

## Photometric Test Report

### Relevant Standards

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

Prepared For

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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		3998
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	130.6
			95	110	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		30.6
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	9.56
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.993
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	3045±175	2982
			4 steps	3045±100	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		94.2
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		67
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		102
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		0.257
(Goniophotometer – Section 4.2)			Non-Worst Case		N/A
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		30.6
(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 @30W3000K	-	250903025-S1
2	Goniophotometer Test	2025-09-16	TKBEAM2B @30W3000K	-	250903025-S1
3	THD and PF Test	2025-09-16	TKBEAM2B @30W3000K	-	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 @30W3000K, 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

<b>Model No.</b>	TKBEAM2B @30W3000K	<b>Sample ID</b>	250903025-S1
<b>Operate time (Min.)</b>	10	<b>Stabilization time (Min.)</b>	60
<b>Temperature (°C)</b>	25.4	<b>Humidity (%RH)</b>	41.0

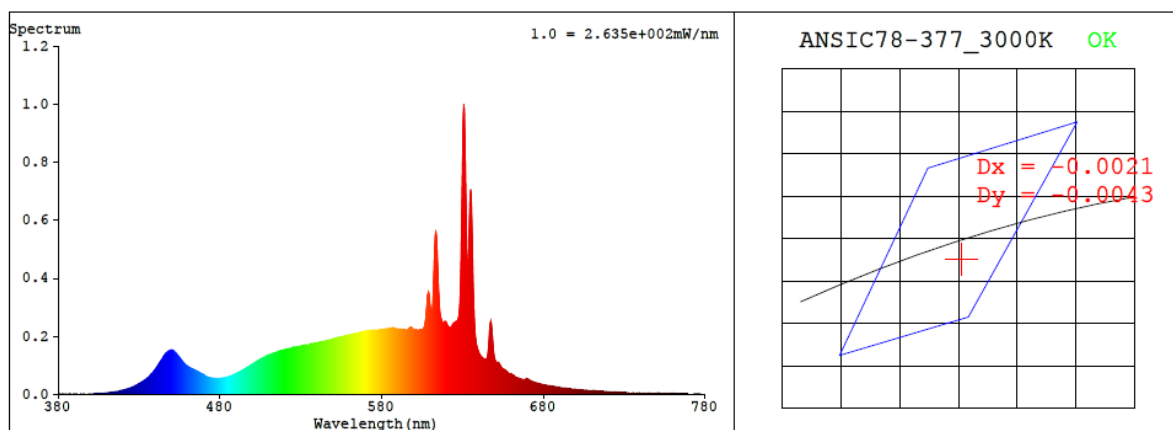
<b>Test Method</b>
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were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

<b>Voltage (Vac)</b>	<b>Frequency (Hz)</b>	<b>Current (A)</b>	<b>Power (W)</b>	<b>Power Factor</b>
120.0	60	0.257	30.6	0.993

<b>CCT (K)</b>	<b>CRI</b>	<b>R9</b>	<b>Duv</b>	<b>SDCM</b>	<b>Rf</b>	<b>Rg</b>	<b>IES Rcs,h1</b>
2982	94.2	67	-0.0015	2.7	91	102	-4%

#### 4.1 Integrating Sphere Test



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.4361$   $y = 0.4002$  /  $u' = 0.2517$   $v' = 0.5197$  ( $duv = -1.45e-03$ )

