

## 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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Date: 2025-08-20

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Technical Lead: Vincent Yuan

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		1059
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	123.1
			N/A	N/A	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		8.6
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	N/A	120V	7.03
				277V	41.14
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	N/A	120V	0.986
				277V	0.812
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	5029±283	4976
			4 steps	5029±220	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		90.8
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		76
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%		-4%
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-U3-G1
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		0.038
(Goniophotometer – Section 4.2)			Non-Worst Case		0.070
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		8.6
(Goniophotometer – Section 4.2)			Non-Worst Case		8.3

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-08-06	V1-18 @8W5000K	-	250728005-S1
2	Goniophotometer Test	2025-08-06	V1-18 @8W5000K	-	250728005-S1
3	THD and PF Test	2025-08-06	V1-18 @8W5000K	-	250728005-S1

### Remark (If any):

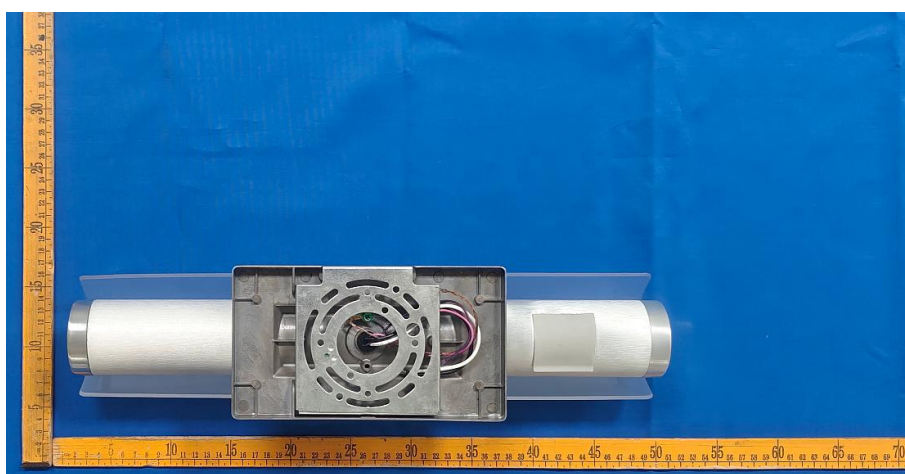
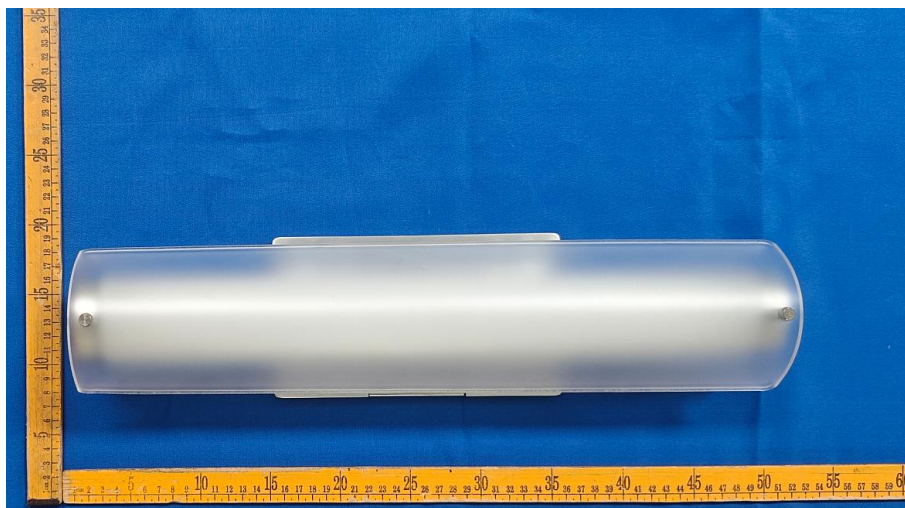
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3. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. Government.

### 3.0 Product Description

Luminaire Description: Model No. V1-18 @8W5000K, 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 @8W5000K	<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

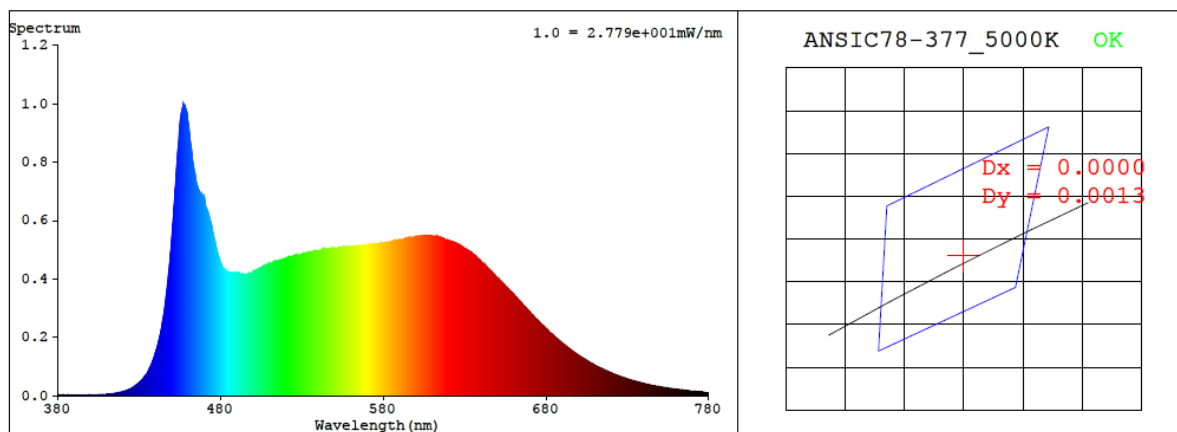
<b>Test Method</b>
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were 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	0.070	8.3	0.986
277.0	60	0.038	8.6	0.812

