

## Photometric Test Report

### Relevant Standards

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

Prepared For

**RAB Lighting Inc.**

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Prepared By

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Issue Date: 2025-08-20

Revised Date: N/A

## 1.0 Test Summary

Wall mount Luminaire					
Requirement Category		Test Method	Requirements		Test Value
Luminaire Output (lm) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	N/A		1462
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	121.8
			N/A	N/A	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		12.0
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	N/A	120V	6.09
				277V	25.48
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	N/A	120V	0.991
				277V	0.886
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	3985±275	4021
			4 steps	3985±154	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		92.1
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		81
Minimum Rf (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	≥70		87
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%		-3%
Zonal Lumen Requirement (0°-60°) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	N/A		26.9%
Backlight, Uplight and Glare (BUG) Ratings (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019 IES TM-15-11	N/A		B0-U4-G2
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		0.049
(Goniophotometer – Section 4.2)			Non-Worst Case		0.098
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		12.0
(Goniophotometer – Section 4.2)			Non-Worst Case		11.7

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-08-06	V1-18 @12W4000K	-	250728005-S1
2	Goniophotometer Test	2025-08-06	V1-18 @12W4000K	-	250728005-S1
3	THD and PF Test	2025-08-06	V1-18 @12W4000K	-	250728005-S1

### Remark (If any):

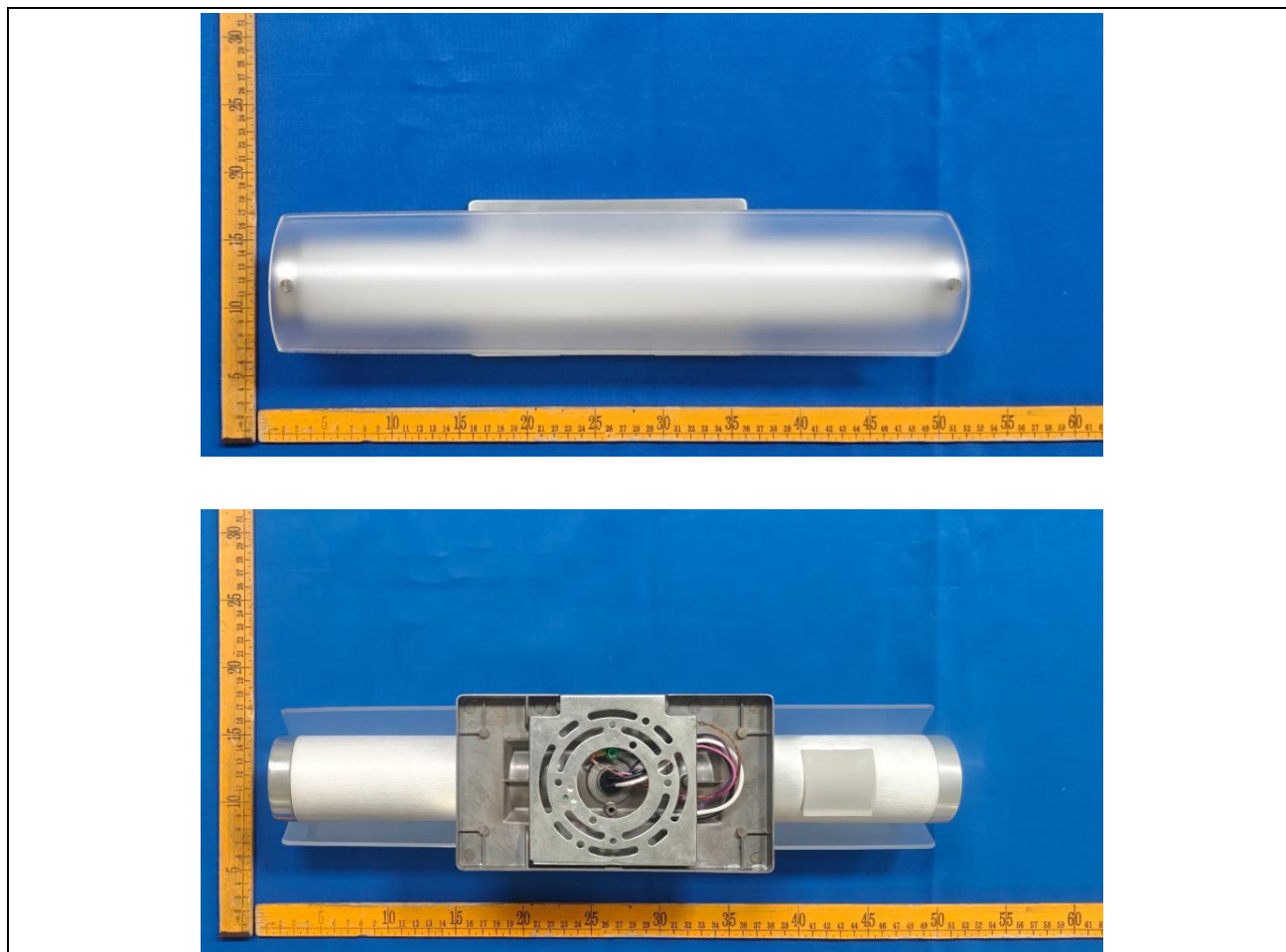
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3. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. Government.

