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-54S-XXX-8CCT-BYP/3SP
(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-54S-XXX-8CCT-BYP/3SP (XXX indidates base type, can be E26 or EX39)
Rated Inputs	AC 100-277V, 50/60Hz
Rated Power	54 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-54S-XXX-8CCT-BYP/3SP are the same to the product in the report BL210817010-9 and is authorized by original applicant to use their test data.
- Note:All the data in previous report BL210817010-9 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-54S-XXX-8CCT-BYP/3SP, 3000K at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.11	60	0.450	53.44	0.989

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
7225.04	135.2	3067

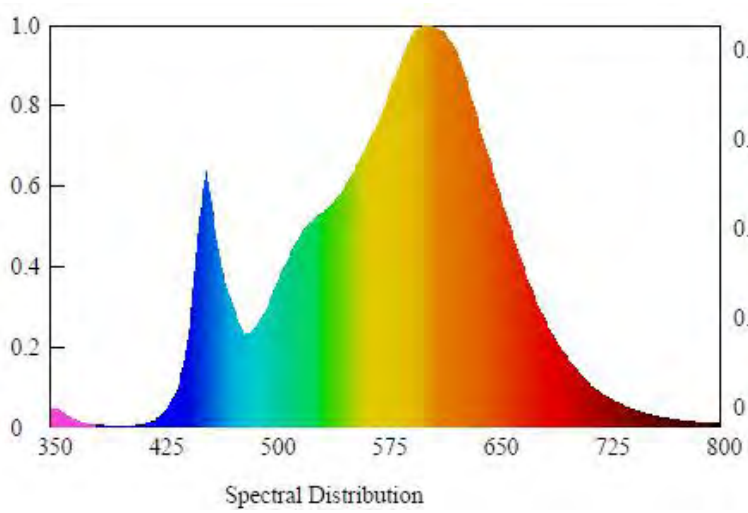
Chromaticity Coordinate

Duv	x	y	u'	v'
-0.00165	0.4300	0.3975	0.2489	0.5177

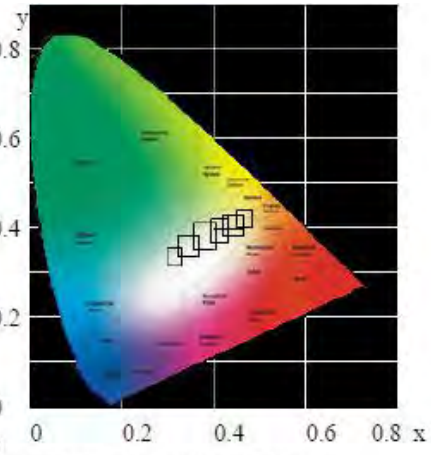
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
85.4	19	86	96	-10

Spectral Distribution

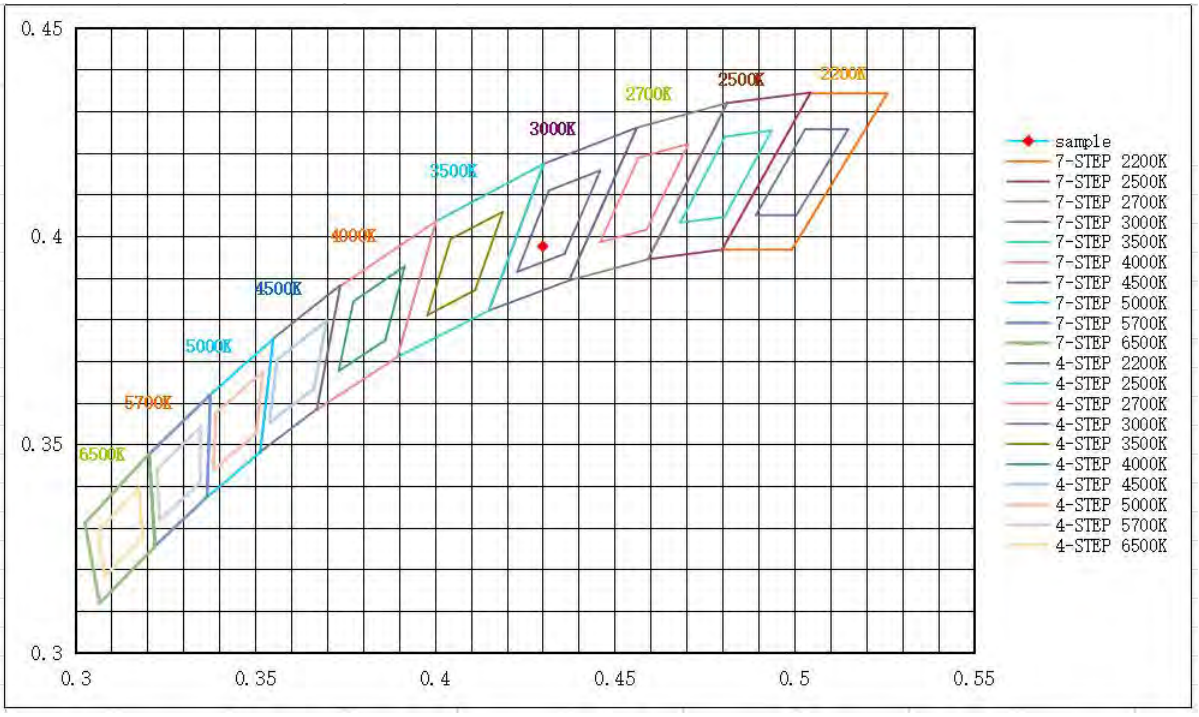


Spectral Distribution



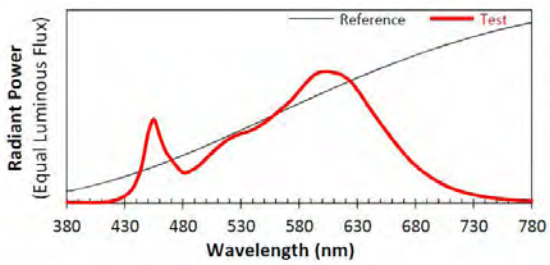
CIE1931 Chromaticity Diagram

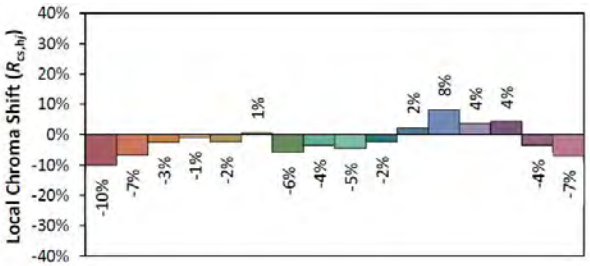
7/4 Step Quadrangle

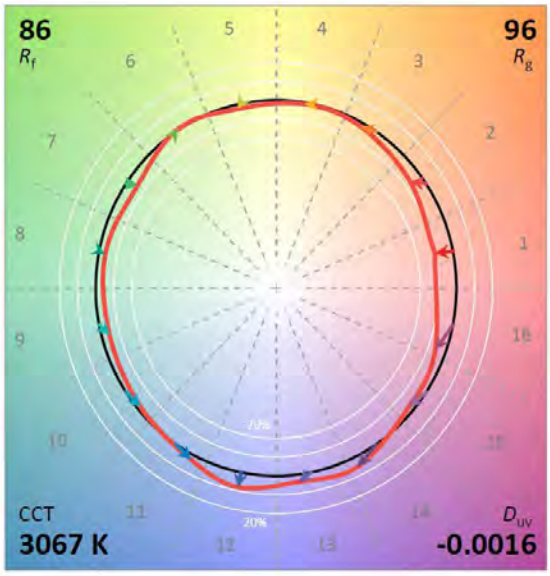


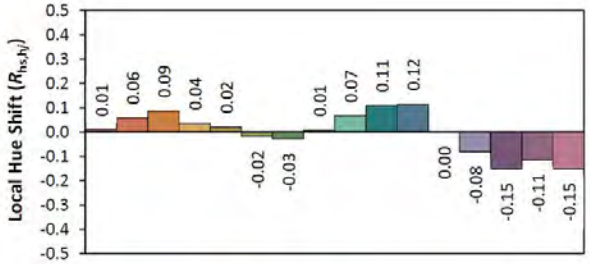
ANSI/IES TM-30-18 Color Rendition Report

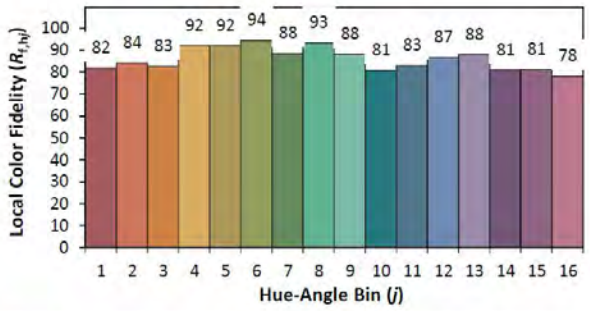
Source:	BL210817026-9	**Manufacturer:**	RAB Lighting Inc
Date:	2021-10-11	**Model:**	HIDFA-54S-XXX-8CCT-BYP/3SP, 3000K at 120V

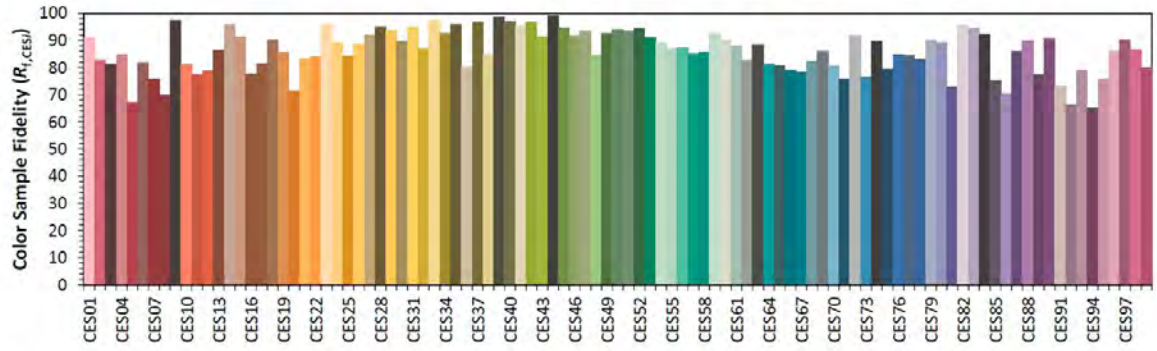












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.4300
y	0.3975
u'	0.2489
v'	0.5177

CIE 13.3-1995 (CRI)

R_a	85
R_9	19

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-54S-XXX-8CCT-BYP/3SP, 4000K at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.12	60	0.439	52.09	0.989

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
7756.25	148.9	3895

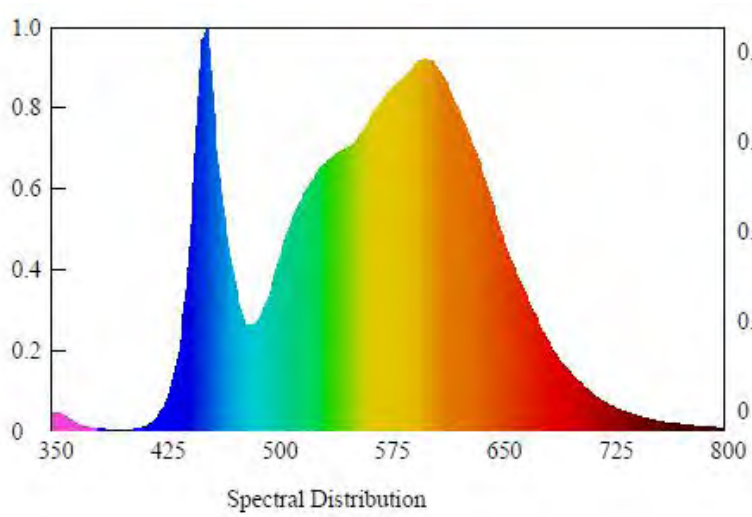
Chromaticity Coordinate

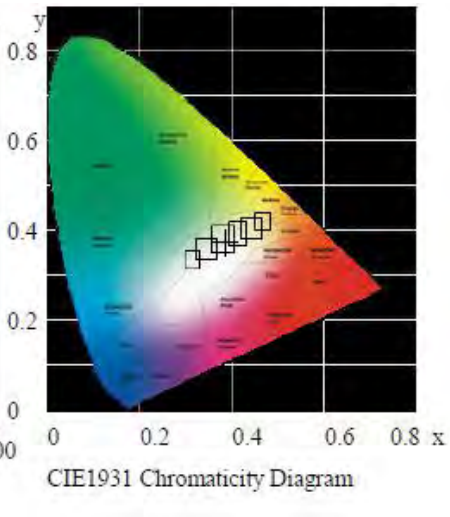
Duv	x	y	u'	v'
-0.00188	0.3838	0.3748	0.2281	0.5012

Color Rendering

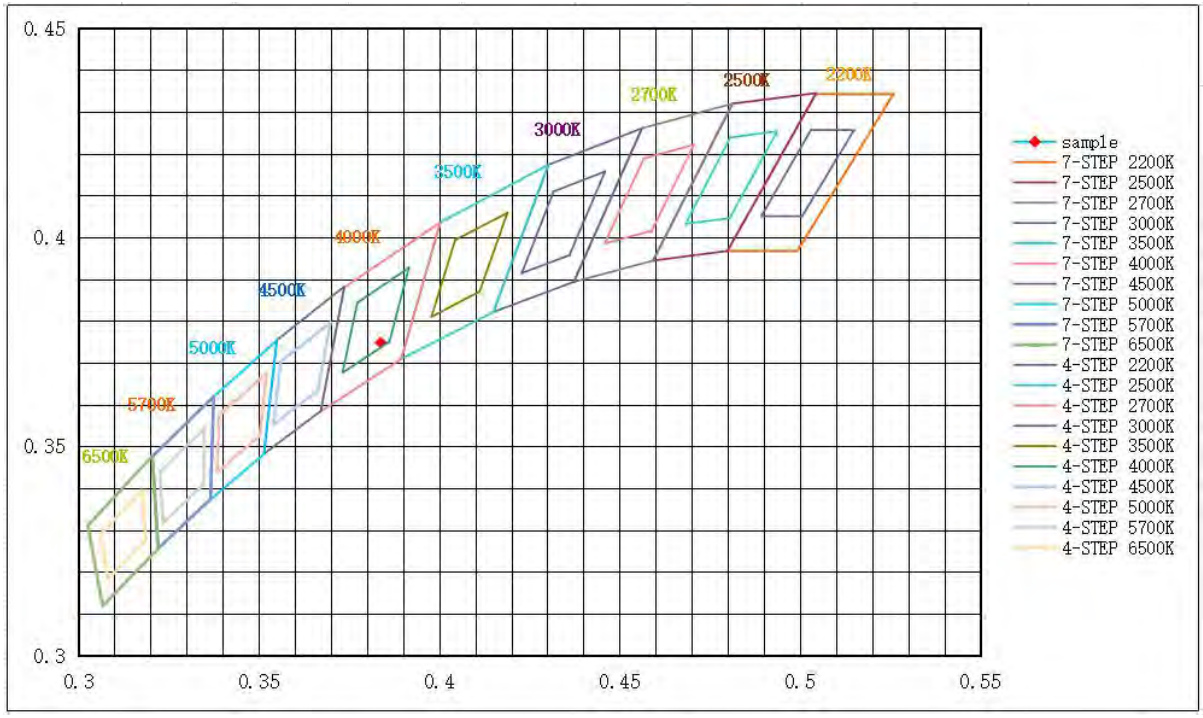
CRI	R9	Rf	Rg	Rcs,h1(%)
85.4	22	85	96	-10

Spectral Distribution



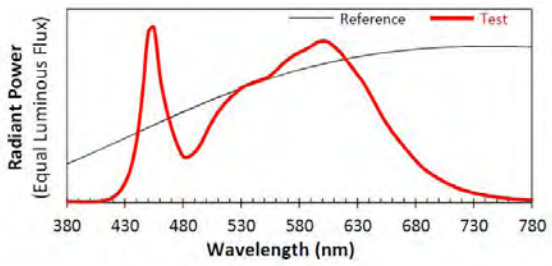


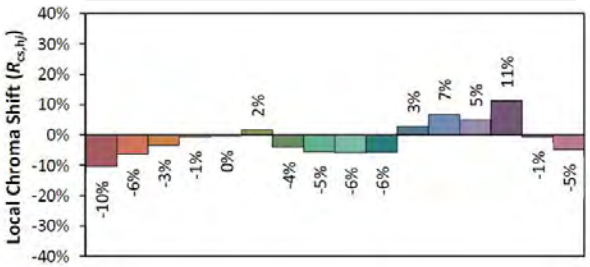
7/4 Step Quadrangle

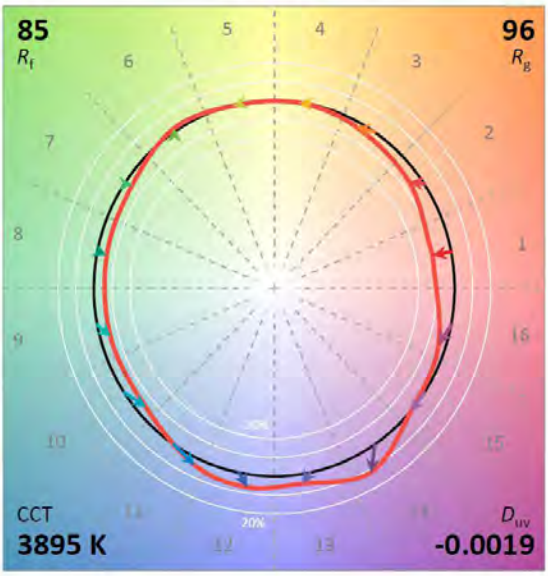


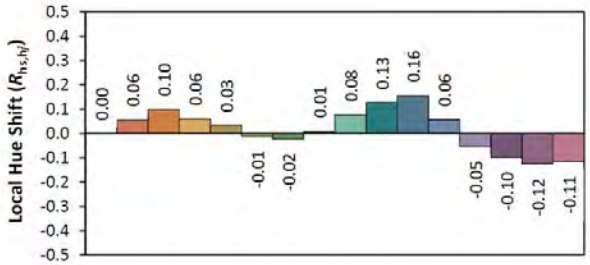
ANSI/IES TM-30-18 Color Rendition Report

