

LM-79-08 Test Report

For

Beyond LED Technology

LED Linear High Bay Light

Model Name(s):

BLT-LHBC(240/270/300)W-50KLV-S

Representative (Tested) Model:

BLT-LHBC(240/270/300)W-50KLV-S

Model Difference:

1. **XX** represents CCT, can be **40** for 4000K or **50** for 5000K;
2. **Product** is wattage tunable product, can be tunable from **240W, 270W and 310W**;
3. **X** represents Motion Sensor, can be blank for without Motion Sensor or **S** for with Motion Sensor;
4. **Y** represents Emergency, can be blank for without Emergency or **E** for with Emergency;

Prepared by:

Alan Wang

Engineer: Alan Wang

Date: 2022-10-11

Reviewed by:

Vincent Yuan

Technical Lead: Vincent Yuan

Issue Date: 2022-10-31

Revised Date: N/A

Note:

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 imply product certification, approval, or endorsement by NVLAP, or any agency of the Federal Government.

Client Information:

Applicant Name:	Beyond LED Technology
Brand Name:	Beyond LED Technology

Product Information:

Model Number:	BLT-LHBC(240/270/300)W-50KLV-S
Product Type:	High Bay Luminaires for Commercial and Industrial Buildings
Rating Input:	120-347Vac, 50/60Hz, 240W/270W/310W
Declared CCT:	5000K
Declared Light Output:	47200 lm
LED Manufacturer:	Guangdong Elite Optoelectronic Technology Co., Ltd
LED Model:	SMD2835
LED Quantity:	392 pcs
LED Driver Model:	RI-T320B-260B12

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:	2022-09-11
Quantity of Receipt Samples:	1 pc
Sample Number:	220911021-S1
Test Representation:	N/A

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:

Test Report Form:	LM-79-08_TRF_V1.5
Issued Date of Test Report:	2022-10-31
Revised Date of Test Report:	N/A
Test Report No.:	NTCLR22090249
Remark (If applicable):	N/A

Test Specification:	
Date of Test	2022-09-25
Test Item	<ol style="list-style-type: none"> 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	<p>IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products</p> <p>ANSI C78.377-2017 Specifications for the Chromaticity of Solid State Lighting Products</p> <p>CIE 13.3-1995 Method of Measuring and Specifying Color Rendering Properties of Light Sources</p> <p>CIE 15-2004 Technical Report Colorimetry</p> <p>ANSI IES TM-30-18 IES Method for Evaluating Light Source Color Rendition</p> <p>IES TM-15-11 Luminaire Classification System for Outdoor Luminaires</p> <p>Addendum A for IES TM-15-11 Backlight, Uplight, and Glare (BUG) Ratings</p>

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 $25\text{ }^{\circ}\text{C} \pm 1^{\circ}\text{C}$, 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 $25\text{ }^{\circ}\text{C} \pm 1^{\circ}\text{C}$. 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, 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:

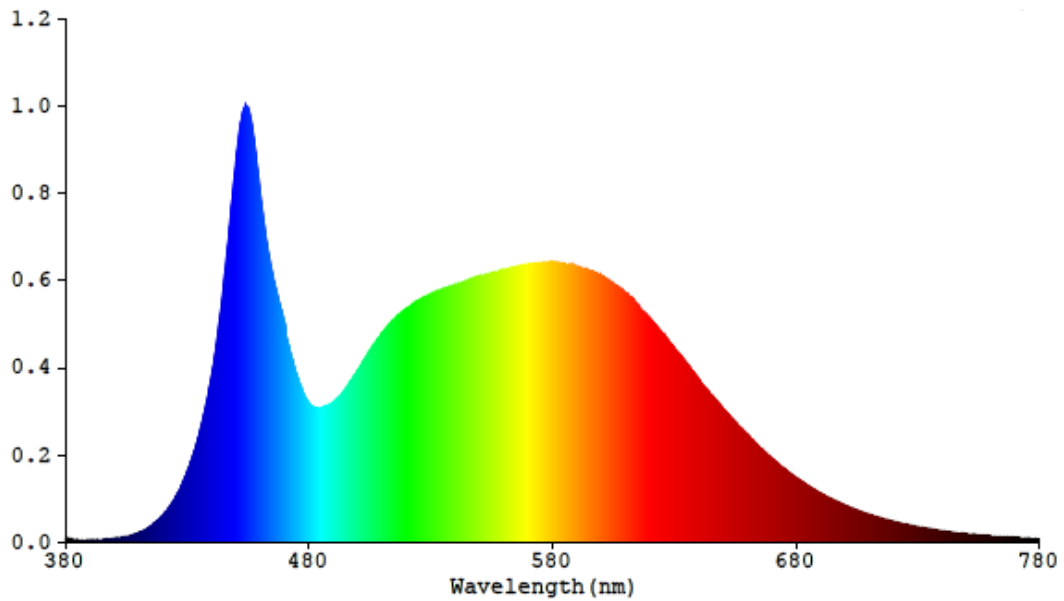
Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor
120.0	60	2.6211	313.81	0.9977

