

## 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

2x2 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	2000		3409
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Standard	Premium	129.6
		110	125	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		26.3
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)	ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	10.29
			277V	10.13
Power Factor (THD & PF – Section 4.3)	ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.994
			277V	0.926
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019	7 steps	3465±245	3343
		4 steps	3465±124	
Minimum CRI (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019 CIE13.3-1995	≥80		82.7
Minimum R9 (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019 CIE13.3-1995	≥0		6
Minimum Rf (Integrating Sphere – Section 4.1)	ANSI/IES TM-30-18	≥70		84
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%		77.9%
Discomfort Glare (UGR) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Standard	Premium	20.6
		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		277.0
(Goniophotometer – Section 4.2)		Non-Worst Case		120.0
Input Current (A)				
(Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		0.103
(Goniophotometer – Section 4.2)		Non-Worst Case		0.214
Power (Input Wattage – W)				
(Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		26.3
(Goniophotometer – Section 4.2)		Non-Worst Case		25.5

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-01-17	EZP2X2 @25W3500K	-	250117002-S1
2	Goniophotometer Test	2025-01-17	EZP2X2 @25W3500K	-	250117002-S1
3	THD and PF Test	2025-01-17	EZP2X2 @25W3500K	-	250117002-S1

### Remark (If any):

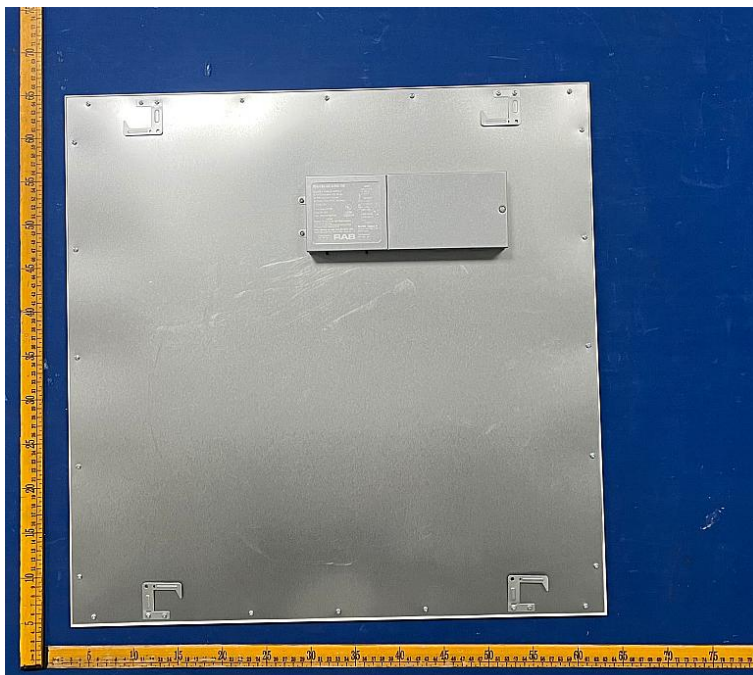
1. The results contained in this report pertain only to the tested samples.
2. This report shall not be reproduced, no limited part or full, without approval of Dongguan New Testing Centre Co., Ltd.
3. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. Government.

### 3.0 Product Description

Luminaire Description: Model No. EZP2X2 @25W3500K, 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

<b>Model No.</b>	EZP2X2 @25W3500K	<b>Sample ID</b>	250117002-S1
<b>Operate time (Min.)</b>	10	<b>Stabilization time (Min.)</b>	60
<b>Temperature (°C)</b>	25.4	<b>Humidity (%RH)</b>	41.0

