

## Photometric Test Report

### Relevant Standards

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

Prepared For

**RAB Lighting Inc.**

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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		1460
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	147.8
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		39.5
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	9.56
				277V	6.06
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.994
				277V	0.959
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	5029±283	4992
			4 steps	5029±220	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		83.1
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		12
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		97
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%		63.1%
Discomfort Glare (UGR) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	29.3
			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		0.331
(Goniophotometer – Section 4.2)			Non-Worst Case		0.145
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		39.5
(Goniophotometer – Section 4.2)			Non-Worst Case		38.4

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-04-02	STRP4H/MVS @40W5000K	-	250402002-S1
2	Goniophotometer Test	2025-04-02	STRP4H/MVS @40W5000K	-	250402002-S1
3	THD and PF Test	2025-04-02	STRP4H/MVS @40W5000K	-	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 @40W5000K, 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 @40W5000K	Sample ID	250402002-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

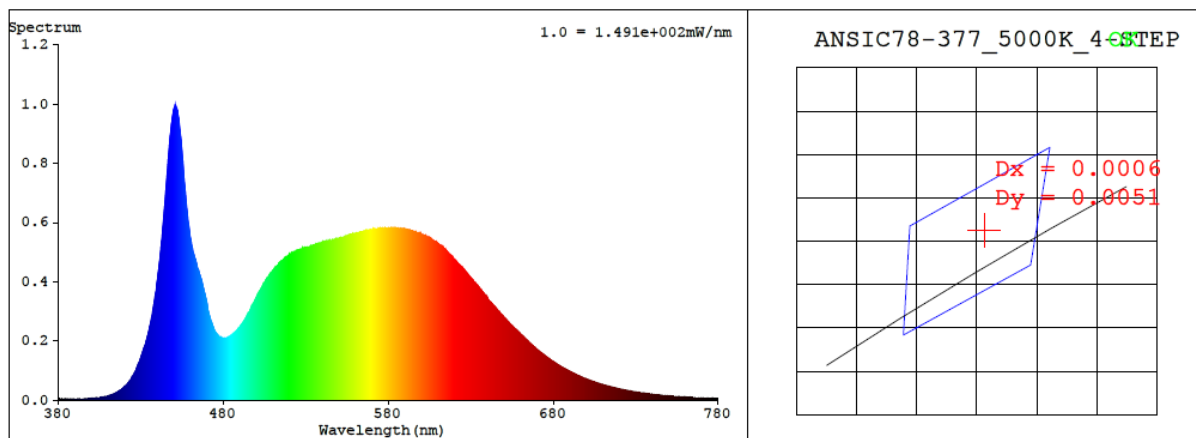
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made 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 4<math>\pi</math> 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	0.331	39.5	0.994
277.0	60	0.145	38.4	0.959

CCT (K)	CRI	R9	Duv	SDCM	Rf	Rg	IES Rcs,h1
4992	83.1	12	0.0023	0.9	84	97	-12%

## 4.1 Integrating Sphere Test



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3459$   $y = 0.3570$  /  $u' = 0.2099$   $v' = 0.4874$  ( $duv=2.33e-03$ )

