

## Photometric Test Report

### Relevant Standards

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

Prepared For

**RAB Lighting Inc.**

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Prepared By

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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		779
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	152.8
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		10.2
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	6.37
				277V	10.43
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.994
				277V	0.924
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	3985±275	4100
			4 steps	3985±154	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		84.8
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		17
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%		55.7%
Discomfort Glare (UGR) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	30.2
			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		0.040
(Goniophotometer – Section 4.2)			Non-Worst Case		0.082
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		10.2
(Goniophotometer – Section 4.2)			Non-Worst Case		9.8

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-01-02	STRP2 @10W4000K	-	241225003-S1
2	Goniophotometer Test	2025-01-02	STRP2 @10W4000K	-	241225003-S1
3	THD and PF Test	2025-01-02	STRP2 @10W4000K	-	241225003-S1

### Remark (If any):

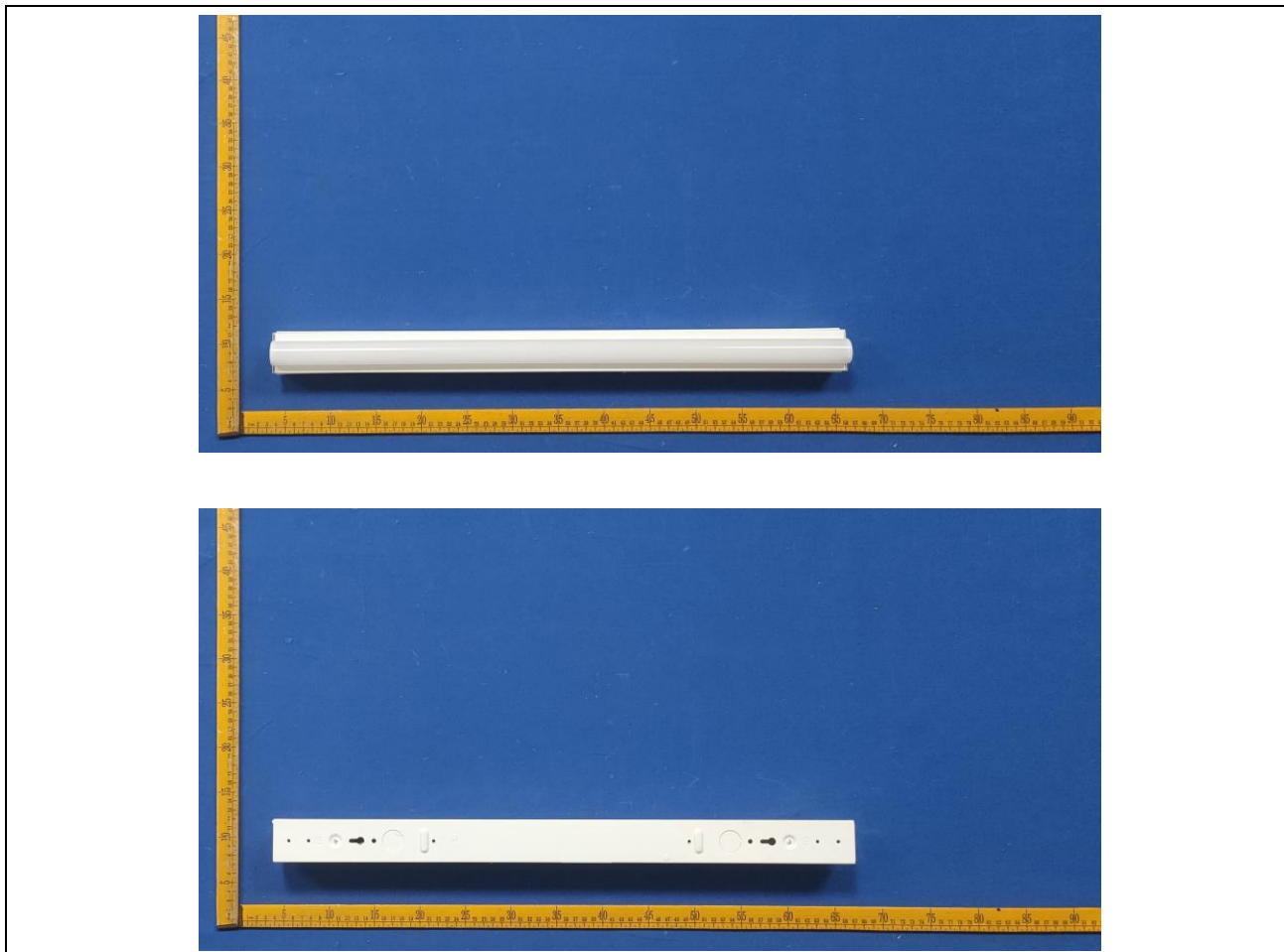
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3. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. Government.

