

Photometric Test Report

Relevant Standards

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

Prepared For

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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		402
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	154.5
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		10.4
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	8.92
				277V	22.25
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.982
				277V	0.849
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	3985±275	4089
			4 steps	3985±154	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		85.2
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		19
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%		56.4%
Discomfort Glare (UGR) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	28.1
			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		0.044
(Goniophotometer – Section 4.2)			Non-Worst Case		0.081
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		10.4
(Goniophotometer – Section 4.2)			Non-Worst Case		9.6

2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-01-03	STRP4 @10W4000K	-	241225005-S1
2	Goniophotometer Test	2025-01-03	STRP4 @10W4000K	-	241225005-S1
3	THD and PF Test	2025-01-03	STRP4 @10W4000K	-	241225005-S1

Remark (If any):

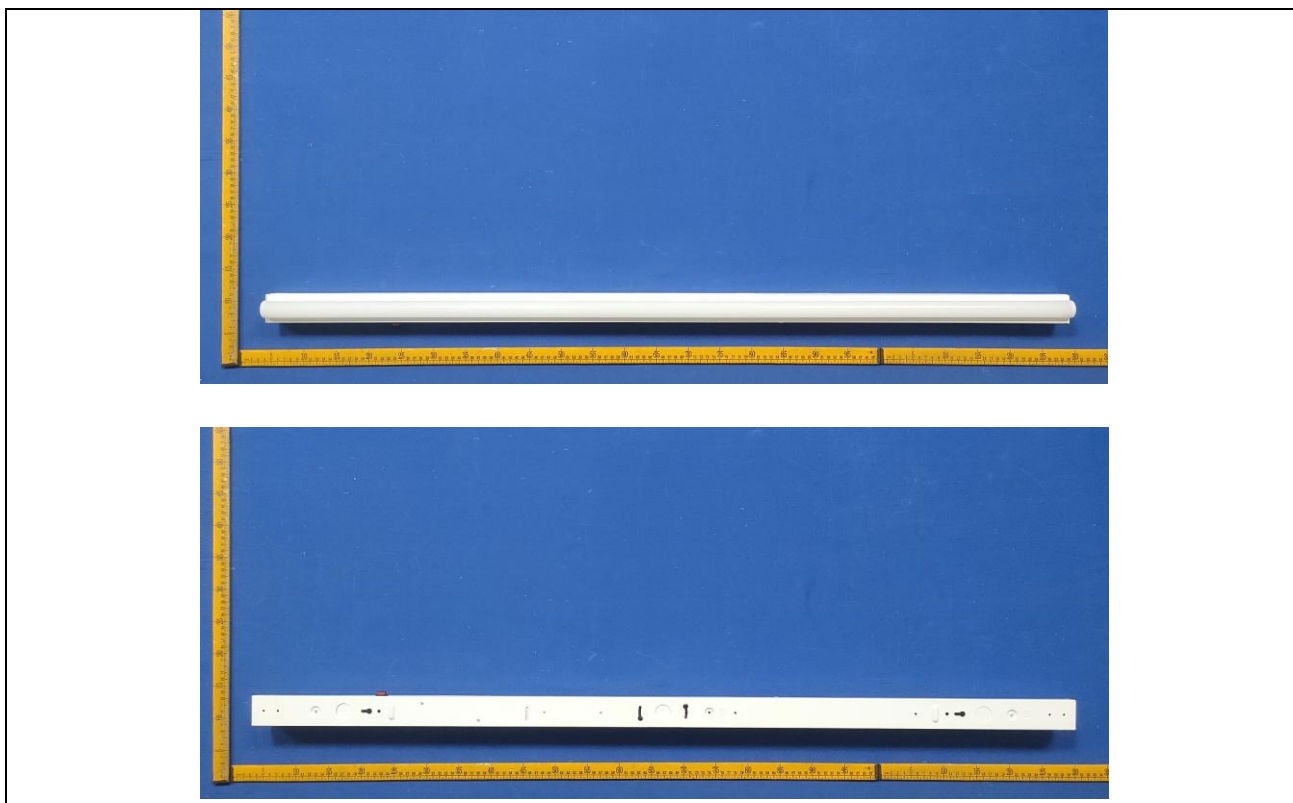
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3.0 Product Description

Luminaire Description: Model No. STRP4 @10W4000K, color tunable from 3500K, 4000K and 5000K.

