

Photometric Test Report

Relevant Standards

- ☒ ANSI/IES LM-79-2019
- ☒ ANSI C82.77-2017

Prepared For

RAB Lighting Inc.

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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		5029
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Standard	Premium	125.7
		110	125	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		40.0
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)	ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	10.44
			277V	8.74
Power Factor (THD & PF – Section 4.3)	ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.993
			277V	0.960
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019	7 steps	3465±245	3379
		4 steps	3465±124	
Minimum CRI (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019 CIE13.3-1995	≥80		83.2
Minimum R9 (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019 CIE13.3-1995	≥0		8
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	19.4
		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		0.336
(Goniophotometer – Section 4.2)		Non-Worst Case		0.150
Power (Input Wattage – W)				
(Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		40.0
(Goniophotometer – Section 4.2)		Non-Worst Case		39.9

2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-01-20	EZP2X4 @40W3500K	-	250117003-S1
2	Goniophotometer Test	2025-01-20	EZP2X4 @40W3500K	-	250117003-S1
3	THD and PF Test	2025-01-20	EZP2X4 @40W3500K	-	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 @40W3500K, 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 @40W3500K	Sample ID	250117003-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

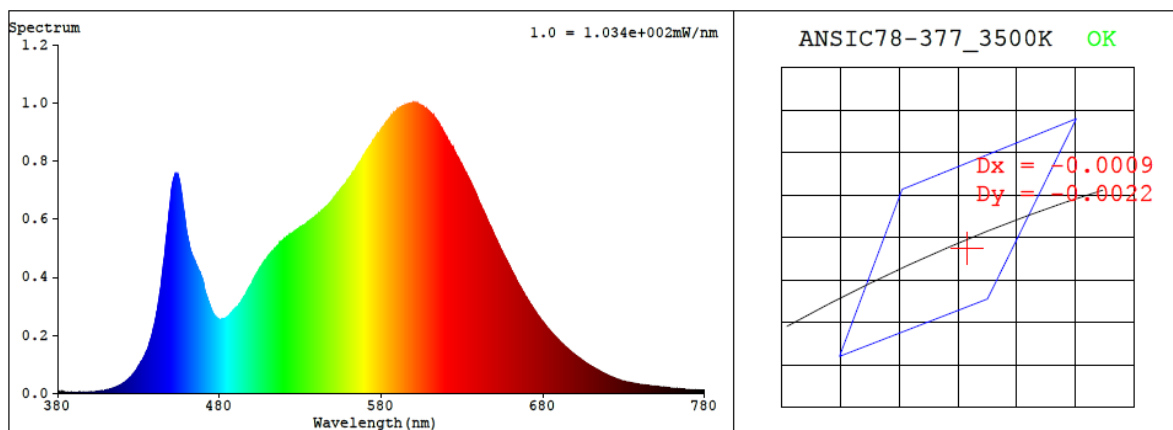
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made 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	0.336	40.0	0.993
277.0	60	0.150	39.9	0.960

CCT (K)	CRI	R9	Duv	Rf	Rg	IES Rcs,h1
3379	83.2	8	-0.0008	85	95	-12%

4.1 Integrating Sphere Test



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.4114$ $y = 0.3919$ / $u' = 0.2392$ $v' = 0.5127$ ($duv = -7.61e-04$)

