

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: 2025-04-03

Review by:

Vincent Yuan

Technical Lead: Vincent Yuan

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		754
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	153.8
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		19.6
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	5.43
				277V	18.60
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.987
				277V	0.850
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	3465±245	3439
			4 steps	3465±124	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		84.2
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		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%		-12%
Zonal Lumen Requirement (0°-60°) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	≥40%		63.2%
Discomfort Glare (UGR) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	27.1
			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		0.083
(Goniophotometer – Section 4.2)			Non-Worst Case		0.160
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		19.6
(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	2025-04-02	STRP4H/MVS @20W3500K	-	250402002-S1
2	Goniophotometer Test	2025-04-02	STRP4H/MVS @20W3500K	-	250402002-S1
3	THD and PF Test	2025-04-02	STRP4H/MVS @20W3500K	-	250402002-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. STRP4H/MVS @20W3500K, 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.	STRP4H/MVS @20W3500K	Sample ID	250402002-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

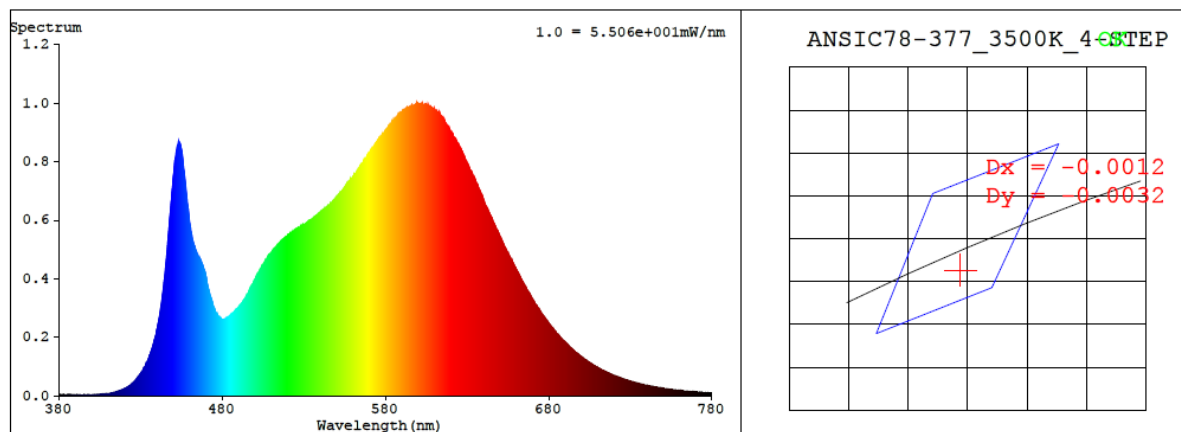
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made 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	0.160	19.0	0.987
277.0	60	0.083	19.6	0.850

CCT (K)	CRI	R9	Duv	SDCM	Rf	Rg	IES Rcs,h1
3439	84.2	13	-0.0011	1.8	85	95	-12%

4.1 Integrating Sphere Test



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.4076$ $y = 0.3893$ / $u' = 0.2378$ $v' = 0.5110$ ($duv = -1.13e-03$)

CCT= 3439K Prcp WL: $L_d = 581.6\text{nm}$ Purity=39.2%

Peak WL: $L_p = 599\text{nm}$ FWHM: $=142.7\text{nm}$ Ratio: R=20.8% G=75.8% B=3.3%

