

## 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		1518
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	157.3
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		19.3
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002	20.00%	120V	7.92
		ANSI C82-77-10:2020		277V	8.26
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002	0.9	120V	0.994
		ANSI C82-77-10:2020		277V	0.953
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	3985±275	4051
			4 steps	3985±154	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		84.8
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		17
Minimum Rf (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	≥70		85
Minimum Rg (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	≥89		95
IES Rcs,h1 (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	-12%≤IES Rcs,h1≤+23%		-11%
Zonal Lumen Requirement (0°-60°) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	≥40%		62.5%
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		0.162
(Goniophotometer – Section 4.2)			Non-Worst Case		0.072
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		19.3
(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	2025-03-28	STRP2H/MVS @20W4000K	-	250324006-S1
2	Goniophotometer Test	2025-03-28	STRP2H/MVS @20W4000K	-	250324006-S1
3	THD and PF Test	2025-03-28	STRP2H/MVS @20W4000K	-	250324006-S1

### Remark (If any):

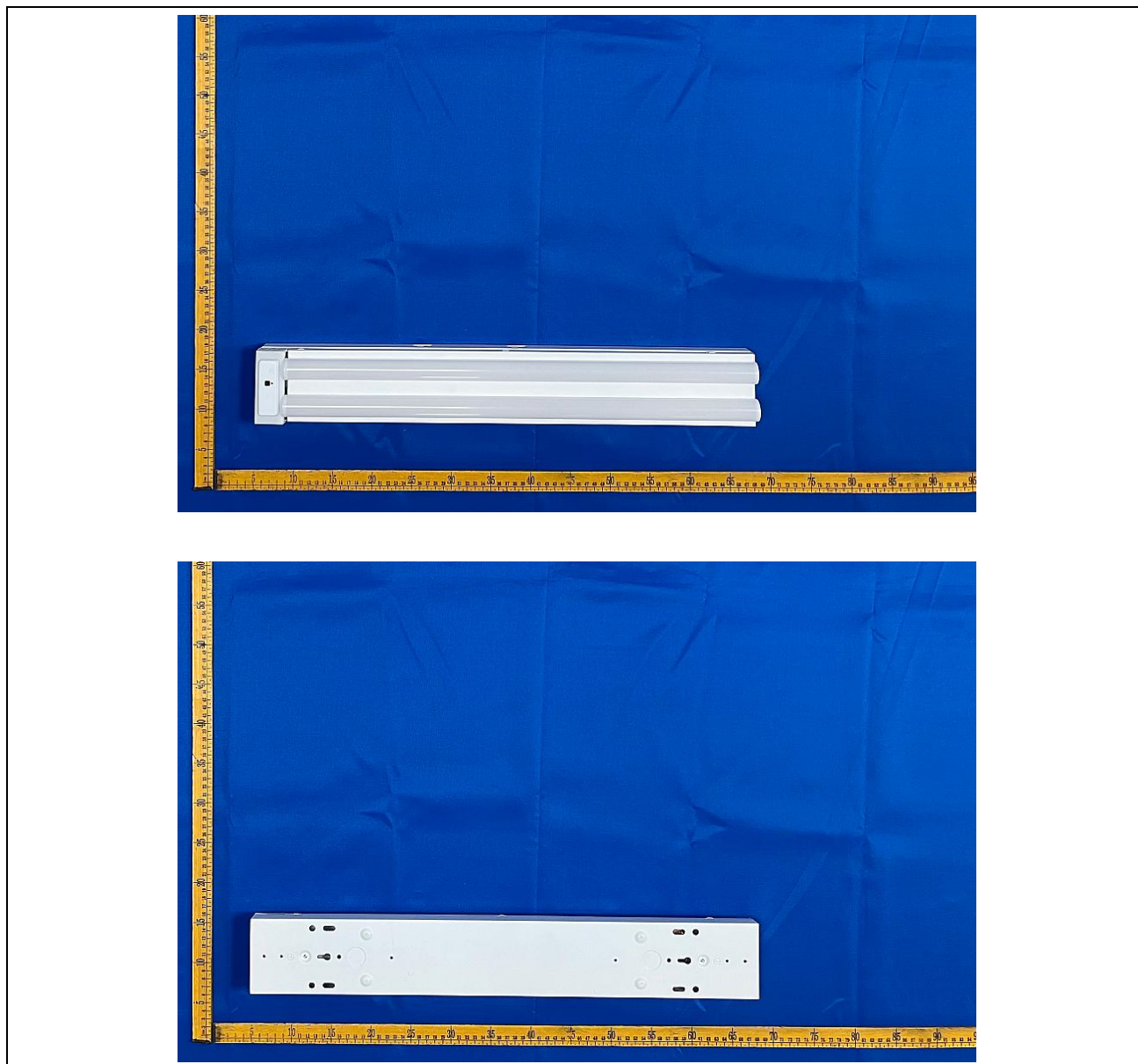
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3. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. Government.