CCT= 3379K Prcp WL: Ld=581.6nm Purity=41.1%

Peak WL: Lp=601nm FWHM: =140.8nm Ratio:R=20.9% G=75.9% B=3.2%

Render Index: Ra = 83.2 AvgR = 77.4 TM30:Rf=84 Rg=95

EEL: 0.09988 A++ Highest

R1 =82 R2 =92 R3 =96 R4 =81 R5 =82 R6 =89 R7 =83

R8 =61 R9 =8 R10=81 R11=80 R12=69 R13=85 R14=98 R15=75

4.1 Integrating Sphere Test

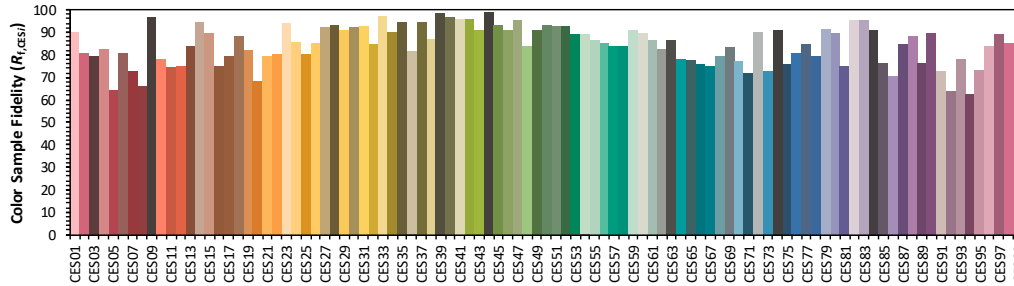
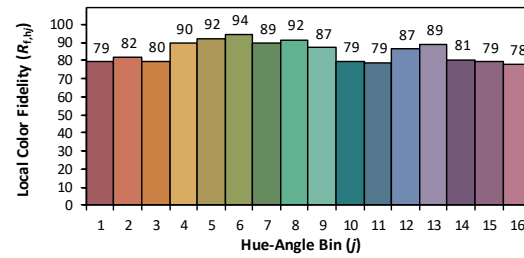
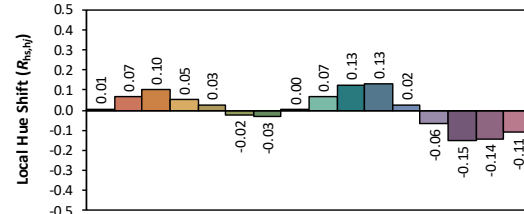
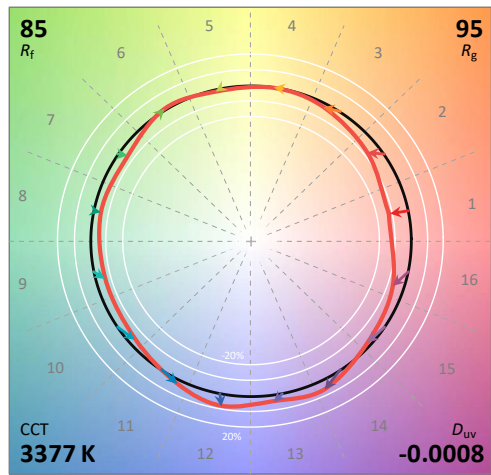
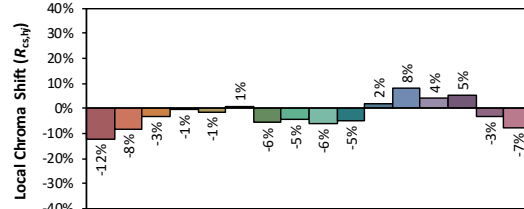
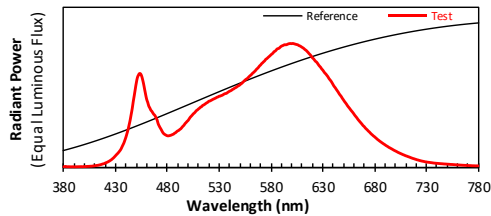
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/1/21

