

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

1x4 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	1500		3601
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Standard	Premium	116.2
		110	125	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		31.0
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)	ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	11.71
			277V	11.70
Power Factor (THD & PF – Section 4.3)	ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.993
			277V	0.956
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019	7 steps	5029±283	4764
		4 steps	5029±220	
Minimum CRI (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019 CIE13.3-1995	≥80		83.3
Minimum R9 (Integrating Sphere – Section 4.1)	ANSI/IES LM-79-2019 CIE13.3-1995	≥0		9
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	20.7
		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		0.117
(Goniophotometer – Section 4.2)		Non-Worst Case		0.251
Power (Input Wattage – W)				
(Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		31.0
(Goniophotometer – Section 4.2)		Non-Worst Case		29.9

2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-01-20	EZP1X4 @30W5000K	-	250117001-S1
2	Goniophotometer Test	2025-01-20	EZP1X4 @30W5000K	-	250117001-S1
3	THD and PF Test	2025-01-20	EZP1X4 @30W5000K	-	250117001-S1

Remark (If any):

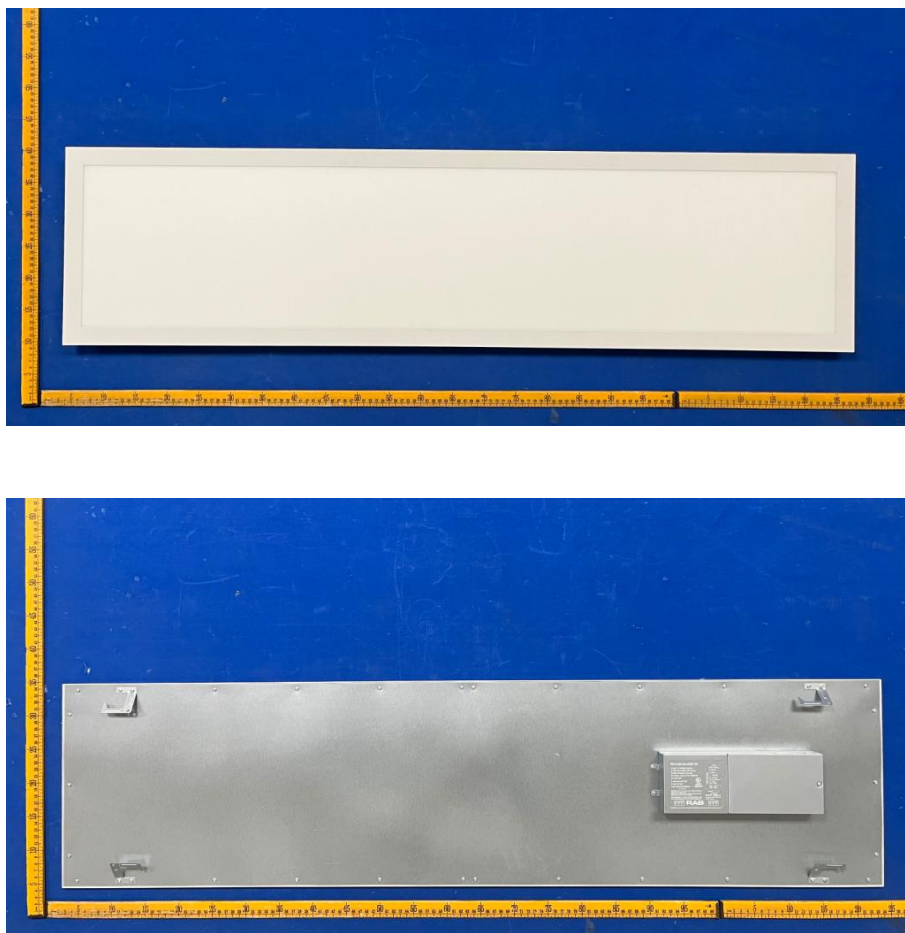
1. The results contained in this report pertain only to the tested samples.
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3.0 Product Description

Luminaire Description: Model No. EZP1X4 @30W5000K, 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.	EZP1X4 @30W5000K	Sample ID	250117001-S1
Operate time (Min.)	10	Stabilization time (Min.)	60
Temperature (°C)	25.4	Humidity (%RH)	41.0