### 3.0 Product Description

Luminaire Description: Model No. STRP2H/MVS @20W4000K, 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.	STRP2H/MVS @20W4000K	Sample ID	250324006-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

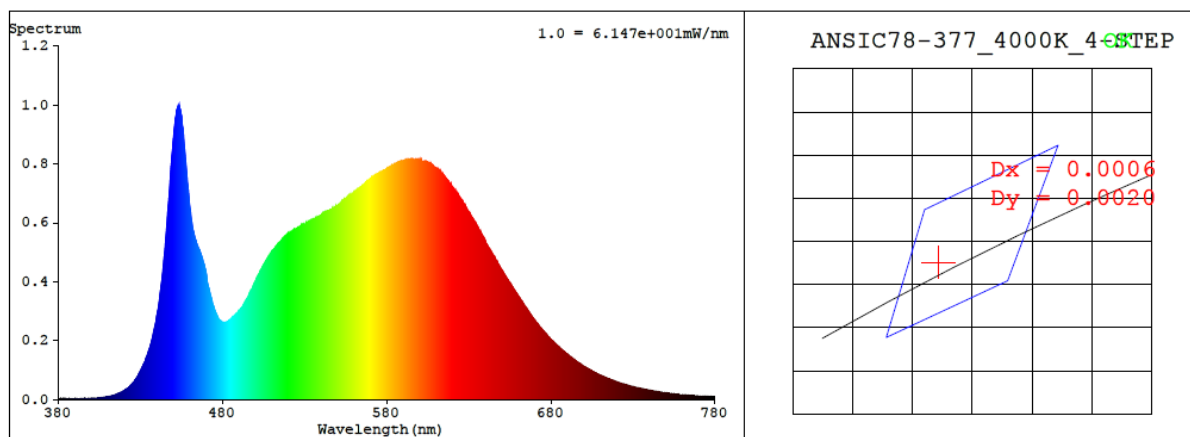
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made 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	0.162	19.3	0.994
277.0	60	0.072	19.0	0.953

CCT (K)	CRI	R9	Duv	SDCM	Rf	Rg	IES Rcs,h1
4051	84.8	17	0.0008	1.4	85	95	-11%

## 4.1 Integrating Sphere Test



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3788$   $y = 0.3774$  /  $u' = 0.2238$   $v' = 0.5016$  ( $duv=7.94e-04$ )

