

## 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		417
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	136.7
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		6.1
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	9.10
				277V	18.93
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.979
				277V	0.836
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	3465±245	3408
			4 steps	3465±124	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		84.1
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		12
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%		55.9%
Discomfort Glare (UGR) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	28.4
			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		0.026
(Goniophotometer – Section 4.2)			Non-Worst Case		0.047
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		6.1
(Goniophotometer – Section 4.2)			Non-Worst Case		5.5

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-03-29	STRP2/MVS @6W3500K	-	250324005-S1
2	Goniophotometer Test	2025-03-29	STRP2/MVS @6W3500K	-	250324005-S1
3	THD and PF Test	2025-03-29	STRP2/MVS @6W3500K	-	250324005-S1

### Remark (If any):

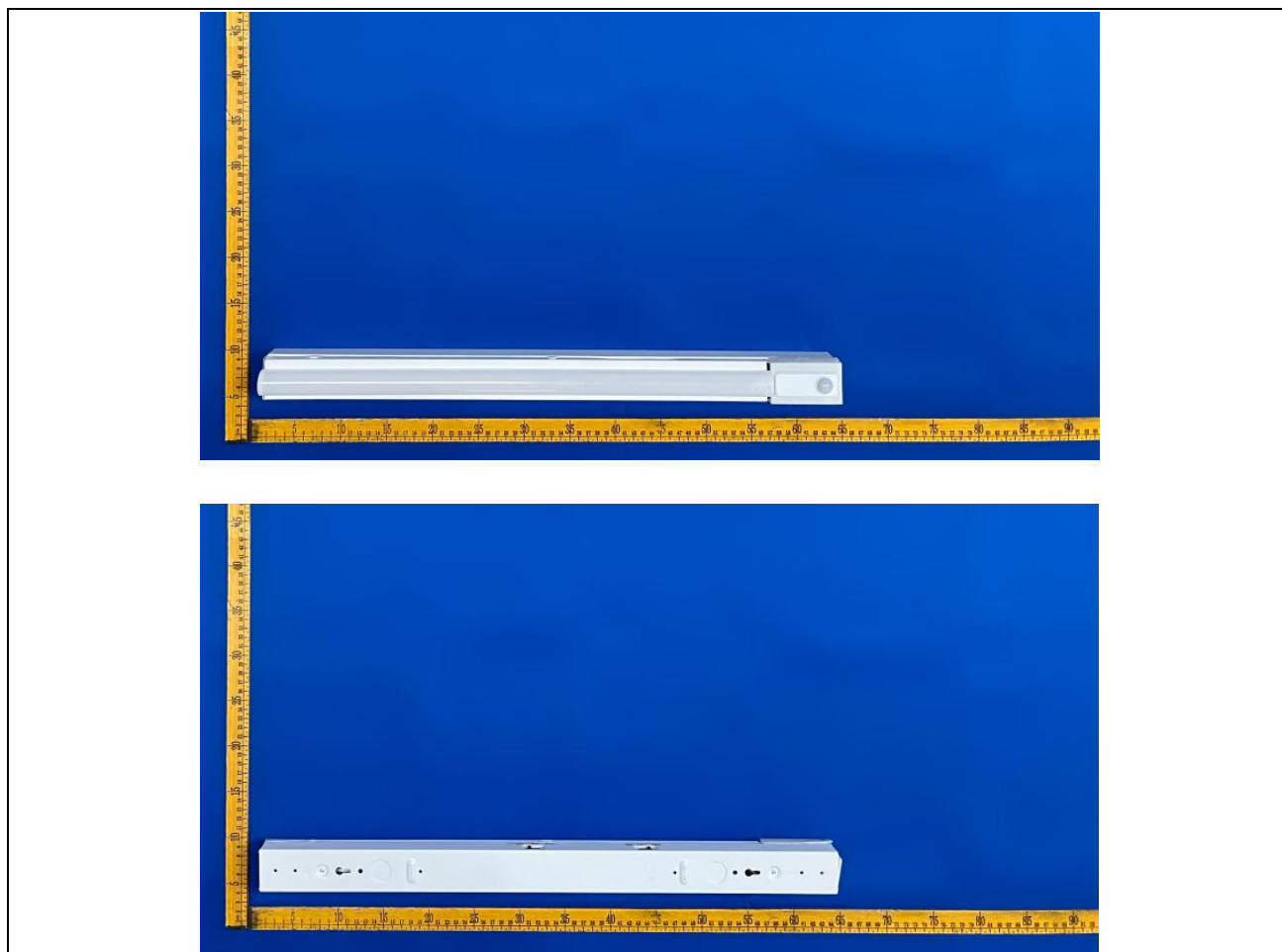
1. The results contained in this report pertain only to the tested samples.
2. This report shall not be reproduced, no limited part or full, without approval of Dongguan New Testing Centre Co., Ltd.
3. This report must not be used by the client to claim product certification, approval, or endorsement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

### 3.0 Product Description

Luminaire Description: Model No. STRP2/MVS @6W3500K, 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

