

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		5044
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Standard	Premium	125.2
		110	125	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		40.3
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)	ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	11.20
			277V	15.43
Power Factor (THD & PF – Section 4.3)	ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.994
			277V	0.977
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019	7 steps	5029±283	4750
		4 steps	5029±220	
Minimum CRI (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019 CIE13.3-1995	≥80		82.5
Minimum R9 (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019 CIE13.3-1995	≥0		5
Minimum Rf (Integrating Sphere – Section 4.1)	ANSI/IES TM-30-18	≥70		83
Minimum Rg (Integrating Sphere – Section 4.1)	ANSI/IES TM-30-18	≥89		93
IES Rcs,h1 (Integrating Sphere – Section 4.1)	ANSI/IES TM-30-18	-12%≤IES Rcs,h1≤+23%		-13%
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	21.9
		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		0.149
(Goniophotometer – Section 4.2)		Non-Worst Case		0.337
Power (Input Wattage – W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		40.3
(Goniophotometer – Section 4.2)		Non-Worst Case		40.2

2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-01-17	EZP2X2 @40W5000K	-	250117002-S1
2	Goniophotometer Test	2025-01-17	EZP2X2 @40W5000K	-	250117002-S1
3	THD and PF Test	2025-01-17	EZP2X2 @40W5000K	-	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 @40W5000K, 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.	EZP2X2 @40W5000K	Sample ID	250117002-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

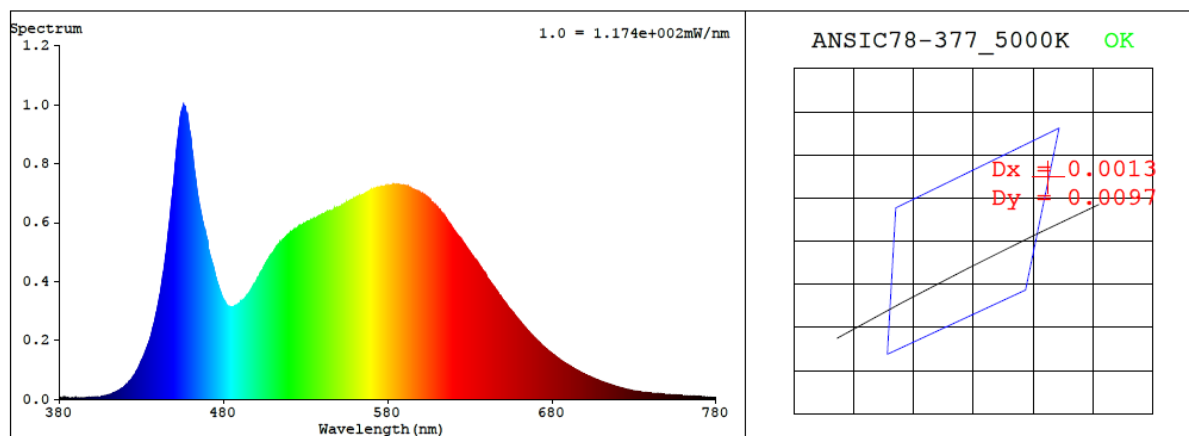
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made 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	0.337	40.2	0.994
277.0	60	0.149	40.3	0.977

CCT (K)	CRI	R9	Duv	Rf	Rg	IES Rcs,h1
4750	82.5	5	0.0043	83	93	-13%

4.1 Integrating Sphere Test



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.3538$ $y = 0.3671$ / $u' = 0.2113$ $v' = 0.4933$ ($duv=4.26e-03$)

