

## 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		1114
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	151.0
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		29.5
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	8.02
				277V	10.90
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.992
				277V	0.925
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	3465±245	3441
			4 steps	3465±124	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		83.9
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		11
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	28.5
			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		0.248
(Goniophotometer – Section 4.2)			Non-Worst Case		0.115
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		29.5
(Goniophotometer – Section 4.2)			Non-Worst Case		29.4

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-04-02	STRP4H/MVS @30W3500K	-	250402002-S1
2	Goniophotometer Test	2025-04-02	STRP4H/MVS @30W3500K	-	250402002-S1
3	THD and PF Test	2025-04-02	STRP4H/MVS @30W3500K	-	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 @30W3500K, 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 @30W3500K	Sample ID	250402002-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

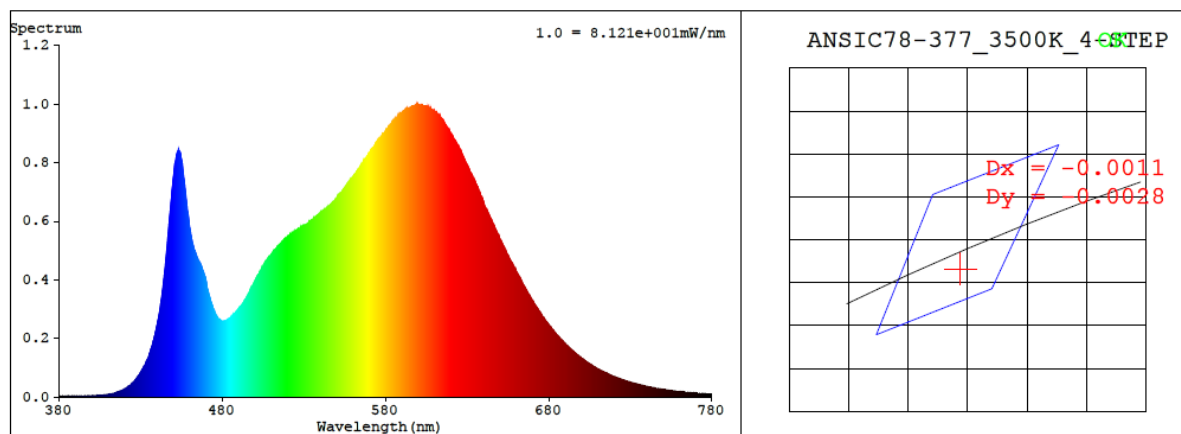
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made 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	0.248	29.5	0.992
277.0	60	0.115	29.4	0.925

CCT (K)	CRI	R9	Duv	SDCM	Rf	Rg	IES Rcs,h1
3441	83.9	11	-0.0010	1.6	85	95	-12%

## 4.1 Integrating Sphere Test



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.4076$   $y = 0.3896$  /  $u' = 0.2377$   $v' = 0.5111$  ( $duv = -1.00e-03$ )

