

## 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		560
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	145.3
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		7.7
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	5.32
				277V	16.46
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.989
				277V	0.868
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	5029±283	4872
			4 steps	5029±220	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		83.5
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		14
Minimum Rf (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	≥70		84
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%		55.8%
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		0.032
(Goniophotometer – Section 4.2)			Non-Worst Case		0.061
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		7.7
(Goniophotometer – Section 4.2)			Non-Worst Case		7.2

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-03-29	STRP2/MVS @8W5000K	-	250324005-S1
2	Goniophotometer Test	2025-03-29	STRP2/MVS @8W5000K	-	250324005-S1
3	THD and PF Test	2025-03-29	STRP2/MVS @8W5000K	-	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 @8W5000K, 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 @8W5000K	<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

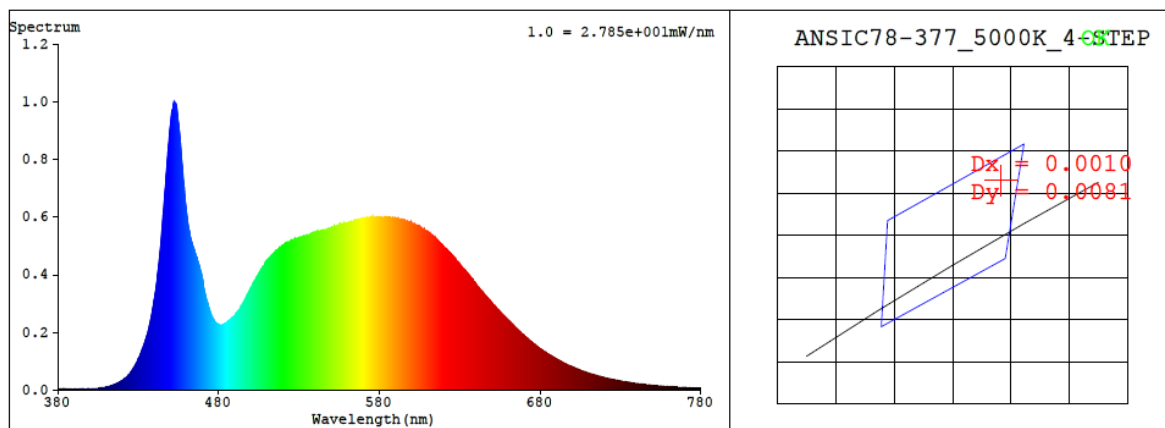
<b>Test Method</b>
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were 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	0.061	7.2	0.989
277.0	60	0.032	7.7	0.868

<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>
4872	83.5	14	0.0036	3.4	84	95	-12%

#### 4.1 Integrating Sphere Test



#### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3498$   $y = 0.3627$  /  $u' = 0.2104$   $v' = 0.4907$  ( $duv=3.60e-03$ )

CCT= 4872K Prcp WL:  $L_d=571.3nm$  Purity=13.8%

Peak WL:  $L_p=452nm$  FWHM:  $=20.3nm$  Ratio:  $R=16.0\%$   $G=79.7\%$   $B=4.4\%$

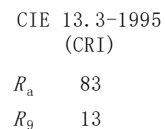
Render Index:  $R_a = 83.5$  AvgR = 76.4 TM30:  $R_f=84$   $R_g=95$