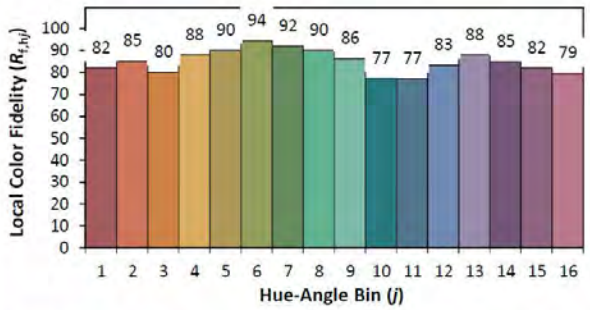
Source:	BL210817026-9	**Manufacturer:**	RAB Lighting Inc
Date:	2021-10-11	**Model:**	HIDFA-54S-XXX-8CCT-BYP/3SP, 4000K at 120V

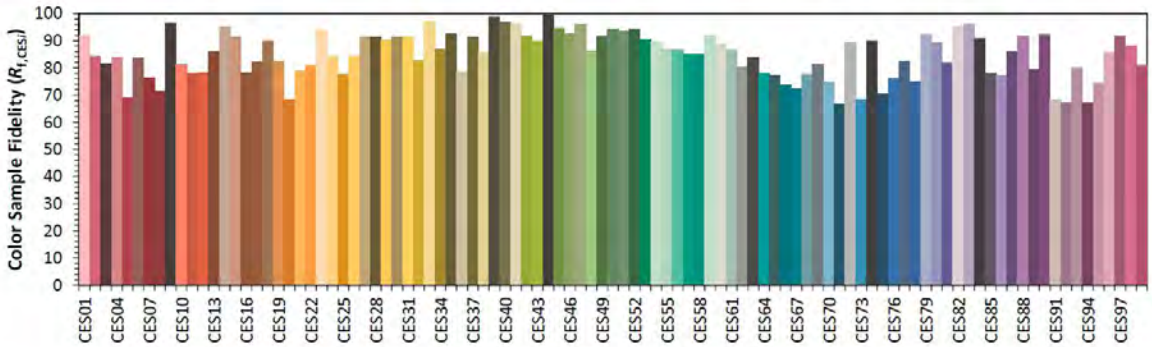












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3838
y	0.3748
u'	0.2281
v'	0.5012

CIE 13.3-1995 (CRI)

R_a	85
R_9	21

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-54S-XXX-8CCT-BYP/3SP, 5000K at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.10	60	0.450	53.39	0.989

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
7608.08	142.5	4868

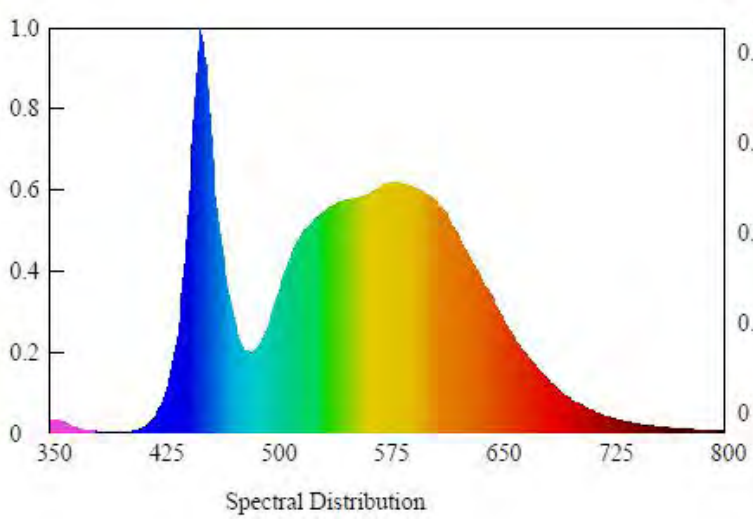
Chromaticity Coordinate

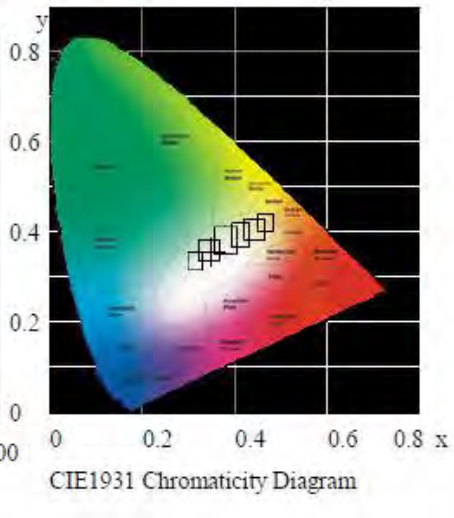
Duv	x	y	u'	v'
+0.00094	0.3492	0.3567	0.2122	0.4877

Color Rendering

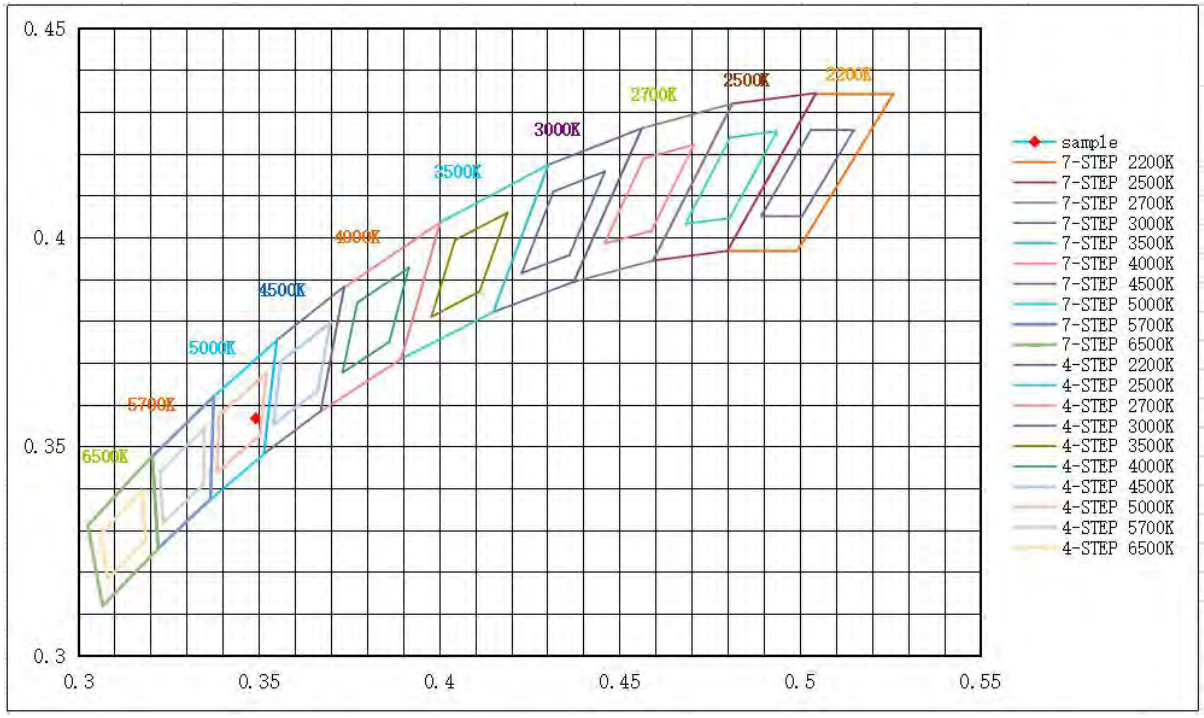
CRI	R9	Rf	Rg	Rcs,h1(%)
82.3	11	82	97	-12

Spectral Distribution



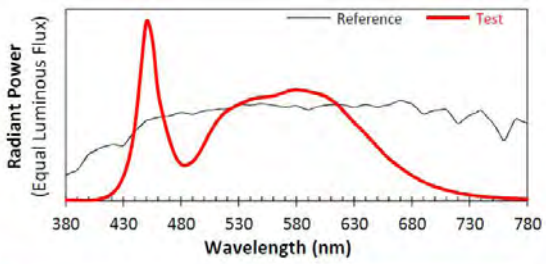


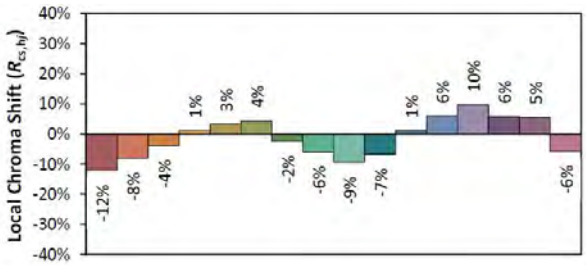
7/4 Step Quadrangle

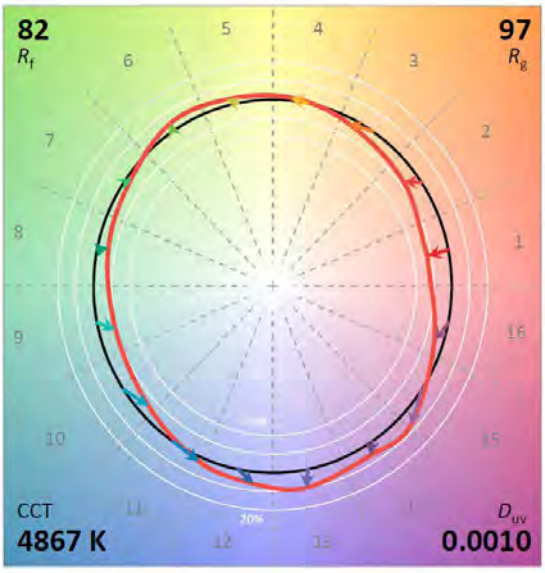


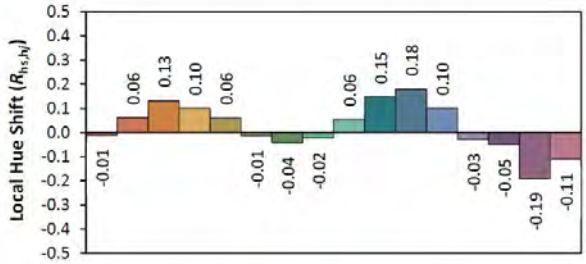
ANSI/IES TM-30-18 Color Rendition Report

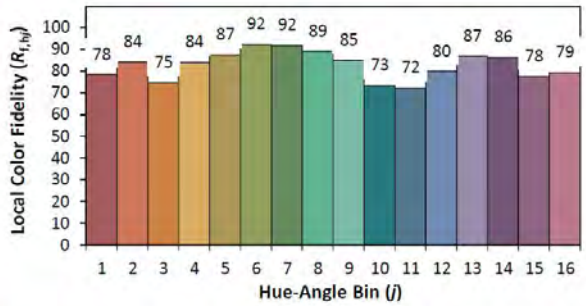
Source:	BL210817026-9	**Manufacturer:**	RAB Lighting Inc
Date:	2021-10-11	**Model:**	HIDFA-54S-XXX-8CCT-BYP/3SP, 5000K at 120V

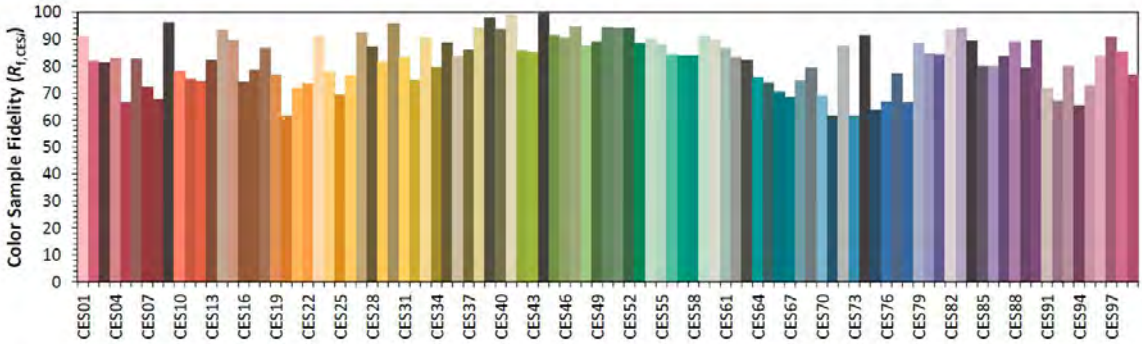












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3492
y	0.3567
u'	0.2122
v'	0.4877

CIE 13.3-1995 (CRI)

R_a	82
R_9	11

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-54S-XXX-8CCT-BYP/3SP, 3000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.19	60	0.222	54.62	0.888

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
7231.71	132.4	3064

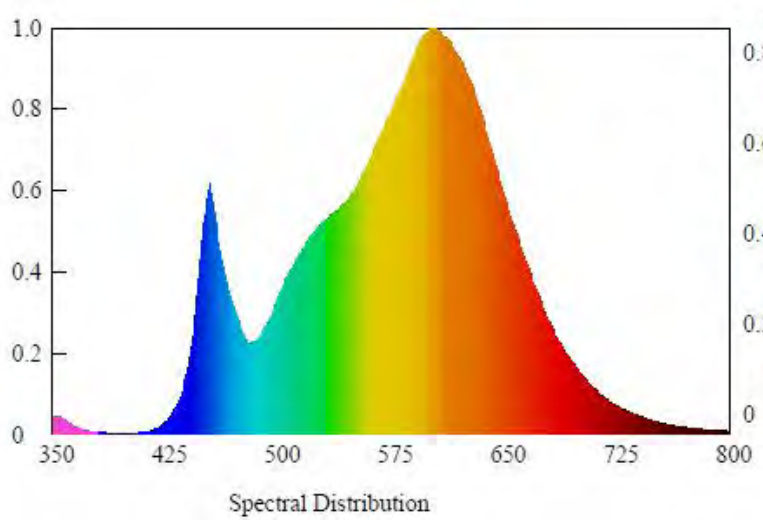
Chromaticity Coordinate

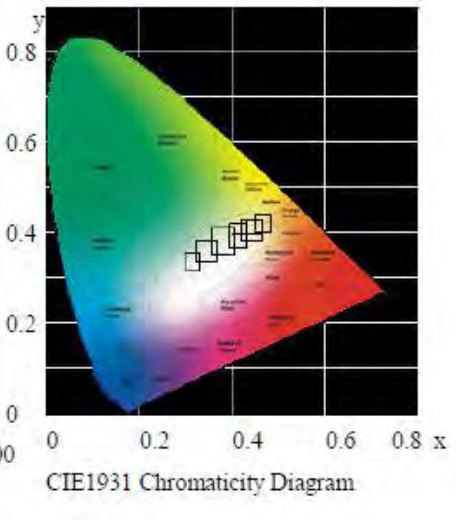
Duv	x	y	u'	v'
-0.00152	0.4303	0.3980	0.2489	0.5180

