

LM-79-08 Test Report
Beyond LED Technology
(Brand Name: Beyond LED Technology)

LED Flood Light

Model Name(s):

BLT-FLE150W-50KSVP-S

Representative (Tested) Model:

BLT-FLE150W-50KSVP-S

Model Difference:

1. **XXK** represents CCT, can be 30K for 3000K, 40K for 4000K, 50K for 5000K or 57K for 5700K;
2. **X** represents photocell, can be blank for without photocell or **P** for with photocell
3. **M=** represents Mounting mean, can be blank for Trunnion, **S** for Shipfitter, **Y** for Yoke or **K** for Knuckle;
4. All is the same construction, except CCT, mounting mean and function.

Prepare by :



Engineer: Alan Wang

Date: 2021-01-18

Review by:



Technical Lead: Vincent Yuan

Issue Date: 2021-01-31

Revised Date: N/A

- Note:
1. The results contained in this report pertain only to the tested samples.
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 3. This report does not imply product certification, approval, or endorsement by NVLAP, or any agency of the Federal Government.

Client Information:

Product Information:

Model Number:	BLT-FLE150W-50KSVP-S
Product Type:	Architectural Flood and Spot Luminaires
Rating Input:	120-277Vac, 50/60Hz, 150W
Declared CCT:	5700K
Declared Light Output:	22500 lm
LED Manufacturer:	Guangdong Elite Optoelectronic Technology Co., Ltd.
LED Model:	SMD2835
LED Quantity:	196 pcs
Driver Manufacturer:	SOSEN
Driver Model:	SS-150NL-260B

Test Information:

Standard Lamp:	Total Spectral Radiant Flux Standard Lamp, trace to NIST. 1. D908S for Gonio 2. D215S for Integrating Sphere
Date of Receipt Samples:	2021-01-07
Quantity of Receipt Samples:	1 pc
Sample Number:	210107008-S1

Laboratory Information:

Test Laboratory:	Dongguan New Testing Centre Co., Ltd
Laboratory Address:	3F, No. 1 the 1 st North Industry Road, Songshan Lake Science & Technology Park, Dongguan, Guangdong, China
Laboratory Contact Name:	Neil Zhong
Laboratory Contact E-mail:	Neil_zhong@ntc-cert.com

Report Information:

Issued Date of Test Report:	2021-01-31
Revised Date of Test Report:	N/A
Test Report No.:	NTCLR21010070
Remark (If applicable):	N/A

Test Specification:	
Date of Test	2021-01-12
Test Item	1. Total Luminous Flux 2. Luminous Distribution Intensity 3. Luminous Efficacy 4. Correlated Color Temperature 5. Color Rendering Index 6. Chromaticity Coordinate 7. Fidelity Index 8. Gamut Index 9. Local Chroma Shift 10. THD and PF
Reference Standard	IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products ANSI C78.377-2017 Specifications for the Chromaticity of Solid State Lighting Products CIE 13.3-1995 Method of Measuring and Specifying Color Rendering Properties of Light Sources CIE 15-2004 Technical Report Colorimetry ANSI IES TM-30-18 IES Method for Evaluating Light Source Color Rendition ANSI C78.77-10-2014 Harmonic Emission Limits – Related Power Quality Requirements IES TM-15-11 Luminaire Classification System for Outdoor Luminaires Addendum A for IES TM-15-11 Backlight, Uplight, and Glare (BUG) Ratings

Test Methods:
<p>1. Photometric and Electrical Measurements – Light Distribution Method:</p> <p>Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at 25 °C ± 1°C, measured at a point not more than 1 m from the sample and at the same height as the sample. The sample was operated at required Voltage and Frequency. It was stabilized before measurement was made. Luminous Flux, Luminaire Efficacy and Zonal Lumen were calculated from the software taken at 1° vertical intervals and 15° horizontal intervals.</p>
<p>2. Photometric and Electrical Measurements – Integrating Sphere Method:</p> <p>Photometric parameters were measured using an integrating sphere, as spectroradiometer and software. The ambient temperature condition inside the sphere was measured at 25 °C± 1°C. The sample measurements were made using a spectroradiometer connected by a fiber optic cable and detector through the detector port of the integrating sphere. The sample was operated at require Voltage and Frequency. It was stabilized before measurement was made. Chromaticity Coordinates, Correlated Color Temperature and Color Rendering Index were calculated from the spectral radiant flux measurements taken at least 1 nm intervals over the rage of 380 to 780 nm.</p>
<p>3. THD and PF Measurements:</p> <p>The sample was tested according to the ANSI C82.77-2002, the sample was operated at requirement Voltage and Frequency, and was stabilized before measurement. The Total Harmonic Distortion was calculated from the Digital Power Meter.</p>

