

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: 2025-09-25

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		2453
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	154.3
			95	110	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		15.9
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	10.35
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.985
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	3985±275	3930
			4 steps	3985±154	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		94.9
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		85
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		104
IES Rcs,h1 (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	-12%≤IES Rcs,h1≤+23%		-3%
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		0.135
(Goniophotometer – Section 4.2)			Non-Worst Case		N/A
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		15.9
(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 @15W4000K	-	250903025-S1
2	Goniophotometer Test	2025-09-16	TKBEAM2B @15W4000K	-	250903025-S1
3	THD and PF Test	2025-09-16	TKBEAM2B @15W4000K	-	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 @15W4000K, 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 @15W4000K	Sample ID	250903025-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

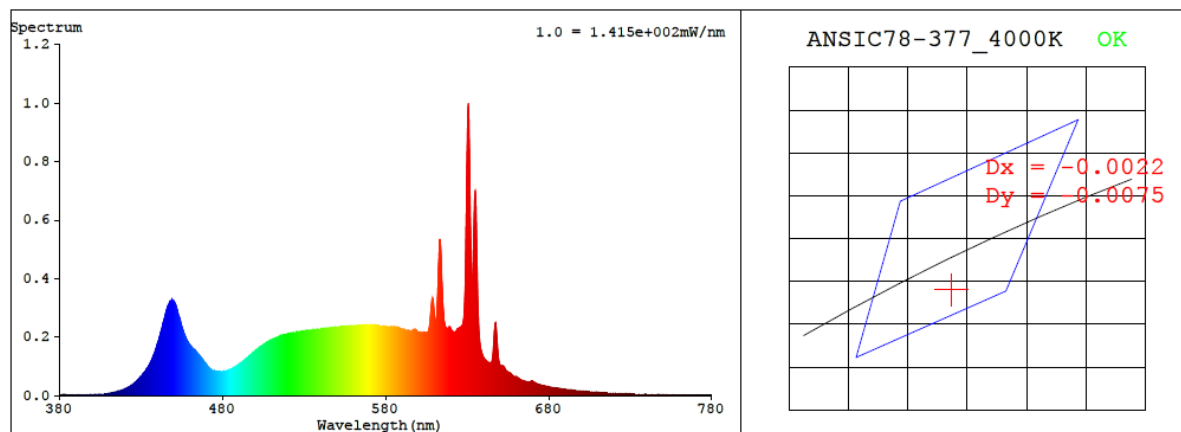
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made 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 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	0.135	15.9	0.985

CCT (K)	CRI	R9	Duv	SDCM	Rf	Rg	IES Rcs,h1
3930	94.9	85	-0.0029	4.2	91	104	-3%

4.1 Integrating Sphere Test



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.3813$ $y = 0.3712$ / $u' = 0.2280$ $v' = 0.4992$ ($duv = -2.91e-03$)

