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-100S-EX39-8CCT-BYP/3SP

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-100S-EX39-8CCT-BYP/3SP
Rated Inputs	AC 100-277V, 50/60Hz
Rated Power	100 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-100S-EX39-8CCT-BYP/3SP are the same to the product in the report BL210817013-9 and is authorized by original applicant to use their test data.
- Note:All the data in previous report BL210817013-9 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-100S-EX39-8CCT-BYP/3SP, 3000K at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.00	60	0.772	91.75	0.991

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
12542.26	136.7	3004

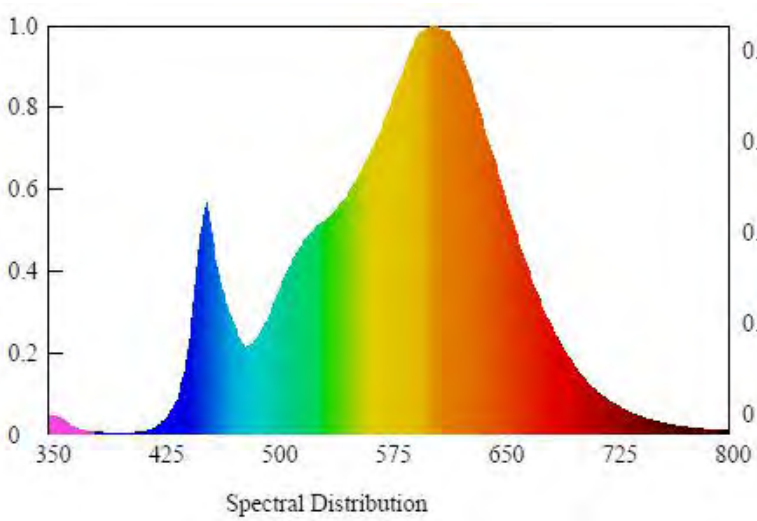
Chromaticity Coordinate

Duv	x	y	u'	v'
-0.00056	0.4358	0.4023	0.2506	0.5205

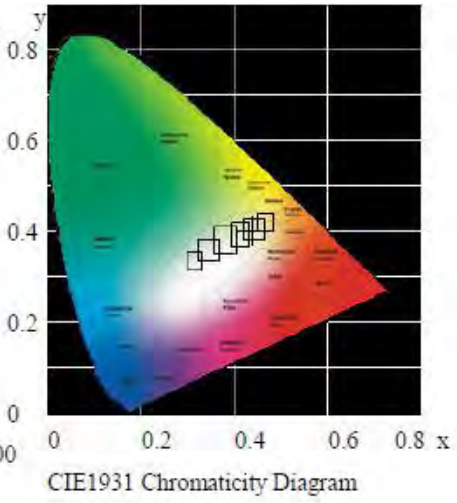
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
85.1	17	86	96	-10

Spectral Distribution

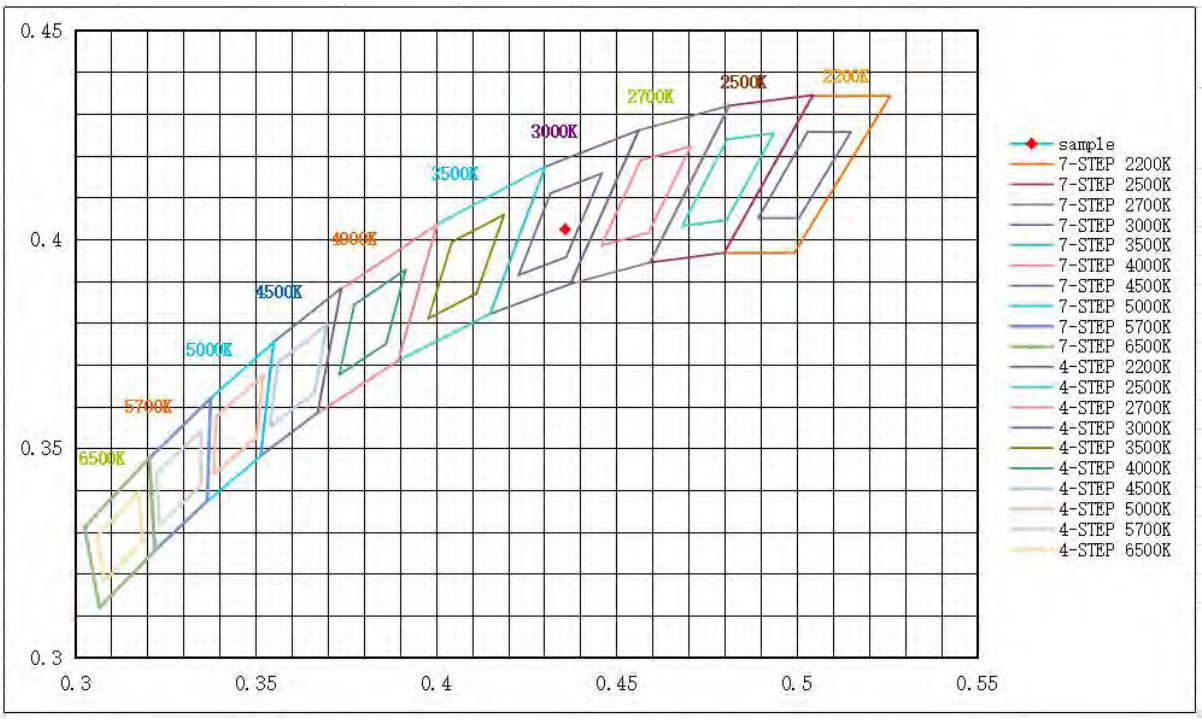


Spectral Distribution



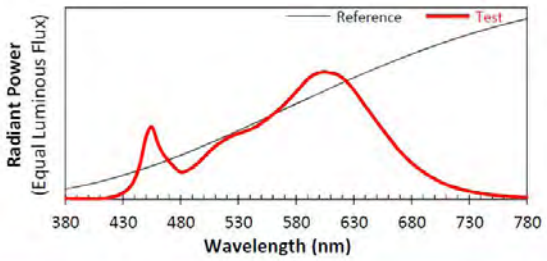
CIE1931 Chromaticity Diagram

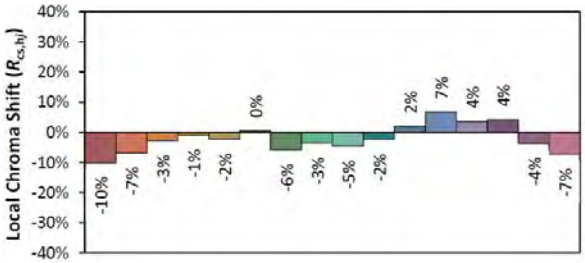
7/4 Step Quadrangle

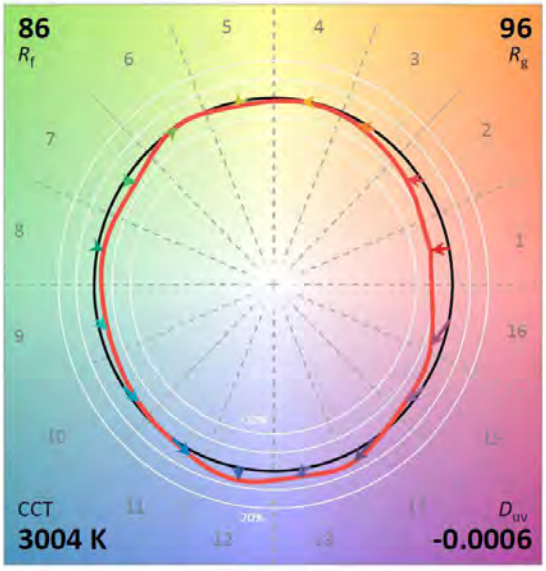


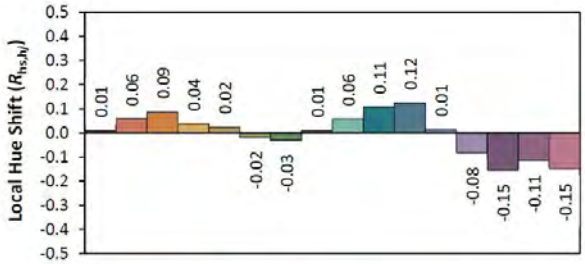
ANSI/IES TM-30-18 Color Rendition Report

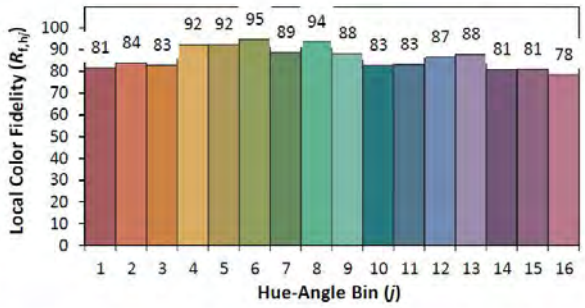
Source:	BL210817029-9	**Manufacturer:**	RAB Lighting Inc
Date:	2021-10-11	**Model:**	HIDFA-100S-EX39-8CCT-BYP/3SP, 3000K at 120V

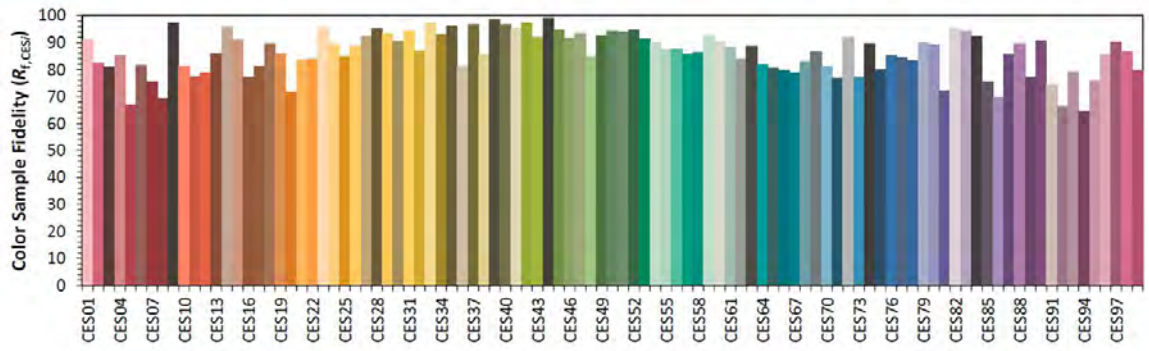












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.4358
y	0.4023
u'	0.2506
v'	0.5205

CIE 13.3-1995 (CRI)

R_a	85
R_9	17

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-100S-EX39-8CCT-BYP/3SP, 4000K at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.05	60	0.760	90.36	0.991

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
13689.61	151.5	3830

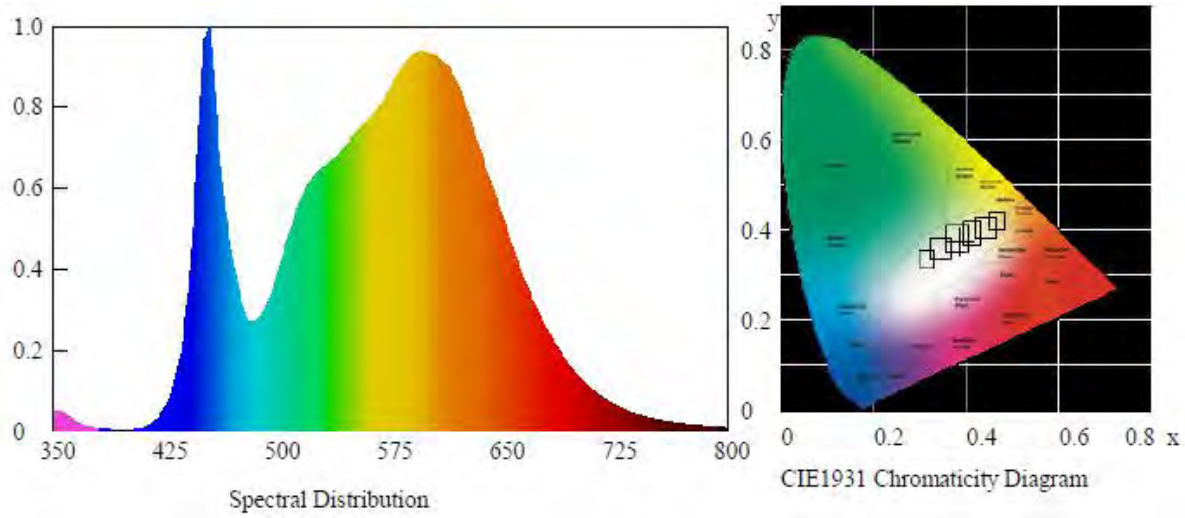
Chromaticity Coordinate

Duv	x	y	u'	v'
-0.00195	0.3867	0.3764	0.2294	0.5023

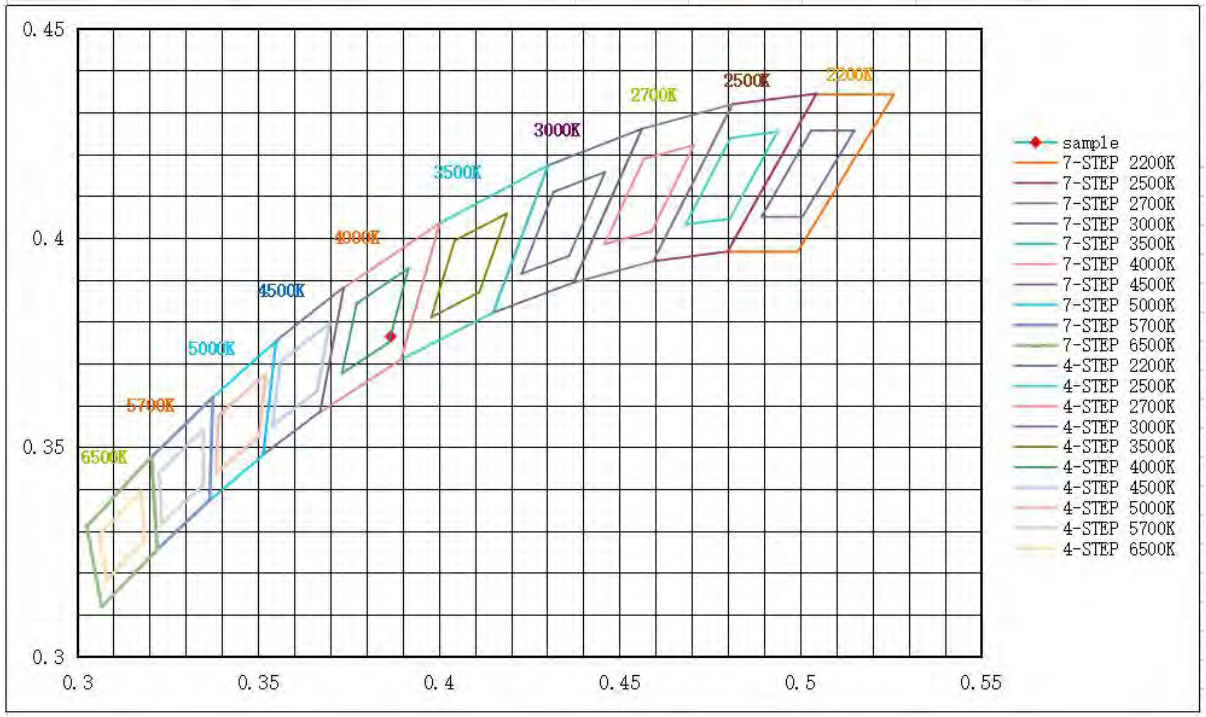
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
85.4	21	85	96	-10

