

## 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: 2025-01-06

Review by:

*Vincent Yuan*

Technical Lead: Vincent Yuan

Issue Date: 2025-01-06

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		586
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	158.2
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		14.8
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	6.38
				277V	14.57
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.992
				277V	0.910
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	3985±275	4092
			4 steps	3985±154	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		85.0
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		18
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%		-11%
Zonal Lumen Requirement (0°-60°) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	≥40%		56.4%
Discomfort Glare (UGR) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	29.4
			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		0.059
(Goniophotometer – Section 4.2)			Non-Worst Case		0.122
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		14.8
(Goniophotometer – Section 4.2)			Non-Worst Case		14.5

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-01-03	STRP4 @15W4000K	-	241225005-S1
2	Goniophotometer Test	2025-01-03	STRP4 @15W4000K	-	241225005-S1
3	THD and PF Test	2025-01-03	STRP4 @15W4000K	-	241225005-S1

### Remark (If any):

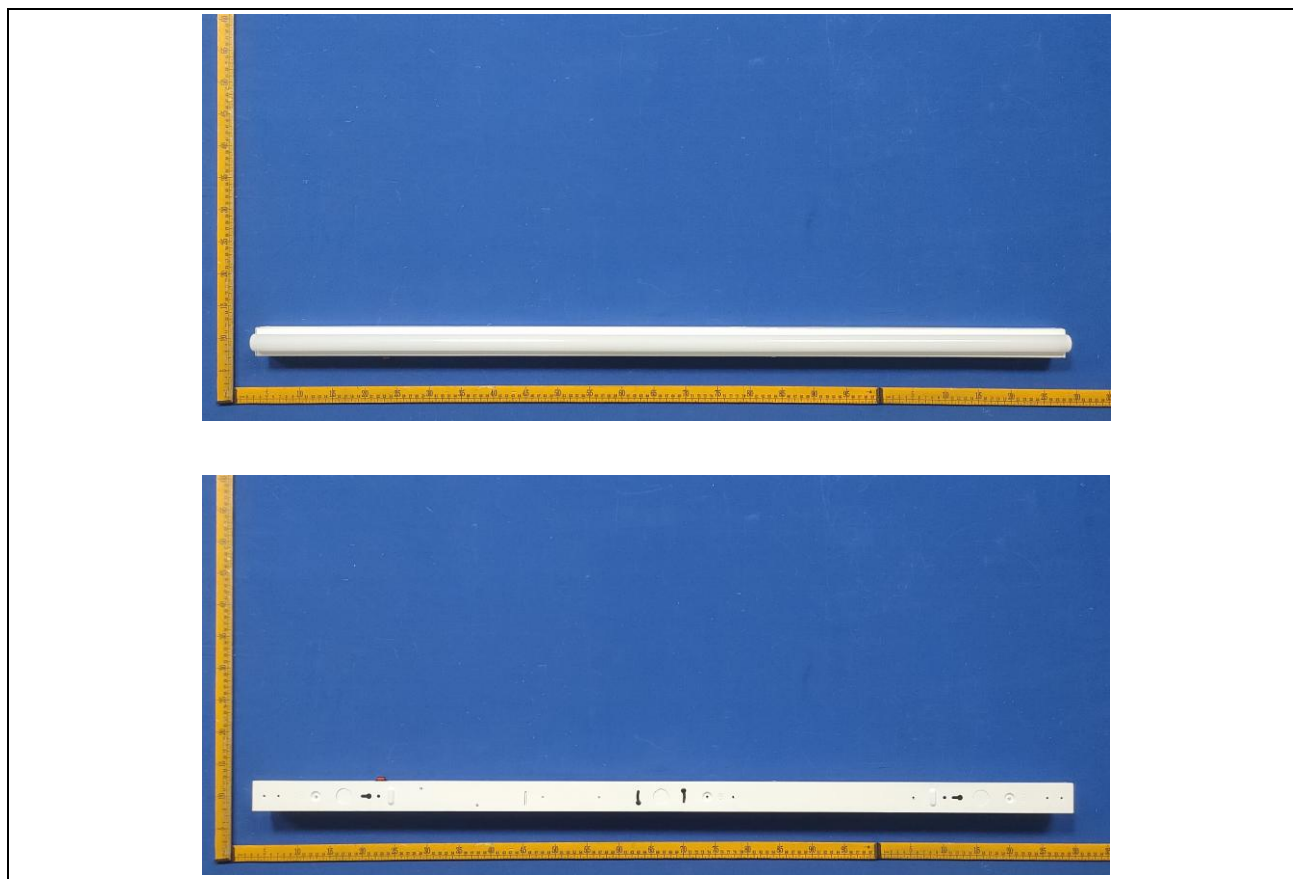
1. The results contained in this report pertain only to the tested samples.
2. This report shall not be reproduced, no limited part or full, without approval of Dongguan New Testing Centre Co., Ltd.
3. This report must not be used by the client to claim product certification, approval, or endorsement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

### 3.0 Product Description

Luminaire Description: Model No. STRP4 @15W4000K, 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>	STRP4 @15W4000K	<b>Sample ID</b>	241225005-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

