

Photometric Test Report

Relevant Standards

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

Prepared For

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1.0 Test Summary

DLC Technical Requirements V5.1

1x4 Luminaires for Ambient Lighting of Interior Commercial Spaces				
Requirement Category	Test Method	Requirements		Test Value
Luminaire Output (lm) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	1500		5292
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Standard	Premium	145.4
		110	125	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		36.4
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)	ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	12.13
			277V	11.73
Power Factor (THD & PF – Section 4.3)	ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.992
			277V	0.985
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019	7 steps	3465±245	3529
		4 steps	3465±124	
Minimum CRI (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019 CIE13.3-1995	≥80		83.3
Minimum R9 (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019 CIE13.3-1995	≥0		10
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		94
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	≥75%		74.9%
Discomfort Glare (UGR) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Standard	Premium	24.4
		N/A	<22	
Spacing Criterion (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	0°-180°	1.0-2.0	1.20
		90°-270°	1.0-2.0	1.28
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		0.133
(Goniophotometer – Section 4.2)		Non-Worst Case		0.304
Power (Input Wattage – W)				
(Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		36.4
(Goniophotometer – Section 4.2)		Non-Worst Case		36.2

2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-07-19	SWISHFA1X4 @39W3500K	-	250715001-S1
2	Goniophotometer Test	2025-07-19	SWISHFA1X4 @39W3500K	-	250715001-S1
3	THD and PF Test	2025-07-19	SWISHFA1X4 @39W3500K	-	250715001-S1

Remark (If any):

1. The results contained in this report pertain only to the tested samples.
2. This report shall not be reproduced, no limited part or full, without approval of Dongguan New Testing Centre Co., Ltd.
3. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. Government.

3.0 Product Description

Luminaire Description: Model No. SWISHFA1X4 @39W3500K, 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.	SWISHFA1X4 @39W3500K	Sample ID	250715001-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

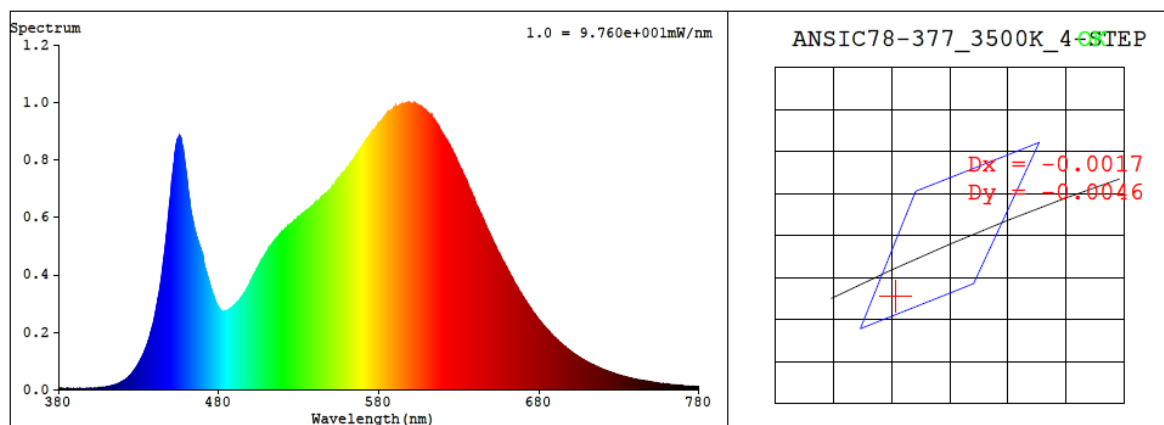
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made 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	0.304	36.2	0.992
277.0	60	0.133	36.4	0.985

CCT (K)	CRI	R9	Duv	SDCM	Rf	Rg	IES Rcs,h1
3529	83.3	10	-0.0017	3.1	84	94	-12%

4.1 Integrating Sphere Test



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.4020$ $y = 0.3854$ / $u' = 0.2358$ $v' = 0.5085$ ($duv = -1.65e-03$)

