Date of issue 2021-10-11
Version 1.0
Total pages 55

Test report of
IES LM-79-08
Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Applicant:

RAB Lighting Inc

Address:

Northvale, New Jersey, 07647, USA

For Product:

LED Corn Lamp

Model No.:

HIDFA-27S-XXX-8CCT-BYP
(XXX indidates base type, can be E26 or EX39)

Test laboratory: Shenzhen Belling Efficiency Testing Lab Co.,Ltd, 1Floor, No.1 Building, Meibaohe Industrial Park, Dalang Street, Longhua District, Shenzhen, Guangdong Prov.518101 China.

Jaky Li

Jason zhou

Complied by: Jaky Li **Review by: Jason zhou**

Project Engineer **Technical Manager**

Note: The test data was only valid for the test sample(s). This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or use in part without prior written consent from Shenzhen Belling Efficiency Testing Lab Co.,Ltd. This report must not be used by the customer to claim product certification, approval, or endorsement By NVLAP, NIST, or any agency of the U.S. Government.

1 General

1.1 Product Information

Manufacturer	RAB Lighting Inc
Manufacturer Address	Northvale, New Jersey, 07647, USA
Brand Name	RAB
Luminaire Type	LED Corn Lamp
Model Number	HIDFA-27S-XXX-8CCT-BYP (XXX indidates base type, can be E26 or EX39)
Rated Inputs	AC 100-277V, 50/60Hz
Rated Power	27 W
Color-Tunable Product	Yes, CCT setting: 3000K / 4000K / 5000K
Date of Receipt Samples	2021-08-16
Date of test	2021-08-17 to 2021-08-27
Burning Time Before Test	0hour(For New Products)

1.2 Standards or methods

- ANSI C78.377-2017:Specifications for the Chromaticity of Solid State Lighting Products
- ANSI C82.77-10:2014:Harmonic Emission Limits - Related Power Quality Requirements for Lighting Equipment - Solid State
- CIE Publication No.13.3-1995:Method of Measuring and Specifying Color Rendering of Light Sources
- IESNA LM-79-08 Approved Method: Electric & Photometric Measurement of Solid-state Lighting Products

1.3 Description

- Declaration: RAB Lighting Inc declare that their product with model HIDFA-27S-XXX-8CCT-BYP are the same to the product in the report BL210817007-9 and is authorized by original applicant to use their test data.
- Note:All the data in previous report BL210817007-9 is shared in report.

1.4 Equipment list

Device	Manufacture	Model No.	Serial No.	Calibration due date
Goniophotometric System	SENSING	GMS-3000	N.A	2022-03-31
AC Power Source	ALL POWER	APW-110N	992257	2022-03-31
Total Luminous Flux Standard Lamp	SENSING	110V/100W	S1510065	2022-04-07
Total Spectral Radiant Flux Standard Lamp	SENSING	12V/20W	LSD12201731	2022-04-07
Digital Power Meter	YOKOGAWA	WT310	C2QM02030V	2022-03-31
Integral Sphere	SENSING	SPR-600M	N.A	2022-03-31
Digital Power Meter	YOKOGAWA	WT210	91L929742	2022-03-31
Optical Color and Electrical Measurement System	SENSING	SPR-3000	S1101108	2022-03-31
Environment Measurer	XUYAO	HS-1	N/A	2022-04-03
Environment Measurer	XUYAO	HS-1	N/A	2022-04-03
Stop watch	KISLO	K610	N/A	2022-04-22
Digital Anemometer	TECMAN	TD8901	026141	2021-09-09

Statement of Traceability: Shenzhen Belling Efficiency Testing Lab Co.,Ltd attests that all calibration has been performed using suitable standards traceable to national primary standards and International System of Unit (SI).

2 Test conducted and method

2.1 Ambient Condition

The ambient temperature in which measurements are being taken was maintained at 25°C ±1°C, the air flow around the sample(s) being tested did not affect the performance.

2.2 Power Supply Characteristics

The AC power supply had a sinusoidal voltage wave shape at the prescribed frequency (60 Hz) such that the RMS summation of the harmonic components does not exceed 3 percent of the fundamental during operation of the test item.

The voltage of AC power supply (RMS voltage) applied to the device under test was regulated to within±0.2 percent under load.

2.3 Seasoning and Stabilization

No seasoning was performed in accordance with IESNA LM-79-08. And before the measurement, the sample was stabilized until the light output and power variations were less than 0.5% in 30 minutes intervals (3 readings, 15 minutes apart).

2.4 Integrating Sphere System

The system includes AC power source, digital power meter, DC power supply, spectrophotometer, and integrating sphere. The integrating sphere system is calibrated by standard light source before measurement. The system and standard light source has been calibrated regularly and traceable to the National Primary Standards. 4π geometry was used during measurement. The product was operated in its intended orientation in application and was recorded in this report.

Integrating Sphere Uncertainty: The uncertainty of the light output (luminous flux) measurements is U=1.8% (K=2), at the 95% confidence level. The uncertainty of the correlated color temperature measurements is U=20K (K=2), at the 95% confidence level. The uncertainty of the CRI is U=1.8(K=2), at the 95% confidence level. The uncertainty of power meter AC current U=0.18% of rdg, AC Voltage U=0.16% of rdg, Power U=0.20% (K=2), at the 95% confidence level.

2.5 Goniophotometer System

The goniophotometer system is calibrated by standard light source before measurement. The standard light source has been calibrated regularly and traceable to the National Primary Standards.

Type C goniophotometer was used for measuring total luminous flux, luminous intensity distribution, and color spatial uniformity. The product was operated in its intended orientation in application and was recorded in this report. The method according to IESNA LM-79-08 following chapter.

Goniophotometer Uncertainty :The uncertainty of the luminous intensity is U=1.6% (K=2), at the 95% confidence level.

3 Test Result Summary

3.1 Integrating Sphere System (Total operating time for integrating sphere test: 1.0 hour)

3.1.1 Model Number: HIDFA-27S-XXX-8CCT-BYP, 3000K at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.04	60	0.236	27.97	0.989

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
3563.42	127.4	3047

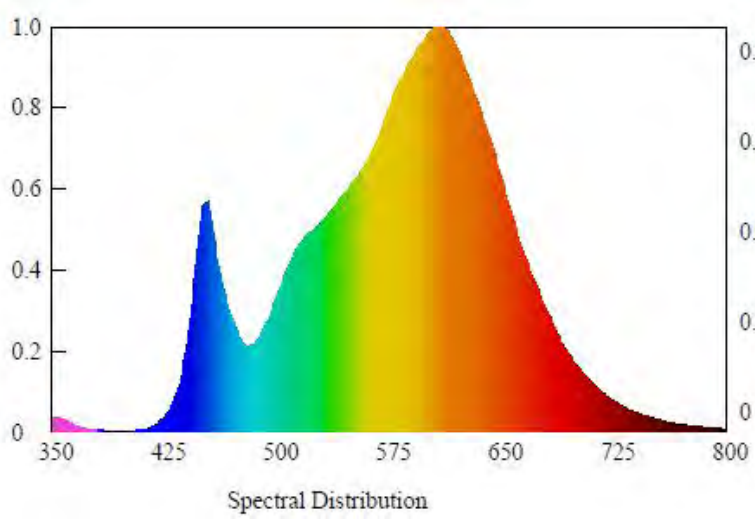
Chromaticity Coordinate

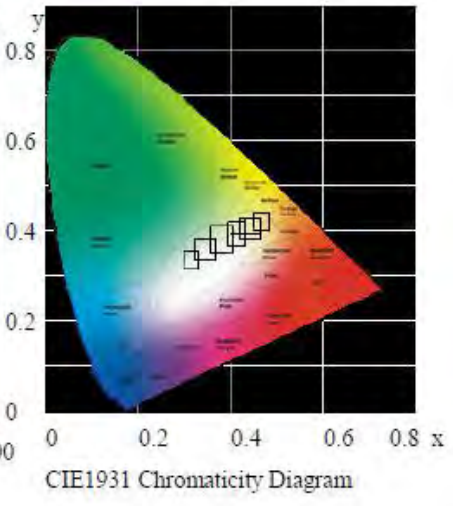
Duv	x	y	u'	v'
-0.00196	0.4309	0.3971	0.2497	0.5177

Color Rendering

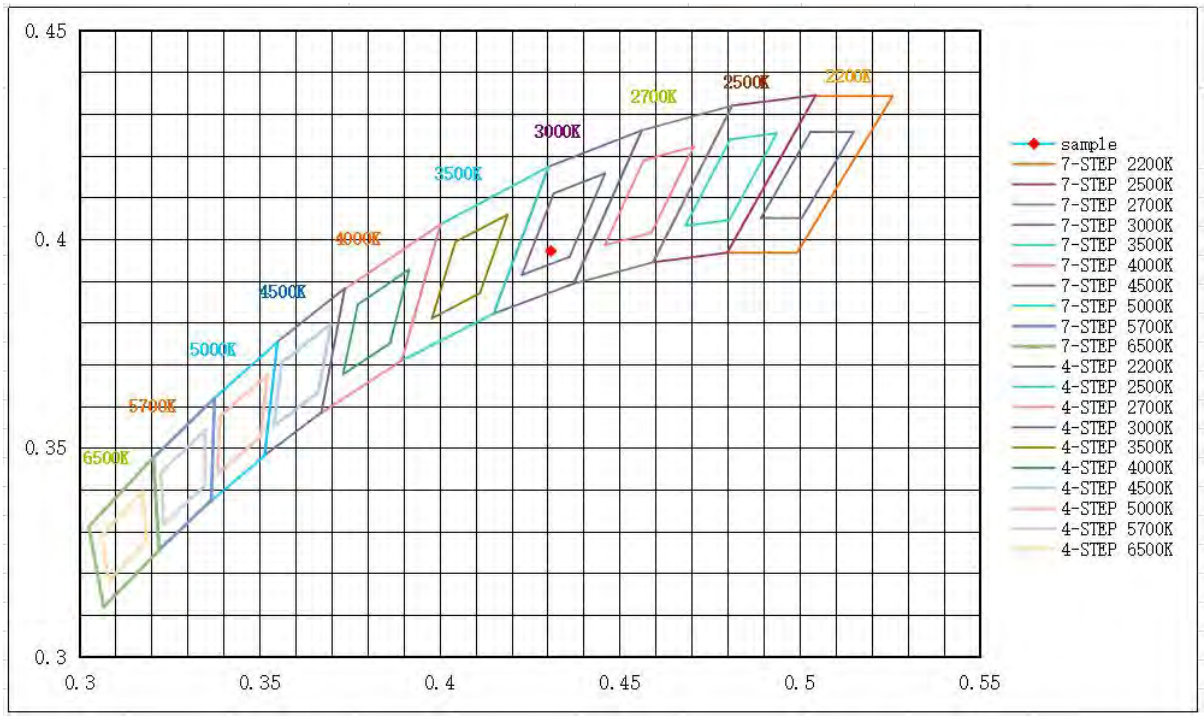
CRI	R9	Rf	Rg	Rcs,h1(%)
86.3	24	87	97	-9

Spectral Distribution



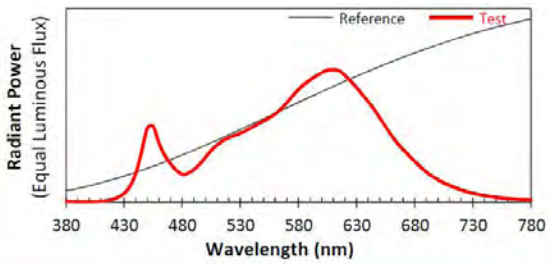


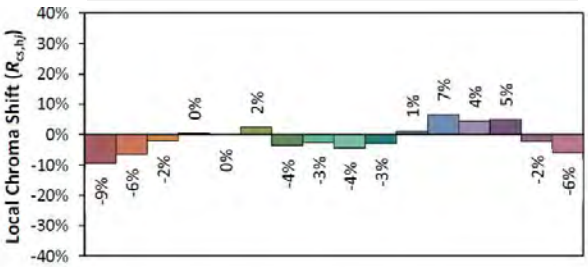
7/4 Step Quadrangle

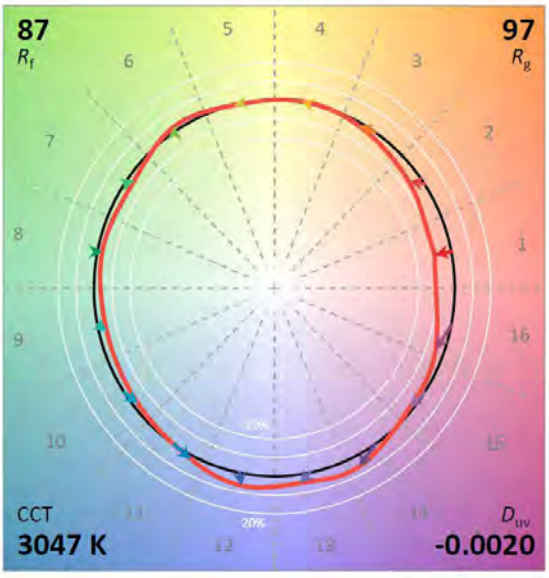


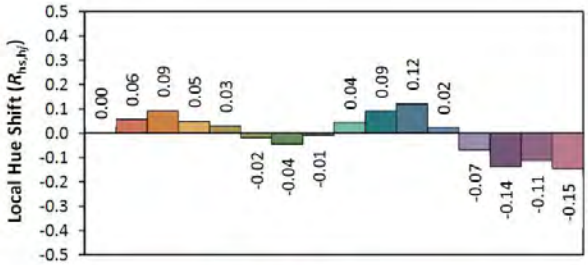
ANSI/IES TM-30-18 Color Rendition Report

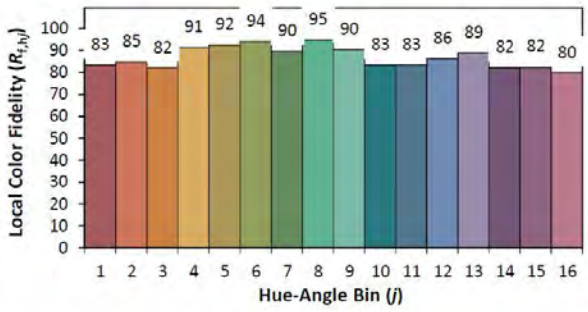
Source:	BL210817023-9	**Manufacturer:**	RAB Lighting Inc
Date:	2021-10-11	**Model:**	HIDFA-27S-XXX-8CCT-BYP, 3000K at 120V

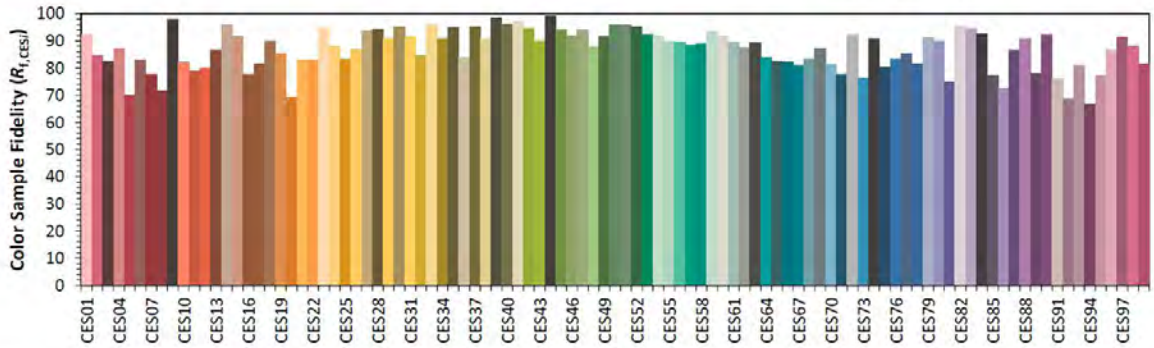












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.4309
y	0.3971
u'	0.2497
v'	0.5177

CIE 13.3-1995 (CRI)

R_a	86
R_9	24

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

3.1.2 Model Number: HIDFA-27S-XXX-8CCT-BYP, 4000K at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.05	60	0.230	27.26	0.989

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
3786.42	138.9	4010

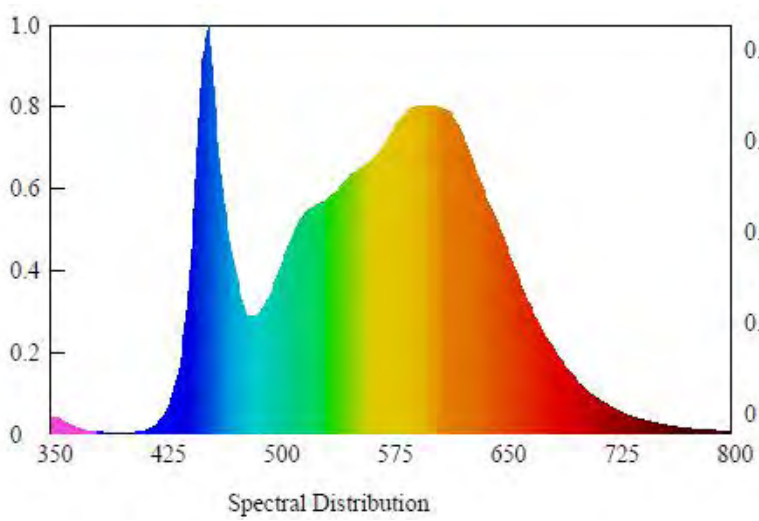
Chromaticity Coordinate

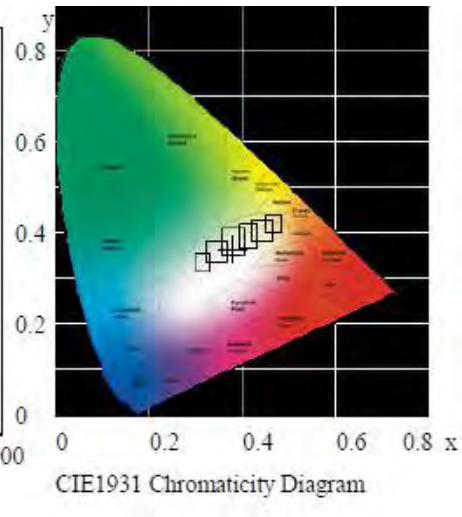
Duv	x	y	u'	v'
-0.00386	0.3774	0.3668	0.2271	0.4966

