



Report No.: BLC2106035E-A

LM-79-08 Test Report

For

Beyond LED Technology

(Brand Name: Beyond LED Technology)

Outdoor Pole/Arm-Mounted Area and Roadway Luminaires

Architectural Flood and Spot Luminaires

Model name(s): BLT-SB03D-150WJT3A1-GR10SP50

Remark: "a" can be any two letters for lamp colors; "b" can be "3RP", "3NP", "5RP", "5NP", "7RP" or "7NP" for Photocontrol type provided or blank for no Photocontrol provided; "c" can be "10SP" or "20SP" for Surge-Protective Device type provided or blank for no Surge-Protective Device provided; "d" can be "Z", "ZP", "ZM" or blank; "e" can be "AM", "DM", "YM", "A&DM", "FM", "TM" or "IM" for mounting bracket types; "f" can be any digits for CCT.

Representative (Tested) Model:

BLT-SB03D-150WJT3A1-GR10SP50

Test & Report By:

Arvin Qin

Engineer: Arvin Qin

Date: 2021-06-28

Review By:

Jason Luo

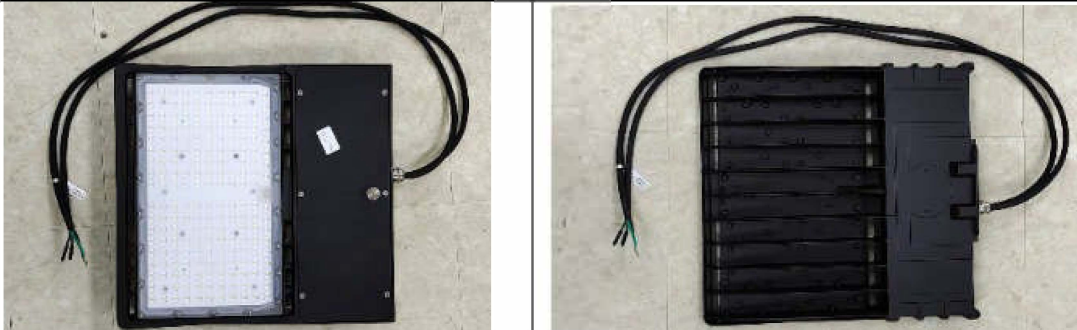
Manager: Jason Luo



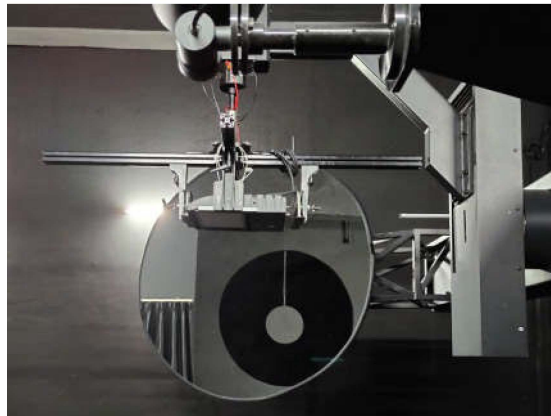
1.1 Product Information:

Model Number	BLT-SB03D-150WJT3A1-GR10SP50	
SKU (if available)	N/A	
Type of Luminaire (for integral lamps, list base type and lamp type)	Outdoor Pole/Arm-Mounted Area and Roadway Luminaires Architectural Flood and Spot Luminaires	
Rated Voltage / Frequency	120-277Vac, 50/60 Hz	
Nominal Power	150W	
Rated Initial Lamp Lumen	--	
Declared CCT	5000K	
LED Manufacturer	Bridgelux Inc.	
LED Model	BXEM-50C-12H-6C	
Sample Number	BLC2106035E-A1,A2,A3, A4	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s

Photo



Test Photo of Goniophotometer





1.2 Test Specifications:	
Date of Receipt	2021-04-25
Date of Test	2021-06-28
Test item	<ol style="list-style-type: none">1. Total Luminous Flux2. Luminous Distribution Intensity3. Luminous Efficacy4. Correlated Color Temperature5. Color Rendering Index6. Chromaticity Coordinate7. Electrical Parameters
Reference Standard	<ol style="list-style-type: none">1. IES LM-79-2008 Electrical and Photometric Measurements of Solid-State Lighting Products2. ANSI C78.377-2008 Specifications for the Chromaticity of Solid State Lighting Products3. CIE 13.3-1995 Method of Measuring and Specifying Colour Rendering Properties of Light Sources4. CIE 15-2004 Technical Report Colorimetry5. IESNA LM-16-93 Practical Guide to Colorimetry of Light Source6. IESNA TM-16-05 Technical Memorandum on Light Emitting Diode (LED) Sources and Systems
Reference Work Instruction	BL-QP-033

1.3 Test Methods

1) Photometric and Light Distribution Measurement – Goniophotometer Method:

Photometric parameters were measured using the goniophotometer and software. The ambient temperature shall be maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, 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 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Luminous flux, luminaire efficacy, zonal lumen were calculated from the software taken at 1° vertical intervals and 22.5° horizontal intervals.

2) Chromaticity Measurement – Sphere-Spectroradiometer Method:

Chromaticity parameters were measured using an integrating sphere, a spectroradiometer and software. The ambient temperature condition inside the sphere was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. 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 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Chromaticity coordinates, correlated color temperature and color rendering index were calculated from the spectral power distribution taken at 5 nm intervals over the range of 380 to 780 nm.

3) Electrical Measurements:

Electrical parameters were measured using power meters incorporated in goniophotometer or sphere-spectroradiometer system. The ambient temperature surrounding the sample was maintained at $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$. The sample was operated at 120 or rated Volts AC, 60Hz. It was stabilized before measurement was made. Voltage, frequency, current, power, power factor and total harmonic distortion were measured by and read from the power meter.



