

## Photometric Test Report

### Relevant Standards

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

Prepared For

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Issue Date: 2025-02-21

Revised Date: N/A

## 1.0 Test Summary

DLC Technical Requirements V5.1

Architectural Flood and Spot Luminaires				
Requirement Category	Test Method	Requirements		Test Value
Luminaire Output (lm) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	1000		3233
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Standard	Premium	106.4
		105	120	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		30.4
Total Harmonic Distortion (A%) (THD & PF – Section 4.3)	ANSI C82.77:2002 ANSI C82-77-10:2020	20.00%	120V	14.31
Power Factor (THD & PF – Section 4.3)	ANSI C82.77:2002 ANSI C82-77-10:2020	0.9	120V	0.989
Allowable CCTs* (K) (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019	7 steps	5029±283	5191
		4 steps	5029±220	
Minimum CRI (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019 CIE13.3-1995	≥70		82.9
Minimum R9 (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019 CIE13.3-1995	N/A		12
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		98
IES Rcs,h1 (Integrating Sphere – Section 4.1)	ANSI/IES TM-30-18	-18%≤IES Rcs,h1≤+23%		-12%
Zonal Lumen Requirement (0°-90°) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	≥85%		100.0%
Input Voltage (V)				
(Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Cast		120.0
(Goniophotometer – Section 4.2)		Non-Worst Case		N/A
Input Current (A)				
(Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		0.256
(Goniophotometer – Section 4.2)		Non-Worst Case		N/A
Power (Input Wattage – W)				
(Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		30.4
(Goniophotometer – Section 4.2)		Non-Worst Case		N/A

## 2.0 Test List

Test Item	Test	Test Date	Model Number	Build Level	Sample No.
1	Goniophotometer Test	-	BULLET2X20 @30W5000K	ES 1st ES #3-4	241216023-S1
2	THD and PF Test	-	BULLET2X20 @30W5000K	ES 1st ES #3-4	241216023-S1

### Remark (If any):

1. The results contained in this report pertain only to the tested samples.
2. This report shall not be reproduced, no limited part or full, without approval of Dongguan New Testing Centre Co., Ltd.
3. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST or any agency of the U.S. Government.
4. The test result is based BULLET2X20 @30W3000K and BULLET2X12 @40W5000K.

## 4.0 Product Description

Luminaire Description: Model No. BULLET2X20 @30W5000K, color tunable from 3000K, 4000K and 5000K.

Electrical Specification: 120Vac, 60Hz

Photos of Luminaire Characteristics



## 4.0 LM-79 Measurement and Test Results

### 4.1 Goniophotometer Test

<b>Model No.</b>	BULLET2X20 @30W5000K	<b>Sample ID</b>	241216023-S1
<b>Operate time (Min.)</b>	30	<b>Stabilization time (Min.)</b>	60
<b>Temperature (°C)</b>	24.8	<b>Humidity (%RH)</b>	40.1

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 <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

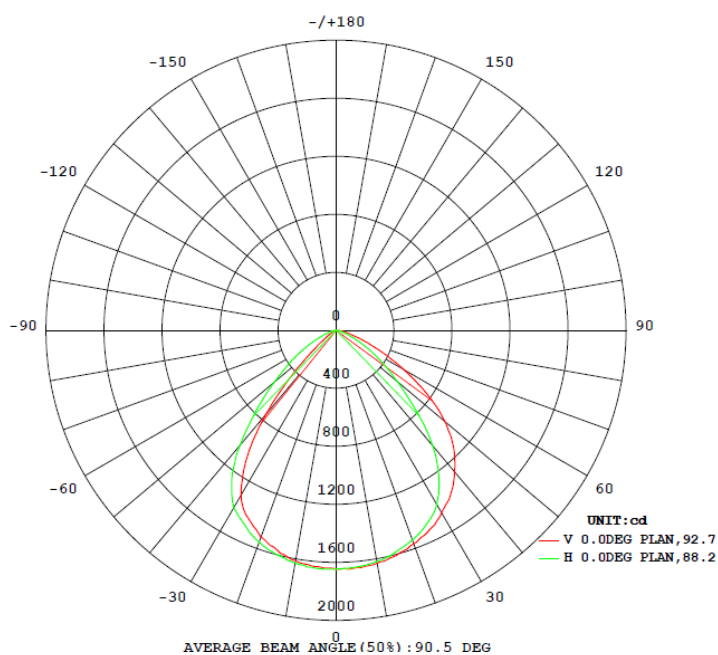
Condition	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
<b>WORST CASE</b>	120.0	60.0	0.256	30.4	0.989
<b>NON-WORST CASE</b>	N/A	N/A	N/A	N/A	N/A

