

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: 2025-10-22

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		5990
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	156.4
			95	110	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		38.3
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	9.76
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.986
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	5029±283	4962
			4 steps	5029±220	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		92.2
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		80
Minimum Rf (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	≥70		89
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%		-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		0.324
(Goniophotometer – Section 4.2)			Non-Worst Case		N/A
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		38.3
(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	2025-10-21	TKBEAM4B @40W5000K	-	251017004-S1
2	Goniophotometer Test	2025-10-21	TKBEAM4B @40W5000K	-	251017004-S1
3	THD and PF Test	2025-10-21	TKBEAM4B @40W5000K	-	251017004-S1

Remark (If any):

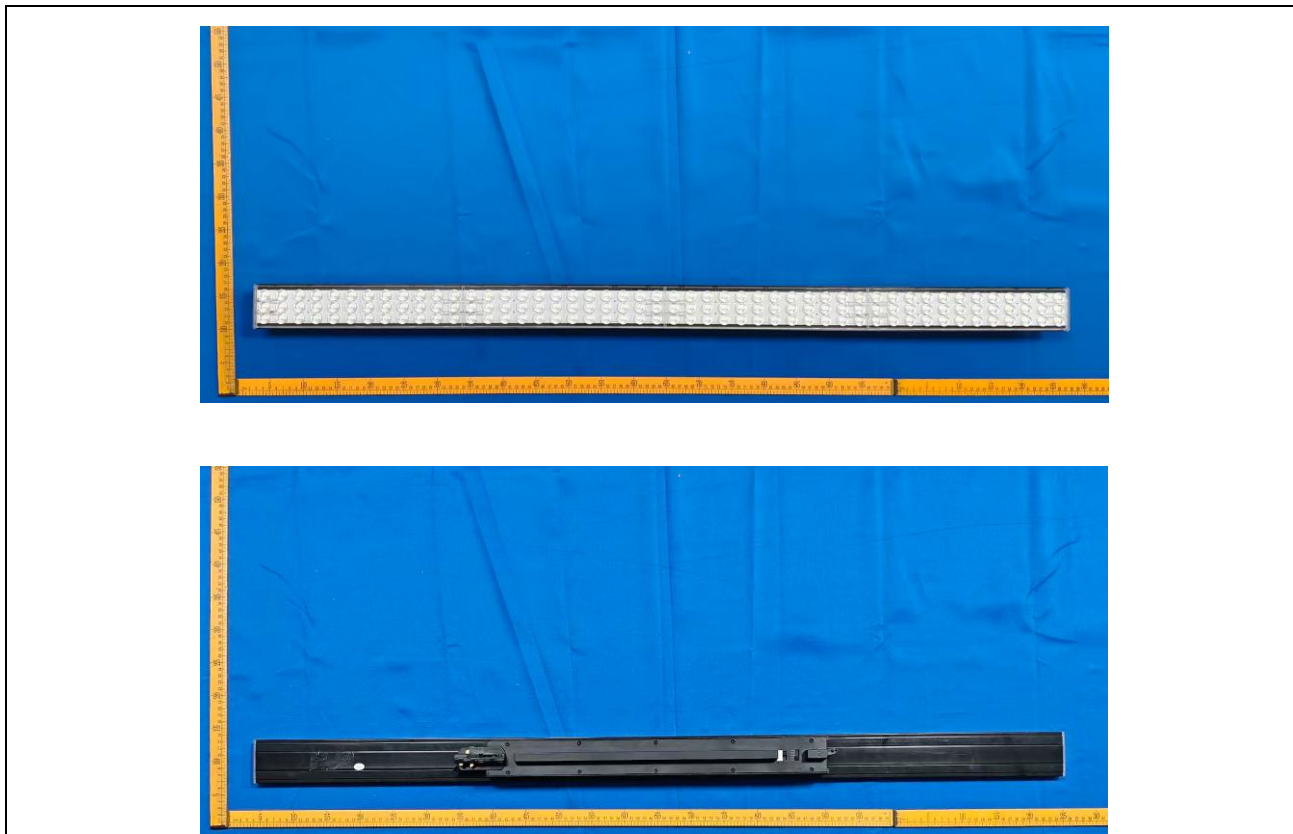
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3.0 Product Description

Luminaire Description: Model No. TKBEAM4B @40W5000K, 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.	TKBEAM4B @40W5000K	Sample ID	251017004-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