Color Rendering

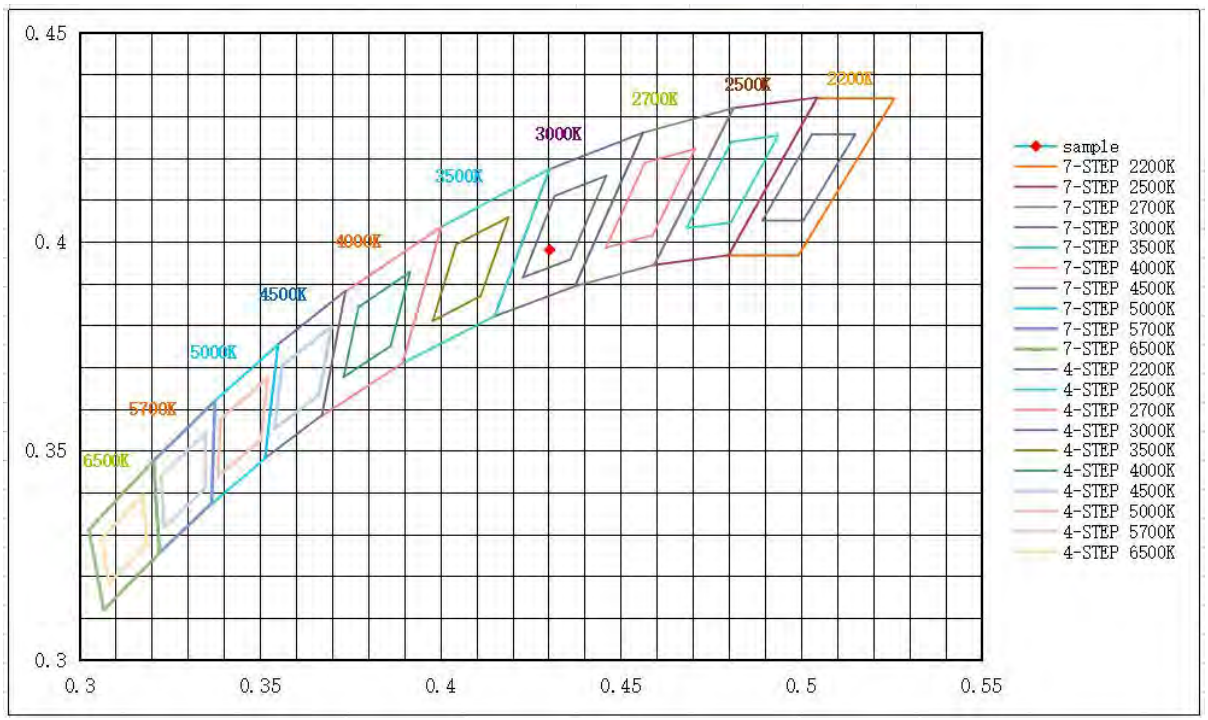
CRI	R9	Rf	Rg	Rcs,h1(%)
85.5	19	86	96	-10

Spectral Distribution



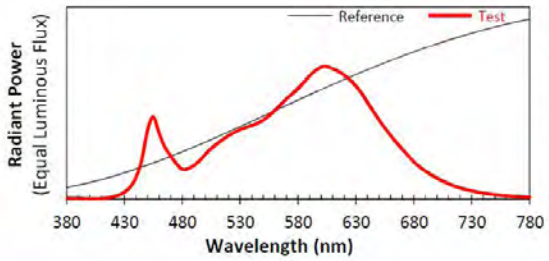


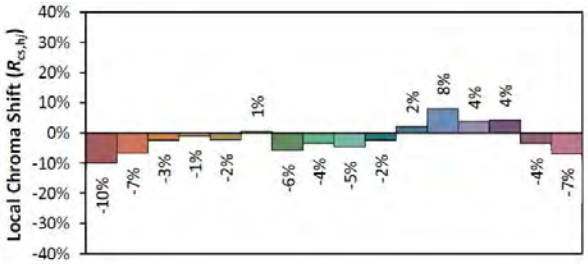
7/4 Step Quadrangle

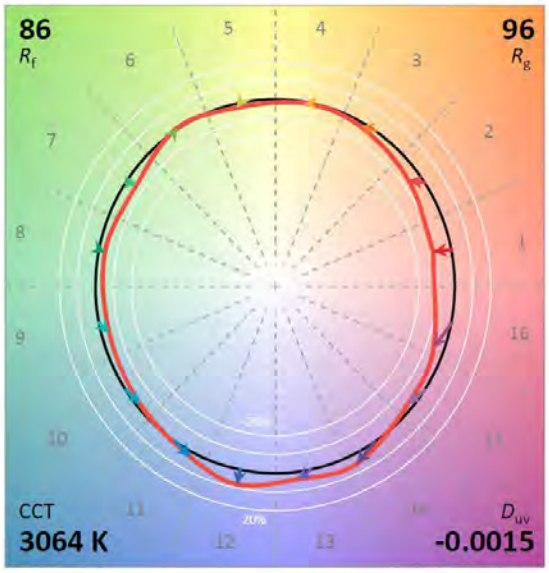


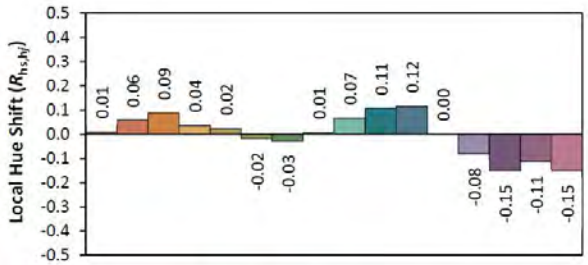
ANSI/IES TM-30-18 Color Rendition Report

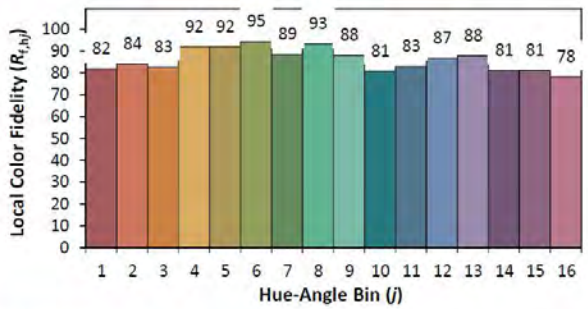
Source:	BL210817026-9	**Manufacturer:**	RAB Lighting Inc
Date:	2021-10-11	**Model:**	HIDFA-54S-XXX-8CCT-BYP/3SP, 3000K at 277V

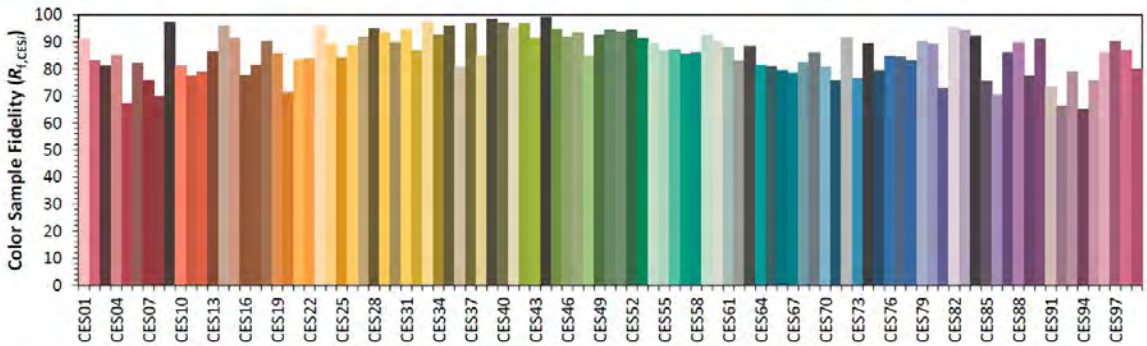












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.4303
y	0.3980
u'	0.2489
v'	0.5180

CIE 13.3-1995 (CRI)

R_a	85
R_9	19

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-54S-XXX-8CCT-BYP/3SP, 4000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.17	60	0.218	53.45	0.884

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
7878.53	147.4	3884

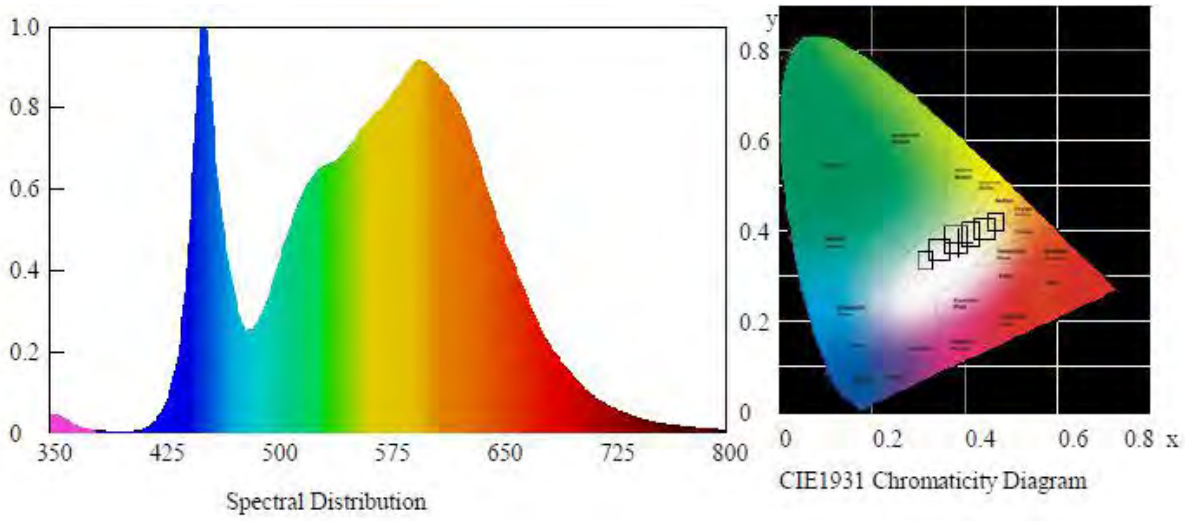
Chromaticity Coordinate

Duv	x	y	u'	v'
-0.00168	0.3844	0.3756	0.2282	0.5017

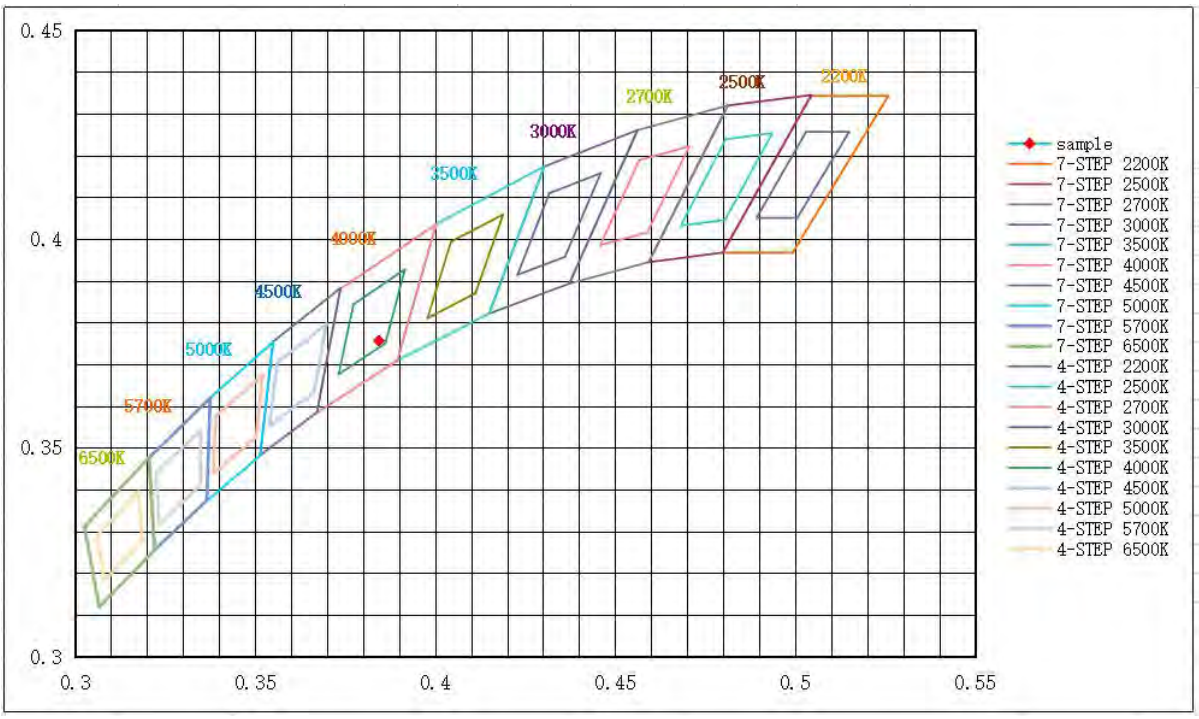
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
85.3	22	85	97	-10

Spectral Distribution

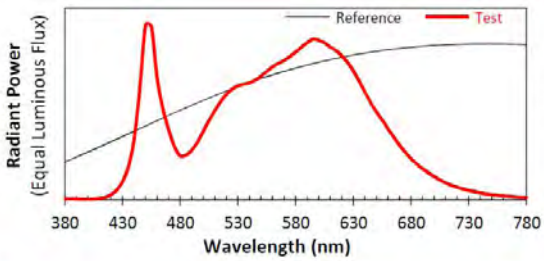


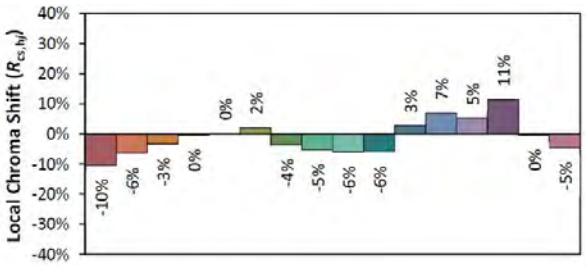
7/4 Step Quadrangle

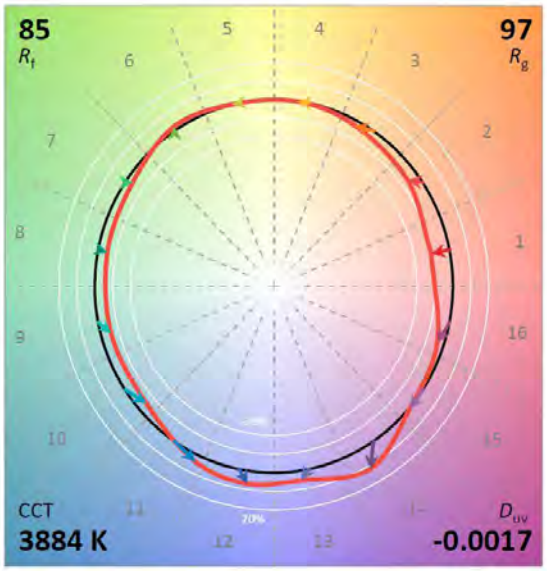


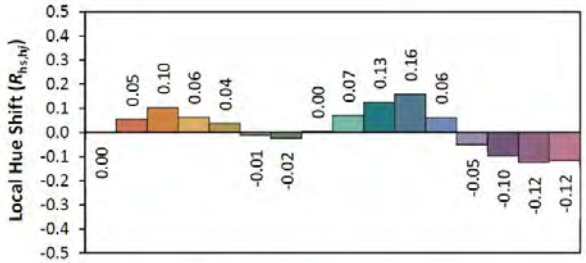
ANSI/IES TM-30-18 Color Rendition Report

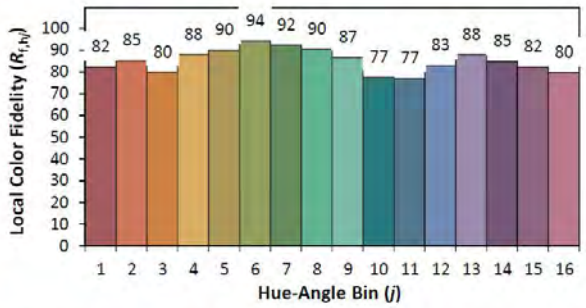
Source:	BL210817026-9	**Manufacturer:**	RAB Lighting Inc
Date:	2021-10-11	**Model:**	HIDFA-54S-XXX-8CCT-BYP/3SP, 4000K at 277V

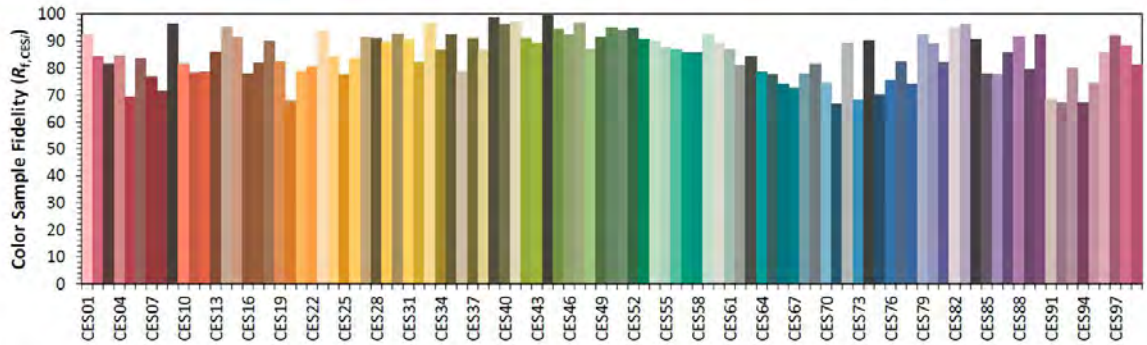












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3844
y	0.3756
u'	0.2282
v'	0.5017

CIE 13.3-1995 (CRI)

R_a	85
R_9	22

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-54S-XXX-8CCT-BYP/3SP, 5000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.19	60	0.224	55.04	0.888

