

## 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		557
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	148.5
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		7.5
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	5.25
				277V	17.64
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.989
				277V	0.864
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	3985±275	4051
			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%		55.9%
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		0.031
(Goniophotometer – Section 4.2)			Non-Worst Case		0.058
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		7.5
(Goniophotometer – Section 4.2)			Non-Worst Case		6.9

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-03-29	STRP2/MVS @8W4000K	-	250324005-S1
2	Goniophotometer Test	2025-03-29	STRP2/MVS @8W4000K	-	250324005-S1
3	THD and PF Test	2025-03-29	STRP2/MVS @8W4000K	-	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 @8W4000K, 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 @8W4000K	<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

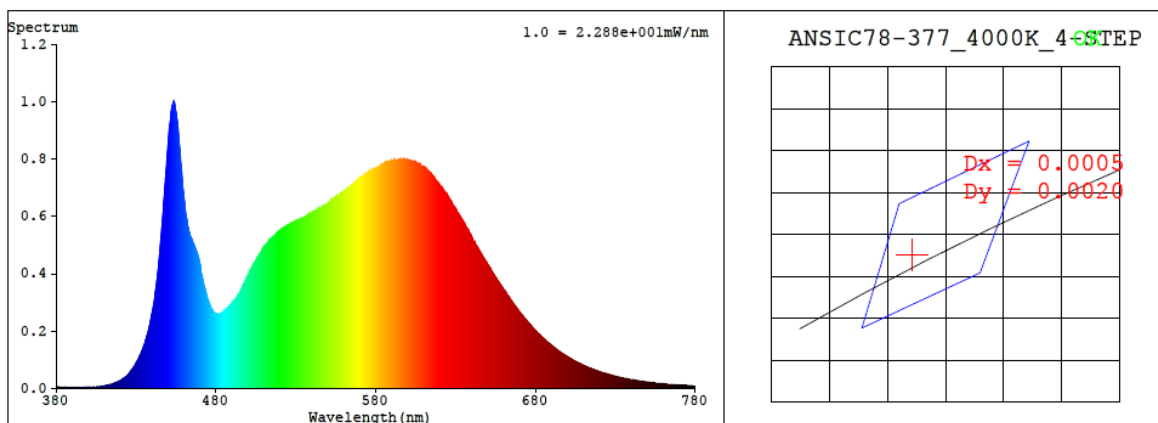
<b>Test Method</b>
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were 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	0.058	6.9	0.989
277.0	60	0.031	7.5	0.864

<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>
4051	85.0	18	0.0008	1.4	85	95	-11%

## 4.1 Integrating Sphere Test



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3787$   $y = 0.3774$  /  $u' = 0.2237$   $v' = 0.5016$  ( $duv = 7.92e-04$ )

