

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

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		3621
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Standard	Premium	140.9
		110	125	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		25.7
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)	ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	10.60
			277V	9.74
Power Factor (THD & PF – Section 4.3)	ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.994
			277V	0.922
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019	7 steps	3985±275	3956
		4 steps	3985±154	
Minimum CRI (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019 CIE13.3-1995	≥80		84.0
Minimum R9 (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019 CIE13.3-1995	≥0		12
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		93
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	20.8
		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		0.101
(Goniophotometer – Section 4.2)		Non-Worst Case		0.210
Power (Input Wattage – W)				
(Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		25.7
(Goniophotometer – Section 4.2)		Non-Worst Case		25.0

2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-01-17	EZP2X2 @25W4000K	-	250117002-S1
2	Goniophotometer Test	2025-01-17	EZP2X2 @25W4000K	-	250117002-S1
3	THD and PF Test	2025-01-17	EZP2X2 @25W4000K	-	250117002-S1

Remark (If any):

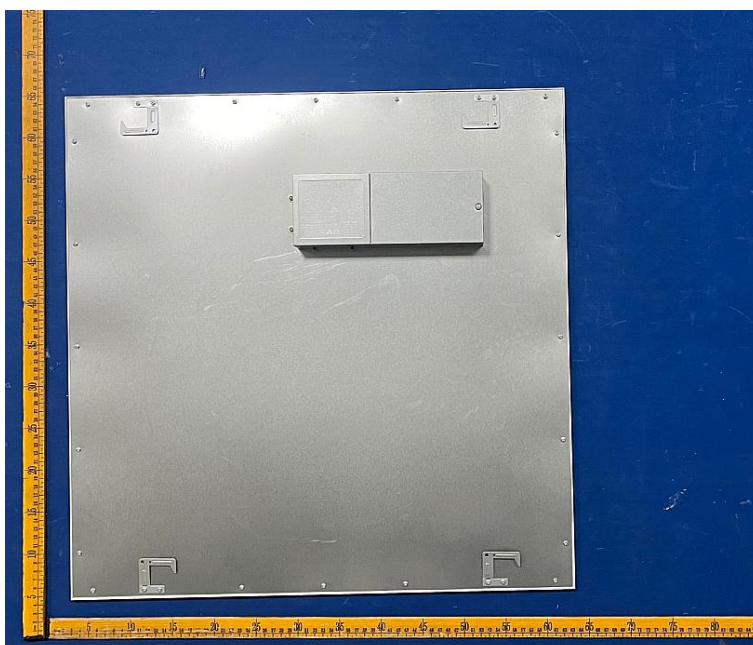
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3.0 Product Description

Luminaire Description: Model No. EZP2X2 @25W4000K, 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 @25W4000K	Sample ID	250117002-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

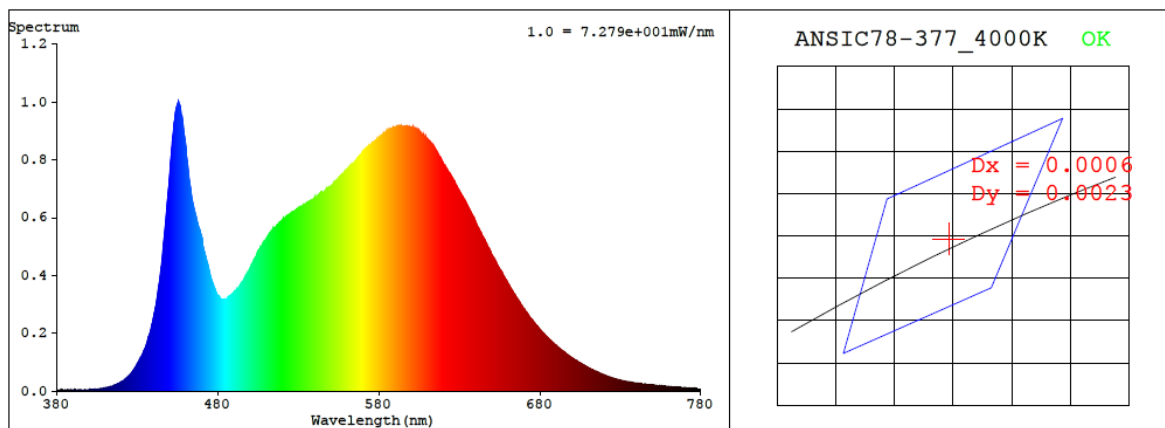
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made 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	0.210	25.0	0.994
277.0	60	0.101	25.7	0.922

