

## 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		1423
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Standard	Premium	119.6
			N/A	N/A	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		11.9
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	N/A	120V	6.25
				277V	26.82
Power Factor (THD & PF – Section 4.3)		ANSI C82.77:2002 ANSI C82-77-10:2020	N/A	120V	0.990
				277V	0.883
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019	7 steps	5029±283	4962
			4 steps	5029±220	
Minimum CRI (Integrating Sphere – Section 4.1)		ANSI/IES LM-79:2019 CIE13.3-1995	≥80		91.2
Minimum R9 (Integrating Sphere – Section 4.1)		ANSI/IES LM-79-2019 CIE13.3-1995	≥0		74
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%		-5%
Zonal Lumen Requirement (0°-60°) (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	N/A		26.6%
Backlight, Uplight and Glare (BUG) Ratings (Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019 IES TM-15-11	N/A		B0-U4-G2
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		0.049
(Goniophotometer – Section 4.2)			Non-Worst Case		0.098
Power (Input Wattage – W)					
(Goniophotometer – Section 4.2)		ANSI/IES LM-79:2019	Worst Case		11.9
(Goniophotometer – Section 4.2)			Non-Worst Case		11.7

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Integrating Sphere Test	2025-08-10	V1-18B @12W5000K	-	250728006-S1
2	Goniophotometer Test	2025-08-10	V1-18B @12W5000K	-	250728006-S1
3	THD and PF Test	2025-08-10	V1-18B @12W5000K	-	250728006-S1

### Remark (If any):

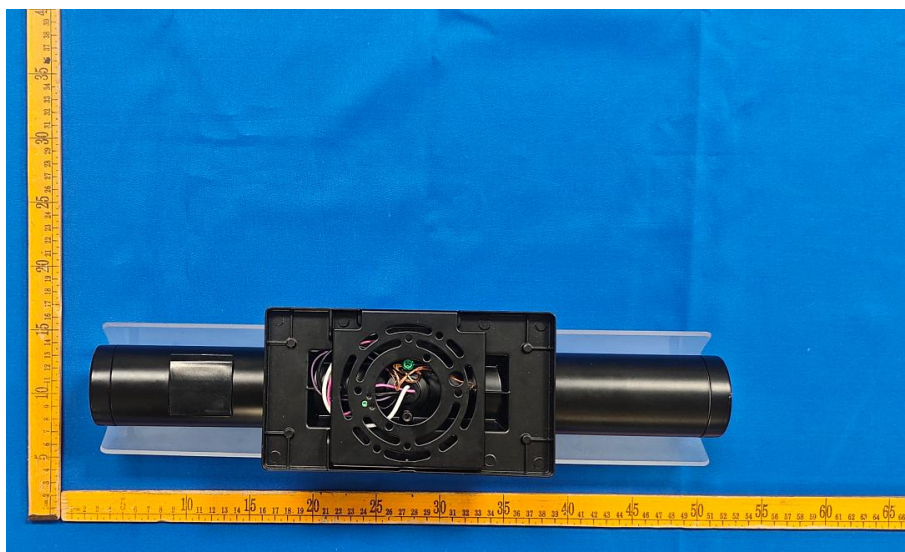
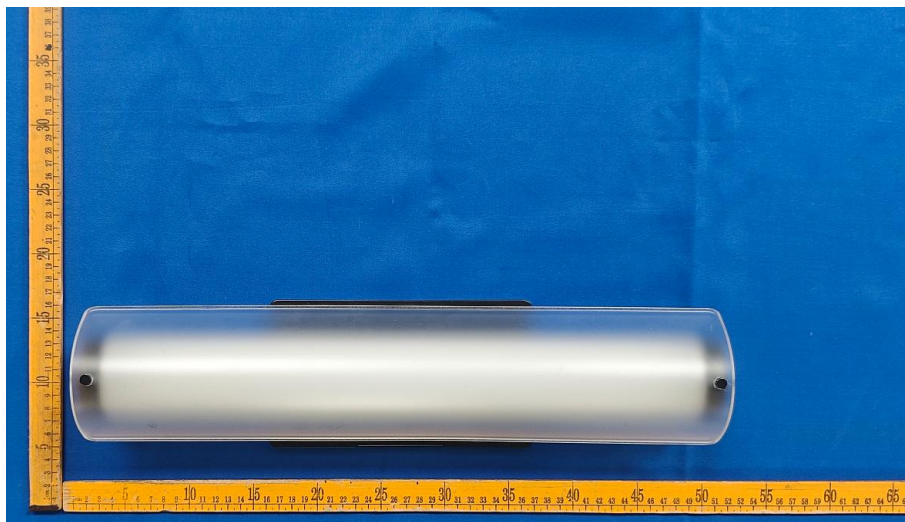
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3. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. Government.

### 3.0 Product Description

Luminaire Description: Model No. V1-18B @12W5000K, 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>	V1-18B @12W5000K	<b>Sample ID</b>	250728006-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

