

## 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		1116
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	156.0
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		28.6
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	7.83
				277V	10.38
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.993
				277V	0.920
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	5029±283	4922
			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		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%		63.3%
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		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		0.240
(Goniophotometer – Section 4.2)			Non-Worst Case		0.111
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		28.6
(Goniophotometer – Section 4.2)			Non-Worst Case		28.2

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-01-05	STRP4H @30W5000K	-	241225006-S1
2	Goniophotometer Test	2025-01-05	STRP4H @30W5000K	-	241225006-S1
3	THD and PF Test	2025-01-05	STRP4H @30W5000K	-	241225006-S1

### Remark (If any):

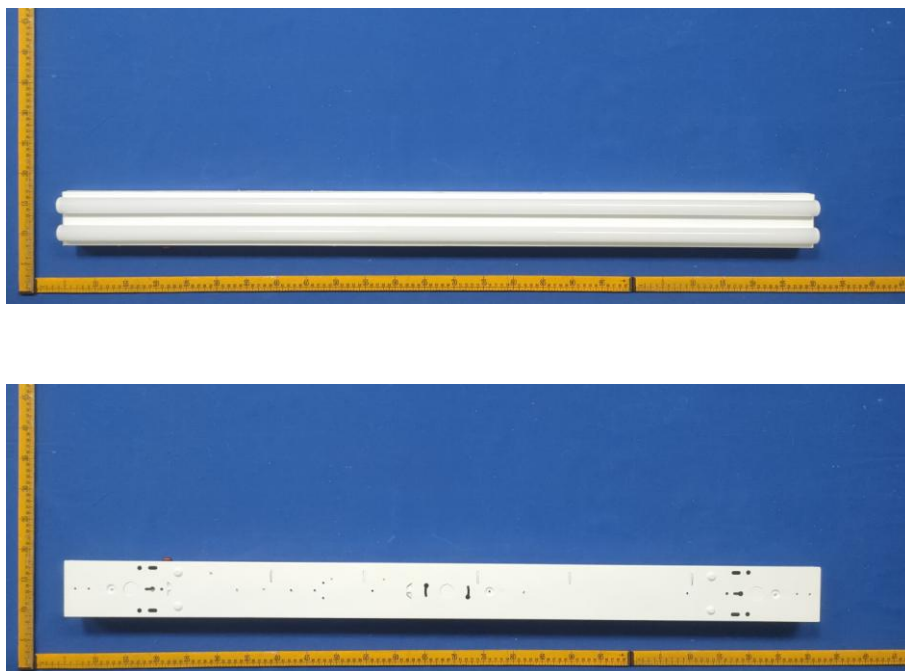
1. The results contained in this report pertain only to the tested samples.
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3. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. Government.

### 3.0 Product Description

Luminaire Description: Model No. STRP4H @30W5000K, 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>	STRP4H @30W5000K	<b>Sample ID</b>	241225006-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

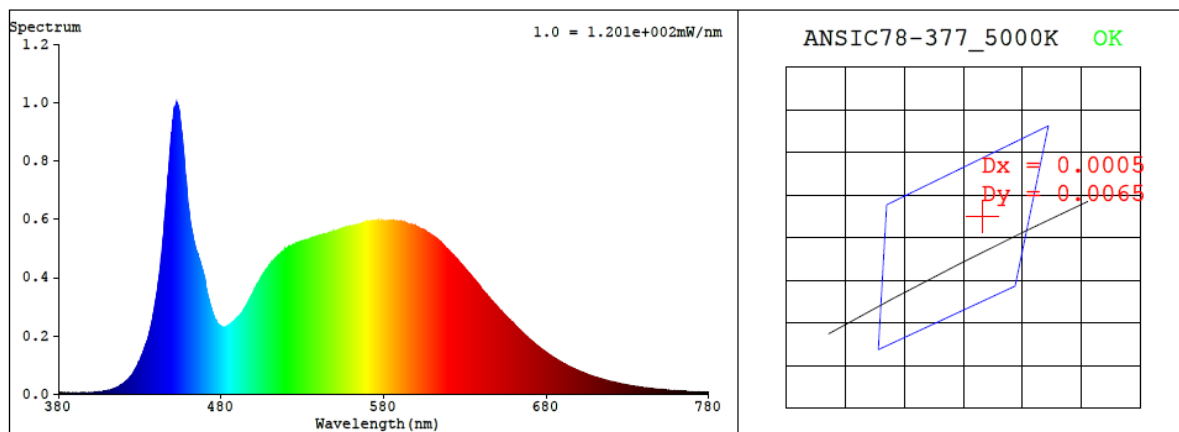
<b>Test Method</b>
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were 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	0.240	28.6	0.993
277.0	60	0.111	28.2	0.920

