

## Photometric Test Report

### Relevant Standards

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

Prepared For

**RAB Lighting Inc.**

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Prepared By

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Issue Date: 2025-08-21

Revised Date: N/A

## 1.0 Test Summary

Wall mount Luminaire					
Requirement Category		Test Method	Requirements		Test Value
Luminaire Output (lm) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	N/A		1322
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	121.3
			N/A	N/A	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		10.9
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	N/A	120V	8.60
				277V	32.51
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	N/A	120V	0.989
				277V	0.846
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	5029±283	4976
			4 steps	5029±220	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		90.8
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		77
Minimum Rf (Integrating Sphere – Section 4.1)		ANSI/IES TM-30-18	≥70		87
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%		-4%
Zonal Lumen Requirement (0°-60°) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	N/A		26.7%
Backlight, Uplight and Glare (BUG) Ratings (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019 IES TM-15-11	N/A		B0-U4-G1
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		0.047
(Goniophotometer – Section 4.2)			Non-Worst Case		0.085
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		10.9
(Goniophotometer – Section 4.2)			Non-Worst Case		10.1

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-08-07	V1-24 @10W5000K	-	250728007-S1
2	Goniophotometer Test	2025-08-07	V1-24 @10W5000K	-	250728007-S1
3	THD and PF Test	2025-08-07	V1-24 @10W5000K	-	250728007-S1

### Remark (If any):

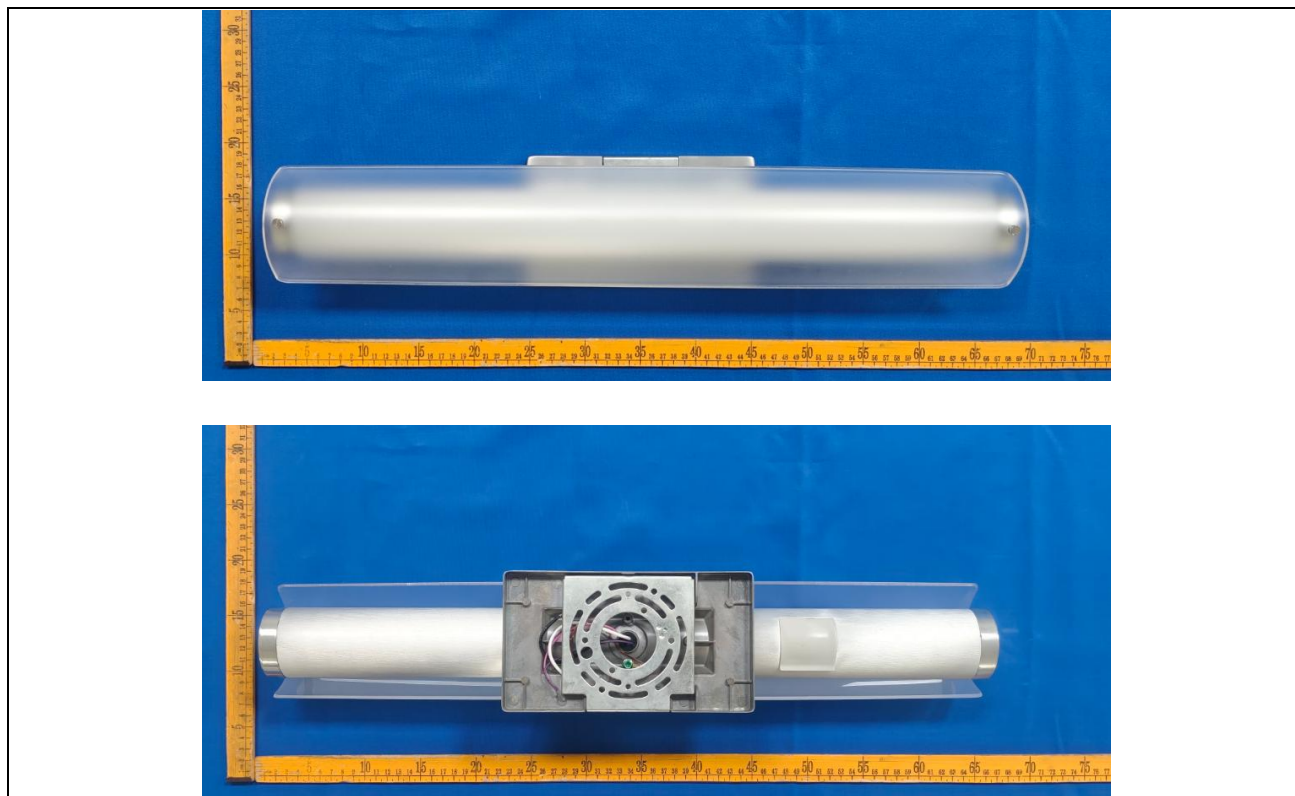
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3. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. Government.

### 3.0 Product Description

Luminaire Description: Model No. V1-24 @10W5000K, color tunable from 2700K, 3000K, 3500K, 4000K and 5000K.