CCT= 4051K Prcp WL:  $L_d=578.4nm$  Purity=26.9%

Peak WL:  $L_p=454nm$  FWHM:  $=21.8nm$  Ratio:R=18.4% G=77.7% B=3.8%

Render Index:  $R_a = 84.8$  AvgR = 78.7 TM30:Rf=85 Rg=95

EEL: 0.09073 A++ Highest

R1 =84 R2 =91 R3 =96 R4 =83 R5 =83 R6 =87 R7 =87

R8 =67 R9 =17 R10=79 R11=82 R12=62 R13=86 R14=98 R15=78

## 4.1 Integrating Sphere Test

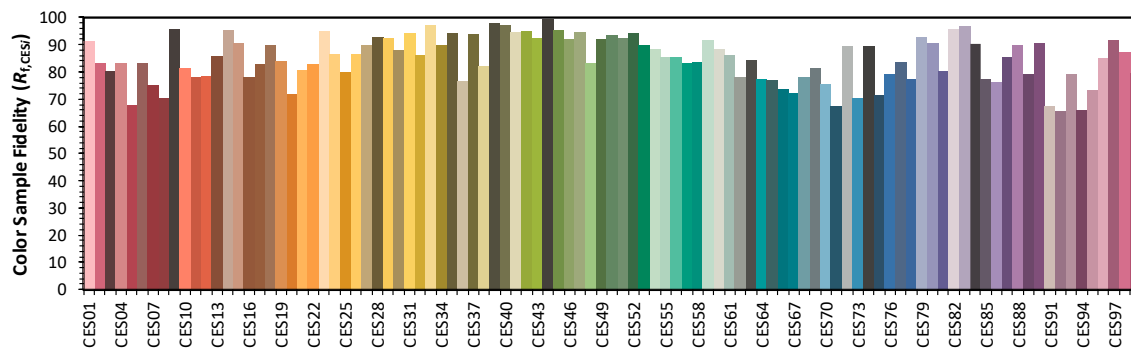
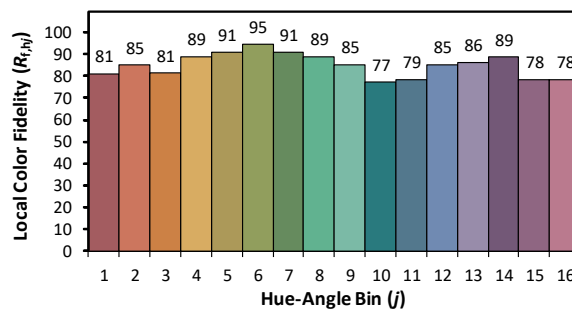
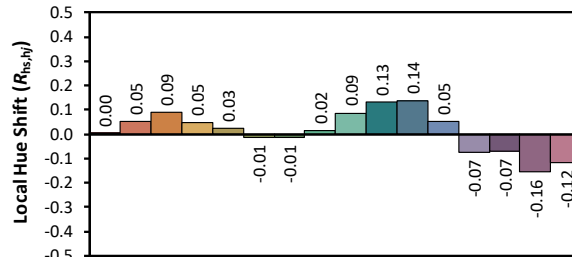
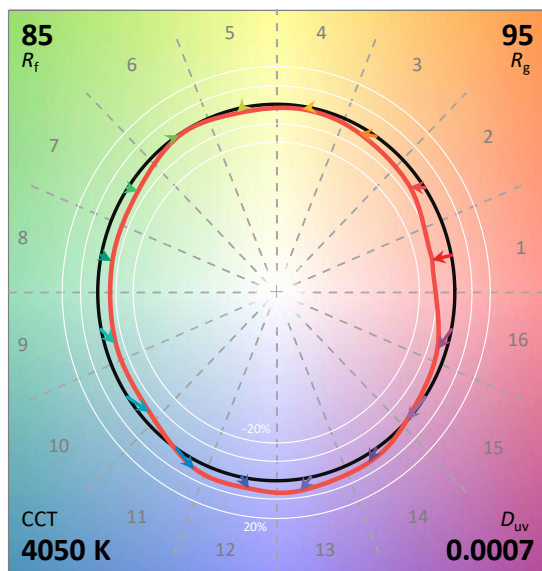
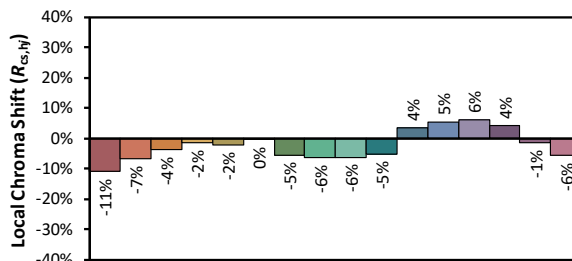
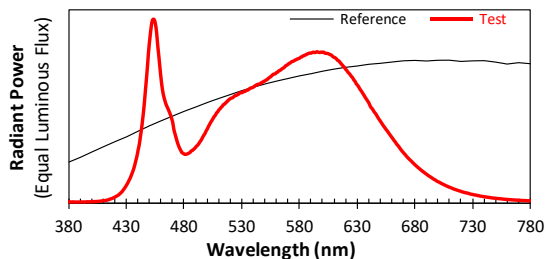
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/4/1

Model: STRP2H/MVS @20W4000K



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

$x$  0.3788  
 $y$  0.3773  
 $u'$  0.2238  
 $v'$  0.5016

CIE 13.3-1995  
(CRI)