CCT= 4992K Prcp WL: Ld=570.7nm Purity=10.9%

Peak WL: Lp=451nm FWHM: =20.1nm Ratio:R=15.8% G=79.9% B=4.3%

Render Index: Ra = 83.1 AvgR = 76.0 TM30:Rf=84 Rg=96

EEL: 0.09659 A++ Highest

R1 =81 R2 =88 R3 =92 R4 =83 R5 =81 R6 =82 R7 =89

R8 =69 R9 =12 R10=70 R11=81 R12=56 R13=83 R14=96 R15=76

## 4.1 Integrating Sphere Test

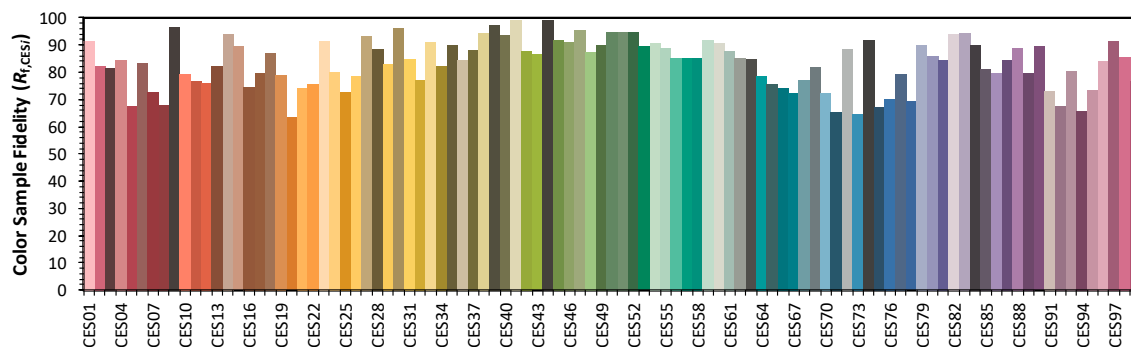
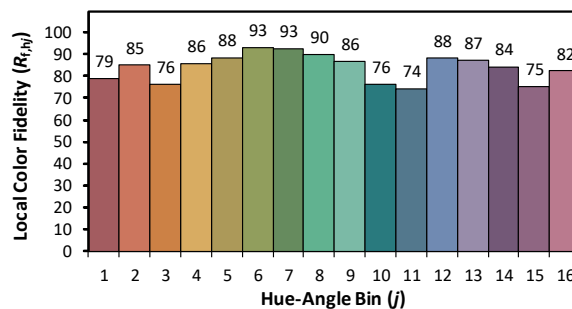
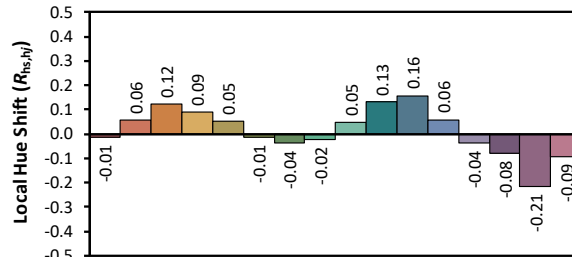
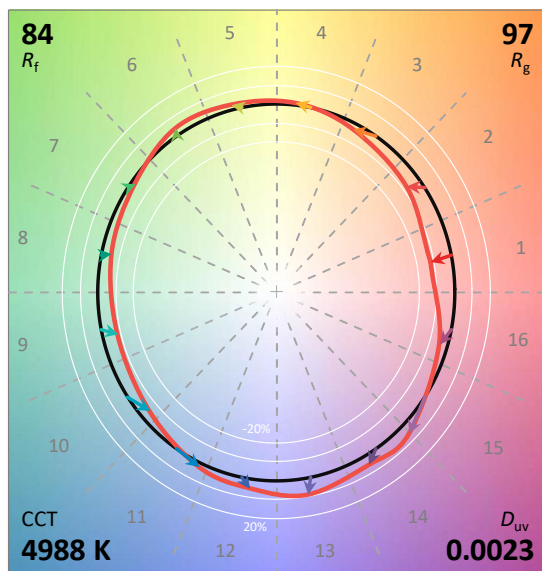
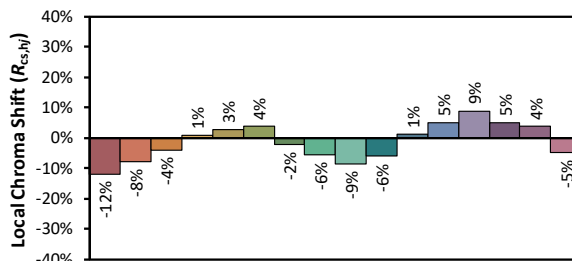
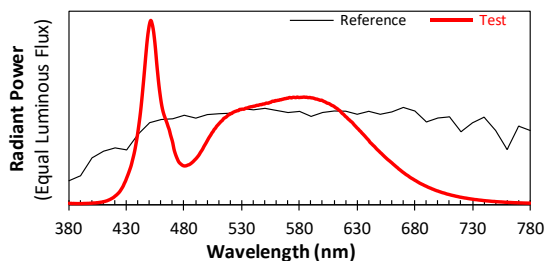
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/4/3

Model: STRP4H/MVS @40W5000K



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

$x$  0.3459  
 $y$  0.3568  
 $u'$  0.2100  
 $v'$  0.4873

CIE 13.3-1995  
(CRI)

