



Report No.: BLC2009007E-C

LM-79-08 Test Report

For

LEDVANCE LLC

(Brand Name: SYLVANIA)

200 Ballardvale St. Wilmington, MA 01887 USA

LED Corn Lamp

Model name(s): LED27HIDRSC2MED

Representative (Tested) Model:
LED27HIDRSC2MED(3000K)
LED27HIDRSC2MED(4000K)
LED27HIDRSC2MED(5000K)

Model Different: All construction and rating are the same, except CCT

Test & Report By:

Grace Li

Engineer: Grace Li

Date: 2020-09-11

Review By:

Jason Luo

Manager: Jason Luo



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1.1 Product Information:

Organization Name	LEDVANCE LLC	
Brand Name	SYLVANIA	
Model Number	LED27HIDRSC2MED	
SKU (if available)	N/A	
Type of Product (for integral lamps, list base type and lamp type)	LED Corn Lamp	
Rated Voltage / Frequency	100-277Vac, 50/60 Hz	
Nominal Power	27W	
Rated Initial Lamp Lumen	--	
Declared CCT	3000K, 4000K, 5000K	
LED Manufacturer	Lumileds	
LED Model	L128-XX80RA35000H1	
Sample Number	BLC2009007E-C1(3000K), C2(4000K), C3(5000K)	
Luminaire Aperture (for downlights)	--	in.
Luminaire Length	--	mm
Luminaires Width	--	mm
Number of Units (modular products)	N/A	s

Photo





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1.2 Test Specifications:

Date of Receipt	2020-09-07
Date of Test	2020-09-11
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.



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2.1 Electrical, Photometric and Chromaticity Measurements*(Refer to Work Instruction BL-QP-033)*

Test date	2020-09-11	Test Ambient:	25.2 ° C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	LED27HIDRSC2MED(3000K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC200900	120.1	60	0.237	28.10	0.989	10.69
7E-C1	277.1	60	0.111	28.21	0.919	10.42
DLC Pass Criteria					$\geq 0.9(-3\%)$	$\leq 20(+5)$

Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	80	R9	1
Frequency (Hz)	60	R2	92	R10	81
CCT (K)	2922	R3	95	R11	79
Duv	0.0002	R4	79	R12	72
Chromaticity (x, y)	x=0.4429 y=0.4066	R5	81	R13	83
Chromaticity (u', v')	u(u')=0.2533 v'=0.5233	R6	91	R14	98
Color Rendering Index (CRI)	82	R7	80	R15	72
R9	1	R8	55	--	--
Rf	84				
Rg	94				
Rcs,h1(%)	-12				

Photometric Measurement – Goniophotometer Method:

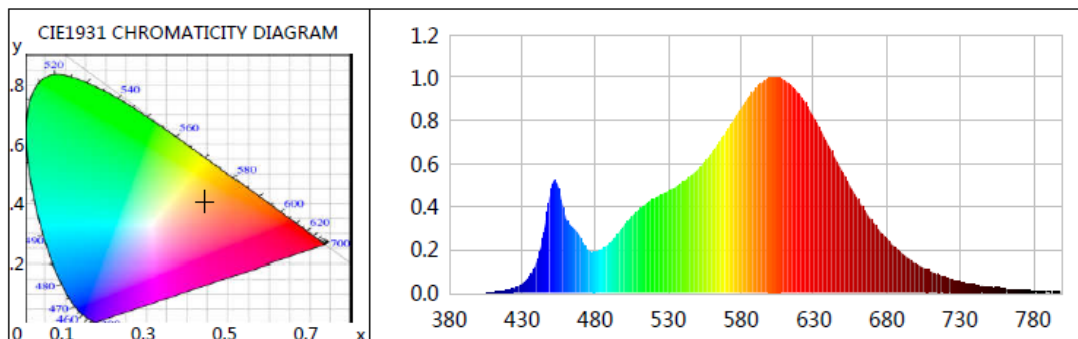
Parameter	Result	
Test Voltage (V)	120.0	277.0
Frequency (Hz)	60	60
Total Luminous (lm)	3999.8	3969.8
Luminous Efficacy (lm/W)	142.34	140.72
Most worst Luminous/Highest	140.72	
Beam Angle (°)	--	--
Center Beam Candle Power (cd)	204	--



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Spectral Power Distribution & Chromaticity Diagram



WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0005	0.0444	525	0.4544	38.1503	670	0.3311	27.7946
385	0.0004	0.0353	530	0.4718	39.6100	675	0.2868	24.0730
390	0.0004	0.0367	535	0.4898	41.1204	680	0.2489	20.8985
395	0.0005	0.0454	540	0.5145	43.1960	685	0.2149	18.0385
400	0.0008	0.0645	545	0.5392	45.2636	690	0.1840	15.4482
405	0.0011	0.0893	550	0.5696	47.8198	695	0.1588	13.3331
410	0.0024	0.2007	555	0.6071	50.9658	700	0.1349	11.3272
415	0.0056	0.4743	560	0.6510	54.6489	705	0.1148	9.6378
420	0.0117	0.9846	565	0.6983	58.6217	710	0.0973	8.1681
425	0.0215	1.8016	570	0.7495	62.9173	715	0.0820	6.8864
430	0.0415	3.4805	575	0.8051	67.5845	720	0.0720	6.0412
435	0.0755	6.3378	580	0.8593	72.1341	725	0.0598	5.0218
440	0.1424	11.9525	585	0.9066	76.1119	730	0.0520	4.3630
445	0.2885	24.2213	590	0.9504	79.7886	735	0.0422	3.5423
450	0.4913	41.2436	595	0.9807	82.3285	740	0.0374	3.1394
455	0.4852	40.7307	600	0.9984	83.8165	745	0.0319	2.6749
460	0.3478	29.1994	605	0.9993	83.8934	750	0.0268	2.2537
465	0.3014	25.3023	610	0.9872	82.8777	755	0.0233	1.9596
470	0.2534	21.2703	615	0.9612	80.6895	760	0.0199	1.6723
475	0.1990	16.7023	620	0.9225	77.4472	765	0.0161	1.3553
480	0.1892	15.8821	625	0.8709	73.1160	770	0.0153	1.2836
485	0.2050	17.2091	630	0.8134	68.2822	775	0.0117	0.9856
490	0.2297	19.2794	635	0.7519	63.1211	780	0.0096	0.8032
495	0.2686	22.5483	640	0.6846	57.4757	785	0.0077	0.6498
500	0.3123	26.2214	645	0.6183	51.9077	790	0.0100	0.8429
505	0.3522	29.5685	650	0.5552	46.6113	795	0.0057	0.4787
510	0.3872	32.5095	655	0.4928	41.3732	800	0.0057	0.4752
515	0.4125	34.6268	660	0.4327	36.3244			
520	0.4347	36.4948	665	0.3808	31.9662			



