

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		752
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	160.8
			115	130	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		18.7
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	6.35
				277V	18.94
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.985
				277V	0.842
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	3985±275	4087
			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%		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		0.080
(Goniophotometer – Section 4.2)			Non-Worst Case		0.155
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		18.7
(Goniophotometer – Section 4.2)			Non-Worst Case		18.3

2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-01-05	STRP4H @20W4000K	-	241225006-S1
2	Goniophotometer Test	2025-01-05	STRP4H @20W4000K	-	241225006-S1
3	THD and PF Test	2025-01-05	STRP4H @20W4000K	-	241225006-S1

Remark (If any):

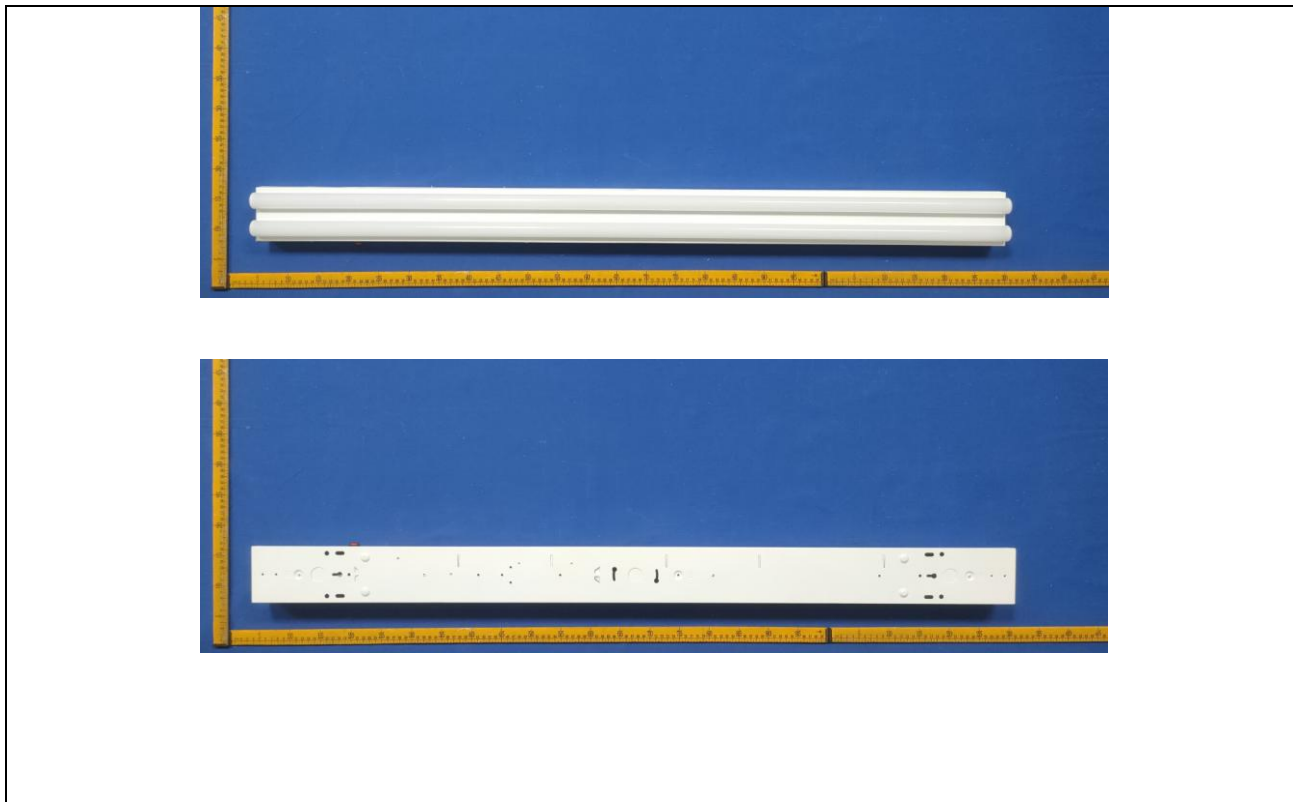
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2. This report shall not be reproduced, no limited part or full, without approval of Dongguan New Testing Centre Co., Ltd.
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3.0 Product Description

Luminaire Description: Model No. STRP4H @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.	STRP4H @20W4000K	Sample ID	241225006-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