CCT= 4750K Prcp WL: $L_d=572.1nm$ Purity=16.3%

Peak WL: $L_p=456nm$ FWHM: $=26.2nm$ Ratio:R=16.0% G=79.4% B=4.6%

Render Index: $R_a = 82.5$ AvgR = 75.2 TM30:Rf=83 Rg=93

EEL: 0.10584 A++ Highest

R1 =80 R2 =90 R3 =95 R4 =78 R5 =80 R6 =85 R7 =86

R8 =65 R9 =5 R10=75 R11=77 R12=56 R13=83 R14=98 R15=74

4.1 Integrating Sphere Test

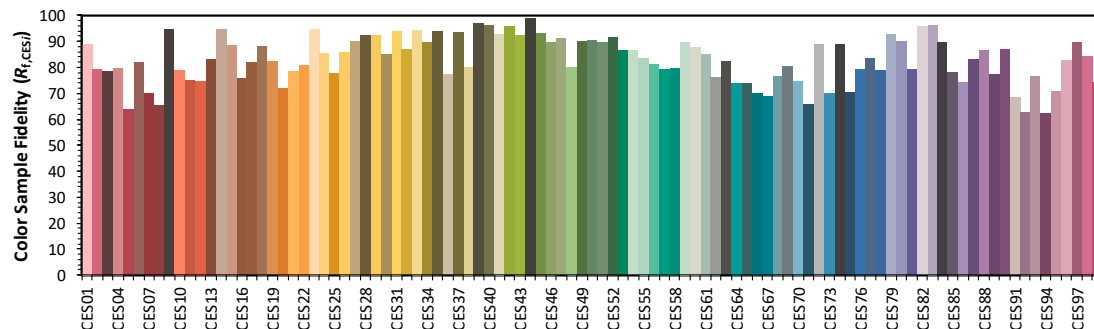
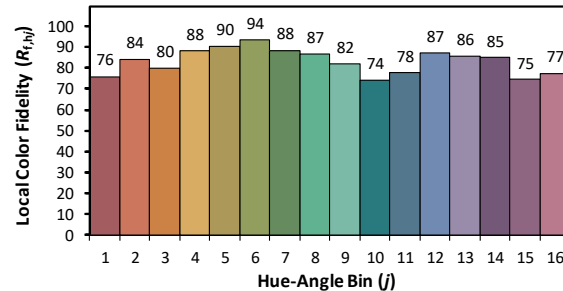
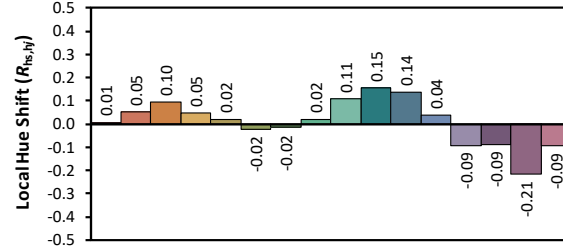
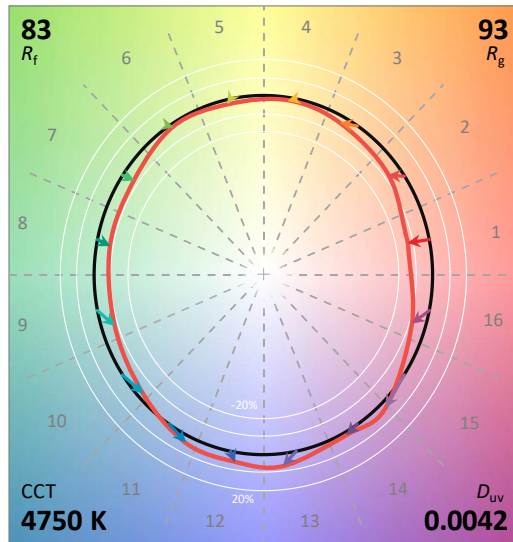
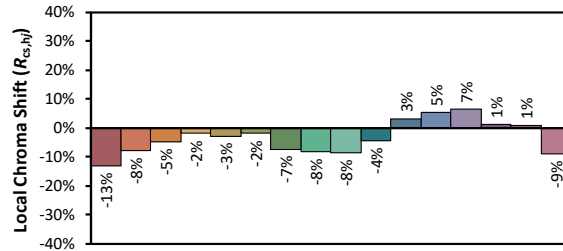
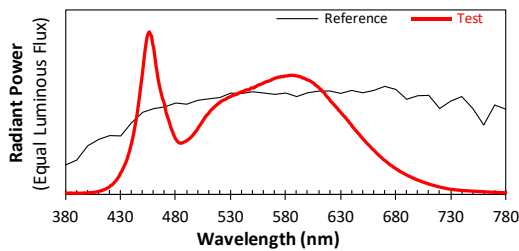
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/1/21