CCT= 3529K Prop WL: $L_d = 581.5\text{nm}$ Purity=36.3%

Peak WL: $L_p = 599\text{nm}$ FWHM: $= 140.0\text{nm}$ Ratio: $R = 20.3\%$ $G = 76.3\%$ $B = 3.4\%$

Render Index: $R_a = 83.3$ AvgR = 77.5 TM30: $R_f = 84$ $R_g = 95$

EEL: 0.09579 A++ Highest

R1 =82 R2 =92 R3 =96 R4 =80 R5 =82 R6 =89 R7 =83

R8 =62 R9 =10 R10=81 R11=79 R12=66 R13=85 R14=98 R15=76

4.1 Integrating Sphere Test

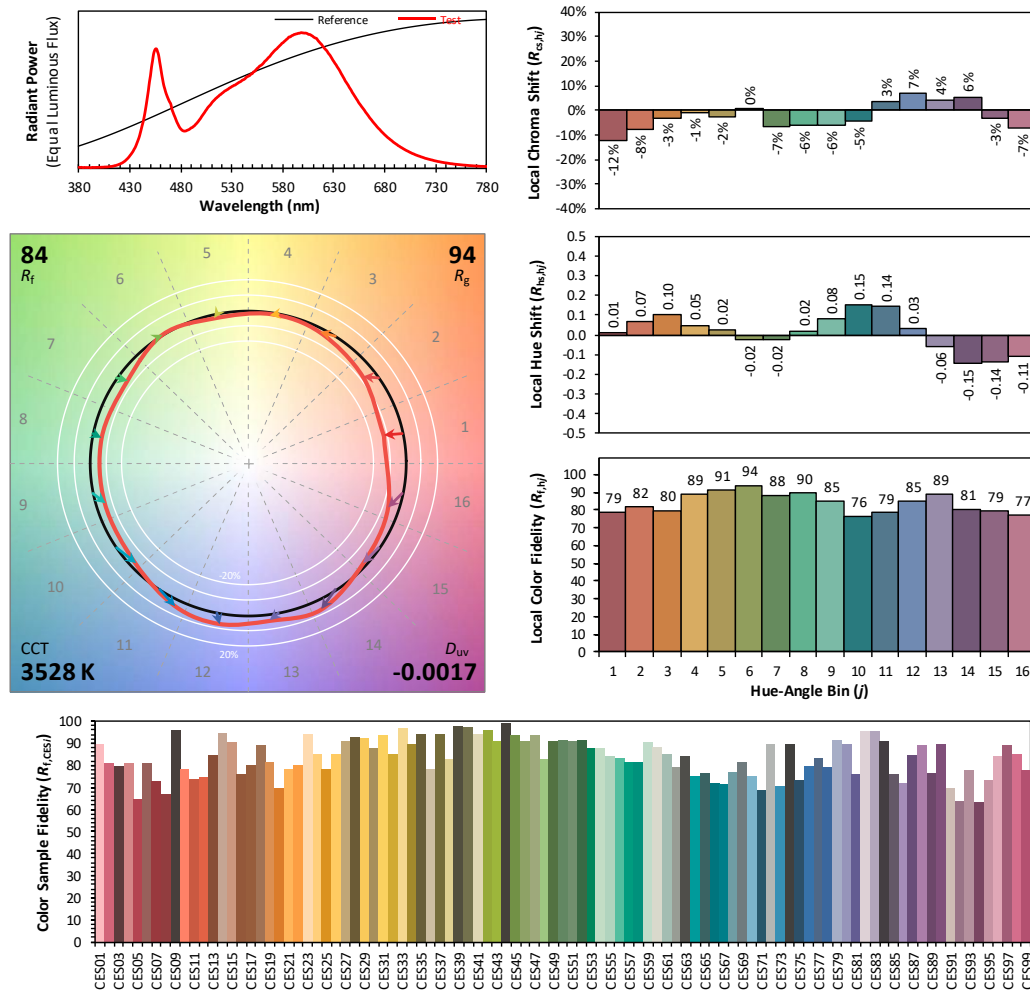
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/7/22