### 3.0 Product Description

Luminaire Description: Model No. V1-18 @12W4000K, color tunable from 2700K, 3000K, 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

<b>Model No.</b>	V1-18 @12W4000K	<b>Sample ID</b>	250728005-S1
<b>Operate time (Min.)</b>	10	<b>Stabilization time (Min.)</b>	60
<b>Temperature (°C)</b>	25.4	<b>Humidity (%RH)</b>	41.0

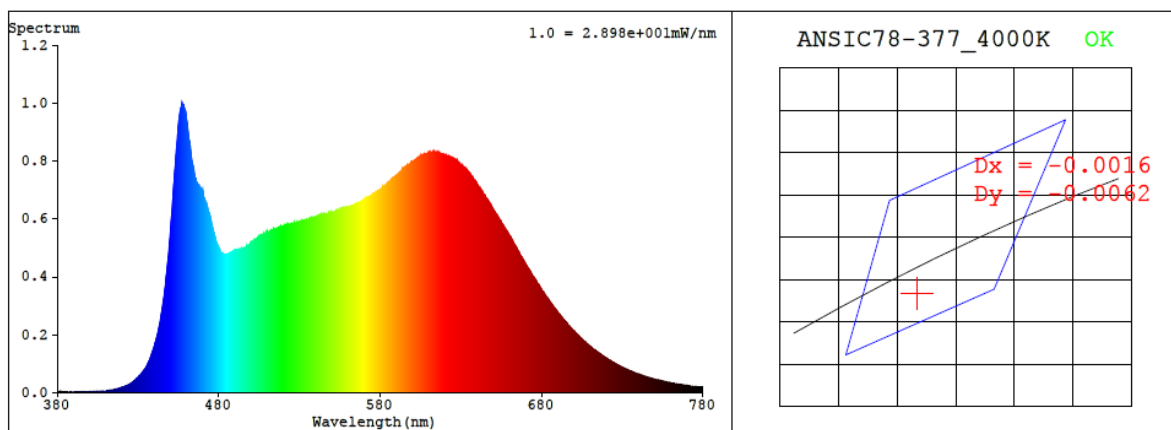
<b>Test Method</b>
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were 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

<b>Voltage (Vac)</b>	<b>Frequency (Hz)</b>	<b>Current (A)</b>	<b>Power (W)</b>	<b>Power Factor</b>
120.0	60	0.098	11.7	0.991
277.0	60	0.049	12.0	0.886

<b>CCT (K)</b>	<b>CRI</b>	<b>R9</b>	<b>Duv</b>	<b>SDCM</b>	<b>Rf</b>	<b>Rg</b>	<b>IES Rcs,h1</b>
4021	92.1	81	-0.0024	3.8	87	95	-3%

## 4.1 Integrating Sphere Test



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3779$   $y = 0.3700$  /  $u' = 0.2261$   $v' = 0.4982$  ( $duv = -2.44e-03$ )

CCT= 4021K Prcp WL: Ld=580.5nm Purity=24.4%

Peak WL: Lp=457nm FWHM: =31.0nm Ratio:R=20.8% G=73.7% B=5.5%

Render Index: Ra = 92.1 AvgR = 91.0 TM30:Rf=89 Rg=97

EEL: 0.00000 A++ Highest

R1 =97 R2 =95 R3 =93 R4 =91 R5 =94 R6 =91 R7 =88

R8 =87 R9 =81 R10=90 R11=96 R12=74 R13=96 R14=97 R15=95

## 4.1 Integrating Sphere Test

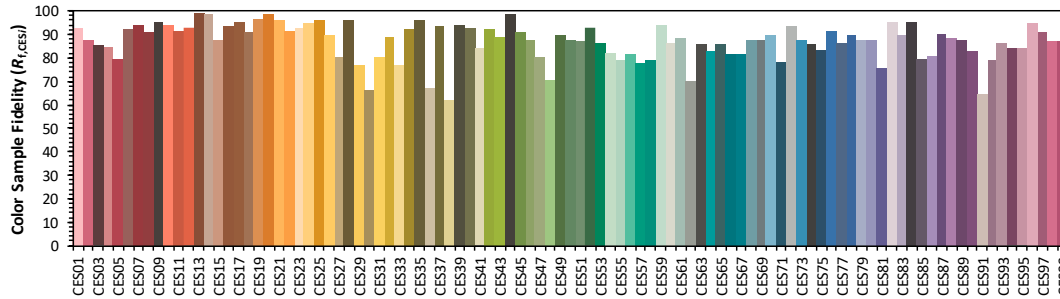
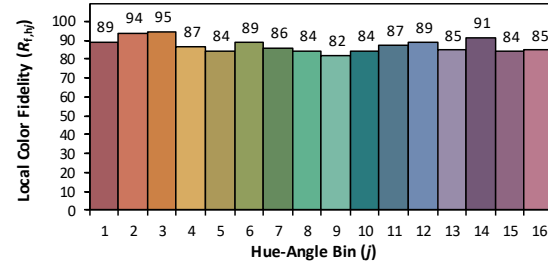
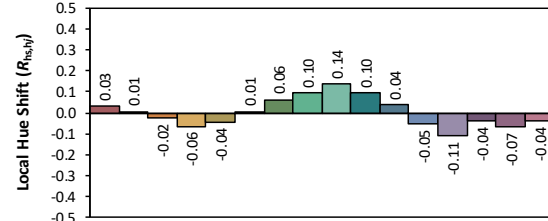
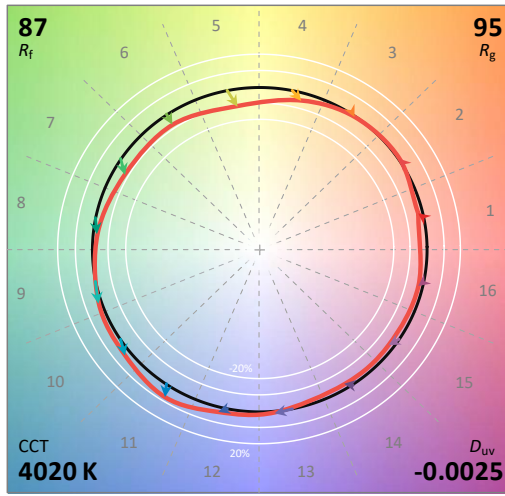
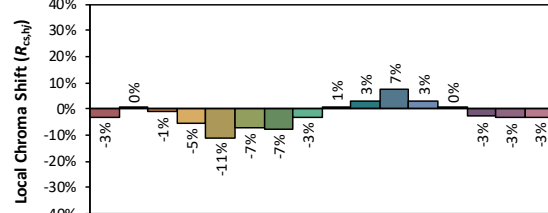
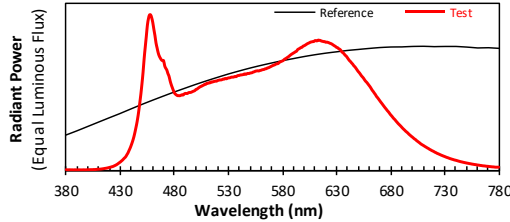
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc

Date: 2025/8/20

Model: V1-18 @12W4000K



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

$x$  0.3779  
 $y$  0.3699  
 $u'$  0.2262  
 $v'$  0.4981

CIE 13.3-1995  
(CRI)

$R_a$  92  
 $R_g$  81



## 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	3.80E-06	447	3.78E-04	514	5.66E-04	581	7.05E-04	648	6.53E-04	715	1.39E-04
381	2.40E-06	448	4.32E-04	515	5.65E-04	582	7.12E-04	649	6.43E-04	716	1.34E-04
382	2.50E-06	449	4.89E-04	516	5.67E-04	583	7.15E-04	650	6.33E-04	717	1.31E-04
383	2.90E-06	450	5.55E-04	517	5.69E-04	584	7.20E-04	651	6.25E-04	718	1.27E-04
384	2.40E-06	451	6.27E-04	518	5.71E-04	585	7.25E-04	652	6.16E-04	719	1.23E-04
385	2.50E-06	452	7.14E-04	519	5.70E-04	586	7.30E-04	653	6.05E-04	720	1.20E-04
386	2.40E-06	453	7.87E-04	520	5.75E-04	587	7.36E-04	654	5.98E-04	721	1.15E-04
387	1.80E-06	454	8.57E-04	521	5.76E-04	588	7.41E-04	655	5.89E-04	722	1.12E-04
388	3.00E-06	455	9.29E-04	522	5.78E-04	589	7.46E-04	656	5.79E-04	723	1.08E-04
389	2.00E-06	456	9.71E-04	523	5.78E-04	590	7.50E-04	657	5.69E-04	724	1.06E-04
390	1.90E-06	457	9.95E-04	524	5.80E-04	591	7.54E-04	658	5.62E-04	725	1.02E-04
391	2.30E-06	458	9.95E-04	525	5.84E-04	592	7.59E-04	659	5.53E-04	726	9.93E-05
392	2.60E-06	459	9.76E-04	526	5.83E-04	593	7.62E-04	660	5.44E-04	727	9.61E-05
393	2.20E-06	460	9.46E-04	527	5.88E-04	594	7.72E-04	661	5.35E-04	728	9.34E-05
394	2.10E-06	461	9.02E-04	528	5.86E-04	595	7.77E-04	662	5.24E-04	729	9.04E-05
395	2.20E-06	462	8.62E-04	529	5.89E-04	596	7.81E-04	663	5.13E-04	730	8.79E-05
396	2.70E-06	463	8.15E-04	530	5.92E-04	597	7.86E-04	664	5.04E-04	731	8.49E-05
397	2.30E-06	464	7.83E-04	531	5.92E-04	598	7.88E-04	665	4.94E-04	732	8.22E-05
398	2.30E-06	465	7.52E-04	532	5.94E-04	599	7.94E-04	666	4.84E-04	733	8.00E-05
399	2.90E-06	466	7.32E-04	533	5.97E-04	600	7.97E-04	667	4.73E-04	734	7.72E-05
400	3.10E-06	467	7.18E-04	534	5.96E-04	601	8.01E-04	668	4.65E-04	735	7.46E-05
401	3.30E-06	468	7.07E-04	535	5.97E-04	602	8.06E-04	669	4.55E-04	736	7.24E-05
402	3.40E-06	469	7.02E-04	536	6.01E-04	603	8.10E-04	670	4.45E-04	737	7.02E-05
403	3.60E-06	470	7.02E-04	537	5.99E-04	604	8.14E-04	671	4.36E-04	738	6.82E-05
404	3.30E-06	471	6.69E-04	538	6.04E-04	605	8.17E-04	672	4.27E-04	739	6.58E-05
405	4.20E-06	472	6.53E-04	539	6.07E-04	606	8.21E-04	673	4.18E-04	740	6.43E-05
406	4.20E-06	473	6.42E-04	540	6.07E-04	607	8.22E-04	674	4.08E-04	741	6.24E-05
407	4.60E-06	474	6.19E-04	541	6.10E-04	608	8.24E-04	675	3.99E-04	742	6.03E-05
408	5.40E-06	475	6.03E-04	542	6.11E-04	609	8.24E-04	676	3.91E-04	743	5.82E-05
409	5.70E-06	476	5.74E-04	543	6.12E-04	610	8.30E-04	677	3.82E-04	744	5.64E-05
410	6.40E-06	477	5.50E-04	544	6.13E-04	611	8.30E-04	678	3.74E-04	745	5.44E-05
411	6.80E-06	478	5.30E-04	545	6.18E-04	612	8.28E-04	679	3.65E-04	746	5.29E-05
412	7.40E-06	479	5.12E-04	546	6.14E-04	613	8.34E-04	680	3.55E-04	747	5.12E-05
413	8.40E-06	480	4.95E-04	547	6.18E-04	614	8.32E-04	681	3.48E-04	748	4.97E-05
