

Photometric Test Report

Relevant Standards

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

Prepared For

RAB Lighting Inc.

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Issue Date: 2025-01-06

Revised Date: N/A

1.0 Test Summary

DLC Technical Requirements V5.1

Direct Linear Ambient Luminaires					
Requirement Category		Test Method	Requirements		Test Value
Luminaire Output (lm) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	375 lm/ft		754
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	158.8
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		19.0
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	6.32
				277V	18.69
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.956
				277V	0.845
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	5029±283	4922
			4 steps	5029±220	
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		15
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		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%		63.3%
Discomfort Glare (UGR) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	26.9
			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		0.081
(Goniophotometer – Section 4.2)			Non-Worst Case		0.162
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		19.0
(Goniophotometer – Section 4.2)			Non-Worst Case		18.6

2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-01-05	STRP4H @20W5000K	-	241225006-S1
2	Goniophotometer Test	2025-01-05	STRP4H @20W5000K	-	241225006-S1
3	THD and PF Test	2025-01-05	STRP4H @20W5000K	-	241225006-S1

Remark (If any):

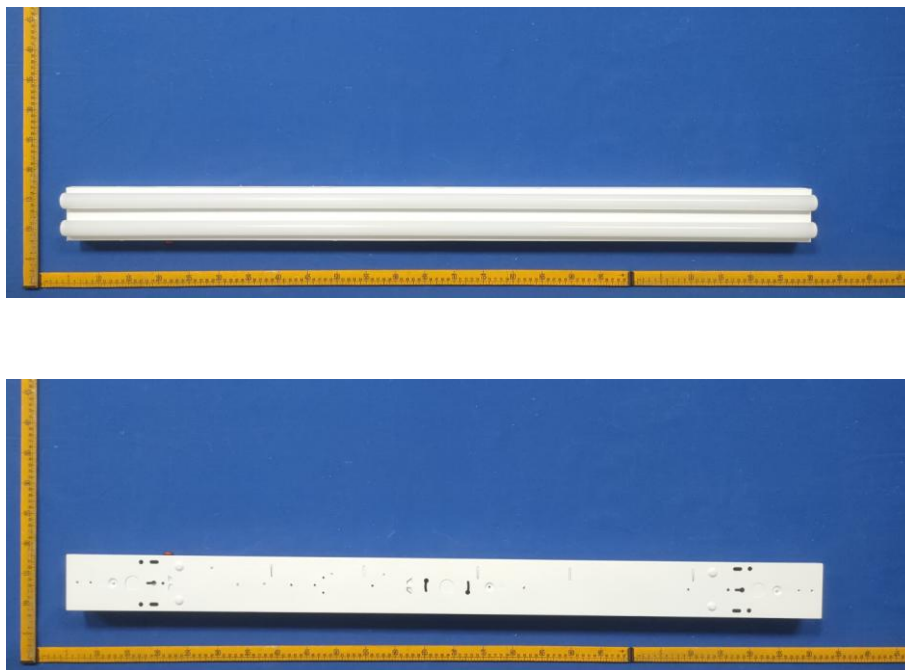
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3.0 Product Description

Luminaire Description: Model No. STRP4H @20W5000K, 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 @20W5000K	Sample ID	241225006-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

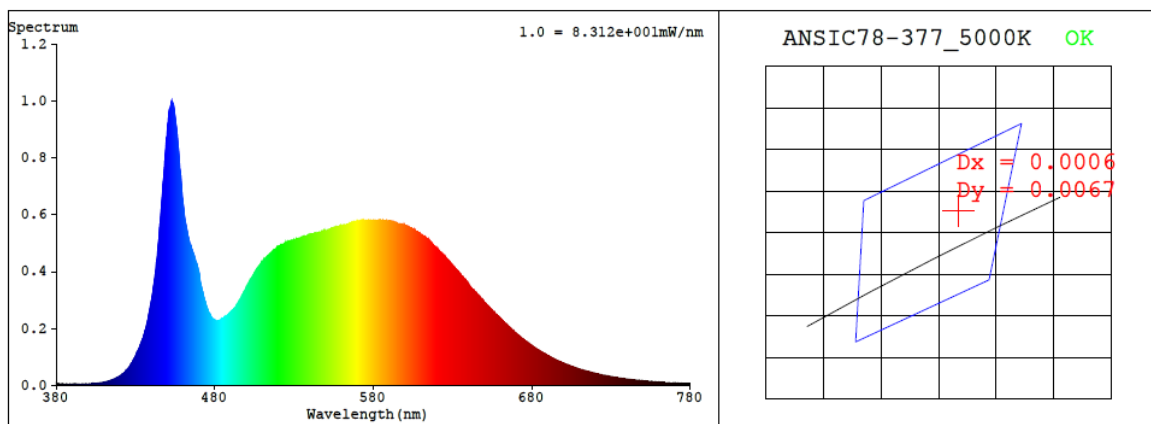
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at $25\pm1^{\circ}\text{C}$.</p> <p>The sample measurements 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	0.162	18.6	0.956
277.0	60	0.081	19.0	0.845