CCT= 3441K Prcp WL: Ld=581.5nm Purity=39.3%

Peak WL: Lp=600nm FWHM: =142.2nm Ratio:R=20.8% G=75.9% B=3.3%

Render Index: Ra = 83.9 AvgR = 78.2 TM30:Rf=84 Rg=95

EEL: 0.09412 A++ Highest

R1 =83 R2 =92 R3 =96 R4 =82 R5 =83 R6 =90 R7 =84

R8 =62 R9 =11 R10=82 R11=81 R12=68 R13=85 R14=99 R15=76

## 4.1 Integrating Sphere Test

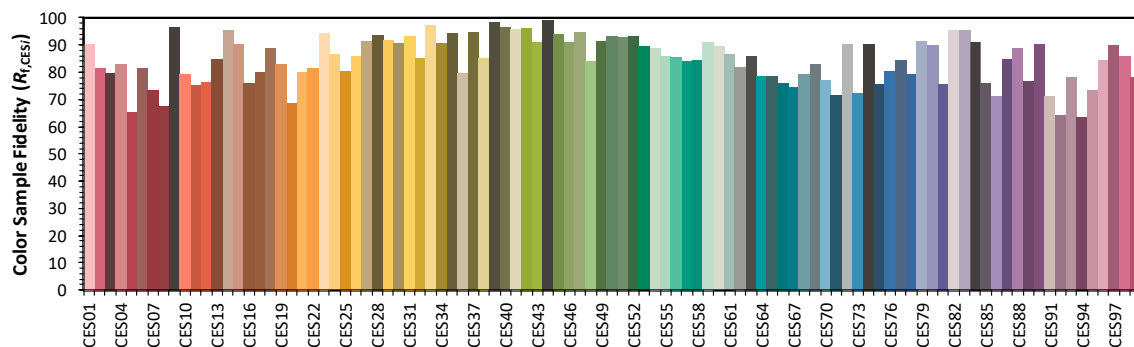
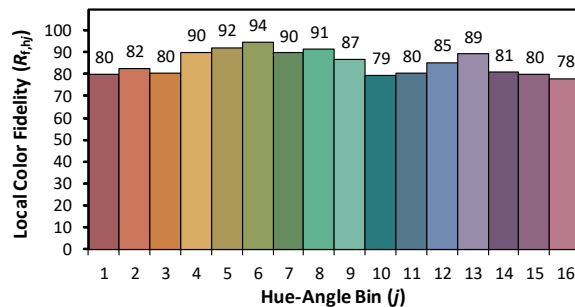
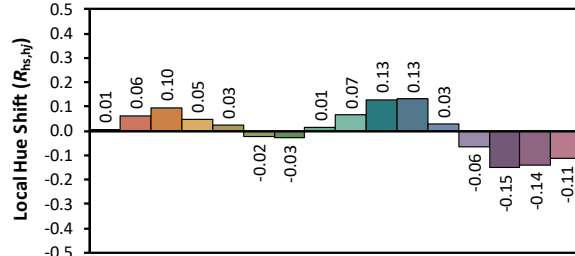
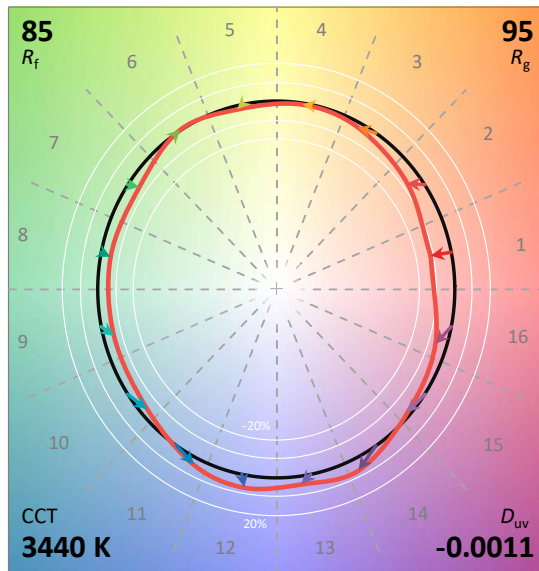
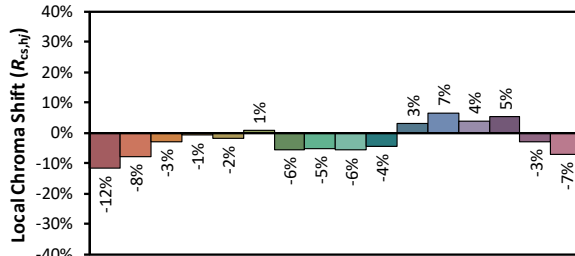
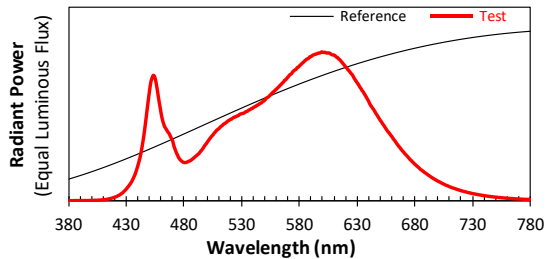
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/4/3

Model: STRP4H/MVS @30W3500K



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

$x$  0.4076  
 $y$  0.3894  
 $u'$  0.2377  
 $v'$  0.5111

CIE 13.3-1995  
(CRI)