Electrical Specification: 120-277Vac, 50/60Hz

Photos of Luminaire Characteristics



## 4.0 LM-79 Measurement and Test Results

### 4.1 Integrating Sphere Test

<b>Model No.</b>	V1-24 @10W5000K	<b>Sample ID</b>	250728007-S1
<b>Operate time (Min.)</b>	10	<b>Stabilization time (Min.)</b>	60
<b>Temperature (°C)</b>	25.4	<b>Humidity (%RH)</b>	41.0

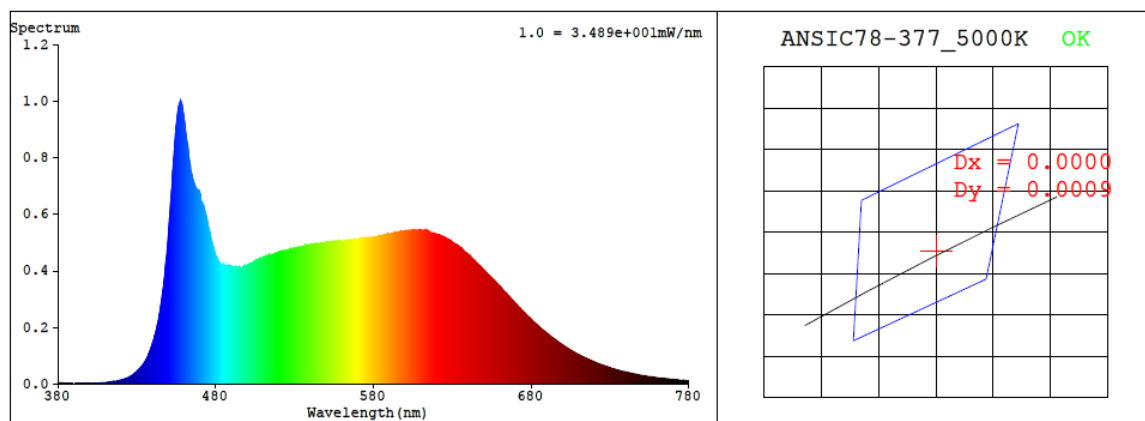
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at <math>25\pm1^{\circ}\text{C}</math>.</p> <p>The 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 <math>\pm 0.2</math> percent under load.</p> <p>The sample was measured using <math>4\pi</math> 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	0.085	10.1	0.989
277.0	60	0.047	10.9	0.846

CCT (K)	CRI	R9	Duv	SDCM	Rf	Rg	IES Rcs,h1
4976	90.8	77	0.0004	1.7	87	95	-4%

## 4.1 Integrating Sphere Test



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3458$   $y = 0.3530$  /  $u' = 0.2114$   $v' = 0.4855$  ( $duv=4.12e-04$ )

CCT= 4976K Prcp WL:  $L_d=572.6nm$  Purity=9.7%

Peak WL:  $L_p=458nm$  FWHM:  $=28.4nm$  Ratio:  $R=17.9\%$   $G=75.6\%$   $B=6.5\%$

Render Index:  $R_a = 90.8$   $AvgR = 89.3$   $TM30:R_f=89$   $R_g=96$

EEL: 0.11701 A+

R1 =96	R2 =96	R3 =93	R4 =85	R5 =92	R6 =94	R7 =86
R8 =85	R9 =77	R10=93	R11=89	R12=67	R13=98	R14=96
R15=92						

## 4.1 Integrating Sphere Test

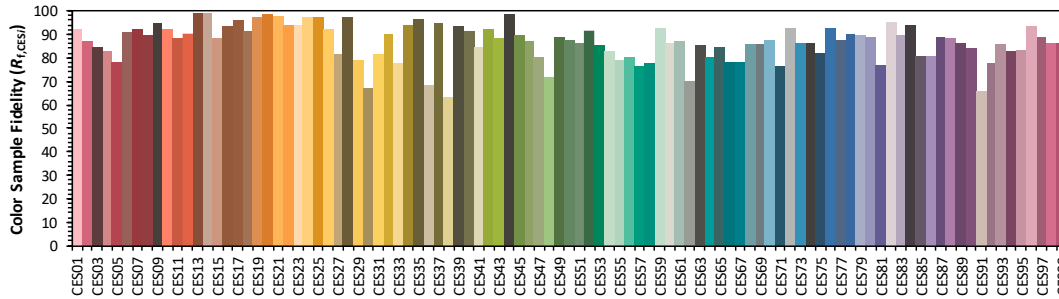
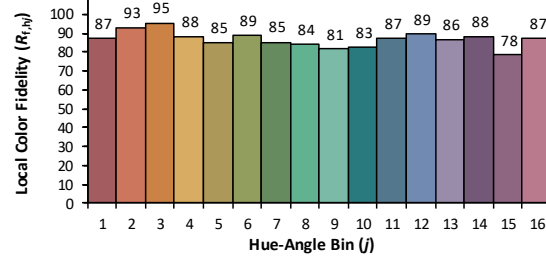
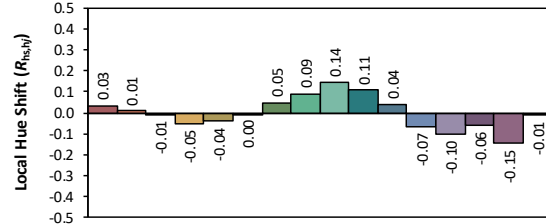
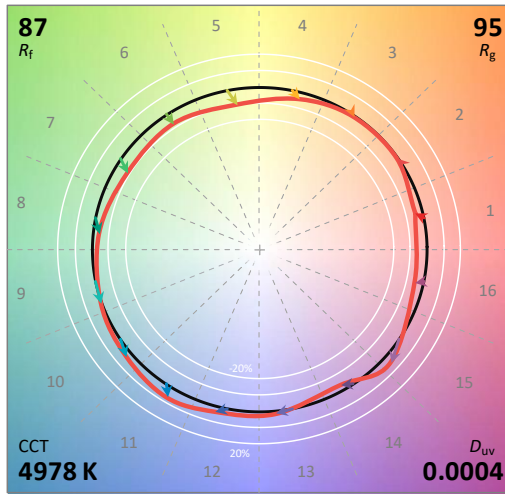
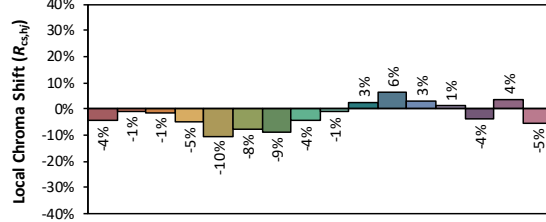
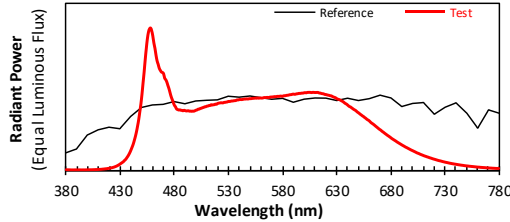
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc

Date: 2025/8/21

Model: V1-24 @10W5000K



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

$x$  0.3458  
 $y$  0.3529  
 $u'$  0.2114  
 $v'$  0.4854

CIE 13.3-1995  
(CRI)

$R_a$  91  
 $R_g$  77



## 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	3.55E-04	514	4.58E-04	581	5.20E-04	648	4.15E-04	715	9.06E-05
381	2.90E-06	448	4.08E-04	515	4.55E-04	582	5.20E-04	649	4.08E-04	716	8.74E-05
382	2.80E-06	449	4.62E-04	516	4.57E-04	583	5.21E-04	650	4.03E-04	717	8.53E-05
383	2.60E-06	450	5.31E-04	517	4.58E-04	584	5.23E-04	651	3.97E-04	718	8.27E-05
384	2.30E-06	451	6.09E-04	518	4.62E-04	585	5.24E-04	652	3.91E-04	719	8.00E-05
385	1.90E-06	452	6.86E-04	519	4.61E-04	586	5.26E-04	653	3.85E-04	720	7.77E-05
386	2.10E-06	453	7.73E-04	520	4.66E-04	587	5.28E-04	654	3.79E-04	721	7.57E-05
387	1.90E-06	454	8.50E-04	521	4.69E-04	588	5.28E-04	655	3.75E-04	722	7.33E-05
388	2.50E-06	455	9.18E-04	522	4.70E-04	589	5.30E-04	656	3.68E-04	723	7.10E-05
389	2.30E-06	456	9.64E-04	523	4.71E-04	590	5.32E-04	657	3.63E-04	724	6.86E-05
390	2.00E-06	457	9.88E-04	524	4.71E-04	591	5.31E-04	658	3.56E-04	725	6.67E-05
391	2.00E-06	458	9.93E-04	525	4.71E-04	592	5.31E-04	659	3.51E-04	726	6.51E-05
392	2.50E-06	459	9.74E-04	526	4.74E-04	593	5.34E-04	660	3.47E-04	727	6.31E-05
393	2.30E-06	460	9.39E-04	527	4.74E-04	594	5.34E-04	661	3.39E-04	728	6.09E-05
394	2.00E-06	461	8.89E-04	528	4.76E-04	595	5.36E-04	662	3.32E-04	729	5.90E-05
395	2.10E-06	462	8.51E-04	529	4.77E-04	596	5.37E-04	663	3.27E-04	730	5.71E-05
396	2.20E-06	463	8.03E-04	530	4.81E-04	597	5.37E-04	664	3.21E-04	731	5.53E-05
397	2.10E-06	464	7.64E-04	531	4.80E-04	598	5.39E-04	665	3.15E-04	732	5.39E-05
398	2.50E-06	465	7.40E-04	532	4.82E-04	599	5.39E-04	666	3.09E-04	733	5.22E-05
399	2.60E-06	466	7.12E-04	533	4.84E-04	600	5.41E-04	667	3.03E-04	734	5.04E-05
400	2.80E-06	467	6.98E-04	534	4.84E-04	601	5.42E-04	668	2.97E-04	735	4.87E-05
401	2.90E-06	468	6.86E-04	535	4.85E-04	602	5.41E-04	669	2.90E-04	736	4.74E-05
402	3.10E-06	469	6.82E-04	536	4.86E-04	603	5.43E-04	670	2.84E-04	737	4.57E-05
403	3.00E-06	470	6.74E-04	537	4.87E-04	604	5.44E-04	671	2.80E-04	738	4.46E-05
404	3.20E-06	471	6.43E-04	538	4.91E-04	605	5.44E-04	672	2.73E-04	739	4.31E-05
405	3.60E-06	472	6.33E-04	539	4.91E-04	606	5.43E-04	673	2.67E-04	740	4.19E-05
406	3.80E-06	473	6.16E-04	540	4.93E-04	607	5.42E-04	674	2.62E-04	741	4.08E-05
407	4.40E-06	474	5.92E-04	541	4.94E-04	608	5.44E-04	675	2.56E-04	742	3.94E-05
408	4.50E-06	475	5.69E-04	542	4.93E-04	609	5.44E-04	676	2.50E-04	743	3.81E-05
409	4.70E-06	476	5.41E-04	543	4.94E-04	610	5.43E-04	677	2.44E-04	744	3.70E-05
410	5.40E-06	477	5.14E-04	544	4.96E-04	611	5.43E-04	678	2.39E-04	745	3.58E-05
411	5.80E-06	478	4.94E-04	545	4.97E-04	612	5.43E-04	679	2.34E-04	746	3.47E-05
