

## 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		594
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	154.3
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		15.4
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	6.18
				277V	13.61
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.993
				277V	0.915
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	5029±283	4860
			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		96
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%		56.0%
Discomfort Glare (UGR) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	29.6
			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		0.061
(Goniophotometer – Section 4.2)			Non-Worst Case		0.127
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		15.4
(Goniophotometer – Section 4.2)			Non-Worst Case		15.1

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-04-03	STRP4/MVS @15W5000K	-	250402001-S1
2	Goniophotometer Test	2025-04-03	STRP4/MVS @15W5000K	-	250402001-S1
3	THD and PF Test	2025-04-03	STRP4/MVS @15W5000K	-	250402001-S1

### Remark (If any):

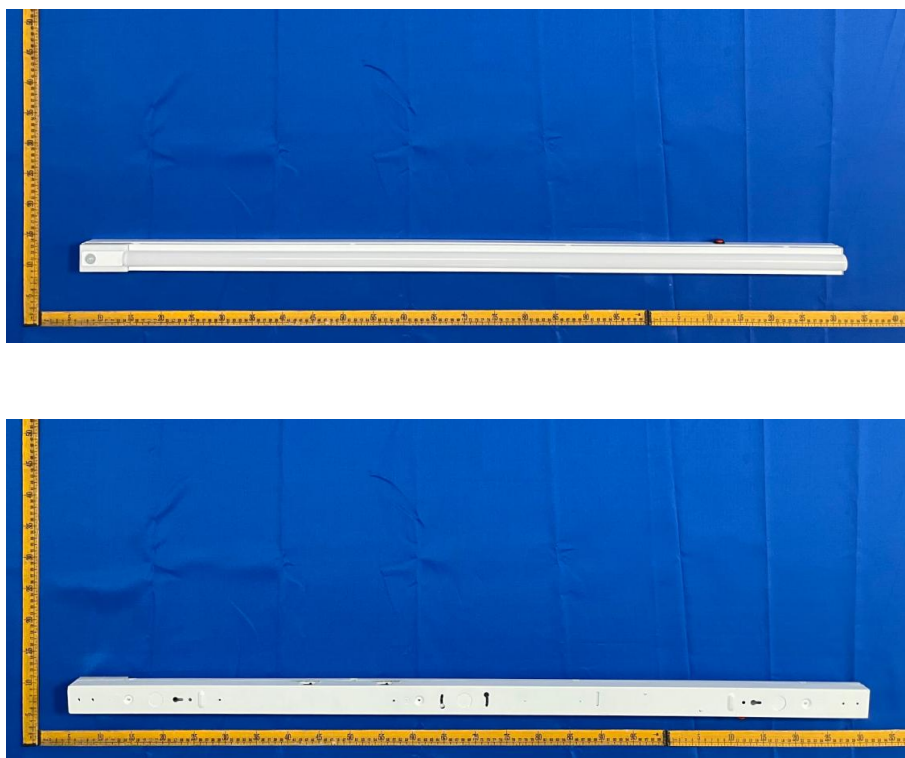
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3. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. Government.

### 3.0 Product Description

Luminaire Description: Model No. STRP4/MVS @15W5000K, 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 @15W5000K	<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

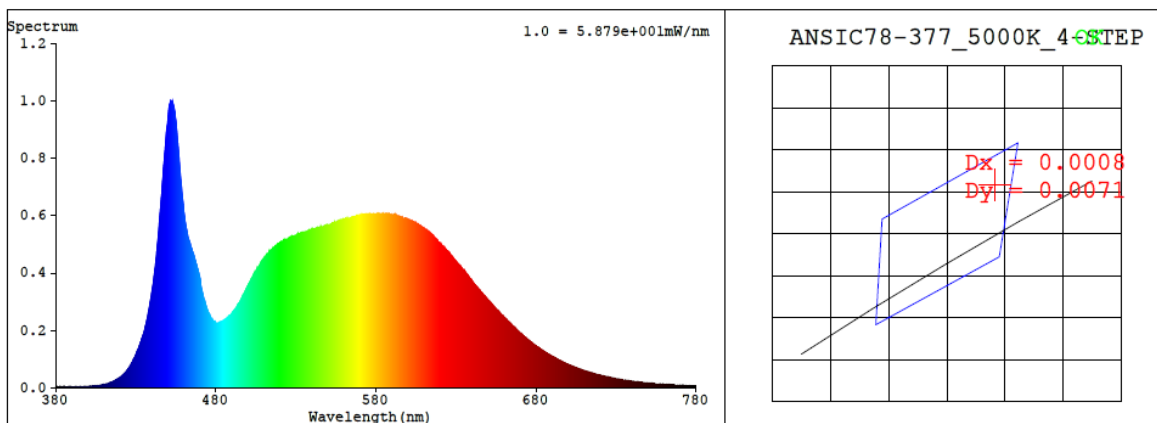
<b>Test Method</b>
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were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

Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
120.0	60	0.127	15.1	0.993
277.0	60	0.061	15.4	0.915

CCT (K)	CRI	R9	Duv	SDCM	Rf	Rg	IES Rcs,h1
4860	83.5	14	0.0032	3.3	84	96	-12%

## 4.1 Integrating Sphere Test



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3499$   $y = 0.3619$  /  $u' = 0.2107$   $v' = 0.4903$  ( $duv=3.20e-03$ )

CCT= 4860K Prcp WL:  $L_d=571.6nm$  Purity=13.6%

Peak WL:  $L_p=452nm$  FWHM:  $=20.5nm$  Ratio:  $R=16.0\%$   $G=79.6\%$   $B=4.3\%$

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

EEL: 0.09299 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=84 R14=96 R15=77

## 4.1 Integrating Sphere Test

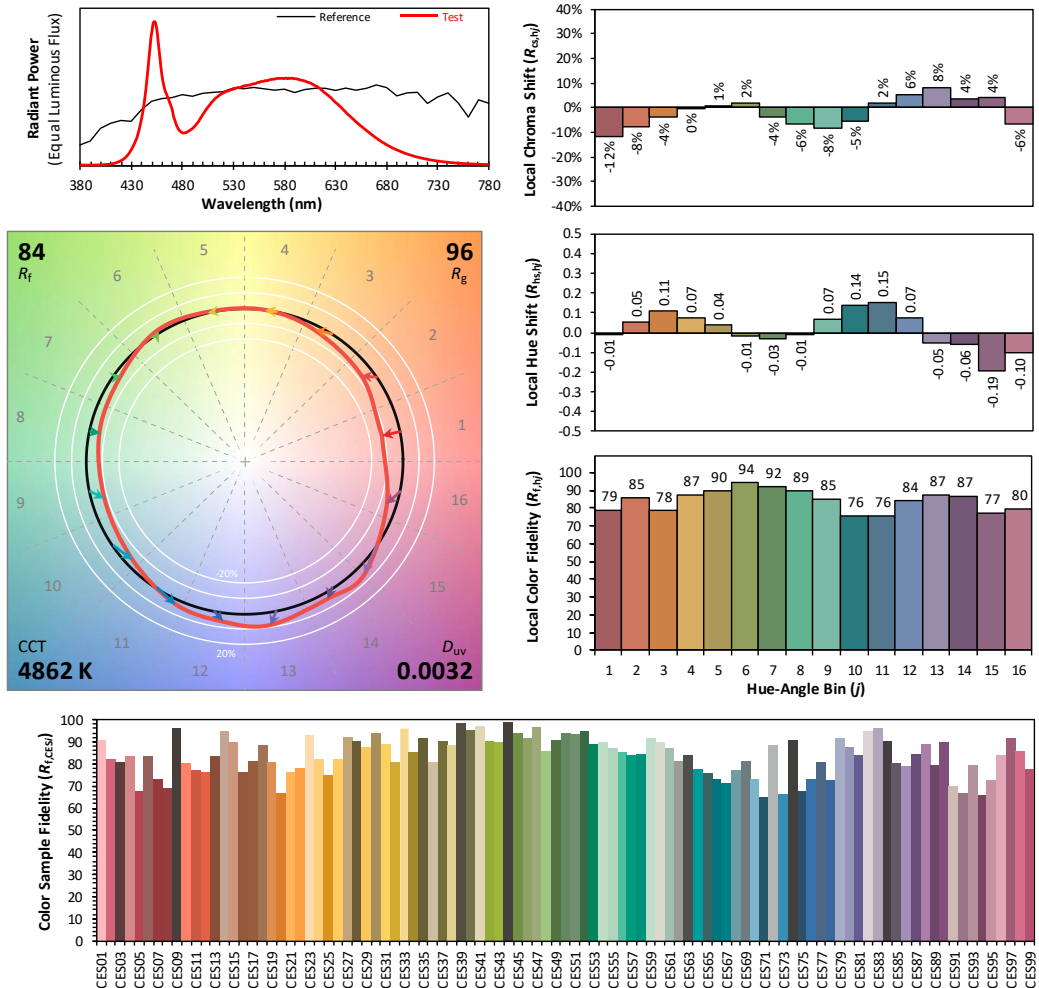
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/4/3

