

## 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

Review by:

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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		1018
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	119.8
			N/A	N/A	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		8.5
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	N/A	120V	7.00
				277V	41.68
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	N/A	120V	0.986
				277V	0.809
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		91.8
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		83
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-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		0.069
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		8.5
(Goniophotometer – Section 4.2)			Non-Worst Case		8.2

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-08-06	V1-18 @8W4000K	-	250728005-S1
2	Goniophotometer Test	2025-08-06	V1-18 @8W4000K	-	250728005-S1
3	THD and PF Test	2025-08-06	V1-18 @8W4000K	-	250728005-S1

### Remark (If any):

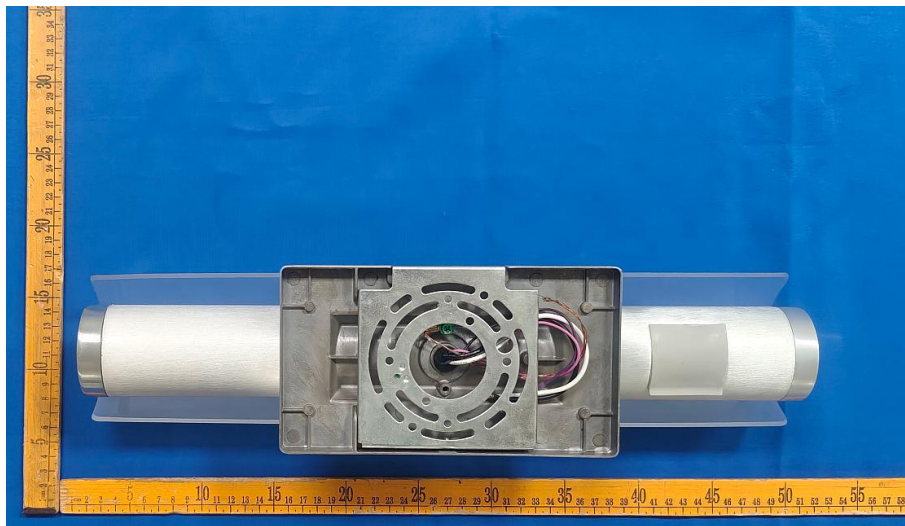
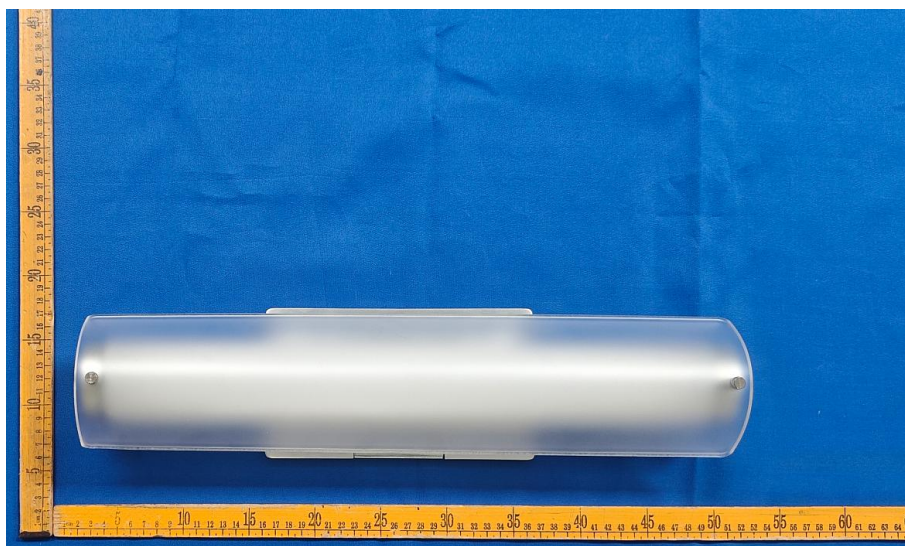
1. The results contained in this report pertain only to the tested samples.
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3. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. Government.

### 3.0 Product Description

Luminaire Description: Model No. V1-18 @8W4000K, 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 @8W4000K	<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

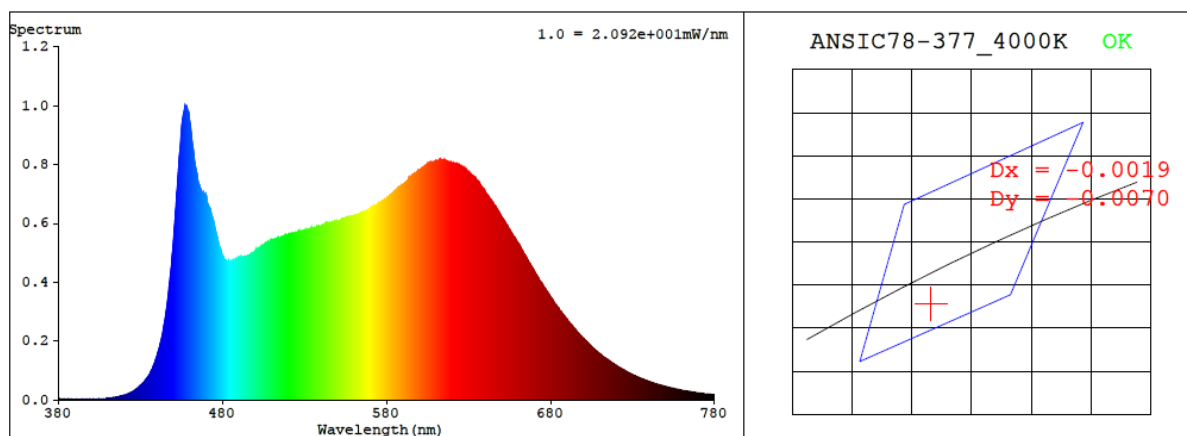
<b>Test Method</b>
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were 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	0.069	8.2	0.986
277.0	60	0.038	8.5	0.809