CCT= 4051K Prcp WL: Ld=578.4nm Purity=26.9%

Peak WL: Lp=454nm FWHM: =21.3nm Ratio:R=18.4% G=77.7% B=3.9%

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

EEL: 0.09383 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

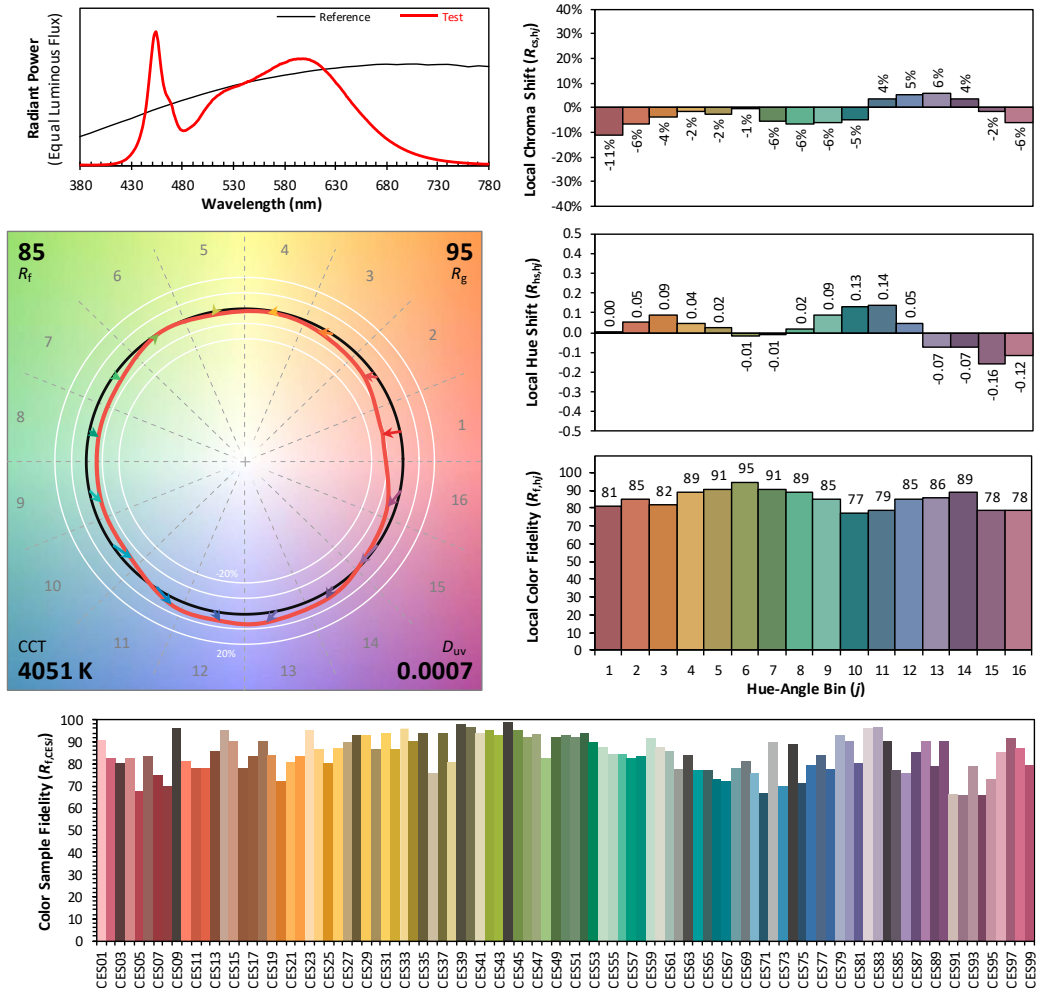
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/4/1