CCT= 3930K Prcp WL: $L_d = 581.0nm$ Purity=25.8%

Peak WL: $L_p = 631nm$ FWHM: $\approx 3.5nm$ Ratio: R=21.2% G=75.2% B=3.7%

Render Index: $R_a = 94.9$ AvgR = 92.7 TM30: $R_f = 91$ $R_g = 104$

EEL: 0.09324 A++ Highest

R1 =99 R2 =96 R3 =90 R4 =94 R5 =97 R6 =94 R7 =95

R8 =95 R9 =85 R10=87 R11=93 R12=78 R13=98 R14=93 R15=98

4.1 Integrating Sphere Test

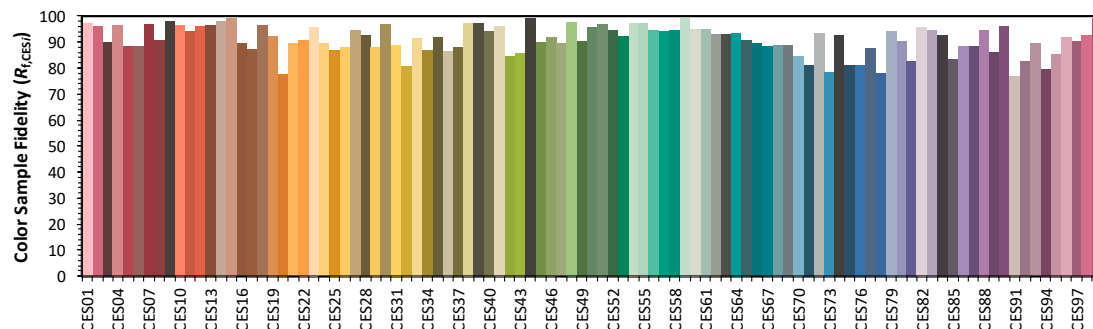
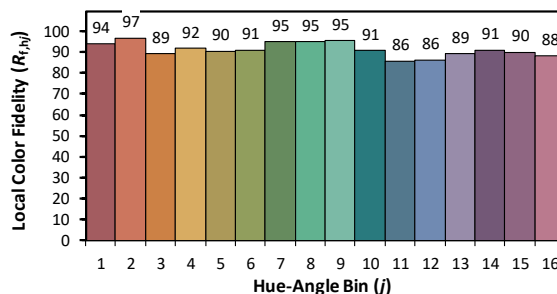
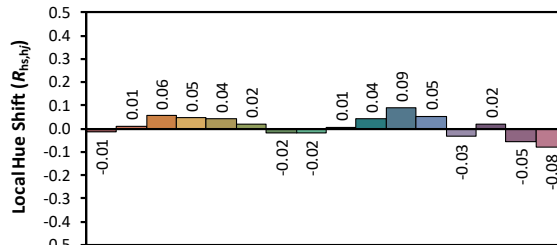
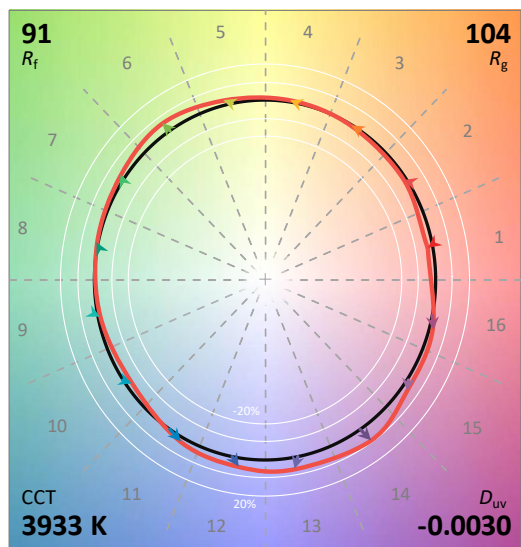
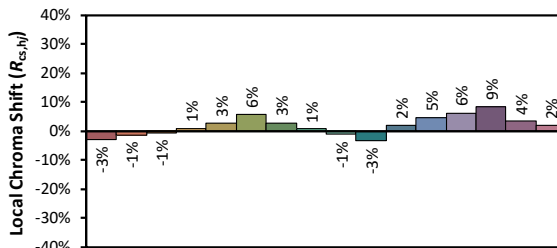
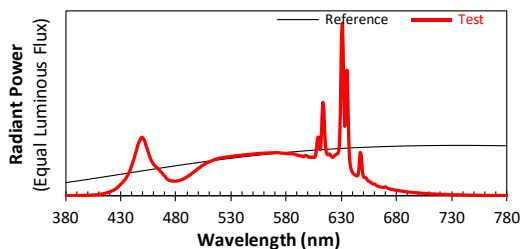
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/9/25