Electrical Specification: 120-277Vac, 50/60Hz

Photos of Luminaire Characteristics



4.0 LM-79 Measurement and Test Results

4.1 Integrating Sphere Test

Model No.	STRP4 @10W4000K	Sample ID	241225005-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

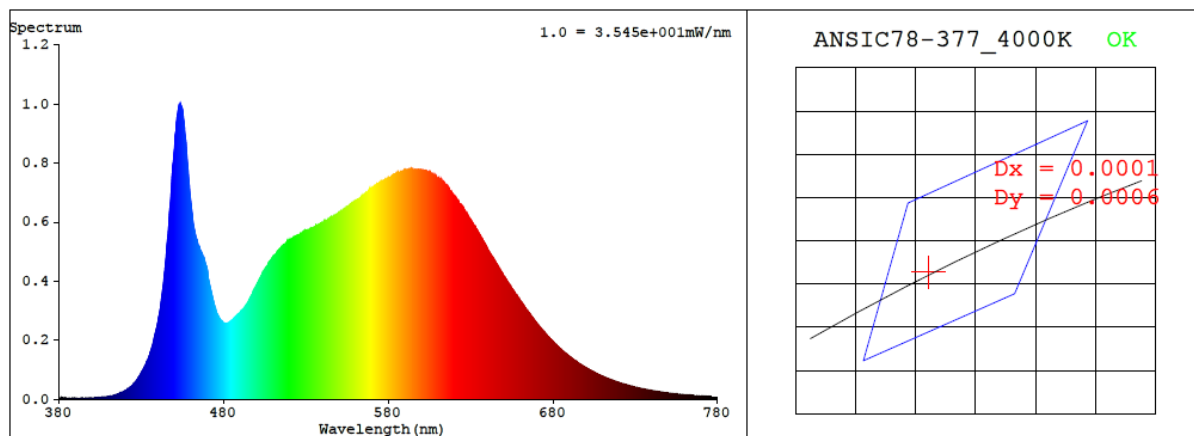
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made 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	0.081	9.6	0.982
277.0	60	0.044	10.4	0.849

CCT (K)	CRI	R9	Duv	Rf	Rg	IES Rcs,h1
4089	85.2	19	0.0003	85	95	-11%

4.1 Integrating Sphere Test



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.3767$ $y = 0.3750$ / $u' = 0.2234$ $v' = 0.5002$ ($duv=2.63e-04$)

CCT= 4089K Prcp WL: $L_d=578.6nm$ Purity=25.6%

Peak WL: $L_p=454nm$ FWHM: $=21.0nm$ Ratio: $R=18.4\%$ $G=77.7\%$ $B=4.0\%$

Render Index: $R_a = 85.2$ AvgR = 79.1 TM30: $R_f=85$ $R_g=95$

EEL: 0.08815 A++ Highest

R1 =84 R2 =92 R3 =96 R4 =83 R5 =84 R6 =88 R7 =87

R8 =68 R9 =19 R10=80 R11=82 R12=62 R13=86 R14=98 R15=79

4.1 Integrating Sphere Test

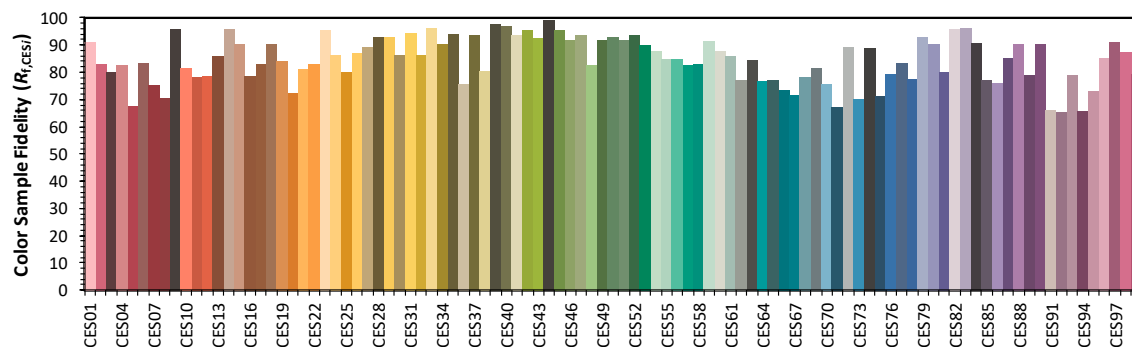
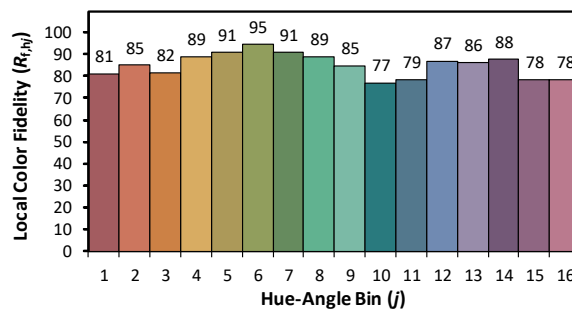
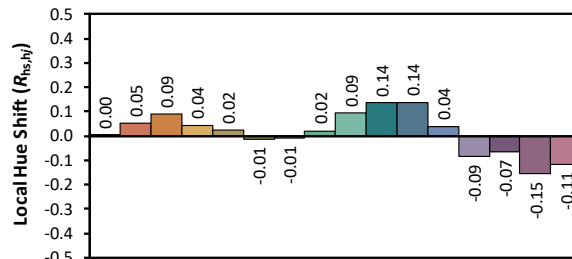
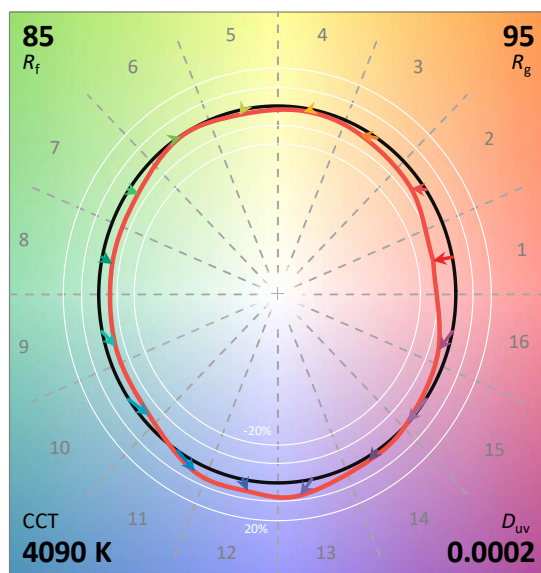
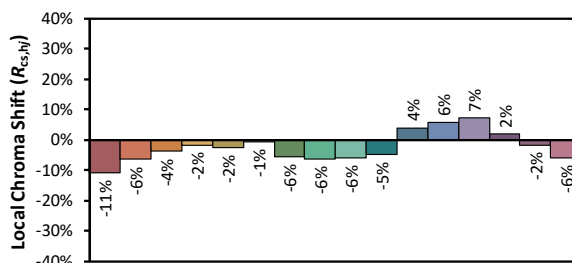
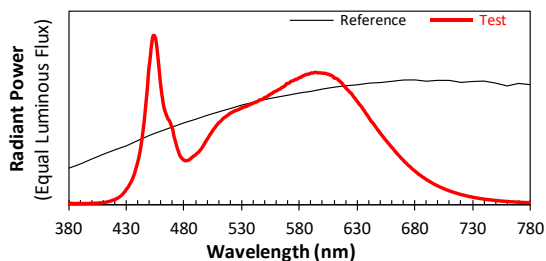
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/1/6