<b>Model No.</b>	STRP2/MVS @6W3500K	<b>Sample ID</b>	250324005-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

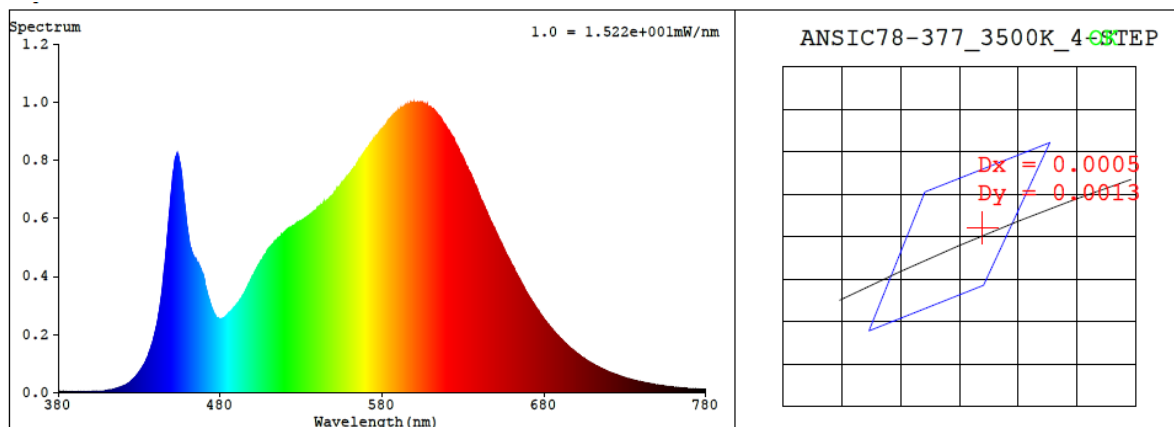
<b>Test Method</b>
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were 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	0.047	5.5	0.979
277.0	60	0.026	6.1	0.836

<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>
3408	84.1	12	0.0005	1.6	85	95	-12%

## 4.1 Integrating Sphere Test



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.4111$   $y = 0.3946$  /  $u' = 0.2379$   $v' = 0.5137$  ( $duv=4.52e-04$ )

CCT= 3408K Prcp WL: Ld=581.0nm Purity=41.8%

Peak WL: Lp=600nm FWHM: =143.8nm Ratio:R=20.9% G=75.9% B=3.2%

Render Index: Ra = 84.1 AvgR = 78.3 TM30:Rf=85 Rg=95

EEL: 0.09647 A++ Highest

R1 =83 R2 =92 R3 =96 R4 =82 R5 =83 R6 =90 R7 =84

R8 =63 R9 =12 R10=81 R11=81 R12=67 R13=85 R14=99 R15=76

## 4.1 Integrating Sphere Test

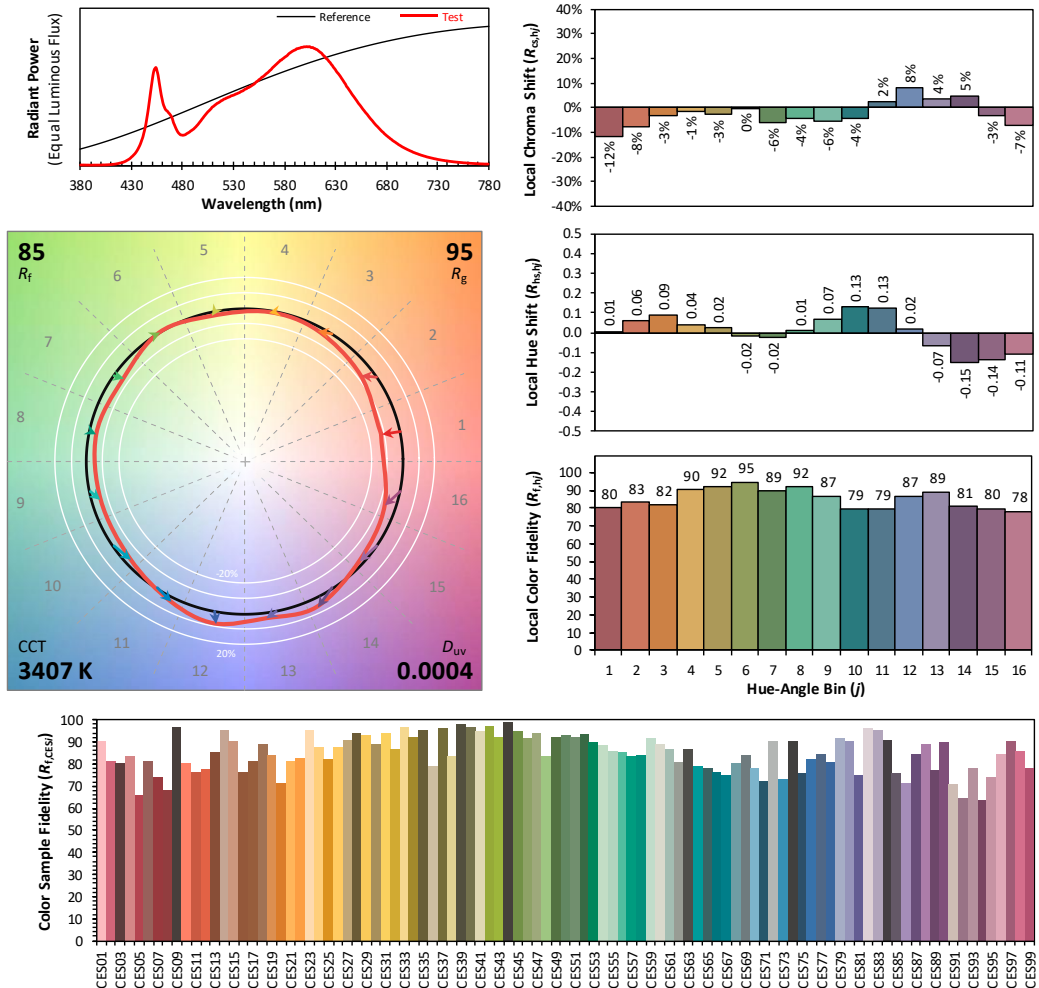
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/4/1