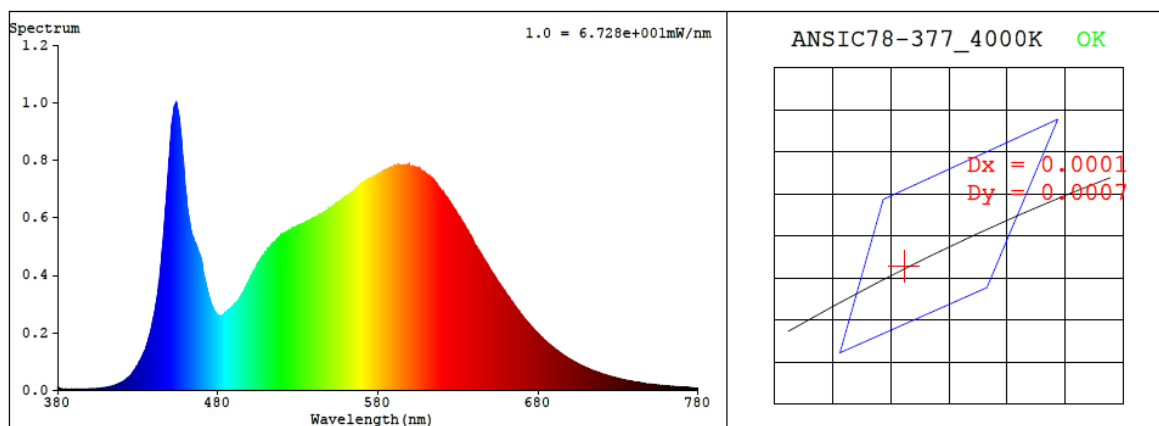
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made 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	0.155	18.3	0.985
277.0	60	0.080	18.7	0.842

CCT (K)	CRI	R9	Duv	Rf	Rg	IES Rcs,h1
4087	85.2	19	0.0003	85	95	-11%

4.1 Integrating Sphere Test



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.3768$ $y = 0.3751$ / $u' = 0.2234$ $v' = 0.5003$ ($duv=2.92e-04$)

CCT= 4087K Prcp WL: $L_d=578.6nm$ Purity=25.7%

Peak WL: $L_p=454nm$ FWHM: $\approx 21.2nm$ Ratio: R=18.4% G=77.6% B=4.0%

Render Index: $R_a = 85.2$ AvgR = 79.2 TM30: $R_f=85$ $R_g=95$

EEL: 0.08429 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

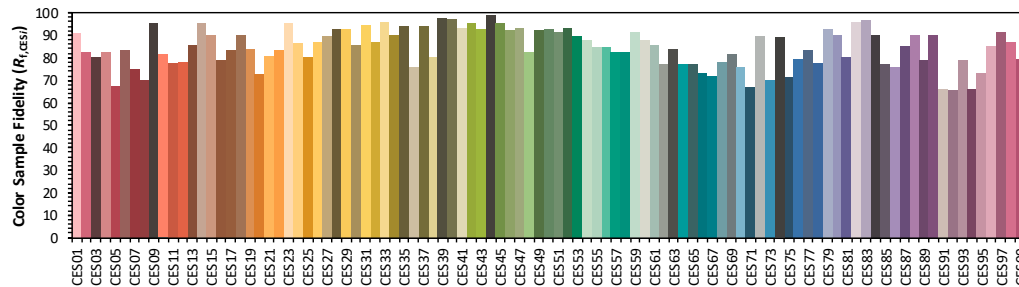
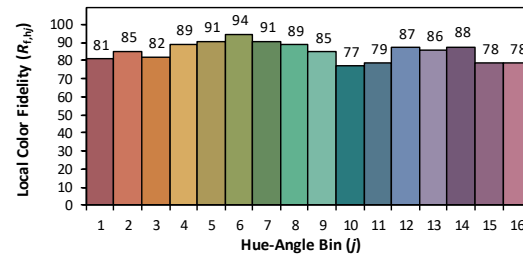
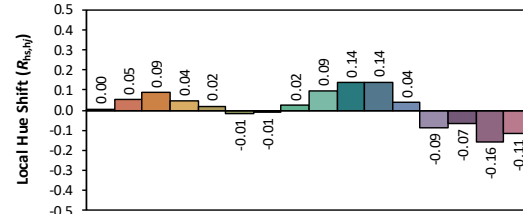
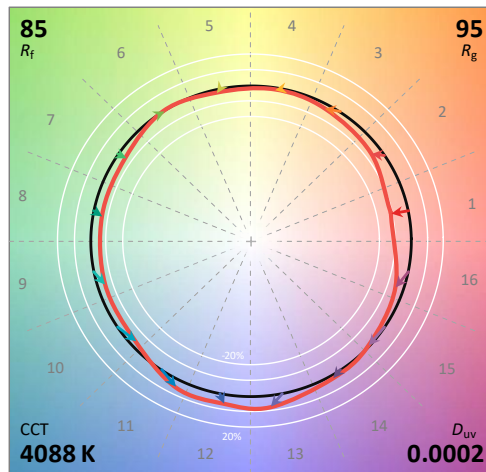
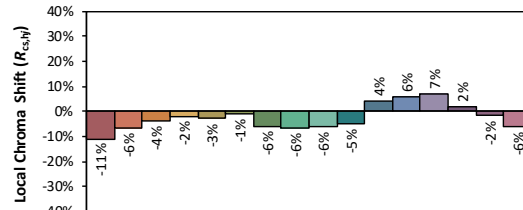
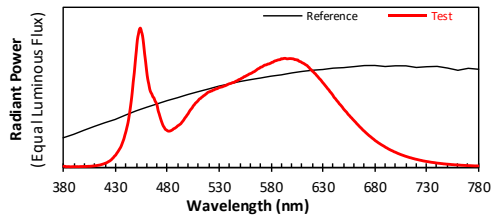
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/1/6