Model: EZP2X4 @40W3500K



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

x 0.4115
 y 0.3918
 u' 0.2393
 v' 0.5126

CIE 13.3-1995
(CRI)
 R_a 83
 R_g 8

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	3.70E-06	447	5.29E-04	514	4.98E-04	581	9.14E-04	648	5.70E-04	715	7.71E-05
381	5.50E-06	448	5.79E-04	515	5.02E-04	582	9.21E-04	649	5.56E-04	716	7.41E-05
382	5.50E-06	449	6.32E-04	516	5.07E-04	583	9.32E-04	650	5.44E-04	717	7.09E-05
383	3.50E-06	450	6.83E-04	517	5.14E-04	584	9.36E-04	651	5.31E-04	718	6.85E-05
384	3.90E-06	451	7.22E-04	518	5.20E-04	585	9.45E-04	652	5.20E-04	719	6.56E-05
385	3.60E-06	452	7.43E-04	519	5.24E-04	586	9.54E-04	653	5.09E-04	720	6.31E-05
386	3.30E-06	453	7.56E-04	520	5.32E-04	587	9.57E-04	654	4.96E-04	721	6.00E-05
387	2.90E-06	454	7.54E-04	521	5.34E-04	588	9.61E-04	655	4.85E-04	722	5.80E-05
388	3.30E-06	455	7.38E-04	522	5.38E-04	589	9.69E-04	656	4.75E-04	723	5.55E-05
389	3.30E-06	456	7.09E-04	523	5.43E-04	590	9.76E-04	657	4.63E-04	724	5.32E-05
390	2.50E-06	457	6.72E-04	524	5.48E-04	591	9.80E-04	658	4.53E-04	725	5.10E-05
391	3.10E-06	458	6.29E-04	525	5.52E-04	592	9.84E-04	659	4.43E-04	726	4.90E-05
392	3.40E-06	459	5.86E-04	526	5.56E-04	593	9.88E-04	660	4.31E-04	727	4.74E-05
393	3.50E-06	460	5.47E-04	527	5.60E-04	594	9.88E-04	661	4.19E-04	728	4.56E-05
394	3.80E-06	461	5.23E-04	528	5.65E-04	595	9.89E-04	662	4.09E-04	729	4.34E-05
395	4.00E-06	462	4.94E-04	529	5.67E-04	596	9.92E-04	663	3.98E-04	730	4.25E-05
396	4.20E-06	463	4.79E-04	530	5.73E-04	597	9.96E-04	664	3.86E-04	731	4.07E-05
397	4.40E-06	464	4.60E-04	531	5.74E-04	598	9.98E-04	665	3.76E-04	732	3.96E-05
398	3.50E-06	465	4.51E-04	532	5.78E-04	599	9.98E-04	666	3.66E-04	733	3.86E-05
399	4.80E-06	466	4.37E-04	533	5.81E-04	600	9.97E-04	667	3.57E-04	734	3.73E-05
400	5.20E-06	467	4.25E-04	534	5.86E-04	601	9.99E-04	668	3.47E-04	735	3.63E-05
401	5.10E-06	468	4.17E-04	535	5.91E-04	602	9.97E-04	669	3.36E-04	736	3.51E-05
402	5.90E-06	469	3.99E-04	536	5.94E-04	603	9.95E-04	670	3.29E-04	737	3.38E-05
403	6.40E-06	470	3.83E-04	537	5.96E-04	604	9.92E-04	671	3.18E-04	738	3.27E-05
404	6.60E-06	471	3.53E-04	538	6.02E-04	605	9.90E-04	672	3.09E-04	739	3.21E-05
405	7.20E-06	472	3.34E-04	539	6.08E-04	606	9.88E-04	673	3.02E-04	740	3.12E-05
406	7.90E-06	473	3.18E-04	540	6.13E-04	607	9.82E-04	674	2.92E-04	741	3.07E-05
407	8.00E-06	474	3.04E-04	541	6.17E-04	608	9.79E-04	675	2.85E-04	742	2.98E-05
408	9.60E-06	475	2.88E-04	542	6.21E-04	609	9.74E-04	676	2.76E-04	743	2.91E-05
409	9.90E-06	476	2.75E-04	543	6.28E-04	610	9.68E-04	677	2.67E-04	744	2.83E-05
410	1.16E-05	477	2.67E-04	544	6.32E-04	611	9.63E-04	678	2.60E-04	745	2.78E-05
411	1.31E-05	478	2.62E-04	545	6.39E-04	612	9.57E-04	679	2.52E-04	746	2.70E-05