<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	91.8	83	-0.0028	4.1	87	95	-3%

## 4.1 Integrating Sphere Test



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3777$   $y = 0.3692$  /  $u' = 0.2263$   $v' = 0.4978$  (duv=-2.76e-03)

CCT= 4021K Prcp WL: Ld=580.7nm Purity=24.1%

Peak WL: Lp=457nm FWHM: =30.2nm Ratio:R=20.9% G=73.6% B=5.5%

Render Index: Ra = 91.8 AvgR = 90.9 TM30:Rf=89 Rg=97

EEL: 0.11287 A+

R1 =96 R2 =94 R3 =92 R4 =91 R5 =94 R6 =91 R7 =88

R8 =88 R9 =83 R10=89 R11=96 R12=74 R13=96 R14=97 R15=95

## 4.1 Integrating Sphere Test

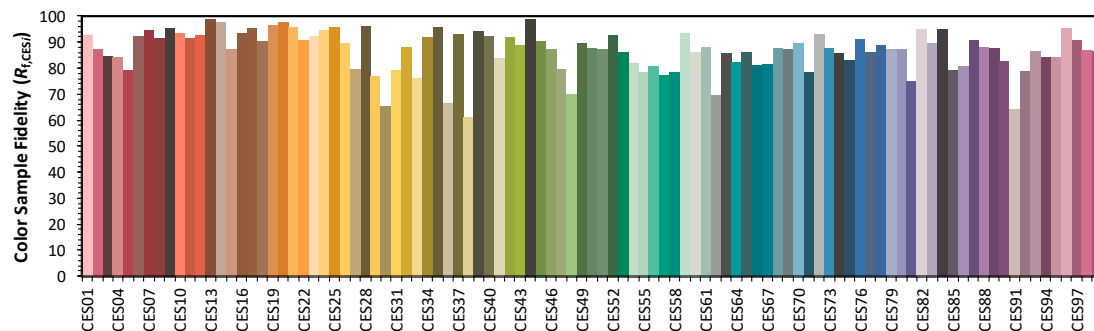
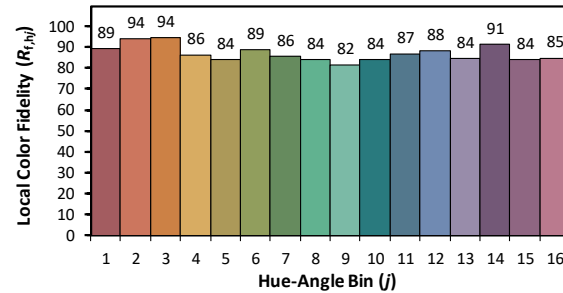
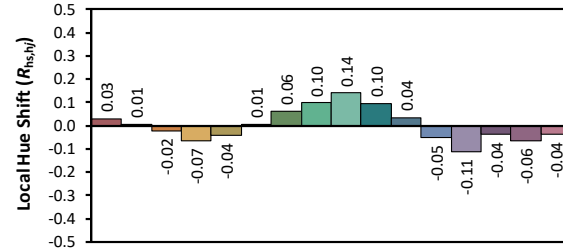
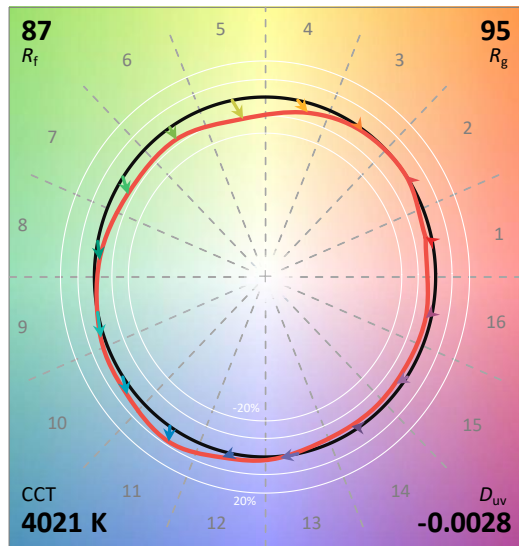
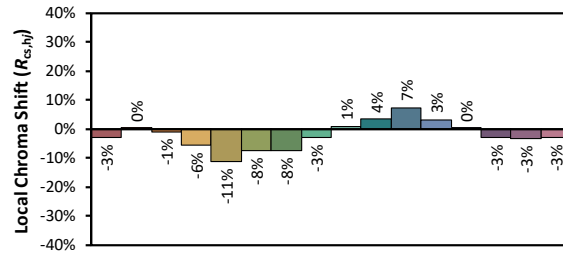
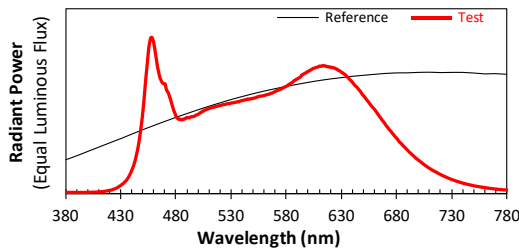
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/8/20