Model: STRP4H @20W4000K



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

x 0.3768
 y 0.3750
 u' 0.2234
 v' 0.5003

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	6.20E-06	447	6.14E-04	514	5.07E-04	581	7.54E-04	648	4.41E-04	715	6.75E-05
381	6.60E-06	448	6.78E-04	515	5.14E-04	582	7.55E-04	649	4.32E-04	716	6.53E-05
382	2.60E-06	449	7.62E-04	516	5.18E-04	583	7.61E-04	650	4.21E-04	717	6.30E-05
383	3.90E-06	450	8.38E-04	517	5.25E-04	584	7.65E-04	651	4.12E-04	718	6.12E-05
384	3.50E-06	451	9.16E-04	518	5.31E-04	585	7.66E-04	652	4.04E-04	719	5.90E-05
385	4.10E-06	452	9.56E-04	519	5.38E-04	586	7.69E-04	653	3.96E-04	720	5.72E-05
386	2.50E-06	453	9.92E-04	520	5.41E-04	587	7.72E-04	654	3.86E-04	721	5.57E-05
387	3.20E-06	454	1.00E-03	521	5.43E-04	588	7.73E-04	655	3.77E-04	722	5.38E-05
388	3.00E-06	455	9.73E-04	522	5.48E-04	589	7.74E-04	656	3.70E-04	723	5.21E-05
389	4.00E-06	456	9.45E-04	523	5.49E-04	590	7.81E-04	657	3.60E-04	724	5.03E-05
390	3.10E-06	457	8.87E-04	524	5.55E-04	591	7.79E-04	658	3.54E-04	725	4.89E-05
391	3.90E-06	458	8.16E-04	525	5.56E-04	592	7.81E-04	659	3.45E-04	726	4.72E-05
392	3.70E-06	459	7.56E-04	526	5.60E-04	593	7.83E-04	660	3.37E-04	727	4.53E-05
393	4.10E-06	460	6.89E-04	527	5.63E-04	594	7.83E-04	661	3.29E-04	728	4.41E-05
394	3.20E-06	461	6.35E-04	528	5.65E-04	595	7.80E-04	662	3.22E-04	729	4.26E-05
395	3.90E-06	462	5.99E-04	529	5.68E-04	596	7.80E-04	663	3.12E-04	730	4.13E-05
396	4.40E-06	463	5.60E-04	530	5.73E-04	597	7.80E-04	664	3.05E-04	731	4.01E-05
397	4.60E-06	464	5.39E-04	531	5.74E-04	598	7.81E-04	665	2.97E-04	732	3.91E-05
398	4.60E-06	465	5.25E-04	532	5.77E-04	599	7.81E-04	666	2.89E-04	733	3.77E-05
399	5.00E-06	466	5.06E-04	533	5.78E-04	600	7.81E-04	667	2.82E-04	734	3.64E-05
400	4.90E-06	467	4.98E-04	534	5.81E-04	601	7.80E-04	668	2.75E-04	735	3.51E-05
401	5.00E-06	468	4.78E-04	535	5.84E-04	602	7.79E-04	669	2.66E-04	736	3.43E-05
402	5.60E-06	469	4.65E-04	536	5.86E-04	603	7.74E-04	670	2.60E-04	737	3.33E-05
403	5.80E-06	470	4.47E-04	537	5.90E-04	604	7.74E-04	671	2.53E-04	738	3.24E-05
404	6.40E-06	471	4.09E-04	538	5.93E-04	605	7.71E-04	672	2.46E-04	739	3.11E-05
405	6.10E-06	472	3.85E-04	539	5.98E-04	606	7.71E-04	673	2.39E-04	740	2.98E-05
406	6.90E-06	473	3.59E-04	540	6.01E-04	607	7.63E-04	674	2.33E-04	741	2.90E-05
407	7.30E-06	474	3.36E-04	541	6.02E-04	608	7.60E-04	675	2.26E-04	742	2.81E-05
408	8.50E-06	475	3.15E-04	542	6.05E-04	609	7.58E-04	676	2.21E-04	743	2.74E-05
409	8.80E-06	476	2.97E-04	543	6.09E-04	610	7.52E-04	677	2.14E-04	744	2.64E-05
410	1.00E-05	477	2.86E-04	544	6.09E-04	611	7.49E-04	678	2.08E-04	745	2.55E-05
411	1.08E-05	478	2.72E-04	545	6.13E-04	612	7.45E-04	679	2.03E-04	746	2.48E-05