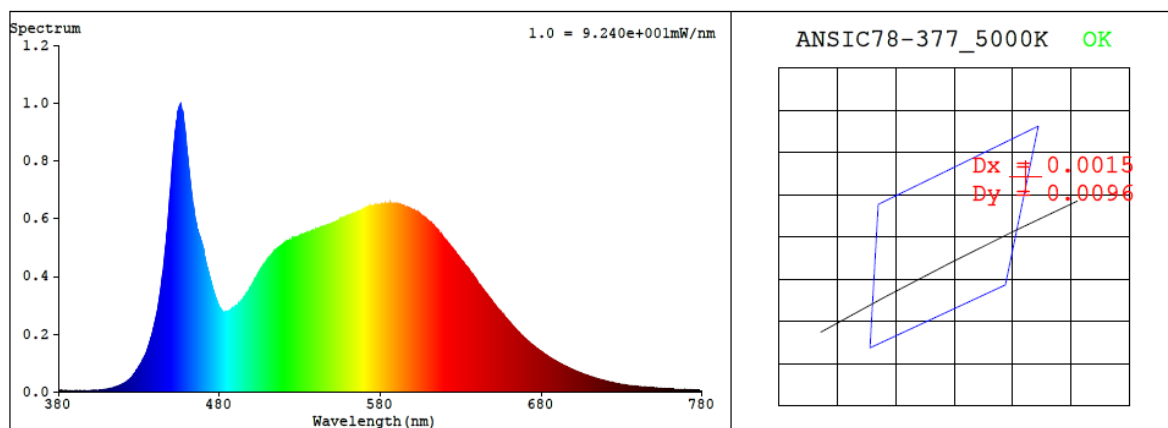
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at 25±1°C.</p> <p>The sample measurements were made 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	0.251	29.9	0.993
277.0	60	0.117	31.0	0.956

CCT (K)	CRI	R9	Duv	Rf	Rg	IES Rcs,h1
4764	83.3	9	0.0041	83	93	-13%

4.1 Integrating Sphere Test



Colorimetric Parameters

Chromaticity Coordinate: $x = 0.3536$ $y = 0.3667$ / $u' = 0.2114$ $v' = 0.4931$ ($duv=4.10e-03$)