Model: STRP2/MVS @8W4000K



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

$x$  0.3787  
 $y$  0.3772  
 $u'$  0.2238  
 $v'$  0.5015

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	2.90E-06	447	6.27E-04	514	5.20E-04	581	7.69E-04	648	4.51E-04	715	6.89E-05
381	3.60E-06	448	7.02E-04	515	5.24E-04	582	7.73E-04	649	4.42E-04	716	6.61E-05
382	3.10E-06	449	7.80E-04	516	5.29E-04	583	7.75E-04	650	4.32E-04	717	6.38E-05
383	3.20E-06	450	8.52E-04	517	5.34E-04	584	7.82E-04	651	4.24E-04	718	6.23E-05
384	2.90E-06	451	9.20E-04	518	5.42E-04	585	7.84E-04	652	4.15E-04	719	6.01E-05
385	2.70E-06	452	9.70E-04	519	5.44E-04	586	7.87E-04	653	4.05E-04	720	5.82E-05
386	3.10E-06	453	9.91E-04	520	5.51E-04	587	7.88E-04	654	3.96E-04	721	5.65E-05
387	2.50E-06	454	9.99E-04	521	5.56E-04	588	7.91E-04	655	3.87E-04	722	5.44E-05
388	2.30E-06	455	9.64E-04	522	5.58E-04	589	7.92E-04	656	3.79E-04	723	5.29E-05
389	2.60E-06	456	9.24E-04	523	5.63E-04	590	7.94E-04	657	3.70E-04	724	5.14E-05
390	1.90E-06	457	8.53E-04	524	5.65E-04	591	7.93E-04	658	3.62E-04	725	4.99E-05
391	3.00E-06	458	7.87E-04	525	5.69E-04	592	7.95E-04	659	3.54E-04	726	4.81E-05
392	2.60E-06	459	7.19E-04	526	5.71E-04	593	7.96E-04	660	3.45E-04	727	4.65E-05
393	2.70E-06	460	6.68E-04	527	5.75E-04	594	7.97E-04	661	3.39E-04	728	4.49E-05
394	3.30E-06	461	6.14E-04	528	5.80E-04	595	7.96E-04	662	3.29E-04	729	4.35E-05
395	2.70E-06	462	5.80E-04	529	5.80E-04	596	7.96E-04	663	3.20E-04	730	4.17E-05
396	2.90E-06	463	5.51E-04	530	5.85E-04	597	7.97E-04	664	3.12E-04	731	4.06E-05
397	3.60E-06	464	5.30E-04	531	5.86E-04	598	7.97E-04	665	3.04E-04	732	3.94E-05
398	3.50E-06	465	5.17E-04	532	5.89E-04	599	7.97E-04	666	2.97E-04	733	3.81E-05
399	3.80E-06	466	5.02E-04	533	5.91E-04	600	7.96E-04	667	2.88E-04	734	3.71E-05
400	4.10E-06	467	4.89E-04	534	5.93E-04	601	7.97E-04	668	2.81E-04	735	3.59E-05
401	4.50E-06	468	4.73E-04	535	5.95E-04	602	7.94E-04	669	2.74E-04	736	3.48E-05
402	4.70E-06	469	4.57E-04	536	5.99E-04	603	7.92E-04	670	2.66E-04	737	3.34E-05
403	5.00E-06	470	4.35E-04	537	6.03E-04	604	7.91E-04	671	2.60E-04	738	3.25E-05
404	5.20E-06	471	3.98E-04	538	6.06E-04	605	7.90E-04	672	2.52E-04	739	3.12E-05
405	5.40E-06	472	3.74E-04	539	6.08E-04	606	7.84E-04	673	2.45E-04	740	3.06E-05
406	6.00E-06	473	3.50E-04	540	6.11E-04	607	7.82E-04	674	2.39E-04	741	2.98E-05
407	6.40E-06	474	3.28E-04	541	6.17E-04	608	7.79E-04	675	2.32E-04	742	2.86E-05
408	7.30E-06	475	3.07E-04	542	6.18E-04	609	7.74E-04	676	2.25E-04	743	2.78E-05
409	8.00E-06	476	2.92E-04	543	6.21E-04	610	7.73E-04	677	2.20E-04	744	2.70E-05
410	8.80E-06	477	2.79E-04	544	6.29E-04	611	7.65E-04	678	2.12E-04	745	2.59E-05
411	9.70E-06	478	2.68E-04	545	6.27E-04	612	7.64E-04	679	2.06E-04	746	2.51E-05
412	1.08E-05	479	2.64E-04	546	6.30E-04	613	7.57E-04	680	2.01E-04	747	2.40E-05
413	1.20E-05	480	2.60E-04	547	6.34E-04	614	7.51E-04	681	1.95E-04	748	2.35E-05
414	1.36E-05	481	2.58E-04	548	6.38E-04	615	7.45E-04	682	1.90E-04	749	2.28E-05
415	1.51E-05	482	2.60E-04	549	6.40E-04	616	7.39E-04	683	1.84E-04	750	2.20E-05
416	1.72E-05	483	2.60E-04	550	6.45E-04	617	7.32E-04	684	1.79E-04	751	2.13E-05
417	1.96E-05	484	2.65E-04	551	6.49E-04	618	7.23E-04	685	1.74E-04	752	2.06E-05
418	2.14E-05	485	2.70E-04	552	6.54E-04	619	7.17E-04	686	1.69E-04	753	2.00E-05
419	2.46E-05	486	2.74E-04	553	6.60E-04	620	7.09E-04	687	1.64E-04	754	1.98E-05
420	2.68E-05	487	2.80E-04	554	6.63E-04	621	7.01E-04	688	1.59E-04	755	1.86E-05
421	3.04E-05	488	2.86E-04	555	6.67E-04	622	6.95E-04	689	1.55E-04	756	1.81E-05
422	3.42E-05	489	2.91E-04	556	6.71E-04	623	6.87E-04	690	1.50E-04	757	1.79E-05
423	3.85E-05	490	2.97E-04	557	6.75E-04	624	6.78E-04	691	1.46E-04	758	1.73E-05
424	4.24E-05	491	3.02E-04	558	6.81E-04	625	6.72E-04	692	1.41E-04	759	1.65E-05
425	4.79E-05	492	3.10E-04	559	6.83E-04	626	6.61E-04	693	1.37E-04	760	1.60E-05
426	5.52E-05	493	3.18E-04	560	6.87E-04	627	6.53E-04	694	1.32E-04	761	1.53E-05
427	6.20E-05	494	3.27E-04	561	6.91E-04	628	6.43E-04	695	1.28E-04	762	1.50E-05
428	6.95E-05	495	3.36E-04	562	6.97E-04	629	6.34E-04	696	1.25E-04	763	1.47E-05
429	7.74E-05	496	3.46E-04	563	7.00E-04	630	6.24E-04	697	1.21E-04	764	1.42E-05
430	8.75E-05	497	3.58E-04	564	7.04E-04	631	6.13E-04	698	1.18E-04	765	1.39E-05
431	9.68E-05	498	3.70E-04	565	7.08E-04	632	6.07E-04	699	1.13E-04	766	1.33E-05
432	1.09E-04	499	3.82E-04	566	7.13E-04	633	5.97E-04	700	1.10E-04	767	1.30E-05
433	1.20E-04	500	3.93E-04	567	7.17E-04	634	5.89E-04	701	1.06E-04	768	1.24E-05
434	1.34E-04	501	4.06E-04	568	7.24E-04	635	5.79E-04	702	1.04E-04	769	1.20E-05
435	1.49E-04	502	4.16E-04	569	7.28E-04	636	5.69E-04	703	1.00E-04	770	1.17E-05
436	1.67E-04	503	4.26E-04	570	7.33E-04	637	5.59E-04	704	9.71E-05	771	1.13E-05
437	1.87E-04	504	4.37E-04	571	7.36E-04	638	5.50E-04	705	9.43E-05	772	1.10E-05
438	2.09E-04	505	4.47E-04	572	7.40E-04	639	5.39E-04	706	9.11E-05	773	1.08E-05
439	2.36E-04	506	4.57E-04	573	7.44E-04	640	5.30E-04	707	8.84E-05	774	1.05E-05
440	2.64E-04	507	4.64E-04	574	7.48E-04	641	5.16E-04	708	8.55E-05	775	9.70E-06
441	2.95E-04	508	4.73E-04	575	7.53E-04	642	5.09E-04	709	8.22E-05	776	9.80E-06
442	3.38E-04	509	4.86E-04	576	7.59E-04	643	4.97E-04	710	8.05E-05	777	9.30E-06
443	3.76E-04	510	4.93E-04	577	7.58E-04	644	4.89E-04	711	7.81E-05	778	9.40E-06
444	4.28E-04	511	5.00E-04	578	7.63E-04	645	4.79E-04	712	7.49E-05	779	9.40E-06
445	4.88E-04	512	5.05E-04	579	7.64E-04	646	4.68E-04	713	7.28E-05	780	9.40E-06
446	5.55E-04	513	5.13E-04	580	7.67E-04	647	4.59E-04	714	7.05E-05	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