$R_a$  84  
 $R_g$  11



## 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	2.50E-06	447	5.63E-04	514	5.15E-04	581	9.14E-04	648	5.65E-04	715	8.28E-05
381	1.80E-06	448	6.28E-04	515	5.19E-04	582	9.22E-04	649	5.53E-04	716	7.96E-05
382	2.90E-06	449	6.89E-04	516	5.24E-04	583	9.28E-04	650	5.41E-04	717	7.71E-05
383	1.90E-06	450	7.47E-04	517	5.31E-04	584	9.36E-04	651	5.31E-04	718	7.47E-05
384	2.90E-06	451	7.97E-04	518	5.38E-04	585	9.43E-04	652	5.18E-04	719	7.21E-05
385	3.00E-06	452	8.23E-04	519	5.42E-04	586	9.50E-04	653	5.08E-04	720	6.98E-05
386	3.40E-06	453	8.42E-04	520	5.48E-04	587	9.53E-04	654	4.96E-04	721	6.73E-05
387	2.50E-06	454	8.37E-04	521	5.49E-04	588	9.58E-04	655	4.84E-04	722	6.56E-05
388	3.40E-06	455	8.13E-04	522	5.56E-04	589	9.68E-04	656	4.72E-04	723	6.37E-05
389	2.80E-06	456	7.72E-04	523	5.61E-04	590	9.68E-04	657	4.62E-04	724	6.17E-05
390	2.90E-06	457	7.25E-04	524	5.64E-04	591	9.76E-04	658	4.53E-04	725	5.93E-05
391	3.50E-06	458	6.75E-04	525	5.67E-04	592	9.79E-04	659	4.41E-04	726	5.72E-05
392	3.10E-06	459	6.29E-04	526	5.71E-04	593	9.83E-04	660	4.32E-04	727	5.56E-05
393	3.30E-06	460	5.83E-04	527	5.74E-04	594	9.85E-04	661	4.20E-04	728	5.40E-05
394	3.40E-06	461	5.47E-04	528	5.81E-04	595	9.87E-04	662	4.10E-04	729	5.17E-05
395	3.00E-06	462	5.20E-04	529	5.83E-04	596	9.91E-04	663	4.00E-04	730	5.00E-05
396	3.50E-06	463	4.98E-04	530	5.87E-04	597	9.92E-04	664	3.88E-04	731	4.86E-05
397	3.10E-06	464	4.86E-04	531	5.88E-04	598	9.94E-04	665	3.78E-04	732	4.73E-05
398	3.90E-06	465	4.73E-04	532	5.91E-04	599	9.99E-04	666	3.67E-04	733	4.59E-05
399	3.80E-06	466	4.60E-04	533	5.97E-04	600	9.98E-04	667	3.58E-04	734	4.45E-05
400	3.70E-06	467	4.51E-04	534	6.00E-04	601	9.96E-04	668	3.48E-04	735	4.27E-05
401	4.60E-06	468	4.33E-04	535	6.04E-04	602	9.97E-04	669	3.38E-04	736	4.14E-05
402	4.90E-06	469	4.18E-04	536	6.10E-04	603	9.93E-04	670	3.29E-04	737	4.05E-05
403	5.70E-06	470	4.00E-04	537	6.13E-04	604	9.92E-04	671	3.20E-04	738	3.85E-05
404	4.70E-06	471	3.69E-04	538	6.18E-04	605	9.93E-04	672	3.11E-04	739	3.75E-05
405	5.90E-06	472	3.47E-04	539	6.21E-04	606	9.91E-04	673	3.04E-04	740	3.61E-05
406	6.30E-06	473	3.27E-04	540	6.27E-04	607	9.86E-04	674	2.95E-04	741	3.51E-05
407	6.50E-06	474	3.10E-04	541	6.32E-04	608	9.81E-04	675	2.86E-04	742	3.41E-05
408	7.50E-06	475	2.93E-04	542	6.35E-04	609	9.79E-04	676	2.77E-04	743	3.27E-05
409	8.10E-06	476	2.82E-04	543	6.42E-04	610	9.78E-04	677	2.71E-04	744	3.17E-05
410	9.20E-06	477	2.73E-04	544	6.45E-04	611	9.72E-04	678	2.61E-04	745	3.08E-05
411	1.01E-05	478	2.66E-04	545	6.50E-04	612	9.64E-04	679	2.55E-04	746	2.97E-05
412	1.08E-05	479	2.61E-04	546	6.56E-04	613	9.62E-04	680	2.46E-04	747	2.89E-05