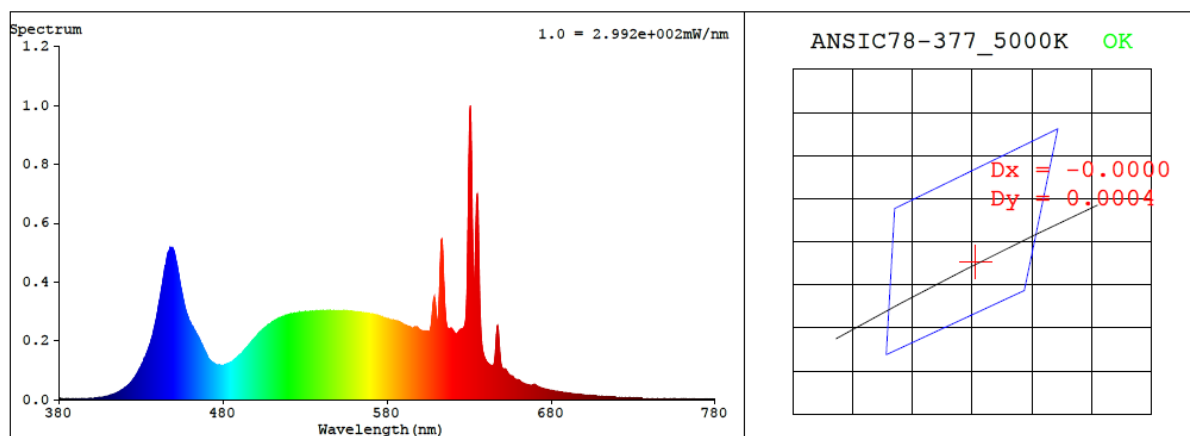
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made 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	0.324	38.3	0.986

CCT (K)	CRI	R9	Duv	SDCM	Rf	Rg	IES Rcs,h1
4962	92.2	80	0.0002	2.1	89	104	-4%

4.1 Integrating Sphere Test



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.3462$ $y = 0.3529$ / $u' = 0.2117$ $v' = 0.4855$ ($duv=2.08e-04$)