CCT= 4764K Prcp WL: Ld=572.2nm Purity=16.1%

Peak WL: Lp=456nm FWHM: =23.6nm Ratio:R=16.1% G=79.2% B=4.7%

Render Index: Ra = 83.3 AvgR = 76.3 TM30:Rf=84 Rg=93

EEI: 0.11448 A+

R1 =81 R2 =91 R3 =96 R4 =79 R5 =81 R6 =86 R7 =86

R8 =66 R9 =9 R10=77 R11=78 R12=55 R13=84 R14=98 R15=75

4.1 Integrating Sphere Test

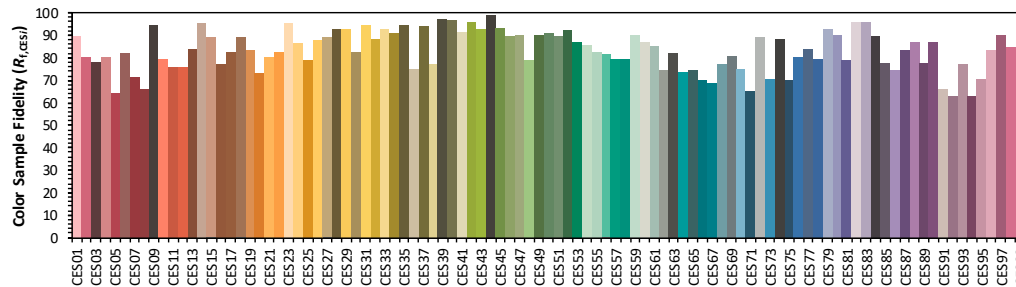
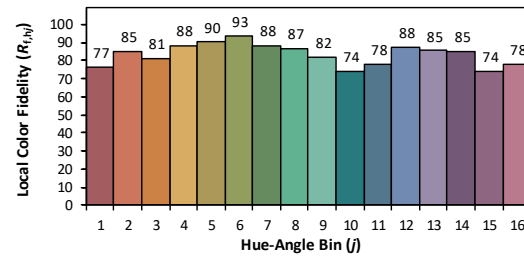
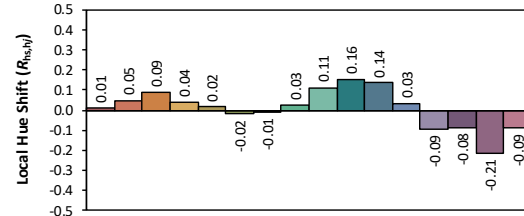
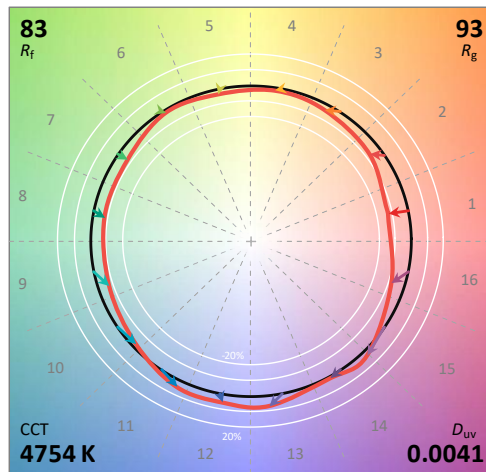
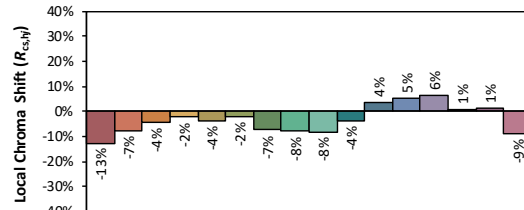
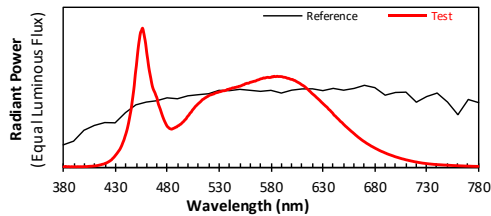
ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/1/21