$R_a$  83  
 $R_g$  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	5.50E-06	447	8.34E-04	514	4.64E-04	581	5.80E-04	648	2.93E-04	715	4.48E-05
381	4.70E-06	448	8.98E-04	515	4.69E-04	582	5.80E-04	649	2.87E-04	716	4.33E-05
382	5.30E-06	449	9.47E-04	516	4.72E-04	583	5.81E-04	650	2.81E-04	717	4.22E-05
383	3.70E-06	450	9.82E-04	517	4.77E-04	584	5.82E-04	651	2.76E-04	718	4.07E-05
384	4.80E-06	451	9.97E-04	518	4.83E-04	585	5.80E-04	652	2.69E-04	719	3.91E-05
385	4.10E-06	452	9.81E-04	519	4.86E-04	586	5.81E-04	653	2.63E-04	720	3.82E-05
386	4.20E-06	453	9.52E-04	520	4.92E-04	587	5.79E-04	654	2.57E-04	721	3.69E-05
387	3.90E-06	454	9.04E-04	521	4.92E-04	588	5.79E-04	655	2.51E-04	722	3.58E-05
388	3.90E-06	455	8.44E-04	522	4.98E-04	589	5.79E-04	656	2.45E-04	723	3.46E-05
389	3.90E-06	456	7.71E-04	523	5.01E-04	590	5.77E-04	657	2.40E-04	724	3.38E-05
390	3.90E-06	457	7.06E-04	524	5.03E-04	591	5.77E-04	658	2.35E-04	725	3.28E-05
391	3.90E-06	458	6.45E-04	525	5.05E-04	592	5.76E-04	659	2.30E-04	726	3.16E-05
392	4.00E-06	459	5.96E-04	526	5.08E-04	593	5.74E-04	660	2.25E-04	727	3.06E-05
393	4.70E-06	460	5.52E-04	527	5.09E-04	594	5.71E-04	661	2.19E-04	728	2.96E-05
394	4.60E-06	461	5.19E-04	528	5.15E-04	595	5.71E-04	662	2.14E-04	729	2.87E-05
395	4.80E-06	462	4.94E-04	529	5.14E-04	596	5.68E-04	663	2.08E-04	730	2.78E-05
396	5.10E-06	463	4.75E-04	530	5.16E-04	597	5.66E-04	664	2.03E-04	731	2.69E-05
397	5.00E-06	464	4.57E-04	531	5.16E-04	598	5.64E-04	665	1.98E-04	732	2.58E-05
398	5.70E-06	465	4.41E-04	532	5.16E-04	599	5.65E-04	666	1.92E-04	733	2.54E-05
399	6.00E-06	466	4.21E-04	533	5.21E-04	600	5.62E-04	667	1.87E-04	734	2.47E-05
400	6.30E-06	467	4.04E-04	534	5.22E-04	601	5.58E-04	668	1.82E-04	735	2.37E-05
401	7.10E-06	468	3.78E-04	535	5.23E-04	602	5.56E-04	669	1.77E-04	736	2.29E-05
402	7.30E-06	469	3.56E-04	536	5.26E-04	603	5.52E-04	670	1.72E-04	737	2.24E-05
403	7.50E-06	470	3.33E-04	537	5.28E-04	604	5.49E-04	671	1.68E-04	738	2.17E-05
404	8.50E-06	471	3.01E-04	538	5.29E-04	605	5.47E-04	672	1.63E-04	739	2.08E-05
405	8.90E-06	472	2.78E-04	539	5.30E-04	606	5.45E-04	673	1.59E-04	740	2.00E-05
406	9.90E-06	473	2.61E-04	540	5.32E-04	607	5.40E-04	674	1.55E-04	741	1.96E-05
407	1.08E-05	474	2.46E-04	541	5.32E-04	608	5.37E-04	675	1.50E-04	742	1.88E-05
408	1.17E-05	475	2.32E-04	542	5.35E-04	609	5.34E-04	676	1.46E-04	743	1.84E-05
409	1.27E-05	476	2.24E-04	543	5.37E-04	610	5.30E-04	677	1.42E-04	744	1.78E-05
410	1.42E-05	477	2.18E-04	544	5.37E-04	611	5.25E-04	678	1.38E-04	745	1.72E-05
411	1.56E-05	478	2.13E-04	545	5.39E-04	612	5.21E-04	679	1.34E-04	746	1.66E-05
412	1.74E-05	479	2.10E-04	546	5.41E-04	613	5.17E-04	680	1.30E-04	747	1.59E-05