CCT= 4962K Prcp WL: $L_d=573.0nm$ Purity=9.8%

Peak WL: $L_p=631nm$ FWHM: $=3.6nm$ Ratio:R=17.9% G=77.6% B=4.4%

Render Index: $R_a = 92.2$ AvgR = 89.3 TM30:Rf=90 Rg=103

EEL: 0.08752 A++ Highest

R1 =95	R2 =92	R3 =87	R4 =93	R5 =94	R6 =89	R7 =94
R8 =94	R9 =80	R10=80	R11=92	R12=69	R13=94	R14=92 R15=95

4.1 Integrating Sphere Test

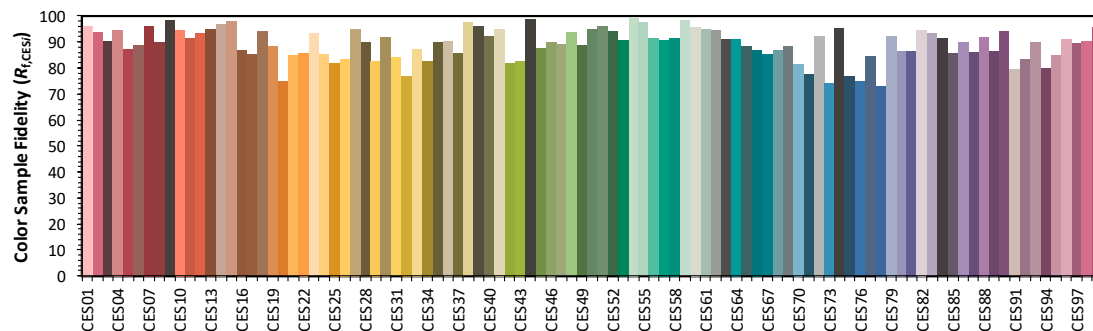
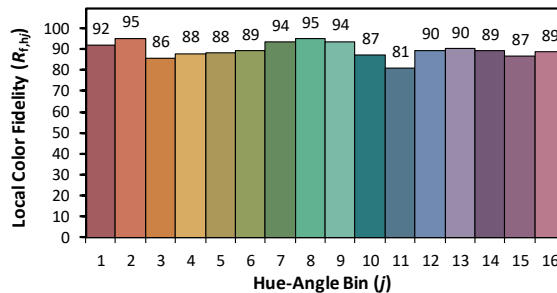
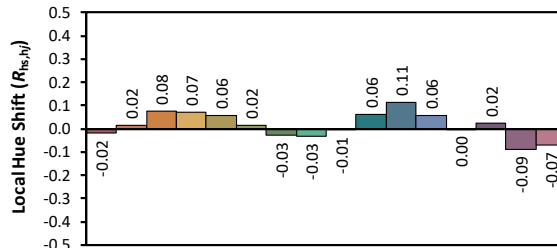
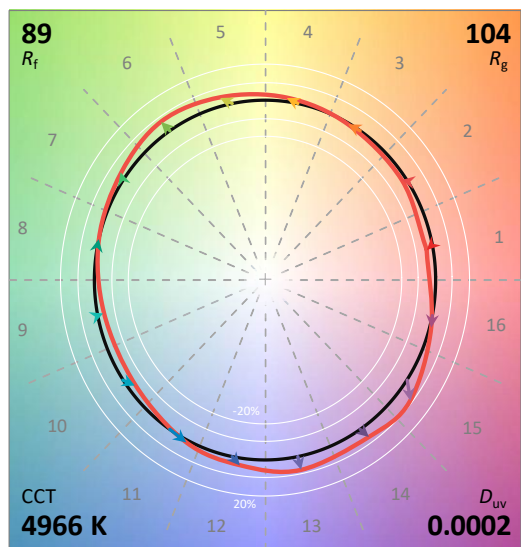
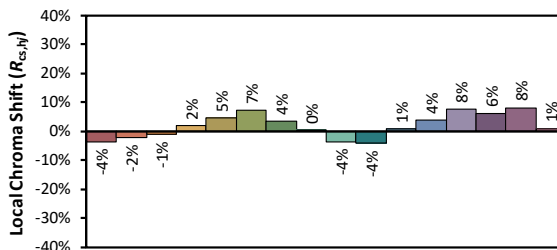
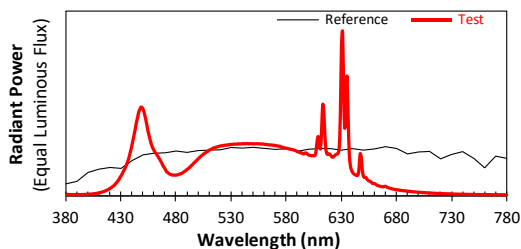
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/10/22

Model: TKBEAM4B @40W5000K



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

x 0.3461

y 0.3527

u' 0.2117

v' 0.4854

CIE 13.3-1995
(CRI)

