

## Photometric Test Report

### Relevant Standards

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

Prepared For

**RAB Lighting Inc.**

Address: 408 W 14th St New York, NY 10014

Prepared By

**Dongguan New Testing Centre Co., Ltd.**

Address: 3F No. 1 the 1st North Industry Road, Songshan Lake Science & Technology Park, Dongguan, Guangdong, China

Prepare by:

*Alan Wang*

Engineer: Alan Wang

Date: 2025-09-25

Review by:

*Vincent Yuan*

Technical Lead: Vincent Yuan

Issue Date: 2025-09-25

Revised Date: N/A

## 1.0 Test Summary

DLC Technical Requirements V6.0

Track or Mono-Point Directional Luminaires					
Requirement Category		Test Method	Requirements		Test Value
Luminaire Output (lm) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	250		3330
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	140.5
			95	110	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		23.7
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	9.79
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.991
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	3045±175	3027
			4 steps	3045±100	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		94.6
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		70
Minimum Rf (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	≥70		91
Minimum Rg (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	≥89		103
IES Rcs,h1 (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	-12%≤IES Rcs,h1≤+23%		-4%
Zonal Lumen Requirement (0°-90°) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	≥85%		99.4%
Input Voltage (V)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Cast		120.0
(Goniophotometer – Section 4.2)			Non-Worst Case		N/A
Input Current (A)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		0.199
(Goniophotometer – Section 4.2)			Non-Worst Case		N/A
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		23.7
(Goniophotometer – Section 4.2)			Non-Worst Case		N/A

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-09-16	TKBEAM2B @22W3000K	-	250903025-S1
2	Goniophotometer Test	2025-09-16	TKBEAM2B @22W3000K	-	250903025-S1
3	THD and PF Test	2025-09-16	TKBEAM2B @22W3000K	-	250903025-S1

### Remark (If any):

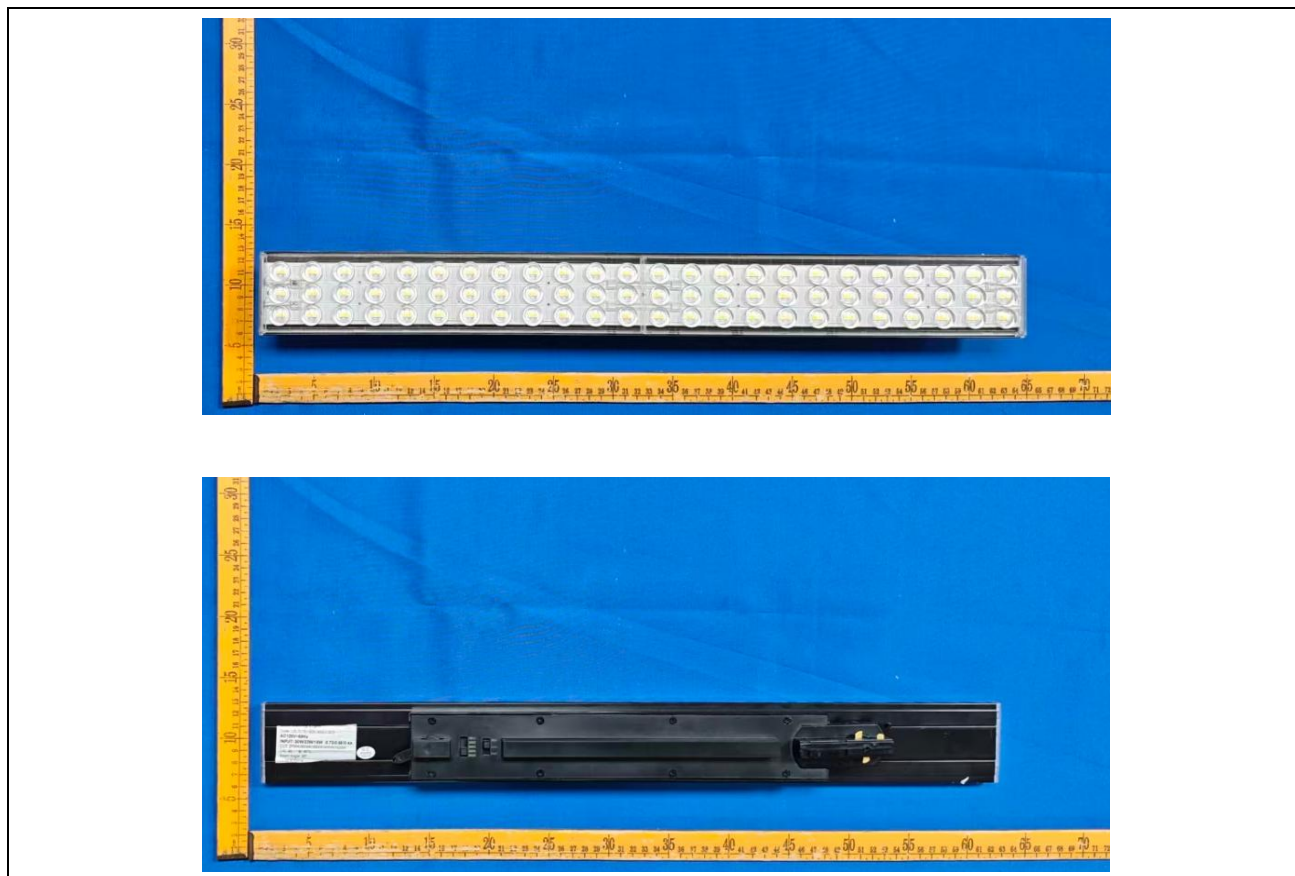
1. The results contained in this report pertain only to the tested samples.
2. This report shall not be reproduced, no limited part or full, without approval of Dongguan New Testing Centre Co., Ltd.
3. This report must not be used by the client to claim product certification, approval, or endorsement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