412	1.22E-05	479	2.68E-04	546	6.18E-04	613	7.40E-04	680	1.96E-04	747	2.36E-05
413	1.36E-05	480	2.62E-04	547	6.21E-04	614	7.35E-04	681	1.90E-04	748	2.34E-05
414	1.46E-05	481	2.59E-04	548	6.25E-04	615	7.31E-04	682	1.85E-04	749	2.23E-05
415	1.60E-05	482	2.60E-04	549	6.30E-04	616	7.22E-04	683	1.80E-04	750	2.18E-05
416	1.83E-05	483	2.61E-04	550	6.31E-04	617	7.16E-04	684	1.74E-04	751	2.13E-05
417	2.04E-05	484	2.65E-04	551	6.36E-04	618	7.05E-04	685	1.70E-04	752	2.06E-05
418	2.28E-05	485	2.69E-04	552	6.41E-04	619	7.01E-04	686	1.65E-04	753	2.01E-05
419	2.52E-05	486	2.76E-04	553	6.44E-04	620	6.91E-04	687	1.60E-04	754	1.91E-05
420	2.82E-05	487	2.79E-04	554	6.51E-04	621	6.86E-04	688	1.56E-04	755	1.84E-05
421	3.09E-05	488	2.85E-04	555	6.52E-04	622	6.77E-04	689	1.52E-04	756	1.81E-05
422	3.48E-05	489	2.90E-04	556	6.57E-04	623	6.71E-04	690	1.47E-04	757	1.73E-05
423	3.95E-05	490	2.98E-04	557	6.61E-04	624	6.61E-04	691	1.42E-04	758	1.68E-05
424	4.34E-05	491	3.02E-04	558	6.65E-04	625	6.54E-04	692	1.38E-04	759	1.65E-05
425	4.87E-05	492	3.07E-04	559	6.70E-04	626	6.45E-04	693	1.34E-04	760	1.58E-05
426	5.49E-05	493	3.13E-04	560	6.72E-04	627	6.36E-04	694	1.29E-04	761	1.54E-05
427	6.30E-05	494	3.23E-04	561	6.76E-04	628	6.29E-04	695	1.26E-04	762	1.52E-05
428	7.03E-05	495	3.32E-04	562	6.80E-04	629	6.19E-04	696	1.22E-04	763	1.45E-05
429	8.01E-05	496	3.42E-04	563	6.85E-04	630	6.09E-04	697	1.19E-04	764	1.38E-05
430	8.65E-05	497	3.55E-04	564	6.88E-04	631	6.01E-04	698	1.15E-04	765	1.36E-05
431	9.86E-05	498	3.63E-04	565	6.93E-04	632	5.91E-04	699	1.11E-04	766	1.32E-05
432	1.09E-04	499	3.75E-04	566	6.99E-04	633	5.82E-04	700	1.08E-04	767	1.27E-05
433	1.21E-04	500	3.84E-04	567	7.05E-04	634	5.73E-04	701	1.05E-04	768	1.23E-05
434	1.33E-04	501	3.98E-04	568	7.09E-04	635	5.63E-04	702	1.01E-04	769	1.20E-05
435	1.46E-04	502	4.10E-04	569	7.12E-04	636	5.56E-04	703	9.79E-05	770	1.16E-05
436	1.64E-04	503	4.19E-04	570	7.19E-04	637	5.44E-04	704	9.52E-05	771	1.11E-05
437	1.84E-04	504	4.28E-04	571	7.21E-04	638	5.36E-04	705	9.19E-05	772	1.11E-05
438	2.05E-04	505	4.41E-04	572	7.25E-04	639	5.26E-04	706	8.93E-05	773	1.09E-05
439	2.32E-04	506	4.49E-04	573	7.30E-04	640	5.16E-04	707	8.65E-05	774	1.03E-05
440	2.58E-04	507	4.60E-04	574	7.34E-04	641	5.03E-04	708	8.40E-05	775	1.00E-05
441	2.90E-04	508	4.66E-04	575	7.35E-04	642	4.95E-04	709	8.12E-05	776	9.60E-06
442	3.21E-04	509	4.73E-04	576	7.38E-04	643	4.86E-04	710	7.86E-05	777	9.20E-06
443	3.67E-04	510	4.82E-04	577	7.42E-04	644	4.76E-04	711	7.64E-05	778	9.20E-06
444	4.16E-04	511	4.91E-04	578	7.43E-04	645	4.68E-04	712	7.39E-05	779	9.30E-06
445	4.72E-04	512	4.95E-04	579	7.46E-04	646	4.57E-04	713	7.17E-05	780	9.30E-06
446	5.35E-04	513	5.02E-04	580	7.49E-04	647	4.49E-04	714	6.91E-05	N/A	N/A

