

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: 2025-01-21

Revised Date: N/A

1.0 Test Summary

DLC Technical Requirements V5.1

2x4 Luminaires for Ambient Lighting of Interior Commercial Spaces				
Requirement Category	Test Method	Requirements		Test Value
Luminaire Output (lm) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	3000		5988
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Standard	Premium	120.7
		110	125	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		49.6
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)	ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	10.40
			277V	12.00
Power Factor (THD & PF – Section 4.3)	ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.994
			277V	0.973
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019	7 steps	3465±245	3388
		4 steps	3465±124	
Minimum CRI (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019 CIE13.3-1995	≥80		83.1
Minimum R9 (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019 CIE13.3-1995	≥0		7
Minimum Rf (Integrating Sphere – Section 4.1)	ANSI/IES TM-30-18	≥70		85
Minimum Rg (Integrating Sphere – Section 4.1)	ANSI/IES TM-30-18	≥89		95
IES Rcs,h1 (Integrating Sphere – Section 4.1)	ANSI/IES TM-30-18	-12%≤IES Rcs,h1≤+23%		-12%
Zonal Lumen Requirement (0°-60°) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	≥75%		78.0%
Discomfort Glare (UGR) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Standard	Premium	20.0
		N/A	<22	
Spacing Criterion (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	0°-180°	1.0-2.0	1.26
		90°-270°	1.0-2.0	1.26
Input Voltage (V) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Cast		120.0
(Goniophotometer – Section 4.2)		Non-Worst Case		277.0
Input Current (A) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		0.416
(Goniophotometer – Section 4.2)		Non-Worst Case		0.180
Power (Input Wattage – W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		49.6
(Goniophotometer – Section 4.2)		Non-Worst Case		48.4

2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-01-20	EZP2X4 @50W3500K	-	250117003-S1
2	Goniophotometer Test	2025-01-20	EZP2X4 @50W3500K	-	250117003-S1
3	THD and PF Test	2025-01-20	EZP2X4 @50W3500K	-	250117003-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. EZP2X4 @50W3500K, color tunable from 3500K, 4000K and 5000K.

Electrical Specification: 120-277Vac, 50/60Hz

Photos of Luminaire Characteristics



4.0 LM-79 Measurement and Test Results

4.1 Integrating Sphere Test

Model No.	EZP2X4 @50W3500K	Sample ID	250117003-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

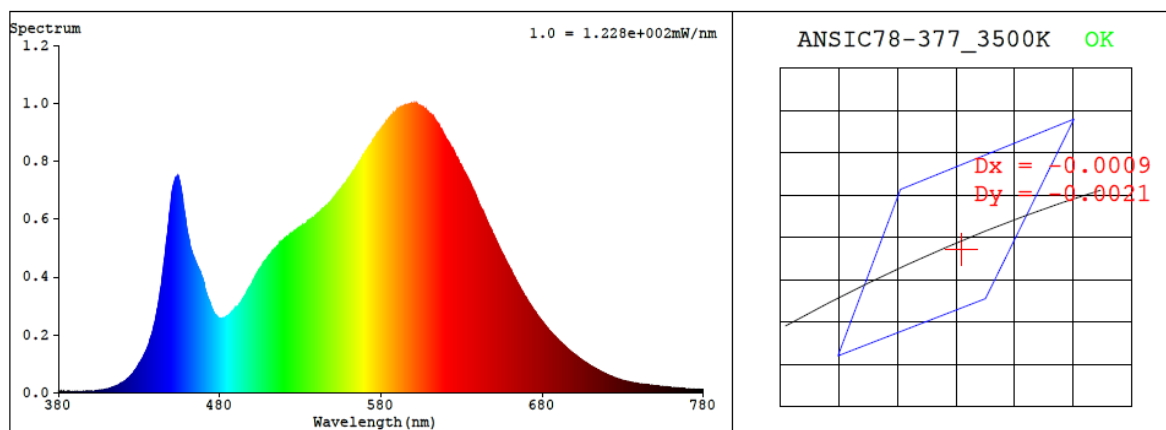
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made 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	0.416	49.6	0.994
277.0	60	0.180	48.4	0.973

CCT (K)	CRI	R9	Duv	Rf	Rg	IES Rcs,h1
3388	83.1	7	-0.0008	85	95	-12%

4.1 Integrating Sphere Test



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.4109$ $y = 0.3917$ / $u' = 0.2389$ $v' = 0.5125$ ($duv = -7.51e-04$)

