

## Photometric Test Report

### Relevant Standards

☒ ANSI/IES LM-79-2019

☒ ANSI C82.77-2017

Prepared For

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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		3472
Minimum Luminaire Efficacy (lm/W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Standard	Premium	110.9
		105	120	
Power (Input Wattage) (W) (Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		31.3
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	3985±275	3930
		4 steps	3985±154	
Minimum CRI (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019 CIE13.3-1995	≥70		84.4
Minimum R9 (Integrating Sphere – Section 4.1)	ANSI/IES LM-79:2019 CIE13.3-1995	N/A		16
Minimum Rf (Integrating Sphere – Section 4.1)	ANSI/IES TM-30-18	≥70		84
Minimum Rg (Integrating Sphere – Section 4.1)	ANSI/IES TM-30-18	≥89		98
IES Rcs,h1 (Integrating Sphere – Section 4.1)	ANSI/IES TM-30-18	-18%≤IES Rcs,h1≤+23%		-11%
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		0.264
(Goniophotometer – Section 4.2)		Non-Worst Case		N/A
Power (Input Wattage – W)				
(Goniophotometer – Section 4.2)	ANSI/IES LM-79:2019	Worst Case		31.3
(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 @30W4000K	ES 1st ES #3-4	241216023-S1
2	THD and PF Test	-	BULLET2X20 @30W4000K	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 @40W4000K.

## 4.0 Product Description

Luminaire Description: Model No. BULLET2X20 @30W4000K, 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

Model No.	BULLET2X20 @30W4000K	Sample ID	241216023-S1
Operate time (Min.)	30	Stabilization time (Min.)	60
Temperature (°C)	24.8	Humidity (%RH)	40.1

<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 \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

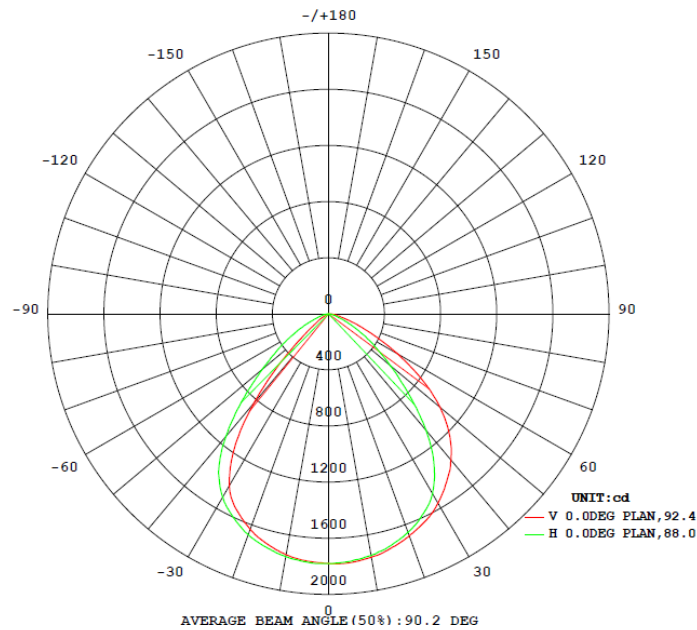
Condition	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor
WORST CASE	120.0	60.0	0.264	31.3	0.989
NON-WORST CASE	N/A	N/A	N/A	N/A	N/A