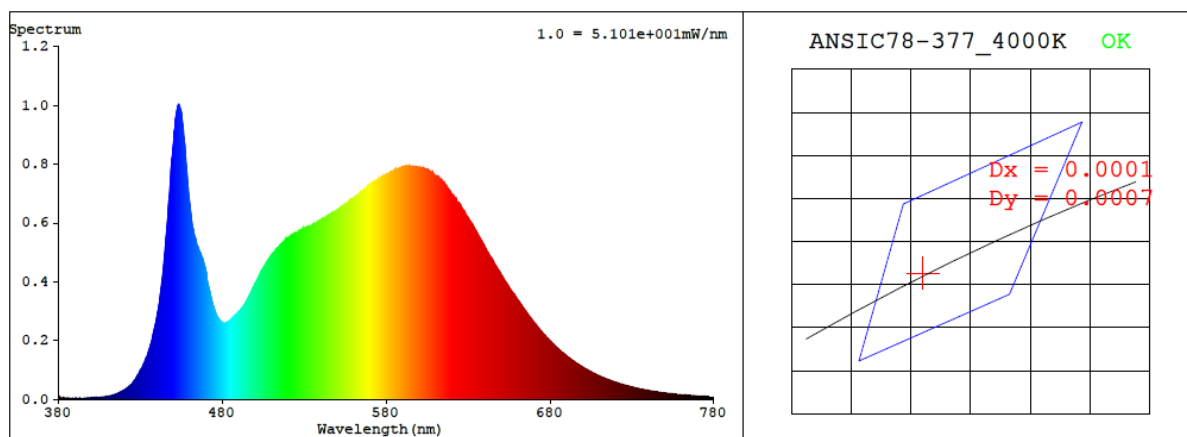
<b>Test Method</b>
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were 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 4<math>\pi</math> 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	0.122	14.5	0.992
277.0	60	0.059	14.8	0.910

<b>CCT (K)</b>	<b>CRI</b>	<b>R9</b>	<b>Duv</b>	<b>Rf</b>	<b>Rg</b>	<b>IES Rcs,h1</b>
4092	85.0	18	0.0003	85	95	-11%

### 4.1 Integrating Sphere Test



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3766$   $y = 0.3749$  /  $u' = 0.2233$   $v' = 0.5002$  ( $duv=2.85e-04$ )