CCT (K)	CRI	R9	Duv	Rf	Rg	IES Rcs,h1
3956	84.0	12	0.0009	84	93	-12%

4.1 Integrating Sphere Test



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.3831$ $y = 0.3803$ / $u' = 0.2254$ $v' = 0.5035$ ($duv=9.00e-04$)

CCT= 3956K Prcp WL: $L_d=578.8\text{nm}$ Purity=29.1%

Peak WL: $L_p=456\text{nm}$ FWHM: $=24.8\text{nm}$ Ratio:R=18.6% G=77.4% B=4.0%

Render Index: $R_a = 84.0$ AvgR = 77.8 TM30:Rf=84 Rg=94

EEL: 0.09377 A++ Highest

R1 =83	R2 =92	R3 =96	R4 =81	R5 =82	R6 =89	R7 =85
R8 =64	R9 =12	R10=81	R11=80	R12=63	R13=86	R14=98 R15=76

4.1 Integrating Sphere Test

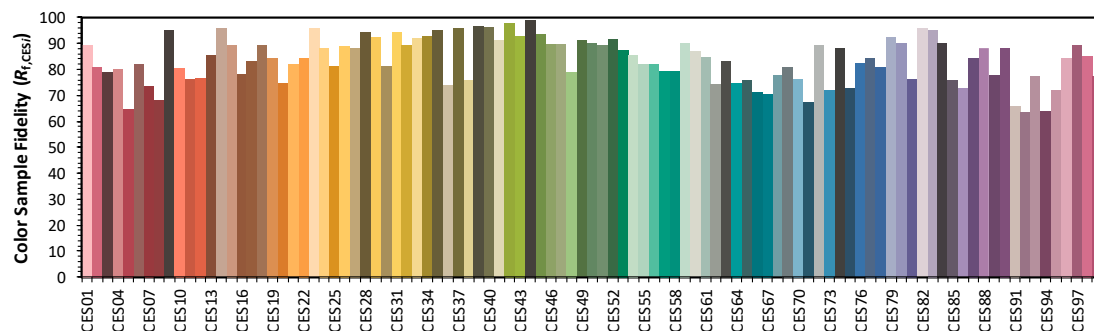
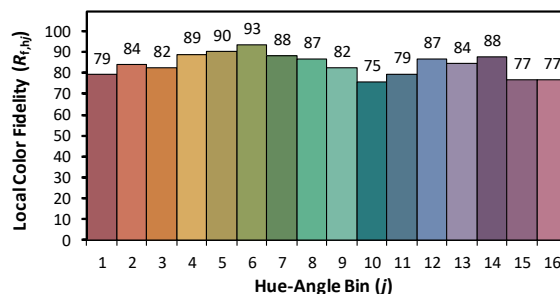
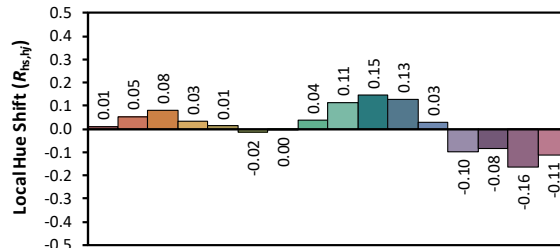
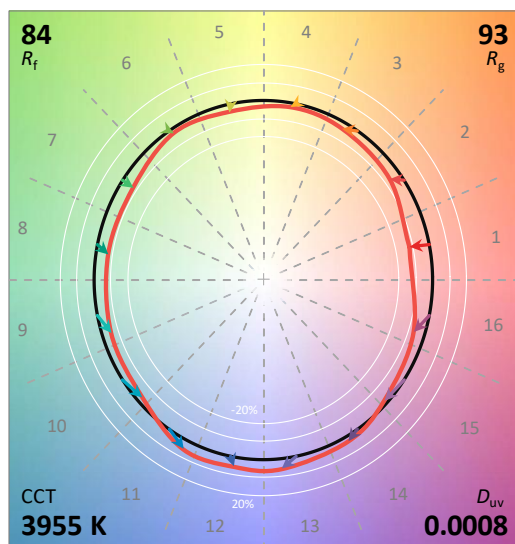
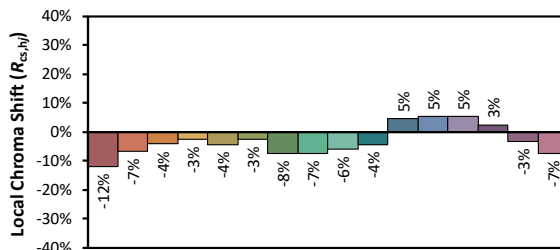
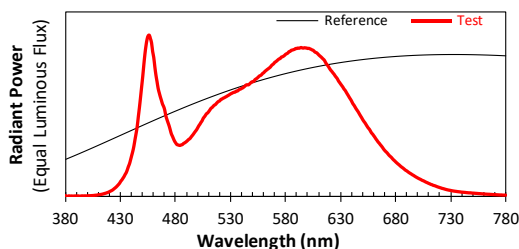
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/1/21