412	1.43E-05	479	2.57E-04	546	6.42E-04	613	9.49E-04	680	2.46E-04	747	2.62E-05
413	1.55E-05	480	2.53E-04	547	6.48E-04	614	9.43E-04	681	2.39E-04	748	2.56E-05
414	1.74E-05	481	2.53E-04	548	6.55E-04	615	9.34E-04	682	2.32E-04	749	2.53E-05
415	1.94E-05	482	2.55E-04	549	6.59E-04	616	9.26E-04	683	2.24E-04	750	2.45E-05
416	2.16E-05	483	2.57E-04	550	6.64E-04	617	9.15E-04	684	2.18E-04	751	2.40E-05
417	2.45E-05	484	2.60E-04	551	6.72E-04	618	9.07E-04	685	2.11E-04	752	2.35E-05
418	2.71E-05	485	2.64E-04	552	6.78E-04	619	8.96E-04	686	2.05E-04	753	2.26E-05
419	2.88E-05	486	2.67E-04	553	6.86E-04	620	8.84E-04	687	1.99E-04	754	2.19E-05
420	3.36E-05	487	2.75E-04	554	6.95E-04	621	8.76E-04	688	1.93E-04	755	2.19E-05
421	3.70E-05	488	2.79E-04	555	7.03E-04	622	8.66E-04	689	1.87E-04	756	2.10E-05
422	4.05E-05	489	2.87E-04	556	7.10E-04	623	8.55E-04	690	1.82E-04	757	2.05E-05
423	4.50E-05	490	2.93E-04	557	7.15E-04	624	8.49E-04	691	1.76E-04	758	1.97E-05
424	4.96E-05	491	2.97E-04	558	7.23E-04	625	8.39E-04	692	1.71E-04	759	1.90E-05
425	5.52E-05	492	3.05E-04	559	7.32E-04	626	8.26E-04	693	1.66E-04	760	1.85E-05
426	6.09E-05	493	3.11E-04	560	7.39E-04	627	8.15E-04	694	1.60E-04	761	1.79E-05
427	6.83E-05	494	3.21E-04	561	7.46E-04	628	8.06E-04	695	1.56E-04	762	1.76E-05
428	7.55E-05	495	3.31E-04	562	7.56E-04	629	7.94E-04	696	1.51E-04	763	1.70E-05
429	8.44E-05	496	3.39E-04	563	7.63E-04	630	7.85E-04	697	1.46E-04	764	1.65E-05
430	9.34E-05	497	3.51E-04	564	7.71E-04	631	7.73E-04	698	1.41E-04	765	1.59E-05
431	1.03E-04	498	3.60E-04	565	7.79E-04	632	7.61E-04	699	1.36E-04	766	1.55E-05
432	1.11E-04	499	3.69E-04	566	7.90E-04	633	7.53E-04	700	1.32E-04	767	1.50E-05
433	1.21E-04	500	3.77E-04	567	7.97E-04	634	7.42E-04	701	1.28E-04	768	1.46E-05
434	1.32E-04	501	3.90E-04	568	8.06E-04	635	7.31E-04	702	1.23E-04	769	1.41E-05
435	1.44E-04	502	4.02E-04	569	8.17E-04	636	7.17E-04	703	1.19E-04	770	1.37E-05
436	1.61E-04	503	4.11E-04	570	8.25E-04	637	7.06E-04	704	1.15E-04	771	1.32E-05
437	1.79E-04	504	4.20E-04	571	8.36E-04	638	6.95E-04	705	1.11E-04	772	1.28E-05
438	1.96E-04	505	4.31E-04	572	8.43E-04	639	6.82E-04	706	1.08E-04	773	1.27E-05
439	2.20E-04	506	4.37E-04	573	8.52E-04	640	6.67E-04	707	1.03E-04	774	1.18E-05
440	2.44E-04	507	4.46E-04	574	8.59E-04	641	6.53E-04	708	9.99E-05	775	1.15E-05
441	2.73E-04	508	4.57E-04	575	8.71E-04	642	6.43E-04	709	9.67E-05	776	1.14E-05
442	3.04E-04	509	4.62E-04	576	8.76E-04	643	6.30E-04	710	9.26E-05	777	1.10E-05
443	3.41E-04	510	4.70E-04	577	8.84E-04	644	6.18E-04	711	9.01E-05	778	1.07E-05
444	3.79E-04	511	4.76E-04	578	8.91E-04	645	6.06E-04	712	8.67E-05	779	1.09E-05
445	4.26E-04	512	4.84E-04	579	8.99E-04	646	5.92E-04	713	8.37E-05	780	1.09E-05
446	4.72E-04	513	4.89E-04	580	9.07E-04	647	5.81E-04	714	8.08E-05	N/A	N/A

