

Photometric Test Report

Relevant Standards

- ☒ ANSI/IES LM-79-19
- ☒ ANSI C82.77-2020

Prepared For

RAB Lighting Inc.

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Date: 2025-12-10

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Issue Date: 2025-12-10

Revised Date: N/A

1.0 Test Summary

DLC Technical Requirements V6.0

Track or Mono-Point Luminaires				
Requirement Category	Test Method	Requirements		Test Value
Luminaire Output (lm) (Goniophotometer – Section 4.2)	ANSI/IES LM-79-19	≥250lm		872
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79-19	Standard	Premium	88.1
		95	110	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79-19	Worst Case		9.9
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)	ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	14.08
Power Factor (THD & PF – Section 4.3)	ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.938
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)	ANSI/IES LM-79-19	7 steps	2725±145	2759
		4 steps	2725±83	
Chromaticity (D _{uv}) (Integrating Sphere – Section 4.1)	ANSI/IES LM-79-19	7 steps	0.0000±0.0060	0.0016
		4 steps	0.0000±0.0033	
Minimum CRI (Integrating Sphere – Section 4.1)	ANSI/IES LM-79 19 CIE13.3-1995	≥80		95.9
Minimum R9 (Integrating Sphere – Section 4.1)	ANSI/IES LM-79-19 CIE13.3-1995	≥0		73
Minimum Rf (Integrating Sphere – Section 4.1)	ANSI/IES TM-30-24	≥70		92
Minimum Rg (Integrating Sphere – Section 4.1)	ANSI/IES TM-30-24	≥89		96
IES Rcs,h1 (Integrating Sphere – Section 4.1)	ANSI/IES TM-30-24	-12%≤IES Rcs,h1≤+23%		-3%
Zonal Lumen Requirement (0°-90°) (Goniophotometer – Section 4.2)	ANSI/IES LM-79-19	≥ 85%		100.0%
Input Voltage (V)				
(Goniophotometer – Section 4.2)	ANSI/IES LM-79-19	Worst Cast		120.0
(Goniophotometer – Section 4.2)		Non-Worst Case		N/A
Input Current (A)				
(Goniophotometer – Section 4.2)	ANSI/IES LM-79-19	Worst Case		0.088
(Goniophotometer – Section 4.2)		Non-Worst Case		N/A
Power (Input Wattage – W)				
(Goniophotometer – Section 4.2)	ANSI/IES LM-79-19	Worst Case		9.9
(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	2025-12-09	PIVOTLB @10W2700K	-	250903026-S1
2	Goniophotometer Test	2025-12-09	PIVOTLB @10W2700K	-	250903026-S1
3	THD and PF Test	2025-12-09	PIVOTLB @10W2700K	-	250903026-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. PIVOTLB @10W2700K, 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.	PIVOTLB @10W2700K	Sample ID	250903026-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

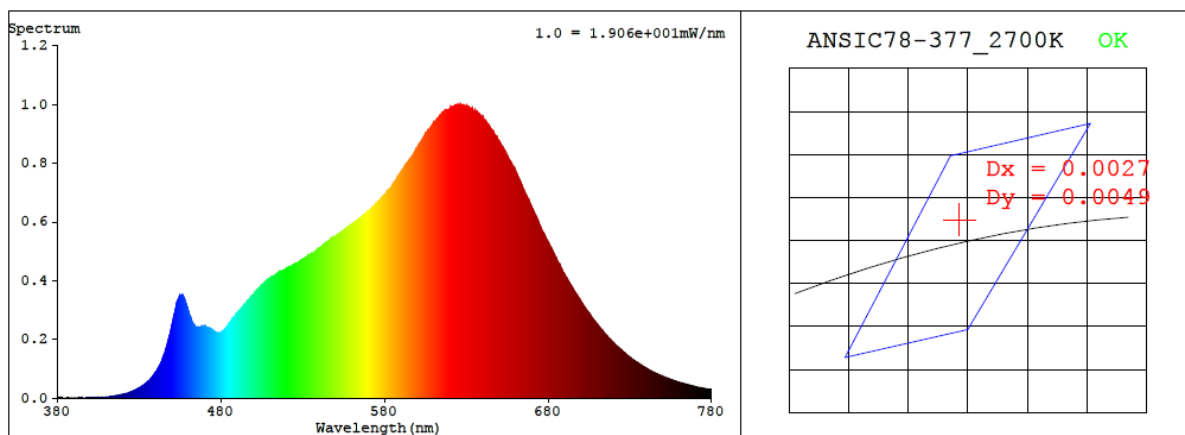
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made 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	0.088	9.9	0.938