2.1 Electrical, Photometric and Chromaticity Measurements

(Refer to Work Instruction BL-QP-033)

Test date	2021-06-28	Test Ambient:	25.2 ° C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	BLT-SB03D-150WJT3A1-GR10SP50		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC210603	120.0	60	1.279	152.56	0.994	11.01
5E-A1	277.0	60	0.590	156.62	0.958	9.45
DLC Pass Criteria					>= 0.9(-3%)	<= 20(+5)

Chromaticity Measurement - Sphere-Spectroradiometer Method:

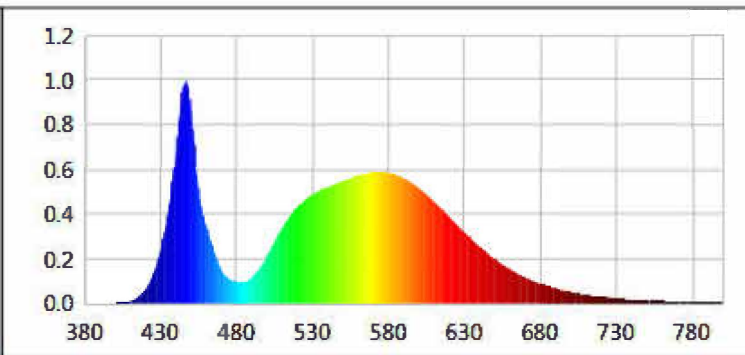
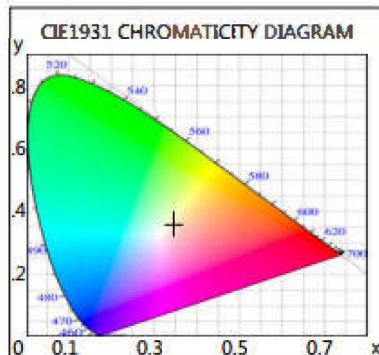
Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	68	R9	-36
Frequency (Hz)	60	R2	76	R10	43
CCT (K)	4953	R3	82	R11	68
Duv	0.0023	R4	72	R12	40
Chromaticity (x, y)	x=0.3469 y=0.3577	R5	69	R13	69
Chromaticity (u', v')	u(u')=0.2103 v'=0.4879	R6	67	R14	90
Color Rendering Index (CRI)	71	R7	81	R15	62
R9	-36	R8	55	--	--
Rf	72	--	--	--	--
Rg	95	--	--	--	--
Rcs,h1(%)	-18				

Photometric Measurement – Goniophotometer Method:

Parameter	Result		DLC V5.1 Pass Criteria
Test Voltage (V)	120.0	277.0	--
Frequency (Hz)	60	60	
Total Luminous (lm)	20962.9	22107.8	>=30000(-10%)
Luminous Efficacy (lm/W)	137.41	141.16	Premium: >= 120(-3%)
Most worst Luminous/Highest	133.85		
Zonal lumens in the 0-90° zone (%)	100	--	Category 1: >=100(-1) Category 2: >=85(-3)
Zonal lumens in the 80-90°zone (%)	2.9	--	<=10(+3)
Beam Angle (°)	125.3	--	--
Center Beam Candle Power (cd)	5121	--	--