Color Rendering

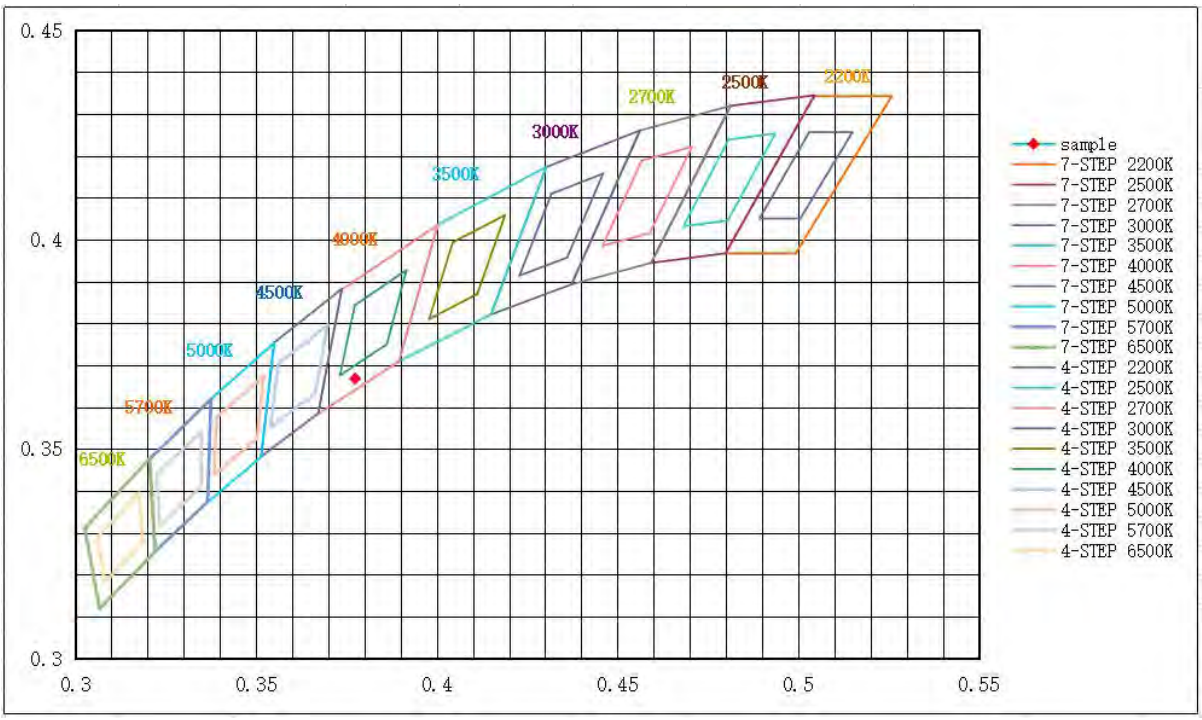
CRI	R9	Rf	Rg	Rcs,h1(%)
88.1	34	86	97	-9

Spectral Distribution



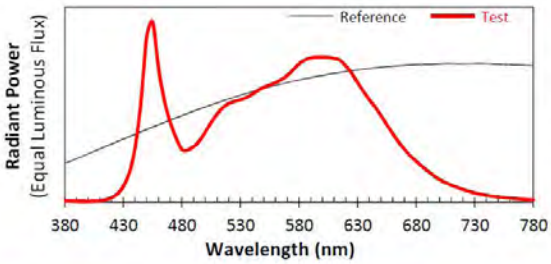


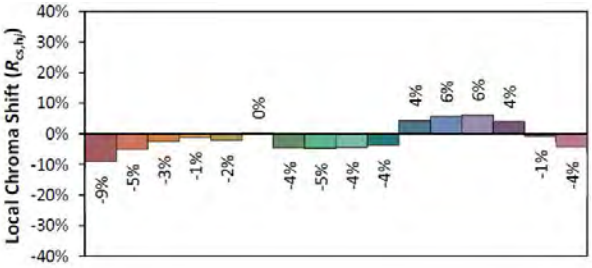
7/4 Step Quadrangle

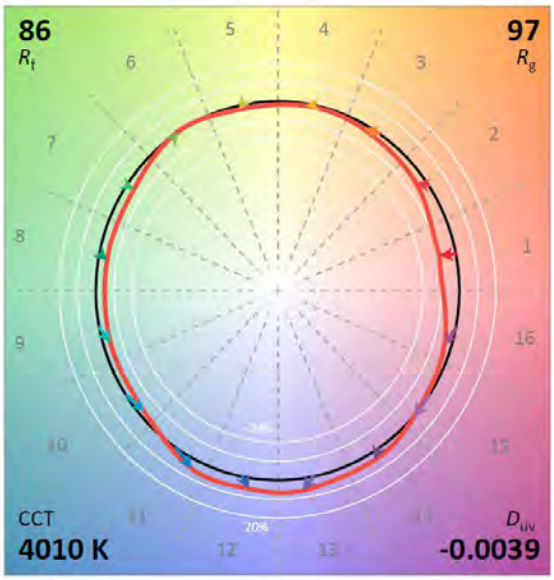


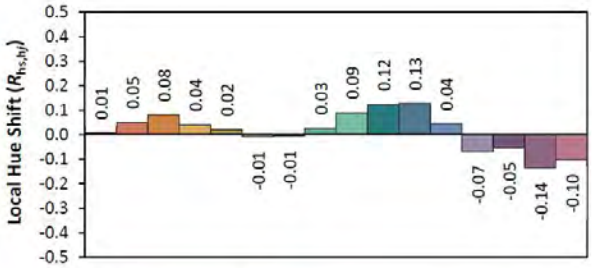
ANSI/IES TM-30-18 Color Rendition Report

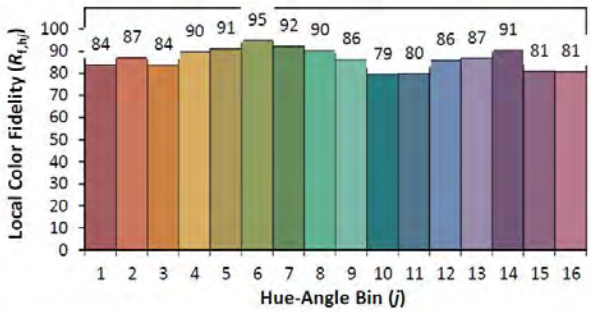
Source:	BL210817023-9	**Manufacturer:**	RAB Lighting Inc
Date:	2021-10-11	**Model:**	HIDFA-27S-XXX-8CCT-BYP, 4000K at 120V

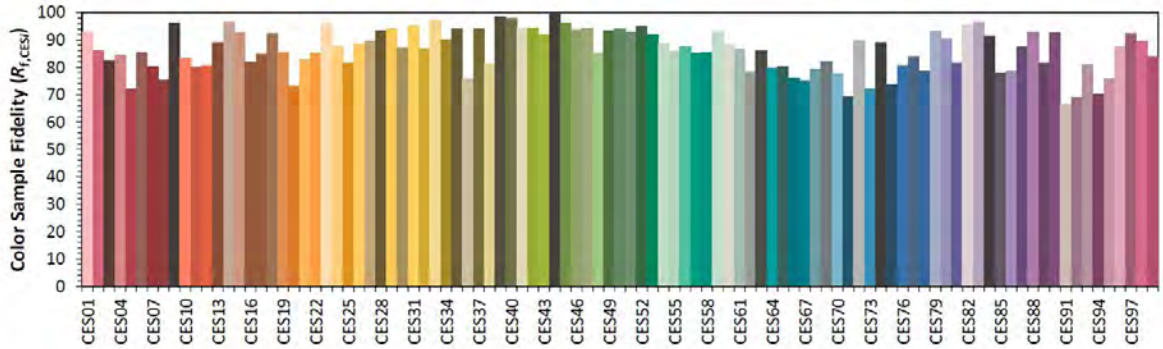












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3774
y	0.3668
u'	0.2271
v'	0.4966

CIE 13.3-1995 (CRI)

R_a	88
R_9	34

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

3.1.3 Model Number: HIDFA-27S-XXX-8CCT-BYP, 5000K at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.04	60	0.234	27.76	0.989

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
3755.92	135.3	4989

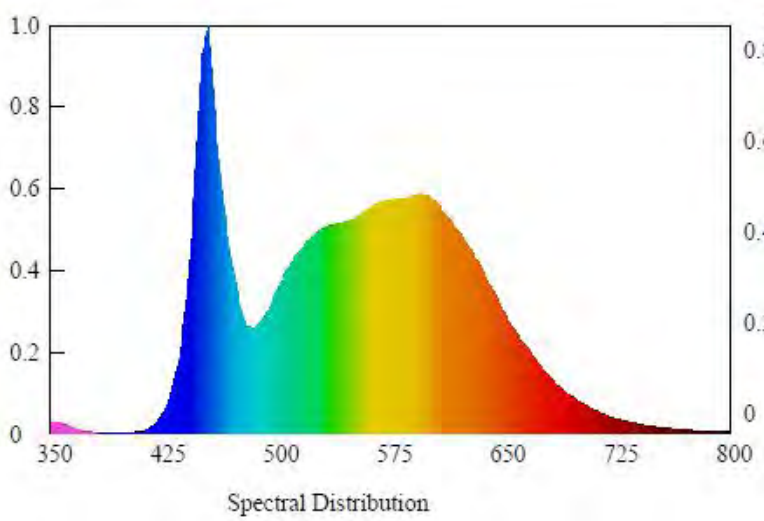
Chromaticity Coordinate

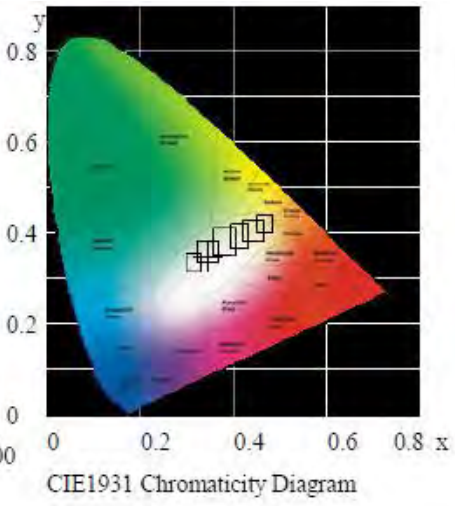
Duv	x	y	u'	v'
-0.00154	0.3451	0.3486	0.2126	0.4832

Color Rendering

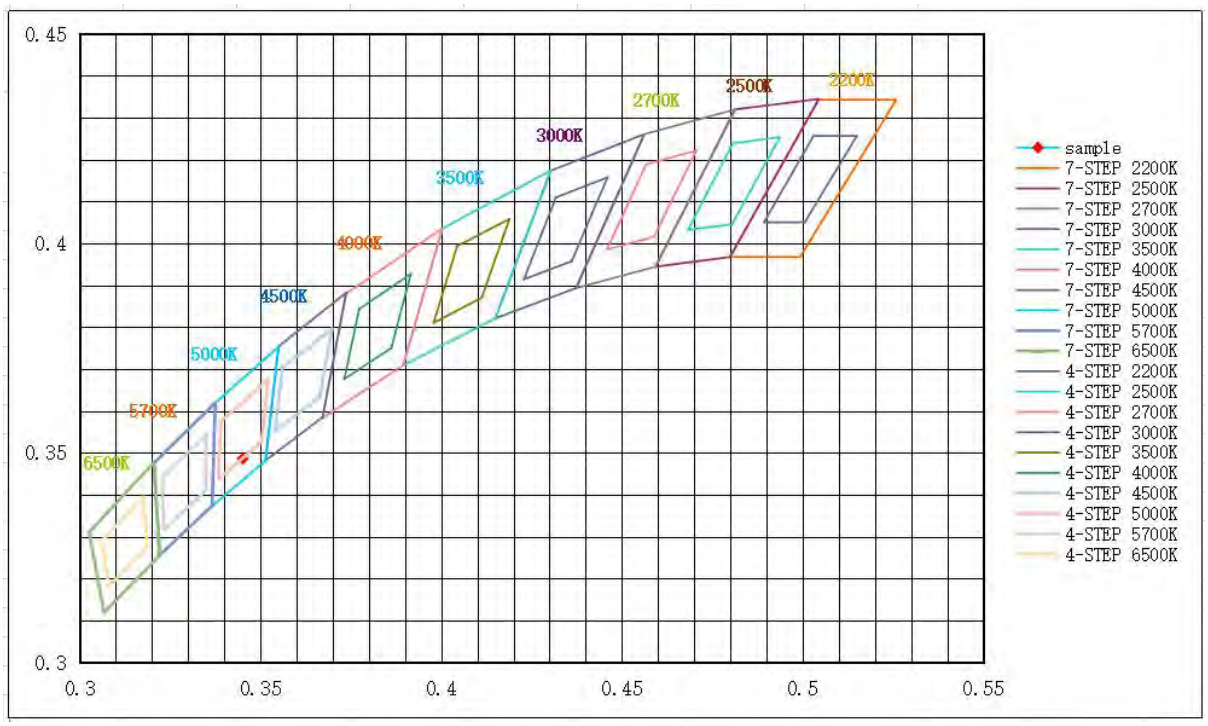
CRI	R9	Rf	Rg	Rcs,h1(%)
86.8	29	85	97	-10

Spectral Distribution



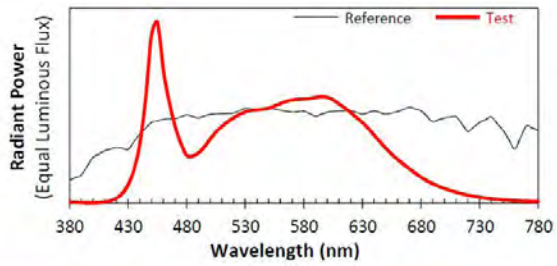


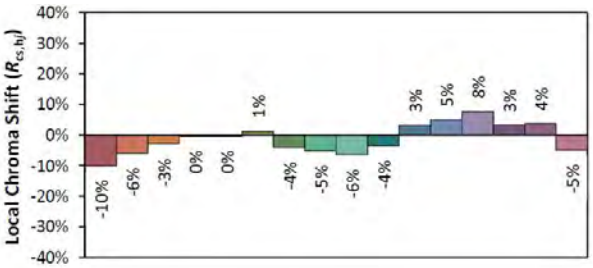
7/4 Step Quadrangle

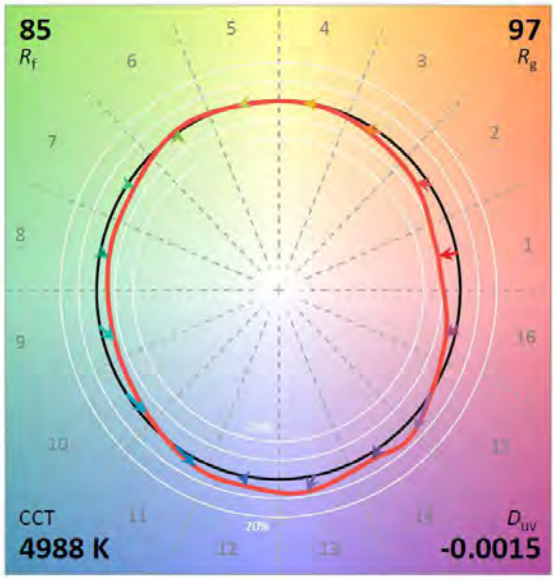


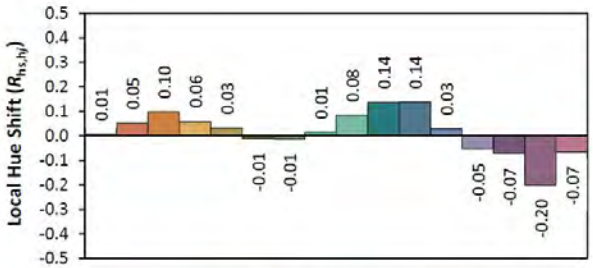
ANSI/IES TM-30-18 Color Rendition Report

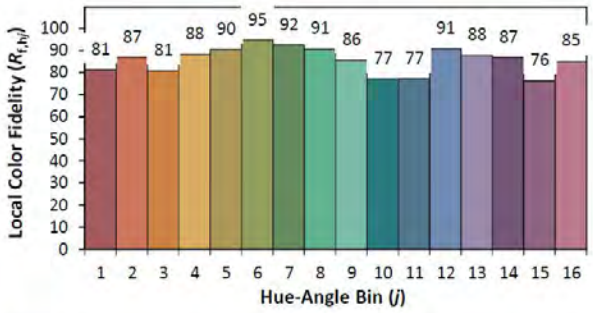
Source:	BL210817023-9	**Manufacturer:**	RAB Lighting Inc
Date:	2021-10-11	**Model:**	HIDFA-27S-XXX-8CCT-BYP, 5000K at 120V

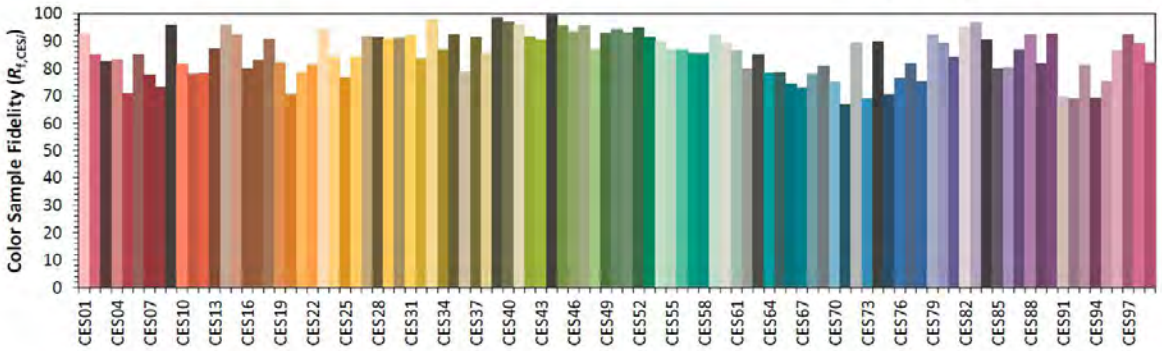












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3451
y	0.3486
u'	0.2126
v'	0.4832