Spectral Distribution

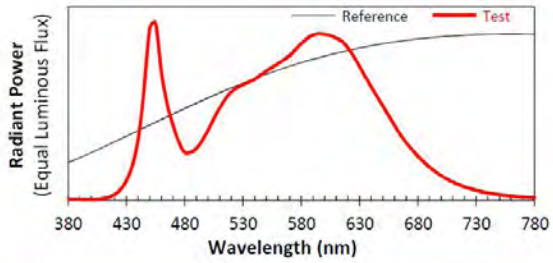


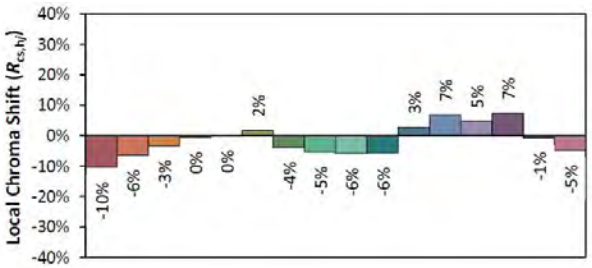
7/4 Step Quadrangle

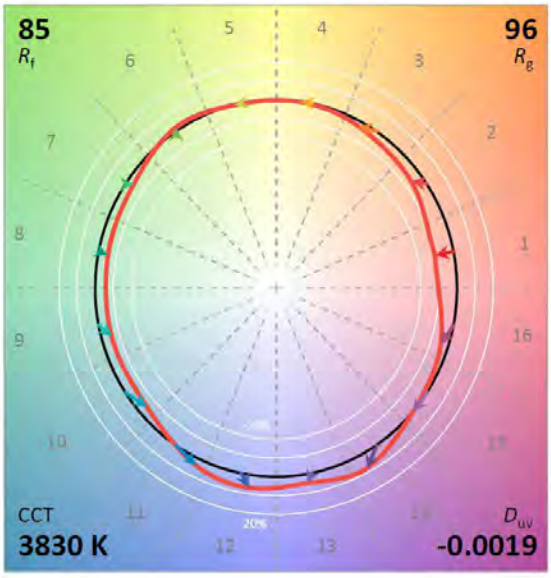


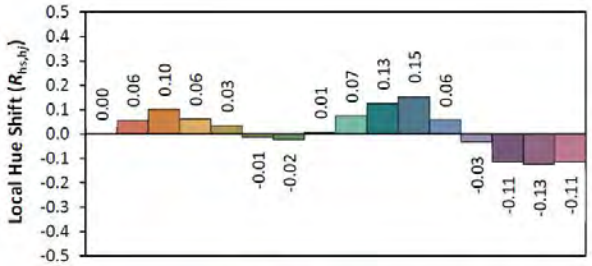
ANSI/IES TM-30-18 Color Rendition Report

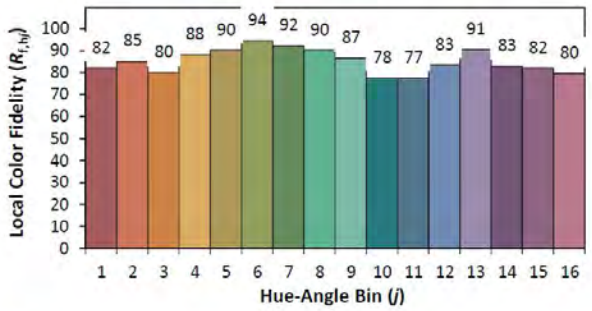
Source:	BL210817029-9	**Manufacturer:**	RAB Lighting Inc
Date:	2021-10-11	**Model:**	HIDFA-100S-EX39-8CCT-BYP/3SP, 4000K at 120V

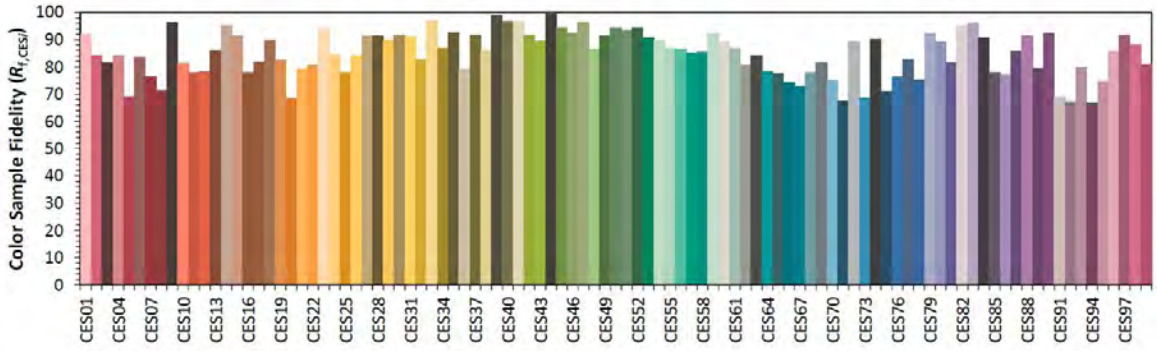












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3867
y	0.3764
u'	0.2294
v'	0.5023

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-100S-EX39-8CCT-BYP/3SP, 5000K at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.03	60	0.785	93.41	0.991

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
13553.86	145.1	4881

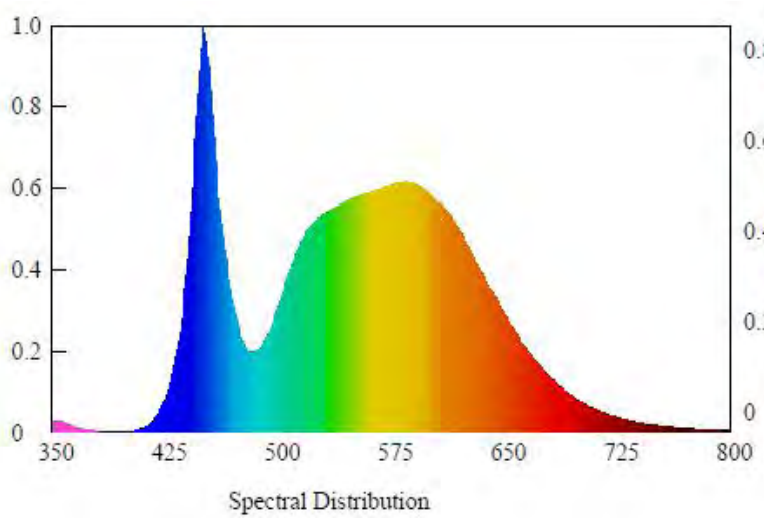
Chromaticity Coordinate

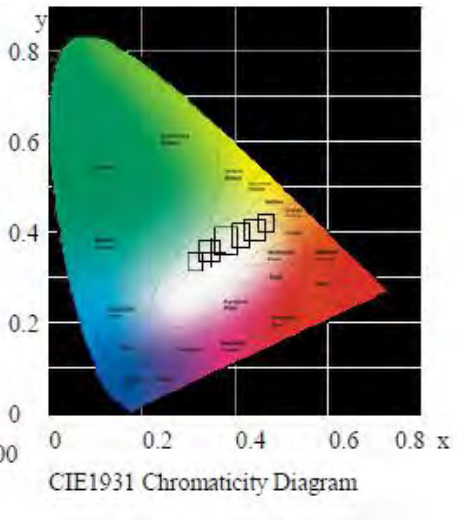
Duv	x	y	u'	v'
+0.00087	0.3488	0.3563	0.2121	0.4875

Color Rendering

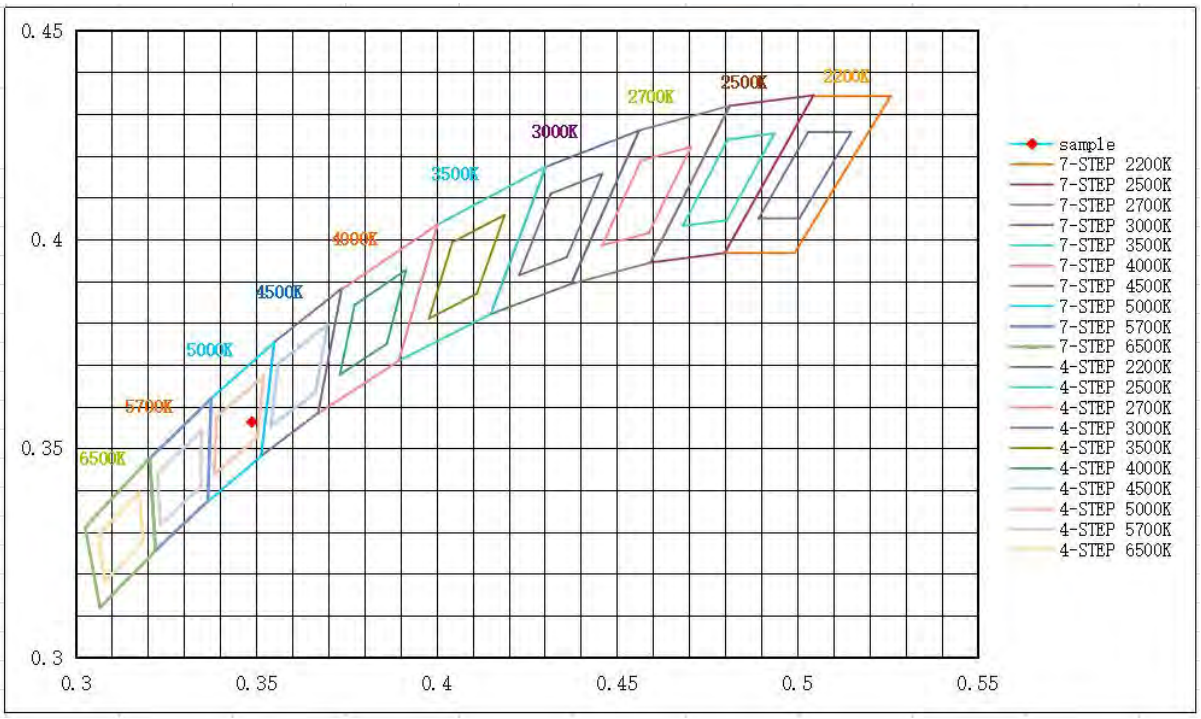
CRI	R9	Rf	Rg	Rcs,h1(%)
81.8	9	82	97	-12

Spectral Distribution



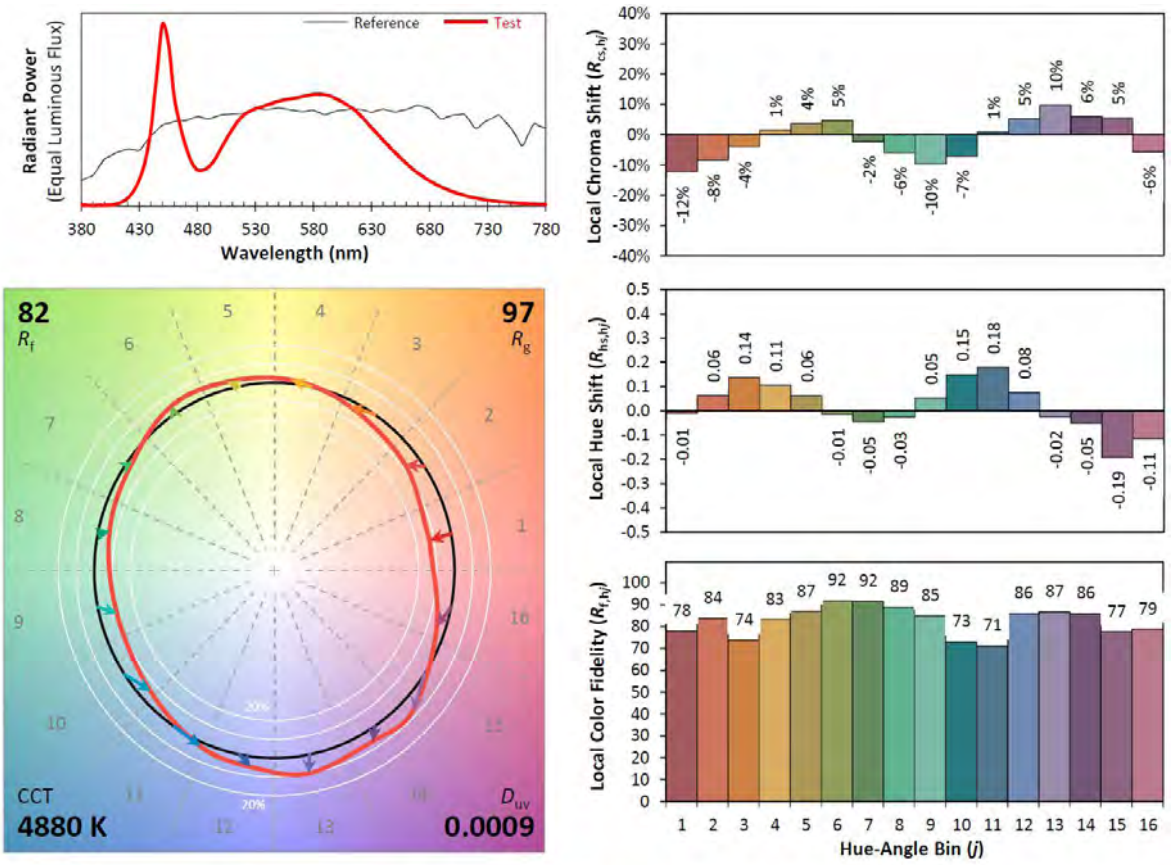


7/4 Step Quadrangle



ANSI/IES TM-30-18 Color Rendition Report

Source:	BL210817029-9	**Manufacturer:**	RAB Lighting Inc
Date:	2021-10-11	**Model:**	HIDFA-100S-EX39-8CCT-BYP/3SP, 5000K at 120V