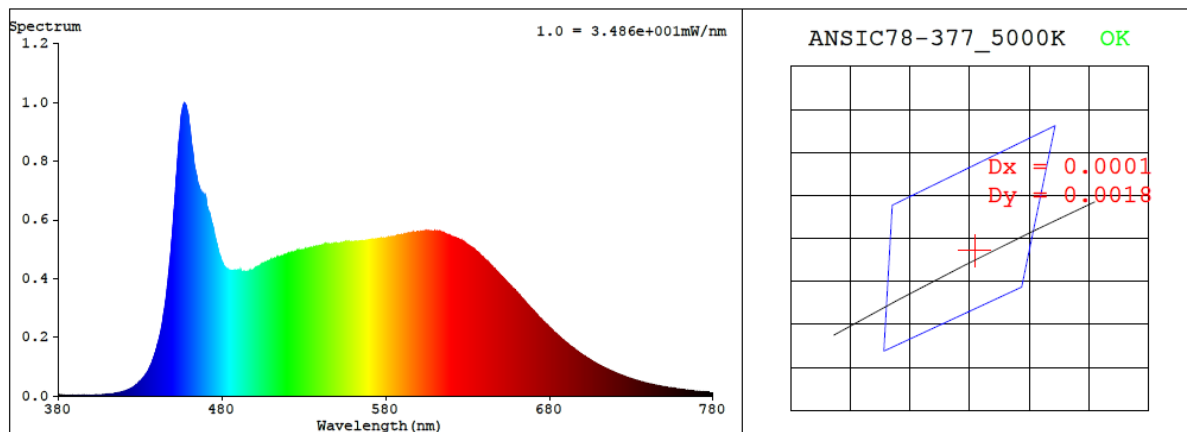
Test Method
<p>The Samples were tested according to the ANSI/IES LM-79:2019.</p> <p>Photometric parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at <math>25\pm 1^{\circ}\text{C}</math>.</p> <p>The 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	0.098	11.7	0.990
277.0	60	0.049	11.9	0.883

CCT (K)	CRI	R9	Duv	SDCM	Rf	Rg	IES Rcs,h1
4962	91.2	74	0.0008	1.6	87	95	-5%

## 4.1 Integrating Sphere Test



### Colorimetric Parameters

Chromaticity Coordinate:  $x = 0.3463$   $y = 0.3543$  /  $u' = 0.2112$   $v' = 0.4861$  ( $duv=8.30e-04$ )

CCT= 4962K Prcp WL: Ld=572.4nm Purity=10.2%

Peak WL: Lp=457nm FWHM: =28.9nm Ratio:R=17.8% G=75.8% B=6.4%

Render Index: Ra = 91.2 AvgR = 89.5 TM30:Rf=89 Rg=96

EEL: 0.12340 A+

R1 =96 R2 =97 R3 =93 R4 =86 R5 =92 R6 =94 R7 =87

R8 =85 R9 =74 R10=95 R11=89 R12=67 R13=99 R14=97 R15=92

## 4.1 Integrating Sphere Test

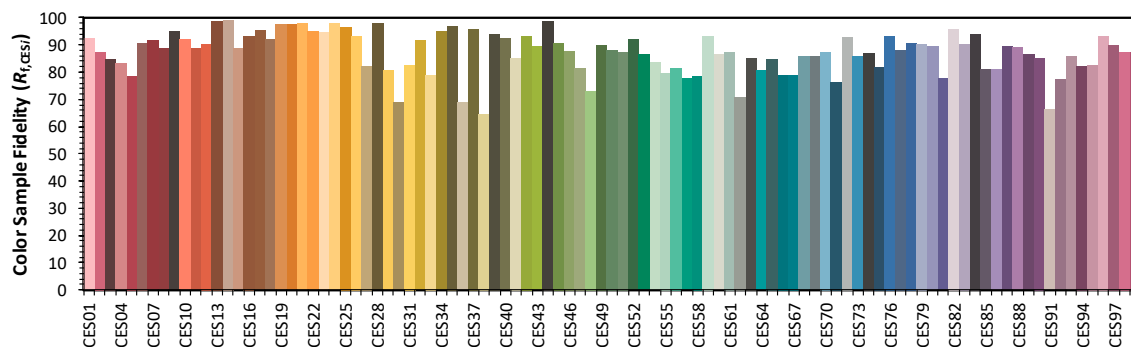
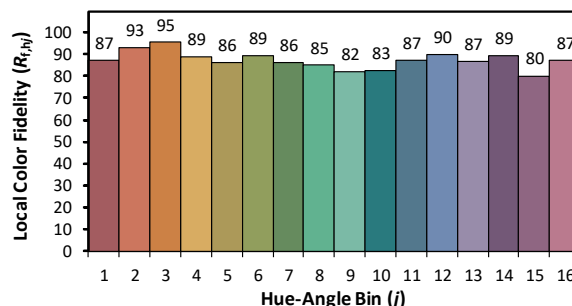
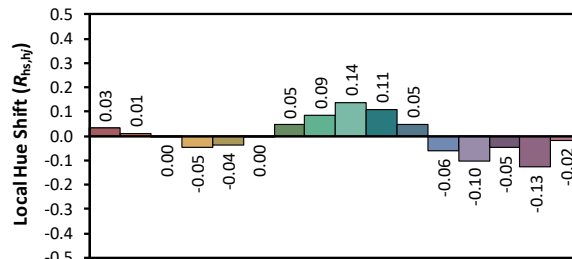
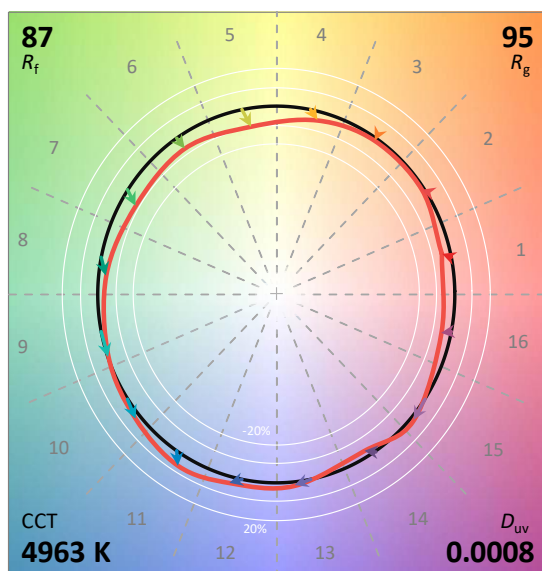
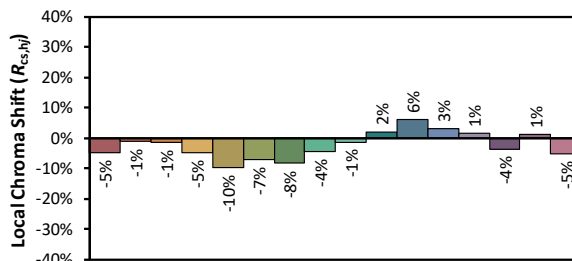
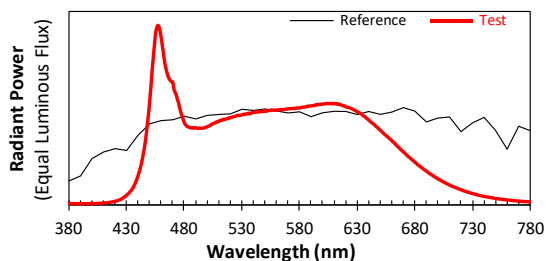
### ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1