CCT (K)	CRI	R9	Duv	Rf	Rg	IES Rcs,h1
4922	83.9	15	0.0031	84	95	-12%

4.1 Integrating Sphere Test



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.3480$ $y = 0.3601$ / $u' = 0.2101$ $v' = 0.4892$ ($duv=3.09e-03$)

CCT= 4922K Prcp WL: $L_d=570.9nm$ Purity=12.5%

Peak WL: $L_p=453nm$ FWHM: $=20.0nm$ Ratio: $R=15.9\%$ $G=79.6\%$ $B=4.5\%$

Render Index: $R_a = 83.9$ $AvgR = 76.9$ $TM30:R_f=84$ $R_g=95$

EEL: 0.08540 A++ Highest

R1 =82	R2 =89	R3 =94	R4 =82	R5 =82	R6 =84	R7 =89
R8 =70	R9 =15	R10=74	R11=81	R12=55	R13=84	R14=97
						R15=77

4.1 Integrating Sphere Test

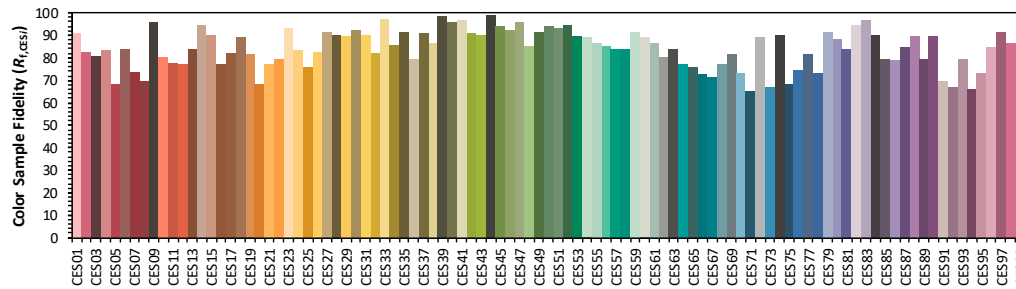
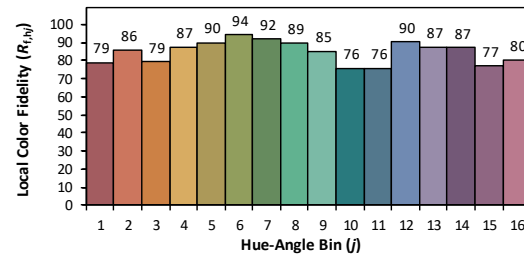
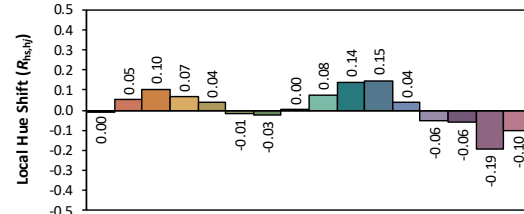
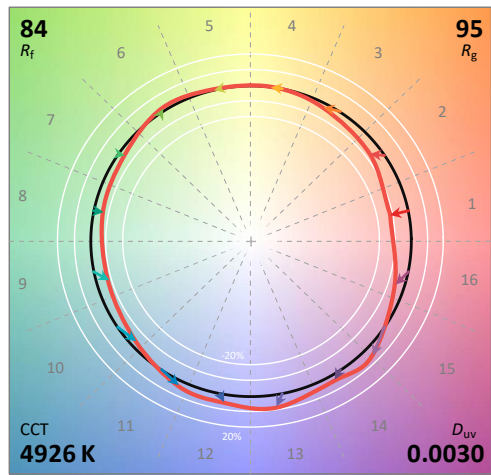
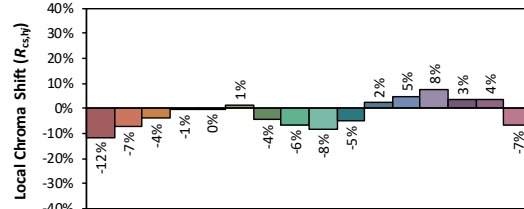
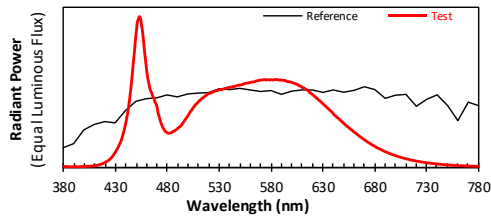
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/1/6