Render Index: $R_a = 84.2$ AvgR = 78.6 TM30: $R_f = 85$ $R_g = 95$

EEL: 0.09322 A++ Highest

R1 =83 R2 =93 R3 =96 R4 =82 R5 =83 R6 =90 R7 =84

R8 =63 R9 =13 R10=83 R11=81 R12=68 R13=86 R14=98 R15=77

4.1 Integrating Sphere Test

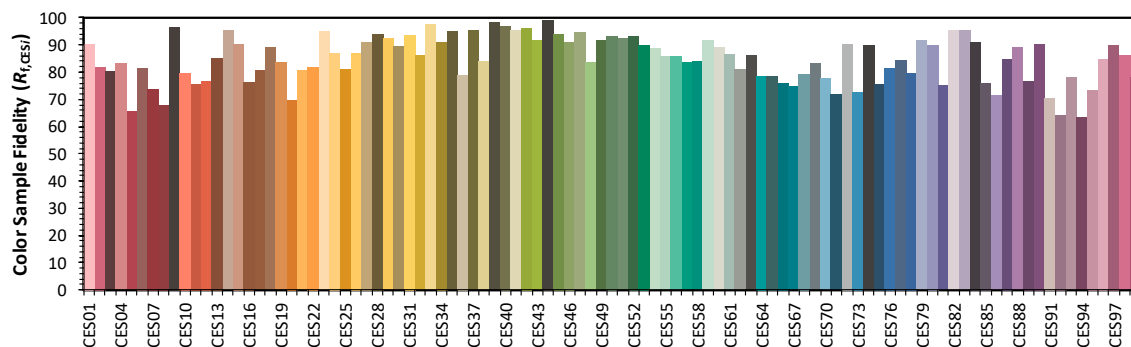
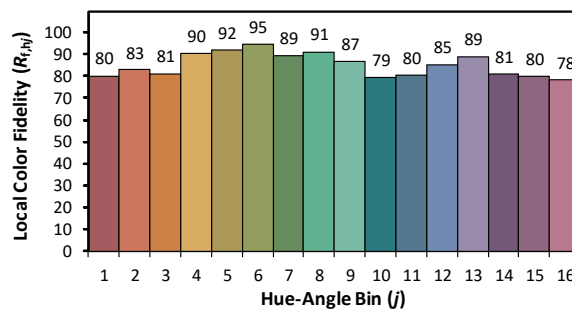
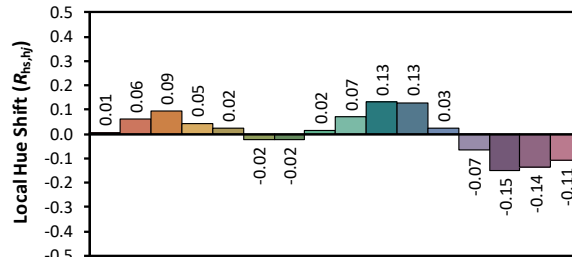
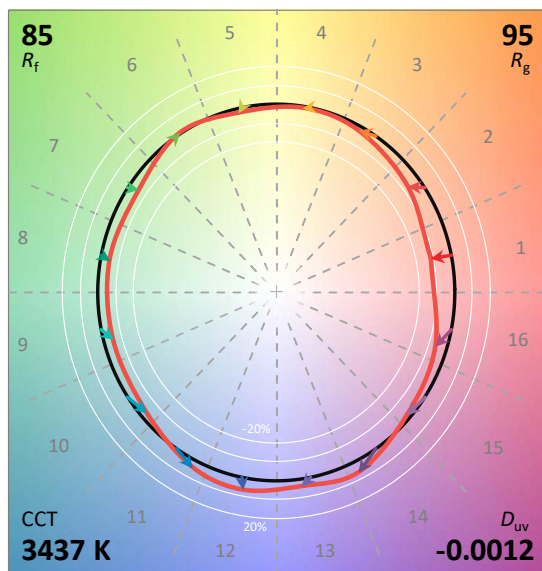
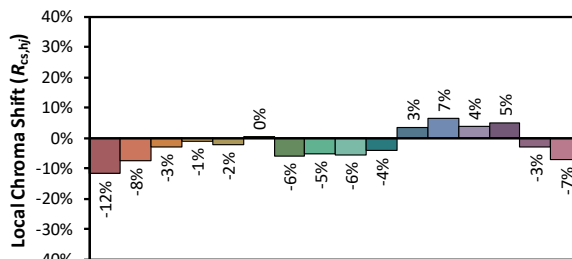
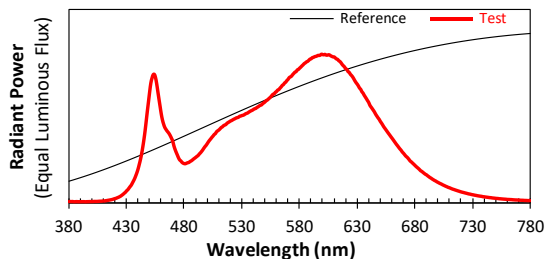
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/4/3

Model: STRP4H/MVS @20W3500K



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

x 0.4076
 y 0.3891
 u' 0.2378
 v' 0.5109

CIE 13.3-1995
(CRI)

