

## Photometric Test Report

### Relevant Standards

- ☒ ANSI/IES LM-79-2019
- ☒ ANSI C82.77-2017

Prepared For

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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		410
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	153.4
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		10.7
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	8.82
				277V	21.32
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.983
				277V	0.851
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	5029±283	4853
			4 steps	5029±220	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		83.7
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%		55.9%
Discomfort Glare (UGR) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	28.3
			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		0.045
(Goniophotometer – Section 4.2)			Non-Worst Case		0.085
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		10.7
(Goniophotometer – Section 4.2)			Non-Worst Case		10.0

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-04-03	STRP4/MVS @10W5000K	-	250402001-S1
2	Goniophotometer Test	2025-04-03	STRP4/MVS @10W5000K	-	250402001-S1
3	THD and PF Test	2025-04-03	STRP4/MVS @10W5000K	-	250402001-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/MVS @10W5000K, 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/MVS @10W5000K	<b>Sample ID</b>	250402001-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

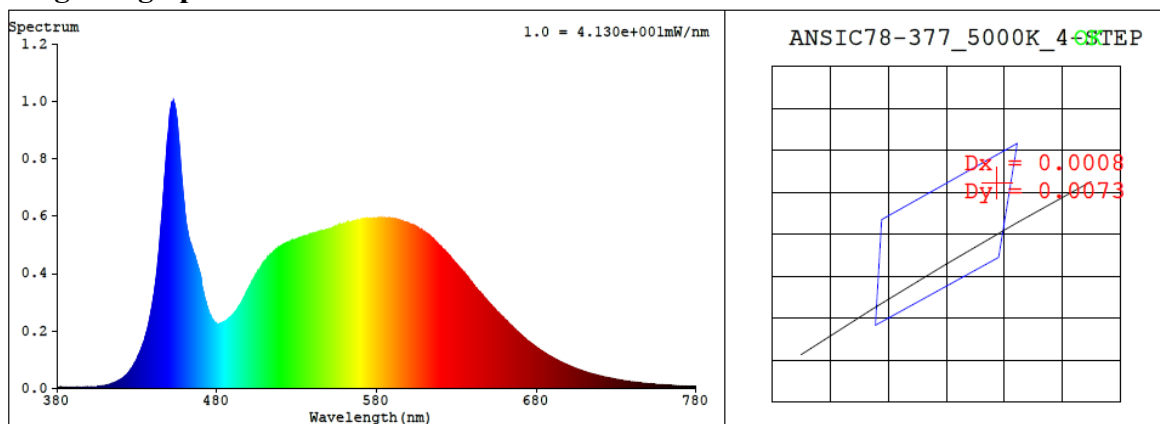
<b>Test Method</b>
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were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

Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
120.0	60	0.085	10.0	0.983
277.0	60	0.045	10.7	0.851

CCT (K)	CRI	R9	Duv	SDCM	Rf	Rg	IES Rcs,h1
4853	83.7	14	0.0033	3.4	84	95	-12%

#### 4.1 Integrating Sphere Test



#### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3502$   $y = 0.3623$  /  $u' = 0.2107$   $v' = 0.4905$  ( $duv=3.28e-03$ )