Model: V1-18 @8W4000K



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

$x$  0.3776

$y$  0.3691

$u'$  0.2263

$v'$  0.4977

CIE 13.3-1995  
(CRI)

$R_a$  92

$R_g$  83



## 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	3.10E-06	447	3.60E-04	514	5.53E-04	581	6.89E-04	648	6.43E-04	715	1.36E-04
381	2.30E-06	448	4.14E-04	515	5.51E-04	582	6.94E-04	649	6.32E-04	716	1.33E-04
382	2.80E-06	449	4.68E-04	516	5.54E-04	583	6.99E-04	650	6.24E-04	717	1.28E-04
383	3.00E-06	450	5.36E-04	517	5.55E-04	584	7.03E-04	651	6.15E-04	718	1.24E-04
384	2.80E-06	451	6.10E-04	518	5.59E-04	585	7.07E-04	652	6.06E-04	719	1.21E-04
385	1.70E-06	452	6.96E-04	519	5.58E-04	586	7.12E-04	653	5.96E-04	720	1.17E-04
386	3.10E-06	453	7.72E-04	520	5.62E-04	587	7.20E-04	654	5.89E-04	721	1.13E-04
387	2.30E-06	454	8.45E-04	521	5.62E-04	588	7.23E-04	655	5.78E-04	722	1.10E-04
388	2.60E-06	455	9.21E-04	522	5.65E-04	589	7.29E-04	656	5.70E-04	723	1.07E-04
389	1.80E-06	456	9.66E-04	523	5.67E-04	590	7.32E-04	657	5.60E-04	724	1.04E-04
390	1.80E-06	457	9.95E-04	524	5.67E-04	591	7.36E-04	658	5.52E-04	725	1.01E-04
391	2.60E-06	458	9.98E-04	525	5.69E-04	592	7.40E-04	659	5.43E-04	726	9.74E-05
392	1.90E-06	459	9.81E-04	526	5.71E-04	593	7.46E-04	660	5.36E-04	727	9.43E-05
393	2.50E-06	460	9.51E-04	527	5.73E-04	594	7.56E-04	661	5.27E-04	728	9.15E-05
394	2.30E-06	461	9.06E-04	528	5.72E-04	595	7.59E-04	662	5.16E-04	729	8.85E-05
395	2.50E-06	462	8.61E-04	529	5.73E-04	596	7.65E-04	663	5.06E-04	730	8.58E-05
396	1.90E-06	463	8.13E-04	530	5.77E-04	597	7.69E-04	664	4.95E-04	731	8.31E-05
397	2.80E-06	464	7.80E-04	531	5.78E-04	598	7.71E-04	665	4.86E-04	732	8.09E-05
398	2.40E-06	465	7.47E-04	532	5.78E-04	599	7.78E-04	666	4.77E-04	733	7.79E-05
399	2.70E-06	466	7.27E-04	533	5.81E-04	600	7.81E-04	667	4.66E-04	734	7.58E-05
400	3.10E-06	467	7.12E-04	534	5.81E-04	601	7.85E-04	668	4.58E-04	735	7.33E-05
401	3.00E-06	468	7.04E-04	535	5.83E-04	602	7.89E-04	669	4.49E-04	736	7.13E-05
402	3.60E-06	469	7.00E-04	536	5.85E-04	603	7.93E-04	670	4.38E-04	737	6.86E-05
403	3.30E-06	470	6.99E-04	537	5.84E-04	604	7.97E-04	671	4.28E-04	738	6.69E-05
404	3.90E-06	471	6.67E-04	538	5.89E-04	605	8.01E-04	672	4.19E-04	739	6.47E-05
405	4.00E-06	472	6.52E-04	539	5.92E-04	606	8.02E-04	673	4.10E-04	740	6.25E-05
406	4.20E-06	473	6.39E-04	540	5.92E-04	607	8.05E-04	674	4.02E-04	741	6.03E-05
407	4.40E-06	474	6.18E-04	541	5.95E-04	608	8.07E-04	675	3.94E-04	742	5.88E-05
408	4.90E-06	475	5.98E-04	542	5.96E-04	609	8.10E-04	676	3.84E-04	743	5.70E-05
409	5.10E-06	476	5.72E-04	543	5.98E-04	610	8.14E-04	677	3.76E-04	744	5.51E-05
410	6.10E-06	477	5.49E-04	544	5.99E-04	611	8.13E-04	678	3.67E-04	745	5.36E-05
411	6.60E-06	478	5.26E-04	545	6.02E-04	612	8.13E-04	679	3.59E-04	746	5.20E-05
412	7.10E-06	479	5.09E-04	546	6.01E-04	613	8.17E-04	680	3.51E-04	747	5.04E-05
413	7.70E-06	480	4.90E-04	547	6.03E-04	614	8.15E-04	681	3.43E-04	748	4.88E-05
414	8.60E-06	481	4.79E-04	548	6.05E-04	615	8.16E-04	682	3.33E-04	749	4.70E-05
415	9.40E-06	482	4.75E-04	549	6.04E-04	616	8.12E-04	683	3.24E-04	750	4.53E-05
416	1.10E-05	483	4.70E-04	550	6.08E-04	617	8.11E-04	684	3.18E-04	751	4.42E-05
417	1.18E-05	484	4.73E-04	551	6.08E-04	618	8.10E-04	685	3.11E-04	752	4.28E-05
418	1.34E-05	485	4.68E-04	552	6.10E-04	619	8.09E-04	686	3.02E-04	753	4.15E-05
419	1.46E-05	486	4.70E-04	553	6.14E-04	620	8.05E-04	687	2.96E-04	754	4.04E-05
420	1.64E-05	487	4.75E-04	554	6.16E-04	621	8.06E-04	688	2.88E-04	755	3.92E-05
421	1.76E-05	488	4.74E-04	555	6.18E-04	622	8.04E-04	689	2.81E-04	756	3.79E-05
422	1.97E-05	489	4.81E-04	556	6.21E-04	623	8.02E-04	690	2.74E-04	757	3.69E-05
423	2.25E-05	490	4.83E-04	557	6.21E-04	624	8.01E-04	691	2.66E-04	758	3.54E-05
424	2.48E-05	491	4.82E-04	558	6.21E-04	625	7.95E-04	692	2.59E-04	759	3.44E-05
425	2.75E-05	492	4.82E-04	559	6.24E-04	626	7.94E-04	693	2.53E-04	760	3.33E-05
426	3.08E-05	493	4.87E-04	560	6.25E-04	627	7.87E-04	694	2.45E-04	761	3.20E-05
427	3.49E-05	494	4.89E-04	561	6.28E-04	628	7.84E-04	695	2.40E-04	762	3.12E-05
428	3.99E-05	495	4.89E-04	562	6.30E-04	629	7.81E-04	696	2.33E-04	763	3.03E-05
429	4.39E-05	496	4.91E-04	563	6.31E-04	630	7.74E-04	697	2.27E-04	764	2.92E-05
430	4.90E-05	497	4.93E-04	564	6.34E-04	631	7.71E-04	698	2.20E-04	765	2.85E-05
431	5.47E-05	498	4.99E-04	565	6.35E-04	632	7.65E-04	699	2.15E-04	766	2.75E-05
432	5.98E-05	499	5.01E-04	566	6.40E-04	633	7.61E-04	700	2.09E-04	767	2.65E-05
433	6.66E-05	500	5.05E-04	567	6.40E-04	634	7.55E-04	701	2.03E-04	768	2.56E-05
434	7.41E-05	501	5.09E-04	568	6.43E-04	635	7.44E-04	702	1.99E-04	769	2.48E-05
435	8.14E-05	502	5.15E-04	569	6.48E-04	636	7.41E-04	703	1.93E-04	770	2.41E-05
436	9.20E-05	503	5.18E-04	570	6.50E-04	637	7.31E-04	704	1.87E-04	771	2.35E-05
437	1.03E-04	504	5.25E-04	571	6.55E-04	638	7.24E-04	705	1.81E-04	772	2.22E-05
438	1.17E-04	505	5.26E-04	572	6.58E-04	639	7.18E-04	706	1.76E-04	773	2.19E-05
439	1.32E-04	506	5.31E-04	573	6.60E-04	640	7.09E-04	707	1.71E-04	774	2.11E-05
440	1.49E-04	507	5.33E-04	574	6.64E-04	641	7.00E-04	708	1.67E-04	775	2.08E-05
441	1.67E-04	508	5.38E-04	575	6.65E-04	642	6.92E-04	709	1.61E-04	776	1.99E-05
442	1.89E-04	509	5.38E-04	576	6.69E-04	643	6.84E-04	710	1.56E-04	777	1.90E-05
443	2.14E-04	510	5.44E-04	577	6.74E-04	644	6.78E-04	711	1.53E-04	778	1.89E-05
444	2.45E-04	511	5.44E-04	578	6.77E-04	645	6.70E-04	712	1.48E-04	779	1.89E-05
445	2.76E-04	512	5.48E-04	579	6.82E-04	646	6.60E-04	713	1.44E-04	780	1.89E-05
446	3.15E-04	513	5.47E-04	580	6.84E-04	647	6.53E-04	714	1.39E-04	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