Spectral Power Distribution & Chromaticity Diagram



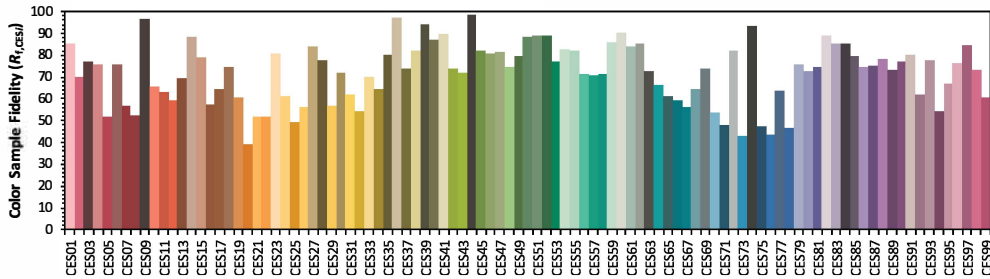
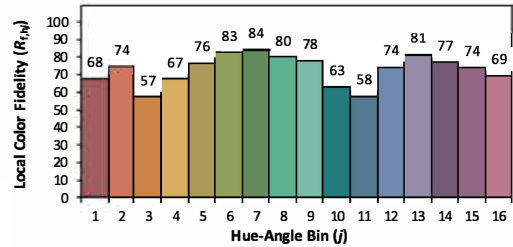
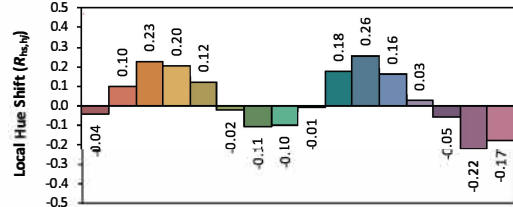
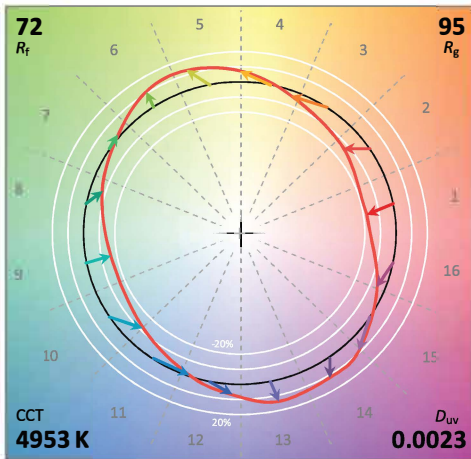
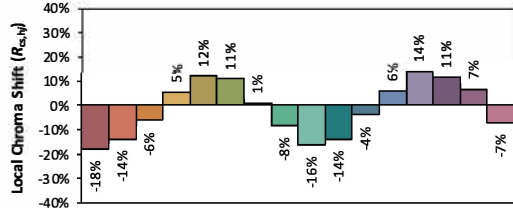
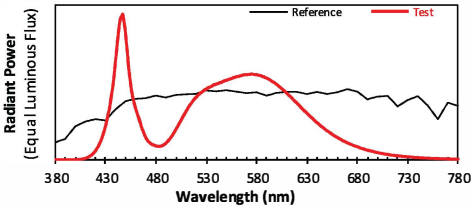
WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0006	0.3480	525	0.4618	273.2297	670	0.1172	69.3289
385	0.0008	0.4469	530	0.4853	287.1442	675	0.1020	60.3738
390	0.0007	0.3869	535	0.5042	298.3054	680	0.0892	52.7737
395	0.0003	0.1937	540	0.5211	308.3036	685	0.0770	45.5458
400	0.0012	0.6953	545	0.5321	314.8128	690	0.0669	39.5628
405	0.0035	2.0825	550	0.5465	323.3198	695	0.0584	34.5792
410	0.0105	6.2207	555	0.5590	330.7500	700	0.0496	29.3458
415	0.0273	16.1482	560	0.5704	337.4690	705	0.0434	25.6925
420	0.0606	35.8709	565	0.5802	343.2648	710	0.0381	22.5575
425	0.1241	73.4248	570	0.5851	346.1977	715	0.0325	19.2153
430	0.2306	136.4409	575	0.5901	349.1312	720	0.0283	16.7578
435	0.3994	236.3074	580	0.5861	346.7462	725	0.0239	14.1294
440	0.6785	401.4525	585	0.5751	340.2535	730	0.0210	12.4398
445	0.9760	577.4819	590	0.5614	332.1797	735	0.0180	10.6564
450	0.8602	508.9274	595	0.5403	319.6605	740	0.0162	9.5875
455	0.5162	305.4117	600	0.5180	306.4545	745	0.0135	7.9921
460	0.3512	207.7732	605	0.4887	289.1479	750	0.0117	6.9168
465	0.2431	143.8597	610	0.4564	270.0151	755	0.0108	6.3860
470	0.1516	89.6878	615	0.4243	251.0449	760	0.0098	5.7841
475	0.1111	65.7432	620	0.3898	230.6201	765	0.0084	4.9991
480	0.0955	56.4847	625	0.3531	208.9009	770	0.0074	4.3746
485	0.0945	55.8982	630	0.3193	188.9249	775	0.0058	3.4033
490	0.1134	67.0920	635	0.2865	169.4964	780	0.0046	2.7480
495	0.1535	90.8446	640	0.2554	151.1121	785	0.0035	2.0559
500	0.2089	123.6108	645	0.2262	133.8099	790	0.0039	2.2873
505	0.2710	160.3475	650	0.1998	118.2256	795	0.0035	2.0940
510	0.3333	197.1924	655	0.1760	104.1254	800	0.0021	1.2321
515	0.3873	229.1469	660	0.1544	91.3594			
520	0.4297	254.2270	665	0.1331	78.7408			



TM30

ANSI/IES TM-30-18 Color Rendition Report

Source: BXEM-50C-12H-6C Manufacturer: Beyond LED Technology
 Date: 2021/6/28 Model: BLT-SB03D-150WJT3A1-GR10SP50



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

x 0.3469
 y 0.3577
 u' 0.2103
 v' 0.4879

CIE 13.3-1995 (CRI)	
R _a	71
R ₉	-36

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



Zonal Lumen Tabulation

Zonal Lumen Summary

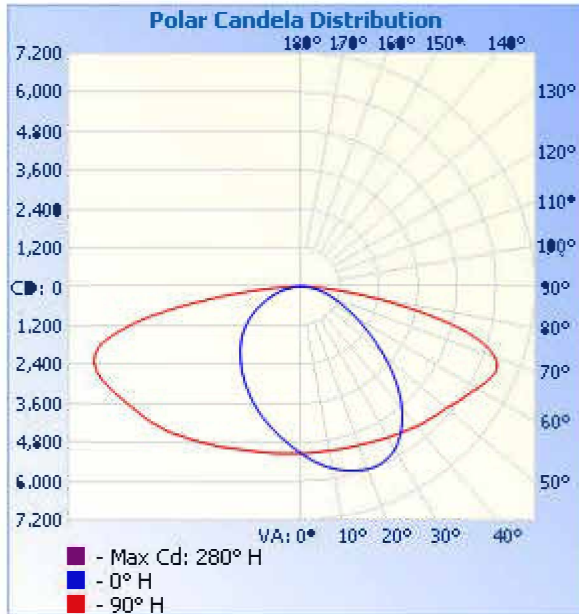
Zone	Lumens	% Lamp	% Luminaire
0-30	4,300.1	20.5%	20.5%
0-40	7,414.9	35.4%	35.4%
0-60	14,703.4	70.1%	70.1%
60-90	6,258.3	29.9%	29.9%
70-100	2,927.2	14%	14%
90-120	0	0%	0%
0-90	20,961.7	100%	100%
90-180	0	0%	0%
0-180	20,961.7	100%	100%

Lumens Per Zone

Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	489.2	2.3%	90-100	0	0%
10-20	1,453.0	6.9%	100-110	0	0%
20-30	2,357.9	11.2%	110-120	0	0%
30-40	3,114.8	14.9%	120-130	0	0%
40-50	3,595.7	17.2%	130-140	0	0%
50-60	3,692.8	17.6%	140-150	0	0%
60-70	3,331.1	15.9%	150-160	0	0%
70-80	2,312.6	11.0%	160-170	0	0%
80-90	614.6	2.9%	170-180	0	0%