<b>CCT (K)</b>	<b>CRI</b>	<b>R9</b>	<b>Duv</b>	<b>Rf</b>	<b>Rg</b>	<b>IES Rcs,h1</b>
4922	83.7	14	0.0030	84	96	-12%

#### 4.1 Integrating Sphere Test



#### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3479$   $y = 0.3599$  /  $u' = 0.2101$   $v' = 0.4891$  ( $duv=3.01e-03$ )

CCT= 4922K Prcp WL: Ld=571.0nm Purity=12.4%

Peak WL: Lp=453nm FWHM: =20.8nm Ratio:R=15.9% G=79.6% B=4.5%

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

EEL: 0.08595 A++ Highest

R1 =82 R2 =89 R3 =93 R4 =82 R5 =81 R6 =84 R7 =89  
R8 =69 R9 =14 R10=73 R11=81 R12=55 R13=84 R14=97 R15=77

CIE 13.3-1995	
(CRI)	
$R_a$	84
$R_9$	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	6.50E-06	447	7.27E-04	514	4.69E-04	581	5.94E-04	648	3.11E-04	715	5.05E-05
381	6.50E-06	448	7.87E-04	515	4.75E-04	582	5.93E-04	649	3.05E-04	716	4.92E-05
382	4.60E-06	449	8.63E-04	516	4.80E-04	583	5.95E-04	650	2.99E-04	717	4.75E-05
383	4.30E-06	450	9.22E-04	517	4.86E-04	584	5.95E-04	651	2.93E-04	718	4.60E-05
384	4.90E-06	451	9.77E-04	518	4.89E-04	585	5.95E-04	652	2.86E-04	719	4.44E-05
385	3.60E-06	452	9.89E-04	519	4.97E-04	586	5.95E-04	653	2.82E-04	720	4.32E-05
386	4.80E-06	453	9.97E-04	520	4.99E-04	587	5.94E-04	654	2.74E-04	721	4.21E-05
387	4.40E-06	454	9.79E-04	521	5.02E-04	588	5.92E-04	655	2.69E-04	722	4.07E-05
388	3.70E-06	455	9.32E-04	522	5.06E-04	589	5.91E-04	656	2.63E-04	723	3.97E-05
389	3.90E-06	456	8.87E-04	523	5.06E-04	590	5.93E-04	657	2.57E-04	724	3.84E-05
390	3.80E-06	457	8.25E-04	524	5.11E-04	591	5.92E-04	658	2.52E-04	725	3.70E-05
391	3.90E-06	458	7.53E-04	525	5.12E-04	592	5.89E-04	659	2.46E-04	726	3.57E-05
392	4.50E-06	459	6.98E-04	526	5.17E-04	593	5.89E-04	660	2.41E-04	727	3.47E-05
393	3.50E-06	460	6.39E-04	527	5.19E-04	594	5.86E-04	661	2.35E-04	728	3.36E-05
394	4.30E-06	461	5.94E-04	528	5.19E-04	595	5.83E-04	662	2.30E-04	729	3.24E-05
395	5.10E-06	462	5.62E-04	529	5.23E-04	596	5.80E-04	663	2.24E-04	730	3.14E-05
396	5.00E-06	463	5.26E-04	530	5.26E-04	597	5.81E-04	664	2.19E-04	731	3.07E-05
397	4.30E-06	464	5.08E-04	531	5.26E-04	598	5.79E-04	665	2.14E-04	732	2.96E-05
398	5.00E-06	465	4.91E-04	532	5.28E-04	599	5.79E-04	666	2.07E-04	733	2.86E-05
399	5.40E-06	466	4.70E-04	533	5.29E-04	600	5.75E-04	667	2.02E-04	734	2.76E-05
400	5.50E-06	467	4.57E-04	534	5.30E-04	601	5.73E-04	668	1.98E-04	735	2.68E-05
401	6.30E-06	468	4.34E-04	535	5.34E-04	602	5.70E-04	669	1.92E-04	736	2.60E-05
402	6.60E-06	469	4.16E-04	536	5.35E-04	603	5.67E-04	670	1.87E-04	737	2.54E-05
403	7.10E-06	470	3.95E-04	537	5.36E-04	604	5.66E-04	671	1.83E-04	738	2.44E-05
404	7.10E-06	471	3.58E-04	538	5.40E-04	605	5.62E-04	672	1.78E-04	739	2.39E-05
405	8.40E-06	472	3.34E-04	539	5.41E-04	606	5.59E-04	673	1.73E-04	740	2.28E-05
406	8.40E-06	473	3.11E-04	540	5.43E-04	607	5.53E-04	674	1.68E-04	741	2.21E-05
407	8.90E-06	474	2.92E-04	541	5.44E-04	608	5.51E-04	675	1.64E-04	742	2.14E-05
408	1.05E-05	475	2.74E-04	542	5.44E-04	609	5.46E-04	676	1.59E-04	743	2.10E-05