Model: STRP2/MVS @6W3500K



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

$x$  0.4111  
 $y$  0.3945  
 $u'$  0.2379  
 $v'$  0.5137

CIE 13.3-1995  
(CRI)

$R_a$  84  
 $R_g$  12

## 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	3.30E-06	447	5.14E-04	514	5.22E-04	581	9.14E-04	648	5.80E-04	715	8.42E-05
381	3.70E-06	448	5.78E-04	515	5.26E-04	582	9.19E-04	649	5.68E-04	716	8.16E-05
382	2.70E-06	449	6.41E-04	516	5.31E-04	583	9.26E-04	650	5.56E-04	717	7.88E-05
383	3.80E-06	450	7.02E-04	517	5.37E-04	584	9.36E-04	651	5.44E-04	718	7.66E-05
384	2.50E-06	451	7.60E-04	518	5.44E-04	585	9.43E-04	652	5.31E-04	719	7.39E-05
385	3.10E-06	452	8.00E-04	519	5.47E-04	586	9.49E-04	653	5.19E-04	720	7.10E-05
386	2.20E-06	453	8.16E-04	520	5.54E-04	587	9.55E-04	654	5.09E-04	721	6.91E-05
387	2.90E-06	454	8.22E-04	521	5.59E-04	588	9.61E-04	655	4.97E-04	722	6.69E-05
388	2.30E-06	455	7.92E-04	522	5.61E-04	589	9.65E-04	656	4.85E-04	723	6.49E-05
389	2.20E-06	456	7.57E-04	523	5.67E-04	590	9.70E-04	657	4.73E-04	724	6.28E-05
390	2.10E-06	457	7.01E-04	524	5.69E-04	591	9.73E-04	658	4.63E-04	725	6.09E-05
391	2.40E-06	458	6.49E-04	525	5.74E-04	592	9.81E-04	659	4.52E-04	726	5.88E-05
392	2.20E-06	459	5.96E-04	526	5.76E-04	593	9.81E-04	660	4.41E-04	727	5.66E-05
393	2.50E-06	460	5.55E-04	527	5.81E-04	594	9.85E-04	661	4.32E-04	728	5.53E-05
394	2.70E-06	461	5.17E-04	528	5.86E-04	595	9.86E-04	662	4.21E-04	729	5.33E-05
395	2.30E-06	462	4.94E-04	529	5.88E-04	596	9.91E-04	663	4.09E-04	730	5.11E-05
396	2.70E-06	463	4.74E-04	530	5.91E-04	597	9.93E-04	664	3.98E-04	731	4.95E-05
397	2.60E-06	464	4.63E-04	531	5.94E-04	598	9.93E-04	665	3.88E-04	732	4.81E-05
398	2.70E-06	465	4.57E-04	532	5.99E-04	599	9.97E-04	666	3.79E-04	733	4.65E-05
399	2.90E-06	466	4.45E-04	533	6.02E-04	600	9.97E-04	667	3.68E-04	734	4.49E-05
400	3.00E-06	467	4.36E-04	534	6.06E-04	601	9.97E-04	668	3.57E-04	735	4.35E-05
401	3.70E-06	468	4.25E-04	535	6.09E-04	602	9.99E-04	669	3.47E-04	736	4.22E-05
402	4.10E-06	469	4.12E-04	536	6.13E-04	603	9.97E-04	670	3.37E-04	737	4.11E-05
403	3.80E-06	470	3.93E-04	537	6.19E-04	604	9.98E-04	671	3.29E-04	738	3.90E-05
404	4.00E-06	471	3.62E-04	538	6.24E-04	605	9.98E-04	672	3.20E-04	739	3.87E-05
405	4.70E-06	472	3.42E-04	539	6.26E-04	606	9.92E-04	673	3.11E-04	740	3.72E-05
406	4.80E-06	473	3.21E-04	540	6.32E-04	607	9.91E-04	674	3.02E-04	741	3.59E-05
407	5.50E-06	474	3.03E-04	541	6.39E-04	608	9.91E-04	675	2.93E-04	742	3.44E-05
408	5.90E-06	475	2.86E-04	542	6.43E-04	609	9.84E-04	676	2.84E-04	743	3.35E-05
409	6.60E-06	476	2.73E-04	543	6.46E-04	610	9.83E-04	677	2.78E-04	744	3.22E-05
410	7.20E-06	477	2.65E-04	544	6.56E-04	611	9.76E-04	678	2.68E-04	745	3.14E-05
411	8.50E-06	478	2.57E-04	545	6.55E-04	612	9.74E-04	679	2.61E-04	746	3.01E-05