### 3.0 Product Description

Luminaire Description: Model No. TKBEAM2B @22W3000K, color tunable from 2700K, 3000K, 3500K, 4000K and 5000K.

Electrical Specification: 120Vac, 60Hz

#### Photos of Luminaire Characteristics



## 4.0 LM-79 Measurement and Test Results

### 4.1 Integrating Sphere Test

Model No.	TKBEAM2B @22W3000K	Sample ID	250903025-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

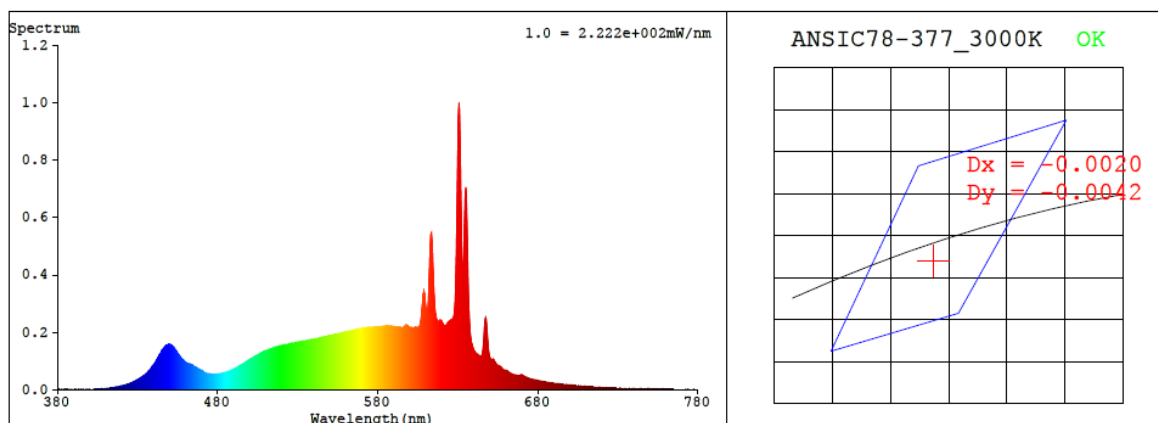
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere.</p> <p>The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within ±0.2 percent under load.</p> <p>The sample was measured using 4<math>\pi</math> geometry and operated at rated voltage and was stabilized before measurement. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral radiant flux measurements taken at 1 nm intervals over the range of 380 to 780nm.</p>

### Test Result

Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
120.0	60	0.199	23.7	0.991

CCT (K)	CRI	R9	Duv	SDCM	Rf	Rg	IES Rcs,h1
3027	94.6	70	-0.0014	1.9	91	103	-4%

## 4.1 Integrating Sphere Test



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.4330$   $y = 0.3992$  /  $u' = 0.2501$   $v' = 0.5189$  ( $duv = -1.41e-03$ )