CCT= 4092K      Prcp WL:   Ld=578.5nm      Purity=25.5%

Peak WL: Lp=453nm FWHM: =21.6nm Ratio:R=18.3% G=77.7% B=3.9%

Render Index: Ra = 85.0 AvgR = 78.9 TM30:Rf=85 Rg=95

EEl: 0.08574 A++ Highest

R1 =84    R2 =92    R3 =96    R4 =83    R5 =83    R6 =88    R7 =87

R8 =68    R9 =18    R10=79    R11=82    R12=62    R13=86    R14=98    R15=78

## 4.1 Integrating Sphere Test

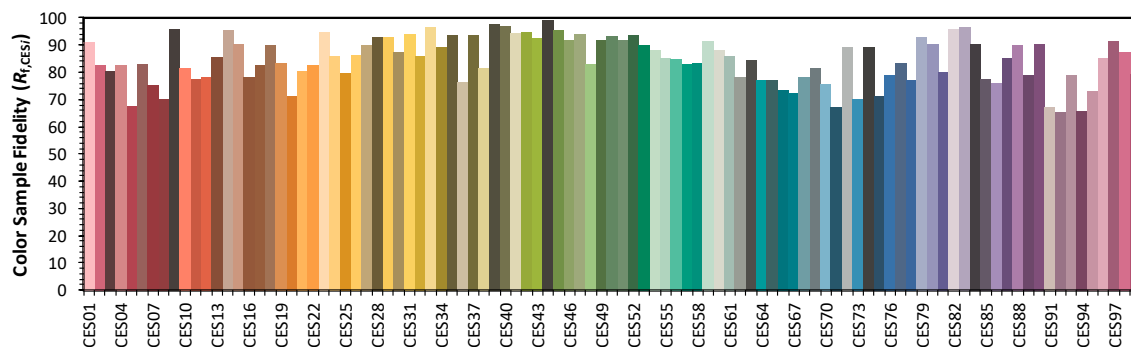
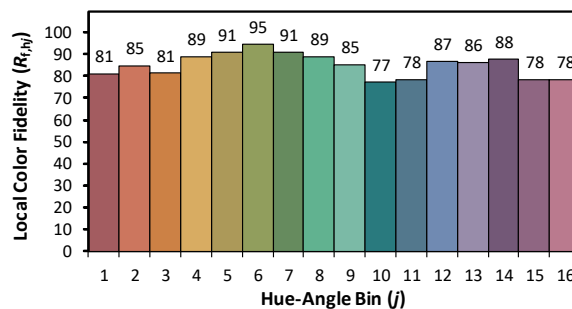
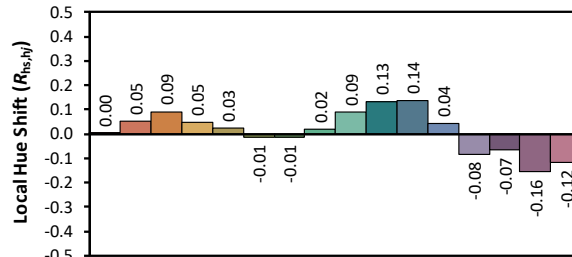
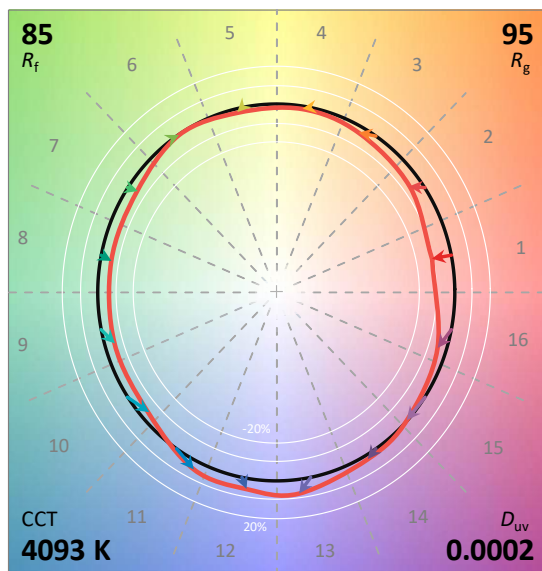
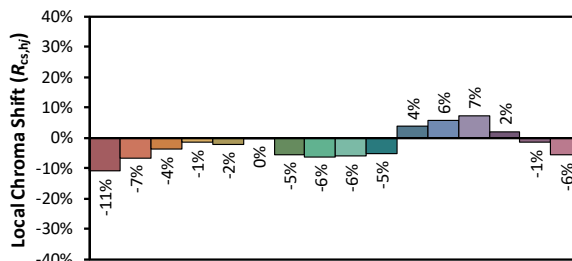
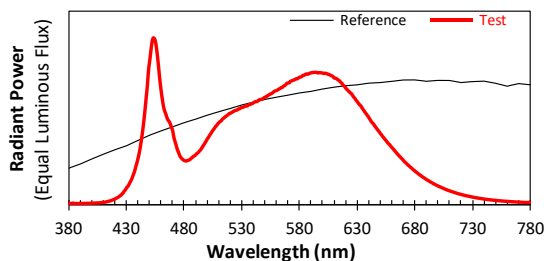
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/1/6

Model: STRP4 @15W4000K



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

$x$  0.3766  
 $y$  0.3748  
 $u'$  0.2233  
 $v'$  0.5001

CIE 13.3-1995  
(CRI)