<b>Model No.</b>	V1-18 @8W4000K	<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	8.5	0.809
<b>NON-WORST CASE</b>	120.0	60	0.069	8.2	0.986

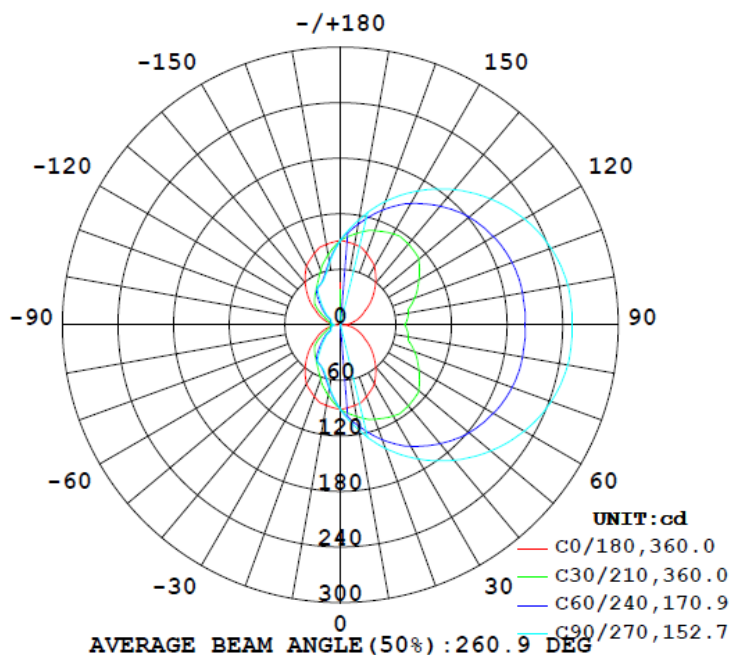
### Test Result

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°-60°)	
1018	93.5	156.3	180.0	95.6	119.8	26.9%	B0-U3-G1