CCT= 4853K Prcp WL: Ld=571.6nm Purity=13.8%

Peak WL: Lp=453nm FWHM: =19.8nm Ratio:R=16.0% G=79.6% B=4.4%

Render Index: Ra = 83.7 AvgR = 76.7 TM30:Rf=84 Rg=95

EEL: 0.09366 A++ Highest

R1 =82 R2 =89 R3 =94 R4 =82 R5 =81 R6 =84 R7 =89

R8 =69 R9 =14 R10=73 R11=81 R12=55 R13=84 R14=97 R15=77

## 4.1 Integrating Sphere Test

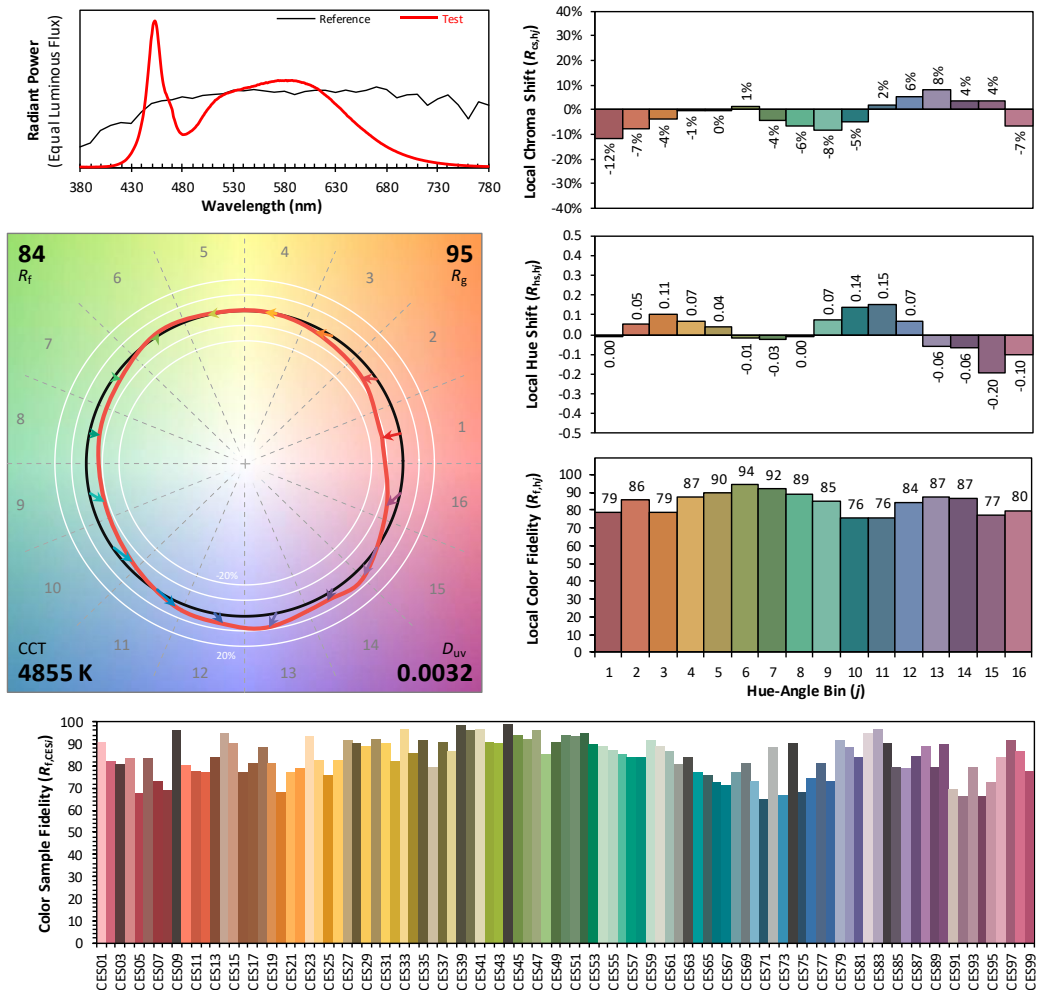
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/4/3