$R_a$  85  
 $R_g$  17



## 4.1 Integrating Sphere Test

Spectral Distribution over Visible Wavelength											
WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)
380	4.30E-06	447	6.58E-04	514	5.31E-04	581	7.87E-04	648	4.60E-04	715	7.08E-05
381	3.20E-06	448	7.33E-04	515	5.34E-04	582	7.90E-04	649	4.50E-04	716	6.85E-05
382	2.60E-06	449	8.16E-04	516	5.41E-04	583	7.94E-04	650	4.41E-04	717	6.64E-05
383	3.40E-06	450	8.80E-04	517	5.47E-04	584	7.96E-04	651	4.32E-04	718	6.45E-05
384	3.00E-06	451	9.36E-04	518	5.53E-04	585	7.99E-04	652	4.22E-04	719	6.23E-05
385	2.90E-06	452	9.79E-04	519	5.58E-04	586	8.03E-04	653	4.13E-04	720	6.01E-05
386	2.70E-06	453	9.93E-04	520	5.63E-04	587	8.06E-04	654	4.05E-04	721	5.81E-05
387	2.50E-06	454	9.89E-04	521	5.66E-04	588	8.08E-04	655	3.96E-04	722	5.62E-05
388	2.80E-06	455	9.66E-04	522	5.68E-04	589	8.10E-04	656	3.88E-04	723	5.45E-05
389	2.80E-06	456	9.20E-04	523	5.74E-04	590	8.09E-04	657	3.79E-04	724	5.31E-05
390	2.90E-06	457	8.48E-04	524	5.79E-04	591	8.12E-04	658	3.70E-04	725	5.17E-05
391	3.00E-06	458	7.88E-04	525	5.80E-04	592	8.14E-04	659	3.62E-04	726	5.05E-05
392	3.10E-06	459	7.23E-04	526	5.84E-04	593	8.12E-04	660	3.53E-04	727	4.82E-05
393	3.00E-06	460	6.63E-04	527	5.87E-04	594	8.14E-04	661	3.45E-04	728	4.66E-05
394	2.80E-06	461	6.14E-04	528	5.93E-04	595	8.17E-04	662	3.35E-04	729	4.48E-05
395	3.50E-06	462	5.80E-04	529	5.95E-04	596	8.15E-04	663	3.28E-04	730	4.38E-05
396	4.10E-06	463	5.56E-04	530	5.96E-04	597	8.13E-04	664	3.18E-04	731	4.22E-05
397	4.00E-06	464	5.35E-04	531	5.99E-04	598	8.14E-04	665	3.11E-04	732	4.11E-05
398	3.90E-06	465	5.20E-04	532	6.01E-04	599	8.15E-04	666	3.03E-04	733	3.99E-05
399	3.90E-06	466	5.06E-04	533	6.04E-04	600	8.13E-04	667	2.94E-04	734	3.88E-05
400	4.20E-06	467	4.91E-04	534	6.08E-04	601	8.15E-04	668	2.85E-04	735	3.72E-05
401	4.60E-06	468	4.75E-04	535	6.09E-04	602	8.09E-04	669	2.78E-04	736	3.60E-05
402	5.30E-06	469	4.56E-04	536	6.13E-04	603	8.08E-04	670	2.71E-04	737	3.45E-05
403	5.20E-06	470	4.33E-04	537	6.19E-04	604	8.08E-04	671	2.63E-04	738	3.38E-05
404	5.80E-06	471	3.95E-04	538	6.21E-04	605	8.06E-04	672	2.56E-04	739	3.22E-05
405	6.10E-06	472	3.71E-04	539	6.23E-04	606	8.03E-04	673	2.48E-04	740	3.17E-05
406	6.60E-06	473	3.48E-04	540	6.26E-04	607	8.00E-04	674	2.42E-04	741	3.06E-05
407	7.10E-06	474	3.27E-04	541	6.30E-04	608	7.96E-04	675	2.35E-04	742	2.96E-05
408	8.10E-06	475	3.08E-04	542	6.35E-04	609	7.89E-04	676	2.30E-04	743	2.88E-05
409	9.50E-06	476	2.93E-04	543	6.38E-04	610	7.87E-04	677	2.24E-04	744	2.80E-05
410	9.60E-06	477	2.82E-04	544	6.41E-04	611	7.83E-04	678	2.17E-04	745	2.69E-05
411	1.05E-05	478	2.70E-04	545	6.42E-04	612	7.78E-04	679	2.11E-04	746	2.59E-05
412	1.16E-05	479	2.67E-04	546	6.44E-04	613	7.70E-04	680	2.05E-04	747	2.52E-05
413	1.31E-05	480	2.62E-04	547	6.50E-04	614	7.67E-04	681	1.99E-04	748	2.41E-05
414	1.46E-05	481	2.61E-04	548	6.52E-04	615	7.60E-04	682	1.94E-04	749	2.38E-05
415	1.71E-05	482	2.62E-04	549	6.57E-04	616	7.52E-04	683	1.88E-04	750	2.31E-05
416	1.92E-05	483	2.65E-04	550	6.59E-04	617	7.45E-04	684	1.83E-04	751	2.21E-05
417	2.12E-05	484	2.68E-04	551	6.64E-04	618	7.38E-04	685	1.78E-04	752	2.16E-05
418	2.40E-05	485	2.71E-04	552	6.67E-04	619	7.31E-04	686	1.72E-04	753	2.10E-05
419	2.72E-05	486	2.79E-04	553	6.73E-04	620	7.22E-04	687	1.68E-04	754	2.02E-05
420	2.98E-05	487	2.82E-04	554	6.78E-04	621	7.15E-04	688	1.63E-04	755	1.99E-05
421	3.41E-05	488	2.88E-04	555	6.82E-04	622	7.05E-04	689	1.58E-04	756	1.89E-05
422	3.74E-05	489	2.93E-04	556	6.88E-04	623	7.00E-04	690	1.54E-04	757	1.83E-05
423	4.12E-05	490	3.01E-04	557	6.94E-04	624	6.91E-04	691	1.49E-04	758	1.78E-05
424	4.69E-05	491	3.08E-04	558	6.96E-04	625	6.83E-04	692	1.44E-04	759	1.71E-05
425	5.29E-05	492	3.14E-04	559	6.98E-04	626	6.76E-04	693	1.41E-04	760	1.69E-05
426	5.86E-05	493	3.24E-04	560	7.04E-04	627	6.64E-04	694	1.37E-04	761	1.60E-05
427	6.76E-05	494	3.32E-04	561	7.07E-04	628	6.57E-04	695	1.32E-04	762	1.58E-05
428	7.57E-05	495	3.42E-04	562	7.13E-04	629	6.45E-04	696	1.28E-04	763	1.51E-05
429	8.49E-05	496	3.54E-04	563	7.16E-04	630	6.37E-04	697	1.25E-04	764	1.48E-05
430	9.57E-05	497	3.65E-04	564	7.20E-04	631	6.29E-04	698	1.21E-04	765	1.42E-05
431	1.06E-04	498	3.74E-04	565	7.26E-04	632	6.18E-04	699	1.16E-04	766	1.41E-05
432	1.19E-04	499	3.89E-04	566	7.29E-04	633	6.09E-04	700	1.13E-04	767	1.34E-05
433	1.31E-04	500	3.99E-04	567	7.34E-04	634	6.00E-04	701	1.10E-04	768	1.30E-05
434	1.47E-04	501	4.12E-04	568	7.41E-04	635	5.90E-04	702	1.07E-04	769	1.24E-05
435	1.63E-04	502	4.24E-04	569	7.44E-04	636	5.80E-04	703	1.03E-04	770	1.21E-05
436	1.80E-04	503	4.35E-04	570	7.49E-04	637	5.69E-04	704	1.00E-04	771	1.19E-05
437	2.02E-04	504	4.45E-04	571	7.54E-04	638	5.60E-04	705	9.73E-05	772	1.15E-05
438	2.28E-04	505	4.56E-04	572	7.56E-04	639	5.50E-04	706	9.40E-05	773	1.11E-05
439	2.53E-04	506	4.66E-04	573	7.62E-04	640	5.41E-04	707	9.11E-05	774	1.09E-05
440	2.86E-04	507	4.74E-04	574	7.65E-04	641	5.26E-04	708	8.83E-05	775	1.06E-05
441	3.16E-04	508	4.85E-04	575	7.67E-04	642	5.14E-04	709	8.56E-05	776	1.03E-05
442	3.60E-04	509	4.92E-04	576	7.71E-04	643	5.08E-04	710	8.28E-05	777	9.90E-06
443	4.03E-04	510	5.02E-04	577	7.74E-04	644	4.98E-04	711	8.06E-05	778	9.60E-06
444	4.57E-04	511	5.08E-04	578	7.77E-04	645	4.88E-04	712	7.80E-05	779	9.50E-06
445	5.14E-04	512	5.16E-04	579	7.79E-04	646	4.81E-04	713	7.51E-05	780	9.60E-06
446	5.86E-04	513	5.22E-04	580	7.82E-04	647	4.71E-04	714	7.27E-05	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