409	1.11E-05	476	2.60E-04	543	5.49E-04	610	5.43E-04	677	1.55E-04	744	2.04E-05
410	1.23E-05	477	2.52E-04	544	5.48E-04	611	5.40E-04	678	1.51E-04	745	1.97E-05
411	1.42E-05	478	2.40E-04	545	5.50E-04	612	5.36E-04	679	1.47E-04	746	1.91E-05
412	1.47E-05	479	2.37E-04	546	5.53E-04	613	5.32E-04	680	1.43E-04	747	1.85E-05
413	1.69E-05	480	2.32E-04	547	5.54E-04	614	5.26E-04	681	1.39E-04	748	1.79E-05
414	1.88E-05	481	2.30E-04	548	5.56E-04	615	5.23E-04	682	1.35E-04	749	1.73E-05
415	2.09E-05	482	2.30E-04	549	5.58E-04	616	5.16E-04	683	1.32E-04	750	1.68E-05
416	2.40E-05	483	2.31E-04	550	5.58E-04	617	5.10E-04	684	1.28E-04	751	1.63E-05
417	2.60E-05	484	2.33E-04	551	5.60E-04	618	5.03E-04	685	1.24E-04	752	1.56E-05
418	2.97E-05	485	2.38E-04	552	5.62E-04	619	4.99E-04	686	1.21E-04	753	1.52E-05
419	3.30E-05	486	2.42E-04	553	5.65E-04	620	4.92E-04	687	1.17E-04	754	1.48E-05
420	3.73E-05	487	2.45E-04	554	5.67E-04	621	4.87E-04	688	1.14E-04	755	1.43E-05
421	4.20E-05	488	2.51E-04	555	5.69E-04	622	4.81E-04	689	1.11E-04	756	1.38E-05
422	4.66E-05	489	2.56E-04	556	5.71E-04	623	4.76E-04	690	1.08E-04	757	1.33E-05
423	5.20E-05	490	2.63E-04	557	5.72E-04	624	4.68E-04	691	1.05E-04	758	1.31E-05
424	5.77E-05	491	2.67E-04	558	5.74E-04	625	4.64E-04	692	1.02E-04	759	1.25E-05
425	6.42E-05	492	2.73E-04	559	5.76E-04	626	4.56E-04	693	9.84E-05	760	1.22E-05
426	7.35E-05	493	2.80E-04	560	5.75E-04	627	4.50E-04	694	9.52E-05	761	1.18E-05
427	8.33E-05	494	2.90E-04	561	5.77E-04	628	4.44E-04	695	9.27E-05	762	1.16E-05
428	9.32E-05	495	2.99E-04	562	5.77E-04	629	4.38E-04	696	9.03E-05	763	1.13E-05
429	1.06E-04	496	3.09E-04	563	5.80E-04	630	4.32E-04	697	8.75E-05	764	1.05E-05
430	1.15E-04	497	3.20E-04	564	5.81E-04	631	4.24E-04	698	8.48E-05	765	1.07E-05
431	1.31E-04	498	3.30E-04	565	5.82E-04	632	4.18E-04	699	8.25E-05	766	1.05E-05
432	1.43E-04	499	3.41E-04	566	5.84E-04	633	4.12E-04	700	8.02E-05	767	9.70E-06
433	1.59E-04	500	3.50E-04	567	5.87E-04	634	4.05E-04	701	7.76E-05	768	9.50E-06
434	1.75E-04	501	3.63E-04	568	5.89E-04	635	3.98E-04	702	7.51E-05	769	9.30E-06
435	1.91E-04	502	3.75E-04	569	5.91E-04	636	3.93E-04	703	7.26E-05	770	8.80E-06
436	2.13E-04	503	3.83E-04	570	5.92E-04	637	3.85E-04	704	7.11E-05	771	8.60E-06
437	2.38E-04	504	3.92E-04	571	5.92E-04	638	3.79E-04	705	6.91E-05	772	8.50E-06
438	2.66E-04	505	4.04E-04	572	5.93E-04	639	3.72E-04	706	6.67E-05	773	8.10E-06
439	2.96E-04	506	4.12E-04	573	5.94E-04	640	3.64E-04	707	6.47E-05	774	8.00E-06
440	3.31E-04	507	4.22E-04	574	5.95E-04	641	3.55E-04	708	6.26E-05	775	7.90E-06
441	3.69E-04	508	4.29E-04	575	5.93E-04	642	3.50E-04	709	6.06E-05	776	7.60E-06
442	4.09E-04	509	4.35E-04	576	5.94E-04	643	3.44E-04	710	5.90E-05	777	7.20E-06
443	4.61E-04	510	4.45E-04	577	5.95E-04	644	3.36E-04	711	5.72E-05	778	6.90E-06
444	5.18E-04	511	4.52E-04	578	5.93E-04	645	3.31E-04	712	5.56E-05	779	6.90E-06
445	5.79E-04	512	4.57E-04	579	5.93E-04	646	3.24E-04	713	5.37E-05	780	6.90E-06
446	6.47E-04	513	4.63E-04	580	5.94E-04	647	3.19E-04	714	5.21E-05	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