CCT= 2982K      Prcp WL:    Ld=583.4nm      Purity=51.0%

Peak WL: Lp=631nm FWHM: =3.7nm Ratio:R=25.3% G=72.1% B=2.6%

Render Index: Ra = 94.2 AvgR = 91.6 TM30:Rf=90 Rg=102

EEl: 0.10951 A++ Highest

R1 =97    R2 =96    R3 =94    R4 =95    R5 =96    R6 =96    R7 =93

R8 =87      R9 =67      R10=89      R11=95      R12=85      R13=96      R14=95      R15=93

## 4.1 Integrating Sphere Test

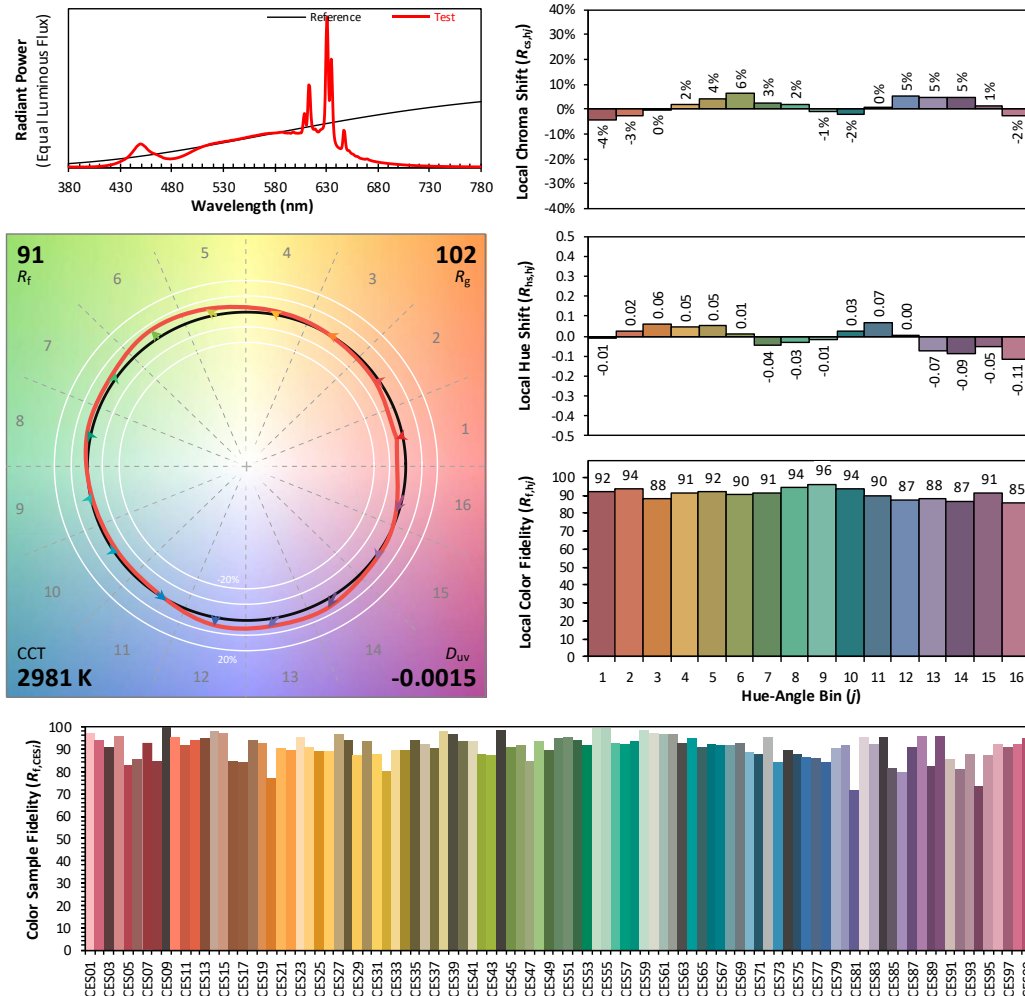
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/9/25

Model: TKBEAM2B @30W3000K



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

$x$  0.4361  
 $y$  0.4001  
 $u'$  0.2518  
 $v'$  0.5197

CIE 13.3-1995  
(CRI)