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	STRP4H @20W4000K	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 $25 \pm 1^\circ\text{C}$, 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	0.080	18.7	0.842
NON-WORST CASE	120.0	60	0.155	18.3	0.985

Test Result

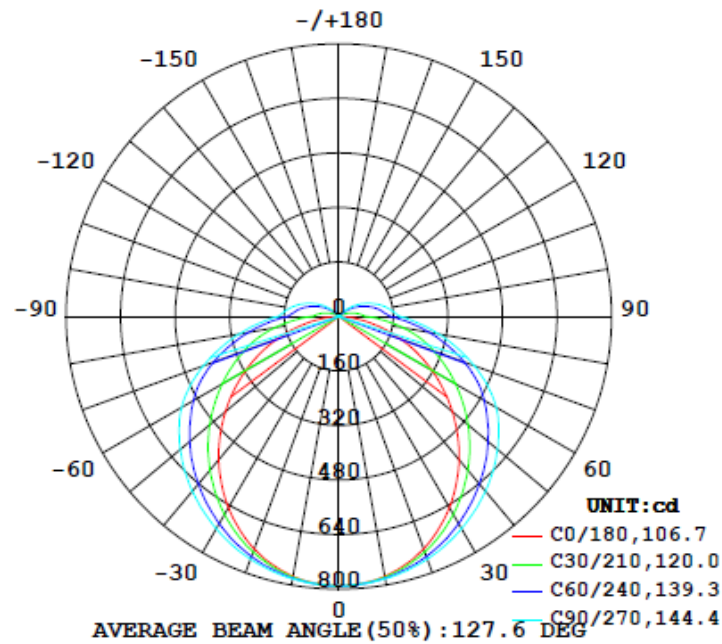
Flux (lm)	Flux per feet (lm/ft)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)
		C0-180	C90-270	C0-180	C90-270	
3007	752	160.5	160.5	106.6	144.2	160.8

