

Photometric Test Report

Relevant Standards

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

Prepared For

RAB Lighting Inc.

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Issue Date: 2025-04-03

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		782
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	153.4
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		20.4
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002	20.00%	120V	7.54
		ANSI C82-77-10:2020		277V	8.10
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002	0.9	120V	0.995
		ANSI C82-77-10:2020		277V	0.955
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	5029±283	4872
			4 steps	5029±220	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		83.4
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		13
Minimum Rf (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	≥70		84
Minimum Rg (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	≥89		96
IES Rcs,h1 (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	-12%≤IES Rcs,h1≤+23%		-12%
Zonal Lumen Requirement (0°-60°) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	≥40%		56.0%
Discomfort Glare (UGR) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	30.6
			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		0.171
(Goniophotometer – Section 4.2)			Non-Worst Case		0.076
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		20.4
(Goniophotometer – Section 4.2)			Non-Worst Case		20.2

2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-04-03	STRP4/MVS @20W5000K	-	250402001-S1
2	Goniophotometer Test	2025-04-03	STRP4/MVS @20W5000K	-	250402001-S1
3	THD and PF Test	2025-04-03	STRP4/MVS @20W5000K	-	250402001-S1

Remark (If any):

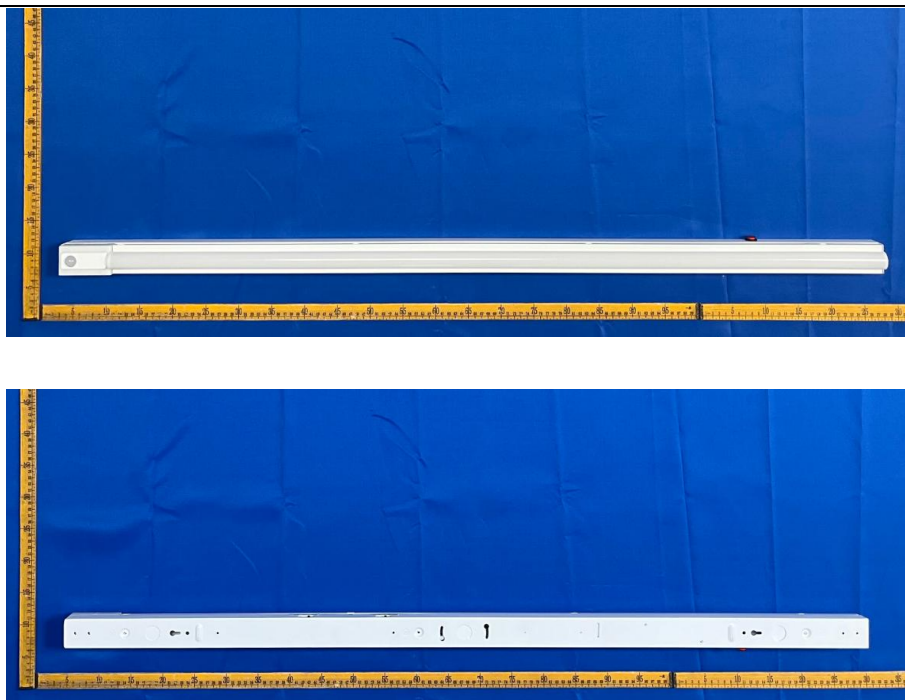
1. The results contained in this report pertain only to the tested samples.
2. This report shall not be reproduced, no limited part or full, without approval of Dongguan New Testing Centre Co., Ltd.
3. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. Government.

3.0 Product Description

Luminaire Description: Model No. STRP4/MVS @20W5000K, 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

Model No.	STRP4/MVS @20W5000K	Sample ID	250402001-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

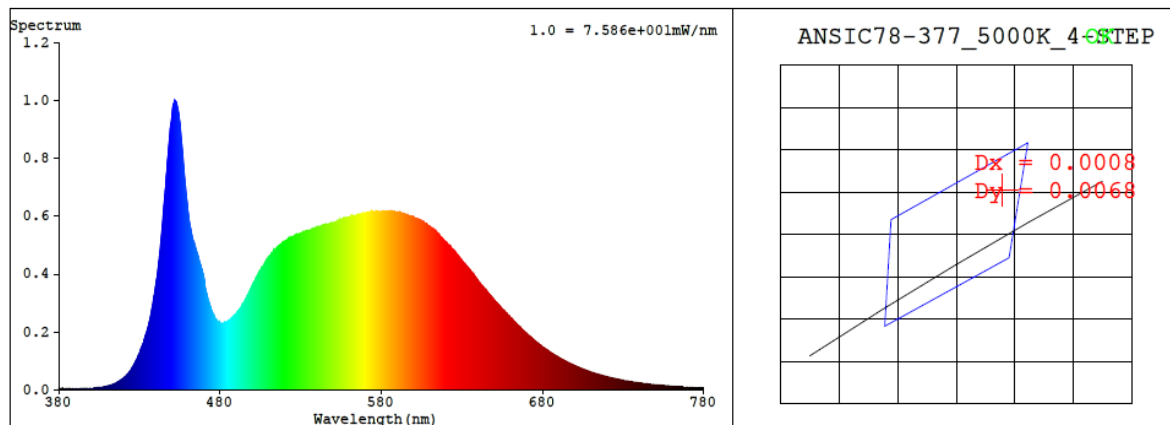
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere.</p> <p>The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within ±0.2 percent under load.</p> <p>The sample was measured using 4π geometry and operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780nm.</p>