Integrating Sphere Test Results:

Test Condition:

Test Ambient (°C)	Test Humidity (%)	Orientation	Stabilization Time (minute)	Test Time (minute)
25.4	41.0	Face Down	90	10

Electrical Data:

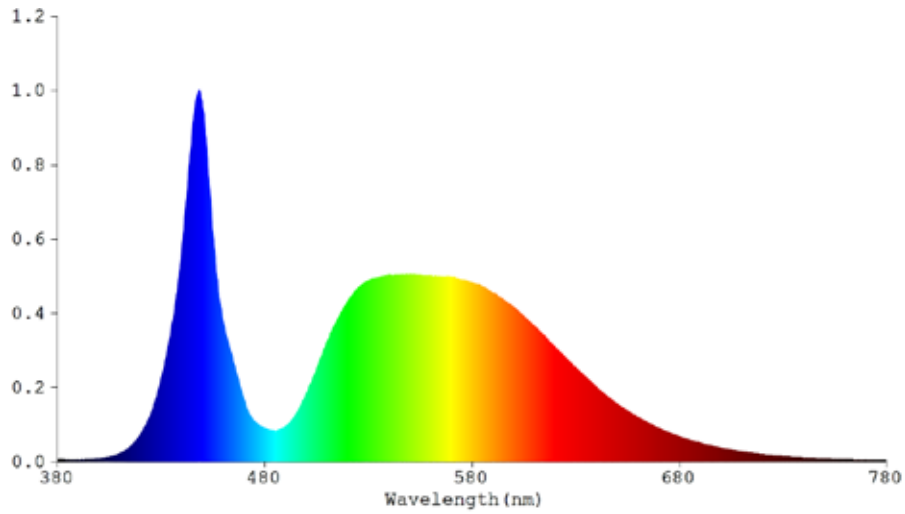
Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor
120.0	60	1.2430	149.20	0.9990

Color Data:

Parameter	Result
CCT(K)	5712
R _a	70.7
R _r	72
R _g	94
R _{cs, h1}	-18%
Chromaticity, (x, y)	(0.3271, 0.3480)
Chromaticity, (u', v')	(0.2006, 0.4802)
Duv	0.0059

Specify Color Rendering			
R1	68	R9	-37
R2	74	R10	39
R3	78	R11	70
R4	72	R12	40
R5	70	R13	69
R6	66	R14	88
R7	80	R15	62
R8	57	-	-

Spectrum Diagram:

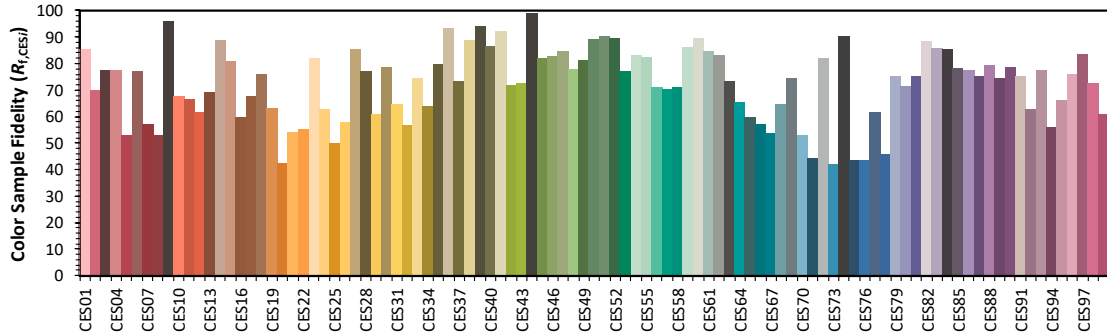
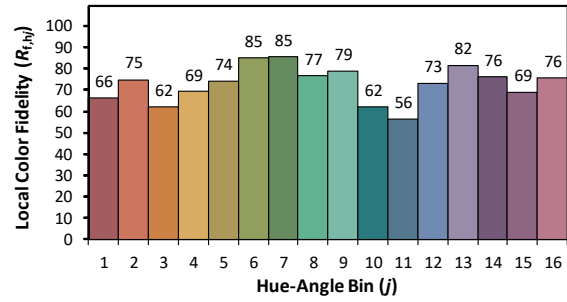
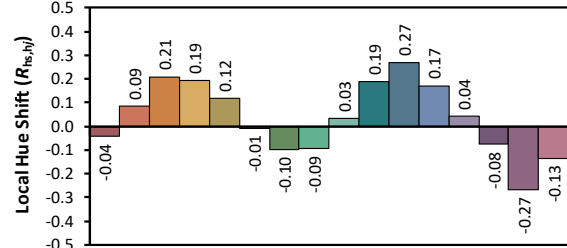
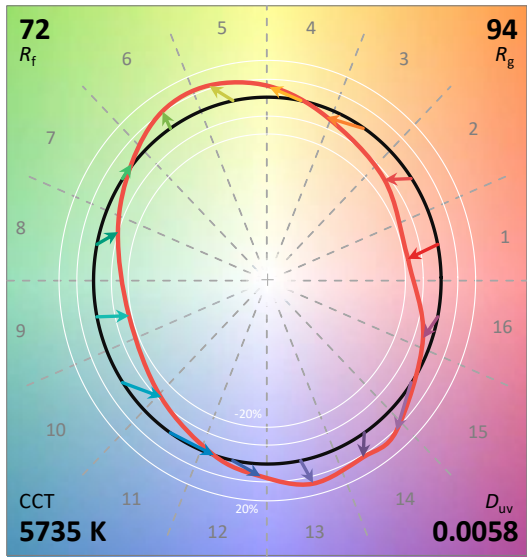
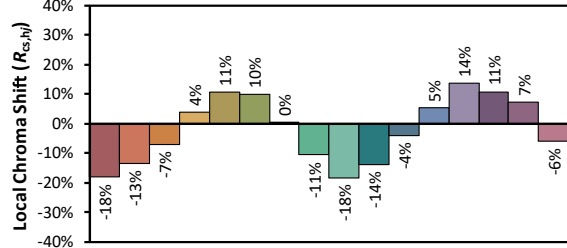
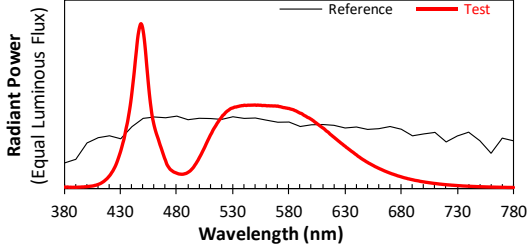


IES TM-30-18 Color Rendition Result:

ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1
Date: 2021/1/18

Manufacturer: Beyond LED Technology
Model: BLT-FLE150W-50KSVP-S



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

x 0.3270
 y 0.3477
 u' 0.2006
 v' 0.4801

CIE 13.3-1995 (CRI)	
R_a	71
R_9	-37

Colors are for visual orientation purposes only. Created with the ANSI/IES TM-30-18 Calculator Version 2.00.

Spectrum Data:

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0069	447	0.9827	514	0.3716	581	0.4811	648	0.1641	715	0.0239
381	0.0047	448	0.9994	515	0.3826	582	0.4794	649	0.1597	716	0.0231
382	0.0062	449	0.9880	516	0.3942	583	0.4776	650	0.1561	717	0.0223
383	0.0065	450	0.9555	517	0.4040	584	0.4757	651	0.1516	718	0.0218
384	0.0045	451	0.9052	518	0.4144	585	0.4718	652	0.1483	719	0.0210
385	0.0053	452	0.8393	519	0.4227	586	0.4696	653	0.1445	720	0.0205
386	0.0050	453	0.7605	520	0.4320	587	0.4659	654	0.1407	721	0.0198
387	0.0046	454	0.6834	521	0.4421	588	0.4621	655	0.1372	722	0.0193
388	0.0047	455	0.6096	522	0.4470	589	0.4585	656	0.1332	723	0.0187
389	0.0049	456	0.5434	523	0.4556	590	0.4551	657	0.1295	724	0.0182
390	0.0044	457	0.4891	524	0.4625	591	0.4534	658	0.1266	725	0.0175
391	0.0050	458	0.4391	525	0.4684	592	0.4491	659	0.1229	726	0.0172
392	0.0054	459	0.4050	526	0.4729	593	0.4439	660	0.1199	727	0.0167
393	0.0056	460	0.3744	527	0.4781	594	0.4399	661	0.1166	728	0.0161
394	0.0058	461	0.3491	528	0.4829	595	0.4367	662	0.1138	729	0.0157
395	0.0065	462	0.3266	529	0.4856	596	0.4318	663	0.1106	730	0.0151
396	0.0067	463	0.3072	530	0.4873	597	0.4282	664	0.1076	731	0.0147
397	0.0068	464	0.2863	531	0.4908	598	0.4257	665	0.1043	732	0.0142
398	0.0078	465	0.2638	532	0.4927	599	0.4210	666	0.1017	733	0.0139
399	0.0080	466	0.2450	533	0.4929	600	0.4171	667	0.0988	734	0.0133
400	0.0087	467	0.2240	534	0.4955	601	0.4121	668	0.0961	735	0.0129
401	0.0097	468	0.2037	535	0.4965	602	0.4073	669	0.0934	736	0.0125
402	0.0105	469	0.1835	536	0.4988	603	0.4011	670	0.0908	737	0.0123
403	0.0112	470	0.1667	537	0.4996	604	0.3968	671	0.0882	738	0.0118
404	0.0119	471	0.1467	538	0.5015	605	0.3911	672	0.0857	739	0.0116
405	0.0129	472	0.1341	539	0.5011	606	0.3864	673	0.0838	740	0.0112
406	0.0142	473	0.1242	540	0.5036	607	0.3809	674	0.0812	741	0.0109
407	0.0163	474	0.1147	541	0.5030	608	0.3759	675	0.0791	742	0.0106
408	0.0175	475	0.1089	542	0.5021	609	0.3709	676	0.0764	743	0.0102
409	0.0200	476	0.1040	543	0.5036	610	0.3660	677	0.0740	744	0.0099
410	0.0222	477	0.0989	544	0.5039	611	0.3615	678	0.0722	745	0.0097
411	0.0250	478	0.0957	545	0.5036	612	0.3554	679	0.0702	746	0.0094
412	0.0280	479	0.0931	546	0.5040	613	0.3486	680	0.0681	747	0.0091
413	0.0320	480	0.0904	547	0.5041	614	0.3437	681	0.0660	748	0.0088
414	0.0363	481	0.0877	548	0.5043	615	0.3391	682	0.0638	749	0.0086
415	0.0409	482	0.0857	549	0.5047	616	0.3319	683	0.0620	750	0.0083
416	0.0466	483	0.0850	550	0.5048	617	0.3255	684	0.0604	751	0.0080
417	0.0527	484	0.0842	551	0.5029	618	0.3203	685	0.0588	752	0.0078
418	0.0586	485	0.0842	552	0.5047	619	0.3142	686	0.0565	753	0.0076
419	0.0666	486	0.0849	553	0.5038	620	0.3091	687	0.0555	754	0.0074
420	0.0744	487	0.0870	554	0.5034	621	0.3032	688	0.0535	755	0.0071
421	0.0833	488	0.0885	555	0.5036	622	0.2977	689	0.0522	756	0.0069
422	0.0943	489	0.0916	556	0.5015	623	0.2920	690	0.0506	757	0.0068
423	0.1043	490	0.0957	557	0.5021	624	0.2862	691	0.0492	758	0.0065
424	0.1172	491	0.1001	558	0.5020	625	0.2809	692	0.0473	759	0.0065
425	0.1303	492	0.1052	559	0.5018	626	0.2751	693	0.0462	760	0.0062
426	0.1458	493	0.1122	560	0.5002	627	0.2698	694	0.0451	761	0.0059
427	0.1637	494	0.1196	561	0.5002	628	0.2647	695	0.0440	762	0.0058
428	0.1834	495	0.1277	562	0.5006	629	0.2585	696	0.0425	763	0.0057
429	0.2038	496	0.1386	563	0.4995	630	0.2543	697	0.0407	764	0.0055
430	0.2251	497	0.1483	564	0.4998	631	0.2476	698	0.0398	765	0.0053
431	0.2495	498	0.1596	565	0.4995	632	0.2432	699	0.0385	766	0.0053
432	0.2754	499	0.1707	566	0.4989	633	0.2376	700	0.0376	767	0.0050
433	0.2999	500	0.1840	567	0.4993	634	0.2326	701	0.0364	768	0.0050
434	0.3343	501	0.1961	568	0.4990	635	0.2272	702	0.0353	769	0.0048
435	0.3685	502	0.2092	569	0.4976	636	0.2221	703	0.0345	770	0.0046
436	0.3988	503	0.2233	570	0.4987	637	0.2176	704	0.0334	771	0.0045
437	0.4384	504	0.2366	571	0.4956	638	0.2122	705	0.0323	772	0.0044
438	0.4792	505	0.2506	572	0.4951	639	0.2066	706	0.0315	773	0.0043
439	0.5260	506	0.2659	573	0.4932	640	0.2022	707	0.0304	774	0.0040
440	0.5813	507	0.2807	574	0.4913	641	0.1962	708	0.0295	775	0.0039
441	0.6414	508	0.2949	575	0.4892	642	0.1910	709	0.0286	776	0.0039
442	0.7027	509	0.3085	576	0.4889	643	0.1870	710	0.0278	777	0.0038
443	0.7724	510	0.3228	577	0.4869	644	0.1815	711	0.0272	778	0.0037
444	0.8369	511	0.3343	578	0.4863	645	0.1771	712	0.0261	779	0.0037
445	0.9041	512	0.3489	579	0.4843	646	0.1725	713	0.0254	780	0.0037
446	0.9505	513	0.3610	580	0.4839	647	0.1686	714	0.0244	N/A	N/A