CCT= 3388K Prcp WL: $L_d = 581.6\text{nm}$ Purity=40.9%

Peak WL: $L_p = 599\text{nm}$ FWHM: $=140.4\text{nm}$ Ratio: $R=20.8\%$ $G=76.0\%$ $B=3.2\%$

Render Index: $R_a = 83.1$ AvgR = 77.2 TM30: $R_f = 84$ $R_g = 95$

EEL: 0.10442 A++ Highest

R1 =82 R2 =92 R3 =96 R4 =80 R5 =82 R6 =89 R7 =83

R8 =61 R9 =7 R10=81 R11=80 R12=69 R13=84 R14=98 R15=75

4.1 Integrating Sphere Test

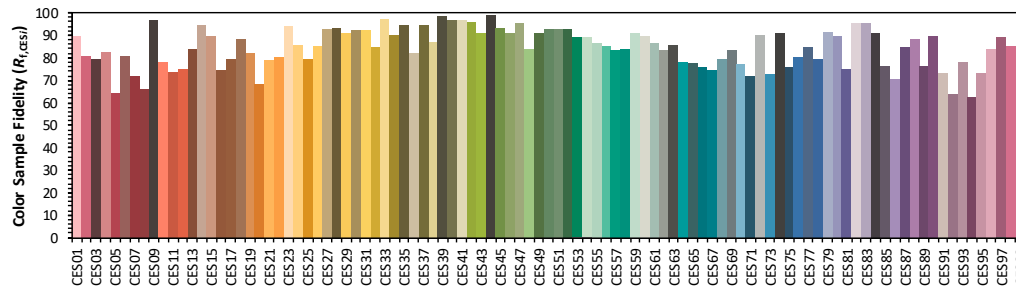
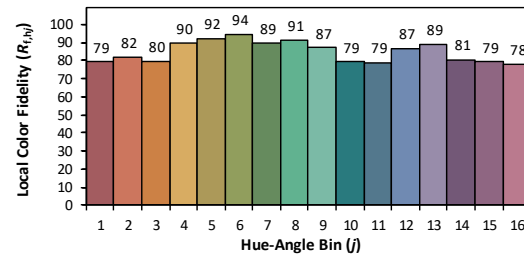
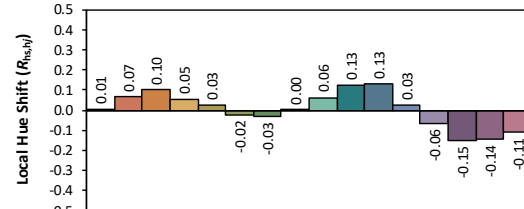
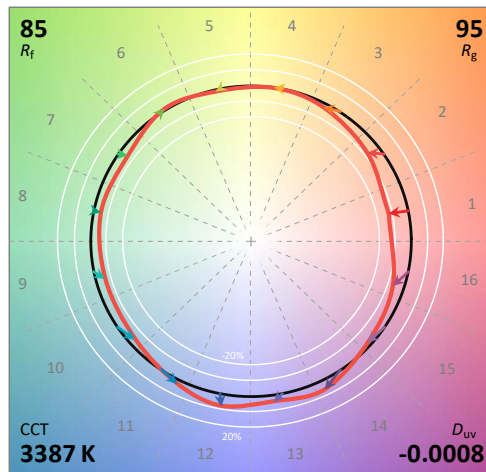
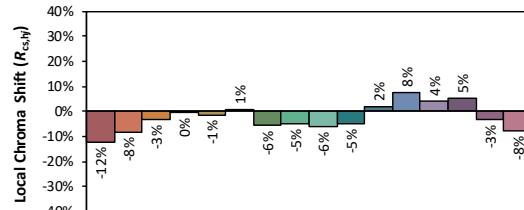
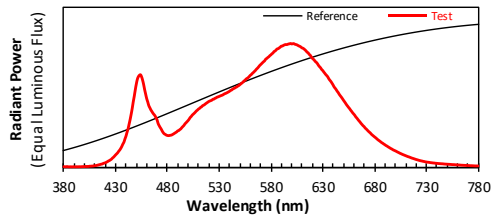
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/1/21

