

LM-79-19 Test Report

For

RAB LIGHTING INC.

408 W 14th St, New York, NY 10014 United States

LED Pendant Light

Model Name(s): TKPM[blank, B]

Remark: The [blank, B] for enclosure color, it can be blank for white or B for black.

Representative (Tested) Model:

TKPM(mode:3000K)

TKPM(mode:4000K)

TKPM(mode:5000K)

Model Difference: N/A

Prepared by:

Alan Wang

Engineer: Alan Wang

Date: 2025-04-08

Reviewed by:

Vincent Yuan

Technical Lead: Vincent Yuan

Issue Date: 2025-04-11

Revised Date: N/A

- Note:
1. The results contained in this report pertain only to the tested samples.
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 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.

Laboratory: Dongguan New Testing Centre Co., Ltd

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

Tel: 86-769-22212079

Website: <http://www.ntc-cert.com>

Client Information:

Applicant Name:	RAB LIGHTING INC.
Brand Name:	RAB LIGHTING
Manufacturer Name:	RAB LIGHTING INC.
Manufacturer Address:	408 W 14th St, New York, NY 10014 United States

Product Information:

Model Number:	TKPM[blank, B]
Product Type:	LED Pendant Light
Rating Input:	120Vac, 60 Hz, 8W
Declared CCT:	3000K,4000K,5000K(Color Tunable)
LED Manufacturer:	Bridgelux Inc.
LED Model:	BXRV-TR-3050G-10A1-B-23
LED Driver Model:	SXC-OILH8TUW

Test Information:

Standard Lamp:	Total Spectral Radiant Flux Standard Lamp, trace to NIST. 1. D908S for Gonio, luminous uncertainty 3.14% 2. D215S for Integrating Sphere, luminous uncertainty 2.86%, CCT uncertainty 3K
Date of Receipt Samples:	2025-03-23
Quantity of Receipt Samples:	1 pc
Sample Number:	241122001-S1
Test Representation:	N/A

Laboratory Information:

Test Laboratory:	Dongguan New Testing Centre Co., Ltd
Laboratory Address:	3F, No. 1 the 1 st North Industry Road, Songshan Lake Science & Technology Park, Dongguan, Guangdong, China
Laboratory Contact Name:	Neil Zhong
Laboratory Contact E-mail:	Neil_zhong@ntc-cert.com

Report Information:

Test Report Form:	LM-79_TRF_V1.6
Issued Date of Test Report:	N/A
Revised Date of Test Report:	N/A
Test Report No.:	NTCLR25040066
Remark (If applicable):	N/A

Test Specification:	
Date of Test	2025-03-25
Test Item	<ol style="list-style-type: none"> 1. Total Luminous Flux 2. Luminous Distribution Intensity 3. Luminous Efficacy 4. Correlated Color Temperature 5. Color Rendering Index 6. Chromaticity Coordinate 7. Fidelity Index 8. Gamut Index 9. Local Chroma Shift 10. THD and PF
Reference Standard	ANSI/IES LM-79:2019 Optical and Electrical Measurements of Solid-State Lighting Products – Chromaticity Uniformity Measurements ANSI C78.377-2017 Specifications for the Chromaticity of Solid State Lighting Products CIE 13.3-1995 Method of Measuring and Specifying Color Rendering Properties of Light Sources CIE 15-2018 Technical Report Colorimetry ANSI IES TM-30-18 IES Method for Evaluating Light Source Color Rendition IES TM-15-11 Luminaire Classification System for Outdoor Luminaires Addendum A for IES TM-15-11 Backlight, Uplight, and Glare (BUG) Ratings ANSI C82.77-10:2020 Harmonic Emission Limits – Related Power Quality Requirements for Lighting Equipment – Solid State

Test Methods:
<p>1. Photometric and Electrical Measurements – Light Distribution Method:</p> <p>Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at 25 °C ± 1°C, measured at a point not more than 1 m from the sample and at the same height as the sample. The sample was operated at required Voltage and Frequency. It was stabilized before measurement was made. Luminous Flux, Luminaire Efficacy and Zonal Lumen were calculated from the software taken at 1° vertical intervals and 15° horizontal intervals.</p>
<p>2. Photometric and Electrical Measurements – Integrating Sphere Method:</p> <p>Photometric parameters were measured using an integrating sphere, as spectroradiometer and software. The ambient temperature condition inside the sphere was measured at 25 °C± 1°C. The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. The sample was operated at require Voltage and Frequency. It was stabilized before measurement was made. Chromaticity Coordinates, Correlated Color Temperature and Color Rendering Index were calculated from the spectral radiant flux measurements taken at least 1 nm intervals over the rage of 380 to 780 nm.</p>
<p>3. THD and PF Measurements:</p> <p>The sample was tested according to the ANSI C82.77, the sample was operated at requirement Voltage and Frequency, and was stabilized before measurement. The Total Harmonic Distortion was calculated from the Digital Power Meter.</p>

Integrating Sphere Test Results:

Test Condition:

Test Ambient (°C)	Test Humidity (%)	Orientation	Stabilization Time (minute)	Test Time (minute)
25.4	41.0	Face Down	90	10

Electrical Data:

CCT Setting	Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor
3000K	120.0	60	0.0703	8.06	0.9550
4000K	120.0	60	0.0671	7.70	0.9558
5000K	120.0	60	0.0702	8.05	0.9555

Output Data:

CCT Setting	Luminous (lm)	Efficacy (lm/W)
3000K	628.2	77.97
4000K	670.8	87.11
5000K	663.6	82.46

Color Data:

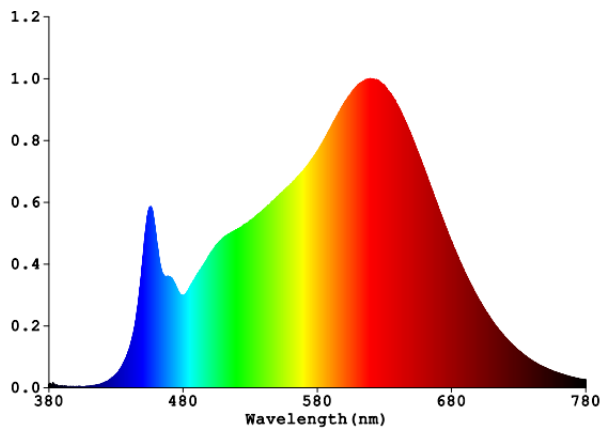
CCT Setting	Test CCT (K)	R _a	R ₉	R _f	R _g	R _{cs, h1}	Chromaticity		
							(x, y)	(u', v')	Duv
3000K	3061	94.3	67	91	97	-4%	(0.4321,0.4013)	(0.2486,0.5196)	-0.0004
4000K	3898	94.3	78	89	97	-3%	(0.3838,0.3753)	(0.2279,0.5015)	-0.0016
5000K	5035	94.0	72	90	97	-4%	(0.3444,0.3547)	(0.2098,0.4861)	0.0018

Specify Color Rendering:

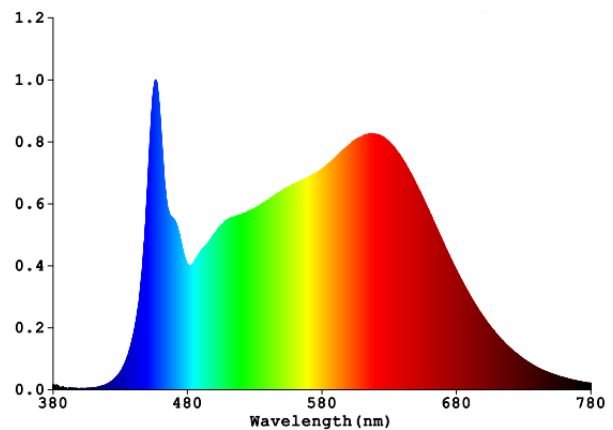
CCT Setting	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15
3000K	97	99	96	95	96	96	91	84	67	99	98	83	98	99	92
4000K	98	98	96	93	95	95	91	88	78	97	96	75	99	99	95
5000K	95	99	97	92	94	95	92	87	72	97	93	73	97	99	93