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	EZP2X4 @40W3500K	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	0.336	40.0	0.993
NON-WORST CASE	277.0	60	0.150	39.9	0.960

Test Result

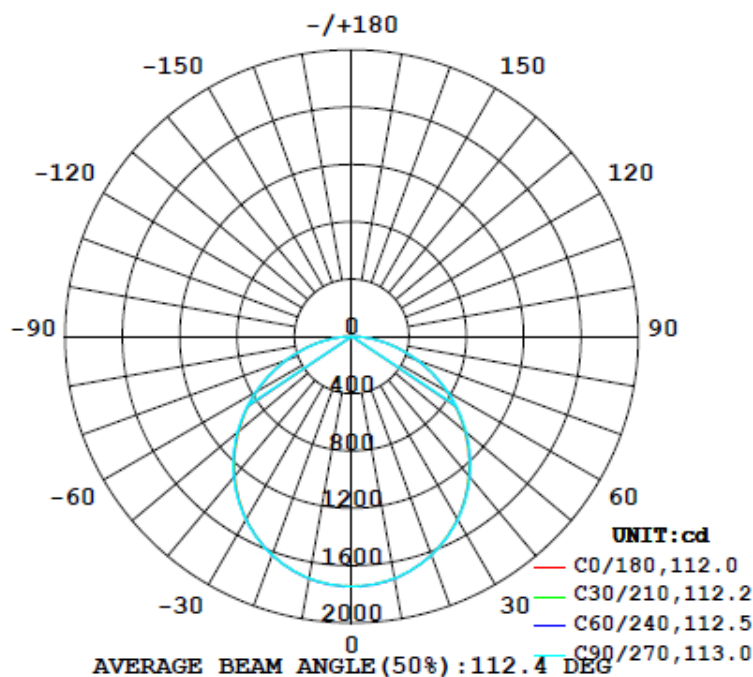
Flux (lm)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)	Zonal Lumen Requirement (0°-60°)
	C0-180	C90-270	C0-180	C90-270		
5029	164.5	164.0	112.0	112.9	125.7	78.0%

UGR		Spacing Criterion	
Crosswise	Endwise	(0°-180°)	(90°-270°)
19.4	19.4	1.26	1.26