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

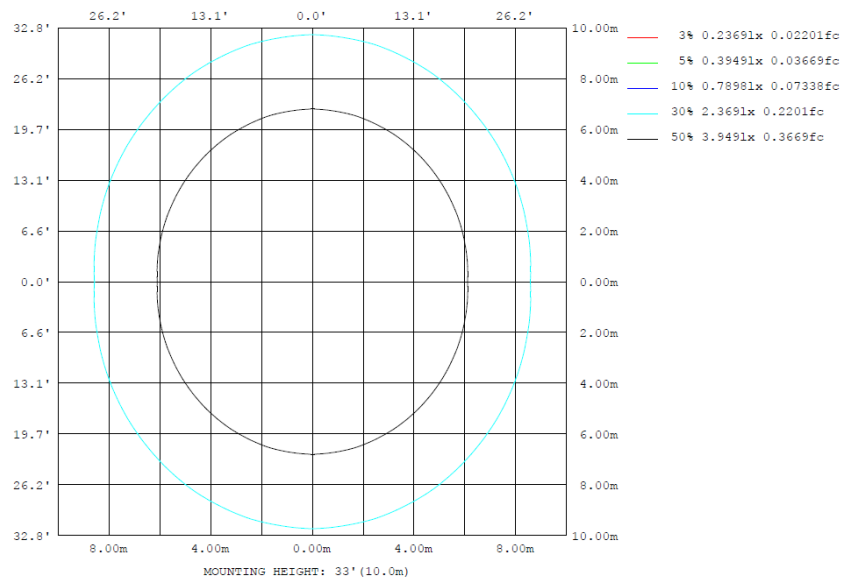
4.2 Goniophotometer Test

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	774.4	778.1	781.1	778.1	774.4	778.1	781.1	778.1	0- 10	74.86	74.86	2.49, 2.49
20	725.7	741.2	757.5	741.2	725.7	741.2	757.5	741.2	10- 20	215.5	290.3	9.65, 9.65
30	648.1	685.9	719.1	685.9	648.1	685.9	719.1	685.9	20- 30	330.3	620.7	20.6, 20.6
40	548.7	614.4	669.0	614.4	548.7	614.4	669.0	614.4	30- 40	407.7	1028	34.2, 34.2
50	434.7	533.2	607.2	533.2	434.7	533.2	607.2	533.2	40- 50	442.0	1470	48.9, 48.9
60	314.9	446.2	532.6	446.2	314.9	446.2	532.6	446.2	50- 60	433.2	1904	63.3, 63.3
70	192.2	352.5	423.0	352.5	192.2	352.5	423.0	352.5	60- 70	382.8	2286	76, 76
80	76.71	234.2	297.3	234.2	76.71	234.2	297.3	234.2	70- 80	290.3	2577	85.7, 85.7
90	4.818	121.7	179.9	121.7	4.818	121.7	179.9	121.7	80- 90	175.5	2752	91.5, 91.5
100	3.076	90.20	145.2	90.20	3.076	90.20	145.2	90.20	90-100	102.7	2855	94.9, 94.9
110	3.890	60.96	110.3	60.96	3.890	60.96	110.3	60.96	100-110	73.42	2928	97.4, 97.4
120	4.071	32.98	73.17	32.98	4.071	32.98	73.17	32.98	110-120	45.37	2974	98.9, 98.9
130	4.071	8.763	38.80	8.763	4.071	8.763	38.80	8.763	120-130	22.35	2996	99.6, 99.6
140	4.071	2.007	9.069	2.007	4.071	2.007	9.069	2.007	130-140	7.343	3003	99.9, 99.9
150	4.071	1.734	1.305	1.734	4.071	1.734	1.305	1.734	140-150	1.691	3005	99.9, 99.9
160	3.622	1.642	1.305	1.642	3.622	1.642	1.305	1.642	150-160	0.9953	3006	100, 100
170	4.162	1.642	1.305	1.642	4.162	1.642	1.305	1.642	160-170	0.5869	3007	100, 100
180	4.343	1.915	1.772	1.915	4.343	1.915	1.772	1.915	170-180	0.2282	3007	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT: lm		

