

## Photometric Test Report

### Relevant Standards

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

Prepared For

**RAB Lighting Inc.**

Address: 408 W 14th St New York, NY 10014

Prepared By

**Dongguan New Testing Centre Co., Ltd.**

Address: 3F No. 1 the 1st North Industry Road, Songshan Lake Science & Technology Park, Dongguan, Guangdong, China

Prepare by:

*Alan Wang*

Engineer: Alan Wang

Date: 2025-01-04

Review by:

*Vincent Yuan*

Technical Lead: Vincent Yuan

Issue Date: 2025-01-04

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		1536
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	160.0
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		19.2
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	8.12
				277V	8.62
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.994
				277V	0.949
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	3985±275	4078
			4 steps	3985±154	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		84.7
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		16
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%		62.7%
Discomfort Glare (UGR) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	29.2
			N/A	<22	
Input Voltage (V)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Cast		120.0
(Goniophotometer – Section 4.2)			Non-Worst Case		277.0
Input Current (A)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		0.161
(Goniophotometer – Section 4.2)			Non-Worst Case		0.072
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		19.2
(Goniophotometer – Section 4.2)			Non-Worst Case		19.0

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-01-02	STRP2H @20W4000K	-	241225004-S1
2	Goniophotometer Test	2025-01-02	STRP2H @20W4000K	-	241225004-S1
3	THD and PF Test	2025-01-02	STRP2H @20W4000K	-	241225004-S1

### Remark (If any):

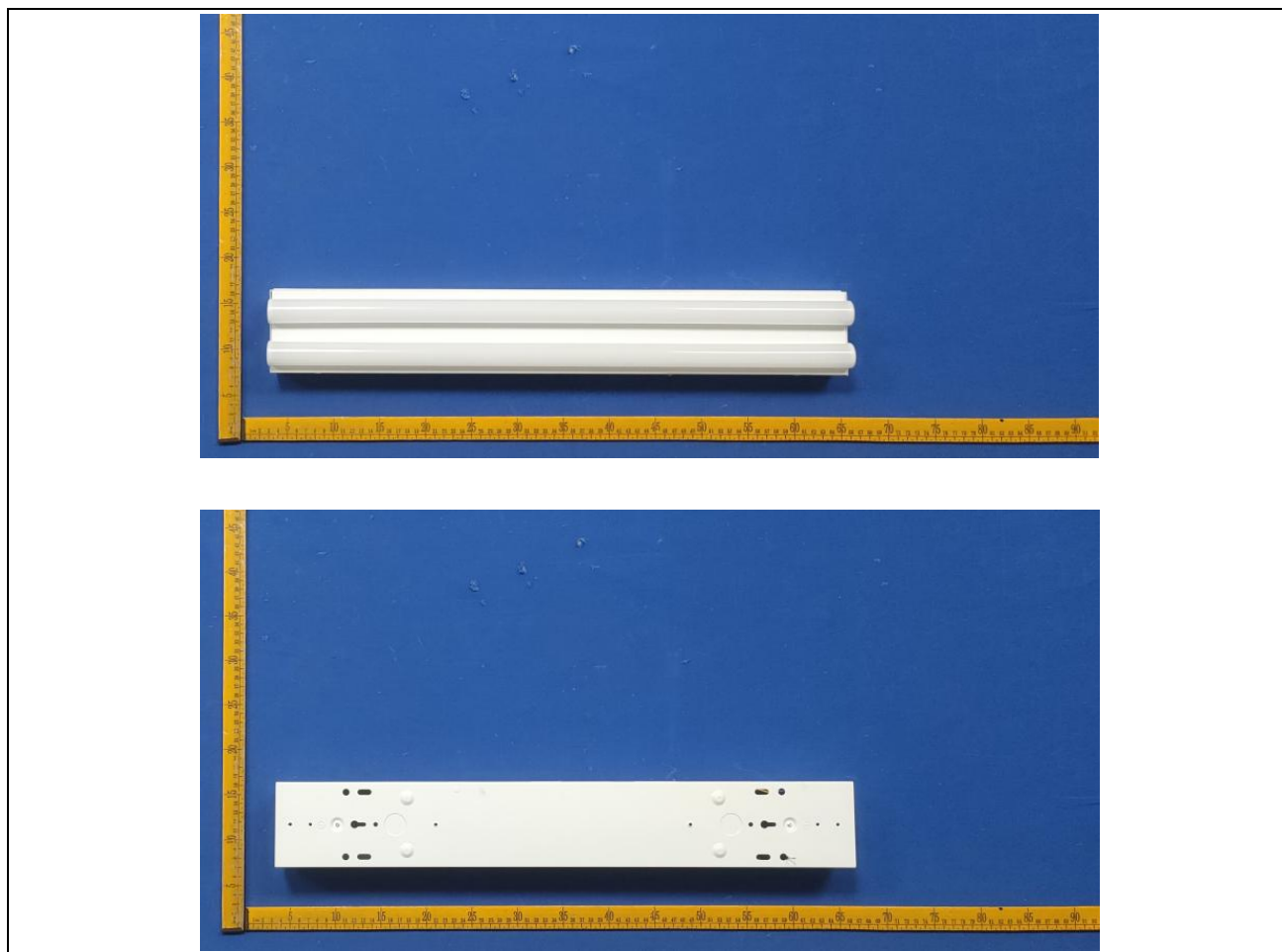
1. The results contained in this report pertain only to the tested samples.
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3. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. Government.