Spectrum Diagram:

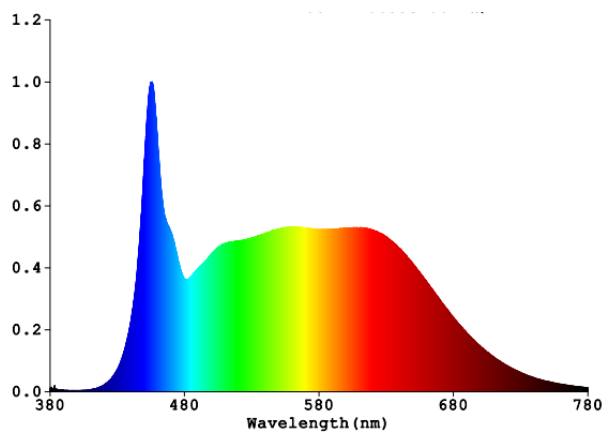
CCT Setting=3000K



CCT Setting=4000K



CCT Setting=5000K

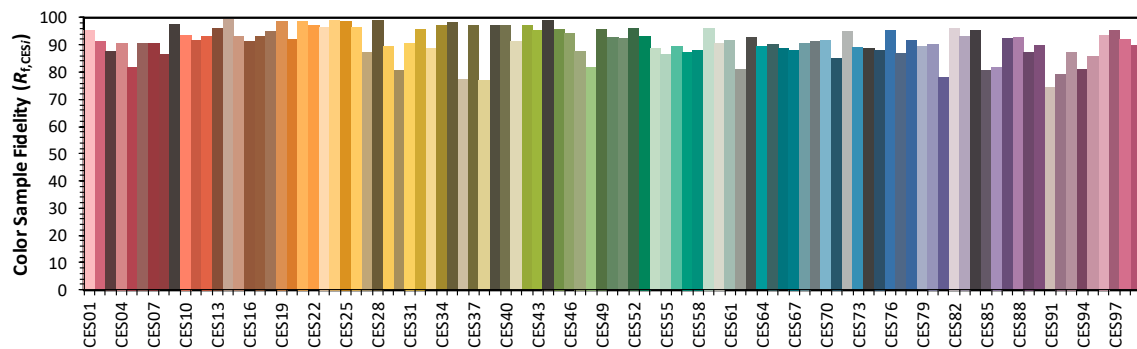
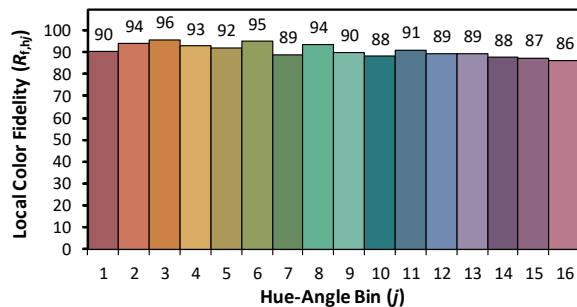
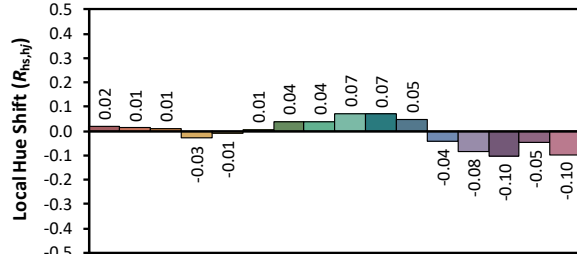
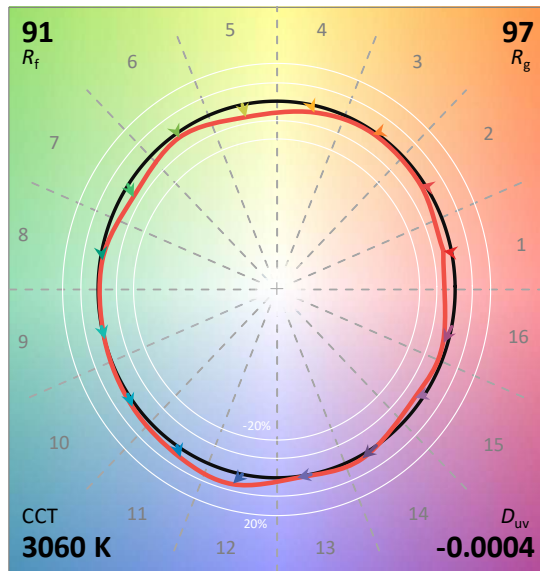
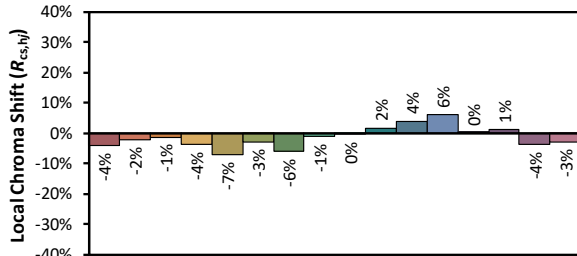
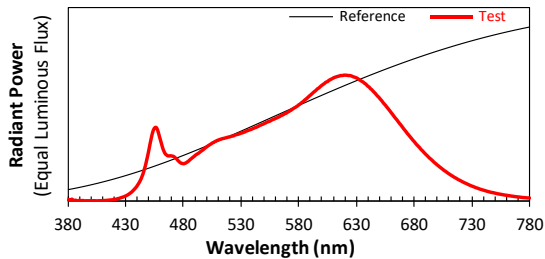


IES TM-30-18 Color Rendition Result (CCT Setting=3000K):

ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1
Date: 2025/4/8

Manufacturer: RAB LIGHTING INC.
Model: TKPM[blank, B]



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

x 0.4321
 y 0.4013
 u' 0.2487
 v' 0.5196

CIE 13.3-1995
(CRI)
 R_a 94
 R_g 67

Spectrum Data (CCT Setting=3000K):