413	1.19E-05	480	2.58E-04	547	6.59E-04	614	9.52E-04	681	2.40E-04	748	2.78E-05
414	1.30E-05	481	2.58E-04	548	6.67E-04	615	9.47E-04	682	2.33E-04	749	2.68E-05
415	1.53E-05	482	2.60E-04	549	6.71E-04	616	9.36E-04	683	2.27E-04	750	2.61E-05
416	1.66E-05	483	2.63E-04	550	6.78E-04	617	9.28E-04	684	2.19E-04	751	2.55E-05
417	1.92E-05	484	2.67E-04	551	6.89E-04	618	9.18E-04	685	2.11E-04	752	2.45E-05
418	2.14E-05	485	2.70E-04	552	6.94E-04	619	9.09E-04	686	2.07E-04	753	2.35E-05
419	2.39E-05	486	2.75E-04	553	6.98E-04	620	8.98E-04	687	2.00E-04	754	2.31E-05
420	2.71E-05	487	2.81E-04	554	7.06E-04	621	8.92E-04	688	1.94E-04	755	2.22E-05
421	2.93E-05	488	2.87E-04	555	7.14E-04	622	8.79E-04	689	1.89E-04	756	2.17E-05
422	3.36E-05	489	2.94E-04	556	7.22E-04	623	8.73E-04	690	1.84E-04	757	2.09E-05
423	3.74E-05	490	3.01E-04	557	7.30E-04	624	8.61E-04	691	1.77E-04	758	1.99E-05
424	4.15E-05	491	3.08E-04	558	7.36E-04	625	8.52E-04	692	1.72E-04	759	1.95E-05
425	4.73E-05	492	3.14E-04	559	7.45E-04	626	8.43E-04	693	1.67E-04	760	1.89E-05
426	5.27E-05	493	3.21E-04	560	7.51E-04	627	8.28E-04	694	1.61E-04	761	1.82E-05
427	5.90E-05	494	3.32E-04	561	7.59E-04	628	8.16E-04	695	1.56E-04	762	1.76E-05
428	6.73E-05	495	3.40E-04	562	7.66E-04	629	8.03E-04	696	1.51E-04	763	1.74E-05
429	7.43E-05	496	3.51E-04	563	7.75E-04	630	7.92E-04	697	1.46E-04	764	1.67E-05
430	8.39E-05	497	3.63E-04	564	7.82E-04	631	7.82E-04	698	1.42E-04	765	1.63E-05
431	9.33E-05	498	3.75E-04	565	7.91E-04	632	7.67E-04	699	1.38E-04	766	1.55E-05
432	1.03E-04	499	3.84E-04	566	7.98E-04	633	7.57E-04	700	1.33E-04	767	1.52E-05
433	1.14E-04	500	3.95E-04	567	8.09E-04	634	7.43E-04	701	1.30E-04	768	1.44E-05
434	1.25E-04	501	4.06E-04	568	8.14E-04	635	7.34E-04	702	1.26E-04	769	1.44E-05
435	1.40E-04	502	4.17E-04	569	8.23E-04	636	7.21E-04	703	1.21E-04	770	1.38E-05
436	1.56E-04	503	4.27E-04	570	8.32E-04	637	7.08E-04	704	1.17E-04	771	1.34E-05
437	1.73E-04	504	4.37E-04	571	8.42E-04	638	6.94E-04	705	1.14E-04	772	1.32E-05
438	1.95E-04	505	4.45E-04	572	8.49E-04	639	6.81E-04	706	1.10E-04	773	1.24E-05
439	2.18E-04	506	4.56E-04	573	8.54E-04	640	6.67E-04	707	1.06E-04	774	1.23E-05
440	2.45E-04	507	4.64E-04	574	8.66E-04	641	6.49E-04	708	1.04E-04	775	1.18E-05
441	2.73E-04	508	4.74E-04	575	8.73E-04	642	6.38E-04	709	9.99E-05	776	1.15E-05
442	3.06E-04	509	4.80E-04	576	8.79E-04	643	6.27E-04	710	9.59E-05	777	1.12E-05
443	3.46E-04	510	4.86E-04	577	8.84E-04	644	6.16E-04	711	9.35E-05	778	1.11E-05
444	3.93E-04	511	4.94E-04	578	8.95E-04	645	6.04E-04	712	8.99E-05	779	1.12E-05
445	4.43E-04	512	5.02E-04	579	8.99E-04	646	5.90E-04	713	8.75E-05	780	1.12E-05
446	5.01E-04	513	5.06E-04	580	9.07E-04	647	5.78E-04	714	8.48E-05	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