Model: STRP4/MVS @15W5000K



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

$x$  0.3499  
 $y$  0.3617  
 $u'$  0.2107  
 $v'$  0.4902

CIE 13.3-1995  
(CRI)

$R_a$  84  
 $R_g$  14

## 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	4.10E-06	447	7.44E-04	514	4.76E-04	581	6.07E-04	648	3.20E-04	715	5.17E-05
381	4.30E-06	448	8.13E-04	515	4.81E-04	582	6.06E-04	649	3.13E-04	716	4.98E-05
382	3.60E-06	449	8.90E-04	516	4.88E-04	583	6.03E-04	650	3.06E-04	717	4.82E-05
383	4.00E-06	450	9.33E-04	517	4.93E-04	584	6.07E-04	651	3.00E-04	718	4.66E-05
384	3.00E-06	451	9.84E-04	518	4.97E-04	585	6.05E-04	652	2.93E-04	719	4.57E-05
385	3.70E-06	452	9.98E-04	519	5.01E-04	586	6.05E-04	653	2.87E-04	720	4.43E-05
386	3.10E-06	453	9.97E-04	520	5.05E-04	587	6.07E-04	654	2.81E-04	721	4.24E-05
387	3.10E-06	454	9.73E-04	521	5.08E-04	588	6.06E-04	655	2.75E-04	722	4.13E-05
388	3.70E-06	455	9.31E-04	522	5.11E-04	589	6.04E-04	656	2.70E-04	723	3.99E-05
389	3.40E-06	456	8.64E-04	523	5.16E-04	590	6.04E-04	657	2.64E-04	724	3.89E-05
390	3.30E-06	457	8.00E-04	524	5.17E-04	591	6.03E-04	658	2.58E-04	725	3.79E-05
391	3.50E-06	458	7.33E-04	525	5.18E-04	592	6.02E-04	659	2.53E-04	726	3.65E-05
392	3.30E-06	459	6.69E-04	526	5.23E-04	593	5.99E-04	660	2.46E-04	727	3.52E-05
393	3.90E-06	460	6.16E-04	527	5.25E-04	594	5.99E-04	661	2.41E-04	728	3.39E-05
394	3.90E-06	461	5.75E-04	528	5.28E-04	595	5.95E-04	662	2.36E-04	729	3.30E-05
395	4.20E-06	462	5.44E-04	529	5.29E-04	596	5.94E-04	663	2.30E-04	730	3.17E-05
396	4.00E-06	463	5.16E-04	530	5.31E-04	597	5.91E-04	664	2.24E-04	731	3.08E-05
397	4.30E-06	464	5.01E-04	531	5.36E-04	598	5.91E-04	665	2.19E-04	732	3.01E-05
398	4.90E-06	465	4.81E-04	532	5.36E-04	599	5.89E-04	666	2.13E-04	733	2.90E-05
399	5.00E-06	466	4.65E-04	533	5.39E-04	600	5.87E-04	667	2.08E-04	734	2.80E-05
400	5.50E-06	467	4.45E-04	534	5.41E-04	601	5.83E-04	668	2.02E-04	735	2.71E-05
401	5.80E-06	468	4.27E-04	535	5.42E-04	602	5.82E-04	669	1.97E-04	736	2.63E-05
402	5.70E-06	469	4.07E-04	536	5.42E-04	603	5.78E-04	670	1.92E-04	737	2.55E-05
403	6.60E-06	470	3.85E-04	537	5.43E-04	604	5.77E-04	671	1.87E-04	738	2.49E-05
404	6.50E-06	471	3.46E-04	538	5.47E-04	605	5.74E-04	672	1.82E-04	739	2.41E-05
405	7.30E-06	472	3.24E-04	539	5.47E-04	606	5.71E-04	673	1.77E-04	740	2.34E-05
406	7.80E-06	473	3.03E-04	540	5.53E-04	607	5.67E-04	674	1.72E-04	741	2.27E-05
407	8.20E-06	474	2.81E-04	541	5.53E-04	608	5.63E-04	675	1.67E-04	742	2.18E-05
408	9.40E-06	475	2.66E-04	542	5.55E-04	609	5.59E-04	676	1.63E-04	743	2.12E-05
409	1.01E-05	476	2.54E-04	543	5.57E-04	610	5.56E-04	677	1.59E-04	744	2.06E-05
410	1.13E-05	477	2.43E-04	544	5.58E-04	611	5.51E-04	678	1.55E-04	745	2.00E-05
411	1.26E-05	478	2.37E-04	545	5.59E-04	612	5.49E-04	679	1.50E-04	746	1.93E-05