CIE 13.3-1995 (CRI)

R_a	87
R_9	29

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

3.1.4 Model Number: HIDFA-27S-XXX-8CCT-BYP, 3000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.13	60	0.116	28.95	0.903

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
3725.89	128.7	3064

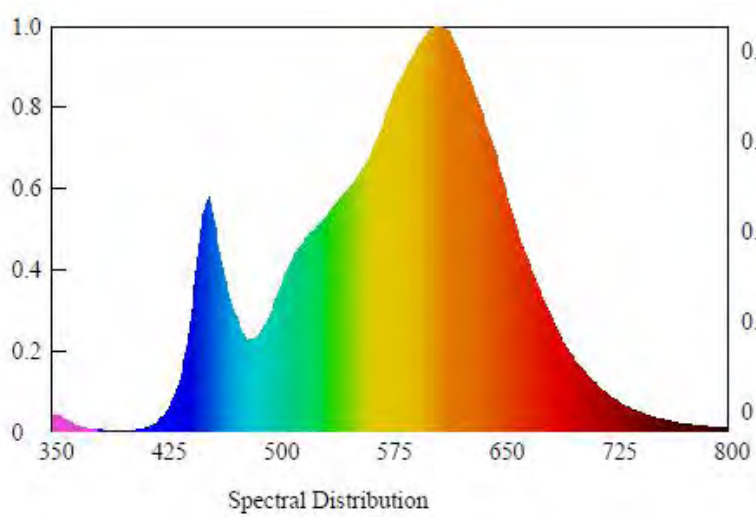
Chromaticity Coordinate

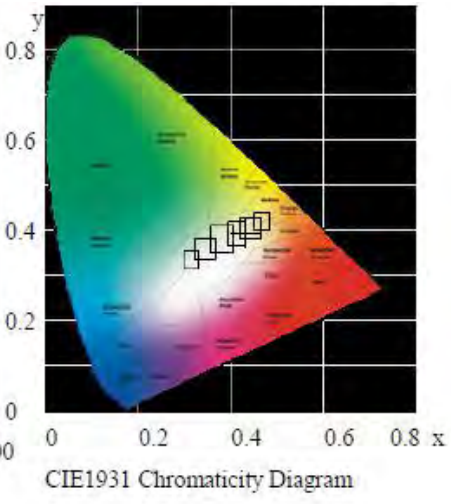
Duv	x	y	u'	v'
-0.00236	0.4292	0.3955	0.2493	0.5168

Color Rendering

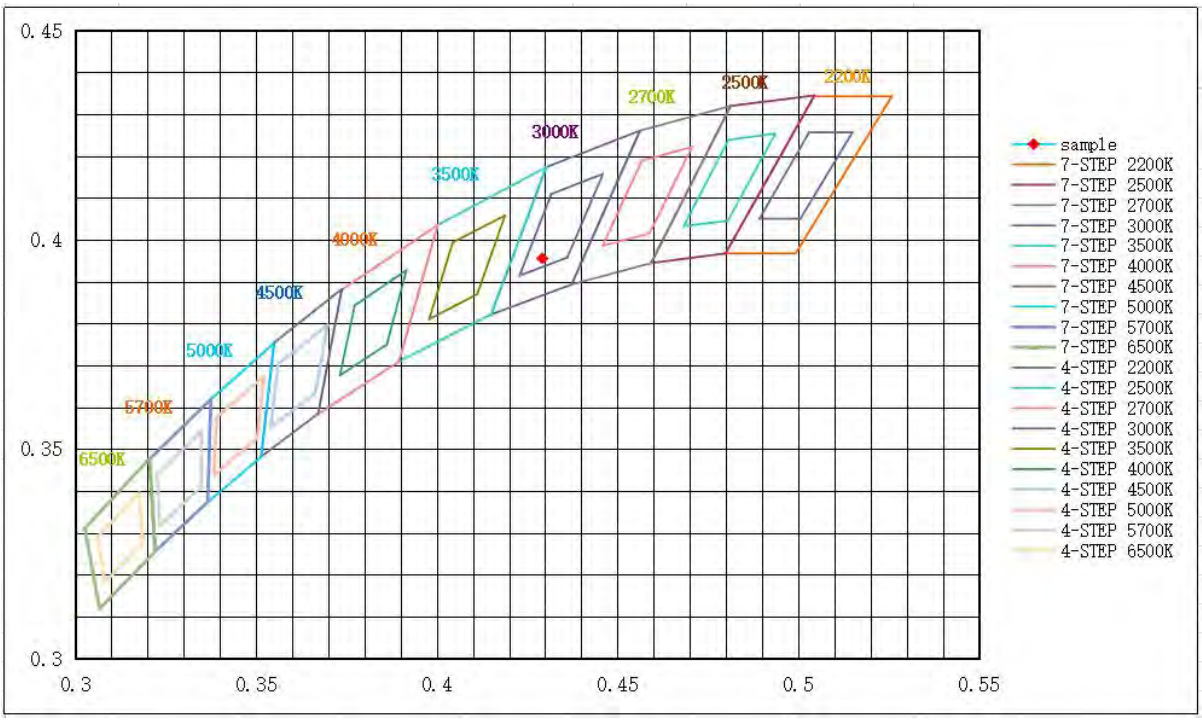
CRI	R9	Rf	Rg	Rcs,h1(%)
86.0	23	87	97	-10

Spectral Distribution



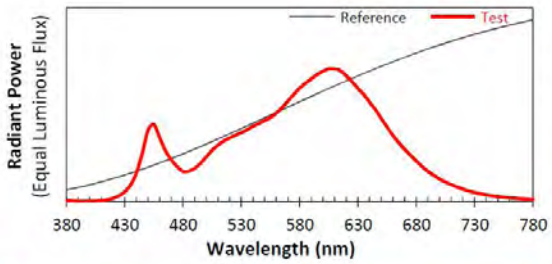


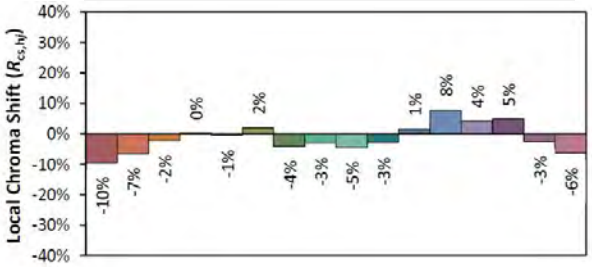
7/4 Step Quadrangle

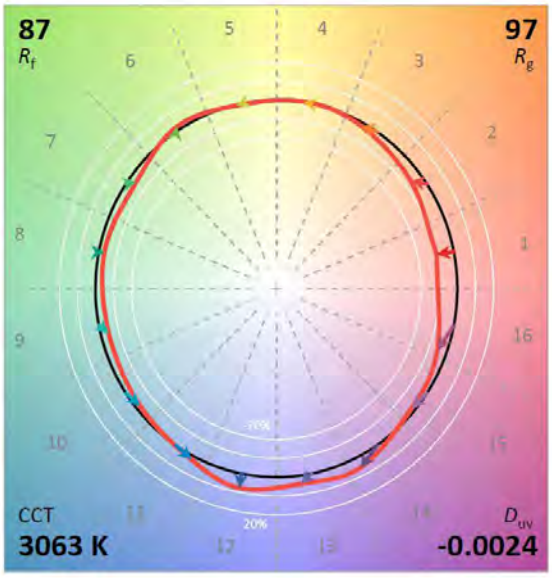


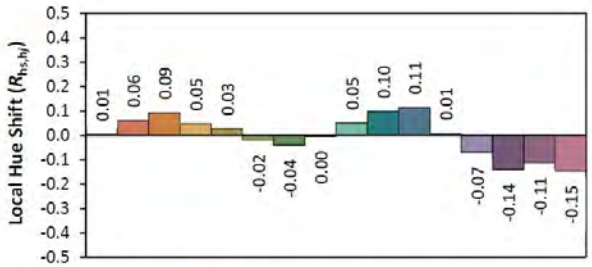
ANSI/IES TM-30-18 Color Rendition Report

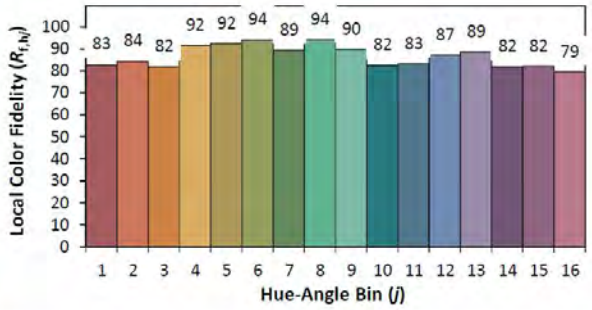
Source:	BL210817023-9	**Manufacturer:**	RAB Lighting Inc
Date:	2021-10-11	**Model:**	HIDFA-27S-XXX-8CCT-BYP, 3000K at 277V

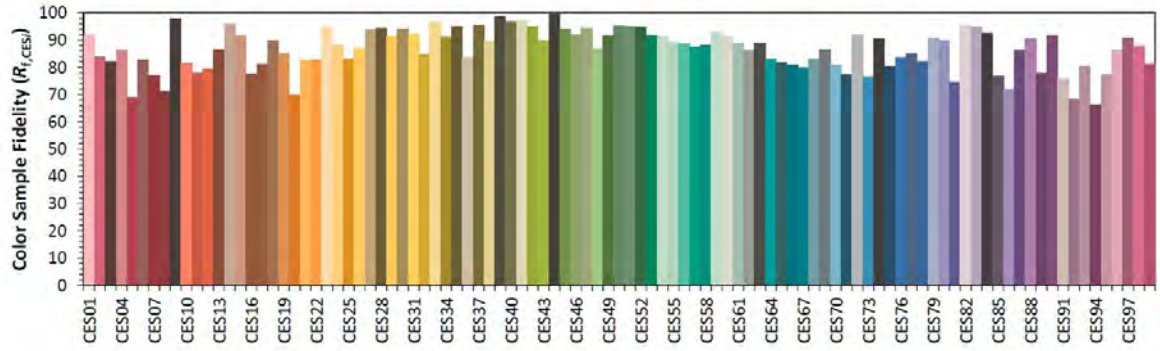












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.4292
y	0.3955
u'	0.2493
v'	0.5168

CIE 13.3-1995 (CRI)

R_a	86
R_9	22

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

3.1.5 Model Number: HIDFA-27S-XXX-8CCT-BYP, 4000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.15	60	0.113	28.31	0.901

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
3960.55	139.9	4038

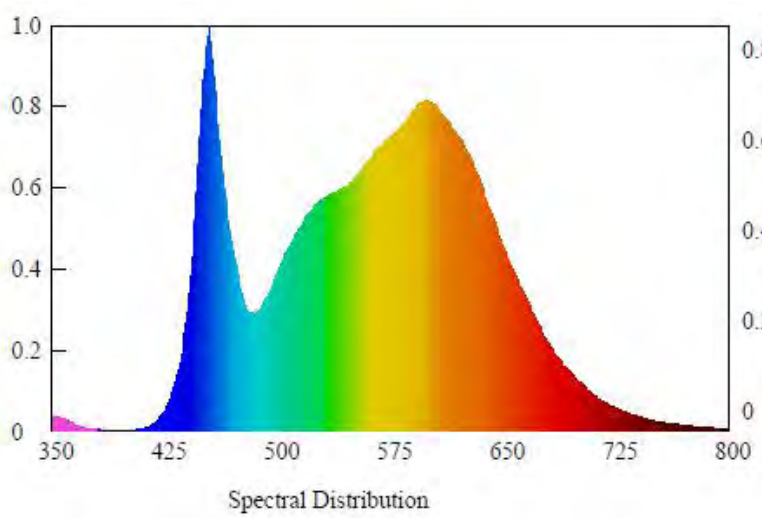
Chromaticity Coordinate

Duv	x	y	u'	v'
-0.00411	0.3761	0.3654	0.2268	0.4958

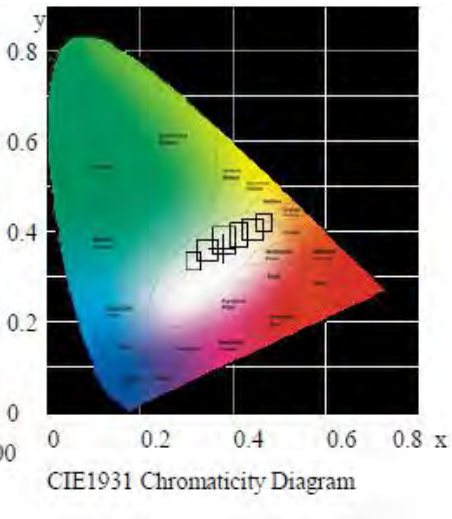
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
88.2	34	86	96	-9

Spectral Distribution

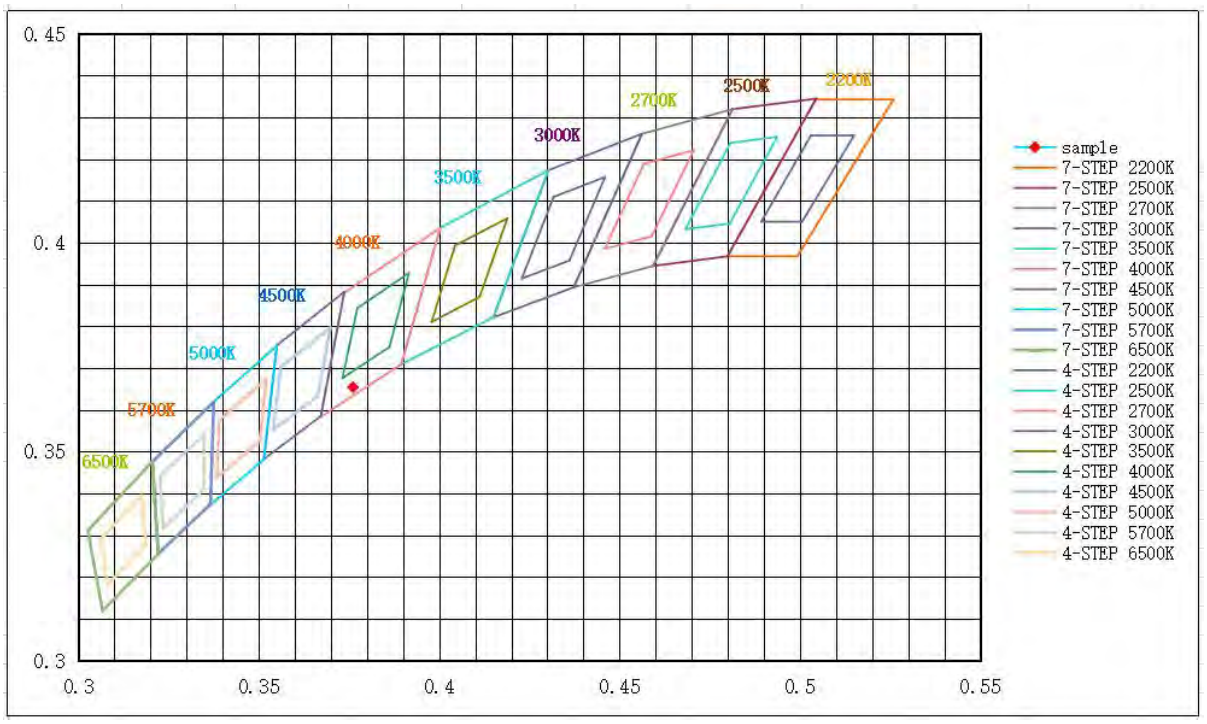


Spectral Distribution



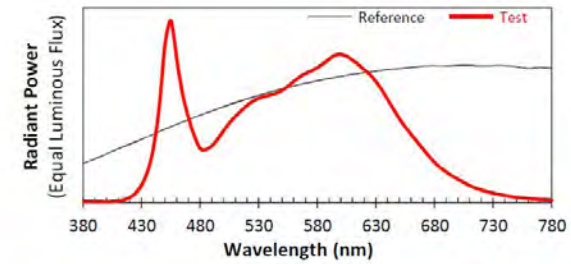
CIE1931 Chromaticity Diagram

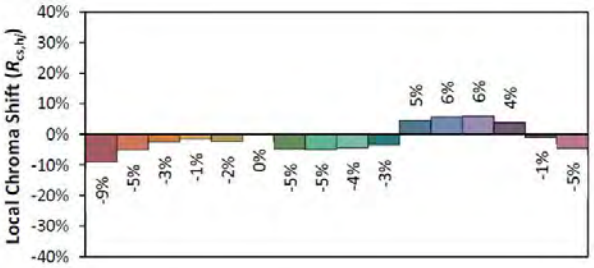
7/4 Step Quadrangle

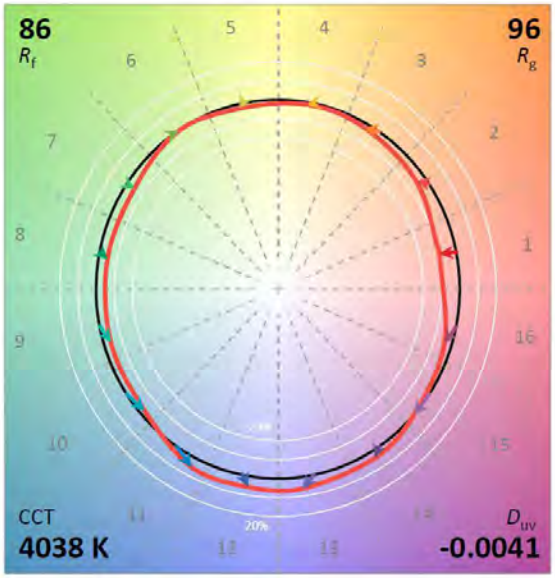


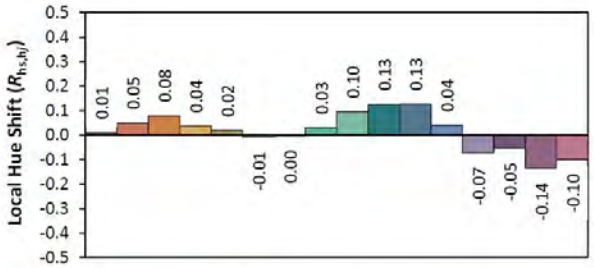
ANSI/IES TM-30-18 Color Rendition Report