Model: STRP4 @10W4000K



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

x 0.3767
 y 0.3748
 u' 0.2234
 v' 0.5002

CIE 13.3-1995
(CRI)

R_a 85
 R_g 19

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	5.40E-06	447	6.16E-04	514	5.09E-04	581	7.51E-04	648	4.38E-04	715	6.70E-05
381	3.70E-06	448	6.86E-04	515	5.14E-04	582	7.55E-04	649	4.30E-04	716	6.51E-05
382	5.70E-06	449	7.83E-04	516	5.18E-04	583	7.60E-04	650	4.19E-04	717	6.25E-05
383	3.90E-06	450	8.40E-04	517	5.23E-04	584	7.61E-04	651	4.12E-04	718	6.07E-05
384	4.30E-06	451	9.06E-04	518	5.28E-04	585	7.66E-04	652	4.02E-04	719	5.87E-05
385	3.30E-06	452	9.64E-04	519	5.34E-04	586	7.68E-04	653	3.94E-04	720	5.70E-05
386	3.70E-06	453	9.97E-04	520	5.38E-04	587	7.68E-04	654	3.85E-04	721	5.47E-05
387	3.40E-06	454	9.98E-04	521	5.42E-04	588	7.71E-04	655	3.77E-04	722	5.33E-05
388	4.30E-06	455	9.84E-04	522	5.46E-04	589	7.72E-04	656	3.69E-04	723	5.22E-05
389	3.60E-06	456	9.40E-04	523	5.49E-04	590	7.76E-04	657	3.60E-04	724	5.01E-05
390	3.80E-06	457	8.79E-04	524	5.53E-04	591	7.77E-04	658	3.53E-04	725	4.84E-05
391	3.70E-06	458	8.09E-04	525	5.55E-04	592	7.77E-04	659	3.43E-04	726	4.69E-05
392	3.10E-06	459	7.39E-04	526	5.57E-04	593	7.80E-04	660	3.36E-04	727	4.53E-05
393	3.80E-06	460	6.78E-04	527	5.61E-04	594	7.81E-04	661	3.28E-04	728	4.41E-05
394	4.40E-06	461	6.29E-04	528	5.62E-04	595	7.79E-04	662	3.20E-04	729	4.28E-05
395	3.60E-06	462	5.85E-04	529	5.69E-04	596	7.77E-04	663	3.11E-04	730	4.08E-05
396	4.00E-06	463	5.57E-04	530	5.69E-04	597	7.78E-04	664	3.03E-04	731	4.00E-05
397	4.00E-06	464	5.37E-04	531	5.74E-04	598	7.77E-04	665	2.96E-04	732	3.83E-05
398	4.50E-06	465	5.18E-04	532	5.75E-04	599	7.76E-04	666	2.88E-04	733	3.73E-05
399	4.40E-06	466	5.03E-04	533	5.78E-04	600	7.76E-04	667	2.81E-04	734	3.60E-05
400	4.90E-06	467	4.95E-04	534	5.79E-04	601	7.75E-04	668	2.73E-04	735	3.53E-05
401	4.60E-06	468	4.79E-04	535	5.83E-04	602	7.75E-04	669	2.66E-04	736	3.38E-05
402	5.80E-06	469	4.60E-04	536	5.88E-04	603	7.73E-04	670	2.60E-04	737	3.27E-05
403	5.40E-06	470	4.42E-04	537	5.89E-04	604	7.69E-04	671	2.52E-04	738	3.17E-05
404	6.10E-06	471	4.03E-04	538	5.93E-04	605	7.69E-04	672	2.45E-04	739	3.08E-05
405	6.40E-06	472	3.79E-04	539	5.95E-04	606	7.65E-04	673	2.39E-04	740	2.97E-05
406	7.00E-06	473	3.54E-04	540	5.99E-04	607	7.64E-04	674	2.32E-04	741	2.86E-05
407	7.40E-06	474	3.29E-04	541	6.01E-04	608	7.60E-04	675	2.26E-04	742	2.76E-05
408	8.00E-06	475	3.11E-04	542	6.06E-04	609	7.55E-04	676	2.21E-04	743	2.70E-05
409	9.00E-06	476	2.90E-04	543	6.05E-04	610	7.46E-04	677	2.13E-04	744	2.59E-05
410	1.02E-05	477	2.79E-04	544	6.11E-04	611	7.46E-04	678	2.07E-04	745	2.55E-05
411	1.03E-05	478	2.70E-04	545	6.16E-04	612	7.43E-04	679	2.02E-04	746	2.48E-05