<b>Model No.</b>	STRP4H @30W5000K	<b>Sample ID</b>	241225006-S1
<b>Operate time (Min.)</b>	30	<b>Stabilization time (Min.)</b>	60
<b>Temperature (°C)</b>	25.0	<b>Humidity (%RH)</b>	42.1

<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	0.240	28.6	0.993
<b>NON-WORST CASE</b>	277.0	60	0.111	28.2	0.920

#### Test Result

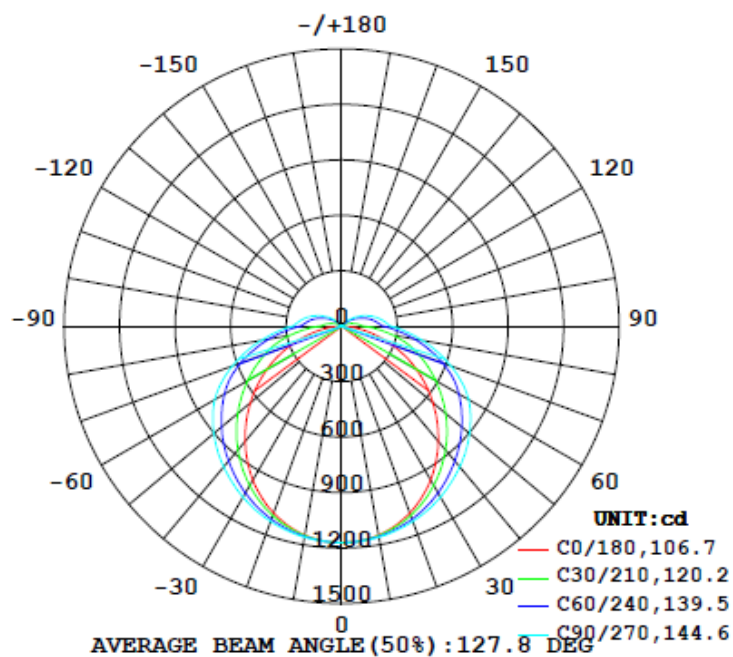
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
4462	1116	161.1	161.1	107.0	144.5	156.0