### 3.0 Product Description

Luminaire Description: Model No. STRP2 @10W4000K, 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 @10W4000K	<b>Sample ID</b>	241225003-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

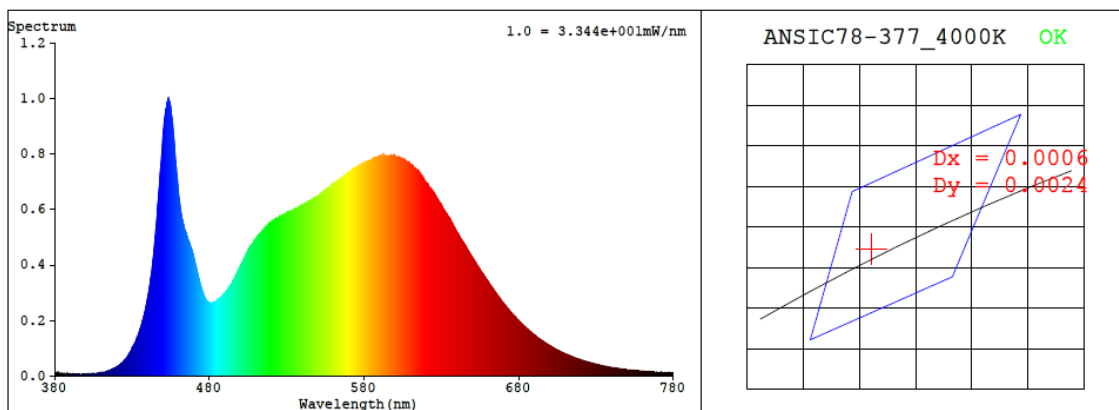
<b>Test Method</b>
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were 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	0.082	9.8	0.994
277.0	60	0.040	10.2	0.924

<b>CCT (K)</b>	<b>CRI</b>	<b>R9</b>	<b>Duv</b>	<b>Rf</b>	<b>Rg</b>	<b>IES Rcs,h1</b>
4100	84.8	17	0.0010	85	95	-11%

## 4.1 Integrating Sphere Test



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3767$   $y = 0.3765$  /  $u' = 0.2228$   $v' = 0.5009$  ( $duv=9.62e-04$ )

CCT= 4100K Prcp WL: Ld=578.1nm Purity=26.0%

Peak WL: Lp=454nm FWHM: =21.1nm Ratio:R=18.2% G=77.9% B=3.9%

Render Index: Ra = 84.8 AvgR = 78.6 TM30:Rf=85 Rg=95

EEL: 0.08920 A++ Highest

R1 =83 R2 =91 R3 =96 R4 =83 R5 =83 R6 =87 R7 =87

R8 =67 R9 =17 R10=79 R11=82 R12=61 R13=86 R14=98 R15=78

## 4.1 Integrating Sphere Test

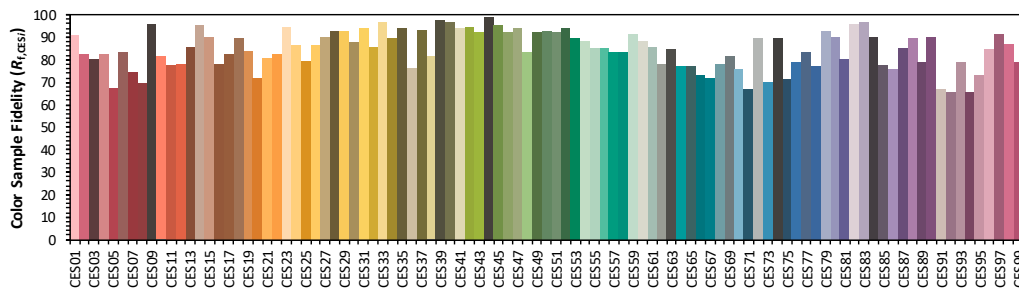
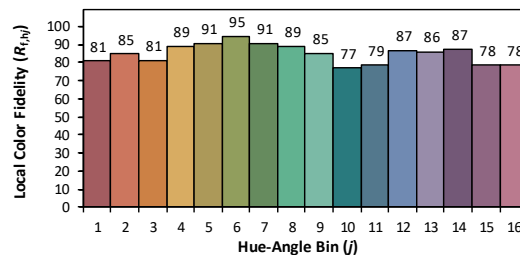
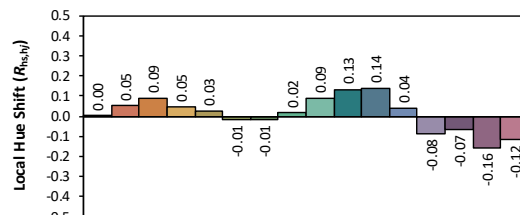
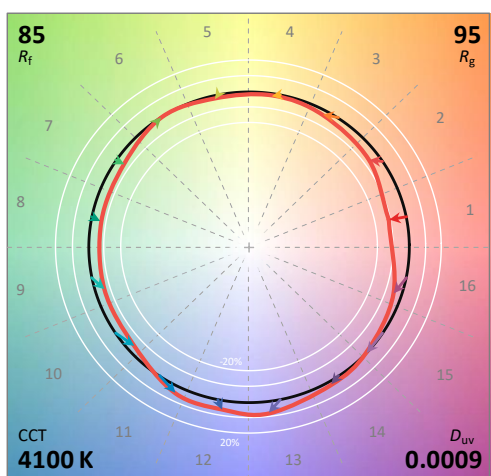
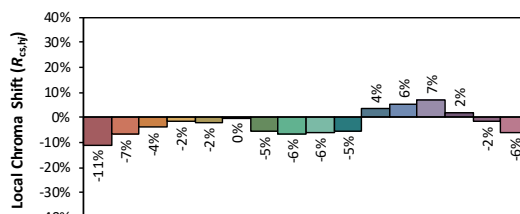
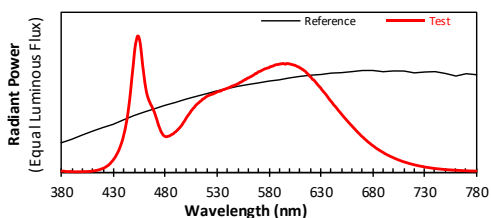
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/1/4