CCT= 3027K Prcp WL: Ld=583.2nm Purity=49.8%

Peak WL: Lp=631nm FWHM: =3.6nm Ratio:R=25.1% G=72.3% B=2.6%

Render Index: Ra = 94.6 AvgR = 92.0 TM30:Rf=90 Rg=102

EEL: 0.10235 A++ Highest

R1 =97 R2 =96 R3 =94 R4 =95 R5 =96 R6 =96 R7 =94

R8 =88 R9 =70 R10=89 R11=95 R12=85 R13=97 R14=95 R15=94

## 4.1 Integrating Sphere Test

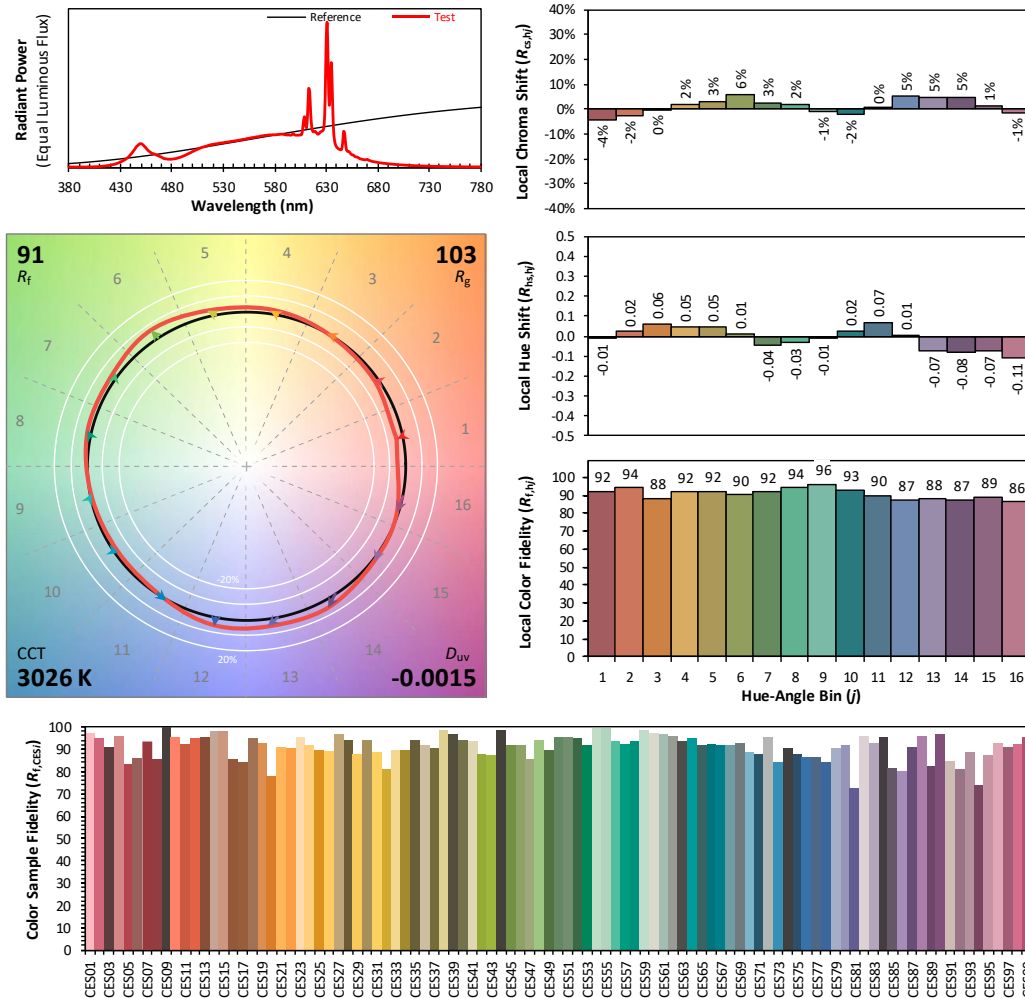
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/9/25

Model: TKBEAM2B @22W3000K



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

$x$  0.4330  
 $y$  0.3991  
 $u'$  0.2502  
 $v'$  0.5188

CIE 13.3-1995  
(CRI)