Zonal Lumen Requirement (0°-60°)	UGR	
	Crosswise	Endwise
63.3%	22.8	28.3

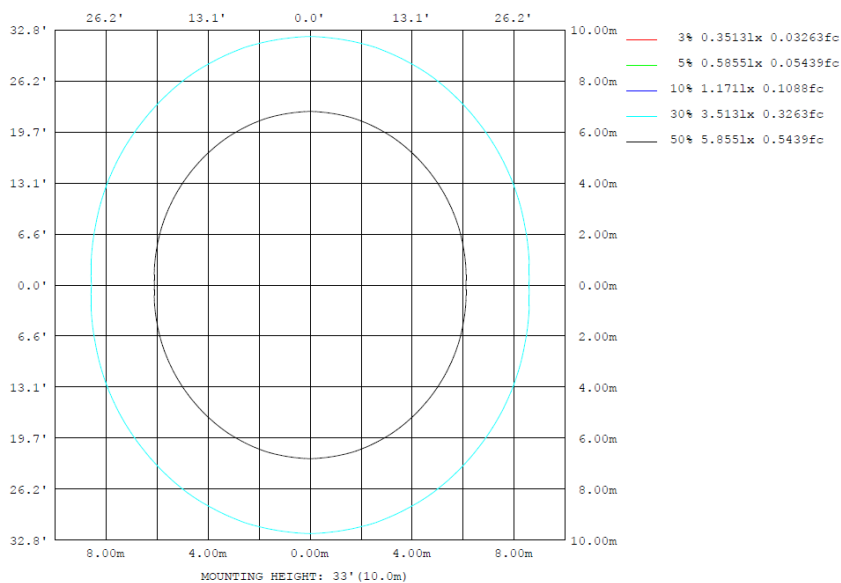
## 4.2 Goniophotometer Test

### Lighting Distribution Curve

#### LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



### Isolux Plot



## 4.2 Goniophotometer Test

### Zonal Lumen Summary

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
10	1147	1151	1158	1151	1147	1151	1158	1151	0~ 10	110.9	110.9	2.49,2.49
20	1075	1098	1123	1098	1075	1098	1123	1098	10~ 20	319.2	430.1	9.64,9.64
30	960.5	1016	1067	1016	960.5	1016	1067	1016	20~ 30	489.8	919.9	20.6,20.6
40	812.5	911.0	992.8	911.0	812.5	911.0	992.8	911.0	30~ 40	604.7	1525	34.2,34.2
50	644.5	790.5	902.1	790.5	644.5	790.5	902.1	790.5	40~ 50	655.8	2180	48.9,48.9
60	466.4	662.2	792.1	662.2	466.4	662.2	792.1	662.2	50~ 60	643.1	2823	63.3,63.3
70	285.0	523.1	628.8	523.1	285.0	523.1	628.8	523.1	60~ 70	568.5	3392	76,76
80	113.5	348.1	442.2	348.1	113.5	348.1	442.2	348.1	70~ 80	431.2	3823	85.7,85.7
90	6.503	180.4	267.9	180.4	6.503	180.4	267.9	180.4	80~ 90	260.8	4084	91.5,91.5
100	4.423	133.6	216.4	133.6	4.423	133.6	216.4	133.6	90~100	152.5	4236	95,95
110	5.602	90.62	164.0	90.62	5.602	90.62	164.0	90.62	100~110	109.0	4345	97.4,97.4
120	5.692	48.98	109.2	48.98	5.692	48.98	109.2	48.98	110~120	67.35	4413	98.9,98.9
130	5.782	12.54	58.04	12.54	5.782	12.54	58.04	12.54	120~130	33.11	4446	99.6,99.6
140	5.782	2.820	13.34	2.820	5.782	2.820	13.34	2.820	130~140	10.72	4457	99.9,99.9
150	5.782	2.456	1.861	2.456	5.782	2.456	1.861	2.456	140~150	2.388	4459	99.9,99.9
160	4.971	2.183	1.676	2.183	4.971	2.183	1.676	2.183	150~160	1.372	4460	100,100
170	6.324	2.727	2.048	2.727	6.324	2.727	2.048	2.727	160~170	0.8450	4461	100,100
180	6.776	2.911	2.607	2.911	6.776	2.911	2.607	2.911	170~180	0.3479	4462	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	110.87	0-10	110.87	2.49%
10-20	319.22	0-20	430.09	9.64%
20-30	489.80	0-30	919.89	20.62%
30-40	604.66	0-40	1524.55	34.17%
40-50	655.82	0-50	2180.37	48.87%
50-60	643.07	0-60	2823.44	63.29%
60-70	568.51	0-70	3391.95	76.03%
70-80	431.23	0-80	3823.18	85.70%
80-90	260.78	0-90	4083.96	91.54%
90-100	152.52	0-100	4236.48	94.96%
100-110	108.95	0-110	4345.43	97.40%
110-120	67.35	0-120	4412.78	98.91%
120-130	33.11	0-130	4445.89	99.66%
130-140	10.72	0-140	4456.61	99.90%
140-150	2.39	0-150	4459.00	99.95%