414	9.40E-06	481	4.87E-04	548	6.20E-04	615	8.32E-04	682	3.39E-04	749	4.81E-05
415	1.06E-05	482	4.82E-04	549	6.19E-04	616	8.27E-04	683	3.31E-04	750	4.66E-05
416	1.20E-05	483	4.78E-04	550	6.22E-04	617	8.26E-04	684	3.24E-04	751	4.52E-05
417	1.29E-05	484	4.78E-04	551	6.24E-04	618	8.24E-04	685	3.15E-04	752	4.40E-05
418	1.46E-05	485	4.77E-04	552	6.25E-04	619	8.24E-04	686	3.07E-04	753	4.24E-05
419	1.60E-05	486	4.80E-04	553	6.29E-04	620	8.20E-04	687	2.99E-04	754	4.14E-05
420	1.81E-05	487	4.83E-04	554	6.31E-04	621	8.21E-04	688	2.92E-04	755	3.98E-05
421	1.96E-05	488	4.81E-04	555	6.35E-04	622	8.19E-04	689	2.85E-04	756	3.86E-05
422	2.20E-05	489	4.88E-04	556	6.36E-04	623	8.16E-04	690	2.78E-04	757	3.74E-05
423	2.37E-05	490	4.92E-04	557	6.37E-04	624	8.13E-04	691	2.70E-04	758	3.62E-05
424	2.68E-05	491	4.92E-04	558	6.36E-04	625	8.11E-04	692	2.63E-04	759	3.55E-05
425	3.01E-05	492	4.92E-04	559	6.39E-04	626	8.07E-04	693	2.57E-04	760	3.38E-05
426	3.36E-05	493	4.96E-04	560	6.40E-04	627	8.02E-04	694	2.50E-04	761	3.30E-05
427	3.77E-05	494	4.98E-04	561	6.43E-04	628	7.97E-04	695	2.44E-04	762	3.20E-05
428	4.27E-05	495	4.98E-04	562	6.45E-04	629	7.93E-04	696	2.38E-04	763	3.07E-05
429	4.80E-05	496	5.01E-04	563	6.46E-04	630	7.87E-04	697	2.31E-04	764	2.99E-05
430	5.29E-05	497	5.05E-04	564	6.50E-04	631	7.85E-04	698	2.25E-04	765	2.87E-05
431	5.90E-05	498	5.07E-04	565	6.50E-04	632	7.78E-04	699	2.19E-04	766	2.79E-05
432	6.49E-05	499	5.11E-04	566	6.55E-04	633	7.75E-04	700	2.13E-04	767	2.74E-05
433	7.26E-05	500	5.18E-04	567	6.56E-04	634	7.68E-04	701	2.07E-04	768	2.62E-05
434	7.95E-05	501	5.20E-04	568	6.60E-04	635	7.58E-04	702	2.01E-04	769	2.53E-05
435	8.68E-05	502	5.26E-04	569	6.63E-04	636	7.53E-04	703	1.97E-04	770	2.49E-05
436	9.89E-05	503	5.31E-04	570	6.67E-04	637	7.45E-04	704	1.90E-04	771	2.39E-05
437	1.10E-04	504	5.35E-04	571	6.70E-04	638	7.37E-04	705	1.85E-04	772	2.32E-05
438	1.26E-04	505	5.38E-04	572	6.73E-04	639	7.31E-04	706	1.80E-04	773	2.24E-05
439	1.41E-04	506	5.42E-04	573	6.76E-04	640	7.21E-04	707	1.75E-04	774	2.16E-05
440	1.59E-04	507	5.45E-04	574	6.80E-04	641	7.11E-04	708	1.69E-04	775	2.13E-05
441	1.79E-04	508	5.50E-04	575	6.82E-04	642	7.02E-04	709	1.64E-04	776	2.04E-05
442	2.01E-04	509	5.50E-04	576	6.84E-04	643	6.95E-04	710	1.60E-04	777	1.95E-05
443	2.28E-04	510	5.57E-04	577	6.91E-04	644	6.87E-04	711	1.56E-04	778	1.94E-05
444	2.59E-04	511	5.57E-04	578	6.94E-04	645	6.79E-04	712	1.51E-04	779	1.94E-05
445	2.93E-04	512	5.60E-04	579	6.98E-04	646	6.69E-04	713	1.47E-04	780	1.95E-05
446	3.31E-04	513	5.60E-04	580	7.00E-04	647	6.62E-04	714	1.43E-04	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

<b>Model No.</b>	V1-18 @12W4000K	<b>Sample ID</b>	250728005-S1
<b>Operate time (Min.)</b>	30	<b>Stabilization time (Min.)</b>	60
<b>Temperature (°C)</b>	24.9	<b>Humidity (%RH)</b>	42.1

<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	0.049	12.0	0.886
<b>NON-WORST CASE</b>	120.0	60	0.098	11.7	0.991