CCT (K)	CRI	R9	Duv	SDCM	Rf	Rg	IES Rcs,h1
2759	95.9	73	0.0016	1.8	92	96	-3%

4.1 Integrating Sphere Test



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.4578$ $y = 0.4144$ / $u' = 0.2595$ $v' = 0.5285$ ($duv=1.58e-03$)

CCT= 2759K Prcp WL: $L_d=583.4nm$ Purity=61.8%

Peak WL: $L_p=626nm$ FWHM: $=144.1nm$ Ratio:R=26.5% G=70.6% B=2.9%

Render Index: $R_a = 95.9$ AvgR = 94.4 TM30:Rf=92 Rg=97

EEL: 0.14756 A+

R1 =98 R2 =99 R3 =99 R4 =97 R5 =97 R6 =97 R7 =93

R8 =87 R9 =73 R10=99 R11=99 R12=88 R13=99 R14=99 R15=93

4.1 Integrating Sphere Test

ANSI/IES TM-30-24 Color Rendition Report

Source: BXRV-TR-2750G-30A0-A-2x

Make: RAB Lighting Inc.

Date: 2025/12/10

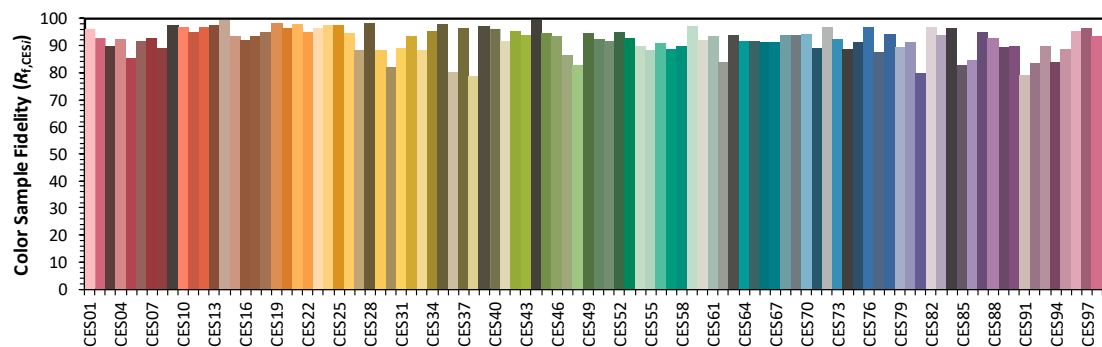
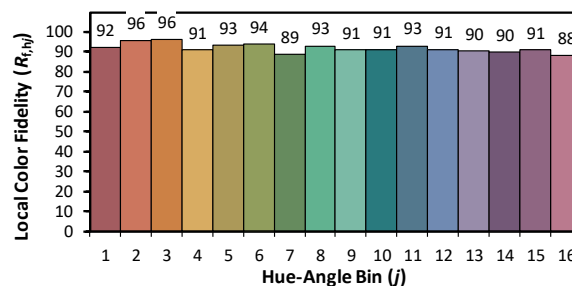
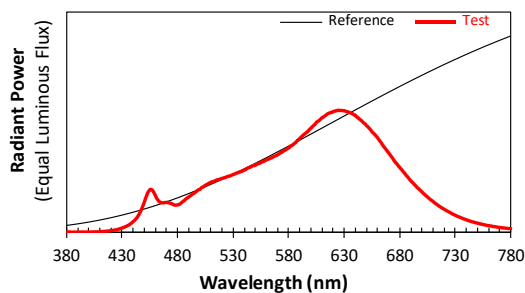
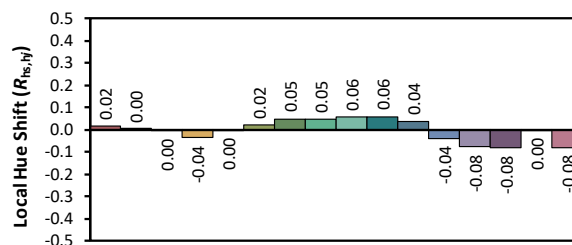
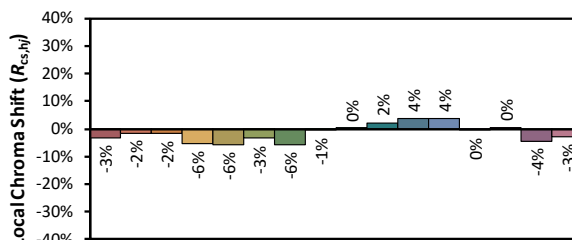
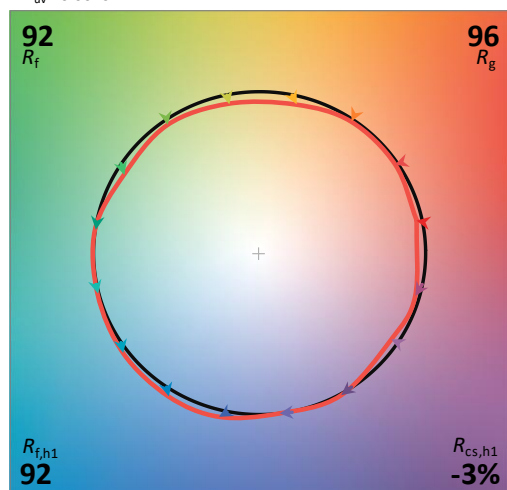
Model: PIVOTLB @10W2700K