R_a 84
 R_g 12

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	3.80E-06	447	5.50E-04	514	5.16E-04	581	9.13E-04	648	5.70E-04	715	8.22E-05
381	4.40E-06	448	6.18E-04	515	5.21E-04	582	9.21E-04	649	5.60E-04	716	7.98E-05
382	3.70E-06	449	6.82E-04	516	5.25E-04	583	9.28E-04	650	5.46E-04	717	7.70E-05
383	4.40E-06	450	7.48E-04	517	5.33E-04	584	9.36E-04	651	5.35E-04	718	7.47E-05
384	3.00E-06	451	8.05E-04	518	5.38E-04	585	9.41E-04	652	5.23E-04	719	7.20E-05
385	2.70E-06	452	8.38E-04	519	5.43E-04	586	9.48E-04	653	5.09E-04	720	6.96E-05
386	3.50E-06	453	8.61E-04	520	5.48E-04	587	9.52E-04	654	4.99E-04	721	6.73E-05
387	3.60E-06	454	8.64E-04	521	5.51E-04	588	9.59E-04	655	4.88E-04	722	6.55E-05
388	2.90E-06	455	8.44E-04	522	5.56E-04	589	9.67E-04	656	4.77E-04	723	6.34E-05
389	3.20E-06	456	8.03E-04	523	5.61E-04	590	9.69E-04	657	4.66E-04	724	6.13E-05
390	2.70E-06	457	7.51E-04	524	5.64E-04	591	9.77E-04	658	4.55E-04	725	5.94E-05
391	3.40E-06	458	6.99E-04	525	5.69E-04	592	9.78E-04	659	4.44E-04	726	5.72E-05
392	3.20E-06	459	6.48E-04	526	5.71E-04	593	9.83E-04	660	4.34E-04	727	5.53E-05
393	3.50E-06	460	5.97E-04	527	5.74E-04	594	9.85E-04	661	4.23E-04	728	5.40E-05
394	2.40E-06	461	5.57E-04	528	5.80E-04	595	9.88E-04	662	4.12E-04	729	5.18E-05
395	3.00E-06	462	5.29E-04	529	5.82E-04	596	9.92E-04	663	4.01E-04	730	5.02E-05
396	3.30E-06	463	5.07E-04	530	5.86E-04	597	9.92E-04	664	3.91E-04	731	4.87E-05
397	3.40E-06	464	4.93E-04	531	5.87E-04	598	9.94E-04	665	3.81E-04	732	4.69E-05
398	3.90E-06	465	4.82E-04	532	5.91E-04	599	1.00E-03	666	3.70E-04	733	4.56E-05
399	3.70E-06	466	4.72E-04	533	5.96E-04	600	9.97E-04	667	3.60E-04	734	4.39E-05
400	4.10E-06	467	4.61E-04	534	6.00E-04	601	9.96E-04	668	3.51E-04	735	4.25E-05
401	4.10E-06	468	4.47E-04	535	6.03E-04	602	9.99E-04	669	3.40E-04	736	4.12E-05
402	5.00E-06	469	4.30E-04	536	6.09E-04	603	9.94E-04	670	3.31E-04	737	4.01E-05
403	4.80E-06	470	4.12E-04	537	6.13E-04	604	9.93E-04	671	3.22E-04	738	3.89E-05
404	4.90E-06	471	3.81E-04	538	6.18E-04	605	9.96E-04	672	3.12E-04	739	3.69E-05
405	5.20E-06	472	3.57E-04	539	6.21E-04	606	9.95E-04	673	3.05E-04	740	3.63E-05
406	5.90E-06	473	3.36E-04	540	6.27E-04	607	9.89E-04	674	2.97E-04	741	3.49E-05
407	6.40E-06	474	3.18E-04	541	6.31E-04	608	9.85E-04	675	2.87E-04	742	3.39E-05
408	6.60E-06	475	3.00E-04	542	6.34E-04	609	9.82E-04	676	2.78E-04	743	3.29E-05
409	7.50E-06	476	2.86E-04	543	6.40E-04	610	9.81E-04	677	2.72E-04	744	3.17E-05
410	7.80E-06	477	2.79E-04	544	6.44E-04	611	9.75E-04	678	2.64E-04	745	3.06E-05
411	8.50E-06	478	2.69E-04	545	6.50E-04	612	9.68E-04	679	2.57E-04	746	3.01E-05
412	1.00E-05	479	2.64E-04	546	6.55E-04	613	9.65E-04	680	2.49E-04	747	2.86E-05