Test Result

Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
120.0	60	0.171	20.4	0.995
277.0	60	0.076	20.2	0.955

CCT (K)	CRI	R9	Duv	SDCM	Rf	Rg	IES Rcs,h1
4872	83.4	13	0.0030	3.1	84	96	-12%

4.1 Integrating Sphere Test



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.3496$ $y = 0.3613$ / $u' = 0.2107$ $v' = 0.4900$ ($duv=3.04e-03$)

CCT= 4872K Prcp WL: $L_d=571.6nm$ Purity=13.3%

Peak WL: $L_p=452nm$ FWHM: $=21.3nm$ Ratio:R=16.0% G=79.7% B=4.3%

Render Index: $R_a = 83.4$ AvgR = 76.3 TM30:Rf=84 Rg=95

EEL: 0.09270 A++ Highest

R1 =82 R2 =88 R3 =93 R4 =82 R5 =81 R6 =83 R7 =89

R8 =69 R9 =13 R10=72 R11=81 R12=56 R13=83 R14=96 R15=76

4.1 Integrating Sphere Test

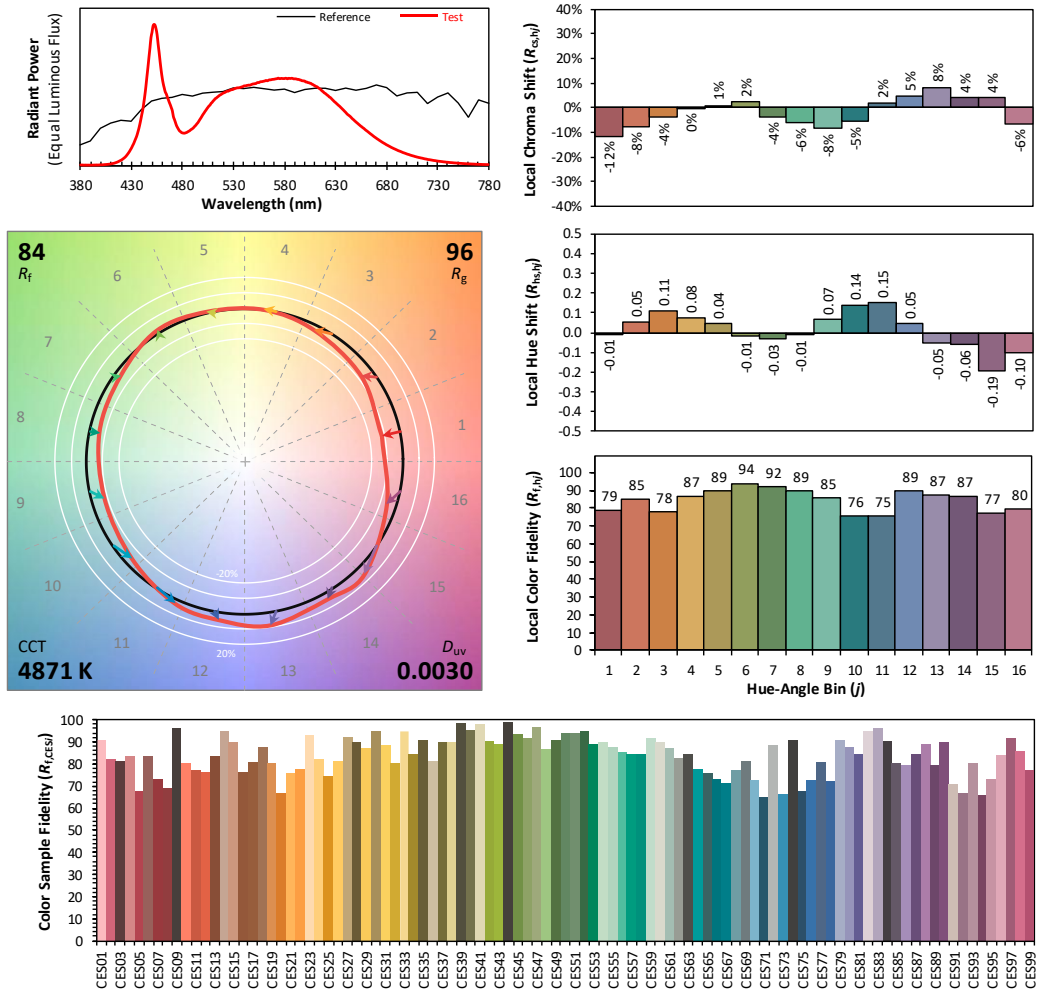
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/4/3