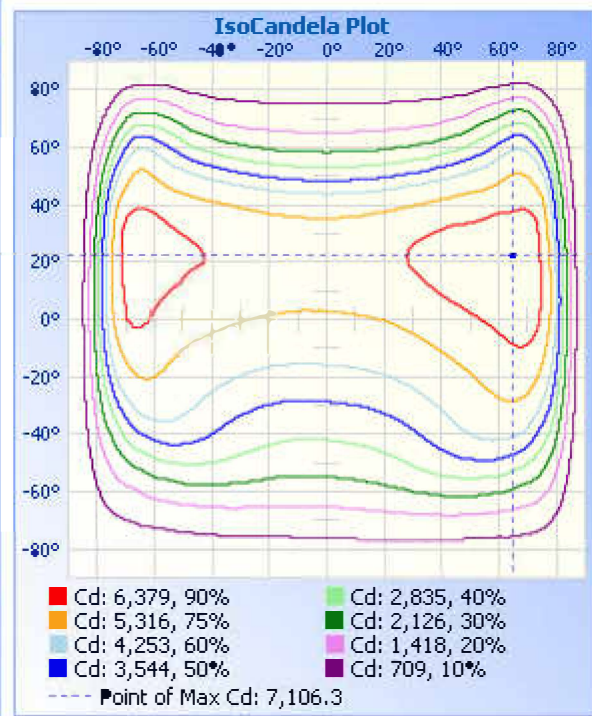
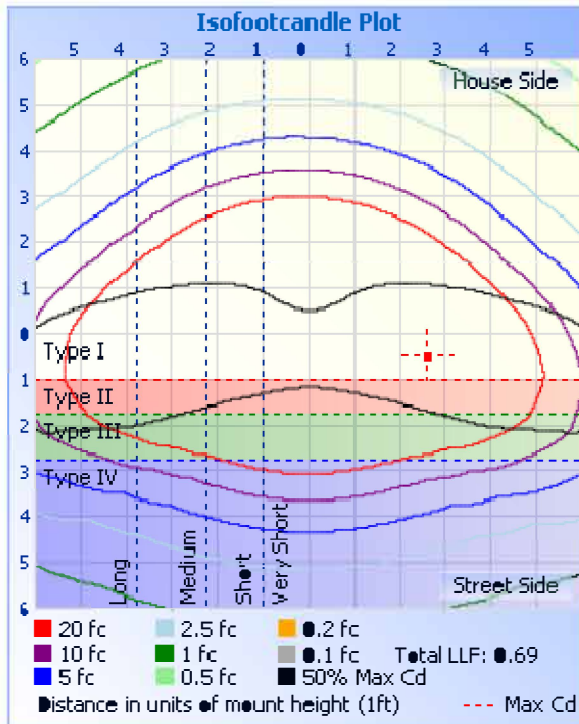
Photometric Data



Illuminance at a Distance

Center Beam fc	Beam Width	
5.7ft	159.5 ft	16.3 ft 61.1 ft
11.3ft	39.9 ft	32.5 ft 122.1 ft
17.0ft	17.7 ft	48.8 ft 183.2 ft
22.7ft	10.0 ft	65.1 ft 244.3 ft
28.3ft	6.4 ft	81.3 ft 305.3 ft
34.0ft	4.4 ft	97.6 ft 366.4 ft

■ Vert. Spread: 110.3°
■ Horiz. Spread: 159.0°





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Certificate#4810.01

Candela Table - Type C

	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	250	260	270	280	290	300	310	320	330	340	350	360	
0	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121	5121
1	5186	5183	5175	5166	5165	5154	5146	5135	5132	5119	5106	5098	5091	5083	5071	5065	5064	5059	5062	5068	5056	5073	5080	5086	5084	5104	5114	5121	5136	5151	5155	5165	5169	5184	5173	5175	5186	
2	5246	5241	5228	5217	5209	5192	5172	5151	5141	5118	5092	5076	5049	5043	5024	5014	4996	5004	5002	5006	5003	5024	5039	5049	5059	5090	5107	5127	5151	5178	5187	5202	5221	5235	5232	5234	5246	
3	5305	5305	5282	5265	5253	5240	5197	5171	5150	5116	5081	5056	5018	5007	4974	4963	4940	4946	4943	4947	4946	4971	5000	5018	5034	5074	5102	5129	5163	5204	5216	5243	5265	5289	5287	5289	5305	
4	5362	5361	5331	5315	5291	5274	5226	5189	5162	5114	5071	5035	4989	4969	4931	4907	4886	4889	4886	4892	4895	4923	4954	4981	5012	5058	5097	5139	5180	5228	5249	5286	5315	5340	5341	5351	5362	
5	5418	5420	5380	5361	5338	5308	5255	5207	5171	5110	5059	5009	4960	4927	4882	4854	4829	4830	4826	4834	4842	4874	4916	4954	4986	5043	5094	5146	5195	5252	5285	5332	5360	5391	5393	5404	5418	
6	5467	5470	5429	5406	5387	5346	5285	5228	5184	5112	5050	4991	4927	4892	4836	4801	4775	4774	4766	4779	4792	4819	4877	4917	4963	5022	5090	5158	5218	5278	5320	5375	5422	5441	5446	5458	5467	
7	5531	5519	5480	5455	5430	5385	5313	5248	5202	5103	5039	4966	4899	4840	4790	4756	4719	4708	4713	4727	4738	4771	4834	4885	4937	5010	5090	5163	5233	5305	5356	5415	5461	5485	5495	5513	5531	
8	5577	5568	5525	5500	5471	5418	5342	5267	5209	5104	5033	4952	4869	4806	4747	4700	4667	4653	4658	4669	4686	4724	4794	4852	4919	4995	5088	5172	5251	5330	5393	5456	5508	5536	5543	5560	5577	
9	5624	5612	5570	5543	5514	5455	5371	5290	5222	5108	5024	4931	4840	4766	4702	4653	4616	4599	4603	4618	4637	4676	4754	4819	4897	4982	5083	5182	5273	5358	5430	5498	5556	5574	5596	5611	5624	
10	5668	5655	5617	5582	5551	5486	5404	5314	5237	5110	5017	4914	4813	4731	4662	4600	4563	4545	4537	4570	4586	4635	4715	4787	4872	4970	5082	5192	5294	5380	5472	5537	5599	5624	5644	5654	5668	
11	5711	5693	5658	5620	5585	5521	5438	5335	5247	5112	5011	4892	4779	4691	4607	4555	4512	4491	4482	4513	4538	4589	4668	4754	4853	4962	5077	5201	5313	5413	5511	5571	5640	5666	5688	5697	5711	
12	5749	5731	5692	5666	5620	5552	5466	5366	5263	5122	4996	4873	4753	4653	4563	4505	4460	4436	4429	4460	4489	4545	4630	4722	4831	4954	5079	5212	5335	5446	5544	5618	5682	5708	5730	5743	5749	
13	5784	5773	5730	5699	5654	5585	5494	5388	5277	5130	4987	4856	4725	4616	4523	4459	4409	4381	4378	4405	4436	4499	4591	4692	4804	4945	5084	5225	5356	5484	5579	5657	5720	5757	5764	5779	5784	
14	5816	5800	5763	5737	5687	5623	5526	5417	5290	5139	4980	4841	4696	4581	4481	4406	4347	4329	4325	4349	4385	4458	4554	4652	4784	4935	5084	5232	5379	5522	5618	5696	5756	5793	5801	5812	5816	
15	5847	5830	5798	5769	5725	5654	5560	5446	5309	5143	4973	4826	4670	4548	4438	4364	4293	4277	4269	4293	4335	4418	4515	4623	4760	4925	5088	5247	5404	5555	5659	5736	5796	5827	5833	5843	5847	
16	5872	5866	5825	5799	5757	5685	5588	5473	5321	5145	4974	4800	4644	4514	4396	4306	4240	4221	4213	4243	4286	4376	4478	4595	4745	4913	5090	5261	5430	5583	5708	5776	5831	5861	5863	5870	5872	