412	1.15E-05	479	2.65E-04	546	6.18E-04	613	7.39E-04	680	1.96E-04	747	2.38E-05
413	1.28E-05	480	2.59E-04	547	6.18E-04	614	7.33E-04	681	1.90E-04	748	2.30E-05
414	1.46E-05	481	2.57E-04	548	6.22E-04	615	7.26E-04	682	1.85E-04	749	2.23E-05
415	1.62E-05	482	2.57E-04	549	6.27E-04	616	7.21E-04	683	1.79E-04	750	2.17E-05
416	1.80E-05	483	2.59E-04	550	6.32E-04	617	7.14E-04	684	1.74E-04	751	2.10E-05
417	2.07E-05	484	2.62E-04	551	6.32E-04	618	7.04E-04	685	1.69E-04	752	2.01E-05
418	2.34E-05	485	2.66E-04	552	6.38E-04	619	6.96E-04	686	1.64E-04	753	1.97E-05
419	2.48E-05	486	2.73E-04	553	6.43E-04	620	6.89E-04	687	1.59E-04	754	1.91E-05
420	2.84E-05	487	2.78E-04	554	6.48E-04	621	6.81E-04	688	1.55E-04	755	1.84E-05
421	3.10E-05	488	2.84E-04	555	6.52E-04	622	6.74E-04	689	1.50E-04	756	1.79E-05
422	3.46E-05	489	2.88E-04	556	6.55E-04	623	6.67E-04	690	1.46E-04	757	1.75E-05
423	3.88E-05	490	2.93E-04	557	6.60E-04	624	6.60E-04	691	1.42E-04	758	1.66E-05
424	4.35E-05	491	3.01E-04	558	6.65E-04	625	6.55E-04	692	1.38E-04	759	1.61E-05
425	4.85E-05	492	3.05E-04	559	6.68E-04	626	6.44E-04	693	1.33E-04	760	1.57E-05
426	5.56E-05	493	3.13E-04	560	6.71E-04	627	6.34E-04	694	1.29E-04	761	1.53E-05
427	6.18E-05	494	3.21E-04	561	6.75E-04	628	6.27E-04	695	1.25E-04	762	1.47E-05
428	7.12E-05	495	3.30E-04	562	6.79E-04	629	6.16E-04	696	1.21E-04	763	1.43E-05
429	7.92E-05	496	3.41E-04	563	6.81E-04	630	6.08E-04	697	1.18E-04	764	1.40E-05
430	9.03E-05	497	3.51E-04	564	6.88E-04	631	5.99E-04	698	1.14E-04	765	1.35E-05
431	9.81E-05	498	3.64E-04	565	6.91E-04	632	5.89E-04	699	1.11E-04	766	1.31E-05
432	1.09E-04	499	3.75E-04	566	6.95E-04	633	5.83E-04	700	1.07E-04	767	1.25E-05
433	1.21E-04	500	3.86E-04	567	6.99E-04	634	5.74E-04	701	1.03E-04	768	1.24E-05
434	1.33E-04	501	3.96E-04	568	7.06E-04	635	5.63E-04	702	1.01E-04	769	1.18E-05
435	1.49E-04	502	4.08E-04	569	7.15E-04	636	5.54E-04	703	9.79E-05	770	1.16E-05
436	1.65E-04	503	4.18E-04	570	7.14E-04	637	5.43E-04	704	9.47E-05	771	1.11E-05
437	1.85E-04	504	4.29E-04	571	7.17E-04	638	5.33E-04	705	9.21E-05	772	1.05E-05
438	2.10E-04	505	4.39E-04	572	7.24E-04	639	5.24E-04	706	8.86E-05	773	1.06E-05
439	2.33E-04	506	4.48E-04	573	7.28E-04	640	5.13E-04	707	8.60E-05	774	1.03E-05
440	2.60E-04	507	4.56E-04	574	7.30E-04	641	5.02E-04	708	8.33E-05	775	9.60E-06
441	2.89E-04	508	4.66E-04	575	7.32E-04	642	4.92E-04	709	8.08E-05	776	9.50E-06
442	3.28E-04	509	4.74E-04	576	7.37E-04	643	4.84E-04	710	7.84E-05	777	9.40E-06
443	3.71E-04	510	4.82E-04	577	7.39E-04	644	4.76E-04	711	7.59E-05	778	9.10E-06
444	4.22E-04	511	4.88E-04	578	7.41E-04	645	4.67E-04	712	7.35E-05	779	9.20E-06
445	4.77E-04	512	4.93E-04	579	7.45E-04	646	4.58E-04	713	7.12E-05	780	9.20E-06
446	5.44E-04	513	5.02E-04	580	7.50E-04	647	4.48E-04	714	6.88E-05	N/A	N/A