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

x	0.3488
y	0.3563
u'	0.2121
v'	0.4875

CIE 13.3-1995 (CRI)

R_a	82
R_9	9

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-100S-EX39-8CCT-BYP/3SP, 3000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
276.92	60	0.377	93.44	0.895

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
12464.91	133.4	3010

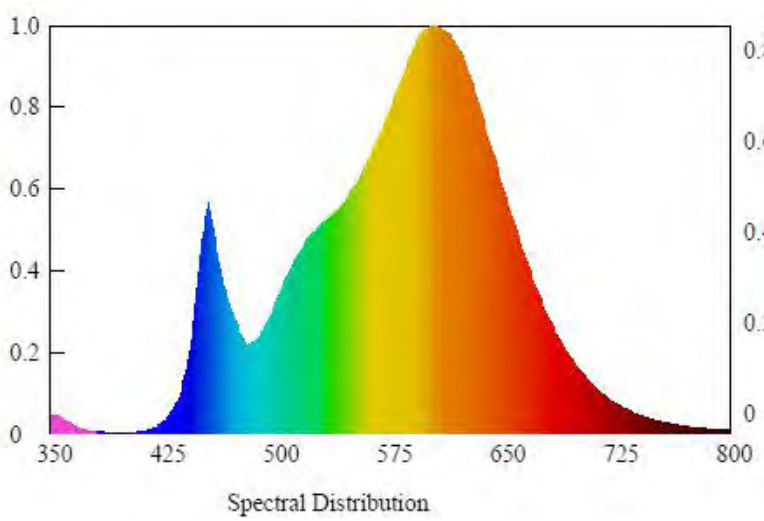
Chromaticity Coordinate

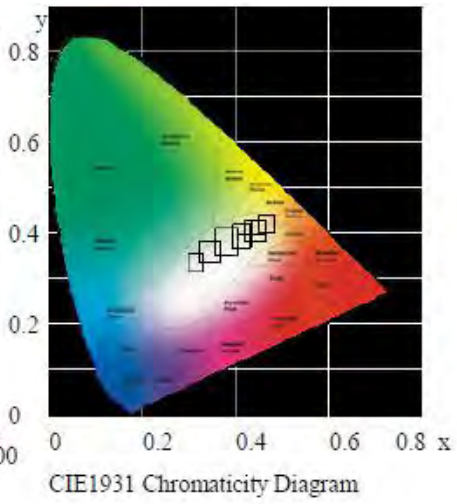
Duv	x	y	u'	v'
-0.00074	0.4352	0.4016	0.2505	0.5202

Color Rendering

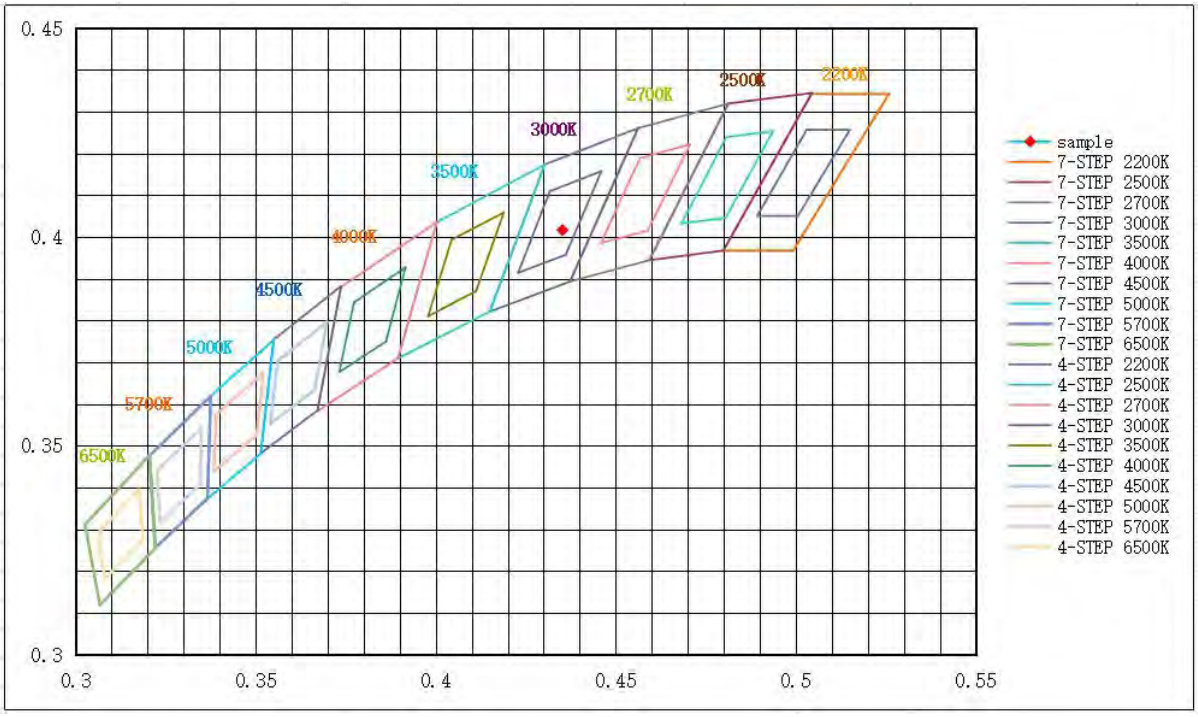
CRI	R9	Rf	Rg	Rcs,h1(%)
85.0	17	86	95	-10

Spectral Distribution



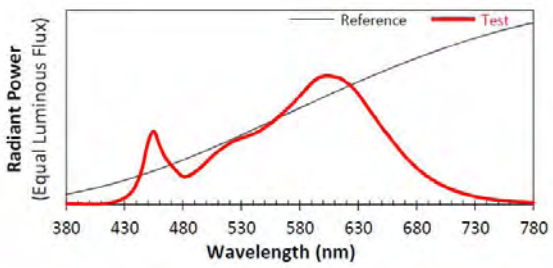


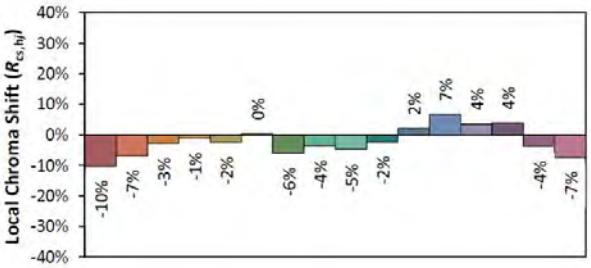
7/4 Step Quadrangle

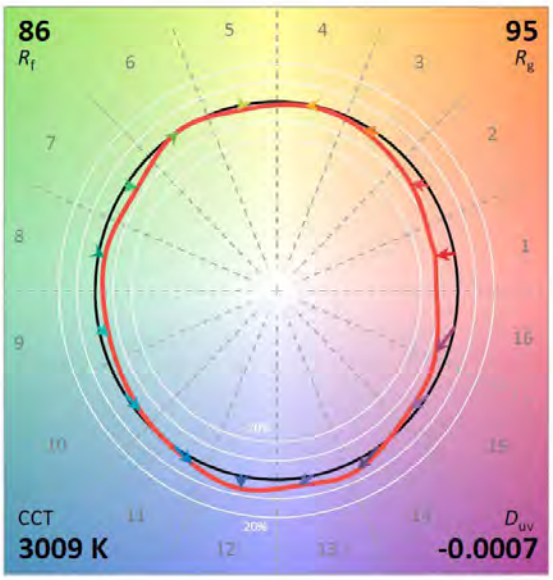


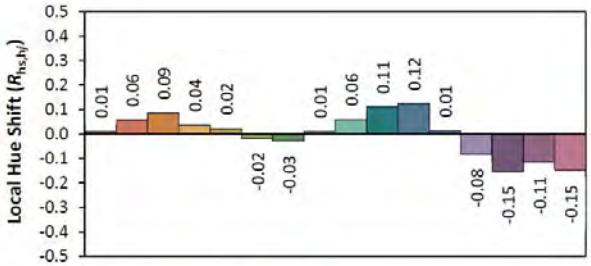
ANSI/IES TM-30-18 Color Rendition Report

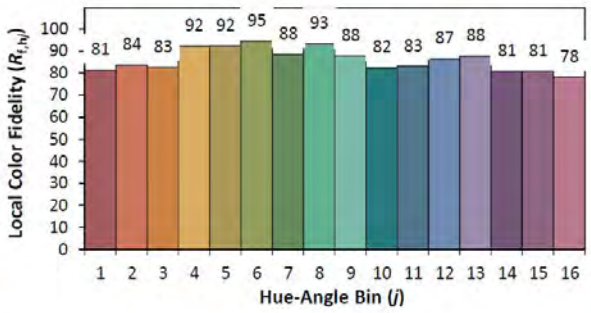
Source:	BL210817029-9	**Manufacturer:**	RAB Lighting Inc
Date:	2021-10-11	**Model:**	HIDFA-100S-EX39-8CCT-BYP/3SP, 3000K at 277V

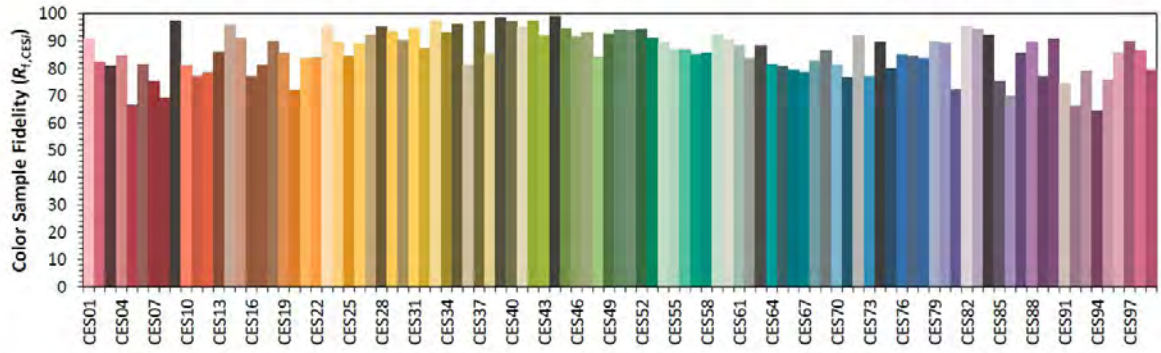












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.4352
y	0.4016
u'	0.2505
v'	0.5202

CIE 13.3-1995 (CRI)

R_a	85
R_9	17

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-100S-EX39-8CCT-BYP/3SP, 4000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.05	60	0.372	91.83	0.891

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
13645.93	148.6	3827

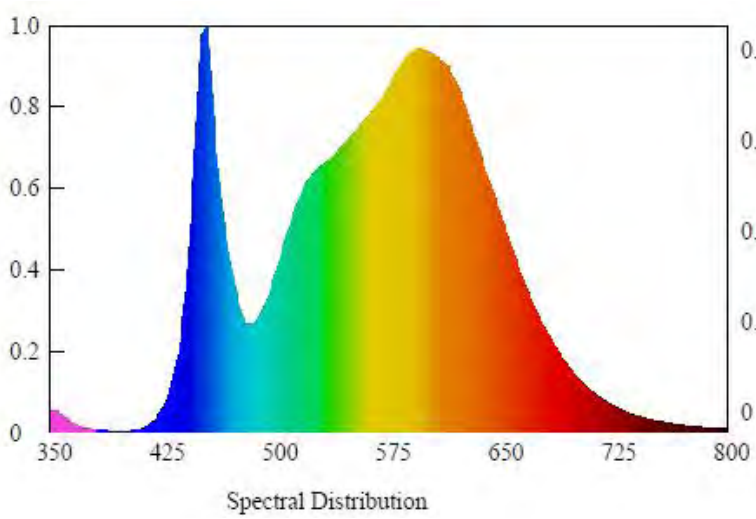
Chromaticity Coordinate

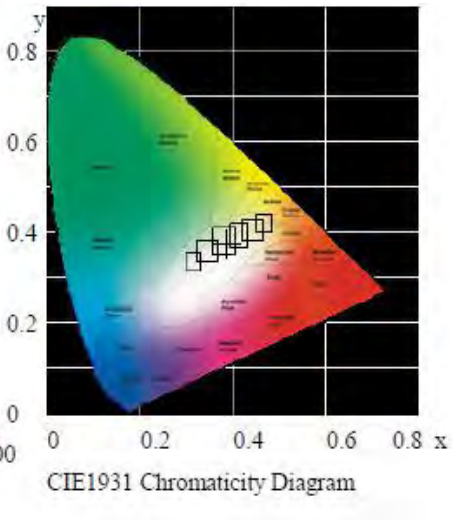
Duv	x	y	u'	v'
-0.0019	0.3869	0.3766	0.2294	0.5025