Goniophotometer Test Results:

Test Condition:

Test Ambient (°C)	Test Humidity (%)	Orientation	Stabilization Time (minute)	Test Time (minute)
24.1	42.6	Face Down	90	25

Electrical Data:

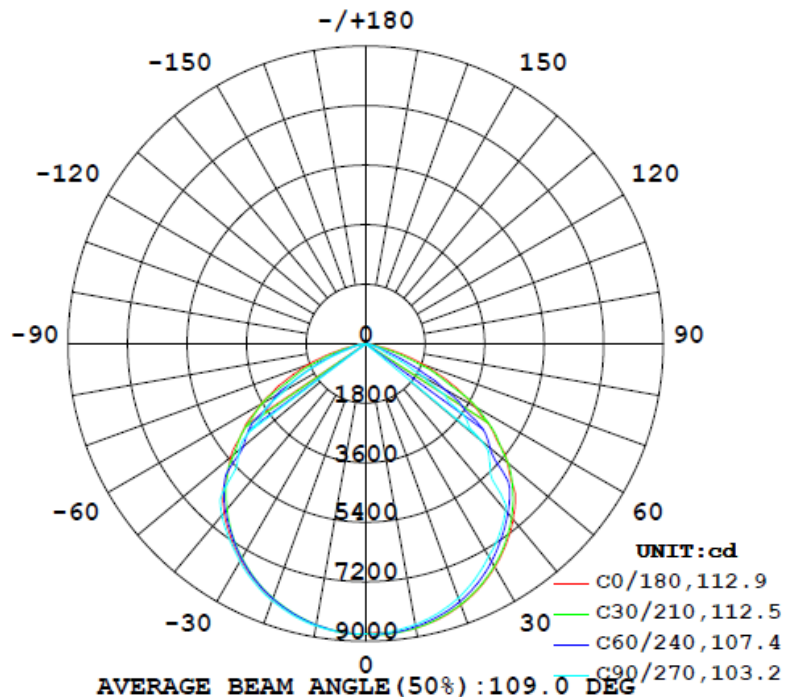
Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor
120.0	60	1.2430	149.20	0.9990
277.0	60	0.5679	146.10	0.9287

Goniophotometer Data:

Parameter	Results			
	120V		277V	
Total Luminous (lm)	22656.7		22223.1	
Luminous Efficacy (lm/w)	151.85		152.11	
Zonal Lumens Distribution (0-90°)	99.9%		99.9%	
Beam Angle (50%) (°)	0-180°	90-270°	0-180°	90-270°
	102.2	112.1	102.9	112.1
Field Angle (10%) (°)	0-180°	90-270°	0-180°	90-270°
	137.1	151.7	139.0	151.8
NEMA Type	7H x 7V		7H x 7V	

Luminous Intensity Distribution Diagram (120V):

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

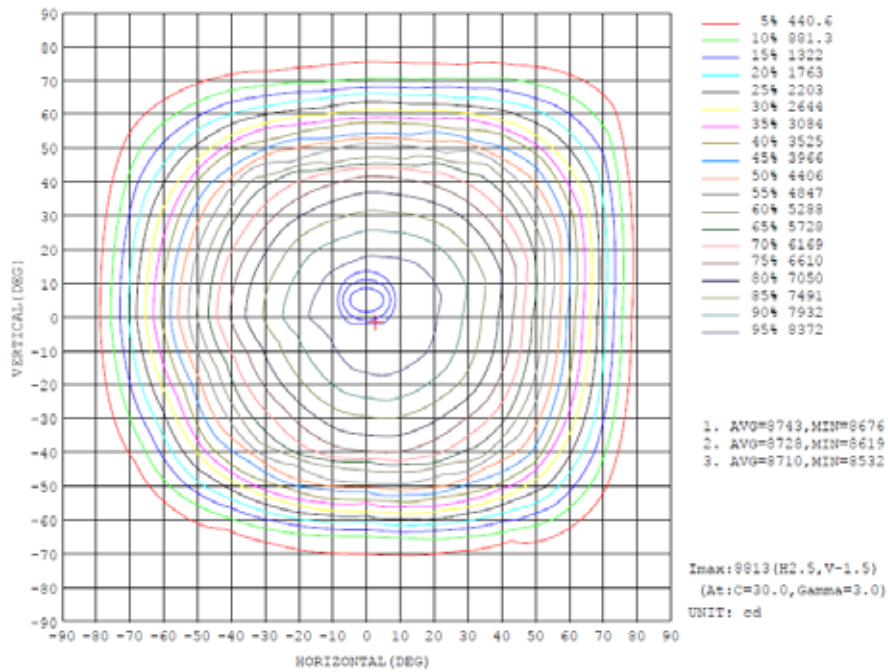


Zonal Flux Diagram (120V):

ZONAL FLUX DIAGRAM:

y	C0	C45	C90	C135	C180	C225	C270	C315	y	± zone	± total	±lum, lamp
10	8735	8702	8623	8496	8467	8641	8641	8719	0- 10	831.7	831.7	3.47,3.47
20	8414	8334	8191	7993	8224	8214	8272	8435	10- 20	2395	3227	14.2,14.2
30	7804	7665	7438	7203	7555	7527	7607	7879	20- 30	3465	4892	30.4,30.4
40	6934	6885	6585	6167	6660	6565	6773	7033	30- 40	4476	11367	50.2,50.2
50	5598	5530	4578	4691	5125	5411	4993	5947	40- 50	4611	15978	70.5,70.5
60	3834	3354	2089	2498	3462	3449	2821	3981	50- 60	3774	19753	87.2,87.2
70	1875	963.8	448.7	442.5	1843	1381	930.7	1872	60- 70	2141	21893	96.6,96.6
80	244.9	91.22	33.90	23.60	327.7	227.0	245.1	343.0	70- 80	472.9	22546	99.6,99.6
90	0.8319	0.4574	0.3801	0.8519	1.185	1.733	2.014	15.76	80- 90	49.52	22436	99.9,99.9
100	0.9403	0.8556	0.7581	1.075	2.153	1.492	1.127	1.373	90-100	1.225	22637	99.9,99.9
110	1.448	1.327	1.322	1.747	2.745	2.515	2.039	2.344	100-110	1.690	22639	99.9,99.9
120	2.422	2.103	2.150	2.720	3.543	3.248	2.879	2.861	110-120	2.272	22641	99.9,99.9
130	3.566	3.135	3.261	3.814	5.343	4.854	4.572	3.968	120-130	2.978	22644	99.9,99.9
140	4.475	4.281	4.438	4.715	6.218	6.550	6.028	5.559	130-140	3.639	22648	100,100
150	4.909	4.831	4.915	5.348	7.108	7.355	7.122	6.706	140-150	3.548	22651	100,100
160	5.758	5.595	5.311	6.360	7.965	7.899	7.346	7.208	150-160	2.927	22654	100,100
170	6.465	6.731	6.537	6.984	8.131	8.218	7.807	7.473	160-170	1.984	22656	100,100
180	7.485	7.485	7.485	7.485	7.750	7.750	7.750	7.750	170-180	0.7229	22657	100,100
DES	LUMINOUS INTENSITY:cd								UNIT:lm			