Model: STRP4/MVS @10W5000K



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

$x$  0.3501  
 $y$  0.3621  
 $u'$  0.2108  
 $v'$  0.4904

CIE 13.3-1995  
(CRI)  
 $R_a$  84  
 $R_g$  15

## 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	4.00E-06	447	7.04E-04	514	4.67E-04	581	5.94E-04	648	3.14E-04	715	5.06E-05
381	3.90E-06	448	7.79E-04	515	4.71E-04	582	5.93E-04	649	3.07E-04	716	4.88E-05
382	3.50E-06	449	8.62E-04	516	4.78E-04	583	5.89E-04	650	3.01E-04	717	4.73E-05
383	3.60E-06	450	9.11E-04	517	4.82E-04	584	5.93E-04	651	2.94E-04	718	4.58E-05
384	3.10E-06	451	9.69E-04	518	4.85E-04	585	5.92E-04	652	2.88E-04	719	4.44E-05
385	3.20E-06	452	9.91E-04	519	4.91E-04	586	5.93E-04	653	2.82E-04	720	4.33E-05
386	3.60E-06	453	9.98E-04	520	4.94E-04	587	5.93E-04	654	2.77E-04	721	4.16E-05
387	2.70E-06	454	9.79E-04	521	4.97E-04	588	5.93E-04	655	2.70E-04	722	4.03E-05
388	2.80E-06	455	9.41E-04	522	5.01E-04	589	5.90E-04	656	2.65E-04	723	3.91E-05
389	3.30E-06	456	8.75E-04	523	5.05E-04	590	5.91E-04	657	2.59E-04	724	3.80E-05
390	3.30E-06	457	8.10E-04	524	5.07E-04	591	5.90E-04	658	2.54E-04	725	3.68E-05
391	3.20E-06	458	7.40E-04	525	5.08E-04	592	5.90E-04	659	2.49E-04	726	3.57E-05
392	3.00E-06	459	6.72E-04	526	5.11E-04	593	5.87E-04	660	2.42E-04	727	3.45E-05
393	3.30E-06	460	6.16E-04	527	5.13E-04	594	5.86E-04	661	2.37E-04	728	3.34E-05
394	3.50E-06	461	5.72E-04	528	5.15E-04	595	5.83E-04	662	2.32E-04	729	3.22E-05
395	4.10E-06	462	5.41E-04	529	5.17E-04	596	5.82E-04	663	2.25E-04	730	3.10E-05
396	4.00E-06	463	5.13E-04	530	5.19E-04	597	5.79E-04	664	2.20E-04	731	3.03E-05
397	3.80E-06	464	4.99E-04	531	5.23E-04	598	5.79E-04	665	2.16E-04	732	2.96E-05
398	4.20E-06	465	4.80E-04	532	5.25E-04	599	5.77E-04	666	2.09E-04	733	2.83E-05
399	4.90E-06	466	4.64E-04	533	5.26E-04	600	5.75E-04	667	2.04E-04	734	2.75E-05
400	4.70E-06	467	4.46E-04	534	5.29E-04	601	5.70E-04	668	1.99E-04	735	2.67E-05
401	5.10E-06	468	4.29E-04	535	5.29E-04	602	5.70E-04	669	1.94E-04	736	2.60E-05
402	5.50E-06	469	4.10E-04	536	5.30E-04	603	5.67E-04	670	1.88E-04	737	2.51E-05
403	5.80E-06	470	3.90E-04	537	5.30E-04	604	5.65E-04	671	1.83E-04	738	2.42E-05
404	6.20E-06	471	3.48E-04	538	5.34E-04	605	5.62E-04	672	1.78E-04	739	2.35E-05
405	6.50E-06	472	3.27E-04	539	5.35E-04	606	5.60E-04	673	1.74E-04	740	2.29E-05
406	7.10E-06	473	3.04E-04	540	5.39E-04	607	5.55E-04	674	1.69E-04	741	2.20E-05
407	7.70E-06	474	2.82E-04	541	5.41E-04	608	5.54E-04	675	1.64E-04	742	2.12E-05
408	8.40E-06	475	2.66E-04	542	5.42E-04	609	5.48E-04	676	1.61E-04	743	2.07E-05
409	9.20E-06	476	2.53E-04	543	5.43E-04	610	5.46E-04	677	1.56E-04	744	1.99E-05
410	1.01E-05	477	2.41E-04	544	5.45E-04	611	5.41E-04	678	1.52E-04	745	1.95E-05
411	1.15E-05	478	2.34E-04	545	5.46E-04	612	5.38E-04	679	1.47E-04	746	1.88E-05