Model No.	STRP2H/MVS @20W4000K	Sample ID	250324006-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 <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	0.162	19.3	0.994
NON-WORST CASE	277.0	60	0.072	19.0	0.953

#### Test Result

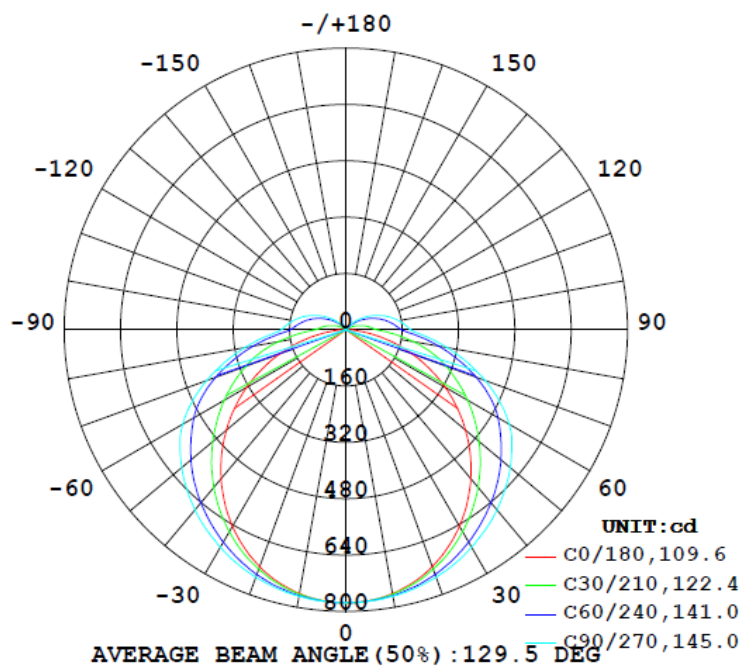
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
3036	1518	161.5	161.5	109.6	145.0	157.3

Zonal Lumen Requirement	UGR	
( $0^\circ$ - $60^\circ$ )	Crosswise	Endwise
62.5%	24.1	29.3