### 3.0 Product Description

Luminaire Description: Model No. STRP2H @20W4000K, 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>	STRP2H @20W4000K	<b>Sample ID</b>	241225004-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

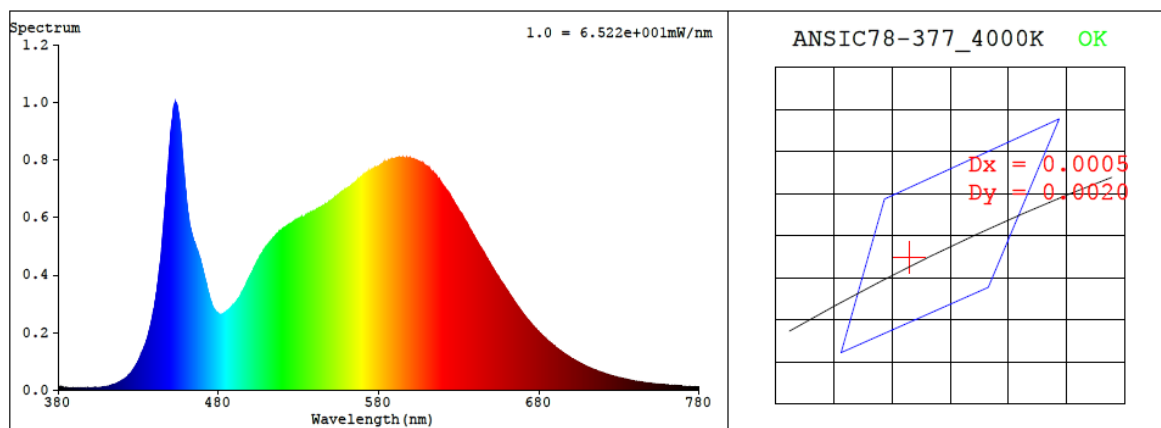
<b>Test Method</b>
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were 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	0.161	19.2	0.994
277.0	60	0.072	19.0	0.949

<b>CCT (K)</b>	<b>CRI</b>	<b>R9</b>	<b>Duv</b>	<b>Rf</b>	<b>Rg</b>	<b>IES Rcs,h1</b>
4078	84.7	16	0.0008	85	95	-11%

## 4.1 Integrating Sphere Test



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3776$   $y = 0.3766$  /  $u' = 0.2233$   $v' = 0.5011$  ( $duv=7.84e-04$ )

CCT= 4078K Prcp WL:  $L_d=578.3nm$  Purity=26.3%

Peak WL:  $L_p=453nm$  FWHM:  $=21.2nm$  Ratio:  $R=18.3\%$   $G=77.8\%$   $B=3.9\%$