<b>Model No.</b>	STRP2/MVS @8W4000K	<b>Sample ID</b>	250324005-S1
<b>Operate time (Min.)</b>	30	<b>Stabilization time (Min.)</b>	60
<b>Temperature (°C)</b>	24.7	<b>Humidity (%RH)</b>	41.3

<b>Test Method</b>
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using a type C goniophotometer and software.</p> <p>The ambient temperature shall be maintained at <math>25 \pm 1^\circ\text{C}</math>, measured at a point not more than 1 m from the sample and at the same height as the sample.</p> <p>The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within <math>\pm 0.2</math> percent under load.</p> <p>The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at <math>1.0^\circ</math> vertical intervals and <math>15^\circ</math> horizontal intervals.</p>

#### Test Conditions

Condition	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
<b>WORST CASE</b>	277.0	60	0.031	7.5	0.864
<b>NON-WORST CASE</b>	120.0	60	0.058	6.9	0.989

#### Test Result

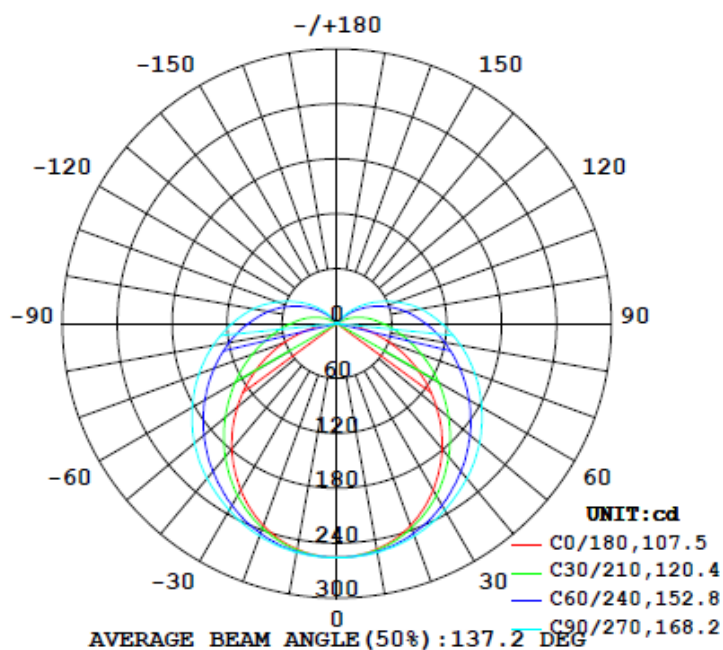
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
1114	557	161.3	161.3	107.6	168.1	148.5