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
7881.78	143.2	4788

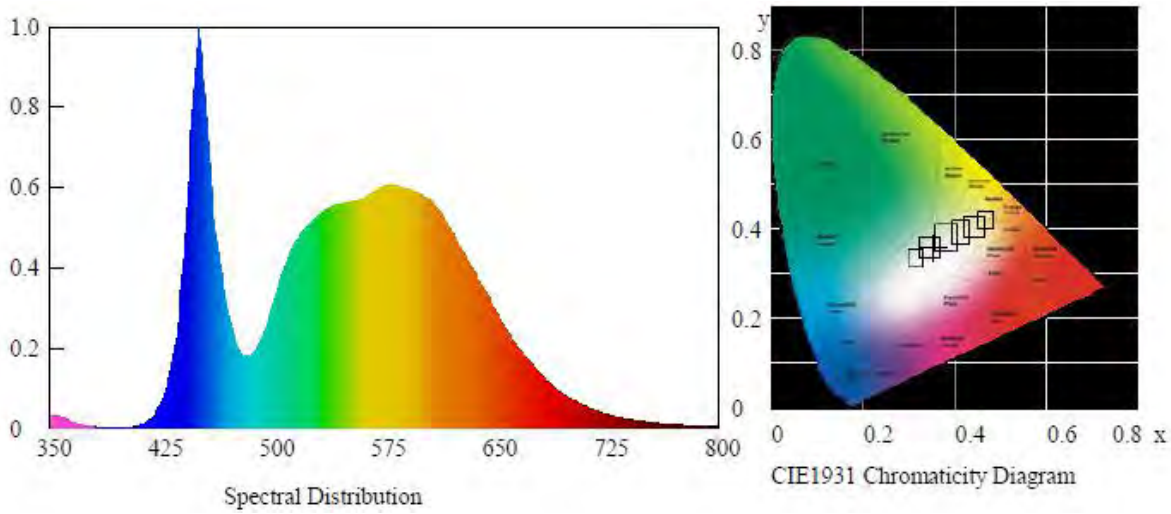
Chromaticity Coordinate

Duv	x	y	u'	v'
+0.00138	0.3517	0.3596	0.2128	0.4895

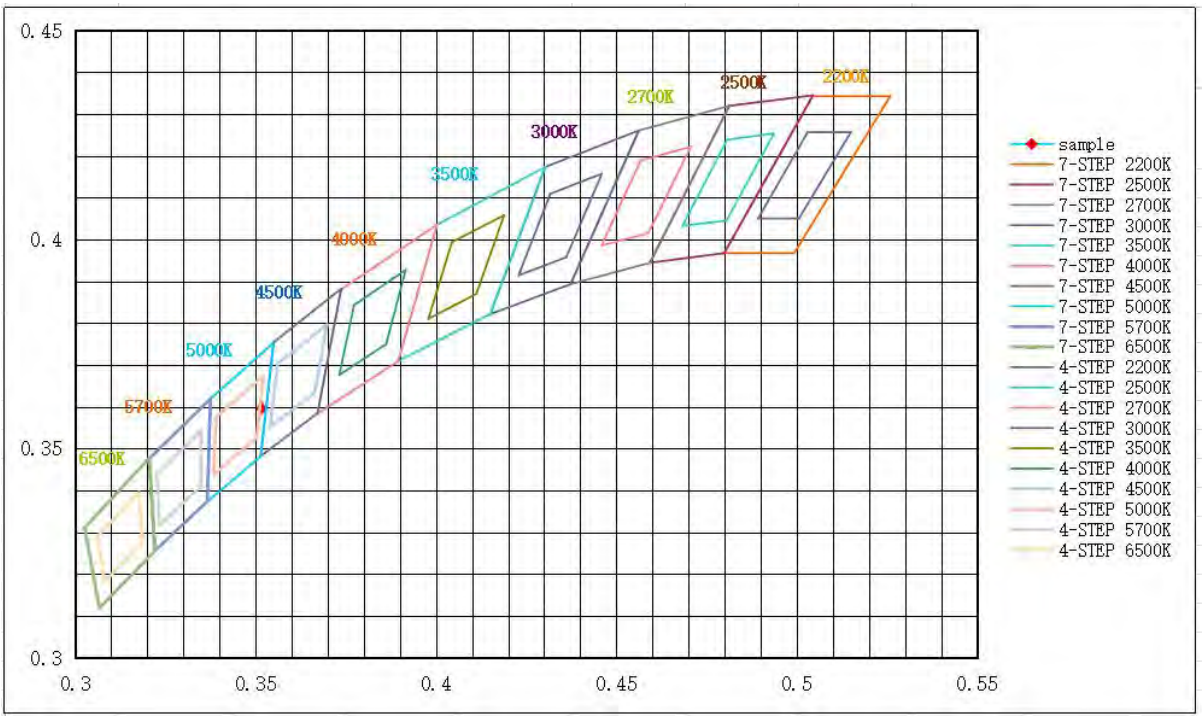
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
81.8	10	82	97	-12

Spectral Distribution

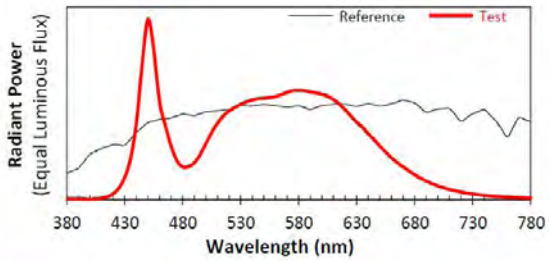


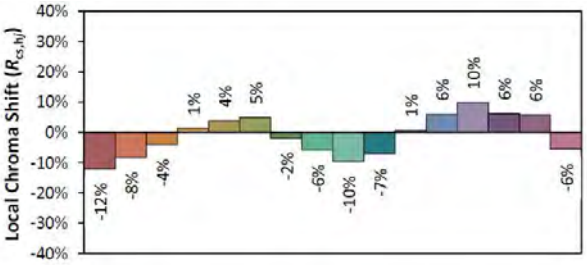
7/4 Step Quadrangle

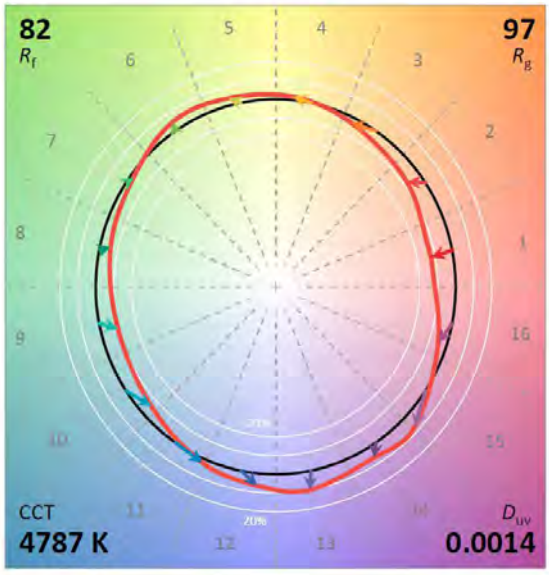


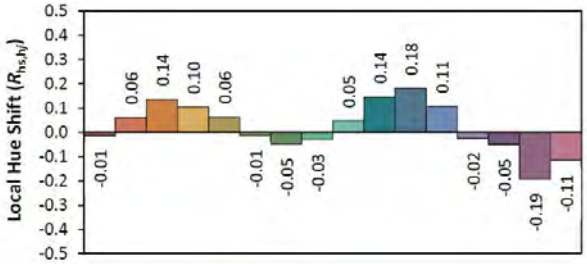
ANSI/IES TM-30-18 Color Rendition Report

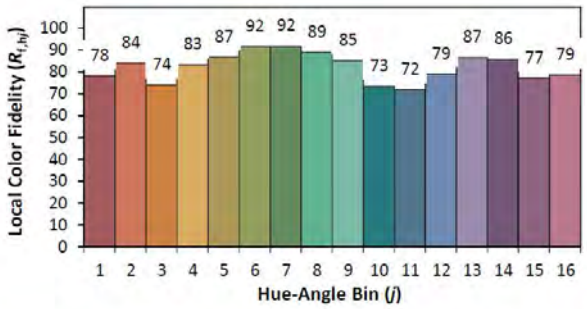
Source:	BL210817026-9	**Manufacturer:**	RAB Lighting Inc
Date:	2021-10-11	**Model:**	HIDFA-54S-XXX-8CCT-BYP/3SP, 5000K at 277V

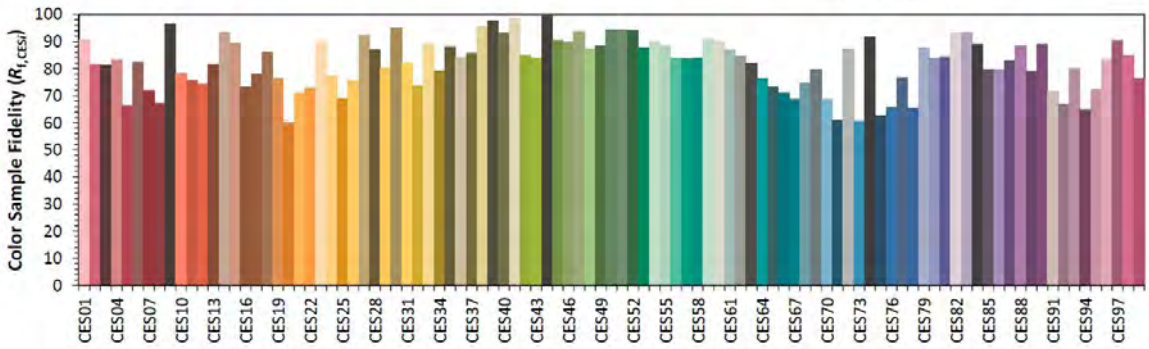












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3517
y	0.3596
u'	0.2128
v'	0.4895

CIE 13.3-1995 (CRI)

R_a	82
R_9	10

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-54S-XXX-8CCT-BYP/3SP, 3000K at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.070	60	0.456	54.130	0.988

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
7278.40	134.46	27.31	57.04

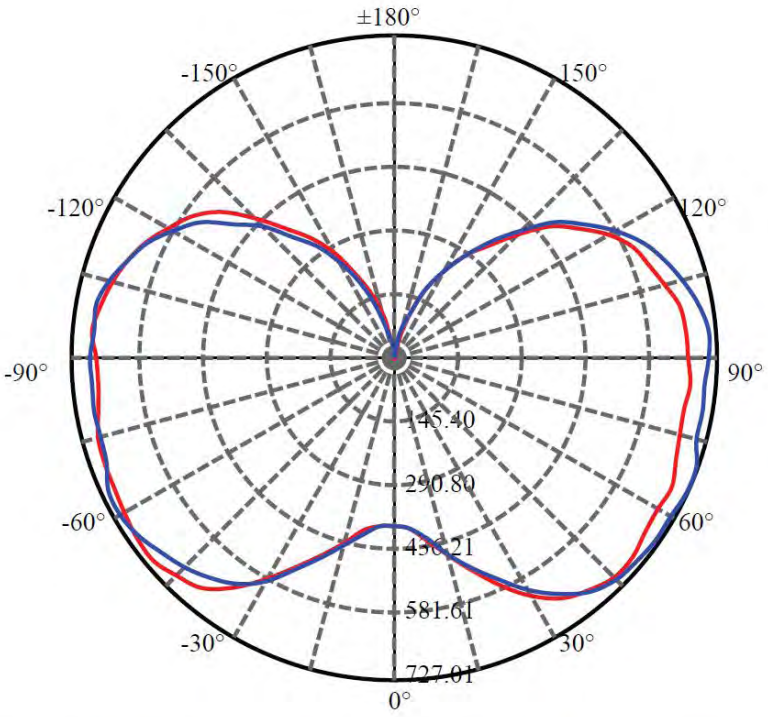
Zonal Flux Diagram

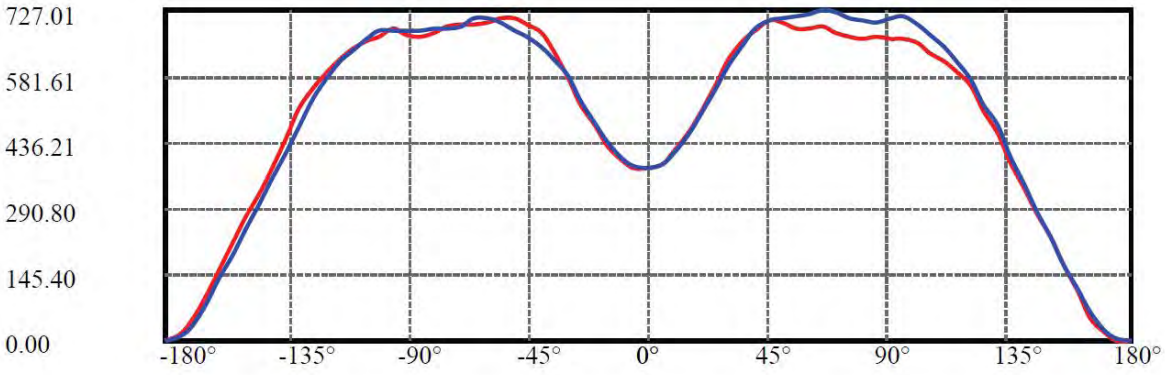
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	379.661	0.000	0	0.00%	0.00%
5.0	385.051	9.142	9.142	0.00%	0.13%
10.0	407.316	28.345	37.487	0.00%	0.52%
15.0	446.514	50.649	88.136	0.00%	1.21%
20.0	492.494	77.387	165.523	0.00%	2.27%
25.0	544.668	108.779	274.303	0.00%	3.77%
30.0	599.379	144.780	419.083	0.00%	5.76%
35.0	645.519	183.320	602.403	0.00%	8.28%
40.0	677.072	220.664	823.067	0.00%	11.31%
45.0	693.415	253.757	1076.824	0.00%	14.79%
50.0	699.640	281.487	1358.311	0.00%	18.66%
55.0	701.268	304.604	1662.915	0.00%	22.85%
60.0	703.183	324.635	1987.549	0.00%	27.31%
65.0	703.614	341.995	2329.544	0.00%	32.01%
70.0	694.836	354.096	2683.64	0.00%	36.87%
75.0	687.175	361.235	3044.876	0.00%	41.83%
80.0	681.493	366.217	3411.093	0.00%	46.87%
85.0	678.125	369.441	3780.534	0.00%	51.94%
90.0	677.567	371.199	4151.733	0.00%	57.04%
95.0	681.653	372.165	4523.898	0.00%	62.16%
100.0	671.709	367.741	4891.639	0.00%	67.21%
105.0	653.723	354.649	5246.288	0.00%	72.08%
110.0	632.544	336.209	5582.497	0.00%	76.70%
115.0	606.752	313.798	5896.295	0.00%	81.01%
120.0	570.874	286.283	6182.578	0.00%	84.94%
125.0	528.452	254.106	6436.684	0.00%	88.44%
130.0	476.965	218.611	6655.295	0.00%	91.44%
135.0	416.094	180.456	6835.751	0.00%	93.92%
140.0	355.510	142.869	6978.619	0.00%	95.88%
145.0	299.027	109.204	7087.824	0.00%	97.38%
150.0	242.991	79.816	7167.64	0.00%	98.48%
155.0	184.769	54.133	7221.773	0.00%	99.22%
160.0	127.776	32.780	7254.554	0.00%	99.67%
165.0	73.033	16.549	7271.103	0.00%	99.90%
170.0	27.723	5.977	7277.08	0.00%	99.98%
175.0	6.623	1.229	7278.309	0.00%	100.00%
180.0	0.811	0.089	7278.397	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:167.5 Right:163.3

:C90/270Left:165.8 Right:163.9

Beam Angle(50%Imax):C0/180Left:142.3 Right:138.3

:C90/270Left:139.4 Right:138.4

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	379.66	386.36	417.77	461.95	507.40	565.88	620.02	661.13	683.34
22.5	379.66	390.19	420.32	462.20	510.72	567.41	613.89	654.49	675.94
45.0	379.66	389.17	420.83	464.76	513.27	571.75	619.50	662.41	681.05
67.5	379.66	390.45	423.39	471.14	518.13	573.80	630.74	673.90	696.11
90.0	379.66	387.64	413.68	455.82	501.02	554.13	603.67	648.36	687.69
112.5	379.66	385.85	409.34	449.95	497.19	540.85	603.93	650.91	688.71
135.0	379.66	380.74	400.66	441.26	492.08	541.88	597.80	648.11	682.32
157.5	379.66	381.51	398.36	433.35	473.44	521.45	578.14	623.85	665.98
180.0	379.66	381.51	395.81	429.52	472.67	521.45	579.67	635.08	677.98
202.5	379.66	381.76	392.74	426.45	471.65	520.94	575.07	625.89	670.58
225.0	379.66	381.51	396.58	431.81	474.20	518.89	574.05	628.70	664.45
247.5	379.66	381.76	394.53	430.28	481.35	533.45	594.73	643.00	674.15
270.0	379.66	383.30	402.45	437.18	479.31	528.34	580.43	620.27	645.04
292.5	379.66	382.79	407.81	449.18	495.40	544.17	601.88	645.55	670.07
315.0	379.66	391.47	413.68	447.65	493.87	549.28	599.33	649.13	684.62
337.5	379.66	384.83	409.09	451.73	498.21	561.03	617.21	657.55	685.13
360.0	379.66	386.36	417.77	461.95	507.40	565.88	620.02	661.13	683.34