R_a 92

R_g 81

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	1.70E-06	447	5.03E-04	514	2.77E-04	581	2.75E-04	648	2.22E-04	715	1.04E-05
381	4.20E-06	448	5.17E-04	515	2.79E-04	582	2.72E-04	649	1.43E-04	716	1.02E-05
382	3.30E-06	449	5.15E-04	516	2.81E-04	583	2.71E-04	650	1.10E-04	717	9.80E-06
383	2.30E-06	450	5.05E-04	517	2.83E-04	584	2.70E-04	651	1.04E-04	718	9.50E-06
384	3.20E-06	451	4.84E-04	518	2.85E-04	585	2.68E-04	652	1.04E-04	719	9.30E-06
385	2.90E-06	452	4.57E-04	519	2.87E-04	586	2.67E-04	653	9.58E-05	720	8.80E-06
386	2.90E-06	453	4.26E-04	520	2.89E-04	587	2.65E-04	654	8.76E-05	721	8.80E-06
387	2.30E-06	454	3.91E-04	521	2.90E-04	588	2.63E-04	655	8.27E-05	722	8.50E-06
388	2.70E-06	455	3.62E-04	522	2.90E-04	589	2.59E-04	656	8.06E-05	723	8.00E-06
389	2.60E-06	456	3.36E-04	523	2.92E-04	590	2.55E-04	657	7.61E-05	724	8.00E-06
390	2.80E-06	457	3.10E-04	524	2.93E-04	591	2.54E-04	658	6.99E-05	725	7.60E-06
391	2.90E-06	458	2.90E-04	525	2.94E-04	592	2.51E-04	659	6.76E-05	726	7.50E-06
392	2.80E-06	459	2.74E-04	526	2.94E-04	593	2.49E-04	660	6.73E-05	727	7.20E-06
393	2.10E-06	460	2.62E-04	527	2.96E-04	594	2.48E-04	661	6.40E-05	728	7.20E-06
394	3.30E-06	461	2.51E-04	528	2.97E-04	595	2.44E-04	662	5.89E-05	729	6.80E-06
395	2.80E-06	462	2.42E-04	529	2.97E-04	596	2.42E-04	663	5.59E-05	730	6.70E-06
396	3.20E-06	463	2.32E-04	530	2.98E-04	597	2.47E-04	664	5.39E-05	731	6.30E-06
397	3.80E-06	464	2.21E-04	531	2.98E-04	598	2.47E-04	665	5.20E-05	732	6.00E-06
398	4.30E-06	465	2.12E-04	532	2.99E-04	599	2.42E-04	666	5.03E-05	733	6.00E-06
399	4.90E-06	466	2.00E-04	533	3.00E-04	600	2.37E-04	667	4.96E-05	734	5.50E-06
400	4.40E-06	467	1.88E-04	534	2.99E-04	601	2.34E-04	668	4.88E-05	735	5.70E-06
401	5.10E-06	468	1.74E-04	535	3.00E-04	602	2.33E-04	669	5.07E-05	736	5.40E-06
402	5.80E-06	469	1.64E-04	536	3.00E-04	603	2.32E-04	670	5.16E-05	737	5.40E-06
403	5.60E-06	470	1.53E-04	537	3.02E-04	604	2.32E-04	671	4.77E-05	738	5.20E-06
404	7.00E-06	471	1.41E-04	538	3.00E-04	605	2.31E-04	672	4.42E-05	739	5.00E-06
405	7.40E-06	472	1.34E-04	539	3.01E-04	606	2.33E-04	673	4.21E-05	740	4.90E-06
406	8.30E-06	473	1.29E-04	540	3.02E-04	607	2.60E-04	674	3.98E-05	741	4.80E-06
407	8.80E-06	474	1.24E-04	541	3.03E-04	608	3.22E-04	675	3.81E-05	742	4.30E-06
408	1.04E-05	475	1.22E-04	542	3.01E-04	609	3.43E-04	676	3.64E-05	743	4.50E-06
409	1.15E-05	476	1.19E-04	543	3.02E-04	610	2.89E-04	677	3.55E-05	744	4.20E-06
410	1.29E-05	477	1.17E-04	544	3.03E-04	611	2.73E-04	678	3.37E-05	745	4.10E-06
411	1.42E-05	478	1.18E-04	545	3.02E-04	612	3.81E-04	679	3.26E-05	746	3.90E-06
412	1.65E-05	479	1.17E-04	546	3.01E-04	613	5.32E-04	680	3.19E-05	747	3.90E-06
413	1.83E-05	480	1.17E-04	547	3.02E-04	614	4.92E-04	681	3.06E-05	748	3.90E-06
414	2.02E-05	481	1.19E-04	548	3.02E-04	615	3.46E-04	682	2.97E-05	749	3.60E-06
415	2.27E-05	482	1.21E-04	549	3.02E-04	616	2.64E-04	683	2.82E-05	750	3.60E-06
416	2.57E-05	483	1.23E-04	550	3.01E-04	617	2.41E-04	684	2.77E-05	751	3.50E-06
417	2.81E-05	484	1.25E-04	551	3.02E-04	618	2.40E-04	685	2.65E-05	752	3.40E-06
418	3.18E-05	485	1.27E-04	552	3.01E-04	619	2.43E-04	686	2.59E-05	753	3.20E-06
419	3.45E-05	486	1.32E-04	553	3.02E-04	620	2.36E-04	687	2.53E-05	754	3.20E-06
420	3.96E-05	487	1.36E-04	554	3.02E-04	621	2.27E-04	688	2.43E-05	755	3.20E-06
421	4.32E-05	488	1.41E-04	555	3.01E-04	622	2.23E-04	689	2.37E-05	756	3.20E-06
422	4.81E-05	489	1.46E-04	556	3.01E-04	623	2.26E-04	690	2.28E-05	757	2.80E-06
423	5.31E-05	490	1.51E-04	557	3.00E-04	624	2.34E-04	691	2.23E-05	758	2.80E-06
424	5.84E-05	491	1.55E-04	558	3.01E-04	625	2.38E-04	692	2.19E-05	759	2.60E-06
425	6.69E-05	492	1.61E-04	559	3.00E-04	626	2.41E-04	693	2.08E-05	760	2.70E-06
426	7.34E-05	493	1.68E-04	560	2.99E-04	627	2.46E-04	694	2.00E-05	761	2.70E-06
427	8.25E-05	494	1.74E-04	561	2.98E-04	628	2.80E-04	695	1.94E-05	762	2.80E-06
428	9.07E-05	495	1.81E-04	562	2.97E-04	629	4.66E-04	696	1.90E-05	763	2.30E-06
429	1.04E-04	496	1.88E-04	563	2.97E-04	630	8.65E-04	697	1.84E-05	764	2.50E-06
430	1.13E-04	497	1.94E-04	564	2.96E-04	631	9.62E-04	698	1.79E-05	765	2.20E-06
431	1.24E-04	498	2.00E-04	565	2.95E-04	632	6.17E-04	699	1.75E-05	766	2.50E-06
432	1.38E-04	499	2.07E-04	566	2.94E-04	633	3.93E-04	700	1.66E-05	767	2.20E-06
433	1.50E-04	500	2.13E-04	567	2.95E-04	634	5.51E-04	701	1.62E-05	768	2.00E-06
434	1.63E-04	501	2.19E-04	568	2.93E-04	635	7.01E-04	702	1.57E-05	769	2.00E-06
435	1.79E-04	502	2.26E-04	569	2.93E-04	636	4.79E-04	703	1.53E-05	770	2.10E-06
436	1.97E-04	503	2.31E-04	570	2.90E-04	637	2.57E-04	704	1.48E-05	771	1.80E-06
437	2.16E-04	504	2.36E-04	571	2.90E-04	638	1.78E-04	705	1.44E-05	772	1.90E-06
438	2.41E-04	505	2.42E-04	572	2.89E-04	639	1.49E-04	706	1.38E-05	773	1.90E-06
439	2.68E-04	506	2.46E-04	573	2.88E-04	640	1.36E-04	707	1.34E-05	774	1.80E-06
440	2.97E-04	507	2.51E-04	574	2.87E-04	641	1.26E-04	708	1.30E-05	775	1.60E-06
441	3.28E-04	508	2.56E-04	575	2.84E-04	642	1.21E-04	709	1.25E-05	776	1.90E-06
442	3.60E-04	509	2.58E-04	576	2.81E-04	643	1.17E-04	710	1.24E-05	777	1.80E-06
443	3.92E-04	510	2.64E-04	577	2.81E-04	644	1.15E-04	711	1.18E-05	778	1.70E-06
444	4.29E-04	511	2.67E-04	578	2.77E-04	645	1.18E-04	712	1.12E-05	779	1.80E-06
445	4.56E-04	512	2.70E-04	579	2.77E-04	646	1.60E-04	713	1.12E-05	780	1.80E-06
446	4.88E-04	513	2.74E-04	580	2.75E-04	647	2.43E-04	714	1.08E-05	N/A	N/A