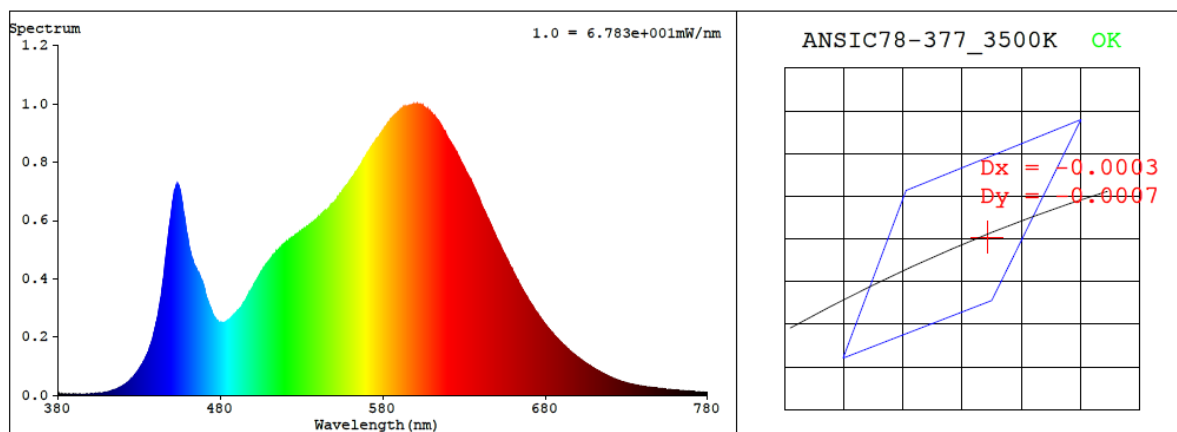
<b>Test Method</b>
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were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

<b>Voltage (Vac)</b>	<b>Frequency (Hz)</b>	<b>Current (A)</b>	<b>Power (W)</b>	<b>Power Factor</b>
120.0	60	0.214	25.5	0.994
277.0	60	0.103	26.3	0.926

<b>CCT (K)</b>	<b>CRI</b>	<b>R9</b>	<b>Duv</b>	<b>Rf</b>	<b>Rg</b>	<b>IES Rcs,h1</b>
3343	82.7	6	-0.0002	84	95	-12%

## 4.1 Integrating Sphere Test



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.4142$   $y = 0.3944$  /  $u' = 0.2399$   $v' = 0.5141$  ( $duv = -2.30e-04$ )

CCT= 3343K Prcp WL:  $L_d = 581.5\text{nm}$  Purity=42.7%

Peak WL:  $L_p = 601\text{nm}$  FWHM:  $= 138.4\text{nm}$  Ratio: R=21.0% G=75.9% B=3.1%

Render Index:  $R_a = 82.7$  AvgR = 76.8 TM30:  $R_f = 84$   $R_g = 95$

EEL: 0.10214 A++ Highest

R1 =81 R2 =91 R3 =96 R4 =80 R5 =82 R6 =89 R7 =83

R8 =60 R9 =6 R10=80 R11=79 R12=68 R13=84 R14=98 R15=74

## 4.1 Integrating Sphere Test

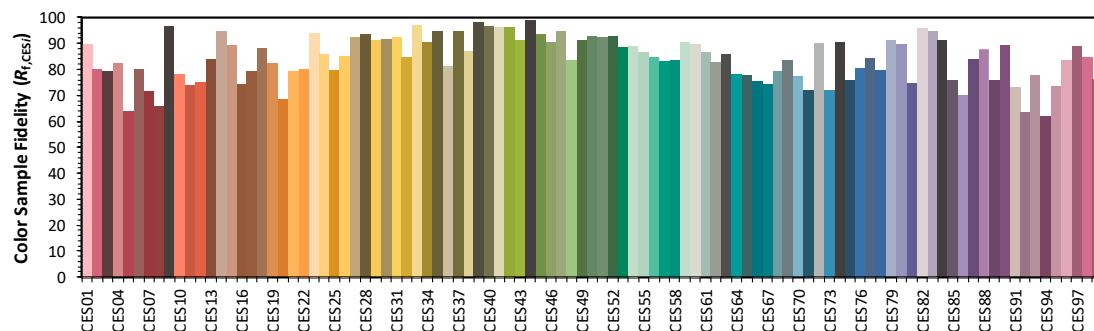
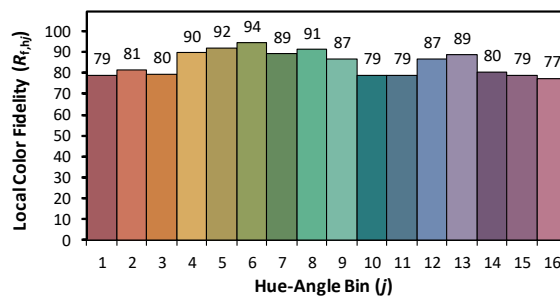
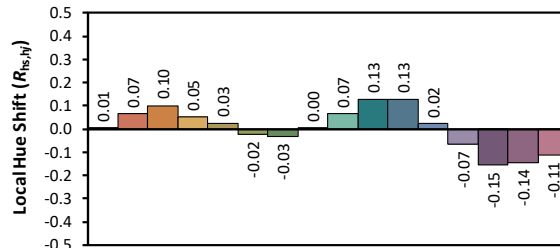
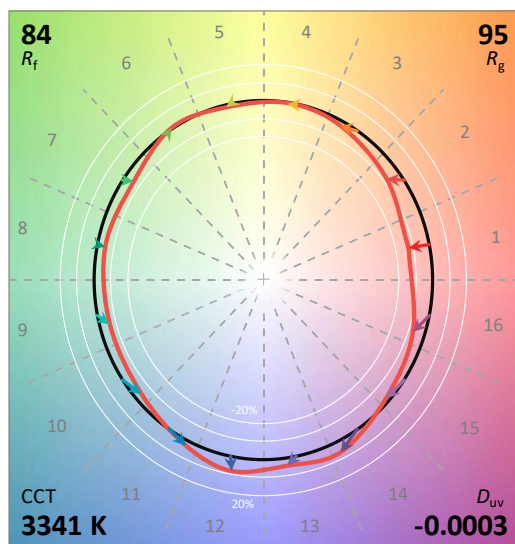
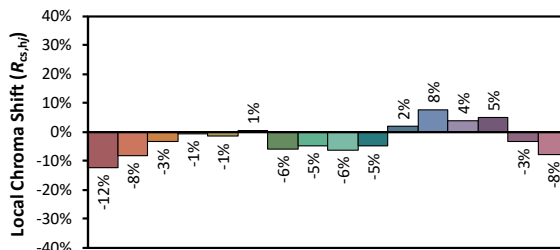
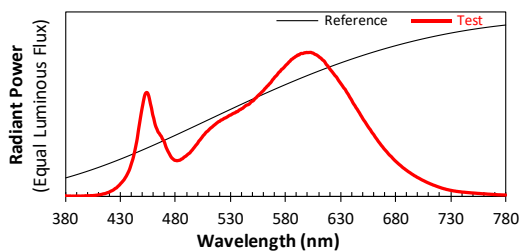
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/1/21

