

## Photometric Test Report

### Relevant Standards

- ☒ ANSI/IES LM-79-2019
- ☒ ANSI C82.77-2017

Prepared For

**RAB Lighting Inc.**

Address: 408 W 14th St New York, NY 10014

Prepared By

**Dongguan New Testing Centre Co., Ltd.**

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

Prepare by:

*Alan Wang*

Engineer: Alan Wang

Date: 2025-04-01

Review by:

*Vincent Yuan*

Technical Lead: Vincent Yuan

Issue Date: 2025-04-01

Revised Date: N/A

## 1.0 Test Summary

DLC Technical Requirements V5.1

Direct Linear Ambient Luminaires					
Requirement Category		Test Method	Requirements		Test Value
Luminaire Output (lm) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	375 lm/ft		1101
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	146.8
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		15.0
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	6.62
				277V	13.87
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.993
				277V	0.915
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	3465±245	3414
			4 steps	3465±124	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		83.9
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		11
Minimum Rf (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	≥70		85
Minimum Rg (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	≥89		95
IES Rcs,h1 (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	-12%≤IES Rcs,h1≤+23%		-12%
Zonal Lumen Requirement (0°-60°) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	≥40%		62.5%
Discomfort Glare (UGR) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	28.1
			N/A	<22	
Input Voltage (V)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Cast		277.0
(Goniophotometer – Section 4.2)			Non-Worst Case		120.0
Input Current (A)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		0.059
(Goniophotometer – Section 4.2)			Non-Worst Case		0.124
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		15.0
(Goniophotometer – Section 4.2)			Non-Worst Case		14.8

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-03-28	STRP2H/MVS @15W3500K	-	250324006-S1
2	Goniophotometer Test	2025-03-28	STRP2H/MVS @15W3500K	-	250324006-S1
3	THD and PF Test	2025-03-28	STRP2H/MVS @15W3500K	-	250324006-S1

### Remark (If any):

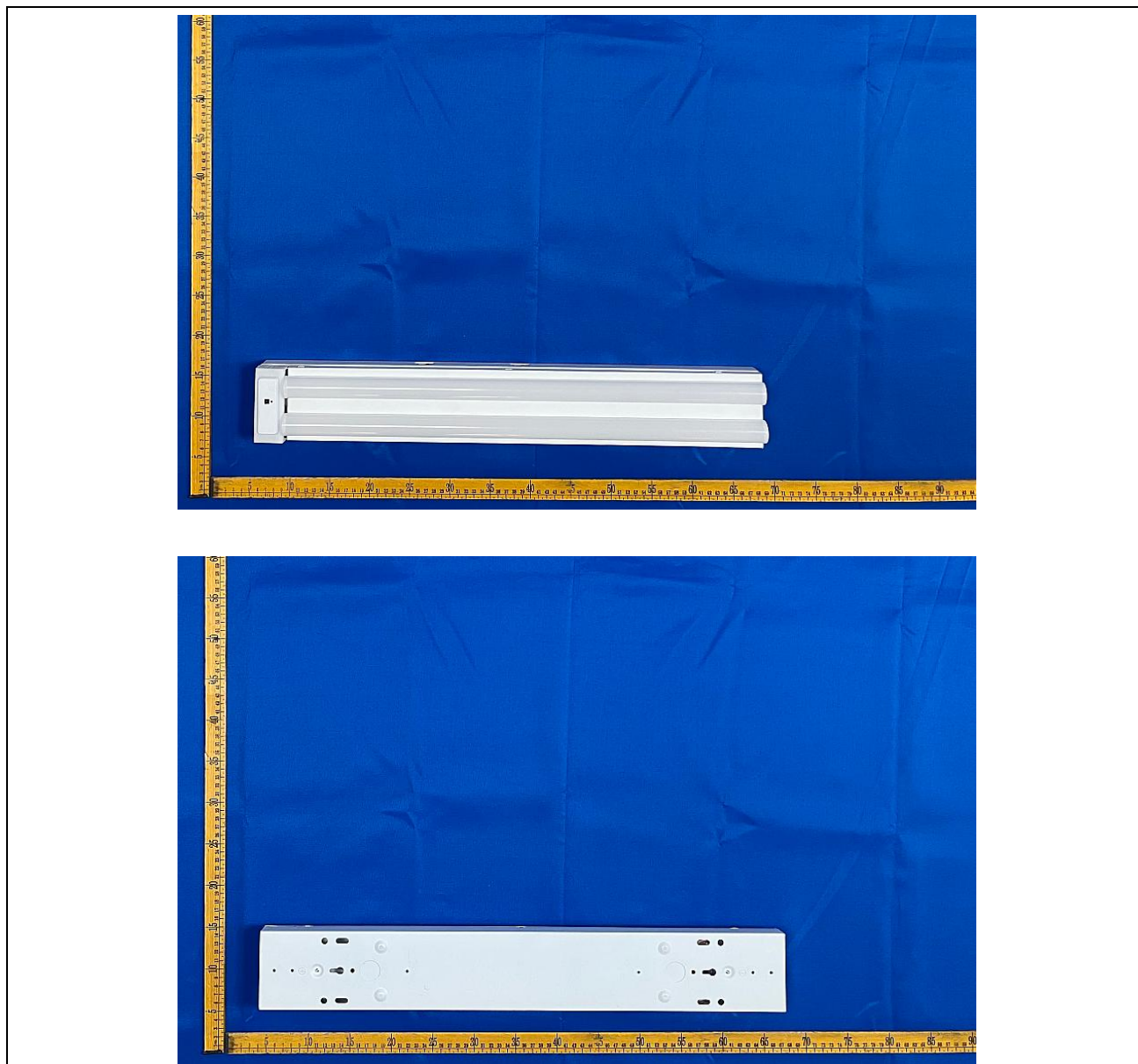
1. The results contained in this report pertain only to the tested samples.
2. This report shall not be reproduced, no limited part or full, without approval of Dongguan New Testing Centre Co., Ltd.
3. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. Government.