Render Index:  $R_a = 84.7$   $AvgR = 78.5$   $TM30:R_f=85$   $R_g=95$

EEL: 0.08489 A++ Highest

R1 =83	R2 =91	R3 =96	R4 =83	R5 =83	R6 =87	R7 =87
R8 =67	R9 =16	R10=78	R11=82	R12=62	R13=86	R14=98
R15=78						

## 4.1 Integrating Sphere Test

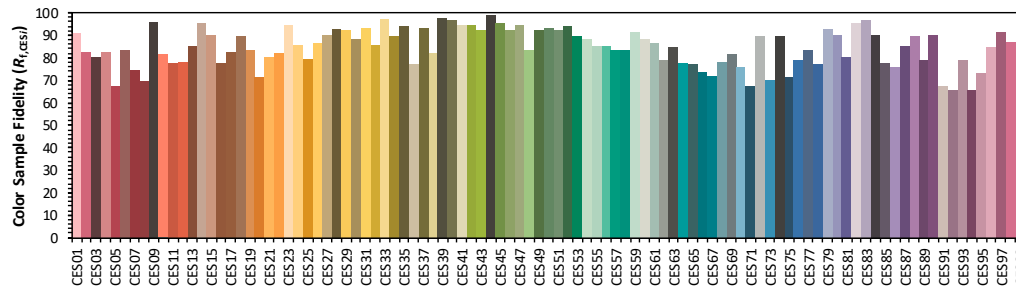
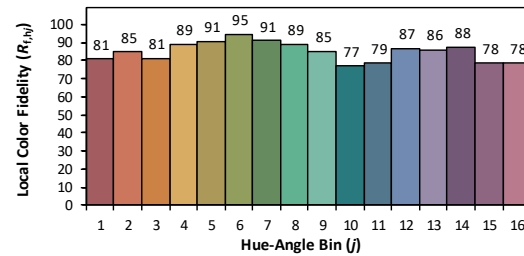
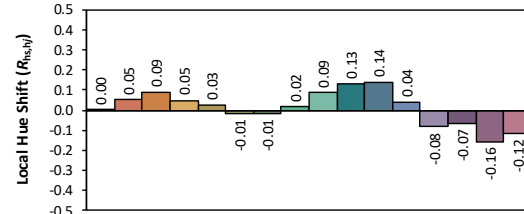
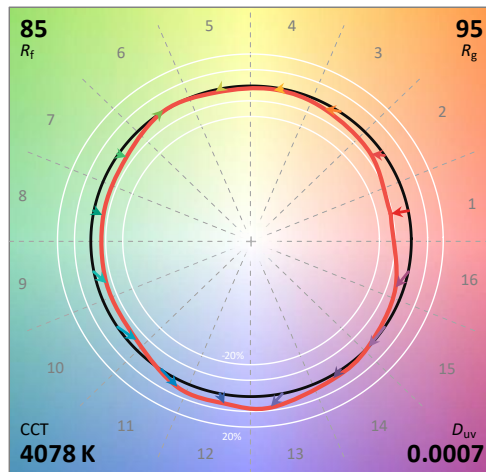
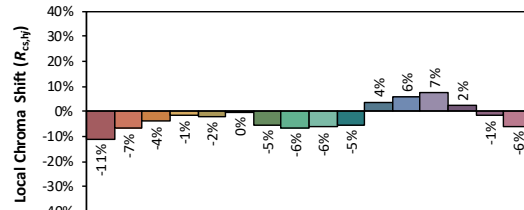
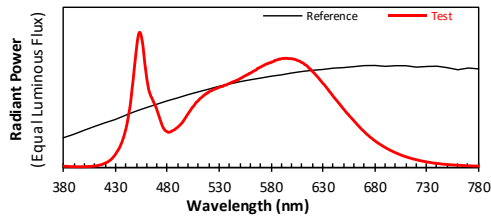
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/1/4