$R_a$  94  
 $R_g$  68



## 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	1.80E-06	447	1.42E-04	514	1.42E-04	581	2.24E-04	648	2.30E-04	715	1.07E-05
381	1.20E-06	448	1.48E-04	515	1.45E-04	582	2.24E-04	649	1.57E-04	716	1.05E-05
382	1.20E-06	449	1.51E-04	516	1.48E-04	583	2.25E-04	650	1.18E-04	717	9.90E-06
383	1.20E-06	450	1.51E-04	517	1.49E-04	584	2.26E-04	651	1.09E-04	718	9.70E-06
384	5.00E-07	451	1.48E-04	518	1.51E-04	585	2.27E-04	652	1.09E-04	719	9.60E-06
385	9.00E-07	452	1.45E-04	519	1.52E-04	586	2.28E-04	653	1.01E-04	720	9.20E-06
386	8.00E-07	453	1.38E-04	520	1.53E-04	587	2.29E-04	654	9.26E-05	721	8.90E-06
387	1.30E-06	454	1.33E-04	521	1.56E-04	588	2.28E-04	655	8.78E-05	722	8.60E-06
388	1.00E-06	455	1.26E-04	522	1.57E-04	589	2.26E-04	656	8.47E-05	723	8.30E-06
389	9.00E-07	456	1.18E-04	523	1.57E-04	590	2.24E-04	657	8.06E-05	724	7.90E-06
390	0.00E+00	457	1.11E-04	524	1.59E-04	591	2.24E-04	658	7.41E-05	725	7.90E-06
391	3.00E-07	458	1.06E-04	525	1.60E-04	592	2.23E-04	659	7.08E-05	726	7.80E-06
392	1.00E-06	459	1.01E-04	526	1.63E-04	593	2.23E-04	660	7.01E-05	727	7.50E-06
393	9.00E-07	460	9.61E-05	527	1.63E-04	594	2.24E-04	661	6.73E-05	728	7.10E-06
394	1.20E-06	461	9.25E-05	528	1.63E-04	595	2.22E-04	662	6.25E-05	729	6.90E-06
395	7.00E-07	462	8.94E-05	529	1.65E-04	596	2.22E-04	663	5.82E-05	730	6.70E-06
396	1.10E-06	463	8.75E-05	530	1.66E-04	597	2.27E-04	664	5.63E-05	731	6.50E-06
397	1.40E-06	464	8.44E-05	531	1.68E-04	598	2.31E-04	665	5.47E-05	732	6.20E-06
398	1.50E-06	465	8.18E-05	532	1.69E-04	599	2.27E-04	666	5.30E-05	733	6.10E-06
399	1.60E-06	466	7.91E-05	533	1.70E-04	600	2.23E-04	667	5.20E-05	734	5.90E-06
400	2.00E-06	467	7.60E-05	534	1.70E-04	601	2.23E-04	668	5.14E-05	735	5.90E-06
401	1.70E-06	468	7.23E-05	535	1.70E-04	602	2.21E-04	669	5.26E-05	736	5.50E-06
402	2.20E-06	469	6.92E-05	536	1.73E-04	603	2.22E-04	670	5.35E-05	737	5.40E-06
403	2.30E-06	470	6.74E-05	537	1.75E-04	604	2.23E-04	671	5.01E-05	738	5.20E-06
404	2.50E-06	471	6.21E-05	538	1.76E-04	605	2.23E-04	672	4.63E-05	739	5.20E-06
405	2.90E-06	472	5.97E-05	539	1.77E-04	606	2.26E-04	673	4.40E-05	740	5.00E-06
406	3.10E-06	473	5.77E-05	540	1.76E-04	607	2.54E-04	674	4.18E-05	741	4.80E-06
407	3.90E-06	474	5.65E-05	541	1.78E-04	608	3.20E-04	675	3.99E-05	742	4.70E-06
408	4.10E-06	475	5.52E-05	542	1.80E-04	609	3.51E-04	676	3.81E-05	743	4.40E-06
409	4.70E-06	476	5.46E-05	543	1.81E-04	610	2.99E-04	677	3.73E-05	744	4.40E-06
410	5.10E-06	477	5.43E-05	544	1.82E-04	611	2.77E-04	678	3.57E-05	745	4.10E-06
411	5.60E-06	478	5.36E-05	545	1.84E-04	612	3.75E-04	679	3.43E-05	746	4.10E-06
412	6.30E-06	479	5.38E-05	546	1.85E-04	613	5.37E-04	680	3.32E-05	747	3.90E-06