Model: TKBEAM2B @15W4000K



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

x 0.3813
 y 0.3710
 u' 0.2280
 v' 0.4992

CIE 13.3-1995
(CRI)
 R_a 95
 R_g 85

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	3.09E-04	514	2.00E-04	581	2.36E-04	648	2.20E-04	715	9.70E-06
381	1.30E-06	448	3.22E-04	515	2.03E-04	582	2.35E-04	649	1.41E-04	716	9.30E-06
382	5.00E-07	449	3.28E-04	516	2.05E-04	583	2.35E-04	650	1.07E-04	717	9.20E-06
383	1.80E-06	450	3.22E-04	517	2.06E-04	584	2.35E-04	651	1.02E-04	718	8.90E-06
384	1.50E-06	451	3.13E-04	518	2.08E-04	585	2.36E-04	652	1.01E-04	719	8.60E-06
385	8.00E-07	452	2.96E-04	519	2.10E-04	586	2.35E-04	653	9.39E-05	720	8.40E-06
386	1.20E-06	453	2.75E-04	520	2.11E-04	587	2.34E-04	654	8.46E-05	721	8.10E-06
387	1.40E-06	454	2.59E-04	521	2.13E-04	588	2.32E-04	655	8.07E-05	722	7.80E-06
388	6.00E-07	455	2.36E-04	522	2.14E-04	589	2.29E-04	656	7.78E-05	723	7.70E-06
389	1.50E-06	456	2.21E-04	523	2.14E-04	590	2.27E-04	657	7.34E-05	724	7.40E-06
390	8.00E-07	457	2.04E-04	524	2.16E-04	591	2.26E-04	658	6.80E-05	725	7.30E-06
391	1.60E-06	458	1.91E-04	525	2.16E-04	592	2.24E-04	659	6.54E-05	726	6.90E-06
392	2.10E-06	459	1.81E-04	526	2.18E-04	593	2.23E-04	660	6.53E-05	727	6.40E-06
393	1.60E-06	460	1.73E-04	527	2.18E-04	594	2.23E-04	661	6.12E-05	728	6.30E-06
394	1.70E-06	461	1.67E-04	528	2.19E-04	595	2.20E-04	662	5.71E-05	729	6.20E-06
395	2.00E-06	462	1.60E-04	529	2.20E-04	596	2.20E-04	663	5.35E-05	730	5.70E-06
396	2.40E-06	463	1.56E-04	530	2.20E-04	597	2.25E-04	664	5.17E-05	731	5.90E-06
397	2.30E-06	464	1.49E-04	531	2.21E-04	598	2.26E-04	665	4.97E-05	732	5.80E-06
398	2.30E-06	465	1.41E-04	532	2.22E-04	599	2.21E-04	666	4.84E-05	733	5.50E-06
399	3.40E-06	466	1.36E-04	533	2.23E-04	600	2.17E-04	667	4.75E-05	734	5.40E-06
400	2.70E-06	467	1.29E-04	534	2.24E-04	601	2.17E-04	668	4.72E-05	735	5.20E-06
401	3.10E-06	468	1.21E-04	535	2.24E-04	602	2.15E-04	669	4.88E-05	736	5.00E-06
402	3.90E-06	469	1.13E-04	536	2.25E-04	603	2.15E-04	670	4.96E-05	737	5.00E-06
403	3.80E-06	470	1.08E-04	537	2.26E-04	604	2.16E-04	671	4.61E-05	738	4.60E-06
404	4.30E-06	471	9.85E-05	538	2.27E-04	605	2.15E-04	672	4.24E-05	739	4.60E-06
405	4.70E-06	472	9.28E-05	539	2.26E-04	606	2.17E-04	673	4.00E-05	740	4.50E-06
406	5.00E-06	473	8.85E-05	540	2.27E-04	607	2.45E-04	674	3.81E-05	741	4.40E-06
407	5.30E-06	474	8.54E-05	541	2.29E-04	608	3.07E-04	675	3.62E-05	742	4.40E-06
408	6.10E-06	475	8.47E-05	542	2.29E-04	609	3.28E-04	676	3.49E-05	743	4.20E-06
409	6.30E-06	476	8.29E-05	543	2.29E-04	610	2.73E-04	677	3.38E-05	744	3.90E-06
410	7.40E-06	477	8.25E-05	544	2.30E-04	611	2.61E-04	678	3.25E-05	745	3.90E-06
411	8.50E-06	478	8.23E-05	545	2.30E-04	612	3.68E-04	679	3.11E-05	746	3.70E-06