Model: EZP2X2 @25W4000K



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

x 0.3830
 y 0.3802
 u' 0.2255
 v' 0.5035

CIE 13.3-1995
(CRI)
 R_a 84
 R_g 12

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	6.10E-06	447	5.50E-04	514	5.56E-04	581	8.80E-04	648	4.97E-04	715	6.81E-05
381	1.80E-06	448	6.12E-04	515	5.63E-04	582	8.85E-04	649	4.86E-04	716	6.58E-05
382	2.70E-06	449	6.77E-04	516	5.66E-04	583	8.93E-04	650	4.74E-04	717	6.30E-05
383	5.00E-06	450	7.40E-04	517	5.74E-04	584	8.94E-04	651	4.64E-04	718	6.03E-05
384	2.90E-06	451	8.13E-04	518	5.81E-04	585	9.01E-04	652	4.55E-04	719	5.81E-05
385	4.10E-06	452	8.79E-04	519	5.87E-04	586	9.02E-04	653	4.44E-04	720	5.58E-05
386	3.60E-06	453	9.31E-04	520	5.90E-04	587	9.05E-04	654	4.33E-04	721	5.37E-05
387	3.60E-06	454	9.71E-04	521	5.98E-04	588	9.07E-04	655	4.23E-04	722	5.12E-05
388	4.00E-06	455	9.91E-04	522	6.01E-04	589	9.12E-04	656	4.15E-04	723	4.96E-05
389	4.40E-06	456	9.93E-04	523	6.06E-04	590	9.12E-04	657	4.04E-04	724	4.77E-05
390	2.70E-06	457	9.72E-04	524	6.08E-04	591	9.15E-04	658	3.92E-04	725	4.55E-05
391	4.90E-06	458	9.47E-04	525	6.13E-04	592	9.13E-04	659	3.85E-04	726	4.37E-05
392	3.60E-06	459	8.93E-04	526	6.16E-04	593	9.16E-04	660	3.75E-04	727	4.21E-05
393	3.00E-06	460	8.57E-04	527	6.20E-04	594	9.18E-04	661	3.66E-04	728	4.05E-05
394	4.10E-06	461	7.99E-04	528	6.24E-04	595	9.16E-04	662	3.55E-04	729	3.93E-05
395	4.80E-06	462	7.48E-04	529	6.29E-04	596	9.14E-04	663	3.46E-04	730	3.79E-05
396	4.30E-06	463	7.08E-04	530	6.33E-04	597	9.17E-04	664	3.36E-04	731	3.65E-05
397	4.70E-06	464	6.66E-04	531	6.36E-04	598	9.15E-04	665	3.29E-04	732	3.52E-05
398	4.70E-06	465	6.39E-04	532	6.40E-04	599	9.15E-04	666	3.20E-04	733	3.41E-05
399	4.40E-06	466	6.14E-04	533	6.42E-04	600	9.12E-04	667	3.12E-04	734	3.31E-05
400	5.30E-06	467	5.92E-04	534	6.44E-04	601	9.13E-04	668	3.03E-04	735	3.22E-05
401	5.60E-06	468	5.69E-04	535	6.50E-04	602	9.10E-04	669	2.92E-04	736	3.12E-05
402	5.70E-06	469	5.55E-04	536	6.50E-04	603	9.07E-04	670	2.84E-04	737	3.03E-05
403	6.20E-06	470	5.33E-04	537	6.55E-04	604	9.03E-04	671	2.77E-04	738	2.95E-05
404	6.60E-06	471	4.97E-04	538	6.60E-04	605	9.01E-04	672	2.71E-04	739	2.88E-05
405	7.00E-06	472	4.75E-04	539	6.63E-04	606	8.94E-04	673	2.62E-04	740	2.75E-05
406	7.80E-06	473	4.55E-04	540	6.67E-04	607	8.88E-04	674	2.54E-04	741	2.73E-05
407	8.70E-06	474	4.35E-04	541	6.70E-04	608	8.86E-04	675	2.48E-04	742	2.65E-05
408	9.00E-06	475	4.11E-04	542	6.75E-04	609	8.80E-04	676	2.42E-04	743	2.60E-05
409	1.07E-05	476	3.87E-04	543	6.81E-04	610	8.73E-04	677	2.34E-04	744	2.50E-05
410	1.14E-05	477	3.72E-04	544	6.87E-04	611	8.66E-04	678	2.27E-04	745	2.44E-05
411	1.24E-05	478	3.55E-04	545	6.88E-04	612	8.61E-04	679	2.21E-04	746	2.36E-05