Model: STRP4H @20W5000K



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

x 0.3479
 y 0.3600
 u' 0.2101
 v' 0.4891

CIE 13.3-1995
(CRI)
 R_a 84
 R_g 15

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	6.80E-06	447	6.88E-04	514	4.59E-04	581	5.80E-04	648	3.06E-04	715	4.91E-05
381	5.70E-06	448	7.53E-04	515	4.63E-04	582	5.78E-04	649	3.00E-04	716	4.78E-05
382	4.70E-06	449	8.35E-04	516	4.69E-04	583	5.80E-04	650	2.92E-04	717	4.62E-05
383	4.70E-06	450	9.00E-04	517	4.75E-04	584	5.82E-04	651	2.87E-04	718	4.48E-05
384	5.30E-06	451	9.62E-04	518	4.78E-04	585	5.80E-04	652	2.81E-04	719	4.35E-05
385	3.70E-06	452	9.81E-04	519	4.85E-04	586	5.80E-04	653	2.75E-04	720	4.19E-05
386	3.00E-06	453	9.97E-04	520	4.88E-04	587	5.79E-04	654	2.69E-04	721	4.06E-05
387	3.90E-06	454	9.85E-04	521	4.90E-04	588	5.78E-04	655	2.64E-04	722	3.94E-05
388	3.70E-06	455	9.42E-04	522	4.94E-04	589	5.77E-04	656	2.58E-04	723	3.82E-05
389	3.60E-06	456	8.97E-04	523	4.94E-04	590	5.79E-04	657	2.51E-04	724	3.72E-05
390	3.70E-06	457	8.33E-04	524	4.99E-04	591	5.77E-04	658	2.48E-04	725	3.59E-05
391	4.10E-06	458	7.60E-04	525	5.02E-04	592	5.76E-04	659	2.41E-04	726	3.45E-05
392	4.40E-06	459	7.02E-04	526	5.05E-04	593	5.75E-04	660	2.36E-04	727	3.37E-05
393	3.80E-06	460	6.40E-04	527	5.07E-04	594	5.73E-04	661	2.31E-04	728	3.29E-05
394	4.20E-06	461	5.90E-04	528	5.07E-04	595	5.70E-04	662	2.25E-04	729	3.16E-05
395	3.90E-06	462	5.59E-04	529	5.10E-04	596	5.67E-04	663	2.19E-04	730	3.05E-05
396	4.30E-06	463	5.24E-04	530	5.13E-04	597	5.67E-04	664	2.15E-04	731	2.96E-05
397	4.40E-06	464	5.03E-04	531	5.13E-04	598	5.65E-04	665	2.08E-04	732	2.85E-05
398	4.40E-06	465	4.89E-04	532	5.14E-04	599	5.64E-04	666	2.03E-04	733	2.80E-05
399	5.10E-06	466	4.67E-04	533	5.16E-04	600	5.61E-04	667	1.99E-04	734	2.72E-05
400	5.30E-06	467	4.57E-04	534	5.18E-04	601	5.59E-04	668	1.93E-04	735	2.61E-05
401	5.40E-06	468	4.33E-04	535	5.20E-04	602	5.58E-04	669	1.88E-04	736	2.52E-05
402	6.40E-06	469	4.19E-04	536	5.22E-04	603	5.53E-04	670	1.84E-04	737	2.45E-05
403	7.10E-06	470	3.98E-04	537	5.23E-04	604	5.53E-04	671	1.78E-04	738	2.39E-05
404	6.70E-06	471	3.60E-04	538	5.26E-04	605	5.49E-04	672	1.74E-04	739	2.30E-05
405	7.20E-06	472	3.36E-04	539	5.29E-04	606	5.48E-04	673	1.69E-04	740	2.22E-05
406	7.70E-06	473	3.11E-04	540	5.29E-04	607	5.41E-04	674	1.65E-04	741	2.15E-05
407	8.20E-06	474	2.91E-04	541	5.31E-04	608	5.39E-04	675	1.61E-04	742	2.09E-05
408	9.50E-06	475	2.73E-04	542	5.30E-04	609	5.35E-04	676	1.56E-04	743	2.01E-05
409	1.00E-05	476	2.58E-04	543	5.35E-04	610	5.30E-04	677	1.52E-04	744	1.95E-05
410	1.11E-05	477	2.48E-04	544	5.34E-04	611	5.27E-04	678	1.47E-04	745	1.90E-05
411	1.18E-05	478	2.38E-04	545	5.36E-04	612	5.24E-04	679	1.44E-04	746	1.83E-05