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	TKBEAM4B @40W5000K	Sample ID	251017004-S1
Operate time (Min.)	30	Stabilization time (Min.)	60
Temperature (°C)	24.8	Humidity (%RH)	40.1

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	120.0	60	0.324	38.3	0.986
NON-WORST CASE	N/A	N/A	N/A	N/A	N/A

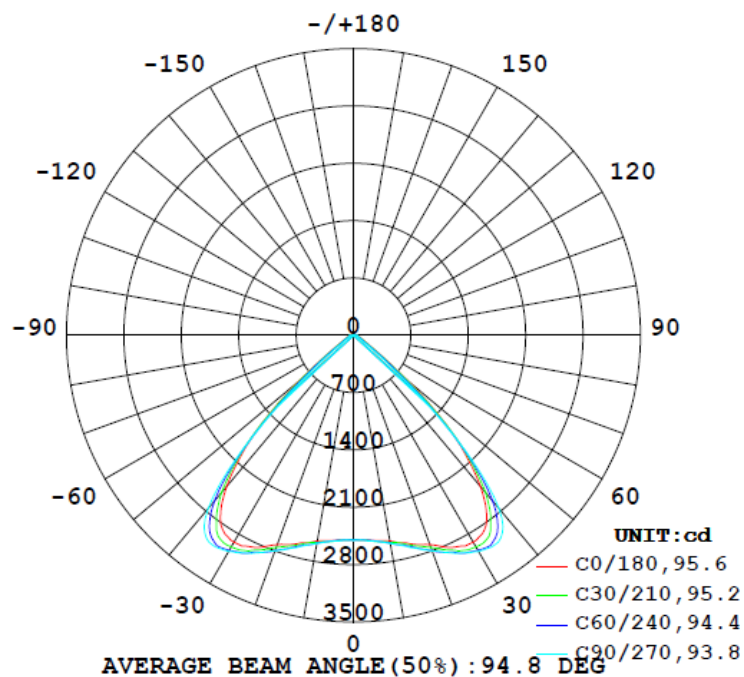
Test Result

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°)
5990	93.8	108.2	67.9	91.0	156.4	99.4%