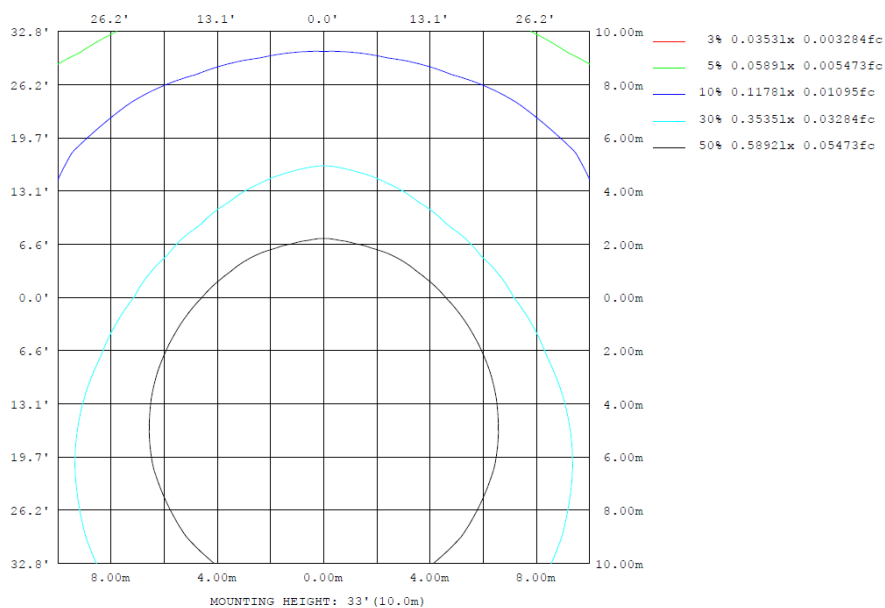
## 4.2 Goniophotometer Test

### Lighting Distribution Curve

#### LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



### Isolux Plot



## 4.2 Goniophotometer Test

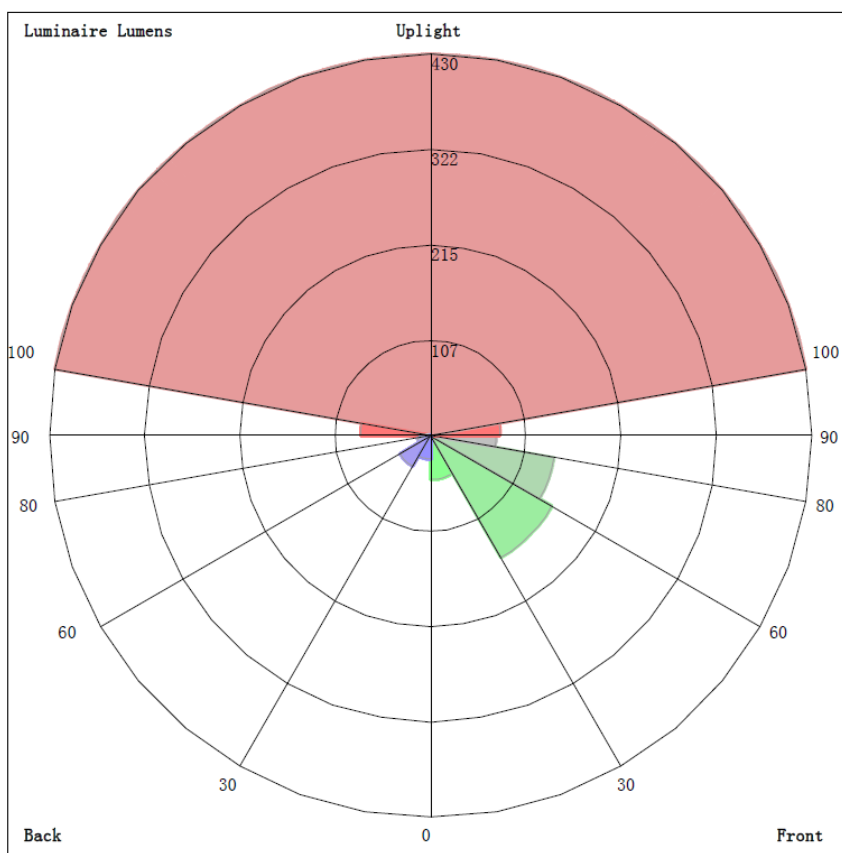
### Zonal Lumen Summary

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum,lamp
10	88.35	105.9	115.3	105.9	88.35	72.74	68.37	72.74	0- 10	8.605	8.605	0.85,0.85
20	82.44	122.1	142.0	122.1	82.44	57.15	52.50	57.15	10- 20	25.36	33.97	3.34,3.34
30	73.66	134.0	167.1	134.0	73.66	47.48	48.46	47.48	20- 30	41.58	75.55	7.42,7.42
40	59.16	143.9	190.7	143.9	59.16	43.42	33.53	43.42	30- 40	56.59	132.1	13,13
50	44.86	148.2	211.8	148.2	44.86	29.07	21.66	29.07	40- 50	67.54	199.7	19.6,19.6
60	30.77	149.0	229.3	149.0	30.77	17.90	11.86	17.90	50- 60	74.13	273.8	26.9,26.9
70	21.08	146.7	242.1	146.7	21.08	11.57	10.83	11.57	60- 70	77.39	351.2	34.5,34.5
80	11.71	141.5	249.0	141.5	11.71	10.79	8.992	10.79	70- 80	78.79	430.0	42.2,42.2
90	2.654	138.0	250.2	138.0	2.654	10.24	9.155	10.24	80- 90	78.89	508.9	50,50
100	11.71	141.5	249.0	141.5	11.71	10.79	8.992	10.79	90-100	78.89	587.8	57.8,57.8
110	21.08	146.7	242.1	146.7	21.08	11.57	10.83	11.57	100-110	78.79	666.5	65.5,65.5
120	30.77	149.0	229.3	149.0	30.77	17.90	11.86	17.90	110-120	77.39	743.9	73.1,73.1
130	44.86	148.2	211.8	148.2	44.86	29.07	21.66	29.07	120-130	74.13	818.1	80.4,80.4
140	59.16	143.9	190.7	143.9	59.16	43.42	33.53	43.42	130-140	67.54	885.6	87,87
150	73.66	134.0	167.1	134.0	73.66	47.48	48.46	47.48	140-150	56.59	942.2	92.6,92.6
160	82.44	122.1	142.0	122.1	82.44	57.15	52.50	57.15	150-160	41.58	983.8	96.7,96.7
170	88.35	105.9	115.3	105.9	88.35	72.74	68.37	72.74	160-170	25.36	1009	99.2,99.2
180	91.39	91.39	91.39	91.39	91.39	91.39	91.39	91.39	170-180	8.605	1018	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	8.61	0-10	8.61	0.85%
10-20	25.36	0-20	33.97	3.37%
20-30	41.58	0-30	75.55	7.49%
30-40	56.59	0-40	132.14	13.09%
40-50	67.54	0-50	199.68	19.79%
50-60	74.13	0-60	273.81	27.13%
60-70	77.39	0-70	351.20	34.80%
70-80	78.79	0-80	429.99	42.61%
80-90	78.89	0-90	508.88	50.43%
90-100	78.89	0-100	587.77	58.24%
100-110	78.79	0-110	666.56	66.05%
110-120	77.39	0-120	743.95	73.72%
120-130	74.13	0-130	818.08	81.07%
130-140	67.54	0-140	885.62	87.76%
140-150	56.59	0-150	942.21	93.37%
150-160	41.58	0-160	983.79	97.49%
160-170	25.36	0-170	1009.15	100.00%
170-180	8.61	0-180	1017.76	100.85%