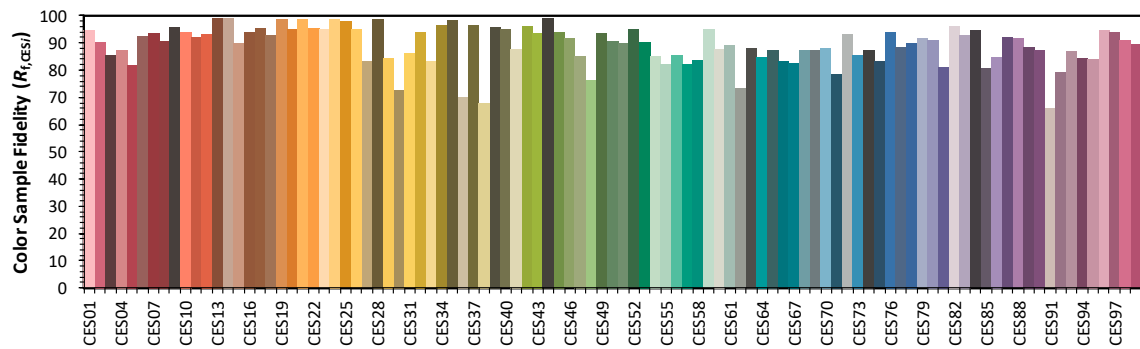
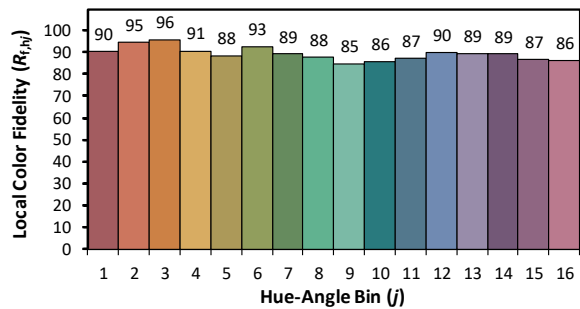
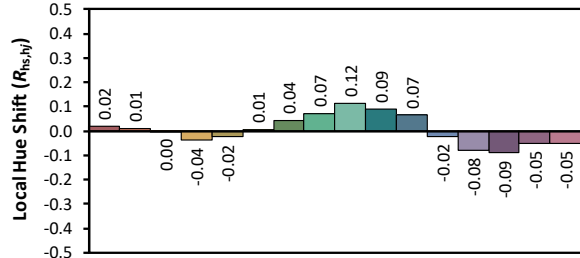
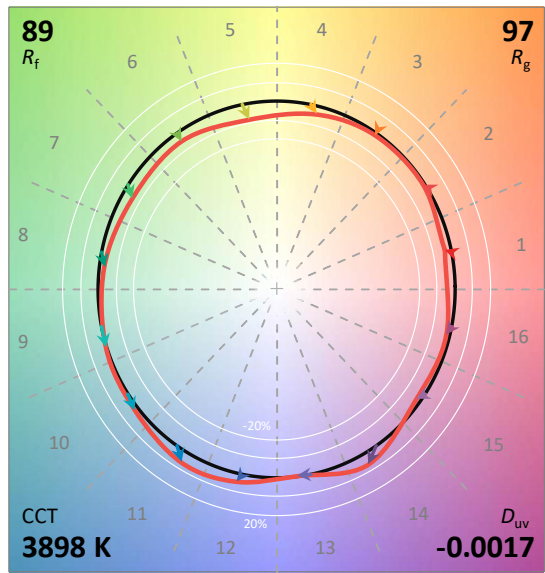
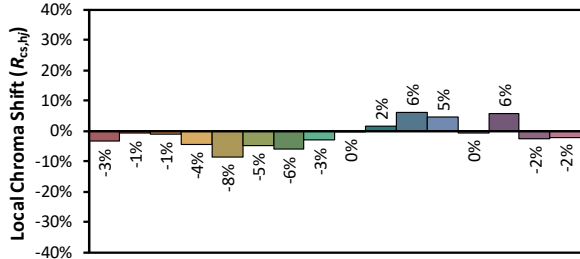
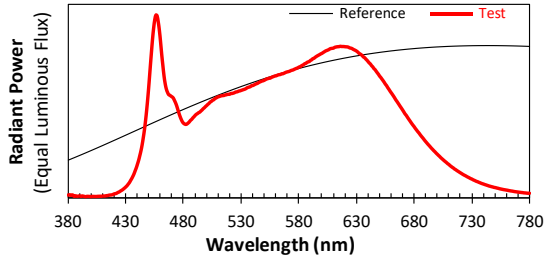
Spectral Distribution over Visible Wavelength											
WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)
380	1.00E-05	447	2.88E-04	514	4.97E-04	581	7.71E-04	648	8.35E-04	715	1.88E-04
381	1.34E-05	448	3.28E-04	515	4.98E-04	582	7.79E-04	649	8.27E-04	716	1.84E-04
382	4.80E-06	449	3.68E-04	516	5.01E-04	583	7.85E-04	650	8.16E-04	717	1.78E-04
383	1.65E-05	450	4.13E-04	517	5.03E-04	584	7.93E-04	651	8.05E-04	718	1.73E-04
384	9.60E-06	451	4.60E-04	518	5.07E-04	585	8.02E-04	652	7.95E-04	719	1.68E-04
385	3.20E-06	452	5.02E-04	519	5.09E-04	586	8.09E-04	653	7.82E-04	720	1.64E-04
386	8.50E-06	453	5.42E-04	520	5.10E-04	587	8.17E-04	654	7.71E-04	721	1.59E-04
387	5.30E-06	454	5.68E-04	521	5.14E-04	588	8.25E-04	655	7.61E-04	722	1.54E-04
388	2.80E-06	455	5.82E-04	522	5.16E-04	589	8.34E-04	656	7.49E-04	723	1.49E-04
389	5.20E-06	456	5.86E-04	523	5.18E-04	590	8.41E-04	657	7.38E-04	724	1.44E-04
390	7.10E-06	457	5.74E-04	524	5.22E-04	591	8.49E-04	658	7.27E-04	725	1.41E-04
391	4.50E-06	458	5.48E-04	525	5.26E-04	592	8.58E-04	659	7.15E-04	726	1.36E-04
392	5.00E-06	459	5.13E-04	526	5.28E-04	593	8.66E-04	660	7.03E-04	727	1.32E-04
393	5.40E-06	460	4.82E-04	527	5.30E-04	594	8.73E-04	661	6.91E-04	728	1.28E-04
394	1.70E-06	461	4.49E-04	528	5.33E-04	595	8.81E-04	662	6.79E-04	729	1.24E-04
395	3.60E-06	462	4.18E-04	529	5.37E-04	596	8.91E-04	663	6.66E-04	730	1.20E-04
396	3.70E-06	463	3.95E-04	530	5.41E-04	597	8.96E-04	664	6.55E-04	731	1.16E-04
397	3.50E-06	464	3.77E-04	531	5.42E-04	598	9.04E-04	665	6.44E-04	732	1.13E-04
398	3.70E-06	465	3.68E-04	532	5.47E-04	599	9.13E-04	666	6.32E-04	733	1.09E-04
399	3.40E-06	466	3.61E-04	533	5.49E-04	600	9.20E-04	667	6.20E-04	734	1.06E-04
400	3.80E-06	467	3.59E-04	534	5.55E-04	601	9.27E-04	668	6.09E-04	735	1.03E-04
401	3.60E-06	468	3.60E-04	535	5.58E-04	602	9.32E-04	669	5.97E-04	736	9.94E-05
402	4.00E-06	469	3.60E-04	536	5.61E-04	603	9.41E-04	670	5.85E-04	737	9.58E-05
403	3.90E-06	470	3.58E-04	537	5.64E-04	604	9.46E-04	671	5.72E-04	738	9.35E-05
404	3.30E-06	471	3.56E-04	538	5.68E-04	605	9.49E-04	672	5.61E-04	739	9.03E-05
405	2.80E-06	472	3.51E-04	539	5.71E-04	606	9.58E-04	673	5.50E-04	740	8.78E-05
406	3.50E-06	473	3.42E-04	540	5.76E-04	607	9.63E-04	674	5.37E-04	741	8.49E-05
407	3.60E-06	474	3.35E-04	541	5.79E-04	608	9.68E-04	675	5.27E-04	742	8.22E-05
408	4.50E-06	475	3.23E-04	542	5.84E-04	609	9.73E-04	676	5.16E-04	743	7.95E-05
409	4.30E-06	476	3.15E-04	543	5.86E-04	610	9.78E-04	677	5.05E-04	744	7.68E-05
410	5.10E-06	477	3.07E-04	544	5.91E-04	611	9.82E-04	678	4.93E-04	745	7.46E-05