#### Test Result

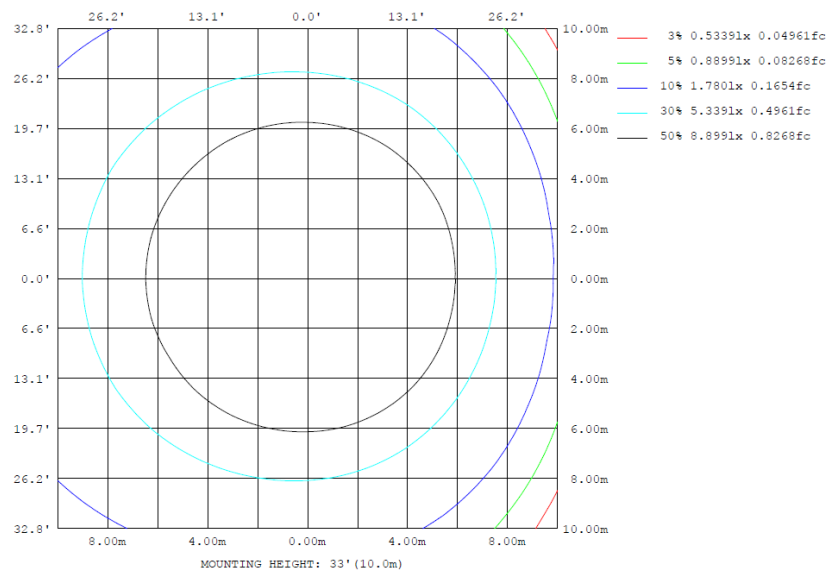
Flux (lm)	Field Angle (10%)		Beam Angle (50%)		Luminous Efficacy (lm/W)	Zonal Lumen Requirement (0°-90°)	NEMA Type
	C0-180	C90-270	C0-180	C90-270			
3472	124.0	129.0	92.2	88.5	110.9	100.0%	6H x 6V

## 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	1743	1740	1748	1753	1760	1757	1756	1748	0- 10	168.6	168.6	4.86,4.86
20	1634	1639	1657	1672	1684	1674	1675	1649	10- 20	483.7	652.4	18.8,18.8
30	1416	1452	1482	1522	1560	1535	1510	1469	20- 30	731.1	1383	39.8,39.8
40	823.9	937.5	1081	1270	1358	1312	1137	988.8	30- 40	827.5	2211	63.7,63.7
50	200.0	368.7	576.5	837.4	1040	895.7	619.3	409.1	40- 50	662.3	2873	82.8,82.8
60	48.63	95.46	263.6	365.6	562.4	406.3	288.2	114.7	50- 60	381.9	3255	93.8,93.8
70	1.930	18.62	81.20	122.9	197.4	138.1	93.02	23.10	60- 70	161.6	3417	98.4,98.4
80	0.0712	3.295	7.588	20.72	46.68	26.80	17.14	4.463	70- 80	47.74	3464	99.8,99.8
90	0	0	0	0	0	0	0	0	80- 90	7.558	3472	100,100
100	0	0	0	0	0	0	0	0	90-100	0	3472	100,100
110	0	0	0	0	0	0	0	0	100-110	0	3472	100,100
120	0	0	0	0	0	0	0	0	110-120	0	3472	100,100
130	0	0	0	0	0	0	0	0	120-130	0	3472	100,100
140	0	0	0	0	0	0	0	0	130-140	0	3472	100,100
150	0	0	0	0	0	0	0	0	140-150	0	3472	100,100
160	0	0	0	0	0	0	0	0	150-160	0	3472	100,100
170	0	0	0	0	0	0	0	0	160-170	0	3472	100,100
180	0	0	0	0	0	0	0	0	170-180	0	3472	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Zonal (lm)		Total (lm)		Percent
0-10	168.63	0-10	168.63	4.86%
10-20	483.73	0-20	652.36	18.79%
20-30	731.10	0-30	1383.46	39.85%
30-40	827.47	0-40	2210.93	63.68%
40-50	662.28	0-50	2873.21	82.75%
50-60	381.89	0-60	3255.10	93.75%
60-70	161.60	0-70	3416.70	98.41%
70-80	47.74	0-80	3464.44	99.78%
80-90	7.56	0-90	3472.00	100.00%
90-100	0.00	0-100	3472.00	100.00%
100-110	0.00	0-110	3472.00	100.00%
110-120	0.00	0-120	3472.00	100.00%
120-130	0.00	0-130	3472.00	100.00%
130-140	0.00	0-140	3472.00	100.00%
140-150	0.00	0-150	3472.00	100.00%
150-160	0.00	0-160	3472.00	100.00%
160-170	0.00	0-170	3472.00	100.00%
170-180	0.00	0-180	3472.00	100.00%