Model: EZP1X4 @30W5000K



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

x 0.3536
 y 0.3665
 u' 0.2114
 v' 0.4930

CIE 13.3-1995
(CRI)
 R_a 83
 R_g 9

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	3.40E-06	447	5.28E-04	514	4.87E-04	581	6.51E-04	648	3.25E-04	715	4.58E-05
381	5.30E-06	448	5.88E-04	515	4.90E-04	582	6.49E-04	649	3.19E-04	716	4.42E-05
382	5.70E-06	449	6.68E-04	516	4.96E-04	583	6.54E-04	650	3.10E-04	717	4.27E-05
383	3.80E-06	450	7.29E-04	517	5.01E-04	584	6.52E-04	651	3.03E-04	718	4.09E-05
384	4.20E-06	451	8.02E-04	518	5.06E-04	585	6.51E-04	652	2.96E-04	719	3.94E-05
385	4.50E-06	452	8.69E-04	519	5.09E-04	586	6.54E-04	653	2.90E-04	720	3.80E-05
386	2.80E-06	453	9.21E-04	520	5.14E-04	587	6.52E-04	654	2.83E-04	721	3.71E-05
387	3.90E-06	454	9.67E-04	521	5.19E-04	588	6.52E-04	655	2.76E-04	722	3.52E-05
388	4.00E-06	455	9.82E-04	522	5.20E-04	589	6.52E-04	656	2.69E-04	723	3.39E-05
389	2.90E-06	456	1.00E-03	523	5.23E-04	590	6.52E-04	657	2.63E-04	724	3.28E-05
390	3.70E-06	457	9.71E-04	524	5.26E-04	591	6.51E-04	658	2.56E-04	725	3.15E-05
391	4.00E-06	458	9.32E-04	525	5.28E-04	592	6.47E-04	659	2.50E-04	726	3.03E-05
392	3.00E-06	459	8.88E-04	526	5.33E-04	593	6.47E-04	660	2.44E-04	727	2.92E-05
393	4.20E-06	460	8.26E-04	527	5.35E-04	594	6.46E-04	661	2.37E-04	728	2.85E-05
394	3.90E-06	461	7.75E-04	528	5.37E-04	595	6.43E-04	662	2.30E-04	729	2.74E-05
395	3.80E-06	462	7.19E-04	529	5.39E-04	596	6.39E-04	663	2.25E-04	730	2.66E-05
396	4.10E-06	463	6.77E-04	530	5.42E-04	597	6.39E-04	664	2.18E-04	731	2.55E-05
397	3.80E-06	464	6.39E-04	531	5.43E-04	598	6.36E-04	665	2.12E-04	732	2.48E-05
398	3.80E-06	465	5.98E-04	532	5.45E-04	599	6.33E-04	666	2.07E-04	733	2.38E-05
399	4.10E-06	466	5.69E-04	533	5.48E-04	600	6.31E-04	667	2.01E-04	734	2.33E-05
400	4.70E-06	467	5.50E-04	534	5.50E-04	601	6.31E-04	668	1.95E-04	735	2.24E-05
401	5.20E-06	468	5.35E-04	535	5.50E-04	602	6.25E-04	669	1.90E-04	736	2.18E-05
402	4.60E-06	469	5.14E-04	536	5.52E-04	603	6.24E-04	670	1.85E-04	737	2.10E-05
403	5.60E-06	470	4.96E-04	537	5.54E-04	604	6.19E-04	671	1.80E-04	738	2.05E-05
404	6.30E-06	471	4.62E-04	538	5.60E-04	605	6.15E-04	672	1.75E-04	739	2.01E-05
405	6.90E-06	472	4.39E-04	539	5.59E-04	606	6.11E-04	673	1.70E-04	740	1.93E-05
406	7.20E-06	473	4.20E-04	540	5.64E-04	607	6.07E-04	674	1.66E-04	741	1.90E-05
407	7.40E-06	474	3.97E-04	541	5.64E-04	608	6.03E-04	675	1.61E-04	742	1.83E-05
408	8.40E-06	475	3.74E-04	542	5.67E-04	609	5.97E-04	676	1.57E-04	743	1.80E-05
409	8.90E-06	476	3.54E-04	543	5.71E-04	610	5.92E-04	677	1.51E-04	744	1.75E-05
410	9.50E-06	477	3.36E-04	544	5.70E-04	611	5.88E-04	678	1.48E-04	745	1.71E-05
411	1.05E-05	478	3.20E-04	545	5.73E-04	612	5.83E-04	679	1.44E-04	746	1.65E-05