412	1.26E-05	479	2.29E-04	546	5.46E-04	613	5.34E-04	680	1.43E-04	747	1.81E-05
413	1.39E-05	480	2.24E-04	547	5.48E-04	614	5.29E-04	681	1.39E-04	748	1.75E-05
414	1.59E-05	481	2.24E-04	548	5.51E-04	615	5.23E-04	682	1.35E-04	749	1.72E-05
415	1.77E-05	482	2.25E-04	549	5.52E-04	616	5.17E-04	683	1.31E-04	750	1.64E-05
416	2.02E-05	483	2.26E-04	550	5.54E-04	617	5.11E-04	684	1.28E-04	751	1.61E-05
417	2.24E-05	484	2.28E-04	551	5.55E-04	618	5.06E-04	685	1.24E-04	752	1.54E-05
418	2.54E-05	485	2.33E-04	552	5.57E-04	619	4.99E-04	686	1.21E-04	753	1.51E-05
419	2.85E-05	486	2.36E-04	553	5.61E-04	620	4.95E-04	687	1.17E-04	754	1.45E-05
420	3.17E-05	487	2.41E-04	554	5.64E-04	621	4.89E-04	688	1.14E-04	755	1.43E-05
421	3.52E-05	488	2.46E-04	555	5.64E-04	622	4.83E-04	689	1.12E-04	756	1.36E-05
422	4.00E-05	489	2.50E-04	556	5.67E-04	623	4.79E-04	690	1.08E-04	757	1.34E-05
423	4.41E-05	490	2.56E-04	557	5.70E-04	624	4.72E-04	691	1.04E-04	758	1.29E-05
424	4.96E-05	491	2.63E-04	558	5.71E-04	625	4.66E-04	692	1.01E-04	759	1.24E-05
425	5.61E-05	492	2.69E-04	559	5.71E-04	626	4.61E-04	693	9.87E-05	760	1.20E-05
426	6.40E-05	493	2.77E-04	560	5.73E-04	627	4.52E-04	694	9.58E-05	761	1.18E-05
427	7.18E-05	494	2.87E-04	561	5.75E-04	628	4.46E-04	695	9.30E-05	762	1.12E-05
428	8.11E-05	495	2.93E-04	562	5.79E-04	629	4.38E-04	696	8.99E-05	763	1.10E-05
429	9.07E-05	496	3.04E-04	563	5.76E-04	630	4.33E-04	697	8.74E-05	764	1.07E-05
430	1.01E-04	497	3.15E-04	564	5.78E-04	631	4.27E-04	698	8.49E-05	765	1.04E-05
431	1.14E-04	498	3.28E-04	565	5.81E-04	632	4.20E-04	699	8.23E-05	766	9.80E-06
432	1.27E-04	499	3.38E-04	566	5.82E-04	633	4.14E-04	700	7.97E-05	767	9.80E-06
433	1.41E-04	500	3.50E-04	567	5.84E-04	634	4.08E-04	701	7.74E-05	768	9.40E-06
434	1.56E-04	501	3.59E-04	568	5.85E-04	635	4.02E-04	702	7.52E-05	769	9.00E-06
435	1.73E-04	502	3.71E-04	569	5.86E-04	636	3.95E-04	703	7.32E-05	770	8.90E-06
436	1.93E-04	503	3.80E-04	570	5.87E-04	637	3.87E-04	704	7.07E-05	771	8.60E-06
437	2.16E-04	504	3.91E-04	571	5.89E-04	638	3.80E-04	705	6.86E-05	772	8.30E-06
438	2.43E-04	505	3.99E-04	572	5.90E-04	639	3.73E-04	706	6.65E-05	773	8.20E-06
439	2.73E-04	506	4.08E-04	573	5.92E-04	640	3.67E-04	707	6.40E-05	774	7.90E-06
440	3.07E-04	507	4.15E-04	574	5.93E-04	641	3.59E-04	708	6.23E-05	775	7.50E-06
441	3.40E-04	508	4.26E-04	575	5.90E-04	642	3.50E-04	709	6.03E-05	776	7.40E-06
442	3.83E-04	509	4.33E-04	576	5.92E-04	643	3.46E-04	710	5.82E-05	777	7.30E-06
443	4.34E-04	510	4.41E-04	577	5.91E-04	644	3.39E-04	711	5.68E-05	778	7.00E-06
444	4.91E-04	511	4.47E-04	578	5.92E-04	645	3.34E-04	712	5.50E-05	779	7.00E-06
445	5.60E-04	512	4.58E-04	579	5.92E-04	646	3.27E-04	713	5.34E-05	780	7.00E-06
446	6.29E-04	513	4.61E-04	580	5.91E-04	647	3.19E-04	714	5.18E-05	N/A	N/A

## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

Model No.	STRP4/MVS @10W5000K	Sample ID	250402001-S1
Operate time (Min.)	30	Stabilization time (Min.)	60
Temperature (°C)	25.0	Humidity (%RH)	42.6

Test Method
<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
WORST CASE	277.0	60	0.045	10.7	0.851
NON-WORST CASE	120.0	60	0.085	10.0	0.983

#### Test Result

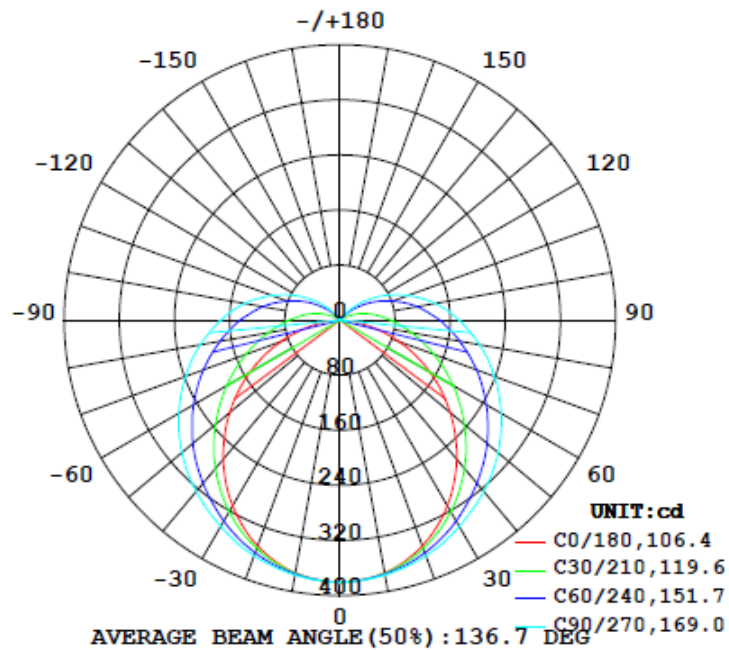
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
1641	410	159.8	159.8	106.4	169.0	153.4

Zonal Lumen Requirement	UGR	
( $0^\circ$ - $60^\circ$ )	Crosswise	Endwise
55.9%	20.1	28.3

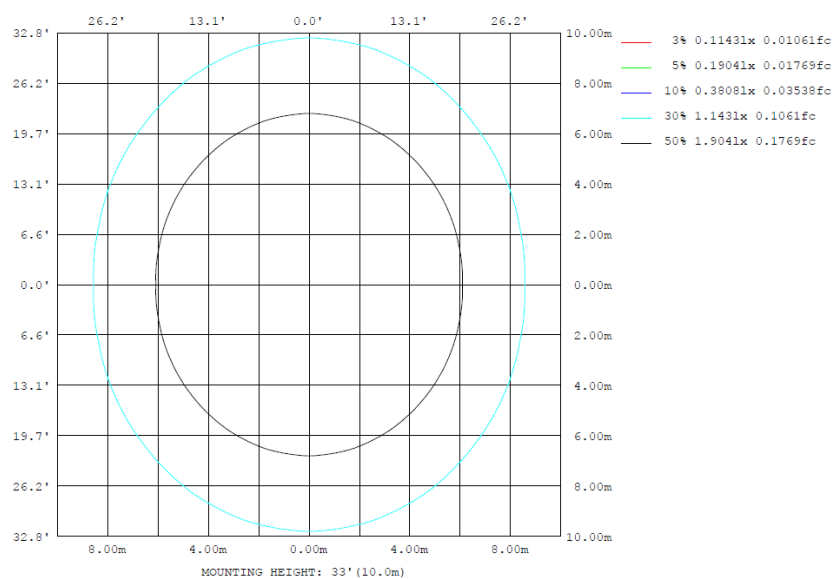
## 4.2 Goniophotometer Test

### 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	372.4	373.6	375.8	373.6	372.4	373.6	375.8	373.6	0- 10	36.00	36.00	2.19,2.19
20	349.0	356.4	364.2	356.4	349.0	356.4	364.2	356.4	10- 20	103.5	139.5	8.5,8.5
30	311.5	328.8	346.1	328.8	311.5	328.8	346.1	328.8	20- 30	158.6	298.1	18.2,18.2
40	263.6	294.2	324.8	294.2	263.6	294.2	324.8	294.2	30- 40	195.7	493.8	30.1,30.1
50	209.0	257.0	299.4	257.0	209.0	257.0	299.4	257.0	40- 50	213.1	706.9	43.1,43.1
60	150.7	218.9	269.9	218.9	150.7	218.9	269.9	218.9	50- 60	211.1	918.1	55.9,55.9
70	91.10	180.5	238.2	180.5	91.10	180.5	238.2	180.5	60- 70	192.6	1111	67.7,67.7
80	34.52	144.7	205.7	144.7	34.52	144.7	205.7	144.7	70- 80	162.5	1273	77.6,77.6
90	2.365	113.5	172.9	113.5	2.365	113.5	172.9	113.5	80- 90	128.4	1402	85.4,85.4
100	1.826	84.37	140.4	84.37	1.826	84.37	140.4	84.37	90-100	97.95	1500	91.4,91.4
110	1.707	56.49	104.8	56.49	1.707	56.49	104.8	56.49	100-110	68.92	1568	95.6,95.6
120	1.883	31.32	70.37	31.32	1.883	31.32	70.37	31.32	110-120	42.46	1611	98.2,98.2
130	1.970	9.316	38.73	9.316	1.970	9.316	38.73	9.316	120-130	21.17	1632	99.5,99.5
140	2.057	1.190	11.08	1.190	2.057	1.190	11.08	1.190	130-140	7.011	1639	99.9,99.9
150	2.042	0.8590	0.7680	0.8590	2.042	0.8590	0.7680	0.8590	140-150	1.064	1640	99.9,99.9
160	2.021	0.6063	0.7680	0.6063	2.021	0.6063	0.7680	0.6063	150-160	0.5127	1641	100,100
170	2.139	0.6909	0.7680	0.6909	2.139	0.6909	0.7680	0.6909	160-170	0.2932	1641	100,100
180	0.1920	0.1920	0.1920	0.1920	0.1920	0.1920	0.1920	0.1920	170-180	0.1004	1641	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