### 3.0 Product Description

Luminaire Description: Model No. STRP2H/MVS @15W3500K, color tunable from 3500K, 4000K and 5000K.

Electrical Specification: 120-277Vac, 50/60Hz

#### Photos of Luminaire Characteristics



## 4.0 LM-79 Measurement and Test Results

### 4.1 Integrating Sphere Test

Model No.	STRP2H/MVS @15W3500K	Sample ID	250324006-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

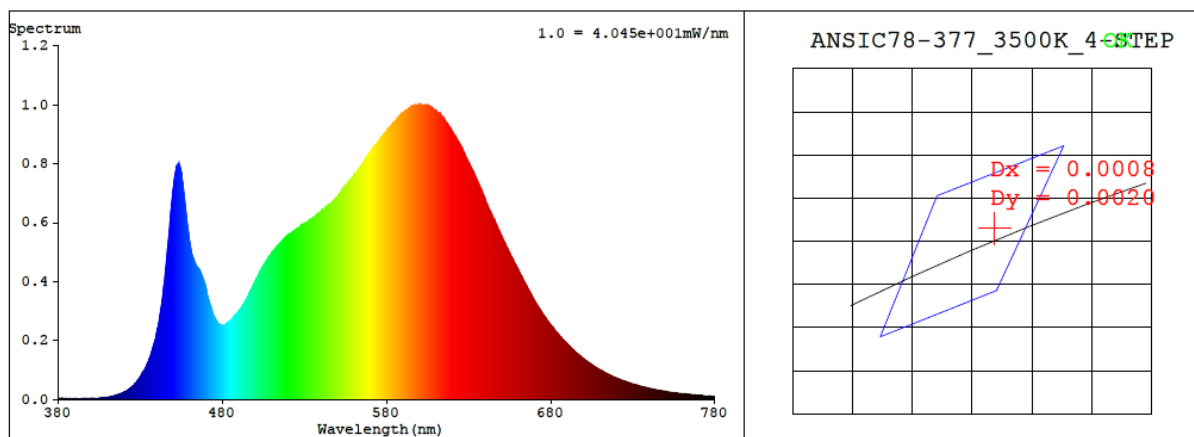
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere.</p> <p>The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within ±0.2 percent under load.</p> <p>The sample was measured using 4π geometry and operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780nm.</p>

### Test Result

Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
120.0	60	0.124	14.8	0.993
277.0	60	0.059	15.0	0.915

CCT (K)	CRI	R9	Duv	SDCM	Rf	Rg	IES Rcs,h1
3414	83.9	11	0.0007	1.5	85	95	-12%

## 4.1 Integrating Sphere Test



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.4110$   $y = 0.3951$  /  $u' = 0.2376$   $v' = 0.5139$  ( $duv=6.88e-04$ )