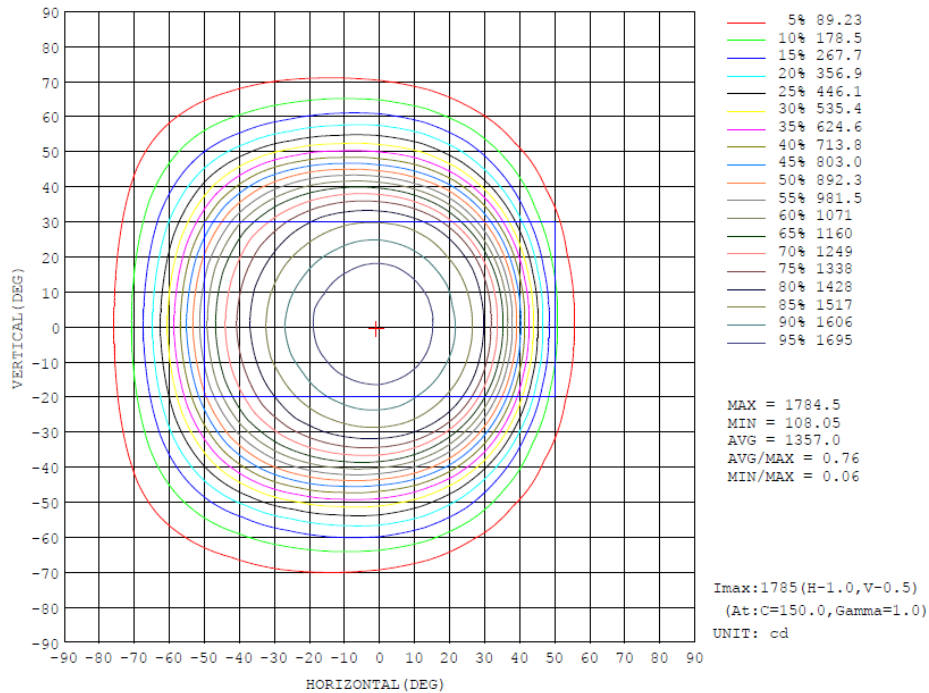


## 4.1 Goniophotometer Test

### Area Flux Diagram

		AREA FLUX DIAGRAM																		UNIT:lm		Φ t	Φ a
		0.01	0.05	0.10	0.13	0.14	0.20	0.28	0.33	0.20	0.09	0.05	0.07	0.06	0.02	0.01	0.00	0.00	0.00	1.75	0.00		
VERTICAL (DEG)	90	0.01	0.05	0.10	0.13	0.14	0.20	0.28	0.33	0.20	0.09	0.05	0.07	0.06	0.02	0.01	0.00	0.00	0.00	10.9	0.00		
	80	0.02	0.12	0.26	0.45	0.73	1.15	1.51	1.68	1.64	1.38	0.96	0.55	0.27	0.11	0.03	0.01	0.00	0.00	10.9	0.00		
	70	0.03	0.19	0.55	1.24	2.27	3.47	4.57	5.37	5.57	4.98	3.68	2.09	0.92	0.33	0.10	0.02	0.00	0.00	35.4	13.8		
	60	0.04	0.29	1.06	2.67	5.14	8.11	10.9	12.9	13.5	12.6	9.92	6.16	2.70	0.85	0.22	0.04	0.00	0.00	87.0	78.8		
	50	0.05	0.43	1.77	4.88	10.1	16.4	22.0	25.7	26.9	25.3	20.6	13.4	6.26	1.99	0.44	0.06	0.00	0.00	176	171		
	40	0.06	0.57	2.65	7.76	16.3	25.5	33.2	38.7	41.1	40.0	34.6	24.5	12.2	3.69	0.84	0.10	0.01	0.00	282	278		
	30	0.06	0.72	3.55	10.7	21.5	31.9	39.8	45.4	48.3	48.0	43.9	34.8	19.7	6.18	1.27	0.17	0.01	0.00	356	353		
	20	0.07	0.83	4.27	12.9	24.7	35.0	43.0	48.8	51.9	51.7	47.8	40.4	25.7	8.73	1.65	0.23	0.01	0.00	398	395		
	10	0.07	0.90	4.69	14.0	26.0	36.4	44.6	50.5	53.6	53.3	49.6	42.2	28.6	10.3	1.87	0.26	0.01	0.00	417	414		
	0	0.07	0.90	4.66	13.9	25.8	36.2	44.6	50.4	53.5	53.1	49.5	42.1	28.3	10.1	1.83	0.25	0.00	0.00	415	413		
-30	-10	0.07	0.82	4.17	12.6	24.2	34.5	42.7	48.6	51.6	51.3	47.5	39.9	24.9	8.30	1.57	0.21	0.00	0.00	393	390		
	-20	0.06	0.70	3.41	10.3	20.7	31.0	39.2	44.8	47.7	47.4	43.2	33.6	18.6	5.68	1.17	0.14	0.00	0.00	348	344		
	-30	0.06	0.55	2.51	7.31	15.3	24.2	31.8	37.1	39.5	38.5	33.0	23.0	11.2	3.27	0.74	0.08	0.00	0.00	268	264		
	-40	0.05	0.41	1.66	4.50	9.24	15.1	20.4	24.0	25.2	23.7	19.1	12.2	5.51	1.70	0.37	0.05	0.00	0.00	163	158		
	-50	0.04	0.28	0.98	2.40	4.63	7.33	9.94	11.9	12.6	11.6	9.02	5.44	2.27	0.69	0.17	0.03	0.00	0.00	79.3	70.3		
	-60	0.03	0.18	0.51	1.09	1.97	3.09	4.13	4.85	5.01	4.42	3.20	1.74	0.74	0.26	0.07	0.01	0.00	0.00	31.3	9.49		
	-70	0.02	0.11	0.24	0.39	0.58	0.92	1.27	1.45	1.37	1.11	0.73	0.41	0.20	0.08	0.02	0.00	0.00	0.00	8.91	0.00		
	-80	0.01	0.05	0.10	0.12	0.12	0.14	0.19	0.23	0.13	0.05	0.03	0.04	0.03	0.01	0.00	0.00	0.00	0.00	1.27	0.00		
	-90	0.01	0.05	0.10	0.12	0.12	0.14	0.19	0.23	0.13	0.05	0.03	0.04	0.03	0.01	0.00	0.00	0.00	0.00	1.27	0.00		
	HORIZONTAL (DEG)																						
Φ t	0.84	8.11	37.1	107	209	311	394	452	479	468	416	323	188	62.3	12.4	1.66	0.06	0.00	3472	---			
Φ a	0.00	0.34	28.5	99.9	202	303	386	445	472	461	409	315	180	51.1	0.61	0.00	0.00	0.00	---	3352			