Model: SWISHFA1X4 @39W3500K



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

x 0.4020
 y 0.3852
 u' 0.2358
 v' 0.5085

CIE 13.3-1995
(CRI)
 R_a 83
 R_9 10

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	5.23E-04	514	5.13E-04	581	9.32E-04	648	5.57E-04	715	8.34E-05
381	4.20E-06	448	5.75E-04	515	5.18E-04	582	9.38E-04	649	5.46E-04	716	8.13E-05
382	5.30E-06	449	6.35E-04	516	5.26E-04	583	9.46E-04	650	5.34E-04	717	7.86E-05
383	4.50E-06	450	6.81E-04	517	5.31E-04	584	9.51E-04	651	5.22E-04	718	7.63E-05
384	2.70E-06	451	7.43E-04	518	5.39E-04	585	9.60E-04	652	5.10E-04	719	7.30E-05
385	4.60E-06	452	7.89E-04	519	5.43E-04	586	9.67E-04	653	4.99E-04	720	7.09E-05
386	3.70E-06	453	8.38E-04	520	5.51E-04	587	9.67E-04	654	4.85E-04	721	6.91E-05
387	4.10E-06	454	8.65E-04	521	5.56E-04	588	9.73E-04	655	4.75E-04	722	6.68E-05
388	3.30E-06	455	8.78E-04	522	5.62E-04	589	9.78E-04	656	4.65E-04	723	6.50E-05
389	4.10E-06	456	8.78E-04	523	5.68E-04	590	9.80E-04	657	4.54E-04	724	6.30E-05
390	3.90E-06	457	8.57E-04	524	5.72E-04	591	9.85E-04	658	4.44E-04	725	6.09E-05
391	2.60E-06	458	8.32E-04	525	5.77E-04	592	9.86E-04	659	4.34E-04	726	5.94E-05
392	3.20E-06	459	7.85E-04	526	5.81E-04	593	9.89E-04	660	4.24E-04	727	5.74E-05
393	5.10E-06	460	7.41E-04	527	5.87E-04	594	9.91E-04	661	4.12E-04	728	5.50E-05
394	4.20E-06	461	6.93E-04	528	5.92E-04	595	9.94E-04	662	4.03E-04	729	5.33E-05
395	4.40E-06	462	6.51E-04	529	5.96E-04	596	9.94E-04	663	3.92E-04	730	5.16E-05
396	4.40E-06	463	6.12E-04	530	6.02E-04	597	9.97E-04	664	3.82E-04	731	5.00E-05
397	5.00E-06	464	5.85E-04	531	6.05E-04	598	9.98E-04	665	3.71E-04	732	4.81E-05
398	4.70E-06	465	5.58E-04	532	6.10E-04	599	9.97E-04	666	3.62E-04	733	4.71E-05
399	5.20E-06	466	5.37E-04	533	6.12E-04	600	9.96E-04	667	3.53E-04	734	4.53E-05
400	5.60E-06	467	5.18E-04	534	6.18E-04	601	9.95E-04	668	3.42E-04	735	4.41E-05
401	5.50E-06	468	5.00E-04	535	6.23E-04	602	9.95E-04	669	3.33E-04	736	4.23E-05
402	6.10E-06	469	4.85E-04	536	6.28E-04	603	9.94E-04	670	3.24E-04	737	4.14E-05
403	6.30E-06	470	4.71E-04	537	6.33E-04	604	9.91E-04	671	3.16E-04	738	3.97E-05
404	6.50E-06	471	4.35E-04	538	6.36E-04	605	9.86E-04	672	3.06E-04	739	3.86E-05
405	7.60E-06	472	4.14E-04	539	6.41E-04	606	9.85E-04	673	2.98E-04	740	3.77E-05
406	7.60E-06	473	3.94E-04	540	6.48E-04	607	9.82E-04	674	2.90E-04	741	3.65E-05
407	8.00E-06	474	3.76E-04	541	6.51E-04	608	9.77E-04	675	2.83E-04	742	3.53E-05
408	8.50E-06	475	3.57E-04	542	6.55E-04	609	9.73E-04	676	2.74E-04	743	3.41E-05
409	9.30E-06	476	3.38E-04	543	6.61E-04	610	9.66E-04	677	2.66E-04	744	3.27E-05
410	1.05E-05	477	3.23E-04	544	6.70E-04	611	9.62E-04	678	2.59E-04	745	3.20E-05
411	1.15E-05	478	3.07E-04	545	6.73E-04	612	9.58E-04	679	2.51E-04	746	3.13E-05