Model: STRP2H @20W4000K



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

$x$  0.3775  
 $y$  0.3765  
 $u'$  0.2233  
 $v'$  0.5010

CIE 13.3-1995  
(CRI)  
 $R_a$  85  
 $R_g$  17

## 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	1.25E-05	447	6.55E-04	514	5.27E-04	581	7.82E-04	648	4.55E-04	715	7.00E-05
381	9.00E-06	448	7.32E-04	515	5.32E-04	582	7.83E-04	649	4.45E-04	716	6.80E-05
382	1.10E-05	449	8.03E-04	516	5.40E-04	583	7.87E-04	650	4.35E-04	717	6.56E-05
383	1.02E-05	450	8.72E-04	517	5.43E-04	584	7.94E-04	651	4.26E-04	718	6.37E-05
384	8.80E-06	451	9.35E-04	518	5.52E-04	585	7.94E-04	652	4.16E-04	719	6.18E-05
385	9.20E-06	452	9.80E-04	519	5.52E-04	586	7.97E-04	653	4.07E-04	720	5.97E-05
386	8.40E-06	453	1.00E-03	520	5.60E-04	587	7.99E-04	654	3.99E-04	721	5.79E-05
387	7.10E-06	454	9.93E-04	521	5.64E-04	588	8.04E-04	655	3.91E-04	722	5.58E-05
388	7.90E-06	455	9.63E-04	522	5.67E-04	589	8.02E-04	656	3.81E-04	723	5.40E-05
389	8.30E-06	456	9.21E-04	523	5.70E-04	590	8.05E-04	657	3.73E-04	724	5.22E-05
390	6.80E-06	457	8.58E-04	524	5.76E-04	591	8.07E-04	658	3.65E-04	725	5.09E-05
391	7.30E-06	458	7.84E-04	525	5.78E-04	592	8.07E-04	659	3.57E-04	726	4.92E-05
392	7.70E-06	459	7.23E-04	526	5.82E-04	593	8.09E-04	660	3.48E-04	727	4.76E-05
393	6.20E-06	460	6.65E-04	527	5.84E-04	594	8.07E-04	661	3.39E-04	728	4.64E-05
394	7.20E-06	461	6.17E-04	528	5.88E-04	595	8.09E-04	662	3.31E-04	729	4.48E-05
395	6.80E-06	462	5.75E-04	529	5.90E-04	596	8.07E-04	663	3.22E-04	730	4.36E-05
396	7.00E-06	463	5.51E-04	530	5.94E-04	597	8.07E-04	664	3.14E-04	731	4.18E-05
397	7.50E-06	464	5.29E-04	531	5.97E-04	598	8.06E-04	665	3.06E-04	732	4.07E-05
398	7.70E-06	465	5.15E-04	532	6.02E-04	599	8.06E-04	666	2.97E-04	733	3.91E-05
399	6.30E-06	466	4.97E-04	533	6.00E-04	600	8.06E-04	667	2.89E-04	734	3.84E-05
400	7.40E-06	467	4.80E-04	534	6.03E-04	601	8.03E-04	668	2.81E-04	735	3.71E-05
401	8.10E-06	468	4.63E-04	535	6.09E-04	602	8.03E-04	669	2.74E-04	736	3.57E-05
402	8.40E-06	469	4.47E-04	536	6.11E-04	603	8.00E-04	670	2.67E-04	737	3.44E-05
403	8.90E-06	470	4.24E-04	537	6.11E-04	604	7.98E-04	671	2.59E-04	738	3.35E-05
404	9.40E-06	471	4.01E-04	538	6.16E-04	605	7.95E-04	672	2.51E-04	739	3.25E-05
405	9.00E-06	472	3.79E-04	539	6.20E-04	606	7.90E-04	673	2.45E-04	740	3.17E-05
406	9.50E-06	473	3.55E-04	540	6.23E-04	607	7.90E-04	674	2.39E-04	741	3.08E-05
407	1.04E-05	474	3.33E-04	541	6.27E-04	608	7.86E-04	675	2.32E-04	742	3.01E-05
408	1.10E-05	475	3.11E-04	542	6.30E-04	609	7.80E-04	676	2.25E-04	743	2.91E-05
409	1.17E-05	476	2.96E-04	543	6.34E-04	610	7.77E-04	677	2.19E-04	744	2.79E-05
410	1.24E-05	477	2.84E-04	544	6.37E-04	611	7.73E-04	678	2.14E-04	745	2.72E-05
411	1.35E-05	478	2.75E-04	545	6.40E-04	612	7.68E-04	679	2.06E-04	746	2.64E-05
412	1.50E-05	479	2.70E-04	546	6.41E-04	613	7.60E-04	680	2.02E-04	747	2.56E-05
413	1.64E-05	480	2.65E-04	547	6.47E-04	614	7.58E-04	681	1.96E-04	748	2.51E-05
414	1.78E-05	481	2.61E-04	548	6.47E-04	615	7.50E-04	682	1.90E-04	749	2.42E-05
415	2.01E-05	482	2.63E-04	549	6.53E-04	616	7.44E-04	683	1.85E-04	750	2.35E-05
416	2.20E-05	483	2.65E-04	550	6.57E-04	617	7.33E-04	684	1.80E-04	751	2.32E-05
417	2.42E-05	484	2.69E-04	551	6.62E-04	618	7.31E-04	685	1.75E-04	752	2.24E-05
418	2.79E-05	485	2.74E-04	552	6.65E-04	619	7.20E-04	686	1.69E-04	753	2.19E-05
419	3.05E-05	486	2.77E-04	553	6.69E-04	620	7.12E-04	687	1.65E-04	754	2.12E-05
420	3.46E-05	487	2.82E-04	554	6.76E-04	621	7.05E-04	688	1.60E-04	755	2.08E-05
421	3.72E-05	488	2.88E-04	555	6.78E-04	622	6.97E-04	689	1.55E-04	756	2.03E-05
422	4.11E-05	489	2.94E-04	556	6.83E-04	623	6.89E-04	690	1.52E-04	757	1.98E-05
423	4.59E-05	490	2.99E-04	557	6.87E-04	624	6.80E-04	691	1.47E-04	758	1.94E-05
424	5.20E-05	491	3.07E-04	558	6.89E-04	625	6.72E-04	692	1.43E-04	759	1.85E-05
425	5.66E-05	492	3.15E-04	559	6.97E-04	626	6.63E-04	693	1.38E-04	760	1.83E-05
426	6.37E-05	493	3.21E-04	560	6.98E-04	627	6.53E-04	694	1.34E-04	761	1.76E-05
427	7.25E-05	494	3.31E-04	561	7.03E-04	628	6.44E-04	695	1.30E-04	762	1.77E-05
428	8.07E-05	495	3.40E-04	562	7.06E-04	629	6.34E-04	696	1.26E-04	763	1.73E-05
429	9.01E-05	496	3.52E-04	563	7.13E-04	630	6.25E-04	697	1.23E-04	764	1.70E-05
430	1.01E-04	497	3.63E-04	564	7.16E-04	631	6.17E-04	698	1.19E-04	765	1.64E-05
431	1.13E-04	498	3.76E-04	565	7.20E-04	632	6.09E-04	699	1.16E-04	766	1.59E-05
432	1.25E-04	499	3.88E-04	566	7.23E-04	633	5.99E-04	700	1.11E-04	767	1.57E-05
433	1.38E-04	500	3.99E-04	567	7.34E-04	634	5.89E-04	701	1.09E-04	768	1.52E-05
434	1.52E-04	501	4.10E-04	568	7.35E-04	635	5.80E-04	702	1.05E-04	769	1.49E-05
435	1.70E-04	502	4.22E-04	569	7.40E-04	636	5.69E-04	703	1.02E-04	770	1.45E-05
436	1.88E-04	503	4.32E-04	570	7.44E-04	637	5.59E-04	704	9.89E-05	771	1.39E-05
437	2.10E-04	504	4.45E-04	571	7.48E-04	638	5.50E-04	705	9.58E-05	772	1.36E-05
438	2.33E-04	505	4.52E-04	572	7.52E-04	639	5.40E-04	706	9.25E-05	773	1.37E-05
439	2.61E-04	506	4.63E-04	573	7.55E-04	640	5.29E-04	707	8.99E-05	774	1.33E-05
440	2.88E-04	507	4.73E-04	574	7.60E-04	641	5.19E-04	708	8.65E-05	775	1.28E-05
441	3.25E-04	508	4.84E-04	575	7.64E-04	642	5.10E-04	709	8.45E-05	776	1.27E-05
442	3.66E-04	509	4.90E-04	576	7.68E-04	643	5.01E-04	710	8.16E-05	777	1.25E-05
443	4.12E-04	510	4.98E-04	577	7.69E-04	644	4.93E-04	711	7.91E-05	778	1.22E-05
444	4.56E-04	511	5.06E-04	578	7.74E-04	645	4.82E-04	712	7.65E-05	779	1.23E-05
445	5.20E-04	512	5.14E-04	579	7.75E-04	646	4.74E-04	713	7.44E-05	780	1.24E-05
446	5.91E-04	513	5.18E-04	580	7.77E-04	647	4.63E-04	714	7.21E-05	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