EEL: 0.09589 A++ Highest

R1 =82	R2 =89	R3 =93	R4 =82	R5 =81	R6 =83	R7 =89
R8 =69	R9 =14	R10=72	R11=81	R12=55	R13=83	R14=97 R15=76

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

**Model:** STRP2/MVS @8W5000K



## 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	4.30E-06	447	7.21E-04	514	4.72E-04	581	5.99E-04	648	3.15E-04	715	5.07E-05
381	3.30E-06	448	7.96E-04	515	4.79E-04	582	5.97E-04	649	3.09E-04	716	4.90E-05
382	3.60E-06	449	8.64E-04	516	4.85E-04	583	5.98E-04	650	3.02E-04	717	4.75E-05
383	2.80E-06	450	9.21E-04	517	4.88E-04	584	6.00E-04	651	2.95E-04	718	4.59E-05
384	3.30E-06	451	9.70E-04	518	4.94E-04	585	6.00E-04	652	2.90E-04	719	4.48E-05
385	2.40E-06	452	9.98E-04	519	4.97E-04	586	5.99E-04	653	2.83E-04	720	4.28E-05
386	3.30E-06	453	9.93E-04	520	5.02E-04	587	5.98E-04	654	2.78E-04	721	4.19E-05
387	2.90E-06	454	9.78E-04	521	5.06E-04	588	5.98E-04	655	2.72E-04	722	4.05E-05
388	3.40E-06	455	9.26E-04	522	5.08E-04	589	5.96E-04	656	2.66E-04	723	3.91E-05
389	2.70E-06	456	8.71E-04	523	5.12E-04	590	5.96E-04	657	2.60E-04	724	3.79E-05
390	3.20E-06	457	7.97E-04	524	5.14E-04	591	5.93E-04	658	2.55E-04	725	3.67E-05
391	3.10E-06	458	7.32E-04	525	5.16E-04	592	5.94E-04	659	2.49E-04	726	3.60E-05
392	3.10E-06	459	6.69E-04	526	5.19E-04	593	5.91E-04	660	2.44E-04	727	3.44E-05
393	3.50E-06	460	6.19E-04	527	5.22E-04	594	5.91E-04	661	2.38E-04	728	3.38E-05
394	3.50E-06	461	5.74E-04	528	5.25E-04	595	5.88E-04	662	2.32E-04	729	3.22E-05
395	3.40E-06	462	5.45E-04	529	5.25E-04	596	5.87E-04	663	2.26E-04	730	3.14E-05
396	3.50E-06	463	5.17E-04	530	5.29E-04	597	5.85E-04	664	2.21E-04	731	3.03E-05
397	4.10E-06	464	4.97E-04	531	5.29E-04	598	5.83E-04	665	2.15E-04	732	2.94E-05
398	3.90E-06	465	4.82E-04	532	5.32E-04	599	5.82E-04	666	2.10E-04	733	2.86E-05
399	4.60E-06	466	4.63E-04	533	5.33E-04	600	5.80E-04	667	2.04E-04	734	2.74E-05
400	4.50E-06	467	4.47E-04	534	5.34E-04	601	5.77E-04	668	1.99E-04	735	2.65E-05
401	4.90E-06	468	4.30E-04	535	5.36E-04	602	5.76E-04	669	1.94E-04	736	2.61E-05
402	5.20E-06	469	4.09E-04	536	5.37E-04	603	5.71E-04	670	1.89E-04	737	2.54E-05
403	5.80E-06	470	3.85E-04	537	5.40E-04	604	5.70E-04	671	1.85E-04	738	2.43E-05
404	6.10E-06	471	3.49E-04	538	5.42E-04	605	5.68E-04	672	1.80E-04	739	2.36E-05
405	6.50E-06	472	3.25E-04	539	5.44E-04	606	5.62E-04	673	1.74E-04	740	2.28E-05
406	7.30E-06	473	3.03E-04	540	5.45E-04	607	5.59E-04	674	1.70E-04	741	2.23E-05
407	7.80E-06	474	2.83E-04	541	5.50E-04	608	5.57E-04	675	1.65E-04	742	2.14E-05
408	8.80E-06	475	2.66E-04	542	5.50E-04	609	5.52E-04	676	1.61E-04	743	2.09E-05
409	9.40E-06	476	2.53E-04	543	5.51E-04	610	5.50E-04	677	1.57E-04	744	2.03E-05
410	1.05E-05	477	2.43E-04	544	5.54E-04	611	5.44E-04	678	1.52E-04	745	1.95E-05
411	1.16E-05	478	2.35E-04	545	5.54E-04	612	5.42E-04	679	1.47E-04	746	1.89E-05