412	8.90E-06	479	2.56E-04	546	6.61E-04	613	9.67E-04	680	2.52E-04	747	2.93E-05
413	1.00E-05	480	2.54E-04	547	6.66E-04	614	9.60E-04	681	2.46E-04	748	2.83E-05
414	1.12E-05	481	2.54E-04	548	6.72E-04	615	9.52E-04	682	2.38E-04	749	2.73E-05
415	1.27E-05	482	2.57E-04	549	6.77E-04	616	9.47E-04	683	2.33E-04	750	2.68E-05
416	1.47E-05	483	2.60E-04	550	6.83E-04	617	9.39E-04	684	2.24E-04	751	2.57E-05
417	1.59E-05	484	2.67E-04	551	6.90E-04	618	9.27E-04	685	2.19E-04	752	2.53E-05
418	1.86E-05	485	2.71E-04	552	7.00E-04	619	9.21E-04	686	2.11E-04	753	2.43E-05
419	2.00E-05	486	2.76E-04	553	7.06E-04	620	9.10E-04	687	2.05E-04	754	2.36E-05
420	2.25E-05	487	2.82E-04	554	7.12E-04	621	9.00E-04	688	1.99E-04	755	2.27E-05
421	2.48E-05	488	2.89E-04	555	7.21E-04	622	8.94E-04	689	1.94E-04	756	2.16E-05
422	2.76E-05	489	2.94E-04	556	7.26E-04	623	8.84E-04	690	1.87E-04	757	2.13E-05
423	3.12E-05	490	3.01E-04	557	7.34E-04	624	8.72E-04	691	1.82E-04	758	2.09E-05
424	3.48E-05	491	3.07E-04	558	7.42E-04	625	8.64E-04	692	1.75E-04	759	1.97E-05
425	4.02E-05	492	3.16E-04	559	7.46E-04	626	8.50E-04	693	1.70E-04	760	1.92E-05
426	4.47E-05	493	3.24E-04	560	7.54E-04	627	8.41E-04	694	1.65E-04	761	1.89E-05
427	4.99E-05	494	3.34E-04	561	7.61E-04	628	8.27E-04	695	1.60E-04	762	1.79E-05
428	5.54E-05	495	3.43E-04	562	7.70E-04	629	8.17E-04	696	1.54E-04	763	1.74E-05
429	6.28E-05	496	3.54E-04	563	7.76E-04	630	8.06E-04	697	1.50E-04	764	1.70E-05
430	7.13E-05	497	3.65E-04	564	7.83E-04	631	7.91E-04	698	1.45E-04	765	1.63E-05
431	7.84E-05	498	3.76E-04	565	7.92E-04	632	7.80E-04	699	1.41E-04	766	1.60E-05
432	8.78E-05	499	3.88E-04	566	8.00E-04	633	7.71E-04	700	1.37E-04	767	1.54E-05
433	9.64E-05	500	3.99E-04	567	8.07E-04	634	7.60E-04	701	1.32E-04	768	1.51E-05
434	1.07E-04	501	4.10E-04	568	8.18E-04	635	7.48E-04	702	1.29E-04	769	1.44E-05
435	1.20E-04	502	4.21E-04	569	8.26E-04	636	7.34E-04	703	1.24E-04	770	1.41E-05
436	1.34E-04	503	4.32E-04	570	8.34E-04	637	7.22E-04	704	1.20E-04	771	1.35E-05
437	1.51E-04	504	4.42E-04	571	8.42E-04	638	7.08E-04	705	1.17E-04	772	1.32E-05
438	1.68E-04	505	4.52E-04	572	8.50E-04	639	6.95E-04	706	1.12E-04	773	1.27E-05
439	1.89E-04	506	4.59E-04	573	8.58E-04	640	6.83E-04	707	1.09E-04	774	1.25E-05
440	2.14E-04	507	4.69E-04	574	8.67E-04	641	6.64E-04	708	1.06E-04	775	1.22E-05
441	2.38E-04	508	4.77E-04	575	8.74E-04	642	6.55E-04	709	1.02E-04	776	1.15E-05
442	2.72E-04	509	4.89E-04	576	8.84E-04	643	6.42E-04	710	9.94E-05	777	1.13E-05
443	3.06E-04	510	4.95E-04	577	8.86E-04	644	6.29E-04	711	9.63E-05	778	1.13E-05
444	3.47E-04	511	5.01E-04	578	8.94E-04	645	6.17E-04	712	9.26E-05	779	1.13E-05
445	4.00E-04	512	5.09E-04	579	9.00E-04	646	6.03E-04	713	9.01E-05	780	1.13E-05
446	4.52E-04	513	5.15E-04	580	9.08E-04	647	5.91E-04	714	8.67E-05	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