#### Test Result

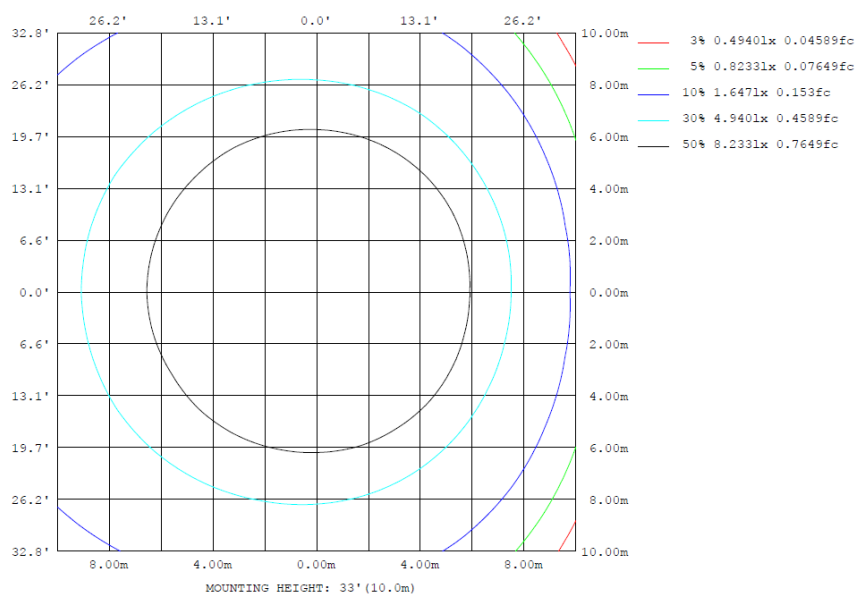
Flux (lm)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)	Zonal Lumen Requirement	NEMA Type
	C0-180	C90-270	C0-180	C90-270		(0°-90°)	
3233	124.1	129.1	92.5	88.5	106.4	100.0%	6H x 6V

## 4.1 Goniophotometer Test

### Lighting Distribution Curve



### Isolux Plot



## 4.1 Goniophotometer Test

### Zonal Lumen Summary

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	zone	total	lum, lamp
10	1612	1614	1617	1628	1629	1628	1630	1618	0- 10	156.1	156.1	4.83,4.83
20	1517	1517	1538	1549	1566	1558	1553	1534	10- 20	448.5	604.6	18.7,18.7
30	1312	1352	1387	1423	1456	1429	1411	1366	20- 30	679.4	1284	39.7,39.7
40	748.1	880.2	1036	1201	1271	1214	1030	902.7	30- 40	770.4	2054	63.5,63.5
50	178.9	359.3	554.5	808.3	982.3	816.8	560.2	354.5	40- 50	616.3	2671	82.6,82.6
60	43.98	94.34	257.4	355.4	536.1	371.4	259.1	96.88	50- 60	357.6	3028	93.7,93.7
70	1.650	17.82	81.03	117.5	190.4	129.7	82.65	20.27	60- 70	152.3	3181	98.4,98.4
80	0.0647	3.074	7.265	20.15	45.30	25.74	15.20	3.999	70- 80	45.21	3226	99.8,99.8
90	0	0	0	0	0	0	0	0	80- 90	7.181	3233	100,100
100	0	0	0	0	0	0	0	0	90-100	0	3233	100,100
110	0	0	0	0	0	0	0	0	100-110	0	3233	100,100
120	0	0	0	0	0	0	0	0	110-120	0	3233	100,100
130	0	0	0	0	0	0	0	0	120-130	0	3233	100,100
140	0	0	0	0	0	0	0	0	130-140	0	3233	100,100
150	0	0	0	0	0	0	0	0	140-150	0	3233	100,100
160	0	0	0	0	0	0	0	0	150-160	0	3233	100,100
170	0	0	0	0	0	0	0	0	160-170	0	3233	100,100
180	0	0	0	0	0	0	0	0	170-180	0	3233	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