412	1.16E-05	479	2.95E-04	546	6.79E-04	613	9.55E-04	680	2.44E-04	747	2.99E-05
413	1.36E-05	480	2.86E-04	547	6.80E-04	614	9.43E-04	681	2.37E-04	748	2.89E-05
414	1.51E-05	481	2.79E-04	548	6.89E-04	615	9.34E-04	682	2.30E-04	749	2.79E-05
415	1.76E-05	482	2.75E-04	549	6.94E-04	616	9.26E-04	683	2.23E-04	750	2.74E-05
416	1.85E-05	483	2.73E-04	550	6.98E-04	617	9.17E-04	684	2.18E-04	751	2.66E-05
417	2.13E-05	484	2.73E-04	551	7.09E-04	618	9.09E-04	685	2.11E-04	752	2.58E-05
418	2.34E-05	485	2.74E-04	552	7.12E-04	619	8.98E-04	686	2.05E-04	753	2.51E-05
419	2.70E-05	486	2.79E-04	553	7.20E-04	620	8.89E-04	687	1.99E-04	754	2.41E-05
420	2.95E-05	487	2.81E-04	554	7.28E-04	621	8.80E-04	688	1.92E-04	755	2.34E-05
421	3.33E-05	488	2.85E-04	555	7.37E-04	622	8.72E-04	689	1.87E-04	756	2.26E-05
422	3.66E-05	489	2.90E-04	556	7.42E-04	623	8.64E-04	690	1.82E-04	757	2.18E-05
423	4.11E-05	490	2.97E-04	557	7.51E-04	624	8.52E-04	691	1.76E-04	758	2.15E-05
424	4.66E-05	491	2.99E-04	558	7.56E-04	625	8.41E-04	692	1.72E-04	759	2.08E-05
425	5.15E-05	492	3.06E-04	559	7.61E-04	626	8.33E-04	693	1.65E-04	760	2.02E-05
426	5.90E-05	493	3.11E-04	560	7.67E-04	627	8.20E-04	694	1.61E-04	761	1.95E-05
427	6.60E-05	494	3.20E-04	561	7.76E-04	628	8.08E-04	695	1.56E-04	762	1.87E-05
428	7.37E-05	495	3.27E-04	562	7.86E-04	629	7.94E-04	696	1.51E-04	763	1.81E-05
429	8.26E-05	496	3.36E-04	563	7.92E-04	630	7.84E-04	697	1.47E-04	764	1.78E-05
430	9.27E-05	497	3.45E-04	564	7.99E-04	631	7.71E-04	698	1.42E-04	765	1.71E-05
431	1.02E-04	498	3.56E-04	565	8.08E-04	632	7.62E-04	699	1.38E-04	766	1.67E-05
432	1.13E-04	499	3.65E-04	566	8.17E-04	633	7.48E-04	700	1.33E-04	767	1.60E-05
433	1.24E-04	500	3.77E-04	567	8.23E-04	634	7.37E-04	701	1.29E-04	768	1.58E-05
434	1.39E-04	501	3.88E-04	568	8.33E-04	635	7.26E-04	702	1.26E-04	769	1.50E-05
435	1.51E-04	502	3.99E-04	569	8.43E-04	636	7.12E-04	703	1.22E-04	770	1.46E-05
436	1.69E-04	503	4.09E-04	570	8.51E-04	637	6.97E-04	704	1.18E-04	771	1.42E-05
437	1.89E-04	504	4.22E-04	571	8.60E-04	638	6.85E-04	705	1.14E-04	772	1.37E-05
438	2.09E-04	505	4.32E-04	572	8.68E-04	639	6.71E-04	706	1.11E-04	773	1.33E-05
439	2.30E-04	506	4.43E-04	573	8.75E-04	640	6.58E-04	707	1.07E-04	774	1.26E-05
440	2.58E-04	507	4.52E-04	574	8.80E-04	641	6.43E-04	708	1.04E-04	775	1.27E-05
441	2.88E-04	508	4.60E-04	575	8.89E-04	642	6.32E-04	709	1.01E-04	776	1.25E-05
442	3.18E-04	509	4.69E-04	576	8.96E-04	643	6.20E-04	710	9.73E-05	777	1.19E-05
443	3.47E-04	510	4.79E-04	577	9.04E-04	644	6.09E-04	711	9.46E-05	778	1.16E-05
444	3.84E-04	511	4.89E-04	578	9.11E-04	645	5.95E-04	712	9.17E-05	779	1.16E-05
445	4.26E-04	512	4.97E-04	579	9.20E-04	646	5.84E-04	713	8.88E-05	780	1.16E-05
446	4.73E-04	513	5.04E-04	580	9.24E-04	647	5.71E-04	714	8.69E-05	N/A	N/A