Model: EZP2X2 @25W3500K



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

$x$  0.4142  
 $y$  0.3943  
 $u'$  0.2400  
 $v'$  0.5141

CIE 13.3-1995  
(CRI)  
 $R_a$  83  
 $R_g$  6

## 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	5.60E-06	447	5.01E-04	514	4.88E-04	581	9.15E-04	648	5.65E-04	715	7.72E-05
381	9.00E-07	448	5.48E-04	515	4.94E-04	582	9.22E-04	649	5.53E-04	716	7.44E-05
382	3.70E-06	449	5.94E-04	516	5.00E-04	583	9.31E-04	650	5.40E-04	717	7.13E-05
383	2.30E-06	450	6.34E-04	517	5.07E-04	584	9.38E-04	651	5.28E-04	718	6.86E-05
384	4.20E-06	451	6.74E-04	518	5.13E-04	585	9.47E-04	652	5.18E-04	719	6.58E-05
385	2.40E-06	452	7.05E-04	519	5.18E-04	586	9.52E-04	653	5.06E-04	720	6.33E-05
386	2.90E-06	453	7.18E-04	520	5.21E-04	587	9.58E-04	654	4.94E-04	721	6.07E-05
387	3.30E-06	454	7.19E-04	521	5.28E-04	588	9.63E-04	655	4.82E-04	722	5.80E-05
388	2.80E-06	455	7.06E-04	522	5.31E-04	589	9.69E-04	656	4.71E-04	723	5.59E-05
389	3.60E-06	456	6.79E-04	523	5.35E-04	590	9.73E-04	657	4.62E-04	724	5.36E-05
390	2.60E-06	457	6.42E-04	524	5.41E-04	591	9.80E-04	658	4.48E-04	725	5.19E-05
391	3.60E-06	458	6.10E-04	525	5.44E-04	592	9.79E-04	659	4.38E-04	726	4.93E-05
392	3.50E-06	459	5.68E-04	526	5.47E-04	593	9.86E-04	660	4.29E-04	727	4.79E-05
393	2.90E-06	460	5.41E-04	527	5.52E-04	594	9.90E-04	661	4.16E-04	728	4.62E-05
394	3.30E-06	461	5.06E-04	528	5.57E-04	595	9.90E-04	662	4.05E-04	729	4.43E-05
395	3.80E-06	462	4.82E-04	529	5.62E-04	596	9.91E-04	663	3.95E-04	730	4.28E-05
396	3.70E-06	463	4.65E-04	530	5.64E-04	597	9.95E-04	664	3.83E-04	731	4.14E-05
397	4.10E-06	464	4.46E-04	531	5.69E-04	598	9.95E-04	665	3.74E-04	732	3.98E-05
398	5.40E-06	465	4.37E-04	532	5.74E-04	599	9.97E-04	666	3.64E-04	733	3.84E-05
399	4.60E-06	466	4.24E-04	533	5.77E-04	600	9.96E-04	667	3.53E-04	734	3.75E-05
400	5.50E-06	467	4.15E-04	534	5.80E-04	601	9.97E-04	668	3.45E-04	735	3.59E-05
401	5.30E-06	468	3.97E-04	535	5.87E-04	602	9.97E-04	669	3.34E-04	736	3.51E-05
402	5.40E-06	469	3.88E-04	536	5.87E-04	603	9.97E-04	670	3.25E-04	737	3.40E-05
403	6.50E-06	470	3.70E-04	537	5.93E-04	604	9.94E-04	671	3.17E-04	738	3.32E-05
404	5.80E-06	471	3.45E-04	538	5.99E-04	605	9.92E-04	672	3.08E-04	739	3.25E-05
405	7.00E-06	472	3.28E-04	539	6.03E-04	606	9.87E-04	673	2.99E-04	740	3.11E-05
406	7.30E-06	473	3.12E-04	540	6.08E-04	607	9.83E-04	674	2.90E-04	741	3.04E-05
407	8.40E-06	474	2.99E-04	541	6.11E-04	608	9.80E-04	675	2.82E-04	742	3.00E-05
408	9.20E-06	475	2.84E-04	542	6.19E-04	609	9.75E-04	676	2.76E-04	743	2.92E-05
409	1.06E-05	476	2.71E-04	543	6.25E-04	610	9.69E-04	677	2.67E-04	744	2.84E-05
410	1.13E-05	477	2.63E-04	544	6.31E-04	611	9.62E-04	678	2.59E-04	745	2.77E-05
411	1.24E-05	478	2.57E-04	545	6.34E-04	612	9.58E-04	679	2.51E-04	746	2.69E-05