<b>Model No.</b>	STRP2H @20W4000K	<b>Sample ID</b>	241225004-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>	120.0	60	0.161	19.2	0.994
<b>NON-WORST CASE</b>	277.0	60	0.072	19.0	0.949

### Test Result

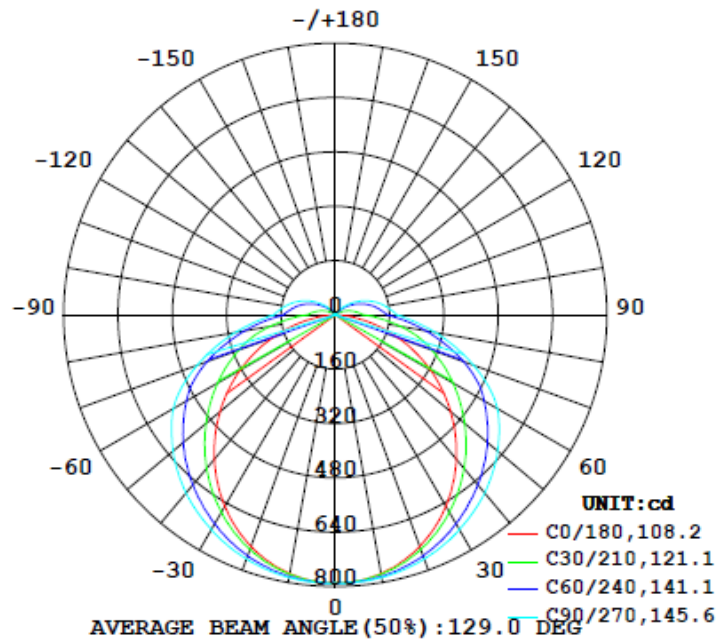
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
3071	1536	160.5	160.5	108.1	145.5	160.0

Zonal Lumen Requirement (0°-60°)	UGR	
	Crosswise	Endwise
62.7%	23.8	29.2

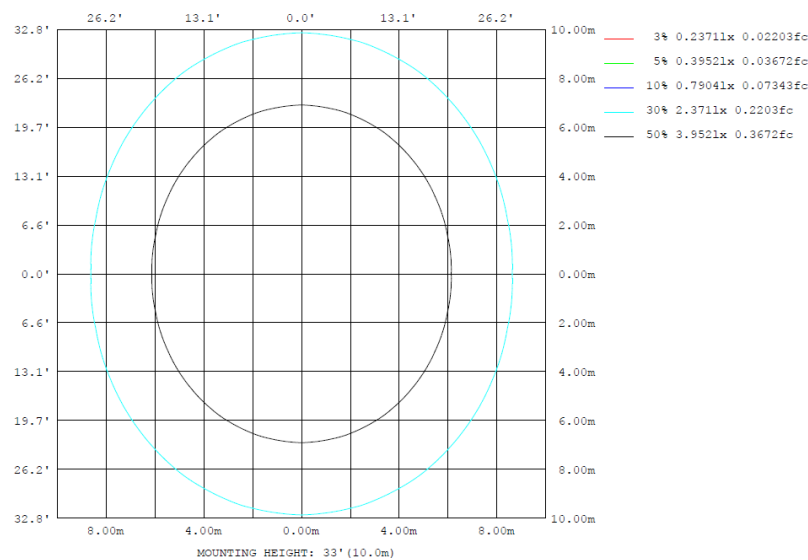
## 4.2 Goniophotometer Test

### Lighting Distribution Curve

#### LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



### Isolux Plot



## 4.2 Goniophotometer Test

### Zonal Lumen Summary

ZONAL FLUX DIAGRAM:

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lum, lamp
10	774.4	778.7	785.0	778.7	774.4	778.7	785.0	778.7	0- 10	74.92	74.92	2.44, 2.44
20	725.7	744.9	764.9	744.9	725.7	744.9	764.9	744.9	10- 20	216.1	291.0	9.48, 9.48
30	651.3	690.9	730.3	690.9	651.3	690.9	730.3	690.9	20- 30	332.3	623.3	20.3, 20.3
40	554.6	620.3	684.4	620.3	554.6	620.3	684.4	620.3	30- 40	411.7	1035	33.7, 33.7
50	443.1	542.6	623.9	542.6	443.1	542.6	623.9	542.6	40- 50	448.5	1483	48.3, 48.3
60	323.1	456.6	550.9	456.6	323.1	456.6	550.9	456.6	50- 60	442.0	1926	62.7, 62.7
70	196.5	362.8	433.2	362.8	196.5	362.8	433.2	362.8	60- 70	392.3	2318	75.5, 75.5
80	76.49	237.9	299.3	237.9	76.49	237.9	299.3	237.9	70- 80	296.0	2614	85.1, 85.1
90	5.261	123.3	181.8	123.3	5.261	123.3	181.8	123.3	80- 90	176.6	2790	90.9, 90.9
100	4.848	95.85	150.0	95.85	4.848	95.85	150.0	95.85	90-100	107.3	2898	94.4, 94.4
110	4.809	67.28	116.8	67.28	4.809	67.28	116.8	67.28	100-110	78.60	2976	96.9, 96.9
120	5.157	39.97	80.95	39.97	5.157	39.97	80.95	39.97	110-120	50.74	3027	98.6, 98.6
130	5.681	16.57	46.98	16.57	5.681	16.57	46.98	16.57	120-130	27.32	3054	99.5, 99.5
140	5.881	3.602	17.78	3.602	5.881	3.602	17.78	3.602	130-140	11.12	3066	99.8, 99.8
150	5.907	3.083	1.854	3.083	5.907	3.083	1.854	3.083	140-150	2.961	3069	99.9, 99.9
160	5.443	2.676	1.854	2.676	5.443	2.676	1.854	2.676	150-160	1.457	3070	100, 100
170	6.363	2.740	1.948	2.740	6.363	2.740	1.948	2.740	160-170	0.8645	3071	100, 100
180	6.283	2.862	2.596	2.862	6.283	2.862	2.596	2.862	170-180	0.3311	3071	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

	Zonal (lm)		Total (lm)	Percent
0-10	74.92	0-10	74.92	2.44%
10-20	216.07	0-20	290.99	9.48%
20-30	332.29	0-30	623.28	20.30%
30-40	411.69	0-40	1034.97	33.70%
40-50	448.52	0-50	1483.49	48.31%
50-60	442.03	0-60	1925.52	62.70%
60-70	392.33	0-70	2317.85	75.48%
70-80	296.00	0-80	2613.85	85.12%
80-90	176.62	0-90	2790.47	90.87%
90-100	107.30	0-100	2897.77	94.36%
100-110	78.60	0-110	2976.37	96.92%
110-120	50.74	0-120	3027.11	98.58%
120-130	27.32	0-130	3054.43	99.47%
130-140	11.12	0-140	3065.55	99.83%
140-150	2.96	0-150	3068.51	99.92%
150-160	1.46	0-160	3069.97	99.97%
160-170	0.86	0-170	3070.83	100.00%
170-180	0.33	0-180	3071.16	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										
X=2H		UGR Viewed Crosswise					UGR Viewed Endwise			
Y=2H		15.4	17.0	15.9	17.5	18.0	18.6	20.1	19.1	20.6
3H		17.0	18.4	17.5	18.9	19.5	21.2	22.6	21.7	23.1
4H		17.5	18.9	18.1	19.4	20.0	22.4	23.8	23.0	24.3
6H		17.9	19.1	18.4	19.6	20.2	23.6	24.8	24.1	25.4
8H		17.9	19.1	18.5	19.7	20.3	24.2	25.3	24.7	25.9
12H		18.0	19.1	18.5	19.7	20.3	24.8	25.9	25.3	26.4
4H		2H	16.7	18.0	17.2	18.6	19.1	20.4	19.6	20.9
		3H	18.6	19.7	19.1	20.3	20.9	21.9	23.1	22.5
		4H	19.3	20.3	19.9	20.9	21.5	23.3	24.3	23.9
		6H	19.8	20.7	20.3	21.3	21.9	24.7	25.6	25.2
		8H	19.9	20.8	20.5	21.4	22.0	25.3	26.2	25.9
		12H	20.0	20.8	20.6	21.4	22.0	26.0	26.8	26.6
8H		4H	20.2	21.1	20.8	21.7	22.3	23.5	24.4	24.1
		6H	20.9	21.7	21.6	22.3	23.0	25.1	25.8	25.7
		8H	21.2	21.9	21.8	22.5	23.2	25.9	26.5	26.5
		12H	21.4	22.0	22.0	22.6	23.3	26.8	27.3	27.4
12H		4H	20.4	21.2	21.0	21.9	22.5	23.6	24.4	24.2
		6H	21.3	22.0	21.9	22.6	23.3	25.1	25.8	25.8
		8H	21.7	22.3	22.3	22.9	23.6	26.0	26.6	26.6