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	703.77	701.73	687.94	685.90	692.28	675.17	666.24	664.96	668.02
22.5	679.26	682.32	690.49	699.69	696.37	683.34	673.13	671.34	672.62
45.0	688.20	690.24	690.49	693.56	687.18	669.04	664.70	664.19	662.15
67.5	709.39	709.90	698.67	696.11	695.35	683.34	674.92	671.34	670.32
90.0	705.05	710.92	715.52	718.58	727.01	723.95	707.09	706.58	701.22
112.5	706.58	712.71	713.22	708.63	708.37	704.03	682.32	676.45	673.39
135.0	696.11	709.65	709.14	715.01	718.84	710.92	698.16	687.69	686.41
157.5	689.47	697.13	705.31	712.97	719.10	718.58	714.50	701.73	696.37
180.0	695.86	709.65	708.37	701.22	696.37	696.88	692.28	678.75	668.53
202.5	694.07	699.43	699.69	701.99	709.14	707.60	699.69	702.24	691.52
225.0	687.18	685.64	685.90	689.22	691.26	686.15	683.34	680.54	666.49
247.5	691.26	702.24	705.56	701.73	701.48	699.94	699.18	686.41	679.00
270.0	667.26	682.32	699.94	710.16	708.63	689.98	687.18	686.15	682.83
292.5	685.13	695.09	697.65	697.90	692.54	678.75	675.68	662.15	666.24
315.0	703.26	707.86	706.58	707.35	706.58	694.33	684.11	674.66	672.62
337.5	692.79	697.39	705.82	710.92	707.35	695.35	692.28	688.71	692.28
360.0	703.77	701.73	687.94	685.90	692.28	675.17	666.24	664.96	668.02

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	661.64	662.15	655.77	630.49	613.38	592.44	558.47	505.36	457.86
22.5	664.70	664.96	655.26	639.42	610.31	579.41	534.47	486.72	437.18
45.0	653.47	658.06	651.94	631.00	603.16	576.35	540.34	495.91	439.73
67.5	665.21	664.96	660.62	633.55	614.65	589.37	557.96	504.08	458.37
90.0	708.37	712.71	694.58	673.39	644.27	615.93	571.50	521.19	474.20
112.5	674.92	680.28	664.70	647.08	629.46	607.76	573.54	535.24	490.29
135.0	690.49	698.16	684.11	669.56	651.94	631.76	596.78	561.79	507.15
157.5	701.22	711.18	695.35	676.71	656.79	626.65	588.61	545.19	489.78
180.0	673.39	684.62	670.07	657.55	640.70	618.23	586.05	554.64	508.68
202.5	696.37	706.07	694.07	677.47	661.13	631.51	600.35	554.39	501.78
225.0	668.53	681.05	667.00	650.91	637.12	610.57	580.95	542.13	491.57
247.5	681.81	689.98	679.00	665.21	648.36	625.89	596.27	561.79	515.83
270.0	683.60	680.79	680.03	665.98	638.91	613.38	572.77	533.45	470.12
292.5	664.19	661.13	659.34	639.42	619.76	598.05	564.09	523.23	475.74
315.0	667.26	663.68	658.57	642.74	619.25	591.67	554.39	517.36	460.16
337.5	685.90	686.66	676.96	659.09	631.51	599.08	557.45	512.76	453.01
360.0	661.64	662.15	655.77	630.49	613.38	592.44	558.47	505.36	457.86

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	392.49	335.03	279.88	224.97	166.50	107.76	51.33	16.85	1.53
22.5	380.49	316.90	261.23	204.80	151.43	96.53	48.52	15.07	1.02
45.0	384.32	324.05	270.43	215.78	157.56	101.89	49.80	13.53	1.28
67.5	389.68	334.27	278.60	224.97	163.94	107.00	52.60	12.77	1.79
90.0	407.04	342.69	283.96	225.74	167.77	110.83	62.31	21.45	3.32
112.5	420.32	356.48	303.88	247.44	188.46	130.23	75.08	26.05	5.62
135.0	446.37	384.06	321.75	263.02	202.50	140.96	83.25	32.69	8.17
157.5	434.88	371.55	309.24	253.06	193.31	139.17	85.55	38.56	10.98
180.0	444.84	378.96	326.86	272.73	216.04	154.49	97.55	45.20	13.02
202.5	445.60	383.55	322.52	266.85	207.86	149.90	96.02	47.24	14.05
225.0	434.62	379.72	322.27	269.66	211.18	155.00	96.27	46.99	14.05
247.5	448.41	385.59	332.99	278.34	217.31	157.30	99.59	48.01	14.05
270.0	417.26	356.74	302.60	243.36	187.44	134.32	80.69	32.18	8.17
292.5	413.94	354.95	298.77	243.10	187.18	129.47	72.01	20.68	4.60
315.0	399.64	347.29	289.83	234.17	176.45	122.83	62.31	9.70	2.30
337.5	397.60	336.31	279.62	219.87	161.39	106.74	55.67	16.60	2.04
360.0	392.49	335.03	279.88	224.97	166.50	107.76	51.33	16.85	1.53

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

3.2.2 Model Number: HIDFA-54S-XXX-8CCT-BYP/3SP, 3000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.010	60	0.220	53.860	0.885

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
7127.69	132.34	27.36	57.08

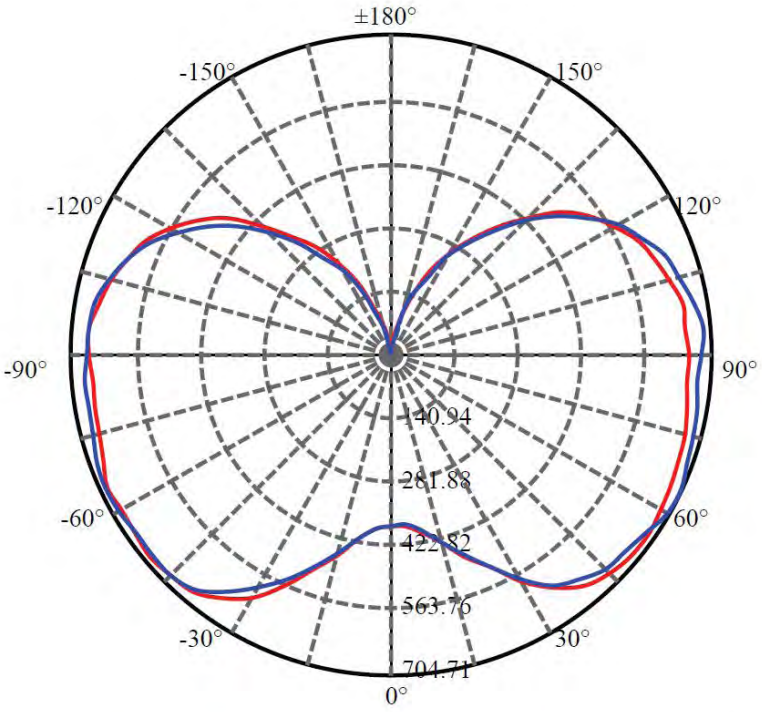
Zonal Flux Diagram

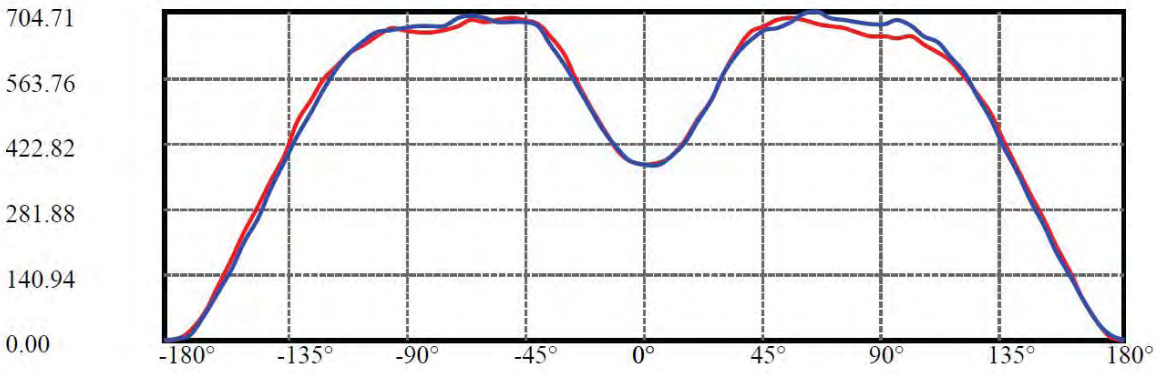
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	376.288	0.000	0	0.00%	0.00%
5.0	380.869	9.052	9.052	0.00%	0.13%
10.0	401.778	27.998	37.049	0.00%	0.52%
15.0	440.078	49.938	86.988	0.00%	1.22%
20.0	485.132	76.250	163.238	0.00%	2.29%
25.0	535.378	107.033	270.271	0.00%	3.79%
30.0	589.474	142.351	412.622	0.00%	5.79%
35.0	634.781	180.280	592.902	0.00%	8.32%
40.0	663.581	216.622	809.524	0.00%	11.36%
45.0	678.146	248.432	1057.955	0.00%	14.84%
50.0	685.358	275.516	1333.471	0.00%	18.71%
55.0	686.952	298.386	1631.857	0.00%	22.89%
60.0	689.635	318.194	1950.052	0.00%	27.36%
65.0	689.856	335.357	2285.408	0.00%	32.06%
70.0	680.813	347.062	2632.471	0.00%	36.93%
75.0	671.708	353.527	2985.998	0.00%	41.89%
80.0	666.516	358.071	3344.069	0.00%	46.92%
85.0	662.618	361.158	3705.227	0.00%	51.98%
90.0	664.970	363.504	4068.731	0.00%	57.08%
95.0	665.648	364.334	4433.065	0.00%	62.19%
100.0	657.174	359.442	4792.507	0.00%	67.24%
105.0	639.657	346.996	5139.503	0.00%	72.11%
110.0	618.685	328.910	5468.413	0.00%	76.72%
115.0	594.082	307.080	5775.494	0.00%	81.03%
120.0	557.487	279.949	6055.442	0.00%	84.96%
125.0	517.672	248.520	6303.962	0.00%	88.44%
130.0	465.911	213.864	6517.826	0.00%	91.44%
135.0	407.412	176.468	6694.294	0.00%	93.92%
140.0	347.713	139.818	6834.111	0.00%	95.88%
145.0	292.370	106.793	6940.904	0.00%	97.38%
150.0	237.532	78.032	7018.936	0.00%	98.47%
155.0	181.431	53.020	7071.956	0.00%	99.22%
160.0	125.804	32.223	7104.18	0.00%	99.67%
165.0	72.166	16.315	7120.495	0.00%	99.90%
170.0	27.553	5.915	7126.41	0.00%	99.98%
175.0	6.028	1.201	7127.612	0.00%	100.00%
180.0	0.891	0.083	7127.694	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:164.2 Right:166.8

:C90/270Left:163.5 Right:166.9

Beam Angle(50%Imax):C0/180Left:139.7 Right:142.0

:C90/270Left:137.5 Right:140.4

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	376.29	380.51	395.15	428.48	472.16	517.10	574.42	626.18	661.02
22.5	376.29	376.21	390.61	425.45	467.62	513.06	569.62	617.60	652.19
45.0	376.29	374.70	388.08	422.92	468.88	514.07	568.87	617.09	640.32
67.5	376.29	376.47	392.63	424.94	471.66	520.13	578.46	623.91	650.93
90.0	376.29	375.96	392.88	425.45	469.64	517.36	571.64	617.34	644.36
112.5	376.29	378.74	398.69	436.81	481.76	528.47	588.56	633.50	661.28
135.0	376.29	382.02	403.48	439.84	484.53	541.85	591.84	644.87	679.46
157.5	376.29	385.05	406.51	446.66	493.37	549.93	603.46	646.63	672.39
180.0	376.29	383.79	409.04	453.98	500.19	557.25	614.31	653.96	677.44
202.5	376.29	383.79	410.55	450.70	497.41	556.75	602.19	646.38	668.35
225.0	376.29	382.78	411.31	454.74	501.95	556.75	605.48	647.14	668.60
247.5	376.29	383.28	409.54	453.48	501.70	552.71	614.31	654.46	680.97
270.0	376.29	383.28	410.81	451.96	496.40	546.39	591.08	636.28	672.64
292.5	376.29	384.04	407.27	449.18	491.35	538.06	593.61	639.56	671.38
315.0	376.29	380.76	403.74	444.64	491.35	538.31	592.35	638.30	666.07
337.5	376.29	382.53	398.18	432.01	472.16	517.86	571.39	613.30	649.92
360.0	376.29	380.51	395.15	428.48	472.16	517.10	574.42	626.18	661.02

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	676.17	688.04	691.83	685.77	679.46	674.91	668.60	658.75	653.70
22.5	670.62	679.20	678.45	679.71	682.49	678.45	666.33	671.63	661.28
45.0	662.54	666.83	667.84	671.38	669.36	660.27	656.98	654.97	645.12
67.5	663.30	679.20	682.99	681.48	677.94	669.86	665.32	656.98	652.44
90.0	666.07	671.63	683.24	699.15	704.45	691.32	689.30	681.73	676.68
112.5	679.96	691.83	691.83	692.59	686.02	677.18	672.13	658.50	653.45
135.0	698.90	703.70	700.92	703.70	704.71	698.14	683.75	670.37	665.82
157.5	686.02	696.12	696.12	700.67	701.68	697.89	684.51	681.73	679.96
180.0	688.04	690.31	685.01	682.74	689.30	674.15	665.57	662.03	660.01
202.5	675.67	683.24	690.57	700.16	701.17	685.01	674.15	674.41	671.12
225.0	673.90	678.19	682.74	688.80	685.01	665.32	660.01	654.97	653.45
247.5	695.36	695.87	691.58	690.57	690.06	677.94	667.84	666.58	661.78
270.0	683.50	682.99	684.00	690.31	694.86	689.81	676.17	675.42	673.90
292.5	686.53	687.79	683.24	683.50	685.26	677.69	661.02	653.45	655.47
315.0	677.18	689.56	691.83	694.61	694.86	686.27	673.40	668.60	665.82
337.5	666.58	681.22	689.05	689.05	691.07	688.80	682.23	674.15	671.88
360.0	676.17	688.04	691.83	685.77	679.46	674.91	668.60	658.75	653.70

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	653.20	649.41	652.19	634.01	615.32	598.66	565.84	530.99	485.80
22.5	666.07	661.02	662.03	644.11	626.69	598.66	559.27	526.95	468.37
45.0	648.15	644.11	647.90	632.49	610.02	588.81	558.26	524.43	473.17
67.5	653.70	649.92	651.18	634.77	616.08	598.91	562.30	533.77	480.24
90.0	680.47	688.55	675.42	652.95	639.56	608.00	573.41	523.67	472.41
112.5	660.27	668.85	650.93	638.81	621.38	596.39	564.07	528.72	478.73
135.0	670.37	674.41	659.76	639.06	619.62	596.39	560.03	525.18	468.63
157.5	683.24	685.26	668.09	651.94	628.20	596.64	554.47	505.74	453.48
180.0	665.57	668.85	650.42	634.51	615.58	592.09	560.03	517.61	468.37
202.5	675.42	679.20	661.28	640.83	613.30	584.27	542.86	498.67	450.45
225.0	659.51	660.52	642.59	624.92	598.15	571.64	538.57	493.37	441.86
247.5	667.08	670.62	652.19	635.52	614.57	592.85	557.00	518.11	465.60
270.0	667.84	667.08	661.78	643.10	616.59	584.52	537.05	489.84	439.34
292.5	651.18	650.17	647.64	629.21	607.24	588.81	555.99	510.79	464.08
315.0	665.32	665.57	666.07	644.36	629.72	608.25	574.17	528.47	478.73
337.5	672.13	666.83	665.32	653.96	626.94	600.43	556.49	526.45	465.34
360.0	653.20	649.41	652.19	634.01	615.32	598.66	565.84	530.99	485.80

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	428.23	367.63	313.85	258.30	203.26	144.93	86.86	37.87	9.09
22.5	416.61	357.53	302.74	246.43	191.14	139.38	84.33	38.88	9.60
45.0	418.63	360.31	306.53	254.01	200.98	145.18	88.12	39.64	9.85
67.5	425.20	366.11	313.09	258.80	201.74	143.16	85.60	37.37	9.34
90.0	416.11	356.77	300.97	246.69	190.38	136.85	88.63	40.90	12.63
112.5	414.85	355.76	302.23	248.96	191.14	136.85	80.29	27.77	8.84
135.0	410.05	349.20	295.67	239.36	185.33	129.02	74.23	19.95	5.05
157.5	397.68	331.02	274.71	219.67	164.63	110.84	62.37	19.95	3.03
180.0	398.94	342.38	287.84	232.04	174.47	115.64	59.84	22.22	3.03
202.5	386.31	327.23	268.65	215.12	158.57	105.79	56.05	20.45	2.27
225.0	381.52	324.45	271.68	216.39	164.63	105.29	54.03	19.19	1.77
247.5	399.95	341.37	288.35	231.79	173.72	116.15	58.83	19.44	1.77
270.0	383.03	322.43	264.36	210.58	152.76	102.26	56.31	15.15	3.54
292.5	404.75	346.67	292.89	237.60	179.52	124.73	66.66	20.96	2.78
315.0	421.41	357.78	297.94	240.12	183.31	124.23	72.72	27.52	5.56
337.5	415.35	356.77	296.43	244.67	187.35	132.56	79.79	33.58	8.33
360.0	428.23	367.63	313.85	258.30	203.26	144.93	86.86	37.87	9.09

C/γ(°)	180.0
0.0	0.89
22.5	0.89
45.0	0.89
67.5	0.89
90.0	0.89
112.5	0.89
135.0	0.89
157.5	0.89
180.0	0.89
202.5	0.89
225.0	0.89
247.5	0.89
270.0	0.89
292.5	0.89
315.0	0.89
337.5	0.89
360.0	0.89