$R_a$  85  
 $R_g$  18



## 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	3.70E-06	447	6.44E-04	514	5.16E-04	581	7.65E-04	648	4.44E-04	715	6.83E-05
381	3.50E-06	448	7.15E-04	515	5.22E-04	582	7.69E-04	649	4.36E-04	716	6.60E-05
382	3.30E-06	449	8.08E-04	516	5.28E-04	583	7.75E-04	650	4.25E-04	717	6.38E-05
383	5.70E-06	450	8.61E-04	517	5.33E-04	584	7.75E-04	651	4.17E-04	718	6.14E-05
384	4.40E-06	451	9.21E-04	518	5.38E-04	585	7.80E-04	652	4.07E-04	719	6.01E-05
385	3.00E-06	452	9.73E-04	519	5.45E-04	586	7.83E-04	653	3.99E-04	720	5.79E-05
386	4.00E-06	453	9.99E-04	520	5.47E-04	587	7.82E-04	654	3.90E-04	721	5.63E-05
387	3.00E-06	454	9.96E-04	521	5.51E-04	588	7.85E-04	655	3.82E-04	722	5.44E-05
388	2.90E-06	455	9.78E-04	522	5.55E-04	589	7.88E-04	656	3.73E-04	723	5.23E-05
389	4.10E-06	456	9.32E-04	523	5.59E-04	590	7.90E-04	657	3.64E-04	724	5.10E-05
390	4.20E-06	457	8.73E-04	524	5.63E-04	591	7.91E-04	658	3.58E-04	725	4.93E-05
391	4.00E-06	458	8.03E-04	525	5.65E-04	592	7.93E-04	659	3.49E-04	726	4.81E-05
392	3.50E-06	459	7.34E-04	526	5.67E-04	593	7.93E-04	660	3.41E-04	727	4.63E-05
393	4.50E-06	460	6.77E-04	527	5.72E-04	594	7.93E-04	661	3.34E-04	728	4.49E-05
394	3.90E-06	461	6.28E-04	528	5.73E-04	595	7.92E-04	662	3.25E-04	729	4.36E-05
395	4.10E-06	462	5.86E-04	529	5.80E-04	596	7.89E-04	663	3.17E-04	730	4.20E-05
396	4.50E-06	463	5.60E-04	530	5.81E-04	597	7.91E-04	664	3.09E-04	731	4.06E-05
397	4.20E-06	464	5.42E-04	531	5.83E-04	598	7.91E-04	665	3.01E-04	732	3.91E-05
398	5.10E-06	465	5.19E-04	532	5.86E-04	599	7.90E-04	666	2.93E-04	733	3.83E-05
399	5.00E-06	466	5.04E-04	533	5.90E-04	600	7.89E-04	667	2.85E-04	734	3.68E-05
400	5.40E-06	467	4.96E-04	534	5.90E-04	601	7.86E-04	668	2.78E-04	735	3.57E-05
401	5.20E-06	468	4.79E-04	535	5.93E-04	602	7.87E-04	669	2.71E-04	736	3.48E-05
402	6.00E-06	469	4.60E-04	536	5.98E-04	603	7.87E-04	670	2.63E-04	737	3.37E-05
403	6.40E-06	470	4.39E-04	537	6.00E-04	604	7.83E-04	671	2.55E-04	738	3.24E-05
404	6.50E-06	471	4.00E-04	538	6.03E-04	605	7.81E-04	672	2.49E-04	739	3.17E-05
405	7.10E-06	472	3.76E-04	539	6.05E-04	606	7.78E-04	673	2.42E-04	740	3.01E-05
406	7.30E-06	473	3.53E-04	540	6.10E-04	607	7.75E-04	674	2.35E-04	741	2.94E-05
407	7.90E-06	474	3.28E-04	541	6.14E-04	608	7.72E-04	675	2.29E-04	742	2.83E-05
408	8.90E-06	475	3.11E-04	542	6.17E-04	609	7.67E-04	676	2.23E-04	743	2.75E-05
409	9.50E-06	476	2.92E-04	543	6.17E-04	610	7.59E-04	677	2.18E-04	744	2.65E-05
410	1.02E-05	477	2.81E-04	544	6.22E-04	611	7.58E-04	678	2.10E-04	745	2.60E-05
411	1.12E-05	478	2.73E-04	545	6.27E-04	612	7.55E-04	679	2.05E-04	746	2.50E-05
412	1.26E-05	479	2.67E-04	546	6.30E-04	613	7.49E-04	680	1.99E-04	747	2.44E-05
413	1.42E-05	480	2.62E-04	547	6.30E-04	614	7.45E-04	681	1.93E-04	748	2.32E-05
414	1.62E-05	481	2.60E-04	548	6.34E-04	615	7.38E-04	682	1.88E-04	749	2.29E-05
415	1.78E-05	482	2.60E-04	549	6.39E-04	616	7.31E-04	683	1.82E-04	750	2.21E-05
416	1.98E-05	483	2.63E-04	550	6.43E-04	617	7.24E-04	684	1.77E-04	751	2.14E-05
417	2.23E-05	484	2.65E-04	551	6.46E-04	618	7.14E-04	685	1.72E-04	752	2.09E-05
418	2.53E-05	485	2.69E-04	552	6.51E-04	619	7.08E-04	686	1.67E-04	753	2.00E-05
419	2.77E-05	486	2.75E-04	553	6.56E-04	620	6.98E-04	687	1.62E-04	754	1.94E-05
420	3.11E-05	487	2.81E-04	554	6.60E-04	621	6.91E-04	688	1.58E-04	755	1.88E-05
421	3.52E-05	488	2.87E-04	555	6.63E-04	622	6.83E-04	689	1.53E-04	756	1.83E-05
422	3.84E-05	489	2.91E-04	556	6.67E-04	623	6.76E-04	690	1.48E-04	757	1.77E-05
423	4.29E-05	490	2.97E-04	557	6.72E-04	624	6.70E-04	691	1.44E-04	758	1.71E-05
424	4.84E-05	491	3.05E-04	558	6.78E-04	625	6.64E-04	692	1.40E-04	759	1.67E-05
425	5.30E-05	492	3.10E-04	559	6.81E-04	626	6.53E-04	693	1.35E-04	760	1.61E-05
426	6.06E-05	493	3.18E-04	560	6.83E-04	627	6.43E-04	694	1.31E-04	761	1.54E-05
427	6.77E-05	494	3.25E-04	561	6.87E-04	628	6.36E-04	695	1.27E-04	762	1.52E-05
428	7.84E-05	495	3.35E-04	562	6.92E-04	629	6.25E-04	696	1.23E-04	763	1.46E-05
429	8.61E-05	496	3.47E-04	563	6.95E-04	630	6.17E-04	697	1.20E-04	764	1.42E-05
430	9.91E-05	497	3.57E-04	564	7.01E-04	631	6.06E-04	698	1.16E-04	765	1.38E-05
431	1.06E-04	498	3.69E-04	565	7.02E-04	632	5.98E-04	699	1.13E-04	766	1.35E-05
432	1.18E-04	499	3.80E-04	566	7.09E-04	633	5.92E-04	700	1.09E-04	767	1.31E-05
433	1.32E-04	500	3.93E-04	567	7.13E-04	634	5.81E-04	701	1.05E-04	768	1.24E-05
434	1.44E-04	501	4.02E-04	568	7.19E-04	635	5.70E-04	702	1.03E-04	769	1.22E-05
435	1.62E-04	502	4.14E-04	569	7.27E-04	636	5.60E-04	703	9.97E-05	770	1.17E-05
436	1.80E-04	503	4.25E-04	570	7.29E-04	637	5.50E-04	704	9.66E-05	771	1.13E-05
437	2.00E-04	504	4.35E-04	571	7.30E-04	638	5.41E-04	705	9.38E-05	772	1.13E-05
438	2.27E-04	505	4.46E-04	572	7.38E-04	639	5.32E-04	706	9.02E-05	773	1.08E-05
439	2.50E-04	506	4.55E-04	573	7.41E-04	640	5.21E-04	707	8.81E-05	774	1.04E-05
440	2.79E-04	507	4.65E-04	574	7.44E-04	641	5.10E-04	708	8.46E-05	775	1.00E-05
441	3.10E-04	508	4.73E-04	575	7.46E-04	642	4.99E-04	709	8.19E-05	776	9.70E-06
442	3.51E-04	509	4.82E-04	576	7.50E-04	643	4.90E-04	710	8.01E-05	777	9.40E-06
443	3.95E-04	510	4.90E-04	577	7.54E-04	644	4.83E-04	711	7.73E-05	778	9.40E-06
444	4.47E-04	511	4.96E-04	578	7.54E-04	645	4.73E-04	712	7.49E-05	779	9.40E-06
445	5.05E-04	512	5.01E-04	579	7.59E-04	646	4.62E-04	713	7.30E-05	780	9.50E-06
446	5.71E-04	513	5.10E-04	580	7.64E-04	647	4.53E-04	714	7.01E-05	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