412	1.18E-05	479	3.05E-04	546	5.74E-04	613	5.77E-04	680	1.40E-04	747	1.60E-05
413	1.33E-05	480	2.93E-04	547	5.77E-04	614	5.70E-04	681	1.36E-04	748	1.58E-05
414	1.49E-05	481	2.86E-04	548	5.77E-04	615	5.64E-04	682	1.32E-04	749	1.54E-05
415	1.68E-05	482	2.79E-04	549	5.82E-04	616	5.58E-04	683	1.28E-04	750	1.49E-05
416	1.85E-05	483	2.76E-04	550	5.82E-04	617	5.50E-04	684	1.24E-04	751	1.43E-05
417	2.09E-05	484	2.74E-04	551	5.85E-04	618	5.44E-04	685	1.20E-04	752	1.42E-05
418	2.24E-05	485	2.76E-04	552	5.88E-04	619	5.36E-04	686	1.17E-04	753	1.38E-05
419	2.45E-05	486	2.80E-04	553	5.92E-04	620	5.29E-04	687	1.14E-04	754	1.34E-05
420	2.81E-05	487	2.83E-04	554	5.93E-04	621	5.23E-04	688	1.11E-04	755	1.29E-05
421	3.06E-05	488	2.88E-04	555	6.00E-04	622	5.17E-04	689	1.08E-04	756	1.25E-05
422	3.43E-05	489	2.89E-04	556	6.01E-04	623	5.10E-04	690	1.04E-04	757	1.22E-05
423	3.86E-05	490	2.97E-04	557	6.04E-04	624	5.02E-04	691	1.01E-04	758	1.18E-05
424	4.29E-05	491	2.99E-04	558	6.03E-04	625	4.96E-04	692	9.74E-05	759	1.16E-05
425	4.82E-05	492	3.06E-04	559	6.06E-04	626	4.89E-04	693	9.47E-05	760	1.13E-05
426	5.35E-05	493	3.10E-04	560	6.11E-04	627	4.82E-04	694	9.18E-05	761	1.08E-05
427	6.19E-05	494	3.18E-04	561	6.12E-04	628	4.74E-04	695	8.92E-05	762	1.05E-05
428	6.90E-05	495	3.25E-04	562	6.14E-04	629	4.67E-04	696	8.67E-05	763	1.01E-05
429	7.76E-05	496	3.32E-04	563	6.16E-04	630	4.60E-04	697	8.40E-05	764	9.90E-06
430	8.71E-05	497	3.41E-04	564	6.19E-04	631	4.52E-04	698	8.15E-05	765	9.60E-06
431	9.65E-05	498	3.47E-04	565	6.19E-04	632	4.46E-04	699	7.86E-05	766	9.30E-06
432	1.07E-04	499	3.60E-04	566	6.23E-04	633	4.39E-04	700	7.58E-05	767	9.00E-06
433	1.17E-04	500	3.69E-04	567	6.27E-04	634	4.33E-04	701	7.35E-05	768	8.60E-06
434	1.28E-04	501	3.78E-04	568	6.28E-04	635	4.25E-04	702	7.13E-05	769	8.50E-06
435	1.42E-04	502	3.90E-04	569	6.32E-04	636	4.16E-04	703	6.92E-05	770	8.20E-06
436	1.58E-04	503	3.96E-04	570	6.35E-04	637	4.10E-04	704	6.67E-05	771	8.00E-06
437	1.78E-04	504	4.09E-04	571	6.37E-04	638	4.02E-04	705	6.46E-05	772	7.80E-06
438	1.96E-04	505	4.18E-04	572	6.39E-04	639	3.94E-04	706	6.22E-05	773	7.60E-06
439	2.20E-04	506	4.27E-04	573	6.43E-04	640	3.86E-04	707	6.02E-05	774	7.20E-06
440	2.43E-04	507	4.37E-04	574	6.41E-04	641	3.75E-04	708	5.86E-05	775	6.90E-06
441	2.69E-04	508	4.43E-04	575	6.44E-04	642	3.69E-04	709	5.65E-05	776	6.70E-06
442	3.01E-04	509	4.51E-04	576	6.45E-04	643	3.62E-04	710	5.43E-05	777	6.70E-06
443	3.37E-04	510	4.58E-04	577	6.47E-04	644	3.54E-04	711	5.25E-05	778	6.40E-06
444	3.78E-04	511	4.65E-04	578	6.45E-04	645	3.47E-04	712	5.11E-05	779	6.30E-06
445	4.18E-04	512	4.71E-04	579	6.45E-04	646	3.40E-04	713	4.91E-05	780	6.30E-06
446	4.73E-04	513	4.79E-04	580	6.46E-04	647	3.31E-04	714	4.75E-05	N/A	N/A