412	1.35E-05	479	2.33E-04	546	5.39E-04	613	5.19E-04	680	1.40E-04	747	1.78E-05
413	1.51E-05	480	2.28E-04	547	5.40E-04	614	5.14E-04	681	1.36E-04	748	1.74E-05
414	1.65E-05	481	2.26E-04	548	5.42E-04	615	5.13E-04	682	1.32E-04	749	1.68E-05
415	1.88E-05	482	2.26E-04	549	5.45E-04	616	5.05E-04	683	1.28E-04	750	1.63E-05
416	2.11E-05	483	2.27E-04	550	5.44E-04	617	4.99E-04	684	1.25E-04	751	1.56E-05
417	2.33E-05	484	2.30E-04	551	5.45E-04	618	4.92E-04	685	1.21E-04	752	1.53E-05
418	2.66E-05	485	2.34E-04	552	5.47E-04	619	4.88E-04	686	1.18E-04	753	1.49E-05
419	2.93E-05	486	2.40E-04	553	5.50E-04	620	4.82E-04	687	1.15E-04	754	1.42E-05
420	3.28E-05	487	2.41E-04	554	5.53E-04	621	4.77E-04	688	1.12E-04	755	1.38E-05
421	3.68E-05	488	2.47E-04	555	5.55E-04	622	4.70E-04	689	1.08E-04	756	1.36E-05
422	4.07E-05	489	2.52E-04	556	5.57E-04	623	4.66E-04	690	1.05E-04	757	1.30E-05
423	4.50E-05	490	2.58E-04	557	5.57E-04	624	4.58E-04	691	1.02E-04	758	1.27E-05
424	5.15E-05	491	2.63E-04	558	5.58E-04	625	4.54E-04	692	9.93E-05	759	1.21E-05
425	5.73E-05	492	2.69E-04	559	5.61E-04	626	4.46E-04	693	9.61E-05	760	1.19E-05
426	6.40E-05	493	2.75E-04	560	5.61E-04	627	4.41E-04	694	9.33E-05	761	1.14E-05
427	7.35E-05	494	2.84E-04	561	5.63E-04	628	4.35E-04	695	9.02E-05	762	1.12E-05
428	8.17E-05	495	2.93E-04	562	5.65E-04	629	4.29E-04	696	8.76E-05	763	1.07E-05
429	9.29E-05	496	3.03E-04	563	5.65E-04	630	4.23E-04	697	8.54E-05	764	1.04E-05
430	1.03E-04	497	3.15E-04	564	5.66E-04	631	4.15E-04	698	8.33E-05	765	1.02E-05
431	1.16E-04	498	3.23E-04	565	5.69E-04	632	4.10E-04	699	8.01E-05	766	9.90E-06
432	1.27E-04	499	3.33E-04	566	5.71E-04	633	4.03E-04	700	7.84E-05	767	9.50E-06
433	1.42E-04	500	3.42E-04	567	5.73E-04	634	3.97E-04	701	7.57E-05	768	9.30E-06
434	1.57E-04	501	3.56E-04	568	5.74E-04	635	3.91E-04	702	7.34E-05	769	9.10E-06
435	1.71E-04	502	3.66E-04	569	5.76E-04	636	3.84E-04	703	7.12E-05	770	8.60E-06
436	1.91E-04	503	3.75E-04	570	5.77E-04	637	3.77E-04	704	6.88E-05	771	8.50E-06
437	2.15E-04	504	3.84E-04	571	5.77E-04	638	3.72E-04	705	6.67E-05	772	8.30E-06
438	2.41E-04	505	3.95E-04	572	5.79E-04	639	3.65E-04	706	6.49E-05	773	7.90E-06
439	2.69E-04	506	4.04E-04	573	5.80E-04	640	3.58E-04	707	6.28E-05	774	7.70E-06
440	3.01E-04	507	4.12E-04	574	5.81E-04	641	3.48E-04	708	6.11E-05	775	7.40E-06
441	3.37E-04	508	4.20E-04	575	5.79E-04	642	3.42E-04	709	5.90E-05	776	7.30E-06
442	3.75E-04	509	4.26E-04	576	5.78E-04	643	3.36E-04	710	5.72E-05	777	7.00E-06
443	4.25E-04	510	4.35E-04	577	5.80E-04	644	3.30E-04	711	5.56E-05	778	6.80E-06
444	4.80E-04	511	4.42E-04	578	5.79E-04	645	3.25E-04	712	5.43E-05	779	6.80E-06
445	5.42E-04	512	4.47E-04	579	5.78E-04	646	3.17E-04	713	5.22E-05	780	6.80E-06
446	6.10E-04	513	4.53E-04	580	5.79E-04	647	3.13E-04	714	5.09E-05	N/A	N/A