Model: STRP4/MVS @20W5000K



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

x 0.3496
 y 0.3612
 u' 0.2107
 v' 0.4899

CIE 13.3-1995
(CRI)

R_a 83
 R_g 13

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	5.20E-06	447	7.64E-04	514	4.83E-04	581	6.17E-04	648	3.24E-04	715	5.30E-05
381	4.20E-06	448	8.32E-04	515	4.89E-04	582	6.16E-04	649	3.16E-04	716	5.12E-05
382	4.50E-06	449	9.05E-04	516	4.95E-04	583	6.13E-04	650	3.10E-04	717	4.93E-05
383	3.50E-06	450	9.41E-04	517	4.99E-04	584	6.17E-04	651	3.04E-04	718	4.77E-05
384	3.70E-06	451	9.86E-04	518	5.04E-04	585	6.16E-04	652	2.98E-04	719	4.66E-05
385	4.00E-06	452	9.98E-04	519	5.09E-04	586	6.16E-04	653	2.91E-04	720	4.50E-05
386	3.40E-06	453	9.91E-04	520	5.13E-04	587	6.17E-04	654	2.85E-04	721	4.30E-05
387	3.70E-06	454	9.65E-04	521	5.16E-04	588	6.16E-04	655	2.79E-04	722	4.24E-05
388	3.60E-06	455	9.25E-04	522	5.19E-04	589	6.13E-04	656	2.74E-04	723	4.12E-05
389	3.40E-06	456	8.59E-04	523	5.24E-04	590	6.13E-04	657	2.68E-04	724	4.00E-05
390	3.50E-06	457	7.99E-04	524	5.26E-04	591	6.13E-04	658	2.63E-04	725	3.86E-05
391	3.80E-06	458	7.33E-04	525	5.26E-04	592	6.11E-04	659	2.56E-04	726	3.72E-05
392	3.50E-06	459	6.73E-04	526	5.31E-04	593	6.09E-04	660	2.50E-04	727	3.61E-05
393	4.10E-06	460	6.21E-04	527	5.33E-04	594	6.09E-04	661	2.45E-04	728	3.52E-05
394	4.10E-06	461	5.80E-04	528	5.37E-04	595	6.06E-04	662	2.39E-04	729	3.38E-05
395	4.50E-06	462	5.49E-04	529	5.37E-04	596	6.04E-04	663	2.33E-04	730	3.26E-05
396	4.70E-06	463	5.21E-04	530	5.40E-04	597	6.00E-04	664	2.28E-04	731	3.15E-05
397	4.00E-06	464	5.07E-04	531	5.43E-04	598	5.99E-04	665	2.22E-04	732	3.07E-05
398	5.00E-06	465	4.86E-04	532	5.46E-04	599	5.98E-04	666	2.17E-04	733	2.99E-05
399	5.40E-06	466	4.67E-04	533	5.48E-04	600	5.97E-04	667	2.11E-04	734	2.89E-05
400	5.80E-06	467	4.47E-04	534	5.49E-04	601	5.91E-04	668	2.05E-04	735	2.82E-05
401	5.90E-06	468	4.29E-04	535	5.50E-04	602	5.91E-04	669	2.00E-04	736	2.70E-05
402	5.90E-06	469	4.08E-04	536	5.51E-04	603	5.87E-04	670	1.95E-04	737	2.63E-05
403	6.90E-06	470	3.87E-04	537	5.53E-04	604	5.86E-04	671	1.90E-04	738	2.55E-05
404	7.50E-06	471	3.46E-04	538	5.56E-04	605	5.82E-04	672	1.85E-04	739	2.42E-05
405	8.00E-06	472	3.27E-04	539	5.57E-04	606	5.81E-04	673	1.80E-04	740	2.39E-05
406	8.70E-06	473	3.05E-04	540	5.62E-04	607	5.75E-04	674	1.75E-04	741	2.33E-05
407	9.40E-06	474	2.84E-04	541	5.64E-04	608	5.72E-04	675	1.70E-04	742	2.24E-05
408	1.03E-05	475	2.70E-04	542	5.64E-04	609	5.68E-04	676	1.66E-04	743	2.16E-05
409	1.14E-05	476	2.57E-04	543	5.66E-04	610	5.64E-04	677	1.61E-04	744	2.12E-05
410	1.28E-05	477	2.46E-04	544	5.67E-04	611	5.59E-04	678	1.57E-04	745	2.06E-05
411	1.44E-05	478	2.40E-04	545	5.69E-04	612	5.57E-04	679	1.53E-04	746	1.97E-05