4.0 LM-79 Measurement and Test Results

4.2 Goniophotometer Test

Model No.	EZP1X4 @30W5000K	Sample ID	250117001-S1
Operate time (Min.)	30	Stabilization time (Min.)	60
Temperature (°C)	24.9	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 $25\pm1^{\circ}\text{C}$, 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	0.117	31.0	0.956
NON-WORST CASE	120.0	60	0.251	29.9	0.993

Test Result

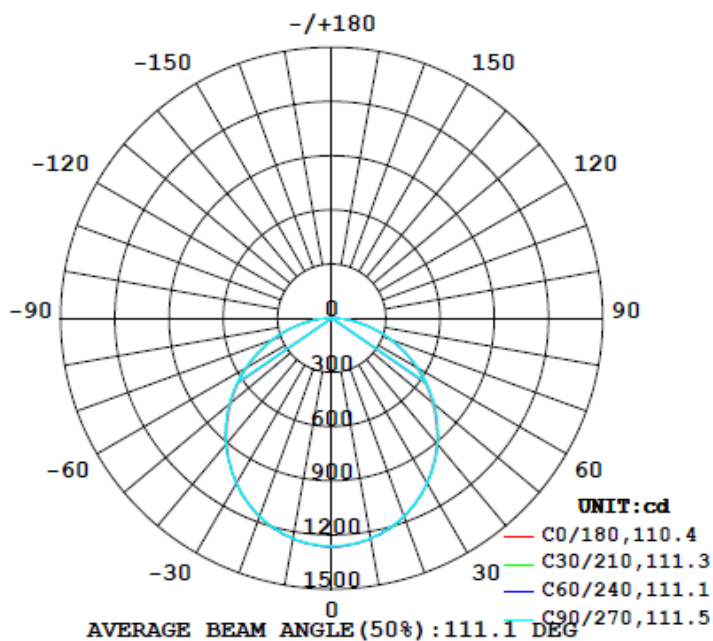
Flux (lm)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)	Zonal Lumen Requirement (0°-60°)
	C0-180	C90-270	C0-180	C90-270		
3601	164.3	164.4	110.5	111.4	116.2	77.9%