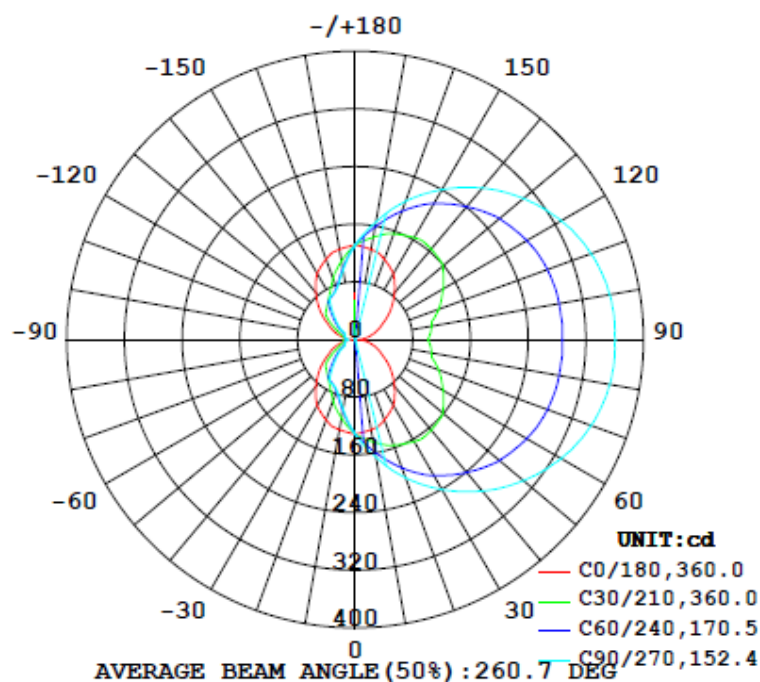
### Test Result

Flux (lm)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)	Zonal Lumen Requirement	BUG
	C0-180	C90-270	C0-180	C90-270		(0°-60°)	
1462	92.8	156.1	180.0	95.8	121.8	26.9%	B0-U4-G2