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	SWISHFA1X4 @39W3500K	Sample ID	250715001-S1
Operate time (Min.)	30	Stabilization time (Min.)	60
Temperature (°C)	25.0	Humidity (%RH)	43.1

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	0.133	36.4	0.985
NON-WORST CASE	120.0	60	0.304	36.2	0.992

Test Result

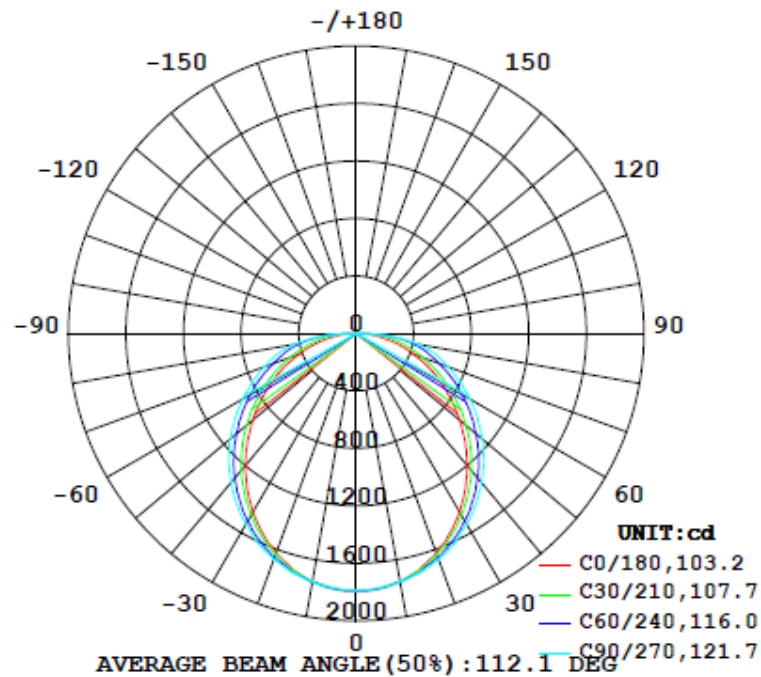
Flux (lm)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)	Zonal Lumen Requirement
	C0-180	C90-270	C0-180	C90-270		(0°-60°)
5292	162.1	172.7	103.1	121.3	145.4	74.9%