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TM30

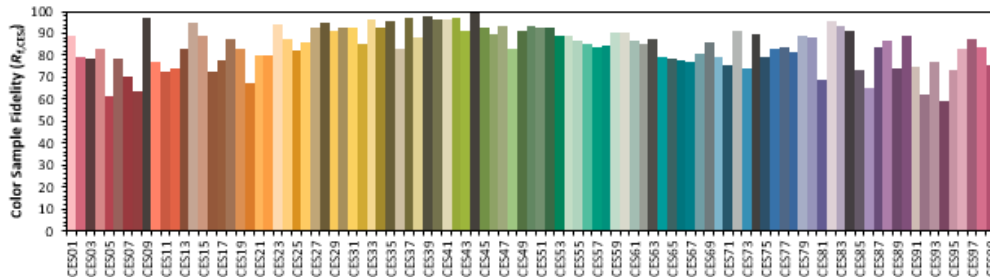
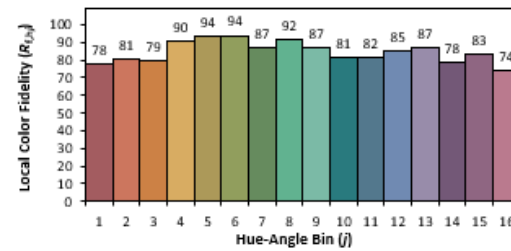
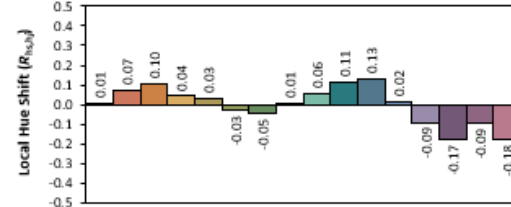
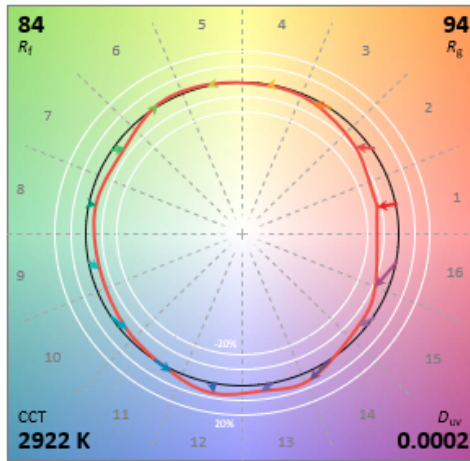
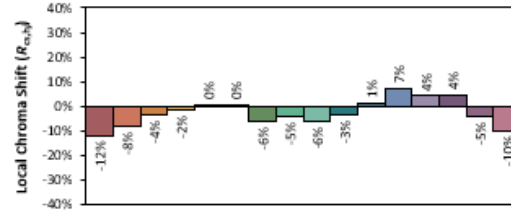
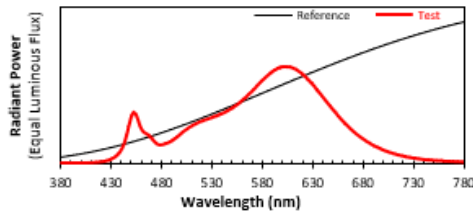
ANSI/IES TM-30-18 Color Rendition Report

Source: L128-3080RA35000H1

Manufacturer: ASMAIT LIGHT CO., LTD

Date: 2020/9/11

Model: LED27HIDRSC2MED(3000K)



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

x 0.4429

y 0.4066

u' 0.2533

v' 0.5233

CIE 13.3-1995
(CRI)

R_a 82

R_g 1

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



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Zonal Lumen Tabulation

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Luminaire
0-30	219.0	5.5%	5.5%
0-40	428.2	10.7%	10.7%
0-60	1,069.9	26.7%	26.7%
60-90	1,201.5	30%	30%
70-100	1,220.4	30.5%	30.5%
90-120	1,110.0	27.8%	27.7%
0-90	2,271.4	56.8%	56.8%
90-180	1,728.6	43.2%	43.2%
0-180	4,000.0	100%	100%

Lumens Per Zone

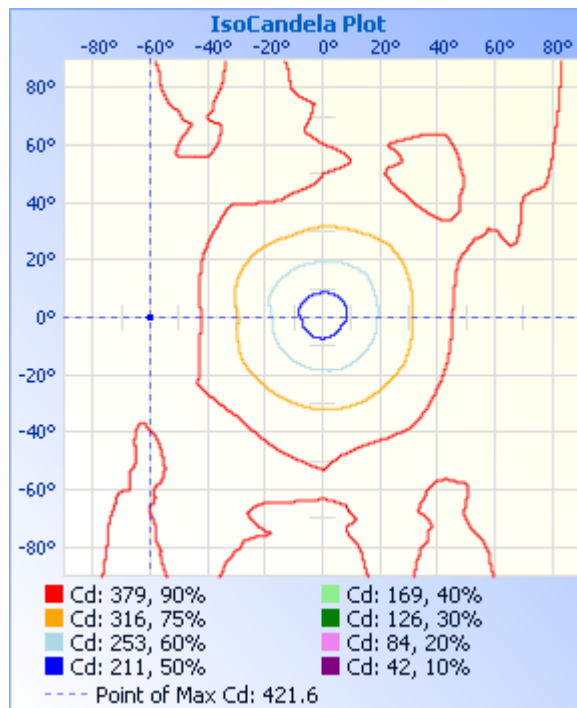
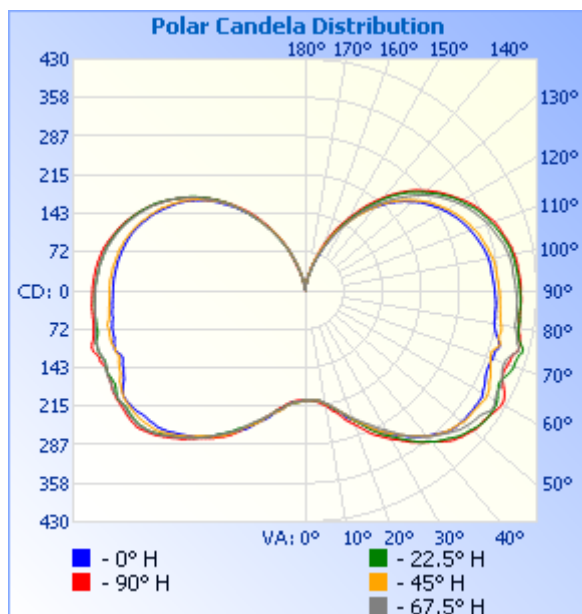
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	20.0	0.5%	90-100	403.9	10.1%
10-20	67.3	1.7%	100-110	377.7	9.4%
20-30	131.8	3.3%	110-120	328.4	8.2%
30-40	209.2	5.2%	120-130	262.3	6.6%
40-50	289.5	7.2%	130-140	185.5	4.6%
50-60	352.2	8.8%	140-150	109.2	2.7%
60-70	384.9	9.6%	150-160	48.7	1.2%
70-80	405.9	10.1%	160-170	12.2	0.3%
80-90	410.7	10.3%	170-180	0.7	0%



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Photometric Data





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Candela Table - Type C

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	360
0	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204	204
1	203	203	203	203	203	203	204	204	205	205	205	205	204	204	204	203	203
2	203	203	203	203	203	203	204	205	205	206	206	205	205	204	204	203	203
3	204	203	204	204	204	204	205	206	206	207	207	206	204	205	204	204	204
4	204	204	204	204	205	205	206	206	207	208	208	207	205	204	204	204	204
5	204	204	204	204	206	206	207	207	208	208	208	208	206	204	204	204	204
6	205	205	205	205	208	207	208	207	208	209	210	209	207	206	205	204	205
7	206	206	206	205	209	209	210	209	210	211	211	210	208	207	206	205	206
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9	211	210	211	210	215	214	216	215	216	216	217	216	213	211	211	210	211
10	213	213	213	212	216	218	219	218	220	219	222	220	217	215	213	212	213
11	216	215	217	215	221	221	223	223	224	225	225	224	221	217	216	215	216
12	220	220	218	218	224	224	227	227	227	225	229	226	223	221	219	219	220
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25	281	284	279	273	294	287	288	288	287	282	286	284	288	282	273	278	281
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61	378	409	388	405	421	395	406	389	387	399	388	401	403	373	387	375	378