Isocandela Diagram (120V):

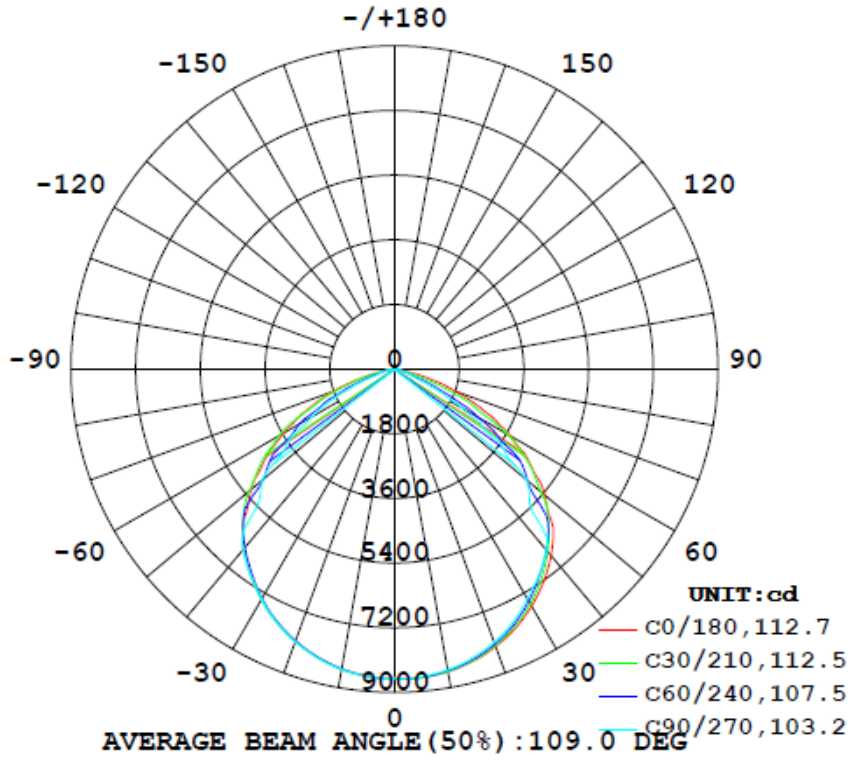


Luminous Distribution Intensity Data (120V):

Table--1 and Table--2 data tables showing luminous distribution intensity. Table--1 covers 0 to 270 degrees, and Table--2 covers 285 to 345 degrees. Both tables include columns for 'C (DEG)' and 'I (CD)' and rows for various angles from 0 to 180 degrees.

Luminous Intensity Distribution Diagram (277V):

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



Zonal Flux Diagram (277V):

ZONAL FLUX DIAGRAM:

γ	c0	c45	c90	c135	c180	c225	c270	c315	γ	Φ zone	Φ total	Wlum, lamp
10	8555	8530	8487	8456	8472	8479	8490	8528	0= 10	817.5	817.5	3.48, 3.48
20	8222	8169	8093	8041	8058	8063	8079	8171	10= 20	2355	3172	14.3, 14.3
30	7622	7512	7306	7350	7461	7389	7393	7539	20= 30	3602	6774	30.5, 30.5
40	6776	6556	6563	6377	6320	6447	6560	6616	30= 40	4399	11173	50.3, 50.3
50	5651	5417	6808	5341	5214	5312	4787	5483	40= 50	4537	15710	70.7, 70.7
60	3728	3287	2187	3210	3389	3387	2459	3478	50= 60	3713	19625	87.4, 87.4
70	1622	942.6	489.0	932.3	1006	1051	795.2	1317	60= 70	2097	21523	96.8, 96.8
80	236.2	89.49	61.59	100.9	321.1	323.3	199.4	206.5	70= 80	427.6	22150	99.7, 99.7
90	0.5144	0.4445	0.3459	0.4291	1.155	1.463	0.9197	1.037	80= 90	31.09	22203	99.9, 99.9
100	0.9197	0.8378	0.6939	0.8859	2.106	1.656	1.194	1.474	90=100	0.9902	22204	99.9, 99.9
110	1.437	1.301	1.233	1.455	2.084	2.462	2.043	2.473	100=110	1.075	22204	99.9, 99.9
120	2.374	2.063	2.020	2.371	3.469	3.183	2.941	3.042	110=120	2.211	22206	99.9, 99.9
130	3.493	3.074	3.067	3.432	4.944	4.756	4.689	4.364	120=130	2.931	22211	99.9, 99.9
140	4.386	4.207	4.265	4.512	6.092	6.420	6.047	5.928	130=140	3.997	22215	100, 100
150	4.910	4.745	4.789	5.050	6.959	7.207	7.022	6.855	140=150	3.899	22216	100, 100
160	5.643	5.488	5.313	5.913	7.702	7.751	7.258	7.198	150=160	2.968	22221	100, 100
170	6.531	6.405	6.400	6.584	7.961	8.057	7.449	7.441	160=170	1.944	22223	100, 100
180	8.203	8.203	8.203	8.203	7.695	7.695	7.695	7.695	170=180	0.7041	22224	100, 100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Isocandela Diagram (277V):

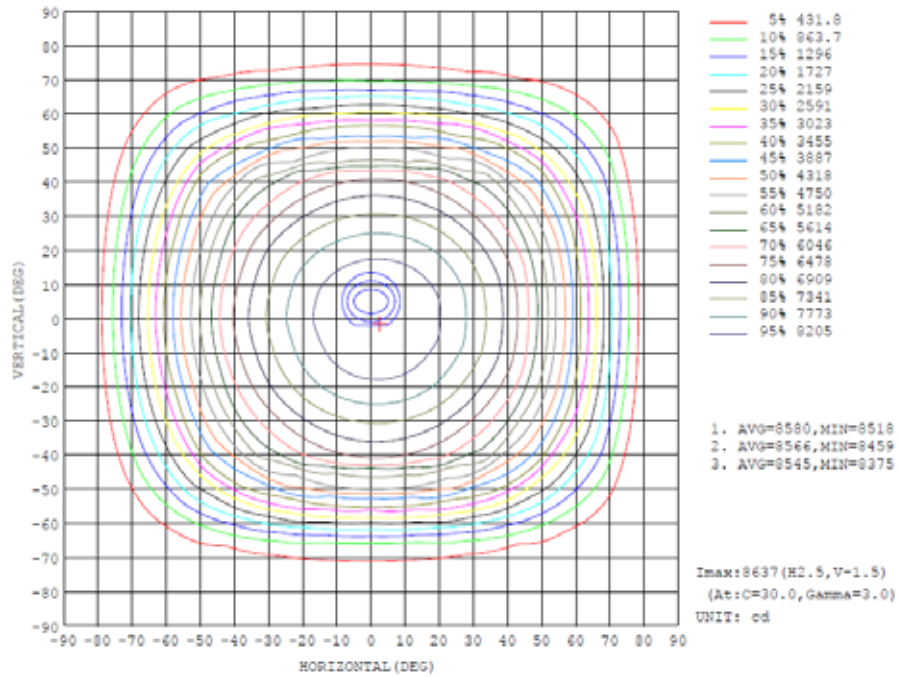


Photo of Sample:



Equipment List:

Equipment ID	Equipment Name	Last Cal.	Due Cal.
NTC-F01-001	Goniophotometer System	2020-11-12	2021-11-11
NTC-F01-006	2.0 meter Integrating Sphere	2020-11-12	2021-11-11
NTC-F01-012	Standard Lamp	2020-11-12	2021-11-11
NTC-F01-013	Standard Lamp	2020-11-12	2021-11-11
NTC-F01-031	Digital Power Meter	2020-08-22	2021-08-21
NTC-F01-019	Temperature & Humidity Meter	2020-11-13	2021-11-12

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