:	201212003-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.:	NTCLR21010179
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:

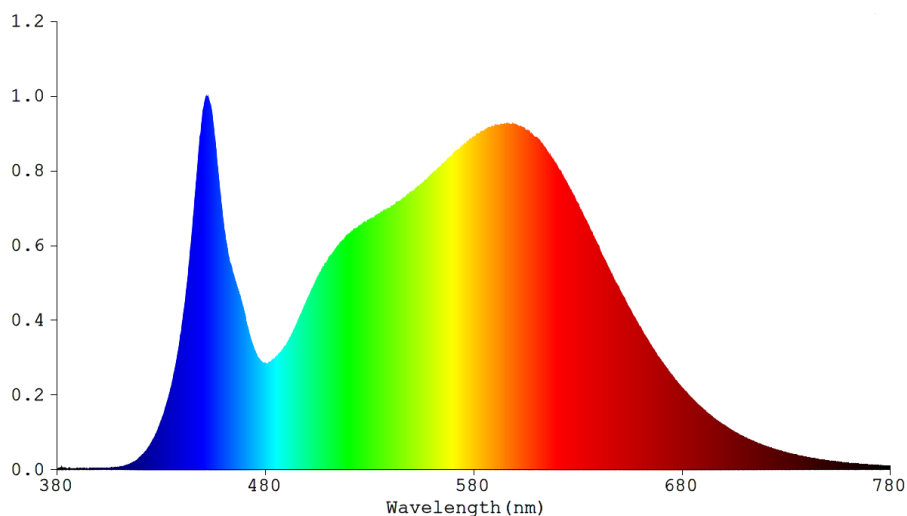
Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor
120.0	60	0.0767	9.020	0.9757

Color Data:

Parameter	Result
CCT(K)	4000
R _a	83.9
R _f	85
R _g	95
R _{cs, hl}	-11%
Chromaticity, (x, y)	(0.3816, 0.3810)
Chromaticity, (u', v')	(0.2242, 0.5036)
Duv	0.0016

Special Color Rendering			
R1	82	R9	11
R2	90	R10	76
R3	96	R11	82
R4	83	R12	63
R5	82	R13	84
R6	86	R14	98
R7	87	R15	76
R8	66	-	-

Spectrum Diagram:



IES TM-30-18 Color Rendition Result:

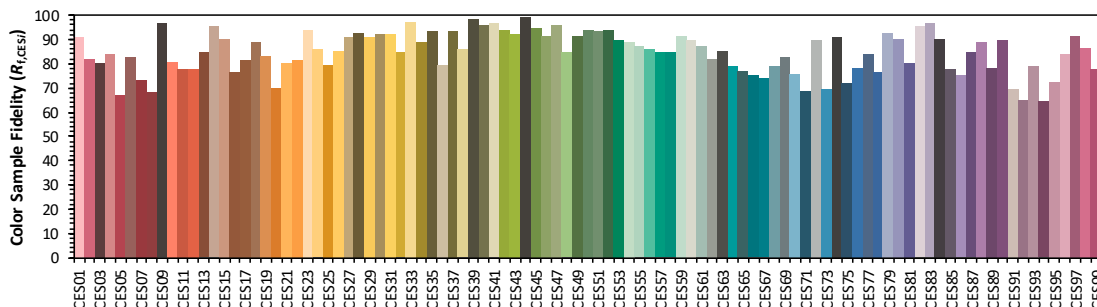
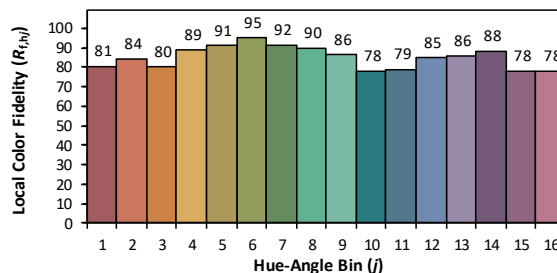
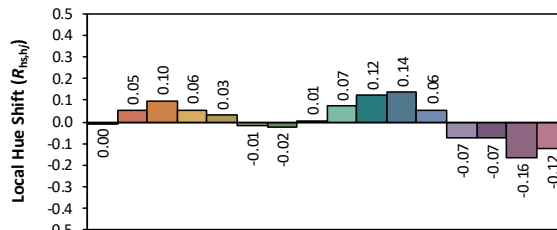
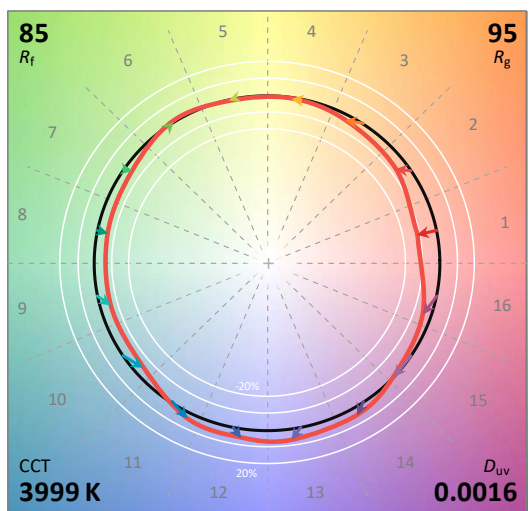
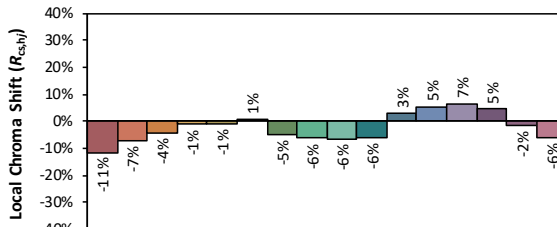
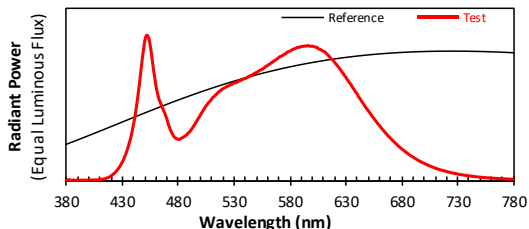
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: ESPEN TECHNOLOGY INC