Model: EZP2X2 @40W5000K



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

x 0.3538

y 0.3670

u' 0.2113

v' 0.4932

CIE 13.3-1995
(CRI)

R_a 82

R_g 5

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	6.70E-06	447	5.96E-04	514	5.27E-04	581	7.24E-04	648	3.55E-04	715	5.13E-05
381	4.80E-06	448	6.50E-04	515	5.33E-04	582	7.26E-04	649	3.48E-04	716	4.96E-05
382	4.30E-06	449	7.03E-04	516	5.39E-04	583	7.29E-04	650	3.39E-04	717	4.77E-05
383	5.00E-06	450	7.56E-04	517	5.45E-04	584	7.28E-04	651	3.32E-04	718	4.57E-05
384	5.90E-06	451	8.17E-04	518	5.51E-04	585	7.29E-04	652	3.25E-04	719	4.37E-05
385	5.20E-06	452	8.76E-04	519	5.58E-04	586	7.29E-04	653	3.17E-04	720	4.24E-05
386	4.30E-06	453	9.23E-04	520	5.59E-04	587	7.28E-04	654	3.09E-04	721	4.05E-05
387	5.00E-06	454	9.65E-04	521	5.68E-04	588	7.27E-04	655	3.03E-04	722	3.92E-05
388	4.80E-06	455	9.85E-04	522	5.71E-04	589	7.26E-04	656	2.97E-04	723	3.77E-05
389	3.80E-06	456	9.95E-04	523	5.75E-04	590	7.24E-04	657	2.90E-04	724	3.59E-05
390	6.30E-06	457	9.80E-04	524	5.78E-04	591	7.24E-04	658	2.82E-04	725	3.46E-05
391	4.60E-06	458	9.68E-04	525	5.81E-04	592	7.20E-04	659	2.75E-04	726	3.33E-05
392	3.80E-06	459	9.22E-04	526	5.84E-04	593	7.20E-04	660	2.69E-04	727	3.20E-05
393	4.60E-06	460	8.93E-04	527	5.89E-04	594	7.18E-04	661	2.62E-04	728	3.09E-05
394	4.40E-06	461	8.42E-04	528	5.92E-04	595	7.12E-04	662	2.55E-04	729	2.97E-05
395	5.20E-06	462	7.90E-04	529	5.96E-04	596	7.12E-04	663	2.48E-04	730	2.87E-05
396	5.10E-06	463	7.50E-04	530	5.98E-04	597	7.10E-04	664	2.42E-04	731	2.79E-05
397	5.80E-06	464	7.04E-04	531	6.03E-04	598	7.06E-04	665	2.36E-04	732	2.72E-05
398	6.50E-06	465	6.71E-04	532	6.04E-04	599	7.02E-04	666	2.30E-04	733	2.61E-05
399	5.50E-06	466	6.39E-04	533	6.08E-04	600	7.00E-04	667	2.23E-04	734	2.56E-05
400	7.00E-06	467	6.13E-04	534	6.08E-04	601	6.98E-04	668	2.17E-04	735	2.46E-05
401	7.20E-06	468	5.85E-04	535	6.14E-04	602	6.95E-04	669	2.11E-04	736	2.40E-05
402	7.50E-06	469	5.69E-04	536	6.13E-04	603	6.90E-04	670	2.06E-04	737	2.33E-05
403	8.20E-06	470	5.43E-04	537	6.18E-04	604	6.85E-04	671	2.01E-04	738	2.28E-05
404	9.20E-06	471	5.06E-04	538	6.22E-04	605	6.82E-04	672	1.95E-04	739	2.20E-05
405	9.10E-06	472	4.84E-04	539	6.24E-04	606	6.76E-04	673	1.90E-04	740	2.17E-05
406	1.02E-05	473	4.64E-04	540	6.28E-04	607	6.68E-04	674	1.84E-04	741	2.10E-05
407	1.11E-05	474	4.46E-04	541	6.28E-04	608	6.64E-04	675	1.79E-04	742	2.04E-05
408	1.27E-05	475	4.20E-04	542	6.32E-04	609	6.59E-04	676	1.74E-04	743	2.02E-05
409	1.41E-05	476	3.99E-04	543	6.36E-04	610	6.53E-04	677	1.69E-04	744	1.96E-05
410	1.57E-05	477	3.83E-04	544	6.38E-04	611	6.46E-04	678	1.64E-04	745	1.92E-05
411	1.72E-05	478	3.66E-04	545	6.40E-04	612	6.41E-04	679	1.60E-04	746	1.85E-05