Laboratory: Belling Test Laboratory Co., LTD A2LA Certificate# 4810.01
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Report Format Number BL-FM-SA-012



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62	377	404	387	403	419	391	403	389	383	397	386	402	403	374	387	377	377
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93	350	396	358	389	399	363	389	362	356	388	363	387	393	345	362	349	350

Laboratory: Belling Test Laboratory Co., LTD A2LA Certificate# 4810.01
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Report Format Number BL-FM-SA-012



Report No.: BLC2009007E-A

Certificate#4810.01

94	349	396	357	388	399	363	388	361	355	387	361	386	392	344	361	347	349
95	348	395	357	387	398	362	388	360	354	386	360	385	391	344	360	347	348
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2.2 Electrical, Photometric and Chromaticity Measurements*(Refer to Work Instruction BL-QP-033)*

Test date	2020-09-11	Test Ambient:	25.2 ° C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	LED27HIDRSC2MED(4000K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC200900	120.1	60	0.231	27.43	0.988	11.02
7E-C2	277.1	60	0.109	27.55	0.915	10.32
DLC Pass Criteria					$\geq 0.9(-3\%)$	$\leq 20(+5)$

Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	84	R9	14
Frequency (Hz)	60	R2	92	R10	81
CCT (K)	3757	R3	96	R11	82
Duv	-0.0014	R4	83	R12	66
Chromaticity (x, y)	x=0.3906 y=0.3799	R5	84	R13	86
Chromaticity (u', v')	u(u')=0.2306 v'=0.5045	R6	89	R14	99
Color Rendering Index (CRI)	85	R7	84	R15	77
R9	14	R8	64	--	--
Rf	85				
Rg	95				
Rcs,h1(%)	-11				

Photometric Measurement – Sphere-Spectroradiometer Method:

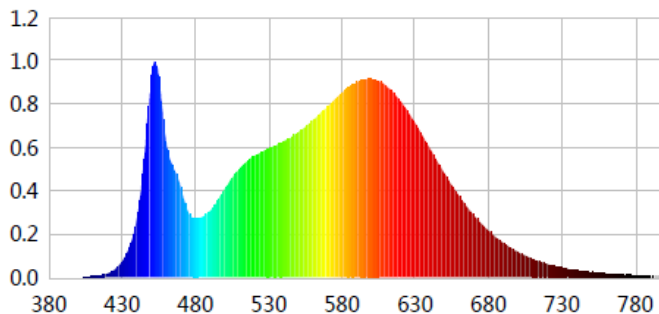
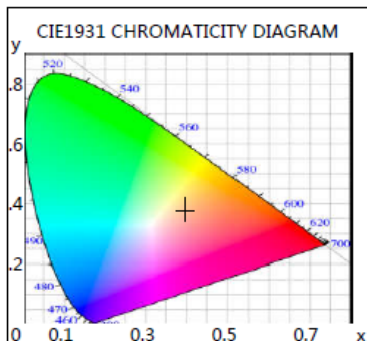
Parameter	Result	
Test Voltage (V)	120.0	277.0
Frequency (Hz)	60	60
Total Luminous (lm)	4283.0	4267.7
Luminous Efficacy (lm/W)	156.14	154.91
Most worst Luminous/Highest Watts	154.91	



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Spectral Power Distribution & Chromaticity Diagram



WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0007	0.0553	525	0.5771	49.1009	670	0.2850	24.2530
385	0.0007	0.0578	530	0.5922	50.3837	675	0.2478	21.0809
390	0.0005	0.0408	535	0.6070	51.6449	680	0.2141	18.2192
395	0.0005	0.0410	540	0.6269	53.3422	685	0.1841	15.6654
400	0.0011	0.0932	545	0.6445	54.8360	690	0.1589	13.5199
405	0.0015	0.1284	550	0.6676	56.8030	695	0.1358	11.5543
410	0.0035	0.2942	555	0.6937	59.0222	700	0.1159	9.8649
415	0.0081	0.6918	560	0.7250	61.6893	705	0.0999	8.5033
420	0.0178	1.5153	565	0.7571	64.4153	710	0.0840	7.1470
425	0.0363	3.0922	570	0.7883	67.0673	715	0.0717	6.1035
430	0.0728	6.1954	575	0.8223	69.9607	720	0.0612	5.2089
435	0.1408	11.9792	580	0.8535	72.6227	725	0.0525	4.4664
440	0.2664	22.6663	585	0.8792	74.8051	730	0.0447	3.8063
445	0.5442	46.3003	590	0.9004	76.6081	735	0.0363	3.0882
450	0.9335	79.4223	595	0.9145	77.8087	740	0.0329	2.7959
455	0.9290	79.0425	600	0.9165	77.9772	745	0.0292	2.4818
460	0.6272	53.3619	605	0.9065	77.1279	750	0.0235	2.0034
465	0.5066	43.0997	610	0.8862	75.3973	755	0.0211	1.7976
470	0.4119	35.0434	615	0.8530	72.5750	760	0.0180	1.5315
475	0.3026	25.7469	620	0.8138	69.2382	765	0.0147	1.2526
480	0.2699	22.9609	625	0.7624	64.8701	770	0.0136	1.1535
485	0.2812	23.9244	630	0.7104	60.4428	775	0.0104	0.8823
490	0.3063	26.0572	635	0.6536	55.6116	780	0.0078	0.6612
495	0.3522	29.9695	640	0.5938	50.5228	785	0.0065	0.5567
500	0.4073	34.6535	645	0.5349	45.5138	790	0.0073	0.6207
505	0.4589	39.0473	650	0.4791	40.7678	795	0.0040	0.3414
510	0.5014	42.6621	655	0.4233	36.0142	800	0.0036	0.3067
515	0.5332	45.3644	660	0.3741	31.8303			
520	0.5578	47.4628	665	0.3276	27.8709			

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TM30

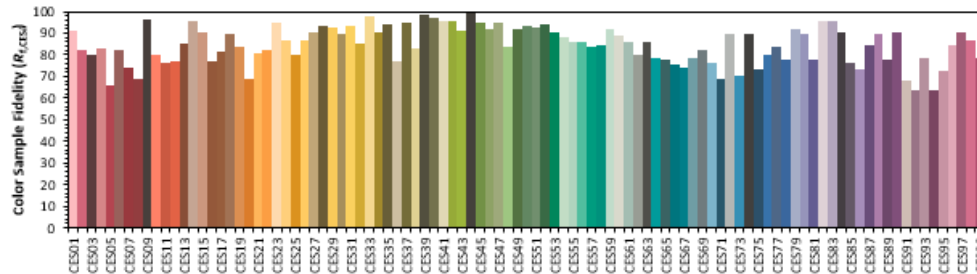
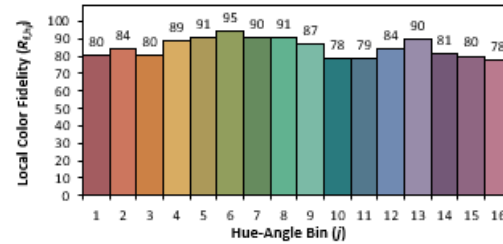
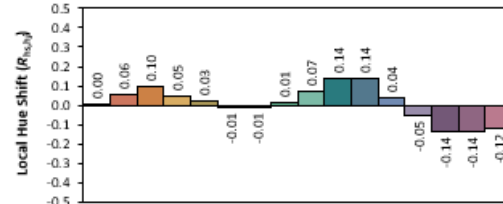
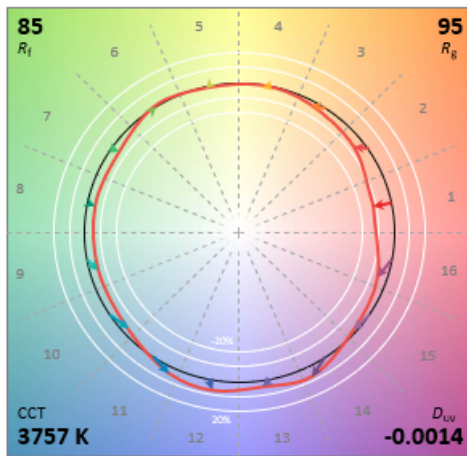
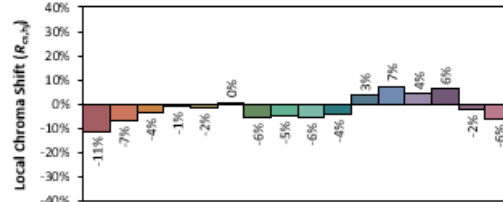
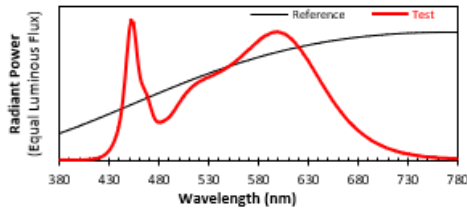
ANSI/IES TM-30-18 Color Rendition Report