<b>Model No.</b>	STRP2/MVS @6W3500K	<b>Sample ID</b>	250324005-S1
<b>Operate time (Min.)</b>	30	<b>Stabilization time (Min.)</b>	60
<b>Temperature (°C)</b>	24.7	<b>Humidity (%RH)</b>	41.3

<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	0.026	6.1	0.836
<b>NON-WORST CASE</b>	120.0	60	0.047	5.5	0.979

### Test Result

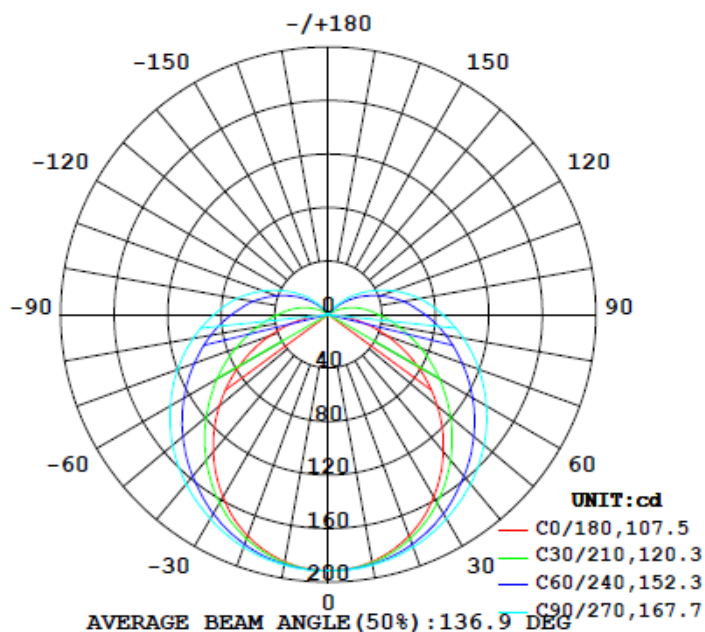
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
834	417	161.6	161.6	107.6	167.6	136.7