412	6.20E-06	479	4.73E-04	546	4.97E-04	613	5.43E-04	680	2.28E-04	747	3.38E-05
413	6.90E-06	480	4.54E-04	547	4.98E-04	614	5.39E-04	681	2.22E-04	748	3.24E-05
414	7.90E-06	481	4.43E-04	548	4.97E-04	615	5.39E-04	682	2.17E-04	749	3.14E-05
415	8.50E-06	482	4.28E-04	549	4.99E-04	616	5.36E-04	683	2.12E-04	750	3.04E-05
416	9.70E-06	483	4.24E-04	550	5.00E-04	617	5.35E-04	684	2.08E-04	751	2.97E-05
417	1.02E-05	484	4.21E-04	551	5.00E-04	618	5.33E-04	685	2.03E-04	752	2.88E-05
418	1.15E-05	485	4.22E-04	552	5.02E-04	619	5.30E-04	686	1.97E-04	753	2.76E-05
419	1.28E-05	486	4.19E-04	553	5.02E-04	620	5.29E-04	687	1.93E-04	754	2.71E-05
420	1.42E-05	487	4.18E-04	554	5.03E-04	621	5.27E-04	688	1.88E-04	755	2.61E-05
421	1.57E-05	488	4.15E-04	555	5.04E-04	622	5.25E-04	689	1.84E-04	756	2.55E-05
422	1.71E-05	489	4.19E-04	556	5.03E-04	623	5.23E-04	690	1.79E-04	757	2.47E-05
423	1.92E-05	490	4.16E-04	557	5.05E-04	624	5.21E-04	691	1.74E-04	758	2.38E-05
424	2.13E-05	491	4.14E-04	558	5.03E-04	625	5.20E-04	692	1.70E-04	759	2.31E-05
425	2.42E-05	492	4.15E-04	559	5.05E-04	626	5.16E-04	693	1.66E-04	760	2.21E-05
426	2.71E-05	493	4.15E-04	560	5.04E-04	627	5.12E-04	694	1.61E-04	761	2.15E-05
427	3.07E-05	494	4.12E-04	561	5.04E-04	628	5.09E-04	695	1.58E-04	762	2.11E-05
428	3.49E-05	495	4.13E-04	562	5.05E-04	629	5.06E-04	696	1.54E-04	763	2.02E-05
429	3.94E-05	496	4.12E-04	563	5.07E-04	630	5.01E-04	697	1.49E-04	764	1.96E-05
430	4.46E-05	497	4.13E-04	564	5.08E-04	631	4.97E-04	698	1.45E-04	765	1.91E-05
431	4.99E-05	498	4.12E-04	565	5.08E-04	632	4.94E-04	699	1.41E-04	766	1.85E-05
432	5.52E-05	499	4.16E-04	566	5.09E-04	633	4.92E-04	700	1.38E-04	767	1.81E-05
433	6.11E-05	500	4.19E-04	567	5.07E-04	634	4.87E-04	701	1.34E-04	768	1.74E-05
434	6.95E-05	501	4.21E-04	568	5.10E-04	635	4.83E-04	702	1.31E-04	769	1.65E-05
435	7.64E-05	502	4.27E-04	569	5.11E-04	636	4.79E-04	703	1.27E-04	770	1.63E-05
436	8.73E-05	503	4.27E-04	570	5.11E-04	637	4.73E-04	704	1.23E-04	771	1.57E-05
437	9.84E-05	504	4.32E-04	571	5.12E-04	638	4.67E-04	705	1.20E-04	772	1.51E-05
438	1.12E-04	505	4.33E-04	572	5.13E-04	639	4.63E-04	706	1.17E-04	773	1.49E-05
439	1.27E-04	506	4.37E-04	573	5.14E-04	640	4.57E-04	707	1.13E-04	774	1.41E-05
440	1.45E-04	507	4.39E-04	574	5.14E-04	641	4.50E-04	708	1.10E-04	775	1.38E-05
441	1.64E-04	508	4.43E-04	575	5.16E-04	642	4.45E-04	709	1.07E-04	776	1.34E-05
442	1.84E-04	509	4.43E-04	576	5.16E-04	643	4.42E-04	710	1.04E-04	777	1.29E-05
443	2.11E-04	510	4.47E-04	577	5.16E-04	644	4.36E-04	711	1.01E-04	778	1.25E-05
444	2.39E-04	511	4.48E-04	578	5.18E-04	645	4.30E-04	712	9.81E-05	779	1.25E-05
445	2.72E-04	512	4.52E-04	579	5.17E-04	646	4.25E-04	713	9.56E-05	780	1.25E-05
446	3.11E-04	513	4.52E-04	580	5.16E-04	647	4.20E-04	714	9.27E-05	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