413	1.11E-05	480	2.60E-04	547	6.58E-04	614	9.56E-04	681	2.41E-04	748	2.77E-05
414	1.27E-05	481	2.60E-04	548	6.66E-04	615	9.50E-04	682	2.35E-04	749	2.69E-05
415	1.39E-05	482	2.63E-04	549	6.71E-04	616	9.41E-04	683	2.28E-04	750	2.59E-05
416	1.56E-05	483	2.67E-04	550	6.78E-04	617	9.30E-04	684	2.21E-04	751	2.51E-05
417	1.70E-05	484	2.69E-04	551	6.85E-04	618	9.22E-04	685	2.12E-04	752	2.46E-05
418	1.93E-05	485	2.75E-04	552	6.90E-04	619	9.13E-04	686	2.08E-04	753	2.33E-05
419	2.20E-05	486	2.79E-04	553	6.97E-04	620	9.02E-04	687	2.01E-04	754	2.28E-05
420	2.44E-05	487	2.85E-04	554	7.04E-04	621	8.97E-04	688	1.95E-04	755	2.21E-05
421	2.66E-05	488	2.91E-04	555	7.12E-04	622	8.83E-04	689	1.89E-04	756	2.13E-05
422	3.02E-05	489	2.97E-04	556	7.21E-04	623	8.77E-04	690	1.85E-04	757	2.07E-05
423	3.33E-05	490	3.03E-04	557	7.29E-04	624	8.65E-04	691	1.78E-04	758	2.01E-05
424	3.73E-05	491	3.10E-04	558	7.32E-04	625	8.56E-04	692	1.73E-04	759	1.96E-05
425	4.19E-05	492	3.16E-04	559	7.42E-04	626	8.47E-04	693	1.67E-04	760	1.85E-05
426	4.77E-05	493	3.25E-04	560	7.48E-04	627	8.33E-04	694	1.62E-04	761	1.82E-05
427	5.36E-05	494	3.33E-04	561	7.57E-04	628	8.20E-04	695	1.57E-04	762	1.79E-05
428	6.08E-05	495	3.43E-04	562	7.61E-04	629	8.08E-04	696	1.52E-04	763	1.74E-05
429	6.74E-05	496	3.53E-04	563	7.71E-04	630	7.97E-04	697	1.47E-04	764	1.70E-05
430	7.68E-05	497	3.65E-04	564	7.79E-04	631	7.85E-04	698	1.43E-04	765	1.60E-05
431	8.40E-05	498	3.76E-04	565	7.89E-04	632	7.71E-04	699	1.38E-04	766	1.56E-05
432	9.45E-05	499	3.85E-04	566	7.95E-04	633	7.63E-04	700	1.34E-04	767	1.49E-05
433	1.05E-04	500	3.97E-04	567	8.06E-04	634	7.47E-04	701	1.29E-04	768	1.48E-05
434	1.15E-04	501	4.09E-04	568	8.11E-04	635	7.37E-04	702	1.26E-04	769	1.44E-05
435	1.30E-04	502	4.19E-04	569	8.22E-04	636	7.23E-04	703	1.22E-04	770	1.39E-05
436	1.44E-04	503	4.29E-04	570	8.30E-04	637	7.11E-04	704	1.18E-04	771	1.33E-05
437	1.60E-04	504	4.39E-04	571	8.42E-04	638	6.98E-04	705	1.14E-04	772	1.29E-05
438	1.80E-04	505	4.47E-04	572	8.47E-04	639	6.85E-04	706	1.10E-04	773	1.27E-05
439	2.01E-04	506	4.58E-04	573	8.52E-04	640	6.73E-04	707	1.07E-04	774	1.24E-05
440	2.27E-04	507	4.64E-04	574	8.62E-04	641	6.54E-04	708	1.03E-04	775	1.16E-05
441	2.57E-04	508	4.76E-04	575	8.70E-04	642	6.43E-04	709	9.96E-05	776	1.15E-05
442	2.89E-04	509	4.82E-04	576	8.79E-04	643	6.32E-04	710	9.73E-05	777	1.12E-05
443	3.27E-04	510	4.88E-04	577	8.82E-04	644	6.21E-04	711	9.38E-05	778	1.07E-05
444	3.72E-04	511	4.96E-04	578	8.94E-04	645	6.08E-04	712	9.04E-05	779	1.06E-05
445	4.24E-04	512	5.04E-04	579	8.97E-04	646	5.94E-04	713	8.75E-05	780	1.06E-05
446	4.82E-04	513	5.09E-04	580	9.06E-04	647	5.82E-04	714	8.51E-05	N/A	N/A