411	5.30E-06	478	3.01E-04	545	5.95E-04	612	9.85E-04	679	4.82E-04	746	7.19E-05
412	5.70E-06	479	2.99E-04	546	6.01E-04	613	9.88E-04	680	4.73E-04	747	6.99E-05
413	6.70E-06	480	2.97E-04	547	6.04E-04	614	9.91E-04	681	4.61E-04	748	6.85E-05
414	7.30E-06	481	3.00E-04	548	6.09E-04	615	9.93E-04	682	4.50E-04	749	6.66E-05
415	8.40E-06	482	3.04E-04	549	6.11E-04	616	9.96E-04	683	4.40E-04	750	6.41E-05
416	9.20E-06	483	3.10E-04	550	6.17E-04	617	9.96E-04	684	4.31E-04	751	6.23E-05
417	1.05E-05	484	3.16E-04	551	6.20E-04	618	9.97E-04	685	4.21E-04	752	6.00E-05
418	1.07E-05	485	3.25E-04	552	6.25E-04	619	9.99E-04	686	4.09E-04	753	5.79E-05
419	1.29E-05	486	3.33E-04	553	6.29E-04	620	9.99E-04	687	4.01E-04	754	5.69E-05
420	1.47E-05	487	3.40E-04	554	6.33E-04	621	9.99E-04	688	3.91E-04	755	5.47E-05
421	1.57E-05	488	3.48E-04	555	6.36E-04	622	9.98E-04	689	3.81E-04	756	5.33E-05
422	1.73E-05	489	3.55E-04	556	6.41E-04	623	9.97E-04	690	3.72E-04	757	5.14E-05
423	2.10E-05	490	3.63E-04	557	6.46E-04	624	9.96E-04	691	3.63E-04	758	4.98E-05
424	2.19E-05	491	3.70E-04	558	6.50E-04	625	9.95E-04	692	3.54E-04	759	4.82E-05
425	2.59E-05	492	3.76E-04	559	6.53E-04	626	9.91E-04	693	3.44E-04	760	4.74E-05
426	2.88E-05	493	3.81E-04	560	6.58E-04	627	9.87E-04	694	3.37E-04	761	4.56E-05
427	3.20E-05	494	3.88E-04	561	6.61E-04	628	9.84E-04	695	3.28E-04	762	4.38E-05
428	3.49E-05	495	3.96E-04	562	6.67E-04	629	9.81E-04	696	3.20E-04	763	4.30E-05
429	3.87E-05	496	4.02E-04	563	6.70E-04	630	9.78E-04	697	3.11E-04	764	4.12E-05
430	4.30E-05	497	4.09E-04	564	6.76E-04	631	9.72E-04	698	3.03E-04	765	4.02E-05
431	4.75E-05	498	4.16E-04	565	6.80E-04	632	9.66E-04	699	2.95E-04	766	3.90E-05
432	5.31E-05	499	4.25E-04	566	6.85E-04	633	9.60E-04	700	2.87E-04	767	3.72E-05
433	5.96E-05	500	4.31E-04	567	6.89E-04	634	9.54E-04	701	2.80E-04	768	3.62E-05
434	6.64E-05	501	4.38E-04	568	6.95E-04	635	9.49E-04	702	2.72E-04	769	3.50E-05
435	7.34E-05	502	4.44E-04	569	6.98E-04	636	9.43E-04	703	2.66E-04	770	3.42E-05
436	8.29E-05	503	4.50E-04	570	7.05E-04	637	9.34E-04	704	2.58E-04	771	3.32E-05
437	9.22E-05	504	4.56E-04	571	7.10E-04	638	9.29E-04	705	2.51E-04	772	3.20E-05
438	1.03E-04	505	4.62E-04	572	7.16E-04	639	9.19E-04	706	2.43E-04	773	3.08E-05
439	1.13E-04	506	4.66E-04	573	7.21E-04	640	9.10E-04	707	2.38E-04	774	2.96E-05
440	1.27E-04	507	4.72E-04	574	7.28E-04	641	9.04E-04	708	2.31E-04	775	2.88E-05
441	1.41E-04	508	4.77E-04	575	7.34E-04	642	8.93E-04	709	2.24E-04	776	2.81E-05
442	1.57E-04	509	4.81E-04	576	7.40E-04	643	8.86E-04	710	2.18E-04	777	2.75E-05
443	1.76E-04	510	4.85E-04	577	7.45E-04	644	8.76E-04	711	2.12E-04	778	2.64E-05
444	1.98E-04	511	4.88E-04	578	7.51E-04	645	8.66E-04	712	2.06E-04	779	2.61E-05
445	2.23E-04	512	4.91E-04	579	7.57E-04	646	8.57E-04	713	2.00E-04	780	2.62E-05
446	2.55E-04	513	4.94E-04	580	7.65E-04	647	8.46E-04	714	1.95E-04	N/A	N/A