Model No.	STRP4H/MVS @30W3500K	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	0.248	29.5	0.992
NON-WORST CASE	277.0	60	0.115	29.4	0.925

#### Test Result

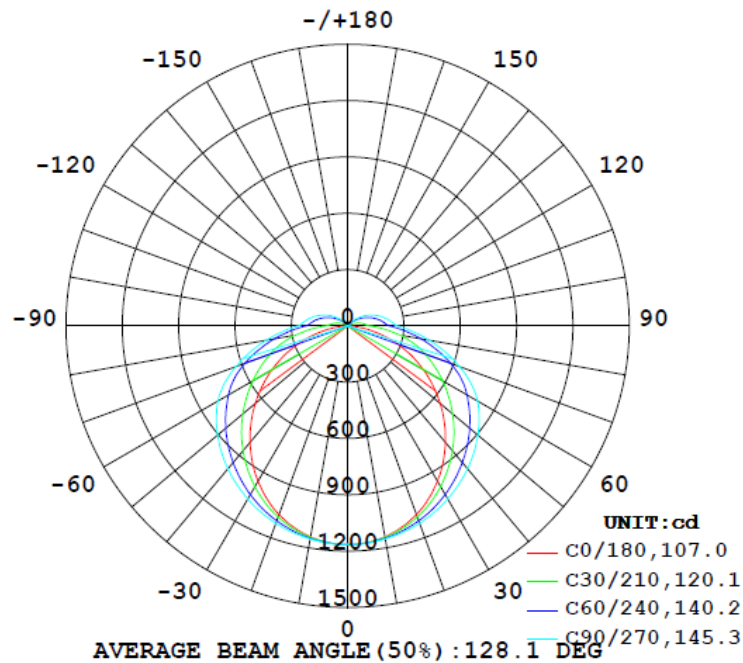
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
4454	1114	160.0	160.0	106.9	145.2	151.0

Zonal Lumen Requirement	UGR	
( $0^{\circ}$ - $60^{\circ}$ )	Crosswise	Endwise
63.2%	22.8	28.5