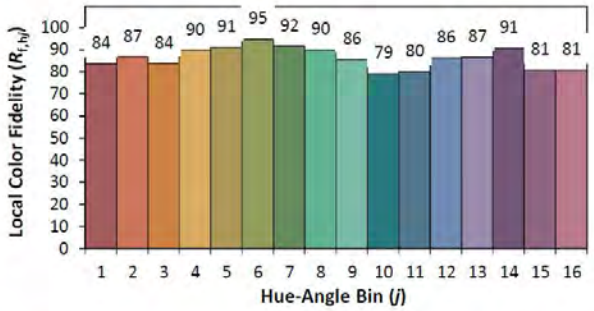
Source:	BL210817023-9	**Manufacturer:**	RAB Lighting Inc
Date:	2021-10-11	**Model:**	HIDFA-27S-XXX-8CCT-BYP, 4000K at 277V

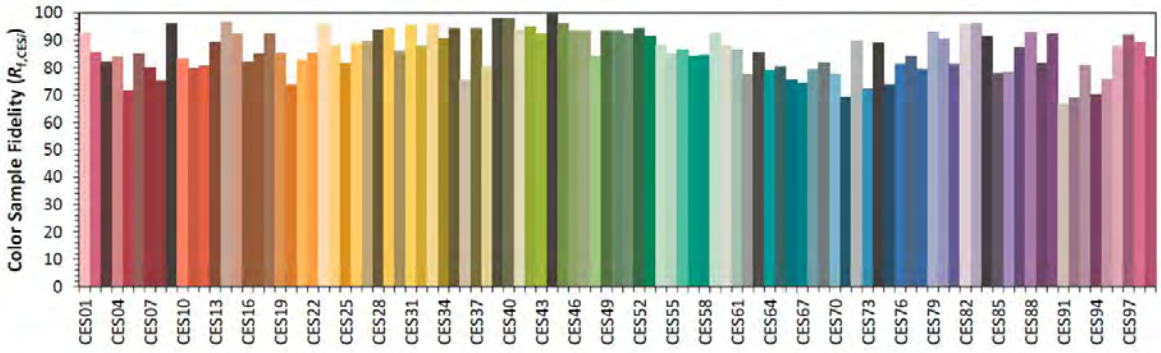












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3761
y	0.3654
u'	0.2268
v'	0.4958

CIE 13.3-1995 (CRI)

R_a	88
R_9	34

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

3.1.6 Model Number: HIDFA-27S-XXX-8CCT-BYP, 5000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.13	60	0.116	28.94	0.903

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
3956.12	136.7	5012

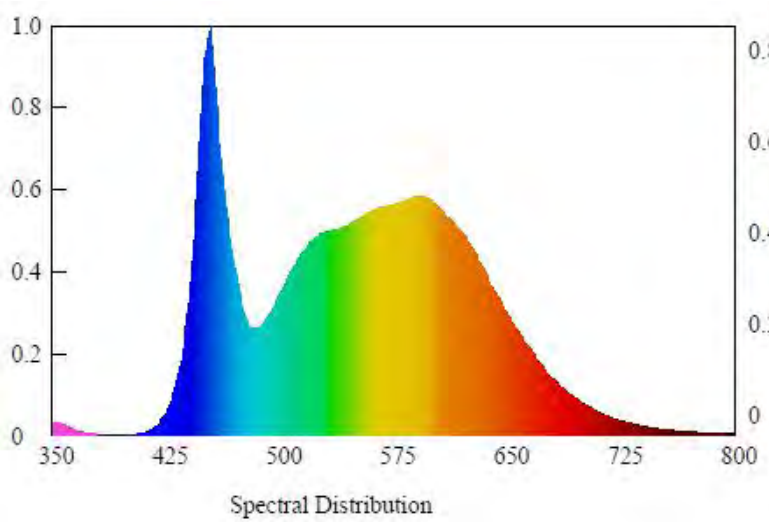
Chromaticity Coordinate

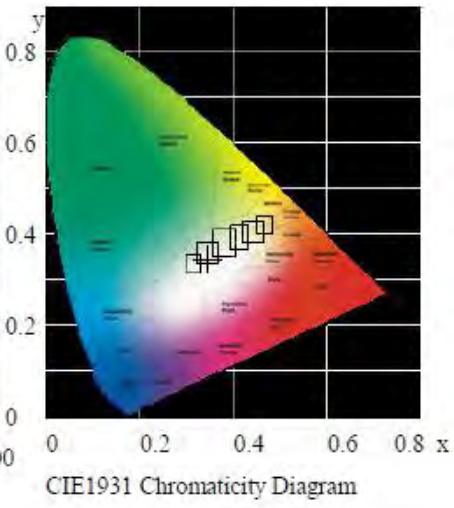
Duv	x	y	u'	v'
-0.00169	0.3445	0.3478	0.2125	0.4827

Color Rendering

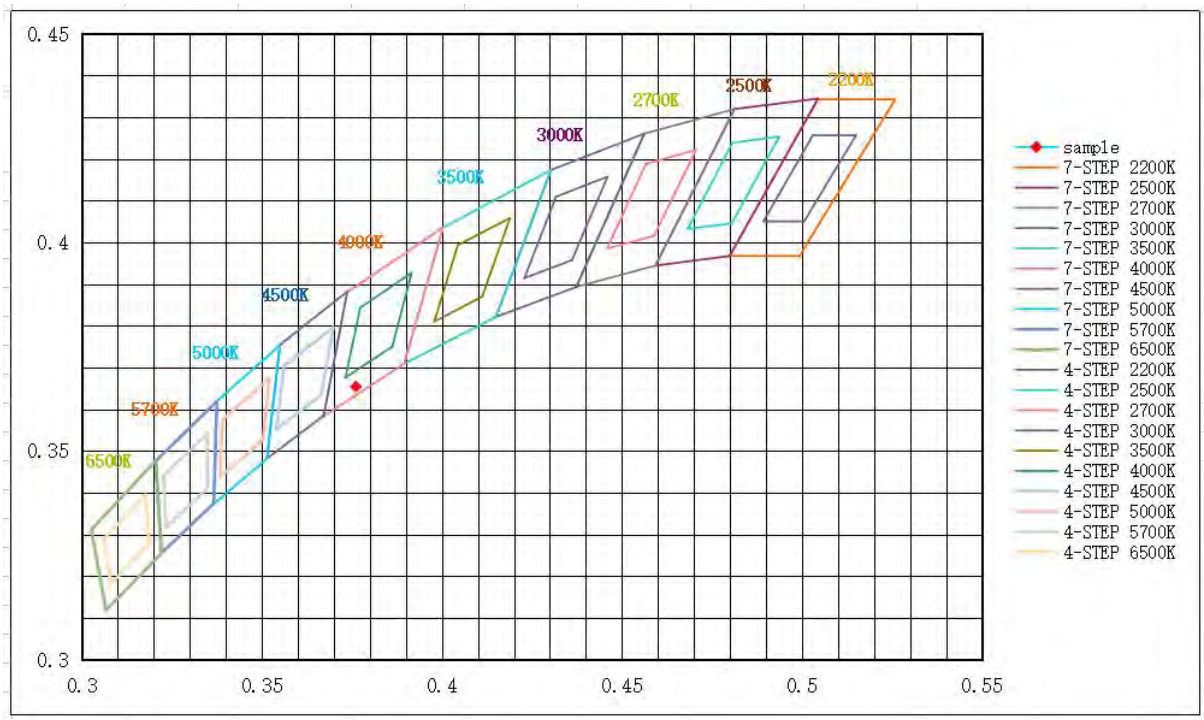
CRI	R9	Rf	Rg	Rcs,h1(%)
86.9	28	85	97	-10

Spectral Distribution



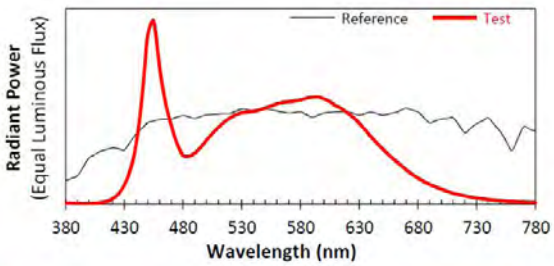


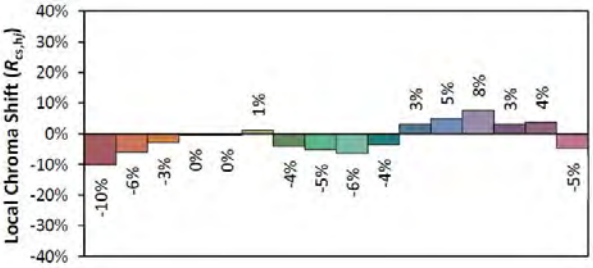
7/4 Step Quadrangle

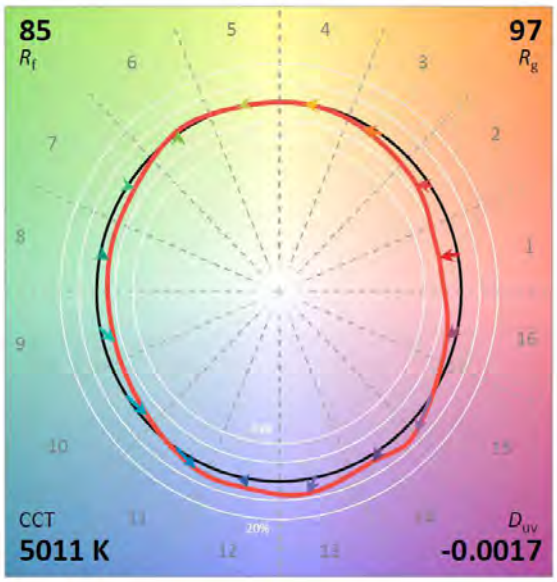


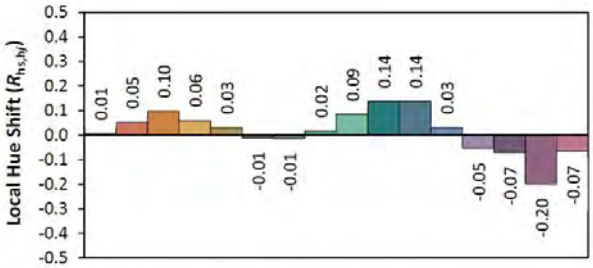
ANSI/IES TM-30-18 Color Rendition Report

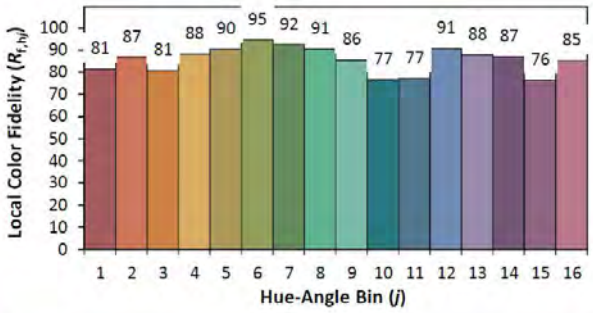
Source:	BL210817023-9	**Manufacturer:**	RAB Lighting Inc
Date:	2021-10-11	**Model:**	HIDFA-27S-XXX-8CCT-BYP, 5000K at 277V

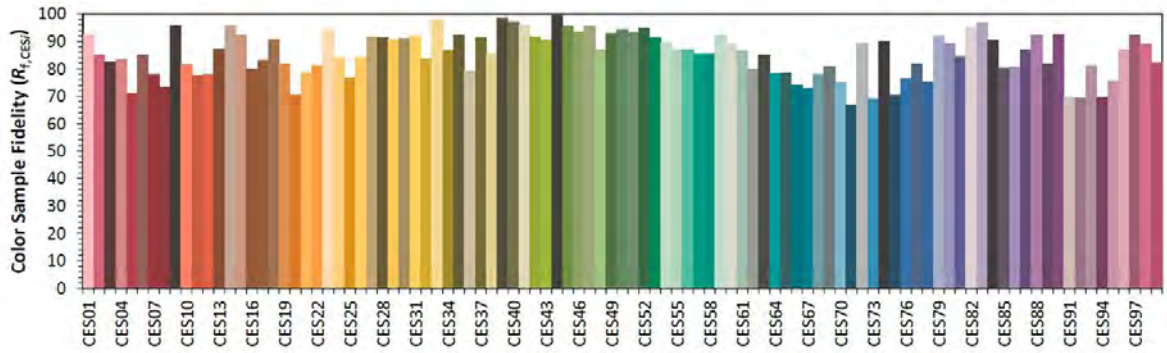












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3445
y	0.3478
u'	0.2125
v'	0.4827

CIE 13.3-1995 (CRI)

R_a	87
R_9	28

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

3.2 Goniophotometer System (Total operating time for luminous intensity distribution: 1.0 hour)

3.2.1 Model Number: HIDFA-27S-XXX-8CCT-BYP, 3000K at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.020	60	0.231	27.441	0.989

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
3501.38	127.60	22.86	52.82

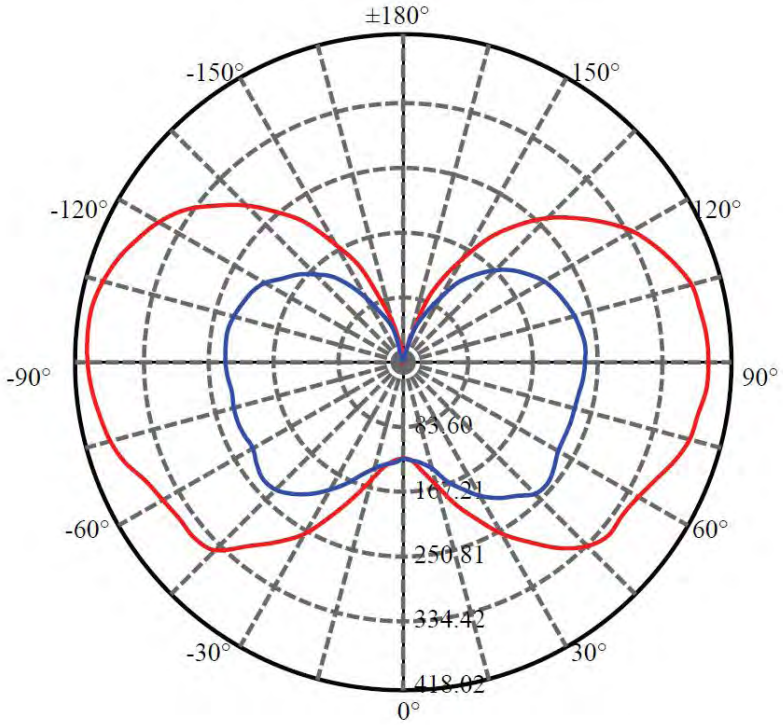
Zonal Flux Diagram

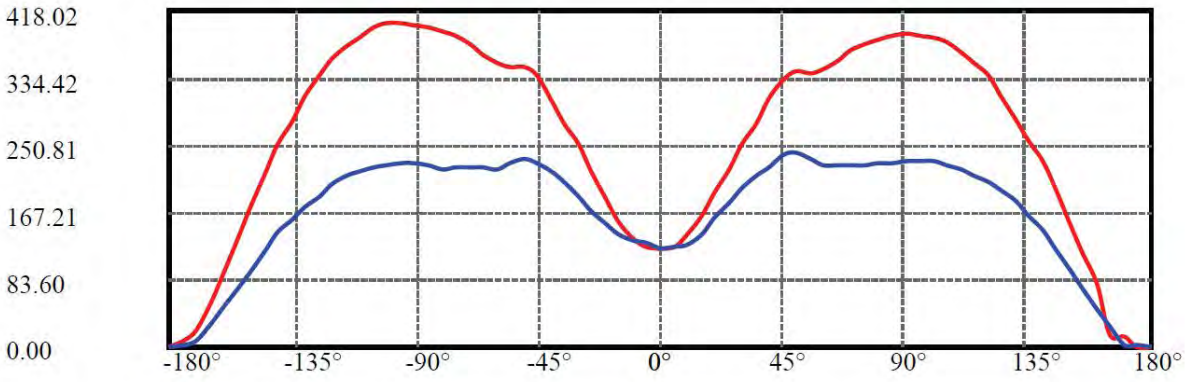
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	123.275	0.000	0	0.00%	0.00%
5.0	126.282	2.983	2.983	0.00%	0.09%
10.0	133.824	9.305	12.288	0.00%	0.35%
15.0	150.311	16.855	29.143	0.00%	0.83%
20.0	172.653	26.617	55.76	0.00%	1.59%
25.0	197.016	38.772	94.531	0.00%	2.70%
30.0	223.503	53.217	147.748	0.00%	4.22%
35.0	247.081	69.297	217.045	0.00%	6.20%
40.0	270.260	86.315	303.359	0.00%	8.66%
45.0	291.870	104.083	407.442	0.00%	11.64%
50.0	302.590	120.119	527.562	0.00%	15.07%
55.0	303.298	131.740	659.302	0.00%	18.83%
60.0	307.288	141.135	800.437	0.00%	22.86%
65.0	316.323	151.601	952.038	0.00%	27.19%
70.0	327.327	162.976	1115.014	0.00%	31.85%
75.0	336.503	173.514	1288.529	0.00%	36.80%
80.0	342.810	181.765	1470.294	0.00%	41.99%
85.0	348.086	187.733	1658.027	0.00%	47.35%
90.0	350.840	191.372	1849.398	0.00%	52.82%
95.0	351.046	192.182	2041.581	0.00%	58.31%
100.0	348.871	190.184	2231.765	0.00%	63.74%
105.0	342.758	185.061	2416.826	0.00%	69.02%
110.0	332.475	176.495	2593.321	0.00%	74.07%
115.0	318.614	164.860	2758.181	0.00%	78.77%
120.0	300.840	150.590	2908.771	0.00%	83.08%
125.0	278.703	133.960	3042.731	0.00%	86.90%
130.0	253.298	115.675	3158.405	0.00%	90.20%
135.0	227.982	97.250	3255.655	0.00%	92.98%
140.0	201.521	79.526	3335.181	0.00%	95.25%
145.0	171.006	62.153	3397.334	0.00%	97.03%
150.0	136.128	45.228	3442.562	0.00%	98.32%
155.0	102.395	30.185	3472.747	0.00%	99.18%
160.0	66.539	17.718	3490.465	0.00%	99.69%
165.0	30.760	8.019	3498.484	0.00%	99.92%
170.0	9.846	2.409	3500.892	0.00%	99.99%
175.0	2.741	0.450	3501.343	0.00%	100.00%
180.0	0.230	0.036	3501.378	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:167.0 Right:163.0