<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>
4976	90.8	76	0.0006	1.6	87	95	-4%

## 4.1 Integrating Sphere Test



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3458$   $y = 0.3535$  /  $u' = 0.2112$   $v' = 0.4857$  ( $duv=6.42e-04$ )

CCT= 4976K Prcp WL:  $L_d=572.4nm$  Purity=9.8%

Peak WL:  $L_p=457nm$  FWHM:  $=28.6nm$  Ratio:R=17.9% G=75.6% B=6.5%

Render Index:  $R_a = 90.8$  AvgR = 89.3 TM30:Rf=89 Rg=96

EEL: 0.11057 A+

R1 =96 R2 =96 R3 =93 R4 =85 R5 =92 R6 =94 R7 =86

R8 =85 R9 =76 R10=94 R11=89 R12=67 R13=98 R14=97 R15=92

## 4.1 Integrating Sphere Test

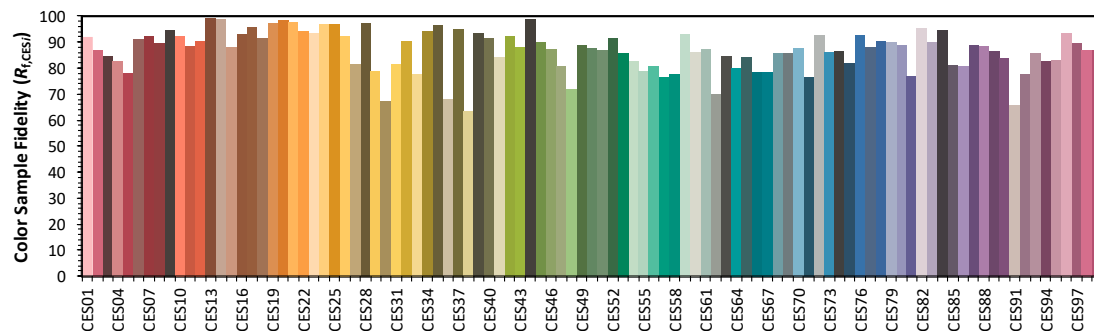
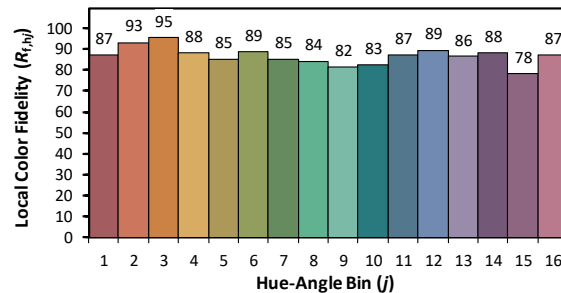
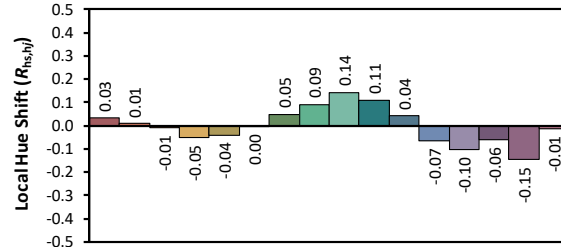
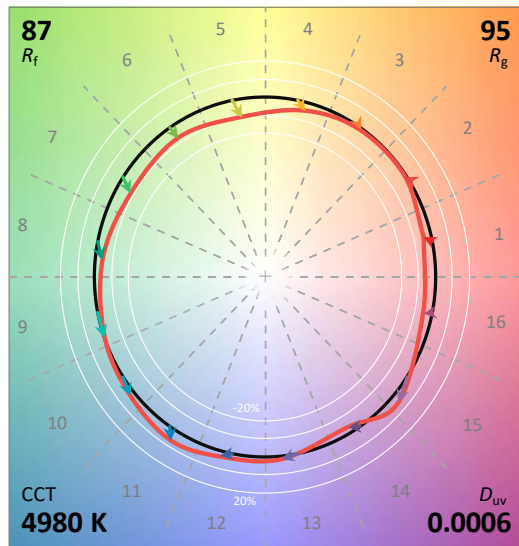
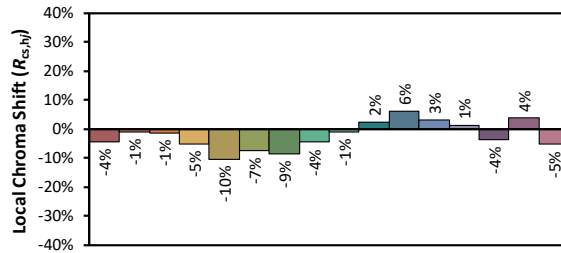
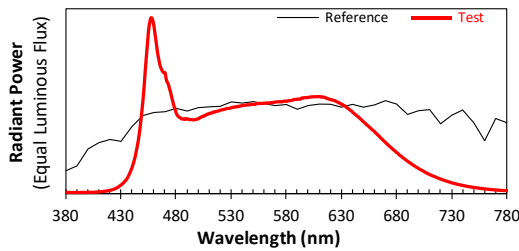
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/8/20