	Zonal (lm)		Total (lm)	Percent
0-10	156.07	0-10	156.07	4.83%
10-20	448.52	0-20	604.59	18.70%
20-30	679.44	0-30	1284.03	39.72%
30-40	770.40	0-40	2054.43	63.55%
40-50	616.30	0-50	2670.73	82.61%
50-60	357.55	0-60	3028.28	93.67%
60-70	152.32	0-70	3180.60	98.38%
70-80	45.21	0-80	3225.81	99.78%
80-90	7.18	0-90	3232.99	100.00%
90-100	0.00	0-100	3232.99	100.00%
100-110	0.00	0-110	3232.99	100.00%
110-120	0.00	0-120	3232.99	100.00%
120-130	0.00	0-130	3232.99	100.00%
130-140	0.00	0-140	3232.99	100.00%
140-150	0.00	0-150	3232.99	100.00%
150-160	0.00	0-160	3232.99	100.00%
160-170	0.00	0-170	3232.99	100.00%
170-180	0.00	0-180	3232.99	100.00%

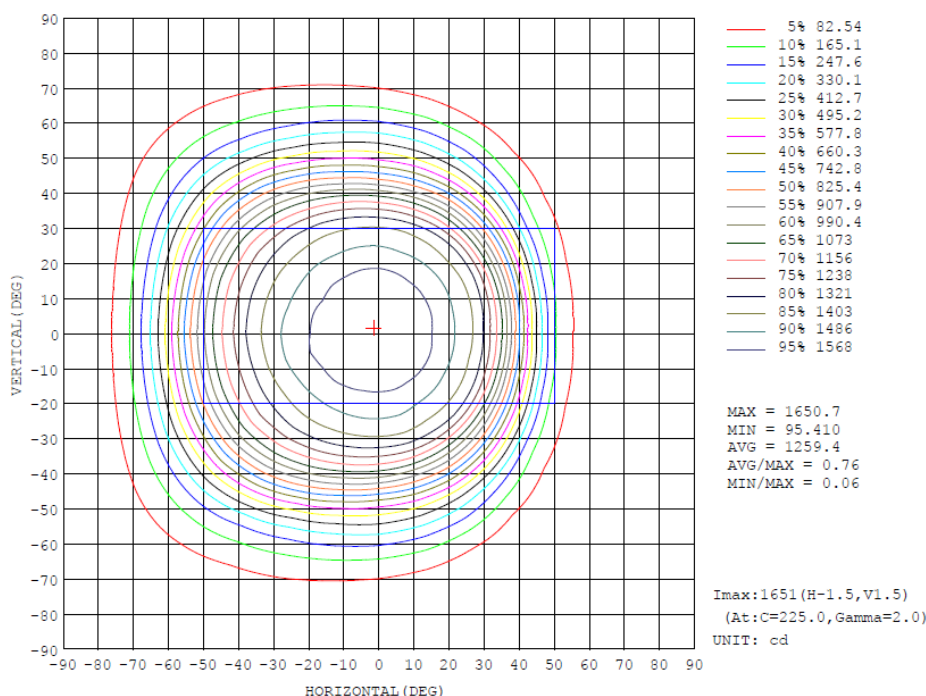


## 4.1 Goniophotometer Test

### Area Flux Diagram

		AREA FLUX DIAGRAM																UNIT:lm			Φ t	Φ a
VERTICAL (DEG)	90	0.01	0.05	0.09	0.12	0.13	0.19	0.27	0.31	0.18	0.08	0.05	0.06	0.05	0.02	0.01	0.00	0.00	0.00	1.63	0.00	
	80	0.02	0.11	0.24	0.43	0.70	1.09	1.40	1.54	1.47	1.20	0.82	0.47	0.24	0.10	0.03	0.01	0.00	0.00	9.86	0.00	
	70	0.03	0.18	0.52	1.17	2.14	3.24	4.23	4.92	5.03	4.41	3.19	1.76	0.78	0.29	0.09	0.02	0.00	0.00	32.0	12.2	
	60	0.04	0.28	1.00	2.50	4.77	7.46	9.98	11.7	12.3	11.3	8.75	5.31	2.29	0.73	0.19	0.03	0.00	0.00	78.7	70.8	
	50	0.05	0.41	1.68	4.55	9.25	14.9	19.9	23.2	24.2	22.7	18.4	11.8	5.36	1.71	0.40	0.06	0.00	0.00	159	154	
	40	0.06	0.55	2.51	7.24	15.0	23.5	30.6	35.6	37.8	36.8	31.6	22.1	10.7	3.17	0.75	0.10	0.00	0.00	258	254	
	30	0.06	0.69	3.36	10.0	20.0	29.6	37.1	42.2	44.8	44.4	40.8	32.1	17.8	5.41	1.14	0.15	0.01	0.00	330	327	
	20	0.07	0.80	4.06	12.1	23.1	32.7	40.0	45.3	48.2	47.9	44.4	37.6	23.7	7.81	1.49	0.21	0.01	0.00	369	367	
	10	0.07	0.87	4.49	13.3	24.4	34.0	41.5	46.8	49.6	49.3	45.9	39.2	26.4	9.29	1.69	0.24	0.00	0.00	387	385	
	0	0.07	0.86	4.47	13.2	24.3	33.9	41.6	46.8	49.5	49.2	45.8	39.0	26.1	9.23	1.67	0.23	0.00	0.00	386	383	
-30	-10	0.07	0.79	4.01	12.0	22.8	32.3	39.8	45.1	47.8	47.6	44.0	37.1	22.9	7.70	1.45	0.19	0.00	0.00	366	363	
	-20	0.06	0.67	3.28	9.85	19.7	29.3	36.7	41.8	44.4	44.2	40.3	31.3	17.4	5.39	1.09	0.13	0.00	0.00	326	323	
	-30	0.05	0.53	2.42	7.05	14.8	23.2	30.3	35.2	37.3	36.4	31.2	21.8	10.8	3.16	0.69	0.07	0.00	0.00	255	251	
	-40	0.05	0.40	1.60	4.35	8.97	14.6	19.7	23.2	24.3	22.8	18.4	11.9	5.44	1.65	0.34	0.04	0.00	0.00	158	153	
	-50	0.04	0.27	0.94	2.32	4.47	7.09	9.60	11.5	12.2	11.3	8.84	5.42	2.25	0.66	0.16	0.02	0.00	0.00	77.1	69.1	
	-60	0.03	0.17	0.49	1.06	1.89	2.97	3.99	4.72	4.91	4.38	3.21	1.76	0.74	0.25	0.07	0.01	0.00	0.00	30.6	10.7	
	-70	0.02	0.11	0.23	0.38	0.56	0.88	1.23	1.42	1.36	1.11	0.73	0.40	0.19	0.08	0.02	0.00	0.00	0.00	8.73	0.00	
	-80	0.01	0.05	0.09	0.12	0.12	0.14	0.18	0.23	0.12	0.04	0.03	0.04	0.03	0.01	0.00	0.00	0.00	0.00	1.22	0.00	
	-90																					
			-90	-80	-70	-60	-50	-40	-30	-20	HORIZONTAL (DEG)	20	30	40	50	60	70	80	90			
Φ t	0	0.81	7.80	35.5	102	197	291	368	422	446	435	386	299	173	56.7	11.3	1.51	0.05	0.00	0.00	3233	---