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	STRP4H @20W5000K	Sample ID	241225006-S1
Operate time (Min.)	30	Stabilization time (Min.)	60
Temperature (°C)	25.0	Humidity (%RH)	42.1

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±1°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	0.081	19.0	0.845
NON-WORST CASE	120.0	60	0.162	18.6	0.956

Test Result

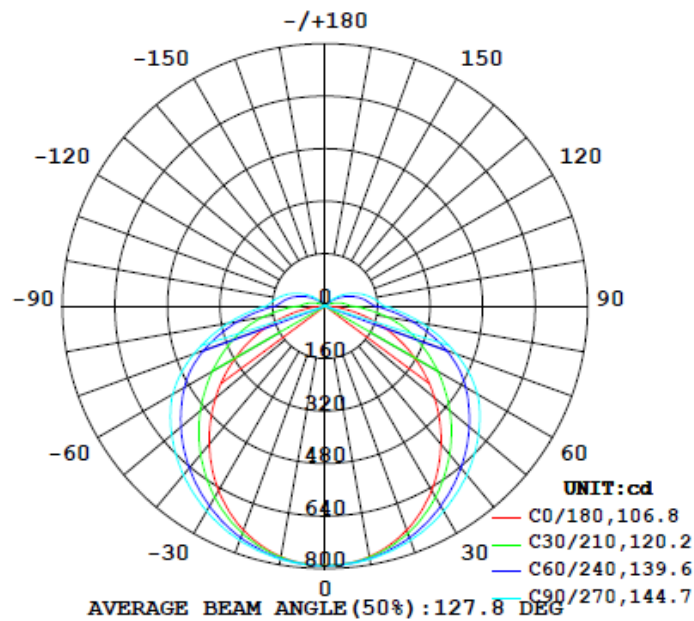
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
3017	754	160.4	160.4	106.7	144.6	158.8