IES TM-30-18 Color Rendition Result (CCT Setting=4000K):

ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1
Date: 2025/4/8

Manufacturer: RAB LIGHTING INC.
Model: TKPM[blank, B]



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

x 0.3838
 y 0.3752
 u' 0.2279
 v' 0.5014

CIE 13.3-1995
(CRI)
 R_a 94
 R_g 78

Spectrum Data (CCT Setting=4000K):

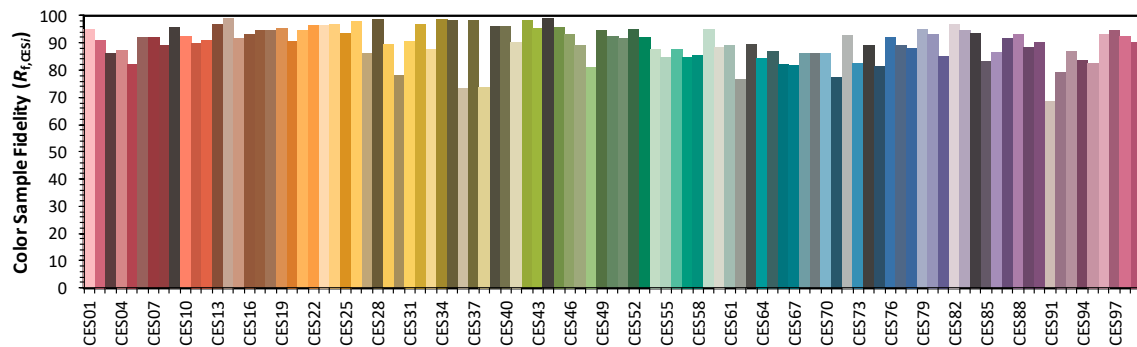
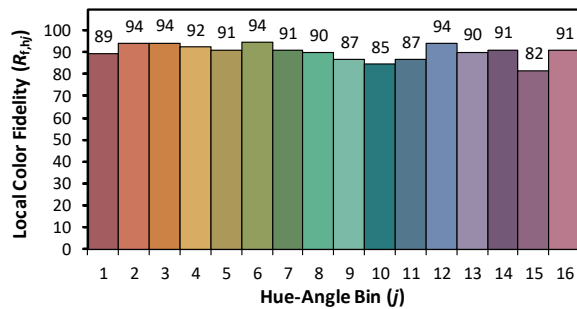
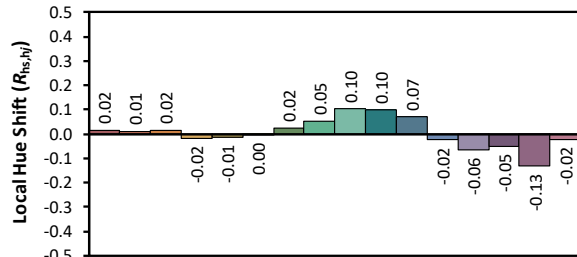
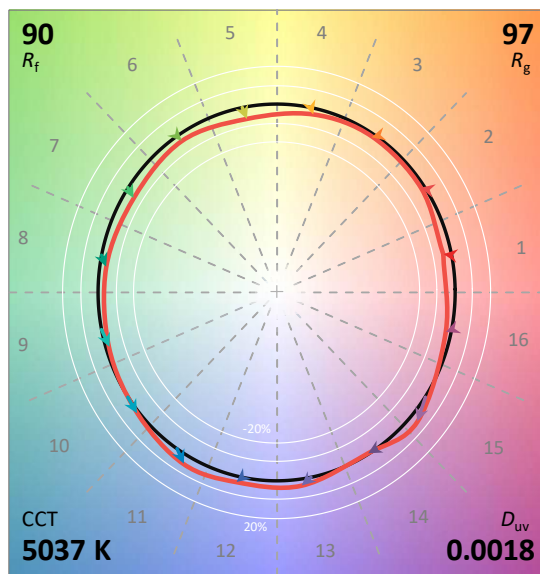
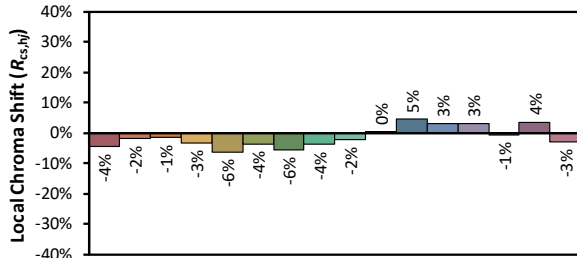
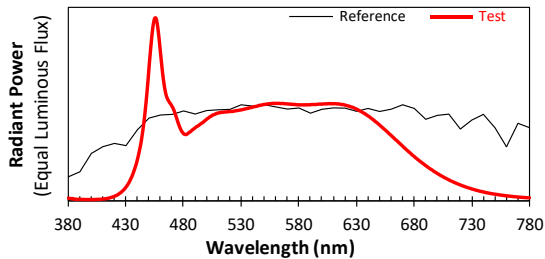
Spectral Distribution over Visible Wavelength											
WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)	WL (nm)	Radiant (W/nm)
380	1.13E-05	447	4.20E-04	514	5.56E-04	581	7.14E-04	648	6.81E-04	715	1.54E-04
381	1.35E-05	448	4.80E-04	515	5.57E-04	582	7.18E-04	649	6.73E-04	716	1.51E-04
382	9.80E-06	449	5.48E-04	516	5.60E-04	583	7.22E-04	650	6.63E-04	717	1.46E-04
383	1.21E-05	450	6.24E-04	517	5.61E-04	584	7.25E-04	651	6.55E-04	718	1.42E-04
384	1.15E-05	451	7.07E-04	518	5.63E-04	585	7.31E-04	652	6.47E-04	719	1.38E-04
385	4.20E-06	452	7.86E-04	519	5.63E-04	586	7.33E-04	653	6.38E-04	720	1.34E-04
386	7.60E-06	453	8.63E-04	520	5.64E-04	587	7.38E-04	654	6.29E-04	721	1.30E-04
387	6.20E-06	454	9.26E-04	521	5.68E-04	588	7.41E-04	655	6.19E-04	722	1.26E-04
388	5.10E-06	455	9.73E-04	522	5.68E-04	589	7.43E-04	656	6.11E-04	723	1.22E-04
389	6.60E-06	456	9.97E-04	523	5.70E-04	590	7.49E-04	657	6.00E-04	724	1.19E-04
390	6.50E-06	457	9.93E-04	524	5.72E-04	591	7.52E-04	658	5.91E-04	725	1.15E-04
391	3.80E-06	458	9.59E-04	525	5.75E-04	592	7.58E-04	659	5.81E-04	726	1.12E-04
392	6.80E-06	459	9.12E-04	526	5.76E-04	593	7.60E-04	660	5.72E-04	727	1.09E-04
393	5.60E-06	460	8.50E-04	527	5.78E-04	594	7.65E-04	661	5.63E-04	728	1.05E-04
394	4.10E-06	461	7.81E-04	528	5.81E-04	595	7.70E-04	662	5.54E-04	729	1.02E-04
395	2.50E-06	462	7.21E-04	529	5.82E-04	596	7.74E-04	663	5.44E-04	730	9.91E-05
396	4.40E-06	463	6.64E-04	530	5.85E-04	597	7.77E-04	664	5.33E-04	731	9.54E-05
397	4.60E-06	464	6.22E-04	531	5.87E-04	598	7.81E-04	665	5.24E-04	732	9.26E-05
398	4.30E-06	465	5.92E-04	532	5.89E-04	599	7.85E-04	666	5.15E-04	733	8.96E-05
399	3.40E-06	466	5.75E-04	533	5.91E-04	600	7.88E-04	667	5.05E-04	734	8.65E-05
400	3.10E-06	467	5.62E-04	534	5.94E-04	601	7.92E-04	668	4.96E-04	735	8.46E-05
401	4.80E-06	468	5.58E-04	535	5.99E-04	602	7.96E-04	669	4.86E-04	736	8.15E-05
402	3.90E-06	469	5.53E-04	536	6.01E-04	603	8.00E-04	670	4.77E-04	737	7.91E-05
403	4.10E-06	470	5.49E-04	537	6.03E-04	604	8.03E-04	671	4.67E-04	738	7.63E-05
404	3.70E-06	471	5.43E-04	538	6.06E-04	605	8.05E-04	672	4.56E-04	739	7.40E-05
405	4.40E-06	472	5.30E-04	539	6.11E-04	606	8.08E-04	673	4.49E-04	740	7.20E-05
406	4.80E-06	473	5.17E-04	540	6.11E-04	607	8.12E-04	674	4.39E-04	741	6.96E-05
407	5.00E-06	474	5.00E-04	541	6.15E-04	608	8.14E-04	675	4.29E-04	742	6.76E-05
408	5.10E-06	475	4.79E-04	542	6.18E-04	609	8.15E-04	676	4.20E-04	743	6.54E-05