Date: 2021/2/2

Model: L24T8/840/9P-ID DE RF



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

x 0.3816
 y 0.3808
 u' 0.2242
 v' 0.5035

CIE 13.3-1995
(CRI)
 R_a 84
 R_9 11

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	0.0030	447	0.7900	514	0.5935	581	0.8941	648	0.5018	715	0.0737
381	0.0034	448	0.8549	515	0.6000	582	0.8994	649	0.4914	716	0.0713
382	0.0073	449	0.9086	516	0.6082	583	0.9021	650	0.4813	717	0.0698
383	0.0053	450	0.9626	517	0.6138	584	0.9062	651	0.4708	718	0.0672
384	0.0026	451	0.9899	518	0.6195	585	0.9074	652	0.4613	719	0.0656
385	0.0027	452	0.9992	519	0.6274	586	0.9128	653	0.4488	720	0.0629
386	0.0048	453	0.9858	520	0.6311	587	0.9158	654	0.4381	721	0.0608
387	0.0026	454	0.9644	521	0.6355	588	0.9148	655	0.4295	722	0.0589
388	0.0027	455	0.9195	522	0.6398	589	0.9193	656	0.4180	723	0.0574
389	0.0030	456	0.8692	523	0.6449	590	0.9206	657	0.4085	724	0.0552
390	0.0031	457	0.8069	524	0.6479	591	0.9219	658	0.3983	725	0.0536
391	0.0036	458	0.7512	525	0.6515	592	0.9224	659	0.3880	726	0.0521
392	0.0032	459	0.7006	526	0.6550	593	0.9244	660	0.3813	727	0.0507
393	0.0032	460	0.6497	527	0.6608	594	0.9240	661	0.3696	728	0.0486
394	0.0033	461	0.6112	528	0.6607	595	0.9257	662	0.3598	729	0.0474
395	0.0030	462	0.5781	529	0.6674	596	0.9276	663	0.3515	730	0.0457
396	0.0034	463	0.5520	530	0.6702	597	0.9256	664	0.3421	731	0.0438
397	0.0031	464	0.5350	531	0.6727	598	0.9234	665	0.3335	732	0.0423
398	0.0034	465	0.5142	532	0.6735	599	0.9234	666	0.3238	733	0.0414
399	0.0037	466	0.4957	533	0.6793	600	0.9235	667	0.3156	734	0.0399
400	0.0037	467	0.4770	534	0.6838	601	0.9216	668	0.3058	735	0.0391
401	0.0038	468	0.4606	535	0.6868	602	0.9190	669	0.2997	736	0.0373
402	0.0043	469	0.4377	536	0.6880	603	0.9173	670	0.2905	737	0.0367
403	0.0045	470	0.4169	537	0.6949	604	0.9157	671	0.2835	738	0.0353
404	0.0045	471	0.3874	538	0.6962	605	0.9088	672	0.2756	739	0.0340
405	0.0046	472	0.3677	539	0.7001	606	0.9032	673	0.2684	740	0.0330
406	0.0053	473	0.3471	540	0.7015	607	0.9013	674	0.2602	741	0.0324
407	0.0055	474	0.3311	541	0.7059	608	0.8976	675	0.2533	742	0.0307
408	0.0061	475	0.3162	542	0.7091	609	0.8911	676	0.2461	743	0.0306
409	0.0071	476	0.3029	543	0.7165	610	0.8894	677	0.2387	744	0.0294
410	0.0076	477	0.2957	544	0.7182	611	0.8851	678	0.2310	745	0.0282
411	0.0085	478	0.2897	545	0.7211	612	0.8770	679	0.2252	746	0.0273
412	0.0095	479	0.2849	546	0.7264	613	0.8710	680	0.2185	747	0.0265
413	0.0113	480	0.2846	547	0.7293	614	0.8629	681	0.2126	748	0.0256
414	0.0132	481	0.2833	548	0.7357	615	0.8546	682	0.2076	749	0.0249
415	0.0152	482	0.2879	549	0.7390	616	0.8454	683	0.2003	750	0.0243
416	0.0182	483	0.2924	550	0.7434	617	0.8361	684	0.1944	751	0.0233
417	0.0209	484	0.2961	551	0.7464	618	0.8308	685	0.1888	752	0.0226
418	0.0239	485	0.3012	552	0.7521	619	0.8212	686	0.1835	753	0.0219
419	0.0289	486	0.3059	553	0.7579	620	0.8126	687	0.1777	754	0.0213
420	0.0340	487	0.3129	554	0.7605	621	0.8021	688	0.1719	755	0.0206
421	0.0401	488	0.3195	555	0.7657	622	0.7949	689	0.1672	756	0.0199
422	0.0465	489	0.3284	556	0.7685	623	0.7837	690	0.1622	757	0.0194
423	0.0526	490	0.3342	557	0.7757	624	0.7748	691	0.1580	758	0.0188
424	0.0611	491	0.3446	558	0.7815	625	0.7639	692	0.1525	759	0.0181
425	0.0700	492	0.3539	559	0.7869	626	0.7528	693	0.1479	760	0.0177
426	0.0802	493	0.3665	560	0.7920	627	0.7423	694	0.1434	761	0.0173
427	0.0908	494	0.3778	561	0.7979	628	0.7328	695	0.1385	762	0.0169
428	0.1023	495	0.3897	562	0.8005	629	0.7192	696	0.1346	763	0.0162
429	0.1167	496	0.4035	563	0.8081	630	0.7115	697	0.1305	764	0.0159
430	0.1316	497	0.4159	564	0.8122	631	0.6969	698	0.1266	765	0.0152
431	0.1458	498	0.4288	565	0.8181	632	0.6882	699	0.1223	766	0.0145
432	0.1662	499	0.4406	566	0.8233	633	0.6757	700	0.1195	767	0.0142
433	0.1846	500	0.4547	567	0.8281	634	0.6661	701	0.1162	768	0.0139
434	0.2069	501	0.4665	568	0.8343	635	0.6544	702	0.1120	769	0.0134
435	0.2291	502	0.4796	569	0.8388	636	0.6414	703	0.1078	770	0.0130
436	0.2576	503	0.4901	570	0.8458	637	0.6306	704	0.1047	771	0.0129
437	0.2838	504	0.5033	571	0.8511	638	0.6181	705	0.1016	772	0.0121
438	0.3165	505	0.5151	572	0.8546	639	0.6071	706	0.0985	773	0.0120
439	0.3538	506	0.5255	573	0.8579	640	0.5981	707	0.0952	774	0.0115
440	0.3921	507	0.5360	574	0.8630	641	0.5813	708	0.0922	775	0.0108
441	0.4321	508	0.5423	575	0.8689	642	0.5702	709	0.0896	776	0.0109
442	0.4820	509	0.5524	576	0.8705	643	0.5599	710	0.0858	777	0.0102
443	0.5365	510	0.5621	577	0.8793	644	0.5474	711	0.0838	778	0.0101
444	0.5949	511	0.5723	578	0.8839	645	0.5361	712	0.0806	779	0.0103
445	0.6549	512	0.5777	579	0.8854	646	0.5243	713	0.0785	780	0.0103
446	0.7211	513	0.5856	580	0.8908	647	0.5127	714	0.0759	N/A	N/A