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

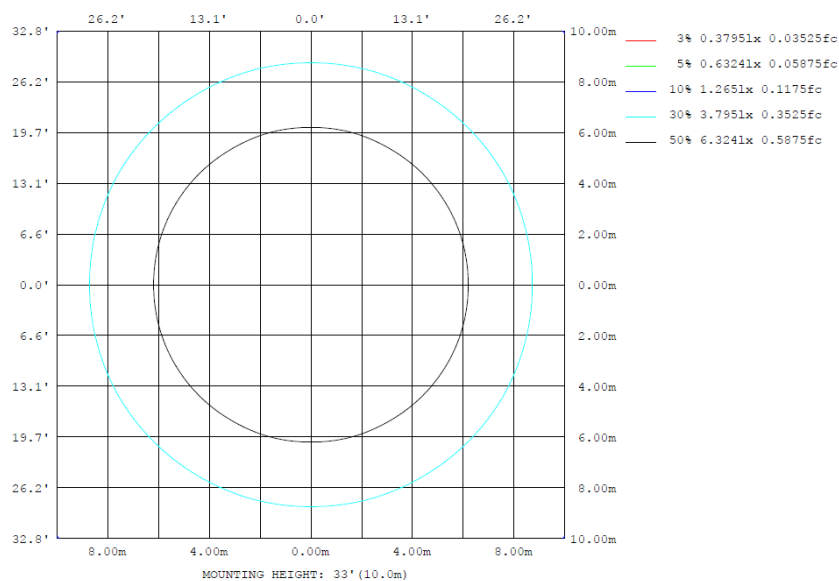
4.2 Goniophotometer Test

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	\$lum, lamp
10	1238	1235	1238	1235	1238	1235	1238	1235	0- 10	119.4	119.4	3.32,3.32
20	1170	1167	1167	1167	1170	1167	1167	1167	10- 20	341.1	460.5	12.8,12.8
30	1053	1052	1058	1052	1053	1052	1058	1052	20- 30	514.6	975.0	27.1,27.1
40	903.8	910.4	909.8	910.4	903.8	910.4	909.8	910.4	30- 40	616.8	1592	44.2,44.2
50	727.8	736.3	738.0	736.3	727.8	736.3	738.0	736.3	40- 50	636.9	2229	61.9,61.9
60	539.8	545.7	549.9	545.7	539.8	545.7	549.9	545.7	50- 60	575.2	2804	77.9,77.9
70	345.6	351.1	350.5	351.1	345.6	351.1	350.5	351.1	60- 70	443.7	3248	90.2,90.2
80	160.3	161.3	160.8	161.3	160.3	161.3	160.8	161.3	70- 80	268.0	3515	97.6,97.6
90	0	0	0	0	0	0	0	0	80- 90	85.49	3601	100,100
100	0	0	0	0	0	0	0	0	90-100	0	3601	100,100
110	0	0	0	0	0	0	0	0	100-110	0	3601	100,100
120	0	0	0	0	0	0	0	0	110-120	0	3601	100,100
130	0	0	0	0	0	0	0	0	120-130	0	3601	100,100
140	0	0	0	0	0	0	0	0	130-140	0	3601	100,100
150	0	0	0	0	0	0	0	0	140-150	0	3601	100,100
160	0	0	0	0	0	0	0	0	150-160	0	3601	100,100
170	0	0	0	0	0	0	0	0	160-170	0	3601	100,100
180	0	0	0	0	0	0	0	0	170-180	0	3601	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	119.40	0-10	119.40	3.32%
10-20	341.06	0-20	460.46	12.79%
20-30	514.55	0-30	975.01	27.08%
30-40	616.77	0-40	1591.78	44.20%
40-50	636.86	0-50	2228.64	61.89%
50-60	575.16	0-60	2803.80	77.86%
60-70	443.71	0-70	3247.51	90.18%
70-80	267.98	0-80	3515.49	97.63%
80-90	85.49	0-90	3600.98	100.00%
90-100	0.00	0-100	3600.98	100.00%
100-110	0.00	0-110	3600.98	100.00%
110-120	0.00	0-120	3600.98	100.00%
120-130	0.00	0-130	3600.98	100.00%
130-140	0.00	0-140	3600.98	100.00%
140-150	0.00	0-150	3600.98	100.00%
150-160	0.00	0-160	3600.98	100.00%
160-170	0.00	0-170	3600.98	100.00%
170-180	0.00	0-180	3600.98	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	11.6	13.2	12.0	13.6	13.9	11.7	13.3	12.0	13.6	13.9
	3H	13.5	15.0	13.8	15.3	15.6	13.5	15.0	13.9	15.3	15.7
	4H	14.2	15.6	14.6	16.0	16.3	14.3	15.7	14.7	16.0	16.4
	6H	14.8	16.1	15.2	16.5	16.8	14.8	16.1	15.2	16.5	16.9
	8H	15.0	16.2	15.4	16.6	17.0	15.0	16.3	15.5	16.7	17.1
	12H	15.1	16.3	15.6	16.7	17.2	15.2	16.4	15.6	16.8	17.2
4H	2H	12.3	13.7	12.7	14.0	14.4	12.3	13.7	12.7	14.1	14.4
	3H	14.4	15.6	14.8	15.9	16.3	14.4	15.6	14.8	16.0	16.4
	4H	15.2	16.3	15.7	16.7	17.2	15.3	16.3	15.7	16.8	17.2
	6H	16.0	16.9	16.4	17.3	17.8	16.0	16.9	16.4	17.4	17.8
	8H	16.2	17.1	16.7	17.6	18.0	16.2	17.1	16.7	17.6	18.0
	12H	16.4	17.2	16.9	17.7	18.2	16.5	17.3	16.9	17.7	18.2
8H	4H	15.6	16.5	16.0	16.9	17.4	15.6	16.5	16.1	16.9	17.4
	6H	16.4	17.2	16.9	17.7	18.2	16.5	17.2	17.0	17.7	18.2
	8H	16.8	17.5	17.3	18.0	18.5	16.8	17.5	17.3	18.0	18.5
	12H	17.1	17.7	17.6	18.2	18.8	17.1	17.7	17.6	18.2	18.8
12H	4H	15.6	16.4	16.1	16.9	17.4	15.7	16.5	16.2	16.9	17.4
	6H	16.6	17.2	17.1	17.7	18.2	16.6	17.2	17.1	17.7	18.2
	8H	17.0	17.5	17.5	18.0	18.6	17.0	17.6	17.5	18.0	18.6
Maximum UGR = 18.8											