412	1.35E-05	479	3.41E-04	546	6.88E-04	613	8.54E-04	680	2.14E-04	747	2.32E-05
413	1.49E-05	480	3.30E-04	547	6.93E-04	614	8.47E-04	681	2.08E-04	748	2.33E-05
414	1.67E-05	481	3.21E-04	548	7.00E-04	615	8.41E-04	682	2.01E-04	749	2.23E-05
415	1.87E-05	482	3.19E-04	549	7.06E-04	616	8.29E-04	683	1.96E-04	750	2.16E-05
416	2.07E-05	483	3.16E-04	550	7.08E-04	617	8.17E-04	684	1.90E-04	751	2.14E-05
417	2.27E-05	484	3.15E-04	551	7.10E-04	618	8.09E-04	685	1.84E-04	752	2.07E-05
418	2.55E-05	485	3.19E-04	552	7.20E-04	619	7.99E-04	686	1.79E-04	753	2.01E-05
419	2.79E-05	486	3.20E-04	553	7.24E-04	620	7.87E-04	687	1.74E-04	754	1.98E-05
420	3.17E-05	487	3.27E-04	554	7.30E-04	621	7.78E-04	688	1.68E-04	755	1.90E-05
421	3.50E-05	488	3.31E-04	555	7.36E-04	622	7.70E-04	689	1.62E-04	756	1.86E-05
422	3.84E-05	489	3.35E-04	556	7.43E-04	623	7.61E-04	690	1.59E-04	757	1.82E-05
423	4.31E-05	490	3.41E-04	557	7.46E-04	624	7.53E-04	691	1.53E-04	758	1.75E-05
424	4.88E-05	491	3.47E-04	558	7.51E-04	625	7.42E-04	692	1.48E-04	759	1.71E-05
425	5.43E-05	492	3.53E-04	559	7.59E-04	626	7.34E-04	693	1.44E-04	760	1.66E-05
426	6.03E-05	493	3.58E-04	560	7.63E-04	627	7.25E-04	694	1.40E-04	761	1.60E-05
427	6.75E-05	494	3.67E-04	561	7.71E-04	628	7.11E-04	695	1.35E-04	762	1.54E-05
428	7.49E-05	495	3.76E-04	562	7.76E-04	629	7.02E-04	696	1.32E-04	763	1.51E-05
429	8.32E-05	496	3.84E-04	563	7.82E-04	630	6.92E-04	697	1.27E-04	764	1.46E-05
430	9.45E-05	497	3.94E-04	564	7.87E-04	631	6.83E-04	698	1.23E-04	765	1.46E-05
431	1.03E-04	498	4.03E-04	565	7.92E-04	632	6.74E-04	699	1.19E-04	766	1.38E-05
432	1.13E-04	499	4.12E-04	566	7.98E-04	633	6.62E-04	700	1.15E-04	767	1.35E-05
433	1.24E-04	500	4.24E-04	567	8.07E-04	634	6.54E-04	701	1.11E-04	768	1.30E-05
434	1.37E-04	501	4.37E-04	568	8.13E-04	635	6.43E-04	702	1.08E-04	769	1.26E-05
435	1.48E-04	502	4.46E-04	569	8.18E-04	636	6.31E-04	703	1.05E-04	770	1.24E-05
436	1.66E-04	503	4.58E-04	570	8.27E-04	637	6.20E-04	704	1.01E-04	771	1.20E-05
437	1.86E-04	504	4.67E-04	571	8.31E-04	638	6.09E-04	705	9.79E-05	772	1.16E-05
438	2.03E-04	505	4.82E-04	572	8.37E-04	639	5.98E-04	706	9.47E-05	773	1.11E-05
439	2.28E-04	506	4.91E-04	573	8.43E-04	640	5.86E-04	707	9.08E-05	774	1.07E-05
440	2.55E-04	507	5.01E-04	574	8.48E-04	641	5.73E-04	708	8.77E-05	775	1.03E-05
441	2.81E-04	508	5.11E-04	575	8.50E-04	642	5.63E-04	709	8.48E-05	776	1.04E-05
442	3.13E-04	509	5.15E-04	576	8.59E-04	643	5.52E-04	710	8.13E-05	777	9.70E-06
443	3.53E-04	510	5.24E-04	577	8.61E-04	644	5.41E-04	711	7.87E-05	778	9.30E-06
444	3.91E-04	511	5.33E-04	578	8.65E-04	645	5.31E-04	712	7.51E-05	779	9.40E-06
445	4.34E-04	512	5.43E-04	579	8.70E-04	646	5.20E-04	713	7.34E-05	780	9.40E-06
446	4.93E-04	513	5.48E-04	580	8.77E-04	647	5.08E-04	714	6.98E-05	N/A	N/A