CCT= 3414K Prcp WL:  $L_d=580.9nm$  Purity=41.9%

Peak WL:  $L_p=600nm$  FWHM:  $=144.1nm$  Ratio:R=20.8% G=76.0% B=3.2%

Render Index:  $R_a = 83.9$  AvgR = 78.0 TM30:Rf=85 Rg=95

EEL: 0.09734 A++ Highest

R1 =83 R2 =92 R3 =97 R4 =82 R5 =83 R6 =89 R7 =84

R8 =63 R9 =11 R10=80 R11=81 R12=67 R13=85 R14=99 R15=76

## 4.1 Integrating Sphere Test

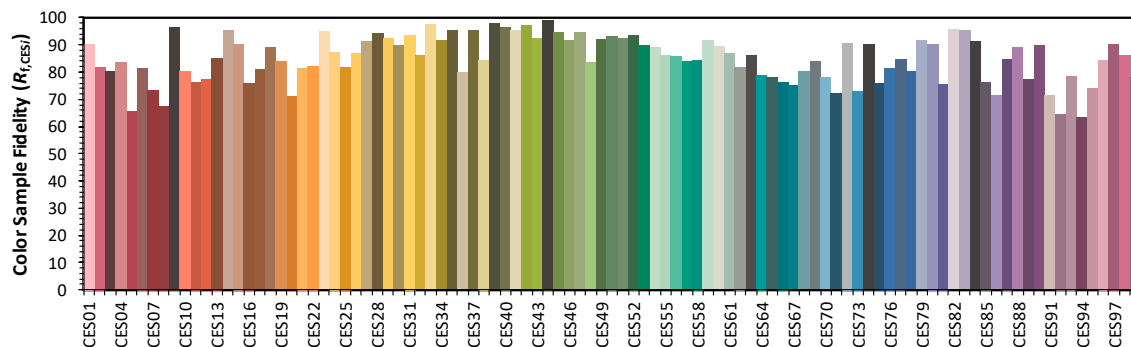
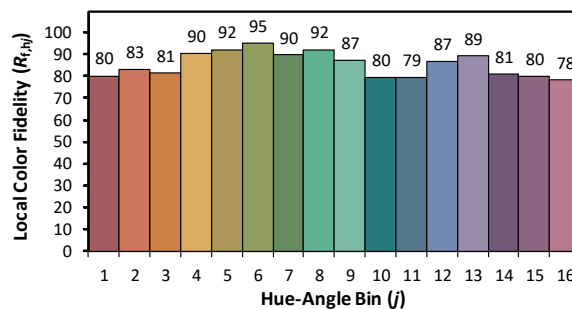
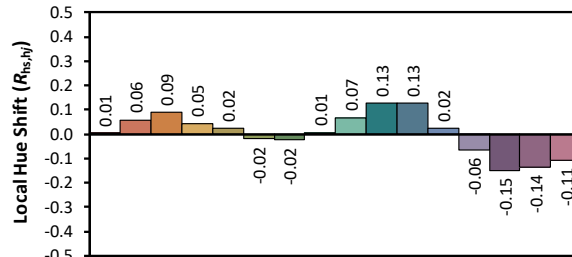
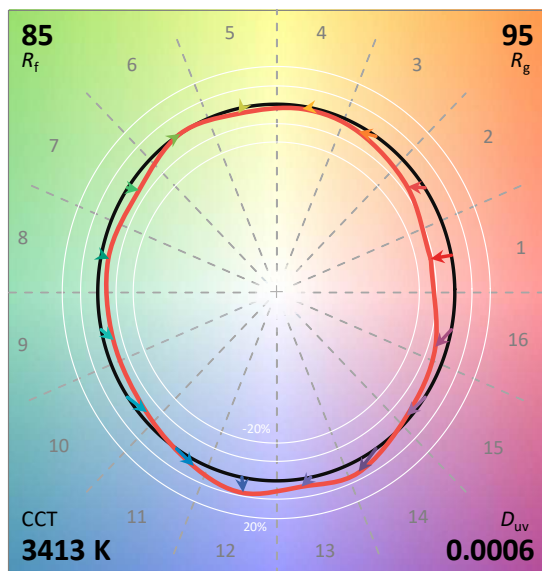
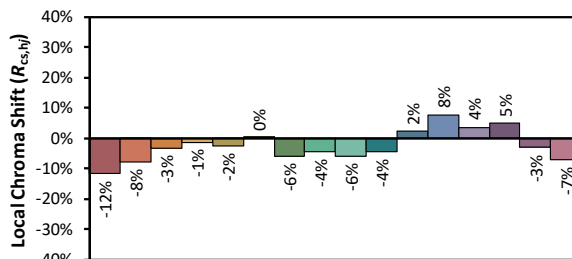
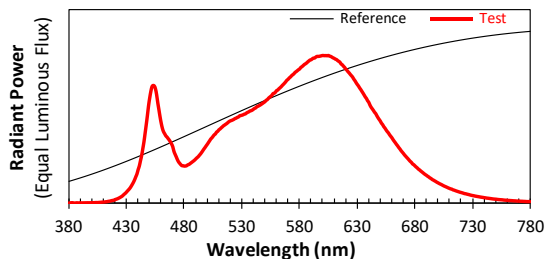
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/4/1

Model: STRP2H/MVS @15W3500K



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

$x$  0.4110  
 $y$  0.3950  
 $u'$  0.2377  
 $v'$  0.5139

CIE 13.3-1995  
(CRI)