### Isocandela





## 4.1 Goniophotometer Test

### Luminous Distribution Intensity Data

Table--1

UNIT: cd

H (DEG)	-90	-85	-80	-75	-70	-65	-60	-55	-50	-45	-40	-35	-30	-25	-20	-15	-10	-5	0
V (DEG)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	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
-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	6.19	8.66	10.4	11.6	12.3	12.6	12.2	11.6	10.7	11.9	13.1	14.5	17.2	19.7	21.7	17.5	12.7	7.59
-70	0.00	8.82	13.2	17.8	22.0	26.4	31.5	36.8	43.1	50.3	60.0	70.0	78.6	84.5	88.1	89.9	89.1	86.1	81.2
-60	0.00	10.9	18.4	27.4	38.7	53.8	71.4	91.6	117	142	165	190	213	232	250	264	270	270	264
-50	0.00	13.1	24.0	39.8	64.4	95.8	137	186	244	304	363	424	480	521	559	581	591	592	576
-40	0.00	15.3	30.0	55.7	95.3	153	230	326	440	564	685	796	890	964	1022	1065	1089	1095	1081
-30	0.00	17.1	35.9	70.8	129	218	343	495	669	846	1005	1132	1235	1319	1383	1432	1463	1481	1482
-20	0.00	18.6	41.2	85.3	162	280	448	653	869	1060	1214	1335	1425	1499	1559	1604	1636	1656	1657
-10	0.00	19.5	45.0	96.0	186	328	525	759	989	1178	1321	1430	1523	1595	1651	1694	1725	1747	1748
0	0.00	20.0	46.7	101	197	351	562	810	1040	1220	1358	1465	1560	1632	1684	1728	1760	1779	1779
10	0.00	19.6	45.2	96.9	189	333	533	772	1007	1192	1331	1443	1531	1600	1656	1699	1733	1755	1756
20	0.00	18.7	41.7	87.0	167	289	462	676	903	1092	1241	1358	1444	1516	1570	1614	1650	1669	1675
30	0.00	17.3	36.5	72.9	134	229	361	521	706	892	1053	1177	1278	1361	1423	1466	1494	1510	1510
40	0.00	15.4	30.5	57.1	100	163	246	350	475	608	738	855	950	1024	1085	1124	1148	1154	1137
50	0.00	13.2	24.3	41.5	68.2	103	149	205	267	333	401	468	527	571	608	630	637	637	619
60	0.00	11.0	18.9	28.3	41.3	57.8	78.5	104	131	159	185	211	235	254	273	286	293	294	288
70	0.00	8.83	13.4	18.6	23.1	28.4	34.6	42.1	51.2	60.9	71.7	81.6	89.6	95.3	99.2	101	101	97.9	93.0
80	0.00	6.10	8.69	10.6	11.9	12.6	12.8	13.5	14.1	14.7	17.5	20.2	22.9	24.8	26.4	27.3	24.2	20.8	17.1
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