412	1.43E-05	479	2.31E-04	546	5.58E-04	613	5.44E-04	680	1.46E-04	747	1.86E-05
413	1.57E-05	480	2.27E-04	547	5.61E-04	614	5.39E-04	681	1.42E-04	748	1.80E-05
414	1.78E-05	481	2.26E-04	548	5.64E-04	615	5.34E-04	682	1.38E-04	749	1.75E-05
415	2.01E-05	482	2.27E-04	549	5.67E-04	616	5.27E-04	683	1.34E-04	750	1.69E-05
416	2.27E-05	483	2.29E-04	550	5.68E-04	617	5.21E-04	684	1.31E-04	751	1.64E-05
417	2.54E-05	484	2.30E-04	551	5.68E-04	618	5.16E-04	685	1.27E-04	752	1.58E-05
418	2.86E-05	485	2.35E-04	552	5.69E-04	619	5.07E-04	686	1.23E-04	753	1.54E-05
419	3.25E-05	486	2.39E-04	553	5.75E-04	620	5.04E-04	687	1.20E-04	754	1.48E-05
420	3.56E-05	487	2.43E-04	554	5.77E-04	621	4.98E-04	688	1.16E-04	755	1.43E-05
421	3.95E-05	488	2.50E-04	555	5.77E-04	622	4.92E-04	689	1.13E-04	756	1.40E-05
422	4.50E-05	489	2.53E-04	556	5.81E-04	623	4.87E-04	690	1.10E-04	757	1.37E-05
423	5.03E-05	490	2.59E-04	557	5.83E-04	624	4.80E-04	691	1.07E-04	758	1.32E-05
424	5.64E-05	491	2.67E-04	558	5.84E-04	625	4.75E-04	692	1.04E-04	759	1.29E-05
425	6.38E-05	492	2.74E-04	559	5.84E-04	626	4.69E-04	693	1.01E-04	760	1.22E-05
426	7.20E-05	493	2.81E-04	560	5.86E-04	627	4.61E-04	694	9.78E-05	761	1.20E-05
427	8.08E-05	494	2.92E-04	561	5.89E-04	628	4.53E-04	695	9.50E-05	762	1.17E-05
428	9.06E-05	495	2.99E-04	562	5.91E-04	629	4.47E-04	696	9.21E-05	763	1.14E-05
429	1.02E-04	496	3.09E-04	563	5.89E-04	630	4.40E-04	697	8.91E-05	764	1.10E-05
430	1.14E-04	497	3.22E-04	564	5.91E-04	631	4.33E-04	698	8.64E-05	765	1.06E-05
431	1.28E-04	498	3.32E-04	565	5.95E-04	632	4.28E-04	699	8.38E-05	766	1.05E-05
432	1.42E-04	499	3.44E-04	566	5.96E-04	633	4.22E-04	700	8.18E-05	767	9.90E-06
433	1.58E-04	500	3.56E-04	567	5.97E-04	634	4.14E-04	701	7.89E-05	768	9.80E-06
434	1.74E-04	501	3.66E-04	568	6.00E-04	635	4.09E-04	702	7.66E-05	769	9.30E-06
435	1.90E-04	502	3.77E-04	569	5.99E-04	636	4.02E-04	703	7.51E-05	770	9.10E-06
436	2.14E-04	503	3.87E-04	570	5.99E-04	637	3.94E-04	704	7.22E-05	771	9.00E-06
437	2.39E-04	504	3.98E-04	571	6.02E-04	638	3.87E-04	705	7.00E-05	772	8.60E-06
438	2.68E-04	505	4.06E-04	572	6.04E-04	639	3.79E-04	706	6.78E-05	773	8.50E-06
439	3.00E-04	506	4.16E-04	573	6.05E-04	640	3.73E-04	707	6.57E-05	774	8.00E-06
440	3.36E-04	507	4.24E-04	574	6.06E-04	641	3.64E-04	708	6.39E-05	775	7.70E-06
441	3.73E-04	508	4.34E-04	575	6.05E-04	642	3.58E-04	709	6.19E-05	776	7.50E-06
442	4.17E-04	509	4.43E-04	576	6.06E-04	643	3.51E-04	710	5.97E-05	777	7.30E-06
443	4.70E-04	510	4.50E-04	577	6.05E-04	644	3.45E-04	711	5.81E-05	778	7.20E-06
444	5.29E-04	511	4.57E-04	578	6.05E-04	645	3.39E-04	712	5.69E-05	779	7.20E-06
445	5.99E-04	512	4.66E-04	579	6.05E-04	646	3.32E-04	713	5.46E-05	780	7.30E-06
446	6.67E-04	513	4.71E-04	580	6.04E-04	647	3.25E-04	714	5.31E-05	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