Model: STRP2 @10W4000K



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

$x$  0.3767  
 $y$  0.3763  
 $u'$  0.2228  
 $v'$  0.5008

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	1.06E-05	447	6.42E-04	514	5.20E-04	581	7.70E-04	648	4.45E-04	715	6.79E-05
381	1.09E-05	448	7.16E-04	515	5.26E-04	582	7.71E-04	649	4.36E-04	716	6.60E-05
382	1.16E-05	449	7.87E-04	516	5.35E-04	583	7.74E-04	650	4.27E-04	717	6.37E-05
383	9.10E-06	450	8.66E-04	517	5.37E-04	584	7.75E-04	651	4.18E-04	718	6.19E-05
384	8.70E-06	451	9.28E-04	518	5.44E-04	585	7.80E-04	652	4.09E-04	719	6.00E-05
385	8.00E-06	452	9.63E-04	519	5.49E-04	586	7.84E-04	653	4.00E-04	720	5.81E-05
386	8.50E-06	453	9.93E-04	520	5.54E-04	587	7.85E-04	654	3.91E-04	721	5.62E-05
387	6.00E-06	454	9.91E-04	521	5.60E-04	588	7.86E-04	655	3.83E-04	722	5.43E-05
388	9.30E-06	455	9.68E-04	522	5.61E-04	589	7.87E-04	656	3.74E-04	723	5.27E-05
389	7.00E-06	456	9.23E-04	523	5.67E-04	590	7.89E-04	657	3.65E-04	724	5.11E-05
390	7.30E-06	457	8.57E-04	524	5.68E-04	591	7.92E-04	658	3.57E-04	725	4.96E-05
391	6.20E-06	458	7.84E-04	525	5.71E-04	592	7.91E-04	659	3.49E-04	726	4.77E-05
392	7.00E-06	459	7.25E-04	526	5.72E-04	593	7.93E-04	660	3.42E-04	727	4.65E-05
393	6.00E-06	460	6.64E-04	527	5.78E-04	594	7.94E-04	661	3.33E-04	728	4.52E-05
394	6.40E-06	461	6.17E-04	528	5.79E-04	595	7.91E-04	662	3.25E-04	729	4.38E-05
395	6.50E-06	462	5.77E-04	529	5.83E-04	596	7.89E-04	663	3.17E-04	730	4.20E-05
396	6.70E-06	463	5.50E-04	530	5.87E-04	597	7.94E-04	664	3.08E-04	731	4.05E-05
397	6.50E-06	464	5.28E-04	531	5.90E-04	598	7.93E-04	665	3.00E-04	732	3.95E-05
398	7.10E-06	465	5.11E-04	532	5.92E-04	599	7.93E-04	666	2.93E-04	733	3.83E-05
399	7.30E-06	466	4.93E-04	533	5.93E-04	600	7.91E-04	667	2.85E-04	734	3.75E-05
400	7.10E-06	467	4.81E-04	534	5.96E-04	601	7.89E-04	668	2.78E-04	735	3.60E-05
401	7.60E-06	468	4.61E-04	535	6.01E-04	602	7.86E-04	669	2.69E-04	736	3.50E-05
402	7.90E-06	469	4.46E-04	536	6.04E-04	603	7.85E-04	670	2.63E-04	737	3.38E-05
403	7.70E-06	470	4.26E-04	537	6.05E-04	604	7.82E-04	671	2.56E-04	738	3.26E-05
404	8.20E-06	471	4.02E-04	538	6.09E-04	605	7.81E-04	672	2.49E-04	739	3.17E-05
405	8.60E-06	472	3.80E-04	539	6.12E-04	606	7.78E-04	673	2.42E-04	740	3.06E-05
406	8.60E-06	473	3.54E-04	540	6.14E-04	607	7.74E-04	674	2.36E-04	741	2.98E-05
407	9.80E-06	474	3.33E-04	541	6.17E-04	608	7.70E-04	675	2.29E-04	742	2.90E-05
408	1.03E-05	475	3.13E-04	542	6.21E-04	609	7.69E-04	676	2.22E-04	743	2.80E-05
409	1.11E-05	476	2.96E-04	543	6.24E-04	610	7.61E-04	677	2.16E-04	744	2.74E-05
410	1.21E-05	477	2.84E-04	544	6.29E-04	611	7.59E-04	678	2.11E-04	745	2.64E-05
411	1.30E-05	478	2.72E-04	545	6.30E-04	612	7.52E-04	679	2.04E-04	746	2.61E-05
412	1.40E-05	479	2.66E-04	546	6.33E-04	613	7.49E-04	680	1.99E-04	747	2.50E-05