$R_a$  95  
 $R_g$  70



## 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	1.00E-06	447	1.48E-04	514	1.42E-04	581	2.19E-04	648	2.26E-04	715	1.03E-05
381	1.90E-06	448	1.55E-04	515	1.46E-04	582	2.20E-04	649	1.50E-04	716	9.80E-06
382	7.00E-07	449	1.58E-04	516	1.48E-04	583	2.20E-04	650	1.14E-04	717	9.60E-06
383	2.00E-07	450	1.58E-04	517	1.49E-04	584	2.20E-04	651	1.06E-04	718	9.50E-06
384	1.50E-06	451	1.55E-04	518	1.51E-04	585	2.22E-04	652	1.06E-04	719	8.80E-06
385	6.00E-07	452	1.50E-04	519	1.53E-04	586	2.22E-04	653	9.82E-05	720	8.80E-06
386	1.40E-06	453	1.42E-04	520	1.54E-04	587	2.22E-04	654	8.95E-05	721	8.40E-06
387	2.00E-07	454	1.35E-04	521	1.55E-04	588	2.23E-04	655	8.44E-05	722	8.10E-06
388	1.00E-06	455	1.26E-04	522	1.57E-04	589	2.20E-04	656	8.22E-05	723	8.10E-06
389	1.20E-06	456	1.19E-04	523	1.57E-04	590	2.19E-04	657	7.78E-05	724	7.60E-06
390	7.00E-07	457	1.11E-04	524	1.58E-04	591	2.19E-04	658	7.16E-05	725	7.50E-06
391	1.60E-06	458	1.06E-04	525	1.59E-04	592	2.17E-04	659	6.89E-05	726	7.20E-06
392	7.00E-07	459	1.01E-04	526	1.62E-04	593	2.17E-04	660	6.83E-05	727	7.00E-06
393	1.30E-06	460	9.53E-05	527	1.62E-04	594	2.18E-04	661	6.49E-05	728	6.90E-06
394	1.00E-06	461	9.27E-05	528	1.63E-04	595	2.16E-04	662	6.03E-05	729	6.50E-06
395	6.00E-07	462	8.97E-05	529	1.64E-04	596	2.17E-04	663	5.68E-05	730	6.30E-06
396	8.00E-07	463	8.83E-05	530	1.64E-04	597	2.21E-04	664	5.45E-05	731	6.00E-06
397	1.00E-06	464	8.50E-05	531	1.67E-04	598	2.25E-04	665	5.25E-05	732	6.00E-06
398	1.60E-06	465	8.14E-05	532	1.67E-04	599	2.20E-04	666	5.13E-05	733	5.80E-06
399	1.80E-06	466	7.86E-05	533	1.68E-04	600	2.16E-04	667	5.00E-05	734	5.70E-06
400	1.70E-06	467	7.63E-05	534	1.70E-04	601	2.16E-04	668	4.97E-05	735	5.40E-06
401	1.80E-06	468	7.22E-05	535	1.70E-04	602	2.16E-04	669	5.09E-05	736	5.30E-06
402	1.90E-06	469	6.96E-05	536	1.71E-04	603	2.16E-04	670	5.18E-05	737	5.10E-06
403	2.00E-06	470	6.68E-05	537	1.73E-04	604	2.17E-04	671	4.85E-05	738	4.90E-06
404	2.30E-06	471	6.18E-05	538	1.74E-04	605	2.17E-04	672	4.48E-05	739	4.90E-06
405	2.70E-06	472	5.89E-05	539	1.75E-04	606	2.20E-04	673	4.27E-05	740	4.70E-06
406	3.00E-06	473	5.74E-05	540	1.75E-04	607	2.48E-04	674	4.03E-05	741	4.60E-06
407	3.00E-06	474	5.61E-05	541	1.77E-04	608	3.12E-04	675	3.83E-05	742	4.30E-06
408	3.50E-06	475	5.52E-05	542	1.78E-04	609	3.40E-04	676	3.69E-05	743	4.30E-06
409	3.70E-06	476	5.38E-05	543	1.79E-04	610	2.86E-04	677	3.59E-05	744	4.10E-06
410	4.40E-06	477	5.36E-05	544	1.80E-04	611	2.68E-04	678	3.44E-05	745	4.00E-06
411	5.30E-06	478	5.33E-05	545	1.81E-04	612	3.71E-04	679	3.33E-05	746	3.90E-06
412	5.70E-06	479	5.33E-05	546	1.82E-04	613	5.29E-04	680	3.20E-05	747	3.80E-06
413	6.40E-06	480	5.40E-05	547	1.84E-04	614	5.04E-04	681	3.05E-05	748	3.50E-06
414	7.00E-06	481	5.51E-05	548	1.85E-04	615	3.57E-04	682	2.97E-05	749	3.70E-06
415	8.10E-06	482	5.55E-05	549	1.88E-04	616	2.69E-04	683	2.88E-05	750	3.60E-06
416	8.80E-06	483	5.71E-05	550	1.88E-04	617	2.42E-04	684	2.78E-05	751	3.40E-06
417	9.90E-06	484	5.83E-05	551	1.88E-04	618	2.38E-04	685	2.69E-05	752	3.30E-06
418	1.07E-05	485	6.03E-05	552	1.90E-04	619	2.42E-04	686	2.60E-05	753	3.00E-06
419	1.16E-05	486	6.28E-05	553	1.93E-04	620	2.36E-04	687	2.52E-05	754	3.20E-06
420	1.33E-05	487	6.42E-05	554	1.94E-04	621	2.28E-04	688	2.44E-05	755	2.90E-06
421	1.43E-05	488	6.71E-05	555	1.95E-04	622	2.22E-04	689	2.36E-05	756	2.80E-06
422	1.57E-05	489	6.88E-05	556	1.96E-04	623	2.26E-04	690	2.30E-05	757	2.60E-06
423	1.76E-05	490	7.17E-05	557	1.98E-04	624	2.34E-04	691	2.23E-05	758	2.60E-06
424	1.93E-05	491	7.46E-05	558	1.99E-04	625	2.39E-04	692	2.16E-05	759	2.60E-06
425	2.15E-05	492	7.74E-05	559	2.00E-04	626	2.44E-04	693	2.08E-05	760	2.40E-06
426	2.38E-05	493	8.08E-05	560	2.01E-04	627	2.48E-04	694	2.02E-05	761	2.60E-06
427	2.61E-05	494	8.41E-05	561	2.03E-04	628	2.84E-04	695	1.95E-05	762	2.40E-06
428	2.91E-05	495	8.75E-05	562	2.04E-04	629	4.62E-04	696	1.89E-05	763	2.40E-06
429	3.20E-05	496	9.07E-05	563	2.05E-04	630	8.49E-04	697	1.84E-05	764	2.30E-06
430	3.54E-05	497	9.42E-05	564	2.06E-04	631	9.74E-04	698	1.77E-05	765	2.20E-06
431	3.82E-05	498	9.71E-05	565	2.07E-04	632	6.57E-04	699	1.72E-05	766	2.10E-06
432	4.20E-05	499	1.02E-04	566	2.10E-04	633	4.17E-04	700	1.65E-05	767	2.00E-06
433	4.54E-05	500	1.05E-04	567	2.10E-04	634	5.49E-04	701	1.63E-05	768	1.80E-06
434	4.94E-05	501	1.08E-04	568	2.11E-04	635	7.06E-04	702	1.55E-05	769	1.80E-06
435	5.36E-05	502	1.12E-04	569	2.12E-04	636	5.04E-04	703	1.52E-05	770	1.90E-06
436	5.89E-05	503	1.15E-04	570	2.14E-04	637	2.73E-04	704	1.47E-05	771	1.80E-06
437	6.49E-05	504	1.18E-04	571	2.14E-04	638	1.86E-04	705	1.45E-05	772	1.80E-06
438	7.04E-05	505	1.21E-04	572	2.14E-04	639	1.53E-04	706	1.38E-05	773	1.70E-06
439	7.87E-05	506	1.24E-04	573	2.15E-04	640	1.39E-04	707	1.30E-05	774	1.80E-06
440	8.70E-05	507	1.28E-04	574	2.17E-04	641	1.29E-04	708	1.28E-05	775	1.60E-06
441	9.48E-05	508	1.30E-04	575	2.17E-04	642	1.24E-04	709	1.25E-05	776	1.60E-06
442	1.04E-04	509	1.34E-04	576	2.17E-04	643	1.20E-04	710	1.20E-05	777	1.60E-06
443	1.14E-04	510	1.35E-04	577	2.18E-04	644	1.17E-04	711	1.15E-05	778	1.60E-06
444	1.23E-04	511	1.37E-04	578	2.18E-04	645	1.20E-04	712	1.14E-05	779	1.60E-06
445	1.34E-04	512	1.39E-04	579	2.18E-04	646	1.61E-04	713	1.10E-05	780	1.60E-06
446	1.42E-04	513	1.41E-04	580	2.18E-04	647	2.41E-04	714	1.05E-05	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