Φ a	0	0.00	0.44	27.6	95.0	190	284	361	414	439	428	380	292	165	46.2	0.39	0.00	0.00	0.00	---	3123	

### Isocandela





## 4.1 Goniophotometer Test

## Luminous Distribution Intensity Data

Table--1

H (DEG)		UNIT: cd																	
V (DEG)	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
-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
-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
-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
-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
-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
-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
-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
-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
-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
-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
-80	0.00	6.04	8.27	9.86	11.1	11.8	12.2	11.9	11.3	10.5	11.5	12.5	13.7	16.5	19.6	21.4	21.7	12.4	7.2
-70	0.00	8.56	12.6	17.6	21.0	21.1	25.5	30.5	35.7	41.6	47.4	57.7	67.6	82.1	86.6	88.0	87.7	85.2	80.1
-60	0.00	10.6	17.6	26.1	37.2	52.1	69.1	88.7	112	136	158	183	206	224	242	255	262	262	257
-50	0.00	12.6	23.0	38.2	62.7	92.4	132	179	236	294	352	412	465	504	540	563	571	571	555
-40	0.00	14.7	28.8	53.2	91.8	147	221	315	428	546	663	770	860	928	985	1021	1040	1048	1038
-30	0.00	16.6	34.6	68.9	124	210	330	478	645	812	963	1077	1170	1244	1302	1343	1370	1385	1387
-20	0.00	18.0	39.8	82.4	156	270	430	625	829	1006	1146	1254	1333	1400	1452	1489	1517	1535	1538
-10	0.00	18.9	43.5	92.7	179	316	503	723	938	1108	1234	1338	1422	1487	1537	1575	1599	1620	1617
0	0.00	19.3	45.3	97.3	190	337	536	768	982	1147	1271	1379	1456	1519	1566	1606	1629	1641	1643
10	0.00	18.9	43.8	93.4	182	318	506	728	946	1119	1244	1353	1426	1484	1536	1574	1609	1625	1633
20	0.00	18.1	40.2	83.8	159	275	437	633	844	1020	1157	1262	1352	1414	1459	1500	1529	1548	1551
30	0.00	16.7	35.1	70.1	128	217	340	486	655	825	972	1086	1181	1261	1322	1368	1395	1408	1411
40	0.00	14.9	29.3	54.8	95.5	155	231	327	439	558	675	780	867	935	987	1022	1043	1048	1038
50	0.00	12.8	23.4	39.8	65.0	97.8	141	192	248	308	368	427	480	518	551	570	577	576	560
60	0.00	10.7	18.2	27.1	39.3	54.9	74.3	97.7	123	148	173	197	218	235	252	263	268	266	259
70	0.00	8.66	13.0	17.9	22.1	26.9	32.6	39.8	48.8	58.0	67.9	76.7	83.7	88.5	91.3	92.5	91.3	87.9	82.5
80	0.00	6.03	8.51	10.3	11.4	12.0	12.1	12.8	13.1	13.6	14.1	19.1	21.8	23.3	24.4	24.9	21.9	18.7	15.5
90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
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
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
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
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
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
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
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
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