150-160	1.37	0-160	4460.37	99.98%
160-170	0.84	0-170	4461.21	100.00%
170-180	0.35	0-180	4461.56	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	13.1	14.7	13.6	15.2	15.7	16.2	17.7	16.7	18.2	18.8
	3H	14.7	16.1	15.2	16.6	17.2	18.9	20.3	19.4	20.8	21.4
	4H	15.2	16.5	15.8	17.1	17.6	20.1	21.5	20.7	22.0	22.6
	6H	15.6	16.8	16.1	17.3	17.9	21.4	22.6	21.9	23.1	23.7
	8H	15.6	16.8	16.2	17.4	18.0	22.0	23.2	22.5	23.7	24.3
	12H	15.7	16.8	16.2	17.3	18.0	22.6	23.8	23.2	24.3	24.9
4H	2H	14.4	15.7	14.9	16.2	16.8	16.7	18.0	17.2	18.5	19.1
	3H	16.3	17.4	16.8	18.0	18.6	19.6	20.7	20.2	21.3	21.9
	4H	17.0	18.0	17.5	18.6	19.2	21.0	22.0	21.6	22.6	23.2
	6H	17.4	18.4	18.0	18.9	19.6	22.4	23.3	23.0	23.9	24.6
	8H	17.6	18.4	18.2	19.0	19.7	23.1	24.0	23.7	24.6	25.3
	12H	17.6	18.4	18.2	19.0	19.7	23.9	24.7	24.5	25.3	26.0
8H	4H	17.9	18.8	18.5	19.4	20.0	21.3	22.1	21.8	22.7	23.4
	6H	18.6	19.4	19.3	20.0	20.7	22.9	23.6	23.5	24.2	24.9
	8H	18.9	19.5	19.5	20.2	20.9	23.7	24.3	24.3	25.0	25.7
	12H	19.0	19.6	19.7	20.3	21.0	24.6	25.2	25.3	25.9	26.6
12H	4H	18.1	18.9	18.7	19.5	20.2	21.3	22.0	21.9	22.7	23.3
	6H	19.0	19.7	19.6	20.3	21.0	22.9	23.6	23.5	24.2	24.9
	8H	19.3	19.9	20.0	20.6	21.3	23.8	24.4	24.4	25.0	25.8

Maximum UGR = 26.6

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	18.3	19.9	18.8	20.4	20.9	21.4	22.9	21.9	23.4	24.0
	3H	19.9	21.3	20.4	21.8	22.4	24.1	25.5	24.6	26.0	26.6
	4H	20.4	21.7	21.0	22.3	22.8	25.3	26.7	25.9	27.2	27.8
	6H	20.8	22.0	21.3	22.5	23.1	26.6	27.8	27.1	28.3	28.9
	8H	20.8	22.0	21.4	22.6	23.2	27.2	28.4	27.7	28.9	29.5
	12H	20.9	22.0	21.4	22.5	23.2	27.8	29.0	28.4	29.5	30.1
4H	2H	19.6	20.9	20.1	21.4	22.0	21.9	23.2	22.4	23.7	24.3
	3H	21.5	22.6	22.0	23.2	23.8	24.8	25.9	25.4	26.5	27.1
	4H	22.2	23.2	22.7	23.8	24.4	26.2	27.2	26.8	27.8	28.4
	6H	22.6	23.6	23.2	24.1	24.8	27.6	28.5	28.2	29.1	29.8
	8H	22.8	23.6	23.4	24.2	24.9	28.3	29.2	28.9	29.8	30.5
	12H	22.8	23.6	23.4	24.2	24.9	29.1	29.9	29.7	30.5	31.2
8H	4H	23.1	24.0	23.7	24.6	25.2	26.5	27.3	27.0	27.9	28.6
	6H	23.8	24.6	24.5	25.2	25.9	28.1	28.8	28.7	29.4	30.1
	8H	24.1	24.7	24.7	25.4	26.1	28.9	29.5	29.5	30.2	30.9
	12H	24.2	24.8	24.9	25.5	26.2	29.8	30.4	30.5	31.1	31.8
12H	4H	23.3	24.1	23.9	24.7	25.4	26.5	27.2	27.1	27.9	28.5
	6H	24.2	24.9	24.8	25.5	26.2	28.1	28.8	28.7	29.4	30.1
	8H	24.5	25.1	25.2	25.8	26.5	29.0	29.6	29.6	30.2	31.0