Manufacturer: RAB Lighting Inc.

Date: 2025/8/21

Model: V1-18B @12W5000K



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

$x$  0.3463  
 $y$  0.3541  
 $u'$  0.2113  
 $v'$  0.4861

CIE 13.3-1995  
(CRI)

$R_a$  91  
 $R_g$  74



## 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	3.90E-06	447	3.89E-04	514	4.74E-04	581	5.38E-04	648	4.25E-04	715	9.26E-05
381	3.20E-06	448	4.47E-04	515	4.72E-04	582	5.41E-04	649	4.18E-04	716	8.99E-05
382	3.30E-06	449	5.06E-04	516	4.75E-04	583	5.41E-04	650	4.12E-04	717	8.75E-05
383	2.80E-06	450	5.75E-04	517	4.77E-04	584	5.41E-04	651	4.06E-04	718	8.48E-05
384	2.60E-06	451	6.50E-04	518	4.80E-04	585	5.43E-04	652	4.00E-04	719	8.24E-05
385	2.40E-06	452	7.37E-04	519	4.79E-04	586	5.43E-04	653	3.94E-04	720	8.00E-05
386	2.50E-06	453	8.10E-04	520	4.84E-04	587	5.47E-04	654	3.88E-04	721	7.73E-05
387	2.30E-06	454	8.79E-04	521	4.85E-04	588	5.47E-04	655	3.83E-04	722	7.51E-05
388	2.20E-06	455	9.47E-04	522	4.86E-04	589	5.47E-04	656	3.77E-04	723	7.27E-05
389	2.50E-06	456	9.81E-04	523	4.88E-04	590	5.48E-04	657	3.72E-04	724	7.09E-05
390	1.70E-06	457	9.98E-04	524	4.90E-04	591	5.49E-04	658	3.66E-04	725	6.87E-05
391	2.30E-06	458	9.90E-04	525	4.92E-04	592	5.51E-04	659	3.61E-04	726	6.69E-05
392	2.20E-06	459	9.65E-04	526	4.95E-04	593	5.50E-04	660	3.54E-04	727	6.44E-05
393	2.30E-06	460	9.28E-04	527	4.96E-04	594	5.55E-04	661	3.48E-04	728	6.28E-05
394	2.30E-06	461	8.82E-04	528	4.94E-04	595	5.54E-04	662	3.43E-04	729	6.07E-05
395	2.70E-06	462	8.39E-04	529	4.96E-04	596	5.56E-04	663	3.35E-04	730	5.91E-05
396	2.70E-06	463	7.91E-04	530	4.98E-04	597	5.57E-04	664	3.29E-04	731	5.70E-05
397	2.50E-06	464	7.61E-04	531	5.01E-04	598	5.56E-04	665	3.22E-04	732	5.56E-05
398	2.60E-06	465	7.33E-04	532	5.01E-04	599	5.58E-04	666	3.16E-04	733	5.37E-05
399	2.90E-06	466	7.13E-04	533	5.03E-04	600	5.58E-04	667	3.10E-04	734	5.20E-05
400	2.70E-06	467	6.98E-04	534	5.04E-04	601	5.59E-04	668	3.03E-04	735	5.01E-05
401	3.10E-06	468	6.90E-04	535	5.04E-04	602	5.60E-04	669	2.98E-04	736	4.88E-05
402	3.20E-06	469	6.83E-04	536	5.08E-04	603	5.61E-04	670	2.91E-04	737	4.79E-05
403	3.40E-06	470	6.82E-04	537	5.04E-04	604	5.62E-04	671	2.87E-04	738	4.57E-05
404	3.50E-06	471	6.42E-04	538	5.09E-04	605	5.61E-04	672	2.79E-04	739	4.42E-05
405	4.10E-06	472	6.25E-04	539	5.10E-04	606	5.62E-04	673	2.73E-04	740	4.28E-05
406	4.30E-06	473	6.10E-04	540	5.11E-04	607	5.61E-04	674	2.67E-04	741	4.17E-05
407	4.60E-06	474	5.85E-04	541	5.13E-04	608	5.62E-04	675	2.62E-04	742	4.07E-05
408	5.10E-06	475	5.66E-04	542	5.13E-04	609	5.59E-04	676	2.56E-04	743	3.94E-05
409	5.40E-06	476	5.37E-04	543	5.14E-04	610	5.62E-04	677	2.51E-04	744	3.84E-05
410	5.70E-06	477	5.13E-04	544	5.14E-04	611	5.61E-04	678	2.45E-04	745	3.69E-05
411	6.60E-06	478	4.92E-04	545	5.18E-04	612	5.58E-04	679	2.40E-04	746	3.59E-05
412	7.10E-06	479	4.73E-04	546	5.15E-04	613	5.61E-04	680	2.34E-04	747	3.51E-05
413	7.70E-06	480	4.55E-04	547	5.17E-04	614	5.57E-04	681	2.29E-04	748	3.38E-05