412	1.57E-05	479	2.34E-04	546	5.68E-04	613	5.51E-04	680	1.48E-04	747	1.91E-05
413	1.75E-05	480	2.31E-04	547	5.71E-04	614	5.46E-04	681	1.45E-04	748	1.87E-05
414	1.99E-05	481	2.30E-04	548	5.74E-04	615	5.41E-04	682	1.41E-04	749	1.80E-05
415	2.25E-05	482	2.29E-04	549	5.77E-04	616	5.35E-04	683	1.37E-04	750	1.74E-05
416	2.52E-05	483	2.32E-04	550	5.78E-04	617	5.27E-04	684	1.33E-04	751	1.69E-05
417	2.85E-05	484	2.34E-04	551	5.79E-04	618	5.22E-04	685	1.29E-04	752	1.64E-05
418	3.24E-05	485	2.38E-04	552	5.80E-04	619	5.15E-04	686	1.25E-04	753	1.60E-05
419	3.61E-05	486	2.43E-04	553	5.85E-04	620	5.10E-04	687	1.22E-04	754	1.55E-05
420	3.98E-05	487	2.47E-04	554	5.87E-04	621	5.05E-04	688	1.19E-04	755	1.49E-05
421	4.47E-05	488	2.53E-04	555	5.87E-04	622	4.98E-04	689	1.15E-04	756	1.46E-05
422	5.03E-05	489	2.58E-04	556	5.91E-04	623	4.94E-04	690	1.12E-04	757	1.39E-05
423	5.60E-05	490	2.63E-04	557	5.93E-04	624	4.86E-04	691	1.09E-04	758	1.36E-05
424	6.27E-05	491	2.70E-04	558	5.93E-04	625	4.82E-04	692	1.05E-04	759	1.31E-05
425	7.11E-05	492	2.78E-04	559	5.95E-04	626	4.75E-04	693	1.03E-04	760	1.27E-05
426	8.05E-05	493	2.85E-04	560	5.97E-04	627	4.67E-04	694	9.98E-05	761	1.23E-05
427	9.04E-05	494	2.95E-04	561	5.99E-04	628	4.60E-04	695	9.70E-05	762	1.22E-05
428	1.01E-04	495	3.03E-04	562	6.02E-04	629	4.52E-04	696	9.34E-05	763	1.18E-05
429	1.14E-04	496	3.14E-04	563	5.99E-04	630	4.47E-04	697	9.09E-05	764	1.14E-05
430	1.26E-04	497	3.26E-04	564	6.01E-04	631	4.40E-04	698	8.85E-05	765	1.11E-05
431	1.42E-04	498	3.37E-04	565	6.05E-04	632	4.33E-04	699	8.58E-05	766	1.08E-05
432	1.56E-04	499	3.49E-04	566	6.06E-04	633	4.26E-04	700	8.31E-05	767	1.03E-05
433	1.74E-04	500	3.61E-04	567	6.07E-04	634	4.21E-04	701	8.04E-05	768	9.90E-06
434	1.91E-04	501	3.71E-04	568	6.09E-04	635	4.14E-04	702	7.86E-05	769	9.60E-06
435	2.09E-04	502	3.82E-04	569	6.10E-04	636	4.06E-04	703	7.59E-05	770	9.40E-06
436	2.33E-04	503	3.92E-04	570	6.10E-04	637	3.99E-04	704	7.34E-05	771	9.00E-06
437	2.60E-04	504	4.03E-04	571	6.12E-04	638	3.92E-04	705	7.13E-05	772	8.90E-06
438	2.90E-04	505	4.12E-04	572	6.14E-04	639	3.84E-04	706	6.92E-05	773	8.70E-06
439	3.24E-04	506	4.22E-04	573	6.15E-04	640	3.77E-04	707	6.74E-05	774	8.30E-06
440	3.62E-04	507	4.28E-04	574	6.18E-04	641	3.69E-04	708	6.48E-05	775	8.00E-06
441	3.97E-04	508	4.40E-04	575	6.15E-04	642	3.62E-04	709	6.31E-05	776	7.90E-06
442	4.46E-04	509	4.46E-04	576	6.15E-04	643	3.56E-04	710	6.09E-05	777	7.70E-06
443	4.98E-04	510	4.56E-04	577	6.16E-04	644	3.51E-04	711	5.93E-05	778	7.50E-06
444	5.58E-04	511	4.63E-04	578	6.15E-04	645	3.44E-04	712	5.73E-05	779	7.60E-06
445	6.28E-04	512	4.73E-04	579	6.15E-04	646	3.37E-04	713	5.60E-05	780	7.60E-06
446	6.93E-04	513	4.77E-04	580	6.15E-04	647	3.29E-04	714	5.42E-05	N/A	N/A