Model No.	TKBEAM2B @22W3000K	Sample ID	250903025-S1
Operate time (Min.)	30	Stabilization time (Min.)	60
Temperature (°C)	25.0	Humidity (%RH)	40.8

Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using a type C goniophotometer and software.</p> <p>The ambient temperature shall be maintained at <math>25 \pm 1^\circ\text{C}</math>, measured at a point not more than 1 m from the sample and at the same height as the sample.</p> <p>The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within <math>\pm 0.2</math> percent under load.</p> <p>The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at <math>1.0^\circ</math> vertical intervals and <math>15^\circ</math> horizontal intervals.</p>

#### Test Conditions

Condition	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
WORST CASE	120.0	60	0.199	23.7	0.991
NON-WORST CASE	N/A	N/A	N/A	N/A	N/A

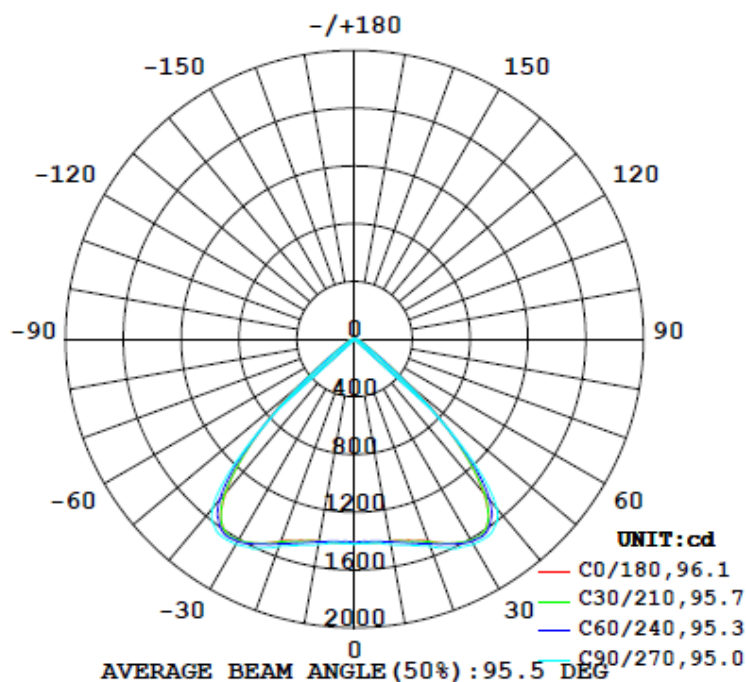
#### Test Result

Flux (lm)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)	Zonal Lumen Requirement
	C0-180	C90-270	C0-180	C90-270		(0°-90°)
3330	95.2	109.2	70.2	93.2	140.5	99.4%