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	STRP4H/MVS @20W3500K	Sample ID	250402002-S1
Operate time (Min.)	30	Stabilization time (Min.)	60
Temperature (°C)	24.8	Humidity (%RH)	42.9

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	277.0	60	0.083	19.6	0.850
NON-WORST CASE	120.0	60	0.160	19.0	0.987

Test Result

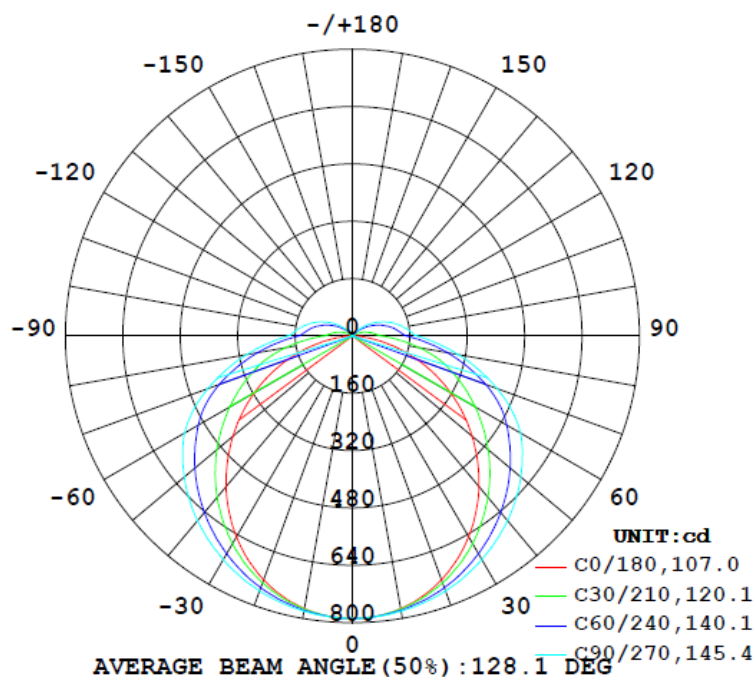
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
3014	754	160.0	160.0	106.9	145.2	153.8