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	STRP4/MVS @20W5000K	Sample ID	250402001-S1
Operate time (Min.)	30	Stabilization time (Min.)	60
Temperature (°C)	25.0	Humidity (%RH)	42.6

Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using a type C goniophotometer and software.</p> <p>The ambient temperature shall be maintained at $25 \pm 1^\circ\text{C}$, 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 ± 0.2 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 1.0° vertical intervals and 15° horizontal intervals.</p>

Test Conditions

Condition	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
WORST CASE	120.0	60	0.171	20.4	0.995
NON-WORST CASE	277.0	60	0.076	20.2	0.955

Test Result

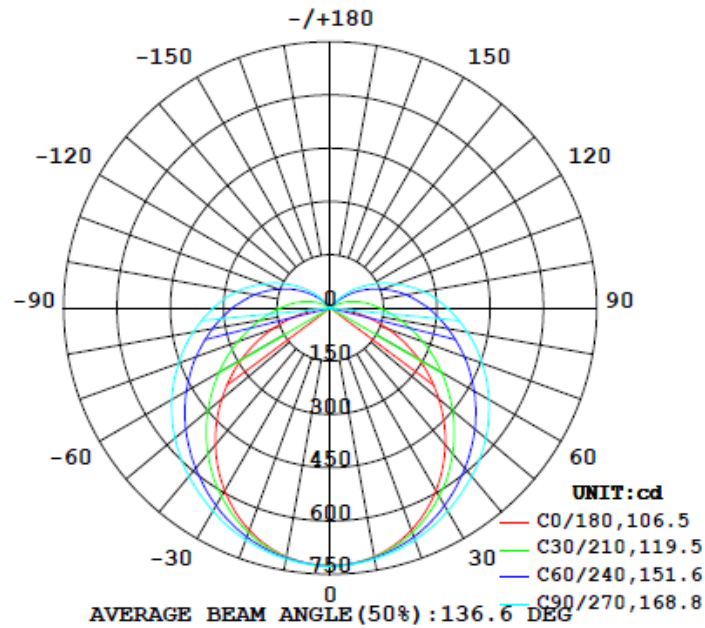
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
3129	782	159.8	159.8	106.4	168.8	153.4