413	1.93E-05	480	2.08E-04	547	5.41E-04	614	5.11E-04	681	1.27E-04	748	1.56E-05
414	2.21E-05	481	2.08E-04	548	5.44E-04	615	5.07E-04	682	1.23E-04	749	1.54E-05
415	2.47E-05	482	2.10E-04	549	5.44E-04	616	5.00E-04	683	1.19E-04	750	1.46E-05
416	2.78E-05	483	2.13E-04	550	5.46E-04	617	4.93E-04	684	1.16E-04	751	1.42E-05
417	3.13E-05	484	2.15E-04	551	5.49E-04	618	4.89E-04	685	1.12E-04	752	1.37E-05
418	3.49E-05	485	2.18E-04	552	5.49E-04	619	4.82E-04	686	1.09E-04	753	1.34E-05
419	3.92E-05	486	2.23E-04	553	5.49E-04	620	4.76E-04	687	1.06E-04	754	1.30E-05
420	4.46E-05	487	2.28E-04	554	5.52E-04	621	4.71E-04	688	1.03E-04	755	1.28E-05
421	4.95E-05	488	2.34E-04	555	5.53E-04	622	4.63E-04	689	1.00E-04	756	1.22E-05
422	5.53E-05	489	2.40E-04	556	5.58E-04	623	4.59E-04	690	9.74E-05	757	1.19E-05
423	6.16E-05	490	2.46E-04	557	5.59E-04	624	4.52E-04	691	9.41E-05	758	1.13E-05
424	6.87E-05	491	2.54E-04	558	5.59E-04	625	4.47E-04	692	9.14E-05	759	1.11E-05
425	7.82E-05	492	2.62E-04	559	5.63E-04	626	4.42E-04	693	8.88E-05	760	1.09E-05
426	8.81E-05	493	2.70E-04	560	5.62E-04	627	4.34E-04	694	8.64E-05	761	1.04E-05
427	9.90E-05	494	2.81E-04	561	5.64E-04	628	4.27E-04	695	8.33E-05	762	1.00E-05
428	1.13E-04	495	2.90E-04	562	5.64E-04	629	4.20E-04	696	8.12E-05	763	1.00E-05
429	1.26E-04	496	3.01E-04	563	5.67E-04	630	4.13E-04	697	7.83E-05	764	9.50E-06
430	1.42E-04	497	3.13E-04	564	5.67E-04	631	4.08E-04	698	7.59E-05	765	9.30E-06
431	1.58E-04	498	3.24E-04	565	5.70E-04	632	4.00E-04	699	7.35E-05	766	8.90E-06
432	1.75E-04	499	3.34E-04	566	5.70E-04	633	3.95E-04	700	7.18E-05	767	8.70E-06
433	1.93E-04	500	3.46E-04	567	5.73E-04	634	3.87E-04	701	6.94E-05	768	8.70E-06
434	2.12E-04	501	3.57E-04	568	5.73E-04	635	3.81E-04	702	6.74E-05	769	8.10E-06
435	2.38E-04	502	3.67E-04	569	5.76E-04	636	3.74E-04	703	6.50E-05	770	8.00E-06
436	2.62E-04	503	3.77E-04	570	5.76E-04	637	3.67E-04	704	6.31E-05	771	7.70E-06
437	2.90E-04	504	3.88E-04	571	5.79E-04	638	3.60E-04	705	6.15E-05	772	7.50E-06
438	3.24E-04	505	3.95E-04	572	5.79E-04	639	3.53E-04	706	5.98E-05	773	7.40E-06
439	3.61E-04	506	4.07E-04	573	5.77E-04	640	3.47E-04	707	5.74E-05	774	7.00E-06
440	4.03E-04	507	4.13E-04	574	5.80E-04	641	3.37E-04	708	5.55E-05	775	6.90E-06
441	4.49E-04	508	4.23E-04	575	5.81E-04	642	3.31E-04	709	5.41E-05	776	6.70E-06
442	4.99E-04	509	4.30E-04	576	5.79E-04	643	3.25E-04	710	5.25E-05	777	6.60E-06
443	5.58E-04	510	4.37E-04	577	5.79E-04	644	3.19E-04	711	5.07E-05	778	6.40E-06
444	6.23E-04	511	4.44E-04	578	5.82E-04	645	3.13E-04	712	4.91E-05	779	6.40E-06
445	6.91E-04	512	4.50E-04	579	5.79E-04	646	3.06E-04	713	4.77E-05	780	6.40E-06
446	7.63E-04	513	4.55E-04	580	5.79E-04	647	2.99E-04	714	4.64E-05	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