	Zonal (lm)		Total (lm)	Percent
0-10	36.00	0-10	36.00	2.19%
10-20	103.51	0-20	139.51	8.50%
20-30	158.60	0-30	298.11	18.17%
30-40	195.72	0-40	493.83	30.09%
40-50	213.10	0-50	706.93	43.08%
50-60	211.13	0-60	918.06	55.95%
60-70	192.57	0-70	1110.63	67.68%
70-80	162.53	0-80	1273.16	77.59%
80-90	128.42	0-90	1401.58	85.41%
90-100	97.95	0-100	1499.53	91.38%
100-110	68.92	0-110	1568.45	95.58%
110-120	42.46	0-120	1610.91	98.17%
120-130	21.17	0-130	1632.08	99.46%
130-140	7.01	0-140	1639.09	99.89%
140-150	1.06	0-150	1640.15	99.95%
150-160	0.51	0-160	1640.66	99.98%
160-170	0.29	0-170	1640.95	100.00%
170-180	0.10	0-180	1641.05	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	14.3	15.7	14.9	16.3	17.0	18.5	19.9	19.1	20.5	21.2
	3H	15.6	17.0	16.2	17.6	18.3	21.5	22.8	22.1	23.4	24.1
	4H	16.1	17.3	16.7	17.9	18.7	23.1	24.3	23.7	24.9	25.6
	6H	16.3	17.5	17.0	18.1	18.8	24.8	25.9	25.4	26.6	27.3
	8H	16.4	17.5	17.0	18.1	18.9	25.7	26.8	26.3	27.4	28.2
	12H	16.4	17.5	17.0	18.1	18.9	26.7	27.7	27.3	28.4	29.1
4H	2H	15.6	16.9	16.2	17.5	18.2	18.8	20.0	19.4	20.7	21.4
	3H	17.3	18.4	17.9	19.0	19.7	22.1	23.1	22.7	23.8	24.5
	4H	17.9	18.9	18.5	19.5	20.3	23.8	24.8	24.4	25.4	26.2
	6H	18.3	19.1	18.9	19.8	20.6	25.6	26.5	26.3	27.2	28.0
	8H	18.4	19.2	19.0	19.9	20.6	26.6	27.5	27.3	28.2	28.9
	12H	18.4	19.2	19.1	19.9	20.6	27.8	28.5	28.5	29.2	30.0
8H	4H	19.1	19.9	19.7	20.6	21.4	23.9	24.8	24.6	25.4	26.2
	6H	19.7	20.4	20.4	21.2	21.9	26.0	26.7	26.7	27.4	28.2
	8H	19.9	20.6	20.6	21.3	22.1	27.1	27.7	27.8	28.5	29.3
	12H	20.1	20.7	20.8	21.4	22.2	28.4	29.0	29.1	29.7	30.5
12H	4H	19.5	20.2	20.1	20.9	21.7	23.9	24.7	24.6	25.4	26.2
	6H	20.3	20.9	21.0	21.6	22.5	26.0	26.6	26.7	27.3	28.2
	8H	20.6	21.2	21.3	21.9	22.8	27.2	27.8	27.9	28.5	29.3