412	1.91E-05	479	3.50E-04	546	6.39E-04	613	6.32E-04	680	1.55E-04	747	1.84E-05
413	2.19E-05	480	3.37E-04	547	6.41E-04	614	6.26E-04	681	1.51E-04	748	1.78E-05
414	2.41E-05	481	3.28E-04	548	6.48E-04	615	6.21E-04	682	1.47E-04	749	1.75E-05
415	2.65E-05	482	3.20E-04	549	6.51E-04	616	6.11E-04	683	1.43E-04	750	1.71E-05
416	2.94E-05	483	3.15E-04	550	6.51E-04	617	6.00E-04	684	1.38E-04	751	1.66E-05
417	3.30E-05	484	3.11E-04	551	6.51E-04	618	5.94E-04	685	1.34E-04	752	1.63E-05
418	3.68E-05	485	3.13E-04	552	6.58E-04	619	5.86E-04	686	1.31E-04	753	1.59E-05
419	3.97E-05	486	3.13E-04	553	6.60E-04	620	5.78E-04	687	1.27E-04	754	1.55E-05
420	4.55E-05	487	3.17E-04	554	6.64E-04	621	5.68E-04	688	1.23E-04	755	1.50E-05
421	5.16E-05	488	3.19E-04	555	6.69E-04	622	5.62E-04	689	1.20E-04	756	1.46E-05
422	5.50E-05	489	3.23E-04	556	6.70E-04	623	5.55E-04	690	1.16E-04	757	1.45E-05
423	6.20E-05	490	3.27E-04	557	6.73E-04	624	5.48E-04	691	1.13E-04	758	1.40E-05
424	6.85E-05	491	3.32E-04	558	6.75E-04	625	5.40E-04	692	1.09E-04	759	1.34E-05
425	7.72E-05	492	3.37E-04	559	6.78E-04	626	5.32E-04	693	1.07E-04	760	1.32E-05
426	8.37E-05	493	3.42E-04	560	6.82E-04	627	5.25E-04	694	1.03E-04	761	1.28E-05
427	9.48E-05	494	3.50E-04	561	6.86E-04	628	5.16E-04	695	9.93E-05	762	1.25E-05
428	1.03E-04	495	3.56E-04	562	6.87E-04	629	5.09E-04	696	9.72E-05	763	1.20E-05
429	1.16E-04	496	3.65E-04	563	6.92E-04	630	5.01E-04	697	9.35E-05	764	1.16E-05
430	1.30E-04	497	3.73E-04	564	6.92E-04	631	4.92E-04	698	9.07E-05	765	1.13E-05
431	1.40E-04	498	3.82E-04	565	6.94E-04	632	4.85E-04	699	8.77E-05	766	1.09E-05
432	1.55E-04	499	3.91E-04	566	6.96E-04	633	4.77E-04	700	8.51E-05	767	1.08E-05
433	1.69E-04	500	4.00E-04	567	7.01E-04	634	4.72E-04	701	8.30E-05	768	1.03E-05
434	1.83E-04	501	4.13E-04	568	7.04E-04	635	4.62E-04	702	7.98E-05	769	9.90E-06
435	1.99E-04	502	4.21E-04	569	7.06E-04	636	4.54E-04	703	7.73E-05	770	9.80E-06
436	2.19E-04	503	4.32E-04	570	7.11E-04	637	4.46E-04	704	7.49E-05	771	9.60E-06
437	2.42E-04	504	4.41E-04	571	7.12E-04	638	4.37E-04	705	7.23E-05	772	9.20E-06
438	2.64E-04	505	4.53E-04	572	7.14E-04	639	4.30E-04	706	7.01E-05	773	9.10E-06
439	2.91E-04	506	4.64E-04	573	7.16E-04	640	4.21E-04	707	6.76E-05	774	8.80E-06
440	3.18E-04	507	4.73E-04	574	7.18E-04	641	4.10E-04	708	6.54E-05	775	8.30E-06
441	3.47E-04	508	4.83E-04	575	7.18E-04	642	4.03E-04	709	6.34E-05	776	8.10E-06
442	3.80E-04	509	4.88E-04	576	7.21E-04	643	3.95E-04	710	6.09E-05	777	7.80E-06
443	4.20E-04	510	4.97E-04	577	7.21E-04	644	3.86E-04	711	5.90E-05	778	7.80E-06
444	4.54E-04	511	5.06E-04	578	7.20E-04	645	3.80E-04	712	5.68E-05	779	7.90E-06
445	4.95E-04	512	5.15E-04	579	7.24E-04	646	3.71E-04	713	5.48E-05	780	7.90E-06
446	5.47E-04	513	5.20E-04	580	7.25E-04	647	3.65E-04	714	5.29E-05	N/A	N/A