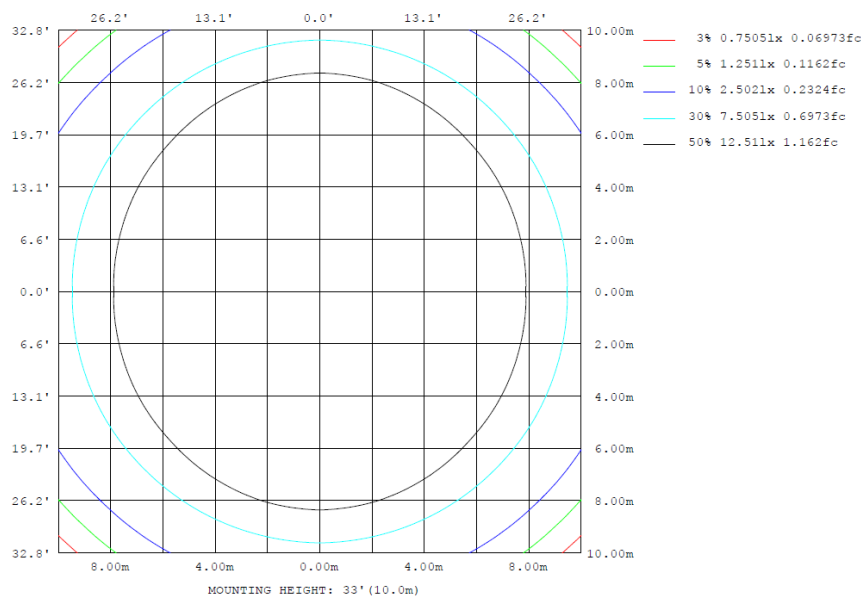
4.2 Goniophotometer Test

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	Φ zone	Φ total	%lum,lamp
10	2550	2569	2581	2569	2550	2569	2581	2569	0- 10	241.8	241.8	4.04,4.04
20	2719	2771	2799	2771	2719	2771	2799	2771	10- 20	757.3	999.1	16.7,16.7
30	2918	3008	3048	3008	2918	3008	3048	3008	20- 30	1345	2344	39.1,39.1
40	2406	2544	2761	2544	2406	2544	2761	2544	30- 40	1816	4160	69.5,69.5
50	872.7	765.6	609.1	765.6	872.7	765.6	609.1	765.6	40- 50	1302	5462	91.2,91.2
60	179.8	154.9	105.3	154.9	179.8	154.9	105.3	154.9	50- 60	303.8	5766	96.3,96.3
70	89.69	75.33	60.18	75.33	89.69	75.33	60.18	75.33	60- 70	103.9	5870	98,98
80	30.47	43.92	37.96	43.92	30.47	43.92	37.96	43.92	70- 80	57.47	5927	99,99
90	3.019	20.28	25.22	20.28	3.019	20.28	25.22	20.28	80- 90	28.84	5956	99.4,99.4
100	2.692	7.854	17.88	7.854	2.692	7.854	17.88	7.854	90-100	11.50	5968	99.6,99.6
110	4.083	1.501	7.046	1.501	4.083	1.501	7.046	1.501	100-110	4.949	5972	99.7,99.7
120	9.276	1.401	1.048	1.401	9.276	1.401	1.048	1.401	110-120	2.443	5975	99.8,99.8
130	10.03	1.774	1.421	1.774	10.03	1.774	1.421	1.774	120-130	2.360	5977	99.8,99.8
140	10.02	3.736	2.755	3.736	10.02	3.736	2.755	3.736	130-140	3.064	5980	99.8,99.8
150	11.51	4.670	3.709	4.670	11.51	4.670	3.709	4.670	140-150	3.477	5984	99.9,99.9
160	10.11	4.671	3.995	4.671	10.11	4.671	3.995	4.671	150-160	2.760	5987	99.9,99.9
170	19.66	7.287	5.707	7.287	19.66	7.287	5.707	7.287	160-170	2.106	5989	100,100
180	20.42	7.755	6.563	7.755	20.42	7.755	6.563	7.755	170-180	0.9361	5990	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	241.85	0-10	241.85	4.04%
10-20	757.27	0-20	999.12	16.68%
20-30	1345.27	0-30	2344.39	39.15%
30-40	1816.10	0-40	4160.49	69.47%
40-50	1301.61	0-50	5462.10	91.21%
50-60	303.79	0-60	5765.89	96.28%
60-70	103.85	0-70	5869.74	98.01%
70-80	57.47	0-80	5927.21	98.97%
80-90	28.84	0-90	5956.05	99.45%
90-100	11.50	0-100	5967.55	99.65%
100-110	4.95	0-110	5972.50	99.73%
110-120	2.44	0-120	5974.94	99.77%
120-130	2.36	0-130	5977.30	99.81%
130-140	3.06	0-140	5980.36	99.86%
140-150	3.48	0-150	5983.84	99.92%
150-160	2.76	0-160	5986.60	99.96%
160-170	2.11	0-170	5988.71	100.00%
170-180	0.94	0-180	5989.65	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	2502	2500	2496	2496	2499	2500	2506	2500	2499	2496	2496	2500	2502	2500	2496	2496	2499	2500	2506
5	2515	2513	2517	2513	2514	2523	2519	2523	2514	2513	2517	2513	2515	2513	2517	2513	2514	2523	2519
10	2550	2552	2566	2569	2580	2575	2580	2569	2566	2552	2550	2552	2566	2569	2580	2575	2580	2569	2550
15	2634	2630	2650	2657	2669	2680	2683	2680	2669	2657	2650	2630	2634	2630	2650	2657	2669	2680	2683
20	2719	2739	2756	2771	2796	2801	2799	2801	2796	2771	2756	2739	2719	2739	2756	2771	2796	2801	2799
25	2856	2862	2894	2905	2922	2940	2938	2940	2922	2905	2894	2862	2856	2862	2894	2905	2922	2940	2938
30	2918	2948	2983	3008	3032	3051	3048	3051	3032	3008	2983	2948	2918	2948	2983	3008	3032	3051	3048