UGR		Spacing Criterion	
Crosswise	Endwise	(0°-180°)	(90°-270°)
21.3	24.4	1.20	1.28

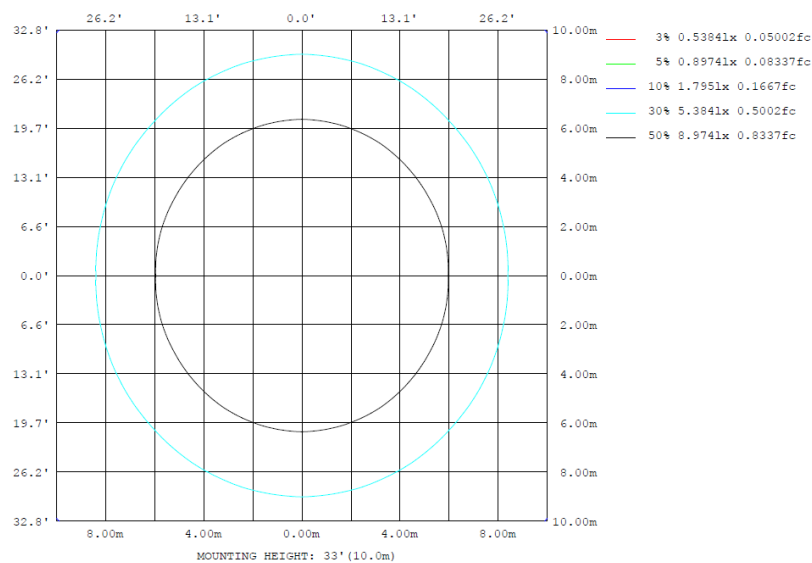
4.2 Goniophotometer Test

Lighting Distribution Curve

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



Isolux Plot



4.2 Goniophotometer Test

Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	φ zone	φ total	%lum, lamp
10	1754	1750	1755	1750	1754	1750	1755	1750	0- 10	169.2	169.2	3.2,3.2
20	1627	1643	1673	1643	1627	1643	1673	1643	10- 20	482.1	651.3	12.3,12.3
30	1436	1478	1535	1478	1436	1478	1535	1478	20- 30	725.2	1376	26,26
40	1198	1274	1359	1274	1198	1274	1359	1274	30- 40	867.0	2243	42.4,42.4
50	936.0	1040	1141	1040	936.0	1040	1141	1040	40- 50	896.8	3140	59.3,59.3
60	675.0	788.3	910.9	788.3	675.0	788.3	910.9	788.3	50- 60	821.5	3962	74.9,74.9
70	426.1	551.0	676.4	551.0	426.1	551.0	676.4	551.0	60- 70	666.4	4628	87.4,87.4
80	199.1	340.2	433.6	340.2	199.1	340.2	433.6	340.2	70- 80	466.4	5094	96.3,96.3
90	0	0	0	0	0	0	0	0	80- 90	198.0	5292	100,100
100	0	0	0	0	0	0	0	0	90-100	0	5292	100,100
110	0	0	0	0	0	0	0	0	100-110	0	5292	100,100
120	0	0	0	0	0	0	0	0	110-120	0	5292	100,100
130	0	0	0	0	0	0	0	0	120-130	0	5292	100,100
140	0	0	0	0	0	0	0	0	130-140	0	5292	100,100
150	0	0	0	0	0	0	0	0	140-150	0	5292	100,100
160	0	0	0	0	0	0	0	0	150-160	0	5292	100,100
170	0	0	0	0	0	0	0	0	160-170	0	5292	100,100
180	0	0	0	0	0	0	0	0	170-180	0	5292	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