414	8.60E-06	481	4.44E-04	548	5.18E-04	615	5.57E-04	682	2.23E-04	749	3.24E-05
415	9.30E-06	482	4.37E-04	549	5.17E-04	616	5.53E-04	683	2.17E-04	750	3.14E-05
416	1.07E-05	483	4.31E-04	550	5.19E-04	617	5.51E-04	684	2.13E-04	751	3.04E-05
417	1.18E-05	484	4.31E-04	551	5.19E-04	618	5.49E-04	685	2.08E-04	752	2.98E-05
418	1.29E-05	485	4.27E-04	552	5.20E-04	619	5.49E-04	686	2.03E-04	753	2.86E-05
419	1.41E-05	486	4.25E-04	553	5.22E-04	620	5.43E-04	687	1.98E-04	754	2.83E-05
420	1.57E-05	487	4.27E-04	554	5.23E-04	621	5.42E-04	688	1.93E-04	755	2.71E-05
421	1.73E-05	488	4.23E-04	555	5.24E-04	622	5.40E-04	689	1.88E-04	756	2.65E-05
422	1.95E-05	489	4.26E-04	556	5.25E-04	623	5.39E-04	690	1.83E-04	757	2.54E-05
423	2.18E-05	490	4.27E-04	557	5.25E-04	624	5.36E-04	691	1.79E-04	758	2.45E-05
424	2.44E-05	491	4.24E-04	558	5.24E-04	625	5.33E-04	692	1.74E-04	759	2.37E-05
425	2.69E-05	492	4.22E-04	559	5.25E-04	626	5.30E-04	693	1.70E-04	760	2.30E-05
426	3.08E-05	493	4.24E-04	560	5.24E-04	627	5.26E-04	694	1.66E-04	761	2.25E-05
427	3.50E-05	494	4.24E-04	561	5.25E-04	628	5.23E-04	695	1.62E-04	762	2.18E-05
428	3.95E-05	495	4.23E-04	562	5.27E-04	629	5.20E-04	696	1.57E-04	763	2.11E-05
429	4.47E-05	496	4.24E-04	563	5.26E-04	630	5.15E-04	697	1.53E-04	764	2.06E-05
430	5.00E-05	497	4.25E-04	564	5.27E-04	631	5.12E-04	698	1.49E-04	765	1.97E-05
431	5.57E-05	498	4.28E-04	565	5.27E-04	632	5.08E-04	699	1.45E-04	766	1.92E-05
432	6.20E-05	499	4.29E-04	566	5.28E-04	633	5.05E-04	700	1.41E-04	767	1.86E-05
433	6.96E-05	500	4.33E-04	567	5.28E-04	634	5.01E-04	701	1.37E-04	768	1.79E-05
434	7.70E-05	501	4.34E-04	568	5.30E-04	635	4.94E-04	702	1.34E-04	769	1.74E-05
435	8.50E-05	502	4.38E-04	569	5.31E-04	636	4.91E-04	703	1.30E-04	770	1.71E-05
436	9.75E-05	503	4.42E-04	570	5.31E-04	637	4.86E-04	704	1.27E-04	771	1.61E-05
437	1.10E-04	504	4.47E-04	571	5.32E-04	638	4.79E-04	705	1.23E-04	772	1.57E-05
438	1.26E-04	505	4.49E-04	572	5.33E-04	639	4.75E-04	706	1.20E-04	773	1.52E-05
439	1.41E-04	506	4.52E-04	573	5.33E-04	640	4.69E-04	707	1.16E-04	774	1.48E-05
440	1.61E-04	507	4.54E-04	574	5.35E-04	641	4.63E-04	708	1.13E-04	775	1.44E-05
441	1.81E-04	508	4.59E-04	575	5.34E-04	642	4.56E-04	709	1.10E-04	776	1.40E-05
442	2.05E-04	509	4.59E-04	576	5.33E-04	643	4.53E-04	710	1.07E-04	777	1.35E-05
443	2.32E-04	510	4.64E-04	577	5.37E-04	644	4.48E-04	711	1.04E-04	778	1.32E-05
444	2.65E-04	511	4.65E-04	578	5.36E-04	645	4.42E-04	712	1.01E-04	779	1.31E-05
445	3.00E-04	512	4.69E-04	579	5.36E-04	646	4.36E-04	713	9.78E-05	780	1.32E-05
446	3.40E-04	513	4.68E-04	580	5.37E-04	647	4.30E-04	714	9.55E-05	N/A	N/A



## 4.0 LM-79 Measurement and Test Results

### 4.2 Goniophotometer Test

<b>Model No.</b>	V1-18B @12W5000K	<b>Sample ID</b>	250728006-S1
<b>Operate time (Min.)</b>	30	<b>Stabilization time (Min.)</b>	60
<b>Temperature (°C)</b>	24.9	<b>Humidity (%RH)</b>	42.6

<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 \pm 1^{\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	0.049	11.9	0.883
<b>NON-WORST CASE</b>	120.0	60	0.098	11.7	0.990