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Certificate#4810.01

17	5900	5888	5855	5829	5784	5727	5625	5498	5339	5159	4968	4784	4615	4478	4358	4253	4187	4167	4163	4191	4236	4324	4439	4565	4723	4905	5103	5273	5457	5620	5736	5809	5862	5894	5896	5893	5900
18	5920	5914	5882	5855	5814	5759	5656	5527	5359	5165	4968	4771	4588	4445	4312	4203	4137	4115	4107	4141	4191	4280	4402	4534	4705	4892	5108	5290	5482	5657	5782	5850	5896	5922	5922	5915	5920
19	5948	5934	5902	5878	5842	5792	5689	5555	5377	5176	4963	4758	4565	4408	4268	4160	4075	4055	4052	4085	4135	4238	4365	4507	4682	4884	5113	5307	5519	5691	5818	5885	5931	5951	5951	5938	5948
20	5962	5942	5922	5896	5875	5825	5718	5573	5399	5185	4962	4741	4538	4377	4228	4112	4022	4001	3989	4038	4085	4193	4325	4484	4659	4877	5118	5328	5548	5732	5853	5922	5967	5983	5970	5955	5962
21	5975	5955	5930	5916	5902	5856	5753	5607	5425	5194	4956	4730	4515	4341	4187	4063	3971	3947	3944	3982	4031	4149	4289	4457	4642	4872	5129	5349	5584	5771	5891	5960	6001	6007	5988	5968	5975
22	5980	5959	5945	5939	5928	5889	5775	5631	5448	5203	4958	4725	4494	4306	4146	4019	3918	3895	3885	3928	3984	4103	4246	4431	4629	4866	5136	5372	5622	5806	5930	5987	6027	6031	5998	5976	5980
23	5974	5957	5945	5959	5952	5917	5805	5665	5471	5219	4959	4711	4469	4272	4097	3970	3868	3838	3830	3880	3935	4058	4213	4404	4609	4864	5142	5401	5653	5842	5966	6035	6059	6048	6004	5985	5974
24	5972	5953	5946	5965	5974	5941	5836	5691	5492	5233	4960	4701	4447	4231	4055	3922	3816	3778	3776	3826	3885	4011	4176	4377	4595	4860	5151	5430	5688	5885	6006	6071	6085	6063	6012	5983	5972
25	5952	5942	5947	5982	5994	5970	5871	5723	5517	5249	4957	4693	4428	4199	4010	3873	3763	3727	3723	3776	3837	3971	4143	4344	4586	4858	5160	5460	5725	5922	6040	6104	6115	6073	6010	5966	5952
26	5930	5921	5943	5977	6014	5995	5900	5752	5545	5267	4965	4679	4408	4171	3973	3818	3715	3673	3661	3714	3791	3926	4103	4316	4574	4859	5173	5484	5763	5962	6082	6132	6136	6081	6002	5951	5930
27	5900	5901	5929	5983	6027	6019	5929	5783	5571	5290	4961	4669	4385	4134	3927	3771	3664	3617	3609	3660	3741	3884	4065	4291	4559	4855	5190	5514	5799	6007	6128	6164	6155	6078	5991	5927	5900
28	5869	5870	5911	5977	6039	6038	5960	5814	5598	5310	4968	4658	4361	4106	3889	3722	3614	3565	3556	3611	3693	3843	4031	4269	4545	4864	5209	5544	5838	6054	6168	6194	6170	6077	5968	5894	5869
29	5825	5832	5882	5970	6046	6066	6000	5855	5625	5335	4969	4652	4341	4073	3848	3677	3561	3509	3506	3557	3636	3797	3997	4241	4532	4862	5228	5569	5879	6093	6206	6223	6180	6065	5939	5851	5825
30	5771	5783	5852	5951	6053	6084	6028	5885	5650	5354	4978	4638	4324	4045	3808	3628	3499	3456	3452	3502	3586	3754	3965	4217	4510	4867	5247	5594	5917	6133	6244	6248	6181	6061	5907	5810	5771
31	5711	5730	5812	5933	6047	6101	6058	5912	5679	5373	4982	4632	4294	4014	3766	3583	3452	3405	3399	3446	3543	3711	3930	4193	4506	4870	5261	5621	5952	6175	6284	6273	6184	6036	5863	5758	5711
32	5632	5667	5769	5900	6041	6114	6086	5941	5705	5383	4997	4624	4283	3984	3727	3534	3402	3353	3336	3395	3493	3663	3898	4173	4494	4877	5284	5654	5996	6227	6321	6296	6175	6006	5816	5699	5632
33	5550	5595	5700	5866	6028	6131	6112	5974	5736	5398	5001	4621	4263	3952	3689	3487	3351	3298	3285	3340	3445	3620	3865	4148	4489	4879	5307	5692	6044	6272	6360	6316	6168	5968	5761	5618	5550
34	5478	5520	5634	5828	6014	6141	6137	6009	5765	5426	5006	4613	4244	3928	3650	3441	3297	3246	3234	3293	3395	3585	3832	4128	4479	4881	5329	5725	6082	6309	6397	6340	6151	5922	5697	5542	5478
35	5385	5433	5564	5783	5996	6148	6163	6041	5797	5451	5017	4607	4223	3891	3608	3397	3250	3183	3180	3242	3347	3538	3797	4103	4470	4884	5348	5761	6127	6353	6431	6348	6132	5873	5616	5458	5385