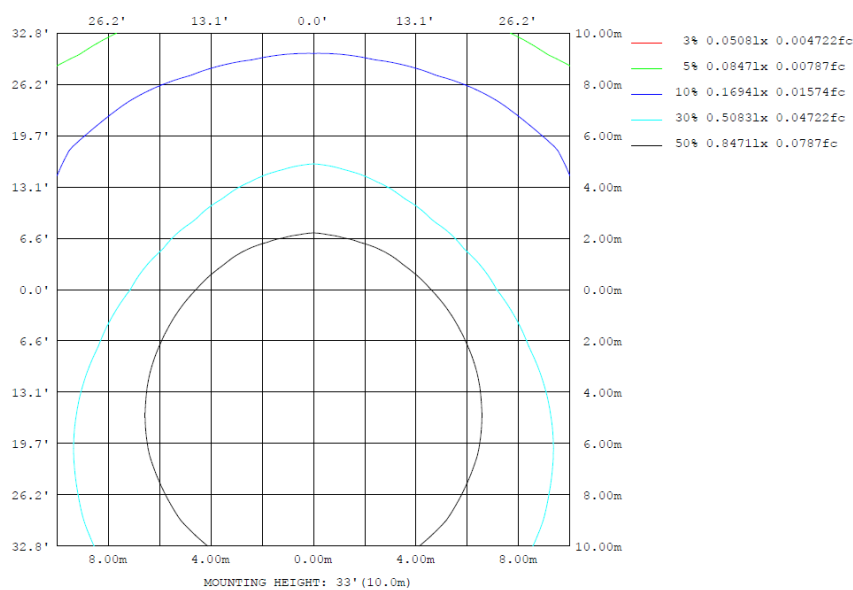
## 4.2 Goniophotometer Test

### Lighting Distribution Curve

#### LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



### Isolux Plot



## 4.2 Goniophotometer Test

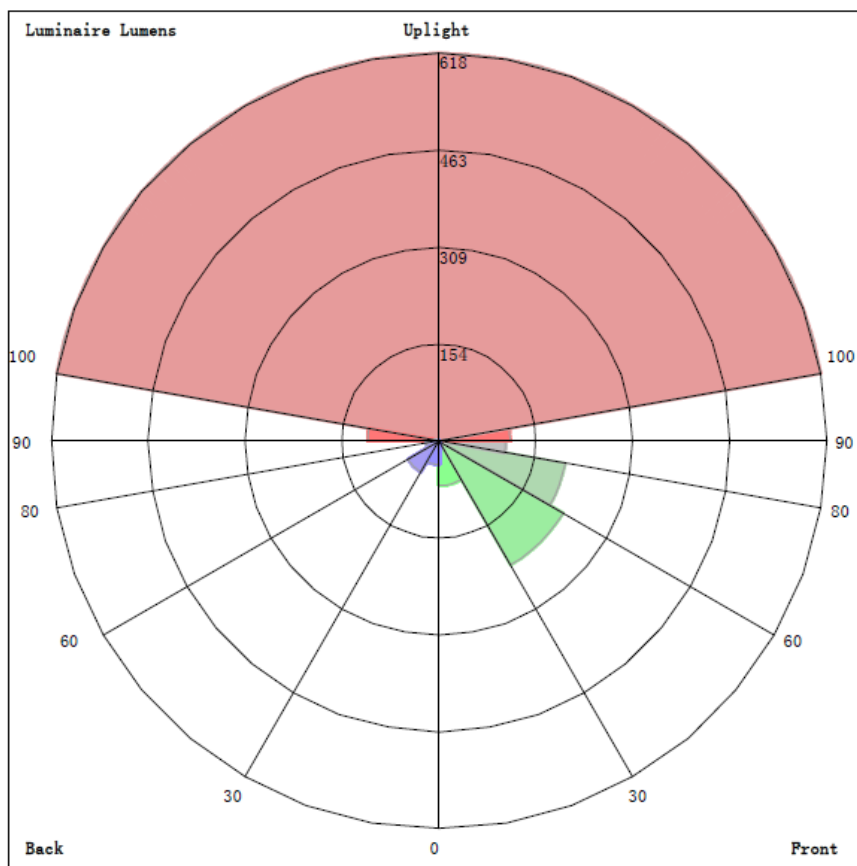
### Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	φ zone	φ total	θlum, lamp
10	127.0	152.0	165.7	152.0	127.0	104.5	98.12	104.5	0- 10	12.36	12.36	0.85,0.85
20	118.6	175.5	204.2	175.5	118.6	81.97	75.09	81.97	10- 20	36.43	48.79	3.34,3.34
30	106.0	192.6	240.3	192.6	106.0	67.76	68.88	67.76	20- 30	59.70	108.5	7.42,7.42
40	84.99	207.0	274.4	207.0	84.99	61.78	48.13	61.78	30- 40	81.25	189.7	13.13
50	64.20	213.2	304.7	213.2	64.20	41.31	30.80	41.31	40- 50	97.03	286.8	19.6,19.6
60	43.62	214.3	329.9	214.3	43.62	25.39	16.57	25.39	50- 60	106.5	393.3	26.9,26.9
70	29.81	211.1	348.0	211.1	29.81	16.44	15.24	16.44	60- 70	111.1	504.4	34.5,34.5
80	16.45	204.1	358.5	204.1	16.45	15.19	12.70	15.19	70- 80	113.2	617.6	42.2,42.2
90	3.556	199.2	360.6	199.2	3.556	14.42	13.36	14.42	80- 90	113.5	731.1	50.50
100	16.45	204.1	358.5	204.1	16.45	15.19	12.70	15.19	90-100	113.5	844.5	57.8,57.8
110	29.81	211.1	348.0	211.1	29.81	16.44	15.24	16.44	100-110	113.2	957.7	65.5,65.5
120	43.62	214.3	329.9	214.3	43.62	25.39	16.57	25.39	110-120	111.1	1069	73.1,73.1
130	64.20	213.2	304.7	213.2	64.20	41.31	30.80	41.31	120-130	106.5	1175	80.4,80.4
140	84.99	207.0	274.4	207.0	84.99	61.78	48.13	61.78	130-140	97.03	1272	87.87
150	106.0	192.6	240.3	192.6	106.0	67.76	68.88	67.76	140-150	81.25	1354	92.6,92.6
160	118.6	175.5	204.2	175.5	118.6	81.97	75.09	81.97	150-160	59.70	1413	96.7,96.7
170	127.0	152.0	165.7	152.0	127.0	104.5	98.12	104.5	160-170	36.43	1450	99.2,99.2
180	131.3	131.3	131.3	131.3	131.3	131.3	131.3	131.3	170-180	12.36	1462	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	12.36	0-10	12.36	0.85%
10-20	36.43	0-20	48.79	3.37%
20-30	59.70	0-30	108.49	7.48%
30-40	81.25	0-40	189.74	13.09%
40-50	97.03	0-50	286.77	19.78%
50-60	106.48	0-60	393.25	27.13%
60-70	111.14	0-70	504.39	34.79%
70-80	113.20	0-80	617.59	42.60%
80-90	113.46	0-90	731.05	50.43%
90-100	113.46	0-100	844.51	58.25%
100-110	113.20	0-110	957.71	66.06%
110-120	111.14	0-120	1068.85	73.73%
120-130	106.48	0-130	1175.33	81.07%
130-140	97.03	0-140	1272.36	87.76%
140-150	81.25	0-150	1353.61	93.37%
150-160	59.70	0-160	1413.31	97.49%
160-170	36.43	0-170	1449.74	100.00%
170-180	12.36	0-180	1462.10	100.85%