Goniophotometer Test Results:

Test Condition:

Test Ambient (°C)	Test Humidity (%)	Orientation	Stabilization Time (minute)	Test Time (minute)
24.8	49.1	Face Down	90	25

Electrical Data:

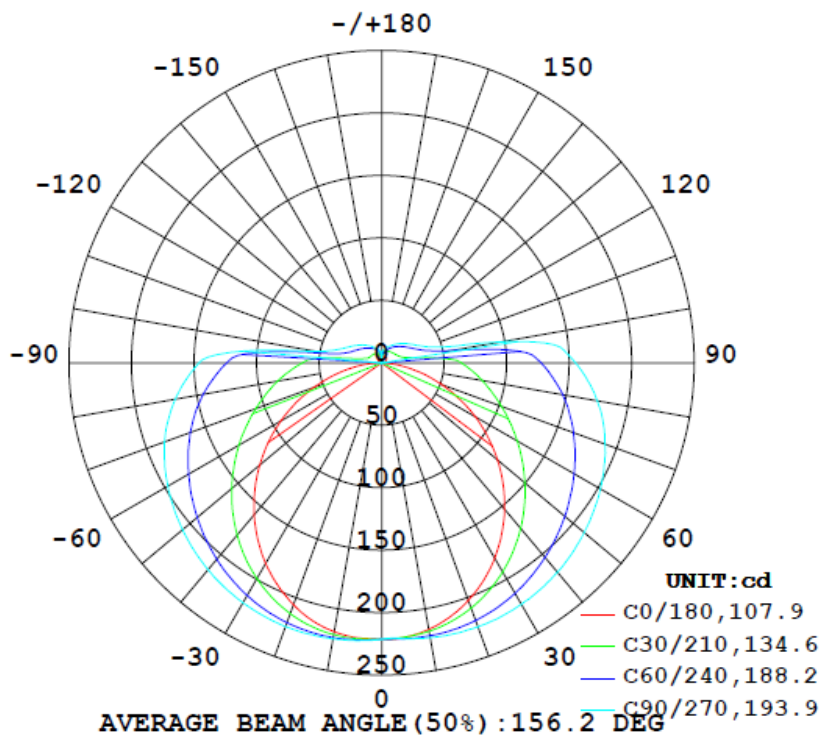
Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor
120.0	60	0.0767	9.020	0.9757

Goniophotometer Data:

Parameter	Results
Total Luminous (lm)	1120.7
Luminous Efficacy (lm/w)	124.25
Zonal Lumens Distribution (0-60°)	52.4%
Beam Angle (°)	193.9