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	EZP2X2 @25W4000K	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	0.101	25.7	0.922
NON-WORST CASE	120.0	60	0.210	25.0	0.994

Test Result

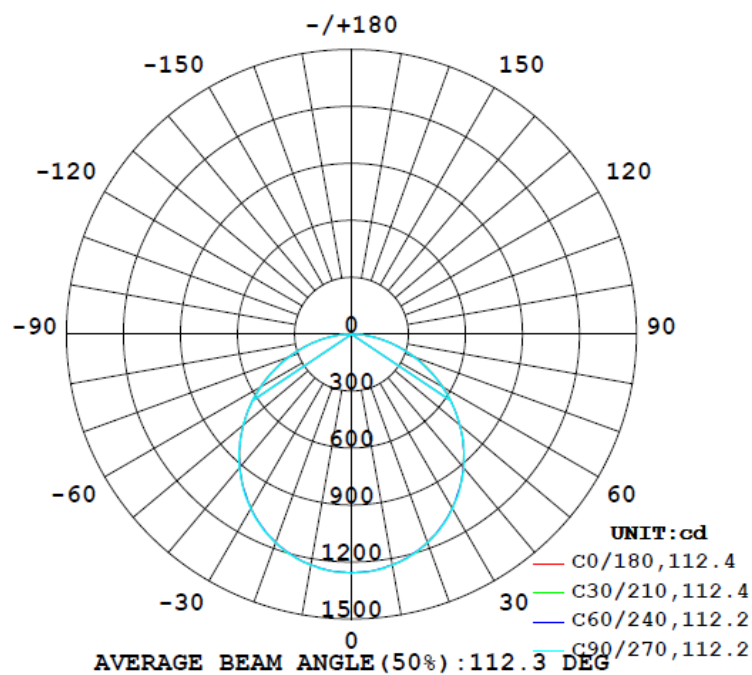
Flux (lm)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)	Zonal Lumen Requirement
	C0-180	C90-270	C0-180	C90-270		(0°-60°)
3621	164.8	164.1	112.1	111.8	140.9	77.9%