	Zonal (lm)		Total (lm)	Percent
0-10	74.86	0-10	74.86	2.49%
10-20	215.45	0-20	290.31	9.66%
20-30	330.35	0-30	620.66	20.64%
30-40	407.73	0-40	1028.39	34.20%
40-50	442.03	0-50	1470.42	48.90%
50-60	433.19	0-60	1903.61	63.31%
60-70	382.80	0-70	2286.41	76.04%
70-80	290.30	0-80	2576.71	85.70%
80-90	175.53	0-90	2752.24	91.54%
90-100	102.73	0-100	2854.97	94.95%
100-110	73.42	0-110	2928.39	97.39%
110-120	45.37	0-120	2973.76	98.90%
120-130	22.35	0-130	2996.11	99.65%
130-140	7.34	0-140	3003.45	99.89%
140-150	1.69	0-150	3005.14	99.95%
150-160	1.00	0-160	3006.14	99.98%
160-170	0.59	0-170	3006.73	100.00%
170-180	0.23	0-180	3006.96	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	17.7	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	21.3
	4H	15.2	16.5	15.8	17.1	17.6	20.1	21.4	20.6	22.0	22.5
	6H	15.6	16.8	16.1	17.3	17.9	21.3	22.6	21.9	23.1	23.7
	8H	15.6	16.8	16.2	17.4	18.0	22.0	23.1	22.5	23.7	24.3
	12H	15.7	16.8	16.2	17.3	18.0	22.6	23.7	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	20.1	21.3	21.9
	4H	17.0	18.0	17.5	18.6	19.2	21.0	22.0	21.5	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	25.2
	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	21.2	22.1	21.8	22.7	23.4
	6H	18.6	19.4	19.3	20.0	20.7	22.8	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	25.2	25.8	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		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	16.9	18.5	17.4	19.0	19.5	20.0	21.5	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	25.1
	4H	19.0	20.3	19.6	20.9	21.4	23.9	25.2	24.4	25.8	26.3
	6H	19.4	20.6	19.9	21.1	21.7	25.1	26.4	25.7	26.9	27.5
	8H	19.4	20.6	20.0	21.2	21.8	25.8	26.9	26.3	27.5	28.1
	12H	19.5	20.6	20.0	21.1	21.8	26.4	27.5	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	23.9	25.1	25.7
	4H	20.8	21.8	21.3	22.4	23.0	24.8	25.8	25.3	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	29.0
	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	25.0	25.9	25.6	26.5	27.2
	6H	22.4	23.2	23.1	23.8	24.5	26.6	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	29.0	29.6	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	790	791	791	791	791	790	790	790	791	791	791	791	790	791	791	791	791	790	790
5	786	787	787	788	787	788	788	788	787	788	787	787	786	787	787	788	787	788	788
10	774	776	777	778	780	781	781	781	780	778	777	776	774	776	777	778	780	781	781
15	754	756	759	762	766	770	772	770	766	762	759	756	754	756	759	762	766	770	772
20	726	730	736	741	749	754	758	754	749	741	736	730	726	730	736	741	749	754	758
25	690	697	706	716	728	736	740	736	728	716	706	697	690	697	706	716	728	736	740
30	648	658	671	686	702	714	719	714	702	686	671	658	648	658	671	686	702	714	719
35	600	614	631	652	673	689	695	689	673	652	631	614	600	614	631	652	673	689	695
40	549	565	589	614	641	661	669	661	641	614	589	565	549	565	589	614	641	661	669
45	493	513	542	574	608	630	640	630	608	574	542	513	493	513	542	574	608	630	640
50	435	458	494	533	571	597	607	597	571	533	494	458	435	458	494	533	571	597	607
55	375	401	444	490	533	561	572	561	533	490	444	401	375	401	444	490	533	561	572
60	315	344	395	446	493	522	533	522	493	446	395	344	315	344	395	446	493	522	533
65	254	288	345	402	447	473	482	473	447	402	345	288	254	288	345	402	447	473	482
70	192	233	296	352	391	414	423	414	391	352	296	233	192	233	296	352	391	414	423
75	132	180	247	296	330	352	360	352	330	296	247	180	132	180	247	296	330	352	360
80	76.7	129	191	234	269	290	297	290	269	234	191	129	76.7	129	191	234	269	290	297
85	30.5	81.5	133	176	209	228	236	228	209	176	133	81.5	30.5	81.5	133	176	209	228	236
90	4.82	36.5	82.0	122	153	172	180	172	153	122	82.0	36.5	4.82	36.5	82.0	122	153	172	180
95	2.99	24.6	66.0	104	133	153	161	153	133	104	66.0	24.6	2.99	24.6	66.0	104	133	153	161
100	3.08	15.7	53.5	90.2	120	137	145	137	120	90.2	53.5	15.7	3.08	15.7	53.5	90.2	120	137	145
105	3.71	8.00	41.1	75.8	104	121	128	121	104	75.8	41.1	8.00	3.71	8.00	41.1	75.8	104	121	128
110	3.89	3.56	29.7	61.0	87.2	104	110	104	87.2	61.0	29.7	3.56	3.89	3.56	29.7	61.0	87.2	104	110
115	3.98	3.38	18.7	46.6	70.6	85.9	91.7	85.9	70.6	46.6	18.7	3.38	3.98	3.38	18.7	46.6	70.6	85.9	91.7
120	4.07	3.38	8.79	33.0	54.4	68.0	73.2	68.0	54.4	33.0	8.79	3.38	4.07	3.38	8.79	33.0	54.4	68.0	73.2
125	4.07	3.38	3.66	20.3	38.8	51.0	55.6	51.0	38.8	20.3	3.66	3.38	4.07	3.38	3.66	20.3	38.8	51.0	55.6
130	4.07	3.38	2.83	8.76	24.3	34.9	38.8	34.9	24.3	8.76	2.83	3.38	4.07	3.38	2.83	8.76	24.3	34.9	38.8
135	4.07	3.47	2.74	2.92	10.9	20.0	23.3	20.0	10.9	2.92	2.74	3.47	4.07	3.47	2.74	2.92	10.9	20.0	23.3
140	4.07	3.66	2.65	2.01	2.85	6.58	9.07	6.58	2.85	2.01	2.65	3.66	4.07	3.66	2.65	2.01	2.85	6.58	9.07
145	4.07	3.66	2.47	1.92	1.56	1.67	2.06	1.67	1.56	1.92	2.47	3.66	4.07	3.66	2.47	1.92	1.56	1.67	2.06
150	4.07	3.66	2.37	1.73	1.56	1.48	1.31	1.48	1.56	1.73	2.37	3.66	4.07	3.66	2.37	1.73	1.56	1.48	1.31
155	3.80	3.47	2.10	1.64	1.47	1.48	1.31	1.48	1.47	1.64	2.10	3.47	3.80	3.47	2.10	1.64	1.47	1.48	1.31
160	3.62	3.20	2.01	1.64	1.47	1.48	1.31	1.48	1.47	1.64	2.01	3.20	3.62	3.20	2.01	1.64	1.47	1.48	1.31
165	3.53	3.20	2.01	1.64	1.47	1.48	1.31	1.48	1.47	1.64	2.01	3.20	3.53	3.20	2.01	1.64	1.47	1.48	1.31
170	4.16	4.02	2.10	1.64	1.47	1.48	1.31	1.48	1.47	1.64	2.10	4.02	4.16	4.02	2.10	1.64	1.47	1.48	1.31
175	4.34	4.02	2.46	1.82	1.74	1.66	1.58	1.66	1.74	1.82	2.46	4.02	4.34	4.02	2.46	1.82	1.74	1.66	1.58
180	4.34	4.11	2.65	1.92	1.74	1.76	1.77	1.76	1.74	1.92	2.65	4.11	4.34	4.11	2.65	1.92	1.74	1.76	1.77