413	7.00E-06	480	5.47E-05	547	1.87E-04	614	5.25E-04	681	3.23E-05	748	3.90E-06
414	7.60E-06	481	5.53E-05	548	1.87E-04	615	3.79E-04	682	3.09E-05	749	3.40E-06
415	8.50E-06	482	5.62E-05	549	1.89E-04	616	2.83E-04	683	2.97E-05	750	3.70E-06
416	9.70E-06	483	5.69E-05	550	1.90E-04	617	2.52E-04	684	2.88E-05	751	3.70E-06
417	1.03E-05	484	5.84E-05	551	1.91E-04	618	2.47E-04	685	2.83E-05	752	3.70E-06
418	1.20E-05	485	6.02E-05	552	1.94E-04	619	2.51E-04	686	2.74E-05	753	3.40E-06
419	1.30E-05	486	6.20E-05	553	1.95E-04	620	2.45E-04	687	2.66E-05	754	3.40E-06
420	1.45E-05	487	6.37E-05	554	1.96E-04	621	2.34E-04	688	2.54E-05	755	3.30E-06
421	1.57E-05	488	6.64E-05	555	1.98E-04	622	2.30E-04	689	2.48E-05	756	3.10E-06
422	1.70E-05	489	6.88E-05	556	1.99E-04	623	2.32E-04	690	2.41E-05	757	3.00E-06
423	1.88E-05	490	7.13E-05	557	2.01E-04	624	2.41E-04	691	2.31E-05	758	2.90E-06
424	2.05E-05	491	7.41E-05	558	2.02E-04	625	2.46E-04	692	2.23E-05	759	2.60E-06
425	2.28E-05	492	7.66E-05	559	2.03E-04	626	2.51E-04	693	2.18E-05	760	2.70E-06
426	2.54E-05	493	7.98E-05	560	2.05E-04	627	2.56E-04	694	2.12E-05	761	2.60E-06
427	2.74E-05	494	8.32E-05	561	2.06E-04	628	2.90E-04	695	2.04E-05	762	2.50E-06
428	3.11E-05	495	8.64E-05	562	2.06E-04	629	4.58E-04	696	1.97E-05	763	2.50E-06
429	3.33E-05	496	8.97E-05	563	2.09E-04	630	8.35E-04	697	1.91E-05	764	2.30E-06
430	3.66E-05	497	9.31E-05	564	2.09E-04	631	9.84E-04	698	1.85E-05	765	2.30E-06
431	4.03E-05	498	9.66E-05	565	2.11E-04	632	6.90E-04	699	1.79E-05	766	2.20E-06
432	4.31E-05	499	1.00E-04	566	2.12E-04	633	4.39E-04	700	1.74E-05	767	2.10E-06
433	4.72E-05	500	1.04E-04	567	2.14E-04	634	5.49E-04	701	1.68E-05	768	2.30E-06
434	5.02E-05	501	1.07E-04	568	2.15E-04	635	7.07E-04	702	1.63E-05	769	2.20E-06
435	5.46E-05	502	1.11E-04	569	2.16E-04	636	5.23E-04	703	1.61E-05	770	1.90E-06
436	5.94E-05	503	1.14E-04	570	2.18E-04	637	2.92E-04	704	1.52E-05	771	1.80E-06
437	6.51E-05	504	1.17E-04	571	2.19E-04	638	1.96E-04	705	1.47E-05	772	1.90E-06
438	7.12E-05	505	1.21E-04	572	2.19E-04	639	1.60E-04	706	1.43E-05	773	1.90E-06
439	7.79E-05	506	1.23E-04	573	2.20E-04	640	1.43E-04	707	1.41E-05	774	1.80E-06
440	8.59E-05	507	1.27E-04	574	2.21E-04	641	1.33E-04	708	1.32E-05	775	1.90E-06
441	9.34E-05	508	1.28E-04	575	2.21E-04	642	1.27E-04	709	1.28E-05	776	1.80E-06
442	1.02E-04	509	1.33E-04	576	2.21E-04	643	1.23E-04	710	1.26E-05	777	1.70E-06
443	1.11E-04	510	1.34E-04	577	2.22E-04	644	1.21E-04	711	1.22E-05	778	1.60E-06
444	1.19E-04	511	1.36E-04	578	2.22E-04	645	1.24E-04	712	1.19E-05	779	1.60E-06
445	1.28E-04	512	1.39E-04	579	2.23E-04	646	1.62E-04	713	1.13E-05	780	1.60E-06
446	1.36E-04	513	1.41E-04	580	2.23E-04	647	2.40E-04	714	1.10E-05	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