:C90/270Left:166.2 Right:165.5

Beam Angle(50%Imax):C0/180Left:146.7 Right:144.2

:C90/270Left:144.7 Right:145.4

Luminous Intensity Distribution Data

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	123.28	125.82	139.82	162.68	192.54	220.34	251.43	278.00	308.68
22.5	123.28	125.82	140.03	163.91	193.36	222.19	252.05	276.55	301.88
45.0	123.28	127.26	135.70	152.59	173.59	195.22	221.98	248.75	274.70
67.5	123.28	126.23	135.91	148.88	161.44	181.83	200.77	219.51	238.66
90.0	123.28	124.58	128.50	141.26	160.83	179.56	198.10	212.51	224.04
112.5	123.28	124.17	129.11	143.53	159.80	177.09	194.60	210.66	225.07
135.0	123.28	126.64	132.61	147.03	172.36	201.80	234.96	265.43	292.41
157.5	123.28	124.58	129.94	150.32	179.15	209.01	240.11	267.49	294.06
180.0	123.28	124.79	134.67	155.47	185.33	217.87	252.26	278.41	306.62
202.5	123.28	124.17	132.82	154.85	184.51	214.37	245.87	272.85	299.41
225.0	123.28	124.58	133.44	145.59	164.74	191.92	224.66	254.11	283.14
247.5	123.28	126.44	130.76	142.91	161.03	178.74	199.95	220.75	239.90
270.0	123.28	128.91	132.61	139.20	153.82	169.68	187.39	204.07	219.10
292.5	123.28	128.70	133.44	143.32	156.09	171.74	190.89	207.98	225.28
315.0	123.28	128.08	136.53	154.24	179.36	207.98	240.52	271.61	298.79
337.5	123.28	129.73	135.29	159.18	184.51	212.92	240.52	264.61	292.41
360.0	123.28	125.82	139.82	162.68	192.54	220.34	251.43	278.00	308.68

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	331.95	342.04	340.18	345.13	354.60	368.19	376.43	380.96	387.55
22.5	324.53	334.21	330.30	336.89	347.80	359.95	369.63	375.81	380.55
45.0	298.59	307.85	307.44	313.41	325.77	341.63	351.92	360.16	365.51
67.5	252.67	258.85	258.02	264.82	271.41	281.50	289.73	297.15	302.09
90.0	238.25	241.34	234.96	226.72	225.07	226.31	225.28	228.37	229.60
112.5	240.11	248.34	247.52	247.11	251.23	255.76	260.70	265.23	267.70
135.0	316.92	334.62	345.33	352.95	364.69	377.25	389.19	398.05	403.40
157.5	319.80	333.59	335.24	344.71	361.60	378.69	393.93	404.43	411.43
180.0	337.10	348.83	348.83	352.13	362.22	376.02	386.93	392.69	397.64
202.5	328.65	342.66	339.57	342.86	354.60	370.87	381.78	388.99	394.75
225.0	309.09	328.04	336.27	338.54	348.22	363.04	377.87	386.93	392.49
247.5	258.23	264.41	266.88	273.88	279.44	287.67	298.38	304.77	311.15
270.0	229.60	232.90	227.34	220.75	222.81	223.22	222.40	221.78	225.07
292.5	243.40	250.40	250.81	255.34	258.64	264.41	270.58	274.08	280.26
315.0	324.95	343.27	351.72	361.19	376.63	388.78	403.20	408.55	414.52
337.5	316.09	330.09	332.36	340.18	356.45	373.96	386.11	397.02	405.67
360.0	331.95	342.04	340.18	345.13	354.60	368.19	376.43	380.96	387.55

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	388.58	386.72	384.66	379.52	367.16	353.57	336.27	312.59	284.17
22.5	382.81	381.16	378.69	373.54	362.84	348.42	328.86	303.12	277.38
45.0	366.13	364.48	361.19	352.33	341.83	323.92	301.88	276.76	225.49
67.5	304.15	303.12	300.44	292.82	280.26	265.64	248.34	225.90	203.25
90.0	231.46	231.66	230.43	226.31	220.54	213.95	206.33	195.42	181.62
112.5	271.61	271.82	269.35	262.96	254.31	242.99	229.40	212.72	192.74
135.0	406.49	408.55	405.46	401.76	392.90	377.46	355.42	331.33	306.21
157.5	416.38	418.02	414.93	407.73	393.72	375.60	353.98	329.48	300.03
180.0	400.93	402.78	402.78	395.99	385.49	374.16	359.34	338.54	310.33
202.5	397.64	399.08	398.25	391.67	381.57	368.81	351.51	327.21	299.62
225.0	397.43	399.70	397.02	392.08	383.02	366.34	342.45	318.56	294.88
247.5	314.86	317.74	316.71	311.36	300.65	287.67	271.41	249.58	225.90
270.0	227.34	227.34	225.90	222.40	218.07	211.69	202.01	187.39	173.18
292.5	282.53	281.91	278.41	273.67	263.17	251.64	235.78	215.19	196.04
315.0	416.58	414.52	413.49	405.67	395.78	376.84	351.72	325.15	300.85
337.5	408.55	408.14	404.23	394.34	378.28	359.13	338.74	310.33	281.08
360.0	388.58	386.72	384.66	379.52	367.16	353.57	336.27	312.59	284.17

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	258.23	230.22	196.04	153.41	115.73	76.81	15.03	12.97	1.24
22.5	251.43	225.90	191.51	152.38	114.91	76.60	12.36	13.80	0.62
45.0	190.68	170.30	148.88	110.99	81.96	56.63	16.27	9.47	1.65
67.5	176.68	154.24	127.67	102.14	73.10	47.16	11.53	5.77	1.65
90.0	164.33	145.38	122.94	95.96	73.31	47.98	26.56	2.88	1.85
112.5	173.18	151.35	128.29	101.73	76.60	51.48	28.62	7.00	1.24
135.0	277.79	242.78	205.92	165.56	124.58	84.02	47.77	13.80	2.68
157.5	270.38	240.11	207.98	166.59	128.91	88.14	51.69	16.47	5.77
180.0	281.08	251.23	216.63	172.77	134.26	91.02	53.33	19.97	6.80
202.5	271.61	243.19	208.81	171.33	136.73	97.81	56.01	12.56	5.97
225.0	266.26	230.84	194.80	156.30	118.61	80.31	46.13	8.24	5.56
247.5	203.45	178.74	150.53	121.08	91.64	63.42	33.77	9.68	3.91
270.0	158.97	141.88	119.23	94.31	73.31	50.25	29.04	7.83	1.85
292.5	177.71	156.30	129.32	103.99	77.84	53.13	29.86	6.59	0.82
315.0	271.20	235.58	197.89	158.77	105.84	38.92	18.53	6.38	0.62
337.5	254.73	226.31	189.66	150.74	110.99	60.95	15.65	4.12	1.65
360.0	258.23	230.22	196.04	153.41	115.73	76.81	15.03	12.97	1.24

C/γ(°)	180.0
0.0	0.23
22.5	0.23
45.0	0.23
67.5	0.23
90.0	0.23
112.5	0.23
135.0	0.23
157.5	0.23
180.0	0.23
202.5	0.23
225.0	0.23
247.5	0.23
270.0	0.23
292.5	0.23
315.0	0.23
337.5	0.23
360.0	0.23

3.2.2 Model Number: HIDFA-27S-XXX-8CCT-BYP, 3000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.170	60	0.115	28.726	0.903

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
3700.78	128.83	22.88	52.82

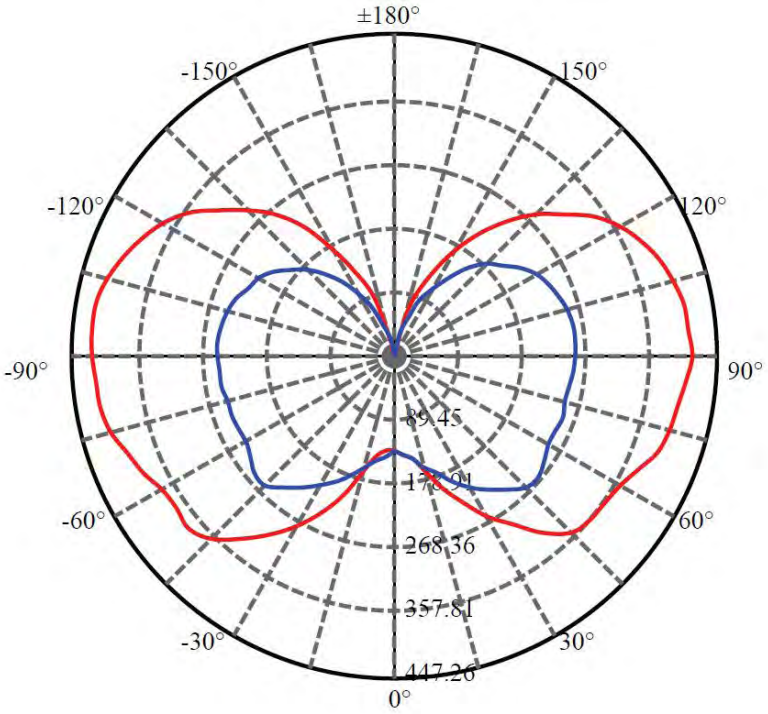
Zonal Flux Diagram

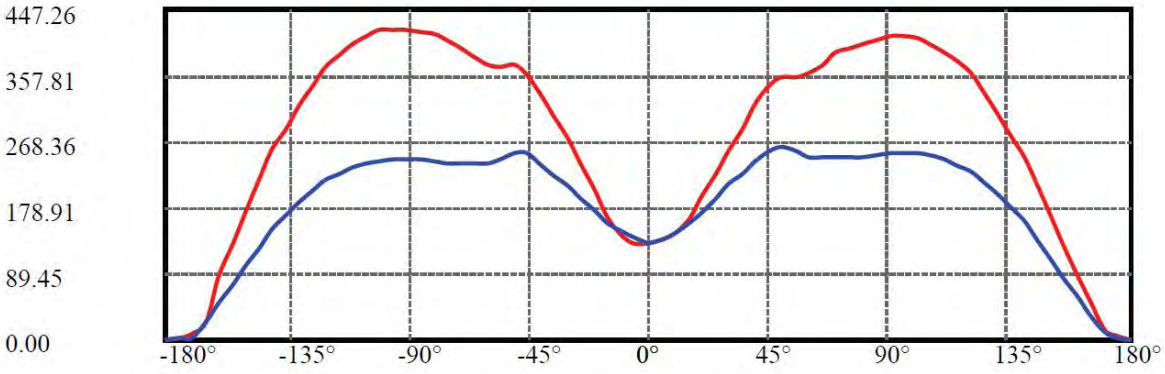
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	131.754	0.000	0	0.00%	0.00%
5.0	134.738	3.186	3.186	0.00%	0.09%
10.0	142.228	9.908	13.094	0.00%	0.35%
15.0	158.908	17.863	30.957	0.00%	0.84%
20.0	182.473	28.135	59.092	0.00%	1.60%
25.0	208.316	40.987	100.078	0.00%	2.70%
30.0	236.167	56.250	156.328	0.00%	4.22%
35.0	261.483	73.282	229.61	0.00%	6.20%
40.0	286.104	91.361	320.971	0.00%	8.67%
45.0	308.755	110.143	431.114	0.00%	11.65%
50.0	319.862	127.021	558.135	0.00%	15.08%
55.0	320.879	139.318	697.454	0.00%	18.85%
60.0	324.753	149.236	846.689	0.00%	22.88%
65.0	334.328	160.224	1006.913	0.00%	27.21%
70.0	346.104	172.290	1179.203	0.00%	31.86%
75.0	355.564	183.405	1362.608	0.00%	36.82%
80.0	361.909	191.976	1554.583	0.00%	42.01%
85.0	367.353	198.158	1752.741	0.00%	47.36%
90.0	370.931	202.148	1954.889	0.00%	52.82%
95.0	370.828	203.099	2157.989	0.00%	58.31%
100.0	368.576	200.914	2358.902	0.00%	63.74%
105.0	362.050	195.495	2554.397	0.00%	69.02%
110.0	351.407	186.486	2740.884	0.00%	74.06%
115.0	336.773	174.252	2915.135	0.00%	78.77%
120.0	318.047	159.188	3074.323	0.00%	83.07%
125.0	295.023	141.709	3216.033	0.00%	86.90%
130.0	268.793	122.592	3338.625	0.00%	90.21%
135.0	241.328	103.078	3441.703	0.00%	93.00%
140.0	212.731	84.073	3525.775	0.00%	95.27%
145.0	180.980	65.688	3591.463	0.00%	97.05%
150.0	143.476	47.779	3639.241	0.00%	98.34%
155.0	106.591	31.646	3670.888	0.00%	99.19%
160.0	69.640	18.483	3689.371	0.00%	99.69%
165.0	33.192	8.475	3697.846	0.00%	99.92%
170.0	8.778	2.490	3700.335	0.00%	99.99%
175.0	2.600	0.407	3700.742	0.00%	100.00%
180.0	0.303	0.035	3700.777	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:163.6 Right:166.3

:C90/270Left:165.0 Right:166.8

Beam Angle(50%Imax):C0/180Left:146.0 Right:145.0

:C90/270Left:144.2 Right:146.3

Luminous Intensity Distribution Data

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	131.75	136.53	145.38	164.33	193.77	224.25	256.58	285.82	318.36
22.5	131.75	134.67	143.73	162.06	189.45	218.28	249.99	279.23	310.74
45.0	131.75	132.41	140.44	152.80	173.39	198.30	227.75	261.73	292.00
67.5	131.75	134.88	136.73	145.79	162.06	181.83	203.86	224.25	245.25
90.0	131.75	137.35	145.79	157.94	172.15	190.68	211.28	225.69	241.55
112.5	131.75	134.88	140.44	153.41	169.47	190.07	210.66	229.40	246.08
135.0	131.75	136.32	144.97	164.33	192.95	223.22	259.26	291.59	319.39
157.5	131.75	134.06	141.47	166.59	193.57	225.69	262.14	288.70	315.06
180.0	131.75	130.56	140.65	166.59	203.66	238.87	271.41	301.47	330.92
202.5	131.75	131.79	142.50	166.18	199.95	233.93	269.14	296.53	321.86
225.0	131.75	132.00	139.00	153.62	179.77	205.72	237.22	267.91	294.06
247.5	131.75	132.20	138.38	151.77	170.92	194.39	215.81	236.19	256.99
270.0	131.75	140.03	146.62	159.18	175.65	190.48	207.98	222.19	237.43
292.5	131.75	135.70	143.53	155.27	171.95	188.83	204.69	221.16	236.81
315.0	131.75	137.56	143.73	160.00	184.71	212.51	244.02	276.76	306.62
337.5	131.75	134.88	142.29	162.68	186.15	216.01	246.90	275.11	304.56
360.0	131.75	136.53	145.38	164.33	193.77	224.25	256.58	285.82	318.36

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	345.74	354.81	355.42	360.78	373.34	387.96	395.58	399.90	406.90
22.5	337.51	346.98	343.48	350.48	363.04	381.16	391.05	397.43	406.29
45.0	316.71	333.39	341.21	344.51	356.66	373.96	387.34	395.17	401.55
67.5	263.38	267.70	270.58	279.03	284.59	294.68	303.12	309.50	315.68
90.0	256.17	260.08	254.73	246.08	246.70	247.73	246.08	246.28	249.37
112.5	265.02	275.94	275.32	279.44	282.73	286.64	294.47	297.56	302.50
135.0	347.60	370.66	381.99	388.99	403.40	414.32	429.97	437.17	441.50
157.5	341.63	358.72	362.63	368.60	383.43	403.20	419.26	431.41	438.00
180.0	358.72	372.31	369.84	372.51	381.99	394.96	406.70	412.88	415.35
202.5	347.19	361.81	359.95	361.39	372.72	385.49	395.99	402.58	406.90
225.0	319.18	332.15	333.59	338.13	348.83	365.72	376.63	385.90	391.87
247.5	271.61	279.64	279.64	285.00	291.79	299.41	308.68	316.09	320.42
270.0	252.05	253.29	245.05	237.64	238.05	239.69	238.66	242.37	244.43
292.5	252.87	257.82	255.76	257.20	262.35	268.11	273.26	279.03	284.17
315.0	333.80	350.69	360.16	370.04	383.22	399.28	413.70	421.73	428.53
337.5	330.92	341.83	344.71	356.25	376.43	395.37	408.55	415.55	424.20
360.0	345.74	354.81	355.42	360.78	373.34	387.96	395.58	399.90	406.90

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	411.85	410.20	408.76	401.34	390.02	377.04	360.78	337.30	306.62
22.5	410.20	409.99	407.52	401.96	392.08	377.87	358.92	334.21	305.59
45.0	405.46	404.43	402.99	395.78	385.28	367.37	341.83	316.50	291.59
67.5	319.39	319.39	317.12	310.94	299.21	285.82	269.14	245.87	222.81
90.0	251.64	252.46	252.26	248.75	243.19	237.02	226.93	213.75	196.66
112.5	306.00	307.03	304.77	298.59	288.91	275.73	260.08	239.90	219.93
135.0	445.41	447.26	444.18	438.82	428.32	409.37	382.60	354.60	328.65
157.5	443.35	445.20	442.53	434.91	421.32	401.14	377.04	349.25	319.39
180.0	419.88	419.88	419.05	411.85	399.49	385.28	369.01	345.33	315.68
202.5	410.20	411.43	408.55	401.76	390.22	375.19	354.81	329.27	301.88
225.0	395.58	396.20	391.67	385.28	373.54	356.45	331.95	306.41	265.23
247.5	323.92	324.53	322.06	315.89	304.77	290.56	274.08	253.29	228.16
270.0	245.25	244.64	242.99	238.66	232.28	224.66	216.01	203.86	187.18
292.5	285.82	284.79	282.11	276.14	265.64	254.11	240.31	221.16	200.16
315.0	431.61	429.76	428.32	421.11	411.43	392.49	369.84	343.48	315.47
337.5	429.35	426.05	422.35	411.02	396.81	378.28	355.42	326.18	295.71
360.0	411.85	410.20	408.76	401.34	390.02	377.04	360.78	337.30	306.62