Zonal Lumen Requirement (0°-60°)	UGR	
	Crosswise	Endwise
55.9%	20.4	28.4

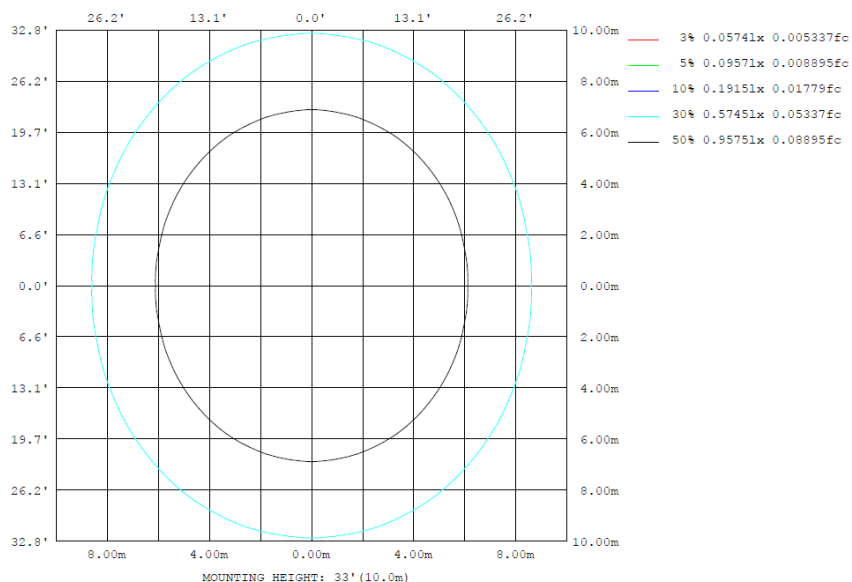
## 4.2 Goniophotometer Test

### 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	187.6	188.6	190.1	188.6	187.6	188.6	190.1	188.6	0- 10	18.16	18.16	2.18,2.18
20	176.1	180.4	185.1	180.4	176.1	180.4	185.1	180.4	10- 20	52.38	70.53	8.46,8.46
30	157.6	167.2	176.4	167.2	157.6	167.2	176.4	167.2	20- 30	80.45	151.0	18.1,18.1
40	133.7	149.9	165.4	149.9	133.7	149.9	165.4	149.9	30- 40	99.43	250.4	30,30
50	106.5	130.9	152.0	130.9	106.5	130.9	152.0	130.9	40- 50	108.3	358.7	43,43
60	76.79	111.1	136.5	111.1	76.79	111.1	136.5	111.1	50- 60	107.2	465.9	55.9,55.9
70	46.66	91.53	119.9	91.53	46.66	91.53	119.9	91.53	60- 70	97.59	563.5	67.6,67.6
80	18.80	73.34	102.5	73.34	18.80	73.34	102.5	73.34	70- 80	82.24	645.7	77.4,77.4
90	2.334	56.85	85.49	56.85	2.334	56.85	85.49	56.85	80- 90	64.92	710.6	85.2,85.2
100	1.584	42.96	69.30	42.96	1.584	42.96	69.30	42.96	90-100	49.37	760.0	91.1,91.1
110	1.584	29.28	51.71	29.28	1.584	29.28	51.71	29.28	100-110	35.01	795.0	95.3,95.3
120	1.584	16.63	34.70	16.63	1.584	16.63	34.70	16.63	110-120	21.77	816.8	98,98
130	1.584	5.872	19.61	5.872	1.584	5.872	19.61	5.872	120-130	11.23	828.0	99.3,99.3
140	1.584	1.281	6.449	1.281	1.584	1.281	6.449	1.281	130-140	4.145	832.2	99.8,99.8
150	1.676	0.8959	0.8989	0.8959	1.676	0.8959	0.8989	0.8959	140-150	0.9206	833.1	99.9,99.9
160	1.282	0.7919	0.8386	0.7919	1.282	0.7919	0.8386	0.7919	150-160	0.4155	833.5	100,100
170	1.240	0.8110	0.7783	0.8110	1.240	0.8110	0.7783	0.8110	160-170	0.2410	833.8	100,100
180	1.211	0.8225	0.7360	0.8225	1.211	0.8225	0.7360	0.8225	170-180	0.0792	833.8	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

	Zonal (lm)		Total (lm)	Percent
0-10	18.16	0-10	18.16	2.18%
10-20	52.38	0-20	70.54	8.46%
20-30	80.46	0-30	151.00	18.11%
30-40	99.43	0-40	250.43	30.04%
40-50	108.29	0-50	358.72	43.02%
50-60	107.19	0-60	465.91	55.88%
60-70	97.59	0-70	563.50	67.59%
70-80	82.24	0-80	645.74	77.45%
80-90	64.92	0-90	710.66	85.24%
90-100	49.37	0-100	760.03	91.16%
100-110	35.01	0-110	795.04	95.36%
110-120	21.77	0-120	816.81	97.97%
120-130	11.23	0-130	828.04	99.31%
130-140	4.14	0-140	832.18	99.81%
140-150	0.92	0-150	833.10	99.92%
150-160	0.42	0-160	833.52	99.97%
160-170	0.24	0-170	833.76	100.00%
170-180	0.08	0-180	833.84	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		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	16.9	18.3	17.5	18.9	19.6	21.0	22.5	21.6	23.1	23.7
	3H	18.3	19.6	18.8	20.2	20.9	24.0	25.3	24.6	25.9	26.6
	4H	18.7	20.0	19.3	20.6	21.3	25.5	26.8	26.1	27.4	28.1
	6H	19.0	20.1	19.6	20.8	21.5	27.2	28.3	27.8	29.0	29.7
	8H	19.0	20.1	19.7	20.8	21.5	28.0	29.1	28.6	29.8	30.5
	12H	19.1	20.1	19.7	20.8	21.5	29.0	30.0	29.6	30.7	31.4
4H	2H	18.2	19.5	18.8	20.1	20.8	21.4	22.6	22.0	23.2	23.9
	3H	19.9	21.0	20.5	21.6	22.3	24.6	25.6	25.2	26.3	27.0
	4H	20.5	21.5	21.1	22.1	22.9	26.2	27.2	26.9	27.9	28.6
	6H	20.9	21.8	21.5	22.5	23.2	28.1	28.9	28.7	29.6	30.4
	8H	21.0	21.8	21.7	22.5	23.3	29.0	29.9	29.7	30.5	31.3
	12H	21.0	21.8	21.7	22.5	23.3	30.1	30.8	30.8	31.5	32.3
8H	4H	21.7	22.5	22.3	23.2	24.0	26.4	27.2	27.1	27.9	28.7
	6H	22.3	23.0	23.0	23.8	24.5	28.4	29.1	29.1	29.8	30.6
	8H	22.6	23.2	23.3	23.9	24.7	29.5	30.1	30.2	30.8	31.6
	12H	22.7	23.3	23.4	24.0	24.9	30.7	31.3	31.4	32.0	32.9
12H	4H	22.0	22.8	22.7	23.5	24.3	26.4	27.2	27.1	27.9	28.7
	6H	22.9	23.5	23.6	24.2	25.1	28.4	29.1	29.1	29.8	30.6
	8H	23.2	23.8	23.9	24.5	25.4	29.6	30.1	30.3	30.9	31.7