## 4.2 Goniophotometer Test

LCS/BUG

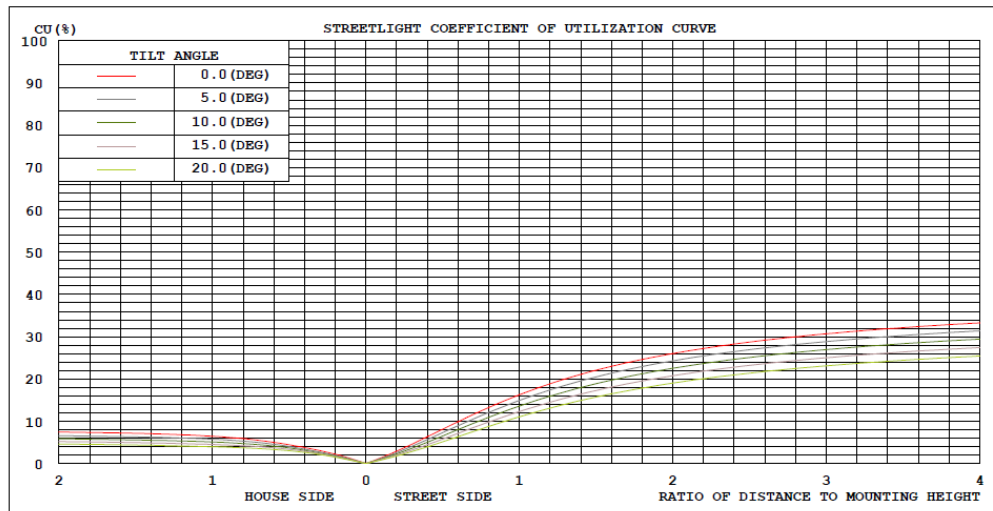


### LUMINAIRE CLASSIFICATION SYSTEM (LCS)

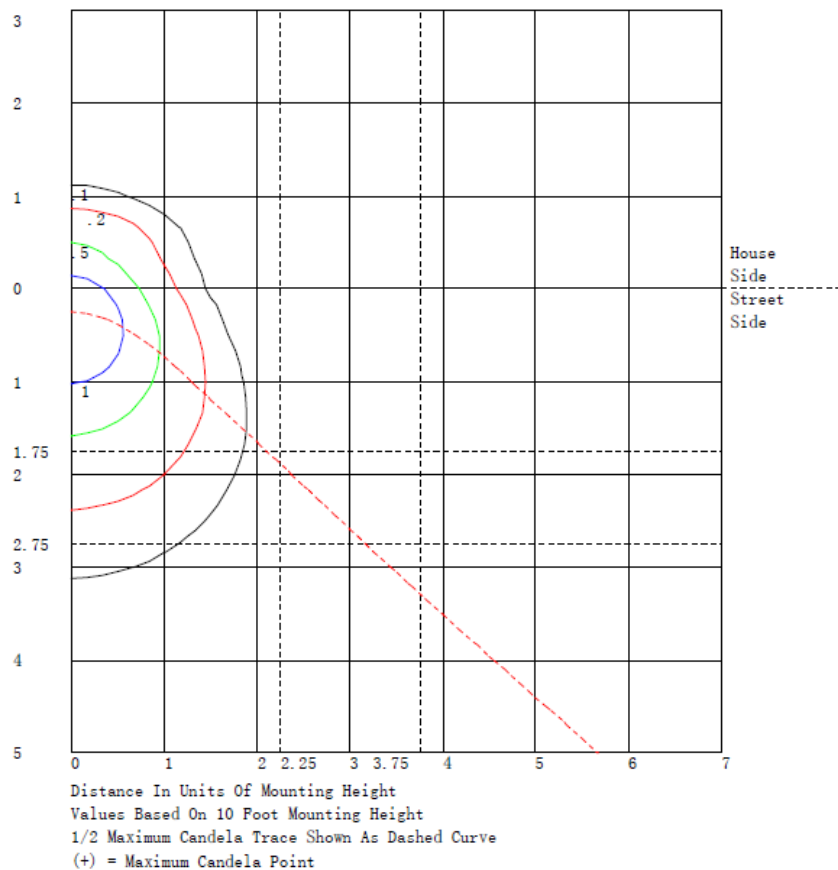
	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	71.0	N.A.	4.9
FM - Front-Medium (30-60)	228.0	N.A.	15.6
FH - Front-High (60-80)	203.8	N.A.	13.9
FVH - Front-Very High (80-90)	106.1	N.A.	7.3
BL - Back-Low (0-30)	37.5	N.A.	2.6
BM - Back-Medium (30-60)	56.7	N.A.	3.9
BH - Back-High (60-80)	20.5	N.A.	1.4
BVH - Back-Very High (80-90)	7.4	N.A.	0.5
UL - Uplight-Low (90-100)	113.5	N.A.	7.8
UH - Uplight-High (100-180)	617.6	N.A.	42.2
Total	1462.1	N.A.	100.0
BUG Rating	B0-U4-G2		