Zonal Lumen Requirement	UGR	
(0° - 60°)	Crosswise	Endwise
56.0%	22.4	30.6

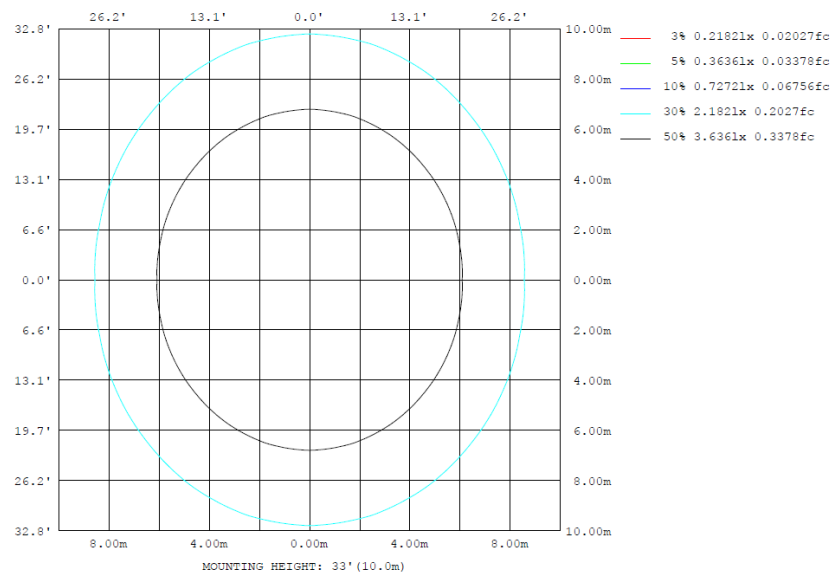
4.2 Goniophotometer Test

Lighting Distribution Curve

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



Isolux Plot



4.2 Goniophotometer Test

Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	Φ lum, lamp
10	711.1	713.0	717.4	713.0	711.1	713.0	717.4	713.0	0- 10	68.70	68.70	2.2,2.2
20	666.4	679.2	695.1	679.2	666.4	679.2	695.1	679.2	10- 20	197.5	266.3	8.51,8.51
30	594.5	627.0	660.5	627.0	594.5	627.0	660.5	627.0	20- 30	302.6	568.9	18.2,18.2
40	503.5	561.2	619.3	561.2	503.5	561.2	619.3	561.2	30- 40	373.4	942.2	30.1,30.1
50	398.9	490.4	571.2	490.4	398.9	490.4	571.2	490.4	40- 50	406.5	1349	43.1,43.1
60	287.8	417.2	515.3	417.2	287.8	417.2	515.3	417.2	50- 60	402.7	1751	56,56
70	173.8	343.8	454.5	343.8	173.8	343.8	454.5	343.8	60- 70	367.3	2119	67.7,67.7
80	66.39	275.8	391.6	275.8	66.39	275.8	391.6	275.8	70- 80	309.9	2429	77.6,77.6
90	4.162	216.3	329.3	216.3	4.162	216.3	329.3	216.3	80- 90	244.8	2673	85.4,85.4
100	3.250	160.8	267.5	160.8	3.250	160.8	267.5	160.8	90-100	186.6	2860	91.4,91.4
110	4.216	107.9	199.5	107.9	4.216	107.9	199.5	107.9	100-110	131.3	2991	95.6,95.6
120	4.379	59.36	133.9	59.36	4.379	59.36	133.9	59.36	110-120	80.98	3072	98.2,98.2
130	4.360	17.38	73.85	17.38	4.360	17.38	73.85	17.38	120-130	40.32	3113	99.5,99.5
140	4.420	2.143	20.31	2.143	4.420	2.143	20.31	2.143	130-140	13.18	3126	99.9,99.9
150	4.376	1.753	1.245	1.753	4.376	1.753	1.245	1.753	140-150	1.941	3128	99.9,99.9
160	3.514	1.507	1.341	1.507	3.514	1.507	1.341	1.507	150-160	0.9492	3129	100,100
170	4.277	1.462	1.532	1.462	4.277	1.462	1.532	1.462	160-170	0.5355	3129	100,100
180	1.532	1.532	1.532	1.532	1.532	1.532	1.532	1.532	170-180	0.1866	3129	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	68.70	0-10	68.70	2.20%
10-20	197.55	0-20	266.25	8.51%
20-30	302.61	0-30	568.86	18.18%
30-40	373.38	0-40	942.24	30.11%
40-50	406.52	0-50	1348.76	43.10%
50-60	402.72	0-60	1751.48	55.97%
60-70	367.28	0-70	2118.76	67.71%
70-80	309.91	0-80	2428.67	77.61%
80-90	244.80	0-90	2673.47	85.43%
90-100	186.64	0-100	2860.11	91.40%
100-110	131.28	0-110	2991.39	95.59%
110-120	80.98	0-120	3072.37	98.18%
120-130	40.32	0-130	3112.69	99.47%
130-140	13.18	0-140	3125.87	99.89%
140-150	1.94	0-150	3127.81	99.95%
150-160	0.95	0-160	3128.76	99.98%
160-170	0.54	0-170	3129.30	100.00%
170-180	0.19	0-180	3129.49	100.01%

4.2 Goniophotometer Test

UGR – Uncorrected Table:

UGR TABLE - UNCORRECTED

Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	14.3	15.7	14.9	16.3	17.0	18.5	19.9	19.1	20.5	21.2
	3H	15.7	17.0	16.2	17.6	18.3	21.5	22.8	22.1	23.4	24.1
	4H	16.1	17.3	16.7	17.9	18.7	23.1	24.3	23.7	24.9	25.6
	6H	16.3	17.5	17.0	18.1	18.8	24.8	25.9	25.4	26.5	27.3
	8H	16.4	17.5	17.0	18.1	18.9	25.7	26.8	26.3	27.4	28.1
	12H	16.4	17.5	17.0	18.1	18.9	26.7	27.7	27.3	28.4	29.1
4H	2H	15.6	16.9	16.2	17.5	18.2	18.8	20.0	19.4	20.7	21.4
	3H	17.3	18.4	17.9	19.0	19.7	22.1	23.1	22.7	23.8	24.5
	4H	17.9	18.9	18.5	19.5	20.3	23.8	24.8	24.4	25.4	26.2
	6H	18.3	19.1	18.9	19.8	20.6	25.6	26.5	26.3	27.2	28.0
	8H	18.4	19.2	19.0	19.9	20.6	26.6	27.5	27.3	28.2	28.9
	12H	18.4	19.2	19.1	19.9	20.6	27.8	28.5	28.5	29.2	30.0
8H	4H	19.1	19.9	19.7	20.6	21.4	23.9	24.8	24.6	25.4	26.2
	6H	19.7	20.4	20.4	21.2	21.9	26.0	26.7	26.7	27.4	28.2
	8H	19.9	20.6	20.6	21.3	22.1	27.1	27.7	27.8	28.5	29.3
	12H	20.1	20.7	20.8	21.4	22.2	28.4	29.0	29.1	29.7	30.5
12H	4H	19.5	20.2	20.1	20.9	21.7	23.9	24.7	24.6	25.4	26.2
	6H	20.3	20.9	21.0	21.6	22.5	26.0	26.6	26.7	27.3	28.2
	8H	20.6	21.2	21.3	21.9	22.8	27.2	27.8	27.9	28.5	29.3