412	1.40E-05	479	2.51E-04	546	6.36E-04	613	9.49E-04	680	2.44E-04	747	2.63E-05
413	1.56E-05	480	2.50E-04	547	6.41E-04	614	9.43E-04	681	2.37E-04	748	2.57E-05
414	1.82E-05	481	2.48E-04	548	6.50E-04	615	9.37E-04	682	2.30E-04	749	2.48E-05
415	1.93E-05	482	2.49E-04	549	6.58E-04	616	9.25E-04	683	2.23E-04	750	2.46E-05
416	2.11E-05	483	2.50E-04	550	6.61E-04	617	9.13E-04	684	2.17E-04	751	2.39E-05
417	2.38E-05	484	2.52E-04	551	6.67E-04	618	9.06E-04	685	2.10E-04	752	2.34E-05
418	2.70E-05	485	2.58E-04	552	6.78E-04	619	8.95E-04	686	2.03E-04	753	2.27E-05
419	2.89E-05	486	2.61E-04	553	6.83E-04	620	8.84E-04	687	1.97E-04	754	2.20E-05
420	3.28E-05	487	2.68E-04	554	6.92E-04	621	8.74E-04	688	1.92E-04	755	2.14E-05
421	3.71E-05	488	2.74E-04	555	7.00E-04	622	8.65E-04	689	1.86E-04	756	2.11E-05
422	4.02E-05	489	2.79E-04	556	7.07E-04	623	8.55E-04	690	1.80E-04	757	2.04E-05
423	4.42E-05	490	2.85E-04	557	7.13E-04	624	8.45E-04	691	1.74E-04	758	1.95E-05
424	4.93E-05	491	2.92E-04	558	7.21E-04	625	8.35E-04	692	1.69E-04	759	1.91E-05
425	5.58E-05	492	2.98E-04	559	7.28E-04	626	8.28E-04	693	1.65E-04	760	1.84E-05
426	5.91E-05	493	3.04E-04	560	7.36E-04	627	8.16E-04	694	1.59E-04	761	1.83E-05
427	6.69E-05	494	3.14E-04	561	7.46E-04	628	8.04E-04	695	1.54E-04	762	1.80E-05
428	7.39E-05	495	3.22E-04	562	7.53E-04	629	7.93E-04	696	1.49E-04	763	1.71E-05
429	8.12E-05	496	3.32E-04	563	7.63E-04	630	7.82E-04	697	1.44E-04	764	1.64E-05
430	9.05E-05	497	3.41E-04	564	7.69E-04	631	7.72E-04	698	1.40E-04	765	1.62E-05
431	9.81E-05	498	3.52E-04	565	7.78E-04	632	7.61E-04	699	1.35E-04	766	1.56E-05
432	1.07E-04	499	3.60E-04	566	7.86E-04	633	7.50E-04	700	1.31E-04	767	1.51E-05
433	1.16E-04	500	3.70E-04	567	7.95E-04	634	7.42E-04	701	1.27E-04	768	1.49E-05
434	1.29E-04	501	3.83E-04	568	8.07E-04	635	7.28E-04	702	1.23E-04	769	1.38E-05
435	1.41E-04	502	3.91E-04	569	8.15E-04	636	7.16E-04	703	1.19E-04	770	1.36E-05
436	1.55E-04	503	4.01E-04	570	8.26E-04	637	7.05E-04	704	1.14E-04	771	1.34E-05
437	1.71E-04	504	4.11E-04	571	8.33E-04	638	6.90E-04	705	1.11E-04	772	1.28E-05
438	1.88E-04	505	4.22E-04	572	8.41E-04	639	6.78E-04	706	1.07E-04	773	1.22E-05
439	2.11E-04	506	4.29E-04	573	8.52E-04	640	6.66E-04	707	1.03E-04	774	1.20E-05
440	2.35E-04	507	4.39E-04	574	8.61E-04	641	6.50E-04	708	9.97E-05	775	1.19E-05
441	2.59E-04	508	4.47E-04	575	8.67E-04	642	6.38E-04	709	9.59E-05	776	1.12E-05
442	2.89E-04	509	4.53E-04	576	8.78E-04	643	6.27E-04	710	9.28E-05	777	1.11E-05
443	3.23E-04	510	4.61E-04	577	8.83E-04	644	6.14E-04	711	8.93E-05	778	1.06E-05
444	3.61E-04	511	4.68E-04	578	8.90E-04	645	6.04E-04	712	8.60E-05	779	1.06E-05
445	4.01E-04	512	4.75E-04	579	8.99E-04	646	5.90E-04	713	8.32E-05	780	1.07E-05
446	4.54E-04	513	4.80E-04	580	9.08E-04	647	5.79E-04	714	7.95E-05	N/A	N/A

## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

<b>Model No.</b>	EZP2X2 @25W3500K	<b>Sample ID</b>	250117002-S1
<b>Operate time (Min.)</b>	30	<b>Stabilization time (Min.)</b>	60
<b>Temperature (°C)</b>	24.6	<b>Humidity (%RH)</b>	42.2

<b>Test Method</b>
<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 <math>25 \pm 1^\circ\text{C}</math>, 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 <math>\pm 0.2</math> 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 <math>1.0^\circ</math> vertical intervals and <math>15^\circ</math> horizontal intervals.</p>

#### Test Conditions

Condition	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
<b>WORST CASE</b>	277.0	60	0.103	26.3	0.926
<b>NON-WORST CASE</b>	120.0	60	0.214	25.5	0.994

#### Test Result

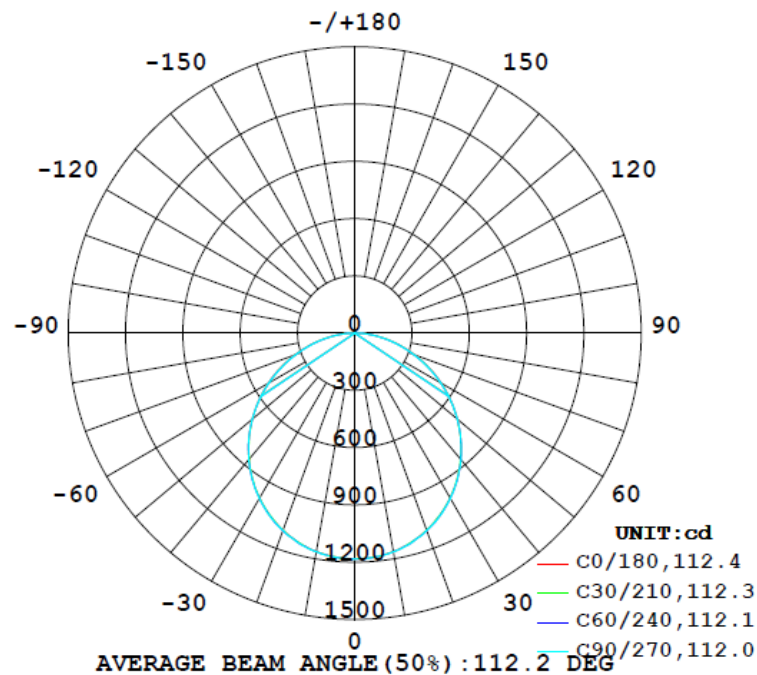
Flux (lm)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)	Zonal Lumen Requirement
	C0-180	C90-270	C0-180	C90-270		(0°-60°)
3409	164.8	164.1	112.3	112.0	129.6	77.9%