Model: EZP2X4 @50W3500K



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

x 0.4109
 y 0.3916
 u' 0.2390
 v' 0.5125

CIE 13.3-1995
(CRI)
 R_a 83
 R_g 7

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	4.60E-06	447	5.28E-04	514	4.97E-04	581	9.17E-04	648	5.67E-04	715	7.78E-05
381	4.30E-06	448	5.74E-04	515	5.01E-04	582	9.23E-04	649	5.55E-04	716	7.45E-05
382	3.50E-06	449	6.27E-04	516	5.07E-04	583	9.35E-04	650	5.43E-04	717	7.18E-05
383	5.40E-06	450	6.74E-04	517	5.14E-04	584	9.39E-04	651	5.31E-04	718	6.91E-05
384	3.90E-06	451	7.12E-04	518	5.20E-04	585	9.48E-04	652	5.19E-04	719	6.63E-05
385	3.20E-06	452	7.32E-04	519	5.26E-04	586	9.56E-04	653	5.06E-04	720	6.33E-05
386	3.60E-06	453	7.43E-04	520	5.31E-04	587	9.58E-04	654	4.95E-04	721	6.10E-05
387	3.60E-06	454	7.47E-04	521	5.35E-04	588	9.64E-04	655	4.84E-04	722	5.85E-05
388	3.00E-06	455	7.32E-04	522	5.39E-04	589	9.71E-04	656	4.74E-04	723	5.59E-05
389	3.80E-06	456	7.05E-04	523	5.42E-04	590	9.78E-04	657	4.61E-04	724	5.37E-05
390	3.80E-06	457	6.70E-04	524	5.49E-04	591	9.79E-04	658	4.51E-04	725	5.17E-05
391	3.10E-06	458	6.28E-04	525	5.51E-04	592	9.84E-04	659	4.39E-04	726	5.00E-05
392	4.10E-06	459	5.91E-04	526	5.57E-04	593	9.88E-04	660	4.30E-04	727	4.78E-05
393	3.70E-06	460	5.55E-04	527	5.61E-04	594	9.91E-04	661	4.20E-04	728	4.63E-05
394	3.80E-06	461	5.28E-04	528	5.66E-04	595	9.91E-04	662	4.07E-04	729	4.40E-05
395	4.30E-06	462	4.99E-04	529	5.69E-04	596	9.93E-04	663	3.97E-04	730	4.25E-05
396	3.90E-06	463	4.82E-04	530	5.73E-04	597	9.96E-04	664	3.86E-04	731	4.12E-05
397	4.50E-06	464	4.64E-04	531	5.76E-04	598	9.97E-04	665	3.76E-04	732	4.01E-05
398	4.90E-06	465	4.51E-04	532	5.80E-04	599	1.00E-03	666	3.66E-04	733	3.90E-05
399	4.90E-06	466	4.37E-04	533	5.83E-04	600	9.97E-04	667	3.55E-04	734	3.74E-05
400	5.60E-06	467	4.27E-04	534	5.87E-04	601	9.98E-04	668	3.46E-04	735	3.64E-05
401	6.40E-06	468	4.16E-04	535	5.93E-04	602	9.99E-04	669	3.36E-04	736	3.54E-05
402	6.10E-06	469	3.99E-04	536	5.96E-04	603	9.95E-04	670	3.28E-04	737	3.43E-05
403	6.40E-06	470	3.83E-04	537	6.00E-04	604	9.92E-04	671	3.17E-04	738	3.36E-05
404	6.80E-06	471	3.54E-04	538	6.04E-04	605	9.90E-04	672	3.10E-04	739	3.21E-05
405	8.40E-06	472	3.37E-04	539	6.09E-04	606	9.85E-04	673	3.01E-04	740	3.17E-05
406	8.40E-06	473	3.22E-04	540	6.14E-04	607	9.80E-04	674	2.92E-04	741	3.08E-05
407	9.40E-06	474	3.09E-04	541	6.20E-04	608	9.77E-04	675	2.84E-04	742	2.98E-05
408	9.70E-06	475	2.92E-04	542	6.24E-04	609	9.71E-04	676	2.77E-04	743	2.93E-05
409	1.14E-05	476	2.79E-04	543	6.31E-04	610	9.65E-04	677	2.67E-04	744	2.85E-05
410	1.26E-05	477	2.70E-04	544	6.36E-04	611	9.62E-04	678	2.60E-04	745	2.80E-05
411	1.37E-05	478	2.65E-04	545	6.40E-04	612	9.55E-04	679	2.53E-04	746	2.75E-05