412	1.29E-05	479	2.30E-04	546	5.55E-04	613	5.36E-04	680	1.44E-04	747	1.83E-05
413	1.48E-05	480	2.27E-04	547	5.57E-04	614	5.30E-04	681	1.40E-04	748	1.77E-05
414	1.62E-05	481	2.26E-04	548	5.60E-04	615	5.25E-04	682	1.36E-04	749	1.71E-05
415	1.87E-05	482	2.26E-04	549	5.59E-04	616	5.21E-04	683	1.32E-04	750	1.64E-05
416	2.12E-05	483	2.27E-04	550	5.62E-04	617	5.14E-04	684	1.28E-04	751	1.61E-05
417	2.36E-05	484	2.31E-04	551	5.63E-04	618	5.09E-04	685	1.24E-04	752	1.57E-05
418	2.67E-05	485	2.34E-04	552	5.67E-04	619	5.04E-04	686	1.22E-04	753	1.51E-05
419	2.94E-05	486	2.38E-04	553	5.68E-04	620	4.97E-04	687	1.18E-04	754	1.45E-05
420	3.25E-05	487	2.44E-04	554	5.70E-04	621	4.91E-04	688	1.15E-04	755	1.43E-05
421	3.77E-05	488	2.49E-04	555	5.74E-04	622	4.87E-04	689	1.11E-04	756	1.38E-05
422	4.11E-05	489	2.54E-04	556	5.75E-04	623	4.80E-04	690	1.08E-04	757	1.35E-05
423	4.60E-05	490	2.58E-04	557	5.76E-04	624	4.75E-04	691	1.05E-04	758	1.31E-05
424	5.22E-05	491	2.63E-04	558	5.80E-04	625	4.70E-04	692	1.02E-04	759	1.26E-05
425	5.89E-05	492	2.73E-04	559	5.78E-04	626	4.62E-04	693	9.92E-05	760	1.21E-05
426	6.74E-05	493	2.80E-04	560	5.80E-04	627	4.57E-04	694	9.58E-05	761	1.18E-05
427	7.54E-05	494	2.90E-04	561	5.82E-04	628	4.48E-04	695	9.31E-05	762	1.13E-05
428	8.51E-05	495	2.98E-04	562	5.83E-04	629	4.42E-04	696	9.04E-05	763	1.10E-05
429	9.47E-05	496	3.10E-04	563	5.85E-04	630	4.35E-04	697	8.72E-05	764	1.10E-05
430	1.08E-04	497	3.20E-04	564	5.86E-04	631	4.29E-04	698	8.52E-05	765	1.04E-05
431	1.19E-04	498	3.32E-04	565	5.88E-04	632	4.22E-04	699	8.27E-05	766	1.00E-05
432	1.34E-04	499	3.41E-04	566	5.90E-04	633	4.16E-04	700	8.04E-05	767	9.90E-06
433	1.47E-04	500	3.53E-04	567	5.90E-04	634	4.11E-04	701	7.82E-05	768	9.60E-06
434	1.63E-04	501	3.65E-04	568	5.93E-04	635	4.04E-04	702	7.52E-05	769	9.20E-06
435	1.82E-04	502	3.75E-04	569	5.94E-04	636	3.97E-04	703	7.31E-05	770	9.00E-06
436	2.02E-04	503	3.85E-04	570	5.97E-04	637	3.90E-04	704	7.10E-05	771	8.50E-06
437	2.28E-04	504	3.95E-04	571	5.96E-04	638	3.84E-04	705	6.86E-05	772	8.20E-06
438	2.53E-04	505	4.04E-04	572	5.98E-04	639	3.75E-04	706	6.66E-05	773	8.20E-06
439	2.85E-04	506	4.13E-04	573	5.98E-04	640	3.70E-04	707	6.41E-05	774	7.90E-06
440	3.19E-04	507	4.22E-04	574	5.99E-04	641	3.60E-04	708	6.32E-05	775	7.60E-06
441	3.55E-04	508	4.30E-04	575	6.00E-04	642	3.54E-04	709	6.05E-05	776	7.40E-06
442	4.04E-04	509	4.41E-04	576	6.02E-04	643	3.47E-04	710	5.87E-05	777	7.30E-06
443	4.52E-04	510	4.49E-04	577	5.99E-04	644	3.40E-04	711	5.69E-05	778	6.90E-06
444	5.09E-04	511	4.55E-04	578	6.00E-04	645	3.34E-04	712	5.55E-05	779	7.00E-06
445	5.77E-04	512	4.61E-04	579	5.99E-04	646	3.27E-04	713	5.38E-05	780	7.00E-06
446	6.48E-04	513	4.66E-04	580	5.99E-04	647	3.21E-04	714	5.23E-05	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