Color Rendering

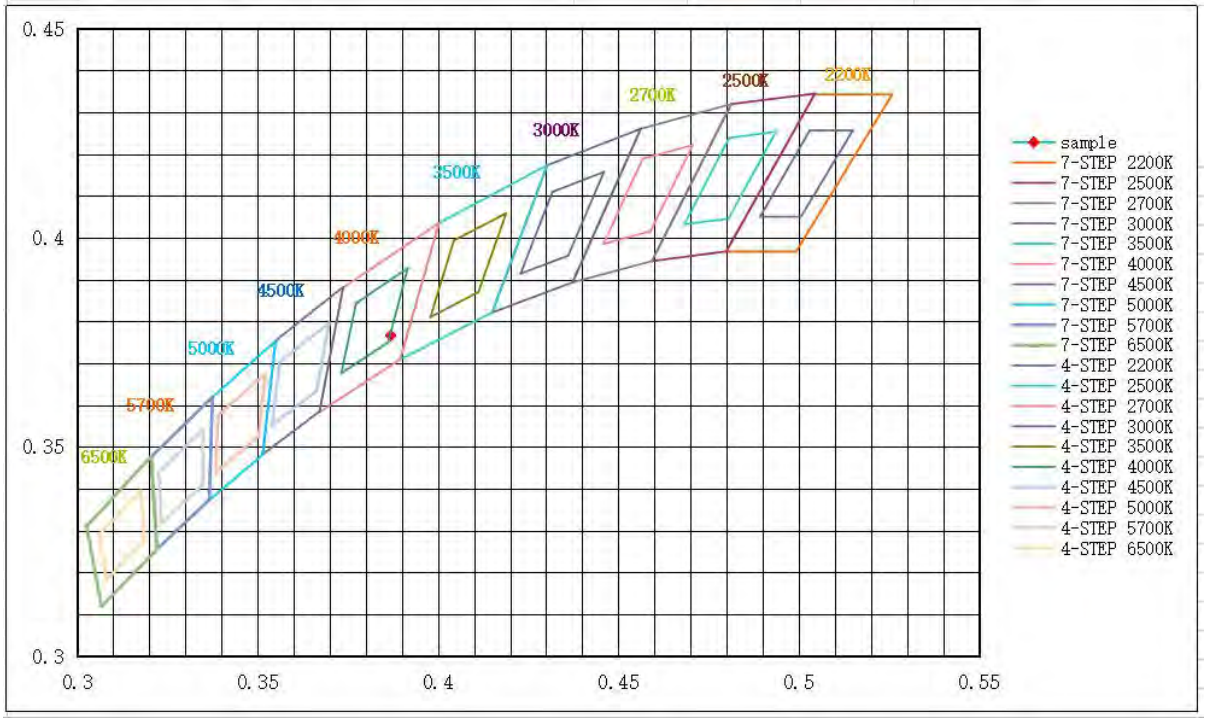
CRI	R9	Rf	Rg	Rcs,h1(%)
85.3	21	85	96	-10

Spectral Distribution



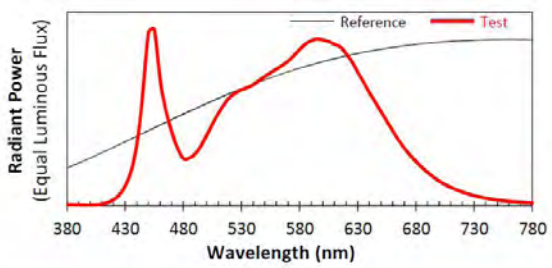


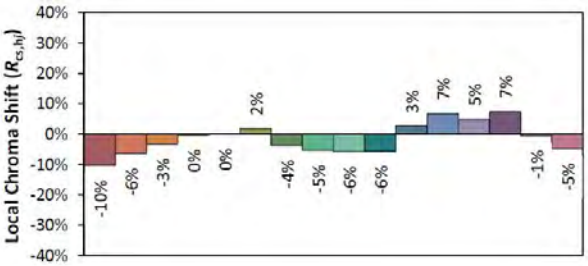
7/4 Step Quadrangle

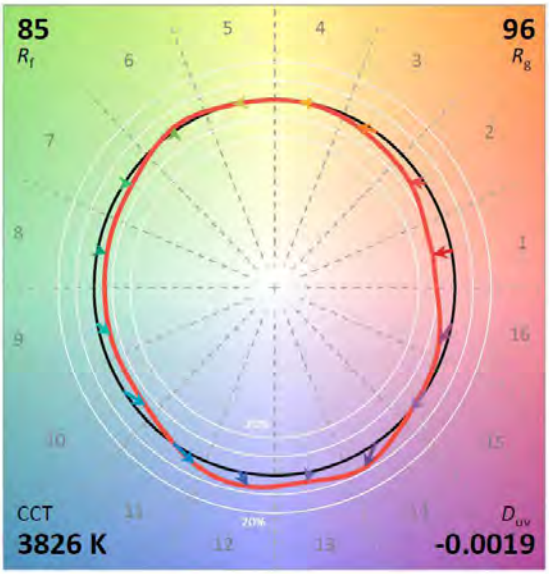


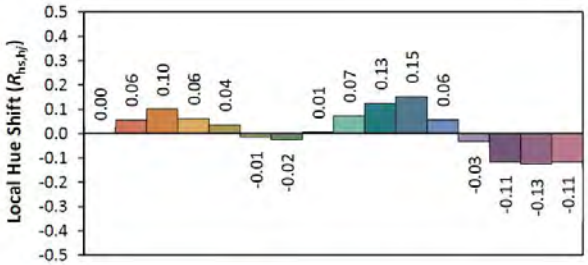
ANSI/IES TM-30-18 Color Rendition Report

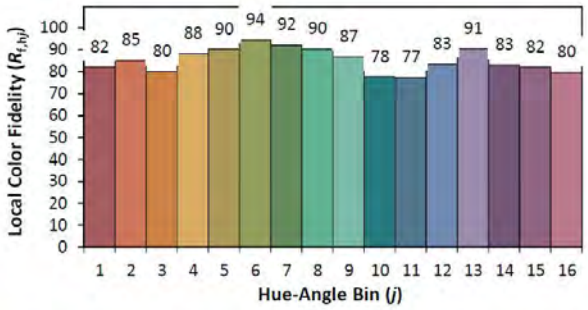
Source:	BL210817029-9	**Manufacturer:**	RAB Lighting Inc
Date:	2021-10-11	**Model:**	HIDFA-100S-EX39-8CCT-BYP/3SP, 4000K at 277V

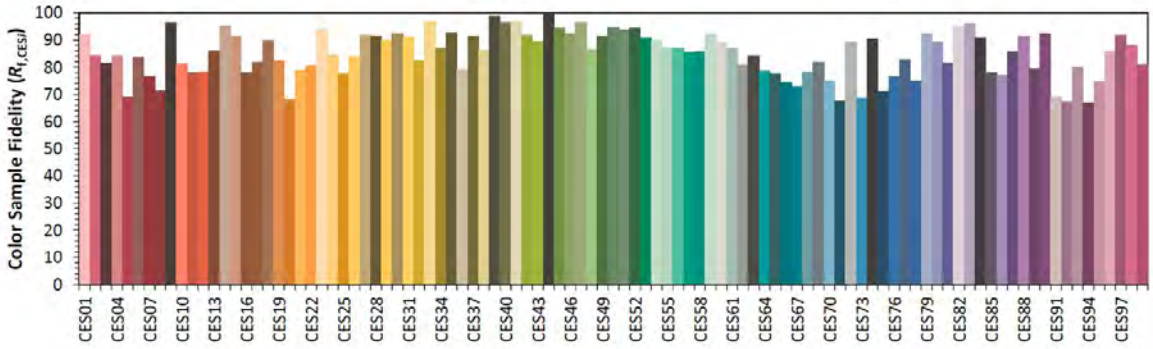












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3869
y	0.3766
u'	0.2294
v'	0.5025

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.

3.1.6 Model Number: HIDFA-100S-EX39-8CCT-BYP/3SP, 5000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.14	60	0.377	93.49	0.895

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
13294.28	142.2	4883

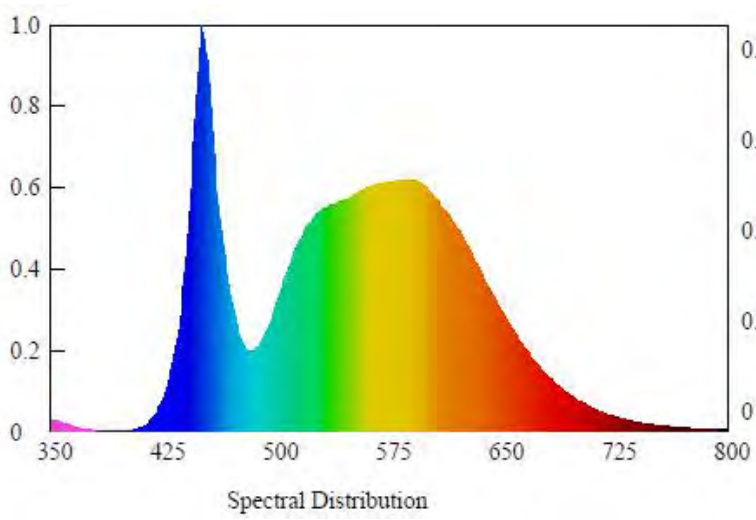
Chromaticity Coordinate

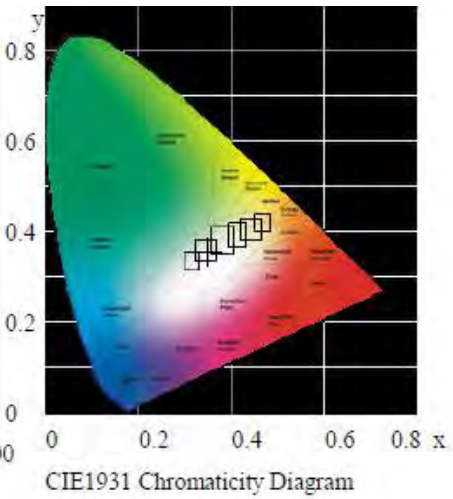
Duv	x	y	u'	v'
+0.00085	0.3487	0.3562	0.2121	0.4874

Color Rendering

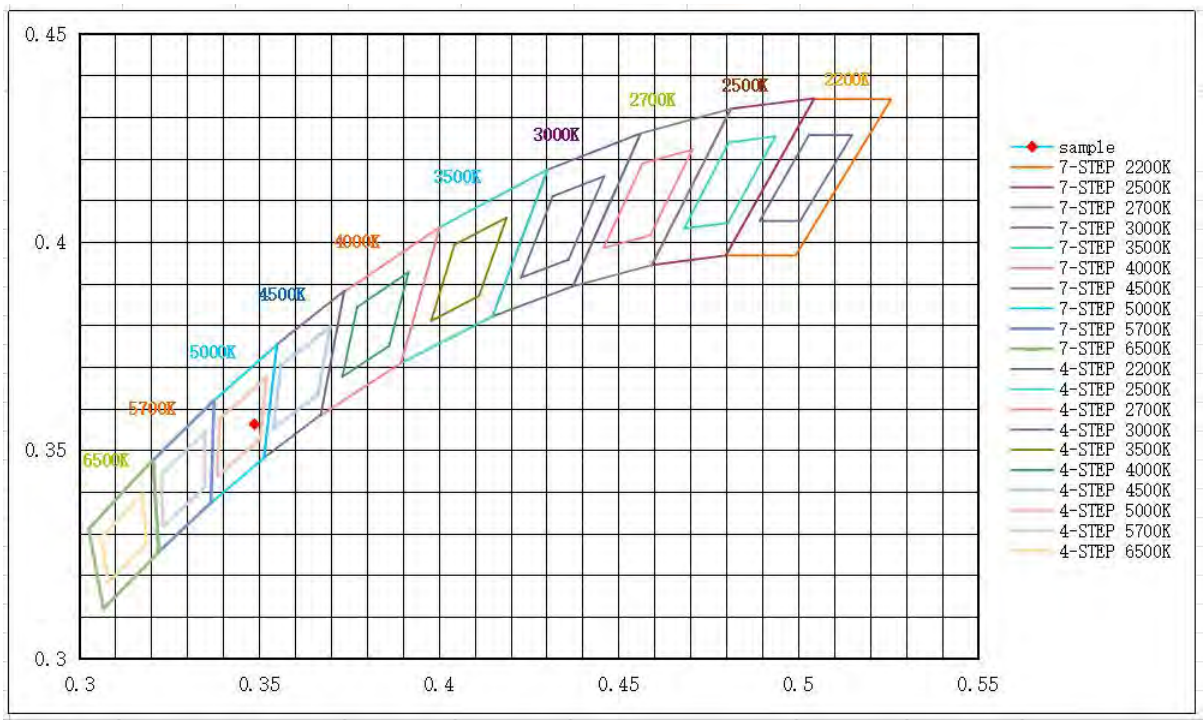
CRI	R9	Rf	Rg	Rcs,h1(%)
81.8	9	82	97	-12

Spectral Distribution



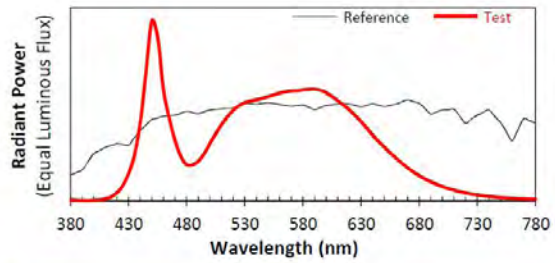


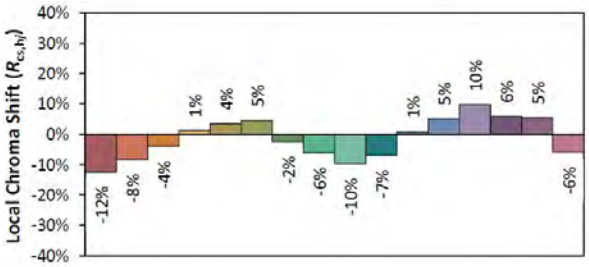
7/4 Step Quadrangle

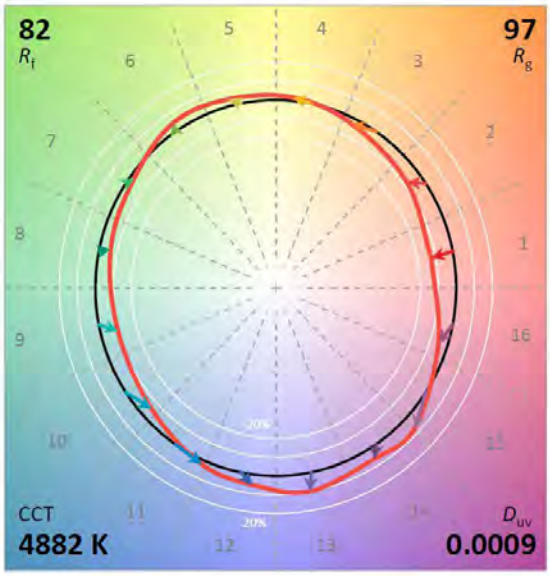


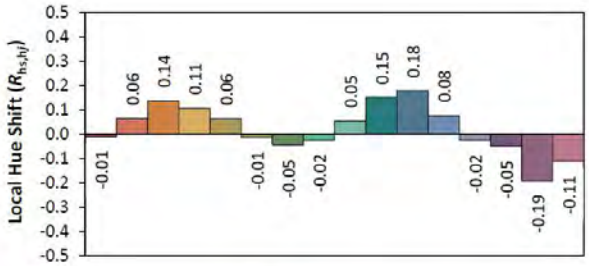
ANSI/IES TM-30-18 Color Rendition Report