H (DEG)																			UNIT: cd	
V (DEG)	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		
-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		
-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		
-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		
-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		
-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		
-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		
-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		
-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		
-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		
-80	6.27	4.78	3.23	3.40	3.64	4.05	3.18	2.39	1.66	1.06	0.59	0.25	0.16	0.11	0.09	0.09	0.08	0.08		
-70	73.4	64.4	54.1	41.9	30.5	21.5	15.3	10.2	6.71	4.12	2.14	0.93	0.44	0.18	0.08	0.09	0.09	0.09		
-60	245	220	188	149	110	75.4	48.7	28.7	18.2	11.1	5.98	2.79	1.13	0.34	0.10	0.08	0.09	0.09		
-50	548	506	446	375	299	216	139	82.7	47.9	24.9	12.6	5.96	2.19	0.56	0.16	0.08	0.08	0.08		
-40	1045	982	891	773	626	462	306	185	103	55.3	27.5	11.0	3.55	0.90	0.25	0.09	0.08	0.08		
-30	1467	1425	1348	1217	1043	834	594	354	183	97.8	51.2	21.0	5.97	1.39	0.32	0.09	0.08	0.08		
-20	1646	1609	1561	1497	1386	1162	886	580	302	137	73.0	34.6	9.98	1.90	0.35	0.10	0.08	0.08		
-10	1733	1707	1665	1594	1513	1362	1096	753	413	184	90.1	45.1	13.9	2.18	0.31	0.09	0.08	0.08		
0	1768	1743	1697	1634	1547	1416	1172	824	454	200	94.9	48.6	15.1	1.93	0.20	0.07	0.08	0.08		
10	1747	1717	1672	1605	1518	1381	1121	777	427	194	92.6	46.4	15.1	2.55	0.40	0.11	0.08	0.08		
20	1660	1629	1577	1507	1413	1205	931	614	323	149	76.5	37.2	11.8	2.51	0.50	0.13	0.08	0.08		
30	1495	1457	1394	1273	1096	888	637	388	205	108	56.2	24.7	7.68	2.05	0.49	0.14	0.09	0.09		
40	1099	1033	943	829	677	507	342	212	120	63.0	32.3	14.1	4.97	1.39	0.40	0.13	0.09	0.09		
50	594	551	488	412	331	244	164	99.2	57.2	30.6	16.3	7.78	3.12	0.89	0.28	0.11	0.09	0.09		
60	269	244	212	171	130	91.3	59.5	35.9	22.6	13.9	7.69	3.87	1.70	0.57	0.18	0.10	0.10	0.09		
70	84.6	74.8	63.6	50.5	37.9	27.3	19.6	13.2	8.50	5.45	3.07	1.47	0.69	0.28	0.12	0.11	0.11	0.11		
80	13.4	9.47	5.77	5.71	5.82	6.15	4.78	3.55	2.45	1.60	0	0.39	0.26	0.17	0.14	0.14	0.14	0.14		
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		
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		
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		
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		
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		
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		
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		
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		
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		
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		

## 4.0 LM-79 Measurement and Test Results

### 4.2 THD and PF Test

<b>Model No.</b>	BULLET2X20 @30W4000K	<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

Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	iTHD(%)
120.0	60.0	0.264	31.3	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\*\*\*\*\*