Color Data:

Parameter	Result
CCT(K)	5182
R _a	84.1
R _f	84
R _g	94
R _{cs, hl}	-12%
Chromaticity, (x, y)	(0.3409, 0.3552)
Chromaticity, (u', v')	(0.2072, 0.4858)
Duv	0.0035

Specify Color Rendering			
R1	82	R9	12
R2	90	R10	75
R3	94	R11	81
R4	83	R12	63
R5	83	R13	84
R6	85	R14	97
R7	88	R15	77
R8	68	-	-

Spectrum Diagram:

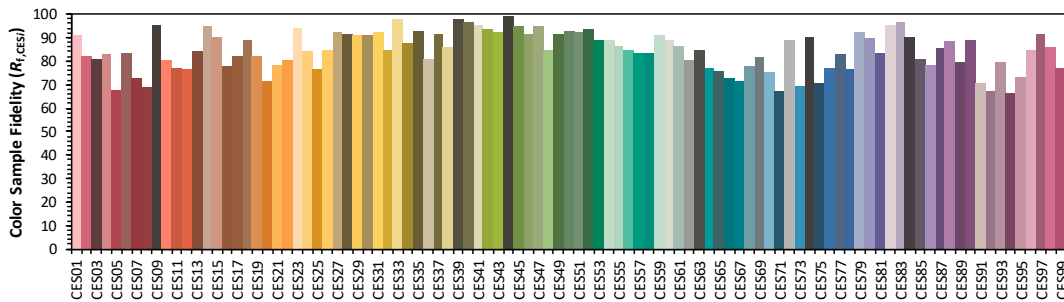
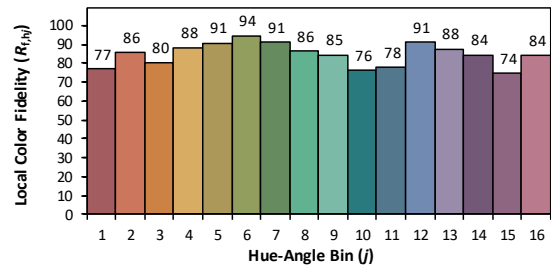
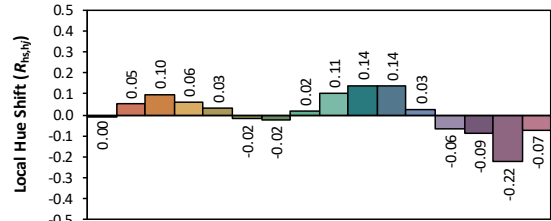
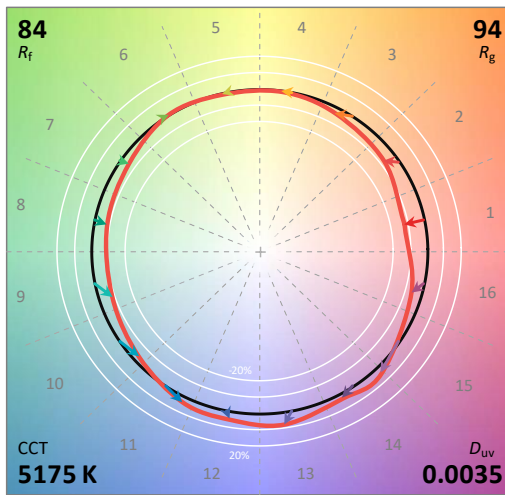
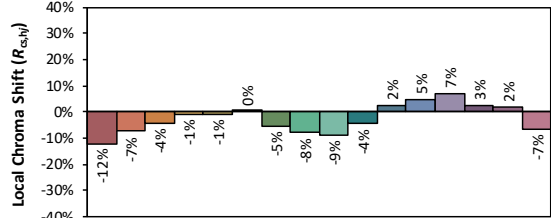
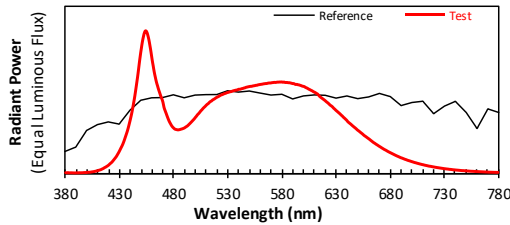


IES TM-30-18 Color Rendition Result:

ANSI/IES TM-30-18 Color Rendition Report

Source: 1 CIE F1
Date: 2022/10/11

Manufacturer: Beyond LED Technology
Model: BLT-LHBC (240/270/300) W-50KLV-S



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

x 0.3408
y 0.3550
u' 0.2072
v' 0.4857

CIE 13.3-1995 (CRI)
R_a 84
R_g 12

Spectrum Data:

nm	mW	nm	mW	nm	mW	nm	mW	nm	mW	nm	mW
380	0.0066	447	0.7023	514	0.5049	581	0.6398	648	0.3192	715	0.0546
381	0.0055	448	0.7643	515	0.5089	582	0.6410	649	0.3124	716	0.0526
382	0.0069	449	0.8228	516	0.5158	583	0.6384	650	0.3053	717	0.0516
383	0.0055	450	0.8754	517	0.5201	584	0.6381	651	0.2998	718	0.0504
384	0.0054	451	0.9231	518	0.5246	585	0.6381	652	0.2938	719	0.0488
385	0.0058	452	0.9605	519	0.5305	586	0.6364	653	0.2874	720	0.0474
386	0.0054	453	0.9890	520	0.5346	587	0.6366	654	0.2816	721	0.0460
387	0.0050	454	1.0000	521	0.5385	588	0.6346	655	0.2752	722	0.0445
388	0.0049	455	0.9924	522	0.5425	589	0.6328	656	0.2682	723	0.0434
389	0.0046	456	0.9695	523	0.5475	590	0.6304	657	0.2628	724	0.0420
390	0.0056	457	0.9377	524	0.5511	591	0.6305	658	0.2575	725	0.0410
391	0.0051	458	0.8958	525	0.5536	592	0.6267	659	0.2517	726	0.0397
392	0.0058	459	0.8496	526	0.5570	593	0.6240	660	0.2463	727	0.0386
393	0.0061	460	0.7983	527	0.5605	594	0.6250	661	0.2408	728	0.0373
394	0.0056	461	0.7543	528	0.5624	595	0.6221	662	0.2346	729	0.0363
395	0.0061	462	0.7098	529	0.5661	596	0.6210	663	0.2286	730	0.0349
396	0.0062	463	0.6743	530	0.5682	597	0.6182	664	0.2227	731	0.0341
397	0.0072	464	0.6407	531	0.5705	598	0.6158	665	0.2169	732	0.0330
398	0.0073	465	0.6148	532	0.5730	599	0.6124	666	0.2124	733	0.0322
399	0.0077	466	0.5885	533	0.5742	600	0.6110	667	0.2068	734	0.0313
400	0.0083	467	0.5660	534	0.5767	601	0.6083	668	0.2021	735	0.0300
401	0.0096	468	0.5429	535	0.5796	602	0.6033	669	0.1971	736	0.0295
402	0.0093	469	0.5236	536	0.5815	603	0.6000	670	0.1919	737	0.0286
403	0.0103	470	0.5007	537	0.5835	604	0.5959	671	0.1875	738	0.0275
404	0.0117	471	0.4640	538	0.5850	605	0.5912	672	0.1825	739	0.0267
405	0.0128	472	0.4416	539	0.5865	606	0.5877	673	0.1777	740	0.0259
406	0.0140	473	0.4214	540	0.5905	607	0.5834	674	0.1730	741	0.0251
407	0.0157	474	0.4005	541	0.5906	608	0.5799	675	0.1685	742	0.0245
408	0.0174	475	0.3808	542	0.5921	609	0.5748	676	0.1648	743	0.0238
409	0.0191	476	0.3634	543	0.5950	610	0.5708	677	0.1604	744	0.0232
410	0.0215	477	0.3495	544	0.5964	611	0.5671	678	0.1558	745	0.0223
411	0.0241	478	0.3360	545	0.5993	612	0.5617	679	0.1518	746	0.0216
412	0.0262	479	0.3262	546	0.6012	613	0.5576	680	0.1479	747	0.0209
413	0.0292	480	0.3186	547	0.6045	614	0.5493	681	0.1442	748	0.0208
414	0.0331	481	0.3120	548	0.6061	615	0.5409	682	0.1404	749	0.0201
415	0.0366	482	0.3093	549	0.6081	616	0.5345	683	0.1366	750	0.0194
416	0.0419	483	0.3075	550	0.6095	617	0.5287	684	0.1328	751	0.0188
417	0.0455	484	0.3062	551	0.6110	618	0.5232	685	0.1290	752	0.0183
418	0.0505	485	0.3075	552	0.6112	619	0.5173	686	0.1253	753	0.0177
419	0.0553	486	0.3092	553	0.6134	620	0.5116	687	0.1220	754	0.0171
420	0.0612	487	0.3117	554	0.6149	621	0.5046	688	0.1187	755	0.0165
421	0.0687	488	0.3138	555	0.6161	622	0.4987	689	0.1153	756	0.0163
422	0.0749	489	0.3169	556	0.6182	623	0.4925	690	0.1117	757	0.0160
423	0.0821	490	0.3203	557	0.6188	624	0.4849	691	0.1092	758	0.0154
424	0.0914	491	0.3258	558	0.6213	625	0.4781	692	0.1062	759	0.0149
425	0.1009	492	0.3305	559	0.6229	626	0.4730	693	0.1031	760	0.0143
426	0.1105	493	0.3361	560	0.6243	627	0.4664	694	0.1001	761	0.0142
427	0.1208	494	0.3437	561	0.6254	628	0.4578	695	0.0977	762	0.0137
428	0.1338	495	0.3511	562	0.6266	629	0.4514	696	0.0946	763	0.0133
429	0.1469	496	0.3589	563	0.6284	630	0.4436	697	0.0919	764	0.0129
430	0.1612	497	0.3669	564	0.6295	631	0.4372	698	0.0897	765	0.0126
431	0.1769	498	0.3753	565	0.6306	632	0.4306	699	0.0872	766	0.0123
432	0.1916	499	0.3833	566	0.6309	633	0.4239	700	0.0846	767	0.0118
433	0.2083	500	0.3932	567	0.6330	634	0.4172	701	0.0824	768	0.0114
434	0.2284	501	0.4021	568	0.6344	635	0.4094	702	0.0797	769	0.0111
435	0.2503	502	0.4124	569	0.6346	636	0.4031	703	0.0774	770	0.0109
436	0.2728	503	0.4200	570	0.6352	637	0.3947	704	0.0756	771	0.0105
437	0.2958	504	0.4289	571	0.6370	638	0.3883	705	0.0733	772	0.0101
438	0.3229	505	0.4387	572	0.6375	639	0.3808	706	0.0712	773	0.0098
439	0.3527	506	0.4465	573	0.6390	640	0.3737	707	0.0691	774	0.0096
440	0.3839	507	0.4554	574	0.6382	641	0.3641	708	0.0670	775	0.0094
441	0.4178	508	0.4633	575	0.6394	642	0.3573	709	0.0651	776	0.0091
442	0.4560	509	0.4702	576	0.6406	643	0.3511	710	0.0632	777	0.0088
443	0.4988	510	0.4783	577	0.6406	644	0.3451	711	0.0618	778	0.0087
444	0.5432	511	0.4854	578	0.6414	645	0.3379	712	0.0594	779	0.0085
445	0.5946	512	0.4906	579	0.6412	646	0.3316	713	0.0579	780	0.0085
446	0.6469	513	0.4988	580	0.6417	647	0.3252	714	0.0562	N/A	N/A