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	STRP4 @10W4000K	Sample ID	241225005-S1
Operate time (Min.)	30	Stabilization time (Min.)	60
Temperature (°C)	24.8	Humidity (%RH)	41.3

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	0.044	10.4	0.849
NON-WORST CASE	120.0	60	0.081	9.6	0.982

Test Result

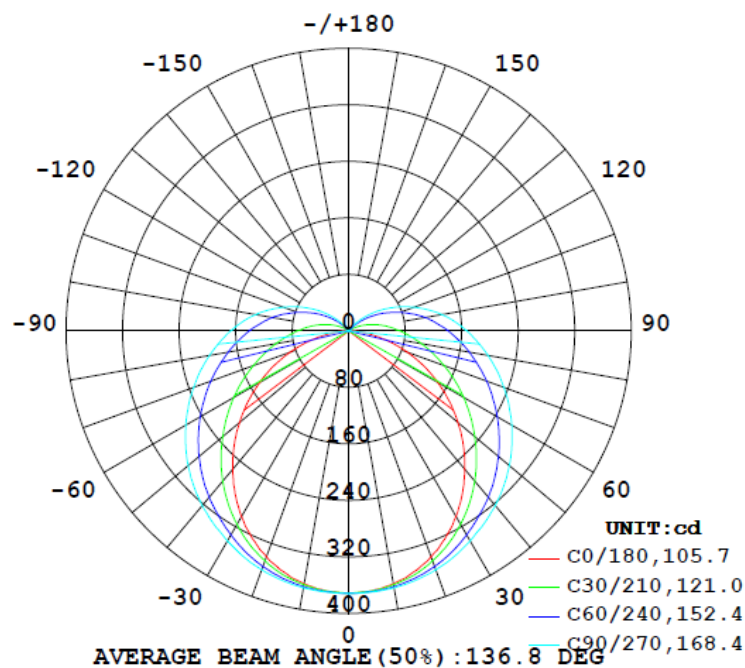
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
1607	402	160.8	160.8	106.1	168.4	154.5