413	1.59E-05	480	2.63E-04	547	6.37E-04	614	7.42E-04	681	1.93E-04	748	2.43E-05
414	1.73E-05	481	2.61E-04	548	6.38E-04	615	7.38E-04	682	1.88E-04	749	2.36E-05
415	1.95E-05	482	2.64E-04	549	6.43E-04	616	7.30E-04	683	1.81E-04	750	2.29E-05
416	2.10E-05	483	2.65E-04	550	6.46E-04	617	7.21E-04	684	1.77E-04	751	2.25E-05
417	2.37E-05	484	2.68E-04	551	6.50E-04	618	7.16E-04	685	1.71E-04	752	2.18E-05
418	2.67E-05	485	2.72E-04	552	6.56E-04	619	7.06E-04	686	1.67E-04	753	2.12E-05
419	2.88E-05	486	2.77E-04	553	6.58E-04	620	6.97E-04	687	1.61E-04	754	2.08E-05
420	3.24E-05	487	2.80E-04	554	6.63E-04	621	6.91E-04	688	1.58E-04	755	2.02E-05
421	3.56E-05	488	2.85E-04	555	6.68E-04	622	6.79E-04	689	1.52E-04	756	1.97E-05
422	3.95E-05	489	2.93E-04	556	6.72E-04	623	6.76E-04	690	1.48E-04	757	1.91E-05
423	4.45E-05	490	2.98E-04	557	6.77E-04	624	6.69E-04	691	1.44E-04	758	1.86E-05
424	4.95E-05	491	3.05E-04	558	6.79E-04	625	6.59E-04	692	1.39E-04	759	1.85E-05
425	5.45E-05	492	3.12E-04	559	6.87E-04	626	6.51E-04	693	1.35E-04	760	1.80E-05
426	6.14E-05	493	3.21E-04	560	6.88E-04	627	6.41E-04	694	1.31E-04	761	1.73E-05
427	6.91E-05	494	3.28E-04	561	6.92E-04	628	6.32E-04	695	1.27E-04	762	1.72E-05
428	7.87E-05	495	3.38E-04	562	6.97E-04	629	6.24E-04	696	1.24E-04	763	1.67E-05
429	8.64E-05	496	3.47E-04	563	7.00E-04	630	6.16E-04	697	1.19E-04	764	1.63E-05
430	9.74E-05	497	3.60E-04	564	7.05E-04	631	6.05E-04	698	1.16E-04	765	1.59E-05
431	1.07E-04	498	3.70E-04	565	7.09E-04	632	5.96E-04	699	1.13E-04	766	1.51E-05
432	1.19E-04	499	3.82E-04	566	7.14E-04	633	5.86E-04	700	1.09E-04	767	1.49E-05
433	1.34E-04	500	3.96E-04	567	7.21E-04	634	5.78E-04	701	1.06E-04	768	1.47E-05
434	1.47E-04	501	4.07E-04	568	7.21E-04	635	5.69E-04	702	1.03E-04	769	1.45E-05
435	1.64E-04	502	4.18E-04	569	7.29E-04	636	5.59E-04	703	9.97E-05	770	1.41E-05
436	1.82E-04	503	4.27E-04	570	7.34E-04	637	5.48E-04	704	9.60E-05	771	1.39E-05
437	2.03E-04	504	4.38E-04	571	7.36E-04	638	5.37E-04	705	9.33E-05	772	1.37E-05
438	2.24E-04	505	4.50E-04	572	7.39E-04	639	5.28E-04	706	9.09E-05	773	1.32E-05
439	2.50E-04	506	4.59E-04	573	7.43E-04	640	5.19E-04	707	8.75E-05	774	1.29E-05
440	2.81E-04	507	4.69E-04	574	7.47E-04	641	5.10E-04	708	8.48E-05	775	1.28E-05
441	3.13E-04	508	4.75E-04	575	7.51E-04	642	4.99E-04	709	8.23E-05	776	1.23E-05
442	3.52E-04	509	4.87E-04	576	7.54E-04	643	4.90E-04	710	7.94E-05	777	1.22E-05
443	3.92E-04	510	4.94E-04	577	7.57E-04	644	4.82E-04	711	7.71E-05	778	1.22E-05
444	4.44E-04	511	5.02E-04	578	7.60E-04	645	4.73E-04	712	7.54E-05	779	1.20E-05
445	5.02E-04	512	5.07E-04	579	7.62E-04	646	4.64E-04	713	7.26E-05	780	1.20E-05
446	5.65E-04	513	5.14E-04	580	7.63E-04	647	4.54E-04	714	7.06E-05	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