Goniophotometer Test Results:

Test Condition:

Test Ambient (°C)	Test Humidity (%)	Orientation	Stabilization Time (minute)	Test Time (minute)
25.0	44.9	Face Down	90	25

Electrical Data:

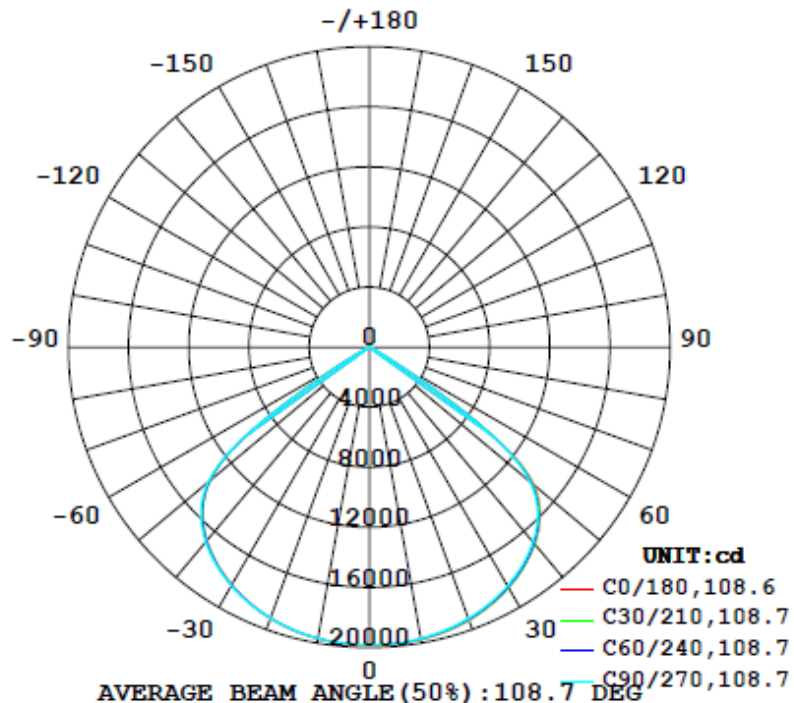
Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor
120.0	60	2.6211	313.81	0.9977

Goniophotometer Data:

Parameter	Results	
Total Luminous (lm)	47259.8	
Luminous Efficacy (lm/W)	150.60	
Zonal Lumens Distribution (20-50°)	67.6%	
Beam Angle (°)	108.7	
UGR	Viewed Crosswise	Viewed Endwise
	23.3	22.8

Luminous Intensity Distribution Diagram:

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM

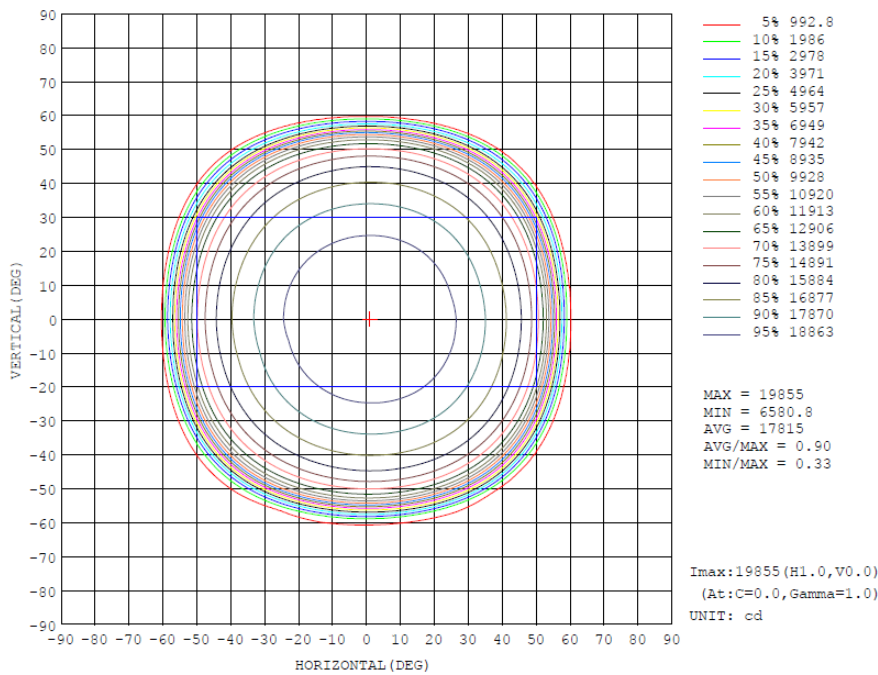


Zonal Flux Diagram:

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	φ zone	φ total	%lum, lamp
10	1977	1974	1969	1966	1971	1968	1968	1970	0- 10	1886	1886	3.99,3.99
20	1936	1931	1921	1917	1922	1920	1921	1927	10- 20	5521	7407	15.7,15.7
30	1850	1848	1834	1827	1827	1831	1835	1844	20- 30	8708	16115	34.1,34.1
40	1710	1707	1690	1678	1681	1683	1694	1704	30- 40	11105	27220	57.6,57.6
50	1430	1410	1393	1372	1385	1382	1401	1418	40- 50	12134	39354	83.3,83.3
60	104.7	94.24	125.9	110.2	122.1	112.7	64.86	96.15	50- 60	7199	46553	98.5,98.5
70	25.80	26.17	22.83	26.47	27.82	27.39	23.24	25.35	60- 70	428.3	46982	99.4,99.4
80	9.788	10.30	8.110	10.14	9.557	10.71	8.162	10.10	70- 80	182.5	47164	99.8,99.8
90	0.0609	0.0683	0.0630	0.0742	0.0765	0.0725	0.0672	0.0674	80- 90	44.31	47208	99.9,99.9
100	0.0836	0.0824	0.0816	0.0821	0.1639	0.1650	0.1637	0.1645	90-100	0.8286	47209	99.9,99.9
110	0.2022	0.2061	0.2094	0.2151	0.4407	0.4418	0.4381	0.4350	100-110	2.291	47211	99.9,99.9
120	0.3902	0.3987	0.4310	0.4315	0.7793	0.8163	0.8332	0.8035	110-120	4.525	47216	99.9,99.9
130	0.6868	0.6518	0.7125	0.7021	1.236	1.313	1.362	1.233	120-130	7.035	47223	99.9,99.9
140	1.078	1.051	1.039	1.073	1.616	1.765	1.766	1.686	130-140	9.183	47232	99.9,99.9
150	1.421	1.402	1.437	1.418	2.122	2.236	2.269	2.223	140-150	10.02	47242	100,100
160	1.753	1.671	1.556	1.732	2.582	2.622	2.540	2.560	150-160	9.197	47251	100,100
170	2.006	1.981	1.820	1.929	2.587	2.602	2.527	2.481	160-170	6.279	47258	100,100
180	2.375	2.370	2.296	2.327	2.383	2.411	2.282	2.271	170-180	2.181	47260	100,100
DEG	LUMINOUS INTENSITY:×10cd									UNIT:lm		

Isocandela Diagram:



Uncorrected UGR Table:

UGR Table - Uncorrected

Reflectances		70	70	50	50	30	70	70	50	50	30
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	10.3	11.7	10.6	12.0	12.3	9.8	11.2	10.2	11.5	11.8
	3H	10.2	11.4	10.6	11.8	12.1	9.7	11.0	10.1	11.3	11.7
	4H	10.1	11.3	10.5	11.7	12.0	9.7	10.8	10.1	11.2	11.6
	6H	10.1	11.2	10.5	11.5	11.9	9.6	10.7	10.0	11.0	11.4
	8H	10.0	11.1	10.5	11.4	11.9	9.6	10.6	10.0	11.0	11.4
	12H	10.0	11.0	10.4	11.4	11.8	9.5	10.5	9.9	10.9	11.3
4H	2H	10.1	11.3	10.5	11.6	12.0	9.6	10.8	10.0	11.1	11.5
	3H	10.0	11.0	10.5	11.4	11.8	9.6	10.5	10.0	10.9	11.3
	4H	10.0	10.8	10.4	11.2	11.7	9.5	10.3	9.9	10.8	11.2
	6H	9.9	10.6	10.4	11.1	11.6	9.4	10.2	9.9	10.6	11.1
	8H	9.9	10.6	10.4	11.0	11.5	9.4	10.1	9.9	10.5	11.0
	12H	9.8	10.4	10.3	10.9	11.4	9.4	10.0	9.8	10.4	10.9
8H	4H	9.9	10.5	10.3	11.0	11.5	9.4	10.1	9.9	10.5	11.0
	6H	9.8	10.4	10.3	10.8	11.3	9.3	9.9	9.8	10.4	10.8
	8H	9.7	10.3	10.3	10.8	11.3	9.3	9.8	9.8	10.3	10.8
	12H	9.7	10.2	10.2	10.7	11.2	9.2	9.7	9.7	10.2	10.7
12H	4H	9.8	10.4	10.3	10.9	11.4	9.3	9.9	9.8	10.4	10.9
	6H	9.7	10.3	10.3	10.7	11.3	9.3	9.8	9.8	10.2	10.8
	8H	9.7	10.2	10.2	10.6	11.2	9.2	9.7	9.7	10.2	10.7

Maximum UGR = 12.3

Corrected UGR Table:

UGR Table - Corrected

Reflectances		70	70	50	50	30	70	70	50	50	30
Ceiling Cavity		70	70	50	50	30	70	70	50	50	30
Walls		50	30	50	30	30	50	30	50	30	30
Floor Cavity		20	20	20	20	20	20	20	20	20	20
Room Size		UGR Viewed Crosswise					UGR Viewed Endwise				
X=2H	Y=2H	23.7	25.1	24.0	25.4	25.7	23.2	24.6	23.6	24.9	25.2
	3H	23.6	24.8	24.0	25.2	25.5	23.1	24.4	23.5	24.7	25.1
	4H	23.5	24.7	23.9	25.1	25.4	23.1	24.2	23.5	24.6	25.0
	6H	23.5	24.6	23.9	24.9	25.3	23.0	24.1	23.4	24.4	24.8
	8H	23.4	24.5	23.9	24.8	25.3	23.0	24.0	23.4	24.4	24.8
	12H	23.4	24.4	23.8	24.8	25.2	22.9	23.9	23.3	24.3	24.7
4H	2H	23.5	24.7	23.9	25.0	25.4	23.0	24.2	23.4	24.5	24.9
	3H	23.4	24.4	23.9	24.8	25.2	23.0	23.9	23.4	24.3	24.7
	4H	23.4	24.2	23.8	24.6	25.1	22.9	23.7	23.3	24.2	24.6
	6H	23.3	24.0	23.8	24.5	25.0	22.8	23.6	23.3	24.0	24.5
	8H	23.3	24.0	23.8	24.4	24.9	22.8	23.5	23.3	23.9	24.4
	12H	23.2	23.8	23.7	24.3	24.8	22.8	23.4	23.2	23.8	24.3
8H	4H	23.3	23.9	23.7	24.4	24.9	22.8	23.5	23.3	23.9	24.4
	6H	23.2	23.8	23.7	24.2	24.7	22.7	23.3	23.2	23.8	24.2
	8H	23.1	23.7	23.7	24.2	24.7	22.7	23.2	23.2	23.7	24.2
	12H	23.1	23.6	23.6	24.1	24.6	22.6	23.1	23.1	23.6	24.1
12H	4H	23.2	23.8	23.7	24.3	24.8	22.7	23.3	23.2	23.8	24.3
	6H	23.1	23.7	23.7	24.1	24.7	22.7	23.2	23.2	23.6	24.2
	8H	23.1	23.6	23.6	24.0	24.6	22.6	23.1	23.1	23.6	24.1

Maximum UGR = 25.7

Luminous Distribution Intensity Data:

Table--1 UNIT: *10cd

C (DEG)	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	255	270
0	1985	1985	1984	1983	1982	1982	1982	1982	1981	1980	1980	1980	1985	1985	1984	1983	1982	1982	1982
5	1984	1984	1982	1981	1980	1980	1979	1979	1978	1977	1976	1975	1982	1981	1980	1979	1979	1979	1978
10	1977	1976	1975	1974	1972	1971	1969	1968	1967	1966	1965	1965	1971	1970	1969	1968	1968	1968	1968
15	1961	1961	1959	1957	1954	1952	1950	1948	1947	1946	1946	1945	1952	1951	1950	1948	1948	1948	1949
20	1936	1935	1933	1931	1927	1924	1921	1920	1918	1917	1916	1916	1922	1922	1921	1920	1919	1920	1921
25	1899	1899	1897	1895	1891	1887	1883	1881	1880	1878	1876	1875	1881	1881	1881	1881	1881	1882	1883
30	1850	1850	1850	1848	1844	1838	1834	1831	1830	1827	1825	1822	1827	1828	1830	1831	1831	1833	1835
35	1788	1789	1789	1787	1782	1776	1771	1768	1766	1762	1759	1757	1762	1762	1764	1766	1768	1770	1773
40	1710	1711	1710	1707	1702	1696	1690	1686	1682	1678	1676	1675	1681	1681	1681	1683	1686	1689	1694
45	1606	1604	1601	1597	1592	1586	1581	1574	1567	1563	1561	1561	1569	1568	1567	1570	1573	1579	1587
50	1430	1426	1416	1410	1405	1400	1393	1384	1376	1372	1372	1374	1385	1383	1382	1382	1386	1394	1401
55	875	878	882	879	869	858	852	855	863	862	862	860	875	880	885	889	889	893	888
60	105	104	99.3	94.2	125	123	126	131	98.0	110	112	112	122	121	119	113	98.7	78.5	64.9
65	36.4	36.9	37.3	37.3	36.4	35.3	34.8	35.6	37.3	38.6	39.1	38.8	38.3	37.9	37.7	37.4	36.6	35.3	34.5
70	25.8	26.2	26.6	26.2	25.0	23.6	22.8	23.3	25.0	26.5	27.4	27.6	27.8	27.9	28.0	27.4	26.2	24.3	23.2
75	17.2	17.7	18.2	17.6	16.4	15.3	14.5	15.1	16.2	17.4	18.4	18.5	18.4	19.2	19.4	18.6	17.2	15.9	14.9
80	9.79	10.5	11.1	10.3	9.59	8.67	8.11	8.66	9.55	10.1	11.0	10.4	9.56	10.8	11.8	10.7	10.0	8.95	8.16
85	4.05	4.52	4.51	3.61	3.12	2.71	2.51	2.70	3.13	3.54	4.54	4.50	4.15	4.67	4.83	3.73	3.30	2.87	2.65
90	0.06	0.07	0.07	0.07	0.06	0.06	0.06	0.06	0.06	0.07	0.06	0.50	0.08	0.07	0.07	0.07	0.07	0.07	0.07
95	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.08	0.08	0.08	0.08	0.08	0.08	0.08
100	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.16	0.16	0.16	0.16	0.16	0.16	0.16
105	0.14	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.14	0.14	0.13	0.30	0.30	0.30	0.30	0.30	0.30	0.30
110	0.20	0.20	0.20	0.21	0.21	0.21	0.21	0.21	0.21	0.22	0.21	0.21	0.44	0.44	0.44	0.44	0.44	0.44	0.44
115	0.28	0.28	0.28	0.29	0.31	0.32	0.32	0.32	0.32	0.32	0.31	0.29	0.57	0.59	0.60	0.61	0.63	0.63	0.63
120	0.39	0.36	0.38	0.40	0.40	0.42	0.43	0.44	0.44	0.43	0.42	0.40	0.78	0.78	0.80	0.82	0.82	0.83	0.83
125	0.52	0.50	0.49	0.52	0.55	0.54	0.55	0.56	0.56	0.56	0.54	0.52	0.99	1.00	1.01	1.06	1.08	1.08	1.06
130	0.69	0.67	0.65	0.65	0.72	0.69	0.71	0.72	0.72	0.70	0.71	0.69	1.24	1.25	1.26	1.31	1.35	1.37	1.36
135	0.88	0.88	0.87	0.82	0.90	0.89	0.90	0.90	0.88	0.88	0.88	0.89	1.45	1.46	1.50	1.53	1.57	1.61	1.60
140	1.08	1.09	1.05	1.05	1.03	1.07	1.04	1.05	1.05	1.07	1.04	1.09	1.62	1.65	1.69	1.76	1.77	1.79	1.77
145	1.26	1.30	1.26	1.22	1.28	1.29	1.25	1.27	1.27	1.25	1.21	1.26	1.87	1.92	1.93	2.02	2.03	2.02	2.00
150	1.42	1.48	1.45	1.40	1.42	1.45	1.44	1.44	1.41	1.42	1.38	1.40	2.12	2.17	2.17	2.24	2.26	2.30	2.27
155	1.58	1.64	1.67	1.52	1.55	1.58	1.54	1.57	1.57	1.56	1.61	1.53	2.37	2.36	2.44	2.42	2.45	2.49	2.43
160	1.75	1.80	1.82	1.67	1.62	1.64	1.56	1.69	1.69	1.73	1.72	1.71	2.58	2.56	2.58	2.62	2.58	2.62	2.54
165	1.87	1.95	1.95	1.85	1.77	1.76	1.70	1.81	1.85	1.87	1.84	1.84	2.58	2.58	2.59	2.67	2.69	2.66	2.59
170	2.01	2.05	2.05	1.98	1.85	1.88	1.82	1.89	1.92	1.93	1.93	1.97	2.59	2.59	2.59	2.60	2.63	2.63	2.53
175	2.23	2.30	2.27	2.20	2.08	2.02	1.96	2.03	2.10	2.11	2.16	2.21	2.55	2.55	2.58	2.58	2.52	2.51	2.45
180	2.37	2.41	2.39	2.37	2.33	2.30	2.30	2.27	2.27	2.33	2.32	2.35	2.38	2.38	2.41	2.41	2.38	2.32	2.28