Zonal Lumen Requirement (0°-60°)	UGR	
	Crosswise	Endwise
56.4%	19.9	28.1

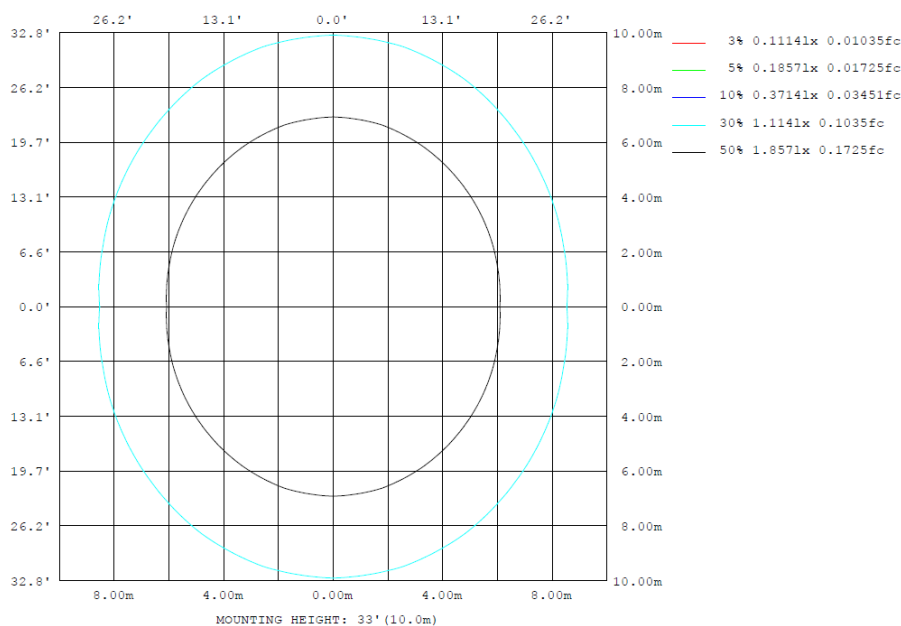
4.2 Goniophotometer Test

Lighting Distribution Curve

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



Isolux Plot



4.2 Goniophotometer Test

Zonal Lumen Summary

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	lum, lamp
10	363.8	365.9	369.4	365.9	363.8	365.9	369.4	365.9	0~ 10	35.20	35.20	2.19, 2.19
20	340.4	350.3	359.9	350.3	340.4	350.3	359.9	350.3	10~ 20	101.6	136.8	8.51, 8.51
30	303.5	324.6	343.4	324.6	303.5	324.6	343.4	324.6	20~ 30	156.3	293.1	18.2, 18.2
40	255.9	291.4	322.8	291.4	255.9	291.4	322.8	291.4	30~ 40	193.4	486.5	30.3, 30.3
50	201.8	254.8	296.6	254.8	201.8	254.8	296.6	254.8	40~ 50	210.7	697.2	43.4, 43.4
60	145.5	216.7	266.6	216.7	145.5	216.7	266.6	216.7	50~ 60	208.6	905.8	56.4, 56.4
70	88.15	178.0	233.7	178.0	88.15	178.0	233.7	178.0	60~ 70	189.9	1096	68.2, 68.2
80	34.52	142.1	200.0	142.1	34.52	142.1	200.0	142.1	70~ 80	159.8	1256	78.1, 78.1
90	2.653	110.7	167.1	110.7	2.653	110.7	167.1	110.7	80~ 90	125.6	1381	85.9, 85.9
100	1.769	81.57	133.9	81.57	1.769	81.57	133.9	81.57	90~100	95.06	1476	91.8, 91.8
110	1.822	53.22	98.42	53.22	1.822	53.22	98.42	53.22	100~110	65.52	1542	95.9, 95.9
120	1.973	28.25	64.02	28.25	1.973	28.25	64.02	28.25	110~120	39.21	1581	98.4, 98.4
130	2.245	6.521	33.40	6.521	2.245	6.521	33.40	6.521	120~130	18.66	1600	99.5, 99.5
140	2.192	1.190	7.120	1.190	2.192	1.190	7.120	1.190	130~140	5.619	1605	99.9, 99.9
150	2.138	1.023	0.8386	1.023	2.138	1.023	0.8386	1.023	140~150	0.9324	1606	99.9, 99.9
160	2.135	0.9763	0.8052	0.9763	2.135	0.9763	0.8052	0.9763	150~160	0.5686	1607	100, 100
170	2.488	1.085	0.7718	1.085	2.488	1.085	0.7718	1.085	160~170	0.3495	1607	100, 100
180	2.641	1.098	0.7484	1.098	2.641	1.098	0.7484	1.098	170~180	0.1219	1607	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

	Zonal (lm)		Total (lm)	Percent
0-10	35.20	0-10	35.20	2.19%
10-20	101.64	0-20	136.84	8.51%
20-30	156.28	0-30	293.12	18.24%
30-40	193.36	0-40	486.48	30.27%
40-50	210.73	0-50	697.21	43.38%
50-60	208.58	0-60	905.79	56.36%
60-70	189.88	0-70	1095.67	68.18%
70-80	159.84	0-80	1255.51	78.13%
80-90	125.62	0-90	1381.13	85.94%
90-100	95.06	0-100	1476.19	91.86%
100-110	65.52	0-110	1541.71	95.93%
110-120	39.21	0-120	1580.92	98.37%
120-130	18.66	0-130	1599.58	99.54%
130-140	5.62	0-140	1605.20	99.88%
140-150	0.93	0-150	1606.13	99.94%
150-160	0.57	0-160	1606.70	99.98%
160-170	0.35	0-170	1607.05	100.00%
170-180	0.12	0-180	1607.17	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				
		14.1	15.6	14.7	16.2	18.4	19.8	18.9	20.4	21.0
	3H	15.5	16.8	16.1	17.4	21.4	22.7	22.0	23.3	24.0
	4H	15.9	17.2	16.5	17.8	22.9	24.2	23.5	24.8	25.5
	6H	16.2	17.4	16.8	18.0	24.6	25.8	25.2	26.4	27.1
	8H	16.2	17.4	16.8	18.0	25.5	26.6	26.1	27.2	27.9
	12H	16.2	17.3	16.9	18.0	26.5	27.6	27.1	28.2	28.9
4H	2H	15.5	16.8	16.1	17.4	18.7	19.9	19.3	20.5	21.2
	3H	17.1	18.2	17.8	18.9	21.9	23.0	22.5	23.6	24.3
	4H	17.8	18.8	18.4	19.4	23.6	24.6	24.2	25.3	26.0
	6H	18.1	19.0	18.8	19.7	25.5	26.4	26.1	27.0	27.8
	8H	18.2	19.1	18.9	19.7	26.4	27.3	27.1	28.0	28.7
	12H	18.3	19.0	18.9	19.7	27.6	28.3	28.3	29.0	29.8
8H	4H	18.9	19.8	19.6	20.4	23.8	24.6	24.4	25.3	26.0
	6H	19.6	20.3	20.3	21.0	25.8	26.5	26.5	27.2	28.0
	8H	19.8	20.5	20.5	21.2	26.9	27.6	27.6	28.3	29.0
	12H	20.0	20.5	20.6	21.2	28.2	28.8	28.9	29.5	30.3
12H	4H	19.3	20.1	20.0	20.8	23.8	24.5	24.4	25.2	26.0
	6H	20.1	20.8	20.8	21.5	25.8	26.5	26.5	27.2	28.0
	8H	20.5	21.1	21.2	21.8	27.0	27.6	27.7	28.3	29.1