Model: V1-18 @8W5000K



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

$x$  0.3458  
 $y$  0.3533  
 $u'$  0.2112  
 $v'$  0.4856

CIE 13.3-1995  
(CRI)

$R_a$  91  
 $R_9$  76



## 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	3.00E-06	447	3.57E-04	514	4.61E-04	581	5.23E-04	648	4.17E-04	715	9.13E-05
381	3.00E-06	448	4.12E-04	515	4.60E-04	582	5.25E-04	649	4.10E-04	716	8.81E-05
382	2.10E-06	449	4.70E-04	516	4.63E-04	583	5.25E-04	650	4.05E-04	717	8.57E-05
383	2.50E-06	450	5.36E-04	517	4.65E-04	584	5.26E-04	651	4.00E-04	718	8.32E-05
384	2.10E-06	451	6.11E-04	518	4.66E-04	585	5.27E-04	652	3.93E-04	719	8.09E-05
385	1.80E-06	452	6.99E-04	519	4.67E-04	586	5.28E-04	653	3.87E-04	720	7.86E-05
386	2.00E-06	453	7.77E-04	520	4.70E-04	587	5.31E-04	654	3.82E-04	721	7.57E-05
387	1.60E-06	454	8.52E-04	521	4.71E-04	588	5.32E-04	655	3.76E-04	722	7.39E-05
388	2.00E-06	455	9.26E-04	522	4.74E-04	589	5.32E-04	656	3.70E-04	723	7.16E-05
389	1.80E-06	456	9.68E-04	523	4.74E-04	590	5.33E-04	657	3.65E-04	724	6.91E-05
390	1.80E-06	457	9.96E-04	524	4.76E-04	591	5.34E-04	658	3.59E-04	725	6.74E-05
391	2.00E-06	458	9.95E-04	525	4.78E-04	592	5.33E-04	659	3.54E-04	726	6.55E-05
392	1.90E-06	459	9.77E-04	526	4.80E-04	593	5.35E-04	660	3.49E-04	727	6.33E-05
393	2.20E-06	460	9.43E-04	527	4.81E-04	594	5.40E-04	661	3.41E-04	728	6.16E-05
394	2.20E-06	461	8.96E-04	528	4.80E-04	595	5.40E-04	662	3.36E-04	729	5.95E-05
395	2.20E-06	462	8.52E-04	529	4.82E-04	596	5.42E-04	663	3.29E-04	730	5.73E-05
396	2.40E-06	463	8.03E-04	530	4.85E-04	597	5.42E-04	664	3.24E-04	731	5.56E-05
397	2.30E-06	464	7.69E-04	531	4.87E-04	598	5.42E-04	665	3.17E-04	732	5.41E-05
398	2.30E-06	465	7.36E-04	532	4.87E-04	599	5.43E-04	666	3.10E-04	733	5.22E-05
399	2.70E-06	466	7.14E-04	533	4.89E-04	600	5.44E-04	667	3.04E-04	734	5.08E-05
400	3.10E-06	467	7.00E-04	534	4.89E-04	601	5.44E-04	668	2.98E-04	735	4.93E-05
401	3.00E-06	468	6.89E-04	535	4.90E-04	602	5.45E-04	669	2.93E-04	736	4.77E-05
402	2.70E-06	469	6.84E-04	536	4.93E-04	603	5.47E-04	670	2.87E-04	737	4.61E-05
403	3.00E-06	470	6.84E-04	537	4.91E-04	604	5.46E-04	671	2.80E-04	738	4.50E-05
404	3.20E-06	471	6.46E-04	538	4.94E-04	605	5.47E-04	672	2.75E-04	739	4.35E-05
405	3.60E-06	472	6.30E-04	539	4.95E-04	606	5.47E-04	673	2.69E-04	740	4.22E-05
406	3.70E-06	473	6.17E-04	540	4.97E-04	607	5.48E-04	674	2.63E-04	741	4.07E-05
407	4.00E-06	474	5.92E-04	541	4.98E-04	608	5.48E-04	675	2.58E-04	742	3.96E-05
408	4.50E-06	475	5.72E-04	542	4.99E-04	609	5.47E-04	676	2.52E-04	743	3.85E-05
409	5.00E-06	476	5.44E-04	543	4.99E-04	610	5.48E-04	677	2.46E-04	744	3.69E-05
410	5.50E-06	477	5.18E-04	544	5.00E-04	611	5.47E-04	678	2.41E-04	745	3.59E-05
411	5.70E-06	478	4.95E-04	545	5.02E-04	612	5.45E-04	679	2.36E-04	746	3.49E-05