## 4.2 Goniophotometer Test

LCS/BUG

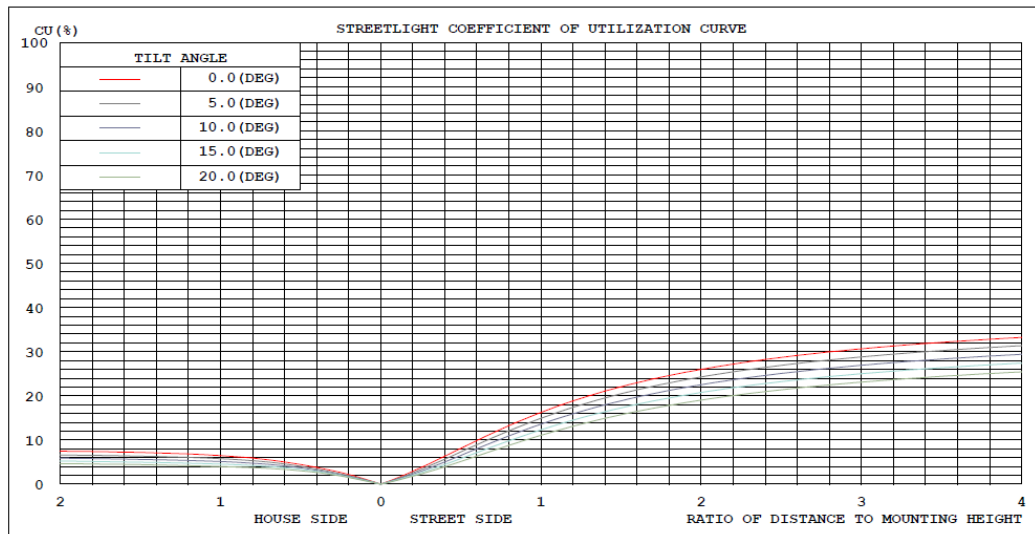


### LUMINAIRE CLASSIFICATION SYSTEM (LCS)

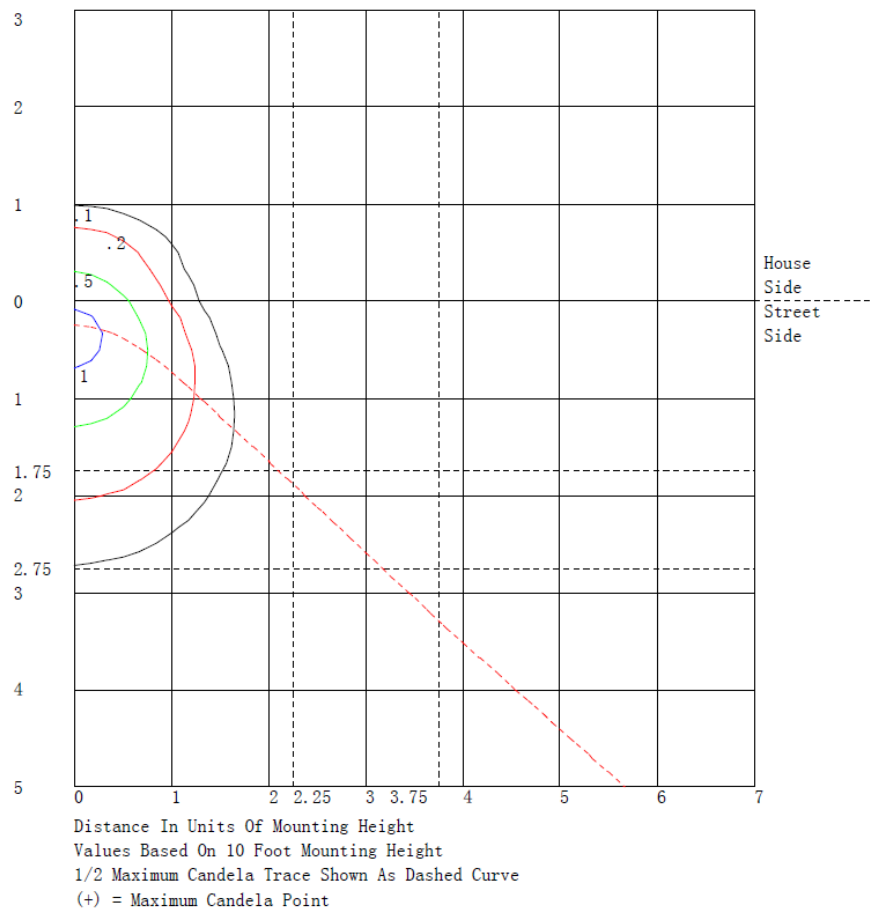
	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	49.4	N.A.	4.9
FM - Front-Medium (30-60)	158.5	N.A.	15.6
FH - Front-High (60-80)	141.6	N.A.	13.9
FVH - Front-Very High (80-90)	73.7	N.A.	7.2
BL - Back-Low (0-30)	26.2	N.A.	2.6
BM - Back-Medium (30-60)	39.7	N.A.	3.9
BH - Back-High (60-80)	14.5	N.A.	1.4
BVH - Back-Very High (80-90)	5.2	N.A.	0.5
UL - Uplight-Low (90-100)	78.9	N.A.	7.8
UH - Uplight-High (100-180)	430.0	N.A.	42.3
Total	1017.7	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	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4
5	89.9	93.0	96.0	98.6	101	102	103	102	101	98.6	96.0	93.0	89.9	86.9	84.2	82.0	80.5	79.7	79.7
10	88.4	94.5	100	106	110	114	115	114	110	106	100	94.5	88.4	82.4	77.1	72.7	69.8	68.3	68.4
15	86.8	96.0	105	114	121	126	129	126	121	114	105	96.0	86.8	77.8	70.1	64.2	60.5	58.8	58.8
20	82.4	94.9	109	122	132	139	142	139	132	122	109	94.9	82.4	71.3	62.7	57.1	53.7	52.3	52.5
25	78.1	93.7	111	128	142	151	155	151	142	128	111	93.7	78.1	64.7	55.6	51.2	49.5	49.1	49.4
30	73.7	92.3	114	134	151	162	167	162	151	134	114	92.3	73.7	58.5	50.2	47.5	47.5	47.7	48.5
35	66.4	88.2	115	139	160	173	179	173	160	139	115	88.2	66.4	51.9	46.0	45.4	45.0	42.4	41.9
40	59.2	83.3	114	144	167	184	191	184	167	144	114	83.3	59.2	46.0	42.7	43.4	37.6	34.1	33.5
45	51.9	78.4	113	146	175	194	202	194	175	146	113	78.4	51.9	40.8	39.7	36.4	30.3	27.5	26.9
50	44.9	71.1	110	148	181	203	212	203	181	148	110	71.1	44.9	36.5	36.4	29.1	24.4	22.0	21.7
55	37.8	62.6	104	150	186	211	221	211	186	150	104	62.6	37.8	32.7	30.5	23.1	19.2	17.1	16.8
60	30.8	53.5	98.0	149	191	219	229	219	191	149	98.0	53.5	30.8	29.1	23.8	17.9	14.1	12.2	11.9
65	25.9	47.1	91.8	148	195	225	236	225	195	148	91.8	47.1	25.9	24.2	18.4	13.7	11.8	11.3	11.3
70	21.1	40.9	85.4	147	197	230	242	230	197	147	85.4	40.9	21.1	18.8	15.1	11.6	11.3	10.9	10.8