Maximum UGR = 30.5

UGR – Corrected Table:

UGR TABLE - CORRECTED

Reflectances											
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30	
Walls	50	30	50	30	30	50	30	50	30	30	
Floor Cavity	20	20	20	20	20	20	20	20	20	20	
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	18.3	19.7	18.9	20.3	21.0	22.5	23.9	23.1	24.5	25.2
	3H	19.7	21.0	20.2	21.6	22.3	25.5	26.8	26.1	27.4	28.1
	4H	20.1	21.3	20.7	21.9	22.7	27.1	28.3	27.7	28.9	29.6
	6H	20.3	21.5	21.0	22.1	22.8	28.8	29.9	29.4	30.5	31.3
	8H	20.4	21.5	21.0	22.1	22.9	29.7	30.8	30.3	31.4	32.1
	12H	20.4	21.5	21.0	22.1	22.9	30.7	31.7	31.3	32.4	33.1
4H	2H	19.6	20.9	20.2	21.5	22.2	22.8	24.0	23.4	24.7	25.4
	3H	21.3	22.4	21.9	23.0	23.7	26.1	27.1	26.7	27.8	28.5
	4H	21.9	22.9	22.5	23.5	24.3	27.8	28.8	28.4	29.4	30.2
	6H	22.3	23.1	22.9	23.8	24.6	29.6	30.5	30.3	31.2	32.0
	8H	22.4	23.2	23.0	23.9	24.6	30.6	31.5	31.3	32.2	32.9
	12H	22.4	23.2	23.1	23.9	24.6	31.8	32.5	32.5	33.2	34.0
8H	4H	23.1	23.9	23.7	24.6	25.4	27.9	28.8	28.6	29.4	30.2
	6H	23.7	24.4	24.4	25.2	25.9	30.0	30.7	30.7	31.4	32.2
	8H	23.9	24.6	24.6	25.3	26.1	31.1	31.7	31.8	32.5	33.3
	12H	24.1	24.7	24.8	25.4	26.2	32.4	33.0	33.1	33.7	34.5
12H	4H	23.5	24.2	24.1	24.9	25.7	27.9	28.7	28.6	29.4	30.2
	6H	24.3	24.9	25.0	25.6	26.5	30.0	30.6	30.7	31.3	32.2
	8H	24.6	25.2	25.3	25.9	26.8	31.2	31.8	31.9	32.5	33.3