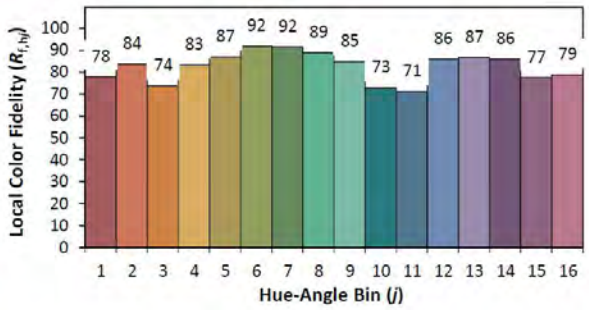
Source:	BL210817029-9	**Manufacturer:**	RAB Lighting Inc
Date:	2021-10-11	**Model:**	HIDFA-100S-EX39-8CCT-BYP/3SP, 5000K at 277V

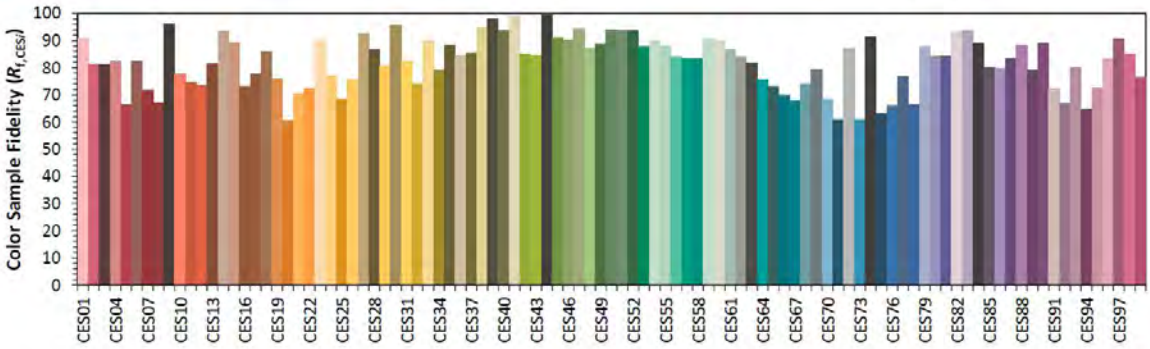












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3487
y	0.3562
u'	0.2121
v'	0.4874

CIE 13.3-1995 (CRI)

R_a	82
R_9	9

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-100S-EX39-8CCT-BYP/3SP, 3000K at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.160	60	0.768	91.330	0.990

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
12482.72	136.68	30.88	60.04

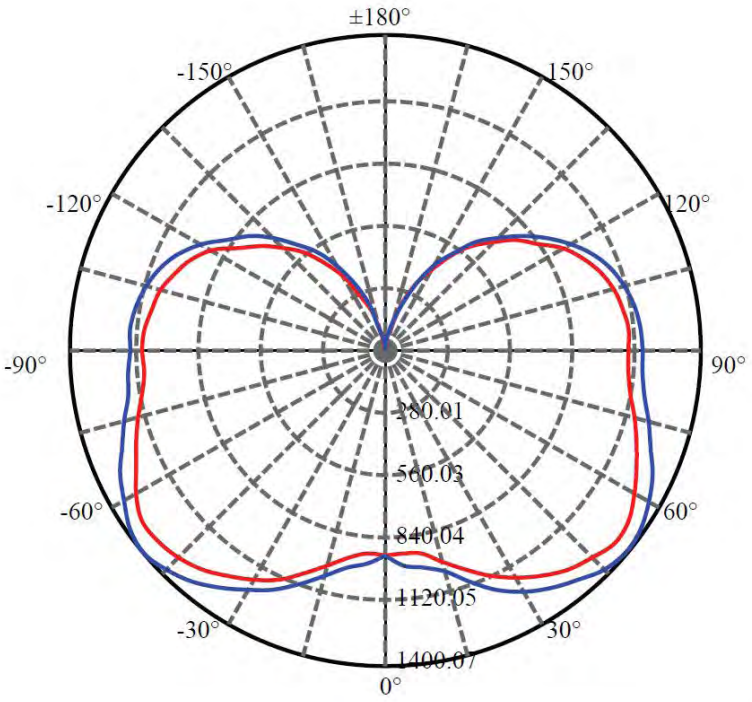
Zonal Flux Diagram

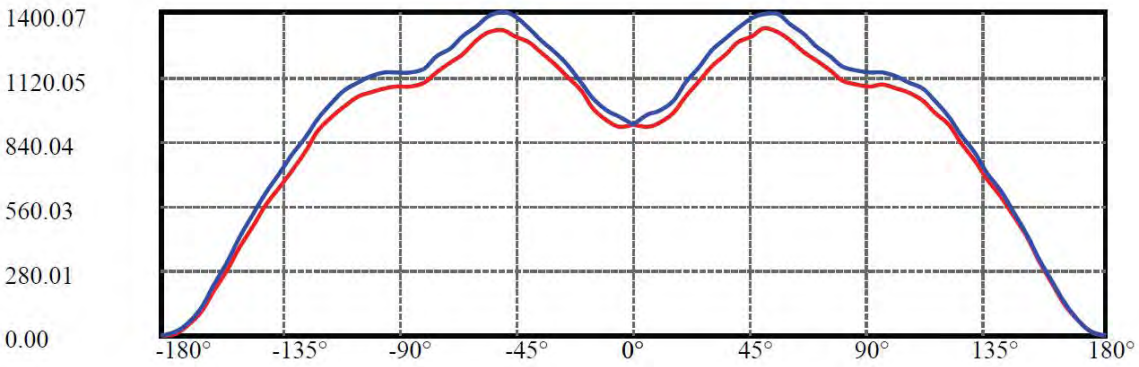
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	911.292	0.000	0	0.00%	0.00%
5.0	914.103	21.822	21.822	0.00%	0.17%
10.0	937.707	66.245	88.067	0.00%	0.71%
15.0	988.878	114.284	202.351	0.00%	1.62%
20.0	1051.530	168.158	370.509	0.00%	2.97%
25.0	1121.132	227.872	598.381	0.00%	4.79%
30.0	1179.370	291.130	889.512	0.00%	7.13%
35.0	1231.044	354.950	1244.462	0.00%	9.97%
40.0	1276.025	418.285	1662.747	0.00%	13.32%
45.0	1316.231	479.977	2142.725	0.00%	17.17%
50.0	1330.298	534.770	2677.494	0.00%	21.45%
55.0	1317.969	575.821	3253.316	0.00%	26.06%
60.0	1283.155	601.242	3854.558	0.00%	30.88%
65.0	1238.753	613.080	4467.638	0.00%	35.79%
70.0	1193.385	615.833	5083.471	0.00%	40.72%
75.0	1150.451	612.641	5696.112	0.00%	45.63%
80.0	1110.038	604.844	6300.956	0.00%	50.48%
85.0	1089.497	597.667	6898.623	0.00%	55.27%
90.0	1086.409	595.780	7494.403	0.00%	60.04%
95.0	1084.735	594.476	8088.879	0.00%	64.80%
100.0	1068.365	585.049	8673.928	0.00%	69.49%
105.0	1048.146	566.319	9240.247	0.00%	74.02%
110.0	1010.912	538.205	9778.452	0.00%	78.34%
115.0	962.778	499.751	10278.203	0.00%	82.34%
120.0	899.096	452.625	10730.828	0.00%	85.97%
125.0	821.116	397.622	11128.451	0.00%	89.15%
130.0	741.025	339.661	11468.112	0.00%	91.87%
135.0	665.580	284.225	11752.337	0.00%	94.15%
140.0	586.622	231.855	11984.193	0.00%	96.01%
145.0	500.739	181.418	12165.611	0.00%	97.46%
150.0	406.272	133.564	12299.174	0.00%	98.53%
155.0	305.422	90.065	12389.24	0.00%	99.25%
160.0	206.090	53.648	12442.888	0.00%	99.68%
165.0	120.040	26.878	12469.766	0.00%	99.90%
170.0	52.472	10.233	12479.999	0.00%	99.98%
175.0	17.207	2.493	12482.491	0.00%	100.00%
180.0	1.950	0.229	12482.72	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:163.3 Right:164.9

:C90/270Left:164.1 Right:164.8

Beam Angle(50%Imax):C0/180Left:133.7 Right:136.1

:C90/270Left:135.0 Right:135.3

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	911.29	907.50	919.03	966.81	1033.11	1103.75	1166.76	1219.68	1266.42
22.5	911.29	892.47	916.77	958.57	1017.67	1085.83	1134.02	1194.56	1240.48
45.0	911.29	897.82	913.27	963.51	1024.88	1088.51	1154.61	1214.94	1259.01
67.5	911.29	891.23	911.83	964.54	1019.52	1082.54	1145.96	1204.44	1241.92
90.0	911.29	953.42	973.60	1019.73	1091.80	1168.40	1238.01	1289.90	1332.73
112.5	911.29	935.92	959.39	1012.93	1076.56	1158.11	1217.62	1267.04	1313.37
135.0	911.29	922.12	943.95	1002.64	1071.00	1142.66	1203.21	1254.07	1295.66
157.5	911.29	916.15	945.39	990.28	1052.47	1125.57	1174.17	1230.39	1271.37
180.0	911.29	905.44	933.45	984.72	1058.03	1119.60	1174.99	1223.18	1267.04
202.5	911.29	905.03	933.86	989.05	1047.94	1113.63	1165.93	1209.80	1248.30
225.0	911.29	897.41	924.39	976.69	1045.47	1109.92	1166.96	1204.65	1249.74
247.5	911.29	892.26	924.18	970.72	1026.52	1098.19	1146.17	1193.94	1246.04
270.0	911.29	948.69	974.22	1030.02	1099.83	1172.11	1229.77	1279.81	1333.55
292.5	911.29	929.74	956.92	1010.05	1067.30	1137.31	1198.47	1247.69	1298.34
315.0	911.29	918.62	944.16	997.70	1054.94	1128.66	1191.67	1246.45	1287.22
337.5	911.29	911.83	928.92	984.10	1037.44	1103.33	1161.61	1216.18	1265.19
360.0	911.29	907.50	919.03	966.81	1033.11	1103.75	1166.76	1219.68	1266.42

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1299.58	1326.35	1315.64	1274.04	1230.18	1187.35	1145.14	1106.63	1087.48
22.5	1284.13	1291.34	1268.07	1238.83	1198.47	1158.93	1106.22	1066.89	1043.62
45.0	1291.13	1315.23	1310.49	1276.51	1229.98	1187.97	1144.72	1103.33	1081.71
67.5	1280.43	1294.84	1270.95	1241.30	1209.38	1171.08	1117.13	1081.51	1058.85
90.0	1372.06	1392.45	1387.51	1351.68	1305.76	1255.51	1210.00	1167.38	1145.75
112.5	1356.62	1364.65	1345.09	1315.85	1275.07	1226.47	1186.73	1141.02	1122.90
135.0	1339.94	1350.03	1338.91	1303.08	1254.07	1212.68	1175.20	1137.52	1114.25
157.5	1312.96	1320.38	1305.14	1267.66	1226.68	1182.00	1141.84	1101.89	1080.27
180.0	1298.55	1319.55	1317.29	1278.57	1221.74	1179.52	1136.49	1097.98	1077.59
202.5	1287.02	1293.40	1282.28	1248.71	1196.20	1152.55	1116.92	1077.18	1059.27
225.0	1282.90	1294.64	1285.99	1249.54	1203.00	1156.05	1111.78	1076.15	1054.94
247.5	1285.37	1296.08	1287.84	1257.16	1213.30	1170.05	1131.54	1095.71	1070.80
270.0	1380.09	1400.07	1382.77	1341.17	1295.66	1241.92	1204.44	1157.70	1143.49
292.5	1350.03	1354.56	1339.53	1306.37	1264.78	1208.97	1166.55	1126.60	1107.86
315.0	1325.11	1348.59	1342.62	1298.14	1251.19	1202.38	1162.43	1118.78	1100.66
337.5	1313.79	1322.64	1307.40	1281.87	1244.60	1200.73	1150.08	1104.36	1082.54
360.0	1299.58	1326.35	1315.64	1274.04	1230.18	1187.35	1145.14	1106.63	1087.48