3.2.3 Model Number: HIDFA-54S-XXX-8CCT-BYP/3SP, 4000K at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.030	60	0.438	51.906	0.988

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
7703.35	148.41	22.99	52.63

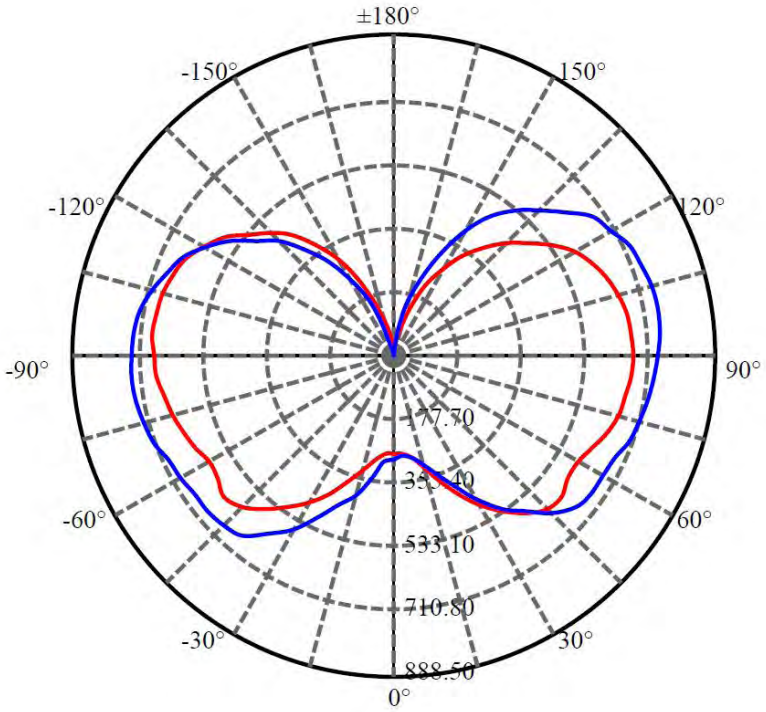
Zonal Flux Diagram

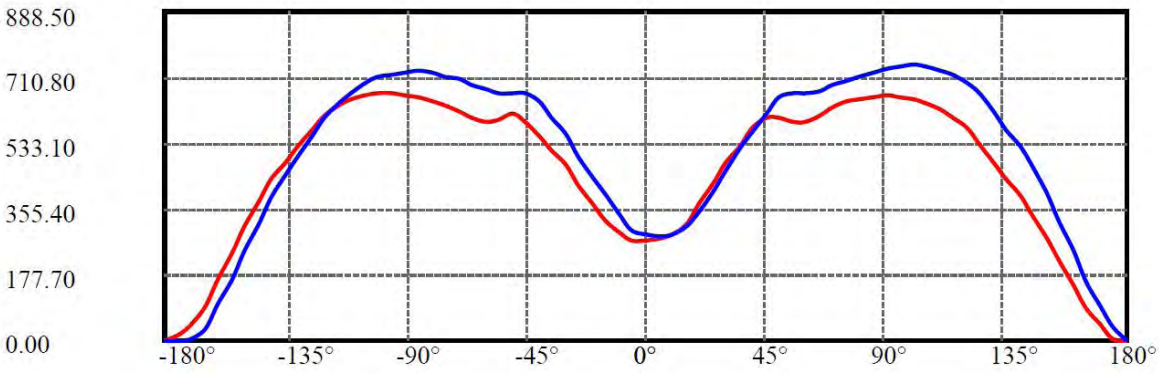
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	274.406	0.000	0	0.00%	0.00%
5.0	278.125	6.605	6.605	0.00%	0.09%
10.0	296.956	20.572	27.178	0.00%	0.35%
15.0	332.278	37.326	64.504	0.00%	0.84%
20.0	380.318	58.728	123.231	0.00%	1.60%
25.0	437.098	85.732	208.963	0.00%	2.71%
30.0	495.048	117.964	326.927	0.00%	4.24%
35.0	552.426	154.248	481.175	0.00%	6.25%
40.0	602.522	192.694	673.87	0.00%	8.75%
45.0	644.372	230.872	904.742	0.00%	11.74%
50.0	665.648	264.709	1169.451	0.00%	15.18%
55.0	669.601	290.328	1459.778	0.00%	18.95%
60.0	676.780	311.212	1770.99	0.00%	22.99%
65.0	692.048	332.765	2103.755	0.00%	27.31%
70.0	714.131	356.053	2459.809	0.00%	31.93%
75.0	732.182	378.043	2837.851	0.00%	36.84%
80.0	744.406	395.094	3232.945	0.00%	41.97%
85.0	753.432	406.998	3639.944	0.00%	47.25%
90.0	759.050	414.129	4054.073	0.00%	52.63%
95.0	760.428	416.045	4470.118	0.00%	58.03%
100.0	756.501	412.186	4882.304	0.00%	63.38%
105.0	745.603	401.921	5284.225	0.00%	68.60%
110.0	728.202	385.229	5669.454	0.00%	73.60%
115.0	702.166	362.178	6031.632	0.00%	78.30%
120.0	666.194	332.651	6364.283	0.00%	82.62%
125.0	620.365	297.384	6661.668	0.00%	86.48%
130.0	568.162	258.425	6920.093	0.00%	89.83%
135.0	514.582	218.784	7138.877	0.00%	92.67%
140.0	455.695	179.655	7318.532	0.00%	95.00%
145.0	386.873	140.576	7459.108	0.00%	96.83%
150.0	311.184	102.794	7561.902	0.00%	98.16%
155.0	233.362	68.913	7630.814	0.00%	99.06%
160.0	158.427	41.091	7671.906	0.00%	99.59%
165.0	94.130	20.814	7692.72	0.00%	99.86%
170.0	46.090	8.318	7701.038	0.00%	99.97%
175.0	13.603	2.135	7703.173	0.00%	100.00%
180.0	1.092	0.176	7703.349	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	269.26	274.67	287.98	316.70	367.89	422.40	478.58	523.95	571.80
22.5	270.09	268.42	275.50	311.29	357.90	409.09	457.36	499.81	548.08
45.0	266.76	261.35	271.34	299.22	342.50	394.94	446.54	512.29	558.49
67.5	266.34	259.68	273.42	296.31	336.67	394.94	461.94	533.93	595.53
90.0	289.23	280.08	289.65	309.21	350.41	401.59	455.70	518.54	565.15
112.5	283.41	280.08	287.57	308.38	353.32	407.84	462.35	531.44	575.55
135.0	278.83	282.16	287.98	310.87	350.82	407.42	464.44	530.60	592.61
157.5	271.34	278.00	287.98	315.03	359.56	414.50	471.09	533.52	595.11
180.0	269.26	272.17	294.23	325.44	372.46	421.99	472.76	514.37	553.49
202.5	270.09	274.67	293.39	336.67	385.78	439.05	490.24	532.69	570.97
225.0	266.76	277.58	296.72	339.59	384.95	444.88	500.22	558.90	611.34
247.5	266.34	281.74	302.96	357.07	422.82	495.23	569.31	637.56	696.65
270.0	289.23	297.97	341.67	397.02	441.55	495.65	554.74	602.60	647.13
292.5	283.41	292.56	338.34	384.12	440.30	498.14	555.57	603.02	648.79
315.0	278.83	285.90	319.61	368.72	419.07	483.16	552.24	611.34	666.27
337.5	271.34	282.99	302.96	340.84	399.10	462.77	527.69	594.28	643.38
360.0	269.26	274.67	287.98	316.70	367.89	422.40	478.58	523.95	571.80

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	600.52	603.85	588.03	591.36	607.59	629.23	642.97	650.46	656.28
22.5	581.79	588.45	575.55	568.06	576.38	594.28	611.76	615.50	621.74
45.0	602.18	634.23	642.14	653.37	675.01	705.39	734.94	762.82	775.31
67.5	656.28	698.32	717.88	729.95	753.67	782.38	817.34	837.31	851.88
90.0	614.67	655.45	666.27	669.60	674.18	689.99	702.48	713.30	722.45
112.5	629.23	674.18	684.58	683.34	683.34	694.57	702.06	708.30	715.38
135.0	650.46	697.07	717.88	736.60	760.32	782.38	808.60	831.07	854.79
157.5	652.12	703.73	723.70	728.70	749.09	776.97	806.52	825.66	836.90
180.0	592.20	610.09	596.36	588.45	603.43	620.50	635.48	645.46	656.70
202.5	605.10	614.67	595.94	591.36	600.10	618.00	628.40	630.07	633.81
225.0	656.28	664.19	665.44	684.58	704.56	737.44	764.49	780.30	790.29
247.5	735.77	748.67	757.00	770.73	789.46	817.34	831.90	846.89	853.13
270.0	666.69	669.60	670.02	678.76	688.75	707.06	712.05	721.21	725.78
292.5	670.85	665.02	660.45	661.69	673.76	681.25	689.16	693.32	699.98
315.0	703.31	718.71	741.60	763.24	783.63	810.26	829.41	838.15	839.40
337.5	692.49	704.14	710.80	728.70	749.50	779.05	797.36	810.68	821.08
360.0	600.52	603.85	588.03	591.36	607.59	629.23	642.97	650.46	656.28

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	660.86	659.20	652.96	642.14	623.41	603.02	573.47	530.60	482.33
22.5	628.40	627.99	628.40	622.99	611.34	597.61	576.38	539.34	497.31
45.0	784.88	786.96	781.55	773.23	753.25	722.45	688.33	636.31	583.04
67.5	862.70	867.69	866.45	858.54	841.89	817.75	777.80	721.21	670.02
90.0	732.03	739.52	743.68	739.10	730.36	719.96	692.91	666.69	618.00
112.5	722.04	727.45	727.86	722.04	714.13	697.48	675.01	646.30	604.26
135.0	869.77	884.34	888.50	881.43	867.69	838.56	793.20	745.34	685.42
157.5	845.22	851.46	850.63	843.97	832.74	806.52	766.98	722.04	669.60
180.0	662.94	669.60	665.44	659.61	650.46	633.81	605.51	568.48	523.53
202.5	637.14	639.22	633.81	622.99	612.59	590.53	558.49	522.28	480.25
225.0	793.20	791.54	783.21	764.49	737.85	699.15	648.79	594.28	533.93
247.5	855.63	853.13	845.22	827.33	803.61	769.48	721.62	671.68	615.92
270.0	723.29	719.54	711.63	693.32	667.52	641.30	603.85	550.58	495.65
292.5	701.23	697.90	691.66	677.51	658.78	632.98	604.26	558.07	505.22
315.0	840.23	830.24	816.92	797.78	765.73	720.37	673.76	611.76	548.08
337.5	825.25	821.08	816.09	803.19	779.88	743.68	698.73	640.89	578.05
360.0	660.86	659.20	652.96	642.14	623.41	603.02	573.47	530.60	482.33

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	437.80	392.86	338.75	278.41	216.40	149.40	89.89	42.86	4.16
22.5	455.70	409.92	356.65	293.39	233.47	159.39	99.46	49.94	10.82
45.0	527.28	467.76	396.18	320.44	247.20	172.71	114.86	63.26	15.40
67.5	613.00	541.84	466.10	384.53	296.31	215.99	134.42	66.59	20.81
90.0	568.06	523.95	466.93	396.60	317.53	241.37	160.64	91.97	40.37
112.5	554.74	511.04	456.94	390.36	312.95	234.71	156.48	90.72	39.95
135.0	618.41	550.16	473.59	387.03	307.54	226.81	153.56	84.90	34.96
157.5	614.67	548.92	467.76	384.12	300.05	208.50	126.51	66.17	20.81
180.0	482.33	436.14	374.13	306.29	237.63	164.38	94.47	46.61	15.81
202.5	439.88	394.94	338.75	270.50	207.66	142.33	84.06	36.21	5.41
225.0	473.59	409.50	335.84	263.43	192.27	124.85	68.25	25.80	1.67
247.5	546.83	470.68	388.28	293.81	207.66	125.26	60.76	14.57	1.25
270.0	445.71	384.53	314.62	242.62	167.30	97.38	35.37	3.75	2.08
292.5	455.70	399.10	327.10	253.44	149.82	90.72	38.70	7.08	1.25
315.0	488.99	416.16	336.26	238.46	142.74	62.01	29.13	18.73	1.25
337.5	510.63	433.64	352.07	275.50	197.26	119.02	59.51	28.30	1.67
360.0	437.80	392.86	338.75	278.41	216.40	149.40	89.89	42.86	4.16

C/γ(°)	180.0
0.0	0.83
22.5	0.83
45.0	0.83
67.5	1.25
90.0	2.50
112.5	0.83
135.0	0.83
157.5	0.83
180.0	0.83
202.5	0.83
225.0	0.83
247.5	1.25
270.0	2.50
292.5	0.83
315.0	0.83
337.5	0.83
360.0	0.83

3.2.4 Model Number: HIDFA-54S-XXX-8CCT-BYP/3SP, 4000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.040	60	0.217	53.250	0.884

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
7880.83	148.00	26.46	56.14

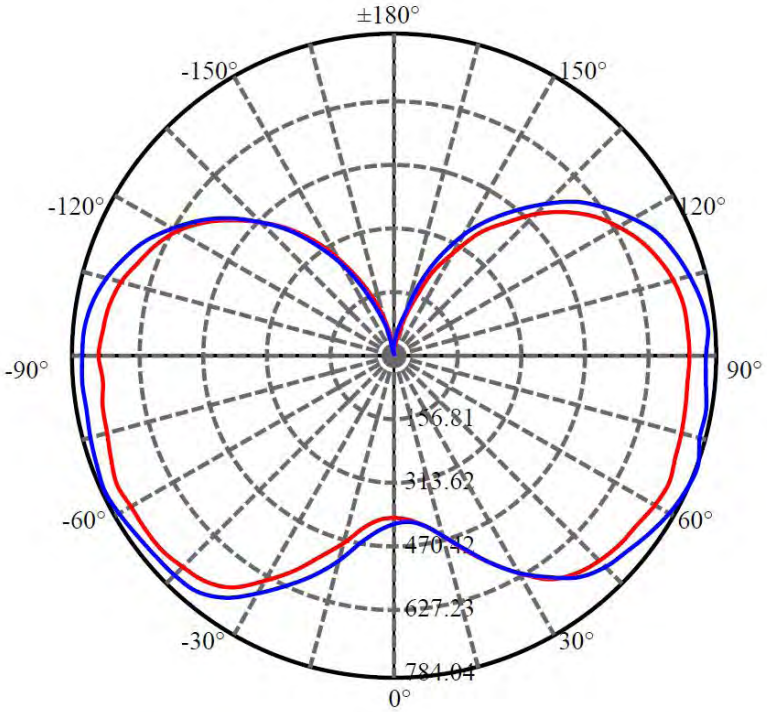
Zonal Flux Diagram

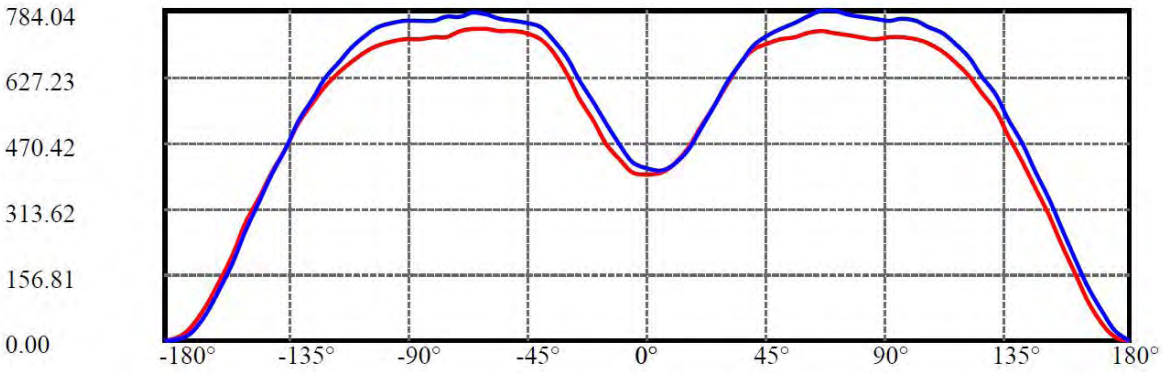
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	398.216	0.000	0	0.00%	0.00%
5.0	403.581	9.585	9.585	0.00%	0.12%
10.0	426.533	29.696	39.281	0.00%	0.50%
15.0	466.514	52.975	92.256	0.00%	1.17%
20.0	517.636	81.108	173.364	0.00%	2.20%
25.0	572.060	114.289	287.653	0.00%	3.65%
30.0	626.530	151.683	439.335	0.00%	5.57%
35.0	674.302	191.557	630.892	0.00%	8.01%
40.0	707.050	230.468	861.36	0.00%	10.93%
45.0	724.091	264.987	1126.347	0.00%	14.29%
50.0	733.670	294.562	1420.909	0.00%	18.03%
55.0	739.730	320.366	1741.276	0.00%	22.10%
60.0	749.013	344.119	2085.394	0.00%	26.46%
65.0	756.007	365.873	2451.268	0.00%	31.10%
70.0	750.813	381.537	2832.804	0.00%	35.95%
75.0	743.512	390.593	3223.397	0.00%	40.90%
80.0	739.639	396.850	3620.247	0.00%	45.94%
85.0	735.982	400.962	4021.208	0.00%	51.03%
90.0	737.429	403.432	4424.64	0.00%	56.14%
95.0	735.105	403.191	4827.831	0.00%	61.26%
100.0	726.244	397.084	5224.915	0.00%	66.30%
105.0	712.506	384.969	5609.884	0.00%	71.18%
110.0	690.671	366.768	5976.652	0.00%	75.84%
115.0	663.527	342.891	6319.544	0.00%	80.19%
120.0	627.646	313.887	6633.43	0.00%	84.17%
125.0	584.088	280.089	6913.519	0.00%	87.73%
130.0	533.924	243.093	7156.612	0.00%	90.81%
135.0	476.401	204.151	7360.764	0.00%	93.40%
140.0	416.065	165.247	7526.011	0.00%	95.50%
145.0	354.761	128.607	7654.618	0.00%	97.13%
150.0	287.875	94.633	7749.25	0.00%	98.33%
155.0	217.925	64.009	7813.26	0.00%	99.14%
160.0	149.445	38.530	7851.79	0.00%	99.63%
165.0	88.015	19.570	7871.36	0.00%	99.88%
170.0	39.172	7.545	7878.905	0.00%	99.98%
175.0	10.696	1.784	7880.689	0.00%	100.00%
180.0	1.185	0.142	7880.831	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:165.7 Right:166.6