<b>Model No.</b>	STRP2/MVS @8W5000K	<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 25±1°C, 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 ±0.2 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 1.0° vertical intervals and 15° horizontal intervals.</p>

#### Test Conditions

Condition	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
<b>WORST CASE</b>	277.0	60	0.032	7.7	0.868
<b>NON-WORST CASE</b>	120.0	60	0.061	7.2	0.989

#### Test Result

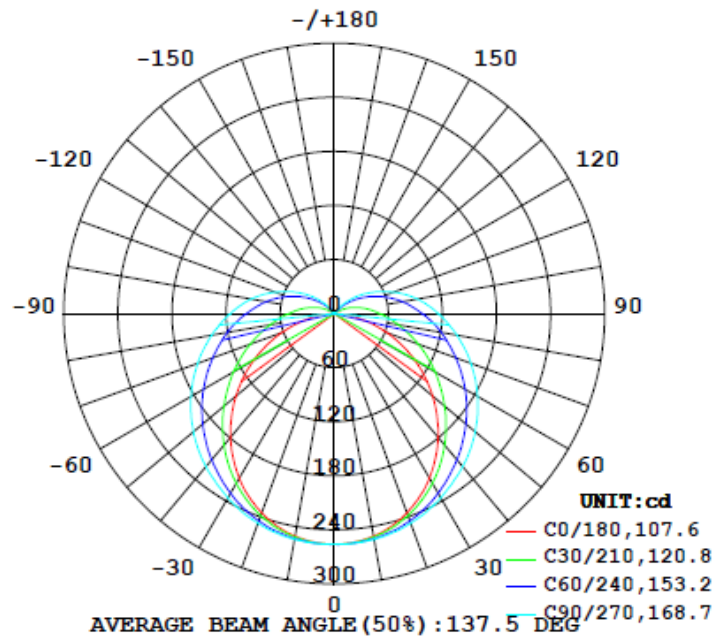
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
1119	560	162.9	162.9	108.3	168.8	145.3