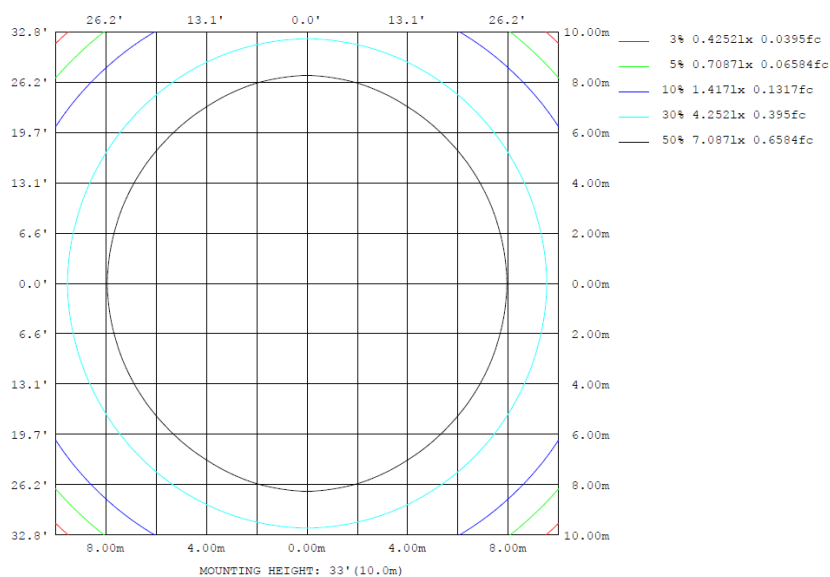
## 4.2 Goniophotometer Test

### Lighting Distribution Curve

#### LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



### Isolux Plot



## 4.2 Goniophotometer Test

### Zonal Lumen Summary

y	C0	C45	C90	C135	C180	C225	C270	C315	y	zone	total	lum, lamp
10	1423	1424	1442	1424	1423	1424	1442	1424	0- 10	135.3	135.3	4.06,4.06
20	1492	1507	1528	1507	1492	1507	1528	1507	10- 20	414.8	550.1	16.5,16.5
30	1616	1611	1643	1611	1616	1611	1643	1611	20- 30	726.2	1276	38.3,38.3
40	1393	1413	1532	1413	1393	1413	1532	1413	30- 40	990.7	2267	68.1,68.1
50	511.7	474.8	411.8	474.8	511.7	474.8	411.8	474.8	40- 50	756.3	3023	90.8,90.8
60	102.2	89.52	62.72	89.52	102.2	89.52	62.72	89.52	50- 60	183.8	3207	96.3,96.3
70	49.24	41.54	31.27	41.54	49.24	41.54	31.27	41.54	60- 70	57.96	3265	98.1,98.1
80	15.37	20.13	19.41	20.13	15.37	20.13	19.41	20.13	70- 80	30.59	3296	99,99
90	2.531	9.530	10.65	9.530	2.531	9.530	10.65	9.530	80- 90	14.05	3310	99.4,99.4
100	1.939	4.099	8.979	4.099	1.939	4.099	8.979	4.099	90-100	5.900	3316	99.6,99.6
110	1.648	1.146	4.023	1.146	1.648	1.146	4.023	1.146	100-110	2.889	3319	99.7,99.7
120	2.996	1.048	0.8609	1.048	2.996	1.048	0.8609	1.048	110-120	1.459	3320	99.7,99.7
130	5.994	1.329	1.051	1.329	5.994	1.329	1.051	1.329	120-130	1.308	3321	99.7,99.7
140	7.943	2.573	2.483	2.573	7.943	2.573	2.483	2.573	130-140	1.909	3323	99.8,99.8
150	8.822	3.522	3.059	3.522	8.822	3.522	3.059	3.522	140-150	2.413	3326	99.9,99.9
160	8.725	3.430	3.059	3.430	8.725	3.430	3.059	3.430	150-160	1.911	3328	99.9,99.9
170	12.89	5.424	4.493	5.424	12.89	5.424	4.493	5.424	160-170	1.449	3329	100,100
180	13.76	5.717	5.066	5.717	13.76	5.717	5.066	5.717	170-180	0.6469	3330	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

	Zonal (lm)		Total (lm)	Percent
0-10	135.31	0-10	135.31	4.06%
10-20	414.80	0-20	550.11	16.52%
20-30	726.17	0-30	1276.28	38.34%
30-40	990.71	0-40	2266.99	68.10%
40-50	756.33	0-50	3023.32	90.82%
50-60	183.81	0-60	3207.13	96.34%
60-70	57.96	0-70	3265.09	98.08%
70-80	30.59	0-80	3295.68	99.00%
80-90	14.05	0-90	3309.73	99.42%
90-100	5.90	0-100	3315.63	99.60%
100-110	2.89	0-110	3318.52	99.69%
110-120	1.46	0-120	3319.98	99.73%
120-130	1.31	0-130	3321.29	99.77%
130-140	1.91	0-140	3323.20	99.83%
140-150	2.41	0-150	3325.61	99.90%
150-160	1.91	0-160	3327.52	99.96%
160-170	1.45	0-170	3328.97	100.00%
170-180	0.65	0-180	3329.62	100.02%