Model No.	STRP4/MVS @15W5000K	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	0.061	15.4	0.915
NON-WORST CASE	120.0	60	0.127	15.1	0.993

#### Test Result

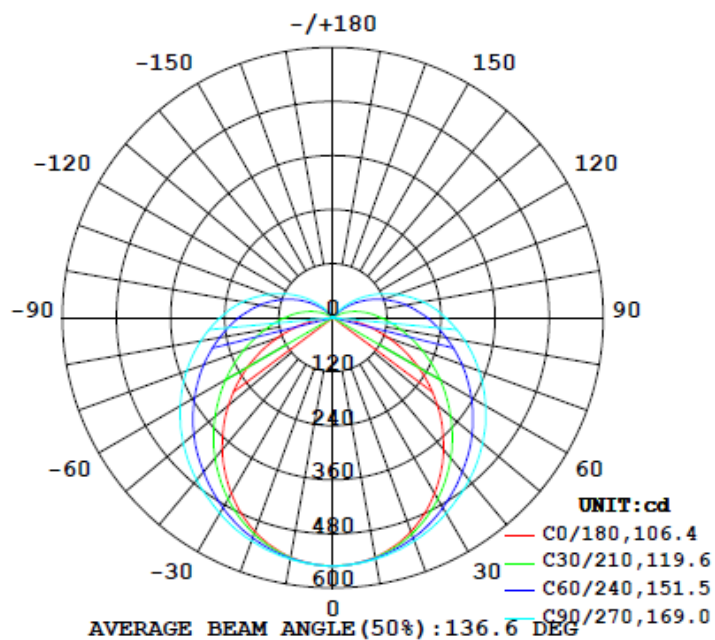
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
2376	594	159.7	159.7	106.4	169.0	154.3

Zonal Lumen Requirement	UGR	
( $0^\circ$ - $60^\circ$ )	Crosswise	Endwise
56.0%	21.3	29.6