<b>Model No.</b>	V1-24 @10W5000K	<b>Sample ID</b>	250728007-S1
<b>Operate time (Min.)</b>	30	<b>Stabilization time (Min.)</b>	60
<b>Temperature (°C)</b>	24.9	<b>Humidity (%RH)</b>	42.1

<b>Test Method</b>
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using a type C goniophotometer and software.</p> <p>The ambient temperature shall be maintained at <math>25\pm1^{\circ}\text{C}</math>, measured at a point not more than 1 m from the sample and at the same height as the sample.</p> <p>The voltage of an AC power supply (RMS voltage) or DC power supply (instantaneous voltage) applied to the device under test shall be regulated to within <math>\pm 0.2</math> percent under load.</p> <p>The samples were operated at rated voltage and was stabilized before measurement. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at <math>1.0^{\circ}</math> vertical intervals and <math>15^{\circ}</math> horizontal intervals.</p>

### Test Conditions

Condition	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
<b>WORST CASE</b>	277.0	60	0.047	10.9	0.846
<b>NON-WORST CASE</b>	120.0	60	0.085	10.1	0.989

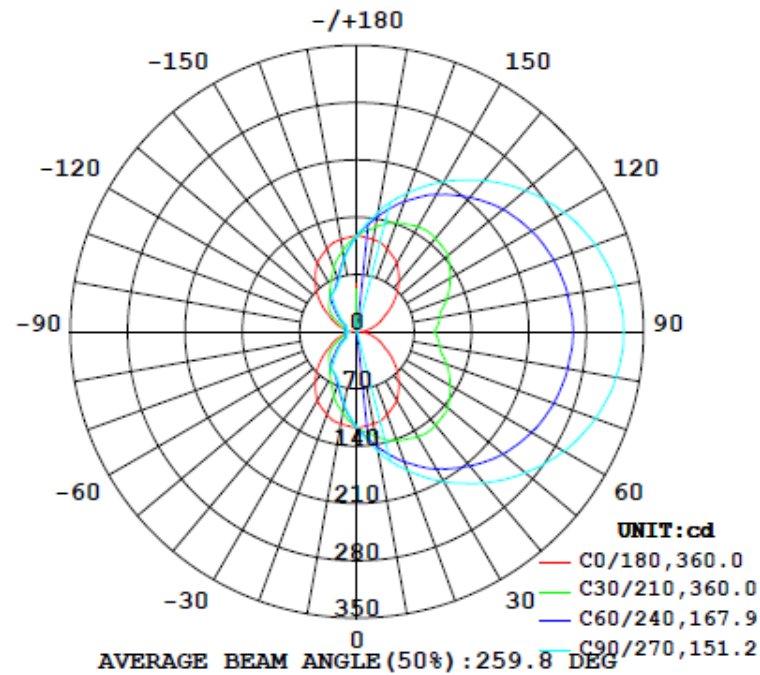
### Test Result

Flux (lm)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)	Zonal Lumen Requirement	BUG
	C0-180	C90-270	C0-180	C90-270		(0°-60°)	
1322	91.1	155.3	180.0	97.9	121.3	26.7%	B0-U4-G1