412	1.57E-05	479	2.60E-04	546	6.46E-04	613	9.48E-04	680	2.46E-04	747	2.65E-05
413	1.78E-05	480	2.57E-04	547	6.49E-04	614	9.39E-04	681	2.39E-04	748	2.57E-05
414	2.01E-05	481	2.56E-04	548	6.56E-04	615	9.30E-04	682	2.32E-04	749	2.51E-05
415	2.20E-05	482	2.57E-04	549	6.60E-04	616	9.24E-04	683	2.25E-04	750	2.46E-05
416	2.46E-05	483	2.59E-04	550	6.67E-04	617	9.12E-04	684	2.18E-04	751	2.40E-05
417	2.64E-05	484	2.60E-04	551	6.74E-04	618	9.05E-04	685	2.12E-04	752	2.36E-05
418	3.04E-05	485	2.65E-04	552	6.81E-04	619	8.91E-04	686	2.06E-04	753	2.30E-05
419	3.34E-05	486	2.70E-04	553	6.88E-04	620	8.81E-04	687	1.99E-04	754	2.23E-05
420	3.59E-05	487	2.75E-04	554	6.97E-04	621	8.73E-04	688	1.94E-04	755	2.16E-05
421	4.03E-05	488	2.81E-04	555	7.03E-04	622	8.64E-04	689	1.88E-04	756	2.12E-05
422	4.47E-05	489	2.86E-04	556	7.13E-04	623	8.54E-04	690	1.82E-04	757	2.10E-05
423	5.01E-05	490	2.94E-04	557	7.18E-04	624	8.47E-04	691	1.76E-04	758	2.00E-05
424	5.42E-05	491	2.97E-04	558	7.24E-04	625	8.36E-04	692	1.72E-04	759	1.95E-05
425	5.98E-05	492	3.04E-04	559	7.33E-04	626	8.23E-04	693	1.66E-04	760	1.87E-05
426	6.54E-05	493	3.11E-04	560	7.42E-04	627	8.12E-04	694	1.61E-04	761	1.83E-05
427	7.46E-05	494	3.21E-04	561	7.49E-04	628	8.03E-04	695	1.56E-04	762	1.81E-05
428	8.14E-05	495	3.30E-04	562	7.58E-04	629	7.90E-04	696	1.51E-04	763	1.73E-05
429	9.07E-05	496	3.38E-04	563	7.65E-04	630	7.82E-04	697	1.46E-04	764	1.66E-05
430	1.00E-04	497	3.51E-04	564	7.74E-04	631	7.70E-04	698	1.41E-04	765	1.62E-05
431	1.09E-04	498	3.59E-04	565	7.82E-04	632	7.60E-04	699	1.37E-04	766	1.56E-05
432	1.18E-04	499	3.68E-04	566	7.93E-04	633	7.49E-04	700	1.33E-04	767	1.53E-05
433	1.30E-04	500	3.78E-04	567	8.00E-04	634	7.40E-04	701	1.29E-04	768	1.48E-05
434	1.40E-04	501	3.89E-04	568	8.10E-04	635	7.29E-04	702	1.24E-04	769	1.46E-05
435	1.53E-04	502	4.02E-04	569	8.21E-04	636	7.14E-04	703	1.20E-04	770	1.40E-05
436	1.69E-04	503	4.10E-04	570	8.29E-04	637	7.03E-04	704	1.16E-04	771	1.36E-05
437	1.87E-04	504	4.21E-04	571	8.37E-04	638	6.92E-04	705	1.12E-04	772	1.31E-05
438	2.03E-04	505	4.29E-04	572	8.46E-04	639	6.79E-04	706	1.08E-04	773	1.25E-05
439	2.29E-04	506	4.37E-04	573	8.54E-04	640	6.66E-04	707	1.04E-04	774	1.25E-05
440	2.52E-04	507	4.46E-04	574	8.61E-04	641	6.50E-04	708	1.01E-04	775	1.18E-05
441	2.83E-04	508	4.55E-04	575	8.74E-04	642	6.39E-04	709	9.72E-05	776	1.15E-05
442	3.11E-04	509	4.62E-04	576	8.79E-04	643	6.28E-04	710	9.37E-05	777	1.08E-05
443	3.48E-04	510	4.70E-04	577	8.87E-04	644	6.14E-04	711	9.05E-05	778	1.07E-05
444	3.86E-04	511	4.75E-04	578	8.93E-04	645	6.03E-04	712	8.68E-05	779	1.06E-05
445	4.29E-04	512	4.84E-04	579	9.02E-04	646	5.89E-04	713	8.42E-05	780	1.06E-05
446	4.74E-04	513	4.88E-04	580	9.08E-04	647	5.78E-04	714	8.12E-05	N/A	N/A