412	9.50E-06	479	8.16E-05	546	2.31E-04	613	5.20E-04	680	3.02E-05	747	3.60E-06
413	1.06E-05	480	8.20E-05	547	2.31E-04	614	4.80E-04	681	2.92E-05	748	3.30E-06
414	1.17E-05	481	8.40E-05	548	2.32E-04	615	3.33E-04	682	2.81E-05	749	3.40E-06
415	1.27E-05	482	8.43E-05	549	2.34E-04	616	2.53E-04	683	2.75E-05	750	3.20E-06
416	1.48E-05	483	8.58E-05	550	2.33E-04	617	2.32E-04	684	2.65E-05	751	3.10E-06
417	1.62E-05	484	8.84E-05	551	2.34E-04	618	2.30E-04	685	2.57E-05	752	3.30E-06
418	1.83E-05	485	9.03E-05	552	2.35E-04	619	2.34E-04	686	2.51E-05	753	3.10E-06
419	2.04E-05	486	9.25E-05	553	2.37E-04	620	2.28E-04	687	2.38E-05	754	3.00E-06
420	2.30E-05	487	9.61E-05	554	2.36E-04	621	2.19E-04	688	2.30E-05	755	2.90E-06
421	2.55E-05	488	9.94E-05	555	2.37E-04	622	2.16E-04	689	2.24E-05	756	2.80E-06
422	2.78E-05	489	1.02E-04	556	2.37E-04	623	2.19E-04	690	2.19E-05	757	2.50E-06
423	3.07E-05	490	1.07E-04	557	2.38E-04	624	2.27E-04	691	2.12E-05	758	2.50E-06
424	3.37E-05	491	1.12E-04	558	2.37E-04	625	2.31E-04	692	2.05E-05	759	2.40E-06
425	3.76E-05	492	1.14E-04	559	2.39E-04	626	2.35E-04	693	1.97E-05	760	2.30E-06
426	4.33E-05	493	1.19E-04	560	2.38E-04	627	2.39E-04	694	1.92E-05	761	2.30E-06
427	4.70E-05	494	1.24E-04	561	2.39E-04	628	2.75E-04	695	1.84E-05	762	2.40E-06
428	5.40E-05	495	1.28E-04	562	2.39E-04	629	4.65E-04	696	1.78E-05	763	2.20E-06
429	5.94E-05	496	1.33E-04	563	2.40E-04	630	8.67E-04	697	1.73E-05	764	1.90E-06
430	6.59E-05	497	1.38E-04	564	2.39E-04	631	9.62E-04	698	1.69E-05	765	2.00E-06
431	7.21E-05	498	1.42E-04	565	2.41E-04	632	6.14E-04	699	1.64E-05	766	2.00E-06
432	7.92E-05	499	1.48E-04	566	2.40E-04	633	3.89E-04	700	1.56E-05	767	2.00E-06
433	8.73E-05	500	1.53E-04	567	2.40E-04	634	5.49E-04	701	1.52E-05	768	1.90E-06
434	9.45E-05	501	1.57E-04	568	2.41E-04	635	7.03E-04	702	1.46E-05	769	2.00E-06
435	1.04E-04	502	1.62E-04	569	2.41E-04	636	4.77E-04	703	1.44E-05	770	1.90E-06
436	1.14E-04	503	1.66E-04	570	2.42E-04	637	2.51E-04	704	1.36E-05	771	1.90E-06
437	1.26E-04	504	1.70E-04	571	2.42E-04	638	1.73E-04	705	1.35E-05	772	1.60E-06
438	1.39E-04	505	1.74E-04	572	2.41E-04	639	1.45E-04	706	1.31E-05	773	1.40E-06
439	1.57E-04	506	1.77E-04	573	2.41E-04	640	1.31E-04	707	1.26E-05	774	1.60E-06
440	1.77E-04	507	1.82E-04	574	2.41E-04	641	1.23E-04	708	1.23E-05	775	1.70E-06
441	1.93E-04	508	1.84E-04	575	2.39E-04	642	1.17E-04	709	1.18E-05	776	1.40E-06
442	2.13E-04	509	1.88E-04	576	2.39E-04	643	1.14E-04	710	1.16E-05	777	1.40E-06
443	2.36E-04	510	1.90E-04	577	2.38E-04	644	1.12E-04	711	1.10E-05	778	1.30E-06
444	2.56E-04	511	1.92E-04	578	2.38E-04	645	1.14E-04	712	1.06E-05	779	1.30E-06
445	2.79E-04	512	1.96E-04	579	2.37E-04	646	1.58E-04	713	1.03E-05	780	1.30E-06
446	2.97E-04	513	1.98E-04	580	2.37E-04	647	2.41E-04	714	1.02E-05	N/A	N/A