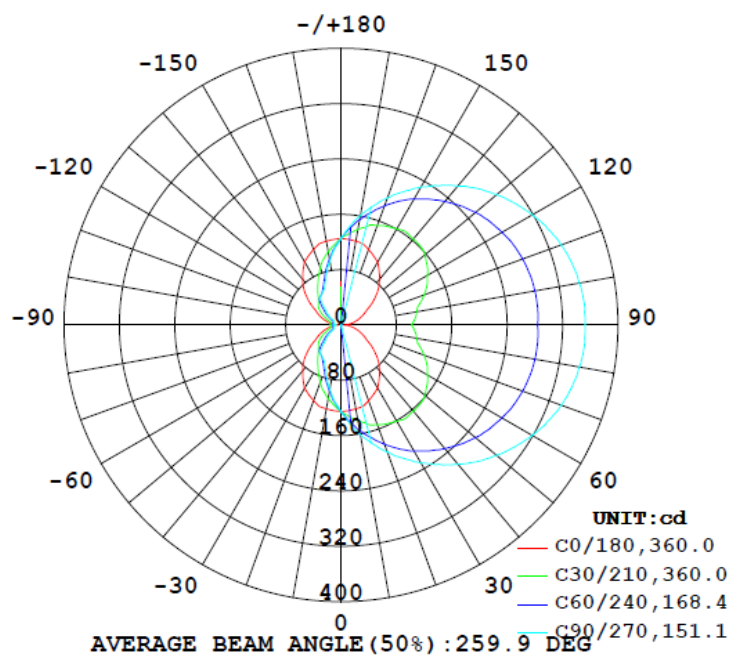
#### Test Result

Flux (lm)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)	Zonal Lumen Requirement	BUG
	C0-180	C90-270	C0-180	C90-270		( $0^{\circ}$ - $60^{\circ}$ )	
1423	88.4	156.3	180.0	98.1	119.6	26.6%	B0-U4-G2