Source: L128-4080RA35000H1

Manufacturer: ASMAIT LIGHT CO., LTD

Date: 2020/9/11

Model: LED27HIDRSC2MED (4000K)



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

x 0.3906
 y 0.3799
 u' 0.2306
 v' 0.5045

CIE 13.3-1995
(CRI)
 R_a 85
 R_g 14

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



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Zonal Lumen Tabulation

Zonal Lumen Summary

Zone	Lumens	% Lamp	% Luminaire
0-30	232.6	5.4%	5.4%
0-40	453.0	10.6%	10.6%
0-60	1,140.9	26.6%	26.6%
60-90	1,292.3	30.2%	30.2%
70-100	1,301.8	30.4%	30.4%
90-120	1,184.4	27.7%	27.7%
0-90	2,433.2	56.8%	56.8%
90-180	1,850.0	43.2%	43.2%
0-180	4,283.2	100%	100%

Lumens Per Zone

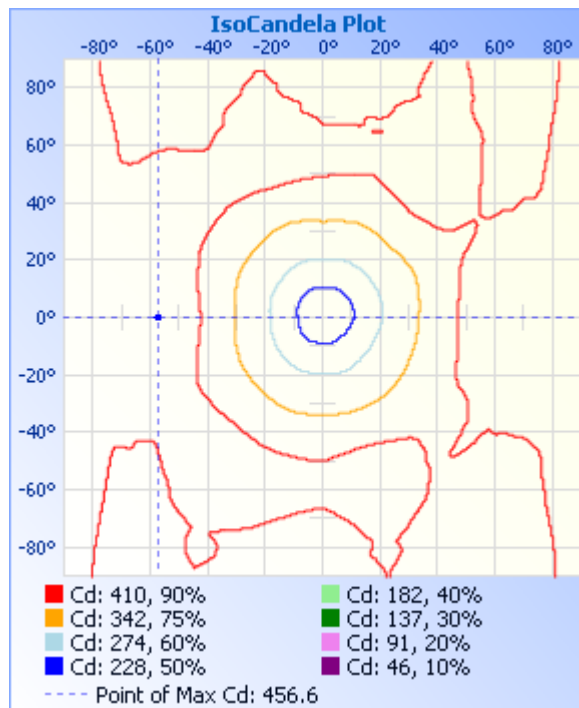
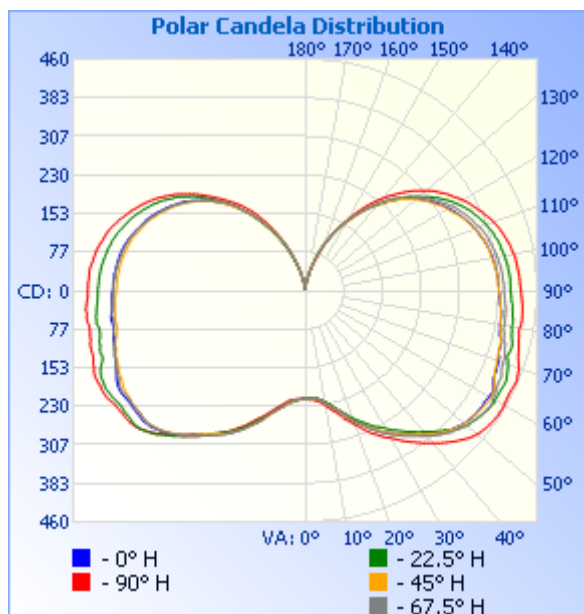
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	21.1	0.5%	90-100	430.3	10%
10-20	71.4	1.7%	100-110	403.2	9.4%
20-30	140.1	3.3%	110-120	350.8	8.2%
30-40	220.5	5.1%	120-130	280.3	6.5%
40-50	308.7	7.2%	130-140	198.8	4.6%
50-60	379.2	8.9%	140-150	117.9	2.8%
60-70	420.8	9.8%	150-160	53.4	1.2%
70-80	433.8	10.1%	160-170	14.2	0.3%
80-90	437.6	10.2%	170-180	1.1	0%



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Photometric Data





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Candela Table - Type C

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	360
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38	362	356	361	366	385	368	369	362	362	366	363	367	368	356	367	356	362
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53	416	425	416	424	451	418	430	417	413	431	409	408	435	405	432	411	416
54	418	427	418	427	452	419	433	417	413	430	410	408	436	406	433	412	418
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59	420	436	425	433	457	420	437	416	415	433	409	411	440	408	439	412	420
60	421	435	426	430	456	422	437	418	416	435	409	412	443	410	441	412	421
61	423	435	426	430	455	423	437	420	418	437	409	415	446	410	445	414	423

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62	423	435	424	429	454	423	438	421	418	438	409	415	447	410	446	415	423
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70	408	428	406	418	451	404	429	415	401	431	397	400	446	398	444	413	408
71	408	425	404	418	448	402	426	413	399	425	397	400	445	394	444	411	408
72	404	421	403	416	445	400	423	414	396	423	395	398	442	394	441	408	404
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90	384	408	384	394	428	385	409	397	382	412	375	380	432	373	421	388	384
91	384	408	383	395	427	384	408	397	381	411	374	380	431	373	421	388	384
92	384	407	382	394	427	384	408	397	381	410	374	380	431	373	420	389	384
93	384	408	384	393	426	383	408	396	381	410	373	380	430	373	419	388	384

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94	384	407	383	393	426	383	407	396	380	409	374	379	430	372	420	388	384
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99	378	403	378	388	422	380	401	393	376	404	369	375	425	367	415	383	378
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125	308	322	306	314	338	308	314	307	304	320	300	302	329	296	327	304	308

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130	285	292	283	290	309	284	286	280	278	292	276	278	299	272	298	280	285
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157	103	105	104	105	103	98	94	94	95	91	97	101	101	98	99	100	103

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158	97	99	96	96	95	89	87	88	88	84	91	93	94	90	92	92	97
159	89	92	88	89	87	82	80	79	81	77	83	85	86	83	85	85	89
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161	75	77	73	74	72	68	66	65	68	63	70	71	70	71	71	71	75
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172	16	16	16	16	14	12	13	12	13	12	13	13	12	14	14	15	16
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176	6	6	6	6	4	4	2	4	5	5	5	5	4	6	5	6	6
177	4	4	4	4	2	3	3	4	4	3	4	4	3	3	3	4	4
178	3	4	4	4	2	3	4	3	4	3	4	2	3	3	3	4	3
179	4	4	3	4	2	3	3	3	4	3	4	3	3	3	3	4	4
180	4	4	4	4	2	3	4	3	4	4	4	4	3	4	3	4	4