Zonal Lumen Requirement	UGR	
(0° - 60°)	Crosswise	Endwise
63.2%	21.4	27.1

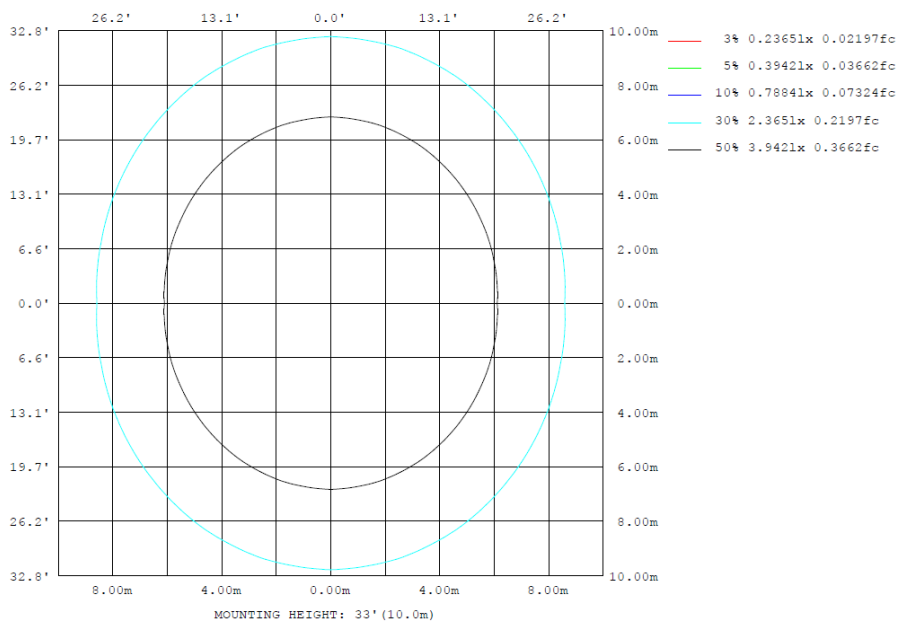
4.2 Goniophotometer Test

Lighting Distribution Curve

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



Isolux Plot



4.2 Goniophotometer Test

Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total	lum, lamp
10	772.3	774.8	780.0	774.8	772.3	774.8	780.0	774.8	0- 10	74.62	74.62	2.48,2.48
20	724.1	739.4	757.2	739.4	724.1	739.4	757.2	739.4	10- 20	214.8	289.4	9.6,9.6
30	647.0	684.8	720.4	684.8	647.0	684.8	720.4	684.8	20- 30	329.8	619.2	20.5,20.5
40	548.2	614.3	672.2	614.3	548.2	614.3	672.2	614.3	30- 40	407.7	1027	34.1,34.1
50	435.5	534.2	612.4	534.2	435.5	534.2	612.4	534.2	40- 50	442.8	1470	48.8,48.8
60	315.3	447.9	540.9	447.9	315.3	447.9	540.9	447.9	50- 60	434.9	1905	63.2,63.2
70	191.1	355.3	429.2	355.3	191.1	355.3	429.2	355.3	60- 70	385.5	2290	76,76
80	73.50	233.7	299.1	233.7	73.50	233.7	299.1	233.7	70- 80	291.3	2581	85.6,85.6
90	3.070	119.4	179.2	119.4	3.070	119.4	179.2	119.4	80- 90	173.9	2755	91.4,91.4
100	2.397	89.79	144.7	89.79	2.397	89.79	144.7	89.79	90-100	102.0	2857	94.8,94.8
110	3.225	62.09	111.7	62.09	3.225	62.09	111.7	62.09	100-110	73.92	2931	97.2,97.2
120	3.344	35.76	76.09	35.76	3.344	35.76	76.09	35.76	110-120	46.82	2978	98.8,98.8
130	3.502	12.22	42.88	12.22	3.502	12.22	42.88	12.22	120-130	24.19	3002	99.6,99.6
140	3.502	1.943	13.96	1.943	3.502	1.943	13.96	1.943	130-140	8.724	3011	99.9,99.9
150	3.502	1.684	1.321	1.684	3.502	1.684	1.321	1.684	140-150	1.763	3013	99.9,99.9
160	3.319	1.581	1.322	1.581	3.319	1.581	1.322	1.581	150-160	0.9255	3014	100,100
170	4.238	1.658	1.418	1.658	4.238	1.658	1.418	1.658	160-170	0.5604	3014	100,100
180	4.423	1.758	1.700	1.758	4.423	1.758	1.700	1.758	170-180	0.2220	3014	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	74.62	0-10	74.62	2.48%
10-20	214.80	0-20	289.42	9.60%
20-30	329.82	0-30	619.24	20.54%
30-40	407.65	0-40	1026.89	34.07%
40-50	442.75	0-50	1469.64	48.76%
50-60	434.93	0-60	1904.57	63.19%
60-70	385.45	0-70	2290.02	75.98%
70-80	291.32	0-80	2581.34	85.64%
80-90	173.87	0-90	2755.21	91.41%
90-100	102.02	0-100	2857.23	94.79%
100-110	73.92	0-110	2931.15	97.25%
110-120	46.82	0-120	2977.97	98.80%
120-130	24.19	0-130	3002.16	99.60%
130-140	8.72	0-140	3010.88	99.89%
140-150	1.76	0-150	3012.64	99.95%
150-160	0.93	0-160	3013.57	99.98%
160-170	0.56	0-170	3014.13	100.00%
170-180	0.22	0-180	3014.35	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	Y=2H	UGR Viewed Crosswise				UGR Viewed Endwise				
		13.2	14.8	13.7	15.2	15.8	16.4	17.9	16.8	18.4
	3H	14.8	16.2	15.3	16.7	17.2	19.0	20.4	19.5	20.9
	4H	15.3	16.6	15.8	17.1	17.7	20.3	21.6	20.8	22.1
	6H	15.6	16.8	16.1	17.4	18.0	21.5	22.7	22.0	23.3
	8H	15.7	16.9	16.2	17.4	18.0	22.1	23.3	22.7	23.8
	12H	15.7	16.8	16.3	17.4	18.0	22.7	23.9	23.3	24.4
4H	2H	14.5	15.8	15.0	16.3	16.9	16.8	18.1	17.3	18.7
	3H	16.3	17.5	16.9	18.0	18.6	19.7	20.9	20.3	21.4
	4H	17.0	18.1	17.6	18.6	19.3	21.1	22.2	21.7	22.7
	6H	17.5	18.4	18.1	19.0	19.7	22.5	23.5	23.1	24.1
	8H	17.6	18.5	18.2	19.1	19.7	23.3	24.1	23.8	24.7
	12H	17.7	18.5	18.3	19.1	19.8	24.0	24.8	24.6	25.4
8H	4H	18.0	18.8	18.6	19.4	20.1	21.4	22.2	22.0	22.8
	6H	18.7	19.4	19.3	20.1	20.7	23.0	23.7	23.6	24.3
	8H	18.9	19.6	19.6	20.2	20.9	23.8	24.5	24.4	25.1
	12H	19.1	19.7	19.7	20.3	21.1	24.7	25.3	25.4	25.9
12H	4H	18.2	19.0	18.8	19.6	20.3	21.4	22.2	22.0	22.8
	6H	19.1	19.7	19.7	20.3	21.1	23.0	23.7	23.7	24.3
	8H	19.4	20.0	20.0	20.6	21.4	23.9	24.5	24.5	25.1