<b>Model No.</b>	STRP2 @10W4000K	<b>Sample ID</b>	241225003-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	0.040	10.2	0.924
<b>NON-WORST CASE</b>	120.0	60	0.082	9.8	0.994

#### Test Result

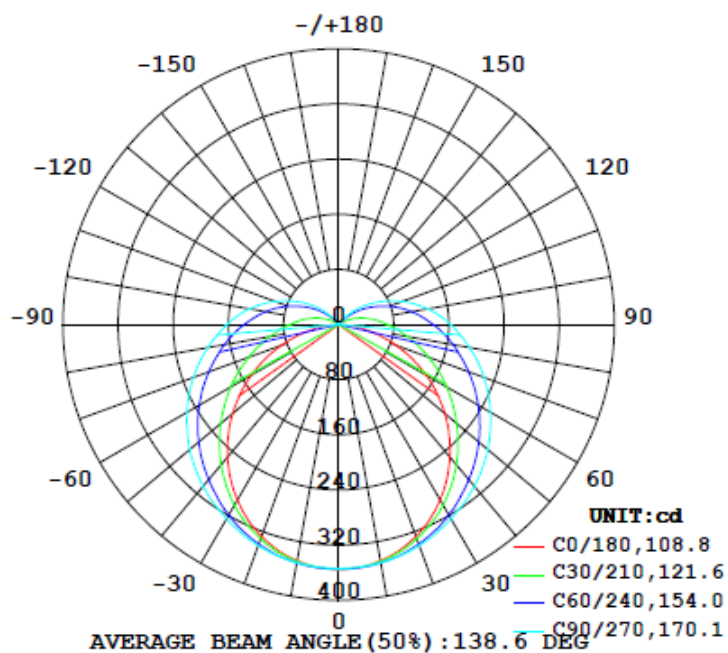
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
1558	779	161.0	161.0	108.8	169.8	152.8