412	6.50E-06	479	4.75E-04	546	5.00E-04	613	5.47E-04	680	2.30E-04	747	3.36E-05
413	6.90E-06	480	4.56E-04	547	5.02E-04	614	5.44E-04	681	2.26E-04	748	3.28E-05
414	7.80E-06	481	4.42E-04	548	5.04E-04	615	5.43E-04	682	2.19E-04	749	3.19E-05
415	8.50E-06	482	4.36E-04	549	5.02E-04	616	5.39E-04	683	2.13E-04	750	3.05E-05
416	9.50E-06	483	4.29E-04	550	5.05E-04	617	5.39E-04	684	2.09E-04	751	3.00E-05
417	1.04E-05	484	4.27E-04	551	5.03E-04	618	5.35E-04	685	2.04E-04	752	2.91E-05
418	1.16E-05	485	4.21E-04	552	5.05E-04	619	5.34E-04	686	1.99E-04	753	2.81E-05
419	1.26E-05	486	4.20E-04	553	5.08E-04	620	5.30E-04	687	1.94E-04	754	2.71E-05
420	1.42E-05	487	4.21E-04	554	5.08E-04	621	5.30E-04	688	1.90E-04	755	2.65E-05
421	1.57E-05	488	4.18E-04	555	5.09E-04	622	5.28E-04	689	1.85E-04	756	2.56E-05
422	1.76E-05	489	4.22E-04	556	5.09E-04	623	5.27E-04	690	1.81E-04	757	2.47E-05
423	1.95E-05	490	4.21E-04	557	5.09E-04	624	5.24E-04	691	1.76E-04	758	2.39E-05
424	2.19E-05	491	4.20E-04	558	5.08E-04	625	5.21E-04	692	1.72E-04	759	2.30E-05
425	2.42E-05	492	4.16E-04	559	5.10E-04	626	5.19E-04	693	1.67E-04	760	2.23E-05
426	2.78E-05	493	4.18E-04	560	5.10E-04	627	5.15E-04	694	1.63E-04	761	2.17E-05
427	3.13E-05	494	4.17E-04	561	5.11E-04	628	5.12E-04	695	1.58E-04	762	2.12E-05
428	3.53E-05	495	4.16E-04	562	5.12E-04	629	5.10E-04	696	1.54E-04	763	2.03E-05
429	4.02E-05	496	4.15E-04	563	5.12E-04	630	5.04E-04	697	1.50E-04	764	1.97E-05
430	4.47E-05	497	4.17E-04	564	5.12E-04	631	5.03E-04	698	1.46E-04	765	1.91E-05
431	5.04E-05	498	4.19E-04	565	5.11E-04	632	4.98E-04	699	1.42E-04	766	1.87E-05
432	5.54E-05	499	4.19E-04	566	5.14E-04	633	4.95E-04	700	1.39E-04	767	1.79E-05
433	6.29E-05	500	4.22E-04	567	5.14E-04	634	4.90E-04	701	1.35E-04	768	1.73E-05
434	6.92E-05	501	4.24E-04	568	5.14E-04	635	4.84E-04	702	1.32E-04	769	1.66E-05
435	7.68E-05	502	4.30E-04	569	5.16E-04	636	4.81E-04	703	1.28E-04	770	1.63E-05
436	8.78E-05	503	4.31E-04	570	5.17E-04	637	4.76E-04	704	1.25E-04	771	1.59E-05
437	9.94E-05	504	4.36E-04	571	5.18E-04	638	4.70E-04	705	1.21E-04	772	1.52E-05
438	1.14E-04	505	4.36E-04	572	5.18E-04	639	4.67E-04	706	1.17E-04	773	1.48E-05
439	1.28E-04	506	4.41E-04	573	5.18E-04	640	4.60E-04	707	1.14E-04	774	1.43E-05
440	1.45E-04	507	4.42E-04	574	5.19E-04	641	4.54E-04	708	1.11E-04	775	1.43E-05
441	1.65E-04	508	4.48E-04	575	5.19E-04	642	4.49E-04	709	1.07E-04	776	1.35E-05
442	1.86E-04	509	4.48E-04	576	5.18E-04	643	4.44E-04	710	1.04E-04	777	1.32E-05
443	2.12E-04	510	4.52E-04	577	5.21E-04	644	4.39E-04	711	1.02E-04	778	1.26E-05
444	2.43E-04	511	4.53E-04	578	5.22E-04	645	4.34E-04	712	9.85E-05	779	1.26E-05
445	2.74E-04	512	4.56E-04	579	5.23E-04	646	4.28E-04	713	9.61E-05	780	1.26E-05
446	3.13E-04	513	4.56E-04	580	5.21E-04	647	4.23E-04	714	9.35E-05	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