Zonal Lumen Requirement (0°-60°)	UGR	
	Crosswise	Endwise
55.8%	21.4	29.4

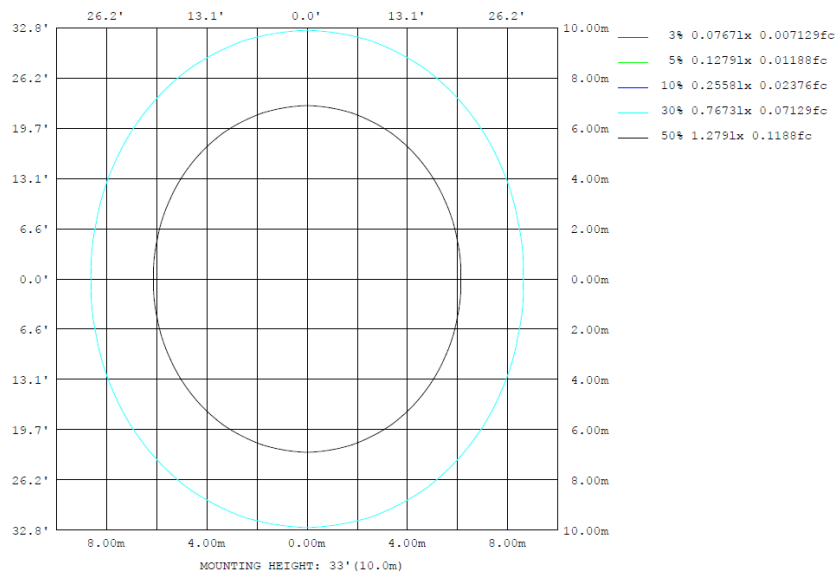
## 4.2 Goniophotometer Test

### 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	250.7	252.6	254.3	252.6	250.7	252.6	254.3	252.6	0- 10	24.28	24.28	2.17,2.17
20	235.3	241.8	247.7	241.8	235.3	241.8	247.7	241.8	10- 20	70.07	94.36	8.43,8.43
30	210.8	224.0	236.1	224.0	210.8	224.0	236.1	224.0	20- 30	107.7	202.0	18.1,18.1
40	179.1	201.1	221.5	201.1	179.1	201.1	221.5	201.1	30- 40	133.2	335.3	30,30
50	142.4	176.0	204.0	176.0	142.4	176.0	204.0	176.0	40- 50	145.3	480.6	43,43
60	103.1	149.5	183.6	149.5	103.1	149.5	183.6	149.5	50- 60	144.0	624.6	55.8,55.8
70	62.22	123.4	161.3	123.4	62.22	123.4	161.3	123.4	60- 70	131.3	755.8	67.6,67.6
80	24.65	98.86	138.2	98.86	24.65	98.86	138.2	98.86	70- 80	110.7	866.5	77.5,77.5
90	2.547	76.77	115.5	76.77	2.547	76.77	115.5	76.77	80- 90	87.44	953.9	85.3,85.3
100	1.686	57.93	93.73	57.93	1.686	57.93	93.73	57.93	90-100	66.47	1020	91.2,91.2
110	1.686	39.15	69.90	39.15	1.686	39.15	69.90	39.15	100-110	47.03	1067	95.4,95.4
120	1.686	22.24	46.83	22.24	1.686	22.24	46.83	22.24	110-120	29.11	1097	98,98
130	1.686	7.647	26.36	7.647	1.686	7.647	26.36	7.647	120-130	14.88	1111	99.3,99.3
140	1.686	1.425	8.559	1.425	1.686	1.425	8.559	1.425	130-140	5.375	1117	99.8,99.8
150	1.686	1.130	0.9619	1.130	1.686	1.130	0.9619	1.130	140-150	1.076	1118	99.9,99.9
160	1.661	0.8967	0.8610	0.8967	1.661	0.8967	0.8610	0.8967	150-160	0.4884	1118	100,100
170	1.620	0.9106	0.8442	0.9106	1.620	0.9106	0.8442	0.9106	160-170	0.2787	1119	100,100
180	1.592	0.9189	0.8324	0.9189	1.592	0.9189	0.8324	0.9189	170-180	0.0935	1119	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