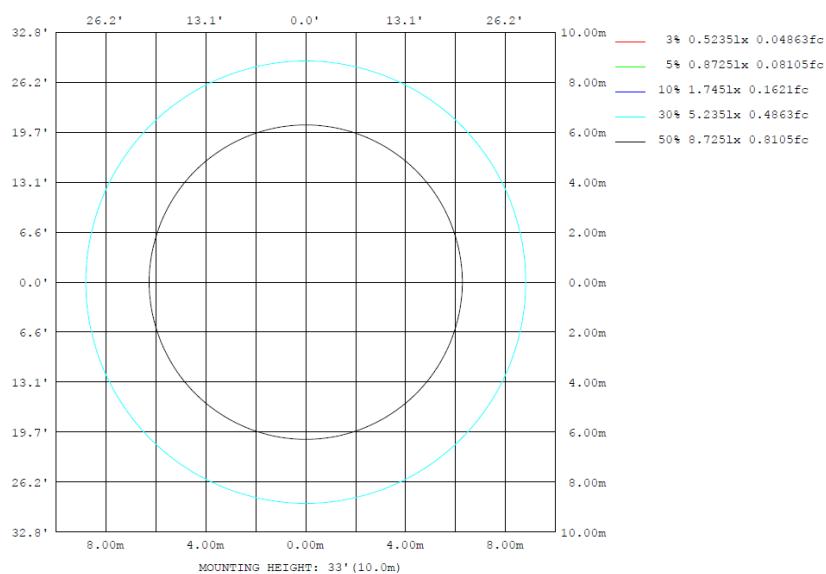
4.2 Goniophotometer Test

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	1713	1713	1715	1713	1713	1713	1715	1713	0- 10	165.1	165.1	3.28,3.28
20	1625	1625	1624	1625	1625	1625	1624	1625	10- 20	473.1	638.2	12.7,12.7
30	1472	1473	1478	1473	1472	1473	1478	1473	20- 30	716.9	1355	26.9,26.9
40	1270	1278	1282	1278	1270	1278	1282	1278	30- 40	863.6	2219	44.1,44.1
50	1030	1039	1043	1039	1030	1039	1043	1039	40- 50	894.8	3114	61.9,61.9
60	763.9	770.1	774.9	770.1	763.9	770.1	774.9	770.1	50- 60	808.7	3922	78,78
70	490.0	488.7	489.6	488.7	490.0	488.7	489.6	488.7	60- 70	622.1	4544	90.4,90.4
80	225.4	220.2	217.2	220.2	225.4	220.2	217.2	220.2	70- 80	370.9	4915	97.7,97.7
90	0	0	0	0	0	0	0	0	80- 90	114.2	5029	100,100
100	0	0	0	0	0	0	0	0	90-100	0	5029	100,100
110	0	0	0	0	0	0	0	0	100-110	0	5029	100,100
120	0	0	0	0	0	0	0	0	110-120	0	5029	100,100
130	0	0	0	0	0	0	0	0	120-130	0	5029	100,100
140	0	0	0	0	0	0	0	0	130-140	0	5029	100,100
150	0	0	0	0	0	0	0	0	140-150	0	5029	100,100
160	0	0	0	0	0	0	0	0	150-160	0	5029	100,100
170	0	0	0	0	0	0	0	0	160-170	0	5029	100,100
180	0	0	0	0	0	0	0	0	170-180	0	5029	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

	Zonal (lm)		Total (lm)	Percent
0-10	165.09	0-10	165.09	3.28%
10-20	473.15	0-20	638.24	12.69%
20-30	716.91	0-30	1355.15	26.94%
30-40	863.56	0-40	2218.71	44.11%
40-50	894.80	0-50	3113.51	61.91%
50-60	808.70	0-60	3922.21	77.99%
60-70	622.07	0-70	4544.28	90.35%
70-80	370.88	0-80	4915.16	97.73%
80-90	114.24	0-90	5029.40	100.00%
90-100	0.00	0-100	5029.40	100.00%
100-110	0.00	0-110	5029.40	100.00%
110-120	0.00	0-120	5029.40	100.00%
120-130	0.00	0-130	5029.40	100.00%
130-140	0.00	0-140	5029.40	100.00%
140-150	0.00	0-150	5029.40	100.00%
150-160	0.00	0-160	5029.40	100.00%
160-170	0.00	0-170	5029.40	100.00%
170-180	0.00	0-180	5029.40	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	13.9	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	13.9	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	13.5	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	13.6	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	15.5	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	14.8	16.5	15.2	16.8	17.1	14.9	16.5	15.2	16.8	17.2
	3H	16.7	18.2	17.1	18.5	18.9	16.7	18.2	17.1	18.6	18.9
	4H	17.4	18.8	17.8	19.2	19.5	17.4	18.9	17.8	19.2	19.6
	6H	18.0	19.3	18.4	19.7	20.1	18.0	19.3	18.4	19.7	20.1
	8H	18.2	19.5	18.6	19.8	20.2	18.2	19.4	18.6	19.8	20.2
	12H	18.3	19.5	18.8	19.9	20.4	18.3	19.5	18.7	19.9	20.3
4H	2H	15.5	16.9	15.9	17.2	17.6	15.5	16.9	15.9	17.3	17.7
	3H	17.6	18.8	18.0	19.2	19.5	17.6	18.8	18.0	19.2	19.6
	4H	18.4	19.5	18.9	19.9	20.4	18.4	19.5	18.9	19.9	20.4
	6H	19.1	20.1	19.6	20.5	21.0	19.1	20.1	19.6	20.5	21.0
	8H	19.4	20.3	19.9	20.7	21.2	19.4	20.3	19.8	20.7	21.2
	12H	19.6	20.4	20.1	20.9	21.4	19.6	20.3	20.0	20.8	21.3
8H	4H	18.8	19.7	19.2	20.1	20.6	18.8	19.7	19.3	20.1	20.6
	6H	19.6	20.4	20.1	20.9	21.3	19.6	20.3	20.1	20.8	21.3
	8H	20.0	20.6	20.5	21.1	21.6	19.9	20.6	20.4	21.1	21.6
	12H	20.3	20.9	20.8	21.4	21.9	20.2	20.8	20.7	21.3	21.8
12H	4H	18.8	19.6	19.3	20.1	20.6	18.8	19.6	19.3	20.1	20.6
	6H	19.7	20.4	20.2	20.8	21.4	19.7	20.4	20.2	20.8	21.4
	8H	20.1	20.7	20.6	21.2	21.8	20.1	20.6	20.6	21.1	21.7