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2.2 Electrical, Photometric and Chromaticity Measurements*(Refer to Work Instruction BL-QP-033)*

Test date	2020-09-11	Test Ambient:	25.2 ° C
Test Orientation	As intended	Stabilization Time (min)	90
Model Number	LED27HIDRSC2MED(5000K)		

Electrical Measurement:

Sample No.	Voltage (Vac)	Frequency (Hz)	Current (A)	Power (W)	Power Factor	THD %
BLC200900	120.1	60	0.234	27.81	0.989	10.72
7E-C3	277.1	60	0.111	28.16	0.919	10.71
DLC Pass Criteria					$\geq 0.9(-3\%)$	$\leq 20(+5)$

Chromaticity Measurement - Sphere-Spectroradiometer Method:

Parameter	Result	Special Color Rendering Indices			
Test Voltage (V)	120.0	R1	80	R9	5
Frequency (Hz)	60	R2	88	R10	72
CCT (K)	4958	R3	94	R11	80
Duv	0.0030	R4	81	R12	55
Chromaticity (x, y)	x=0.3469 y=0.3591	R5	80	R13	83
Chromaticity (u', v')	u(u')=0.2098 v'=0.4885	R6	83	R14	97
Color Rendering Index (CRI)	83	R7	87	R15	75
R9	5	R8	66	--	--
Rf	83				
Rg	95				
Rcs,h1(%)	-13				

Photometric Measurement – Sphere-Spectroradiometer Method:

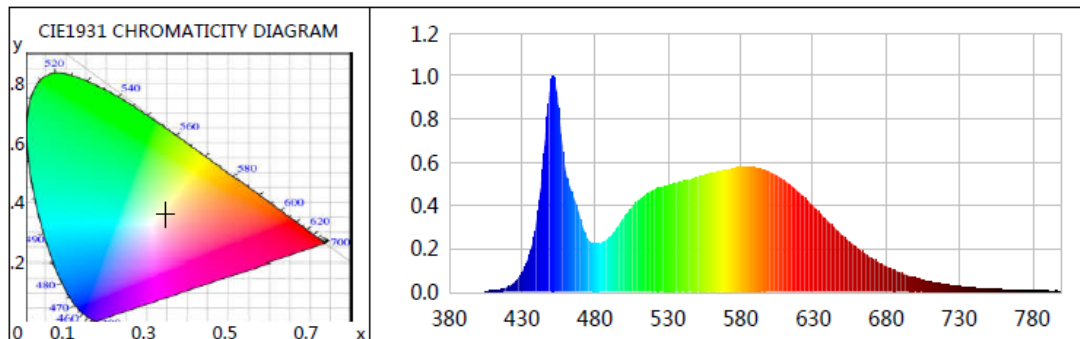
Parameter	Result	
Test Voltage (V)	120.0	277.0
Frequency (Hz)	60	60
Total Luminous (lm)	4093.0	4175.5
Luminous Efficacy (lm/W)	147.18	148.28
Most worst Luminous/Highest Watts	145.35	



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Spectral Power Distribution & Chromaticity Diagram



WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)	WL(nm)	PL	PE(mW/nm)
380	0.0003	0.0381	525	0.4842	54.4865	670	0.1552	17.4625
385	0.0007	0.0740	530	0.4936	55.5476	675	0.1340	15.0816
390	0.0004	0.0420	535	0.5010	56.3760	680	0.1173	13.2034
395	0.0003	0.0374	540	0.5110	57.5040	685	0.1001	11.2625
400	0.0010	0.1148	545	0.5193	58.4297	690	0.0878	9.8812
405	0.0014	0.1592	550	0.5284	59.4611	695	0.0745	8.3884
410	0.0040	0.4516	555	0.5382	60.5632	700	0.0636	7.1613
415	0.0094	1.0527	560	0.5490	61.7820	705	0.0540	6.0798
420	0.0213	2.3916	565	0.5591	62.9146	710	0.0461	5.1881
425	0.0438	4.9328	570	0.5659	63.6750	715	0.0389	4.3752
430	0.0888	9.9886	575	0.5729	64.4695	720	0.0339	3.8099
435	0.1713	19.2715	580	0.5780	65.0354	725	0.0292	3.2857
440	0.3245	36.5164	585	0.5775	64.9791	730	0.0245	2.7609
445	0.6442	72.4911	590	0.5753	64.7353	735	0.0200	2.2484
450	0.9863	110.9792	595	0.5681	63.9227	740	0.0187	2.1055
455	0.8576	96.5008	600	0.5568	62.6553	745	0.0164	1.8427
460	0.5586	62.8551	605	0.5390	60.6477	750	0.0136	1.5347
465	0.4484	50.4578	610	0.5173	58.2141	755	0.0121	1.3601
470	0.3399	38.2432	615	0.4916	55.3193	760	0.0090	1.0084
475	0.2456	27.6377	620	0.4603	51.7938	765	0.0085	0.9559
480	0.2218	24.9628	625	0.4286	48.2320	770	0.0077	0.8709
485	0.2298	25.8632	630	0.3941	44.3493	775	0.0060	0.6772
490	0.2529	28.4524	635	0.3609	40.6112	780	0.0050	0.5617
495	0.2943	33.1218	640	0.3263	36.7219	785	0.0038	0.4249
500	0.3437	38.6769	645	0.2920	32.8553	790	0.0041	0.4631
505	0.3880	43.6645	650	0.2605	29.3140	795	0.0022	0.2488
510	0.4256	47.8900	655	0.2303	25.9099	800	0.0018	0.2045
515	0.4515	50.8096	660	0.2033	22.8733			
520	0.4699	52.8791	665	0.1778	20.0116			