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	TKBEAM2B @15W4000K	Sample ID	250903025-S1
Operate time (Min.)	30	Stabilization time (Min.)	60
Temperature (°C)	25.0	Humidity (%RH)	41.3

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	120.0	60	0.135	15.9	0.985
NON-WORST CASE	N/A	N/A	N/A	N/A	N/A

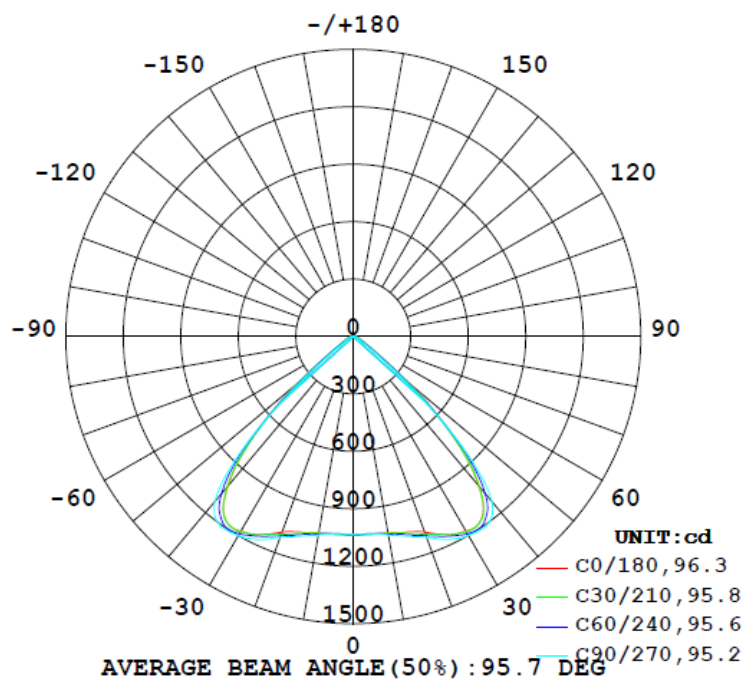
Test Result

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°)
2453	96.0	109.4	70.5	93.3	154.3	99.4%