<b>Model No.</b>	STRP4 @15W4000K	<b>Sample ID</b>	241225005-S1
<b>Operate time (Min.)</b>	30	<b>Stabilization time (Min.)</b>	60
<b>Temperature (°C)</b>	24.8	<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	0.059	14.8	0.910
<b>NON-WORST CASE</b>	120.0	60	0.122	14.5	0.992

#### Test Result

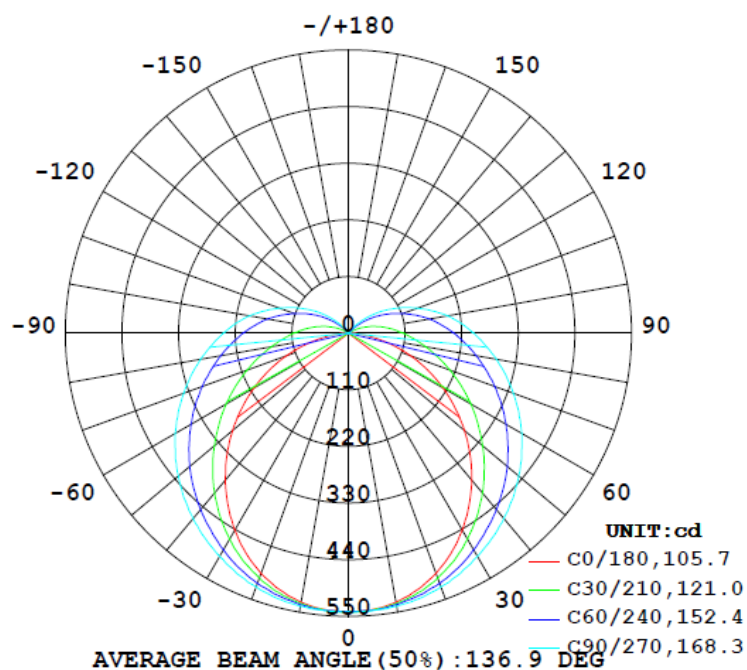
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
2342	586	160.7	160.7	106.0	168.4	158.2