Maximum UGR = 28.7

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										
X=2H		UGR Viewed Crosswise					UGR Viewed Endwise			
Y=2H		19.3	20.9	19.8	21.4	21.9	22.5	24.0	23.0	24.5
3H		20.9	22.3	21.4	22.8	23.4	25.1	26.5	25.6	27.0
4H		21.4	22.8	22.0	23.3	23.9	26.3	27.7	26.9	28.2
6H		21.8	23.0	22.3	23.5	24.1	27.5	28.7	28.0	29.3
8H		21.8	23.0	22.4	23.6	24.2	28.1	29.2	28.6	29.8
12H		21.9	23.0	22.4	23.6	24.2	28.7	29.8	29.2	30.3
4H		2H	20.6	21.9	21.1	22.5	23.0	23.0	24.3	23.5
		3H	22.5	23.6	23.0	24.2	24.8	25.8	27.0	26.4
		4H	23.2	24.2	23.8	24.8	25.4	27.2	28.2	27.8
		6H	23.7	24.6	24.2	25.2	25.8	28.6	29.5	29.1
		8H	23.8	24.7	24.4	25.3	25.9	29.2	30.1	29.8
		12H	23.9	24.7	24.5	25.3	25.9	29.9	30.7	30.5
8H		4H	24.1	25.0	24.7	25.6	26.2	27.4	28.3	28.0
		6H	24.8	25.6	25.5	26.2	26.9	29.0	29.7	29.6
		8H	25.1	25.8	25.7	26.4	27.1	29.8	30.4	30.4
		12H	25.3	25.9	25.9	26.5	27.2	30.7	31.2	31.3
12H		4H	24.3	25.1	24.9	25.8	26.4	27.5	28.3	28.1
		6H	25.2	25.9	25.8	26.5	27.2	29.0	29.7	29.7
		8H	25.6	26.2	26.2	26.8	27.5	29.9	30.5	30.5