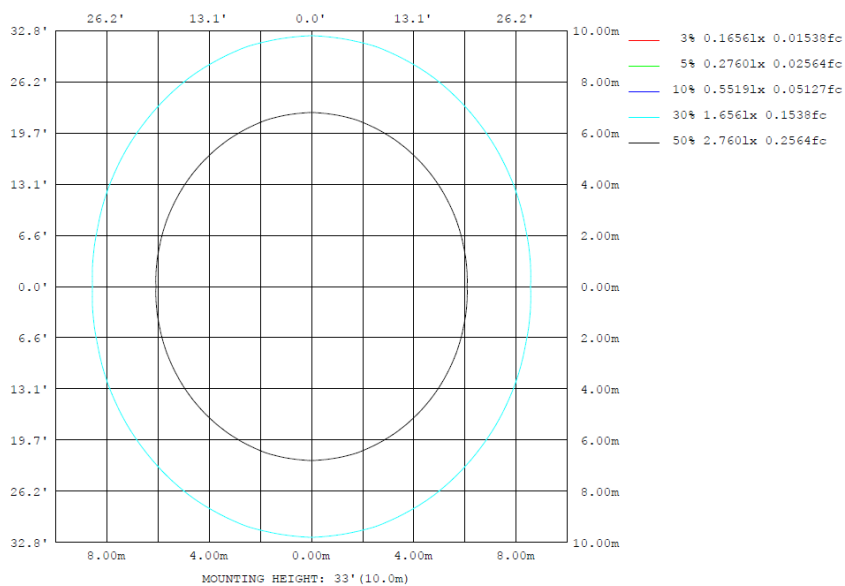
## 4.2 Goniophotometer Test

### 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	ℓlum, lamp
10	540.0	541.2	544.2	541.2	540.0	541.2	544.2	541.2	0- 10	52.15	52.15	2.2,2.2
20	505.7	515.8	527.2	515.8	505.7	515.8	527.2	515.8	10- 20	149.9	202.1	8.51,8.51
30	450.9	476.3	501.8	476.3	450.9	476.3	501.8	476.3	20- 30	229.7	431.8	18.2,18.2
40	381.9	426.1	470.1	426.1	381.9	426.1	470.1	426.1	30- 40	283.3	715.2	30.1,30.1
50	302.8	372.3	433.7	372.3	302.8	372.3	433.7	372.3	40- 50	308.5	1024	43.1,43.1
60	218.3	316.9	391.4	316.9	218.3	316.9	391.4	316.9	50- 60	305.7	1329	56,56
70	131.7	261.1	345.0	261.1	131.7	261.1	345.0	261.1	60- 70	278.8	1608	67.7,67.7
80	50.18	209.5	297.6	209.5	50.18	209.5	297.6	209.5	70- 80	235.3	1843	77.6,77.6
90	3.242	164.3	250.3	164.3	3.242	164.3	250.3	164.3	80- 90	185.9	2029	85.4,85.4
100	2.443	122.2	203.2	122.2	2.443	122.2	203.2	122.2	90-100	141.7	2171	91.4,91.4
110	2.729	81.86	151.6	81.86	2.729	81.86	151.6	81.86	100-110	99.71	2271	95.6,95.6
120	2.898	45.01	101.7	45.01	2.898	45.01	101.7	45.01	110-120	61.47	2332	98.2,98.2
130	2.993	13.15	55.81	13.15	2.993	13.15	55.81	13.15	120-130	30.54	2363	99.5,99.5
140	2.981	1.750	15.51	1.750	2.981	1.750	15.51	1.750	130-140	10.02	2373	99.9,99.9
150	2.989	1.411	0.9577	1.411	2.989	1.411	0.9577	1.411	140-150	1.503	2374	99.9,99.9
160	2.752	1.215	0.9577	1.215	2.752	1.215	0.9577	1.215	150-160	0.7432	2375	100,100
170	3.313	1.226	1.245	1.226	3.313	1.226	1.245	1.226	160-170	0.4281	2375	100,100
180	1.820	1.820	1.820	1.820	1.820	1.820	1.820	1.820	170-180	0.1499	2376	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