Model No.	STRP4H/MVS @40W5000K	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 <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
WORST CASE	120.0	60	0.331	39.5	0.994
NON-WORST CASE	277.0	60	0.145	38.4	0.959

#### Test Result

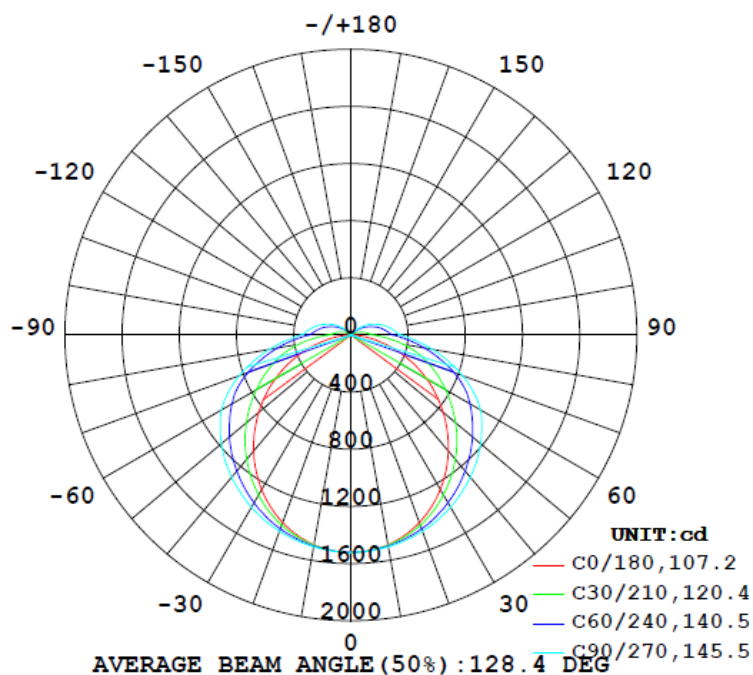
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
5838	1460	160.1	160.1	107.1	145.3	147.8

Zonal Lumen Requirement	UGR	
( $0^\circ$ - $60^\circ$ )	Crosswise	Endwise
63.1%	23.7	29.3