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	EZP2X2 @40W5000K	Sample ID	250117002-S1
Operate time (Min.)	30	Stabilization time (Min.)	60
Temperature (°C)	24.6	Humidity (%RH)	42.2

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	277.0	60	0.149	40.3	0.977
NON-WORST CASE	120.0	60	0.337	40.2	0.994

Test Result

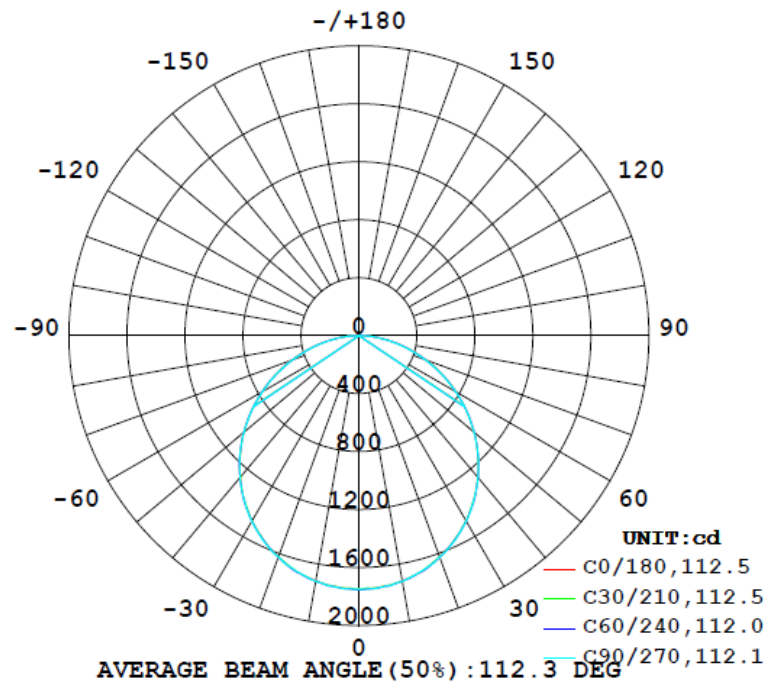
Flux (lm)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)	Zonal Lumen Requirement (0°-60°)
	C0-180	C90-270	C0-180	C90-270		
5044	164.8	164.1	112.3	112.0	125.2	77.9%

UGR		Spacing Criterion	
Crosswise	Endwise	(0°-180°)	(90°-270°)
21.9	21.8	1.26	1.26