:C90/270Left:163.6 Right:169.0

Beam Angle(50%Imax):C0/180Left:142.6 Right:144.5

:C90/270Left:140.2 Right:145.9

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	393.48	400.04	420.09	456.90	504.83	558.60	611.08	662.84	693.64
22.5	394.94	396.76	416.44	450.52	496.81	546.20	603.07	653.37	689.82
45.0	392.02	394.39	409.15	442.69	490.98	546.75	597.96	648.63	683.26
67.5	392.38	390.74	405.69	439.77	483.69	532.90	581.92	630.22	667.22
90.0	408.61	406.60	420.09	454.35	500.82	558.78	612.72	661.02	701.12
112.5	404.60	405.69	420.63	453.99	505.38	561.15	616.73	665.58	706.95
135.0	401.31	404.96	418.99	456.54	508.48	561.33	616.37	666.85	706.40
157.5	398.40	401.50	423.73	468.57	522.15	578.83	635.87	685.44	721.35
180.0	393.48	400.22	428.29	469.48	519.78	576.09	634.41	686.54	717.70
202.5	394.94	401.86	429.93	473.85	523.60	579.19	630.04	677.79	708.95
225.0	392.02	402.23	428.11	470.75	528.53	584.11	643.53	688.91	716.43
247.5	392.38	398.76	427.92	469.48	522.15	577.73	636.05	685.26	716.24
270.0	408.61	423.91	460.73	514.67	567.16	618.01	670.68	718.25	746.50
292.5	404.60	416.26	451.43	497.91	556.59	612.91	667.95	708.77	733.19
315.0	401.31	408.42	436.31	478.41	530.89	584.84	636.60	675.78	702.76
337.5	398.40	404.96	427.01	466.38	520.32	575.55	629.49	673.60	701.30
360.0	393.48	400.04	420.09	456.90	504.83	558.60	611.08	662.84	693.64

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	706.77	714.60	719.16	729.73	736.47	729.73	724.99	720.80	716.24
22.5	711.50	722.62	728.64	738.11	747.41	749.05	745.22	743.94	739.02
45.0	705.13	716.24	723.17	734.47	743.40	736.11	726.81	724.26	716.06
67.5	691.64	704.03	715.70	730.82	741.94	741.21	732.83	732.46	726.63
90.0	726.27	740.85	755.61	771.10	783.13	784.04	772.92	769.46	764.17
112.5	729.73	743.76	747.41	751.96	760.35	760.17	747.23	743.22	732.83
135.0	735.20	750.87	758.71	764.90	769.82	774.20	766.91	762.35	757.25
157.5	737.02	744.86	747.23	755.06	759.07	752.33	739.02	735.01	728.45
180.0	729.36	736.84	736.84	740.30	741.94	733.92	721.71	719.52	714.06
202.5	725.90	733.56	742.67	755.61	759.25	756.34	749.96	746.86	746.86
225.0	727.18	734.10	737.20	743.58	746.68	731.01	725.36	718.98	718.79
247.5	732.83	738.11	743.76	750.87	760.35	751.42	747.04	743.40	743.40
270.0	756.70	759.25	763.63	772.74	778.75	768.73	767.27	759.44	761.08
292.5	739.75	745.04	745.22	750.51	757.80	743.40	737.02	732.46	732.83
315.0	713.51	729.18	739.21	754.33	763.45	759.98	756.34	751.78	753.24
337.5	716.97	724.81	731.55	740.12	746.31	741.39	735.56	730.28	724.81
360.0	706.77	714.60	719.16	729.73	736.47	729.73	724.99	720.80	716.24

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	719.71	719.34	715.33	704.58	685.26	661.20	630.40	591.22	543.47
22.5	741.39	739.94	734.83	720.98	700.02	673.60	636.05	595.05	546.02
45.0	717.88	718.43	714.78	703.12	684.35	663.57	632.23	595.96	552.95
67.5	729.55	731.73	725.72	711.32	691.09	664.48	628.58	586.30	537.27
90.0	761.26	764.54	758.71	746.50	730.09	706.04	670.50	628.95	582.65
112.5	733.56	733.74	727.18	718.43	702.57	680.34	651.54	613.45	565.34
135.0	759.25	756.34	749.23	733.19	713.51	685.63	645.17	597.23	548.57
157.5	731.01	728.82	717.52	709.32	690.55	668.13	634.60	591.40	540.37
180.0	717.34	711.14	702.57	686.17	664.30	639.88	606.16	563.52	514.67
202.5	749.59	743.03	731.55	713.33	688.72	658.11	617.28	568.44	514.86
225.0	719.52	715.51	703.49	688.54	667.22	639.88	606.71	564.06	509.75
247.5	743.94	737.20	721.35	708.41	680.16	648.26	607.26	557.87	503.74
270.0	760.35	755.97	743.03	725.90	697.47	664.30	621.84	572.99	519.23
292.5	734.10	731.19	719.89	704.58	679.25	652.64	617.10	572.81	519.60
315.0	753.60	750.87	739.21	722.99	695.83	660.66	617.46	570.63	518.87
337.5	726.81	723.90	715.51	702.76	680.34	649.72	619.47	575.55	525.43
360.0	719.71	719.34	715.33	704.58	685.26	661.20	630.40	591.22	543.47

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	486.61	424.64	365.23	294.70	227.63	155.10	91.49	36.63	12.03
22.5	491.35	428.29	367.42	301.99	234.19	169.68	105.52	49.94	14.58
45.0	497.36	438.68	380.17	315.48	245.31	172.04	106.07	51.21	15.67
67.5	482.42	422.27	363.04	298.16	234.01	163.66	103.52	49.21	15.13
90.0	525.97	465.47	404.41	337.71	265.72	190.82	126.12	66.52	25.15
112.5	510.30	453.26	392.75	330.24	259.52	183.89	118.65	61.05	21.69
135.0	492.26	429.02	364.87	298.16	230.55	161.11	100.78	51.21	17.13
157.5	482.78	426.10	367.96	300.35	224.90	154.55	91.67	41.01	12.39
180.0	457.81	401.50	342.99	276.11	204.12	137.96	80.92	35.17	8.20
202.5	454.71	392.38	325.50	258.07	192.82	125.57	65.06	23.88	4.74
225.0	451.43	393.48	334.43	267.73	192.46	126.85	68.53	23.69	2.55
247.5	445.05	382.36	318.21	251.87	183.71	117.92	54.68	18.77	4.01
270.0	456.72	394.75	330.24	258.61	184.80	118.46	62.15	21.87	3.28
292.5	461.82	400.95	336.43	264.26	193.19	128.49	68.16	26.24	2.19
315.0	459.82	396.21	332.42	265.90	199.75	134.68	76.55	30.80	3.28
337.5	466.01	407.69	350.10	286.68	214.14	150.36	88.39	39.55	9.11
360.0	486.61	424.64	365.23	294.70	227.63	155.10	91.49	36.63	12.03

C/γ(°)	180.0
0.0	1.09
22.5	1.09
45.0	0.91
67.5	0.91
90.0	1.82
112.5	1.28
135.0	1.28
157.5	1.09
180.0	1.09
202.5	1.09
225.0	0.91
247.5	0.91
270.0	1.82
292.5	1.28
315.0	1.28
337.5	1.09
360.0	1.09

3.2.5 Model Number: HIDFA-54S-XXX-8CCT-BYP/3SP, 5000K at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.100	60	0.448	53.155	0.988

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
7557.04	142.17	25.45	55.37

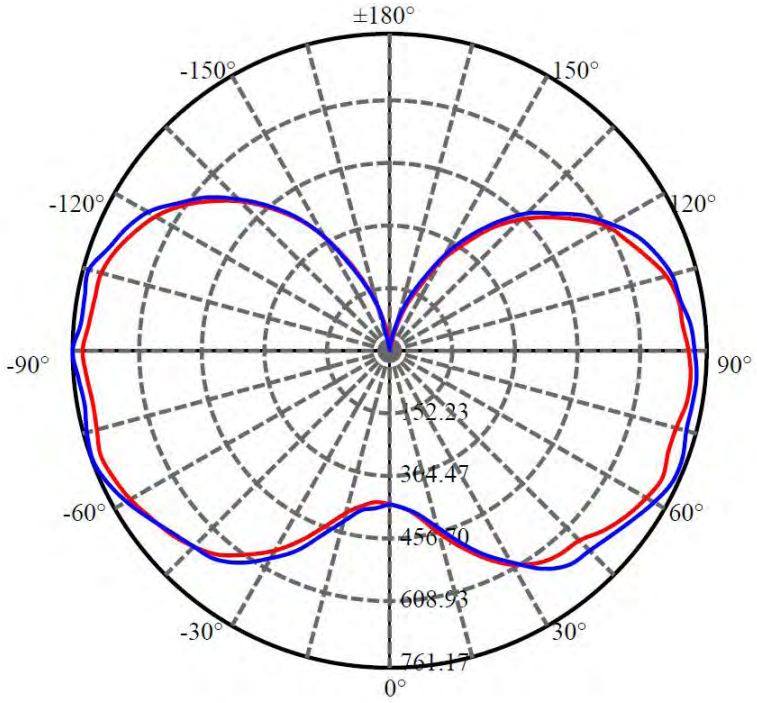
Zonal Flux Diagram

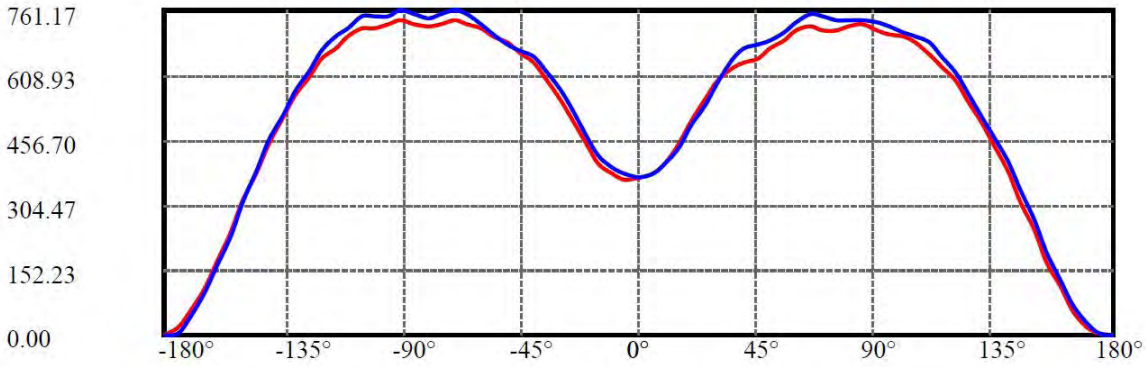
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	367.118	0.000	0	0.00%	0.00%
5.0	373.627	8.855	8.855	0.00%	0.12%
10.0	393.843	27.455	36.31	0.00%	0.48%
15.0	428.174	48.761	85.072	0.00%	1.13%
20.0	476.677	74.572	159.644	0.00%	2.11%
25.0	530.108	105.593	265.237	0.00%	3.51%
30.0	578.554	140.302	405.539	0.00%	5.37%
35.0	620.176	176.521	582.061	0.00%	7.70%
40.0	646.882	211.399	793.46	0.00%	10.50%
45.0	659.008	241.796	1035.256	0.00%	13.70%
50.0	672.082	268.966	1304.222	0.00%	17.26%
55.0	688.634	295.865	1600.087	0.00%	21.17%
60.0	708.441	322.930	1923.017	0.00%	25.45%
65.0	721.068	347.516	2270.533	0.00%	30.05%
70.0	721.682	365.314	2635.847	0.00%	34.88%
75.0	719.450	376.689	3012.536	0.00%	39.86%
80.0	718.930	384.870	3397.406	0.00%	44.96%
85.0	721.589	391.423	3788.83	0.00%	50.14%
90.0	722.166	395.311	4184.141	0.00%	55.37%
95.0	710.747	392.343	4576.484	0.00%	60.56%
100.0	703.289	384.227	4960.711	0.00%	65.64%
105.0	697.338	374.769	5335.48	0.00%	70.60%
110.0	673.421	358.294	5693.774	0.00%	75.34%
115.0	643.330	333.410	6027.184	0.00%	79.76%
120.0	612.365	305.262	6332.446	0.00%	83.80%
125.0	570.706	273.464	6605.909	0.00%	87.41%
130.0	524.156	238.060	6843.969	0.00%	90.56%
135.0	472.139	201.316	7045.285	0.00%	93.23%
140.0	414.281	164.128	7209.413	0.00%	95.40%
145.0	351.924	127.835	7337.248	0.00%	97.09%
150.0	282.406	93.409	7430.658	0.00%	98.33%
155.0	207.401	61.985	7492.643	0.00%	99.15%
160.0	141.268	36.569	7529.212	0.00%	99.63%
165.0	85.084	18.655	7547.867	0.00%	99.88%
170.0	38.069	7.305	7555.172	0.00%	99.98%
175.0	10.415	1.734	7556.906	0.00%	100.00%
180.0	1.116	0.138	7557.044	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:168.5 Right:163.5

:C90/270Left:167.1 Right:164.7

Beam Angle(50%Imax):C0/180Left:146.1 Right:141.0

:C90/270Left:145.5 Right:141.9

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	366.60	379.99	403.79	450.21	499.01	551.38	595.72	623.99	636.78
22.5	363.03	377.61	407.96	457.06	510.02	557.63	600.78	632.32	642.44
45.0	365.11	381.77	413.91	458.54	521.03	568.94	617.74	646.90	651.66
67.5	368.98	379.69	410.34	461.52	505.56	551.38	593.94	627.86	650.77
90.0	369.57	380.29	401.11	438.91	490.98	539.78	589.47	640.65	671.00
112.5	368.09	373.14	400.82	436.23	482.94	540.08	594.53	640.35	661.18
135.0	368.38	369.28	387.13	417.48	471.64	521.63	565.07	612.09	645.12
157.5	367.19	372.55	379.10	413.91	458.54	515.08	563.58	605.84	637.08
180.0	366.60	365.11	378.20	401.41	449.32	504.07	551.68	598.40	638.27
202.5	363.03	367.19	377.31	399.63	440.10	490.68	542.75	589.77	633.81
225.0	365.11	363.92	379.39	396.65	436.82	494.85	546.62	596.02	634.70
247.5	368.98	367.49	375.52	399.92	437.12	488.30	541.86	589.17	626.07
270.0	369.57	377.31	390.70	421.35	468.96	528.77	578.76	621.31	654.04
292.5	368.09	374.63	393.97	425.22	470.74	532.93	586.50	630.24	658.51
315.0	368.38	378.20	398.44	425.51	479.97	536.80	583.52	629.94	650.77
337.5	367.19	369.87	403.79	447.24	504.07	559.42	604.35	637.97	657.91
360.0	366.60	379.99	403.79	450.21	499.01	551.38	595.72	623.99	636.78

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	645.41	670.11	690.94	712.37	724.27	712.37	713.56	721.59	726.35
22.5	651.96	668.33	685.88	707.60	719.80	715.34	721.59	718.32	724.57
45.0	652.85	667.73	699.87	712.96	701.36	695.40	703.74	704.33	701.65
67.5	658.80	670.71	686.77	700.76	706.41	704.03	707.90	707.60	705.82
90.0	681.42	690.64	709.09	731.11	749.56	746.29	735.57	738.85	737.66
112.5	669.52	675.76	694.21	721.29	723.08	706.12	704.33	707.90	711.77
135.0	657.91	670.71	682.01	700.46	724.57	731.41	732.00	731.71	740.34
157.5	653.15	665.65	682.31	693.92	698.97	704.03	695.11	694.21	698.08
180.0	662.08	683.20	698.97	716.83	729.92	736.77	728.14	725.16	729.03
202.5	663.86	676.66	683.20	698.97	711.47	718.32	720.70	719.21	715.64
225.0	649.28	661.48	667.73	693.62	715.34	721.89	713.56	706.12	701.06
247.5	642.74	653.45	664.76	680.82	707.60	728.43	732.30	727.54	724.86
270.0	664.76	680.82	703.44	726.35	749.56	759.38	752.24	743.01	751.05
292.5	663.27	666.54	681.12	708.50	722.48	718.91	705.52	703.44	711.47
315.0	662.37	672.49	690.35	715.04	732.30	740.63	739.44	743.61	745.10
337.5	664.76	679.04	697.49	714.45	720.40	707.60	705.52	710.28	720.99
360.0	645.41	670.11	690.94	712.37	724.27	712.37	713.56	721.59	726.35