Maximum UGR = 30.5

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	16.0	17.4	16.6	18.0	18.7	20.2	21.6	20.8	22.2	22.9
	3H	17.3	18.7	17.9	19.3	20.0	23.2	24.5	23.8	25.1	25.8
	4H	17.8	19.0	18.4	19.6	20.4	24.8	26.0	25.4	26.6	27.3
	6H	18.0	19.2	18.7	19.8	20.5	26.5	27.6	27.1	28.3	29.0
	8H	18.1	19.2	18.7	19.8	20.6	27.4	28.5	28.0	29.1	29.9
	12H	18.1	19.2	18.7	19.8	20.6	28.4	29.4	29.0	30.1	30.8
4H	2H	17.3	18.6	17.9	19.2	19.9	20.5	21.7	21.1	22.4	23.1
	3H	19.0	20.1	19.6	20.7	21.4	23.8	24.8	24.4	25.5	26.2
	4H	19.6	20.6	20.2	21.2	22.0	25.5	26.5	26.1	27.1	27.9
	6H	20.0	20.8	20.6	21.5	22.3	27.3	28.2	28.0	28.9	29.7
	8H	20.1	20.9	20.7	21.6	22.3	28.3	29.2	29.0	29.9	30.6
	12H	20.1	20.9	20.8	21.6	22.3	29.5	30.2	30.2	30.9	31.7
8H	4H	20.8	21.6	21.4	22.3	23.1	25.6	26.5	26.3	27.1	27.9
	6H	21.4	22.1	22.1	22.9	23.6	27.7	28.4	28.4	29.1	29.9
	8H	21.6	22.3	22.3	23.0	23.8	28.8	29.4	29.5	30.2	31.0
	12H	21.8	22.4	22.5	23.1	23.9	30.1	30.7	30.8	31.4	32.2
12H	4H	21.2	21.9	21.8	22.6	23.4	25.6	26.4	26.3	27.1	27.9
	6H	22.0	22.6	22.7	23.3	24.2	27.7	28.3	28.4	29.0	29.9
	8H	22.3	22.9	23.0	23.6	24.5	28.9	29.5	29.6	30.2	31.0

Maximum UGR = 32.2

## 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
0	381	381	381	381	381	381	381	381	381	381	381	381	381	381	381	381	381	381	381
5	378	379	379	379	379	379	379	379	379	379	379	379	378	379	379	379	379	379	379
10	372	373	373	374	374	375	376	375	374	374	373	373	372	373	373	374	374	375	376
15	363	364	365	367	368	370	371	370	368	367	365	364	363	364	365	367	368	370	371
20	349	350	353	356	360	363	364	363	360	356	353	350	349	350	353	356	360	363	364
25	332	334	338	344	349	354	356	354	349	344	338	334	332	334	338	344	349	354	356
30	312	315	321	329	337	344	346	344	337	329	321	315	312	315	321	329	337	344	346
35	289	293	302	312	323	332	335	332	323	312	302	293	289	293	302	312	323	332	335
40	264	269	281	294	309	320	325	320	309	294	281	269	264	269	281	294	309	320	325
45	237	244	259	276	294	307	313	307	294	276	259	244	237	244	259	276	294	307	313
50	209	218	236	257	279	293	299	293	279	257	236	218	209	218	236	257	279	293	299
55	180	191	212	238	262	279	285	279	262	238	212	191	180	191	212	238	262	279	285
60	151	163	190	219	245	263	270	263	245	219	190	163	151	163	190	219	245	263	270
65	121	136	167	199	228	247	254	247	228	199	167	136	121	136	167	199	228	247	254
70	91.1	110	145	181	211	231	238	231	211	181	145	110	91.1	110	145	181	211	231	238
75	61.7	85.0	125	162	193	215	222	215	193	162	125	85.0	61.7	85.0	125	162	193	215	222
80	34.5	62.6	106	145	177	198	206	198	177	145	106	62.6	34.5	62.6	106	145	177	198	206
85	13.3	44.2	88.7	128	160	181	189	181	160	128	88.7	44.2	13.3	44.2	88.7	128	160	181	189
90	2.36	30.6	74.1	114	145	166	173	166	145	114	74.1	30.6	2.36	30.6	74.1	114	145	166	173
95	1.81	21.5	61.0	98.5	129	149	157	149	129	98.5	61.0	21.5	1.81	21.5	61.0	98.5	129	149	157
100	1.83	13.6	48.8	84.4	114	132	140	132	114	84.4	48.8	13.6	1.83	13.6	48.8	84.4	114	132	140
105	1.77	6.84	37.4	70.3	97.7	115	123	115	97.7	70.3	37.4	6.84	1.77	6.84	37.4	70.3	97.7	115	123
110	1.71	2.91	27.1	56.5	81.7	98.2	105	98.2	81.7	56.5	27.1	2.91	1.71	2.91	27.1	56.5	81.7	98.2	105
115	1.79	2.36	17.4	43.5	66.3	81.2	87.3	81.2	66.3	43.5	17.4	2.36	1.79	2.36	17.4	43.5	66.3	81.2	87.3
120	1.88	2.03	8.62	31.3	51.4	64.9	70.4	64.9	51.4	31.3	8.62	2.03	1.88	2.03	8.62	31.3	51.4	64.9	70.4
125	1.88	1.80	2.77	19.8	37.3	49.2	54.2	49.2	37.3	19.8	2.77	1.80	1.88	1.80	2.77	19.8	37.3	49.2	54.2
130	1.97	1.79	2.05	9.32	24.3	34.4	38.7	34.4	24.3	9.32	2.05	1.79	1.97	1.79	2.05	9.32	24.3	34.4	38.7
135	1.97	1.77	1.52	2.16	12.0	20.8	24.4	20.8	12.0	2.16	1.52	1.77	1.97	1.77	1.52	2.16	12.0	20.8	24.4
140	2.06	1.76	1.40	1.19	2.33	8.11	11.1	8.11	2.33	1.19	1.40	1.76	2.06	1.76	1.40	1.19	2.33	8.11	11.1
145	2.05	1.76	1.37	0.95	0.95	1.04	1.08	1.04	0.95	0.95	1.37	1.76	2.05	1.76	1.37	0.95	0.95	1.04	1.08
150	2.04	1.73	1.23	0.86	0.90	0.86	0.77	0.86	0.90	0.86	1.23	1.73	2.04	1.73	1.23	0.86	0.90	0.86	0.77
155	2.03	1.71	1.19	0.69	0.77	0.85	0.77	0.85	0.77	0.69	1.19	1.71	2.03	1.71	1.19	0.69	0.77	0.85	0.77
160	2.02	1.66	1.01	0.61	0.77	0.85	0.77	0.85	0.77	0.61	1.01	1.66	2.02	1.66	1.01	0.61	0.77	0.85	0.77
165	1.93	1.61	0.95	0.60	0.69	0.84	0.77	0.84	0.69	0.60	0.95	1.61	1.93	1.61	0.95	0.60	0.69	0.84	0.77
170	2.14	1.59	1.06	0.69	0.70	0.84	0.77	0.84	0.70	0.69	1.06	1.59	2.14	1.59	1.06	0.69	0.70	0.84	0.77
175	2.04	1.47	1.04	0.79	0.76	0.83	0.77	0.83	0.76	0.79	1.04	1.47	2.04	1.47	1.04	0.79	0.76	0.83	0.77
180	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19