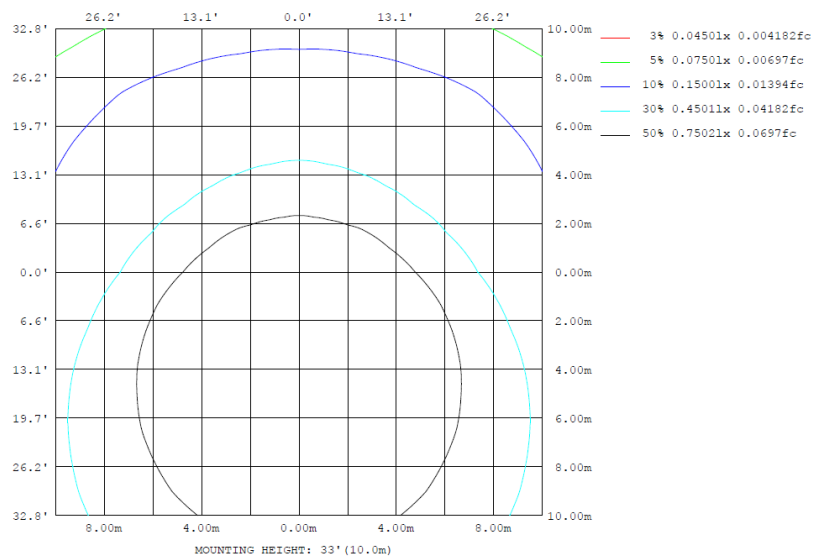
## 4.2 Goniophotometer Test

### Lighting Distribution Curve

#### LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



### Isolux Plot



## 4.2 Goniophotometer Test

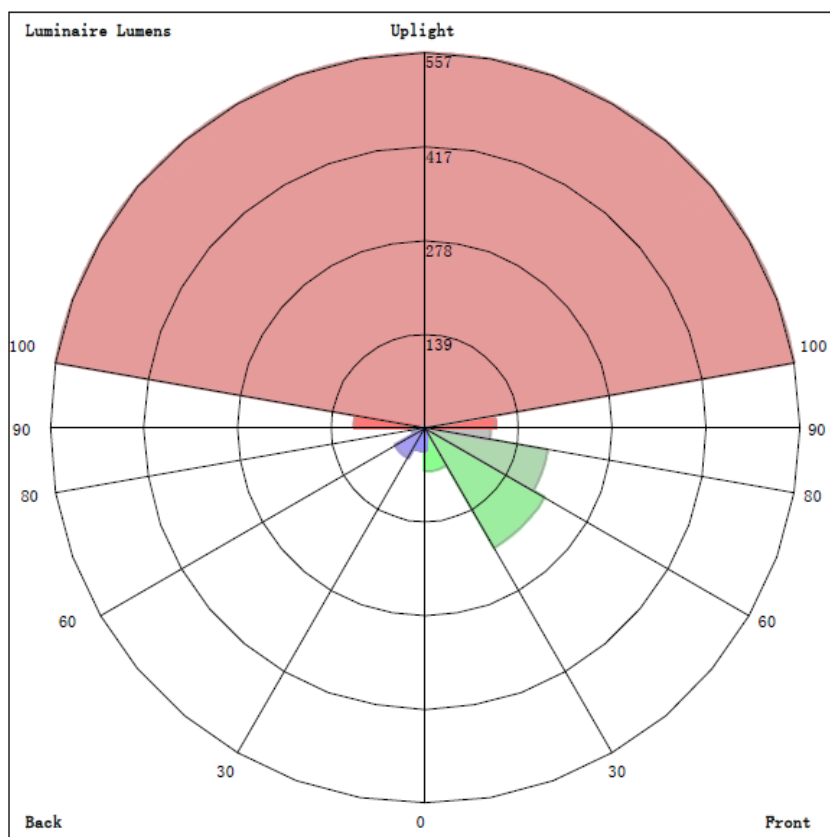
### Zonal Lumen Summary

$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	\$lum, lamp
10	114.4	136.6	148.6	136.6	114.4	95.52	89.52	95.52	0- 10	11.13	11.13	0.84, 0.84
20	107.7	157.5	180.9	157.5	107.7	74.58	65.90	74.58	10- 20	32.90	44.03	3.33, 3.33
30	97.53	172.6	211.6	172.6	97.53	58.61	57.18	58.61	20- 30	53.43	97.46	7.37, 7.37
40	79.29	184.9	241.2	184.9	79.29	52.29	41.70	52.29	30- 40	72.58	170.0	12.9, 12.9
50	59.89	192.0	268.2	192.0	59.89	37.83	26.18	37.83	40- 50	86.96	257.0	19.4, 19.4
60	39.33	194.6	291.6	194.6	39.33	23.55	14.60	23.55	50- 60	95.84	352.8	26.7, 26.7
70	25.94	193.7	310.1	193.7	25.94	15.21	13.80	15.21	60- 70	100.6	453.5	34.3, 34.3
80	13.77	189.9	321.1	189.9	13.77	14.68	13.30	14.68	70- 80	103.2	556.6	42.1, 42.1
90	2.842	187.4	325.9	187.4	2.842	15.92	15.25	15.92	80- 90	104.6	661.2	50, 50
100	13.77	189.9	321.1	189.9	13.77	14.68	13.30	14.68	90-100	104.6	765.8	57.9, 57.9
110	25.94	193.7	310.1	193.7	25.94	15.21	13.80	15.21	100-110	103.2	869.0	65.7, 65.7
120	39.33	194.6	291.6	194.6	39.33	23.55	14.60	23.55	110-120	100.6	969.6	73.3, 73.3
130	59.89	192.0	268.2	192.0	59.89	37.83	26.18	37.83	120-130	95.84	1065	80.6, 80.6
140	79.29	184.9	241.2	184.9	79.29	52.29	41.70	52.29	130-140	86.96	1152	87.1, 87.1
150	97.53	172.6	211.6	172.6	97.53	58.61	57.18	58.61	140-150	72.58	1225	92.6, 92.6
160	107.7	157.5	180.9	157.5	107.7	74.58	65.90	74.58	150-160	53.43	1278	96.7, 96.7
170	114.4	136.6	148.6	136.6	114.4	95.52	89.52	95.52	160-170	32.90	1311	99.2, 99.2
180	117.6	117.6	117.6	117.6	117.6	117.6	117.6	117.6	170-180	11.13	1322	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	11.13	0-10	11.13	0.85%
10-20	32.90	0-20	44.03	3.36%
20-30	53.43	0-30	97.46	7.43%
30-40	72.58	0-40	170.04	12.97%
40-50	86.96	0-50	257.00	19.60%
50-60	95.84	0-60	352.84	26.91%
60-70	100.61	0-70	453.45	34.58%
70-80	103.16	0-80	556.61	42.45%
80-90	104.61	0-90	661.22	50.42%
90-100	104.61	0-100	765.83	58.40%
100-110	103.16	0-110	868.99	66.27%
110-120	100.61	0-120	969.60	73.94%
120-130	95.84	0-130	1065.44	81.25%
130-140	86.96	0-140	1152.40	87.88%
140-150	72.58	0-150	1224.98	93.42%
150-160	53.43	0-160	1278.41	97.49%
160-170	32.90	0-170	1311.31	100.00%
170-180	11.13	0-180	1322.44	100.85%