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36	5275	5344	5489	5724	5981	6150	6186	6074	5825	5475	5029	4600	4208	3866	3574	3356	3200	3131	3132	3187	3301	3499	3763	4085	4460	4893	5368	5797	6169	6399	6464	6350	6109	5824	5542	5368	5275
37	5174	5246	5401	5656	5949	6154	6207	6104	5857	5499	5033	4597	4190	3835	3535	3308	3149	3079	3068	3135	3255	3460	3725	4062	4456	4902	5386	5829	6213	6443	6491	6352	6073	5763	5458	5264	5174
38	5064	5141	5307	5585	5910	6150	6228	6134	5886	5527	5039	4597	4174	3810	3496	3261	3100	3024	3018	3086	3203	3416	3695	4039	4444	4905	5405	5861	6258	6486	6513	6353	6040	5692	5362	5157	5064
39	4944	5025	5205	5508	5864	6140	6254	6166	5919	5558	5046	4588	4159	3778	3461	3220	3053	2972	2962	3034	3157	3374	3662	4021	4437	4914	5426	5902	6308	6527	6534	6341	5993	5609	5265	5044	4944
40	4823	4908	5109	5427	5815	6125	6264	6200	5949	5588	5056	4589	4144	3755	3425	3176	3004	2922	2913	2989	3105	3333	3634	4000	4429	4919	5448	5940	6343	6572	6561	6330	5938	5521	5140	4924	4823
41	4696	4787	4986	5336	5765	6110	6278	6230	5997	5612	5069	4587	4128	3725	3386	3133	2951	2871	2858	2936	3060	3291	3601	3987	4423	4923	5468	5990	6398	6602	6581	6310	5881	5429	5039	4795	4696
42	4570	4643	4865	5243	5691	6086	6294	6257	6021	5630	5075	4582	4117	3699	3351	3090	2899	2821	2811	2879	3011	3251	3567	3959	4417	4926	5488	6024	6450	6645	6599	6288	5817	5312	4919	4665	4570
43	4419	4512	4742	5139	5620	6058	6301	6283	6053	5651	5088	4574	4102	3673	3317	3037	2851	2771	2758	2822	2968	3201	3538	3932	4410	4930	5513	6063	6480	6684	6609	6254	5724	5206	4785	4526	4419
44	4279	4375	4616	5031	5548	6024	6309	6311	6087	5672	5095	4574	4085	3648	3282	2994	2796	2717	2708	2774	2913	3160	3508	3917	4397	4933	5526	6096	6513	6715	6612	6211	5643	5095	4655	4388	4279
45	4131	4226	4474	4914	5459	5984	6311	6335	6125	5695	5103	4574	4068	3621	3244	2949	2749	2661	2657	2725	2865	3123	3480	3893	4383	4938	5543	6122	6548	6739	6620	6170	5552	4971	4519	4234	4131
46	3979	4072	4337	4787	5368	5931	6311	6367	6161	5722	5114	4572	4058	3596	3207	2905	2698	2611	2598	2673	2817	3081	3446	3875	4379	4938	5563	6151	6578	6780	6607	6111	5452	4844	4361	4083	3979
47	3819	3927	4184	4655	5262	5882	6302	6396	6200	5751	5130	4572	4043	3571	3168	2862	2651	2560	2546	2626	2767	3038	3407	3860	4371	4944	5580	6188	6615	6805	6594	6042	5353	4715	4212	3937	3819
48	3683	3771	4042	4523	5163	5820	6289	6410	6230	5775	5145	4579	4033	3543	3129	2817	2601	2503	2493	2571	2720	2989	3373	3841	4362	4949	5586	6223	6647	6836	6578	5977	5237	4567	4053	3788	3683
49	3508	3621	3886	4387	5049	5746	6278	6428	6263	5800	5161	4582	4020	3515	3088	2773	2546	2442	2440	2519	2672	2946	3337	3808	4354	4952	5605	6252	6691	6847	6556	5887	5117	4424	3902	3612	3508
50	3362	3464	3731	4244	4923	5664	6250	6452	6292	5822	5180	4585	4013	3489	3052	2724	2495	2390	2383	2457	2623	2904	3303	3791	4352	4955	5616	6285	6732	6860	6516	5799	4986	4275	3759	3476	3362
51	3207	3306	3577	4092	4796	5582	6219	6475	6319	5854	5194	4584	3997	3459	3014	2664	2439	2329	2322	2398	2570	2854	3264	3768	4344	4956	5634	6306	6760	6867	6489	5723	4854	4118	3591	3312	3207
52	3043	3150	3421	3925	4665	5490	6185	6479	6355	5905	5211	4590	3990	3428	2971	2612	2387	2276	2266	2346	2515	2807	3227	3745	4340	4971	5653	6325	6778	6878	6435	5606	4712	3964	3427	3146	3043
53	2902	2998	3270	3777	4527	5394	6142	6491	6389	5948	5235	4595	3973	3394	2913	2555	2327	2215	2202	2285	2461	2754	3187	3719	4328	4977	5666	6351	6803	6881	6386	5501	4568	3794	3265	2991	2902
54	2762	2847	3100	3613	4381	5276	6098	6508	6430	5993	5261	4597	3951	3356	2859	2496	2265	2152	2143	2227	2390	2702	3144	3687	4317	4979	5685	6388	6819	6880	6317	5381	4421	3633	3112	2850	2762