Maximum UGR = 34.5

4.2 Goniophotometer Test

Luminous Distribution Intensity Data

Table--1

UNIT: cd

C (DEG) y	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	727	727	727	727	727	727	727	727	727	727	727	727	727	727	727	727	727	727	727
5	722	723	723	722	723	723	723	723	723	722	723	723	722	723	723	722	723	723	723
10	711	712	713	713	714	717	717	717	714	713	713	712	711	712	713	713	714	717	717
15	692	694	696	699	702	706	708	706	702	699	696	694	692	694	696	699	702	706	708
20	666	669	674	679	686	692	695	692	686	679	674	669	666	669	674	679	686	692	695
25	633	638	645	655	666	675	680	675	666	655	645	638	633	638	645	655	666	675	680
30	594	601	613	627	643	656	660	656	643	627	613	601	594	601	613	627	643	656	660
35	551	559	576	595	617	634	640	634	617	595	576	559	551	559	576	595	617	634	640
40	504	514	536	561	589	611	619	611	589	561	536	514	504	514	536	561	589	611	619
45	452	466	494	526	561	586	596	586	561	526	494	466	452	466	494	526	561	586	596
50	399	416	450	490	531	560	571	560	531	490	450	416	399	416	450	490	531	560	571
55	344	364	405	454	500	531	544	531	500	454	405	364	344	364	405	454	500	531	544
60	288	312	362	417	467	502	515	502	467	417	362	312	288	312	362	417	467	502	515
65	231	259	319	380	435	472	485	472	435	380	319	259	231	259	319	380	435	472	485
70	174	209	277	344	402	441	455	441	402	344	277	209	174	209	277	344	402	441	455
75	118	162	238	309	369	409	424	409	369	309	238	162	118	162	238	309	369	409	424
80	66.4	120	202	276	337	377	392	377	337	276	202	120	66.4	120	202	276	337	377	392
85	25.2	84.7	169	244	306	345	360	345	306	244	169	84.7	25.2	84.7	169	244	306	345	360
90	4.16	57.9	141	216	276	316	329	316	276	216	141	57.9	4.16	57.9	141	216	276	316	329
95	3.12	40.3	117	188	245	284	299	284	245	188	117	40.3	3.12	40.3	117	188	245	284	299
100	3.25	25.5	93.2	161	217	251	268	251	217	161	93.2	25.5	3.25	25.5	93.2	161	217	251	268
105	3.52	12.6	71.3	134	186	220	233	220	186	134	71.3	12.6	3.52	12.6	71.3	134	186	220	233
110	4.22	5.17	51.3	108	156	187	199	187	156	108	51.3	5.17	4.22	5.17	51.3	108	156	187	199
115	4.30	4.38	32.8	82.9	127	155	166	155	127	82.9	32.8	4.38	4.30	4.38	32.8	82.9	127	155	166
120	4.38	3.75	16.1	59.4	98.3	124	134	124	98.3	59.4	16.1	3.75	4.38	3.75	16.1	59.4	98.3	124	134
125	4.37	3.30	4.90	37.3	71.3	94.1	103	94.1	71.3	37.3	4.90	3.30	4.37	3.30	4.90	37.3	71.3	94.1	103
130	4.36	3.27	3.54	17.4	45.8	65.5	73.9	65.5	45.8	17.4	3.54	3.27	4.36	3.27	3.54	17.4	45.8	65.5	73.9
135	4.52	3.26	2.68	3.71	22.4	39.3	46.0	39.3	22.4	3.71	2.68	3.26	4.52	3.26	2.68	3.71	22.4	39.3	46.0
140	4.42	3.24	2.51	2.14	3.81	15.0	20.3	15.0	3.81	2.14	2.51	3.24	4.42	3.24	2.51	2.14	3.81	15.0	20.3
145	4.40	3.22	2.41	1.87	1.64	1.57	1.57	1.57	1.64	1.87	2.41	3.22	4.40	3.22	2.41	1.87	1.64	1.57	1.57
150	4.38	3.18	2.21	1.75	1.57	1.42	1.24	1.42	1.57	1.75	2.21	3.18	4.38	3.18	2.21	1.75	1.57	1.42	1.24
155	4.10	3.12	2.03	1.69	1.44	1.47	1.24	1.47	1.44	1.69	2.03	3.12	4.10	3.12	2.03	1.69	1.44	1.47	1.24
160	3.51	2.97	1.81	1.51	1.40	1.34	1.34	1.40	1.51	1.81	2.97	3.51	2.97	1.81	1.51	1.40	1.34	1.34	1.40
165	3.75	2.87	1.75	1.48	1.33	1.33	1.24	1.33	1.33	1.48	1.75	2.87	3.75	2.87	1.75	1.48	1.33	1.33	1.24
170	4.28	2.94	1.71	1.46	1.33	1.36	1.53	1.36	1.33	1.46	1.71	2.94	4.28	2.94	1.71	1.46	1.33	1.36	1.53
175	4.38	2.71	1.77	1.54	1.45	1.43	1.53	1.43	1.45	1.54	1.77	2.71	4.38	2.71	1.77	1.54	1.45	1.43	1.53
180	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53	1.53

Table--2

UNIT: cd

C (DEG) y	285	300	315	330	345														
0	727	727	727	727	727														
5	723	723	722	723	723														
10	717	714	713	713	712														
15	706	702	699	696	694														
20	692	686	679	674	669														
25	675	666	655	645	638														
30	656	643	627	613	601														
35	634	617	595	576	559														
40	611	589	561	536	514														
45	586	561	526	494	466														
50	560	531	490	450	416														
55	531	500	454	405	364														
60	502	467	417	362	312														
65	472	435	380	319	259														
70	441	402	344	277	209														
75	409	369	309	238	162														
80	377	337	276	202	120														
85	345	306	244	169	84.7														
90	316	276	216	141	57.9														
95	284	245	188	117	40.3														
100	251	217	161	93.2	25.5														
105	220	186	134	71.3	12.6														
110	187	156	108	51.3	5.17														
115	155	127	82.9	32.8	4.38														
120	124	98.3	59.4	16.1	3.75														
125	94.1	71.3	37.3	4.90	3.30														
130	65.5	45.8	17.4	3.54	3.27														
135	39.3	22.4	3.71	2.68	3.26														
140	15.0	3.81	2.14	2.51	3.24														
145	1.57	1.64	1.87	2.41	3.22														
150	1.42	1.57	1.75	2.21	3.18														
155	1.47	1.44	1.69	2.03	3.12														
160	1.34	1.40	1.51	1.81	2.97														
165	1.33	1.33	1.48	1.75	2.87														
170	1.36	1.33	1.46	1.71	2.94														
175	1.43	1.45	1.54	1.77	2.71														
180	1.53	1.53	1.53	1.53	1.53														

4.0 LM-79 Measurement and Test Results

4.3 THD and PF Test

Model No.	STRP4/MVS @20W5000K	Sample ID	250402001-S1
Temperature (°C)	25.4	Humidity (%RH)	41.0

Test Method
<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 25±1°C. 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	0.171	20.4	0.995	7.54
277.0	60	0.076	20.2	0.955	8.10

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*******