## 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	1415	1417	1416	1411	1413	1415	1419	1415	1413	1411	1416	1417	1415	1417	1416	1411	1413	1415	1419
5	1417	1412	1416	1411	1405	1415	1419	1415	1405	1411	1416	1412	1417	1412	1416	1411	1405	1415	1419
10	1423	1413	1424	1424	1426	1435	1442	1435	1426	1424	1424	1413	1423	1413	1424	1424	1426	1435	1442
15	1441	1437	1450	1455	1464	1469	1479	1469	1464	1455	1450	1437	1441	1437	1450	1455	1464	1469	1479
20	1492	1491	1495	1507	1509	1520	1528	1520	1509	1507	1495	1491	1492	1491	1495	1507	1509	1520	1528
25	1563	1554	1561	1563	1568	1578	1600	1578	1568	1563	1561	1554	1563	1554	1561	1563	1568	1578	1600
30	1616	1605	1611	1611	1618	1625	1643	1625	1618	1611	1611	1605	1616	1605	1611	1611	1618	1625	1643
35	1592	1596	1592	1607	1610	1631	1645	1631	1610	1607	1592	1596	1592	1596	1592	1607	1610	1631	1645
40	1393	1388	1399	1413	1456	1507	1532	1507	1456	1413	1399	1388	1393	1388	1399	1413	1456	1507	1532
45	1002	990	997	1006	1021	1043	1054	1043	1021	1006	997	990	1002	990	997	1006	1021	1043	1054
50	512	503	494	475	462	423	412	423	462	475	494	503	512	503	494	475	462	423	412
55	194	195	187	177	167	148	136	148	167	177	187	195	194	195	187	177	167	148	136
60	102	104	96.2	89.5	79.9	68.9	62.7	68.9	79.9	89.5	96.2	104	102	104	96.2	89.5	79.9	68.9	62.7
65	70.2	68.4	63.4	58.1	49.6	43.0	39.9	43.0	49.6	58.1	63.4	68.4	70.2	68.4	63.4	58.1	49.6	43.0	39.9
70	49.2	49.2	46.4	41.5	35.5	31.1	31.3	31.1	35.5	41.5	46.4	49.2	49.2	49.2	46.4	41.5	35.5	31.1	31.3
75	36.6	31.4	31.0	29.6	26.1	22.4	23.4	22.4	26.1	29.6	31.0	31.4	36.6	31.4	31.0	29.6	26.1	22.4	23.4
80	15.4	17.5	19.2	20.1	22.5	20.0	19.4	20.0	22.5	20.1	19.2	17.5	15.4	17.5	19.2	20.1	22.5	20.0	19.4
85	8.38	10.2	13.0	12.8	13.3	12.3	17.0	12.3	13.3	12.8	13.0	10.2	8.38	10.2	13.0	12.8	13.3	12.3	17.0
90	2.53	5.11	11.2	9.53	7.94	7.77	10.7	7.77	7.94	9.53	11.2	5.11	2.53	5.11	11.2	9.53	7.94	7.77	10.7
95	2.13	2.60	4.69	5.05	5.34	6.21	9.47	6.21	5.34	5.05	4.69	2.60	2.13	2.60	4.69	5.05	5.34	6.21	9.47
100	1.94	1.73	2.40	4.10	5.62	7.27	8.98	7.27	5.62	4.10	2.40	1.73	1.94	1.73	2.40	4.10	5.62	7.27	8.98
105	1.75	1.54	1.44	1.62	2.58	4.03	5.45	4.03	2.58	1.62	1.44	1.54	1.75	1.54	1.44	1.62	2.58	4.03	5.45
110	1.65	1.54	1.34	1.15	1.62	2.88	4.02	2.88	1.62	1.15	1.34	1.54	1.65	1.54	1.34	1.15	1.62	2.88	4.02
115	1.65	1.54	1.24	1.05	1.05	1.54	2.12	1.54	1.05	1.05	1.24	1.54	1.65	1.54	1.24	1.05	1.05	1.54	2.12
120	3.00	1.54	1.24	1.05	0.95	0.96	0.86	0.96	0.95	1.05	1.24	1.54	3.00	1.54	1.24	1.05	0.95	0.96	0.86
125	4.56	1.54	1.24	1.14	1.05	0.96	0.86	0.96	1.05	1.14	1.24	1.54	4.56	1.54	1.24	1.14	1.05	0.96	0.86
130	5.99	2.12	1.53	1.33	1.14	1.05	1.05	1.14	1.33	1.53	2.12	5.99	2.12	1.53	1.33	1.14	1.05	1.05	1.14
135	7.17	2.79	2.20	1.81	1.71	1.72	1.53	1.72	1.71	1.81	2.20	2.79	7.17	2.79	2.20	1.81	1.71	1.72	1.53
140	7.94	3.84	3.05	2.57	2.57	2.58	2.48	2.58	2.57	2.57	3.05	3.84	7.94	3.84	3.05	2.57	2.57	2.58	2.48
145	8.92	4.81	3.73	3.14	3.24	3.06	2.96	3.06	3.24	3.14	3.73	4.81	8.92	4.81	3.73	3.14	3.24	3.06	2.96
150	8.82	5.09	4.02	3.52	3.33	3.16	3.06	3.16	3.33	3.52	4.02	5.09	8.82	5.09	4.02	3.52	3.33	3.16	3.06
155	8.82	5.10	4.02	3.43	3.33	3.16	3.06	3.16	3.33	3.43	4.02	5.10	8.82	5.10	4.02	3.43	3.33	3.16	3.06
160	8.73	4.71	3.82	3.43	3.33	3.16	3.06	3.16	3.33	3.43	3.82	4.71	8.73	4.71	3.82	3.43	3.33	3.16	3.06
165	11.6	7.00	5.06	4.29	4.19	3.92	3.92	3.92	4.19	4.29	5.06	7.00	11.6	7.00	5.06	4.29	4.19	3.92	3.92
170	12.9	8.74	6.31	5.42	4.85	4.68	4.49	4.68	4.85	5.42	6.31	8.74	12.9	8.74	6.31	5.42	4.85	4.68	4.49
175	13.5	9.14	6.97	5.72	5.24	5.07	5.07	5.07	5.24	5.72	6.97	9.14	13.5	9.14	6.97	5.72	5.24	5.07	5.07
180	13.8	9.14	6.98	5.72	5.43	5.07	5.07	5.07	5.43	5.72	6.98	9.14	13.8	9.14	6.98	5.72	5.43	5.07	5.07