<b>Model No.</b>	V1-18 @8W5000K	<b>Sample ID</b>	250728005-S1
<b>Operate time (Min.)</b>	30	<b>Stabilization time (Min.)</b>	60
<b>Temperature (°C)</b>	25.0	<b>Humidity (%RH)</b>	41.9

<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	0.038	8.6	0.812
<b>NON-WORST CASE</b>	120.0	60	0.070	8.3	0.986

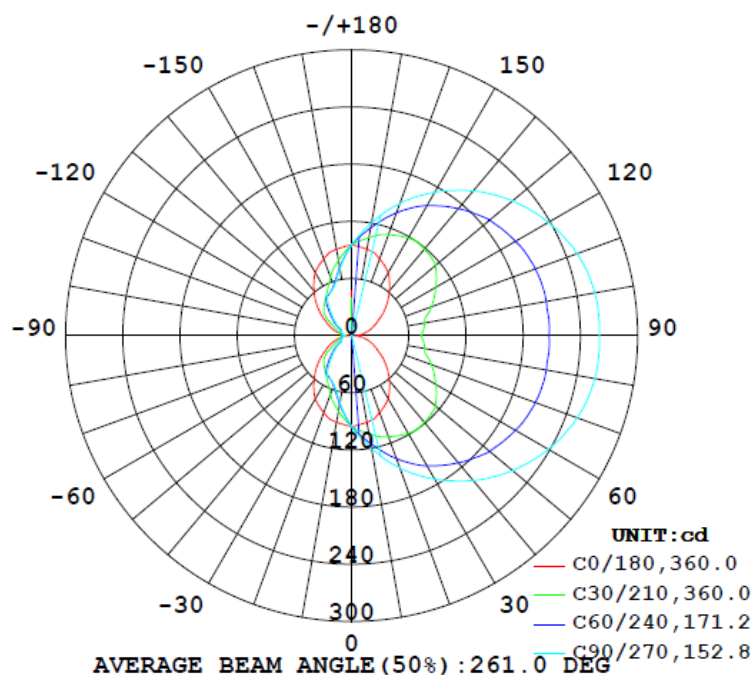
### Test Result

Flux (lm)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)	Zonal Lumen Requirement	BUG
	C0-180	C90-270	C0-180	C90-270		( $0^{\circ}$ - $60^{\circ}$ )	
1059	93.8	156.8	180.0	96.5	123.1	26.9%	B0-U3-G1