Zonal Lumen Requirement (0°-60°)	UGR	
	Crosswise	Endwise
55.7%	22.1	30.2

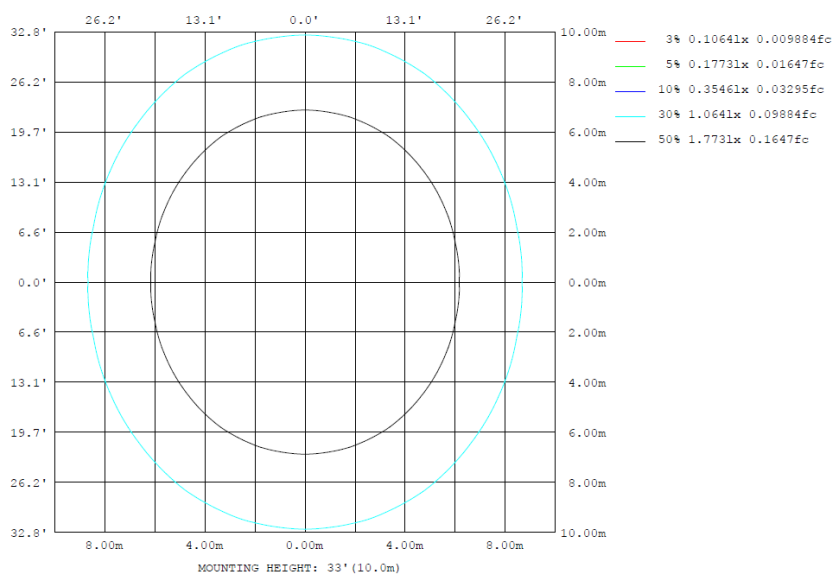
## 4.2 Goniophotometer Test

### 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	zone	total	lum, lamp
10	348.0	349.6	350.9	349.6	348.0	349.6	350.9	349.6	0- 10	33.63	33.63	2.16,2.16
20	327.3	334.8	341.5	334.8	327.3	334.8	341.5	334.8	10- 20	97.06	130.7	8.39,8.39
30	294.0	310.6	325.5	310.6	294.0	310.6	325.5	310.6	20- 30	149.3	280.0	18,18
40	251.2	278.8	306.3	278.8	251.2	278.8	306.3	278.8	30- 40	185.0	465.0	29.8,29.8
50	200.8	244.7	282.3	244.7	200.8	244.7	282.3	244.7	40- 50	202.1	667.2	42.8,42.8
60	146.1	208.7	254.4	208.7	146.1	208.7	254.4	208.7	50- 60	200.9	868.0	55.7,55.7
70	88.80	172.4	224.3	172.4	88.80	172.4	224.3	172.4	60- 70	183.5	1052	67.5,67.5
80	34.94	138.4	192.9	138.4	34.94	138.4	192.9	138.4	70- 80	155.0	1207	77.4,77.4
90	3.728	107.9	162.3	107.9	3.728	107.9	162.3	107.9	80- 90	122.6	1329	85.3,85.3
100	2.548	80.84	131.4	80.84	2.548	80.84	131.4	80.84	90-100	93.17	1422	91.3,91.3
110	2.548	54.05	97.90	54.05	2.548	54.05	97.90	54.05	100-110	65.63	1488	95.5,95.5
120	2.642	30.11	65.21	30.11	2.642	30.11	65.21	30.11	110-120	40.35	1528	98.1,98.1
130	2.737	9.085	35.70	9.085	2.737	9.085	35.70	9.085	120-130	20.26	1548	99.4,99.4
140	2.831	2.126	9.967	2.126	2.831	2.126	9.967	2.126	130-140	6.996	1555	99.8,99.8
150	2.831	1.665	1.022	1.665	2.831	1.665	1.022	1.665	140-150	1.430	1557	99.9,99.9
160	2.831	1.387	1.022	1.387	2.831	1.387	1.022	1.387	150-160	0.7604	1558	100,100
170	2.831	1.387	1.118	1.387	2.831	1.387	1.118	1.387	160-170	0.4333	1558	100,100
180	2.926	1.387	1.208	1.387	2.926	1.387	1.208	1.387	170-180	0.1525	1558	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

	Zonal (lm)		Total (lm)	Percent
0-10	33.63	0-10	33.63	2.16%
10-20	97.06	0-20	130.69	8.39%
20-30	149.33	0-30	280.02	17.97%
30-40	185.01	0-40	465.03	29.85%
40-50	202.13	0-50	667.16	42.82%
50-60	200.86	0-60	868.02	55.71%
60-70	183.48	0-70	1051.50	67.49%
70-80	155.00	0-80	1206.50	77.44%
80-90	122.55	0-90	1329.05	85.30%
90-100	93.17	0-100	1422.22	91.28%
100-110	65.63	0-110	1487.85	95.49%
110-120	40.35	0-120	1528.20	98.08%
120-130	20.26	0-130	1548.46	99.38%
130-140	7.00	0-140	1555.46	99.83%
140-150	1.43	0-150	1556.89	99.92%
150-160	0.76	0-160	1557.65	99.97%
160-170	0.43	0-170	1558.08	100.00%
170-180	0.15	0-180	1558.23	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	16.5	18.0	17.1	18.5	19.2	20.6	22.0	21.2	22.6	23.3
	3H	17.9	19.2	18.5	19.8	20.5	23.6	24.9	24.2	25.5	26.2
	4H	18.3	19.6	18.9	20.2	20.9	25.1	26.4	25.7	27.0	27.7
	6H	18.6	19.8	19.2	20.4	21.1	26.8	28.0	27.4	28.6	29.3
	8H	18.6	19.8	19.3	20.4	21.1	27.7	28.8	28.3	29.4	30.1
	12H	18.7	19.7	19.3	20.4	21.1	28.6	29.7	29.2	30.3	31.1
4H	2H	17.8	19.1	18.4	19.7	20.4	20.9	22.2	21.5	22.8	23.5
	3H	19.5	20.6	20.1	21.2	22.0	24.2	25.2	24.8	25.9	26.6
	4H	20.1	21.1	20.8	21.8	22.5	25.8	26.8	26.5	27.5	28.2
	6H	20.5	21.4	21.2	22.1	22.8	27.7	28.6	28.3	29.2	30.0
	8H	20.6	21.4	21.3	22.1	22.9	28.7	29.5	29.3	30.2	31.0
	12H	20.7	21.4	21.3	22.1	22.9	29.7	30.5	30.4	31.2	32.0
8H	4H	21.3	22.1	22.0	22.8	23.6	26.0	26.8	26.7	27.5	28.3
	6H	22.0	22.7	22.7	23.4	24.2	28.0	28.7	28.7	29.4	30.2
	8H	22.2	22.8	22.9	23.5	24.3	29.1	29.8	29.8	30.5	31.3
	12H	22.3	22.9	23.0	23.6	24.5	30.4	31.0	31.1	31.7	32.5
12H	4H	21.7	22.4	22.3	23.1	23.9	26.0	26.8	26.7	27.5	28.3
	6H	22.5	23.1	23.2	23.8	24.7	28.0	28.7	28.8	29.4	30.2
	8H	22.9	23.4	23.6	24.1	25.0	29.2	29.8	29.9	30.5	31.4
Maximum UGR = 32.5											