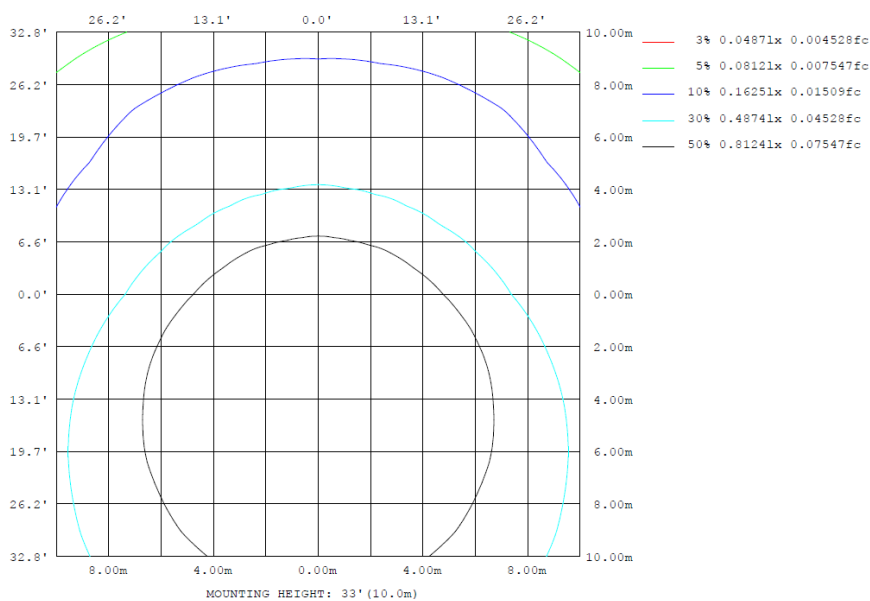
## 4.2 Goniophotometer Test

### Lighting Distribution Curve

#### LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



### Isolux Plot



## 4.2 Goniophotometer Test

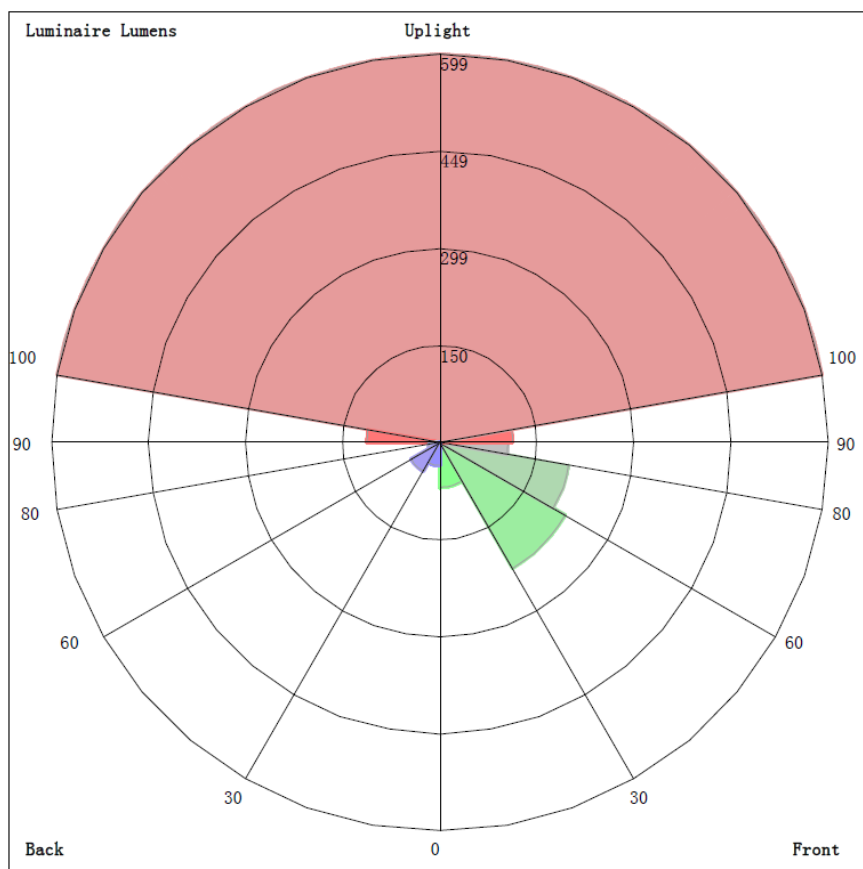
### Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total	lum, lamp
10	123.1	148.3	161.0	148.3	123.1	101.6	94.35	101.6	0- 10	11.95	11.95	0.84,0.84
20	116.5	170.8	195.4	170.8	116.5	78.87	66.73	78.87	10- 20	35.36	47.31	3.33,3.33
30	105.5	187.6	230.2	187.6	105.5	58.17	53.53	58.17	20- 30	57.10	104.4	7.34,7.34
40	86.58	201.8	262.4	201.8	86.58	49.43	43.31	49.43	30- 40	77.49	181.9	12.8,12.8
50	65.62	209.3	293.0	209.3	65.62	38.99	25.99	38.99	40- 50	93.63	275.5	19.4,19.4
60	42.65	212.4	318.9	212.4	42.65	23.46	12.53	23.46	50- 60	103.5	379.0	26.6,26.6
70	28.72	211.4	338.5	211.4	28.72	13.29	11.29	13.29	60- 70	108.7	487.7	34.3,34.3
80	15.84	206.0	349.4	206.0	15.84	13.09	10.71	13.09	70- 80	111.2	599.0	42.1,42.1
90	4.023	200.4	352.1	200.4	4.023	14.27	11.95	14.27	80- 90	112.3	711.3	50,50
100	15.84	206.0	349.4	206.0	15.84	13.09	10.71	13.09	90-100	112.3	823.6	57.9,57.9
110	28.72	211.4	338.5	211.4	28.72	13.29	11.29	13.29	100-110	111.2	934.9	65.7,65.7
120	42.65	212.4	318.9	212.4	42.65	23.46	12.53	23.46	110-120	108.7	1044	73.4,73.4
130	65.62	209.3	293.0	209.3	65.62	38.99	25.99	38.99	120-130	103.5	1147	80.6,80.6
140	86.58	201.8	262.4	201.8	86.58	49.43	43.31	49.43	130-140	93.63	1241	87.2,87.2
150	105.5	187.6	230.2	187.6	105.5	58.17	53.53	58.17	140-150	77.49	1318	92.7,92.7
160	116.5	170.8	195.4	170.8	116.5	78.87	66.73	78.87	150-160	57.10	1375	96.7,96.7
170	123.1	148.3	161.0	148.3	123.1	101.6	94.35	101.6	160-170	35.36	1411	99.2,99.2
180	125.5	125.5	125.5	125.5	125.5	125.5	125.5	125.5	170-180	11.95	1423	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	11.95	0-10	11.95	0.85%
10-20	35.36	0-20	47.31	3.35%
20-30	57.10	0-30	104.41	7.40%
30-40	77.49	0-40	181.90	12.90%
40-50	93.63	0-50	275.53	19.53%
50-60	103.49	0-60	379.02	26.87%
60-70	108.69	0-70	487.71	34.57%
70-80	111.25	0-80	598.96	42.46%
80-90	112.32	0-90	711.28	50.42%
90-100	112.32	0-100	823.60	58.39%
100-110	111.25	0-110	934.85	66.27%
110-120	108.69	0-120	1043.54	73.98%
120-130	103.49	0-130	1147.03	81.31%
130-140	93.63	0-140	1240.66	87.95%
140-150	77.49	0-150	1318.15	93.45%
150-160	57.10	0-160	1375.25	97.49%
160-170	35.36	0-170	1410.61	100.00%
170-180	11.95	0-180	1422.56	100.85%