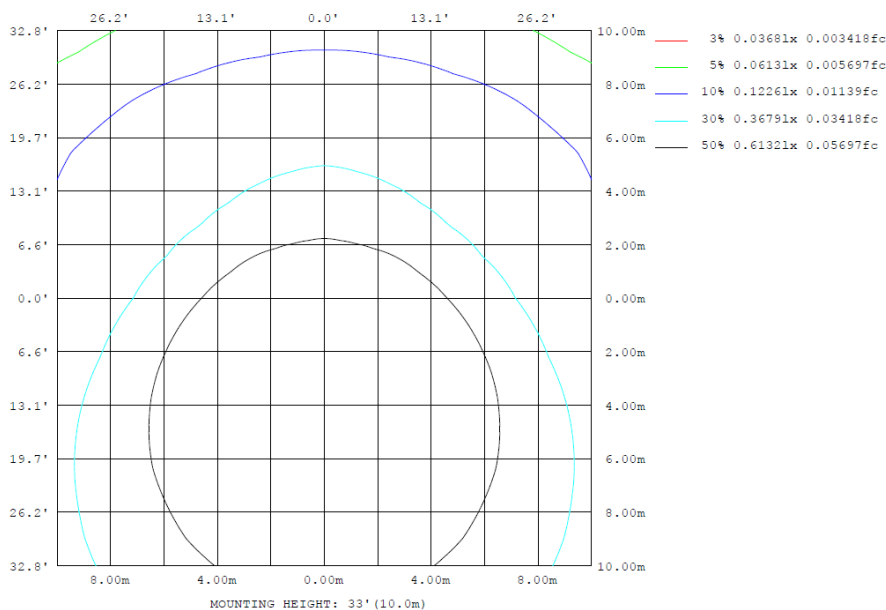
## 4.2 Goniophotometer Test

### Lighting Distribution Curve

#### LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



### Isolux Plot



## 4.2 Goniophotometer Test

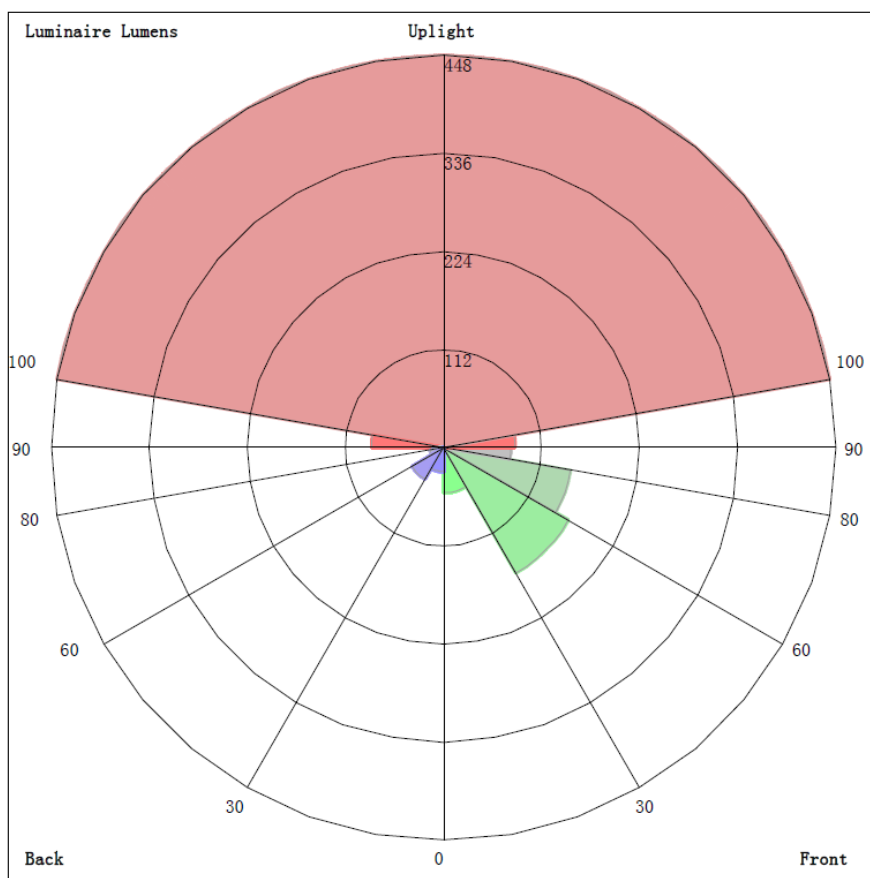
### Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	φ zone	φ total	%lum, lamp
10	92.21	110.3	120.1	110.3	92.21	75.94	71.27	75.94	0- 10	8.975	8.975	0.85, 0.85
20	86.01	127.1	147.8	127.1	86.01	59.64	54.74	59.64	10- 20	26.44	35.41	3.34, 3.34
30	76.85	139.4	173.9	139.4	76.85	49.43	50.36	49.43	20- 30	43.31	78.72	7.43, 7.43
40	61.67	149.8	198.5	149.8	61.67	45.05	35.13	45.05	30- 40	58.92	137.6	13, 13
50	46.74	154.3	220.3	154.3	46.74	30.28	22.55	30.28	40- 50	70.32	208.0	19.6, 19.6
60	32.06	155.0	238.4	155.0	32.06	18.63	12.38	18.63	50- 60	77.17	285.1	26.9, 26.9
70	21.95	152.5	251.6	152.5	21.95	12.21	11.26	12.21	60- 70	80.53	365.6	34.5, 34.5
80	12.21	147.2	259.0	147.2	12.21	11.46	9.226	11.46	70- 80	81.96	447.6	42.3, 42.3
90	2.839	143.7	259.8	143.7	2.839	10.58	9.356	10.58	80- 90	82.05	529.7	50, 50
100	12.21	147.2	259.0	147.2	12.21	11.46	9.226	11.46	90-100	82.05	611.7	57.7, 57.7
110	21.95	152.5	251.6	152.5	21.95	12.21	11.26	12.21	100-110	81.96	693.7	65.5, 65.5
120	32.06	155.0	238.4	155.0	32.06	18.63	12.38	18.63	110-120	80.53	774.2	73.1, 73.1
130	46.74	154.3	220.3	154.3	46.74	30.28	22.55	30.28	120-130	77.17	851.4	80.4, 80.4
140	61.67	149.8	198.5	149.8	61.67	45.05	35.13	45.05	130-140	70.32	921.7	87, 87
150	76.85	139.4	173.9	139.4	76.85	49.43	50.36	49.43	140-150	58.92	980.6	92.6, 92.6
160	86.01	127.1	147.8	127.1	86.01	59.64	54.74	59.64	150-160	43.31	1024	96.7, 96.7
170	92.21	110.3	120.1	110.3	92.21	75.94	71.27	75.94	160-170	26.44	1050	99.2, 99.2
180	95.46	95.46	95.46	95.46	95.46	95.46	95.46	95.46	170-180	8.975	1059	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	8.97	0-10	8.97	0.85%
10-20	26.44	0-20	35.41	3.37%
20-30	43.31	0-30	78.72	7.49%
30-40	58.92	0-40	137.64	13.10%
40-50	70.32	0-50	207.96	19.80%
50-60	77.17	0-60	285.13	27.15%
60-70	80.53	0-70	365.66	34.81%
70-80	81.96	0-80	447.62	42.62%
80-90	82.05	0-90	529.67	50.43%
90-100	82.05	0-100	611.72	58.24%
100-110	81.96	0-110	693.68	66.04%
110-120	80.53	0-120	774.21	73.71%
120-130	77.17	0-130	851.38	81.06%
130-140	70.32	0-140	921.70	87.75%
140-150	58.92	0-150	980.62	93.36%
150-160	43.31	0-160	1023.93	97.48%
160-170	26.44	0-170	1050.37	100.00%
170-180	8.97	0-180	1059.34	100.85%