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1078.00	1083.15	1065.86	1049.38	1017.26	968.45	910.18	831.10	756.35
22.5	1036.61	1039.29	1023.85	1013.76	975.87	932.83	875.99	799.60	728.55
45.0	1074.09	1077.39	1061.12	1048.35	1016.23	969.90	907.91	832.96	754.71
67.5	1051.03	1054.94	1039.50	1027.55	988.84	942.51	881.97	805.98	730.20
90.0	1141.02	1141.02	1121.45	1097.77	1065.44	1017.26	948.89	872.49	790.33
112.5	1121.04	1118.98	1104.77	1078.00	1040.32	990.08	926.45	846.34	759.44
135.0	1118.37	1108.48	1092.83	1063.80	1029.00	974.01	904.62	824.31	742.97
157.5	1082.74	1074.09	1059.06	1030.85	992.34	944.98	884.44	806.60	719.91
180.0	1079.86	1072.65	1053.91	1032.50	995.02	949.92	884.64	797.95	715.38
202.5	1060.71	1052.88	1037.23	1013.14	970.10	927.27	864.26	786.21	707.96
225.0	1059.27	1052.68	1036.41	1009.43	978.96	926.65	858.29	782.71	698.28
247.5	1075.95	1065.24	1050.82	1027.14	979.37	939.62	874.35	796.92	715.38
270.0	1135.87	1140.61	1122.28	1099.42	1064.41	1009.43	936.74	859.73	784.36
292.5	1100.45	1101.89	1081.92	1067.30	1023.44	979.78	917.39	837.08	751.62
315.0	1093.24	1096.95	1081.30	1061.94	1030.02	969.28	903.79	828.01	754.71
337.5	1074.30	1075.53	1061.53	1050.00	1007.99	962.48	905.65	829.87	746.26
360.0	1078.00	1083.15	1065.86	1049.38	1017.26	968.45	910.18	831.10	756.35

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	681.40	600.06	523.04	425.85	322.06	221.16	131.38	61.37	19.77
22.5	660.19	586.47	503.89	415.14	319.59	217.25	131.58	59.92	20.59
45.0	680.37	606.44	519.34	423.79	322.89	223.43	133.64	61.78	20.18
67.5	662.66	586.67	504.51	414.32	312.18	212.51	127.47	57.45	20.80
90.0	704.26	623.74	537.46	438.00	331.33	226.93	135.50	60.34	20.80
112.5	676.25	591.82	504.10	409.99	308.27	208.60	120.67	47.16	17.50
135.0	662.87	583.58	499.98	398.87	300.03	200.57	111.61	49.83	16.06
157.5	648.24	563.40	476.71	384.25	278.61	187.80	104.61	45.10	13.18
180.0	645.16	565.46	479.59	380.13	285.41	189.24	103.79	44.27	11.12
202.5	637.12	552.28	464.77	376.22	273.05	184.92	102.55	45.10	13.80
225.0	624.36	546.31	460.86	367.78	272.44	180.18	102.55	42.42	12.56
247.5	638.98	559.08	469.71	381.16	281.70	185.95	103.17	42.63	15.03
270.0	700.75	619.62	530.05	429.97	323.50	214.37	123.97	50.25	17.71
292.5	678.31	603.77	509.66	413.49	314.44	212.72	126.44	54.36	16.89
315.0	676.25	595.94	513.98	421.94	318.36	214.78	130.14	57.66	19.77
337.5	672.13	601.29	514.19	419.46	322.89	217.04	131.58	59.92	19.56
360.0	681.40	600.06	523.04	425.85	322.06	221.16	131.38	61.37	19.77

C/γ(°)	180.0
0.0	1.95
22.5	1.95
45.0	1.95
67.5	1.95
90.0	1.95
112.5	1.95
135.0	1.95
157.5	1.95
180.0	1.95
202.5	1.95
225.0	1.95
247.5	1.95
270.0	1.95
292.5	1.95
315.0	1.95
337.5	1.95
360.0	1.95

3.2.2 Model Number: HIDFA-100S-EX39-8CCT-BYP/3SP, 3000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.110	60	0.374	92.460	0.892

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
12322.43	133.27	30.87	60.01

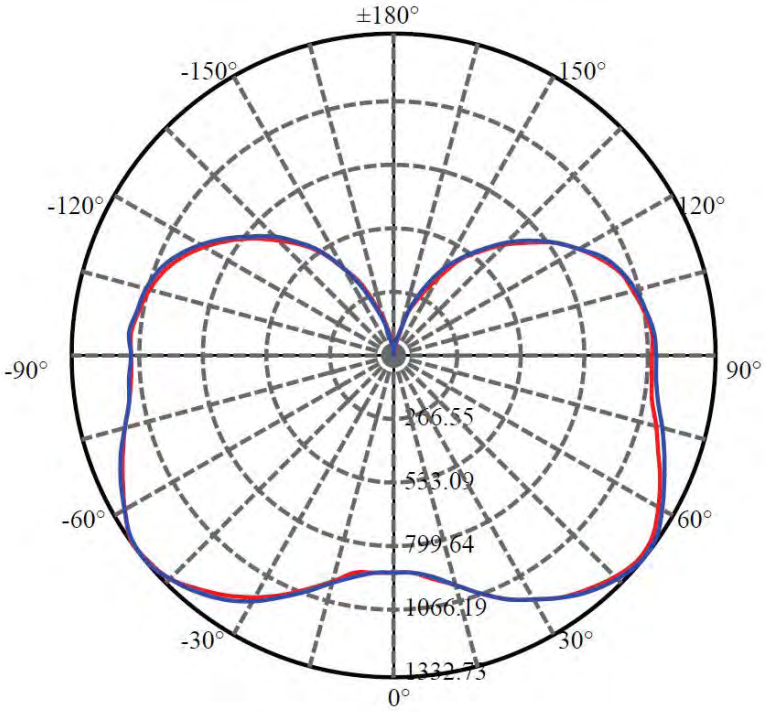
Zonal Flux Diagram

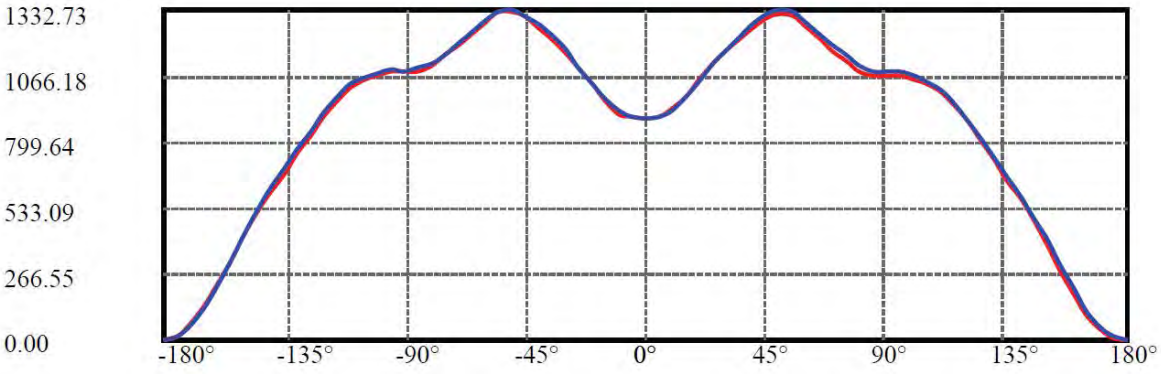
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	897.192	0.000	0	0.00%	0.00%
5.0	901.889	21.508	21.508	0.00%	0.17%
10.0	925.673	65.378	86.885	0.00%	0.71%
15.0	976.021	112.807	199.692	0.00%	1.62%
20.0	1036.215	165.837	365.529	0.00%	2.97%
25.0	1105.637	224.641	590.17	0.00%	4.79%
30.0	1163.346	287.142	877.311	0.00%	7.12%
35.0	1216.088	350.388	1227.7	0.00%	9.96%
40.0	1259.782	413.080	1640.78	0.00%	13.32%
45.0	1298.985	473.777	2114.557	0.00%	17.16%
50.0	1312.113	527.610	2642.167	0.00%	21.44%
55.0	1300.118	567.986	3210.153	0.00%	26.05%
60.0	1266.578	593.284	3803.437	0.00%	30.87%
65.0	1222.472	605.093	4408.53	0.00%	35.78%
70.0	1176.770	607.503	5016.033	0.00%	40.71%
75.0	1135.470	604.382	5620.416	0.00%	45.61%
80.0	1094.903	596.786	6217.201	0.00%	50.45%
85.0	1075.392	589.721	6806.922	0.00%	55.24%
90.0	1070.990	587.696	7394.618	0.00%	60.01%
95.0	1072.264	586.840	7981.458	0.00%	64.77%
100.0	1055.198	578.083	8559.541	0.00%	69.46%
105.0	1034.709	559.201	9118.742	0.00%	74.00%
110.0	998.776	531.520	9650.262	0.00%	78.31%
115.0	951.825	493.905	10144.167	0.00%	82.32%
120.0	887.783	447.212	10591.379	0.00%	85.95%
125.0	811.554	392.797	10984.176	0.00%	89.14%
130.0	732.415	335.710	11319.886	0.00%	91.86%
135.0	657.215	280.795	11600.681	0.00%	94.14%
140.0	580.020	229.084	11829.765	0.00%	96.00%
145.0	494.703	179.309	12009.075	0.00%	97.46%
150.0	401.845	132.023	12141.098	0.00%	98.53%
155.0	301.316	88.986	12230.083	0.00%	99.25%
160.0	203.773	52.975	12283.058	0.00%	99.68%
165.0	118.380	26.550	12309.608	0.00%	99.90%
170.0	52.330	10.126	12319.734	0.00%	99.98%
175.0	16.616	2.466	12322.201	0.00%	100.00%
180.0	2.398	0.227	12322.428	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:165.3 Right:163.1

:C90/270Left:164.8 Right:164.2

Beam Angle(50%Imax):C0/180Left:135.7 Right:134.1

:C90/270Left:136.7 Right:134.5

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	897.19	901.12	937.15	981.02	1048.97	1116.72	1169.23	1218.03	1260.45
22.5	897.19	897.00	933.04	989.05	1047.32	1108.69	1154.61	1208.97	1248.92
45.0	897.19	902.56	930.56	981.84	1046.70	1113.84	1168.20	1212.68	1254.48
67.5	897.19	902.56	926.24	976.90	1036.00	1100.45	1148.43	1199.09	1246.24
90.0	897.19	900.71	929.95	982.25	1044.65	1115.07	1167.58	1221.94	1270.75
112.5	897.19	899.47	926.24	978.34	1032.29	1105.60	1160.17	1210.41	1265.39
135.0	897.19	895.56	920.89	972.98	1037.85	1103.54	1167.99	1218.44	1263.34
157.5	897.19	900.50	920.89	969.48	1021.79	1093.45	1160.79	1208.15	1250.57
180.0	897.19	903.79	913.68	964.54	1030.64	1098.60	1160.37	1215.15	1259.63
202.5	897.19	902.76	921.50	968.25	1021.99	1092.42	1149.87	1214.94	1254.48
225.0	897.19	899.26	915.53	969.90	1032.08	1098.60	1163.26	1221.94	1262.31
247.5	897.19	902.35	922.53	968.66	1027.76	1100.24	1166.76	1219.89	1256.95
270.0	897.19	904.82	929.53	976.07	1035.38	1104.36	1172.94	1230.39	1274.66
292.5	897.19	907.91	929.12	978.54	1038.67	1112.39	1171.91	1220.92	1266.63
315.0	897.19	906.68	922.53	979.99	1039.91	1118.78	1177.26	1225.24	1268.48
337.5	897.19	903.18	931.39	978.54	1037.44	1107.45	1154.20	1211.24	1253.24
360.0	897.19	901.12	937.15	981.02	1048.97	1116.72	1169.23	1218.03	1260.45

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1296.28	1317.08	1310.29	1268.69	1214.12	1168.61	1128.46	1088.30	1071.21
22.5	1289.49	1290.72	1271.37	1234.09	1182.41	1134.84	1097.77	1060.30	1044.85
45.0	1283.93	1297.11	1286.40	1252.22	1205.27	1154.61	1116.31	1075.12	1060.30
67.5	1288.25	1295.46	1283.31	1248.30	1203.21	1153.37	1113.22	1077.80	1059.47
90.0	1312.34	1331.50	1322.02	1281.04	1233.06	1191.06	1149.25	1107.86	1087.68
112.5	1307.81	1314.61	1298.55	1273.63	1234.71	1188.17	1146.58	1105.80	1083.36
135.0	1298.34	1322.64	1316.87	1279.81	1229.98	1187.35	1143.69	1102.30	1078.21
157.5	1297.11	1309.87	1299.99	1277.75	1238.83	1196.00	1153.99	1113.63	1091.80
180.0	1304.11	1326.14	1324.70	1286.19	1236.15	1194.56	1150.90	1110.95	1087.27
202.5	1293.19	1296.90	1280.84	1260.45	1220.50	1176.23	1132.99	1088.51	1066.27
225.0	1301.64	1322.85	1323.67	1290.93	1240.89	1194.56	1156.67	1106.42	1084.59
247.5	1294.64	1304.93	1289.49	1266.63	1234.51	1193.94	1150.08	1108.89	1085.42
270.0	1309.05	1332.73	1323.46	1287.22	1244.80	1197.65	1153.78	1114.04	1097.77
292.5	1302.87	1304.93	1283.31	1250.36	1216.18	1167.58	1123.31	1083.56	1066.47
315.0	1309.67	1323.26	1309.67	1272.19	1228.53	1183.03	1145.55	1107.04	1092.42
337.5	1295.05	1303.08	1277.96	1235.74	1196.41	1146.78	1104.98	1067.91	1049.18
360.0	1296.28	1317.08	1310.29	1268.69	1214.12	1168.61	1128.46	1088.30	1071.21