Notes: N/A

Other: N/A

CCT: 2758 K
 D_{uv} : 0.0016

P2 V- F2



TM-30 Advanced Calculator Version 2.04

Created

2025/12/10

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	1.30E-03	447	1.80E-01	514	4.23E-01	581	6.98E-01	648	8.93E-01	715	2.17E-01
381	8.00E-04	448	2.01E-01	515	4.27E-01	582	7.06E-01	649	8.86E-01	716	2.11E-01
382	2.30E-03	449	2.25E-01	516	4.30E-01	583	7.11E-01	650	8.74E-01	717	2.05E-01
383	2.10E-03	450	2.48E-01	517	4.31E-01	584	7.17E-01	651	8.66E-01	718	1.99E-01
384	5.00E-04	451	2.77E-01	518	4.34E-01	585	7.26E-01	652	8.56E-01	719	1.94E-01
385	0.00E+00	452	3.00E-01	519	4.38E-01	586	7.32E-01	653	8.46E-01	720	1.89E-01
386	9.00E-04	453	3.24E-01	520	4.41E-01	587	7.42E-01	654	8.36E-01	721	1.82E-01
387	1.10E-03	454	3.36E-01	521	4.42E-01	588	7.53E-01	655	8.23E-01	722	1.78E-01
388	3.00E-04	455	3.49E-01	522	4.47E-01	589	7.59E-01	656	8.14E-01	723	1.73E-01
389	8.00E-04	456	3.51E-01	523	4.48E-01	590	7.69E-01	657	8.05E-01	724	1.68E-01
390	1.10E-03	457	3.46E-01	524	4.53E-01	591	7.76E-01	658	7.96E-01	725	1.63E-01
391	7.00E-04	458	3.33E-01	525	4.56E-01	592	7.86E-01	659	7.85E-01	726	1.57E-01
392	9.00E-04	459	3.17E-01	526	4.59E-01	593	7.94E-01	660	7.74E-01	727	1.53E-01
393	1.80E-03	460	2.98E-01	527	4.60E-01	594	8.02E-01	661	7.62E-01	728	1.47E-01
394	1.70E-03	461	2.79E-01	528	4.65E-01	595	8.09E-01	662	7.48E-01	729	1.43E-01
395	1.70E-03	462	2.66E-01	529	4.69E-01	596	8.17E-01	663	7.37E-01	730	1.39E-01
396	7.00E-04	463	2.54E-01	530	4.73E-01	597	8.23E-01	664	7.23E-01	731	1.35E-01
397	1.20E-03	464	2.47E-01	531	4.76E-01	598	8.33E-01	665	7.10E-01	732	1.31E-01
398	1.10E-03	465	2.42E-01	532	4.79E-01	599	8.44E-01	666	6.97E-01	733	1.27E-01
399	1.90E-03	466	2.42E-01	533	4.85E-01	600	8.51E-01	667	6.86E-01	734	1.23E-01
400	1.50E-03	467	2.40E-01	534	4.86E-01	601	8.61E-01	668	6.74E-01	735	1.20E-01
401	1.70E-03	468	2.43E-01	535	4.91E-01	602	8.70E-01	669	6.61E-01	736	1.16E-01
402	1.80E-03	469	2.43E-01	536	4.93E-01	603	8.78E-01	670	6.50E-01	737	1.12E-01
403	2.10E-03	470	2.45E-01	537	4.97E-01	604	8.87E-01	671	6.39E-01	738	1.08E-01
404	2.30E-03	471	2.42E-01	538	5.00E-01	605	9.00E-01	672	6.25E-01	739	1.06E-01
405	2.40E-03	472	2.40E-01	539	5.05E-01	606	9.06E-01	673	6.13E-01	740	1.02E-01
406	2.70E-03	473	2.39E-01	540	5.08E-01	607	9.12E-01	674	6.01E-01	741	9.86E-02
407	3.20E-03	474	2.35E-01	541	5.13E-01	608	9.20E-01	675	5.87E-01	742	9.48E-02
408	3.30E-03	475	2.32E-01	542	5.18E-01	609	9.27E-01	676	5.74E-01	743	9.25E-02
409	3.40E-03	476	2.26E-01	543	5.24E-01	610	9.38E-01	677	5.64E-01	744	8.89E-02
410	4.10E-03	477	2.23E-01	544	5.29E-01	611	9.41E-01	678	5.54E-01	745	8.65E-02
411	5.00E-03	478	2.21E-01	545	5.32E-01	612	9.48E-01	679	5.41E-01	746	8.39E-02