$R_a$  84  
 $R_g$  11



## 4.1 Integrating Sphere Test

Spectral Distribution over Visible Wavelength											
WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)
380	1.40E-06	447	5.31E-04	514	5.23E-04	581	9.17E-04	648	5.78E-04	715	8.53E-05
381	2.30E-06	448	5.92E-04	515	5.29E-04	582	9.23E-04	649	5.66E-04	716	8.26E-05
382	3.20E-06	449	6.59E-04	516	5.34E-04	583	9.29E-04	650	5.55E-04	717	7.99E-05
383	3.30E-06	450	7.11E-04	517	5.40E-04	584	9.37E-04	651	5.41E-04	718	7.74E-05
384	2.10E-06	451	7.56E-04	518	5.47E-04	585	9.42E-04	652	5.31E-04	719	7.47E-05
385	1.00E-06	452	7.88E-04	519	5.53E-04	586	9.47E-04	653	5.18E-04	720	7.26E-05
386	2.10E-06	453	7.96E-04	520	5.57E-04	587	9.55E-04	654	5.08E-04	721	7.04E-05
387	2.90E-06	454	7.92E-04	521	5.60E-04	588	9.61E-04	655	4.96E-04	722	6.79E-05
388	1.80E-06	455	7.73E-04	522	5.63E-04	589	9.67E-04	656	4.85E-04	723	6.52E-05
389	2.60E-06	456	7.34E-04	523	5.67E-04	590	9.70E-04	657	4.76E-04	724	6.39E-05
390	2.70E-06	457	6.79E-04	524	5.72E-04	591	9.76E-04	658	4.63E-04	725	6.18E-05
391	2.20E-06	458	6.32E-04	525	5.75E-04	592	9.81E-04	659	4.53E-04	726	5.99E-05
392	2.50E-06	459	5.83E-04	526	5.80E-04	593	9.81E-04	660	4.43E-04	727	5.80E-05
393	2.40E-06	460	5.41E-04	527	5.83E-04	594	9.87E-04	661	4.31E-04	728	5.56E-05
394	2.70E-06	461	5.06E-04	528	5.91E-04	595	9.92E-04	662	4.20E-04	729	5.37E-05
395	2.80E-06	462	4.83E-04	529	5.93E-04	596	9.92E-04	663	4.09E-04	730	5.20E-05
396	3.00E-06	463	4.70E-04	530	5.95E-04	597	9.93E-04	664	3.98E-04	731	5.06E-05
397	2.90E-06	464	4.56E-04	531	5.98E-04	598	9.95E-04	665	3.88E-04	732	4.87E-05
398	3.00E-06	465	4.47E-04	532	6.02E-04	599	9.97E-04	666	3.77E-04	733	4.73E-05
399	3.40E-06	466	4.37E-04	533	6.04E-04	600	9.98E-04	667	3.67E-04	734	4.57E-05
400	3.60E-06	467	4.27E-04	534	6.10E-04	601	9.98E-04	668	3.55E-04	735	4.46E-05
401	3.60E-06	468	4.14E-04	535	6.15E-04	602	9.97E-04	669	3.46E-04	736	4.30E-05
402	3.80E-06	469	4.00E-04	536	6.18E-04	603	9.98E-04	670	3.37E-04	737	4.16E-05
403	4.50E-06	470	3.82E-04	537	6.24E-04	604	9.97E-04	671	3.27E-04	738	4.04E-05
404	4.60E-06	471	3.51E-04	538	6.26E-04	605	9.99E-04	672	3.18E-04	739	3.92E-05
405	4.50E-06	472	3.32E-04	539	6.30E-04	606	9.94E-04	673	3.09E-04	740	3.77E-05
406	5.40E-06	473	3.14E-04	540	6.36E-04	607	9.92E-04	674	3.01E-04	741	3.67E-05
407	5.80E-06	474	2.95E-04	541	6.41E-04	608	9.88E-04	675	2.91E-04	742	3.51E-05
408	6.80E-06	475	2.80E-04	542	6.45E-04	609	9.83E-04	676	2.83E-04	743	3.41E-05
409	7.40E-06	476	2.70E-04	543	6.53E-04	610	9.79E-04	677	2.76E-04	744	3.32E-05
410	7.70E-06	477	2.61E-04	544	6.56E-04	611	9.74E-04	678	2.66E-04	745	3.20E-05
411	8.60E-06	478	2.54E-04	545	6.60E-04	612	9.71E-04	679	2.61E-04	746	3.11E-05
412	9.80E-06	479	2.53E-04	546	6.65E-04	613	9.64E-04	680	2.53E-04	747	2.98E-05
413	1.06E-05	480	2.51E-04	547	6.70E-04	614	9.59E-04	681	2.45E-04	748	2.87E-05
414	1.26E-05	481	2.52E-04	548	6.75E-04	615	9.53E-04	682	2.39E-04	749	2.79E-05
415	1.36E-05	482	2.54E-04	549	6.81E-04	616	9.41E-04	683	2.31E-04	750	2.74E-05
416	1.54E-05	483	2.59E-04	550	6.87E-04	617	9.36E-04	684	2.25E-04	751	2.65E-05
417	1.76E-05	484	2.62E-04	551	6.96E-04	618	9.27E-04	685	2.19E-04	752	2.53E-05
418	1.90E-05	485	2.68E-04	552	7.00E-04	619	9.18E-04	686	2.12E-04	753	2.46E-05
419	2.09E-05	486	2.74E-04	553	7.09E-04	620	9.08E-04	687	2.06E-04	754	2.38E-05
420	2.44E-05	487	2.80E-04	554	7.16E-04	621	8.99E-04	688	2.00E-04	755	2.34E-05
421	2.73E-05	488	2.85E-04	555	7.23E-04	622	8.89E-04	689	1.94E-04	756	2.27E-05
422	3.00E-05	489	2.92E-04	556	7.30E-04	623	8.81E-04	690	1.89E-04	757	2.15E-05
423	3.39E-05	490	3.00E-04	557	7.41E-04	624	8.70E-04	691	1.83E-04	758	2.09E-05
424	3.79E-05	491	3.07E-04	558	7.44E-04	625	8.62E-04	692	1.78E-04	759	2.02E-05
425	4.25E-05	492	3.14E-04	559	7.50E-04	626	8.52E-04	693	1.71E-04	760	1.95E-05
426	4.72E-05	493	3.23E-04	560	7.61E-04	627	8.39E-04	694	1.67E-04	761	1.89E-05
427	5.43E-05	494	3.33E-04	561	7.65E-04	628	8.28E-04	695	1.61E-04	762	1.85E-05
428	6.16E-05	495	3.43E-04	562	7.73E-04	629	8.15E-04	696	1.57E-04	763	1.79E-05
429	6.80E-05	496	3.55E-04	563	7.80E-04	630	8.03E-04	697	1.52E-04	764	1.75E-05
430	7.66E-05	497	3.66E-04	564	7.87E-04	631	7.93E-04	698	1.47E-04	765	1.67E-05
431	8.52E-05	498	3.77E-04	565	7.96E-04	632	7.80E-04	699	1.42E-04	766	1.62E-05
432	9.38E-05	499	3.88E-04	566	8.04E-04	633	7.69E-04	700	1.38E-04	767	1.59E-05
433	1.03E-04	500	3.99E-04	567	8.12E-04	634	7.57E-04	701	1.34E-04	768	1.52E-05
434	1.16E-04	501	4.11E-04	568	8.21E-04	635	7.44E-04	702	1.30E-04	769	1.47E-05
435	1.29E-04	502	4.23E-04	569	8.31E-04	636	7.31E-04	703	1.26E-04	770	1.42E-05
436	1.43E-04	503	4.34E-04	570	8.37E-04	637	7.18E-04	704	1.22E-04	771	1.39E-05
437	1.60E-04	504	4.43E-04	571	8.47E-04	638	7.08E-04	705	1.18E-04	772	1.33E-05
438	1.80E-04	505	4.53E-04	572	8.53E-04	639	6.92E-04	706	1.14E-04	773	1.33E-05
439	1.99E-04	506	4.63E-04	573	8.61E-04	640	6.82E-04	707	1.11E-04	774	1.26E-05
440	2.28E-04	507	4.69E-04	574	8.68E-04	641	6.64E-04	708	1.07E-04	775	1.23E-05
441	2.52E-04	508	4.81E-04	575	8.74E-04	642	6.50E-04	709	1.03E-04	776	1.19E-05
442	2.87E-04	509	4.86E-04	576	8.84E-04	643	6.38E-04	710	1.00E-04	777	1.13E-05
443	3.22E-04	510	4.96E-04	577	8.89E-04	644	6.27E-04	711	9.69E-05	778	1.11E-05
444	3.67E-04	511	5.02E-04	578	8.96E-04	645	6.15E-04	712	9.51E-05	779	1.11E-05
445	4.14E-04	512	5.09E-04	579	9.02E-04	646	6.06E-04	713	9.06E-05	780	1.11E-05
446	4.72E-04	513	5.16E-04	580	9.07E-04	647	5.92E-04	714	8.84E-05	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