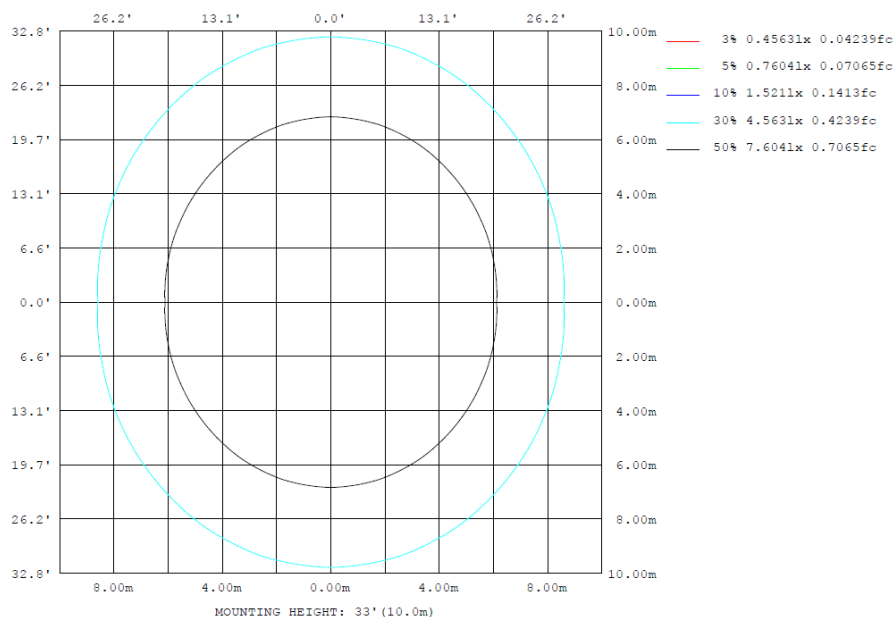
## 4.2 Goniophotometer Test

### Lighting Distribution Curve

#### LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



### Isolux Plot



## 4.2 Goniophotometer Test

### Zonal Lumen Summary

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	1491	1495	1505	1495	1491	1495	1505	1495	0- 10	144.0	144.0	2.47, 2.47
20	1397	1427	1461	1427	1397	1427	1461	1427	10- 20	414.8	558.8	9.57, 9.57
30	1249	1322	1391	1322	1249	1322	1391	1322	20- 30	637.1	1196	20.5, 20.5
40	1060	1187	1299	1187	1060	1187	1299	1187	30- 40	787.8	1984	34, 34
50	842.5	1034	1184	1034	842.5	1034	1184	1034	40- 50	856.3	2840	48.7, 48.7
60	610.4	868.0	1045	868.0	610.4	868.0	1045	868.0	50- 60	841.8	3682	63.1, 63.1
70	370.2	688.1	829.5	688.1	370.2	688.1	829.5	688.1	60- 70	746.7	4429	75.9, 75.9
80	143.2	453.9	579.1	453.9	143.2	453.9	579.1	453.9	70- 80	565.0	4994	85.5, 85.5
90	6.483	232.5	347.8	232.5	6.483	232.5	347.8	232.5	80- 90	338.2	5332	91.3, 91.3
100	6.056	175.5	281.0	175.5	6.056	175.5	281.0	175.5	90-100	199.0	5531	94.7, 94.7
110	7.559	121.9	216.2	121.9	7.559	121.9	216.2	121.9	100-110	144.3	5675	97.2, 97.2
120	7.896	70.27	147.4	70.27	7.896	70.27	147.4	70.27	110-120	91.42	5766	98.8, 98.8
130	7.897	23.97	83.37	23.97	7.897	23.97	83.37	23.97	120-130	47.26	5814	99.6, 99.6
140	7.816	3.687	26.68	3.687	7.816	3.687	26.68	3.687	130-140	17.04	5831	99.9, 99.9
150	7.734	3.135	2.198	3.135	7.734	3.135	2.198	3.135	140-150	3.471	5834	99.9, 99.9
160	6.503	2.869	2.361	2.869	6.503	2.869	2.361	2.869	150-160	1.787	5836	100, 100
170	8.536	3.499	2.824	3.499	8.536	3.499	2.824	3.499	160-170	1.090	5837	100, 100
180	9.274	4.056	3.389	4.056	9.274	4.056	3.389	4.056	170-180	0.4602	5838	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	144.03	0-10	144.03	2.47%
10-20	414.77	0-20	558.80	9.57%
20-30	637.06	0-30	1195.86	20.49%
30-40	787.82	0-40	1983.68	33.98%
40-50	856.29	0-50	2839.97	48.65%
50-60	841.84	0-60	3681.81	63.08%
60-70	746.70	0-70	4428.51	75.87%
70-80	565.02	0-80	4993.53	85.55%
80-90	338.23	0-90	5331.76	91.34%
90-100	198.97	0-100	5530.73	94.75%
100-110	144.28	0-110	5675.01	97.22%
110-120	91.42	0-120	5766.43	98.79%
120-130	47.26	0-130	5813.69	99.60%
130-140	17.04	0-140	5830.73	99.89%
140-150	3.47	0-150	5834.20	99.95%
150-160	1.79	0-160	5835.99	99.98%
160-170	1.09	0-170	5837.08	100.00%
170-180	0.46	0-180	5837.54	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	13.2	14.8	13.7	15.2	15.8	16.4	17.9	16.8	18.4	18.9
	3H	14.8	16.2	15.3	16.7	17.2	19.0	20.4	19.5	20.9	21.5
	4H	15.3	16.6	15.8	17.1	17.7	20.3	21.6	20.8	22.1	22.7
	6H	15.6	16.8	16.2	17.4	18.0	21.5	22.7	22.0	23.3	23.9
	8H	15.7	16.9	16.2	17.4	18.0	22.1	23.3	22.6	23.8	24.4
	12H	15.7	16.8	16.3	17.4	18.0	22.7	23.9	23.3	24.4	25.0
4H	2H	14.5	15.8	15.0	16.3	16.9	16.8	18.1	17.3	18.7	19.2
	3H	16.3	17.5	16.9	18.0	18.6	19.7	20.9	20.3	21.4	22.0
	4H	17.0	18.1	17.6	18.6	19.3	21.1	22.2	21.7	22.7	23.4
	6H	17.5	18.4	18.1	19.0	19.7	22.5	23.5	23.1	24.1	24.7
	8H	17.6	18.5	18.2	19.1	19.8	23.2	24.1	23.8	24.7	25.4
	12H	17.7	18.5	18.3	19.1	19.8	24.0	24.8	24.6	25.4	26.1
8H	4H	18.0	18.8	18.6	19.4	20.1	21.4	22.2	22.0	22.8	23.5
	6H	18.7	19.4	19.3	20.1	20.7	23.0	23.7	23.6	24.3	25.0
	8H	18.9	19.6	19.6	20.3	20.9	23.8	24.5	24.4	25.1	25.8
	12H	19.1	19.7	19.7	20.3	21.1	24.7	25.3	25.4	26.0	26.7
12H	4H	18.2	19.0	18.8	19.6	20.3	21.4	22.2	22.0	22.8	23.5
	6H	19.1	19.7	19.7	20.3	21.1	23.0	23.7	23.7	24.3	25.0
	8H	19.4	20.0	20.1	20.6	21.4	23.9	24.5	24.5	25.1	25.9