Model No.	TKBEAM2B @30W3000K	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	0.257	30.6	0.993
NON-WORST CASE	N/A	N/A	N/A	N/A	N/A

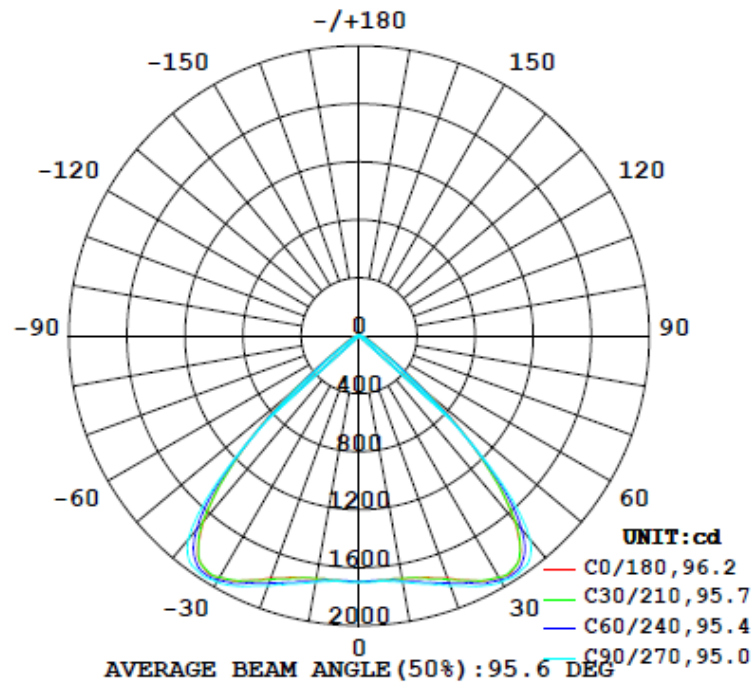
#### Test Result

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°)
3998	95.4	109.3	70.4	93.2	130.6	99.4%