409	5.20E-06	476	4.59E-04	543	6.21E-04	610	8.16E-04	677	4.11E-04	744	6.33E-05
410	6.30E-06	477	4.40E-04	544	6.23E-04	611	8.20E-04	678	4.02E-04	745	6.10E-05
411	6.40E-06	478	4.25E-04	545	6.27E-04	612	8.22E-04	679	3.93E-04	746	5.95E-05
412	6.70E-06	479	4.12E-04	546	6.30E-04	613	8.23E-04	680	3.85E-04	747	5.75E-05
413	8.30E-06	480	4.04E-04	547	6.33E-04	614	8.24E-04	681	3.76E-04	748	5.62E-05
414	8.80E-06	481	4.00E-04	548	6.36E-04	615	8.25E-04	682	3.68E-04	749	5.40E-05
415	1.05E-05	482	3.99E-04	549	6.37E-04	616	8.26E-04	683	3.60E-04	750	5.29E-05
416	1.16E-05	483	4.01E-04	550	6.40E-04	617	8.25E-04	684	3.52E-04	751	5.14E-05
417	1.21E-05	484	4.07E-04	551	6.44E-04	618	8.25E-04	685	3.44E-04	752	4.96E-05
418	1.31E-05	485	4.13E-04	552	6.47E-04	619	8.25E-04	686	3.35E-04	753	4.83E-05
419	1.58E-05	486	4.21E-04	553	6.49E-04	620	8.24E-04	687	3.28E-04	754	4.63E-05
420	1.84E-05	487	4.26E-04	554	6.51E-04	621	8.23E-04	688	3.20E-04	755	4.50E-05
421	1.96E-05	488	4.34E-04	555	6.52E-04	622	8.23E-04	689	3.11E-04	756	4.36E-05
422	2.21E-05	489	4.40E-04	556	6.55E-04	623	8.21E-04	690	3.04E-04	757	4.23E-05
423	2.59E-05	490	4.48E-04	557	6.58E-04	624	8.18E-04	691	2.96E-04	758	4.10E-05
424	2.85E-05	491	4.54E-04	558	6.61E-04	625	8.16E-04	692	2.89E-04	759	4.00E-05
425	3.27E-05	492	4.58E-04	559	6.63E-04	626	8.14E-04	693	2.82E-04	760	3.89E-05
426	3.66E-05	493	4.63E-04	560	6.64E-04	627	8.10E-04	694	2.75E-04	761	3.78E-05
427	4.06E-05	494	4.66E-04	561	6.67E-04	628	8.07E-04	695	2.68E-04	762	3.63E-05
428	4.59E-05	495	4.72E-04	562	6.70E-04	629	8.04E-04	696	2.61E-04	763	3.52E-05
429	5.11E-05	496	4.78E-04	563	6.71E-04	630	8.00E-04	697	2.54E-04	764	3.40E-05
430	5.71E-05	497	4.84E-04	564	6.72E-04	631	7.95E-04	698	2.48E-04	765	3.32E-05
431	6.35E-05	498	4.90E-04	565	6.75E-04	632	7.88E-04	699	2.41E-04	766	3.19E-05
432	7.20E-05	499	4.96E-04	566	6.76E-04	633	7.84E-04	700	2.35E-04	767	3.07E-05
433	8.01E-05	500	5.02E-04	567	6.78E-04	634	7.80E-04	701	2.29E-04	768	2.98E-05
434	9.14E-05	501	5.08E-04	568	6.81E-04	635	7.75E-04	702	2.23E-04	769	2.89E-05
435	1.02E-04	502	5.13E-04	569	6.84E-04	636	7.67E-04	703	2.17E-04	770	2.81E-05
436	1.14E-04	503	5.21E-04	570	6.86E-04	637	7.64E-04	704	2.11E-04	771	2.72E-05
437	1.28E-04	504	5.24E-04	571	6.88E-04	638	7.56E-04	705	2.05E-04	772	2.65E-05
438	1.45E-04	505	5.30E-04	572	6.90E-04	639	7.50E-04	706	2.00E-04	773	2.55E-05
439	1.62E-04	506	5.33E-04	573	6.93E-04	640	7.42E-04	707	1.95E-04	774	2.50E-05
440	1.82E-04	507	5.39E-04	574	6.95E-04	641	7.35E-04	708	1.89E-04	775	2.38E-05
441	2.02E-04	508	5.43E-04	575	6.97E-04	642	7.29E-04	709	1.84E-04	776	2.34E-05
442	2.28E-04	509	5.46E-04	576	7.00E-04	643	7.20E-04	710	1.79E-04	777	2.27E-05
443	2.54E-04	510	5.50E-04	577	7.03E-04	644	7.14E-04	711	1.73E-04	778	2.19E-05
444	2.86E-04	511	5.51E-04	578	7.06E-04	645	7.04E-04	712	1.69E-04	779	2.17E-05
445	3.25E-04	512	5.54E-04	579	7.08E-04	646	6.99E-04	713	1.64E-04	780	2.17E-05
446	3.68E-04	513	5.55E-04	580	7.12E-04	647	6.90E-04	714	1.60E-04	N/A	N/A