Luminous Intensity Distribution Diagram:

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

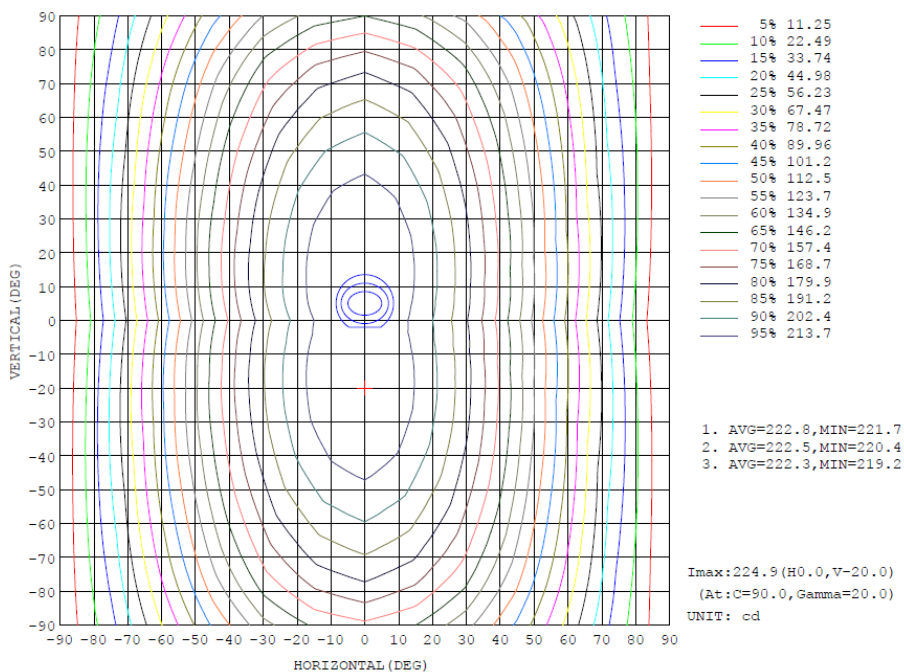


Zonal Flux Diagram:

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total	lum, lamp
10	216.8	220.1	223.4	221.2	218.7	222.2	224.3	221.1	0- 10	21.13	21.13	1.89,1.89
20	202.5	214.4	224.9	217.5	206.1	217.7	224.7	214.6	10- 20	61.91	83.04	7.41,7.41
30	180.7	203.6	223.3	208.4	185.6	207.6	221.8	203.0	20- 30	97.25	180.3	16.1,16.1
40	152.9	188.7	218.8	194.5	158.7	193.0	216.1	187.4	30- 40	123.7	304.0	27.1,27.1
50	121.0	171.4	211.5	177.6	127.4	175.5	207.8	169.4	40- 50	139.4	443.5	39.6,39.6
60	86.51	153.2	201.9	159.2	93.27	156.5	197.5	150.9	50- 60	144.2	587.7	52.4,52.4
70	51.31	135.4	190.1	140.6	57.96	137.4	184.8	132.3	60- 70	139.2	726.9	64.9,64.9
80	19.67	117.8	175.0	122.5	25.19	117.8	167.6	113.5	70- 80	126.3	853.2	76.1,76.1
90	0.5594	99.19	155.0	102.8	1.263	97.05	146.1	92.30	80- 90	107.8	961.1	85.8,85.8
100	1.637	38.53	97.45	50.01	0.9488	30.41	53.04	30.21	90-100	73.14	1034	92.3,92.3
110	2.781	22.09	38.07	20.77	1.801	18.93	33.72	19.81	100-110	27.55	1062	94.7,94.7
120	4.058	17.61	29.38	17.43	2.839	16.14	27.11	16.17	110-120	18.23	1080	96.4,96.4
130	4.957	15.07	24.16	15.41	4.024	14.24	22.39	13.88	120-130	14.13	1094	97.6,97.6
140	5.901	13.31	19.95	13.82	5.209	12.71	18.43	12.37	130-140	10.74	1105	98.6,98.6
150	6.027	12.12	16.34	12.46	6.340	11.03	15.08	11.47	140-150	7.743	1113	99.3,99.3
160	6.524	10.99	13.37	11.30	6.509	10.28	12.38	10.37	150-160	5.003	1118	99.7,99.7
170	4.815	8.819	10.87	9.900	2.885	7.842	10.03	6.703	160-170	2.502	1120	99.9,99.9
180	0.0000	0.0000	0.0000	0	4.302	4.302	4.302	4.302	170-180	0.6145	1121	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	221	221	221	221	221	221	221	221	221	221	221	221	221	221	221	221	221	221
5	220	220	220	221	222	222	222	222	221	221	221	221	221	221	221	222	222	223	223
10	217	217	218	220	222	223	223	223	222	221	220	219	219	220	221	222	223	224	224
15	211	211	214	218	221	224	224	224	222	220	217	215	214	216	218	221	223	224	225
20	202	204	209	214	219	223	225	224	221	218	213	209	206	210	214	218	221	224	225
25	192	195	202	210	217	222	225	223	219	214	207	201	197	202	207	213	219	222	224
30	181	185	193	204	213	220	223	221	216	208	200	192	186	193	200	208	215	220	222
35	167	173	184	197	209	217	221	219	212	202	191	181	173	181	190	201	211	217	219
40	153	160	173	189	203	214	219	215	207	195	181	168	159	169	180	193	205	213	216
45	137	145	162	180	197	210	215	212	202	186	170	155	143	155	169	185	199	209	212
50	121	131	150	171	191	205	211	207	196	178	158	141	127	141	157	175	193	204	208
55	104	115	137	162	184	200	207	202	189	169	146	126	111	126	144	166	186	198	203
60	86.5	100.0	125	153	178	194	202	196	182	159	133	110	93.3	110	132	156	178	192	197
65	68.8	84.4	113	144	171	189	196	190	175	150	121	94.8	75.6	94.2	119	147	171	186	191
70	51.3	69.5	102	135	163	182	190	184	167	141	109	79.3	58.0	78.6	107	137	163	179	185
75	34.6	55.6	91.3	127	155	175	183	177	159	132	97.9	64.7	40.9	63.6	95.5	128	154	170	177
80	19.7	43.8	81.6	118	147	166	175	168	151	122	87.4	51.3	25.2	50.1	84.5	118	145	161	168
85	7.33	34.4	72.4	108	137	157	166	159	141	113	77.1	39.9	11.7	38.4	73.6	107	135	151	157
90	0.56	26.8	63.9	99.2	128	146	155	148	131	103	67.3	30.1	1.26	28.3	63.6	97.0	124	140	146
95	1.18	16.1	44.4	76.7	110	131	144	136	121	92.2	57.7	22.6	0.65	18.9	45.6	72.0	97.9	104	110
100	1.64	9.46	23.8	38.5	57.6	78.6	97.5	90.5	80.5	50.0	26.6	9.82	0.95	8.18	20.1	30.4	43.7	50.6	53.0
105	2.20	7.76	17.7	27.1	38.3	45.0	49.2	44.6	37.6	25.8	16.2	6.56	1.38	5.82	14.0	21.8	30.6	36.2	39.6
110	2.78	7.58	15.5	22.1	31.5	36.2	38.1	34.8	29.2	20.8	12.9	5.76	1.80	5.21	11.7	18.9	26.2	31.0	33.7
115	3.44	7.64	14.2	19.3	27.6	31.5	32.9	30.3	25.6	18.7	11.7	5.76	2.28	5.27	10.8	17.4	23.5	27.8	30.0
120	4.06	7.86	13.3	17.6	24.8	28.2	29.4	27.2	23.2	17.4	11.3	6.09	2.84	5.59	10.5	16.1	21.5	25.2	27.1
125	4.57	8.15	12.7	16.2	22.6	25.5	26.6	24.8	21.3	16.3	11.0	6.49	3.41	5.92	10.2	15.1	19.8	23.0	24.6
130	4.96	8.44	12.2	15.1	20.6	23.2	24.2	22.6	19.7	15.4	10.8	6.64	4.02	6.00	9.91	14.2	18.3	21.0	22.4
135	5.57	8.74	11.8	14.1	18.8	21.0	22.0	20.7	18.2	14.6	10.6	6.77	4.65	6.13	9.69	13.4	16.9	19.2	20.3
140	5.90	8.99	11.5	13.3	17.1	19.1	19.9	18.9	16.9	13.8	10.5	7.31	5.21	6.72	9.54	12.7	15.6	17.4	18.4
145	5.80	9.18	11.2	12.7	15.4	17.3	18.0	17.2	15.6	13.1	10.3	7.73	5.77	7.10	9.31	12.0	14.4	15.9	16.7
150	6.03	9.33	10.9	12.1	13.8	15.7	16.3	15.7	14.4	12.5	9.75	7.86	6.34	7.34	7.69	11.0	13.3	14.5	15.1
155	6.30	9.37	10.7	11.6	12.3	14.2	14.8	14.3	13.4	11.8	7.72	7.47	6.82	7.49	7.42	10.4	12.3	13.2	13.6
160	6.52	9.22	10.3	11.0	10.9	12.9	13.4	13.0	12.4	11.3	9.36	7.18	6.51	5.99	8.17	10.3	11.5	12.1	12.4
165	5.47	6.67	8.23	8.28	7.72	8.92	12.1	11.9	11.5	10.7	9.67	7.47	3.61	5.49	7.96	9.53	10.5	10.9	11.2
170	4.81	5.74	7.78	8.82	9.42	10.3	10.9	10.6	10.3	9.90	9.38	7.80	2.89	4.39	6.04	7.84	9.23	9.82	10.0
175	2.85	3.83	6.08	8.34	9.43	9.78	9.95	9.77	9.44	8.29	6.48	5.04	3.64	3.61	3.54	3.76	4.41	4.97	6.36
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	4.30	4.30	4.30	4.30	4.30	4.30	4.30