UGR		Spacing Criterion	
Crosswise	Endwise	(0°-180°)	(90°-270°)
20.6	20.5	1.26	1.26

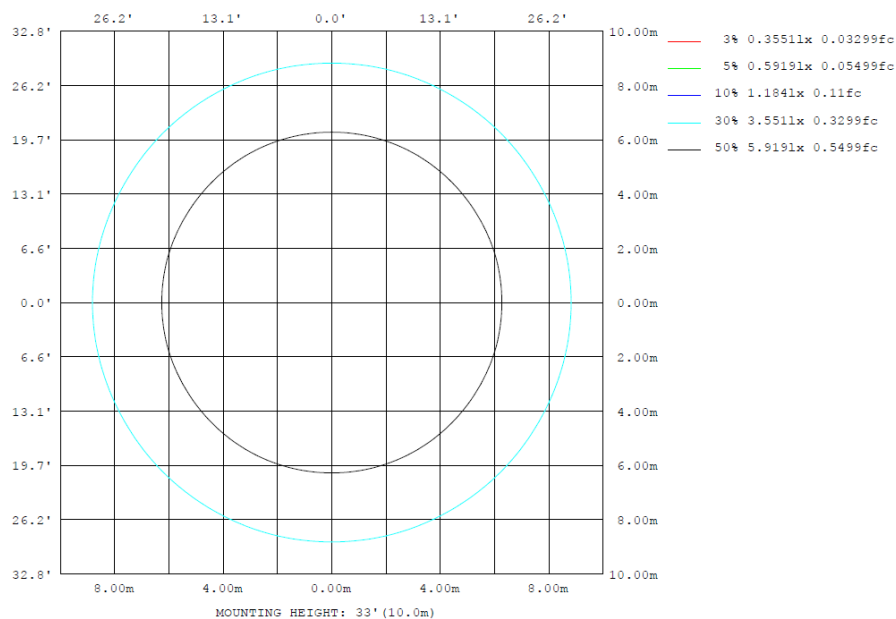
## 4.2 Goniophotometer Test

### 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	Φ zone	Φ total	%lum, lamp
10	1163	1163	1163	1163	1163	1163	1163	1163	0- 10	112.0	112.0	3.28,3.28
20	1100	1098	1100	1098	1100	1098	1100	1098	10- 20	320.7	432.7	12.7,12.7
30	998.4	997.2	1001	997.2	998.4	997.2	1001	997.2	20- 30	485.7	918.4	26.9,26.9
40	862.7	863.1	866.0	863.1	862.7	863.1	866.0	863.1	30- 40	584.7	1503	44.1,44.1
50	701.6	700.5	701.2	700.5	701.6	700.5	701.2	700.5	40- 50	605.2	2108	61.8,61.8
60	521.4	519.7	517.0	519.7	521.4	519.7	517.0	519.7	50- 60	546.8	2655	77.9,77.9
70	335.4	330.9	327.6	330.9	335.4	330.9	327.6	330.9	60- 70	421.1	3076	90.2,90.2
80	155.6	152.1	148.0	152.1	155.6	152.1	148.0	152.1	70- 80	253.0	3329	97.7,97.7
90	0	0	0	0	0	0	0	0	80- 90	79.96	3409	100,100
100	0	0	0	0	0	0	0	0	90-100	0	3409	100,100
110	0	0	0	0	0	0	0	0	100-110	0	3409	100,100
120	0	0	0	0	0	0	0	0	110-120	0	3409	100,100
130	0	0	0	0	0	0	0	0	120-130	0	3409	100,100
140	0	0	0	0	0	0	0	0	130-140	0	3409	100,100
150	0	0	0	0	0	0	0	0	140-150	0	3409	100,100
160	0	0	0	0	0	0	0	0	150-160	0	3409	100,100
170	0	0	0	0	0	0	0	0	160-170	0	3409	100,100
180	0	0	0	0	0	0	0	0	170-180	0	3409	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