<b>Model No.</b>	STRP2H/MVS @15W3500K	<b>Sample ID</b>	250324006-S1
<b>Operate time (Min.)</b>	30	<b>Stabilization time (Min.)</b>	60
<b>Temperature (°C)</b>	25.0	<b>Humidity (%RH)</b>	42.6

<b>Test Method</b>
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using a type C goniophotometer and software.</p> <p>The ambient temperature shall be maintained at <math>25 \pm 1^\circ\text{C}</math>, measured at a point not more than 1 m from the sample and at the same height as the sample.</p> <p>The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within <math>\pm 0.2</math> percent under load.</p> <p>The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at <math>1.0^\circ</math> vertical intervals and <math>15^\circ</math> horizontal intervals.</p>

#### Test Conditions

Condition	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
<b>WORST CASE</b>	277.0	60	0.059	15.0	0.915
<b>NON-WORST CASE</b>	120.0	60	0.124	14.8	0.993

#### Test Result

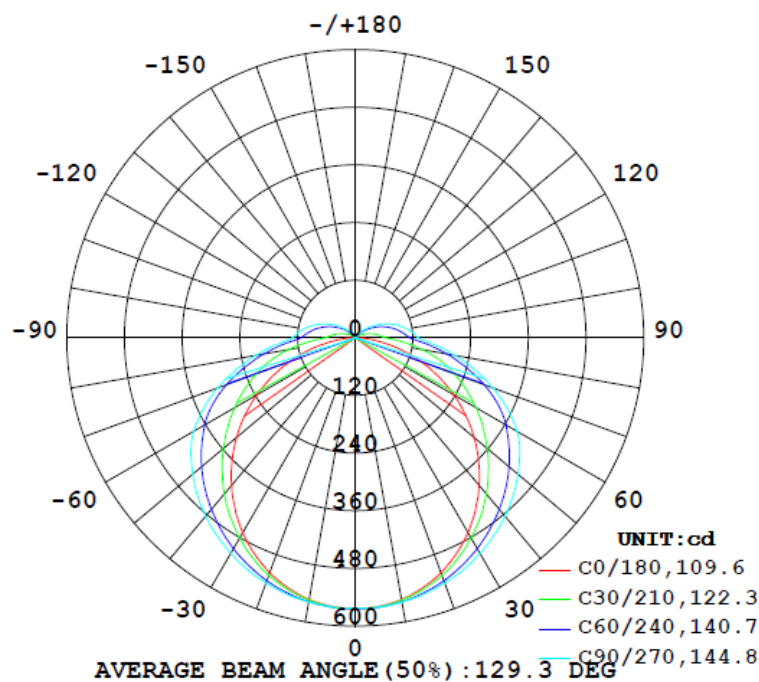
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
2202	1101	161.6	161.6	109.6	144.6	146.8

Zonal Lumen Requirement	UGR	
( $0^\circ$ - $60^\circ$ )	Crosswise	Endwise
62.5%	22.9	28.1