## 4.2 Goniophotometer Test

### Coefficients of Utilization



### Isolines



## 4.2 Goniophotometer Test

### Luminous Distribution Intensity Data

Table--1

UNIT: cd

C (DEG) y (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131
5	129	134	138	142	145	147	148	147	145	142	138	134	129	125	121	118	116	114	114
10	127	136	144	152	159	163	166	163	159	152	144	136	127	118	111	105	100	98.1	98.1
15	125	138	151	163	174	181	185	181	174	163	151	138	125	112	101	92.3	86.8	84.4	84.4
20	119	136	156	175	190	199	204	199	190	175	156	136	119	102	90.0	82.0	76.8	74.8	75.1
25	112	135	160	185	204	217	222	217	204	185	160	135	112	92.8	79.8	73.3	70.7	70.0	70.6
30	106	133	164	193	218	233	240	233	218	193	164	133	106	84.0	71.7	67.8	67.7	68.1	68.9
35	95.5	127	166	200	230	249	257	249	230	200	166	127	95.5	74.4	65.7	64.6	64.4	60.8	60.2
40	85.0	120	164	207	241	265	274	265	241	207	164	120	85.0	65.7	60.9	61.8	54.0	48.9	48.1
45	74.5	113	162	210	252	280	290	280	252	210	162	113	74.5	58.1	57.2	52.1	43.2	39.1	38.3
50	64.2	102	159	213	261	293	305	293	261	213	159	102	64.2	52.0	53.0	41.3	34.6	31.3	30.8
55	53.9	90.0	150	216	268	304	318	304	268	216	150	90.0	53.9	46.5	43.7	32.7	27.4	24.4	23.9
60	43.6	77.0	141	214	275	314	330	314	275	214	141	77.0	43.6	41.2	33.9	25.4	19.8	17.1	16.6
65	36.7	67.7	132	213	280	324	340	324	280	213	132	67.7	36.7	34.3	26.1	19.4	16.4	16.0	15.9
70	29.8	58.6	123	211	284	331	348	331	284	211	123	58.6	29.8	26.7	21.2	16.4	15.9	15.3	15.2
75	22.9	48.9	113	208	286	336	355	336	286	208	113	48.9	22.9	19.0	17.0	15.7	15.2	14.7	14.9
80	16.5	47.1	108	204	287	340	358	340	287	204	108	47.1	16.5	16.8	15.5	15.2	13.8	13.3	12.7
85	10.0	45.9	105	203	288	341	361	341	288	203	105	45.9	10.0	15.4	15.4	14.8	13.0	11.4	11.1
90	3.56	44.4	101	199	287	342	361	342	287	199	101	44.4	3.56	14.0	15.4	14.4	13.1	11.8	13.4
95	10.0	45.9	105	203	288	341	361	341	288	203	105	45.9	10.0	15.4	15.4	14.8	13.0	11.4	11.1
100	16.5	47.1	108	204	287	340	358	340	287	204	108	47.1	16.5	16.8	15.5	15.2	13.8	13.3	12.7
105	22.9	48.9	113	208	286	336	355	336	286	113	48.9	22.9	19.0	17.0	15.7	15.2	14.7	14.9	
110	29.8	58.6	123	211	284	331	348	331	284	211	123	58.6	29.8	26.7	21.2	16.4	15.9	15.3	15.2
115	36.7	67.7	132	213	280	324	340	324	280	213	132	67.7	36.7	34.3	26.1	19.4	16.4	16.0	15.9
120	43.6	77.0	141	214	275	314	330	314	275	214	141	77.0	43.6	41.2	33.9	25.4	19.8	17.1	16.6
125	53.9	90.0	150	216	268	304	318	304	268	216	150	90.0	53.9	46.5	43.7	32.7	27.4	24.4	23.9
130	64.2	102	159	213	261	293	305	293	261	213	159	102	64.2	52.0	53.0	41.3	34.6	31.3	30.8
135	74.5	113	162	210	252	280	290	280	252	210	162	113	74.5	58.1	57.2	52.1	43.2	39.1	38.3
140	85.0	120	164	207	241	265	274	265	241	207	164	120	85.0	65.7	60.9	61.8	54.0	48.9	48.1
145	95.5	127	166	200	230	249	257	249	230	200	166	127	95.5	74.4	65.7	64.6	64.4	60.8	60.2
150	106	133	164	193	218	233	240	233	218	193	164	133	106	84.0	71.7	67.8	67.7	68.1	68.9
155	112	135	160	185	204	217	222	217	204	185	160	135	112	92.8	79.8	73.3	70.7	70.0	70.6
160	119	136	156	175	190	199	204	199	190	175	156	136	119	102	90.0	82.0	76.8	74.8	75.1
165	125	138	151	163	174	181	185	181	174	163	151	138	125	112	101	92.3	86.8	84.4	84.4
170	127	136	144	152	159	163	166	163	159	152	144	136	127	118	111	105	100	98.1	98.1
175	129	134	138	142	145	147	148	147	145	142	138	134	129	125	121	118	116	114	114
180	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131

Table--2

UNIT: cd

C (DEG) y (DEG)	285	300	315	330	345														
0	131	131	131	131	131														
5	114	116	118	121	125														
10	98.1	100	105	111	118														
15	84.4	86.8	92.3	101	112														
20	74.8	76.8	82.0	90.0	102														
25	70.0	70.7	73.3	79.8	92.8														
30	68.1	67.7	67.8	71.7	84.0														
35	60.8	64.4	64.6	65.7	74.4														
40	48.9	54.0	61.8	60.9	65.7														
45	39.1	43.2	52.1	57.2	58.1														
50	31.3	34.6	41.3	53.0	52.0														
55	24.4	27.4	32.7	43.7	46.5														
60	17.1	19.8	25.4	33.9	41.2														
65	16.0	16.4	19.4	26.1	34.3														
70	15.3	15.9	16.4	21.2	26.7														
75	14.7	15.2	15.7	17.0	19.0														
80	13.3	13.8	15.2	15.5	16.8														
85	11.4	13.0	14.8	15.4	15.4														
90	11.8	13.1	14.4	15.4	14.0														
95	11.4	13.0	14.8	15.4	15.4														
100	13.3	13.8	15.2	15.5	16.8														
105	14.7	15.2	15.7	17.0	19.0														
110	15.3	15.9	16.4	21.2	26.7														
115	16.0	16.4	19.4	26.1	34.3														
120	17.1	19.8	25.4	33.9	41.2														
125	24.4	27.4	32.7	43.7	46.5														
130	31.3	34.6	41.3	53.0	52.0														
135	39.1	43.2	52.1	57.2	58.1														
140	48.9	54.0	61.8	60.9	65.7														
145	60.8	64.4	64.6	65.7	74.4														
150	68.1	67.7	67.8	71.7	84.0														
155	70.0	70.7	73.3	79.8	92.8														
160	74.8	76.8	82.0	90.0	102														
165	84.4	86.8	92.3	101	112														
170	98.1	100	105	111	118														
175	114	116	118	121	125														
180	131	131	131	131	131														

## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	V1-18 @12W4000K	<b>Sample ID</b>	250728005-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 <math>25 \pm 1^{\circ}\text{C}</math>. 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	0.098	11.7	0.991	6.09
277.0	60	0.049	12.0	0.886	25.48



## 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	2025-08-04	2026-08-03
NTC-F01-019	Temperature & Humidity Meter	2024-10-29	2025-10-28

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