Maximum UGR = 26.7

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	Y=2H	UGR Viewed Crosswise				UGR Viewed Endwise				
		17.0	18.6	17.5	19.0	19.6	20.2	21.7	20.6	22.2
	3H	18.6	20.0	19.1	20.5	21.0	22.8	24.2	23.3	24.7
	4H	19.1	20.4	19.6	20.9	21.5	24.1	25.4	24.6	25.9
	6H	19.4	20.6	19.9	21.2	21.8	25.3	26.5	25.8	27.1
	8H	19.5	20.7	20.0	21.2	21.8	25.9	27.1	26.5	27.6
	12H	19.5	20.6	20.1	21.2	21.8	26.5	27.7	27.1	28.2
4H	2H	18.3	19.6	18.8	20.1	20.7	20.6	21.9	21.1	22.5
	3H	20.1	21.3	20.7	21.8	22.4	23.5	24.7	24.1	25.2
	4H	20.8	21.9	21.4	22.4	23.1	24.9	26.0	25.5	26.5
	6H	21.3	22.2	21.9	22.8	23.5	26.3	27.3	26.9	27.9
	8H	21.4	22.3	22.0	22.9	23.5	27.1	27.9	27.6	28.5
	12H	21.5	22.3	22.1	22.9	23.6	27.8	28.6	28.4	29.2
8H	4H	21.8	22.6	22.4	23.2	23.9	25.2	26.0	25.8	26.6
	6H	22.5	23.2	23.1	23.9	24.5	26.8	27.5	27.4	28.1
	8H	22.7	23.4	23.4	24.0	24.7	27.6	28.3	28.2	28.9
	12H	22.9	23.5	23.5	24.1	24.9	28.5	29.1	29.2	29.7
12H	4H	22.0	22.8	22.6	23.4	24.1	25.2	26.0	25.8	26.6
	6H	22.9	23.5	23.5	24.1	24.9	26.8	27.5	27.5	28.1
	8H	23.2	23.8	23.8	24.4	25.2	27.7	28.3	28.3	28.9

Maximum UGR = 30.5

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	788	788	788	789	788	788	789	788	788	789	788	788	788	788	788	789	788	788	789
5	785	784	784	785	785	786	786	786	785	785	784	784	785	784	784	785	785	786	786
10	772	773	774	775	777	779	780	779	777	775	774	773	772	773	774	775	777	779	780
15	752	754	756	760	764	768	770	768	764	760	756	754	752	754	756	760	764	768	770
20	724	728	733	739	748	754	757	754	748	739	733	728	724	728	733	739	748	754	757
25	689	695	704	714	726	736	741	736	726	714	704	695	689	695	704	714	726	736	741
30	647	657	669	685	702	715	720	715	702	685	669	657	647	657	669	685	702	715	720
35	600	612	630	651	674	690	697	690	674	651	630	612	600	612	630	651	674	690	697
40	548	564	587	614	642	664	672	664	642	614	587	564	548	564	587	614	642	664	672
45	493	511	542	575	609	634	644	634	609	575	542	511	493	511	542	575	609	634	644
50	435	457	494	534	574	601	612	601	574	534	494	457	435	457	494	534	574	601	612
55	376	401	444	492	536	566	578	566	536	492	444	401	376	401	444	492	536	566	578
60	315	344	395	448	496	529	541	529	496	448	395	344	315	344	395	448	496	529	541
65	253	288	345	404	452	479	490	479	452	404	345	288	253	288	345	404	452	479	490
70	191	232	297	355	395	419	429	419	395	355	297	232	191	232	297	355	395	419	429
75	130	178	248	297	332	355	364	355	332	297	248	178	130	178	248	297	332	355	364
80	73.5	129	190	234	268	290	299	290	268	234	190	129	73.5	129	190	234	268	290	299
85	27.1	79.3	131	174	207	228	236	228	207	174	131	79.3	27.1	79.3	131	174	207	228	236
90	3.07	34.8	79.3	119	151	172	179	172	151	119	79.3	34.8	3.07	34.8	79.3	119	151	172	179
95	2.35	24.5	65.3	103	133	152	160	152	133	103	65.3	24.5	2.35	24.5	65.3	103	133	152	160
100	2.40	16.0	53.7	89.8	119	137	145	137	119	89.8	53.7	16.0	2.40	16.0	53.7	89.8	119	137	145
105	2.95	8.75	41.9	76.1	104	122	129	122	104	76.1	41.9	8.75	2.95	8.75	41.9	76.1	104	122	129
110	3.22	3.26	31.1	62.1	88.4	106	112	106	88.4	62.1	31.1	3.26	3.22	3.26	31.1	62.1	88.4	106	112
115	3.27	2.97	20.9	48.8	72.7	88.1	93.8	88.1	72.7	48.8	20.9	2.97	3.27	2.97	20.9	48.8	72.7	88.1	93.8
120	3.34	2.97	11.2	35.8	57.3	71.0	76.1	71.0	57.3	35.8	11.2	2.97	3.34	2.97	11.2	35.8	57.3	71.0	76.1
125	3.48	2.97	3.46	23.7	42.6	54.9	59.1	54.9	42.6	23.7	3.46	2.97	3.48	2.97	3.46	23.7	42.6	54.9	59.1
130	3.50	2.97	2.52	12.2	28.6	39.4	42.9	39.4	28.6	12.2	2.52	2.97	3.50	2.97	2.52	12.2	28.6	39.4	42.9
135	3.50	2.97	2.35	2.87	15.4	24.9	28.1	24.9	15.4	2.87	2.35	2.97	3.50	2.97	2.35	2.87	15.4	24.9	28.1
140	3.50	3.15	2.28	1.94	3.84	11.0	14.0	11.0	3.84	1.94	2.28	3.15	3.50	3.15	2.28	1.94	3.84	11.0	14.0
145	3.50	3.12	2.31	1.79	1.57	1.61	1.99	1.61	1.57	1.79	2.31	3.12	3.50	3.12	2.31	1.79	1.57	1.61	1.99
150	3.50	3.10	2.22	1.68	1.51	1.53	1.32	1.53	1.51	1.68	2.22	3.10	3.50	3.10	2.22	1.68	1.51	1.53	1.32
155	3.50	3.08	2.03	1.60	1.45	1.44	1.32	1.44	1.45	1.60	2.03	3.08	3.50	3.08	2.03	1.60	1.45	1.44	1.32
160	3.32	2.97	1.85	1.58	1.41	1.41	1.32	1.41	1.41	1.58	1.85	2.97	3.32	2.97	1.85	1.58	1.41	1.41	1.32
165	3.58	2.96	1.85	1.62	1.40	1.41	1.42	1.41	1.40	1.62	1.85	2.96	3.58	2.96	1.85	1.62	1.40	1.41	1.42
170	4.24	3.69	1.94	1.66	1.40	1.43	1.42	1.43	1.40	1.66	1.94	3.69	4.24	3.69	1.94	1.66	1.40	1.43	1.42
175	4.42	3.98	2.59	1.85	1.58	1.59	1.42	1.59	1.58	1.85	2.59	3.98	4.42	3.98	2.59	1.85	1.58	1.59	1.42
180	4.42	4.08	2.68	1.76	1.68	1.69	1.70	1.69	1.68	1.76	2.68	4.08	4.42	4.08	2.68	1.76	1.68	1.69	1.70