Table--2

UNIT: cd

C (DEG) γ (DEG)	285	300	315	330	345														
0	1415	1413	1411	1416	1417														
5	1415	1405	1411	1416	1412														
10	1435	1426	1424	1424	1413														
15	1469	1464	1455	1450	1437														
20	1520	1509	1507	1495	1491														
25	1578	1568	1563	1561	1554														
30	1625	1618	1611	1611	1605														
35	1631	1610	1607	1592	1596														
40	1507	1456	1413	1399	1388														
45	1043	1021	1006	997	990														
50	423	462	475	494	503														
55	148	167	177	187	195														
60	68.9	79.9	89.5	96.2	104														
65	43.0	49.6	58.1	63.4	68.4														
70	31.1	35.5	41.5	46.4	49.2														
75	22.4	26.1	29.6	31.0	31.4														
80	20.0	22.5	20.1	19.2	17.5														
85	12.3	13.3	12.8	13.0	10.2														
90	7.77	7.94	9.53	11.2	5.11														
95	6.21	5.34	5.05	4.69	2.60														
100	7.27	5.62	4.10	2.40	1.73														
105	4.03	2.58	1.62	1.44	1.54														
110	2.88	1.62	1.15	1.34	1.54														
115	1.54	1.05	1.05	1.24	1.54														
120	0.96	0.95	1.05	1.24	1.54														
125	0.96	1.05	1.14	1.24	1.54														
130	1.05	1.14	1.33	1.53	2.12														
135	1.72	1.71	1.81	2.20	2.79														
140	2.58	2.57	2.57	3.05	3.84														
145	3.06	3.24	3.14	3.73	4.81														
150	3.16	3.33	3.52	4.02	5.09														
155	3.16	3.33	3.43	4.02	5.10														
160	3.16	3.33	3.43	3.82	4.71														
165	3.92	4.19	4.29	5.06	7.00														
170	4.68	4.85	5.42	6.31	8.74														
175	5.07	5.24	5.72	6.97	9.14														
180	5.07	5.43	5.72	6.98	9.14														

## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	TKBEAM2B @22W3000K	<b>Sample ID</b>	250903025-S1
<b>Temperature (°C)</b>	25.4	<b>Humidity (%RH)</b>	41.0

<b>Test Method</b>
<p>The samples were tested according to the and ANSI C82.77: 2002 and ANSI C82.77-10:2020</p> <p>The total harmonic distortion shall be measured to the 40th order.</p> <p>The ambient temperature shall be maintained at 25±1°C. The sample measurements were made using a digital power meter and power supply. The sample was operated at rated voltage and was stabilized before measurement. The total harmonic distortion was calculated.</p>

### Test Results

<b>Voltage (Vac)</b>	<b>Frequency (Hz)</b>	<b>Current (A)</b>	<b>Power (W)</b>	<b>Power Factor</b>	<b>iTHD(%)</b>
120.0	60	0.199	23.7	0.991	9.79

## 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	2025-08-04	2026-08-03
NTC-F01-019	Temperature & Humidity Meter	2024-10-29	2025-10-28

\*\*\*\*\*End of Report\*\*\*\*\*