## 4.2 Goniophotometer Test

LCS/BUG

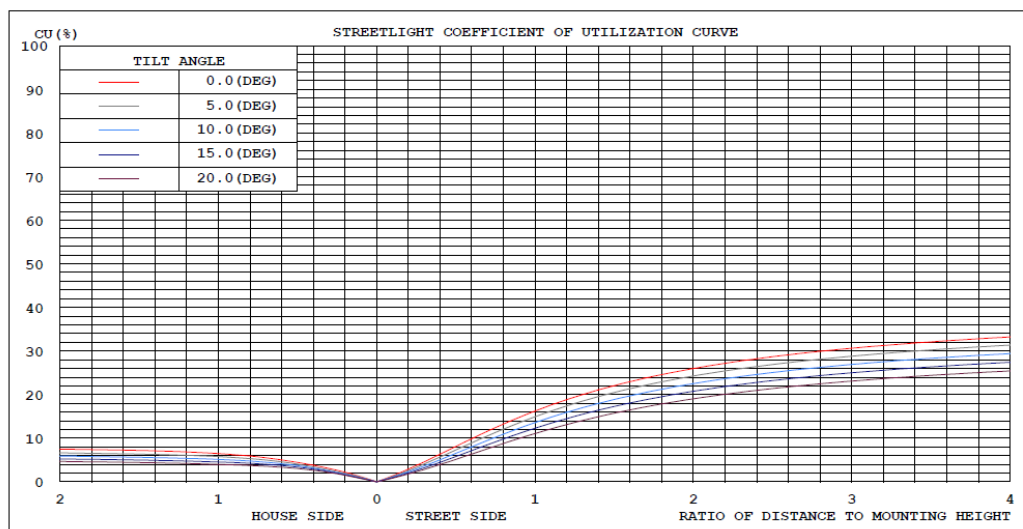


### LUMINAIRE CLASSIFICATION SYSTEM (LCS)

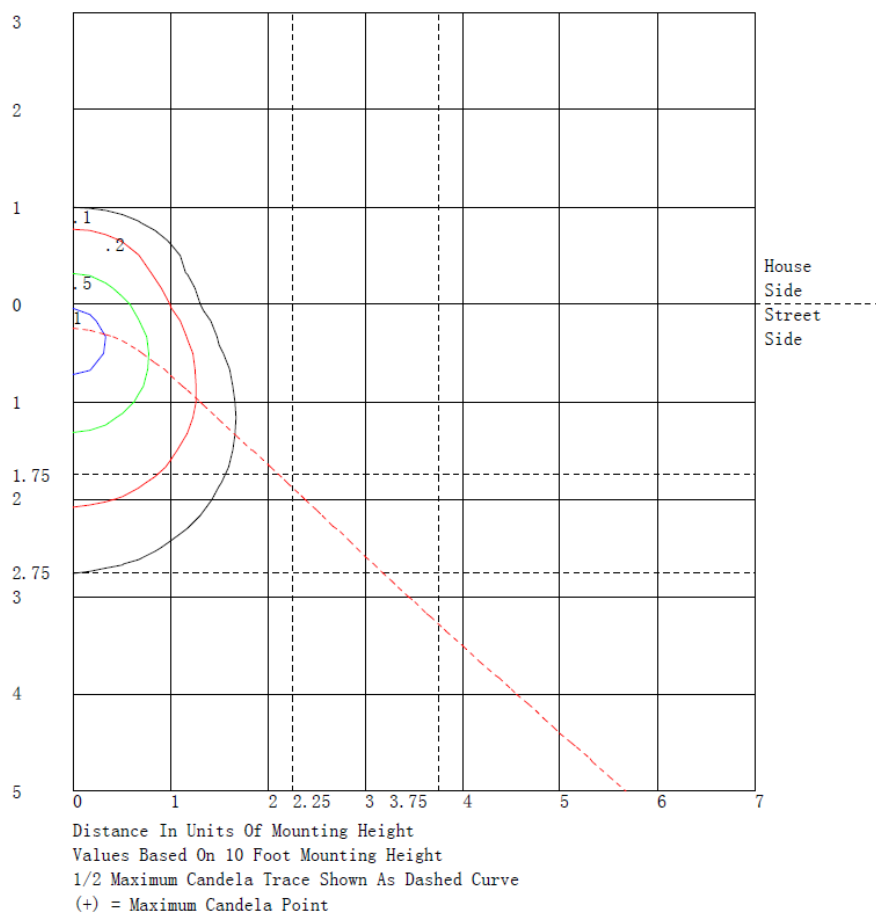
	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	51.4	N.A.	4.9
FM - Front-Medium (30-60)	165.0	N.A.	15.6
FH - Front-High (60-80)	147.3	N.A.	13.9
FVH - Front-Very High (80-90)	76.6	N.A.	7.2
BL - Back-Low (0-30)	27.3	N.A.	2.6
BM - Back-Medium (30-60)	41.4	N.A.	3.9
BH - Back-High (60-80)	15.2	N.A.	1.4
BVH - Back-Very High (80-90)	5.5	N.A.	0.5
UL - Uplight-Low (90-100)	82.0	N.A.	7.7
UH - Uplight-High (100-180)	447.6	N.A.	42.3
Total	1059.3	N.A.	100.0
BUG Rating	B0-U3-G1		