## 4.2 Goniophotometer Test

LCS/BUG

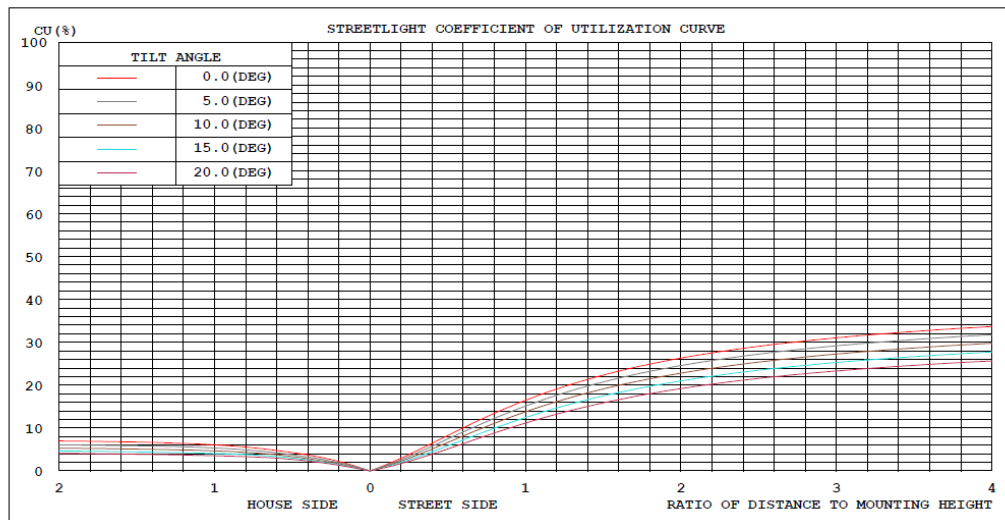


### LUMINAIRE CLASSIFICATION SYSTEM (LCS)

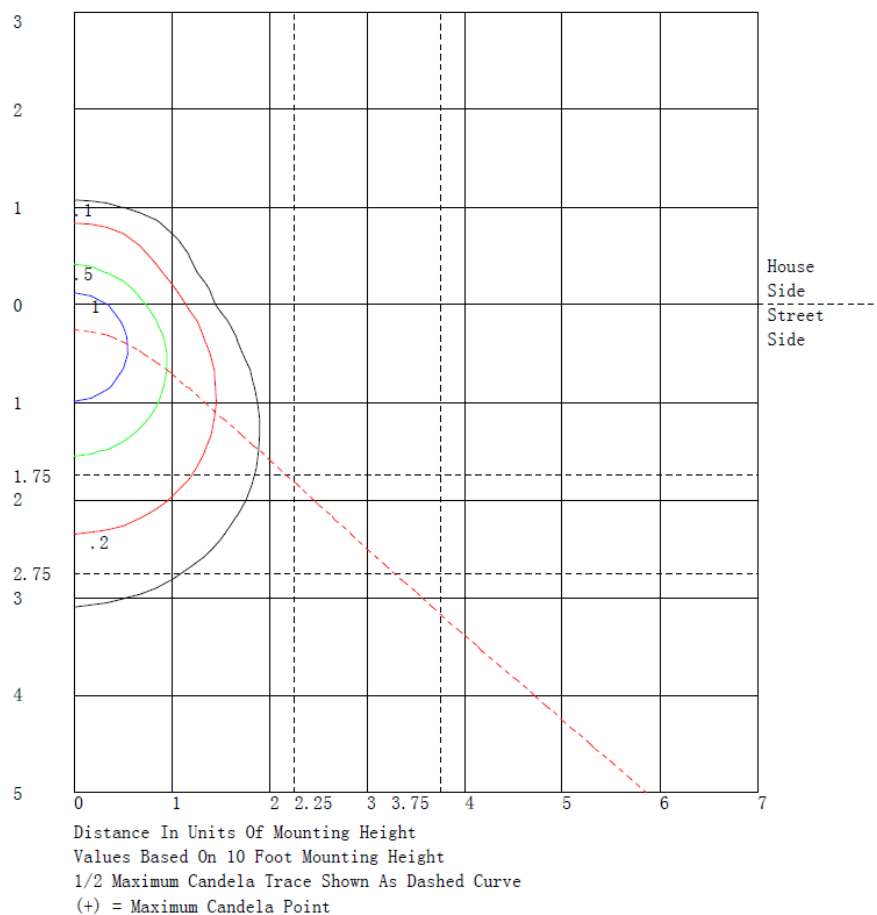
	Lumens	% Lamp	% Luminaire
FL - Front-Low (0-30)	69.0	N.A.	4.9
FM - Front-Medium (30-60)	223.8	N.A.	15.7
FH - Front-High (60-80)	202.1	N.A.	14.2
FVH - Front-Very High (80-90)	105.2	N.A.	7.4
BL - Back-Low (0-30)	35.4	N.A.	2.5
BM - Back-Medium (30-60)	50.8	N.A.	3.6
BH - Back-High (60-80)	17.9	N.A.	1.3
BVH - Back-Very High (80-90)	7.1	N.A.	0.5
UL - Uplight-Low (90-100)	112.3	N.A.	7.9
UH - Uplight-High (100-180)	599.0	N.A.	42.1
Total	1422.6	N.A.	100.0
BUG Rating	B0-U4-G2		