	Zonal (lm)		Total (lm)	Percent
0-10	111.98	0-10	111.98	3.28%
10-20	320.74	0-20	432.72	12.69%
20-30	485.72	0-30	918.44	26.94%
30-40	584.72	0-40	1503.16	44.09%
40-50	605.18	0-50	2108.34	61.84%
50-60	546.81	0-60	2655.15	77.88%
60-70	421.13	0-70	3076.28	90.23%
70-80	253.04	0-80	3329.32	97.65%
80-90	79.96	0-90	3409.28	100.00%
90-100	0.00	0-100	3409.28	100.00%
100-110	0.00	0-110	3409.28	100.00%
110-120	0.00	0-120	3409.28	100.00%
120-130	0.00	0-130	3409.28	100.00%
130-140	0.00	0-140	3409.28	100.00%
140-150	0.00	0-150	3409.28	100.00%
150-160	0.00	0-160	3409.28	100.00%
160-170	0.00	0-170	3409.28	100.00%
170-180	0.00	0-180	3409.28	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	11.7	13.3	12.0	13.6	13.9	11.6	13.3	12.0	13.6	13.9
	3H	13.6	15.0	13.9	15.4	15.7	13.5	15.0	13.9	15.3	15.7
	4H	14.3	15.7	14.7	16.0	16.4	14.2	15.6	14.6	15.9	16.3
	6H	14.9	16.2	15.3	16.6	16.9	14.7	16.1	15.2	16.4	16.8
	8H	15.1	16.3	15.5	16.7	17.1	15.0	16.2	15.4	16.6	17.0
	12H	15.2	16.4	15.7	16.8	17.3	15.1	16.3	15.5	16.7	17.1
4H	2H	12.3	13.7	12.7	14.1	14.4	12.3	13.7	12.7	14.0	14.4
	3H	14.4	15.6	14.8	16.0	16.4	14.4	15.5	14.8	15.9	16.3
	4H	15.3	16.4	15.7	16.8	17.2	15.2	16.3	15.6	16.7	17.1
	6H	16.0	17.0	16.5	17.4	17.9	15.9	16.9	16.4	17.3	17.7
	8H	16.3	17.2	16.8	17.6	18.1	16.2	17.0	16.6	17.5	17.9
	12H	16.5	17.3	17.0	17.8	18.3	16.4	17.2	16.8	17.6	18.1
8H	4H	15.6	16.5	16.1	17.0	17.4	15.6	16.4	16.0	16.9	17.4
	6H	16.5	17.3	17.0	17.7	18.2	16.4	17.1	16.9	17.6	18.1
	8H	16.9	17.5	17.4	18.0	18.5	16.7	17.4	17.2	17.9	18.4
	12H	17.2	17.8	17.7	18.3	18.8	17.0	17.6	17.5	18.1	18.7
12H	4H	15.7	16.5	16.2	17.0	17.4	15.6	16.4	16.1	16.9	17.4
	6H	16.6	17.3	17.1	17.7	18.3	16.5	17.2	17.0	17.6	18.2
	8H	17.0	17.6	17.5	18.1	18.7	16.9	17.5	17.4	18.0	18.5