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TM30

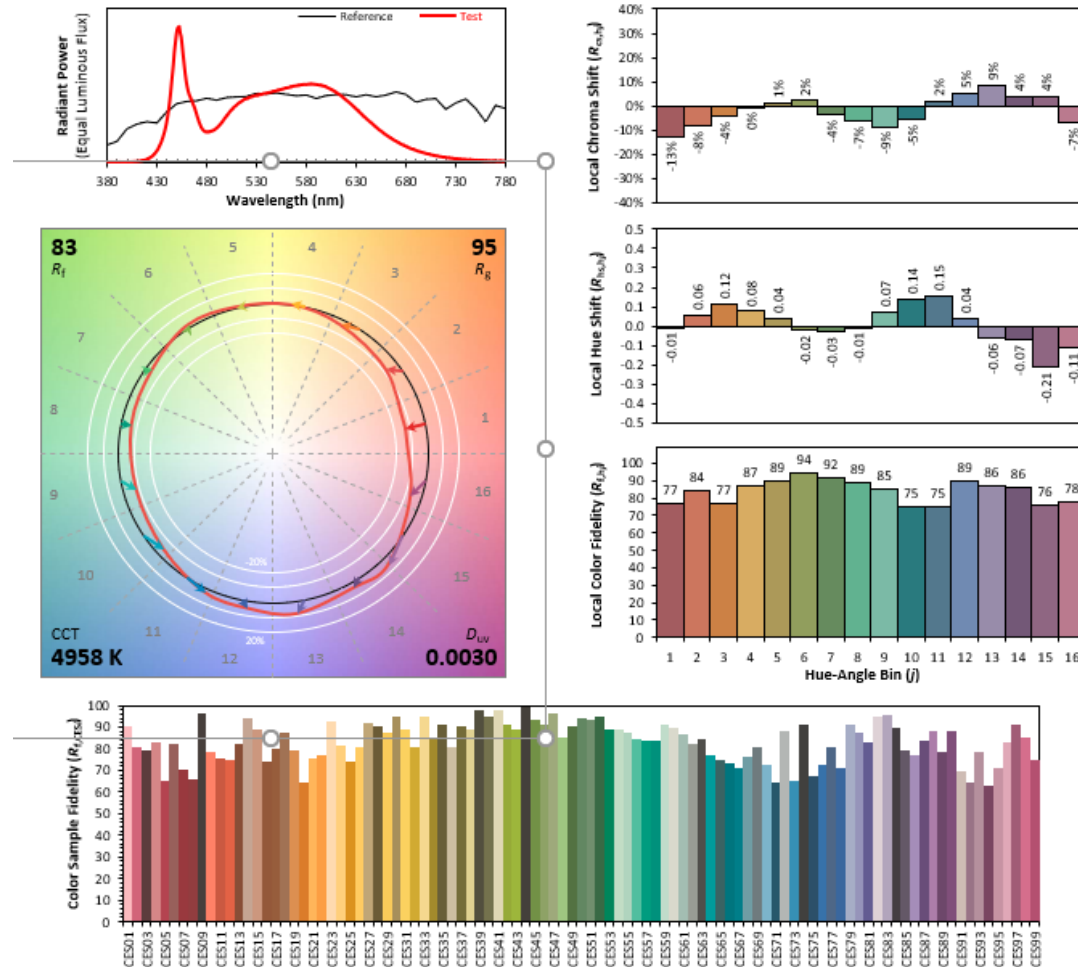
ANSI/IES TM-30-18 Color Rendition Report

Source: L128-5080RA35000H1

Date: 2020/9/11

Manufacturer: ASMAIT LIGHT CO., LTD

Model: LED27HIDRSC2MED (5000K)



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

x 0.3469
 y 0.3591
 u' 0.2098
 v' 0.4885

CIE 13.3-1995
(CRI)

R_a 83
 R_g 5

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



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Zonal Lumen Tabulation

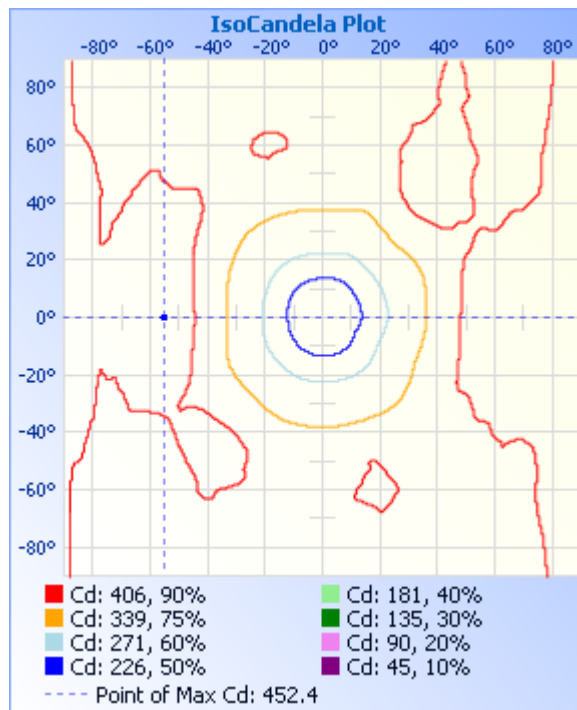
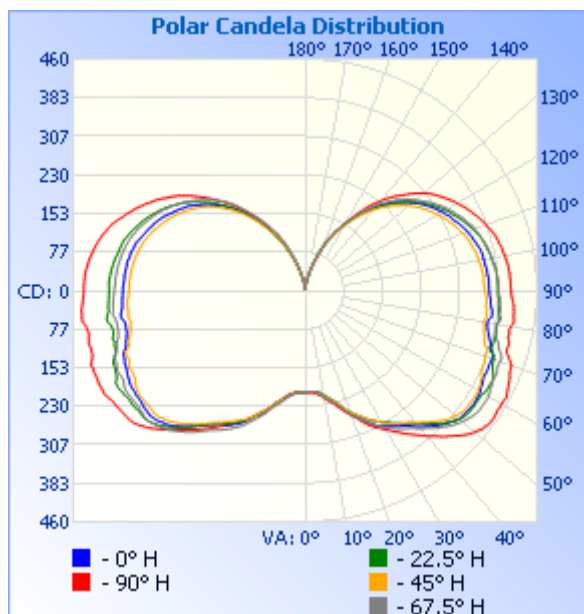
Zonal Lumen Summary				Lumens Per Zone					
Zone	Lumens	% Lamp	% Luminaire	Zone	Lumens	% Total	Zone	Lumens	% Total
0-30	219.5	5.4%	5.4%	0-10	19.7	0.5%	90-100	410.8	10%
0-40	427.5	10.4%	10.4%	10-20	67.1	1.6%	100-110	385.5	9.4%
0-60	1,088.7	26.6%	26.6%	20-30	132.6	3.2%	110-120	335.8	8.2%
60-90	1,231.1	30.1%	30.1%	30-40	208.0	5.1%	120-130	269.0	6.6%
70-100	1,238.9	30.3%	30.3%	40-50	295.3	7.2%	130-140	191.7	4.7%
90-120	1,132.2	27.7%	27.7%	50-60	365.9	8.9%	140-150	113.8	2.8%
0-90	2,319.8	56.7%	56.7%	60-70	403.0	9.8%	150-160	51.8	1.3%
90-180	1,773.5	43.3%	43.3%	70-80	410.7	10.0%	160-170	13.9	0.3%
0-180	4,093.3	100%	100%	80-90	417.4	10.2%	170-180	1.1	0%



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Candela Table - Type C

	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5	360
0	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202	202
1	202	201	201	201	202	202	202	202	202	202	202	201	201	201	201	201	202
2	201	201	200	201	202	202	203	202	202	203	202	202	202	200	201	201	201
3	201	201	201	201	202	203	204	203	203	203	203	202	201	201	201	201	201
4	200	201	201	201	203	203	204	203	203	203	204	203	202	201	202	201	200
5	201	201	202	201	205	204	204	205	204	204	204	205	203	202	202	201	201
6	201	202	202	202	206	206	206	206	206	206	205	206	204	203	202	202	201
7	203	203	204	205	208	207	207	207	208	207	207	208	205	204	204	202	203
8	206	205	207	207	210	209	211	211	210	210	209	210	207	206	206	204	206
9	208	208	209	210	212	212	211	213	214	212	213	213	209	208	209	207	208
10	212	211	212	213	217	216	216	216	216	217	217	217	213	211	212	210	212
11	216	214	215	218	220	219	220	220	221	218	220	221	216	215	214	213	216
12	217	217	218	222	224	224	223	222	224	221	222	226	220	220	219	215	217
13	222	221	222	224	227	227	225	225	226	225	225	230	224	223	223	219	222
14	225	224	226	228	232	230	230	229	230	229	230	235	229	228	227	223	225
15	230	228	229	232	236	234	236	235	234	234	234	238	232	232	231	227	230
16	235	233	233	237	241	239	241	242	239	240	240	244	238	236	235	231	235
17	240	239	238	242	247	245	246	246	247	245	245	249	243	241	240	236	240
18	245	245	244	248	252	252	250	249	254	250	249	256	249	246	247	241	245
19	251	251	250	255	257	258	254	254	258	254	254	262	253	252	252	247	251
20	258	256	256	261	262	263	260	260	262	259	260	268	258	258	259	252	258
21	264	260	261	267	268	267	266	264	266	264	264	273	263	263	264	256	264
22	269	265	265	272	273	272	273	270	270	269	269	278	268	267	268	261	269
23	275	269	270	276	280	278	278	276	276	275	274	284	274	273	273	265	275
24	281	275	274	281	287	284	283	281	282	280	279	291	279	278	280	272	281
25	286	279	280	287	294	291	287	284	288	284	283	296	284	285	287	277	286
26	292	284	285	293	299	295	294	288	293	288	286	301	290	290	292	282	292
27	298	289	290	299	305	299	298	292	297	294	289	305	295	295	298	287	298
28	304	293	292	304	308	303	302	296	300	298	293	311	299	300	303	290	304
29	307	297	298	308	314	308	307	300	305	301	297	314	304	304	308	294	307