Zonal Lumen Requirement (0°-60°)	UGR	
	Crosswise	Endwise
55.9%	21.4	29.4

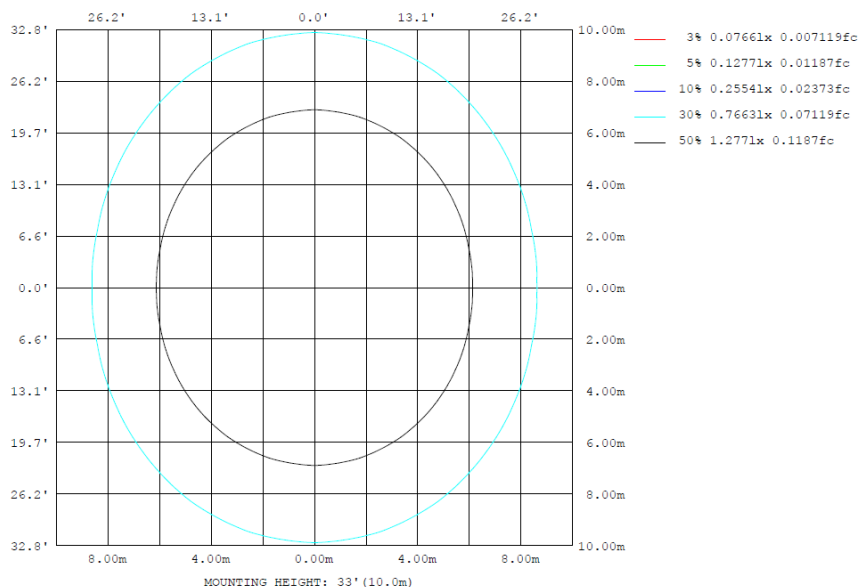
## 4.2 Goniophotometer Test

### 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	zone	total	%lum, lamp
10	250.2	252.2	254.0	252.2	250.2	252.2	254.0	252.2	0- 10	24.24	24.24	2.18, 2.18
20	234.9	241.4	246.9	241.4	234.9	241.4	246.9	241.4	10- 20	69.91	94.15	8.45, 8.45
30	210.2	223.4	235.4	223.4	210.2	223.4	235.4	223.4	20- 30	107.4	201.6	18.1, 18.1
40	178.7	200.4	220.9	200.4	178.7	200.4	220.9	200.4	30- 40	132.8	334.4	30.30
50	142.1	175.1	203.5	175.1	142.1	175.1	203.5	175.1	40- 50	144.8	479.2	43.43
60	102.6	148.9	182.8	148.9	102.6	148.9	182.8	148.9	50- 60	143.4	622.5	55.9, 55.9
70	62.00	122.7	160.4	122.7	62.00	122.7	160.4	122.7	60- 70	130.6	753.1	67.6, 67.6
80	24.55	98.13	137.5	98.13	24.55	98.13	137.5	98.13	70- 80	110.0	863.2	77.5, 77.5
90	2.722	76.30	114.7	76.30	2.722	76.30	114.7	76.30	80- 90	86.87	950.0	85.3, 85.3
100	1.857	57.54	92.95	57.54	1.857	57.54	92.95	57.54	90-100	66.03	1016	91.2, 91.2
110	1.857	38.84	69.27	38.84	1.857	38.84	69.27	38.84	100-110	46.76	1063	95.4, 95.4
120	1.857	22.17	46.35	22.17	1.857	22.17	46.35	22.17	110-120	28.90	1092	98.98
130	1.857	7.696	26.05	7.696	1.857	7.696	26.05	7.696	120-130	14.77	1106	99.3, 99.3
140	1.857	1.638	8.459	1.638	1.857	1.638	8.459	1.638	130-140	5.382	1112	99.8, 99.8
150	1.857	1.114	0.9187	1.114	1.857	1.114	0.9187	1.114	140-150	1.133	1113	99.9, 99.9
160	1.734	0.9781	0.8784	0.9781	1.734	0.9781	0.8784	0.9781	150-160	0.5026	1113	100, 100
170	1.642	0.9221	0.8381	0.9221	1.642	0.9221	0.8381	0.9221	160-170	0.2885	1114	100, 100
180	1.671	0.9115	0.9171	0.9115	1.671	0.9115	0.9171	0.9115	170-180	0.0959	1114	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