## 4.2 Goniophotometer Test

### Coefficients of Utilization



### Isolines



## 4.2 Goniophotometer Test

### 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	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5
5	93.8	97.0	100	103	105	107	107	107	105	103	100	97.0	93.8	90.6	87.9	85.6	84.0	83.0	83.0
10	92.2	98.5	105	110	115	118	120	118	115	110	105	98.5	92.2	86.0	80.3	75.9	72.9	71.3	71.3
15	90.6	100	109	118	126	131	134	131	126	118	109	100	90.6	81.4	73.2	67.1	63.2	61.4	61.4
20	86.0	98.8	113	127	137	144	148	144	137	127	113	98.8	86.0	74.3	65.4	59.6	56.0	54.6	54.7
25	81.4	97.5	116	134	148	157	161	157	148	134	116	97.5	81.4	67.5	58.0	53.4	51.6	51.1	51.6
30	76.9	96.2	118	139	158	169	174	169	158	139	118	96.2	76.9	61.0	52.3	49.4	49.3	49.7	50.4
35	69.3	91.8	120	145	166	180	186	180	166	145	120	91.8	69.3	54.1	47.9	47.1	47.0	44.4	43.9
40	61.7	86.8	119	150	174	191	198	191	174	150	119	86.8	61.7	47.9	44.4	45.0	39.4	35.7	35.1
45	54.1	81.8	117	152	182	202	210	202	182	152	117	81.8	54.1	42.4	41.4	38.1	31.7	28.8	28.1
50	46.7	74.1	115	154	189	211	220	211	189	154	115	74.1	46.7	38.0	38.0	30.3	25.5	23.0	22.6
55	39.4	65.2	108	156	194	220	230	220	194	156	108	65.2	39.4	34.1	31.9	24.2	20.1	18.0	17.6
60	32.1	55.7	102	155	198	227	238	227	198	155	102	55.7	32.1	30.3	24.9	18.6	14.7	12.7	12.4
65	27.0	49.0	95.6	154	202	234	246	234	202	154	95.6	49.0	27.0	25.2	19.2	14.4	12.2	11.7	11.7
70	22.0	42.5	89.1	153	205	239	252	239	205	153	89.1	42.5	22.0	19.7	15.6	12.2	11.8	11.3	11.3
75	16.9	35.5	81.7	150	207	243	256	243	207	150	81.7	35.5	16.9	14.0	12.6	11.8	11.2	10.9	11.1
80	12.2	34.3	77.8	147	207	245	259	245	207	147	77.8	34.3	12.2	12.3	11.5	11.5	10.1	9.98	9.23
85	7.53	33.5	75.8	146	208	246	260	246	208	146	75.8	33.5	7.53	11.2	11.4	11.0	9.53	8.60	8.19
90	2.84	32.5	72.7	144	207	247	260	247	207	144	72.7	32.5	2.84	10.1	11.3	10.6	9.61	8.69	9.36
95	7.53	33.5	75.8	146	208	246	260	246	208	146	75.8	33.5	7.53	11.2	11.4	11.0	9.53	8.60	8.19
100	12.2	34.3	77.8	147	207	245	259	245	207	147	77.8	34.3	12.2	12.3	11.5	11.5	10.1	9.98	9.23
105	16.9	35.5	81.7	150	207	243	256	243	207	150	81.7	35.5	16.9	14.0	12.6	11.8	11.2	10.9	11.1
110	22.0	42.5	89.1	153	205	239	252	239	205	153	89.1	42.5	22.0	19.7	15.6	12.2	11.8	11.3	11.3
115	27.0	49.0	95.6	154	202	234	246	234	202	154	95.6	49.0	27.0	25.2	19.2	14.4	12.2	11.7	11.7
120	32.1	55.7	102	155	198	227	238	227	198	155	102	55.7	32.1	30.3	24.9	18.6	14.7	12.7	12.4
125	39.4	65.2	108	156	194	220	230	220	194	156	108	65.2	39.4	34.1	31.9	24.2	20.1	18.0	17.6
130	46.7	74.1	115	154	189	211	220	211	189	154	115	74.1	46.7	38.0	38.0	30.3	25.5	23.0	22.6
135	54.1	81.8	117	152	182	202	210	202	182	152	117	81.8	54.1	42.4	41.4	38.1	31.7	28.8	28.1
140	61.7	86.8	119	150	174	191	198	191	174	150	119	86.8	61.7	47.9	44.4	45.0	39.4	35.7	35.1
145	69.3	91.8	120	145	166	180	186	180	166	145	120	91.8	69.3	54.1	47.9	47.1	47.0	44.4	43.9
150	76.9	96.2	118	139	158	169	174	169	158	139	118	96.2	76.9	61.0	52.3	49.4	49.3	49.7	50.4
155	81.4	97.5	116	134	148	157	161	157	148	134	116	97.5	81.4	67.5	58.0	53.4	51.6	51.1	51.6
160	86.0	98.8	113	127	137	144	148	144	137	127	113	98.8	86.0	74.3	65.4	59.6	56.0	54.6	54.7
165	90.6	100	109	118	126	131	134	131	126	118	109	100	90.6	81.4	73.2	67.1	63.2	61.4	61.4
170	92.2	98.5	105	110	115	118	120	118	115	110	105	98.5	92.2	86.0	80.3	75.9	72.9	71.3	71.3
175	93.8	97.0	100	103	105	107	107	107	105	103	100	97.0	93.8	90.6	87.9	85.6	84.0	83.0	83.0
180	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5	95.5

Table--2

UNIT: cd

C (DEG)	285	300	315	330	345														
y (DEG)	0	95.5	95.5	95.5	95.5	95.5													
5	83.0	84.0	85.6	87.9	90.6														
10	71.3	72.9	75.9	80.3	86.0														
15	61.4	63.2	67.1	73.2	81.4														
20	54.6	56.0	59.6	65.4	74.3														
25	51.1	51.6	53.4	58.0	67.5														
30	49.7	49.3	49.4	52.3	61.0														
35	44.4	47.0	47.1	47.9	54.1														
40	35.7	39.4	45.0	44.4	47.9														
45	28.8	31.7	38.1	41.4	42.4														
50	23.0	25.5	30.3	38.0	38.0														
55	18.0	20.1	24.2	31.9	34.1														
60	12.7	14.7	18.6	24.9	30.3														
65	11.7	12.2	14.4	19.2	25.2														
70	11.3	11.8	12.2	15.6	19.7														
75	10.9	11.2	11.8	12.6	14.0														
80	9.98	10.1	11.5	11.5	12.3														
85	8.60	9.53	11.0	11.4	11.2														
90	8.69	9.61	10.6	11.3	10.1														
95	8.60	9.53	11.0	11.4	11.2														
100	9.98	10.1	11.5	11.5	12.3														
105	10.9	11.2	11.8	12.6	14.0														
110	11.3	11.8	12.2	15.6	19.7														
115	11.7	12.2	14.4	19.2	25.2														
120	12.7	14.7	18.6	24.9	30.3														
125	18.0	20.1	24.2	31.9	34.1														
130	23.0	25.5	30.3	38.0	38.0														
135	28.8	31.7	38.1	41.4	42.4														
140	35.7	39.4	45.0	44.4	47.9														
145	44.4	47.0	47.1	47.9	54.1														
150	49.7	49.3	49.4	52.3	61.0														
155	51.1	51.6	53.4	58.0	67.5														
160	54.6	56.0	59.6	65.4	74.3														
165	61.4	63.2	67.1	73.2	81.4														
170	71.3	72.9	75.9	80.3	86.0														
175	83.0	84.0	85.6	87.9	90.6														
180	95.5	95.5	95.5	95.5	95.5														

## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	V1-18 @8W5000K	<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	0.070	8.3	0.986	7.03
277.0	60	0.038	8.6	0.812	41.14



## 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\*\*\*\*\*