	Zonal (lm)		Total (lm)	Percent
0-10	24.28	0-10	24.28	2.17%
10-20	70.07	0-20	94.35	8.43%
20-30	107.69	0-30	202.04	18.06%
30-40	133.23	0-40	335.27	29.97%
40-50	145.31	0-50	480.58	42.96%
50-60	143.99	0-60	624.57	55.83%
60-70	131.25	0-70	755.82	67.57%
70-80	110.66	0-80	866.48	77.46%
80-90	87.44	0-90	953.92	85.28%
90-100	66.47	0-100	1020.39	91.22%
100-110	47.03	0-110	1067.42	95.42%
110-120	29.11	0-120	1096.53	98.02%
120-130	14.88	0-130	1111.41	99.35%
130-140	5.37	0-140	1116.78	99.83%
140-150	1.08	0-150	1117.86	99.93%
150-160	0.49	0-160	1118.35	99.97%
160-170	0.28	0-170	1118.63	100.00%
170-180	0.09	0-180	1118.72	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										
X=2H	Y=2H	16.9	18.3	17.5	18.9	19.6	21.0	22.5	21.6	23.1
	3H	18.3	19.6	18.8	20.2	20.9	24.0	25.4	24.6	25.9
	4H	18.7	19.9	19.3	20.6	21.3	25.6	26.8	26.2	27.4
	6H	19.0	20.1	19.6	20.7	21.5	27.2	28.4	27.8	29.0
	8H	19.0	20.1	19.6	20.8	21.5	28.0	29.2	28.7	29.8
	12H	19.0	20.1	19.7	20.7	21.5	29.0	30.1	29.6	30.7
UGR Viewed Endwise										
4H	2H	18.2	19.5	18.8	20.1	20.8	21.4	22.6	22.0	23.2
	3H	19.9	21.0	20.5	21.6	22.4	24.6	25.7	25.2	26.3
	4H	20.5	21.5	21.1	22.1	22.9	26.3	27.3	26.9	27.9
	6H	20.9	21.8	21.5	22.5	23.2	28.1	29.0	28.7	29.6
	8H	21.0	21.8	21.6	22.5	23.3	29.0	29.9	29.7	30.6
	12H	21.0	21.8	21.7	22.5	23.3	30.1	30.9	30.8	31.6
8H	4H	21.7	22.5	22.3	23.2	24.0	26.4	27.3	27.1	27.9
	6H	22.3	23.0	23.0	23.8	24.6	28.4	29.1	29.1	29.8
	8H	22.6	23.2	23.3	23.9	24.7	29.5	30.2	30.2	30.9
	12H	22.7	23.3	23.4	24.0	24.9	30.8	31.3	31.5	32.0
12H	4H	22.1	22.8	22.7	23.5	24.3	26.4	27.2	27.1	27.9
	6H	22.9	23.5	23.6	24.2	25.1	28.4	29.1	29.2	29.8
	8H	23.2	23.8	23.9	24.5	25.4	29.6	30.2	30.3	30.9

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										
X=2H	Y=2H	17.3	18.7	17.9	19.3	20.0	21.4	22.9	22.0	23.5
	3H	18.7	20.0	19.2	20.6	21.3	24.4	25.8	25.0	26.3
	4H	19.1	20.3	19.7	21.0	21.7	26.0	27.2	26.6	27.8
	6H	19.4	20.5	20.0	21.1	21.9	27.6	28.8	28.2	29.4
	8H	19.4	20.5	20.0	21.2	21.9	28.4	29.6	29.1	30.2
	12H	19.4	20.5	20.1	21.1	21.9	29.4	30.5	30.0	31.1
UGR Viewed Endwise										
4H	2H	18.6	19.9	19.2	20.5	21.2	21.8	23.0	22.4	23.6
	3H	20.3	21.4	20.9	22.0	22.8	25.0	26.1	25.6	26.7
	4H	20.9	21.9	21.5	22.5	23.3	26.7	27.7	27.3	28.3
	6H	21.3	22.2	21.9	22.9	23.6	28.5	29.4	29.1	30.0
	8H	21.4	22.2	22.0	22.9	23.7	29.4	30.3	30.1	31.0
	12H	21.4	22.2	22.1	22.9	23.7	30.5	31.3	31.2	32.0
8H	4H	22.1	22.9	22.7	23.6	24.4	26.8	27.7	27.5	28.3
	6H	22.7	23.4	23.4	24.2	25.0	28.8	29.5	29.5	30.2
	8H	23.0	23.6	23.7	24.3	25.1	29.9	30.6	30.6	31.3
	12H	23.1	23.7	23.8	24.4	25.3	31.2	31.7	31.9	32.4
12H	4H	22.5	23.2	23.1	23.9	24.7	26.8	27.6	27.5	28.3
	6H	23.3	23.9	24.0	24.6	25.5	28.8	29.5	29.6	30.2
	8H	23.6	24.2	24.3	24.9	25.8	30.0	30.6	30.7	31.3