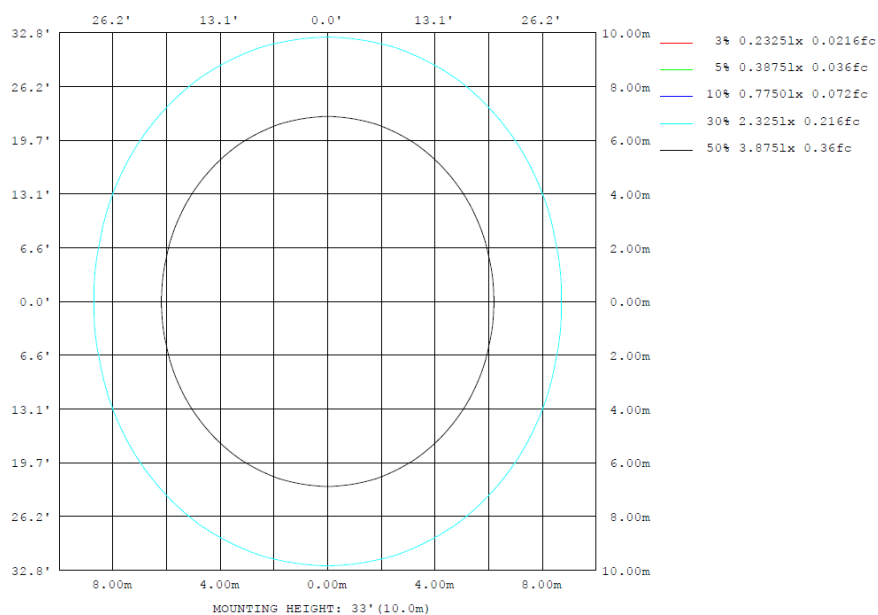
## 4.2 Goniophotometer Test

### 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	$\Phi$ lum, lamp
10	760.6	764.2	768.3	764.2	760.6	764.2	768.3	764.2	0- 10	73.50	73.50	2.42,2.42
20	716.1	731.1	748.0	731.1	716.1	731.1	748.0	731.1	10- 20	212.1	285.6	9.41,9.41
30	644.9	679.6	713.3	679.6	644.9	679.6	713.3	679.6	20- 30	326.5	612.0	20.2,20.2
40	551.7	611.8	667.8	611.8	551.7	611.8	667.8	611.8	30- 40	405.2	1017	33.5,33.5
50	443.5	536.3	609.2	536.3	443.5	536.3	609.2	536.3	40- 50	442.3	1459	48.1,48.1
60	325.1	452.2	535.5	452.2	325.1	452.2	535.5	452.2	50- 60	436.8	1896	62.5,62.5
70	200.5	358.1	420.3	358.1	200.5	358.1	420.3	358.1	60- 70	387.2	2283	75.2,75.2
80	80.77	236.3	292.3	236.3	80.77	236.3	292.3	236.3	70- 80	292.6	2576	84.9,84.9
90	6.904	127.3	184.0	127.3	6.904	127.3	184.0	127.3	80- 90	176.4	2753	90.7,90.7
100	5.559	97.99	152.0	97.99	5.559	97.99	152.0	97.99	90-100	110.4	2863	94.3,94.3
110	5.559	67.98	116.3	67.98	5.559	67.98	116.3	67.98	100-110	79.85	2943	96.9,96.9
120	5.559	39.21	78.99	39.21	5.559	39.21	78.99	39.21	110-120	50.63	2993	98.6,98.6
130	6.030	14.33	44.14	14.33	6.030	14.33	44.14	14.33	120-130	26.52	3020	99.5,99.5
140	5.936	4.266	14.34	4.266	5.936	4.266	14.34	4.266	130-140	10.27	3030	99.8,99.8
150	5.936	3.529	1.770	3.529	5.936	3.529	1.770	3.529	140-150	2.859	3033	99.9,99.9
160	5.464	2.784	1.677	2.784	5.464	2.784	1.677	2.784	150-160	1.526	3035	100,100
170	5.653	2.688	1.954	2.688	5.653	2.688	1.954	2.688	160-170	0.8195	3035	100,100
180	5.653	2.969	2.608	2.969	5.653	2.969	2.608	2.969	170-180	0.3099	3036	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	73.50	0-10	73.50	2.42%
10-20	212.05	0-20	285.55	9.41%
20-30	326.46	0-30	612.01	20.16%
30-40	405.15	0-40	1017.16	33.51%
40-50	442.27	0-50	1459.43	48.08%
50-60	436.81	0-60	1896.24	62.47%
60-70	387.21	0-70	2283.45	75.23%
70-80	292.65	0-80	2576.10	84.87%
80-90	176.42	0-90	2752.52	90.68%
90-100	110.41	0-100	2862.93	94.32%
100-110	79.85	0-110	2942.78	96.95%
110-120	50.63	0-120	2993.41	98.62%
120-130	26.52	0-130	3019.93	99.49%
130-140	10.27	0-140	3030.20	99.83%
140-150	2.86	0-150	3033.06	99.92%
150-160	1.53	0-160	3034.59	99.97%
160-170	0.82	0-170	3035.41	100.00%
170-180	0.31	0-180	3035.72	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	15.7	17.2	16.2	17.7	18.3	18.7	20.3	19.2	20.8	21.3
	3H	17.3	18.7	17.8	19.2	19.8	21.4	22.7	21.9	23.3	23.8
	4H	17.8	19.2	18.4	19.7	20.3	22.5	23.9	23.0	24.4	25.0
	6H	18.2	19.4	18.7	20.0	20.6	23.7	24.9	24.2	25.5	26.1
	8H	18.3	19.5	18.8	20.0	20.6	24.3	25.5	24.8	26.0	26.6
	12H	18.3	19.5	18.9	20.0	20.6	24.9	26.0	25.4	26.5	27.2
4H	2H	16.9	18.3	17.5	18.8	19.4	19.2	20.5	19.7	21.1	21.6
	3H	18.9	20.0	19.4	20.6	21.2	22.1	23.2	22.6	23.8	24.4
	4H	19.6	20.6	20.1	21.2	21.8	23.4	24.5	24.0	25.0	25.7
	6H	20.1	21.0	20.7	21.6	22.2	24.8	25.7	25.4	26.3	26.9
	8H	20.2	21.1	20.8	21.7	22.3	25.4	26.3	26.0	26.9	27.6
	12H	20.3	21.1	20.9	21.7	22.4	26.1	26.9	26.7	27.6	28.2
8H	4H	20.5	21.4	21.1	21.9	22.6	23.7	24.5	24.2	25.1	25.8
	6H	21.2	22.0	21.8	22.6	23.3	25.2	25.9	25.8	26.6	27.2
	8H	21.5	22.2	22.1	22.8	23.5	26.0	26.7	26.6	27.3	28.0
	12H	21.6	22.3	22.3	22.9	23.6	26.9	27.5	27.5	28.1	28.8
12H	4H	20.7	21.5	21.3	22.1	22.8	23.7	24.5	24.3	25.1	25.8
	6H	21.6	22.2	22.2	22.8	23.6	25.2	25.9	25.9	26.5	27.3
	8H	21.9	22.5	22.6	23.2	23.9	26.1	26.7	26.7	27.3	28.1