	Zonal (lm)		Total (lm)	Percent
0-10	24.24	0-10	24.24	2.18%
10-20	69.91	0-20	94.15	8.45%
20-30	107.40	0-30	201.55	18.10%
30-40	132.82	0-40	334.37	30.02%
40-50	144.79	0-50	479.16	43.02%
50-60	143.36	0-60	622.52	55.89%
60-70	130.60	0-70	753.12	67.62%
70-80	110.03	0-80	863.15	77.50%
80-90	86.87	0-90	950.02	85.30%
90-100	66.03	0-100	1016.05	91.23%
100-110	46.76	0-110	1062.81	95.42%
110-120	28.90	0-120	1091.71	98.02%
120-130	14.77	0-130	1106.48	99.34%
130-140	5.38	0-140	1111.86	99.83%
140-150	1.13	0-150	1112.99	99.93%
150-160	0.50	0-160	1113.49	99.97%
160-170	0.29	0-170	1113.78	100.00%
170-180	0.10	0-180	1113.88	100.01%

## 4.2 Goniophotometer Test

UGR – Uncorrected Table:

**UGR TABLE - UNCORRECTED**

Reflectances											
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30	
Walls	50	30	50	30	30	50	30	50	30	30	
Floor Cavity	20	20	20	20	20	20	20	20	20	20	
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	16.9	18.3	17.5	18.9	19.6	21.0	22.5	21.6	23.1	23.7
	3H	18.3	19.6	18.8	20.2	20.9	24.0	25.4	24.6	25.9	26.6
	4H	18.7	19.9	19.3	20.6	21.3	25.6	26.8	26.2	27.4	28.1
	6H	19.0	20.1	19.6	20.7	21.5	27.2	28.3	27.8	29.0	29.7
	8H	19.0	20.1	19.6	20.8	21.5	28.0	29.2	28.7	29.8	30.5
	12H	19.0	20.1	19.7	20.7	21.5	29.0	30.0	29.6	30.7	31.4
4H	2H	18.2	19.5	18.8	20.1	20.8	21.4	22.6	22.0	23.2	23.9
	3H	19.9	21.0	20.5	21.6	22.4	24.6	25.7	25.2	26.3	27.0
	4H	20.5	21.5	21.1	22.1	22.9	26.3	27.2	26.9	27.9	28.7
	6H	20.9	21.8	21.5	22.4	23.2	28.1	29.0	28.7	29.6	30.4
	8H	21.0	21.8	21.6	22.5	23.3	29.0	29.9	29.7	30.6	31.3
	12H	21.0	21.8	21.7	22.5	23.3	30.1	30.9	30.8	31.6	32.4
8H	4H	21.7	22.5	22.3	23.2	24.0	26.4	27.3	27.1	27.9	28.7
	6H	22.3	23.0	23.0	23.8	24.5	28.4	29.1	29.1	29.8	30.6
	8H	22.6	23.2	23.3	23.9	24.7	29.5	30.1	30.2	30.9	31.7
	12H	22.7	23.3	23.4	24.0	24.8	30.7	31.3	31.4	32.0	32.9
12H	4H	22.0	22.8	22.7	23.5	24.3	26.4	27.2	27.1	27.9	28.7
	6H	22.9	23.5	23.6	24.2	25.1	28.4	29.1	29.1	29.8	30.6
	8H	23.2	23.8	23.9	24.5	25.4	29.6	30.2	30.3	30.9	31.7

Maximum UGR = 32.9

UGR – Corrected Table:

**UGR TABLE - CORRECTED**

Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	17.3	18.7	17.9	19.3	20.0	21.4	22.9	22.0	23.5	24.1
	3H	18.7	20.0	19.2	20.6	21.3	24.4	25.8	25.0	26.3	27.0
	4H	19.1	20.3	19.7	21.0	21.7	26.0	27.2	26.6	27.8	28.5
	6H	19.4	20.5	20.0	21.1	21.9	27.6	28.7	28.2	29.4	30.1
	8H	19.4	20.5	20.0	21.2	21.9	28.4	29.6	29.1	30.2	30.9
	12H	19.4	20.5	20.1	21.1	21.9	29.4	30.4	30.0	31.1	31.8
4H	2H	18.6	19.9	19.2	20.5	21.2	21.8	23.0	22.4	23.6	24.3
	3H	20.3	21.4	20.9	22.0	22.8	25.0	26.1	25.6	26.7	27.4
	4H	20.9	21.9	21.5	22.5	23.3	26.7	27.6	27.3	28.3	29.1
	6H	21.3	22.2	21.9	22.8	23.6	28.5	29.4	29.1	30.0	30.8
	8H	21.4	22.2	22.0	22.9	23.7	29.4	30.3	30.1	31.0	31.7
	12H	21.4	22.2	22.1	22.9	23.7	30.5	31.3	31.2	32.0	32.8
8H	4H	22.1	22.9	22.7	23.6	24.4	26.8	27.7	27.5	28.3	29.1
	6H	22.7	23.4	23.4	24.2	24.9	28.8	29.5	29.5	30.2	31.0
	8H	23.0	23.6	23.7	24.3	25.1	29.9	30.5	30.6	31.3	32.1
	12H	23.1	23.7	23.8	24.4	25.2	31.1	31.7	31.8	32.4	33.3
12H	4H	22.4	23.2	23.1	23.9	24.7	26.8	27.6	27.5	28.3	29.1
	6H	23.3	23.9	24.0	24.6	25.5	28.8	29.5	29.5	30.2	31.0
	8H	23.6	24.2	24.3	24.9	25.8	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)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
γ (DEG)	0	255	255	255	256	255	256	256	255	255	255	255	255	255	255	255	255	255	256
5	254	254	255	255	255	255	255	255	255	255	255	254	254	254	255	255	255	255	255
10	250	251	251	252	253	253	254	253	253	252	251	251	250	251	251	252	253	253	254
15	244	244	246	248	250	251	251	251	250	248	246	244	244	244	246	248	250	251	251
20	235	236	238	241	244	246	247	246	244	241	238	236	235	236	238	241	244	246	247
25	224	225	228	233	238	241	242	241	238	233	228	225	224	225	228	233	238	241	242
30	210	212	217	223	230	234	235	234	230	223	217	212	210	212	217	223	230	234	235
35	195	198	204	212	220	226	228	226	220	212	204	198	195	198	204	212	220	226	228
40	179	182	190	200	211	218	221	218	211	200	190	182	179	182	190	200	211	218	221
45	161	165	175	188	201	209	213	209	201	188	175	165	161	165	175	188	201	209	213
50	142	148	159	175	190	200	204	200	190	175	159	148	142	148	159	175	190	200	204
55	123	129	144	162	178	189	193	189	178	162	144	129	123	129	144	162	178	189	193
60	103	111	128	149	167	178	183	178	167	149	128	111	103	111	128	149	167	178	183
65	82.4	92.4	113	136	155	168	172	168	155	136	113	92.4	82.4	92.4	113	136	155	168	172
70	62.0	74.3	98.5	123	143	156	160	156	143	123	98.5	74.3	62.0	74.3	98.5	123	143	156	160
75	42.3	57.9	84.7	110	131	145	149	145	131	110	84.7	57.9	42.3	57.9	84.7	110	131	145	149
80	24.5	43.1	72.0	98.1	120	133	137	133	120	98.1	72.0	43.1	24.5	43.1	72.0	98.1	120	133	137
85	10.4	31.0	60.7	87.3	108	121	126	121	108	87.3	60.7	31.0	10.4	31.0	60.7	87.3	108	121	126
90	2.72	22.0	50.4	76.3	97.0	110	115	110	97.0	76.3	50.4	22.0	2.72	22.0	50.4	76.3	97.0	110	115
95	1.98	15.5	42.0	66.9	86.4	98.9	104	98.9	86.4	66.9	42.0	15.5	1.98	15.5	42.0	66.9	86.4	98.9	104
100	1.86	10.2	34.0	57.5	76.5	88.0	92.9	88.0	76.5	57.5	34.0	10.2	1.86	10.2	34.0	57.5	76.5	88.0	92.9
105	1.86	5.71	26.5	48.0	65.7	76.9	81.4	76.9	65.7	48.0	26.5	5.71	1.86	5.71	26.5	48.0	65.7	76.9	81.4
110	1.86	2.49	19.5	38.8	55.2	65.2	69.3	65.2	55.2	38.8	19.5	2.49	1.86	2.49	19.5	38.8	55.2	65.2	69.3
115	1.86	2.03	12.9	30.3	44.8	53.9	57.5	53.9	44.8	30.3	12.9	2.03	1.86	2.03	12.9	30.3	44.8	53.9	57.5
120	1.86	2.01	7.16	22.2	34.9	43.1	46.3	43.1	34.9	22.2	7.16	2.01	1.86	2.01	7.16	22.2	34.9	43.1	46.3
125	1.86	1.95	2.49	14.5	25.9	33.2	35.8	33.2	25.9	14.5	2.49	1.95	1.86	1.95	2.49	14.5	25.9	33.2	35.8
130	1.86	1.90	2.01	7.70	17.3	23.8	26.1	23.8	17.3	7.70	2.01	1.90	1.86	1.90	2.01	7.70	17.3	23.8	26.1
135	1.86	1.84	1.83	2.12	9.42	15.0	17.0	15.0	9.42	2.12	1.83	1.84	1.86	1.84	1.83	2.12	9.42	15.0	17.0
140	1.86	1.85	1.68	1.64	2.58	6.78	8.46	6.78	2.58	1.64	1.68	1.85	1.86	1.85	1.68	1.64	2.58	6.78	8.46
145	1.86	1.73	1.64	1.37	1.34	1.19	1.48	1.19	1.34	1.37	1.64	1.73	1.86	1.73	1.64	1.37	1.34	1.19	1.48
150	1.86	1.47	1.10	1.11	1.18	1.00	0.92	1.00	1.18	1.11	1.10	1.47	1.86	1.47	1.10	1.11	1.18	1.00	0.92
155	1.67	1.15	1.03	1.02	0.99	0.90	0.90	0.90	0.99	1.02	1.03	1.15	1.67	1.15	1.03	1.02	0.99	0.90	0.90
160	1.73	1.11	1.05	0.98	0.88	0.84	0.88	0.84	0.88	0.98	1.05	1.11	1.73	1.11	1.05	0.98	0.88	0.84	0.88
165	1.69	1.11	1.07	0.95	0.86	0.84	0.86	0.84	0.86	0.95	1.07	1.11	1.69	1.11	1.07	0.95	0.86	0.84	0.86
170	1.64	1.11	1.09	0.92	0.85	0.83	0.84	0.83	0.85	0.92	1.09	1.11	1.64	1.11	1.09	0.92	0.85	0.83	0.84
175	1.60	1.11	1.10	0.91	0.83	0.82	0.92	0.82	0.83	0.91	1.10	1.11	1.60	1.11	1.10	0.91	0.83	0.82	0.92
180	1.67	1.11	1.28	0.91	0.82	0.82	0.92	0.82	0.82	0.91	1.28	1.11	1.67	1.11	1.28	0.91	0.82	0.82	0.92