	Zonal (lm)		Total (lm)	Percent
0-10	169.15	0-10	169.15	3.20%
10-20	482.13	0-20	651.28	12.31%
20-30	725.19	0-30	1376.47	26.01%
30-40	866.97	0-40	2243.44	42.39%
40-50	896.83	0-50	3140.27	59.33%
50-60	821.48	0-60	3961.75	74.86%
60-70	666.39	0-70	4628.14	87.45%
70-80	466.36	0-80	5094.50	96.26%
80-90	198.00	0-90	5292.50	100.00%
90-100	0.00	0-100	5292.50	100.00%
100-110	0.00	0-110	5292.50	100.00%
110-120	0.00	0-120	5292.50	100.00%
120-130	0.00	0-130	5292.50	100.00%
130-140	0.00	0-140	5292.50	100.00%
140-150	0.00	0-150	5292.50	100.00%
150-160	0.00	0-160	5292.50	100.00%
160-170	0.00	0-170	5292.50	100.00%
170-180	0.00	0-180	5292.50	100.00%

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		UGR Viewed Crosswise					UGR Viewed Endwise				
	Y=2H	10.7	12.4	11.1	12.7	13.0	12.1	13.8	12.5	14.1	14.4
	3H	12.5	14.0	12.9	14.4	14.7	14.5	16.0	14.9	16.4	16.7
	4H	13.2	14.7	13.6	15.0	15.4	15.7	17.1	16.1	17.5	17.8
	6H	13.8	15.1	14.2	15.5	15.9	16.8	18.1	17.2	18.5	18.9
	8H	14.0	15.3	14.4	15.7	16.1	17.2	18.5	17.6	18.9	19.3
	12H	14.1	15.4	14.6	15.8	16.2	17.6	18.8	18.0	19.2	19.6
4H		2H	11.6	13.1	12.0	13.4	12.7	14.1	13.1	14.5	14.9
	3H	13.7	14.9	14.1	15.3	15.7	15.3	16.6	15.7	17.0	17.4
	4H	14.5	15.6	14.9	16.0	16.5	16.7	17.8	17.1	18.2	18.6
	6H	15.2	16.2	15.7	16.6	17.1	18.0	19.0	18.4	19.4	19.9
	8H	15.5	16.4	15.9	16.8	17.3	18.6	19.5	19.0	19.9	20.4
	12H	15.7	16.5	16.2	17.0	17.5	19.0	19.9	19.5	20.3	20.8
8H		4H	15.2	16.1	15.7	16.5	17.0	18.0	17.5	18.4	18.9
	6H	16.1	16.9	16.6	17.4	17.8	18.6	19.3	19.1	19.8	20.3
	8H	16.5	17.2	17.0	17.7	18.2	19.2	20.0	19.8	20.5	20.9
	12H	16.8	17.4	17.3	17.9	18.5	19.9	20.5	20.4	21.0	21.6
12H		4H	15.4	16.2	15.8	16.7	17.1	17.1	17.9	17.6	18.4
	6H	16.4	17.1	16.9	17.5	18.1	18.6	19.4	19.2	19.8	20.3
	8H	16.9	17.5	17.4	18.0	18.5	19.4	20.1	19.9	20.5	21.1