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		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	19.3	20.9	19.8	21.3	21.9	22.5	24.0	22.9	24.5	25.0
	3H	20.9	22.3	21.4	22.8	23.3	25.1	26.5	25.6	27.0	27.6
	4H	21.4	22.7	21.9	23.2	23.8	26.4	27.7	26.9	28.2	28.8
	6H	21.7	22.9	22.3	23.5	24.1	27.6	28.8	28.1	29.4	30.0
	8H	21.8	23.0	22.3	23.5	24.1	28.2	29.4	28.7	29.9	30.5
	12H	21.8	22.9	22.4	23.5	24.1	28.8	30.0	29.4	30.5	31.1
4H	2H	20.6	21.9	21.1	22.4	23.0	22.9	24.2	23.4	24.8	25.3
	3H	22.4	23.6	23.0	24.1	24.7	25.8	27.0	26.4	27.5	28.1
	4H	23.1	24.2	23.7	24.7	25.4	27.2	28.3	27.8	28.8	29.5
	6H	23.6	24.5	24.2	25.1	25.8	28.6	29.6	29.2	30.2	30.8
	8H	23.7	24.6	24.3	25.2	25.9	29.3	30.2	29.9	30.8	31.5
	12H	23.8	24.6	24.4	25.2	25.9	30.1	30.9	30.7	31.5	32.2
8H	4H	24.1	24.9	24.7	25.5	26.2	27.5	28.3	28.1	28.9	29.6
	6H	24.8	25.5	25.4	26.2	26.8	29.1	29.8	29.7	30.4	31.1
	8H	25.0	25.7	25.7	26.4	27.0	29.9	30.6	30.5	31.2	31.9
	12H	25.2	25.8	25.8	26.4	27.2	30.8	31.4	31.5	32.1	32.8
12H	4H	24.3	25.1	24.9	25.7	26.4	27.5	28.3	28.1	28.9	29.6
	6H	25.2	25.8	25.8	26.4	27.2	29.1	29.8	29.8	30.4	31.1
	8H	25.5	26.1	26.2	26.7	27.5	30.0	30.6	30.6	31.2	32.0

Maximum UGR = 32.8

## 4.2 Goniophotometer Test

### Luminous Distribution Intensity Data

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	1521	1521	1522	1521	1520	1522	1522	1522	1520	1521	1522	1521	1521	1521	1522	1521	1520	1522	1522
5	1513	1514	1514	1514	1514	1517	1517	1517	1514	1514	1514	1514	1513	1514	1514	1514	1514	1517	1517
10	1491	1492	1493	1495	1500	1504	1505	1504	1500	1495	1493	1492	1491	1492	1493	1495	1500	1504	1505
15	1451	1456	1460	1466	1476	1484	1487	1484	1476	1466	1460	1456	1451	1456	1460	1466	1476	1484	1487
20	1397	1405	1417	1427	1443	1456	1461	1456	1443	1427	1417	1405	1397	1405	1417	1427	1443	1456	1461
25	1329	1344	1360	1378	1404	1422	1430	1422	1404	1378	1360	1344	1329	1344	1360	1378	1404	1422	1430
30	1249	1269	1294	1322	1356	1381	1391	1381	1356	1322	1294	1269	1249	1269	1294	1322	1356	1381	1391
35	1159	1184	1218	1258	1302	1334	1347	1334	1302	1258	1218	1184	1159	1184	1218	1258	1302	1334	1347
40	1060	1091	1136	1187	1242	1283	1299	1283	1242	1187	1136	1091	1060	1091	1136	1187	1242	1283	1299
45	953	989	1048	1112	1179	1227	1244	1227	1179	1112	1048	989	953	989	1048	1112	1179	1227	1244
50	843	883	956	1034	1110	1163	1184	1163	1110	1034	956	883	843	883	956	1034	1110	1163	1184
55	728	775	861	952	1037	1096	1117	1096	1037	952	861	775	728	775	861	952	1037	1096	1117
60	610	666	765	868	961	1024	1045	1024	961	868	765	666	610	666	765	868	961	1024	1045
65	491	557	670	782	875	928	946	928	875	782	670	557	491	557	670	782	875	928	946
70	370	450	575	688	766	813	829	813	766	688	575	450	370	450	575	688	766	813	829
75	253	347	481	575	643	688	704	688	643	575	481	347	253	347	481	575	643	688	704
80	143	250	369	454	522	564	579	564	522	454	369	250	143	250	369	454	522	564	579
85	53.4	155	255	338	402	443	458	443	402	338	255	155	53.4	155	255	338	402	443	458
90	6.48	69.0	156	232	295	334	348	334	295	232	156	69.0	6.48	69.0	156	232	295	334	348
95	5.39	48.1	128	201	259	296	311	296	259	201	128	48.1	5.39	48.1	128	201	259	296	311
100	6.06	31.6	106	175	232	267	281	267	232	175	106	31.6	6.06	31.6	106	175	232	267	281
105	7.07	17.3	82.5	149	204	237	250	237	204	149	82.5	17.3	7.07	17.3	82.5	149	204	237	250
110	7.56	6.87	60.9	122	172	205	216	205	172	122	60.9	6.87	7.56	6.87	60.9	122	172	205	216
115	7.70	6.28	40.7	95.6	142	171	182	171	142	95.6	40.7	6.28	7.70	6.28	40.7	95.6	142	171	182
120	7.90	6.28	22.3	70.3	112	138	147	138	112	70.3	22.3	6.28	7.90	6.28	22.3	70.3	112	138	147
125	7.95	6.28	7.01	46.1	82.8	107	115	107	82.8	46.1	7.01	6.28	7.95	6.28	7.01	46.1	82.8	107	115
130	7.90	6.43	5.25	24.0	55.1	76.4	83.4	76.4	55.1	24.0	5.25	6.43	7.90	6.43	5.25	24.0	55.1	76.4	83.4
135	7.86	6.71	4.96	5.51	29.5	47.7	53.9	47.7	29.5	5.51	4.96	6.71	7.86	6.71	4.96	5.51	29.5	47.7	53.9
140	7.82	6.85	4.83	3.69	7.07	21.1	26.7	21.1	7.07	3.69	4.83	6.85	7.82	6.85	4.83	3.69	7.07	21.1	26.7
145	7.77	6.81	4.57	3.41	2.92	2.82	3.61	2.82	2.92	3.41	4.57	6.81	7.77	6.81	4.57	3.41	2.92	2.82	3.61
150	7.73	6.76	4.15	3.14	2.77	2.59	2.20	2.59	2.77	3.14	4.15	6.76	7.73	6.76	4.15	3.14	2.77	2.59	2.20
155	7.17	6.28	3.69	3.04	2.73	2.55	2.28	2.55	2.73	3.04	3.69	6.28	7.17	6.28	3.69	3.04	2.73	2.55	2.28
160	6.50	5.64	3.50	2.87	2.72	2.53	2.36	2.53	2.72	2.87	3.50	5.64	6.50	5.64	3.50	2.87	2.72	2.53	2.36
165	6.88	6.27	3.50	2.93	2.83	2.62	2.44	2.62	2.83	2.93	3.50	6.27	6.88	6.27	3.50	2.93	2.83	2.62	2.44
170	8.54	7.39	4.24	3.50	3.24	3.18	2.82	3.18	3.24	3.50	4.24	7.39	8.54	7.39	4.24	3.50	3.24	3.18	2.82
175	9.27	7.60	4.61	4.02	3.53	3.46	3.20	3.46	3.53	4.02	4.61	7.60	9.27	7.60	4.61	4.02	3.53	3.46	3.20
180	9.27	7.66	4.70	4.06	3.99	3.83	3.39	3.83	3.99	4.06	4.70	7.66	9.27	7.66	4.70	4.06	3.99	3.83	3.39