412	5.60E-03	479	2.22E-01	546	5.35E-01	613	9.54E-01	680	5.31E-01	747	8.16E-02
413	6.20E-03	480	2.24E-01	547	5.41E-01	614	9.62E-01	681	5.20E-01	748	7.90E-02
414	6.70E-03	481	2.27E-01	548	5.45E-01	615	9.69E-01	682	5.10E-01	749	7.63E-02
415	7.40E-03	482	2.31E-01	549	5.45E-01	616	9.73E-01	683	4.98E-01	750	7.47E-02
416	9.10E-03	483	2.38E-01	550	5.49E-01	617	9.77E-01	684	4.88E-01	751	7.21E-02
417	9.40E-03	484	2.47E-01	551	5.55E-01	618	9.80E-01	685	4.76E-01	752	6.94E-02
418	1.06E-02	485	2.54E-01	552	5.59E-01	619	9.81E-01	686	4.64E-01	753	6.78E-02
419	1.16E-02	486	2.60E-01	553	5.62E-01	620	9.87E-01	687	4.55E-01	754	6.56E-02
420	1.36E-02	487	2.69E-01	554	5.65E-01	621	9.91E-01	688	4.43E-01	755	6.31E-02
421	1.47E-02	488	2.76E-01	555	5.70E-01	622	9.92E-01	689	4.31E-01	756	6.13E-02
422	1.59E-02	489	2.83E-01	556	5.75E-01	623	9.96E-01	690	4.22E-01	757	5.94E-02
423	1.74E-02	490	2.89E-01	557	5.78E-01	624	9.96E-01	691	4.12E-01	758	5.74E-02
424	1.95E-02	491	2.95E-01	558	5.82E-01	625	9.99E-01	692	4.04E-01	759	5.50E-02
425	2.11E-02	492	3.02E-01	559	5.88E-01	626	9.97E-01	693	3.93E-01	760	5.40E-02
426	2.31E-02	493	3.10E-01	560	5.92E-01	627	9.96E-01	694	3.84E-01	761	5.30E-02
427	2.60E-02	494	3.17E-01	561	5.96E-01	628	9.98E-01	695	3.74E-01	762	5.10E-02
428	2.88E-02	495	3.20E-01	562	6.00E-01	629	9.94E-01	696	3.64E-01	763	4.93E-02
429	3.19E-02	496	3.29E-01	563	6.03E-01	630	9.95E-01	697	3.57E-01	764	4.75E-02
430	3.46E-02	497	3.35E-01	564	6.08E-01	631	9.92E-01	698	3.48E-01	765	4.62E-02
431	3.85E-02	498	3.43E-01	565	6.11E-01	632	9.87E-01	699	3.39E-01	766	4.47E-02
432	4.22E-02	499	3.49E-01	566	6.17E-01	633	9.86E-01	700	3.31E-01	767	4.32E-02
433	4.60E-02	500	3.51E-01	567	6.22E-01	634	9.83E-01	701	3.22E-01	768	4.18E-02
434	4.98E-02	501	3.60E-01	568	6.25E-01	635	9.80E-01	702	3.12E-01	769	4.07E-02
435	5.47E-02	502	3.68E-01	569	6.28E-01	636	9.75E-01	703	3.05E-01	770	3.90E-02
436	5.94E-02	503	3.72E-01	570	6.34E-01	637	9.73E-01	704	2.97E-01	771	3.80E-02
437	6.59E-02	504	3.78E-01	571	6.38E-01	638	9.67E-01	705	2.89E-01	772	3.67E-02
438	7.20E-02	505	3.85E-01	572	6.47E-01	639	9.59E-01	706	2.82E-01	773	3.56E-02
439	8.02E-02	506	3.89E-01	573	6.52E-01	640	9.58E-01	707	2.72E-01	774	3.49E-02
440	8.84E-02	507	3.95E-01	574	6.55E-01	641	9.45E-01	708	2.66E-01	775	3.34E-02
441	9.55E-02	508	4.00E-01	575	6.63E-01	642	9.42E-01	709	2.59E-01	776	3.26E-02
442	1.06E-01	509	4.05E-01	576	6.69E-01	643	9.31E-01	710	2.52E-01	777	3.13E-02
443	1.16E-01	510	4.09E-01	577	6.73E-01	644	9.25E-01	711	2.44E-01	778	3.06E-02
444	1.29E-01	511	4.13E-01	578	6.78E-01	645	9.17E-01	712	2.37E-01	779	3.05E-02
445	1.45E-01	512	4.15E-01	579	6.86E-01	646	9.10E-01	713	2.31E-01	780	3.05E-02
446	1.60E-01	513	4.18E-01	580	6.90E-01	647	8.99E-01	714	2.24E-01	N/A	N/A