Maximum UGR = 31.8

## 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	1171	1170	1171	1171	1171	1171	1171	1171	1171	1171	1171	1170	1171	1170	1171	1171	1171	1171	1171
5	1165	1165	1165	1166	1167	1167	1167	1167	1166	1166	1165	1165	1165	1165	1165	1166	1167	1167	1167
10	1147	1148	1150	1151	1155	1158	1158	1155	1151	1150	1148	1147	1148	1150	1151	1155	1158	1158	1158
15	1117	1120	1124	1129	1136	1142	1144	1142	1136	1129	1124	1120	1117	1120	1124	1129	1136	1142	1144
20	1075	1081	1090	1098	1111	1119	1123	1119	1111	1098	1090	1081	1075	1081	1090	1098	1111	1119	1123
25	1023	1033	1046	1060	1079	1093	1098	1093	1079	1060	1046	1033	1023	1033	1046	1060	1079	1093	1098
30	960	975	995	1016	1041	1060	1067	1060	1041	1016	995	975	960	975	995	1016	1041	1060	1067
35	889	910	937	966	998	1022	1032	1022	998	966	937	910	889	910	937	966	998	1022	1032
40	812	837	873	911	952	981	993	981	952	911	873	837	812	837	873	911	952	981	993
45	730	760	805	852	902	936	950	936	902	852	805	760	730	760	805	852	902	936	950
50	644	679	734	790	848	888	902	888	848	790	734	679	644	679	734	790	848	888	902
55	556	595	660	727	791	834	851	834	791	727	660	595	556	595	660	727	791	834	851
60	466	511	587	662	731	776	792	776	731	662	587	511	466	511	587	662	731	776	792
65	376	427	513	596	664	702	716	702	664	596	513	427	376	427	513	596	664	702	716
70	285	346	440	523	581	616	629	616	581	523	440	346	285	346	440	523	581	616	629
75	196	266	368	438	491	523	536	523	491	438	368	266	196	266	368	438	491	523	536
80	114	192	284	348	399	431	442	431	399	348	284	192	114	192	284	348	399	431	442
85	44.8	121	198	261	310	340	352	340	310	261	198	121	44.8	121	198	261	310	340	352
90	6.50	53.9	122	180	227	257	268	257	227	180	122	53.9	6.50	53.9	122	180	227	257	268
95	3.88	35.8	98.0	154	198	228	240	228	198	154	98.0	35.8	3.88	35.8	98.0	154	198	228	240
100	4.42	22.6	79.6	134	178	204	216	204	178	134	79.6	22.6	4.42	22.6	79.6	134	178	204	216
105	5.41	11.2	60.9	112	154	180	191	180	154	112	60.9	11.2	5.41	11.2	60.9	112	154	180	191
110	5.60	4.84	43.3	90.6	129	155	164	155	129	90.6	43.3	4.84	5.60	4.84	43.3	90.6	129	155	164
115	5.69	4.47	27.3	69.4	105	128	136	128	105	69.4	27.3	4.47	5.69	4.47	27.3	69.4	105	128	136
120	5.69	4.47	12.6	49.0	81.1	102	109	102	81.1	49.0	12.6	4.47	5.69	4.47	12.6	49.0	81.1	102	109
125	5.78	4.56	4.66	29.8	57.9	76.4	83.1	76.4	57.9	29.8	4.66	4.56	5.78	4.56	4.66	29.8	57.9	76.4	83.1
130	5.78	4.83	3.74	12.5	35.9	52.3	58.0	52.3	35.9	12.5	3.74	4.83	5.78	4.83	3.74	12.5	35.9	52.3	58.0
135	5.78	5.11	3.74	3.85	15.9	29.6	34.4	29.6	15.9	3.85	3.74	5.11	5.78	5.11	3.74	3.85	15.9	29.6	34.4
140	5.78	5.47	3.56	2.82	3.94	9.69	13.3	9.69	3.94	2.82	3.56	5.47	5.78	5.47	3.56	2.82	3.94	9.69	13.3
145	5.78	5.47	3.37	2.55	2.20	2.50	2.70	2.50	2.20	2.55	3.37	5.47	5.78	5.47	3.37	2.55	2.20	2.50	2.70
150	5.78	5.20	3.19	2.46	2.11	2.03	1.86	2.03	2.11	2.46	3.19	5.20	5.78	5.20	3.19	2.46	2.11	2.03	1.86
155	5.33	4.84	2.83	2.27	2.11	2.03	1.68	2.03	2.11	2.27	2.83	4.84	5.33	4.84	2.83	2.27	2.11	2.03	1.68
160	4.97	4.47	2.64	2.18	2.11	2.03	1.68	2.03	2.11	2.18	2.64	4.47	4.97	4.47	2.64	2.18	2.11	2.03	1.68
165	5.24	4.83	2.73	2.37	2.11	2.03	1.68	2.03	2.11	2.37	2.73	4.83	5.24	4.83	2.73	2.37	2.11	2.03	1.68
170	6.32	5.56	3.18	2.73	2.57	2.40	2.05	2.40	2.57	2.73	3.18	5.56	6.32	5.56	3.18	2.73	2.57	2.40	2.05
175	6.78	5.84	3.73	3.00	2.66	2.76	2.61	2.76	2.66	3.00	3.73	5.84	6.78	5.84	3.73	3.00	2.66	2.76	2.61
180	6.78	5.93	3.74	2.91	2.66	2.68	2.61	2.68	2.66	2.91	3.74	5.93	6.78	5.93	3.74	2.91	2.66	2.68	2.61