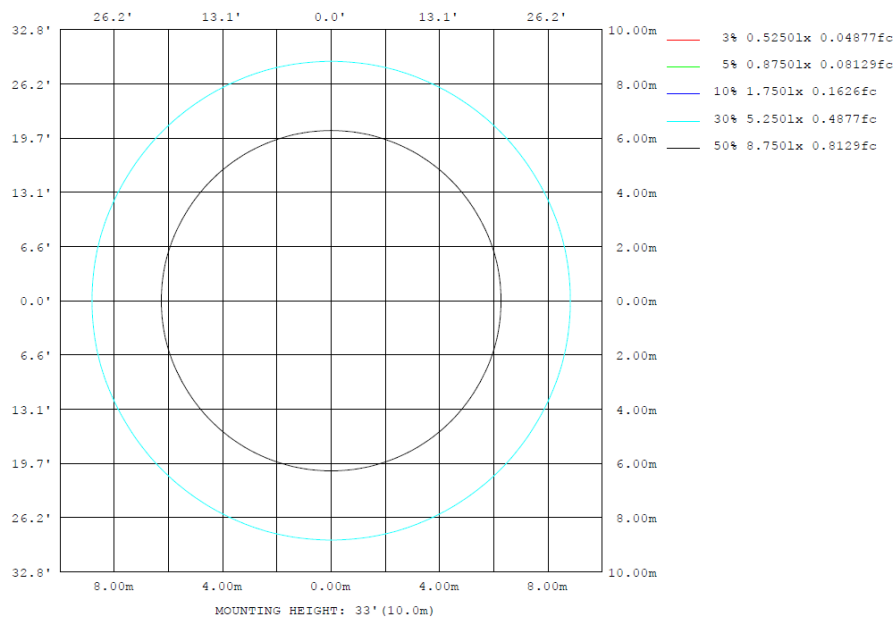
4.2 Goniophotometer Test

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	1717	1720	1721	1720	1717	1720	1721	1720	0- 10	165.6	165.6	3.28,3.28
20	1626	1625	1627	1625	1626	1625	1627	1625	10- 20	474.3	640.0	12.7,12.7
30	1476	1478	1480	1478	1476	1478	1480	1478	20- 30	718.4	1358	26.9,26.9
40	1276	1275	1279	1275	1276	1275	1279	1275	30- 40	864.9	2223	44.1,44.1
50	1037	1036	1037	1036	1037	1036	1037	1036	40- 50	895.5	3119	61.8,61.8
60	772.0	767.4	766.5	767.4	772.0	767.4	766.5	767.4	50- 60	809.4	3928	77.9,77.9
70	496.0	490.1	485.6	490.1	496.0	490.1	485.6	490.1	60- 70	623.2	4551	90.2,90.2
80	230.0	224.7	218.9	224.7	230.0	224.7	218.9	224.7	70- 80	374.3	4926	97.7,97.7
90	0	0	0	0	0	0	0	0	80- 90	118.1	5044	100,100
100	0	0	0	0	0	0	0	0	90-100	0	5044	100,100
110	0	0	0	0	0	0	0	0	100-110	0	5044	100,100
120	0	0	0	0	0	0	0	0	110-120	0	5044	100,100
130	0	0	0	0	0	0	0	0	120-130	0	5044	100,100
140	0	0	0	0	0	0	0	0	130-140	0	5044	100,100
150	0	0	0	0	0	0	0	0	140-150	0	5044	100,100
160	0	0	0	0	0	0	0	0	150-160	0	5044	100,100
170	0	0	0	0	0	0	0	0	160-170	0	5044	100,100
180	0	0	0	0	0	0	0	0	170-180	0	5044	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	165.63	0-10	165.63	3.28%
10-20	474.34	0-20	639.97	12.69%
20-30	718.35	0-30	1358.32	26.93%
30-40	864.87	0-40	2223.19	44.08%
40-50	895.55	0-50	3118.74	61.83%
50-60	809.36	0-60	3928.10	77.88%
60-70	623.22	0-70	4551.32	90.24%
70-80	374.34	0-80	4925.66	97.66%
80-90	118.13	0-90	5043.79	100.00%
90-100	0.00	0-100	5043.79	100.00%
100-110	0.00	0-110	5043.79	100.00%
110-120	0.00	0-120	5043.79	100.00%
120-130	0.00	0-130	5043.79	100.00%
130-140	0.00	0-140	5043.79	100.00%
140-150	0.00	0-150	5043.79	100.00%
150-160	0.00	0-160	5043.79	100.00%
160-170	0.00	0-170	5043.79	100.00%
170-180	0.00	0-180	5043.79	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										
X=2H	Y=2H	11.7	13.3	12.0	13.6	13.9	11.6	13.3	12.0	13.6
	3H	13.6	15.0	13.9	15.4	15.7	13.5	15.0	13.9	15.3
	4H	14.3	15.7	14.7	16.1	16.4	14.2	15.6	14.6	16.0
	6H	14.9	16.2	15.3	16.6	16.9	14.8	16.1	15.2	16.4
	8H	15.1	16.3	15.5	16.7	17.1	15.0	16.2	15.4	16.6
	12H	15.2	16.4	15.7	16.8	17.3	15.1	16.3	15.5	16.7
UGR Viewed Endwise										
	2H	12.3	13.7	12.7	14.1	14.4	12.3	13.7	12.7	14.0
	3H	14.4	15.6	14.8	16.0	16.4	14.4	15.6	14.8	16.0
	4H	15.3	16.4	15.7	16.8	17.2	15.2	16.3	15.6	16.7
	6H	16.0	17.0	16.5	17.4	17.9	15.9	16.9	16.4	17.3
	8H	16.3	17.2	16.8	17.6	18.1	16.2	17.0	16.6	17.5
	12H	16.5	17.3	17.0	17.8	18.3	16.4	17.2	16.9	17.6
4H	2H	12.3	13.7	12.7	14.1	14.4	12.3	13.7	12.7	14.0
	3H	14.4	15.6	14.8	16.0	16.4	14.4	15.6	14.8	16.0
	4H	15.3	16.4	15.7	16.8	17.2	15.2	16.3	15.6	16.7
	6H	16.0	17.0	16.5	17.4	17.9	15.9	16.9	16.4	17.3
	8H	16.3	17.2	16.8	17.6	18.1	16.2	17.0	16.6	17.5
	12H	16.5	17.3	17.0	17.8	18.3	16.4	17.2	16.9	17.6
8H	4H	15.6	16.5	16.1	17.0	17.4	15.6	16.4	16.0	16.9
	6H	16.5	17.3	17.0	17.7	18.2	16.4	17.1	16.9	17.6
	8H	16.9	17.5	17.4	18.0	18.5	16.7	17.4	17.2	17.9
	12H	17.2	17.8	17.7	18.3	18.8	17.0	17.6	17.5	18.1
12H	4H	15.7	16.5	16.2	17.0	17.4	15.6	16.4	16.1	16.9
	6H	16.6	17.3	17.1	17.7	18.3	16.5	17.2	17.0	17.6
	8H	17.0	17.6	17.5	18.1	18.7	16.9	17.5	17.4	18.0