Maximum UGR = 28.8

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	19.6	21.1	20.1	21.6	22.2	22.6	24.2	23.1	24.7	25.2
	3H	21.2	22.6	21.7	23.1	23.7	25.3	26.6	25.8	27.2	27.7
	4H	21.7	23.1	22.3	23.6	24.2	26.4	27.8	26.9	28.3	28.9
	6H	22.1	23.3	22.6	23.9	24.5	27.6	28.8	28.1	29.4	30.0
	8H	22.2	23.4	22.7	23.9	24.5	28.2	29.4	28.7	29.9	30.5
	12H	22.2	23.4	22.8	23.9	24.5	28.8	29.9	29.3	30.4	31.1
4H	2H	20.8	22.2	21.4	22.7	23.3	23.1	24.4	23.6	25.0	25.5
	3H	22.8	23.9	23.3	24.5	25.1	26.0	27.1	26.5	27.7	28.3
	4H	23.5	24.5	24.0	25.1	25.7	27.3	28.4	27.9	28.9	29.6
	6H	24.0	24.9	24.6	25.5	26.1	28.7	29.6	29.3	30.2	30.8
	8H	24.1	25.0	24.7	25.6	26.2	29.3	30.2	29.9	30.8	31.5
	12H	24.2	25.0	24.8	25.6	26.3	30.0	30.8	30.6	31.5	32.1
8H	4H	24.4	25.3	25.0	25.8	26.5	27.6	28.4	28.1	29.0	29.7
	6H	25.1	25.9	25.7	26.5	27.2	29.1	29.8	29.7	30.5	31.1
	8H	25.4	26.1	26.0	26.7	27.4	29.9	30.6	30.5	31.2	31.9
	12H	25.5	26.2	26.2	26.8	27.5	30.8	31.4	31.4	32.0	32.7
12H	4H	24.6	25.4	25.2	26.0	26.7	27.6	28.4	28.2	29.0	29.7
	6H	25.5	26.1	26.1	26.7	27.5	29.1	29.8	29.8	30.4	31.2
	8H	25.8	26.4	26.5	27.1	27.8	30.0	30.6	30.6	31.2	32.0