Table--2 UNIT: *10cd

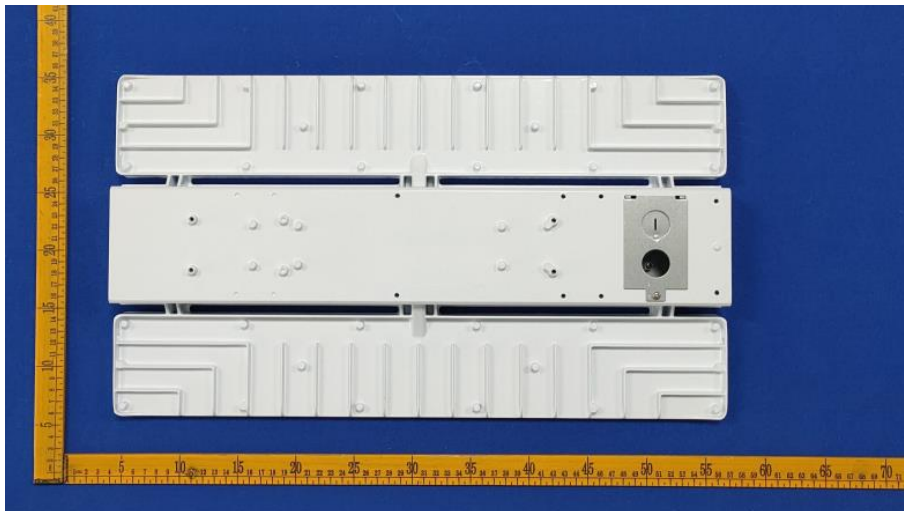
C (DEG)	285	300	315	330	345
0	1982	1981	1980	1980	1980
5	1979	1978	1978	1978	1978
10	1969	1970	1970	1970	1971
15	1950	1952	1954	1955	1956
20	1923	1925	1927	1929	1930
25	1886	1889	1891	1893	1894
30	1838	1842	1844	1845	1845
35	1777	1781	1783	1784	1783
40	1698	1701	1704	1706	1706
45	1591	1593	1596	1599	1601
50	1408	1412	1418	1423	1426
55	888	890	897	897	892
60	68.1	81.9	96.1	102	108
65	35.0	35.8	36.6	37.0	36.8
70	23.4	24.3	25.3	26.0	26.1
75	15.3	16.2	17.1	17.8	17.6
80	8.64	9.56	10.1	10.9	10.5
85	2.83	3.22	3.73	4.47	4.54
90	0.07	0.07	0.07	0.07	0.07
95	0.08	0.08	0.08	0.08	0.08
100	0.16	0.16	0.16	0.16	0.16
105	0.30	0.30	0.30	0.30	0.29
110	0.44	0.44	0.43	0.43	0.43
115	0.63	0.62	0.61	0.59	0.57
120	0.82	0.81	0.80	0.77	0.76
125	1.06	1.05	1.01	0.98	0.98
130	1.34	1.29	1.23	1.23	1.22
135	1.57	1.49	1.45	1.45	1.44
140	1.72	1.69	1.69	1.66	1.66
145	1.93	1.98	1.94	1.92	1.93
150	2.25	2.22	2.22	2.19	2.18
155	2.44	2.45	2.43	2.50	2.42
160	2.53	2.60	2.56	2.67	2.62
165	2.56	2.61	2.60	2.70	2.65
170	2.53	2.52	2.48	2.59	2.60
175	2.37	2.46	2.43	2.53	2.54
180	2.27	2.24	2.27	2.33	2.33

THD and PF Measurement Test Results:

Electrical Measurement:

Voltage (V)	Frequency (Hz)	Current (A)	Wattage (W)	Power Factor	iTHD(%)
120.0	60	2.6211	313.81	0.9977	3.95
277.0	60	1.1892	311.72	0.9463	4.76
347.0	60	1.0143	310.12	0.8811	7.33

Photo of Sample:



Equipment List:

Equipment ID	Equipment Name	Last Cal.	Due Cal.
NTC-F01-001	Goniophotometer System	2021-11-10	2022-11-09
NTC-F01-006	2.0 meter Integrating Sphere	2021-11-10	2022-11-09
NTC-F01-012	Standard Lamp	2021-11-10	2022-11-09
NTC-F01-013	Standard Lamp	2021-11-10	2022-11-09
NTC-F01-031	Digital Power Meter	2022-08-31	2023-08-30
NTC-F01-020	Temperature & Humidity Meter	2021-11-15	2022-11-14

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