Maximum UGR = 33.3

## 4.2 Goniophotometer Test

### Luminous Distribution Intensity Data

Table--1  
C (DEG)  
UNIT: cd

γ (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256	256
5	255	255	255	255	256	256	256	256	256	255	255	255	255	255	255	255	256	256	256
10	251	251	252	253	254	254	254	254	253	252	251	251	251	252	253	253	254	254	254
15	244	245	246	248	250	251	252	251	250	248	246	245	244	245	246	248	250	251	252
20	235	237	239	242	245	247	248	247	245	242	239	237	235	237	239	242	245	247	248
25	224	226	229	233	238	241	243	241	238	233	229	226	224	226	229	233	238	241	243
30	211	213	218	224	230	234	236	234	230	224	218	213	211	213	218	224	230	234	236
35	196	198	205	213	221	227	229	227	221	213	205	198	196	198	205	213	221	227	229
40	179	183	191	201	212	219	222	219	212	201	191	183	179	183	191	201	212	219	222
45	161	166	175	189	201	210	213	210	201	189	175	166	161	166	175	189	201	210	213
50	142	148	160	176	191	200	204	200	191	176	160	148	142	148	160	176	191	200	204
55	123	130	144	163	179	190	194	190	179	163	144	130	123	130	144	163	179	190	194
60	103	111	129	150	168	179	184	179	168	150	129	111	103	111	129	150	168	179	184
65	82.6	92.7	114	136	155	168	173	168	155	136	114	92.7	82.6	92.7	114	136	155	168	173
70	62.2	74.8	99.2	123	144	157	161	157	144	123	99.2	74.8	62.2	74.8	99.2	123	144	157	161
75	42.6	58.1	85.1	111	132	146	150	146	132	111	85.1	58.1	42.6	58.1	85.1	111	132	146	150
80	24.6	43.3	72.2	98.9	121	134	138	134	121	98.9	72.2	43.3	24.6	43.3	72.2	98.9	121	134	138
85	10.1	31.3	60.9	87.9	109	122	127	122	109	87.9	60.9	31.3	10.1	31.3	60.9	87.9	109	122	127
90	2.55	22.1	50.6	76.8	97.6	111	115	111	97.6	76.8	50.6	22.1	2.55	22.1	50.6	76.8	97.6	111	115
95	1.96	15.7	42.2	67.2	86.9	99.7	105	99.7	86.9	67.2	42.2	15.7	1.96	15.7	42.2	67.2	86.9	99.7	105
100	1.69	10.2	34.1	57.9	76.9	88.6	93.7	88.6	76.9	57.9	34.1	10.2	1.69	10.2	34.1	57.9	76.9	88.6	93.7
105	1.69	5.68	26.7	48.3	66.2	77.4	81.9	77.4	66.2	48.3	26.7	5.68	1.69	5.68	26.7	48.3	66.2	77.4	81.9
110	1.69	2.33	19.7	39.1	55.5	65.8	69.9	65.8	55.5	39.1	19.7	2.33	1.69	2.33	19.7	39.1	55.5	65.8	69.9
115	1.69	2.01	13.0	30.6	45.1	54.5	58.1	54.5	45.1	30.6	13.0	2.01	1.69	2.01	13.0	30.6	45.1	54.5	58.1
120	1.69	1.81	7.11	22.2	35.3	43.7	46.8	43.7	35.3	22.2	7.11	1.81	1.69	1.81	7.11	22.2	35.3	43.7	46.8
125	1.69	1.82	2.42	14.6	26.1	33.7	36.2	33.7	26.1	14.6	2.42	1.82	1.69	1.82	2.42	14.6	26.1	33.7	36.2
130	1.69	1.77	1.84	7.65	17.4	24.3	26.4	24.3	17.4	7.65	1.84	1.77	1.69	1.77	1.84	7.65	17.4	24.3	26.4
135	1.69	1.66	1.69	2.04	9.51	15.3	17.1	15.3	9.51	2.04	1.69	1.66	1.69	1.66	1.69	2.04	9.51	15.3	17.1
140	1.69	1.56	1.62	1.43	2.59	6.95	8.56	6.95	2.59	1.43	1.62	1.56	1.69	1.56	1.62	1.43	2.59	6.95	8.56
145	1.69	1.46	1.56	1.22	1.22	1.21	1.51	1.21	1.22	1.22	1.56	1.46	1.69	1.46	1.56	1.22	1.22	1.21	1.51
150	1.69	1.29	1.11	1.13	1.03	1.07	0.96	1.07	1.03	1.13	1.11	1.29	1.69	1.29	1.11	1.13	1.03	1.07	0.96
155	1.68	1.08	1.00	1.03	0.89	0.98	0.87	0.98	0.89	1.03	1.00	1.08	1.68	1.08	1.00	1.03	0.89	0.98	0.87
160	1.66	0.98	0.98	0.90	0.91	0.92	0.86	0.92	0.91	0.90	0.98	0.98	1.66	0.98	0.98	0.90	0.91	0.92	0.86
165	1.64	1.01	0.96	0.90	0.88	0.89	0.85	0.89	0.88	0.90	0.96	1.01	1.64	1.01	0.96	0.90	0.88	0.89	0.85
170	1.62	1.04	0.95	0.91	0.85	0.86	0.84	0.86	0.85	0.91	0.95	1.04	1.62	1.04	0.95	0.91	0.85	0.86	0.84
175	1.60	1.10	0.93	0.92	1.01	0.84	0.84	0.84	1.01	0.92	0.93	1.10	1.60	1.10	0.93	0.92	1.01	0.84	0.84
180	1.59	1.12	1.01	0.92	0.92	0.83	0.83	0.83	0.92	0.92	1.01	1.12	1.59	1.12	1.01	0.92	0.92	0.83	0.83