UGR		Spacing Criterion	
Crosswise	Endwise	(0°-180°)	(90°-270°)
20.8	20.7	1.26	1.26

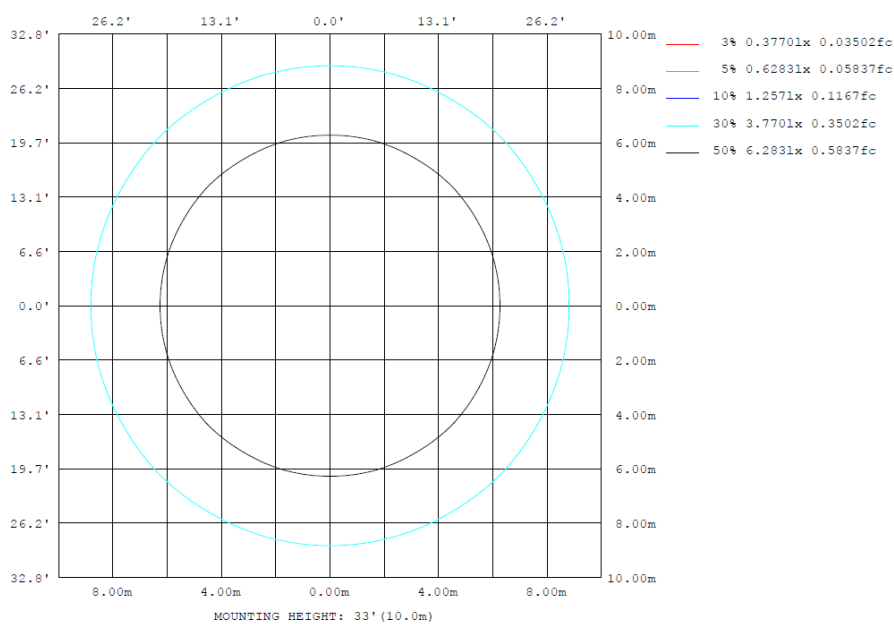
4.2 Goniophotometer Test

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	θlum, lamp
10	1233	1237	1233	1237	1233	1237	1233	1237	0- 10	118.9	118.9	3.28,3.28
20	1167	1169	1168	1169	1167	1169	1168	1169	10- 20	340.7	459.6	12.7,12.7
30	1060	1064	1061	1064	1060	1064	1061	1064	20- 30	515.9	975.5	26.9,26.9
40	914.1	920.5	918.6	920.5	914.1	920.5	918.6	920.5	30- 40	620.8	1596	44.1,44.1
50	744.2	745.1	744.8	745.1	744.2	745.1	744.8	745.1	40- 50	642.9	2239	61.8,61.8
60	555.0	552.6	549.7	552.6	555.0	552.6	549.7	552.6	50- 60	580.9	2820	77.9,77.9
70	355.7	351.8	348.3	351.8	355.7	351.8	348.3	351.8	60- 70	447.4	3268	90.2,90.2
80	165.3	161.8	157.3	161.8	165.3	161.8	157.3	161.8	70- 80	268.9	3537	97.7,97.7
90	0	0	0	0	0	0	0	0	80- 90	84.95	3621	100,100
100	0	0	0	0	0	0	0	0	90-100	0	3621	100,100
110	0	0	0	0	0	0	0	0	100-110	0	3621	100,100
120	0	0	0	0	0	0	0	0	110-120	0	3621	100,100
130	0	0	0	0	0	0	0	0	120-130	0	3621	100,100
140	0	0	0	0	0	0	0	0	130-140	0	3621	100,100
150	0	0	0	0	0	0	0	0	140-150	0	3621	100,100
160	0	0	0	0	0	0	0	0	150-160	0	3621	100,100
170	0	0	0	0	0	0	0	0	160-170	0	3621	100,100
180	0	0	0	0	0	0	0	0	170-180	0	3621	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