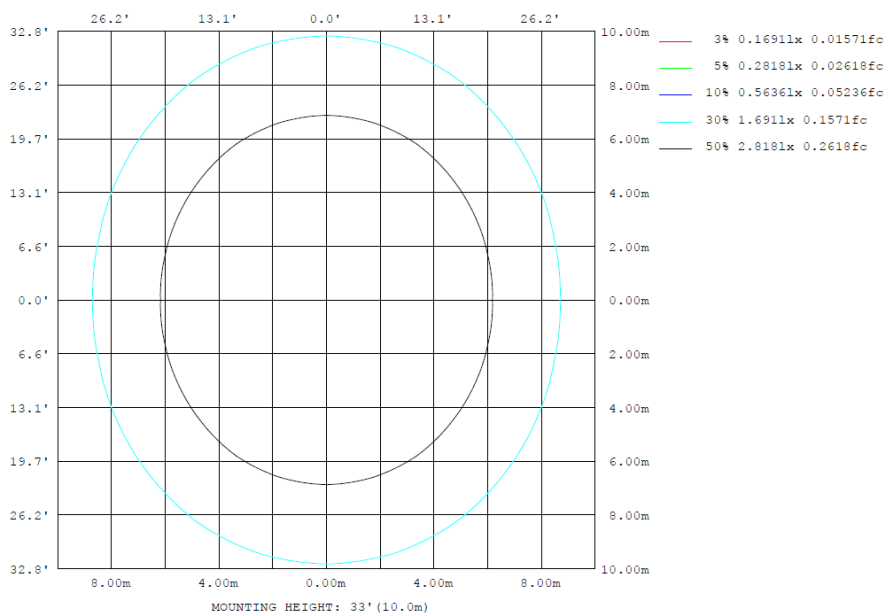
## 4.2 Goniophotometer Test

### Lighting Distribution Curve

#### LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



### Isolux Plot



## 4.2 Goniophotometer Test

### Zonal Lumen Summary

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum, lamp
10	552.9	555.3	558.5	555.3	552.9	555.3	558.5	555.3	0- 10	53.44	53.44	2.43, 2.43
20	520.4	531.1	543.7	531.1	520.4	531.1	543.7	531.1	10- 20	154.1	207.6	9.43, 9.43
30	468.4	492.9	517.9	492.9	468.4	492.9	517.9	492.9	20- 30	237.2	444.8	20.2, 20.2
40	400.5	443.6	484.4	443.6	400.5	443.6	484.4	443.6	30- 40	294.2	739.0	33.6, 33.6
50	322.7	388.4	441.7	388.4	322.7	388.4	441.7	388.4	40- 50	321.0	1060	48.1, 48.1
60	236.0	327.6	388.4	327.6	236.0	327.6	388.4	327.6	50- 60	316.9	1377	62.5, 62.5
70	145.9	259.3	304.4	259.3	145.9	259.3	304.4	259.3	60- 70	280.8	1658	75.3, 75.3
80	58.99	170.8	210.8	170.8	58.99	170.8	210.8	170.8	70- 80	211.9	1870	84.9, 84.9
90	5.510	91.70	131.6	91.70	5.510	91.70	131.6	91.70	80- 90	127.3	1997	90.7, 90.7
100	4.700	70.39	108.8	70.39	4.700	70.39	108.8	70.39	90-100	79.42	2076	94.3, 94.3
110	4.536	49.00	83.02	49.00	4.536	49.00	83.02	49.00	100-110	57.50	2134	96.9, 96.9
120	4.536	28.67	56.23	28.67	4.536	28.67	56.23	28.67	110-120	36.57	2170	98.6, 98.6
130	4.536	10.82	31.79	10.82	4.536	10.82	31.79	10.82	120-130	19.35	2190	99.5, 99.5
140	4.536	3.382	10.30	3.382	4.536	3.382	10.30	3.382	130-140	7.644	2197	99.8, 99.8
150	4.536	2.794	1.495	2.794	4.536	2.794	1.495	2.794	140-150	2.223	2200	99.9, 99.9
160	4.065	2.120	1.495	2.120	4.065	2.120	1.495	2.120	150-160	1.203	2201	100, 100
170	4.150	2.077	1.495	2.077	4.150	2.077	1.495	2.077	160-170	0.6516	2201	100, 100
180	4.158	2.047	1.495	2.047	4.158	2.047	1.495	2.047	170-180	0.2208	2202	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	53.44	0-10	53.44	2.43%
10-20	154.13	0-20	207.57	9.43%
20-30	237.19	0-30	444.76	20.20%
30-40	294.23	0-40	738.99	33.57%
40-50	321.00	0-50	1059.99	48.15%
50-60	316.94	0-60	1376.93	62.55%
60-70	280.80	0-70	1657.73	75.30%
70-80	211.89	0-80	1869.62	84.93%
80-90	127.30	0-90	1996.92	90.71%
90-100	79.42	0-100	2076.34	94.32%
100-110	57.50	0-110	2133.84	96.93%
110-120	36.57	0-120	2170.41	98.59%
120-130	19.35	0-130	2189.76	99.47%
130-140	7.64	0-140	2197.40	99.82%
140-150	2.22	0-150	2199.62	99.92%
150-160	1.20	0-160	2200.82	99.97%
160-170	0.65	0-170	2201.47	100.00%
170-180	0.22	0-180	2201.69	100.01%

## 4.2 Goniophotometer Test

UGR – Uncorrected Table:

**UGR TABLE - UNCORRECTED**

Reflectances										
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20
Room Size										
X=2H	Y=2H	UGR Viewed Crosswise					UGR Viewed Endwise			
	3H	15.7	17.3	16.2	17.8	18.3	18.7	20.3	19.2	20.8
	4H	17.3	18.7	17.8	19.2	19.8	21.3	22.7	21.9	23.2
	6H	17.8	19.2	18.4	19.7	20.3	22.5	23.8	23.0	24.4
	8H	18.2	19.5	18.7	20.0	20.6	23.7	24.9	24.2	25.4
	12H	18.3	19.5	18.9	20.0	20.6	24.2	25.4	24.8	26.0
4H	2H	18.3	19.5	18.9	20.0	20.7	24.8	26.0	25.4	26.5
	3H	17.0	18.3	17.5	18.8	19.4	19.2	20.5	19.7	21.1
	4H	18.9	20.0	19.4	20.6	21.2	22.1	23.2	22.6	23.8
	6H	19.6	20.6	20.2	21.2	21.8	23.4	24.4	24.0	25.0
	8H	20.1	21.0	20.7	21.6	22.3	24.7	25.7	25.3	26.3
	12H	20.2	21.1	20.8	21.7	22.4	25.4	26.3	26.0	26.9
8H	4H	20.3	21.1	20.9	21.7	22.4	26.1	26.9	26.7	27.5
	6H	20.5	21.4	21.1	22.0	22.6	23.6	24.5	24.2	25.1
	8H	21.2	22.0	21.8	22.6	23.3	25.2	25.9	25.8	26.6
	12H	21.5	22.2	22.1	22.8	23.5	26.0	26.6	26.6	27.3
12H	4H	21.7	22.3	22.3	22.9	23.6	26.8	27.4	27.5	28.1
	6H	20.7	21.5	21.3	22.1	22.8	23.7	24.5	24.3	25.1
	8H	21.6	22.2	22.2	22.9	23.6	25.2	25.9	25.9	26.5
	12H	21.9	22.5	22.6	23.2	23.9	26.1	26.7	26.7	27.3