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	715.94	705.82	701.95	686.77	659.10	628.45	597.51	549.30	494.55
22.5	715.64	704.33	691.54	675.76	652.85	619.82	579.06	538.59	485.92
45.0	694.51	681.42	678.15	668.33	641.84	607.33	571.62	531.74	485.62
67.5	701.65	690.05	680.82	665.95	633.81	598.70	558.53	514.49	465.39
90.0	731.11	723.08	711.17	701.06	683.20	651.07	612.38	565.37	510.62
112.5	706.12	696.00	686.48	681.42	666.54	639.76	608.22	569.83	524.31
135.0	737.06	726.65	716.23	709.69	684.69	646.31	611.79	571.02	522.82
157.5	702.84	692.13	686.18	681.72	664.16	635.30	608.52	571.92	531.74
180.0	736.17	726.65	717.42	718.32	699.57	673.38	645.41	605.84	561.80
202.5	728.73	718.61	704.33	703.74	682.91	652.56	629.05	586.79	546.03
225.0	714.45	703.14	696.00	699.27	680.82	650.17	631.43	600.18	563.58
247.5	736.47	725.76	712.37	714.15	693.02	663.86	637.08	591.55	550.19
270.0	761.17	745.39	744.80	747.48	716.83	697.78	667.73	620.42	569.83
292.5	715.94	703.74	702.55	701.06	672.19	649.58	626.67	583.22	542.75
315.0	744.80	731.41	726.35	713.85	683.50	650.17	613.57	567.15	517.76
337.5	712.07	697.78	696.30	688.86	659.70	629.05	599.29	563.88	513.59
360.0	715.94	705.82	701.95	686.77	659.10	628.45	597.51	549.30	494.55

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	442.77	382.96	313.04	246.38	171.40	111.29	57.13	20.23	4.46
22.5	432.36	368.68	300.84	232.40	158.90	100.28	49.10	15.47	1.79
45.0	431.17	374.04	309.76	227.93	158.01	97.60	46.42	13.69	1.49
67.5	409.45	346.96	289.23	224.96	149.67	94.03	48.50	15.18	1.19
90.0	465.39	406.17	339.22	268.10	193.12	129.14	73.20	29.16	6.25
112.5	476.70	417.48	355.59	286.85	205.62	138.07	81.24	34.82	8.93
135.0	467.47	405.58	345.17	276.44	212.16	144.02	91.05	41.36	12.20
157.5	488.90	434.14	374.33	312.14	234.78	166.04	104.74	50.29	16.07
180.0	509.13	449.02	383.56	316.61	242.51	170.50	110.10	57.73	20.53
202.5	491.28	440.10	386.24	316.61	251.44	176.46	118.13	65.17	23.51
225.0	511.81	459.44	403.50	343.39	260.07	187.46	125.57	68.44	25.59
247.5	497.82	443.96	382.96	316.61	253.82	179.43	121.11	65.17	23.21
270.0	515.08	458.25	388.32	313.33	230.31	161.87	99.98	43.44	5.95
292.5	491.57	437.71	379.69	302.03	216.33	149.67	91.35	32.43	5.36
315.0	465.69	404.39	340.41	273.46	198.18	132.12	77.37	31.24	5.65
337.5	457.65	399.63	338.92	261.26	182.11	122.30	66.36	25.29	4.46
360.0	442.77	382.96	313.04	246.38	171.40	111.29	57.13	20.23	4.46

C/γ(°)	180.0
0.0	0.89
22.5	0.89
45.0	1.19
67.5	0.89
90.0	2.08
112.5	1.19
135.0	0.89
157.5	0.89
180.0	0.89
202.5	0.89
225.0	1.19
247.5	0.89
270.0	2.08
292.5	1.19
315.0	0.89
337.5	0.89
360.0	0.89

3.2.6 Model Number: HIDFA-54S-XXX-8CCT-BYP/3SP, 5000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.120	60	0.222	54.610	0.888

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
7832.14	143.42	25.48	55.20

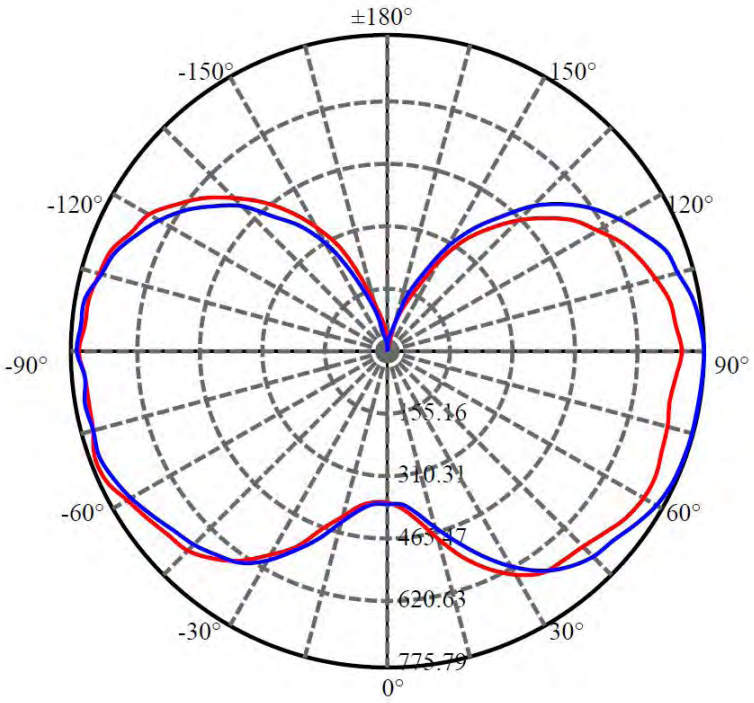
Zonal Flux Diagram

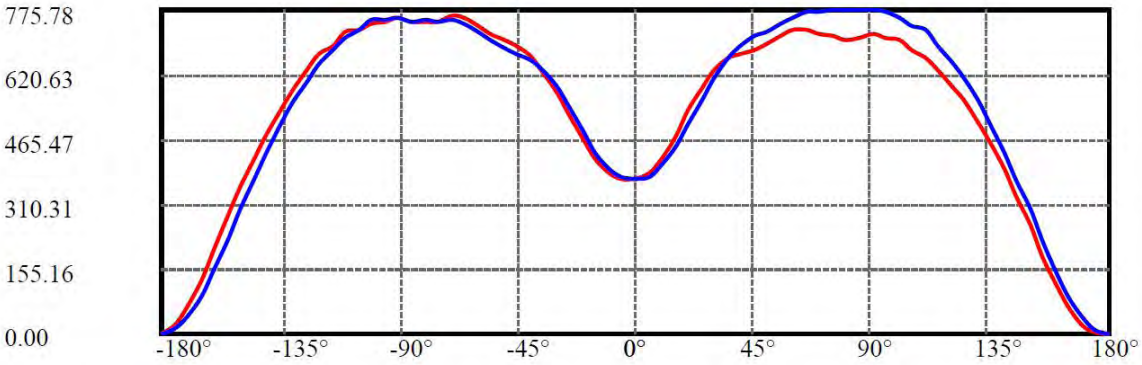
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	374.103	0.000	0	0.00%	0.00%
5.0	379.418	9.008	9.008	0.00%	0.12%
10.0	402.544	27.973	36.981	0.00%	0.47%
15.0	443.625	50.194	87.175	0.00%	1.11%
20.0	496.101	77.447	164.622	0.00%	2.10%
25.0	552.520	109.981	274.603	0.00%	3.51%
30.0	603.225	146.261	420.864	0.00%	5.37%
35.0	644.673	183.762	604.625	0.00%	7.72%
40.0	670.752	219.469	824.094	0.00%	10.52%
45.0	685.467	251.115	1075.209	0.00%	13.73%
50.0	696.910	279.330	1354.539	0.00%	17.29%
55.0	713.190	306.603	1661.141	0.00%	21.21%
60.0	733.076	334.300	1995.442	0.00%	25.48%
65.0	746.434	359.672	2355.113	0.00%	30.07%
70.0	744.695	377.563	2732.677	0.00%	34.89%
75.0	738.997	387.813	3120.49	0.00%	39.84%
80.0	736.747	394.868	3515.358	0.00%	44.88%
85.0	740.019	401.272	3916.63	0.00%	50.01%
90.0	745.716	406.806	4323.436	0.00%	55.20%
95.0	738.391	406.360	4729.796	0.00%	60.39%
100.0	731.576	399.425	5129.221	0.00%	65.49%
105.0	715.233	387.126	5516.347	0.00%	70.43%
110.0	697.868	369.362	5885.709	0.00%	75.15%
115.0	669.523	346.232	6231.941	0.00%	79.57%
120.0	635.800	317.326	6549.267	0.00%	83.62%
125.0	594.479	284.375	6833.643	0.00%	87.25%
130.0	547.445	248.292	7081.935	0.00%	90.42%
135.0	492.989	210.235	7292.17	0.00%	93.11%
140.0	432.421	171.347	7463.517	0.00%	95.29%
145.0	368.262	133.588	7597.105	0.00%	97.00%
150.0	299.474	98.329	7695.433	0.00%	98.25%
155.0	227.095	66.638	7762.071	0.00%	99.11%
160.0	153.663	39.935	7802.006	0.00%	99.62%
165.0	90.653	20.135	7822.141	0.00%	99.87%
170.0	42.470	7.897	7830.038	0.00%	99.97%
175.0	12.050	1.950	7831.988	0.00%	100.00%
180.0	1.085	0.157	7832.145	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:169.3 Right:163.6

:C90/270Left:166.6 Right:165.9

Beam Angle(50%Imax):C0/180Left:147.8 Right:141.0

:C90/270Left:143.8 Right:143.4

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	372.32	384.57	419.56	473.95	534.73	587.58	632.78	660.87	672.11
22.5	373.59	387.38	421.35	472.16	524.77	580.43	623.08	658.32	664.45
45.0	374.36	388.40	424.41	477.01	531.92	582.99	634.57	665.98	677.98
67.5	376.15	389.68	421.60	473.95	534.47	594.22	639.68	678.75	699.43
90.0	373.34	378.19	402.96	447.39	498.97	557.20	611.08	660.36	691.01
112.5	374.61	374.36	399.38	437.94	498.21	552.86	607.25	652.19	684.88
135.0	375.64	375.64	388.40	429.01	482.89	543.92	595.76	638.40	676.45
157.5	372.83	373.85	389.17	419.56	467.31	529.36	585.80	634.06	669.30
180.0	372.32	371.81	385.85	417.00	465.27	527.32	577.11	625.89	663.17
202.5	373.59	372.06	383.30	413.94	459.90	510.98	565.37	615.16	652.96
225.0	374.36	374.87	386.11	417.26	463.22	521.96	576.09	625.63	659.09
247.5	376.15	376.40	388.66	418.03	472.42	531.66	581.71	624.10	656.02
270.0	373.34	376.15	396.32	433.09	486.97	542.13	590.65	631.25	653.47
292.5	374.61	378.70	406.02	444.33	498.46	549.03	600.86	639.68	660.62
315.0	375.64	383.81	407.04	453.52	498.97	556.18	604.95	644.27	671.34
337.5	372.83	384.83	420.58	469.86	519.15	572.52	624.87	659.85	679.77
360.0	372.32	384.57	419.56	473.95	534.73	587.58	632.78	660.87	672.11

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	680.03	694.84	712.20	725.99	727.01	716.29	711.18	701.22	710.67
22.5	679.77	693.30	706.84	722.93	738.50	738.76	733.91	728.80	739.52
45.0	680.54	695.35	722.42	738.76	740.29	721.65	717.05	715.01	723.69
67.5	710.92	721.65	734.16	753.57	762.76	758.42	755.10	746.42	756.89
90.0	713.48	724.20	740.80	757.40	771.44	770.68	773.49	774.76	775.79
112.5	699.43	713.73	727.78	754.59	756.89	749.48	735.44	735.69	744.38
135.0	694.58	706.33	726.25	744.89	763.78	770.68	762.76	768.89	775.02
157.5	683.09	692.54	711.18	730.08	745.14	744.89	731.35	732.37	733.14
180.0	689.73	703.01	716.29	736.20	756.38	762.76	749.23	744.89	745.91
202.5	681.56	696.11	711.18	733.65	743.10	751.02	752.04	746.93	750.76
225.0	676.71	684.37	698.92	726.76	749.23	753.31	735.95	731.35	731.10
247.5	672.36	685.64	703.77	729.57	754.08	768.38	760.21	759.70	757.91
270.0	669.30	686.15	702.75	722.42	740.29	751.02	747.95	752.80	745.40
292.5	665.98	670.83	686.15	709.65	724.97	709.39	711.95	710.92	705.56
315.0	681.05	689.73	700.96	715.78	736.46	728.54	732.63	730.84	730.33
337.5	688.96	692.79	709.39	727.01	732.63	719.86	713.73	707.35	714.24
360.0	680.03	694.84	712.20	725.99	727.01	716.29	711.18	701.22	710.67

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	719.35	708.88	702.50	681.81	659.85	633.29	592.95	556.69	504.08
22.5	743.87	732.88	724.20	697.13	675.68	640.96	597.29	558.22	496.68
45.0	728.03	717.56	709.65	692.79	670.07	641.98	599.84	560.52	514.30
67.5	761.74	749.23	741.31	721.39	692.54	665.73	615.93	569.96	519.15
90.0	773.49	769.91	755.36	739.01	725.99	689.22	652.45	611.08	560.77
112.5	740.03	732.88	727.52	713.99	708.11	673.13	637.89	606.74	564.60
135.0	771.44	766.59	761.49	747.95	730.59	699.43	674.15	626.65	575.33
157.5	739.27	733.40	722.93	712.97	699.43	675.43	650.15	609.80	564.60
180.0	755.36	745.91	740.80	729.82	722.42	690.49	671.34	630.23	584.27
202.5	759.70	753.06	746.67	735.95	717.56	701.48	664.96	618.23	577.37
225.0	738.25	729.05	725.99	717.56	703.01	682.58	663.17	618.99	574.05
247.5	769.91	766.34	754.85	746.93	732.12	710.92	677.22	633.29	593.20
270.0	758.68	753.06	751.78	728.29	707.35	678.24	645.81	602.65	553.37
292.5	712.97	710.67	708.37	687.43	673.64	646.83	615.42	580.18	538.56
315.0	739.78	734.67	724.71	705.31	683.86	647.59	620.02	569.20	524.51
337.5	719.61	710.16	707.09	685.39	663.68	635.08	594.22	559.24	514.30
360.0	719.35	708.88	702.50	681.81	659.85	633.29	592.95	556.69	504.08

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	455.56	394.02	329.67	257.91	181.82	117.21	60.52	19.66	3.58
22.5	437.69	374.10	306.69	236.72	171.09	103.42	45.45	14.30	2.04
45.0	460.42	398.62	332.74	264.81	181.31	114.66	54.65	17.37	2.55
67.5	462.20	394.79	325.33	256.38	185.14	114.91	57.20	18.13	2.55
90.0	502.04	434.88	366.19	296.98	219.61	145.05	86.31	37.54	8.94
112.5	511.23	455.56	393.26	326.61	249.74	163.69	101.63	47.75	11.75
135.0	516.59	456.07	391.47	314.60	246.42	174.92	104.70	52.35	11.24
157.5	513.27	457.35	396.32	328.65	259.19	184.37	117.72	62.05	17.11
180.0	533.96	478.04	417.77	352.14	282.68	200.20	128.45	68.18	23.24
202.5	520.17	463.22	396.32	324.82	253.32	192.29	122.32	67.42	25.79
225.0	532.68	476.50	416.49	349.59	282.68	198.67	128.19	70.48	26.81
247.5	535.24	475.23	409.34	348.06	274.77	194.84	125.13	71.25	26.05
270.0	501.02	434.62	372.57	300.82	228.55	153.22	92.95	43.67	12.51
292.5	481.87	427.47	365.42	298.77	223.44	145.56	85.29	36.26	8.94
315.0	467.05	402.96	341.42	268.13	201.74	134.58	77.12	29.62	5.87
337.5	456.84	395.30	331.20	266.60	192.03	121.04	62.82	23.49	3.83
360.0	455.56	394.02	329.67	257.91	181.82	117.21	60.52	19.66	3.58

C/γ(°)	180.0
0.0	1.02
22.5	1.02
45.0	1.02
67.5	1.28
90.0	1.28
112.5	1.02
135.0	1.02
157.5	1.02
180.0	1.02
202.5	1.02
225.0	1.02
247.5	1.28
270.0	1.28
292.5	1.02
315.0	1.02
337.5	1.02
360.0	1.02

4 Additional Test

Model Number	Test Voltage (V)	Frequency(Hz)	Power Factor	THD
HIDFA-54S-XXX-8CCT-BYP/3SP	120	60	0.989	11.8%
	277	60	0.906	13.5%

Photo Document

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