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	EZP2X4 @50W3500K	Sample ID	250117003-S1
Operate time (Min.)	30	Stabilization time (Min.)	60
Temperature (°C)	24.8	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	0.416	49.6	0.994
NON-WORST CASE	277.0	60	0.180	48.4	0.973

Test Result

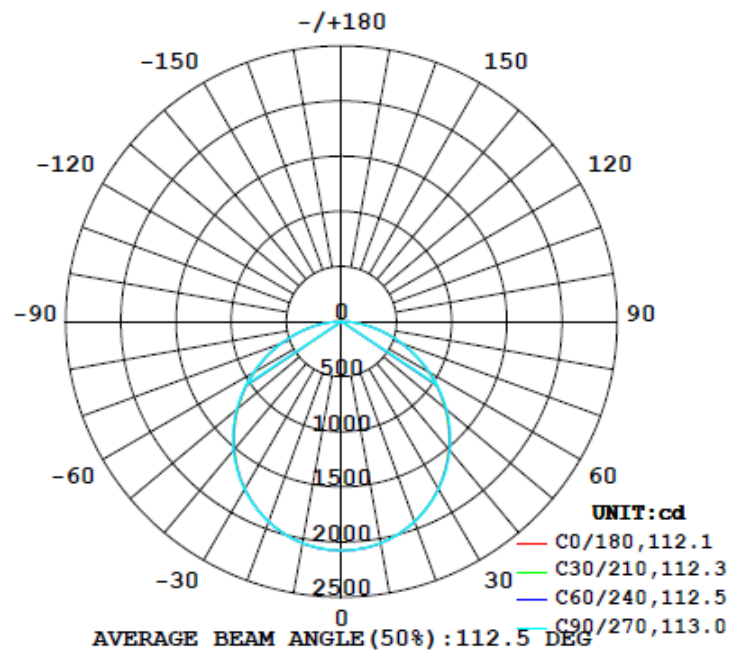
Flux (lm)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)	Zonal Lumen Requirement (0°-60°)
	C0-180	C90-270	C0-180	C90-270		
5988	164.5	164.0	112.0	112.9	120.7	78.0%

UGR		Spacing Criterion	
Crosswise	Endwise	(0°-180°)	(90°-270°)
20.0	20.0	1.26	1.26