Maximum UGR = 32.5

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	18.0	19.5	18.6	20.0	20.7	22.1	23.5	22.7	24.1	24.8
	3H	19.4	20.7	20.0	21.3	22.0	25.1	26.4	25.7	27.0	27.7
	4H	19.8	21.1	20.4	21.7	22.4	26.6	27.9	27.2	28.5	29.2
	6H	20.1	21.3	20.7	21.9	22.6	28.3	29.5	28.9	30.1	30.8
	8H	20.1	21.3	20.8	21.9	22.6	29.2	30.3	29.8	30.9	31.6
	12H	20.2	21.2	20.8	21.9	22.6	30.1	31.2	30.7	31.8	32.6
4H	2H	19.3	20.6	19.9	21.2	21.9	22.4	23.7	23.0	24.3	25.0
	3H	21.0	22.1	21.6	22.7	23.5	25.7	26.7	26.3	27.4	28.1
	4H	21.6	22.6	22.3	23.3	24.0	27.3	28.3	28.0	29.0	29.7
	6H	22.0	22.9	22.7	23.6	24.3	29.2	30.1	29.8	30.7	31.5
	8H	22.1	22.9	22.8	23.6	24.4	30.2	31.0	30.8	31.7	32.5
	12H	22.2	22.9	22.8	23.6	24.4	31.2	32.0	31.9	32.7	33.5
8H	4H	22.8	23.6	23.5	24.3	25.1	27.5	28.3	28.2	29.0	29.8
	6H	23.5	24.2	24.2	24.9	25.7	29.5	30.2	30.2	30.9	31.7
	8H	23.7	24.3	24.4	25.0	25.8	30.6	31.3	31.3	32.0	32.8
	12H	23.8	24.4	24.5	25.1	26.0	31.9	32.5	32.6	33.2	34.0
12H	4H	23.2	23.9	23.8	24.6	25.4	27.5	28.3	28.2	29.0	29.8
	6H	24.0	24.6	24.7	25.3	26.2	29.5	30.2	30.3	30.9	31.7
	8H	24.4	24.9	25.1	25.6	26.5	30.7	31.3	31.4	32.0	32.9