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55	2610	2690	2955	3457	4235	5163	6034	6513	6468	6036	5286	4603	3925	3305	2803	2434	2194	2090	2078	2159	2332	2646	3097	3658	4296	4979	5696	6420	6845	6873	6251	5264	4248	3468	2960	2708	2610
56	2471	2548	2805	3294	4069	5044	5971	6523	6512	6069	5314	4598	3892	3258	2745	2364	2124	2026	2008	2096	2269	2579	3039	3619	4275	4975	5719	6453	6873	6857	6170	5127	4081	3307	2813	2569	2471
57	2337	2425	2656	3132	3920	4914	5904	6528	6553	6111	5333	4591	3855	3195	2673	2300	2062	1954	1951	2032	2204	2516	2983	3570	4251	4968	5731	6483	6906	6836	6084	4981	3912	3132	2660	2424	2337
58	2214	2277	2515	2980	3750	4763	5829	6523	6597	6154	5354	4577	3809	3124	2601	2228	1995	1893	1886	1968	2138	2445	2918	3516	4216	4963	5751	6516	6918	6803	5990	4828	3752	2974	2515	2289	2214
59	2102	2156	2376	2817	3583	4622	5754	6516	6634	6205	5380	4556	3748	3056	2522	2153	1920	1822	1818	1899	2063	2371	2846	3458	4173	4951	5761	6560	6930	6777	5889	4661	3570	2820	2383	2170	2102
60	1979	2049	2249	2674	3431	4475	5662	6510	6676	6260	5395	4522	3677	2969	2436	2078	1851	1752	1749	1824	1990	2294	2770	3387	4125	4928	5777	6598	6960	6742	5777	4508	3404	2670	2244	2049	1979
61	1871	1926	2113	2515	3265	4324	5553	6495	6717	6314	5390	4477	3598	2876	2352	1995	1781	1687	1677	1759	1919	2215	2674	3306	4068	4908	5779	6636	6993	6714	5640	4326	3236	2525	2123	1926	1871
62	1762	1817	1988	2373	3089	4164	5439	6479	6765	6370	5393	4422	3505	2770	2253	1914	1708	1610	1611	1693	1841	2133	2585	3206	3997	4875	5785	6676	7020	6661	5519	4172	3059	2384	2008	1823	1762
63	1665	1716	1880	2246	2932	4000	5331	6455	6818	6420	5385	4343	3388	2666	2159	1836	1632	1543	1544	1624	1764	2054	2491	3106	3903	4829	5788	6706	7014	6605	5372	3986	2887	2233	1882	1719	1665
64	1556	1604	1758	2109	2763	3829	5198	6426	6868	6468	5352	4255	3262	2548	2063	1756	1557	1472	1469	1537	1689	1966	2392	2997	3804	4769	5782	6738	7038	6538	5213	3805	2726	2100	1764	1615	1556
65	1462	1499	1649	1972	2593	3663	5061	6396	6920	6505	5306	4126	3127	2426	1963	1663	1483	1404	1392	1466	1613	1881	2282	2883	3692	4693	5765	6783	7080	6480	5060	3622	2563	1977	1659	1510	1462
66	1365	1406	1540	1848	2444	3478	4935	6371	6960	6542	5246	3987	2974	2298	1861	1580	1407	1332	1323	1391	1533	1778	2171	2753	3560	4597	5746	6803	7092	6396	4899	3437	2397	1852	1558	1417	1365
67	1290	1321	1445	1732	2300	3308	4792	6326	6993	6543	5148	3833	2821	2158	1754	1495	1338	1260	1257	1321	1456	1693	2064	2621	3415	4479	5706	6821	7096	6311	4736	3258	2251	1732	1451	1334	1290
68	1202	1234	1344	1612	2149	3127	4638	6271	7024	6517	5032	3667	2643	2026	1654	1412	1255	1192	1188	1245	1366	1601	1954	2474	3246	4348	5647	6830	7101	6224	4559	3061	2107	1599	1352	1245	1202
69	1128	1154	1262	1499	2003	2952	4487	6212	7028	6451	4867	3464	2476	1899	1558	1320	1184	1123	1116	1178	1289	1495	1828	2327	3078	4199	5551	6819	7106	6110	4362	2881	1950	1494	1261	1167	1128
70	1056	1080	1167	1385	1857	2779	4323	6151	7001	6358	4674	3248	2298	1771	1450	1236	1113	1059	1053	1109	1215	1404	1711	2179	2903	4027	5438	6804	7083	6012	4184	2692	1806	1387	1180	1091	1056
71	989	1013	1091	1287	1719	2609	4165	6058	6960	6221	4460	3033	2127	1627	1342	1155	1041	987	988	1040	1135	1316	1599	2019	2721	3819	5299	6750	7066	5906	4001	2514	1673	1282	1099	1017	989
72	922	947	1016	1193	1584	2453	3989	5948	6873	6032	4221	2801	1941	1504	1241	1071	968	924	927	979	1059	1222	1484	1873	2508	3603	5121	6681	7020	5771	3809	2337	1551	1198	1033	952	922
73	867	887	948	1107	1462	2296	3831	5835	6738	5802	3958	2578	1779	1388	1147	987	902	866	863	906	990	1131	1362	1726	2318	3376	4910	6566	6946	5646	3638	2178	1418	1115	958	892	867