Maximum UGR = 30.3

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				
		15.8	17.3	16.4	17.9	20.1	21.5	20.6	22.1	22.7
	3H	17.2	18.5	17.8	19.1	23.1	24.4	23.7	25.0	25.7
	4H	17.6	18.9	18.2	19.5	24.6	25.9	25.2	26.5	27.2
	6H	17.9	19.1	18.5	19.7	26.3	27.5	26.9	28.1	28.8
	8H	17.9	19.1	18.5	19.7	27.2	28.3	27.8	28.9	29.6
	12H	17.9	19.0	18.6	19.7	28.2	29.3	28.8	29.9	30.6
4H	2H	17.2	18.5	17.8	19.1	20.4	21.6	21.0	22.2	22.9
	3H	18.8	19.9	19.5	20.6	23.6	24.7	24.2	25.3	26.0
	4H	19.5	20.5	20.1	21.1	25.3	26.3	25.9	27.0	27.7
	6H	19.8	20.7	20.5	21.4	27.2	28.1	27.8	28.7	29.5
	8H	19.9	20.8	20.6	21.4	28.1	29.0	28.8	29.7	30.4
	12H	20.0	20.7	20.6	21.4	29.3	30.0	30.0	30.7	31.5
8H	4H	20.6	21.5	21.3	22.1	25.5	26.3	26.1	27.0	27.7
	6H	21.3	22.0	22.0	22.7	27.5	28.2	28.2	28.9	29.7
	8H	21.5	22.2	22.2	22.9	28.6	29.3	29.3	30.0	30.7
	12H	21.7	22.2	22.3	22.9	29.9	30.5	30.6	31.2	32.0
12H	4H	21.0	21.8	21.7	22.5	25.5	26.2	26.1	26.9	27.7
	6H	21.8	22.5	22.5	23.2	27.5	28.2	28.2	28.9	29.7
	8H	22.2	22.8	22.9	23.5	28.7	29.3	29.4	30.0	30.8