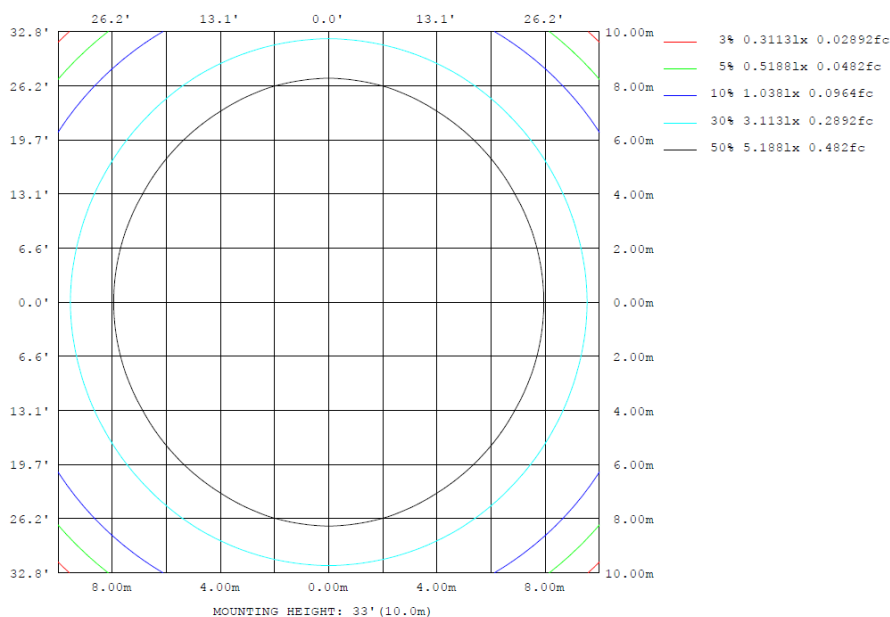
4.2 Goniophotometer Test

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	zone	total	lum,lm
10	1040	1044	1052	1044	1040	1044	1052	1044	0- 10	99.16	99.16	4.04,4.04
20	1086	1102	1117	1102	1086	1102	1117	1102	10- 20	304.1	403.3	16.4,16.4
30	1175	1185	1201	1185	1175	1185	1201	1185	20- 30	532.3	935.5	38.1,38.1
40	1020	1042	1124	1042	1020	1042	1124	1042	30- 40	727.8	1663	67.8,67.8
50	382.8	357.8	305.7	357.8	382.8	357.8	305.7	357.8	40- 50	559.4	2223	90.6,90.6
60	75.84	66.97	46.85	66.97	75.84	66.97	46.85	66.97	50- 60	137.9	2361	96.2,96.2
70	37.00	31.49	23.63	31.49	37.00	31.49	23.63	31.49	60- 70	43.35	2404	98.98
80	11.56	15.22	14.50	15.22	11.56	15.22	14.50	15.22	70- 80	23.14	2427	98.9,98.9
90	2.036	7.412	8.248	7.412	2.036	7.412	8.248	7.412	80- 90	10.77	2438	99.4,99.4
100	1.541	3.419	6.631	3.419	1.541	3.419	6.631	3.419	90-100	4.558	2442	99.6,99.6
110	1.252	0.9527	3.225	0.9527	1.252	0.9527	3.225	0.9527	100-110	2.287	2445	99.7,99.7
120	2.021	0.8553	0.8529	0.8553	2.021	0.8553	0.8529	0.8553	110-120	1.182	2446	99.7,99.7
130	4.237	1.041	0.8529	1.041	4.237	1.041	0.8529	1.041	120-130	1.032	2447	99.8,99.8
140	5.873	1.806	1.611	1.806	5.873	1.806	1.611	1.806	130-140	1.358	2448	99.8,99.8
150	6.358	2.661	2.369	2.661	6.358	2.661	2.369	2.661	140-150	1.758	2450	99.9,99.9
160	6.358	2.661	2.464	2.661	6.358	2.661	2.464	2.661	150-160	1.435	2452	99.9,99.9
170	9.246	3.801	3.222	3.801	9.246	3.801	3.222	3.801	160-170	1.049	2453	100,100
180	9.537	4.086	3.506	4.086	9.537	4.086	3.506	4.086	170-180	0.4626	2453	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	99.16	0-10	99.16	4.04%
10-20	304.10	0-20	403.26	16.44%
20-30	532.26	0-30	935.52	38.14%
30-40	727.84	0-40	1663.36	67.82%
40-50	559.38	0-50	2222.74	90.63%
50-60	137.94	0-60	2360.68	96.25%
60-70	43.35	0-70	2404.03	98.02%
70-80	23.14	0-80	2427.17	98.96%
80-90	10.77	0-90	2437.94	99.40%
90-100	4.56	0-100	2442.50	99.59%
100-110	2.29	0-110	2444.79	99.68%
110-120	1.18	0-120	2445.97	99.73%
120-130	1.03	0-130	2447.00	99.77%
130-140	1.36	0-140	2448.36	99.83%
140-150	1.76	0-150	2450.12	99.90%
150-160	1.44	0-160	2451.56	99.96%
160-170	1.05	0-170	2452.61	100.00%
170-180	0.46	0-180	2453.07	100.02%