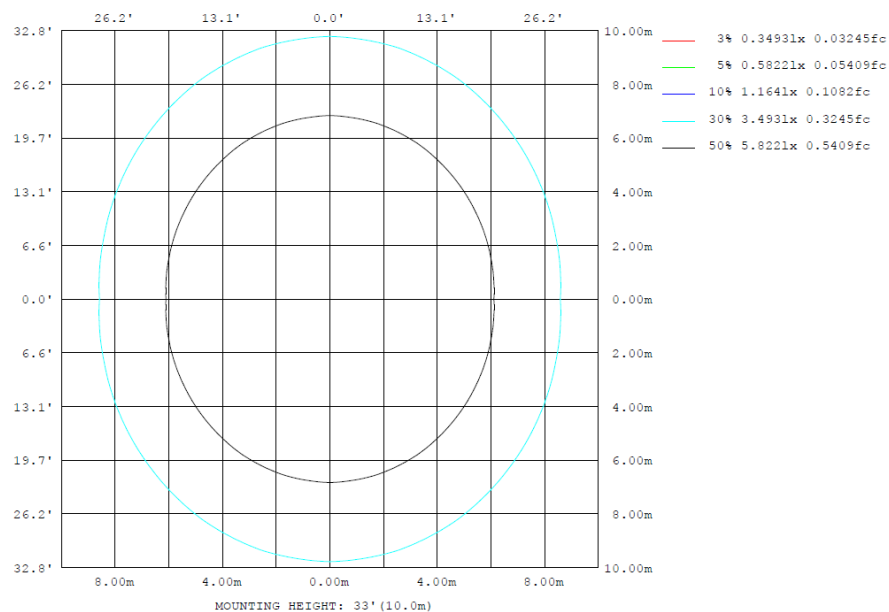
## 4.2 Goniophotometer Test

### 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	1142	1145	1153	1145	1142	1145	1153	1145	0- 10	110.3	110.3	2.48, 2.48
20	1069	1091	1119	1091	1069	1091	1119	1091	10- 20	317.5	427.7	9.6, 9.6
30	956.1	1011	1065	1011	956.1	1011	1065	1011	20- 30	487.4	915.1	20.5, 20.5
40	809.5	907.4	993.1	907.4	809.5	907.4	993.1	907.4	30- 40	602.3	1517	34.1, 34.1
50	643.6	789.5	904.8	789.5	643.6	789.5	904.8	789.5	40- 50	654.3	2172	48.8, 48.8
60	465.6	662.0	798.9	662.0	465.6	662.0	798.9	662.0	50- 60	642.7	2814	63.2, 63.2
70	282.4	524.2	634.2	524.2	282.4	524.2	634.2	524.2	60- 70	569.5	3384	76, 76
80	108.9	345.2	441.5	345.2	108.9	345.2	441.5	345.2	70- 80	430.4	3814	85.6, 85.6
90	4.497	176.0	264.8	176.0	4.497	176.0	264.8	176.0	80- 90	256.9	4071	91.4, 91.4
100	3.682	132.4	213.9	132.4	3.682	132.4	213.9	132.4	90-100	150.6	4222	94.8, 94.8
110	5.097	91.82	164.5	91.82	5.097	91.82	164.5	91.82	100-110	109.1	4331	97.2, 97.2
120	5.530	52.89	112.5	52.89	5.530	52.89	112.5	52.89	110-120	69.12	4400	98.8, 98.8
130	5.432	17.95	63.46	17.95	5.432	17.95	63.46	17.95	120-130	35.68	4436	99.6, 99.6
140	5.361	2.612	20.47	2.612	5.361	2.612	20.47	2.612	130-140	12.79	4449	99.9, 99.9
150	5.652	2.406	1.803	2.406	5.652	2.406	1.803	2.406	140-150	2.569	4451	99.9, 99.9
160	4.700	2.314	1.851	2.314	4.700	2.314	1.851	2.314	150-160	1.340	4452	100, 100
170	6.356	2.680	2.074	2.680	6.356	2.680	2.074	2.680	160-170	0.8290	4453	100, 100
180	6.912	2.868	2.556	2.868	6.912	2.868	2.556	2.868	170-180	0.3476	4454	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)	Total (lm)	Percent
0-10	110.28	2.48%
10-20	317.47	9.61%
20-30	487.38	20.55%
30-40	602.34	34.08%
40-50	654.30	48.77%
50-60	642.70	63.20%
60-70	569.55	75.99%
70-80	430.39	85.65%
80-90	256.89	91.42%
90-100	150.57	94.80%
100-110	109.08	97.25%
110-120	69.12	98.81%
120-130	35.68	99.61%
130-140	12.79	99.89%
140-150	2.57	99.95%
150-160	1.34	99.98%
160-170	0.83	100.00%
170-180	0.35	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	30
Walls	50	30	50	30	30	50	30	50	30	30	30
Floor Cavity	20	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	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	16.1	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	22.7	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
		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	30
Walls	50	30	50	30	30	50	30	50	30	30	30
Floor Cavity	20	20	20	20	20	20	20	20	20	20	20
Room Size											
X=2H Y=2H		UGR Viewed Crosswise					UGR Viewed Endwise				
		18.4	20.0	18.9	20.4	21.0	21.6	23.1	22.0	23.6	24.1
3H		20.0	21.4	20.5	21.9	22.4	24.2	25.6	24.7	26.1	26.7
4H		20.5	21.8	21.0	22.3	22.9	25.5	26.8	26.0	27.3	27.9
6H		20.8	22.0	21.3	22.6	23.2	26.7	27.9	27.2	28.5	29.1
8H		20.9	22.1	21.4	22.6	23.2	27.3	28.5	27.9	29.0	29.6
12H		20.9	22.0	21.5	22.6	23.2	27.9	29.1	28.5	29.6	30.2
4H		2H	19.7	21.0	20.2	21.5	22.1	22.0	23.3	22.5	23.9
		3H	21.5	22.7	22.1	23.2	23.8	24.9	26.1	25.5	26.6
		4H	22.2	23.3	22.8	23.8	24.5	26.3	27.4	26.9	27.9
		6H	22.7	23.6	23.3	24.2	24.9	27.7	28.7	28.3	29.3
		8H	22.8	23.7	23.4	24.3	24.9	28.5	29.3	29.0	29.9
		12H	22.9	23.7	23.5	24.3	25.0	29.2	30.0	29.8	30.6
8H		4H	23.2	24.0	23.8	24.6	25.3	26.6	27.4	27.2	28.0
		6H	23.9	24.6	24.5	25.3	25.9	28.2	28.9	28.8	29.5
		8H	24.1	24.8	24.8	25.4	26.1	29.0	29.7	29.6	30.3
		12H	24.3	24.9	24.9	25.5	26.3	29.9	30.5	30.6	31.1
12H		4H	23.4	24.2	24.0	24.8	25.5	26.6	27.4	27.2	28.0
		6H	24.3	24.9	24.9	25.5	26.3	28.2	28.9	28.9	29.5
		8H	24.6	25.2	25.2	25.8	26.6	29.1	29.7	29.7	30.3