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	16.1	17.7	16.5	18.1	18.4	16.2	17.8	16.5	18.1	18.4
	3H	18.0	19.5	18.3	19.8	20.1	18.0	19.5	18.4	19.8	20.2
	4H	18.7	20.1	19.1	20.5	20.8	18.8	20.2	19.2	20.5	20.9
	6H	19.3	20.6	19.7	21.0	21.3	19.3	20.6	19.7	21.0	21.4
	8H	19.5	20.7	19.9	21.1	21.5	19.5	20.8	20.0	21.2	21.6
	12H	19.6	20.8	20.1	21.2	21.7	19.7	20.9	20.1	21.3	21.7
4H	2H	16.8	18.2	17.2	18.5	18.9	16.8	18.2	17.2	18.6	18.9
	3H	18.9	20.1	19.3	20.4	20.8	18.9	20.1	19.3	20.5	20.9
	4H	19.7	20.8	20.2	21.2	21.7	19.8	20.8	20.2	21.3	21.7
	6H	20.5	21.4	20.9	21.8	22.3	20.5	21.4	20.9	21.9	22.3
	8H	20.7	21.6	21.2	22.1	22.5	20.7	21.6	21.2	22.1	22.5
	12H	20.9	21.7	21.4	22.2	22.7	21.0	21.8	21.4	22.2	22.7
8H	4H	20.1	21.0	20.5	21.4	21.9	20.1	21.0	20.6	21.4	21.9
	6H	20.9	21.7	21.4	22.2	22.7	21.0	21.7	21.5	22.2	22.7
	8H	21.3	22.0	21.8	22.5	23.0	21.3	22.0	21.8	22.5	23.0
	12H	21.6	22.2	22.1	22.7	23.3	21.6	22.2	22.1	22.7	23.3
12H	4H	20.1	20.9	20.6	21.4	21.9	20.2	21.0	20.7	21.4	21.9
	6H	21.1	21.7	21.6	22.2	22.7	21.1	21.7	21.6	22.2	22.7
	8H	21.5	22.0	22.0	22.5	23.1	21.5	22.1	22.0	22.5	23.1

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	1265	1264	1263	1260	1264	1266	1264	1266	1264	1260	1263	1264	1265	1264	1263	1260	1264	1266	1264
5	1256	1256	1253	1254	1256	1263	1255	1263	1256	1254	1253	1256	1256	1256	1253	1254	1256	1263	1255
10	1238	1240	1239	1235	1240	1240	1238	1240	1240	1235	1239	1240	1238	1240	1239	1235	1240	1240	1238
15	1211	1208	1213	1206	1210	1208	1205	1208	1210	1206	1213	1208	1211	1208	1213	1206	1210	1208	1205
20	1170	1168	1164	1167	1167	1169	1167	1169	1167	1167	1164	1168	1170	1168	1164	1167	1167	1169	1167
25	1116	1117	1118	1113	1114	1118	1116	1118	1114	1113	1118	1117	1116	1117	1118	1113	1114	1118	1116
30	1053	1057	1060	1052	1056	1058	1058	1058	1056	1052	1060	1057	1053	1057	1060	1052	1056	1058	1058
35	983	985	987	986	983	989	984	989	983	986	987	985	983	985	987	986	983	989	984
40	904	908	911	910	909	911	910	911	909	910	911	908	904	908	911	910	909	911	910
45	818	824	828	826	829	828	827	828	829	826	828	824	818	824	828	826	829	828	827
50	728	734	738	736	737	739	738	739	737	736	738	734	728	734	738	736	737	739	738
55	637	643	644	646	644	648	646	648	644	646	644	643	637	643	644	646	644	648	646
60	540	544	548	546	549	549	550	549	549	546	548	544	540	544	548	546	549	549	550
65	442	446	450	448	449	451	450	451	449	448	450	446	442	446	450	448	449	451	450
70	346	349	350	351	350	351	350	351	350	351	350	349	346	349	350	351	350	351	350
75	251	253	254	253	253	253	253	253	253	253	254	253	251	253	254	253	253	253	253
80	160	161	163	161	162	161	161	161	162	161	163	161	160	161	163	161	162	161	161
85	76.6	77.0	77.4	77.2	76.6	76.8	76.7	76.8	76.6	77.2	77.4	77.0	76.6	77.0	77.4	77.2	76.6	76.8	76.7
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	1266	1264	1260	1263	1264														
5	1263	1256	1254	1253	1256														
10	1240	1240	1235	1239	1240														
15	1208	1210	1206	1213	1208														
20	1169	1167	1167	1164	1168														
25	1118	1114	1113	1118	1117														
30	1058	1056	1052	1060	1057														
35	989	983	986	987	985														
40	911	909	910	911	908														
45	828	829	826	828	824														
50	739	737	736	738	734														
55	648	644	646	644	643														
60	549	549	546	548	544														
65	451	449	448	450	446														
70	351	350	351	350	349														
75	253	253	253	254	253														
80	161	162	161	163	161														
85	76.8	76.6	77.2	77.4	77.0														
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.	EZP1X4 @30W5000K	Sample ID	250117001-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	0.251	29.9	0.993	11.71
277.0	60	0.117	31.0	0.956	11.70

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*****