Maximum UGR = 32.6

## 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	790	791	789	791	790	791	790	791	790	791	789	791	790	791	789	791	790	791	790
5	786	787	786	788	789	789	789	789	788	786	787	786	787	786	788	789	789	789	789
10	774	775	776	779	782	784	785	784	782	779	776	775	774	775	776	779	782	784	785
15	753	755	758	765	770	775	777	775	770	765	758	755	753	755	758	765	770	775	777
20	726	729	735	745	755	762	765	762	755	745	735	729	726	729	735	745	755	762	765
25	692	695	707	720	735	745	749	745	735	720	707	695	692	695	707	720	735	745	749
30	651	657	671	691	710	725	730	725	710	691	671	657	651	657	671	691	710	725	730
35	605	613	632	658	683	701	709	701	683	658	632	613	605	613	632	658	683	701	709
40	555	564	590	620	653	675	684	675	653	620	590	564	555	564	590	620	653	675	684
45	501	513	545	582	620	646	656	646	620	582	545	513	501	513	545	582	620	646	656
50	443	460	497	543	585	613	624	613	585	543	497	460	443	460	497	543	585	613	624
55	384	403	449	501	546	578	589	578	546	501	449	403	384	403	449	501	546	578	589
60	323	347	400	457	506	540	551	540	506	457	400	347	323	347	400	457	506	540	551
65	260	290	351	412	461	488	497	488	461	412	351	290	260	290	351	412	461	488	497
70	196	235	302	363	402	425	433	425	402	363	302	235	196	235	302	363	402	425	433
75	135	182	254	302	336	359	366	359	336	302	254	182	135	182	254	302	336	359	366
80	76.5	132	195	238	271	293	299	293	271	238	195	132	76.5	132	195	238	271	293	299
85	28.9	83.7	135	177	209	229	236	229	209	177	135	83.7	28.9	83.7	135	177	209	229	236
90	5.26	38.9	83.8	123	155	175	182	175	155	123	83.8	38.9	5.26	38.9	83.8	123	155	175	182
95	4.87	28.4	70.6	108	138	158	166	158	138	108	70.6	28.4	4.87	28.4	70.6	108	138	158	166
100	4.85	19.3	58.6	95.8	124	142	150	142	124	95.8	58.6	19.3	4.85	19.3	58.6	95.8	124	142	150
105	4.83	11.7	46.5	81.9	110	126	134	126	110	81.9	46.5	11.7	4.83	11.7	46.5	81.9	110	126	134
110	4.81	5.80	34.9	67.3	93.6	110	117	110	93.6	67.3	34.9	5.80	4.81	5.80	34.9	67.3	93.6	110	117
115	4.79	5.24	24.6	53.2	77.6	92.9	98.9	92.9	77.6	53.2	24.6	5.24	4.79	5.24	24.6	53.2	77.6	92.9	98.9
120	5.16	5.12	15.1	40.0	61.9	75.6	80.9	75.6	61.9	40.0	15.1	5.12	5.16	5.12	15.1	40.0	61.9	75.6	80.9
125	5.61	5.03	6.69	27.8	46.7	59.1	63.5	59.1	46.7	27.8	6.69	5.03	5.61	5.03	6.69	27.8	46.7	59.1	63.5
130	5.68	5.01	4.55	16.6	32.6	43.4	47.0	43.4	32.6	16.6	4.55	5.01	5.68	5.01	4.55	16.6	32.6	43.4	47.0
135	5.80	4.99	4.44	6.42	19.7	28.9	32.0	28.9	19.7	6.42	4.44	4.99	5.80	4.99	4.44	6.42	19.7	28.9	32.0
140	5.88	4.97	4.26	3.60	7.82	15.4	17.8	15.4	7.82	3.60	4.26	4.97	5.88	4.97	4.26	3.60	7.82	15.4	17.8
145	5.97	4.95	3.98	3.37	2.89	3.43	5.08	3.43	2.89	3.37	3.98	4.95	5.97	4.95	3.98	3.37	2.89	3.43	5.08
150	5.91	4.79	3.70	3.08	2.61	2.16	1.85	2.16	2.61	3.08	3.70	4.79	5.91	4.79	3.70	3.08	2.61	2.16	1.85
155	5.68	4.38	3.24	2.80	2.43	2.03	1.85	2.03	2.43	2.80	3.24	4.38	5.68	4.38	3.24	2.80	2.43	2.03	1.85
160	5.44	4.09	2.95	2.68	2.40	2.00	1.85	2.00	2.40	2.68	2.95	4.09	5.44	4.09	2.95	2.68	2.40	2.00	1.85
165	6.00	4.10	3.09	2.59	2.40	2.03	1.85	2.03	2.40	2.59	3.09	4.10	6.00	4.10	3.09	2.59	2.40	2.03	1.85
170	6.36	4.84	3.43	2.74	2.52	2.42	1.95	2.42	2.52	2.74	3.43	4.84	6.36	4.84	3.43	2.74	2.52	2.42	1.95
175	6.31	4.91	3.76	2.86	2.57	2.65	2.59	2.65	2.57	2.86	3.76	4.91	6.31	4.91	3.76	2.86	2.57	2.65	2.59
180	6.28	4.94	3.89	2.86	2.68	2.59	2.60	2.59	2.68	2.86	3.89	4.94	6.28	4.94	3.89	2.86	2.68	2.59	2.60

Table--2

UNIT: cd

C (DEG) Y (DEG)	285	300	315	330	345														
0	791	790	791	789	791														
5	789	789	788	786	787														
10	784	782	779	776	775														
15	775	770	765	758	755														
20	762	755	745	735	729														
25	745	735	720	707	695														
30	725	710	691	671	657														
35	701	683	658	632	613														
40	675	653	620	590	564														
45	646	620	582	545	513														
50	613	585	543	497	460														
55	578	546	501	449	403														
60	540	506	457	400	347														
65	488	461	412	351	290														
70	425	402	363	302	235														
75	359	336	302	254	182														
80	293	271	238	195	132														
85	229	209	177	135	83.7														
90	175	155	123	83.8	38.9														
95	158	138	108	70.6	28.4														
100	142	124	95.8	58.6	19.3														
105	126	110	81.9	46.5	11.7														
110	110	93.6	67.3	34.9	5.80														
115	92.9	77.6	53.2	24.6	5.24														
120	75.6	61.9	40.0	15.1	5.12														
125	59.1	46.7	27.8	6.69	5.03														
130	43.4	32.6	16.6	4.55	5.01														
135	28.9	19.7	6.42	4.44	4.99														
140	15.4	7.82	3.60	4.26	4.97														
145	3.43	2.89	3.37	3.98	4.95														
150	2.16	2.61	3.08	3.70	4.79														
155	2.03	2.43	2.80	3.24	4.38														
160	2.00	2.40	2.68	2.95	4.09														
165	2.03	2.40	2.59	3.09	4.10														
170	2.42	2.52	2.74	3.43	4.84														
175	2.65	2.57	2.86	3.76	4.91														
180	2.59	2.68	2.86	3.89	4.94														

## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	STRP2H @20W4000K	<b>Sample ID</b>	241225004-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	0.161	19.2	0.994	8.12
277.0	60	0.072	19.0	0.949	8.62

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