Maximum UGR = 32.7

## 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	775	775	775	775	775	776	775	776	775	775	775	775	775	775	775	775	775	776	775
5	772	772	772	773	773	774	774	774	773	773	772	772	772	772	772	773	773	774	774
10	761	761	762	764	766	768	768	768	766	764	762	761	761	761	762	764	766	768	768
15	742	743	746	750	755	759	760	759	755	750	746	743	742	743	746	750	755	759	760
20	716	717	724	731	740	745	748	745	740	731	724	717	716	717	724	731	740	745	748
25	683	686	696	708	720	729	733	729	720	708	696	686	683	686	696	708	720	729	733
30	645	649	663	680	696	709	713	709	696	680	663	649	645	649	663	680	696	709	713
35	601	607	625	647	670	686	692	686	670	647	625	607	601	607	625	647	670	686	692
40	552	560	584	612	641	661	668	661	641	612	584	560	552	560	584	612	641	661	668
45	499	510	540	575	609	632	640	632	609	575	540	510	499	510	540	575	609	632	640
50	444	457	494	536	575	601	609	601	575	536	494	457	444	457	494	536	575	601	609
55	385	403	447	495	537	566	576	566	537	495	447	403	385	403	447	495	537	566	576
60	325	347	399	452	499	528	536	528	499	452	399	347	325	347	399	452	499	528	536
65	263	292	351	409	451	475	482	475	451	409	351	292	263	292	351	409	451	475	482
70	201	237	303	358	393	414	420	414	393	358	303	237	201	237	303	358	393	414	420
75	139	184	253	298	330	351	356	351	330	298	253	184	139	184	253	298	330	351	356
80	80.8	134	194	236	268	288	292	288	268	236	194	134	80.8	134	194	236	268	288	292
85	32.6	85.2	136	176	207	226	231	226	207	176	136	85.2	32.6	85.2	136	176	207	226	231
90	6.90	41.6	87.6	127	158	178	184	178	158	127	87.6	41.6	6.90	41.6	87.6	127	158	178	184
95	5.56	30.1	73.3	112	142	162	168	162	142	112	73.3	30.1	5.56	30.1	73.3	112	142	162	168
100	5.56	20.4	60.6	98.0	127	146	152	146	127	98.0	60.6	20.4	5.56	20.4	60.6	98.0	127	146	152
105	5.56	12.2	47.5	83.2	111	128	135	128	111	83.2	47.5	12.2	5.56	12.2	47.5	83.2	111	128	135
110	5.56	6.48	35.2	68.0	94.2	111	116	111	94.2	68.0	35.2	6.48	5.56	6.48	35.2	68.0	94.2	111	116
115	5.56	5.99	24.3	53.1	77.3	92.5	97.4	92.5	77.3	53.1	24.3	5.99	5.56	5.99	24.3	53.1	77.3	92.5	97.4
120	5.56	5.81	14.1	39.2	60.9	74.5	79.0	74.5	60.9	39.2	14.1	5.81	5.56	5.81	14.1	39.2	60.9	74.5	79.0
125	5.66	5.71	6.18	26.3	45.1	57.3	61.0	57.3	45.1	26.3	6.18	5.71	5.66	5.71	6.18	26.3	45.1	57.3	61.0
130	6.03	5.62	5.31	14.3	30.8	41.0	44.1	41.0	30.8	14.3	5.31	5.62	6.03	5.62	5.31	14.3	30.8	41.0	44.1
135	5.94	5.53	5.03	5.13	17.1	26.1	28.8	26.1	17.1	5.13	5.03	5.53	5.94	5.53	5.03	5.13	17.1	26.1	28.8
140	5.94	5.44	4.84	4.27	5.43	11.9	14.3	11.9	5.43	4.27	4.84	5.44	5.94	5.44	4.84	4.27	5.43	11.9	14.3
145	5.94	5.15	4.56	3.81	3.16	2.62	2.89	2.62	3.16	3.81	4.56	5.15	5.94	5.15	4.56	3.81	3.16	2.62	2.89
150	5.94	4.97	4.10	3.53	3.07	2.05	1.77	2.05	3.07	3.53	4.10	4.97	5.94	4.97	4.10	3.53	3.07	2.05	1.77
155	5.84	4.59	3.73	3.15	2.69	1.95	1.68	1.95	2.69	3.15	3.73	4.59	5.84	4.59	3.73	3.15	2.69	1.95	1.68
160	5.46	4.03	3.17	2.78	2.23	1.77	1.68	1.77	2.23	2.78	3.17	4.03	5.46	4.03	3.17	2.78	2.23	1.77	1.68
165	5.56	4.03	3.07	2.51	2.14	1.77	1.68	1.77	2.14	2.51	3.07	4.03	5.56	4.03	3.07	2.51	2.14	1.77	1.68
170	5.65	4.21	3.07	2.69	2.41	2.32	1.95	2.32	2.41	2.69	3.07	4.21	5.65	4.21	3.07	2.69	2.41	2.32	1.95
175	5.65	4.40	3.26	2.88	2.69	2.61	2.51	2.61	2.69	2.88	3.26	4.40	5.65	4.40	3.26	2.88	2.69	2.61	2.51
180	5.65	4.40	3.26	2.97	2.60	2.79	2.61	2.79	2.60	2.97	3.26	4.40	5.65	4.40	3.26	2.97	2.60	2.79	2.61

Table--2

UNIT: cd

C (DEG) y (DEG)	285	300	315	330	345														
0	776	775	775	775	775														
5	774	773	773	772	772														
10	768	766	764	762	761														
15	759	755	750	746	743														
20	745	740	731	724	717														
25	729	720	708	696	686														
30	709	696	680	663	649														
35	686	670	647	625	607														
40	661	641	612	584	560														
45	632	609	575	540	510														
50	601	575	536	494	457														
55	566	537	495	447	403														
60	528	499	452	399	347														
65	475	451	409	351	292														
70	414	393	358	303	237														
75	351	330	298	253	184														
80	288	268	236	194	134														
85	226	207	176	136	85.2														
90	178	158	127	87.6	41.6														
95	162	142	112	73.3	30.1														
100	146	127	98.0	60.6	20.4														
105	128	111	83.2	47.5	12.2														
110	111	94.2	68.0	35.2	6.48														
115	92.5	77.3	53.1	24.3	5.99														
120	74.5	60.9	39.2	14.1	5.81														
125	57.3	45.1	26.3	6.18	5.71														
130	41.0	30.8	14.3	5.31	5.62														
135	26.1	17.1	5.13	5.03	5.53														
140	11.9	5.43	4.27	4.84	5.44														
145	2.62	3.16	3.81	4.56	5.15														
150	2.05	3.07	3.53	4.10	4.97														
155	1.95	2.69	3.15	3.73	4.59														
160	1.77	2.23	2.78	3.17	4.03														
165	1.77	2.14	2.51	3.07	4.03														
170	2.32	2.41	2.69	3.07	4.21														
175	2.61	2.69	2.88	3.26	4.40														
180	2.79	2.60	2.97	3.26	4.40														

## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	STRP2H/MVS @20W4000K	<b>Sample ID</b>	250324006-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	0.162	19.3	0.994	7.92
277.0	60	0.072	19.0	0.953	8.26

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