Maximum UGR = 18.8

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	16.0	17.6	16.3	17.9	18.2	15.9	17.6	16.3	17.9	18.2
	3H	17.9	19.3	18.2	19.7	20.0	17.8	19.3	18.2	19.6	20.0
	4H	18.6	20.0	19.0	20.3	20.7	18.5	19.9	18.9	20.2	20.6
	6H	19.2	20.5	19.6	20.9	21.2	19.0	20.4	19.5	20.7	21.1
	8H	19.4	20.6	19.8	21.0	21.4	19.3	20.5	19.7	20.9	21.3
	12H	19.5	20.7	20.0	21.1	21.6	19.4	20.6	19.8	21.0	21.4
4H	2H	16.6	18.0	17.0	18.4	18.7	16.6	18.0	17.0	18.3	18.7
	3H	18.7	19.9	19.1	20.3	20.7	18.7	19.8	19.1	20.2	20.6
	4H	19.6	20.7	20.0	21.1	21.5	19.5	20.6	19.9	21.0	21.4
	6H	20.3	21.3	20.8	21.7	22.2	20.2	21.2	20.7	21.6	22.0
	8H	20.6	21.5	21.1	21.9	22.4	20.5	21.3	20.9	21.8	22.2
	12H	20.8	21.6	21.3	22.1	22.6	20.7	21.5	21.1	21.9	22.4
8H	4H	19.9	20.8	20.4	21.3	21.7	19.9	20.7	20.3	21.2	21.7
	6H	20.8	21.6	21.3	22.0	22.5	20.7	21.4	21.2	21.9	22.4
	8H	21.2	21.8	21.7	22.3	22.8	21.0	21.7	21.5	22.2	22.7
	12H	21.5	22.1	22.0	22.6	23.1	21.3	21.9	21.8	22.4	23.0
12H	4H	20.0	20.8	20.5	21.3	21.7	19.9	20.7	20.4	21.2	21.7
	6H	20.9	21.6	21.4	22.0	22.6	20.8	21.5	21.3	21.9	22.5
	8H	21.3	21.9	21.8	22.4	23.0	21.2	21.8	21.7	22.3	22.8

Maximum UGR = 23.1

## 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	1184	1183	1182	1183	1184	1183	1184	1183	1184	1183	1182	1183	1184	1183	1182	1183	1184	1183	1184
5	1177	1180	1176	1178	1179	1179	1178	1179	1178	1176	1180	1177	1180	1176	1178	1179	1179	1178	1177
10	1163	1165	1162	1163	1162	1163	1163	1162	1163	1162	1165	1163	1165	1162	1163	1162	1163	1165	1163
15	1136	1138	1135	1135	1139	1135	1139	1135	1139	1135	1138	1136	1138	1135	1135	1139	1135	1139	1136
20	1100	1100	1098	1098	1101	1101	1100	1101	1098	1098	1100	1100	1100	1098	1098	1101	1101	1100	1100
25	1056	1053	1052	1053	1055	1055	1055	1055	1053	1052	1053	1056	1053	1052	1053	1055	1055	1055	1056
30	998	999	997	997	999	1001	1001	1001	999	997	997	999	998	999	997	997	999	1001	1001
35	934	934	934	933	938	935	935	938	933	934	934	934	934	934	933	938	935	935	935
40	863	863	861	863	864	865	866	865	864	863	861	863	863	863	861	863	864	865	866
45	786	785	785	784	784	785	786	785	784	784	785	785	786	785	785	784	784	785	786
50	702	701	700	700	700	701	701	700	700	700	701	702	701	700	700	700	701	701	701
55	613	613	612	611	612	610	611	610	612	611	612	613	613	613	612	611	612	610	611
60	521	522	520	520	519	518	517	518	519	520	520	522	521	522	520	520	519	518	517
65	429	428	426	425	423	423	423	423	425	426	428	429	428	426	425	423	423	423	423
70	335	334	332	331	330	328	328	328	330	331	332	334	335	334	332	331	330	328	328
75	243	242	241	239	237	235	235	237	239	241	242	243	242	241	239	237	235	235	235
80	156	155	154	152	150	149	148	149	150	152	154	155	156	155	154	152	150	149	148
85	74.2	73.7	73.2	72.0	70.7	69.8	69.2	69.8	70.7	72.0	73.2	73.7	74.2	73.7	73.2	72.0	70.7	69.8	69.2
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	1183	1184	1183	1182	1183														
5	1179	1179	1178	1176	1180														
10	1163	1162	1163	1162	1165														
15	1135	1139	1135	1135	1138														
20	1101	1101	1098	1098	1100														
25	1055	1055	1053	1052	1053														
30	1001	999	997	997	999														
35	935	938	933	934	934														
40	865	864	863	861	863														
45	785	784	784	785	785														
50	701	700	700	700	701														
55	610	612	611	612	613														
60	518	519	520	520	522														
65	423	423	425	426	428														
70	328	330	331	332	334														
75	235	237	239	241	242														
80	149	150	152	154	155														
85	69.8	70.7	72.0	73.2	73.7														
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

<b>Model No.</b>	EZP2X2 @25W3500K	<b>Sample ID</b>	250117002-S1
<b>Temperature (°C)</b>	25.4	<b>Humidity (%RH)</b>	41.0

<b>Test Method</b>
<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 <math>25 \pm 1^\circ\text{C}</math>. 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	0.214	25.5	0.994	10.29
277.0	60	0.103	26.3	0.926	10.13

## 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\*\*\*\*\*