Maximum UGR = 31.9

## 4.2 Goniophotometer Test

### Luminous Distribution Intensity Data

Table--1

UNIT: cd

C (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	1164	1165	1165	1165	1165	1165	1165	1165	1165	1165	1165	1165	1164	1165	1165	1165	1165	1165	1165
5	1159	1159	1160	1159	1160	1161	1161	1161	1160	1159	1160	1159	1159	1159	1160	1159	1160	1161	1161
10	1142	1142	1144	1145	1149	1152	1153	1152	1149	1145	1144	1142	1142	1142	1144	1145	1149	1152	1153
15	1111	1114	1119	1123	1130	1136	1138	1136	1130	1123	1119	1114	1111	1114	1119	1123	1130	1136	1138
20	1069	1077	1084	1091	1105	1114	1119	1114	1105	1091	1084	1077	1069	1077	1084	1091	1105	1114	1119
25	1017	1028	1040	1055	1075	1087	1094	1087	1075	1055	1040	1028	1017	1028	1040	1055	1075	1087	1094
30	956	970	989	1011	1038	1056	1065	1056	1038	1011	989	970	956	970	989	1011	1038	1056	1065
35	886	905	931	962	995	1020	1030	1020	995	962	931	905	886	905	931	962	995	1020	1030
40	809	833	868	907	950	981	993	981	950	907	868	833	809	833	868	907	950	981	993
45	729	756	801	850	901	937	951	937	901	850	801	756	729	756	801	850	901	937	951
50	644	675	730	789	848	889	905	889	848	789	730	675	644	675	730	789	848	889	905
55	555	592	657	726	792	836	854	836	792	726	657	592	555	592	657	726	792	836	854
60	466	508	584	662	733	781	799	781	733	662	584	508	466	508	584	662	733	781	799
65	375	424	510	597	668	708	724	708	668	597	510	424	375	424	510	597	668	708	724
70	282	342	438	524	584	620	634	620	584	524	438	342	282	342	438	524	584	620	634
75	192	264	366	437	491	524	538	524	491	437	366	264	192	264	366	437	491	524	538
80	109	190	281	345	397	429	441	429	397	345	281	190	109	190	281	345	397	429	441
85	40.1	117	193	256	306	337	349	337	306	256	193	117	40.1	117	193	256	306	337	349
90	4.50	51.5	117	176	223	254	265	254	223	176	117	51.5	4.50	51.5	117	176	223	254	265
95	3.45	35.6	96.6	152	196	225	237	225	196	152	96.6	35.6	3.45	35.6	96.6	152	196	225	237
100	3.68	23.2	79.3	132	176	203	214	203	176	132	79.3	23.2	3.68	23.2	79.3	132	176	203	214
105	4.60	12.5	61.7	112	154	180	190	180	154	112	61.7	12.5	4.60	12.5	61.7	112	154	180	190
110	5.10	4.56	45.4	91.8	130	156	164	156	130	91.8	45.4	4.56	5.10	4.56	45.4	91.8	130	156	164
115	5.25	4.13	30.6	71.8	107	130	138	130	107	71.8	30.6	4.13	5.25	4.13	30.6	71.8	107	130	138
120	5.53	4.17	16.5	52.9	84.7	105	112	105	84.7	52.9	16.5	4.17	5.53	4.17	16.5	52.9	84.7	105	112
125	5.65	4.38	4.86	34.7	62.6	81.0	87.4	81.0	62.6	34.7	4.86	4.38	5.65	4.38	4.86	34.7	62.6	81.0	87.4
130	5.43	4.44	3.52	18.0	41.7	58.0	63.5	58.0	41.7	18.0	3.52	4.44	5.43	4.44	3.52	18.0	41.7	58.0	63.5
135	5.40	4.51	3.46	4.09	22.5	36.2	41.2	36.2	22.5	4.09	3.46	4.51	5.40	4.51	3.46	4.09	22.5	36.2	41.2
140	5.36	4.64	3.42	2.61	5.39	16.3	20.5	16.3	5.39	2.61	3.42	4.64	5.36	4.64	3.42	2.61	5.39	16.3	20.5
145	5.53	4.86	3.33	2.50	2.24	2.28	2.88	2.28	2.24	2.50	3.33	4.86	5.53	4.86	3.33	2.50	2.24	2.28	2.88
150	5.65	4.74	3.05	2.41	2.10	2.09	1.80	2.09	2.10	2.41	3.05	4.74	5.65	4.74	3.05	2.41	2.10	2.09	1.80
155	5.35	4.54	2.75	2.31	2.04	2.10	1.83	2.10	2.04	2.31	2.75	4.54	5.35	4.54	2.75	2.31	2.04	2.10	1.83
160	4.70	4.25	2.50	2.31	1.98	2.12	1.85	2.12	1.98	2.31	2.50	4.25	4.70	4.25	2.50	2.31	1.98	2.12	1.85
165	5.23	4.63	2.68	2.31	2.16	2.14	1.87	2.14	2.16	2.31	2.68	4.63	5.23	4.63	2.68	2.31	2.16	2.14	1.87
170	6.36	5.75	3.15	2.68	2.70	2.44	2.07	2.44	2.70	2.68	3.15	5.75	6.36	5.75	3.15	2.68	2.70	2.44	2.07
175	6.82	5.99	3.39	2.87	2.67	2.72	2.42	2.72	2.67	2.87	3.39	5.99	6.82	5.99	3.39	2.87	2.67	2.72	2.42
180	6.91	6.03	3.42	2.87	2.70	2.72	2.56	2.72	2.70	2.87	3.42	6.03	6.91	6.03	3.42	2.87	2.70	2.72	2.56