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	PIVOTLB @10W2700K	Sample ID	250903026-S1
Operate time (Min.)	30	Stabilization time (Min.)	60
Temperature (°C)	25.1	Humidity (%RH)	40.9

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	0.088	9.9	0.938
NON-WORST CASE	N/A	N/A	N/A	N/A	N/A

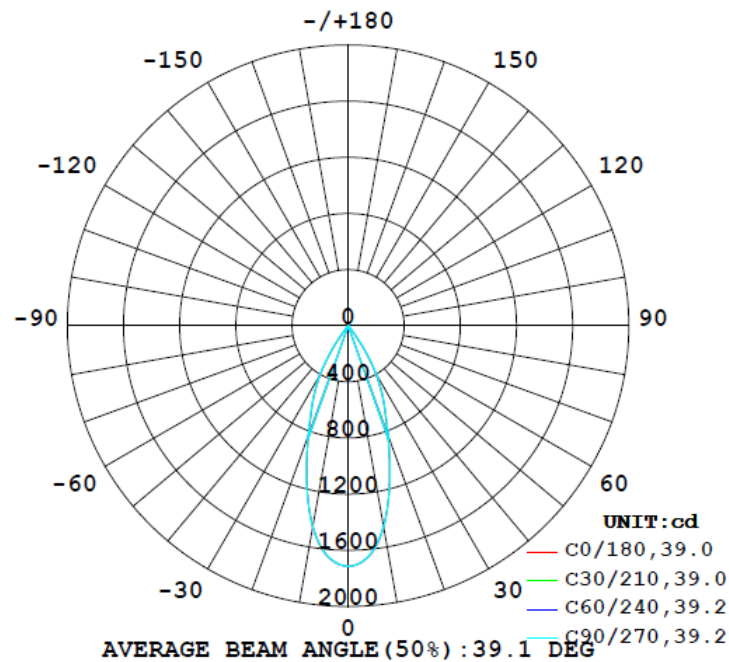
Test Result

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°)
872	70.3	70.6	39.0	39.3	88.1	100.0%