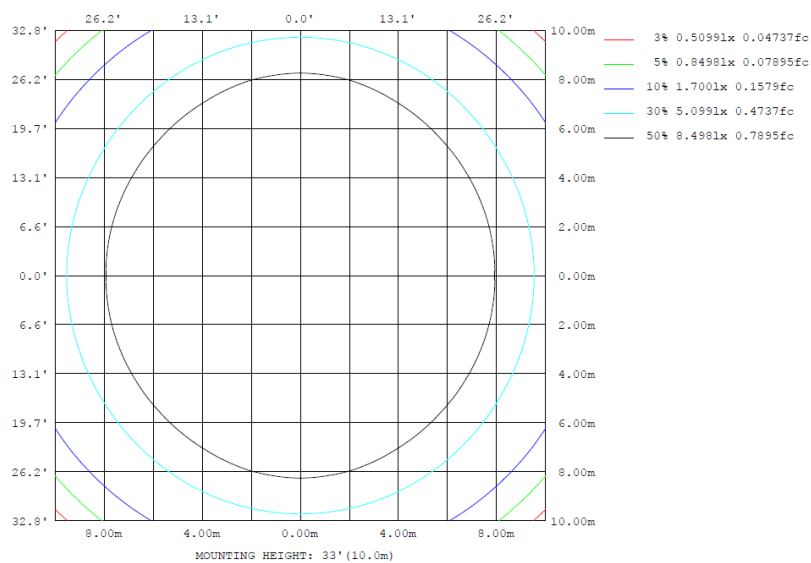
## 4.2 Goniophotometer Test

### Lighting Distribution Curve

#### LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



### Isolux Plot



## 4.2 Goniophotometer Test

### Zonal Lumen Summary

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	%lum, lamp
10	1702	1710	1723	1710	1702	1710	1723	1710	0- 10	162.3	162.3	4.06, 4.06
20	1779	1800	1835	1800	1779	1800	1835	1800	10- 20	497.3	659.7	16.5, 16.5
30	1929	1932	1961	1932	1929	1932	1961	1932	20- 30	870.3	1530	38.3, 38.3
40	1670	1699	1834	1699	1670	1699	1834	1699	30- 40	1189	2719	68, 68
50	617.5	572.2	492.6	572.2	617.5	572.2	492.6	572.2	40- 50	910.0	3629	90.8, 90.8
60	122.7	107.5	75.56	107.5	122.7	107.5	75.56	107.5	50- 60	221.6	3851	96.3, 96.3
70	59.05	50.01	37.23	50.01	59.05	50.01	37.23	50.01	60- 70	69.60	3920	98.1, 98.1
80	17.87	23.86	23.17	23.86	17.87	23.86	23.17	23.86	70- 80	36.52	3957	99, 99
90	2.907	11.30	12.69	11.30	2.907	11.30	12.69	11.30	80- 90	16.78	3974	99.4, 99.4
100	2.315	5.038	10.92	5.038	2.315	5.038	10.92	5.038	90-100	7.053	3981	99.6, 99.6
110	1.929	1.424	4.659	1.424	1.929	1.424	4.659	1.424	100-110	3.431	3984	99.7, 99.7
120	3.567	1.234	1.047	1.234	3.567	1.234	1.047	1.234	110-120	1.709	3986	99.7, 99.7
130	7.135	1.612	1.328	1.612	7.135	1.612	1.328	1.612	120-130	1.550	3987	99.7, 99.7
140	9.548	3.131	2.848	3.131	9.548	3.131	2.848	3.131	130-140	2.340	3990	99.8, 99.8
150	10.61	4.083	3.797	4.083	10.61	4.083	3.797	4.083	140-150	2.929	3993	99.9, 99.9
160	10.51	4.083	3.894	4.083	10.51	4.083	3.894	4.083	150-160	2.327	3995	99.9, 99.9
170	15.52	6.452	5.505	6.452	15.52	6.452	5.505	6.452	160-170	1.762	3997	100, 100
180	16.30	7.122	6.173	7.122	16.30	7.122	6.173	7.122	170-180	0.7872	3998	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	162.33	0-10	162.33	4.06%
10-20	497.33	0-20	659.66	16.50%
20-30	870.26	0-30	1529.92	38.28%
30-40	1189.19	0-40	2719.11	68.03%
40-50	910.01	0-50	3629.12	90.80%
50-60	221.63	0-60	3850.75	96.35%
60-70	69.60	0-70	3920.35	98.09%
70-80	36.52	0-80	3956.87	99.00%
80-90	16.78	0-90	3973.65	99.42%
90-100	7.05	0-100	3980.70	99.60%
100-110	3.43	0-110	3984.13	99.68%
110-120	1.71	0-120	3985.84	99.73%
120-130	1.55	0-130	3987.39	99.77%
130-140	2.34	0-140	3989.73	99.82%
140-150	2.93	0-150	3992.66	99.90%
150-160	2.33	0-160	3994.99	99.96%
160-170	1.76	0-170	3996.75	100.00%
170-180	0.79	0-180	3997.54	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	1694	1699	1696	1695	1697	1698	1701	1698	1697	1695	1696	1699	1694	1699	1696	1695	1697	1698	1701
5	1695	1698	1692	1694	1696	1697	1698	1697	1696	1694	1692	1698	1695	1698	1692	1694	1696	1697	1698
10	1702	1695	1700	1710	1720	1718	1723	1718	1720	1710	1700	1695	1702	1695	1700	1710	1720	1718	1723
15	1725	1728	1730	1739	1762	1767	1770	1767	1762	1739	1730	1728	1725	1728	1730	1739	1762	1767	1770
20	1779	1790	1789	1800	1817	1825	1835	1825	1817	1800	1789	1790	1779	1790	1789	1800	1817	1825	1835
25	1863	1862	1864	1872	1885	1898	1908	1898	1885	1872	1864	1862	1863	1862	1864	1872	1885	1898	1908