Zonal Lumen Requirement (0°-60°)	UGR	
	Crosswise	Endwise
63.3%	21.4	26.9

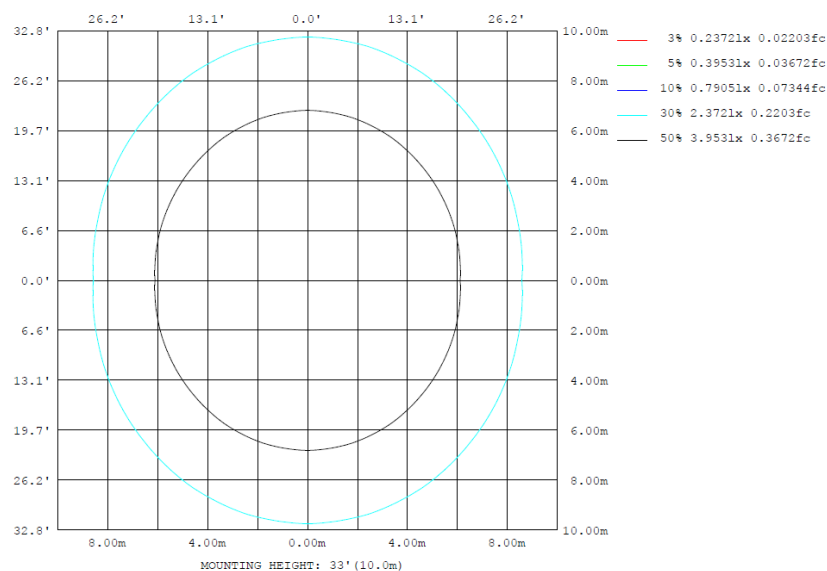
4.2 Goniophotometer Test

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	zone	total	lum, lamp
10	775.7	777.6	782.7	777.6	775.7	777.6	782.7	777.6	0- 10	74.93	74.93	2.48, 2.48
20	726.9	742.0	759.4	742.0	726.9	742.0	759.4	742.0	10- 20	215.7	290.7	9.64, 9.64
30	649.0	686.3	721.2	686.3	649.0	686.3	721.2	686.3	20- 30	331.1	621.7	20.6, 20.6
40	549.3	614.9	671.6	614.9	549.3	614.9	671.6	614.9	30- 40	408.7	1030	34.2, 34.2
50	435.4	534.4	609.7	534.4	435.4	534.4	609.7	534.4	40- 50	443.3	1474	48.9, 48.9
60	315.4	447.4	535.6	447.4	315.4	447.4	535.6	447.4	50- 60	434.8	1909	63.3, 63.3
70	192.4	353.6	425.1	353.6	192.4	353.6	425.1	353.6	60- 70	384.3	2293	76, 76
80	76.60	234.9	299.2	234.9	76.60	234.9	299.2	234.9	70- 80	291.6	2584	85.7, 85.7
90	4.576	122.1	181.0	122.1	4.576	122.1	181.0	122.1	80- 90	176.3	2761	91.5, 91.5
100	2.886	90.55	146.1	90.55	2.886	90.55	146.1	90.55	90-100	103.3	2864	94.9, 94.9
110	3.701	61.22	111.1	61.22	3.701	61.22	111.1	61.22	100-110	73.79	2938	97.4, 97.4
120	3.881	33.33	73.71	33.33	3.881	33.33	73.71	33.33	110-120	45.63	2984	98.9, 98.9
130	3.881	8.732	39.13	8.732	3.881	8.732	39.13	8.732	120-130	22.46	3006	99.6, 99.6
140	3.881	2.091	9.184	2.091	3.881	2.091	9.184	2.091	130-140	7.332	3013	99.9, 99.9
150	3.881	1.728	1.303	1.728	3.881	1.728	1.303	1.728	140-150	1.642	3015	99.9, 99.9
160	3.430	1.637	1.303	1.637	3.430	1.637	1.303	1.637	150-160	0.9575	3016	100, 100
170	4.147	1.637	1.303	1.637	4.147	1.637	1.303	1.637	160-170	0.5743	3016	100, 100
180	4.333	1.909	1.582	1.909	4.333	1.909	1.582	1.909	170-180	0.2268	3017	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

	Zonal (lm)		Total (lm)	Percent
0-10	74.93	0-10	74.93	2.48%
10-20	215.74	0-20	290.67	9.64%
20-30	331.05	0-30	621.72	20.61%
30-40	408.72	0-40	1030.44	34.16%
40-50	443.33	0-50	1473.77	48.86%
50-60	434.79	0-60	1908.56	63.27%
60-70	384.34	0-70	2292.90	76.01%
70-80	291.59	0-80	2584.49	85.68%
80-90	176.32	0-90	2760.81	91.52%
90-100	103.29	0-100	2864.10	94.95%
100-110	73.79	0-110	2937.89	97.39%
110-120	45.63	0-120	2983.52	98.91%
120-130	22.46	0-130	3005.98	99.65%
130-140	7.33	0-140	3013.31	99.89%
140-150	1.64	0-150	3014.95	99.95%
150-160	0.96	0-160	3015.91	99.98%
160-170	0.57	0-170	3016.48	100.00%
170-180	0.23	0-180	3016.71	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	13.1	14.7	13.6	15.2	15.7	16.2	17.8	16.7	18.2	18.8
	3H	14.7	16.1	15.2	16.6	17.2	18.9	20.3	19.4	20.8	21.4
	4H	15.2	16.5	15.8	17.1	17.6	20.1	21.4	20.7	22.0	22.5
	6H	15.6	16.8	16.1	17.3	17.9	21.4	22.6	21.9	23.1	23.7
	8H	15.6	16.8	16.2	17.4	18.0	22.0	23.2	22.5	23.7	24.3
	12H	15.7	16.8	16.2	17.3	18.0	22.6	23.8	23.2	24.3	24.9
4H	2H	14.4	15.7	14.9	16.2	16.8	16.7	18.0	17.2	18.5	19.1
	3H	16.3	17.4	16.8	18.0	18.6	19.6	20.7	20.2	21.3	21.9
	4H	17.0	18.0	17.5	18.6	19.2	21.0	22.0	21.6	22.6	23.2
	6H	17.4	18.4	18.0	18.9	19.6	22.4	23.3	23.0	23.9	24.6
	8H	17.6	18.4	18.2	19.0	19.7	23.1	24.0	23.7	24.6	25.3
	12H	17.6	18.4	18.2	19.0	19.7	23.9	24.7	24.5	25.3	26.0
8H	4H	17.9	18.8	18.5	19.4	20.0	21.3	22.1	21.8	22.7	23.4
	6H	18.6	19.4	19.3	20.0	20.7	22.9	23.6	23.5	24.2	24.9
	8H	18.9	19.5	19.5	20.2	20.9	23.7	24.3	24.3	25.0	25.7
	12H	19.0	19.6	19.7	20.3	21.0	24.6	25.2	25.3	25.9	26.6
12H	4H	18.1	18.9	18.7	19.5	20.2	21.3	22.0	21.9	22.7	23.3
	6H	19.0	19.7	19.6	20.3	21.0	22.9	23.6	23.5	24.2	24.9
	8H	19.3	19.9	20.0	20.6	21.3	23.8	24.4	24.4	25.0	25.8