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	276.55	247.11	210.25	166.59	127.47	87.11	52.30	12.77	5.15
22.5	279.03	255.34	220.96	182.45	140.44	96.37	53.75	9.88	1.24
45.0	261.32	225.07	186.57	148.47	108.93	73.72	31.51	10.50	2.47
67.5	199.95	172.98	143.12	113.05	85.05	57.66	31.09	5.35	3.30
90.0	180.80	161.03	137.14	108.73	83.81	57.66	34.60	10.71	3.30
112.5	199.54	174.01	144.35	115.52	87.72	61.37	35.21	9.68	0.82
135.0	297.15	256.79	216.43	172.77	123.14	52.51	24.09	6.59	0.62
157.5	288.50	257.40	219.10	175.86	132.00	70.84	23.48	7.21	2.68
180.0	286.44	257.61	219.72	172.36	131.79	86.69	24.71	8.44	3.71
202.5	272.02	242.58	206.95	166.59	125.20	87.11	24.30	14.21	3.50
225.0	215.60	183.89	174.62	124.58	76.19	57.45	25.12	9.27	1.85
247.5	200.98	173.18	144.97	117.17	87.31	57.45	20.18	5.97	2.68
270.0	169.89	150.32	126.03	99.26	74.34	49.22	26.15	3.30	1.85
292.5	179.56	158.35	132.00	102.96	74.34	51.48	29.24	6.18	0.82
315.0	286.85	251.43	213.95	169.68	125.61	84.22	46.95	8.86	2.68
337.5	267.08	236.61	199.54	159.59	122.11	83.40	48.39	11.53	4.94
360.0	276.55	247.11	210.25	166.59	127.47	87.11	52.30	12.77	5.15

C/γ(°)	180.0
0.0	0.30
22.5	0.30
45.0	0.30
67.5	0.30
90.0	0.30
112.5	0.30
135.0	0.30
157.5	0.30
180.0	0.30
202.5	0.30
225.0	0.30
247.5	0.30
270.0	0.30
292.5	0.30
315.0	0.30
337.5	0.30
360.0	0.30

3.2.3 Model Number: HIDFA-27S-XXX-8CCT-BYP, 4000K at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.030	60	0.227	26.906	0.988

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
3748.25	139.31	22.99	52.63

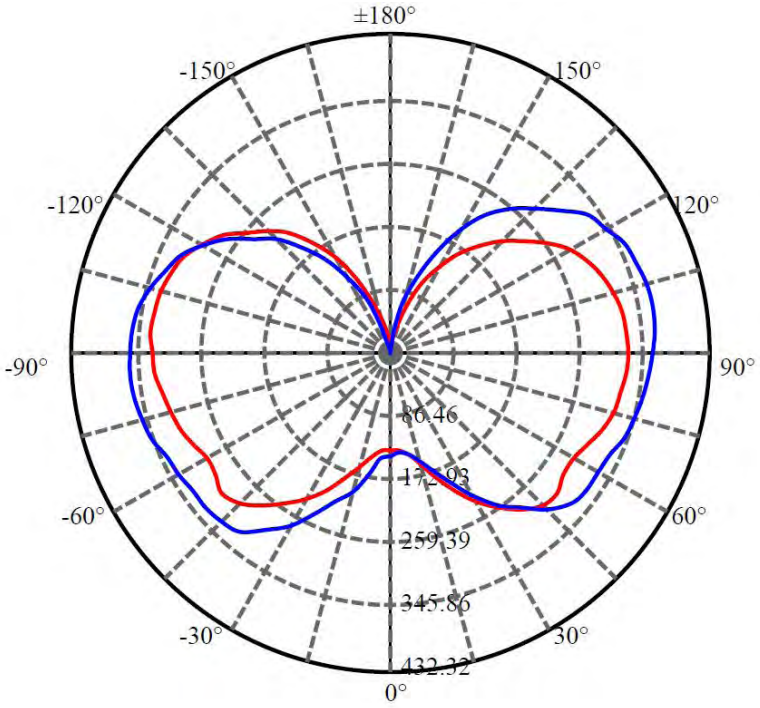
Zonal Flux Diagram

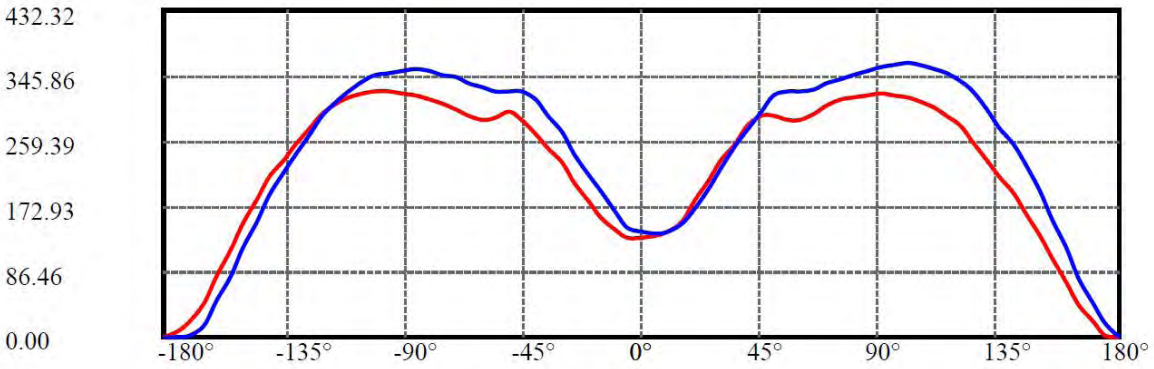
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	133.519	0.000	0	0.00%	0.00%
5.0	135.329	3.214	3.214	0.00%	0.09%
10.0	144.491	10.010	13.224	0.00%	0.35%
15.0	161.678	18.162	31.386	0.00%	0.84%
20.0	185.053	28.576	59.961	0.00%	1.60%
25.0	212.681	41.715	101.676	0.00%	2.71%
30.0	240.878	57.398	159.075	0.00%	4.24%
35.0	268.797	75.053	234.128	0.00%	6.25%
40.0	293.172	93.760	327.888	0.00%	8.75%
45.0	313.535	112.337	440.224	0.00%	11.74%
50.0	323.887	128.800	569.025	0.00%	15.18%
55.0	325.811	141.266	710.291	0.00%	18.95%
60.0	329.304	151.428	861.719	0.00%	22.99%
65.0	336.733	161.915	1023.634	0.00%	27.31%
70.0	347.478	173.247	1196.881	0.00%	31.93%
75.0	356.261	183.946	1380.827	0.00%	36.84%
80.0	362.209	192.243	1573.069	0.00%	41.97%
85.0	366.601	198.035	1771.104	0.00%	47.25%
90.0	369.334	201.505	1972.609	0.00%	52.63%
95.0	370.005	202.437	2175.046	0.00%	58.03%
100.0	368.094	200.559	2375.605	0.00%	63.38%
105.0	362.791	195.565	2571.17	0.00%	68.60%
110.0	354.325	187.443	2758.612	0.00%	73.60%
115.0	341.656	176.227	2934.839	0.00%	78.30%
120.0	324.153	161.859	3096.699	0.00%	82.62%
125.0	301.854	144.700	3241.398	0.00%	86.48%
130.0	276.453	125.743	3367.141	0.00%	89.83%
135.0	250.383	106.455	3473.596	0.00%	92.67%
140.0	221.730	87.415	3561.012	0.00%	95.00%
145.0	188.242	68.401	3629.413	0.00%	96.83%
150.0	151.414	50.017	3679.429	0.00%	98.16%
155.0	113.548	33.531	3712.96	0.00%	99.06%
160.0	77.087	19.994	3732.954	0.00%	99.59%
165.0	45.801	10.128	3743.082	0.00%	99.86%
170.0	22.426	4.047	3747.129	0.00%	99.97%
175.0	6.619	1.039	3748.168	0.00%	100.00%
180.0	0.532	0.085	3748.254	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:167.9 Right:167.4

:C90/270Left:161.9 Right:171.7

Beam Angle(50%Imax):C0/180Left:147.9 Right:145.3

:C90/270Left:140.9 Right:151.6

Luminous Intensity Distribution Data

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	131.01	133.65	140.13	154.10	179.00	205.53	232.87	254.94	278.23
22.5	131.42	130.61	134.05	151.47	174.14	199.05	222.54	243.19	266.68
45.0	129.80	127.17	132.03	145.59	166.65	192.17	217.28	249.27	271.75
67.5	129.60	126.36	133.04	144.18	163.82	192.17	224.77	259.80	289.77
90.0	140.73	136.28	140.94	150.45	170.50	195.41	221.73	252.31	274.99
112.5	137.90	136.28	139.92	150.05	171.92	198.44	224.97	258.58	280.05
135.0	135.67	137.29	140.13	151.26	170.70	198.24	225.98	258.18	288.35
157.5	132.03	135.27	140.13	153.29	174.95	201.68	229.22	259.60	289.57
180.0	131.01	132.43	143.16	158.35	181.23	205.33	230.03	250.28	269.32
202.5	131.42	133.65	142.76	163.82	187.71	213.63	238.54	259.19	277.82
225.0	129.80	135.06	144.38	165.23	187.31	216.47	243.40	271.95	297.46
247.5	129.60	137.09	147.42	173.74	205.73	240.97	277.01	310.22	338.97
270.0	140.73	144.99	166.25	193.18	214.85	241.17	269.92	293.21	314.88
292.5	137.90	142.35	164.63	186.90	214.24	242.38	270.33	293.41	315.69
315.0	135.67	139.11	155.52	179.41	203.91	235.09	268.71	297.46	324.19
337.5	132.03	137.70	147.42	165.84	194.19	225.17	256.76	289.16	313.05
360.0	131.01	133.65	140.13	154.10	179.00	205.53	232.87	254.94	278.23

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	292.20	293.82	286.12	287.74	295.64	306.17	312.85	316.50	319.33
22.5	283.09	286.33	280.05	276.40	280.45	289.16	297.67	299.49	302.52
45.0	293.01	308.60	312.45	317.91	328.44	343.23	357.60	371.17	377.24
67.5	319.33	339.78	349.30	355.17	366.72	380.69	397.70	407.42	414.50
90.0	299.08	318.93	324.19	325.81	328.04	335.73	341.81	347.07	351.53
112.5	306.17	328.04	333.10	332.49	332.49	337.96	341.61	344.64	348.09
135.0	316.50	339.18	349.30	358.41	369.96	380.69	393.44	404.38	415.92
157.5	317.31	342.42	352.14	354.57	364.49	378.05	392.43	401.75	407.21
180.0	288.15	296.86	290.17	286.33	293.62	301.92	309.21	314.07	319.53
202.5	294.43	299.08	289.97	287.74	292.00	300.70	305.76	306.57	308.40
225.0	319.33	323.18	323.79	333.10	342.82	358.82	371.98	379.67	384.53
247.5	358.01	364.29	368.34	375.02	384.13	397.70	404.78	412.07	415.11
270.0	324.39	325.81	326.01	330.27	335.13	344.04	346.47	350.92	353.15
292.5	326.42	323.58	321.36	321.96	327.84	331.48	335.33	337.35	340.59
315.0	342.21	349.71	360.84	371.37	381.29	394.25	403.57	407.82	408.43
337.5	336.95	342.62	345.86	354.57	364.69	379.07	387.98	394.46	399.52
360.0	292.20	293.82	286.12	287.74	295.64	306.17	312.85	316.50	319.33

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	321.56	320.75	317.71	312.45	303.33	293.41	279.04	258.18	234.69
22.5	305.76	305.56	305.76	303.13	297.46	290.78	280.45	262.43	241.98
45.0	381.90	382.91	380.28	376.23	366.51	351.53	334.92	309.61	283.69
67.5	419.77	422.20	421.59	417.74	409.64	397.90	378.46	350.92	326.01
90.0	356.19	359.83	361.86	359.63	355.38	350.31	337.15	324.39	300.70
112.5	351.33	353.96	354.16	351.33	347.48	339.38	328.44	314.47	294.02
135.0	423.21	430.30	432.32	428.88	422.20	408.02	385.95	362.67	333.51
157.5	411.26	414.30	413.90	410.66	405.19	392.43	373.19	351.33	325.81
180.0	322.57	325.81	323.79	320.95	316.50	308.40	294.63	276.61	254.74
202.5	310.02	311.03	308.40	303.13	298.07	287.34	271.75	254.13	233.68
225.0	385.95	385.14	381.09	371.98	359.02	340.19	315.69	289.16	259.80
247.5	416.33	415.11	411.26	402.56	391.01	374.41	351.12	326.82	299.69
270.0	351.93	350.11	346.26	337.35	324.80	312.04	293.82	267.90	241.17
292.5	341.20	339.58	336.54	329.66	320.55	307.99	294.02	271.54	245.83
315.0	408.83	403.97	397.49	388.18	372.59	350.52	327.84	297.67	266.68
337.5	401.54	399.52	397.09	390.81	379.47	361.86	339.99	311.84	281.26
360.0	321.56	320.75	317.71	312.45	303.33	293.41	279.04	258.18	234.69

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	213.02	191.15	164.83	135.47	105.30	72.70	43.74	20.86	2.03
22.5	221.73	199.46	173.54	142.76	113.60	77.56	48.40	24.30	5.27
45.0	256.56	227.60	192.77	155.92	120.28	84.04	55.89	30.78	7.49
67.5	298.27	263.65	226.79	187.10	144.18	105.09	65.41	32.40	10.13
90.0	276.40	254.94	227.20	192.98	154.50	117.45	78.16	44.75	19.64
112.5	269.92	248.66	222.34	189.94	152.28	114.21	76.14	44.14	19.44
135.0	300.90	267.70	230.44	188.32	149.64	110.36	74.72	41.31	17.01
157.5	299.08	267.09	227.60	186.90	146.00	101.45	61.56	32.20	10.13
180.0	234.69	212.21	182.04	149.04	115.62	79.99	45.97	22.68	7.70
202.5	214.04	192.17	164.83	131.62	101.04	69.25	40.90	17.62	2.63
225.0	230.44	199.25	163.41	128.18	93.55	60.75	33.21	12.56	0.81
247.5	266.08	229.02	188.93	142.96	101.04	60.95	29.56	7.09	0.61
270.0	216.87	187.10	153.09	118.05	81.40	47.38	17.21	1.82	1.01
292.5	221.73	194.19	159.16	123.32	72.90	44.14	18.83	3.44	0.61
315.0	237.93	202.49	163.61	116.03	69.46	30.17	14.18	9.11	0.61
337.5	248.46	211.00	171.31	134.05	95.98	57.91	28.96	13.77	0.81
360.0	213.02	191.15	164.83	135.47	105.30	72.70	43.74	20.86	2.03

C/γ(°)	180.0
0.0	0.41
22.5	0.41
45.0	0.41
67.5	0.61
90.0	1.22
112.5	0.41
135.0	0.41
157.5	0.41
180.0	0.41
202.5	0.41
225.0	0.41
247.5	0.61
270.0	1.22
292.5	0.41
315.0	0.41
337.5	0.41
360.0	0.41

3.2.4 Model Number: HIDFA-27S-XXX-8CCT-BYP, 4000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.210	60	0.112	28.041	0.900