Maximum UGR = 28.8

UGR – Corrected Table:

**UGR TABLE - CORRECTED**

Reflectances										
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30
Walls	50	30	50	30	30	50	30	50	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20
Room Size										
X=2H	Y=2H	UGR Viewed Crosswise					UGR Viewed Endwise			
	3H	18.4	20.0	18.9	20.5	21.0	21.4	23.0	21.9	23.5
	4H	20.0	21.4	20.5	21.9	22.5	24.0	25.4	24.6	25.9
	6H	20.5	21.9	21.1	22.4	23.0	25.2	26.5	25.7	27.1
	8H	20.9	22.2	21.4	22.7	23.3	26.4	27.6	26.9	28.1
	12H	21.0	22.2	21.6	22.7	23.3	26.9	28.1	27.5	28.7
4H	2H	21.0	22.2	21.6	22.7	23.4	27.5	28.7	28.1	29.2
	3H	19.7	21.0	20.2	21.5	22.1	21.9	23.2	22.4	23.8
	4H	21.6	22.7	22.1	23.3	23.9	24.8	25.9	25.3	26.5
	6H	22.3	23.3	22.9	23.9	24.5	26.1	27.1	26.7	27.7
	8H	22.8	23.7	23.4	24.3	25.0	27.4	28.4	28.0	29.0
	12H	22.9	23.8	23.5	24.4	25.1	28.1	29.0	28.7	29.6
8H	4H	23.0	23.8	23.6	24.4	25.1	28.8	29.6	29.4	30.2
	6H	23.2	24.1	23.8	24.7	25.3	26.3	27.2	26.9	27.8
	8H	23.9	24.7	24.5	25.3	26.0	27.9	28.6	28.5	29.3
	12H	24.2	24.9	24.8	25.5	26.2	28.7	29.3	29.3	30.0
12H	4H	24.4	25.0	25.0	25.6	26.3	29.5	30.1	30.2	30.8
	6H	23.4	24.2	24.0	24.8	25.5	26.4	27.2	27.0	27.8
	8H	24.3	24.9	24.9	25.6	26.3	27.9	28.6	28.6	29.2
	12H	24.6	25.2	25.3	25.9	26.6	28.8	29.4	29.4	30.0

Maximum UGR = 31.5

## 4.2 Goniophotometer Test

### 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	564	564	564	563	564	563	563	563	564	563	564	564	564	564	564	563	564	563	563
5	561	562	562	562	563	562	562	562	563	562	562	562	561	562	562	562	563	562	562
10	553	554	554	555	558	558	559	558	558	555	554	554	553	554	554	555	558	558	559
15	539	541	542	545	549	551	553	551	549	545	542	541	539	541	542	545	549	551	553
20	520	522	526	531	538	542	544	542	538	531	526	522	520	522	526	531	538	542	544
25	496	499	506	514	523	529	532	529	523	514	506	499	496	499	506	514	523	529	532
30	468	472	481	493	507	514	518	514	507	493	481	472	468	472	481	493	507	514	518
35	436	441	454	470	487	498	502	498	487	470	454	441	436	441	454	470	487	498	502
40	401	407	424	444	466	479	484	479	466	444	424	407	401	407	424	444	466	479	484
45	363	371	392	417	443	458	464	458	443	417	392	371	363	371	392	417	443	458	464
50	323	333	359	388	417	435	442	435	417	388	359	333	323	333	359	388	417	435	442
55	280	293	324	359	390	411	418	411	390	359	324	293	280	293	324	359	390	411	418
60	236	252	290	328	362	382	388	382	362	328	290	252	236	252	290	328	362	382	388
65	191	212	255	297	328	344	349	344	328	297	255	212	191	212	255	297	328	344	349
70	146	172	220	259	285	300	304	300	285	259	220	172	146	172	220	259	285	300	304
75	101	134	183	216	239	253	257	253	239	216	183	134	101	134	183	216	239	253	257
80	59.0	97.7	141	171	193	207	211	207	193	171	141	97.7	59.0	97.7	141	171	193	207	211
85	23.9	62.2	98.5	127	149	162	166	162	149	127	98.5	62.2	23.9	62.2	98.5	127	149	162	166
90	5.51	30.7	63.1	91.7	114	128	132	128	114	91.7	63.1	30.7	5.51	30.7	63.1	91.7	114	128	132
95	4.79	22.2	52.8	80.3	102	116	120	116	102	80.3	52.8	22.2	4.79	22.2	52.8	80.3	102	116	120
100	4.70	15.3	43.7	70.4	91.0	104	109	104	91.0	70.4	43.7	15.3	4.70	15.3	43.7	70.4	91.0	104	109
105	4.54	9.44	34.5	59.8	79.7	91.7	96.6	91.7	79.7	59.8	34.5	9.44	4.54	9.44	34.5	59.8	79.7	91.7	96.6
110	4.54	5.27	25.9	49.0	67.6	79.1	83.0	79.1	67.6	49.0	25.9	5.27	4.54	5.27	25.9	49.0	67.6	79.1	83.0
115	4.54	4.80	18.0	38.5	55.5	66.1	69.5	66.1	55.5	38.5	18.0	4.80	4.54	4.80	18.0	38.5	55.5	66.1	69.5
120	4.54	4.80	10.7	28.7	43.9	53.3	56.2	53.3	43.9	28.7	10.7	4.80	4.54	4.80	10.7	28.7	43.9	53.3	56.2
125	4.54	4.63	4.96	19.4	32.9	41.2	43.6	41.2	32.9	19.4	4.96	4.63	4.54	4.63	4.96	19.4	32.9	41.2	43.6
130	4.54	4.54	4.19	10.8	22.4	29.8	31.8	29.8	22.4	10.8	4.19	4.54	4.54	4.54	4.19	10.8	22.4	29.8	31.8
135	4.54	4.52	4.05	4.20	12.6	18.9	20.9	18.9	12.6	4.05	4.52	4.54	4.52	4.05	4.20	12.6	18.9	20.9	20.9
140	4.54	4.32	3.92	3.38	4.12	8.81	10.3	8.81	4.12	3.38	3.92	4.32	4.54	4.32	3.92	3.38	4.12	8.81	10.3
145	4.54	4.14	3.55	3.16	2.61	1.89	2.25	1.89	2.61	3.16	3.55	4.14	4.54	4.14	3.55	3.16	2.61	1.89	2.25
150	4.54	3.95	3.27	2.79	2.41	1.70	1.50	1.70	2.41	2.79	3.27	3.95	4.54	3.95	3.27	2.79	2.41	1.70	1.50
155	4.35	3.58	2.90	2.33	2.11	1.62	1.50	1.62	2.11	2.33	2.90	3.58	4.35	3.58	2.90	2.33	2.11	1.62	1.50
160	4.06	3.11	2.52	2.12	1.78	1.59	1.50	1.59	1.78	2.12	2.52	3.11	4.06	3.11	2.52	2.12	1.78	1.59	1.50
165	4.13	3.06	2.48	2.10	1.75	1.59	1.50	1.59	1.75	2.10	2.48	3.06	4.13	3.06	2.48	2.10	1.75	1.59	1.50
170	4.15	3.01	2.56	2.08	1.72	1.59	1.50	1.59	1.72	2.08	2.56	3.01	4.15	3.01	2.56	2.08	1.72	1.59	1.50
175	4.16	3.14	2.61	2.06	1.69	1.59	1.50	1.59	1.69	2.06	2.61	3.14	4.16	3.14	2.61	2.06	1.69	1.59	1.50
180	4.16	3.20	2.62	2.05	1.68	1.59	1.50	1.59	1.68	2.05	2.62	3.20	4.16	3.20	2.62	2.05	1.68	1.59	1.50