Table--2 UNIT: cd

C (DEG)	285	300	315	330	345														
γ (DEG)	0	221	221	221	221	221													
5	223	223	222	222	221														
10	224	223	221	219	218														
15	224	222	219	215	212														
20	223	219	215	210	205														
25	221	216	209	202	196														
30	219	212	203	193	185														
35	215	207	196	183	173														
40	211	201	187	172	160														
45	207	195	179	161	146														
50	202	188	169	149	131														
55	196	182	160	136	115														
60	190	174	151	124	99.6														
65	184	167	142	112	83.9														
70	177	159	132	100	68.9														
75	169	150	123	89.5	54.8														
80	159	141	113	79.3	43.0														
85	149	131	103	69.5	33.4														
90	137	119	92.3	59.9	25.4														
95	91.5	73.0	50.3	32.3	13.3														
100	48.4	41.5	30.2	20.1	8.41														
105	37.5	32.8	23.4	16.0	7.14														
110	32.3	28.3	19.8	14.3	6.98														
115	28.8	25.2	17.7	13.2	7.04														
120	26.0	22.8	16.2	12.4	7.24														
125	23.6	20.7	14.9	11.9	7.49														
130	21.4	18.9	13.9	11.4	7.73														
135	19.4	17.1	13.0	11.1	8.01														
140	17.6	15.5	12.4	10.8	8.19														
145	15.9	13.9	11.9	10.5	8.21														
150	14.4	12.4	11.5	10.2	8.23														
155	13.0	11.0	11.1	9.92	8.12														
160	9.14	8.70	10.4	9.43	7.67														
165	9.96	7.68	6.63	5.88	5.11														
170	9.93	9.22	6.70	4.49	4.62														
175	4.29	2.64	1.84	1.58	2.21														
180	4.30	4.30	4.30	4.30	4.30														

THD and PF Measurement Test Results:

Electrical Measurement:

Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor	iTHD (%)
277.0	60	0.0356	8.880	0.9006	17.88

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*******