IES TM-30-18 Color Rendition Result (CCT Setting=5000K):

ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1
Date: 2025/4/8

Manufacturer: RAB LIGHTING INC.
Model: TKPM[blank, B]



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

x 0.3444
 y 0.3546
 u' 0.2098
 v' 0.4860

CIE 13.3-1995
(CRI)
 R_a 94
 R_g 72

Spectrum Data (CCT Setting=5000K):

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	1.13E-05	447	5.10E-04	514	4.82E-04	581	5.23E-04	648	4.24E-04	715	9.70E-05
381	1.04E-05	448	5.76E-04	515	4.84E-04	582	5.23E-04	649	4.18E-04	716	9.45E-05
382	9.10E-06	449	6.49E-04	516	4.84E-04	583	5.24E-04	650	4.12E-04	717	9.14E-05
383	8.30E-06	450	7.29E-04	517	4.84E-04	584	5.23E-04	651	4.07E-04	718	8.91E-05
384	9.40E-06	451	8.02E-04	518	4.85E-04	585	5.23E-04	652	4.01E-04	719	8.64E-05
385	5.00E-06	452	8.71E-04	519	4.86E-04	586	5.24E-04	653	3.95E-04	720	8.40E-05
386	6.10E-06	453	9.33E-04	520	4.86E-04	587	5.23E-04	654	3.90E-04	721	8.15E-05
387	5.40E-06	454	9.75E-04	521	4.87E-04	588	5.23E-04	655	3.85E-04	722	7.87E-05
388	3.30E-06	455	9.99E-04	522	4.87E-04	589	5.24E-04	656	3.79E-04	723	7.69E-05
389	5.00E-06	456	9.99E-04	523	4.87E-04	590	5.24E-04	657	3.73E-04	724	7.47E-05
390	6.50E-06	457	9.72E-04	524	4.90E-04	591	5.25E-04	658	3.67E-04	725	7.21E-05
391	4.00E-06	458	9.26E-04	525	4.90E-04	592	5.25E-04	659	3.61E-04	726	7.00E-05
392	4.40E-06	459	8.69E-04	526	4.91E-04	593	5.25E-04	660	3.56E-04	727	6.80E-05
393	4.60E-06	460	8.04E-04	527	4.93E-04	594	5.25E-04	661	3.49E-04	728	6.60E-05
394	4.20E-06	461	7.43E-04	528	4.93E-04	595	5.25E-04	662	3.44E-04	729	6.39E-05
395	2.80E-06	462	6.85E-04	529	4.95E-04	596	5.26E-04	663	3.37E-04	730	6.19E-05
396	4.00E-06	463	6.38E-04	530	4.96E-04	597	5.27E-04	664	3.31E-04	731	6.01E-05
397	4.10E-06	464	6.00E-04	531	4.97E-04	598	5.28E-04	665	3.27E-04	732	5.83E-05
398	3.70E-06	465	5.73E-04	532	4.99E-04	599	5.27E-04	666	3.20E-04	733	5.64E-05
399	3.70E-06	466	5.56E-04	533	5.00E-04	600	5.27E-04	667	3.14E-04	734	5.47E-05
400	3.10E-06	467	5.44E-04	534	5.01E-04	601	5.28E-04	668	3.08E-04	735	5.31E-05
401	3.90E-06	468	5.34E-04	535	5.04E-04	602	5.28E-04	669	3.03E-04	736	5.12E-05
402	4.00E-06	469	5.26E-04	536	5.04E-04	603	5.29E-04	670	2.96E-04	737	4.94E-05
403	4.00E-06	470	5.14E-04	537	5.07E-04	604	5.29E-04	671	2.90E-04	738	4.84E-05
404	4.40E-06	471	5.03E-04	538	5.08E-04	605	5.30E-04	672	2.84E-04	739	4.67E-05
405	4.70E-06	472	4.87E-04	539	5.09E-04	606	5.30E-04	673	2.79E-04	740	4.54E-05
406	4.90E-06	473	4.68E-04	540	5.11E-04	607	5.29E-04	674	2.73E-04	741	4.37E-05
407	5.20E-06	474	4.49E-04	541	5.13E-04	608	5.30E-04	675	2.67E-04	742	4.23E-05
408	5.20E-06	475	4.29E-04	542	5.14E-04	609	5.29E-04	676	2.62E-04	743	4.10E-05
409	5.90E-06	476	4.12E-04	543	5.15E-04	610	5.29E-04	677	2.56E-04	744	3.98E-05
410	6.80E-06	477	3.95E-04	544	5.16E-04	611	5.30E-04	678	2.50E-04	745	3.86E-05
411	7.40E-06	478	3.82E-04	545	5.19E-04	612	5.29E-04	679	2.45E-04	746	3.73E-05
412	7.80E-06	479	3.72E-04	546	5.21E-04	613	5.28E-04	680	2.40E-04	747	3.61E-05
413	9.20E-06	480	3.65E-04	547	5.22E-04	614	5.28E-04	681	2.34E-04	748	3.53E-05
414	1.03E-05	481	3.62E-04	548	5.23E-04	615	5.28E-04	682	2.29E-04	749	3.39E-05
415	1.14E-05	482	3.60E-04	549	5.25E-04	616	5.26E-04	683	2.24E-04	750	3.32E-05
416	1.30E-05	483	3.63E-04	550	5.26E-04	617	5.24E-04	684	2.19E-04	751	3.24E-05
417	1.53E-05	484	3.68E-04	551	5.26E-04	618	5.25E-04	685	2.14E-04	752	3.13E-05
418	1.69E-05	485	3.73E-04	552	5.27E-04	619	5.24E-04	686	2.09E-04	753	3.03E-05
419	1.91E-05	486	3.76E-04	553	5.29E-04	620	5.22E-04	687	2.04E-04	754	2.95E-05
420	2.15E-05	487	3.83E-04	554	5.29E-04	621	5.20E-04	688	2.00E-04	755	2.83E-05
421	2.44E-05	488	3.88E-04	555	5.30E-04	622	5.18E-04	689	1.95E-04	756	2.74E-05
422	2.71E-05	489	3.92E-04	556	5.30E-04	623	5.17E-04	690	1.90E-04	757	2.67E-05
423	3.11E-05	490	3.97E-04	557	5.31E-04	624	5.15E-04	691	1.85E-04	758	2.59E-05
424	3.55E-05	491	4.03E-04	558	5.31E-04	625	5.12E-04	692	1.80E-04	759	2.52E-05
425	3.99E-05	492	4.06E-04	559	5.31E-04	626	5.10E-04	693	1.76E-04	760	2.44E-05
426	4.48E-05	493	4.10E-04	560	5.31E-04	627	5.09E-04	694	1.72E-04	761	2.36E-05
427	5.06E-05	494	4.15E-04	561	5.31E-04	628	5.05E-04	695	1.68E-04	762	2.29E-05
428	5.70E-05	495	4.20E-04	562	5.31E-04	629	5.03E-04	696	1.64E-04	763	2.22E-05
429	6.41E-05	496	4.24E-04	563	5.31E-04	630	5.00E-04	697	1.59E-04	764	2.15E-05
430	7.21E-05	497	4.28E-04	564	5.30E-04	631	4.97E-04	698	1.55E-04	765	2.09E-05
431	8.07E-05	498	4.34E-04	565	5.31E-04	632	4.93E-04	699	1.51E-04	766	2.00E-05
432	9.07E-05	499	4.39E-04	566	5.31E-04	633	4.89E-04	700	1.47E-04	767	1.94E-05
433	1.02E-04	500	4.45E-04	567	5.30E-04	634	4.86E-04	701	1.43E-04	768	1.88E-05
434	1.15E-04	501	4.49E-04	568	5.29E-04	635	4.83E-04	702	1.39E-04	769	1.84E-05
435	1.28E-04	502	4.54E-04	569	5.29E-04	636	4.79E-04	703	1.35E-04	770	1.77E-05
436	1.44E-04	503	4.59E-04	570	5.28E-04	637	4.76E-04	704	1.32E-04	771	1.70E-05
437	1.62E-04	504	4.62E-04	571	5.27E-04	638	4.71E-04	705	1.29E-04	772	1.65E-05
438	1.81E-04	505	4.67E-04	572	5.28E-04	639	4.67E-04	706	1.25E-04	773	1.61E-05
439	2.01E-04	506	4.68E-04	573	5.26E-04	640	4.62E-04	707	1.22E-04	774	1.56E-05
440	2.26E-04	507	4.72E-04	574	5.27E-04	641	4.59E-04	708	1.19E-04	775	1.52E-05
441	2.52E-04	508	4.74E-04	575	5.25E-04	642	4.53E-04	709	1.15E-04	776	1.48E-05
442	2.83E-04	509	4.77E-04	576	5.26E-04	643	4.49E-04	710	1.12E-04	777	1.42E-05
443	3.14E-04	510	4.78E-04	577	5.25E-04	644	4.43E-04	711	1.09E-04	778	1.37E-05
444	3.56E-04	511	4.80E-04	578	5.24E-04	645	4.39E-04	712	1.05E-04	779	1.36E-05
445	4.00E-04	512	4.81E-04	579	5.24E-04	646	4.33E-04	713	1.03E-04	780	1.37E-05
446	4.52E-04	513	4.83E-04	580	5.23E-04	647	4.28E-04	714	9.98E-05	N/A	N/A

Goniophotometer Test Results (CCT Setting=3000K):

Test Condition:

Test Ambient (°C)	Test Humidity (%)	Orientation	Stabilization Time (minute)	Test Time (minute)
28.4	36.9	Face Down	90	25

Electrical Data:

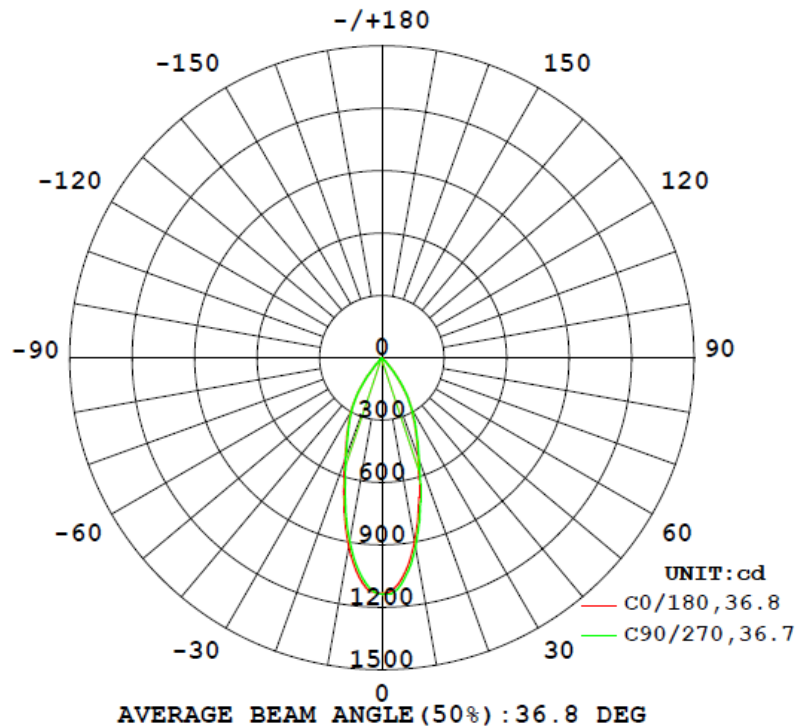
Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor
120.0	60	0.0702	8.05	0.9547