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										
X=2H	Y=2H	17.3	18.9	17.6	19.2	19.5	17.2	18.9	17.6	19.2
	3H	19.2	20.6	19.5	21.0	21.3	19.1	20.6	19.5	20.9
	4H	19.9	21.3	20.3	21.7	22.0	19.8	21.2	20.2	21.6
	6H	20.5	21.8	20.9	22.2	22.5	20.4	21.7	20.8	22.0
	8H	20.7	21.9	21.1	22.3	22.7	20.6	21.8	21.0	22.2
	12H	20.8	22.0	21.3	22.4	22.9	20.7	21.9	21.1	22.3
UGR Viewed Endwise										
	2H	17.9	19.3	18.3	19.7	20.0	17.9	19.3	18.3	19.6
	3H	20.0	21.2	20.4	21.6	22.0	20.0	21.2	20.4	21.6
	4H	20.9	22.0	21.3	22.4	22.8	20.8	21.9	21.2	22.3
	6H	21.6	22.6	22.1	23.0	23.5	21.5	22.5	22.0	22.9
	8H	21.9	22.8	22.4	23.2	23.7	21.8	22.6	22.2	23.1
	12H	22.1	22.9	22.6	23.4	23.9	22.0	22.8	22.5	23.2
4H	2H	17.9	19.3	18.3	19.7	20.0	17.9	19.3	18.3	19.6
	3H	20.0	21.2	20.4	21.6	22.0	20.0	21.2	20.4	21.6
	4H	20.9	22.0	21.3	22.4	22.8	20.8	21.9	21.2	22.3
	6H	21.6	22.6	22.1	23.0	23.5	21.5	22.5	22.0	22.9
	8H	21.9	22.8	22.4	23.2	23.7	21.8	22.6	22.2	23.1
	12H	22.1	22.9	22.6	23.4	23.9	22.0	22.8	22.5	23.2
8H	4H	21.2	22.1	21.7	22.6	23.0	21.2	22.0	21.6	22.5
	6H	22.1	22.9	22.6	23.3	23.8	22.0	22.7	22.5	23.2
	8H	22.5	23.1	23.0	23.6	24.1	22.3	23.0	22.8	23.5
	12H	22.8	23.4	23.3	23.9	24.4	22.6	23.2	23.1	23.7
12H	4H	21.3	22.1	21.8	22.6	23.0	21.2	22.0	21.7	22.5
	6H	22.2	22.9	22.7	23.3	23.9	22.1	22.8	22.6	23.2
	8H	22.6	23.2	23.1	23.7	24.3	22.5	23.1	23.0	23.6