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	1037	1037	1038	1036	1036	1033	1033	1033	1036	1036	1038	1037	1037	1037	1038	1036	1036	1033	1033
5	1038	1038	1039	1037	1033	1033	1033	1033	1037	1039	1038	1038	1038	1039	1037	1037	1033	1033	1034
10	1040	1043	1042	1044	1048	1047	1052	1047	1048	1044	1042	1043	1040	1043	1042	1044	1048	1047	1052
15	1058	1056	1063	1071	1071	1073	1081	1073	1071	1071	1063	1056	1058	1056	1063	1071	1071	1073	1081
20	1086	1097	1097	1102	1108	1113	1117	1113	1108	1102	1097	1097	1086	1097	1097	1102	1108	1113	1117
25	1140	1141	1140	1148	1151	1159	1170	1159	1151	1148	1140	1141	1140	1141	1140	1148	1151	1159	1170
30	1175	1178	1177	1185	1189	1192	1201	1192	1189	1185	1177	1178	1175	1178	1177	1185	1189	1192	1201
35	1165	1168	1167	1178	1189	1203	1210	1203	1189	1178	1167	1168	1165	1168	1167	1178	1189	1203	1210
40	1020	1023	1026	1042	1071	1109	1124	1109	1071	1042	1026	1023	1020	1023	1026	1042	1071	1109	1124
45	738	734	735	745	761	770	777	770	761	745	735	734	738	734	735	745	761	770	777
50	383	377	368	358	347	317	306	317	347	358	368	377	383	377	368	358	347	317	306
55	144	147	141	134	126	111	103	111	126	134	141	147	144	147	141	134	126	111	103
60	75.8	76.8	71.8	67.0	60.0	51.3	46.8	51.3	60.0	67.0	71.8	76.8	75.8	76.8	71.8	67.0	60.0	51.3	46.8
65	52.6	51.1	47.2	43.3	37.5	32.2	30.0	32.2	37.5	43.3	47.2	51.1	52.6	51.1	47.2	43.3	37.5	32.2	30.0
70	37.0	36.6	34.5	31.5	27.3	23.4	23.6	23.4	27.3	31.5	34.5	36.6	37.0	36.6	34.5	31.5	27.3	23.4	23.6
75	27.7	23.9	23.4	22.5	19.8	17.0	17.6	17.0	19.8	22.5	23.4	23.9	27.7	23.9	23.4	22.5	19.8	17.0	17.6
80	11.6	13.5	14.8	15.2	16.6	15.2	14.5	15.2	16.6	15.2	14.8	13.5	11.6	13.5	14.8	15.2	16.6	15.2	14.5
85	6.55	7.79	10.1	9.89	10.2	9.43	12.2	9.43	10.2	9.89	10.1	7.79	6.55	7.79	10.1	9.89	10.2	9.43	12.2
90	2.04	3.95	8.15	7.41	6.28	6.09	8.25	6.09	6.28	7.41	8.15	3.95	2.04	3.95	8.15	7.41	6.28	6.09	8.25
95	1.73	2.21	3.81	4.09	4.27	4.56	7.20	4.56	4.27	4.09	3.81	2.21	1.73	2.21	3.81	4.09	4.27	4.56	7.20
100	1.54	1.34	2.00	3.42	4.27	5.59	6.63	5.59	4.27	3.42	2.00	1.34	1.54	1.34	2.00	3.42	4.27	5.59	6.63
105	1.35	1.25	1.05	1.34	2.09	3.33	4.27	3.33	2.09	1.34	1.05	1.25	1.35	1.25	1.05	1.34	2.09	3.33	4.27
110	1.25	1.25	1.05	0.95	1.33	2.28	3.22	2.28	1.33	0.95	1.05	1.25	1.25	1.25	1.05	0.95	1.33	2.28	3.22
115	1.25	1.15	1.05	0.86	0.86	1.42	1.81	1.42	0.86	0.86	1.05	1.15	1.25	1.15	1.05	0.86	0.86	1.42	1.81
120	2.02	1.34	1.05	0.86	0.85	0.76	0.85	0.76	0.85	0.86	1.05	1.34	2.02	1.34	1.05	0.86	0.85	0.76	0.85
125	3.46	1.25	1.05	0.86	0.85	0.76	0.85	0.76	0.85	0.86	1.05	1.25	3.46	1.25	1.05	0.86	0.85	0.76	0.85
130	4.24	1.44	1.05	1.04	0.85	1.04	0.85	1.04	0.85	1.04	1.05	1.44	4.24	1.44	1.05	1.04	0.85	1.04	0.85
135	5.20	1.92	1.61	1.24	1.23	1.14	1.23	1.14	1.23	1.24	1.61	1.92	5.20	1.92	1.61	1.24	1.23	1.14	1.23
140	5.87	2.69	2.18	1.81	1.80	1.71	1.61	1.71	1.80	1.81	2.18	2.69	5.87	2.69	2.18	1.81	1.80	1.71	1.61
145	6.45	3.46	2.66	2.56	2.28	2.27	2.18	2.27	2.28	2.56	2.66	3.46	6.45	3.46	2.66	2.56	2.28	2.27	2.18
150	6.36	3.55	2.76	2.66	2.66	2.66	2.37	2.66	2.66	2.66	2.76	3.55	6.36	3.55	2.76	2.66	2.66	2.66	2.37
155	6.36	3.55	2.76	2.66	2.66	2.56	2.46	2.56	2.66	2.66	2.76	3.55	6.36	3.55	2.76	2.66	2.66	2.56	2.46
160	6.36	3.55	2.76	2.66	2.66	2.56	2.46	2.56	2.66	2.66	2.76	3.55	6.36	3.55	2.76	2.66	2.66	2.56	2.46
165	8.19	4.89	3.71	3.13	2.94	2.75	2.75	2.94	3.13	3.71	4.89	8.19	4.89	3.71	3.13	2.94	2.75	2.75	2.94
170	9.25	6.24	4.56	3.80	3.42	3.32	3.32	3.42	3.80	4.56	6.24	9.25	6.24	4.56	3.80	3.42	3.32	3.32	3.42
175	9.54	6.62	4.85	4.09	3.70	3.61	3.60	3.61	3.70	4.09	4.85	6.62	9.54	6.62	4.85	4.09	3.70	3.61	3.60
180	9.54	6.72	4.85	4.09	3.80	3.70	3.51	3.70	3.80	4.09	4.85	6.72	9.54	6.72	4.85	4.09	3.80	3.70	3.51