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30	311	301	302	313	319	312	311	305	308	305	301	319	309	307	311	297	311
31	314	305	306	317	324	317	315	308	310	309	304	323	313	310	316	301	314
32	317	308	311	321	329	322	320	312	313	312	309	327	317	314	322	306	317
33	321	313	315	326	335	326	325	316	315	316	313	331	323	319	327	310	321
34	324	318	319	331	341	329	330	321	321	320	317	334	328	322	332	314	324
35	328	322	322	335	347	334	335	325	325	324	321	339	334	327	337	318	328
36	332	326	325	339	353	338	339	330	329	330	326	345	339	332	344	323	332
37	336	330	329	343	358	342	345	335	334	335	331	351	344	336	349	327	336
38	341	334	333	347	364	349	350	340	339	341	336	356	351	342	355	330	341
39	347	339	337	352	371	355	355	344	346	348	341	361	356	346	360	335	347
40	353	345	342	357	378	361	361	350	352	354	346	367	361	351	366	338	353
41	358	350	347	363	383	365	365	354	358	360	350	371	366	357	373	343	358
42	362	355	352	368	389	371	371	359	364	365	355	376	372	364	378	347	362
43	368	361	357	374	396	376	378	364	369	372	361	381	377	368	385	352	368
44	373	367	362	378	403	381	384	370	375	377	365	385	385	373	392	357	373
45	377	373	368	383	409	384	390	375	378	383	370	389	391	378	398	362	377
46	382	379	372	389	415	388	396	378	383	388	374	393	397	382	404	367	382
47	386	384	377	394	422	391	400	381	385	394	377	396	403	387	409	371	386
48	390	390	382	398	428	394	404	385	389	397	379	399	409	391	414	374	390
49	394	394	386	402	434	397	409	388	392	401	383	402	415	394	419	379	394
50	398	398	388	406	438	400	413	391	393	404	385	405	419	396	423	382	398
51	399	401	391	409	442	402	416	392	395	406	386	406	425	398	425	383	399
52	400	404	394	412	446	403	417	393	395	408	386	406	429	400	426	384	400
53	401	405	396	415	448	403	419	394	395	408	385	404	431	400	428	384	401
54	402	405	396	417	451	404	419	394	395	407	386	404	433	399	429	383	402
55	402	406	396	419	451	405	420	393	394	409	387	404	434	399	429	384	402
56	404	406	397	420	452	405	420	392	393	410	387	404	435	400	431	384	404
57	403	406	397	420	451	405	421	392	394	411	388	405	437	403	433	384	403
58	403	406	397	420	450	406	421	392	394	411	389	405	438	403	434	385	403
59	402	406	398	421	450	407	421	394	394	412	388	406	440	404	435	385	402
60	401	409	397	420	450	408	421	396	394	414	387	407	440	403	437	385	401
61	399	411	395	419	451	407	421	395	394	415	384	407	443	402	441	387	399

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62	398	411	394	416	452	403	418	394	394	417	382	407	446	399	441	388	398
63	396	411	391	416	450	400	417	392	392	418	379	403	448	395	440	389	396
64	394	413	391	413	447	397	416	388	391	418	380	402	448	392	437	387	394
65	394	412	386	413	445	395	412	387	390	413	379	403	449	389	436	384	394
66	395	409	384	414	443	392	410	388	388	410	380	405	449	388	437	383	395
67	394	405	384	414	441	390	409	388	386	409	380	405	448	389	436	381	394
68	394	401	384	411	438	389	409	387	386	407	376	403	448	389	434	380	394
69	395	399	381	410	436	388	410	385	384	407	375	402	449	389	435	382	395
70	395	399	380	412	436	388	407	383	383	405	377	400	449	388	439	384	395
71	395	396	380	412	430	388	400	381	381	398	377	401	450	385	436	380	395
72	388	391	381	409	424	381	395	380	376	394	370	395	445	385	427	373	388
73	383	387	373	403	418	378	394	370	371	394	365	390	441	384	421	368	383
74	383	387	370	399	417	377	391	368	370	394	365	389	440	381	423	367	383
75	379	388	368	397	419	377	390	370	367	392	361	386	440	378	421	362	379
76	376	388	369	391	417	374	388	365	365	394	358	382	442	377	420	363	376
77	373	389	364	388	413	370	385	364	363	391	356	381	441	374	419	361	373
78	370	387	363	387	414	368	384	362	363	389	354	379	439	372	416	358	370
79	368	387	362	385	412	367	384	362	363	390	353	379	438	370	414	356	368
80	367	385	359	387	414	368	387	368	363	392	351	379	439	367	416	358	367
81	369	390	363	388	418	370	387	370	367	397	354	380	441	369	420	360	369
82	374	391	364	388	419	371	388	370	369	398	354	382	446	371	421	360	374
83	374	387	362	388	416	371	389	369	368	396	354	385	446	369	418	359	374
84	373	387	364	390	417	372	389	368	366	392	353	383	446	368	417	360	373
85	370	386	359	389	415	371	389	368	364	392	354	383	446	368	416	358	370
86	369	386	361	387	415	370	388	367	364	391	353	382	443	367	416	357	369
87	369	385	361	387	413	370	386	366	363	391	353	381	442	367	415	357	369
88	367	383	360	387	411	369	385	365	363	390	351	380	441	366	414	356	367
89	366	383	358	385	409	368	385	364	362	389	350	379	440	365	413	354	366
90	365	383	357	384	409	367	384	364	362	389	350	379	439	364	413	354	365
91	365	383	356	384	408	366	384	364	362	390	349	378	440	365	413	353	365
92	365	383	355	383	408	365	384	363	361	390	349	377	439	364	412	353	365
93	365	383	355	383	408	365	384	363	360	390	349	377	439	364	412	353	365