	Zonal (lm)		Total (lm)	Percent
0-10	52.15	0-10	52.15	2.20%
10-20	149.93	0-20	202.08	8.51%
20-30	229.71	0-30	431.79	18.18%
30-40	283.35	0-40	715.14	30.11%
40-50	308.53	0-50	1023.67	43.09%
50-60	305.66	0-60	1329.33	55.96%
60-70	278.77	0-70	1608.10	67.70%
70-80	235.29	0-80	1843.39	77.60%
80-90	185.86	0-90	2029.25	85.43%
90-100	141.72	0-100	2170.97	91.39%
100-110	99.71	0-110	2270.68	95.59%
110-120	61.47	0-120	2332.15	98.18%
120-130	30.54	0-130	2362.69	99.47%
130-140	10.02	0-140	2372.71	99.89%
140-150	1.50	0-150	2374.21	99.95%
150-160	0.74	0-160	2374.95	99.98%
160-170	0.43	0-170	2375.38	100.00%
170-180	0.15	0-180	2375.53	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	18.2	21.5	22.8	22.1	23.4	24.1
	4H	16.1	17.3	16.7	17.9	18.6	23.1	24.3	23.7	24.9	25.6
	6H	16.3	17.5	16.9	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	18.3	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	17.3	18.7	17.9	19.3	20.0	21.5	22.9	22.1	23.5	24.2
	3H	18.6	20.0	19.2	20.6	21.2	24.5	25.8	25.1	26.4	27.1
	4H	19.1	20.3	19.7	20.9	21.6	26.1	27.3	26.7	27.9	28.6
	6H	19.3	20.5	19.9	21.1	21.8	27.8	28.9	28.4	29.6	30.3
	8H	19.4	20.5	20.0	21.1	21.9	28.7	29.8	29.3	30.4	31.2
	12H	19.4	20.5	20.0	21.1	21.9	29.7	30.7	30.3	31.4	32.1
4H	2H	18.6	19.9	19.2	20.5	21.2	21.8	23.0	22.4	23.7	24.4
	3H	20.3	21.4	20.9	22.0	22.7	25.1	26.1	25.7	26.8	27.5
	4H	20.9	21.9	21.5	22.5	23.3	26.8	27.8	27.4	28.4	29.2
	6H	21.3	22.1	21.9	22.8	23.6	28.6	29.5	29.3	30.2	31.0
	8H	21.3	22.2	22.0	22.9	23.6	29.6	30.5	30.3	31.2	31.9
	12H	21.4	22.2	22.1	22.9	23.6	30.8	31.5	31.5	32.2	33.0
8H	4H	22.1	22.9	22.7	23.6	24.4	26.9	27.8	27.6	28.4	29.2
	6H	22.7	23.4	23.4	24.2	24.9	29.0	29.7	29.7	30.4	31.2
	8H	22.9	23.6	23.6	24.3	25.1	30.1	30.7	30.8	31.5	32.3
	12H	23.1	23.7	23.8	24.4	25.2	31.4	32.0	32.1	32.7	33.5
12H	4H	22.5	23.2	23.1	23.9	24.7	26.9	27.7	27.6	28.4	29.2
	6H	23.3	23.9	24.0	24.6	25.5	29.0	29.6	29.7	30.3	31.2
	8H	23.6	24.2	24.3	24.9	25.8	30.2	30.8	30.9	31.5	32.3

Maximum UGR = 33.5

## 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	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552	552
5	548	549	549	549	548	549	549	549	548	549	549	549	548	549	549	549	548	549	549
10	540	540	541	541	542	544	544	544	542	541	541	540	540	540	541	541	542	544	544
15	525	526	529	530	533	536	537	536	533	530	529	526	525	526	529	530	533	536	537
20	506	508	511	516	521	526	527	526	521	516	511	508	506	508	511	516	521	526	527
25	481	484	490	498	506	513	516	513	506	498	490	484	481	484	490	498	506	513	516
30	451	456	465	476	488	498	502	498	488	476	465	456	451	456	465	476	488	498	502
35	418	424	437	452	468	481	486	481	468	452	437	424	418	424	437	452	468	481	486
40	382	390	407	426	447	464	470	464	447	426	407	390	382	390	407	426	447	464	470
45	343	353	375	399	425	445	453	445	425	399	375	353	343	353	375	399	425	445	453
50	303	316	341	372	403	425	434	425	403	372	341	316	303	316	341	372	403	425	434
55	261	276	308	345	379	404	413	404	379	345	308	276	261	276	308	345	379	404	413
60	218	236	275	317	355	381	391	381	355	317	275	236	218	236	275	317	355	381	391
65	175	197	242	289	330	358	368	358	330	289	242	197	175	197	242	289	330	358	368
70	132	158	210	261	305	335	345	335	305	261	210	158	132	158	210	261	305	335	345
75	89.6	123	181	235	280	311	322	311	280	235	181	123	89.6	123	181	235	280	311	322
80	50.2	90.8	153	209	255	286	298	286	255	209	153	90.8	50.2	90.8	153	209	255	286	298
85	19.0	64.0	128	185	232	262	274	262	232	185	128	64.0	19.0	64.0	128	185	232	262	274
90	3.24	43.9	107	164	210	240	250	240	210	164	107	43.9	3.24	43.9	107	164	210	240	250
95	2.42	30.9	88.3	143	186	216	228	216	186	143	88.3	30.9	2.42	30.9	88.3	143	186	216	228
100	2.44	19.5	70.6	122	165	191	203	191	165	122	70.6	19.5	2.44	19.5	70.6	122	165	191	203
105	2.74	9.77	54.0	102	141	167	178	167	141	102	54.0	9.77	2.74	9.77	54.0	102	141	167	178
110	2.73	3.94	39.0	81.9	118	142	152	142	118	81.9	39.0	3.94	2.73	3.94	39.0	81.9	118	142	152
115	2.81	3.26	25.1	62.9	96.1	118	126	118	96.1	62.9	25.1	3.26	2.81	3.26	25.1	62.9	96.1	118	126
120	2.90	2.80	12.4	45.0	74.4	94.1	102	94.1	74.4	45.0	12.4	2.80	2.90	2.80	12.4	45.0	74.4	94.1	102
125	2.98	2.46	3.82	28.4	54.0	71.2	78.2	71.2	54.0	28.4	3.82	2.46	2.98	2.46	3.82	28.4	54.0	71.2	78.2
130	2.99	2.63	2.74	13.1	34.7	49.7	55.8	49.7	34.7	13.1	2.74	2.63	2.99	2.63	2.74	13.1	34.7	49.7	55.8
135	2.99	2.60	2.08	2.94	17.0	30.0	34.8	30.0	17.0	2.94	2.08	2.60	2.99	2.60	2.08	2.94	17.0	30.0	34.8
140	2.98	2.58	1.96	1.75	2.96	11.4	15.5	11.4	2.96	1.75	1.96	2.58	2.98	2.58	1.96	1.75	2.96	11.4	15.5
145	3.00	2.75	1.86	1.53	1.30	1.24	1.28	1.24	1.30	1.53	1.86	2.75	3.00	2.75	1.86	1.53	1.30	1.24	1.28
150	2.99	2.71	1.80	1.41	1.13	1.05	0.96	1.05	1.13	1.41	1.80	2.71	2.99	2.71	1.80	1.41	1.13	1.05	0.96
155	2.98	2.63	1.58	1.30	1.13	1.05	0.96	1.05	1.13	1.30	1.58	2.63	2.98	2.63	1.58	1.30	1.13	1.05	0.96
160	2.75	2.26	1.44	1.21	1.13	1.05	0.96	1.05	1.13	1.21	1.44	2.26	2.75	2.26	1.44	1.21	1.13	1.05	0.96
165	2.77	2.32	1.39	1.21	1.13	1.05	0.96	1.05	1.13	1.21	1.39	2.32	2.77	2.32	1.39	1.21	1.13	1.05	0.96
170	3.31	2.38	1.36	1.23	1.22	1.24	1.24	1.22	1.23	1.36	2.38	3.31	2.38	1.36	1.23	1.22	1.24	1.24	1.24
175	3.26	1.94	1.30	1.23	1.23	1.28	1.44	1.28	1.23	1.23	1.30	1.94	3.26	1.94	1.30	1.23	1.23	1.28	1.44
180	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82	1.82