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
3911.73	139.50	22.94	52.57

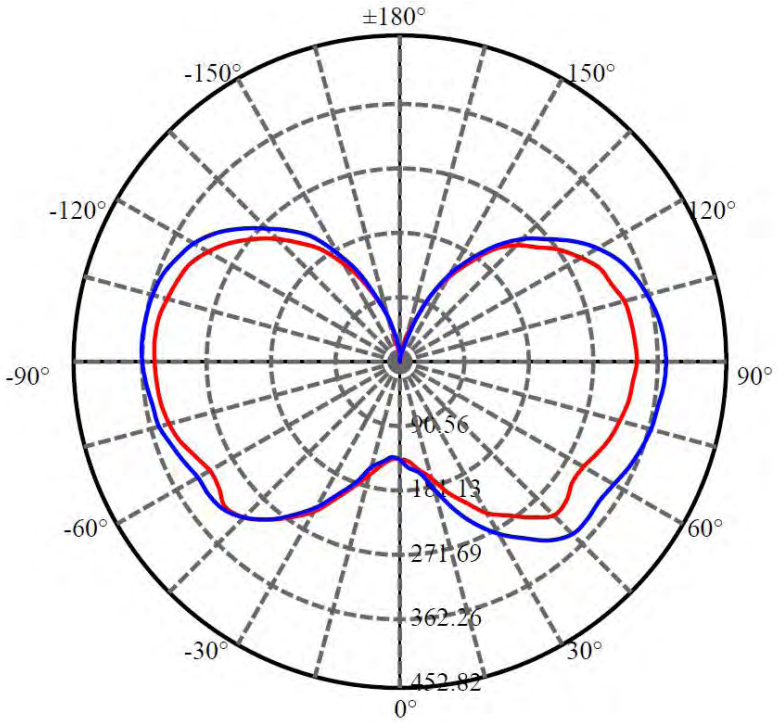
Zonal Flux Diagram

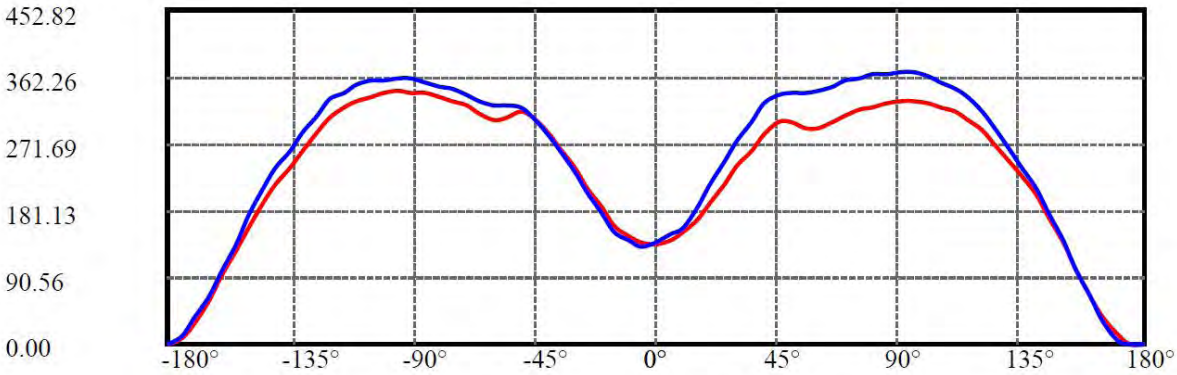
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	136.990	0.000	0	0.00%	0.00%
5.0	139.126	3.301	3.301	0.00%	0.08%
10.0	149.307	10.318	13.619	0.00%	0.35%
15.0	167.415	18.788	32.407	0.00%	0.83%
20.0	192.834	29.690	62.096	0.00%	1.59%
25.0	221.573	43.464	105.56	0.00%	2.70%
30.0	250.929	59.796	165.355	0.00%	4.23%
35.0	279.244	78.072	243.427	0.00%	6.22%
40.0	305.821	97.614	341.041	0.00%	8.72%
45.0	327.185	117.206	458.247	0.00%	11.71%
50.0	337.250	134.259	592.506	0.00%	15.15%
55.0	339.270	147.098	739.604	0.00%	18.91%
60.0	342.848	157.670	897.273	0.00%	22.94%
65.0	351.085	168.696	1065.97	0.00%	27.25%
70.0	362.282	180.629	1246.599	0.00%	31.87%
75.0	372.141	191.966	1438.565	0.00%	36.78%
80.0	378.151	200.757	1639.322	0.00%	41.91%
85.0	382.694	206.740	1846.062	0.00%	47.19%
90.0	385.654	210.380	2056.442	0.00%	52.57%
95.0	386.246	211.352	2267.795	0.00%	57.97%
100.0	383.955	209.282	2477.077	0.00%	63.32%
105.0	378.537	204.022	2681.099	0.00%	68.54%
110.0	369.888	195.626	2876.725	0.00%	73.54%
115.0	357.070	184.070	3060.795	0.00%	78.25%
120.0	338.807	169.169	3229.964	0.00%	82.57%
125.0	316.246	151.414	3381.378	0.00%	86.44%
130.0	289.694	131.752	3513.129	0.00%	89.81%
135.0	262.204	111.519	3624.649	0.00%	92.66%
140.0	232.525	91.603	3716.252	0.00%	95.00%
145.0	197.171	71.692	3787.943	0.00%	96.84%
150.0	158.226	52.335	3840.278	0.00%	98.17%
155.0	118.444	35.013	3875.291	0.00%	99.07%
160.0	80.374	20.852	3896.143	0.00%	99.60%
165.0	46.577	10.463	3906.605	0.00%	99.87%
170.0	21.635	4.046	3910.652	0.00%	99.97%
175.0	6.242	0.997	3911.649	0.00%	100.00%
180.0	0.438	0.080	3911.729	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:169.1 Right:165.3

:C90/270Left:169.8 Right:164.1

Beam Angle(50%Imax):C0/180Left:147.9 Right:144.9

:C90/270Left:148.6 Right:144.0

Luminous Intensity Distribution Data

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	135.09	139.62	150.94	167.62	191.92	217.04	241.96	261.11	282.73
22.5	135.70	140.44	154.03	174.42	196.24	225.49	250.20	269.14	290.56
45.0	140.85	143.53	158.97	176.48	198.72	226.52	260.29	285.41	313.00
67.5	142.50	147.03	165.97	192.33	224.66	255.76	294.47	328.04	356.04
90.0	136.94	148.26	158.77	186.15	217.66	247.73	275.11	300.03	324.95
112.5	134.06	139.20	156.30	185.74	218.69	248.34	276.55	303.12	328.86
135.0	134.26	138.17	152.80	179.36	210.04	242.78	274.29	306.21	335.24
157.5	136.53	137.14	148.47	168.24	197.48	230.84	263.99	295.91	326.39
180.0	135.09	136.73	147.03	161.03	184.71	210.87	239.28	264.61	286.23
202.5	135.70	138.59	144.97	157.12	178.33	205.92	230.02	254.73	278.00
225.0	140.85	138.59	142.91	153.82	173.18	198.30	223.43	256.17	285.41
247.5	142.50	138.59	143.53	151.97	171.12	198.72	230.22	266.46	301.06
270.0	136.94	132.82	140.65	153.00	177.71	204.48	232.28	261.32	284.38
292.5	134.06	134.06	139.41	155.68	179.15	209.84	239.08	268.52	292.41
315.0	134.26	135.70	139.82	156.71	181.83	209.22	239.69	273.26	302.50
337.5	136.53	137.56	144.35	158.97	183.89	213.34	244.02	273.88	305.38
360.0	135.09	139.62	150.94	167.62	191.92	217.04	241.96	261.11	282.73

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	301.06	300.65	292.41	293.03	302.09	309.09	316.71	321.45	325.56
22.5	305.38	299.62	292.20	294.47	300.65	308.27	312.38	314.44	315.47
45.0	330.71	331.74	335.45	345.95	358.92	371.69	385.69	393.11	397.43
67.5	373.75	380.13	384.05	393.31	404.02	418.44	424.82	429.35	432.44
90.0	337.10	338.95	339.36	341.83	348.63	356.25	361.19	364.48	366.54
112.5	343.07	343.69	342.04	341.01	347.39	352.13	357.07	358.92	362.01
135.0	359.34	369.01	379.10	390.43	402.37	417.20	430.79	436.14	441.09
157.5	349.86	361.81	366.95	372.51	381.78	396.81	409.99	418.23	423.58
180.0	306.83	314.44	307.85	304.15	311.36	324.12	330.09	335.45	339.36
202.5	300.24	311.77	306.62	300.24	300.85	308.88	318.77	322.27	324.74
225.0	309.50	331.74	337.51	340.80	351.30	364.69	382.19	396.61	404.23
247.5	332.36	360.16	373.54	378.90	389.40	402.99	418.64	431.61	440.67
270.0	306.62	320.62	323.09	324.33	330.30	338.54	345.33	349.45	353.78
292.5	315.47	328.86	330.51	330.71	331.95	340.18	343.89	347.19	351.51
315.0	329.68	348.63	356.45	367.37	377.46	392.49	407.93	415.76	423.17
337.5	334.01	354.19	361.19	366.54	378.90	394.75	408.76	415.96	421.52
360.0	301.06	300.65	292.41	293.03	302.09	309.09	316.71	321.45	325.56

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	327.83	328.45	325.36	321.86	314.03	304.77	289.73	269.14	246.70
22.5	316.30	314.03	311.97	306.83	298.38	286.64	271.41	249.58	231.05
45.0	398.67	395.78	390.64	380.13	365.10	342.86	316.92	288.91	256.99
67.5	433.47	430.58	424.41	414.52	398.87	377.25	353.98	326.59	294.47
90.0	367.98	367.37	363.45	355.42	345.95	333.80	314.65	292.41	265.23
112.5	363.25	362.22	359.13	353.78	345.54	334.83	318.97	300.85	274.08
135.0	442.53	438.82	432.44	421.52	408.96	390.22	364.28	337.71	303.53
157.5	427.29	427.29	425.85	420.49	412.46	397.02	373.54	347.39	317.74
180.0	341.01	342.45	341.01	334.83	329.06	320.21	305.18	287.47	262.96
202.5	328.86	330.71	331.12	329.27	324.95	319.80	308.68	293.65	273.47
225.0	410.40	415.35	414.52	411.43	404.43	391.46	369.63	348.63	321.65
247.5	447.47	452.62	452.82	450.35	445.20	434.09	414.52	392.28	364.48
270.0	358.92	359.75	358.51	355.83	350.27	341.63	330.71	310.33	287.06
292.5	353.36	355.63	354.39	350.69	344.10	337.92	327.01	309.50	287.88
315.0	428.94	433.47	435.73	432.44	423.38	408.55	388.37	359.54	329.06
337.5	424.20	425.44	421.94	417.20	407.52	392.08	373.34	345.95	318.77
360.0	327.83	328.45	325.36	321.86	314.03	304.77	289.73	269.14	246.70

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	226.72	202.22	170.50	136.94	100.90	65.28	35.63	15.03	1.03
22.5	211.07	186.57	153.62	122.32	90.40	57.86	29.24	10.50	0.41
45.0	228.57	193.36	155.06	119.23	82.99	49.63	23.06	6.59	0.41
67.5	259.67	218.90	176.27	132.00	87.52	48.60	20.59	2.88	0.41
90.0	238.66	212.10	176.89	139.82	101.73	63.63	31.09	5.15	0.82
112.5	248.34	221.78	186.15	146.41	105.84	66.31	32.54	4.53	1.85
135.0	268.52	233.10	193.77	143.53	82.99	45.72	15.24	10.71	4.12
157.5	282.53	246.70	203.86	160.00	116.76	77.63	39.33	18.33	5.77
180.0	239.08	216.01	190.07	157.74	126.85	91.43	59.51	28.83	9.27
202.5	250.40	228.78	202.83	170.09	136.32	99.87	62.60	34.18	13.18
225.0	290.56	260.29	223.63	183.07	142.91	102.96	67.13	38.30	17.30
247.5	335.45	302.50	262.14	217.87	175.86	132.00	87.93	48.19	19.36
270.0	262.14	238.46	210.66	173.59	135.70	99.05	65.07	35.42	11.33
292.5	263.38	240.72	213.34	176.48	139.62	102.14	67.34	35.21	8.44
315.0	299.41	264.20	222.19	180.80	141.26	99.46	61.78	29.86	4.94
337.5	290.76	254.73	213.75	171.74	127.47	84.43	47.16	22.45	1.24
360.0	226.72	202.22	170.50	136.94	100.90	65.28	35.63	15.03	1.03

C/γ(°)	180.0
0.0	0.41
22.5	0.62
45.0	0.41
67.5	0.21
90.0	0.41
112.5	0.62
135.0	0.41
157.5	0.41
180.0	0.41
202.5	0.62
225.0	0.41
247.5	0.21
270.0	0.41
292.5	0.62
315.0	0.41
337.5	0.41
360.0	0.41

3.2.5 Model Number: HIDFA-27S-XXX-8CCT-BYP, 5000K at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.080	60	0.231	27.409	0.989

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
3709.33	135.33	22.96	52.62

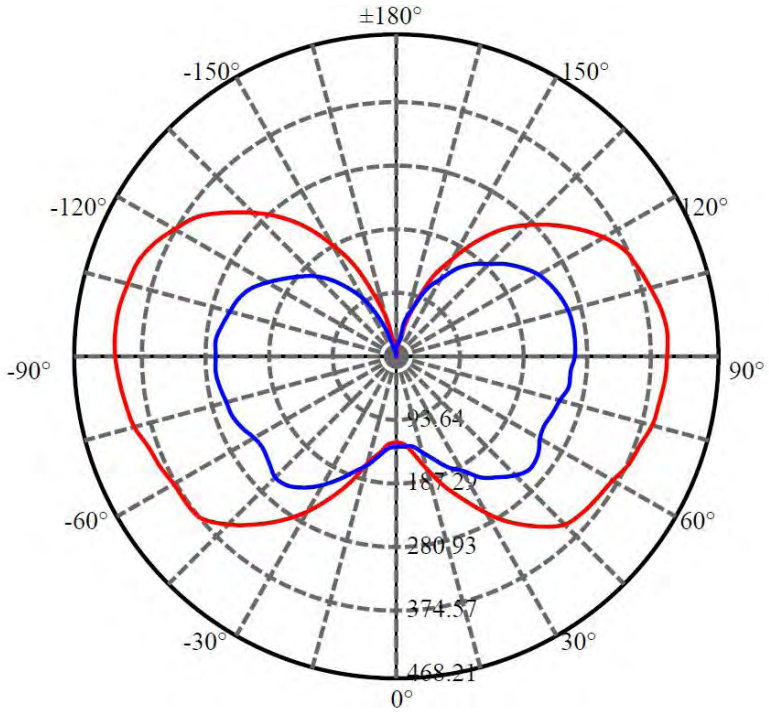
Zonal Flux Diagram

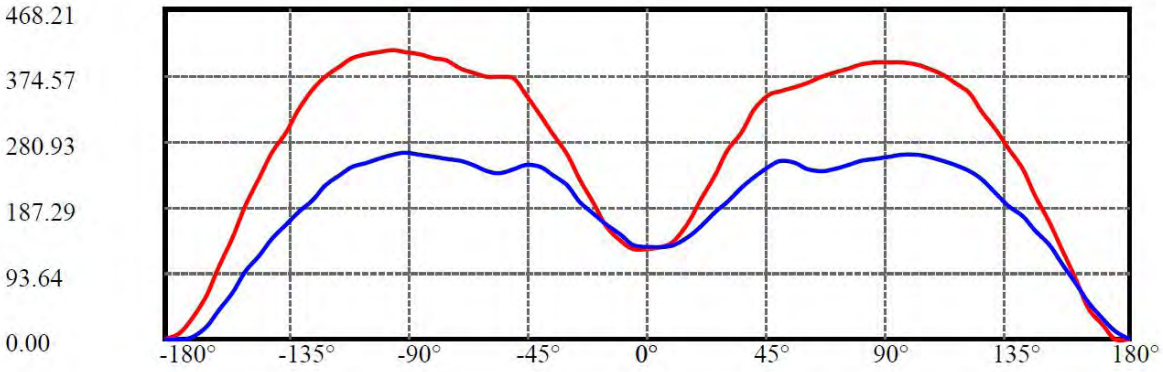
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	127.623	0.000	0	0.00%	0.00%
5.0	129.334	3.072	3.072	0.00%	0.08%
10.0	138.446	9.579	12.651	0.00%	0.34%
15.0	156.367	17.488	30.139	0.00%	0.81%
20.0	179.610	27.689	57.829	0.00%	1.56%
25.0	208.569	40.713	98.541	0.00%	2.66%
30.0	237.415	56.440	154.981	0.00%	4.18%
35.0	265.081	73.996	228.977	0.00%	6.17%
40.0	290.352	92.670	321.647	0.00%	8.67%
45.0	311.023	111.349	432.996	0.00%	11.67%
50.0	321.555	127.822	560.818	0.00%	15.12%
55.0	323.848	140.332	701.15	0.00%	18.90%
60.0	326.561	150.340	851.49	0.00%	22.96%
65.0	334.178	160.627	1012.117	0.00%	27.29%
70.0	344.266	171.786	1183.903	0.00%	31.92%
75.0	352.643	182.161	1366.064	0.00%	36.83%
80.0	358.650	190.322	1556.386	0.00%	41.96%
85.0	362.731	196.017	1752.402	0.00%	47.24%
90.0	365.506	199.397	1951.8	0.00%	52.62%
95.0	366.204	200.348	2152.147	0.00%	58.02%
100.0	363.504	198.279	2350.427	0.00%	63.37%
105.0	358.498	193.188	2543.614	0.00%	68.57%
110.0	350.577	185.341	2728.955	0.00%	73.57%
115.0	338.018	174.357	2903.312	0.00%	78.27%
120.0	320.959	160.198	3063.51	0.00%	82.59%
125.0	299.946	143.520	3207.031	0.00%	86.46%
130.0	275.385	125.096	3332.127	0.00%	89.83%
135.0	248.694	105.898	3438.024	0.00%	92.69%
140.0	220.140	86.809	3524.833	0.00%	95.03%
145.0	186.860	67.905	3592.738	0.00%	96.86%
150.0	149.739	49.566	3642.304	0.00%	98.19%
155.0	111.971	33.120	3675.424	0.00%	99.09%
160.0	74.990	19.609	3695.033	0.00%	99.61%
165.0	42.596	9.691	3704.723	0.00%	99.88%
170.0	19.479	3.682	3708.406	0.00%	99.97%
175.0	4.765	0.867	3709.273	0.00%	100.00%
180.0	0.431	0.062	3709.335	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:168.0 Right:165.8

:C90/270Left:163.2 Right:170.6

Beam Angle(50%Imax):C0/180Left:148.1 Right:145.0

:C90/270Left:142.4 Right:150.2

Luminous Intensity Distribution Data

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	126.53	129.98	140.93	165.26	198.52	231.78	266.65	293.22	325.05
22.5	126.94	127.14	138.09	161.82	196.90	232.38	270.10	297.68	330.33
45.0	125.72	125.93	131.81	155.94	186.56	227.31	264.42	304.57	341.28
67.5	124.71	126.33	128.97	144.58	161.41	187.77	212.11	243.74	271.52
90.0	132.21	130.99	133.63	144.18	159.59	179.26	194.26	214.94	229.54
112.5	130.79	130.99	133.23	141.74	156.75	174.39	188.99	206.83	221.84
135.0	126.53	128.36	133.63	147.42	158.57	177.03	196.29	219.61	241.91
157.5	127.55	128.76	134.85	152.89	180.07	216.16	255.70	294.84	330.73
180.0	126.53	128.76	140.93	159.99	192.23	226.91	261.38	290.99	318.36
202.5	126.94	130.18	143.77	166.68	202.17	239.48	275.17	305.79	336.21
225.0	125.72	127.34	138.09	162.22	191.83	227.92	266.86	304.37	336.61
247.5	124.71	129.78	135.46	152.89	170.94	199.13	224.68	256.11	283.08
270.0	132.21	133.63	147.42	163.64	177.63	196.29	218.59	232.79	243.74
292.5	130.79	131.20	146.00	159.79	173.58	192.64	213.73	226.91	240.49
315.0	126.53	129.78	144.38	157.15	171.75	192.84	216.16	237.66	254.28
337.5	127.55	130.18	143.97	165.67	195.28	235.83	273.55	311.26	340.67
360.0	126.53	129.98	140.93	165.26	198.52	231.78	266.65	293.22	325.05