Table--2

UNIT: cd

C (DEG) y (DEG)	285	300	315	330	345														
0	1033	1036	1036	1038	1037														
5	1033	1033	1037	1039	1038														
10	1047	1048	1044	1042	1043														
15	1073	1071	1071	1063	1056														
20	1113	1108	1102	1097	1097														
25	1159	1151	1148	1140	1141														
30	1192	1189	1185	1177	1178														
35	1203	1189	1178	1167	1168														
40	1109	1071	1042	1026	1023														
45	770	761	745	735	734														
50	317	347	358	368	377														
55	111	126	134	141	147														
60	51.3	60.0	67.0	71.8	76.8														
65	32.2	37.5	43.3	47.2	51.1														
70	23.4	27.3	31.5	34.5	36.6														
75	17.0	19.8	22.5	23.4	23.9														
80	15.2	16.6	15.2	14.8	13.5														
85	9.43	10.2	9.89	10.1	7.79														
90	6.09	6.28	7.41	8.15	3.95														
95	4.56	4.27	4.09	3.81	2.21														
100	5.59	4.27	3.42	2.00	1.34														
105	3.33	2.09	1.34	1.05	1.25														
110	2.28	1.33	0.95	1.05	1.25														
115	1.42	0.86	0.86	1.05	1.15														
120	0.76	0.85	0.86	1.05	1.34														
125	0.76	0.85	0.86	1.05	1.25														
130	1.04	0.85	1.04	1.05	1.44														
135	1.14	1.23	1.24	1.61	1.92														
140	1.71	1.80	1.81	2.18	2.69														
145	2.27	2.28	2.56	2.66	3.46														
150	2.66	2.66	2.66	2.76	3.55														
155	2.56	2.66	2.66	2.76	3.55														
160	2.56	2.66	2.66	2.76	3.55														
165	2.75	2.94	3.13	3.71	4.89														
170	3.32	3.42	3.80	4.56	6.24														
175	3.61	3.70	4.09	4.85	6.62														
180	3.70	3.80	4.09	4.85	6.72														

4.0 LM-79 Measurement and Test Results

4.3 THD and PF Test

Model No.	TKBEAM2B @15W4000K	Sample ID	250903025-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	0.135	15.9	0.985	10.35

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*****