## 4.2 Goniophotometer Test

LCS/BUG

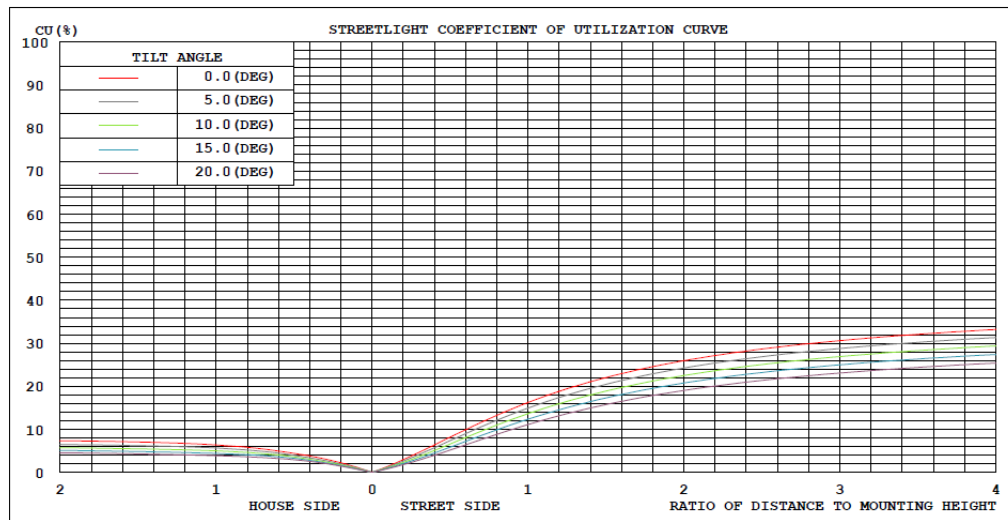


### LUMINAIRE CLASSIFICATION SYSTEM (LCS)

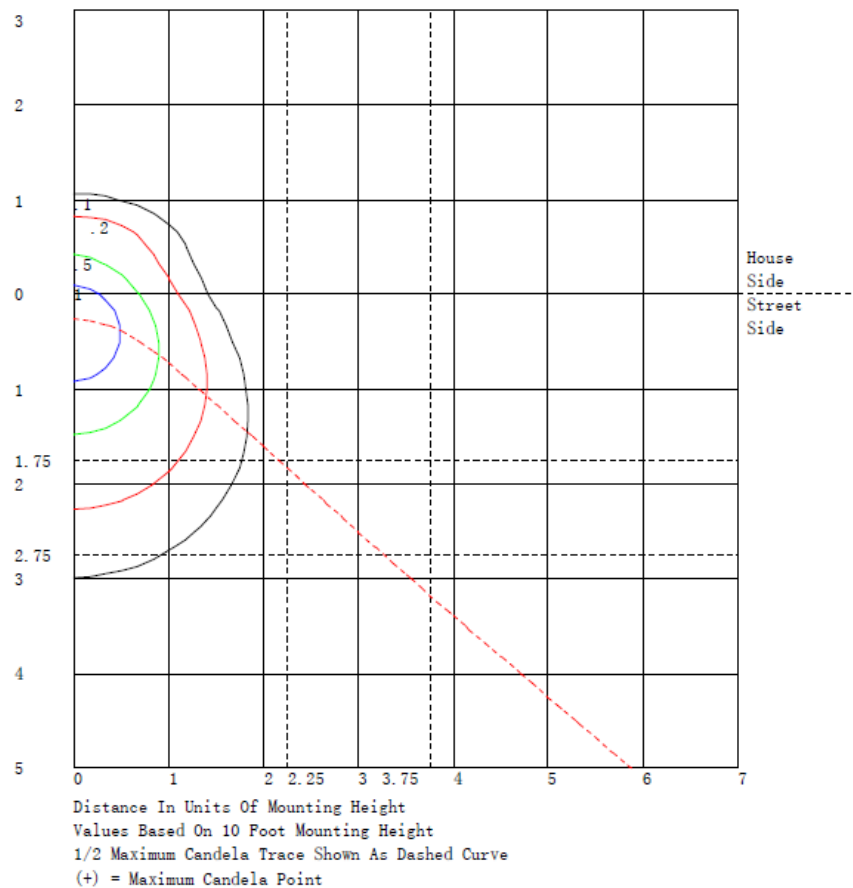
	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	63.7	N.A.	4.8
FM - Front-Medium (30-60)	205.0	N.A.	15.5
FH - Front-High (60-80)	185.1	N.A.	14.0
FVH - Front-Very High (80-90)	97.1	N.A.	7.3
BL - Back-Low (0-30)	33.8	N.A.	2.6
BM - Back-Medium (30-60)	50.3	N.A.	3.8
BH - Back-High (60-80)	18.7	N.A.	1.4
BVH - Back-Very High (80-90)	7.5	N.A.	0.6
UL - Uplight-Low (90-100)	104.6	N.A.	7.9
UH - Uplight-High (100-180)	556.6	N.A.	42.1
Total	1322.4	N.A.	100.0
BUG Rating	B0-U4-G1		