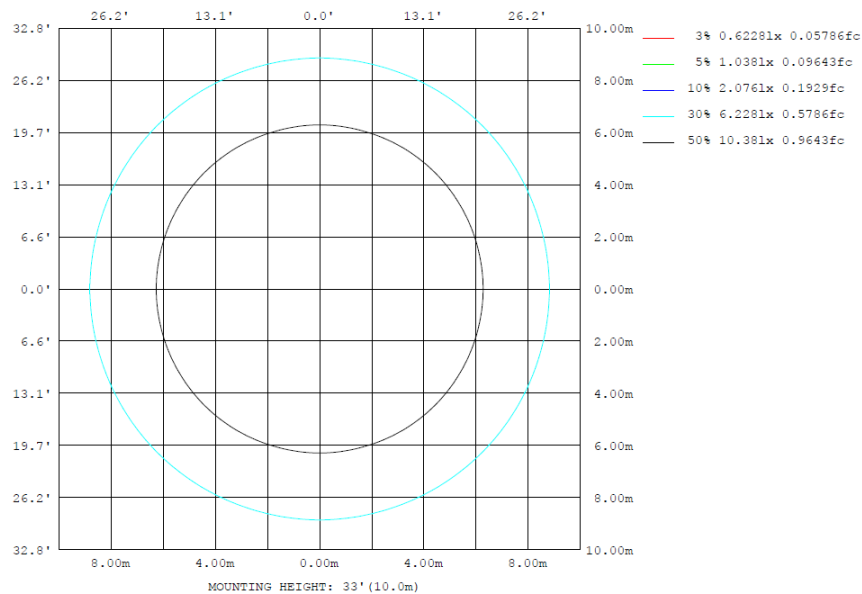
4.2 Goniophotometer Test

Lighting Distribution Curve

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



Isolux Plot



4.2 Goniophotometer Test

Zonal Lumen Summary

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total	%lum, lamp
10	2041	2041	2040	2041	2041	2041	2040	2041	0- 10	196.5	196.5	3.28, 3.28
20	1933	1932	1933	1932	1933	1932	1933	1932	10- 20	563.2	759.7	12.7, 12.7
30	1753	1754	1760	1754	1753	1754	1760	1754	20- 30	853.3	1613	26.9, 26.9
40	1512	1522	1525	1522	1512	1522	1525	1522	30- 40	1028	2641	44.1, 44.1
50	1226	1235	1243	1235	1226	1235	1243	1235	40- 50	1065	3706	61.9, 61.9
60	910.4	917.7	922.5	917.7	910.4	917.7	922.5	917.7	50- 60	962.9	4669	78, 78
70	582.3	581.7	582.9	581.7	582.3	581.7	582.9	581.7	60- 70	740.7	5410	90.3, 90.3
80	268.4	262.4	259.0	262.4	268.4	262.4	259.0	262.4	70- 80	441.8	5852	97.7, 97.7
90	0	0	0	0	0	0	0	0	80- 90	136.1	5988	100, 100
100	0	0	0	0	0	0	0	0	90-100	0	5988	100, 100
110	0	0	0	0	0	0	0	0	100-110	0	5988	100, 100
120	0	0	0	0	0	0	0	0	110-120	0	5988	100, 100
130	0	0	0	0	0	0	0	0	120-130	0	5988	100, 100
140	0	0	0	0	0	0	0	0	130-140	0	5988	100, 100
150	0	0	0	0	0	0	0	0	140-150	0	5988	100, 100
160	0	0	0	0	0	0	0	0	150-160	0	5988	100, 100
170	0	0	0	0	0	0	0	0	160-170	0	5988	100, 100
180	0	0	0	0	0	0	0	0	170-180	0	5988	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT: lm		

	Zonal (lm)		Total (lm)	Percent
0-10	196.52	0-10	196.52	3.28%
10-20	563.15	0-20	759.67	12.69%
20-30	853.33	0-30	1613.00	26.94%
30-40	1027.91	0-40	2640.91	44.11%
40-50	1065.24	0-50	3706.15	61.90%
50-60	962.94	0-60	4669.09	77.98%
60-70	740.72	0-70	5409.81	90.35%
70-80	441.81	0-80	5851.62	97.73%
80-90	136.07	0-90	5987.69	100.00%
90-100	0.00	0-100	5987.69	100.00%
100-110	0.00	0-110	5987.69	100.00%
110-120	0.00	0-120	5987.69	100.00%
120-130	0.00	0-130	5987.69	100.00%
130-140	0.00	0-140	5987.69	100.00%
140-150	0.00	0-150	5987.69	100.00%
150-160	0.00	0-160	5987.69	100.00%
160-170	0.00	0-170	5987.69	100.00%
170-180	0.00	0-180	5987.69	100.00%

4.2 Goniophotometer Test

UGR – Uncorrected Table:

UGR TABLE - UNCORRECTED

Reflectances											
Ceiling Cavity	70	70	50	50	30	70	70	50	50	30	
Walls	50	30	50	30	30	50	30	50	30	30	
Floor Cavity	20	20	20	20	20	20	20	20	20	20	
Room Size	UGR Viewed Crosswise					UGR Viewed Endwise					
X=2H	Y=2H	9.2	10.9	9.6	11.2	11.5	9.3	10.9	9.6	11.2	11.6
	3H	11.1	12.6	11.5	12.9	13.3	11.1	12.6	11.5	13.0	13.3
	4H	11.8	13.2	12.2	13.6	13.9	11.8	13.3	12.2	13.6	14.0
	6H	12.4	13.7	12.8	14.1	14.5	12.4	13.7	12.8	14.1	14.5
	8H	12.6	13.9	13.0	14.2	14.6	12.6	13.8	13.0	14.2	14.6
	12H	12.7	14.0	13.2	14.3	14.8	12.7	13.9	13.1	14.3	14.7
4H	2H	9.9	11.3	10.3	11.6	12.0	9.9	11.3	10.3	11.7	12.1
	3H	12.0	13.2	12.4	13.6	14.0	12.0	13.2	12.4	13.6	14.0
	4H	12.8	13.9	13.3	14.3	14.8	12.8	13.9	13.3	14.3	14.8
	6H	13.6	14.5	14.0	14.9	15.4	13.5	14.5	14.0	14.9	15.4
	8H	13.8	14.7	14.3	15.1	15.6	13.8	14.7	14.2	15.1	15.6
	12H	14.0	14.8	14.5	15.3	15.8	14.0	14.7	14.4	15.2	15.7
8H	4H	13.2	14.1	13.7	14.5	15.0	13.2	14.1	13.7	14.5	15.0
	6H	14.0	14.8	14.5	15.3	15.7	14.0	14.7	14.5	15.2	15.7
	8H	14.4	15.0	14.9	15.6	16.0	14.3	15.0	14.8	15.5	16.0
	12H	14.7	15.3	15.2	15.8	16.3	14.6	15.2	15.1	15.7	16.2
12H	4H	13.2	14.0	13.7	14.5	15.0	13.2	14.0	13.7	14.5	15.0
	6H	14.1	14.8	14.6	15.2	15.8	14.1	14.8	14.6	15.2	15.8
	8H	14.5	15.1	15.0	15.6	16.2	14.5	15.0	15.0	15.5	16.1
Maximum UGR = 16.3											

Maximum UGR = 16.3

UGR – Corrected Table:

UGR TABLE - CORRECTED

Reflectances											
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	15.4	17.1	15.8	17.4	17.7	15.5	17.1	15.8	17.4	17.8
	3H	17.3	18.8	17.7	19.1	19.5	17.3	18.8	17.7	19.2	19.5
	4H	18.0	19.4	18.4	19.8	20.1	18.0	19.5	18.4	19.8	20.2
	6H	18.6	19.9	19.0	20.3	20.7	18.6	19.9	19.0	20.3	20.7
	8H	18.8	20.1	19.2	20.4	20.8	18.8	20.0	19.2	20.4	20.8
	12H	18.9	20.2	19.4	20.5	21.0	18.9	20.1	19.3	20.5	20.9
4H	2H	16.1	17.5	16.5	17.8	18.2	16.1	17.5	16.5	17.9	18.3
	3H	18.2	19.4	18.6	19.8	20.2	18.2	19.4	18.6	19.8	20.2
	4H	19.0	20.1	19.5	20.5	21.0	19.0	20.1	19.5	20.5	21.0
	6H	19.8	20.7	20.2	21.1	21.6	19.7	20.7	20.2	21.1	21.6
	8H	20.0	20.9	20.5	21.3	21.8	20.0	20.9	20.4	21.3	21.8
	12H	20.2	21.0	20.7	21.5	22.0	20.2	20.9	20.6	21.4	21.9
8H	4H	19.4	20.3	19.9	20.7	21.2	19.4	20.3	19.9	20.7	21.2
	6H	20.2	21.0	20.7	21.5	21.9	20.2	20.9	20.7	21.4	21.9
	8H	20.6	21.2	21.1	21.8	22.2	20.5	21.2	21.0	21.7	22.2
	12H	20.9	21.5	21.4	22.0	22.5	20.8	21.4	21.3	21.9	22.4
12H	4H	19.4	20.2	19.9	20.7	21.2	19.4	20.2	19.9	20.7	21.2
	6H	20.3	21.0	20.8	21.4	22.0	20.3	21.0	20.8	21.4	22.0
	8H	20.7	21.3	21.2	21.8	22.4	20.7	21.2	21.2	21.7	22.3