Table--2

UNIT: cd

C (DEG) y (DEG)	285	300	315	330	345														
0	790	791	791	791	791														
5	788	787	788	787	787														
10	781	780	778	777	776														
15	770	766	762	759	756														
20	754	749	741	736	730														
25	736	728	716	706	697														
30	714	702	686	671	658														
35	689	673	652	631	614														
40	661	641	614	589	565														
45	630	608	574	542	513														
50	597	571	533	494	458														
55	561	533	490	444	401														
60	522	493	446	395	344														
65	473	447	402	345	288														
70	414	391	352	296	233														
75	352	330	296	247	180														
80	290	269	234	191	129														
85	228	209	176	133	81.5														
90	172	153	122	82.0	36.5														
95	153	133	104	66.0	24.6														
100	137	120	90.2	53.5	15.7														
105	121	104	75.8	41.1	8.00														
110	104	87.2	61.0	29.7	3.56														
115	85.9	70.6	46.6	18.7	3.38														
120	68.0	54.4	33.0	8.79	3.38														
125	51.0	38.8	20.3	3.66	3.38														
130	34.9	24.3	8.76	2.83	3.38														
135	20.0	10.9	2.92	2.74	3.47														
140	6.58	2.85	2.01	2.65	3.66														
145	1.67	1.56	1.92	2.47	3.66														
150	1.48	1.56	1.73	2.37	3.66														
155	1.48	1.47	1.64	2.10	3.47														
160	1.48	1.47	1.64	2.01	3.20														
165	1.48	1.47	1.64	2.01	3.20														
170	1.48	1.47	1.64	2.10	4.02														
175	1.66	1.74	1.82	2.46	4.02														
180	1.76	1.74	1.92	2.65	4.11														

4.0 LM-79 Measurement and Test Results

4.3 THD and PF Test

Model No.	STRP4H @20W4000K	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	0.155	18.3	0.985	6.35
277.0	60	0.080	18.7	0.842	18.94

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*****