Zonal Lumen Requirement (0°-60°)	UGR	
	Crosswise	Endwise
56.4%	21.2	29.4

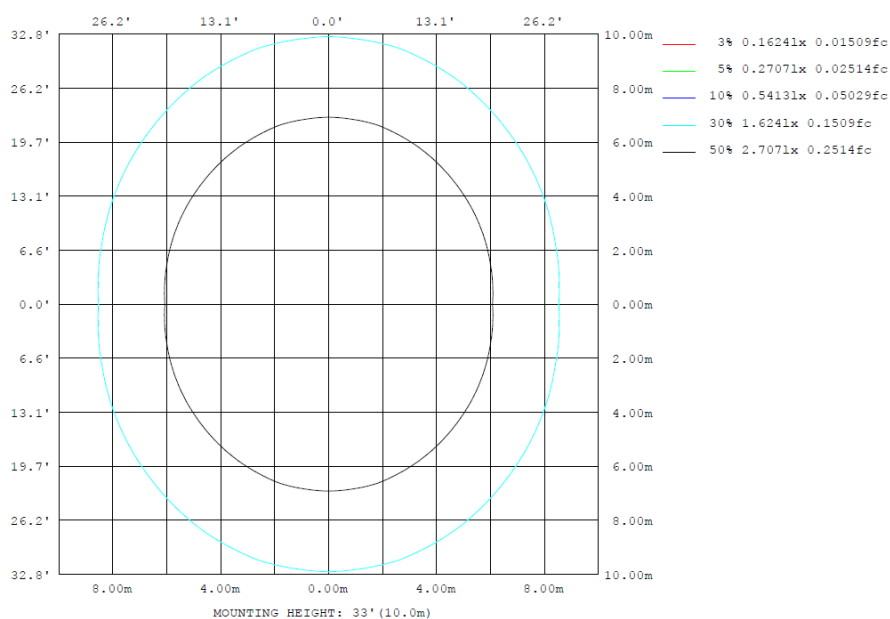
## 4.2 Goniophotometer Test

### Lighting Distribution Curve

#### LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



### Isolux Plot



## 4.2 Goniophotometer Test

### Zonal Lumen Summary

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	± zone	± total	%lum, lamp
10	530.6	534.6	538.7	534.6	530.6	534.6	538.7	534.6	0- 10	51.37	51.37	2.19,2.19
20	496.4	511.1	524.3	511.1	496.4	511.1	524.3	511.1	10- 20	148.3	199.6	8.52,8.52
30	441.8	473.7	500.7	473.7	441.8	473.7	500.7	473.7	20- 30	228.0	427.7	18.3,18.3
40	372.6	425.1	469.7	425.1	372.6	425.1	469.7	425.1	30- 40	282.0	709.6	30.3,30.3
50	294.1	371.3	431.6	371.3	294.1	371.3	431.6	371.3	40- 50	307.1	1017	43.4,43.4
60	212.0	315.9	388.8	315.9	212.0	315.9	388.8	315.9	50- 60	304.0	1321	56.4,56.4
70	128.1	259.3	340.6	259.3	128.1	259.3	340.6	259.3	60- 70	276.8	1598	68.2,68.2
80	50.25	206.9	291.7	206.9	50.25	206.9	291.7	206.9	70- 80	233.0	1831	78.2,78.2
90	3.646	161.1	243.3	161.1	3.646	161.1	243.3	161.1	80- 90	182.9	2014	86,86
100	2.363	118.8	194.9	118.8	2.363	118.8	194.9	118.8	90-100	138.3	2152	91.9,91.9
110	2.794	77.84	143.2	77.84	2.794	77.84	143.2	77.84	100-110	95.32	2247	95.9,95.9
120	2.999	40.59	93.66	40.59	2.999	40.59	93.66	40.59	110-120	57.14	2304	98.4,98.4
130	3.088	9.212	48.77	9.212	3.088	9.212	48.77	9.212	120-130	27.07	2331	99.5,99.5
140	3.088	1.518	10.32	1.518	3.088	1.518	10.32	1.518	130-140	8.047	2339	99.9,99.9
150	3.088	1.234	1.041	1.234	3.088	1.234	1.041	1.234	140-150	1.253	2341	99.9,99.9
160	3.018	1.162	1.079	1.162	3.018	1.162	1.079	1.162	150-160	0.7684	2341	100,100
170	3.542	1.182	1.116	1.182	3.542	1.182	1.116	1.182	160-170	0.4676	2342	100,100
180	4.351	1.371	1.213	1.371	4.351	1.371	1.213	1.371	170-180	0.1659	2342	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	51.37	0-10	51.37	2.19%
10-20	148.27	0-20	199.64	8.52%
20-30	228.02	0-30	427.66	18.26%
30-40	281.97	0-40	709.63	30.30%
40-50	307.14	0-50	1016.77	43.42%
50-60	304.05	0-60	1320.82	56.40%
60-70	276.82	0-70	1597.64	68.22%
70-80	232.97	0-80	1830.61	78.17%
80-90	182.93	0-90	2013.54	85.98%
90-100	138.31	0-100	2151.85	91.88%
100-110	95.32	0-110	2247.17	95.95%
110-120	57.14	0-120	2304.31	98.39%
120-130	27.07	0-130	2331.38	99.55%
130-140	8.05	0-140	2339.43	99.89%
140-150	1.25	0-150	2340.68	99.95%
150-160	0.77	0-160	2341.45	99.98%
160-170	0.47	0-170	2341.92	100.00%
170-180	0.17	0-180	2342.09	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	14.1	15.6	14.7	16.2	16.8	18.4	19.8	18.9	20.4	21.0
	3H	15.5	16.8	16.1	17.4	18.1	21.4	22.7	22.0	23.3	24.0
	4H	15.9	17.2	16.5	17.8	18.5	22.9	24.2	23.5	24.8	25.5
	6H	16.2	17.4	16.8	18.0	18.7	24.6	25.8	25.2	26.4	27.1
	8H	16.2	17.4	16.8	18.0	18.7	25.5	26.6	26.1	27.2	27.9
	12H	16.2	17.3	16.9	18.0	18.7	26.5	27.6	27.1	28.2	28.9
4H	2H	15.5	16.8	16.1	17.3	18.0	18.7	19.9	19.3	20.5	21.2
	3H	17.1	18.2	17.8	18.9	19.6	21.9	23.0	22.5	23.6	24.3
	4H	17.8	18.8	18.4	19.4	20.1	23.6	24.6	24.2	25.3	26.0
	6H	18.1	19.0	18.8	19.7	20.4	25.5	26.4	26.1	27.0	27.8
	8H	18.2	19.1	18.9	19.7	20.5	26.4	27.3	27.1	28.0	28.7
	12H	18.3	19.0	18.9	19.7	20.5	27.6	28.4	28.3	29.0	29.8
8H	4H	18.9	19.8	19.6	20.4	21.2	23.8	24.6	24.4	25.3	26.0
	6H	19.6	20.3	20.3	21.0	21.8	25.8	26.5	26.5	27.2	28.0
	8H	19.8	20.5	20.5	21.2	22.0	26.9	27.6	27.6	28.3	29.0
	12H	20.0	20.5	20.6	21.2	22.1	28.2	28.8	28.9	29.5	30.3
12H	4H	19.3	20.1	20.0	20.8	21.5	23.8	24.5	24.4	25.2	26.0
	6H	20.1	20.8	20.8	21.5	22.3	25.8	26.5	26.5	27.2	28.0
	8H	20.5	21.1	21.2	21.8	22.6	27.0	27.6	27.7	28.3	29.1