Table--2

UNIT: cd

C (DEG) y (DEG)	285	300	315	330	345														
0	552	552	552	552	552														
5	549	548	549	549	549														
10	544	542	541	541	540														
15	536	533	530	529	526														
20	526	521	516	511	508														
25	513	506	498	490	484														
30	498	488	476	465	456														
35	481	468	452	437	424														
40	464	447	426	407	390														
45	445	425	399	375	353														
50	425	403	372	341	316														
55	404	379	345	308	276														
60	381	355	317	275	236														
65	358	330	289	242	197														
70	335	305	261	210	158														
75	311	280	235	181	123														
80	286	255	209	153	90.8														
85	262	232	185	128	64.0														
90	240	210	164	107	43.9														
95	216	186	143	88.3	30.9														
100	191	165	122	70.6	19.5														
105	167	141	102	54.0	9.77														
110	142	118	81.9	39.0	3.94														
115	118	96.1	62.9	25.1	3.26														
120	94.1	74.4	45.0	12.4	2.80														
125	71.2	54.0	28.4	3.82	2.46														
130	49.7	34.7	13.1	2.74	2.63														
135	30.0	17.0	2.94	2.08	2.60														
140	11.4	2.96	1.75	1.96	2.58														
145	1.24	1.30	1.53	1.86	2.75														
150	1.05	1.13	1.41	1.80	2.71														
155	1.05	1.13	1.30	1.58	2.63														
160	1.05	1.13	1.21	1.44	2.26														
165	1.05	1.13	1.21	1.39	2.32														
170	1.24	1.22	1.23	1.36	2.38														
175	1.28	1.23	1.23	1.30	1.94														
180	1.82	1.82	1.82	1.82	1.82														

## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	STRP4/MVS @15W5000K	<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 <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	0.127	15.1	0.993	6.18
277.0	60	0.061	15.4	0.915	13.61

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