Table--2

UNIT: cd

C (DEG) y (DEG)	285	300	315	330	345														
0	1171	1171	1171	1171	1170														
5	1167	1167	1166	1165	1165														
10	1158	1155	1151	1150	1148														
15	1142	1136	1129	1124	1120														
20	1119	1111	1098	1090	1081														
25	1093	1079	1060	1046	1033														
30	1060	1041	1016	995	975														
35	1022	998	966	937	910														
40	981	952	911	873	837														
45	936	902	852	805	760														
50	888	848	790	734	679														
55	834	791	727	660	595														
60	776	731	662	587	511														
65	702	664	596	513	427														
70	616	581	523	440	346														
75	523	491	438	368	266														
80	431	399	348	284	192														
85	340	310	261	198	121														
90	257	227	180	122	53.9														
95	228	198	154	98.0	35.8														
100	204	178	134	79.6	22.6														
105	180	154	112	60.9	11.2														
110	155	129	90.6	43.3	4.84														
115	128	105	69.4	27.3	4.47														
120	102	81.1	49.0	12.6	4.47														
125	76.4	57.9	29.8	4.66	4.56														
130	52.3	35.9	12.5	3.74	4.83														
135	29.6	15.9	3.85	3.74	5.11														
140	9.69	3.94	2.82	3.56	5.47														
145	2.50	2.20	2.55	3.37	5.47														
150	2.03	2.11	2.46	3.19	5.20														
155	2.03	2.11	2.27	2.83	4.84														
160	2.03	2.11	2.18	2.64	4.47														
165	2.03	2.11	2.37	2.73	4.83														
170	2.40	2.57	2.73	3.18	5.56														
175	2.76	2.66	3.00	3.73	5.84														
180	2.68	2.66	2.91	3.74	5.93														

## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	STRP4H @30W5000K	<b>Sample ID</b>	241225006-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	0.240	28.6	0.993	7.83
277.0	60	0.111	28.2	0.920	10.38

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