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74	799	821	880	1025	1335	2115	3648	5653	6566	5513	3650	2328	1624	1269	1039	914	841	805	802	849	917	1040	1252	1588	2124	3110	4630	6426	6845	5481	3450	2014	1308	1026	892	831	799		
75	739	760	814	943	1224	1966	3457	5454	6305	5164	3355	2107	1481	1150	953	841	774	750	747	788	846	962	1147	1434	1917	2849	4327	6170	6676	5306	3251	1838	1195	950	823	763	739		
76	677	698	748	862	1121	1794	3261	5204	5951	4718	3016	1893	1337	1040	870	774	711	688	695	727	783	879	1041	1299	1729	2558	3985	5869	6422	5085	3052	1680	1095	868	754	702	677		
77	621	641	688	788	1027	1652	3057	4863	5498	4248	2677	1672	1198	940	792	711	654	636	637	674	716	808	946	1171	1544	2284	3645	5481	6107	4829	2847	1530	997	796	695	644	621		
78	566	582	622	716	923	1498	2802	4519	5025	3756	2335	1445	1059	844	721	644	603	581	579	609	656	726	847	1040	1363	2025	3286	5124	5790	4514	2604	1399	908	724	636	593	566		
79	510	528	566	641	833	1350	2550	4137	4468	3228	2046	1263	924	748	642	585	548	529	521	554	597	661	762	911	1198	1777	2962	4642	5352	4212	2361	1242	814	658	575	531	510		
80	438	456	500	582	737	1185	2283	3678	3835	2775	1788	1114	804	652	581	529	489	461	451	493	536	596	677	793	1044	1564	2627	4096	4854	3882	2109	1087	726	589	516	463	438		
81	359	389	437	510	636	1016	2040	3267	3211	2303	1532	964	692	565	513	465	430	390	372	417	476	536	588	689	905	1359	2272	3490	4215	3517	1878	927	641	517	449	385	359		
82	287	321	369	442	559	869	1798	2809	2564	1850	1260	820	598	492	441	400	367	321	304	345	408	459	515	602	774	1169	1899	2887	3551	3101	1633	790	548	446	384	316	287		
83	227	252	308	367	458	753	1520	2383	1980	1451	1041	686	502	414	361	346	309	261	240	285	350	382	428	510	654	992	1568	2362	2895	2655	1373	688	460	378	324	254	227		
84	181	201	246	288	352	615	1239	1944	1471	1065	838	560	420	296	282	287	254	197	183	224	287	320	335	404	530	797	1258	1791	2269	2245	1106	555	362	304	256	200	181		
85	129	136	190	219	250	460	1048	1531	1058	748	654	441	324	203	213	227	190	145	133	166	223	257	256	286	421	621	960	1320	1715	1750	917	424	270	235	198	149	129		
86	75	90	113	147	155	322	761	1070	681	479	491	327	228	131	143	160	134	95	88	108	160	195	167	192	328	479	728	886	1205	1243	656	291	174	172	134	93	75		
87	41	39	46	68	81	173	442	743	401	236	307	187	143	76	82	90	85	57	54	67	104	121	102	122	219	314	444	526	795	911	414	182	101	86	61	52	41		
88	18	19	20	22	31	52	160	333	164	67	113	54	52	32	34	33	30	29	31	37	44	48	48	64	97	157	210	231	395	462	190	86	47	30	22	22	18		
89	16	17	16	15	23	22	24	29	31	25	22	21	16	14	18	18	16	15	18	20	15	19	25	25	30	34	44	54	96	117	47	30	21	23	18	16	16		
90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
91	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



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BUG Rating

Lum. Classification System (LCS)

<u>LCS Zone</u>	<u>Lumens</u>	<u>%Lamp</u>	<u>%Lum</u>
FL (0-30)	2423.9	11.6	11.6
FM (30-60)	6082.4	29.0	29.0
FH (60-80)	3244.2	15.5	15.5
FVH(80-90)	387.2	1.8	1.8
BL (0-30)	1876.2	8.9	8.9
BM (30-60)	4322.7	20.6	20.6
BH (60-80)	2399.0	11.4	11.4
BVH(80-90)	227.4	1.1	1.1
UL (90-100)	0.0	0.0	0.0
UH (100-180)	0.0	0.0	0.0
Total	20963.0	99.9	100.0
BUG Rating	B3-U0-G3		



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3. Test Equipment

Equipment Name	Model No.	Serial No.	Next Calibration Date
Goniophotometric System	GPM-3000	DYHXF120001	2022-01-18
AC Power Source	CHP-500	DYBWD010159	2022-01-25
Total Luminous Flux Standard Lamp	24V/150W	DYJYR040040	2022-01-24
Digital Power Meter	WT500	DYDWQ20010	2022-01-25
Integral Sphere (2M)	2M	DYJCE120067	2022-01-18
Digital Power Meter	WT500	DYDWQ20006	2022-01-25
Optical Color and Electrical Measurement System	CMS-3000S	DYJCE120067	2022-01-18

Expand Uncertainty:
Photometric Measurement (Sphere): 2.08%, k=2
Chromaticity Measurement(Sphere):25.6K, k=2
Photometric Measurement(Goniophotometer):2.645%, k=2

***** END OF REPORT *****