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	346.75	352.43	356.28	362.97	372.91	378.99	384.67	388.73	392.58
22.5	353.04	361.55	362.77	367.64	378.59	386.70	389.94	395.01	398.46
45.0	373.92	391.56	397.44	405.35	408.19	419.95	433.54	439.01	443.27
67.5	295.85	314.51	319.58	317.75	324.04	338.64	350.40	359.73	364.39
90.0	243.54	252.86	251.24	240.90	237.45	242.52	246.78	252.86	254.69
112.5	236.64	246.58	242.93	231.17	227.31	225.89	229.14	232.99	233.19
135.0	261.79	279.02	280.04	277.40	286.12	296.06	308.63	317.55	326.27
157.5	361.55	385.68	399.47	404.74	413.87	427.86	440.03	450.17	454.63
180.0	347.36	368.45	372.10	373.11	378.79	384.87	395.82	399.68	404.74
202.5	362.16	376.76	379.80	383.86	392.78	405.96	410.42	416.91	418.33
225.0	364.19	378.18	388.52	400.28	412.04	430.90	446.72	455.03	462.33
247.5	307.21	315.93	315.32	319.98	331.14	346.34	357.09	364.19	367.23
270.0	247.59	241.71	235.83	238.87	246.58	252.46	255.30	258.95	262.19
292.5	243.54	234.82	226.30	224.88	227.31	232.79	232.99	234.82	237.05
315.0	266.04	269.09	270.51	279.23	295.85	308.43	320.59	327.89	334.38
337.5	365.20	375.75	383.45	396.84	413.87	429.89	440.23	444.89	449.96
360.0	346.75	352.43	356.28	362.97	372.91	378.99	384.67	388.73	392.58

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	393.59	393.79	390.35	384.06	374.94	364.19	347.97	322.42	296.46
22.5	401.09	401.70	400.08	393.79	386.70	376.36	359.73	333.77	307.82
45.0	445.50	446.52	441.04	434.15	421.37	404.95	384.26	356.89	328.30
67.5	367.64	369.87	368.04	363.99	354.86	340.26	321.00	296.06	270.51
90.0	258.54	261.18	260.77	258.14	254.28	247.59	238.47	225.69	206.83
112.5	234.82	236.03	236.03	233.60	231.78	225.49	218.80	209.47	193.65
135.0	329.31	330.53	327.69	322.21	313.09	300.72	281.86	261.58	237.25
157.5	461.12	463.75	462.33	457.87	450.98	438.20	417.93	396.23	368.85
180.0	408.39	409.41	407.58	404.14	398.66	388.12	372.10	354.66	326.47
202.5	422.79	423.20	421.78	415.49	407.38	394.81	378.38	360.54	332.56
225.0	467.00	468.21	466.39	461.93	454.63	443.68	422.99	399.68	367.03
247.5	368.04	368.24	364.80	361.15	355.47	339.25	316.74	294.84	270.71
270.0	263.21	261.99	256.92	250.84	243.54	232.38	217.18	197.10	179.26
292.5	237.86	237.05	235.02	232.18	227.11	219.61	207.24	191.42	175.61
315.0	336.21	334.18	328.91	320.39	306.40	284.70	264.83	241.91	216.97
337.5	453.01	453.61	448.34	442.06	428.06	407.99	385.89	356.89	327.89
360.0	393.59	393.79	390.35	384.06	374.94	364.19	347.97	322.42	296.46

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	271.52	242.52	204.60	166.68	126.74	84.36	45.02	19.26	1.42
22.5	282.27	253.27	218.39	176.82	133.02	88.61	50.90	21.29	3.04
45.0	298.29	259.15	221.03	176.21	130.99	85.37	48.06	21.70	3.24
67.5	238.47	205.62	168.71	134.04	100.17	68.94	41.16	20.28	5.07
90.0	188.58	174.19	155.33	132.41	107.27	79.49	51.51	28.39	11.15
112.5	177.63	163.84	144.58	121.26	95.71	69.96	45.42	25.75	10.54
135.0	210.89	187.16	159.99	128.16	101.19	74.42	48.06	25.55	9.94
157.5	336.61	301.94	258.54	209.47	159.59	111.12	63.88	29.00	8.92
180.0	293.42	263.41	230.15	189.39	146.61	101.19	59.82	27.98	8.72
202.5	300.72	272.74	238.87	193.45	149.45	104.63	60.63	25.96	6.29
225.0	331.54	294.03	246.58	197.30	148.03	97.54	54.34	22.51	4.06
247.5	240.90	207.64	172.97	135.46	97.33	63.47	35.49	13.99	1.62
270.0	163.64	143.77	118.83	96.52	68.34	41.37	18.05	3.04	1.22
292.5	158.17	138.50	111.93	86.18	57.59	34.68	15.61	3.65	0.41
315.0	191.63	158.78	129.98	88.01	53.13	28.39	12.57	9.94	0.41
337.5	294.84	255.70	209.27	164.45	116.39	66.31	31.03	13.38	0.20
360.0	271.52	242.52	204.60	166.68	126.74	84.36	45.02	19.26	1.42

C/γ(°)	180.0
0.0	0.41
22.5	0.61
45.0	0.41
67.5	0.41
90.0	0.81
112.5	0.41
135.0	0.20
157.5	0.20
180.0	0.41
202.5	0.61
225.0	0.41
247.5	0.41
270.0	0.81
292.5	0.41
315.0	0.20
337.5	0.20
360.0	0.41

3.2.6 Model Number: HIDFA-27S-XXX-8CCT-BYP, 5000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.130	60	0.114	28.571	0.902

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
3892.77	136.25	22.92	52.58

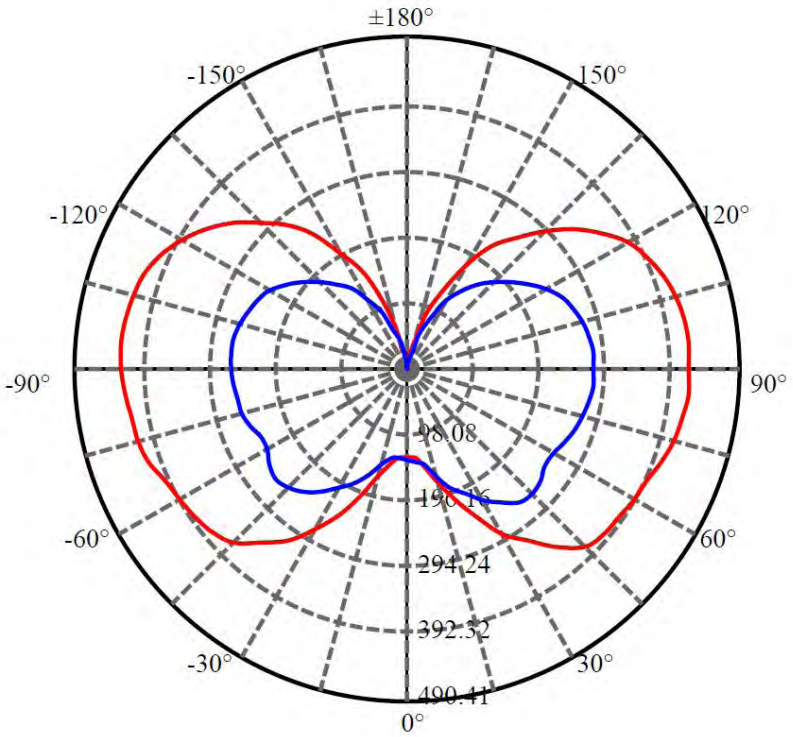
Zonal Flux Diagram

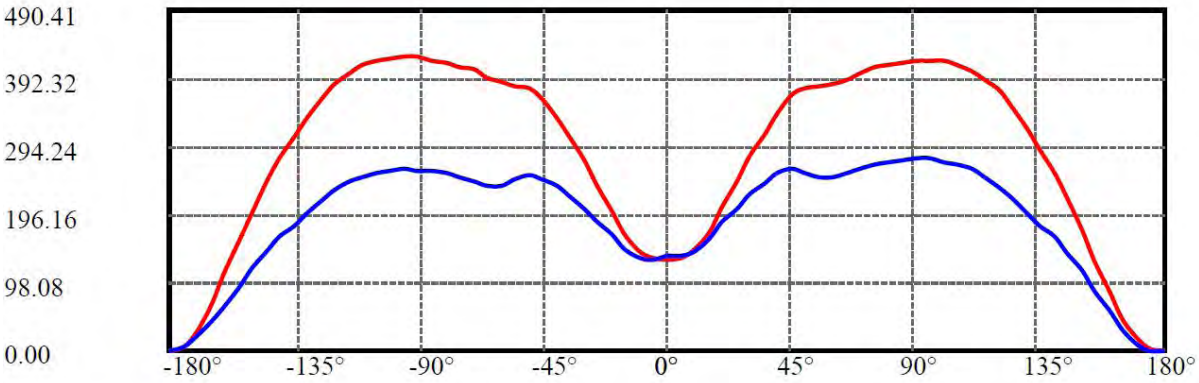
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	131.518	0.000	0	0.00%	0.00%
5.0	133.734	3.171	3.171	0.00%	0.08%
10.0	142.067	9.866	13.037	0.00%	0.33%
15.0	161.858	18.029	31.066	0.00%	0.80%
20.0	188.374	28.864	59.93	0.00%	1.54%
25.0	218.104	42.632	102.562	0.00%	2.63%
30.0	249.260	59.145	161.707	0.00%	4.15%
35.0	277.979	77.640	239.347	0.00%	6.15%
40.0	305.325	97.320	336.667	0.00%	8.65%
45.0	326.851	117.052	453.719	0.00%	11.66%
50.0	337.141	134.169	587.888	0.00%	15.10%
55.0	338.995	147.014	734.903	0.00%	18.88%
60.0	342.170	157.449	892.352	0.00%	22.92%
65.0	350.102	168.293	1060.645	0.00%	27.25%
70.0	360.871	180.023	1240.668	0.00%	31.87%
75.0	370.604	191.196	1431.863	0.00%	36.78%
80.0	376.553	199.918	1631.782	0.00%	41.92%
85.0	380.946	205.831	1837.612	0.00%	47.21%
90.0	383.694	209.364	2046.977	0.00%	52.58%
95.0	384.497	210.337	2257.314	0.00%	57.99%
100.0	381.737	208.204	2465.518	0.00%	63.34%
105.0	376.462	202.873	2668.391	0.00%	68.55%
110.0	368.012	194.594	2862.984	0.00%	73.55%
115.0	354.599	182.970	3045.954	0.00%	78.25%
120.0	337.115	168.157	3214.111	0.00%	82.57%
125.0	314.915	150.715	3364.826	0.00%	86.44%
130.0	288.788	131.265	3496.091	0.00%	89.81%
135.0	261.546	111.203	3607.294	0.00%	92.67%
140.0	231.803	91.347	3698.641	0.00%	95.01%
145.0	197.122	71.563	3770.204	0.00%	96.85%
150.0	157.425	52.209	3822.413	0.00%	98.19%
155.0	117.871	34.839	3857.252	0.00%	99.09%
160.0	79.108	20.659	3877.912	0.00%	99.62%
165.0	44.505	10.187	3888.099	0.00%	99.88%
170.0	19.090	3.772	3891.872	0.00%	99.98%
175.0	4.445	0.842	3892.714	0.00%	100.00%
180.0	0.467	0.059	3892.772	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:168.2 Right:165.8

:C90/270Left:168.3 Right:165.6

Beam Angle(50%Imax):C0/180Left:148.5 Right:145.9

:C90/270Left:146.0 Right:145.6

Luminous Intensity Distribution Data

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	131.05	132.71	145.98	170.66	205.91	242.61	280.35	310.21	341.52
22.5	129.39	133.33	151.37	180.61	218.56	257.13	295.07	325.97	357.70
45.0	131.26	135.20	150.34	174.39	206.95	248.00	287.82	325.14	357.90
67.5	131.26	134.16	145.77	165.06	184.55	210.06	244.06	273.30	301.09
90.0	135.61	138.10	143.08	162.16	184.76	204.87	224.78	241.16	256.92
112.5	135.41	136.86	141.01	158.84	183.31	199.48	219.59	237.43	253.81
135.0	128.56	136.65	144.12	160.70	178.12	200.72	223.95	246.97	266.67
157.5	129.60	131.88	142.66	166.10	199.27	237.43	279.52	319.33	355.00
180.0	131.05	132.92	143.49	166.51	200.93	237.01	274.55	307.52	335.72
202.5	129.39	132.71	142.46	165.68	200.10	237.84	279.73	311.46	342.56
225.0	131.26	132.92	142.04	160.91	192.43	232.45	273.92	313.53	355.83
247.5	131.26	134.16	138.93	152.41	168.58	193.05	221.05	251.11	281.60
270.0	135.61	132.09	133.75	146.19	166.93	184.97	202.59	221.05	237.22
292.5	135.41	131.67	133.13	145.98	162.99	181.03	197.20	214.83	230.17
315.0	128.56	131.67	136.44	151.79	166.10	187.25	207.36	232.04	255.47
337.5	129.60	132.71	138.52	161.74	194.50	235.77	276.62	316.64	356.04
360.0	131.05	132.71	145.98	170.66	205.91	242.61	280.35	310.21	341.52

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	369.10	378.64	380.92	384.65	388.80	398.96	407.05	412.02	415.55
22.5	381.96	386.10	389.42	395.02	407.46	416.59	424.05	427.16	430.27
45.0	382.79	393.16	403.94	416.59	428.41	447.69	460.34	470.92	477.34
67.5	320.37	325.76	326.39	336.96	350.02	363.09	373.66	380.71	382.37
90.0	261.69	255.88	249.25	248.83	255.47	262.31	267.49	271.23	274.96
112.5	261.07	254.43	244.27	239.50	239.71	246.14	247.38	249.04	250.91
135.0	282.22	286.99	287.61	294.04	306.48	321.82	334.47	344.63	352.31
157.5	380.51	395.85	402.90	412.85	429.65	445.41	463.04	469.88	476.10
180.0	361.43	376.36	381.13	385.48	393.78	403.94	409.33	413.89	418.45
202.5	373.25	390.25	393.57	396.27	405.80	417.83	423.43	427.78	431.72
225.0	393.57	423.84	434.42	442.71	450.80	459.30	472.99	477.97	485.43
247.5	311.66	335.92	347.74	345.46	346.71	361.01	376.15	384.45	390.04
270.0	247.80	253.19	246.14	236.60	238.26	244.48	250.70	255.05	258.37
292.5	242.61	247.80	238.46	228.93	227.47	227.89	231.83	235.98	235.56
315.0	275.37	287.40	284.91	289.48	299.01	311.87	324.93	334.06	340.90
337.5	384.24	402.69	412.85	421.36	433.80	445.62	462.83	470.09	474.85
360.0	369.10	378.64	380.92	384.65	388.80	398.96	407.05	412.02	415.55

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	416.79	417.21	416.38	411.61	401.03	388.59	373.66	351.06	320.79
22.5	431.93	432.76	428.82	421.15	410.16	397.92	383.62	358.11	328.46
45.0	479.62	478.59	474.85	467.39	454.53	437.12	417.21	385.90	351.68
67.5	383.20	382.16	378.43	371.59	357.49	337.58	316.22	290.51	260.86
90.0	276.20	275.79	272.47	267.29	260.65	250.08	234.94	218.14	198.86
112.5	252.36	252.98	250.49	247.38	243.23	236.18	224.78	211.72	194.30
135.0	353.96	355.00	351.27	343.39	329.70	311.46	286.99	266.25	240.95
157.5	480.87	482.94	480.04	472.57	464.49	447.28	421.98	397.51	366.82
180.0	422.81	423.22	421.77	416.59	410.78	399.17	382.99	361.43	334.47
202.5	437.12	440.43	437.94	434.21	428.41	416.59	400.83	379.88	351.06
225.0	489.78	490.41	485.22	483.36	474.85	457.85	435.04	409.12	376.15
247.5	395.23	397.72	398.75	396.27	392.33	377.60	357.90	336.55	310.00
270.0	260.03	261.27	259.82	256.71	250.91	242.61	232.87	215.24	198.24
292.5	237.01	238.26	237.64	234.73	231.62	225.19	218.35	204.66	189.53
315.0	343.80	344.43	338.83	330.32	319.54	304.40	284.08	259.82	236.39
337.5	478.38	478.79	475.06	468.84	458.47	443.96	422.39	392.74	362.05
360.0	416.79	417.21	416.38	411.61	401.03	388.59	373.66	351.06	320.79

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	288.23	254.43	219.39	175.01	129.19	86.68	46.66	19.08	1.87
22.5	300.05	265.21	227.27	183.31	137.27	88.75	46.45	18.04	0.62
45.0	316.85	277.45	227.47	179.16	128.36	78.80	38.57	13.06	0.62
67.5	229.96	191.81	156.14	117.37	81.08	49.35	24.26	4.77	0.62
90.0	181.03	162.99	141.21	114.88	85.02	57.44	30.28	7.67	1.24
112.5	176.26	157.80	132.30	102.64	73.41	47.69	25.09	4.77	1.24
135.0	213.58	183.10	149.71	109.49	65.11	40.64	13.89	9.54	3.73
157.5	333.64	295.90	250.28	197.61	146.40	93.11	45.20	20.53	5.60
180.0	306.69	278.48	243.65	197.41	157.80	111.35	66.77	28.41	7.47
202.5	323.69	296.53	259.62	212.75	172.11	119.85	71.75	33.39	9.75
225.0	342.56	306.06	264.38	215.24	165.06	114.88	70.92	34.01	11.82
247.5	277.66	245.31	204.66	164.44	127.32	91.45	58.27	30.28	11.20
270.0	179.99	162.99	143.49	117.57	91.65	64.70	41.47	20.53	5.60
292.5	174.39	157.39	137.27	111.97	86.47	61.38	40.02	20.32	3.53
315.0	210.26	182.68	152.00	123.59	93.31	65.73	40.64	19.49	3.32
337.5	329.91	290.72	245.10	196.37	146.40	93.93	51.84	21.57	2.90
360.0	288.23	254.43	219.39	175.01	129.19	86.68	46.66	19.08	1.87

C/γ(°)	180.0
0.0	0.42
22.5	0.42
45.0	0.42
67.5	0.42
90.0	1.04
112.5	0.21
135.0	0.42
157.5	0.42
180.0	0.42
202.5	0.42
225.0	0.42
247.5	0.42
270.0	1.04
292.5	0.21
315.0	0.42
337.5	0.42
360.0	0.42

4 Additional Test

Model Number	Test Voltage (V)	Frequency(Hz)	Power Factor	THD
HIDFA-27S-XXX-8CCT-BYP	120	60	0.989	15.4%
	277	60	0.903	17.2%

Photo Document

****End of test report****