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1065.86	1071.21	1054.32	1032.50	1003.26	949.10	886.50	808.04	726.70
22.5	1039.29	1041.35	1021.58	1004.28	963.31	918.62	855.81	775.50	698.49
45.0	1056.18	1060.09	1042.17	1020.55	986.16	935.09	865.70	786.01	706.31
67.5	1055.56	1053.50	1035.58	1015.61	974.22	928.92	865.70	786.83	704.46
90.0	1088.10	1083.98	1063.80	1039.91	1006.76	956.51	885.88	819.37	736.17
112.5	1083.56	1076.98	1061.94	1037.85	992.14	951.77	890.20	814.84	730.20
135.0	1076.56	1075.12	1057.62	1035.38	1003.26	957.13	890.00	816.90	737.61
157.5	1087.27	1086.04	1073.06	1049.79	1010.87	964.54	905.24	832.75	746.06
180.0	1085.42	1087.27	1067.71	1047.94	1014.58	968.04	904.21	826.78	749.56
202.5	1060.30	1061.33	1048.76	1022.41	992.75	945.60	889.59	811.95	738.23
225.0	1082.12	1082.95	1068.53	1047.32	1018.29	970.31	907.91	826.37	749.76
247.5	1080.06	1081.30	1065.03	1040.32	1006.96	961.04	899.26	822.04	745.85
270.0	1088.51	1095.71	1078.21	1063.59	1030.64	984.31	918.62	846.34	771.39
292.5	1059.47	1063.80	1047.94	1035.17	996.05	951.16	886.50	809.48	731.85
315.0	1085.42	1090.36	1070.80	1052.06	1013.96	962.48	894.73	818.13	743.38
337.5	1042.17	1045.26	1026.11	1010.67	967.22	924.59	858.70	783.54	702.61
360.0	1065.86	1071.21	1054.32	1032.50	1003.26	949.10	886.50	808.04	726.70

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	649.27	570.41	485.98	383.22	281.91	185.33	100.90	42.21	11.12
22.5	624.98	545.90	459.21	370.87	270.17	182.45	97.40	41.60	13.39
45.0	627.03	553.93	465.59	370.04	270.58	179.15	97.81	40.16	11.53
67.5	634.04	556.61	472.18	381.57	282.53	185.54	102.34	42.63	13.80
90.0	658.75	580.50	499.36	406.90	305.18	207.98	119.23	50.86	15.86
112.5	656.89	582.76	492.36	403.20	305.18	207.98	123.14	52.92	16.89
135.0	658.75	583.79	502.25	415.14	313.83	214.57	129.53	59.51	19.15
157.5	668.84	590.38	507.19	415.35	316.50	213.34	131.79	61.37	21.00
180.0	673.16	599.03	517.90	426.05	325.15	225.49	137.35	64.45	19.77
202.5	663.28	589.14	505.95	418.44	320.62	217.25	133.64	64.04	21.42
225.0	676.04	598.62	517.69	424.41	325.15	227.75	137.35	65.28	21.00
247.5	672.13	593.68	507.60	416.17	317.53	216.22	130.56	60.13	22.45
270.0	693.34	612.00	526.13	425.02	320.21	218.48	129.32	55.81	18.74
292.5	659.78	580.91	492.57	398.67	294.26	201.19	115.11	49.42	14.42
315.0	665.54	583.38	494.21	395.99	295.29	192.95	108.11	46.33	14.21
337.5	633.62	559.29	469.09	378.49	276.97	184.71	100.49	40.57	11.12
360.0	649.27	570.41	485.98	383.22	281.91	185.33	100.90	42.21	11.12

C/γ(°)	180.0
0.0	2.40
22.5	2.40
45.0	2.40
67.5	2.40
90.0	2.40
112.5	2.40
135.0	2.40
157.5	2.40
180.0	2.40
202.5	2.40
225.0	2.40
247.5	2.40
270.0	2.40
292.5	2.40
315.0	2.40
337.5	2.40
360.0	2.40

3.2.3 Model Number: HIDFA-100S-EX39-8CCT-BYP/3SP, 4000K at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.040	60	0.758	90.220	0.991

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
13649.37	151.29	26.40	56.07

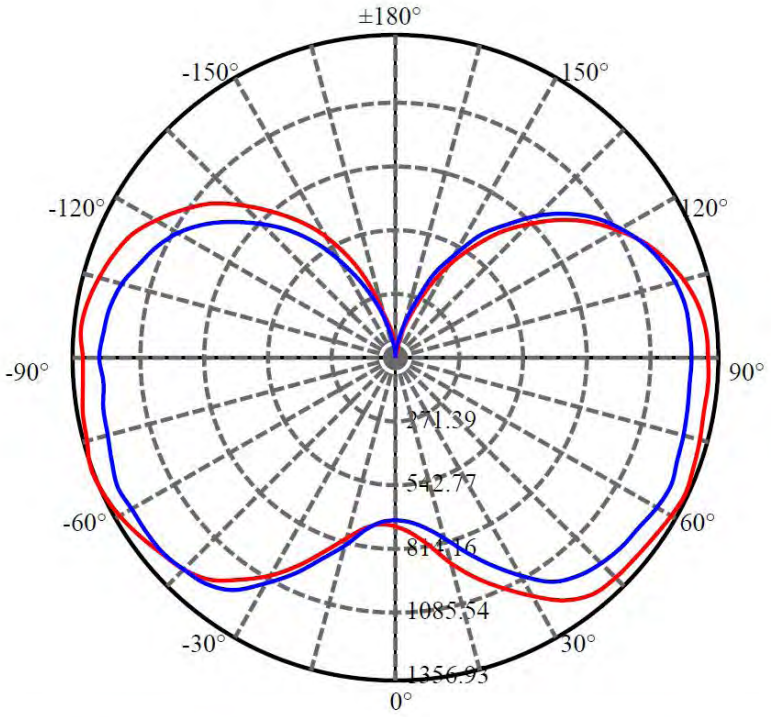
Zonal Flux Diagram

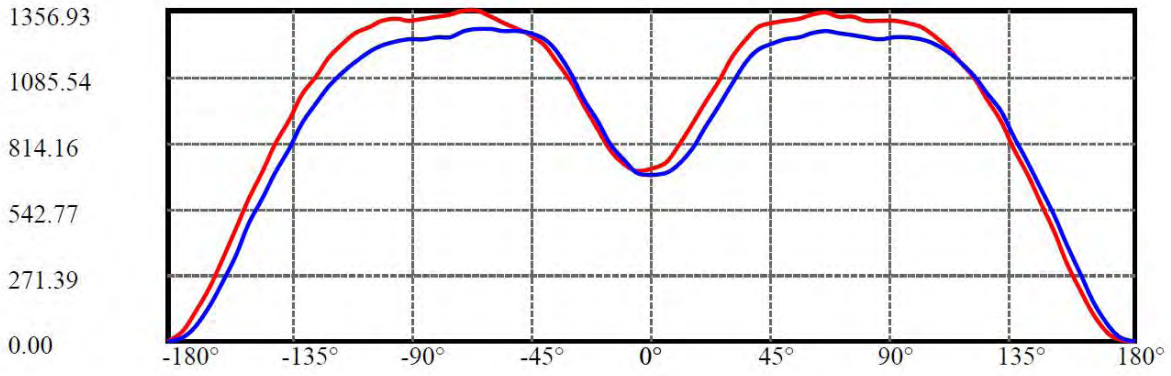
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	689.187	0.000	0	0.00%	0.00%
5.0	698.473	16.578	16.578	0.00%	0.12%
10.0	738.195	51.282	67.86	0.00%	0.50%
15.0	807.390	91.359	159.219	0.00%	1.17%
20.0	895.865	139.808	299.027	0.00%	2.19%
25.0	990.056	197.086	496.113	0.00%	3.63%
30.0	1084.327	261.713	757.826	0.00%	5.55%
35.0	1167.006	330.607	1088.433	0.00%	7.97%
40.0	1223.682	397.942	1486.375	0.00%	10.89%
45.0	1253.174	457.851	1944.226	0.00%	14.24%
50.0	1269.753	509.260	2453.486	0.00%	17.98%
55.0	1280.241	554.143	3007.629	0.00%	22.03%
60.0	1296.307	595.441	3603.07	0.00%	26.40%
65.0	1308.411	633.248	4236.318	0.00%	31.04%
70.0	1299.422	660.590	4896.908	0.00%	35.88%
75.0	1286.786	676.289	5573.197	0.00%	40.83%
80.0	1280.083	687.049	6260.246	0.00%	45.86%
85.0	1273.755	694.132	6954.378	0.00%	50.95%
90.0	1276.258	698.273	7652.651	0.00%	56.07%
95.0	1272.237	697.938	8350.59	0.00%	61.18%
100.0	1256.900	687.583	9038.173	0.00%	66.22%
105.0	1233.125	666.786	9704.959	0.00%	71.10%
110.0	1195.334	635.513	10340.472	0.00%	75.76%
115.0	1148.357	594.456	10934.928	0.00%	80.11%
120.0	1086.259	544.428	11479.355	0.00%	84.10%
125.0	1010.874	486.054	11965.409	0.00%	87.66%
130.0	924.055	422.122	12387.531	0.00%	90.76%
135.0	824.502	354.771	12742.303	0.00%	93.35%
140.0	720.079	287.393	13029.696	0.00%	95.46%
145.0	613.980	223.885	13253.581	0.00%	97.10%
150.0	498.222	165.000	13418.581	0.00%	98.31%
155.0	377.161	111.876	13530.457	0.00%	99.13%
160.0	258.642	67.553	13598.01	0.00%	99.62%
165.0	152.327	34.477	13632.487	0.00%	99.88%
170.0	67.795	13.406	13645.893	0.00%	99.97%
175.0	18.511	3.216	13649.11	0.00%	100.00%
180.0	2.050	0.260	13649.369	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:169.0 Right:163.6

:C90/270Left:165.7 Right:166.6

Beam Angle(50%Imax):C0/180Left:145.9 Right:140.2

:C90/270Left:142.6 Right:144.5

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	707.17	733.66	797.38	890.74	981.58	1069.58	1160.74	1243.06	1291.95
22.5	700.23	720.41	781.29	861.72	963.29	1060.75	1156.01	1226.66	1268.93
45.0	694.55	706.85	755.11	827.97	918.81	1012.18	1101.75	1169.57	1216.25
67.5	689.50	700.86	739.02	807.15	900.52	996.09	1089.45	1165.78	1213.73
90.0	680.99	692.34	727.04	790.75	873.71	966.75	1057.60	1147.17	1200.48
112.5	683.51	686.66	720.73	779.71	859.83	945.31	1043.72	1130.77	1193.86
135.0	678.46	682.56	708.11	766.15	849.74	946.25	1034.89	1122.57	1182.50
157.5	679.09	676.26	702.12	761.10	837.12	922.28	1007.13	1090.71	1154.74
180.0	707.17	703.70	727.04	786.34	866.77	967.07	1060.43	1144.02	1213.41
202.5	700.23	702.12	727.98	785.71	874.65	971.17	1067.37	1151.91	1223.50
225.0	694.55	700.86	725.15	790.12	880.02	971.49	1066.74	1154.11	1222.56
247.5	689.50	694.86	733.35	810.94	903.67	1001.77	1100.49	1186.29	1248.42
270.0	680.99	692.66	741.23	812.52	899.57	997.04	1097.97	1188.18	1242.11
292.5	683.51	695.50	744.07	820.09	906.19	1002.40	1090.40	1173.04	1226.97
315.0	678.46	696.13	740.92	814.72	914.71	1010.91	1113.74	1192.28	1239.91
337.5	679.09	690.13	740.60	812.52	903.67	999.87	1100.81	1185.97	1239.59
360.0	707.17	733.66	797.38	890.74	981.58	1069.58	1160.74	1243.06	1291.95

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1309.61	1314.03	1321.60	1337.37	1347.78	1330.43	1327.91	1314.35	1317.18
22.5	1280.28	1289.43	1289.74	1298.89	1311.51	1286.59	1275.55	1267.66	1268.29
45.0	1234.86	1261.99	1279.33	1305.51	1321.28	1315.29	1308.98	1301.10	1303.62
67.5	1240.85	1254.42	1266.09	1280.91	1291.64	1283.12	1273.03	1263.88	1254.42
90.0	1223.19	1236.75	1244.64	1262.93	1274.60	1262.93	1254.73	1247.48	1239.59
112.5	1231.39	1250.63	1261.04	1277.44	1293.53	1296.37	1289.74	1287.53	1279.02
135.0	1220.35	1239.59	1251.58	1271.13	1286.59	1273.97	1257.89	1253.47	1239.28
157.5	1197.01	1218.46	1238.64	1264.82	1284.07	1282.80	1268.29	1267.66	1257.57
180.0	1256.94	1282.17	1307.72	1334.53	1355.35	1356.93	1337.69	1331.69	1322.55
202.5	1262.93	1287.22	1293.53	1301.41	1315.92	1315.61	1293.21	1286.27	1268.29
225.0	1272.39	1299.52	1313.08	1323.81	1332.32	1339.89	1327.28	1319.39	1310.56
247.5	1275.55	1289.11	1293.21	1306.78	1313.71	1302.04	1279.02	1272.08	1260.72
270.0	1262.30	1275.23	1275.23	1281.23	1284.07	1270.19	1249.05	1245.27	1235.81
292.5	1256.31	1269.56	1285.33	1307.72	1314.03	1308.98	1297.94	1292.58	1292.58
315.0	1258.52	1270.50	1275.86	1286.90	1292.27	1265.14	1255.36	1244.32	1244.01
337.5	1268.29	1277.44	1287.22	1299.52	1315.92	1300.47	1292.90	1286.59	1286.59
360.0	1309.61	1314.03	1321.60	1337.37	1347.78	1330.43	1327.91	1314.35	1317.18