Maximum UGR = 22.5

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	2076	2076	2076	2074	2080	2072	2075	2072	2080	2074	2076	2076	2076	2076	2076	2076	2074	2080	2072
5	2068	2068	2066	2071	2066	2068	2066	2068	2066	2071	2066	2068	2068	2068	2066	2071	2066	2068	2066
10	2041	2041	2041	2041	2041	2043	2040	2043	2041	2041	2041	2041	2041	2041	2041	2041	2041	2043	2040
15	1996	1995	1996	1995	1998	1994	1996	1994	1998	1995	1996	1995	1996	1995	1996	1995	1998	1994	1996
20	1933	1931	1928	1932	1934	1932	1933	1932	1934	1932	1928	1931	1933	1931	1928	1932	1934	1932	1933
25	1852	1850	1851	1855	1850	1855	1854	1855	1850	1855	1851	1850	1852	1850	1851	1855	1850	1855	1854
30	1753	1751	1755	1754	1757	1758	1760	1758	1757	1754	1755	1751	1753	1751	1755	1754	1757	1758	1760
35	1639	1639	1641	1645	1647	1644	1649	1644	1647	1645	1641	1639	1639	1639	1641	1645	1647	1644	1649
40	1512	1511	1514	1522	1521	1522	1525	1522	1521	1522	1514	1511	1512	1511	1514	1522	1521	1522	1525
45	1373	1373	1378	1384	1385	1388	1391	1388	1385	1384	1378	1373	1373	1373	1378	1384	1385	1388	1391
50	1226	1226	1230	1235	1239	1238	1243	1238	1239	1235	1230	1226	1226	1226	1230	1235	1239	1238	1243
55	1070	1070	1073	1081	1081	1082	1087	1082	1081	1081	1073	1070	1070	1070	1073	1081	1081	1082	1087
60	910	909	912	918	916	919	922	919	916	918	912	909	910	909	912	918	916	919	922
65	746	745	748	749	749	750	754	750	749	749	748	745	746	745	748	749	749	750	754
70	582	581	580	582	581	579	583	579	581	582	580	581	582	581	580	582	581	579	583
75	422	419	418	418	415	415	416	415	415	418	418	419	422	419	418	418	415	415	416
80	268	266	264	262	259	258	259	258	259	262	264	266	268	266	264	262	259	258	259
85	127	126	124	121	119	117	117	117	119	121	124	126	127	126	124	121	119	117	117
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	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	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	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	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	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	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	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	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	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	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	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	0.00	0.00	0.00
150	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	0.00	0.00	0.00
155	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	0.00	0.00	0.00
160	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	0.00	0.00	0.00
165	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	0.00	0.00	0.00
170	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	0.00	0.00	0.00
175	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	0.00	0.00	0.00
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	0.00	0.00	0.00

Table--2

UNIT: cd

C (DEG) y (DEG)	285	300	315	330	345														
0	2072	2080	2074	2076	2076														
5	2068	2066	2071	2066	2068														
10	2043	2041	2041	2041	2041														
15	1994	1998	1995	1996	1995														
20	1932	1934	1932	1928	1931														
25	1855	1850	1855	1851	1850														
30	1758	1757	1754	1755	1751														
35	1644	1647	1645	1641	1639														
40	1522	1521	1522	1514	1511														
45	1388	1385	1384	1378	1373														
50	1238	1239	1235	1230	1226														
55	1082	1081	1081	1073	1070														
60	919	916	918	912	909														
65	750	749	749	748	745														
70	579	581	582	580	581														
75	415	415	418	418	419														
80	258	259	262	264	266														
85	117	119	121	124	126														
90	0.00	0.00	0.00	0.00	0.00														
95	0.00	0.00	0.00	0.00	0.00														
100	0.00	0.00	0.00	0.00	0.00														
105	0.00	0.00	0.00	0.00	0.00														
110	0.00	0.00	0.00	0.00	0.00														
115	0.00	0.00	0.00	0.00	0.00														
120	0.00	0.00	0.00	0.00	0.00														
125	0.00	0.00	0.00	0.00	0.00														
130	0.00	0.00	0.00	0.00	0.00														
135	0.00	0.00	0.00	0.00	0.00														
140	0.00	0.00	0.00	0.00	0.00														
145	0.00	0.00	0.00	0.00	0.00														
150	0.00	0.00	0.00	0.00	0.00														
155	0.00	0.00	0.00	0.00	0.00														
160	0.00	0.00	0.00	0.00	0.00														
165	0.00	0.00	0.00	0.00	0.00														
170	0.00	0.00	0.00	0.00	0.00														
175	0.00	0.00	0.00	0.00	0.00														
180	0.00	0.00	0.00	0.00	0.00														

4.0 LM-79 Measurement and Test Results

4.3 THD and PF Test

Model No.	EZP2X4 @50W3500K	Sample ID	250117003-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	0.416	49.6	0.994	10.40
277.0	60	0.180	48.4	0.973	12.00

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	2024-08-06	2025-08-05
NTC-F01-019	Temperature & Humidity Meter	2024-10-29	2025-10-28

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