Maximum UGR = 26.6

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		UGR Viewed Crosswise					UGR Viewed Endwise				
Y=2H	16.9	18.5	17.4	19.0	19.5	20.0	21.6	20.5	22.0	22.6	
3H	18.5	19.9	19.0	20.4	21.0	22.7	24.1	23.2	24.6	25.2	
4H	19.0	20.3	19.6	20.9	21.4	23.9	25.2	24.5	25.8	26.3	
6H	19.4	20.6	19.9	21.1	21.7	25.2	26.4	25.7	26.9	27.5	
8H	19.4	20.6	20.0	21.2	21.8	25.8	27.0	26.3	27.5	28.1	
12H	19.5	20.6	20.0	21.1	21.8	26.4	27.6	27.0	28.1	28.7	
4H	2H	18.2	19.5	18.7	20.0	20.6	20.5	21.8	21.0	22.3	22.9
	3H	20.1	21.2	20.6	21.8	22.4	23.4	24.5	24.0	25.1	25.7
	4H	20.8	21.8	21.3	22.4	23.0	24.8	25.8	25.4	26.4	27.0
	6H	21.2	22.2	21.8	22.7	23.4	26.2	27.1	26.8	27.7	28.4
	8H	21.4	22.2	22.0	22.8	23.5	26.9	27.8	27.5	28.4	29.1
	12H	21.4	22.2	22.0	22.8	23.5	27.7	28.5	28.3	29.1	29.8
8H	4H	21.7	22.6	22.3	23.2	23.8	25.1	25.9	25.6	26.5	27.2
	6H	22.4	23.2	23.1	23.8	24.5	26.7	27.4	27.3	28.0	28.7
	8H	22.7	23.3	23.3	24.0	24.7	27.5	28.1	28.1	28.8	29.5
	12H	22.8	23.4	23.5	24.1	24.8	28.4	29.0	29.1	29.7	30.4
12H	4H	21.9	22.7	22.5	23.3	24.0	25.1	25.8	25.7	26.5	27.1
	6H	22.8	23.5	23.4	24.1	24.8	26.7	27.4	27.3	28.0	28.7
	8H	23.1	23.7	23.8	24.4	25.1	27.6	28.2	28.2	28.8	29.6