Table--2

UNIT: cd

C (DEG)	285	300	315	330	345														
γ (DEG)	0	256	255	256	255	255													
5	255	255	255	255	254														
10	253	253	252	251	251														
15	251	250	248	246	244														
20	246	244	241	238	236														
25	241	238	233	228	225														
30	234	230	223	217	212														
35	226	220	212	204	198														
40	218	211	200	190	182														
45	209	201	188	175	165														
50	200	190	175	159	148														
55	189	178	162	144	129														
60	178	167	149	128	111														
65	168	155	136	113	92.4														
70	156	143	123	98.5	74.3														
75	145	131	110	84.7	57.9														
80	133	120	98.1	72.0	43.1														
85	121	108	87.3	60.7	31.0														
90	110	97.0	76.3	50.4	22.0														
95	98.9	86.4	66.9	42.0	15.5														
100	88.0	76.5	57.5	34.0	10.2														
105	76.9	65.7	48.0	26.5	5.71														
110	65.2	55.2	38.8	19.5	2.49														
115	53.9	44.8	30.3	12.9	2.03														
120	43.1	34.9	22.2	7.16	2.01														
125	33.2	25.9	14.5	2.49	1.95														
130	23.8	17.3	7.70	2.01	1.90														
135	15.0	9.42	2.12	1.83	1.84														
140	6.78	2.58	1.64	1.68	1.85														
145	1.19	1.34	1.37	1.64	1.73														
150	1.00	1.18	1.11	1.10	1.47														
155	0.90	0.99	1.02	1.03	1.15														
160	0.84	0.88	0.98	1.05	1.11														
165	0.84	0.86	0.95	1.07	1.11														
170	0.83	0.85	0.92	1.09	1.11														
175	0.82	0.83	0.91	1.10	1.11														
180	0.82	0.82	0.91	1.28	1.11														

## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	STRP2/MVS @8W4000K	<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	0.058	6.9	0.989	5.25
277.0	60	0.031	7.5	0.864	17.64

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