Table--2

UNIT: cd

C (DEG) γ (DEG)	285	300	315	330	345														
0	563	564	563	564	564														
5	562	563	562	562	562														
10	558	558	555	554	554														
15	551	549	545	542	541														
20	542	538	531	526	522														
25	529	523	514	506	499														
30	514	507	493	481	472														
35	498	487	470	454	441														
40	479	466	444	424	407														
45	458	443	417	392	371														
50	435	417	388	359	333														
55	411	390	359	324	293														
60	382	362	328	290	252														
65	344	328	297	255	212														
70	300	285	259	220	172														
75	253	239	216	183	134														
80	207	193	171	141	97.7														
85	162	149	127	98.5	62.2														
90	128	114	91.7	63.1	30.7														
95	116	102	80.3	52.8	22.2														
100	104	91.0	70.4	43.7	15.3														
105	91.7	79.7	59.8	34.5	9.44														
110	79.1	67.6	49.0	25.9	5.27														
115	66.1	55.5	38.5	18.0	4.80														
120	53.3	43.9	28.7	10.7	4.80														
125	41.2	32.9	19.4	4.96	4.63														
130	29.8	22.4	10.8	4.19	4.54														
135	18.9	12.6	4.20	4.05	4.52														
140	8.81	4.12	3.38	3.92	4.32														
145	1.89	2.61	3.16	3.55	4.14														
150	1.70	2.41	2.79	3.27	3.95														
155	1.62	2.11	2.33	2.90	3.58														
160	1.59	1.78	2.12	2.52	3.11														
165	1.59	1.75	2.10	2.48	3.06														
170	1.59	1.72	2.08	2.56	3.01														
175	1.59	1.69	2.06	2.61	3.14														
180	1.59	1.68	2.05	2.62	3.20														

## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	STRP2H/MVS @15W3500K	<b>Sample ID</b>	250324006-S1
<b>Temperature (°C)</b>	25.4	<b>Humidity (%RH)</b>	41.0

<b>Test Method</b>
<p>The samples were tested according to the and ANSI C82.77: 2002 and ANSI C82.77-10:2020</p> <p>The total harmonic distortion shall be measured to the 40th order.</p> <p>The ambient temperature shall be maintained at 25±1°C. The sample measurements were made using a digital power meter and power supply. The sample was operated at rated voltage and was stabilized before measurement. The total harmonic distortion was calculated.</p>

### Test Results

Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	iTHD(%)
120.0	60	0.124	14.8	0.993	6.62
277.0	60	0.059	15.0	0.915	13.87



## 5.0 Equipment List:

Equipment ID	Equipment Name	Last Cal.	Due Cal.
NTC-F01-001	Goniophotometer System	2024-11-07	2025-11-06
NTC-F01-006	2.0 meter Integrating Sphere	2024-11-07	2025-11-06
NTC-F01-012	Standard Lamp	2024-10-28	2025-10-27
NTC-F01-013	Standard Lamp	2024-10-28	2025-10-27
NTC-F01-031	Digital Power Meter	2024-08-06	2025-08-05
NTC-F01-019	Temperature & Humidity Meter	2024-10-29	2025-10-28

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