## 4.2 Goniophotometer Test

### Coefficients of Utilization



### Isolines



## 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	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125
5	124	129	133	137	140	142	143	142	140	137	133	129	124	120	116	114	112	111	111
10	123	132	141	148	155	159	161	159	155	148	141	132	123	115	108	102	96.9	94.6	94.3
15	122	135	148	160	168	175	178	175	168	160	148	135	122	109	98.6	89.9	84.1	80.3	79.6
20	116	135	153	171	183	192	195	192	183	171	153	135	116	101	88.2	78.9	71.0	67.1	66.7
25	111	134	157	179	198	208	212	208	198	179	157	134	111	92.2	77.3	67.1	61.6	58.3	57.6
30	106	132	161	188	210	224	230	224	210	188	161	132	106	83.6	67.2	58.2	54.8	53.6	53.5
35	96.1	129	164	195	222	240	246	240	222	195	164	129	96.1	73.0	58.7	52.4	51.5	51.8	51.8
40	86.6	124	162	202	233	255	262	255	233	202	162	124	86.6	62.8	51.5	49.4	48.8	45.1	43.3
45	77.1	118	162	206	244	270	279	270	244	206	162	118	77.1	53.6	46.6	45.8	40.3	35.4	33.5
50	65.6	107	158	209	254	283	293	283	254	209	158	107	65.6	46.4	43.1	39.0	31.4	27.5	26.0
55	54.1	95.6	152	213	262	294	307	294	262	213	152	95.6	54.1	40.3	38.2	30.6	24.2	20.7	19.6
60	42.7	83.0	144	212	268	305	319	305	268	212	144	83.0	42.7	34.9	31.8	23.5	17.0	13.4	12.5
65	35.7	72.7	137	212	275	315	329	315	275	212	137	72.7	35.7	30.0	25.1	16.5	12.7	11.9	11.6
70	28.7	62.1	128	211	279	323	339	323	279	211	128	62.1	28.7	24.7	19.7	13.3	12.3	11.8	11.3
75	21.8	50.7	117	209	282	329	345	329	282	209	117	50.7	21.8	19.3	15.2	13.1	12.2	11.1	10.8
80	15.8	47.7	111	206	284	333	349	333	284	206	111	47.7	15.8	17.8	14.3	13.1	11.9	10.9	10.7
85	9.93	45.4	107	205	285	335	353	335	285	205	107	45.4	9.93	17.0	15.4	13.7	12.1	10.4	9.01
90	4.02	42.8	102	200	284	336	352	336	284	200	102	42.8	4.02	16.3	16.5	14.3	12.8	11.2	11.9
95	9.93	45.4	107	205	285	335	353	335	285	205	107	45.4	9.93	17.0	15.4	13.7	12.1	10.4	9.01
100	15.8	47.7	111	206	284	333	349	333	284	206	111	47.7	15.8	17.8	14.3	13.1	11.9	10.9	10.7
105	21.8	50.7	117	209	282	329	345	329	282	209	117	50.7	21.8	19.3	15.2	13.1	12.2	11.1	10.8
110	28.7	62.1	128	211	279	323	339	323	279	211	128	62.1	28.7	24.7	19.7	13.3	12.3	11.8	11.3
115	35.7	72.7	137	212	275	315	329	315	275	212	137	72.7	35.7	30.0	25.1	16.5	12.7	11.9	11.6
120	42.7	83.0	144	212	268	305	319	305	268	212	144	83.0	42.7	34.9	31.8	23.5	17.0	13.4	12.5
125	54.1	95.6	152	213	262	294	307	294	262	213	152	95.6	54.1	40.3	38.2	30.6	24.2	20.7	19.6
130	65.6	107	158	209	254	283	293	283	254	209	158	107	65.6	46.4	43.1	39.0	31.4	27.5	26.0
135	77.1	118	162	206	244	270	279	270	244	206	162	118	77.1	53.6	46.6	45.8	40.3	35.4	33.5
140	86.6	124	162	202	233	255	262	255	233	202	162	124	86.6	62.8	51.5	49.4	48.8	45.1	43.3
145	96.1	129	164	195	222	240	246	240	222	195	164	129	96.1	73.0	58.7	52.4	51.5	51.8	51.8
150	106	132	161	188	210	224	230	224	210	188	161	132	106	83.6	67.2	58.2	54.8	53.6	53.5
155	111	134	157	179	198	208	212	208	198	179	157	134	111	92.2	77.3	67.1	61.6	58.3	57.6
160	116	135	153	171	183	192	195	192	183	171	153	135	116	101	88.2	78.9	71.0	67.1	66.7
165	122	135	148	160	168	175	178	175	168	160	148	135	122	109	98.6	89.9	84.1	80.3	79.6
170	123	132	141	148	155	159	161	159	155	148	141	132	123	115	108	102	96.9	94.6	94.3
175	124	129	133	137	140	142	143	142	140	137	133	129	124	120	116	114	112	111	111
180	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125	125

Table--2

UNIT: cd

C (DEG) y (DEG)	285	300	315	330	345														
0	125	125	125	125	125														
5	111	112	114	116	120														
10	94.6	96.9	102	108	115														
15	80.3	84.1	89.9	98.6	109														
20	67.1	71.0	78.9	88.2	101														
25	58.3	61.6	67.1	77.3	92.2														
30	53.6	54.8	58.2	67.2	83.6														
35	51.8	51.5	52.4	58.7	73.0														
40	45.1	48.8	49.4	51.5	62.8														
45	35.4	40.3	45.8	46.6	53.6														
50	27.5	31.4	39.0	43.1	46.4														
55	20.7	24.2	30.6	38.2	40.3														
60	13.4	17.0	23.5	31.8	34.9														
65	11.9	12.7	16.5	25.1	30.0														
70	11.8	12.3	13.3	19.7	24.7														
75	11.1	12.2	13.1	15.2	19.3														
80	10.9	11.9	13.1	14.3	17.8														
85	10.4	12.1	13.7	15.4	17.0														
90	11.2	12.8	14.3	16.5	16.3														
95	10.4	12.1	13.7	15.4	17.0														
100	10.9	11.9	13.1	14.3	17.8														
105	11.1	12.2	13.1	15.2	19.3														
110	11.8	12.3	13.3	19.7	24.7														
115	11.9	12.7	16.5	25.1	30.0														
120	13.4	17.0	23.5	31.8	34.9														
125	20.7	24.2	30.6	38.2	40.3														
130	27.5	31.4	39.0	43.1	46.4														
135	35.4	40.3	45.8	46.6	53.6														
140	45.1	48.8	49.4	51.5	62.8														
145	51.8	51.5	52.4	58.7	73.0														
150	53.6	54.8	58.2	67.2	83.6														
155	58.3	61.6	67.1	77.3	92.2														
160	67.1	71.0	78.9	88.2	101														
165	80.3	84.1	89.9	98.6	109														
170	94.6	96.9	102	108	115														
175	111	112	114	116	120														
180	125	125	125	125	125														



## 4.0 LM-79 Measurement and Test Results

### 4.3 THD and PF Test

<b>Model No.</b>	V1-18B @12W5000K	<b>Sample ID</b>	250728006-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	0.098	11.7	0.990	6.25
277.0	60	0.049	11.9	0.883	26.82

## 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\*\*\*\*\*