Maximum UGR = 21.9

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	1745	1743	1744	1743	1745	1744	1744	1744	1745	1743	1744	1743	1745	1743	1744	1743	1745	1744	1744
5	1737	1736	1738	1739	1741	1739	1737	1739	1741	1739	1738	1736	1737	1736	1738	1739	1741	1739	1737
10	1713	1711	1713	1713	1716	1715	1715	1715	1716	1713	1713	1711	1713	1711	1713	1713	1716	1715	1715
15	1676	1675	1676	1676	1677	1676	1675	1676	1677	1676	1676	1675	1676	1675	1676	1676	1677	1676	1675
20	1625	1624	1624	1625	1625	1624	1625	1625	1625	1624	1624	1625	1624	1624	1625	1624	1625	1625	1624
25	1554	1553	1553	1555	1558	1557	1560	1557	1558	1555	1553	1553	1554	1553	1553	1555	1558	1557	1560
30	1472	1471	1473	1473	1475	1477	1478	1477	1475	1473	1473	1471	1472	1471	1473	1473	1475	1477	1478
35	1378	1377	1379	1382	1383	1384	1386	1384	1383	1382	1379	1377	1378	1377	1379	1382	1383	1384	1386
40	1270	1270	1272	1278	1281	1279	1282	1279	1281	1278	1272	1270	1270	1270	1272	1278	1281	1279	1282
45	1153	1152	1155	1161	1164	1165	1169	1165	1164	1161	1155	1152	1153	1152	1155	1161	1164	1165	1169
50	1030	1029	1033	1039	1039	1041	1043	1041	1039	1039	1033	1029	1030	1029	1033	1039	1039	1041	1043
55	900	899	903	908	908	909	912	909	908	908	903	899	900	899	903	908	908	909	912
60	764	763	765	770	771	773	775	773	771	770	765	763	764	763	765	770	771	773	775
65	627	625	627	629	629	629	633	629	629	629	627	625	627	625	627	629	629	629	633
70	490	488	488	489	487	487	490	487	487	489	488	488	490	488	488	489	487	487	490
75	354	352	351	351	349	349	350	349	349	351	351	352	354	352	351	351	349	349	350
80	225	223	222	220	217	217	217	217	217	220	222	223	225	223	222	220	217	217	217
85	107	105	104	102	99.9	98.6	98.5	98.6	99.9	102	104	105	107	105	104	102	99.9	98.6	98.5
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	1744	1745	1743	1744	1743														
5	1739	1741	1739	1738	1736														
10	1715	1716	1713	1713	1711														
15	1676	1677	1676	1676	1675														
20	1625	1625	1625	1624	1624														
25	1557	1558	1555	1553	1553														
30	1477	1475	1473	1473	1471														
35	1384	1383	1382	1379	1377														
40	1279	1281	1278	1272	1270														
45	1165	1164	1161	1155	1152														
50	1041	1039	1039	1033	1029														
55	909	908	908	903	899														
60	773	771	770	765	763														
65	629	629	629	627	625														
70	487	487	489	488	488														
75	349	349	351	351	352														
80	217	217	220	222	223														
85	98.6	99.9	102	104	105														
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 @40W3500K	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	0.336	40.0	0.993	10.44
277.0	60	0.150	39.9	0.960	8.74

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*****