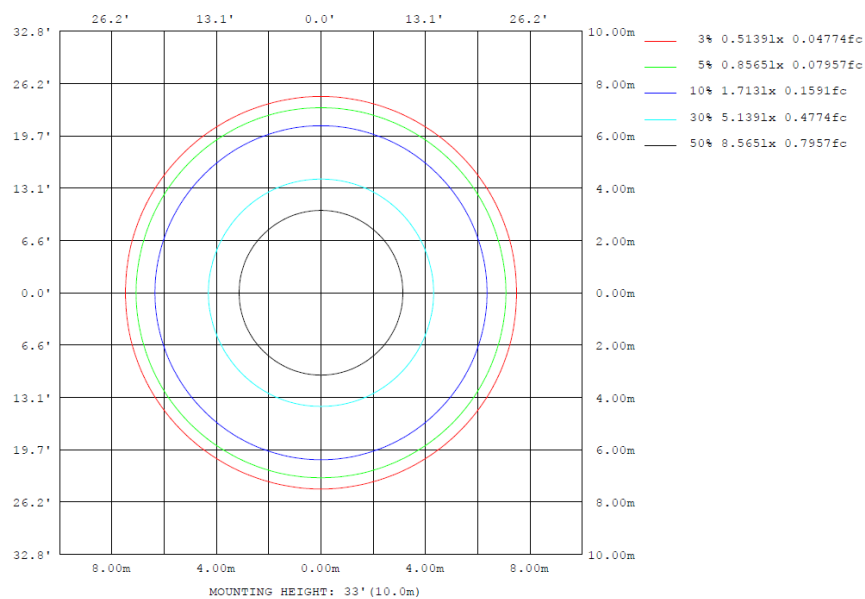
4.2 Goniophotometer Test

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	1459	1453	1453	1453	1459	1453	1453	1453	0- 10	151.4	151.4	17.4,17.4
20	827.5	831.6	835.5	831.6	827.5	831.6	835.5	831.6	10- 20	314.7	466.0	53.5,53.5
30	393.8	399.4	406.0	399.4	393.8	399.4	406.0	399.4	20- 30	273.9	739.9	84.9,84.9
40	27.85	27.76	29.24	27.76	27.85	27.76	29.24	27.76	30- 40	110.8	850.7	97.6,97.6
50	12.03	11.87	11.75	11.87	12.03	11.87	11.75	11.87	40- 50	12.42	863.1	99.99
60	3.298	3.189	3.185	3.189	3.298	3.189	3.185	3.189	50- 60	6.785	869.9	99.8,99.8
70	0.5652	0.5160	0.5087	0.5160	0.5652	0.5160	0.5087	0.5160	60- 70	1.528	871.4	100,100
80	0.0240	0.0243	0.0250	0.0243	0.0240	0.0243	0.0250	0.0243	70- 80	0.1067	871.5	100,100
90	0	0	0	0	0	0	0	0	80- 90	0.0119	871.5	100,100
100	0	0	0	0	0	0	0	0	90-100	0	871.5	100,100
110	0	0	0	0	0	0	0	0	100-110	0	871.5	100,100
120	0	0	0	0	0	0	0	0	110-120	0	871.5	100,100
130	0	0	0	0	0	0	0	0	120-130	0	871.5	100,100
140	0	0	0	0	0	0	0	0	130-140	0	871.5	100,100
150	0	0	0	0	0	0	0	0	140-150	0	871.5	100,100
160	0	0	0	0	0	0	0	0	150-160	0	871.5	100,100
170	0	0	0	0	0	0	0	0	160-170	0	871.5	100,100
180	0	0	0	0	0	0	0	0	170-180	0	871.5	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	151.37	0-10	151.37	17.37%
10-20	314.65	0-20	466.02	53.47%
20-30	273.89	0-30	739.91	84.90%
30-40	110.79	0-40	850.70	97.61%
40-50	12.42	0-50	863.12	99.03%
50-60	6.78	0-60	869.90	99.81%
60-70	1.53	0-70	871.43	99.99%
70-80	0.11	0-80	871.54	100.00%
80-90	0.01	0-90	871.55	100.00%
90-100	0.00	0-100	871.55	100.00%
100-110	0.00	0-110	871.55	100.00%
110-120	0.00	0-120	871.55	100.00%
120-130	0.00	0-130	871.55	100.00%
130-140	0.00	0-140	871.55	100.00%
140-150	0.00	0-150	871.55	100.00%
150-160	0.00	0-160	871.55	100.00%
160-170	0.00	0-170	871.55	100.00%
170-180	0.00	0-180	871.55	100.00%

4.2 Goniophotometer Test

Luminous Distribution Intensity Data

[illegible][illegible]

4.0 LM-79 Measurement and Test Results

4.3 THD and PF Test

Model No.	PIVOTLB @10W2700K	Sample ID	250903026-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 $25 \pm 1^\circ\text{C}$. 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	0.088	9.9	0.938	14.08

5.0 Equipment List:

Equipment ID	Equipment Name	Last Cal.	Due Cal.
NTC-F01-001	Goniophotometer System	2025-11-06	2026-11-05
NTC-F01-006	2.0 meter Integrating Sphere	2025-11-06	2026-11-05
NTC-F01-012	Standard Lamp	2025-10-27	2026-10-26
NTC-F01-013	Standard Lamp	2025-10-27	2026-10-26
NTC-F01-031	Digital Power Meter	2025-08-04	2026-08-03
NTC-F01-019	Temperature & Humidity Meter	2025-10-23	2026-10-22

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