Maximum UGR = 30.4

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	791	791	791	791	791	791	791	791	791	791	791	791	791	791	791	791	791	791	791
5	787	787	787	788	789	789	789	789	789	788	787	787	787	787	787	788	789	789	789
10	776	776	777	778	781	783	783	783	781	778	777	776	776	776	777	778	781	783	783
15	754	757	760	762	768	772	774	772	768	762	760	757	754	757	760	762	768	772	774
20	727	731	737	742	750	758	759	758	750	742	737	731	727	731	737	742	750	758	759
25	691	698	707	716	730	738	742	738	730	716	707	698	691	698	707	716	730	738	742
30	649	659	673	686	704	716	721	716	704	686	673	659	649	659	673	686	704	716	721
35	601	615	633	653	675	691	698	691	675	653	633	615	601	615	633	653	675	691	698
40	549	566	590	615	643	664	672	664	643	615	590	566	549	566	590	615	643	664	672
45	494	514	544	575	610	633	642	633	610	575	544	514	494	514	544	575	610	633	642
50	435	459	496	534	573	600	610	600	573	534	496	459	435	459	496	534	573	600	610
55	376	402	446	491	534	564	575	564	534	491	446	402	376	402	446	491	534	564	575
60	315	346	396	447	495	525	536	525	495	447	396	346	315	346	396	447	495	525	536
65	254	289	347	403	449	475	484	475	449	403	347	289	254	289	347	403	449	475	484
70	192	233	298	354	393	416	425	416	393	354	298	233	192	233	298	354	393	416	425
75	133	180	248	297	332	354	362	354	332	297	248	180	133	180	248	297	332	354	362
80	76.6	130	192	235	270	291	299	291	270	235	192	130	76.6	130	192	235	270	291	299
85	30.2	81.6	134	176	210	230	238	230	210	176	134	81.6	30.2	81.6	134	176	210	230	238
90	4.58	36.4	82.4	122	154	174	181	174	154	122	82.4	36.4	4.58	36.4	82.4	122	154	174	181
95	2.80	24.6	66.2	104	134	154	162	154	134	104	66.2	24.6	2.80	24.6	66.2	104	134	154	162
100	2.89	15.5	53.8	90.6	121	138	146	138	121	90.6	53.8	15.5	2.89	15.5	53.8	90.6	121	138	146
105	3.52	7.70	41.4	76.0	105	122	129	122	105	76.0	41.4	7.70	3.52	7.70	41.4	76.0	105	122	129
110	3.70	3.29	29.8	61.2	87.7	105	111	105	87.7	61.2	29.8	3.29	3.70	3.29	29.8	61.2	87.7	105	111
115	3.79	3.19	18.8	46.9	71.0	86.6	92.3	86.6	71.0	46.9	18.8	3.19	3.79	3.19	18.8	46.9	71.0	86.6	92.3
120	3.88	3.19	8.69	33.3	54.8	68.7	73.7	68.7	54.8	33.3	8.69	3.19	3.88	3.19	8.69	33.3	54.8	68.7	73.7
125	3.88	3.19	3.38	20.4	39.1	51.6	56.0	51.6	39.1	20.4	3.38	3.19	3.88	3.19	3.38	20.4	39.1	51.6	56.0
130	3.88	3.19	2.64	8.73	24.4	35.5	39.1	35.5	24.4	8.73	2.64	3.19	3.88	3.19	2.64	8.73	24.4	35.5	39.1
135	3.88	3.19	2.64	2.82	10.9	20.4	23.6	20.4	10.9	2.82	2.64	3.19	3.88	3.19	2.64	2.82	10.9	20.4	23.6
140	3.88	3.37	2.55	2.09	2.85	6.78	9.18	6.78	2.85	2.09	2.55	3.37	3.88	3.37	2.55	2.09	2.85	6.78	9.18
145	3.88	3.37	2.46	1.91	1.56	1.85	2.06	1.85	1.56	1.91	2.46	3.37	3.88	3.37	2.46	1.91	1.56	1.85	2.06
150	3.88	3.37	2.19	1.73	1.56	1.39	1.30	1.39	1.56	1.73	2.19	3.37	3.88	3.37	2.19	1.73	1.56	1.39	1.30
155	3.70	3.37	2.18	1.64	1.47	1.38	1.30	1.38	1.47	1.64	2.18	3.37	3.70	3.37	2.18	1.64	1.47	1.38	1.30
160	3.43	3.19	1.91	1.64	1.47	1.38	1.30	1.38	1.47	1.64	1.91	3.19	3.43	3.19	1.91	1.64	1.47	1.38	1.30
165	3.52	3.28	1.91	1.64	1.47	1.38	1.30	1.38	1.47	1.64	1.91	3.28	3.52	3.28	1.91	1.64	1.47	1.38	1.30
170	4.15	3.92	2.18	1.64	1.56	1.47	1.30	1.47	1.56	1.64	2.18	3.92	4.15	3.92	2.18	1.64	1.56	1.47	1.30
175	4.33	4.01	2.46	1.82	1.65	1.57	1.40	1.57	1.65	1.82	2.46	4.01	4.33	4.01	2.46	1.82	1.65	1.57	1.40
180	4.33	4.01	2.55	1.91	1.74	1.66	1.58	1.66	1.74	1.91	2.55	4.01	4.33	4.01	2.55	1.91	1.74	1.66	1.58

Table--2

UNIT: cd

C (DEG) y (DEG)	285	300	315	330	345														
0	791	791	791	791	791														
5	789	789	788	787	787														
10	783	781	778	777	776														
15	772	768	762	760	757														
20	758	750	742	737	731														
25	738	730	716	707	698														
30	716	704	686	673	659														
35	691	675	653	633	615														
40	664	643	615	590	566														
45	633	610	575	544	514														
50	600	573	534	496	459														
55	564	534	491	446	402														
60	525	495	447	396	346														
65	475	449	403	347	289														
70	416	393	354	298	233														
75	354	332	297	248	180														
80	291	270	235	192	130														
85	230	210	176	134	81.6														
90	174	154	122	82.4	36.4														
95	154	134	104	66.2	24.6														
100	138	121	90.6	53.8	15.5														
105	122	105	76.0	41.4	7.70														
110	105	87.7	61.2	29.8	3.29														
115	86.6	71.0	46.9	18.8	3.19														
120	68.7	54.8	33.3	8.69	3.19														
125	51.6	39.1	20.4	3.38	3.19														
130	35.5	24.4	8.73	2.64	3.19														
135	20.4	10.9	2.82	2.64	3.19														
140	6.78	2.85	2.09	2.55	3.37														
145	1.85	1.56	1.91	2.46	3.37														
150	1.39	1.56	1.73	2.19	3.37														
155	1.38	1.47	1.64	2.18	3.37														
160	1.38	1.47	1.64	1.91	3.19														
165	1.38	1.47	1.64	1.91	3.28														
170	1.47	1.56	1.64	2.18	3.92														
175	1.57	1.65	1.82	2.46	4.01														
180	1.66	1.74	1.91	2.55	4.01														

4.0 LM-79 Measurement and Test Results

4.3 THD and PF Test

Model No.	STRP4H @20W5000K	Sample ID	241225006-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	0.162	18.6	0.956	6.32
277.0	60	0.081	19.0	0.845	18.69

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*****