	Zonal (lm)		Total (lm)	Percent
0-10	118.91	0-10	118.91	3.28%
10-20	340.71	0-20	459.62	12.69%
20-30	515.86	0-30	975.48	26.94%
30-40	620.85	0-40	1596.33	44.08%
40-50	642.95	0-50	2239.28	61.83%
50-60	580.90	0-60	2820.18	77.87%
60-70	447.40	0-70	3267.58	90.23%
70-80	268.94	0-80	3536.52	97.65%
80-90	84.95	0-90	3621.47	100.00%
90-100	0.00	0-100	3621.47	100.00%
100-110	0.00	0-110	3621.47	100.00%
110-120	0.00	0-120	3621.47	100.00%
120-130	0.00	0-130	3621.47	100.00%
130-140	0.00	0-140	3621.47	100.00%
140-150	0.00	0-150	3621.47	100.00%
150-160	0.00	0-160	3621.47	100.00%
160-170	0.00	0-170	3621.47	100.00%
170-180	0.00	0-180	3621.47	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										
X=2H Y=2H										
			UGR Viewed Crosswise					UGR Viewed Endwise		
			11.6	13.3	12.0	13.6	13.9	11.6	13.3	12.0
	3H		13.5	15.0	13.9	15.4	15.7	13.5	15.0	13.9
	4H		14.3	15.7	14.7	16.0	16.4	14.2	15.6	14.6
	6H		14.9	16.2	15.3	16.5	16.9	14.8	16.1	15.2
	8H		15.1	16.3	15.5	16.7	17.1	15.0	16.2	15.4
	12H		15.2	16.4	15.7	16.8	17.3	15.1	16.3	15.5
4H										
	2H		12.3	13.7	12.7	14.1	14.4	12.3	13.7	12.7
	3H		14.4	15.6	14.8	16.0	16.4	14.4	15.5	14.8
	4H		15.3	16.4	15.7	16.8	17.2	15.2	16.3	15.6
	6H		16.0	17.0	16.5	17.4	17.9	15.9	16.9	16.4
	8H		16.3	17.2	16.8	17.6	18.1	16.2	17.0	16.6
	12H		16.5	17.3	17.0	17.8	18.3	16.4	17.2	16.9
8H										
	4H		15.6	16.5	16.1	17.0	17.4	15.6	16.4	16.0
	6H		16.5	17.3	17.0	17.7	18.2	16.4	17.1	16.9
	8H		16.9	17.5	17.4	18.0	18.5	16.7	17.4	17.2
	12H		17.2	17.8	17.7	18.3	18.8	17.0	17.6	17.5
12H										
	4H		15.7	16.5	16.2	17.0	17.4	15.6	16.4	16.1
	6H		16.6	17.3	17.1	17.7	18.3	16.5	17.2	17.0
	8H		17.0	17.6	17.5	18.1	18.7	16.9	17.5	17.4