Maximum UGR = 32.9

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		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	16.3	17.7	16.9	18.3	19.0	20.4	21.9	21.0	22.5	23.1
	3H	17.7	19.0	18.2	19.6	20.3	23.4	24.7	24.0	25.3	26.0
	4H	18.1	19.4	18.7	20.0	20.7	24.9	26.2	25.5	26.8	27.5
	6H	18.4	19.5	19.0	20.2	20.9	26.6	27.7	27.2	28.4	29.1
	8H	18.4	19.5	19.1	20.2	20.9	27.4	28.5	28.0	29.2	29.9
	12H	18.5	19.5	19.1	20.2	20.9	28.4	29.4	29.0	30.1	30.8
4H	2H	17.6	18.9	18.2	19.5	20.2	20.8	22.0	21.4	22.6	23.3
	3H	19.3	20.4	19.9	21.0	21.7	24.0	25.0	24.6	25.7	26.4
	4H	19.9	20.9	20.5	21.5	22.3	25.6	26.6	26.3	27.3	28.0
	6H	20.3	21.2	20.9	21.9	22.6	27.5	28.3	28.1	29.0	29.8
	8H	20.4	21.2	21.1	21.9	22.7	28.4	29.3	29.1	29.9	30.7
	12H	20.4	21.2	21.1	21.9	22.7	29.5	30.2	30.2	30.9	31.7
8H	4H	21.1	21.9	21.7	22.6	23.4	25.8	26.6	26.5	27.3	28.1
	6H	21.7	22.4	22.4	23.2	23.9	27.8	28.5	28.5	29.2	30.0
	8H	22.0	22.6	22.7	23.3	24.1	28.9	29.5	29.6	30.2	31.0
	12H	22.1	22.7	22.8	23.4	24.3	30.1	30.7	30.8	31.4	32.3
12H	4H	21.4	22.2	22.1	22.9	23.7	25.8	26.6	26.5	27.3	28.1
	6H	22.3	22.9	23.0	23.6	24.5	27.8	28.5	28.5	29.2	30.0
	8H	22.6	23.2	23.3	23.9	24.8	29.0	29.5	29.7	30.3	31.1

Maximum UGR = 32.3

## 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	191	191	192	191	191	191	191	191	191	192	191	191	191	192	191	191	191	191
5	190	191	191	191	191	191	191	191	191	191	191	191	190	191	191	191	191	191	191
10	188	188	188	189	190	190	190	190	190	189	188	188	188	188	188	188	189	190	190
15	183	183	184	185	187	188	188	188	187	185	184	183	183	183	184	185	187	188	188
20	176	177	178	180	183	185	185	185	183	180	178	177	176	177	178	180	183	185	185
25	168	169	171	174	178	180	181	180	178	174	171	169	168	169	171	174	178	180	181
30	158	159	163	167	172	175	176	175	172	167	163	159	158	159	163	167	172	175	176
35	146	148	153	159	165	169	171	169	165	159	153	148	146	148	153	159	165	169	171
40	134	136	142	150	158	163	165	163	158	150	142	136	134	136	142	150	158	163	165
45	120	124	131	140	150	157	159	157	150	140	131	124	120	124	131	140	150	157	159
50	107	110	119	131	142	149	152	149	142	131	119	110	107	110	119	131	142	149	152
55	91.9	96.7	107	121	133	141	144	141	133	121	107	96.7	91.9	96.7	107	121	133	141	144
60	76.8	83.0	96.1	111	125	133	136	133	125	111	96.1	83.0	76.8	83.0	96.1	111	125	133	136
65	61.7	69.2	84.6	101	116	125	128	125	116	101	84.6	69.2	61.7	69.2	84.6	101	116	125	128
70	46.7	55.8	73.6	91.5	107	117	120	117	107	91.5	73.6	55.8	46.7	55.8	73.6	91.5	107	117	120
75	32.3	43.4	63.2	82.2	97.8	108	111	108	97.8	82.2	63.2	43.4	32.3	43.4	63.2	82.2	97.8	108	111
80	18.8	32.6	53.7	73.3	89.3	99.4	103	99.4	89.3	73.3	53.7	32.6	18.8	32.6	53.7	73.3	89.3	99.4	103
85	8.03	23.6	45.3	65.1	80.9	90.6	93.8	90.6	80.9	65.1	45.3	23.6	8.03	23.6	45.3	65.1	80.9	90.6	93.8
90	2.33	16.7	37.6	56.9	72.3	81.8	85.5	81.8	72.3	56.9	37.6	16.7	2.33	16.7	37.6	56.9	72.3	81.8	85.5
95	1.68	11.9	31.8	49.9	64.4	73.9	77.4	73.9	64.4	49.9	31.8	11.9	1.68	11.9	31.8	49.9	64.4	73.9	77.4
100	1.58	7.96	25.6	43.0	57.0	65.6	69.3	65.6	57.0	43.0	25.6	7.96	1.58	7.96	25.6	43.0	57.0	65.6	69.3
105	1.58	4.54	19.9	35.8	49.1	57.4	60.6	57.4	49.1	35.8	19.9	4.54	1.58	4.54	19.9	35.8	49.1	57.4	60.6
110	1.58	2.13	14.7	29.3	41.3	48.8	51.7	48.8	41.3	29.3	14.7	2.13	1.58	2.13	14.7	29.3	41.3	48.8	51.7
115	1.58	1.85	9.72	22.8	33.5	40.4	43.1	40.4	33.5	22.8	9.72	1.85	1.58	1.85	9.72	22.8	33.5	40.4	43.1
120	1.58	1.71	5.51	16.6	26.5	32.5	34.7	32.5	26.5	16.6	5.51	1.71	1.58	1.71	5.51	16.6	26.5	32.5	34.7
125	1.58	1.65	2.03	11.0	19.6	25.1	27.1	25.1	19.6	11.0	2.03	1.65	1.58	1.65	2.03	11.0	19.6	25.1	27.1
130	1.58	1.59	1.70	5.87	13.2	18.0	19.6	18.0	13.2	5.87	1.70	1.59	1.58	1.59	1.70	5.87	13.2	18.0	19.6
135	1.58	1.53	1.47	1.84	7.15	11.4	12.7	11.4	7.15	1.84	1.47	1.53	1.58	1.53	1.47	1.84	7.15	11.4	12.7
140	1.58	1.47	1.43	1.28	2.04	5.14	6.45	5.14	2.04	1.43	1.47	1.58	1.47	1.43	1.28	2.04	5.14	6.45	
145	1.58	1.41	1.23	1.02	1.10	1.01	1.30	1.01	1.10	1.02	1.23	1.41	1.58	1.41	1.23	1.02	1.10	1.01	1.30
150	1.68	1.29	0.92	0.90	0.92	0.89	0.90	0.89	0.92	0.90	0.92	1.29	1.68	1.29	0.92	0.90	0.92	0.89	0.90
155	1.30	1.01	0.82	0.78	0.80	0.76	0.87	0.76	0.80	0.78	0.82	1.01	1.30	1.01	0.82	0.78	0.80	0.76	0.87
160	1.28	0.99	0.80	0.79	0.77	0.76	0.84	0.76	0.77	0.79	0.80	0.99	1.28	0.99	0.80	0.79	0.77	0.76	0.84
165	1.26	0.97	0.78	0.80	0.76	0.75	0.81	0.75	0.76	0.80	0.78	0.97	1.26	0.97	0.78	0.80	0.76	0.75	0.81
170	1.24	0.95	0.76	0.81	0.75	0.74	0.78	0.74	0.75	0.81	0.76	0.95	1.24	0.95	0.76	0.81	0.75	0.74	0.78
175	1.22	0.93	0.74	0.82	0.74	0.74	0.75	0.74	0.74	0.82	0.74	0.93	1.22	0.93	0.74	0.82	0.74	0.74	0.75
180	1.21	0.92	0.73	0.82	0.73	0.73	0.74	0.73	0.73	0.82	0.73	0.92	1.21	0.92	0.73	0.82	0.73	0.73	0.74