Maximum UGR = 32.0

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	371	371	371	371	372	371	372	371	372	371	371	371	371	371	371	371	372	371	372
5	369	369	369	370	370	371	371	371	370	370	369	369	369	369	369	370	370	371	371
10	364	364	365	366	368	369	369	369	368	366	365	364	364	364	365	366	368	369	369
15	354	356	358	360	362	365	366	365	362	360	358	356	354	356	358	360	362	365	366
20	340	343	346	350	355	359	360	359	355	350	346	343	340	343	346	350	355	359	360
25	324	327	333	339	345	351	353	351	345	339	333	327	324	327	333	339	345	351	353
30	304	309	316	325	334	341	343	341	334	325	316	309	304	309	316	325	334	341	343
35	281	287	298	309	320	330	333	330	320	309	298	287	281	287	298	309	320	330	333
40	256	264	278	291	308	319	323	319	308	291	278	264	256	264	278	291	308	319	323
45	230	239	256	274	293	306	310	306	293	274	256	239	230	239	256	274	293	306	310
50	202	214	233	255	277	291	297	291	277	255	233	214	202	214	233	255	277	291	297
55	174	188	210	236	260	276	282	276	260	236	210	188	174	188	210	236	260	276	282
60	145	161	188	217	243	260	267	260	243	217	188	161	145	161	188	217	243	260	267
65	117	134	165	197	225	244	250	244	225	197	165	134	117	134	165	197	225	244	250
70	88.1	108	144	178	208	227	234	227	208	178	144	108	88.1	108	144	178	208	227	234
75	60.5	84.3	124	160	190	210	217	210	190	160	124	84.3	60.5	84.3	124	160	190	210	217
80	34.5	62.4	105	142	173	193	200	193	173	142	105	62.4	34.5	62.4	105	142	173	193	200
85	13.7	44.0	87.4	126	157	176	183	176	157	126	87.4	44.0	13.7	44.0	87.4	126	157	176	183
90	2.65	30.5	72.7	111	141	160	167	160	141	111	72.7	30.5	2.65	30.5	72.7	111	141	160	167
95	1.80	20.9	59.8	96.2	125	144	151	144	125	96.2	59.8	20.9	1.80	20.9	59.8	96.2	125	144	151
100	1.77	12.8	47.1	81.6	110	126	134	126	110	81.6	47.1	12.8	1.77	12.8	47.1	81.6	110	126	134
105	1.78	5.98	35.5	67.1	93.4	109	116	109	93.4	67.1	35.5	5.98	1.78	5.98	35.5	67.1	93.4	109	116
110	1.82	1.93	25.0	53.2	77.2	92.3	98.4	92.3	77.2	53.2	25.0	1.93	1.82	1.93	25.0	53.2	77.2	92.3	98.4
115	1.90	1.83	15.1	40.2	61.5	75.1	80.9	75.1	61.5	40.2	15.1	1.83	1.90	1.83	15.1	40.2	61.5	75.1	80.9
120	1.97	1.83	6.46	28.3	46.8	59.2	64.0	59.2	46.8	28.3	6.46	1.83	1.97	1.83	6.46	28.3	46.8	59.2	64.0
125	2.27	1.83	1.66	16.9	33.0	43.6	48.1	43.6	33.0	16.9	1.66	1.83	2.27	1.83	1.66	16.9	33.0	43.6	48.1
130	2.25	1.83	1.61	6.52	20.2	29.8	33.4	29.8	20.2	6.52	1.61	1.83	2.25	1.83	1.61	6.52	20.2	29.8	33.4
135	2.22	1.83	1.50	1.67	8.63	16.6	19.8	16.6	8.63	1.67	1.50	1.83	2.22	1.83	1.50	1.67	8.63	16.6	19.8
140	2.19	1.83	1.43	1.19	1.21	4.77	7.12	4.77	1.21	1.19	1.43	1.83	2.19	1.83	1.43	1.19	1.21	4.77	7.12
145	2.16	1.83	1.33	1.10	1.00	1.11	0.93	1.11	1.00	1.10	1.33	1.83	2.16	1.83	1.33	1.10	1.00	1.11	0.93
150	2.14	1.83	1.23	1.02	0.93	1.08	0.84	1.08	0.93	1.02	1.23	1.83	2.14	1.83	1.23	1.02	0.93	1.08	0.84
155	2.11	1.83	1.16	0.95	0.85	1.05	0.82	1.05	0.85	0.95	1.16	1.83	2.11	1.83	1.16	0.95	0.85	1.05	0.82
160	2.13	1.83	1.14	0.98	0.86	1.02	0.81	1.02	0.86	0.98	1.14	1.83	2.13	1.83	1.14	0.98	0.86	1.02	0.81
165	2.17	1.83	1.16	1.03	0.88	1.00	0.79	1.00	0.88	1.03	1.16	1.83	2.17	1.83	1.16	1.03	0.88	1.00	0.79
170	2.49	1.83	1.19	1.08	0.90	0.97	0.77	0.97	0.90	1.08	1.19	1.83	2.49	1.83	1.19	1.08	0.90	0.97	0.77
175	2.64	1.83	1.19	1.09	0.92	0.94	0.76	0.94	0.92	1.09	1.19	1.83	2.64	1.83	1.19	1.09	0.92	0.94	0.76
180	2.64	1.83	1.19	1.10	1.01	1.30	0.75	1.30	1.01	1.10	1.19	1.83	2.64	1.83	1.19	1.10	1.01	1.30	0.75

Table--2

UNIT: cd

C (DEG) γ (DEG)	285	300	315	330	345														
0	371	372	371	371	371														
5	371	370	370	369	369														
10	369	368	366	365	364														
15	365	362	360	358	356														
20	359	355	350	346	343														
25	351	345	339	333	327														
30	341	334	325	316	309														
35	330	320	309	298	287														
40	319	308	291	278	264														
45	306	293	274	256	239														
50	291	277	255	233	214														
55	276	260	236	210	188														
60	260	243	217	188	161														
65	244	225	197	165	134														
70	227	208	178	144	108														
75	210	190	160	124	84.3														
80	193	173	142	105	62.4														
85	176	157	126	87.4	44.0														
90	160	141	111	72.7	30.5														
95	144	125	96.2	59.8	20.9														
100	126	110	81.6	47.1	12.8														
105	109	93.4	67.1	35.5	5.98														
110	92.3	77.2	53.2	25.0	1.93														
115	75.1	61.5	40.2	15.1	1.83														
120	59.2	46.8	28.3	6.46	1.83														
125	43.6	33.0	16.9	1.66	1.83														
130	29.8	20.2	6.52	1.61	1.83														
135	16.6	8.63	1.67	1.50	1.83														
140	4.77	1.21	1.19	1.43	1.83														
145	1.11	1.00	1.10	1.33	1.83														
150	1.08	0.93	1.02	1.23	1.83														
155	1.05	0.85	0.95	1.16	1.83														
160	1.02	0.86	0.98	1.14	1.83														
165	1.00	0.88	1.03	1.16	1.83														
170	0.97	0.90	1.08	1.19	1.83														
175	0.94	0.92	1.09	1.19	1.83														
180	1.30	1.01	1.10	1.19	1.83														

4.0 LM-79 Measurement and Test Results

4.3 THD and PF Test

Model No.	STRP4 @10W4000K	Sample ID	241225005-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 $25 \pm 1^\circ\text{C}$. 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	0.081	9.6	0.982	8.92
277.0	60	0.044	10.4	0.849	22.25

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*****