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										
X=2H Y=2H										
			UGR Viewed Crosswise					UGR Viewed Endwise		
			16.1	17.8	16.5	18.1	18.4	16.1	17.8	16.5
	3H		18.0	19.5	18.4	19.9	20.2	18.0	19.5	18.4
	4H		18.8	20.2	19.2	20.5	20.9	18.7	20.1	19.1
	6H		19.4	20.7	19.8	21.0	21.4	19.3	20.6	19.7
	8H		19.6	20.8	20.0	21.2	21.6	19.5	20.7	19.9
	12H		19.7	20.9	20.2	21.3	21.8	19.6	20.8	20.0
4H										
	2H		16.8	18.2	17.2	18.6	18.9	16.8	18.2	17.2
	3H		18.9	20.1	19.3	20.5	20.9	18.9	20.0	19.3
	4H		19.8	20.9	20.2	21.3	21.7	19.7	20.8	20.1
	6H		20.5	21.5	21.0	21.9	22.4	20.4	21.4	20.9
	8H		20.8	21.7	21.3	22.1	22.6	20.7	21.5	21.1
	12H		21.0	21.8	21.5	22.3	22.8	20.9	21.7	21.4
8H										
	4H		20.1	21.0	20.6	21.5	21.9	20.1	20.9	20.5
	6H		21.0	21.8	21.5	22.2	22.7	20.9	21.6	21.4
	8H		21.4	22.0	21.9	22.5	23.0	21.2	21.9	21.7
	12H		21.7	22.3	22.2	22.8	23.3	21.5	22.1	22.0
12H										
	4H		20.2	21.0	20.7	21.5	21.9	20.1	20.9	20.6
	6H		21.1	21.8	21.6	22.2	22.8	21.0	21.7	21.5
	8H		21.5	22.1	22.0	22.6	23.2	21.4	22.0	21.9

Maximum UGR = 23.3

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	1256	1257	1255	1260	1254	1257	1258	1257	1254	1260	1255	1257	1256	1257	1255	1260	1254	1257	1258
5	1251	1249	1251	1254	1252	1253	1253	1253	1252	1254	1251	1249	1251	1249	1251	1254	1252	1253	1253
10	1233	1232	1235	1237	1234	1238	1233	1238	1234	1237	1235	1232	1233	1232	1235	1237	1234	1238	1233
15	1205	1207	1207	1210	1206	1209	1206	1209	1206	1210	1207	1207	1205	1207	1207	1210	1206	1209	1206
20	1167	1167	1168	1169	1167	1171	1168	1171	1167	1169	1168	1167	1167	1167	1168	1169	1167	1171	1168
25	1118	1118	1120	1121	1117	1123	1119	1123	1117	1121	1120	1118	1118	1118	1120	1121	1117	1123	1119
30	1060	1061	1058	1064	1061	1063	1061	1063	1061	1064	1058	1061	1060	1061	1058	1064	1061	1063	1061
35	991	992	993	993	992	996	994	996	992	993	993	992	991	992	993	993	992	996	994
40	914	915	917	921	917	919	919	919	917	921	917	915	914	915	917	921	917	919	919
45	832	832	831	834	832	836	834	836	832	834	831	832	832	832	831	834	832	836	834
50	744	743	742	745	744	744	745	744	744	745	742	743	744	743	742	745	744	744	745
55	651	650	651	651	648	650	648	650	648	651	651	650	651	650	651	651	648	650	648
60	555	554	552	553	551	552	550	552	551	553	552	554	555	554	552	553	551	552	550
65	455	455	453	452	449	450	449	450	449	452	453	455	455	455	453	452	449	450	449
70	356	354	354	352	350	349	348	349	350	352	354	354	356	354	354	352	350	349	348
75	259	258	256	255	252	250	250	250	252	255	256	258	259	258	256	255	252	250	250
80	165	165	164	162	159	158	157	158	159	162	164	165	165	165	164	162	159	158	157
85	78.9	78.6	77.8	76.6	75.0	74.2	73.7	74.2	75.0	76.6	77.8	78.6	78.9	78.6	77.8	76.6	75.0	74.2	73.7
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	1257	1254	1260	1255	1257														
5	1253	1252	1254	1251	1249														
10	1238	1234	1237	1235	1232														
15	1209	1206	1210	1207	1207														
20	1171	1167	1169	1168	1167														
25	1123	1117	1121	1120	1118														
30	1063	1061	1064	1058	1061														
35	996	992	993	993	992														
40	919	917	921	917	915														
45	836	832	834	831	832														
50	744	744	745	742	743														
55	650	648	651	651	650														
60	552	551	553	552	554														
65	450	449	452	453	455														
70	349	350	352	354	354														
75	250	252	255	256	258														
80	158	159	162	164	165														
85	74.2	75.0	76.6	77.8	78.6														
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 @25W4000K	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	0.210	25.0	0.994	10.60
277.0	60	0.101	25.7	0.922	9.74

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*****