Maximum UGR = 30.3

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	17.1	18.6	17.7	19.2	19.8	21.4	22.8	21.9	23.4	24.0
	3H	18.5	19.8	19.1	20.4	21.1	24.4	25.7	25.0	26.3	27.0
	4H	18.9	20.2	19.5	20.8	21.5	25.9	27.2	26.5	27.8	28.5
	6H	19.2	20.4	19.8	21.0	21.7	27.6	28.8	28.2	29.4	30.1
	8H	19.2	20.4	19.8	21.0	21.7	28.5	29.6	29.1	30.2	30.9
	12H	19.2	20.3	19.9	21.0	21.7	29.5	30.6	30.1	31.2	31.9
4H	2H	18.5	19.8	19.1	20.3	21.0	21.7	22.9	22.3	23.5	24.2
	3H	20.1	21.2	20.8	21.9	22.6	24.9	26.0	25.5	26.6	27.3
	4H	20.8	21.8	21.4	22.4	23.1	26.6	27.6	27.2	28.3	29.0
	6H	21.1	22.0	21.8	22.7	23.4	28.5	29.4	29.1	30.0	30.8
	8H	21.2	22.1	21.9	22.7	23.5	29.4	30.3	30.1	31.0	31.7
	12H	21.3	22.0	21.9	22.7	23.5	30.6	31.4	31.3	32.0	32.8
8H	4H	21.9	22.8	22.6	23.4	24.2	26.8	27.6	27.4	28.3	29.0
	6H	22.6	23.3	23.3	24.0	24.8	28.8	29.5	29.5	30.2	31.0
	8H	22.8	23.5	23.5	24.2	25.0	29.9	30.6	30.6	31.3	32.0
	12H	23.0	23.5	23.6	24.2	25.1	31.2	31.8	31.9	32.5	33.3
12H	4H	22.3	23.1	23.0	23.8	24.5	26.8	27.5	27.4	28.2	29.0
	6H	23.1	23.8	23.8	24.5	25.3	28.8	29.5	29.5	30.2	31.0
	8H	23.5	24.1	24.2	24.8	25.6	30.0	30.6	30.7	31.3	32.1