Table--2

UNIT: cd

C (DEG)	285	300	315	330	345														
0	381	381	381	381	381														
5	379	379	379	379	379														
10	375	374	374	373	373														
15	370	368	367	365	364														
20	363	360	356	353	350														
25	354	349	344	338	334														
30	344	337	329	321	315														
35	332	323	312	302	293														
40	320	309	294	281	269														
45	307	294	276	259	244														
50	293	279	257	236	218														
55	279	262	238	212	191														
60	263	245	219	190	163														
65	247	228	199	167	136														
70	231	211	181	145	110														
75	215	193	162	125	85.0														
80	198	177	145	106	62.6														
85	181	160	128	88.7	44.2														
90	166	145	114	74.1	30.6														
95	149	129	98.5	61.0	21.5														
100	132	114	84.4	48.8	13.6														
105	115	97.7	70.3	37.4	6.84														
110	98.2	81.7	56.5	27.1	2.91														
115	81.2	66.3	43.5	17.4	2.36														
120	64.9	51.4	31.3	8.62	2.03														
125	49.2	37.3	19.8	2.77	1.80														
130	34.4	24.3	9.32	2.05	1.79														
135	20.8	12.0	2.16	1.52	1.77														
140	8.11	2.33	1.19	1.40	1.76														
145	1.04	0.95	0.95	1.37	1.76														
150	0.86	0.90	0.86	1.23	1.73														
155	0.85	0.77	0.69	1.19	1.71														
160	0.85	0.77	0.61	1.01	1.66														
165	0.84	0.69	0.60	0.95	1.61														
170	0.84	0.70	0.69	1.06	1.59														
175	0.83	0.76	0.79	1.04	1.47														
180	0.19	0.19	0.19	0.19	0.19														

## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	STRP4/MVS @10W5000K	<b>Sample ID</b>	250402001-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 25±1°C. 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	0.085	10.0	0.983	8.82
277.0	60	0.045	10.7	0.851	21.32

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