Table--2

UNIT: cd

C (DEG) y (DEG)	285	300	315	330	345														
0	788	788	789	788	788														
5	786	785	785	784	784														
10	779	777	775	774	773														
15	768	764	760	756	754														
20	754	748	739	733	728														
25	736	726	714	704	695														
30	715	702	685	669	657														
35	690	674	651	630	612														
40	664	642	614	587	564														
45	634	609	575	542	511														
50	601	574	534	494	457														
55	566	536	492	444	401														
60	529	496	448	395	344														
65	479	452	404	345	288														
70	419	395	355	297	232														
75	355	332	297	248	178														
80	290	268	234	190	129														
85	228	207	174	131	79.3														
90	172	151	119	79.3	34.8														
95	152	133	103	65.3	24.5														
100	137	119	89.8	53.7	16.0														
105	122	104	76.1	41.9	8.75														
110	106	88.4	62.1	31.1	3.26														
115	88.1	72.7	48.8	20.9	2.97														
120	71.0	57.3	35.8	11.2	2.97														
125	54.9	42.6	23.7	3.46	2.97														
130	39.4	28.6	12.2	2.52	2.97														
135	24.9	15.4	2.87	2.35	2.97														
140	11.0	3.84	1.94	2.28	3.15														
145	1.61	1.57	1.79	2.31	3.12														
150	1.53	1.51	1.68	2.22	3.10														
155	1.44	1.45	1.60	2.03	3.08														
160	1.41	1.41	1.58	1.85	2.97														
165	1.41	1.40	1.62	1.85	2.96														
170	1.43	1.40	1.66	1.94	3.69														
175	1.59	1.58	1.85	2.59	3.98														
180	1.69	1.68	1.76	2.68	4.08														

4.0 LM-79 Measurement and Test Results

4.3 THD and PF Test

Model No.	STRP4H/MVS @20W3500K	Sample ID	250402002-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	0.160	19.0	0.987	5.43
277.0	60	0.083	19.6	0.850	18.60

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*****