30	1929	1920	1923	1932	1944	1955	1961	1955	1944	1932	1923	1920	1929	1920	1923	1932	1944	1955	1961
35	1911	1913	1911	1922	1940	1961	1964	1961	1940	1922	1911	1913	1911	1922	1940	1961	1964	1961	1964
40	1670	1669	1679	1699	1745	1811	1834	1811	1745	1699	1679	1669	1670	1669	1679	1699	1745	1811	1834
45	1200	1198	1196	1209	1234	1256	1264	1256	1234	1209	1196	1198	1200	1198	1196	1209	1234	1256	1264
50	618	611	594	572	559	513	493	513	559	572	594	611	618	611	594	572	559	513	493
55	233	235	224	213	202	178	164	178	202	213	224	235	233	235	224	213	202	178	164
60	123	125	115	107	96.5	83.1	75.6	83.1	96.5	107	115	125	123	125	115	107	96.5	83.1	75.6
65	84.3	82.0	76.0	69.9	59.8	51.5	47.9	51.5	59.8	69.9	76.0	82.0	84.3	82.0	76.0	69.9	59.8	51.5	47.9
70	59.1	59.2	55.3	50.0	42.6	37.1	37.2	37.1	42.6	50.0	55.3	59.2	59.1	59.2	55.3	50.0	42.6	37.1	37.2
75	43.7	37.9	36.5	35.1	31.3	26.8	27.9	26.8	31.3	35.1	36.5	37.9	43.7	37.9	36.5	35.1	31.3	26.8	27.9
80	17.9	20.8	23.0	23.9	26.9	24.0	23.2	24.0	26.9	23.9	23.0	20.8	17.9	20.8	23.0	23.9	26.9	24.0	23.2
85	10.2	12.1	15.6	15.1	15.9	14.5	20.2	14.5	15.9	15.1	15.6	12.1	10.2	12.1	15.6	15.1	15.9	14.5	20.2
90	2.91	6.06	13.6	11.3	9.55	9.19	12.7	9.19	9.55	11.3	13.6	6.06	2.91	6.06	13.6	11.3	9.55	9.19	12.7
95	2.32	3.08	5.61	5.99	6.48	7.62	11.3	7.62	6.48	5.99	5.61	3.08	2.32	3.08	5.61	5.99	6.48	7.62	11.3
100	2.31	2.02	2.95	5.04	7.04	8.96	10.9	8.96	7.04	5.04	2.95	2.02	2.31	2.02	2.95	5.04	7.04	8.96	10.9
105	2.03	1.92	1.71	2.00	2.87	4.96	6.48	4.96	2.87	2.00	1.71	1.92	2.03	1.92	1.71	2.00	2.87	4.96	6.48
110	1.93	1.73	1.52	1.42	1.81	3.44	4.66	3.44	1.81	1.42	1.52	1.73	1.93	1.73	1.52	1.42	1.81	3.44	4.66
115	2.03	1.73	1.52	1.23	1.14	2.00	2.57	2.00	1.14	1.23	1.52	1.73	2.03	1.73	1.52	1.23	1.14	2.00	2.57
120	3.57	1.73	1.52	1.23	1.14	1.05	1.05	1.14	1.23	1.52	1.73	3.57	1.73	1.52	1.23	1.14	1.05	1.05	1.14
125	5.69	1.83	1.52	1.23	1.14	1.05	1.04	1.05	1.14	1.23	1.52	1.83	5.69	1.83	1.52	1.23	1.14	1.05	1.04
130	7.14	2.59	1.90	1.61	1.42	1.33	1.42	1.33	1.42	1.61	1.90	2.59	7.14	2.59	1.90	1.61	1.42	1.33	1.42
135	8.58	3.55	2.76	2.37	2.28	2.28	2.08	2.28	2.28	2.37	2.76	3.55	8.58	3.55	2.76	2.37	2.28	2.28	2.08
140	9.55	4.51	3.70	3.13	3.05	3.05	2.85	3.05	3.05	3.13	3.70	4.51	9.55	4.51	3.70	3.13	3.05	3.05	2.85
145	10.4	5.86	4.56	3.89	3.90	3.81	3.61	3.81	3.90	3.89	4.56	5.86	10.4	5.86	4.56	3.89	3.90	3.81	3.61
150	10.6	6.05	4.66	4.08	4.00	4.19	3.80	4.19	4.00	4.08	4.66	6.05	10.6	6.05	4.66	4.08	4.00	4.19	3.80
155	10.6	6.05	4.66	4.08	4.09	4.19	3.89	4.19	4.09	4.08	4.66	6.05	10.6	6.05	4.66	4.08	4.09	4.19	3.89
160	10.5	5.57	4.56	4.08	4.09	4.19	3.89	4.19	4.09	4.08	4.56	5.57	10.5	5.57	4.56	4.08	4.09	4.19	3.89
165	13.9	8.35	6.27	5.41	4.85	4.85	4.65	4.85	4.85	5.41	6.27	8.35	13.9	8.35	6.27	5.41	4.85	4.85	4.65
170	15.5	10.7	7.79	6.45	5.90	5.72	5.51	5.72	5.90	6.45	7.79	10.7	15.5	10.7	7.79	6.45	5.90	5.72	5.51
175	16.2	11.2	8.26	7.12	6.47	6.29	6.07	6.29	6.47	7.12	8.26	11.2	16.2	11.2	8.26	7.12	6.47	6.29	6.07
180	16.3	11.1	8.36	7.12	6.38	6.67	6.17	6.67	6.38	7.12	8.36	11.1	16.3	11.1	8.36	7.12	6.38	6.67	6.17