Table--2

UNIT: cd

C (DEG)	285	300	315	330	345														
0	1165	1165	1165	1165	1165														
5	1161	1160	1159	1160	1159														
10	1152	1149	1145	1144	1142														
15	1136	1130	1123	1119	1114														
20	1114	1105	1091	1084	1077														
25	1087	1075	1055	1040	1028														
30	1056	1038	1011	989	970														
35	1020	995	962	931	905														
40	981	950	907	868	833														
45	937	901	850	801	756														
50	889	848	789	730	675														
55	836	792	726	657	592														
60	781	733	662	584	508														
65	708	668	597	510	424														
70	620	584	524	438	342														
75	524	491	437	366	264														
80	429	397	345	281	190														
85	337	306	256	193	117														
90	254	223	176	117	51.5														
95	225	196	152	96.6	35.6														
100	203	176	132	79.3	23.2														
105	180	154	112	61.7	12.5														
110	156	130	91.8	45.4	4.56														
115	130	107	71.8	30.6	4.13														
120	105	84.7	52.9	16.5	4.17														
125	81.0	62.6	34.7	4.86	4.38														
130	58.0	41.7	18.0	3.52	4.44														
135	36.2	22.5	4.09	3.46	4.51														
140	16.3	5.39	2.61	3.42	4.64														
145	2.28	2.24	2.50	3.33	4.86														
150	2.09	2.10	2.41	3.05	4.74														
155	2.10	2.04	2.31	2.75	4.54														
160	2.12	1.98	2.31	2.50	4.25														
165	2.14	2.16	2.31	2.68	4.63														
170	2.44	2.70	2.68	3.15	5.75														
175	2.72	2.67	2.87	3.39	5.99														
180	2.72	2.70	2.87	3.42	6.03														

## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	STRP4H/MVS @30W3500K	<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 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

<b>Voltage (Vac)</b>	<b>Frequency (Hz)</b>	<b>Current (A)</b>	<b>Power (W)</b>	<b>Power Factor</b>	<b>iTHD(%)</b>
120.0	60	0.248	29.5	0.992	8.02
277.0	60	0.115	29.4	0.925	10.90

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