Maximum UGR = 33.3

## 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	541	541	542	541	540	542	541	542	540	541	542	541	541	541	542	541	540	542	541
5	539	539	540	539	540	542	541	542	540	539	540	539	539	539	540	539	540	542	541
10	531	533	533	535	536	539	539	539	536	535	533	533	531	533	533	535	536	539	539
15	516	519	522	524	528	532	533	532	528	524	522	519	516	519	522	524	528	532	533
20	496	501	506	511	517	523	524	523	517	511	506	501	496	501	506	511	517	523	524
25	472	478	486	495	503	512	515	512	503	495	486	478	472	478	486	495	503	512	515
30	442	451	462	474	486	498	501	498	486	474	462	451	442	451	462	474	486	498	501
35	408	419	435	450	467	483	486	483	467	450	435	419	408	419	435	450	467	483	486
40	373	386	405	425	447	465	470	465	447	425	405	386	373	386	405	425	447	465	470
45	334	349	373	399	426	446	452	446	426	399	373	349	334	349	373	399	426	446	452
50	294	312	340	371	403	425	432	425	403	371	340	312	294	312	340	371	403	425	432
55	253	274	307	344	378	403	410	403	378	344	307	274	253	274	307	344	378	403	410
60	212	235	275	316	354	380	389	380	354	316	275	235	212	235	275	316	354	380	389
65	170	196	242	287	328	355	365	355	328	287	242	196	170	196	242	287	328	355	365
70	128	158	210	259	302	331	341	331	302	259	210	158	128	158	210	259	302	331	341
75	87.7	123	180	233	277	307	317	307	277	233	180	123	87.7	123	180	233	277	307	317
80	50.3	90.9	152	207	252	282	292	282	252	207	152	90.9	50.3	90.9	152	207	252	282	292
85	19.7	64.1	127	183	228	256	267	256	228	183	127	64.1	19.7	64.1	127	183	228	256	267
90	3.65	44.0	106	161	205	233	243	233	205	161	106	44.0	3.65	44.0	106	161	205	233	243
95	2.27	30.1	87.6	140	182	210	220	210	182	140	87.6	30.1	2.27	30.1	87.6	140	182	210	220
100	2.36	18.3	69.0	119	160	184	195	184	160	119	69.0	18.3	2.36	18.3	69.0	119	160	184	195
105	2.63	8.28	51.8	97.9	136	159	169	159	136	97.9	51.8	8.28	2.63	8.28	51.8	97.9	136	159	169
110	2.79	2.57	36.3	77.8	112	135	143	135	112	77.8	36.3	2.57	2.79	2.57	36.3	77.8	112	135	143
115	2.91	2.65	22.1	58.4	89.9	110	118	110	89.9	58.4	22.1	2.65	2.91	2.65	22.1	58.4	89.9	110	118
120	3.00	2.65	9.21	40.6	68.1	86.4	93.7	86.4	68.1	40.6	9.21	2.65	3.00	2.65	9.21	40.6	68.1	86.4	93.7
125	3.09	2.65	2.39	24.1	47.9	63.8	70.4	63.8	47.9	24.1	2.39	2.65	3.09	2.65	2.39	24.1	47.9	63.8	70.4
130	3.09	2.57	2.29	9.21	29.3	43.2	48.8	43.2	29.3	9.21	2.29	2.57	3.09	2.57	2.29	9.21	29.3	43.2	48.8
135	3.09	2.66	2.08	1.74	12.2	24.0	28.8	24.0	12.2	1.74	2.08	2.66	3.09	2.66	2.08	1.74	12.2	24.0	28.8
140	3.09	2.66	2.02	1.52	1.48	6.70	10.3	6.70	1.48	1.52	2.02	2.66	3.09	2.66	2.02	1.52	1.48	6.70	10.3
145	3.09	2.66	1.92	1.35	1.19	1.21	1.12	1.21	1.19	1.35	1.92	2.66	3.09	2.66	1.92	1.35	1.19	1.21	1.12
150	3.09	2.66	1.65	1.23	1.19	1.21	1.04	1.21	1.19	1.23	1.65	2.66	3.09	2.66	1.65	1.23	1.19	1.21	1.04
155	3.09	2.66	1.69	1.14	1.19	1.21	1.06	1.21	1.19	1.14	1.69	2.66	3.09	2.66	1.69	1.14	1.19	1.21	1.06
160	3.02	2.66	1.56	1.16	1.19	1.21	1.08	1.21	1.19	1.16	1.56	2.66	3.02	2.66	1.56	1.16	1.19	1.21	1.08
165	3.13	2.66	1.53	1.18	1.19	1.21	1.10	1.21	1.19	1.18	1.53	2.66	3.13	2.66	1.53	1.18	1.19	1.21	1.10
170	3.54	2.75	1.50	1.18	1.19	1.21	1.12	1.21	1.19	1.18	1.50	2.75	3.54	2.75	1.50	1.18	1.19	1.21	1.12
175	4.09	2.84	1.48	1.19	1.19	1.21	1.21	1.21	1.19	1.19	1.48	2.84	4.09	2.84	1.48	1.19	1.19	1.21	1.21
180	4.35	2.84	1.46	1.37	1.19	1.21	1.21	1.21	1.19	1.37	1.46	2.84	4.35	2.84	1.46	1.37	1.19	1.21	1.21

Table--2

UNIT: cd

C (DEG) y (DEG)	285	300	315	330	345														
0	542	540	541	542	541														
5	542	540	539	540	539														
10	539	536	535	533	533														
15	532	528	524	522	519														
20	523	517	511	506	501														
25	512	503	495	486	478														
30	498	486	474	462	451														
35	483	467	450	435	419														
40	465	447	425	405	386														
45	446	426	399	373	349														
50	425	403	371	340	312														
55	403	378	344	307	274														
60	380	354	316	275	235														
65	355	328	287	242	196														
70	331	302	259	210	158														
75	307	277	233	180	123														
80	282	252	207	152	90.9														
85	256	228	183	127	64.1														
90	233	205	161	106	44.0														
95	210	182	140	87.6	30.1														
100	184	160	119	69.0	18.3														
105	159	136	97.9	51.8	8.28														
110	135	112	77.8	36.3	2.57														
115	110	89.9	58.4	22.1	2.65														
120	86.4	68.1	40.6	9.21	2.65														
125	63.8	47.9	24.1	2.39	2.65														
130	43.2	29.3	9.21	2.29	2.57														
135	24.0	12.2	1.74	2.08	2.66														
140	6.70	1.48	1.52	2.02	2.66														
145	1.21	1.19	1.35	1.92	2.66														
150	1.21	1.19	1.23	1.65	2.66														
155	1.21	1.19	1.14	1.69	2.66														
160	1.21	1.19	1.16	1.56	2.66														
165	1.21	1.19	1.18	1.53	2.66														
170	1.21	1.19	1.18	1.50	2.75														
175	1.21	1.19	1.19	1.48	2.84														
180	1.21	1.19	1.37	1.46	2.84														

## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	STRP4 @15W4000K	<b>Sample ID</b>	241225005-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	0.122	14.5	0.992	6.38
277.0	60	0.059	14.8	0.910	14.57

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