Table--2		UNIT: °cd																	
V (DBc)	H (DBc)																		
	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	85	90	
-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
-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
-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
-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
-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
-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
-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
-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
-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
-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
-80	5.99	4.56	3.07	3.23	3.50	3.90	3.03	2.25	1.54	0.98	0.54	0.23	0.15	0.10	0.09	0.09	0.08	0.08	0.00
-70	73.7	65.0	54.9	42.4	30.6	21.3	15.0	9.80	6.22	3.77	1.96	0.84	0.39	0.16	0.07	0.08	0.09	0.09	0.00
-60	240	217	187	149	111	76.0	48.0	27.8	17.3	10.4	5.40	2.54	1.02	0.30	0.09	0.07	0.08	0.08	0.00
-50	530	492	434	367	294	215	139	81.2	46.1	23.5	11.7	5.45	1.99	0.50	0.15	0.07	0.08	0.08	0.00
-40	998	935	850	740	601	448	300	183	99.9	52.6	25.3	10.2	3.19	0.80	0.22	0.08	0.08	0.08	0.00
-30	1375	1336	1262	1140	977	782	560	340	177	92.7	47.7	19.0	5.74	1.24	0.29	0.09	0.07	0.07	0.00
-20	1527	1493	1451	1394	1288	1077	819	540	285	128	67.8	31.5	9.02	1.68	0.31	0.09	0.07	0.07	0.00
-10	1610	1579	1545	1476	1402	1260	1009	689	381	169	83.0	41.1	12.3	1.90	0.27	0.08	0.07	0.07	0.00
0	1635	1612	1569	1517	1432	1312	1077	748	408	179	86.6	44.0	13.3	1.65	0.18	0.06	0.07	0.07	0.00
10	1619	1592	1551	1489	1414	1281	1033	709	383	173	84.1	42.2	13.5	2.26	0.36	0.10	0.07	0.07	0.00
20	1536	1509	1461	1406	1315	1113	848	552	284	132	69.8	33.8	10.8	2.27	0.45	0.12	0.08	0.08	0.00
30	1395	1356	1289	1169	1001	828	568	336	176	95.4	50.8	22.5	7.01	1.86	0.44	0.12	0.08	0.08	0.00
40	995	931	849	742	600	444	295	180	103	55.9	29.0	12.8	4.55	1.28	0.37	0.12	0.08	0.08	0.00
50	533	492	433	363	288	209	138	84.3	49.6	27.1	14.5	7.09	2.84	0.82	0.26	0.10	0.09	0.09	0.00
60	240	217	186	148	110	76.8	50.3	30.9	19.8	12.6	6.96	3.53	1.55	0.52	0.16	0.10	0.10	0.10	0.00
70	74	64.9	54.4	42.9	32.1	23.1	16.8	11.6	7.60	4.89	2.78	1.33	0.63	0.26	0.11	0.10	0.11	0.11	0.00
80	11.9	8.8	6.5	5.7	5.05	4.15	3.36	2.41	1.64	0.82	0.36	0.24	0.16	0.13	0.13	0.13	0.10	0.10	0.00
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
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
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
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
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
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
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
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
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
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

## 4.0 LM-79 Measurement and Test Results

### 4.2 THD and PF Test

<b>Model No.</b>	BULLET2X20 @30W5000K	<b>Sample ID</b>	241216023-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

<b>Voltage (Vac)</b>	<b>Frequency (Hz)</b>	<b>Current (A)</b>	<b>Power (W)</b>	<b>Power Factor</b>	<b>iTHD(%)</b>
120.0	60.0	0.256	30.4	0.989	14.31

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