Table--2

UNIT: cd

C (DEG) γ (DEG)	285	300	315	330	345														
0	1698	1697	1695	1696	1699														
5	1697	1696	1694	1692	1698														
10	1718	1720	1710	1700	1695														
15	1767	1762	1739	1730	1728														
20	1825	1817	1800	1789	1790														
25	1898	1885	1872	1864	1862														
30	1955	1944	1932	1923	1920														
35	1961	1940	1922	1911	1913														
40	1811	1745	1699	1679	1669														
45	1256	1234	1209	1196	1198														
50	513	559	572	594	611														
55	178	202	213	224	235														
60	83.1	96.5	107	115	125														
65	51.5	59.8	69.9	76.0	82.0														
70	37.1	42.6	50.0	55.3	59.2														
75	26.8	31.3	35.1	36.5	37.9														
80	24.0	26.9	23.9	23.0	20.8														
85	14.5	15.9	15.1	15.6	12.1														
90	9.19	9.55	11.3	13.6	6.06														
95	7.62	6.48	5.99	5.61	3.08														
100	8.96	7.04	5.04	2.95	2.02														
105	4.96	2.87	2.00	1.71	1.92														
110	3.44	1.81	1.42	1.52	1.73														
115	2.00	1.14	1.23	1.52	1.73														
120	1.05	1.14	1.23	1.52	1.73														
125	1.05	1.14	1.23	1.52	1.83														
130	1.42	1.42	1.61	1.90	2.59														
135	2.28	2.28	2.37	2.76	3.55														
140	3.05	3.05	3.13	3.70	4.51														
145	3.81	3.90	3.89	4.56	5.86														
150	4.19	4.00	4.08	4.66	6.05														
155	4.19	4.09	4.08	4.66	6.05														
160	4.19	4.09	4.08	4.56	5.57														
165	4.85	4.85	5.41	6.27	8.35														
170	5.72	5.90	6.45	7.79	10.7														
175	6.29	6.47	7.12	8.26	11.2														
180	6.67	6.38	7.12	8.36	11.1														

## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	TKBEAM2B @30W3000K	<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	0.257	30.6	0.993	9.56

## 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\*\*\*\*\*