35	2820	2854	2913	2946	3017	3077	3080	3077	3017	2946	2913	2854	2820	2854	2913	2946	3017	3077	3080
40	2406	2440	2504	2544	2635	2722	2761	2722	2635	2544	2504	2440	2406	2440	2504	2544	2635	2722	2761
45	1735	1748	1758	1734	1728	1722	1728	1722	1728	1734	1758	1748	1735	1748	1758	1734	1728	1722	1728
50	873	861	823	766	735	648	609	648	735	766	823	861	873	861	823	766	735	648	609
55	340	343	320	293	271	230	206	230	271	293	320	343	340	343	320	293	271	230	206
60	180	182	168	155	138	119	105	119	138	155	168	182	180	182	168	155	138	119	105
65	123	122	113	104	91.5	78.4	72.2	78.4	91.5	104	113	122	123	122	113	104	91.5	78.4	72.2
70	89.7	87.7	83.6	75.3	67.4	58.3	50.2	58.3	67.4	75.3	83.6	87.7	89.7	87.7	83.6	75.3	67.4	58.3	50.2
75	69.0	56.5	57.0	54.4	49.9	43.3	44.9	43.3	49.9	54.4	57.0	56.5	69.0	56.5	57.0	54.4	49.9	43.3	44.9
80	30.5	32.2	41.0	43.9	46.9	41.6	38.0	41.6	46.9	43.9	41.0	32.2	30.5	32.2	41.0	43.9	46.9	41.6	38.0
85	15.2	18.9	26.6	26.9	27.4	25.1	20.1	25.1	27.4	26.9	26.6	18.9	15.2	18.9	26.6	26.9	27.4	25.1	20.1
90	3.02	8.90	21.4	20.3	16.5	16.1	25.2	16.1	16.5	20.3	21.4	8.90	3.02	8.90	21.4	20.3	16.5	16.1	25.2
95	2.69	3.56	8.72	10.4	11.3	12.2	20.3	12.2	11.3	10.4	8.72	3.56	2.69	3.56	8.72	10.4	11.3	12.2	20.3
100	2.69	2.06	3.75	7.85	11.3	14.0	17.9	14.0	11.3	7.85	3.75	2.06	2.69	2.06	3.75	7.85	11.3	14.0	17.9
105	2.69	2.05	1.87	2.53	4.26	7.32	10.4	7.32	4.26	2.53	1.87	2.05	2.69	2.05	1.87	2.53	4.26	7.32	10.4
110	4.08	2.05	1.87	1.50	2.37	4.66	7.05	4.66	2.37	1.50	1.87	2.05	4.08	2.05	1.87	1.50	2.37	4.66	7.05
115	6.96	2.05	1.87	1.40	1.32	2.19	3.34	2.19	1.32	1.40	1.87	2.05	6.96	2.05	1.87	1.40	1.32	2.19	3.34
120	9.28	3.17	1.87	1.40	1.23	1.14	1.05	1.14	1.23	1.40	1.87	3.17	9.28	3.17	1.87	1.40	1.23	1.14	1.05
125	10.2	4.29	1.87	1.40	1.23	1.14	1.05	1.14	1.23	1.40	1.87	4.29	10.2	4.29	1.87	1.40	1.23	1.14	1.05
130	10.0	5.60	2.52	1.77	1.51	1.52	1.42	1.52	1.51	1.77	2.52	5.60	10.0	5.60	2.52	1.77	1.51	1.52	1.42
135	10.0	7.09	3.36	2.71	2.54	2.37	1.90	2.37	2.54	2.71	3.36	7.09	10.0	7.09	3.36	2.71	2.54	2.37	1.90
140	10.0	7.93	4.21	3.74	3.39	3.31	2.76	3.31	3.39	3.74	4.21	7.93	10.0	7.93	4.21	3.74	3.39	3.31	2.76
145	10.9	8.96	5.15	4.48	4.15	4.08	3.33	4.08	4.15	4.48	5.15	8.96	10.9	8.96	5.15	4.48	4.15	4.08	3.33
150	11.5	9.25	5.43	4.67	4.52	4.46	3.71	4.46	4.52	4.67	5.43	9.25	11.5	9.25	5.43	4.67	4.52	4.46	3.71
155	10.8	9.25	5.62	4.67	4.53	4.46	3.99	4.46	4.53	4.67	5.62	9.25	10.8	9.25	5.62	4.67	4.53	4.46	3.99
160	10.1	8.87	5.52	4.67	4.53	4.55	3.99	4.55	4.53	4.67	5.52	8.87	10.1	8.87	5.52	4.67	4.53	4.55	3.99
165	15.0	12.3	7.02	6.17	5.66	5.50	4.75	5.50	5.66	6.17	7.02	12.3	15.0	12.3	7.02	6.17	5.66	5.50	4.75
170	19.7	14.6	8.51	7.29	6.88	6.45	5.71	6.45	6.88	7.29	8.51	14.6	19.7	14.6	8.51	7.29	6.88	6.45	5.71
175	20.4	15.1	8.98	7.75	7.26	7.21	6.27	7.21	7.26	7.75	8.98	15.1	20.4	15.1	8.98	7.75	7.26	7.21	6.27
180	20.4	15.1	8.89	7.75	7.26	7.30	6.56	7.30	7.26	7.75	8.89	15.1	20.4	15.1	8.89	7.75	7.26	7.30	6.56