Maximum UGR = 34.0

## 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	355	355	355	355	355	355	354	355	355	355	355	355	355	355	355	355	355	355	354
5	353	353	353	353	354	354	353	354	354	353	353	353	353	353	353	353	354	354	353
10	348	348	349	350	351	352	351	352	351	350	349	348	348	348	349	350	351	352	351
15	339	340	342	344	346	348	347	348	346	344	342	340	339	340	342	344	346	348	347
20	327	328	331	335	339	342	341	342	339	335	331	328	327	328	331	335	339	342	341
25	312	314	318	324	330	334	334	334	330	324	318	314	312	314	318	324	330	334	334
30	294	296	303	311	319	324	325	324	319	311	303	296	294	296	303	311	319	324	325
35	274	276	285	295	307	314	316	314	307	295	285	276	274	276	285	295	307	314	316
40	251	255	266	279	294	303	306	303	294	279	266	255	251	255	266	279	294	303	306
45	227	232	245	262	280	291	295	291	280	262	245	232	227	232	245	262	280	291	295
50	201	207	223	245	265	278	282	278	265	245	223	207	201	207	223	245	265	278	282
55	174	182	202	227	250	264	268	264	250	227	202	182	174	182	202	227	250	264	268
60	146	157	181	209	234	249	254	249	234	209	181	157	146	157	181	209	234	249	254
65	118	131	160	190	217	234	239	234	217	190	160	131	118	131	160	190	217	234	239
70	88.8	105	139	172	201	219	224	219	201	172	139	105	88.8	105	139	172	201	219	224
75	60.8	82.0	120	155	184	203	209	203	184	155	120	82.0	60.8	82.0	120	155	184	203	209
80	34.9	60.9	102	138	169	187	193	187	169	138	102	60.9	34.9	60.9	102	138	169	187	193
85	14.5	43.4	85.6	123	153	171	177	171	153	123	85.6	43.4	14.5	43.4	85.6	123	153	171	177
90	3.73	30.6	70.9	108	137	155	162	155	137	108	70.9	30.6	3.73	30.6	70.9	108	137	155	162
95	2.64	21.4	58.9	94.3	122	140	147	140	122	94.3	58.9	21.4	2.64	21.4	58.9	94.3	122	140	147
100	2.55	13.8	47.3	80.8	108	124	131	124	108	80.8	47.3	13.8	2.55	13.8	47.3	80.8	108	124	131
105	2.55	7.32	36.4	67.2	92.9	109	115	109	92.9	67.2	36.4	7.32	2.55	7.32	36.4	67.2	92.9	109	115
110	2.55	3.19	26.4	54.1	77.5	92.4	97.9	92.4	77.5	54.1	26.4	3.19	2.55	3.19	26.4	54.1	77.5	92.4	97.9
115	2.64	2.80	17.0	41.6	63.0	76.3	81.3	76.3	63.0	41.6	17.0	2.80	2.64	2.80	17.0	41.6	63.0	76.3	81.3
120	2.64	2.71	8.65	30.1	48.8	61.0	65.2	61.0	48.8	30.1	8.65	2.71	2.64	2.71	8.65	30.1	48.8	61.0	65.2
125	2.74	2.62	2.98	19.0	35.6	46.4	50.0	46.4	35.6	19.0	2.98	2.62	2.74	2.62	2.98	19.0	35.6	46.4	50.0
130	2.74	2.62	2.51	9.09	23.2	32.7	35.7	32.7	23.2	9.09	2.51	2.62	2.74	2.62	2.51	9.09	23.2	32.7	35.7
135	2.74	2.62	2.32	2.60	11.7	19.7	22.4	19.7	11.7	2.60	2.32	2.62	2.74	2.62	2.32	2.60	11.7	19.7	22.4
140	2.83	2.52	2.32	2.13	2.71	7.84	9.97	7.84	2.71	2.13	2.32	2.52	2.83	2.52	2.32	2.13	2.71	7.84	9.97
145	2.83	2.43	2.13	1.85	1.58	1.40	1.50	1.40	1.58	1.85	2.13	2.43	2.83	2.43	2.13	1.85	1.58	1.40	1.50
150	2.83	2.34	1.86	1.66	1.40	1.21	1.02	1.21	1.40	1.66	1.86	2.34	2.83	2.34	1.86	1.66	1.40	1.21	1.02
155	2.83	2.15	1.67	1.48	1.21	1.12	1.02	1.12	1.21	1.48	1.67	2.15	2.83	2.15	1.67	1.48	1.21	1.12	1.02
160	2.83	1.96	1.58	1.39	1.30	1.11	1.02	1.11	1.30	1.39	1.58	1.96	2.83	1.96	1.58	1.39	1.30	1.11	1.02
165	2.83	1.96	1.58	1.39	1.11	1.11	1.02	1.11	1.11	1.39	1.58	1.96	2.83	1.96	1.58	1.39	1.11	1.11	1.02
170	2.83	2.06	1.58	1.39	1.21	1.21	1.12	1.21	1.21	1.39	1.58	2.06	2.83	2.06	1.58	1.39	1.21	1.21	1.12
175	2.93	2.06	1.58	1.39	1.30	1.21	1.21	1.21	1.30	1.39	1.58	2.06	2.93	2.06	1.58	1.39	1.30	1.21	1.21
180	2.93	2.06	1.58	1.39	1.30	1.21	1.21	1.21	1.30	1.39	1.58	2.06	2.93	2.06	1.58	1.39	1.30	1.21	1.21

Table--2

UNIT: cd

C (DEG) y (DEG)	285	300	315	330	345														
0	355	355	355	355	355														
5	354	354	353	353	353														
10	352	351	350	349	348														
15	348	346	344	342	340														
20	342	339	335	331	328														
25	334	330	324	318	314														
30	324	319	311	303	296														
35	314	307	295	285	276														
40	303	294	279	266	255														
45	291	280	262	245	232														
50	278	265	245	223	207														
55	264	250	227	202	182														
60	249	234	209	181	157														
65	234	217	190	160	131														
70	219	201	172	139	105														
75	203	184	155	120	82.0														
80	187	169	138	102	60.9														
85	171	153	123	85.6	43.4														
90	155	137	108	70.9	30.6														
95	140	122	94.3	58.9	21.4														
100	124	108	80.8	47.3	13.8														
105	109	92.9	67.2	36.4	7.32														
110	92.4	77.5	54.1	26.4	3.19														
115	76.3	63.0	41.6	17.0	2.80														
120	61.0	48.8	30.1	8.65	2.71														
125	46.4	35.6	19.0	2.98	2.62														
130	32.7	23.2	9.09	2.51	2.62														
135	19.7	11.7	2.60	2.32	2.62														
140	7.84	2.71	2.13	2.32	2.52														
145	1.40	1.58	1.85	2.13	2.43														
150	1.21	1.40	1.66	1.86	2.34														
155	1.12	1.21	1.48	1.67	2.15														
160	1.11	1.30	1.39	1.58	1.96														
165	1.11	1.11	1.39	1.58	1.96														
170	1.21	1.21	1.39	1.58	2.06														
175	1.21	1.30	1.39	1.58	2.06														
180	1.21	1.30	1.39	1.58	2.06														

## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	STRP2 @10W4000K	<b>Sample ID</b>	241225003-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	0.082	9.8	0.994	6.37
277.0	60	0.040	10.2	0.924	10.43

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