Table--2  
C (DEG)  
UNIT: cd

γ (DEG)	285	300	315	330	345														
0	256	256	256	256	256														
5	256	256	255	255	255														
10	254	254	253	252	251														
15	251	250	248	246	245														
20	247	245	242	239	237														
25	241	238	233	229	226														
30	234	230	224	218	213														
35	227	221	213	205	198														
40	219	212	201	191	183														
45	210	201	189	175	166														
50	200	191	176	160	148														
55	190	179	163	144	130														
60	179	168	150	129	111														
65	168	155	136	114	92.7														
70	157	144	123	99.2	74.8														
75	146	132	111	85.1	58.1														
80	134	121	98.9	72.2	43.3														
85	122	109	87.9	60.9	31.3														
90	111	97.6	76.8	50.6	22.1														
95	99.7	86.9	67.2	42.2	15.7														
100	88.6	76.9	57.9	34.1	10.2														
105	77.4	66.2	48.3	26.7	5.68														
110	65.8	55.5	39.1	19.7	2.33														
115	54.5	45.1	30.6	13.0	2.01														
120	43.7	35.3	22.2	7.11	1.81														
125	33.7	26.1	14.6	2.42	1.82														
130	24.3	17.4	7.65	1.84	1.77														
135	15.3	9.51	2.04	1.69	1.66														
140	6.95	2.59	1.43	1.62	1.56														
145	1.21	1.22	1.22	1.56	1.46														
150	1.07	1.03	1.13	1.11	1.29														
155	0.98	0.89	1.03	1.00	1.08														
160	0.92	0.91	0.90	0.98	0.98														
165	0.89	0.88	0.90	0.96	1.01														
170	0.86	0.85	0.91	0.95	1.04														
175	0.84	1.01	0.92	0.93	1.10														
180	0.83	0.92	0.92	1.01	1.12														

## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	STRP2/MVS @8W5000K	<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	0.061	7.2	0.989	5.32
277.0	60	0.032	7.7	0.868	16.46

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