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94	365	382	355	382	407	364	383	363	360	389	348	377	438	363	412	352	365
95	363	381	356	382	407	364	382	363	360	388	348	376	438	363	411	351	363
96	363	381	354	381	406	364	381	362	359	387	347	376	436	362	410	351	363
97	363	380	354	380	406	363	381	361	358	385	347	375	435	361	409	350	363
98	361	379	353	378	405	363	380	361	358	385	346	374	434	361	408	349	361
99	361	376	351	377	403	362	379	360	358	383	345	373	432	359	407	348	361
100	360	375	349	376	402	361	379	359	356	382	344	372	429	359	406	348	360
101	360	375	349	375	401	360	378	358	355	380	343	371	428	358	405	345	360
102	359	372	348	374	400	359	377	356	354	378	342	370	426	356	403	345	359
103	357	371	347	373	398	357	377	354	353	377	341	369	423	355	401	344	357
104	356	369	345	371	396	356	375	353	350	376	339	367	421	353	399	341	356
105	354	368	343	369	395	355	374	351	350	374	338	365	418	352	397	339	354
106	351	367	342	366	393	353	371	349	348	373	336	364	415	349	395	338	351
107	349	364	340	364	391	351	369	347	345	369	334	361	412	346	393	336	349
108	348	361	338	363	388	348	368	345	342	366	332	360	409	346	390	335	348
109	345	358	336	361	384	346	366	342	340	364	330	356	405	343	388	332	345
110	343	356	333	358	382	343	364	339	337	361	327	355	401	340	384	329	343
111	341	352	330	357	380	340	362	337	335	358	326	351	396	338	381	327	341
112	338	349	328	353	377	337	360	334	332	355	323	349	391	336	379	324	338
113	335	346	325	349	373	336	356	332	329	351	320	345	387	333	376	322	335
114	332	343	322	347	370	334	353	329	328	348	317	342	382	330	372	319	332
115	328	339	319	344	366	330	351	325	325	345	314	339	378	327	369	315	328
116	325	336	317	340	363	325	348	322	322	341	312	337	373	325	365	313	325
117	324	331	313	336	360	323	344	319	319	337	308	333	368	321	361	310	324
118	320	328	310	333	356	321	340	316	316	333	306	330	363	318	356	307	320
119	316	325	306	329	352	318	337	312	312	329	302	327	359	314	352	304	316
120	314	321	303	326	348	315	333	308	307	325	299	323	352	309	348	300	314
121	310	317	299	322	345	312	327	304	305	321	295	318	348	306	343	298	310
122	307	313	296	318	340	308	322	301	301	317	292	315	343	303	339	292	307
123	303	308	292	313	336	303	316	296	298	312	288	311	337	300	333	289	303
124	299	304	289	310	331	299	310	292	293	307	285	307	331	295	329	285	299
125	295	299	285	305	327	295	305	288	290	302	280	303	325	292	324	281	295

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126	291	295	281	300	323	291	300	285	286	297	276	299	320	287	319	277	291
127	287	290	277	295	318	286	294	280	280	293	273	294	314	284	313	273	287
128	282	285	273	290	313	283	290	274	277	287	269	289	307	279	308	268	282
129	278	280	268	286	308	278	284	271	271	281	264	285	300	274	303	265	278
130	273	275	264	281	301	272	278	266	267	275	259	280	293	268	298	259	273
131	269	270	258	276	295	267	273	260	262	269	255	275	286	264	293	255	269
132	263	264	253	272	289	262	267	255	257	263	249	270	279	260	287	251	263
133	257	258	248	266	282	257	260	250	251	257	244	265	272	254	281	245	257
134	253	252	243	261	275	251	254	244	246	251	238	261	264	249	275	240	253
135	248	245	238	255	268	246	248	239	240	244	233	255	257	243	268	234	248
136	242	238	233	248	262	240	241	232	235	237	227	249	250	237	261	229	242
137	236	232	227	242	256	233	234	226	228	230	222	244	243	230	254	222	236
138	230	226	222	236	248	227	228	219	223	224	216	238	236	225	246	216	230
139	224	221	215	230	242	221	221	213	217	217	209	232	229	218	238	209	224
140	218	214	209	223	233	214	214	207	211	210	203	225	222	212	229	203	218
141	210	209	203	216	225	208	207	200	204	203	197	219	215	205	220	197	210
142	203	202	197	208	218	200	200	194	196	196	190	210	207	198	211	190	203
143	197	195	190	201	210	193	192	187	189	189	184	202	200	191	203	183	197
144	190	190	184	193	202	185	185	181	182	181	178	195	192	185	194	177	190
145	183	183	177	186	193	178	178	173	175	173	172	187	185	178	185	169	183
146	176	176	171	178	184	171	170	167	167	167	164	180	176	172	177	164	176
147	169	170	163	171	175	162	163	160	160	159	158	173	168	165	168	157	169
148	162	163	156	164	166	156	156	153	153	151	151	167	160	158	160	151	162
149	156	156	150	157	158	150	150	145	146	144	144	159	152	150	153	145	156
150	149	151	144	151	150	141	143	139	140	137	138	152	144	145	145	139	149
151	142	144	136	144	142	136	136	133	134	129	130	146	137	139	138	132	142
152	136	137	130	137	134	129	128	125	127	122	124	138	129	133	131	126	136
153	129	131	125	129	126	123	120	118	120	115	117	132	122	127	124	121	129
154	121	124	118	123	119	116	113	112	114	108	109	126	115	120	117	114	121
155	115	118	112	116	112	109	107	105	106	100	103	120	108	113	109	108	115
156	107	111	106	108	105	102	100	99	99	94	96	112	101	105	103	103	107
157	100	103	99	101	97	95	93	93	92	88	90	104	95	98	96	96	100

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158	93	96	91	94	90	87	86	86	85	81	84	95	87	91	89	90	93
159	86	89	85	86	83	80	79	78	77	75	78	88	80	83	81	83	86
160	80	82	77	78	75	73	72	71	71	68	71	80	73	77	74	77	80
161	73	75	71	72	68	67	65	65	65	61	64	73	66	71	67	71	73
162	66	67	66	66	62	61	60	59	60	55	59	67	60	65	61	65	66
163	60	60	61	61	56	55	54	54	54	49	53	61	55	59	56	59	60
164	55	54	54	55	50	49	48	47	48	45	47	54	50	53	50	54	55
165	49	47	49	49	44	43	43	41	42	39	42	49	44	47	45	48	49
166	43	42	42	43	38	38	38	36	36	34	36	43	39	42	39	42	43
167	37	37	37	37	33	33	32	30	32	29	32	36	34	36	35	38	37
168	32	31	33	32	28	27	28	26	28	26	27	31	29	32	31	33	32
169	28	27	28	28	24	23	24	22	23	22	24	27	25	27	26	28	28
170	23	23	24	24	20	19	20	19	19	18	20	23	22	22	21	24	23
171	19	20	20	19	16	15	16	15	16	15	16	17	17	19	18	20	19
172	16	16	16	16	13	12	13	12	13	12	13	14	12	14	14	16	16
173	13	13	13	12	10	9	10	9	10	10	10	12	8	8	11	13	13
174	10	11	10	10	7	6	7	8	8	8	8	10	5	5	8	7	10
175	7	8	8	8	5	5	5	5	7	6	6	6	5	5	6	6	7
176	6	6	5	5	3	4	4	4	5	5	5	4	4	5	4	6	6
177	4	3	4	4	2	3	3	4	4	4	4	4	2	3	3	4	4
178	4	4	4	4	2	3	3	4	3	4	4	4	2	3	3	4	4
179	3	4	4	4	2	3	3	3	4	4	4	5	3	3	4	4	3
180	4	4	4	4	3	2	3	4	4	4	4	4	2	3	4	4	4



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3. Test Equipment

Equipment Name	Model No.	Serial No.	Next Calibration Date
Goniophotometric System	GPM-3000	DYHXF120001	2021/2/26
AC Power Source	CHP-500C	N/A	2021/3/29
Total Luminous Flux Standard Lamp	24V/150W	DYJYR040040	2021/3/1
Digital Power Meter	WT500	DYDWQ200006	2021/3/29
Integral Sphere (2M)	2M	DYJCE120067	2021/2/26
Digital Power Meter	WT500	DYDWQ200006	2021/3/29
Optical Color and Electrical Measurement System	CMS-3000S	DYJCE120067	2021/2/26
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 *****