75	16.2	34.1	78.3	144	199	233	246	233	199	144	78.3	34.1	16.2	13.4	12.2	11.1	10.9	10.4	10.6
80	11.7	32.8	74.6	142	200	236	249	236	200	142	74.6	32.8	11.7	11.8	11.0	10.8	9.81	9.63	8.99
85	7.18	32.0	72.6	141	200	237	250	237	200	141	72.6	32.0	7.18	10.8	10.9	10.5	9.21	8.25	7.87
90	2.65	31.0	69.6	138	199	237	250	237	199	138	69.6	31.0	2.65	9.75	10.7	10.2	9.28	8.33	9.16
95	7.18	32.0	72.6	141	200	237	250	237	200	141	72.6	32.0	7.18	10.8	10.9	10.5	9.21	8.25	7.87
100	11.7	32.8	74.6	142	200	236	249	236	200	142	74.6	32.8	11.7	11.8	11.0	10.8	9.81	9.63	8.99
105	16.2	34.1	78.3	144	199	233	246	233	199	144	78.3	34.1	16.2	13.4	12.2	11.1	10.9	10.4	10.6
110	21.1	40.9	85.4	147	197	230	242	230	197	147	85.4	40.9	21.1	18.8	15.1	11.6	11.3	10.9	10.8
115	25.9	47.1	91.8	148	195	225	236	225	195	148	91.8	47.1	25.9	24.2	18.4	13.7	11.8	11.3	11.3
120	30.8	53.5	98.0	149	191	219	229	219	191	149	98.0	53.5	30.8	29.1	23.8	17.9	14.1	12.2	11.9
125	37.8	62.6	104	150	186	211	221	211	186	150	104	62.6	37.8	32.7	30.5	23.1	19.2	17.1	16.8
130	44.9	71.1	110	148	181	203	212	203	181	148	110	71.1	44.9	36.5	36.4	29.1	24.4	22.0	21.7
135	51.9	78.4	113	146	175	194	202	194	175	146	113	78.4	51.9	40.8	39.7	36.4	30.3	27.5	26.9
140	59.2	83.3	114	144	167	184	191	184	167	144	114	83.3	59.2	46.0	42.7	43.4	37.6	34.1	33.5
145	66.4	88.2	115	139	160	173	179	173	160	139	115	88.2	66.4	51.9	46.0	45.4	45.0	42.4	41.9
150	73.7	92.3	114	134	151	162	167	162	151	134	114	92.3	73.7	58.5	50.2	47.5	47.5	47.7	48.5
155	78.1	93.7	111	128	142	151	155	151	142	128	111	93.7	78.1	64.7	55.6	51.2	49.5	49.1	49.4
160	82.4	94.9	109	122	132	139	142	139	132	122	109	94.9	82.4	71.3	62.7	57.1	53.7	52.3	52.5
165	86.8	96.0	105	114	121	126	129	126	121	114	105	96.0	86.8	77.8	70.1	64.2	60.5	58.8	58.8
170	88.4	94.5	100	106	110	114	115	114	110	106	100	94.5	88.4	82.4	77.1	72.7	69.8	68.3	68.4
175	89.9	93.0	96.0	98.6	101	102	103	102	101	98.6	96.0	93.0	89.9	86.9	84.2	82.0	80.5	79.7	79.7
180	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4	91.4