Goniophotometer Data:

Parameter	Results
Total Luminous (lm)	626.3
Luminous Efficacy (lm/W)	77.80
Beam Angle (°)	36.8
Center Beam Intensity (cd)	1135

Luminous Intensity Distribution Diagram:

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

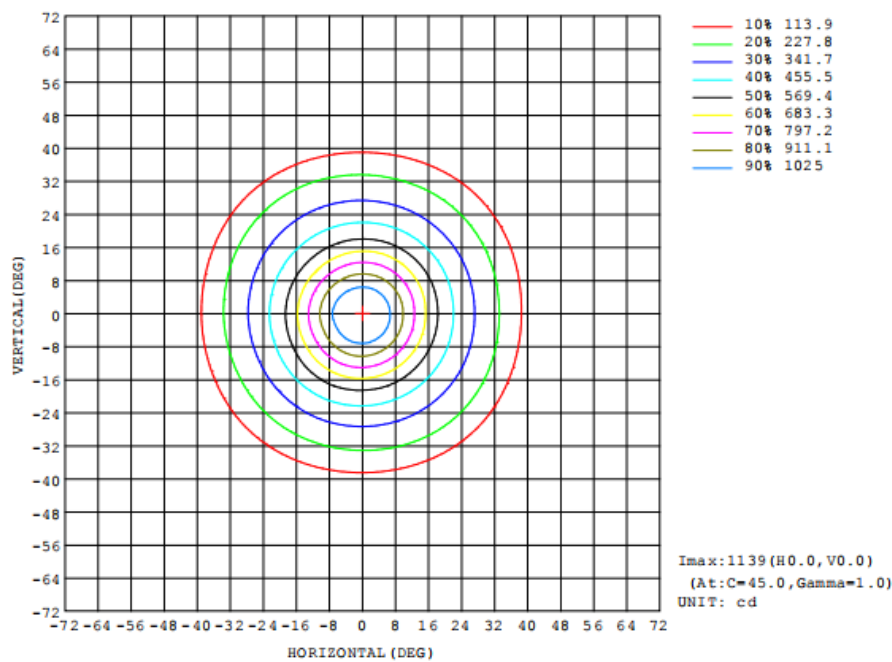


Zonal Flux Diagram:

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	● zone	● total	llum, lamp
10	901.9	915.0	925.8	927.2	922.0	901.5	896.5	904.1	0- 10	97.44	97.44	13.6,13.6
20	513.1	515.5	524.1	531.0	523.2	510.0	509.5	513.9	10- 20	193.8	291.3	46.5,46.5
30	266.0	288.8	289.1	288.4	297.3	296.3	294.3	289.0	20- 30	179.4	470.7	75.2,75.2
40	83.52	80.42	84.22	88.11	92.64	92.19	93.34	93.57	30- 40	117.9	588.5	94,94
50	13.70	13.57	13.75	13.86	14.09	14.06	13.84	13.78	40- 50	24.46	613.0	97.9,97.9
60	5.941	5.834	6.075	6.024	6.116	6.429	6.719	6.727	50- 60	8.854	621.9	99.3,99.3
70	1.965	1.856	2.058	2.051	2.289	1.976	2.066	1.959	60- 70	3.391	625.2	99.8,99.8
80	0.0224	0.0231	0.0246	0.0242	0.0215	0.0236	0.0242	0.0227	70- 80	1.026	626.3	100,100
90	0	0	0	0.0002	0	0	0	0	80- 90	0.0084	626.3	100,100
100	0	0	0	0	0	0	0	0	90-100	0.0000	626.3	100,100
110	0	0	0	0	0	0	0	0	100-110	0	626.3	100,100
120	0	0	0	0	0	0	0	0	110-120	0.0000	626.3	100,100
130	0	0	0	0.0002	0	0	0	0	120-130	0.0000	626.3	100,100
140	0.0013	0.0013	0.0013	0.0024	0.0002	0.0004	0	0.0007	130-140	0.0002	626.3	100,100
150	0.0043	0.0034	0.0045	0.0049	0.0028	0.0024	0.0024	0.0026	140-150	0.0013	626.3	100,100
160	0.0063	0.0050	0.0064	0.0075	0.0054	0.0052	0.0060	0.0054	150-160	0.0021	626.3	100,100
170	0.0086	0.0071	0.0099	0.0116	0.0076	0.0084	0.0073	0.0080	160-170	0.0020	626.3	100,100
180	0	0	0	0	0	0	0	0	170-180	0.0007	626.3	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Isocandela Diagram:



Luminous Distribution Intensity Data:

Table--1 UNIT: cd

C (DEG) y (DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	1135	1135	1135	1135	1135	1135	1135	1135	1135	1135	1135	1135	1135	1135	1135	1135			
5	1071	1075	1083	1085	1090	1091	1089	1082	1086	1078	1073	1067	1067	1069	1071	1070			
10	902	906	915	918	926	930	927	918	922	911	901	894	897	901	904	903			
15	693	695	701	706	715	721	720	710	712	700	689	683	687	694	698	697			
20	513	513	516	519	524	533	531	522	523	517	510	507	509	512	514	514			
25	385	386	387	388	393	395	393	391	397	393	391	389	389	388	387	386			
30	286	288	289	288	289	289	288	290	297	297	296	295	294	291	289	288			
35	189	190	191	191	190	188	187	190	199	201	203	203	199	194	192	192			
40	83.5	81.3	80.4	82.2	84.2	86.3	88.1	88.4	92.6	91.7	92.2	93.0	93.3	92.7	93.6	91.0			
45	18.7	18.2	18.0	18.6	19.3	19.4	19.8	20.1	21.8	20.9	20.5	21.0	21.4	21.1	20.9	20.4			
50	13.7	13.6	13.6	13.6	13.8	13.8	13.9	13.9	14.1	14.0	14.1	14.1	13.8	13.7	13.8	13.7			
55	9.93	9.78	9.74	9.79	10.0	10.0	10.1	10.1	10.3	10.2	9.97	10.1	9.95	9.87	9.91	9.87			
60	5.94	5.85	5.83	5.86	6.07	6.04	6.02	6.01	6.12	5.84	5.63	5.70	5.72	5.71	5.73	5.91			
65	3.14	3.01	2.96	3.08	3.26	3.23	3.23	3.24	3.34	3.15	3.03	3.17	3.19	3.09	3.03	3.12			
70	1.97	1.88	1.86	1.92	2.06	2.08	2.09	2.18	2.29	2.13	1.98	2.00	2.09	2.01	1.96	1.99			
75	1.01	0.97	0.95	0.98	1.08	1.13	1.14	1.19	1.28	1.20	1.08	1.10	1.10	1.05	1.01	1.02			
80	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02			
85	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01			
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
95	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
100	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
105	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
110	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
115	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
120	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
125	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
130	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
135	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
140	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
145	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
150	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
155	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
160	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01			
165	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01			
170	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01			
175	0.01	0.01	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01			
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

THD and PF Measurement Test Results:

Electrical Measurement:

CCT Setting	Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor	iTHD(%)
3000K	120.0	60	0.0702	8.05	0.9547	14.94
4000K	120.0	60	0.0671	7.70	0.9558	14.65
5000K	120.0	60	0.0702	8.05	0.9555	14.85

Photo of Sample:



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-F01-020	Temperature & Humidity Meter	2024-10-29	2025-10-28

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