Table--2

UNIT: cd

C (DEG) y (DEG)	285	300	315	330	345														
0	2500	2499	2496	2496	2500														
5	2523	2514	2513	2517	2513														
10	2575	2580	2569	2566	2552														
15	2680	2669	2657	2650	2630														
20	2801	2796	2771	2756	2739														
25	2940	2922	2905	2894	2862														
30	3051	3032	3008	2983	2948														
35	3077	3017	2946	2913	2854														
40	2722	2635	2544	2504	2440														
45	1722	1728	1734	1758	1748														
50	648	735	766	823	861														
55	230	271	293	320	343														
60	119	138	155	168	182														
65	78.4	91.5	104	113	122														
70	58.3	67.4	75.3	83.6	87.7														
75	43.3	49.9	54.4	57.0	56.5														
80	41.6	46.9	43.9	41.0	32.2														
85	25.1	27.4	26.9	26.6	18.9														
90	16.1	16.5	20.3	21.4	8.90														
95	12.2	11.3	10.4	8.72	3.56														
100	14.0	11.3	7.85	3.75	2.06														
105	7.32	4.26	2.53	1.87	2.05														
110	4.66	2.37	1.50	1.87	2.05														
115	2.19	1.32	1.40	1.87	2.05														
120	1.14	1.23	1.40	1.87	3.17														
125	1.14	1.23	1.40	1.87	4.29														
130	1.52	1.51	1.77	2.52	5.60														
135	2.37	2.54	2.71	3.36	7.09														
140	3.31	3.39	3.74	4.21	7.93														
145	4.08	4.15	4.48	5.15	8.96														
150	4.46	4.52	4.67	5.43	9.25														
155	4.46	4.53	4.67	5.62	9.25														
160	4.55	4.53	4.67	5.52	8.87														
165	5.50	5.66	6.17	7.02	12.3														
170	6.45	6.88	7.29	8.51	14.6														
175	7.21	7.26	7.75	8.98	15.1														
180	7.30	7.26	7.75	8.89	15.1														

4.0 LM-79 Measurement and Test Results

4.3 THD and PF Test

Model No.	TKBEAM4B @40W5000K	Sample ID	251017004-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	0.324	38.3	0.986	9.76

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*****