Table--2

UNIT: cd

C (DEG)	285	300	315	330	345														
y (DEG)	0	91.4	91.4	91.4	91.4														
5	79.7	80.5	82.0	84.2	86.9														
10	68.3	69.8	72.7	77.1	82.4														
15	58.8	60.5	64.2	70.1	77.8														
20	52.3	53.7	57.1	62.7	71.3														
25	49.1	49.5	51.2	55.6	64.7														
30	47.7	47.5	47.5	50.2	58.5														
35	42.4	45.0	45.4	46.0	51.9														
40	34.1	37.6	43.4	42.7	46.0														
45	27.5	30.3	36.4	39.7	40.8														
50	22.0	24.4	29.1	36.4	36.5														
55	17.1	19.2	23.1	30.5	32.7														
60	12.2	14.1	17.9	23.8	29.1														
65	11.3	11.8	13.7	18.4	24.2														
70	10.9	11.3	11.6	15.1	18.8														
75	10.4	10.9	11.1	12.2	13.4														
80	9.63	9.81	10.8	11.0	11.8														
85	8.25	9.21	10.5	10.9	10.8														
90	8.33	9.28	10.2	10.7	9.75														
95	8.25	9.21	10.5	10.9	10.8														
100	9.63	9.81	10.8	11.0	11.8														
105	10.4	10.9	11.1	12.2	13.4														
110	10.9	11.3	11.6	15.1	18.8														
115	11.3	11.8	13.7	18.4	24.2														
120	12.2	14.1	17.9	23.8	29.1														
125	17.1	19.2	23.1	30.5	32.7														
130	22.0	24.4	29.1	36.4	36.5														
135	27.5	30.3	36.4	39.7	40.8														
140	34.1	37.6	43.4	42.7	46.0														
145	42.4	45.0	45.4	46.0	51.9														
150	47.7	47.5	47.5	50.2	58.5														
155	49.1	49.5	51.2	55.6	64.7														
160	52.3	53.7	57.1	62.7	71.3														
165	58.8	60.5	64.2	70.1	77.8														
170	68.3	69.8	72.7	77.1	82.4														
175	79.7	80.5	82.0	84.2	86.9														
180	91.4	91.4	91.4	91.4	91.4														



## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	V1-18 @8W4000K	<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	0.069	8.2	0.986	7.00
277.0	60	0.038	8.5	0.809	41.68

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