Table--2

UNIT: cd

C (DEG)	285	300	315	330	345														
y (DEG)	0	191	191	191	192	191													
5	191	191	191	191	191														
10	190	190	189	188	188														
15	188	187	185	184	183														
20	185	183	180	178	177														
25	180	178	174	171	169														
30	175	172	167	163	159														
35	169	165	159	153	148														
40	163	158	150	142	136														
45	157	150	140	131	124														
50	149	142	131	119	110														
55	141	133	121	107	96.7														
60	133	125	111	96.1	83.0														
65	125	116	101	84.6	69.2														
70	117	107	91.5	73.6	55.8														
75	108	97.8	82.2	63.2	43.4														
80	99.4	89.3	73.3	53.7	32.6														
85	90.6	80.9	65.1	45.3	23.6														
90	81.8	72.3	56.9	37.6	16.7														
95	73.9	64.4	49.9	31.8	11.9														
100	65.6	57.0	43.0	25.6	7.96														
105	57.4	49.1	35.8	19.9	4.54														
110	48.8	41.3	29.3	14.7	2.13														
115	40.4	33.5	22.8	9.72	1.85														
120	32.5	26.5	16.6	5.51	1.71														
125	25.1	19.6	11.0	2.03	1.65														
130	18.0	13.2	5.87	1.70	1.59														
135	11.4	7.15	1.84	1.47	1.53														
140	5.14	2.04	1.28	1.43	1.47														
145	1.01	1.10	1.02	1.23	1.41														
150	0.89	0.92	0.90	0.92	1.29														
155	0.76	0.80	0.78	0.82	1.01														
160	0.76	0.77	0.79	0.80	0.99														
165	0.75	0.76	0.80	0.78	0.97														
170	0.74	0.75	0.81	0.76	0.95														
175	0.74	0.74	0.82	0.74	0.93														
180	0.73	0.73	0.82	0.73	0.92														

## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	STRP2/MVS @6W3500K	<b>Sample ID</b>	250324005-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	0.047	5.5	0.979	9.10
277.0	60	0.026	6.1	0.836	18.93

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