Maximum UGR = 21.6

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	16.5	18.2	16.9	18.5	18.8	17.9	19.6	18.3	19.9	20.2
	3H	18.3	19.8	18.7	20.2	20.5	20.3	21.8	20.7	22.2	22.5
	4H	19.0	20.5	19.4	20.8	21.2	21.5	22.9	21.9	23.3	23.6
	6H	19.6	20.9	20.0	21.3	21.7	22.6	23.9	23.0	24.3	24.7
	8H	19.8	21.1	20.2	21.5	21.9	23.0	24.3	23.4	24.7	25.1
	12H	19.9	21.2	20.4	21.6	22.0	23.4	24.6	23.8	25.0	25.4
4H		2H	17.4	18.9	17.8	19.2	18.5	19.9	18.9	20.3	20.7
	3H	19.5	20.7	19.9	21.1	21.5	21.1	22.4	21.5	22.8	23.2
	4H	20.3	21.4	20.7	21.8	22.3	22.5	23.6	22.9	24.0	24.4
	6H	21.0	22.0	21.5	22.4	22.9	23.8	24.8	24.2	25.2	25.7
	8H	21.3	22.2	21.7	22.6	23.1	24.4	25.3	24.8	25.7	26.2
	12H	21.5	22.3	22.0	22.8	23.3	24.8	25.7	25.3	26.1	26.6
8H		4H	21.0	21.9	21.5	22.3	22.8	23.8	23.3	24.2	24.7
	6H	21.9	22.7	22.4	23.2	23.6	24.4	25.1	24.9	25.6	26.1
	8H	22.3	23.0	22.8	23.5	24.0	25.0	25.8	25.6	26.3	26.7
	12H	22.6	23.2	23.1	23.7	24.3	25.7	26.3	26.2	26.8	27.4
12H		4H	21.2	22.0	21.6	22.5	22.9	23.7	23.4	24.2	24.6
	6H	22.2	22.9	22.7	23.3	23.9	24.4	25.2	25.0	25.6	26.1
	8H	22.7	23.3	23.2	23.8	24.3	25.2	25.9	25.7	26.3	26.9

Maximum UGR = 27.4

4.2 Goniophotometer Test

Luminous Distribution Intensity Data

[illegible]

C (DBG)						UNIT: cd														
γ	(DEG)	285	300	315	330	345														
0		1795	1790	1790	1797	1796														
5		1786	1783	1778	1780	1780														
10		1756	1760	1750	1750	1753														
15		1725	1720	1703	1705	1701														
20		1675	1660	1643	1637	1636														
25		1606	1591	1571	1557	1546														
30		1530	1509	1478	1460	1449														
35		1438	1414	1382	1354	1337														
40		1343	1311	1274	1243	1216														
45		1237	1203	1157	1119	1093														
50		1127	1088	1040	993	962														
55		1014	970	912	864	829														
60		893	849	788	739	702														
65		773	732	671	613	572														
70		660	615	551	490	446														
75		561	511	439	374	327														
80		423	393	340	271	219														
85		243	232	208	170	119														
90		0.00	0.00	0.00	0.00	0.00														
95		0.00	0.00	0.00	0.00	0.00														
100		0.00	0.00	0.00	0.00	0.00														
105		0.00	0.00	0.00	0.00	0.00														
110		0.00	0.00	0.00	0.00	0.00														
115		0.00	0.00	0.00	0.00	0.00														
120		0.00	0.00	0.00	0.00	0.00														
125		0.00	0.00	0.00	0.00	0.00														
130		0.00	0.00	0.00	0.00	0.00														
135		0.00	0.00	0.00	0.00	0.00														
140		0.00	0.00	0.00	0.00	0.00														
145		0.00	0.00	0.00	0.00	0.00														
150		0.00	0.00	0.00	0.00	0.00														
155		0.00	0.00	0.00	0.00	0.00														
160		0.00	0.00	0.00	0.00	0.00														
165		0.00	0.00	0.00	0.00	0.00														
170		0.00	0.00	0.00	0.00	0.00														
175		0.00	0.00	0.00	0.00	0.00														
180		0.00	0.00	0.00	0.00	0.00														

4.0 LM-79 Measurement and Test Results

4.3 THD and PF Test

Model No.	SWISHFA1X4 @39W3500K	Sample ID	250715001-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±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

Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	iTHD(%)
120.0	60	0.304	36.2	0.992	12.13
277.0	60	0.133	36.4	0.985	11.73

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*****