Maximum UGR = 24.4

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	1750	1748	1747	1752	1755	1753	1750	1753	1755	1752	1747	1748	1750	1748	1747	1752	1755	1753	1750
5	1740	1744	1739	1741	1744	1743	1743	1743	1744	1741	1739	1744	1740	1744	1739	1741	1744	1743	1743
10	1717	1719	1718	1720	1720	1721	1721	1721	1720	1718	1719	1717	1719	1718	1720	1720	1721	1721	1721
15	1681	1680	1679	1681	1685	1681	1681	1681	1685	1681	1679	1680	1681	1680	1679	1681	1685	1681	1681
20	1626	1626	1624	1625	1627	1631	1627	1631	1627	1625	1624	1626	1626	1624	1625	1627	1631	1627	1627
25	1557	1557	1557	1561	1559	1562	1559	1561	1557	1557	1557	1557	1557	1557	1557	1561	1559	1562	1563
30	1476	1477	1474	1478	1478	1478	1480	1478	1478	1478	1474	1477	1476	1477	1474	1478	1478	1478	1480
35	1380	1382	1380	1383	1385	1385	1382	1385	1385	1383	1380	1382	1380	1382	1380	1383	1385	1385	1382
40	1276	1276	1274	1275	1279	1279	1279	1279	1275	1274	1276	1276	1276	1274	1275	1279	1279	1279	1279
45	1160	1160	1159	1162	1162	1162	1165	1162	1162	1162	1159	1160	1160	1160	1159	1162	1162	1162	1165
50	1037	1038	1035	1036	1037	1038	1037	1038	1037	1036	1035	1038	1037	1038	1035	1036	1037	1038	1037
55	908	908	905	905	906	906	904	906	906	905	905	908	908	908	905	905	906	906	904
60	772	772	769	767	769	767	767	767	769	767	769	772	772	772	769	767	769	767	767
65	634	633	631	630	629	627	627	627	629	630	631	633	634	633	631	630	629	627	627
70	496	494	492	490	488	486	486	486	488	490	492	494	496	494	492	490	488	486	486
75	359	359	356	353	351	348	348	348	351	353	356	359	359	359	356	353	351	348	348
80	230	230	227	225	222	220	219	220	222	225	227	230	230	230	227	225	222	220	219
85	110	109	108	107	104	103	103	103	104	107	108	109	110	109	108	107	104	103	103
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	1753	1755	1752	1747	1748														
5	1743	1744	1741	1739	1744														
10	1721	1720	1720	1718	1719														
15	1681	1685	1681	1679	1680														
20	1631	1627	1625	1624	1626														
25	1562	1559	1561	1557	1557														
30	1478	1478	1478	1474	1477														
35	1385	1385	1383	1380	1382														
40	1279	1279	1275	1274	1276														
45	1162	1162	1162	1159	1160														
50	1038	1037	1036	1035	1038														
55	906	906	905	905	908														
60	767	769	767	769	772														
65	627	629	630	631	633														
70	486	488	490	492	494														
75	348	351	353	356	359														
80	220	222	225	227	230														
85	103	104	107	108	109														
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.	EZP2X2 @40W5000K	Sample ID	250117002-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	0.337	40.2	0.994	11.20
277.0	60	0.149	40.3	0.977	15.43

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*****