## 4.2 Goniophotometer Test

### Coefficients of Utilization



### Isolines



## 4.2 Goniophotometer Test

### Luminous Distribution Intensity Data

Table--1

UNIT: cd

C (DEG) γ (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118
5	116	120	123	126	129	131	132	131	129	126	123	120	116	112	109	107	104	104	104
10	114	122	129	137	142	147	149	147	142	137	129	122	114	107	101	95.5	91.9	89.8	89.5
15	113	124	137	147	156	162	165	162	156	147	137	124	113	102	92.6	84.6	79.3	76.4	76.4
20	108	123	142	158	169	177	181	177	169	158	142	123	108	93.7	83.2	74.6	68.9	66.3	65.9
25	103	123	145	165	182	192	196	192	182	165	145	123	103	85.7	73.3	65.5	61.3	59.6	59.7
30	97.5	122	148	173	194	206	212	206	194	173	148	122	97.5	77.9	64.8	58.6	57.2	56.9	57.2
35	88.4	118	150	179	204	220	226	220	204	179	150	118	88.4	68.5	58.1	54.6	54.8	53.8	52.6
40	79.3	112	149	185	214	234	241	234	214	185	149	112	79.3	60.0	52.5	52.3	48.4	43.4	41.7
45	70.2	106	147	189	224	247	256	247	224	189	147	106	70.2	52.2	48.5	46.9	38.8	34.7	33.2
50	59.9	97.4	145	192	233	259	268	259	233	192	145	97.4	59.9	45.8	44.9	37.8	31.1	27.4	26.2
55	49.6	86.3	138	194	240	270	280	270	240	194	138	86.3	49.6	40.3	38.8	30.2	24.5	21.3	20.2
60	39.3	74.4	132	195	246	280	292	280	246	195	132	74.4	39.3	35.2	31.3	23.6	18.2	15.2	14.6
65	32.6	65.1	124	195	252	289	302	289	252	195	124	65.1	32.6	29.7	24.4	17.9	15.0	14.2	13.9
70	25.9	55.8	116	194	256	296	310	296	256	194	116	55.8	25.9	23.7	19.4	15.2	14.8	14.1	13.8
75	19.2	45.8	108	192	259	302	316	302	259	192	108	45.8	19.2	17.6	15.1	14.8	14.8	14.1	13.7
80	13.8	43.2	103	190	261	306	321	306	261	190	103	43.2	13.8	16.1	13.9	14.7	14.5	13.9	13.3
85	8.31	41.3	99.4	190	263	309	325	309	263	190	99.4	41.3	8.31	15.2	14.6	15.3	14.8	12.5	11.6
90	2.84	39.0	94.5	187	264	311	326	311	264	187	94.5	39.0	2.84	14.3	15.3	15.9	15.6	12.8	15.3
95	8.31	41.3	99.4	190	263	309	325	309	263	190	99.4	41.3	8.31	15.2	14.6	15.3	14.8	12.5	11.6
100	13.8	43.2	103	190	261	306	321	306	261	190	103	43.2	13.8	16.1	13.9	14.7	14.5	13.9	13.3
105	19.2	45.8	108	192	259	302	316	302	259	192	108	45.8	19.2	17.6	15.1	14.8	14.8	14.1	13.7
110	25.9	55.8	116	194	256	296	310	296	256	194	116	55.8	25.9	23.7	19.4	15.2	14.8	14.1	13.8
115	32.6	65.1	124	195	252	289	302	289	252	195	124	65.1	32.6	29.7	24.4	17.9	15.0	14.2	13.9
120	39.3	74.4	132	195	246	280	292	280	246	195	132	74.4	39.3	35.2	31.3	23.6	18.2	15.2	14.6
125	49.6	86.3	138	194	240	270	280	270	240	194	138	86.3	49.6	40.3	38.8	30.2	24.5	21.3	20.2
130	59.9	97.4	145	192	233	259	268	259	233	192	145	97.4	59.9	45.8	44.9	37.8	31.1	27.4	26.2
135	70.2	106	147	189	224	247	256	247	224	189	147	106	70.2	52.2	48.5	46.9	38.8	34.7	33.2
140	79.3	112	149	185	214	234	241	234	214	185	149	112	79.3	60.0	52.5	52.3	48.4	43.4	41.7
145	88.4	118	150	179	204	220	226	220	204	179	150	118	88.4	68.5	58.1	54.6	54.8	53.8	52.6
150	97.5	122	148	173	194	206	212	206	194	173	148	122	97.5	77.9	64.8	58.6	57.2	56.9	57.2
155	103	123	145	165	182	192	196	192	182	165	145	123	103	85.7	73.3	65.5	61.3	59.6	59.7
160	108	123	142	158	169	177	181	177	169	158	142	123	108	93.7	83.2	74.6	68.9	66.3	65.9
165	113	124	137	147	156	162	165	162	156	147	137	124	113	102	92.6	84.6	79.3	76.4	76.4
170	114	122	129	137	142	147	149	147	142	137	129	122	114	107	101	95.5	91.9	89.8	89.5
175	116	120	123	126	129	131	132	131	129	126	123	120	116	112	109	107	104	104	104
180	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118	118

Table--2

UNIT: cd

C (DEG) γ (DEG)	285	300	315	330	345														
0	118	118	118	118	118														
5	104	104	107	109	112														
10	89.8	91.9	95.5	101	107														
15	76.4	79.3	84.6	92.6	102														
20	66.3	68.9	74.6	83.2	93.7														
25	59.6	61.3	65.5	73.3	85.7														
30	56.9	57.2	58.6	64.8	77.9														
35	53.8	54.8	54.6	58.1	68.5														
40	43.4	48.4	52.3	52.5	60.0														
45	34.7	38.8	46.9	48.5	52.2														
50	27.4	31.1	37.8	44.9	45.8														
55	21.3	24.5	30.2	38.8	40.3														
60	15.2	18.2	23.6	31.3	35.2														
65	14.2	15.0	17.9	24.4	29.7														
70	14.1	14.8	15.2	19.4	23.7														
75	14.1	14.8	14.8	15.1	17.6														
80	13.9	14.5	14.7	13.9	16.1														
85	12.5	14.8	15.3	14.6	15.2														
90	12.8	15.6	15.9	15.3	14.3														
95	12.5	14.8	15.3	14.6	15.2														
100	13.9	14.5	14.7	13.9	16.1														
105	14.1	14.8	14.8	15.1	17.6														
110	14.1	14.8	15.2	19.4	23.7														
115	14.2	15.0	17.9	24.4	29.7														
120	15.2	18.2	23.6	31.3	35.2														
125	21.3	24.5	30.2	38.8	40.3														
130	27.4	31.1	37.8	44.9	45.8														
135	34.7	38.8	46.9	48.5	52.2														
140	43.4	48.4	52.3	52.5	60.0														
145	53.8	54.8	54.6	58.1	68.5														
150	56.9	57.2	58.6	64.8	77.9														
155	59.6	61.3	65.5	73.3	85.7														
160	66.3	68.9	74.6	83.2	93.7														
165	76.4	79.3	84.6	92.6	102														
170	89.8	91.9	95.5	101	107														
175	104	104	107	109	112														
180	118	118	118	118	118														

## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	V1-24 @10W5000K	<b>Sample ID</b>	250728007-S1
<b>Temperature (°C)</b>	25.4	<b>Humidity (%RH)</b>	41.0

<b>Test Method</b>
<p>The samples were tested according to the and Ansi C82.77: 2002 and ANSI C82.77-10:2020</p> <p>The total harmonic distortion shall be measured to the 40th order.</p> <p>The ambient temperature shall be maintained at <math>25 \pm 1^{\circ}\text{C}</math>. The sample measurements were made using a digital power meter and power supply. The sample was operated at rated voltage and was stabilized before measurement. The total harmonic distortion was calculated.</p>

### Test Results

Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	iTHD(%)
120.0	60	0.085	10.1	0.989	8.60
277.0	60	0.047	10.9	0.846	32.51



## 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	2025-08-04	2026-08-03
NTC-F01-019	Temperature & Humidity Meter	2024-10-29	2025-10-28

\*\*\*\*\*End of Report\*\*\*\*\*