Table--2

UNIT: cd

C (DEG) γ (DEG)	285	300	315	330	345														
0	1522	1520	1521	1522	1521														
5	1517	1514	1514	1514	1514														
10	1504	1500	1495	1493	1492														
15	1484	1476	1466	1460	1456														
20	1456	1443	1427	1417	1405														
25	1422	1404	1378	1360	1344														
30	1381	1356	1322	1294	1269														
35	1334	1302	1258	1218	1184														
40	1283	1242	1187	1136	1091														
45	1227	1179	1112	1048	989														
50	1163	1110	1034	956	883														
55	1096	1037	952	861	775														
60	1024	961	868	765	666														
65	928	875	782	670	557														
70	813	766	688	575	450														
75	688	643	575	481	347														
80	564	522	454	369	250														
85	443	402	338	255	155														
90	334	295	232	156	69.0														
95	296	259	201	128	48.1														
100	267	232	175	106	31.6														
105	237	204	149	82.5	17.3														
110	205	172	122	60.9	6.87														
115	171	142	95.6	40.7	6.28														
120	138	112	70.3	22.3	6.28														
125	107	82.8	46.1	7.01	6.28														
130	76.4	55.1	24.0	5.25	6.43														
135	47.7	29.5	5.51	4.96	6.71														
140	21.1	7.07	3.69	4.83	6.85														
145	2.82	2.92	3.41	4.57	6.81														
150	2.59	2.77	3.14	4.15	6.76														
155	2.55	2.73	3.04	3.69	6.28														
160	2.53	2.72	2.87	3.50	5.64														
165	2.62	2.83	2.93	3.50	6.27														
170	3.18	3.24	3.50	4.24	7.39														
175	3.46	3.53	4.02	4.61	7.60														
180	3.83	3.99	4.06	4.70	7.66														

## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	STRP4H/MVS @40W5000K	<b>Sample ID</b>	250402002-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	0.331	39.5	0.994	9.56
277.0	60	0.145	38.4	0.959	6.06

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