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1315.92	1308.35	1285.96	1256.31	1207.10	1149.70	1076.20	991.67	898.62
22.5	1270.50	1265.46	1245.90	1219.40	1175.56	1129.51	1068.00	991.36	899.26
45.0	1304.25	1299.52	1279.33	1251.26	1204.26	1143.39	1068.63	987.57	897.99
67.5	1257.89	1252.84	1238.33	1216.25	1177.45	1124.46	1072.10	996.09	909.35
90.0	1245.58	1244.95	1238.01	1219.40	1185.97	1144.34	1091.03	1023.21	940.58
112.5	1283.12	1280.60	1271.76	1247.79	1211.52	1165.78	1100.81	1029.84	944.99
135.0	1242.43	1243.38	1237.07	1216.88	1184.39	1148.44	1094.18	1031.42	956.98
157.5	1262.62	1266.40	1255.99	1231.07	1196.06	1150.01	1087.88	1014.70	929.85
180.0	1317.50	1323.18	1313.08	1291.95	1263.56	1221.93	1160.42	1088.51	1008.39
202.5	1269.56	1269.87	1258.52	1243.38	1215.93	1177.45	1127.62	1061.70	978.43
225.0	1314.03	1308.98	1296.68	1268.93	1234.86	1186.60	1116.58	1033.62	949.41
247.5	1265.14	1261.35	1241.80	1227.61	1195.12	1156.32	1098.28	1023.53	935.21
270.0	1241.48	1230.76	1215.93	1187.55	1149.70	1107.43	1049.08	975.27	890.74
292.5	1297.31	1285.96	1266.09	1234.54	1191.96	1138.97	1068.32	983.79	891.05
315.0	1245.27	1238.33	1217.51	1191.65	1154.74	1107.43	1050.03	976.22	882.22
337.5	1287.53	1275.86	1248.42	1226.03	1177.14	1121.94	1050.97	965.49	871.81
360.0	1315.92	1308.35	1285.96	1256.31	1207.10	1149.70	1076.20	991.67	898.62

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	790.44	683.19	571.54	447.58	319.83	205.02	107.56	37.85	5.68
22.5	799.27	693.92	582.26	457.36	334.34	222.37	117.97	45.42	3.79
45.0	795.80	685.72	575.32	460.19	345.70	233.09	132.48	53.31	5.68
67.5	806.52	705.59	605.92	496.15	370.62	260.22	152.98	68.45	15.77
90.0	842.16	734.92	632.10	510.03	393.96	268.42	158.34	63.40	20.82
112.5	850.37	741.23	635.88	522.65	405.31	293.65	182.63	86.42	25.23
135.0	860.77	759.21	657.96	545.99	424.55	297.75	183.57	88.63	27.13
157.5	834.91	730.82	628.31	516.02	405.00	283.25	179.16	85.16	26.18
180.0	910.30	805.58	699.91	584.47	459.88	330.24	218.27	115.13	43.53
202.5	883.17	784.44	679.72	571.54	449.15	318.26	205.34	105.66	37.53
225.0	851.94	742.49	631.47	516.02	399.00	278.83	174.43	88.63	29.65
247.5	835.54	737.45	636.83	519.81	389.23	267.47	158.66	70.97	21.45
270.0	792.33	694.86	593.62	477.86	353.27	238.77	140.05	60.88	14.19
292.5	786.97	679.09	563.34	446.63	333.71	217.32	112.60	41.32	8.20
315.0	781.29	680.99	578.79	463.35	333.08	219.53	118.60	41.00	4.42
337.5	770.25	661.75	550.72	435.91	317.94	204.08	94.63	32.49	6.94
360.0	790.44	683.19	571.54	447.58	319.83	205.02	107.56	37.85	5.68

C/γ(°)	180.0
0.0	3.15
22.5	2.21
45.0	2.21
67.5	1.89
90.0	1.89
112.5	1.89
135.0	1.58
157.5	1.58
180.0	3.15
202.5	2.21
225.0	2.21
247.5	1.89
270.0	1.89
292.5	1.89
315.0	1.58
337.5	1.58
360.0	3.15

3.2.4 Model Number: HIDFA-100S-EX39-8CCT-BYP/3SP, 4000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.190	60	0.370	91.466	0.891

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
13575.83	148.42	25.42	55.32

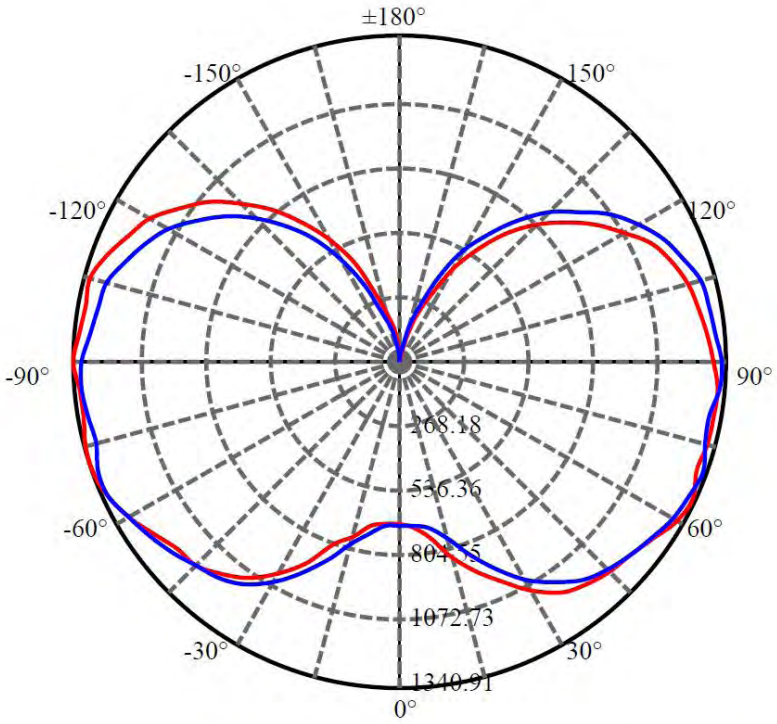
Zonal Flux Diagram

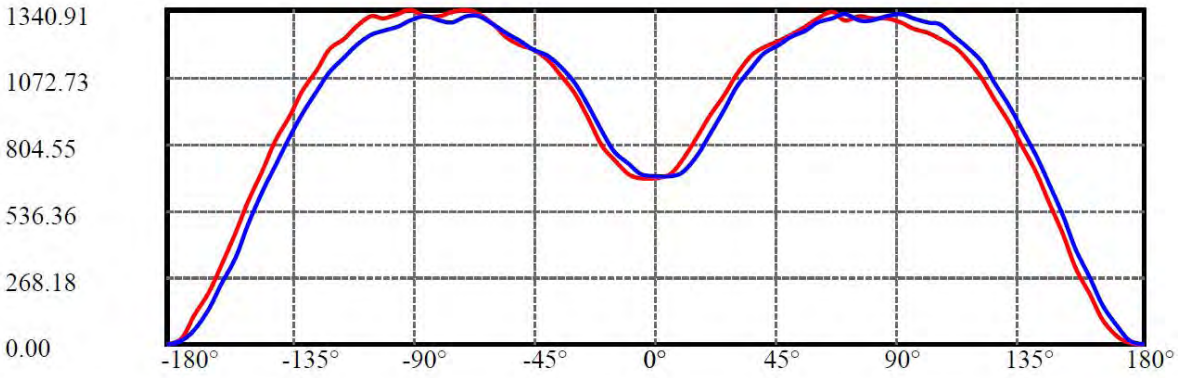
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	669.243	0.000	0	0.00%	0.00%
5.0	673.489	16.044	16.044	0.00%	0.12%
10.0	709.613	49.391	65.435	0.00%	0.48%
15.0	772.359	87.634	153.069	0.00%	1.13%
20.0	857.682	133.802	286.871	0.00%	2.11%
25.0	954.429	189.387	476.259	0.00%	3.51%
30.0	1042.482	252.063	728.321	0.00%	5.36%
35.0	1115.034	316.997	1045.319	0.00%	7.70%
40.0	1163.694	379.503	1424.821	0.00%	10.50%
45.0	1185.800	434.507	1859.328	0.00%	13.70%
50.0	1204.940	482.594	2341.922	0.00%	17.25%
55.0	1234.898	529.956	2871.878	0.00%	21.15%
60.0	1271.966	578.944	3450.822	0.00%	25.42%
65.0	1296.430	624.075	4074.897	0.00%	30.02%
70.0	1297.441	657.024	4731.921	0.00%	34.86%
75.0	1287.265	676.120	5408.041	0.00%	39.84%
80.0	1287.433	689.224	6097.265	0.00%	44.91%
85.0	1296.127	702.203	6799.468	0.00%	50.09%
90.0	1296.296	710.333	7509.801	0.00%	55.32%
95.0	1274.796	704.894	8214.695	0.00%	60.51%
100.0	1259.801	689.677	8904.372	0.00%	65.59%
105.0	1248.849	672.498	9576.87	0.00%	70.54%
110.0	1207.535	643.526	10220.396	0.00%	75.28%
115.0	1154.562	599.459	10819.855	0.00%	79.70%
120.0	1097.477	549.019	11368.874	0.00%	83.74%
125.0	1021.724	491.538	11860.411	0.00%	87.36%
130.0	940.006	428.194	12288.606	0.00%	90.52%
135.0	846.393	362.545	12651.15	0.00%	93.19%
140.0	742.704	295.682	12946.832	0.00%	95.37%
145.0	631.164	230.535	13177.367	0.00%	97.06%
150.0	507.425	168.869	13346.236	0.00%	98.31%
155.0	371.217	112.304	13458.54	0.00%	99.14%
160.0	253.982	66.422	13524.961	0.00%	99.63%
165.0	152.686	34.091	13559.053	0.00%	99.88%
170.0	68.744	13.488	13572.541	0.00%	99.98%
175.0	14.389	3.089	13575.63	0.00%	100.00%
180.0	1.820	0.202	13575.831	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:163.3

:C90/270Left:165.5 Right:166.7

Beam Angle(50%Imax):C0/180Left:146.2 Right:140.8

:C90/270Left:142.7 Right:144.3

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	666.95	685.28	739.74	830.32	917.13	1000.70	1084.27	1158.67	1191.56
22.5	663.72	685.82	743.51	816.30	921.98	1008.78	1098.29	1158.13	1185.63
45.0	678.81	676.66	715.48	779.10	877.77	962.42	1052.46	1116.62	1147.35
67.5	672.88	670.73	708.47	769.39	854.58	965.65	1044.37	1113.92	1155.44
90.0	671.26	674.50	692.83	755.91	842.18	942.47	1034.66	1106.91	1167.30
112.5	666.41	673.42	695.53	745.13	822.23	911.19	1007.71	1086.42	1154.36
135.0	668.57	662.10	686.36	752.14	820.08	920.90	1018.49	1106.37	1165.68
157.5	665.33	662.64	691.21	740.28	822.23	907.42	986.14	1077.26	1124.71
180.0	666.95	664.79	682.59	738.66	800.67	912.81	1008.24	1079.95	1138.72
202.5	663.72	669.11	694.45	742.43	823.85	930.60	1022.80	1098.83	1160.29
225.0	678.81	672.88	692.29	755.37	847.03	933.84	1022.26	1090.20	1153.82
247.5	672.88	676.12	704.15	778.56	870.22	972.12	1060.01	1134.41	1187.25
270.0	671.26	678.81	721.95	778.02	861.05	965.11	1050.30	1112.84	1161.37
292.5	666.41	677.20	730.03	790.42	878.31	978.59	1061.62	1125.78	1155.44
315.0	668.57	670.73	737.04	789.88	886.39	988.83	1072.41	1145.19	1185.09
337.5	665.33	675.04	718.17	795.81	877.23	969.42	1055.69	1129.02	1185.09
360.0	666.95	685.28	739.74	830.32	917.13	1000.70	1084.27	1158.67	1191.56

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1216.90	1237.39	1271.90	1311.26	1330.67	1297.24	1312.88	1305.87	1307.48
22.5	1188.33	1202.88	1246.02	1280.52	1270.28	1236.85	1246.56	1262.73	1264.89
45.0	1168.92	1190.48	1217.98	1256.26	1293.46	1287.53	1281.60	1298.32	1309.64
67.5	1173.23	1198.57	1241.70	1263.81	1284.30	1265.43	1236.85	1255.18	1275.67
90.0	1202.88	1233.08	1261.65	1291.85	1310.72	1327.43	1302.63	1296.16	1316.65
112.5	1189.94	1208.28	1220.14	1243.32	1275.13	1309.64	1289.15	1273.52	1296.70
135.0	1175.93	1181.86	1203.42	1254.64	1294.00	1308.56	1275.67	1259.50	1268.66
157.5	1142.50	1155.44	1180.78	1227.15	1260.58	1308.02	1300.47	1285.38	1305.33
180.0	1179.70	1196.95	1232.00	1280.52	1320.96	1337.14	1336.60	1318.81	1316.65
202.5	1195.34	1218.52	1234.70	1274.05	1296.70	1299.94	1286.99	1272.98	1278.37
225.0	1192.64	1214.21	1237.93	1269.20	1300.47	1322.58	1318.27	1312.88	1321.50
247.5	1205.04	1224.99	1246.56	1282.14	1306.41	1305.87	1282.68	1281.06	1300.47
270.0	1180.78	1216.90	1246.56	1281.60	1318.81	1315.03	1287.53	1301.01	1313.95
292.5	1168.92	1183.47	1216.90	1260.04	1289.69	1288.07	1285.38	1295.62	1297.24
315.0	1183.47	1197.49	1253.57	1300.47	1291.85	1261.65	1264.89	1276.75	1272.98
337.5	1208.28	1218.52	1246.56	1274.59	1298.86	1288.07	1288.07	1303.17	1291.85
360.0	1216.90	1237.39	1271.90	1311.26	1330.67	1297.24	1312.88	1305.87	1307.48

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1290.77	1267.58	1249.25	1224.99	1191.02	1142.50	1065.40	981.29	891.78
22.5	1254.64	1234.70	1221.76	1211.51	1171.61	1109.07	1054.61	980.75	913.35
45.0	1305.33	1276.75	1270.82	1237.39	1181.86	1122.55	1065.40	986.14	895.56
67.5	1278.37	1253.03	1241.17	1233.62	1198.03	1136.03	1088.58	1022.80	945.16
90.0	1323.66	1303.71	1294.00	1281.06	1236.31	1192.64	1135.49	1052.46	958.10
112.5	1307.48	1282.14	1269.20	1255.18	1212.05	1163.53	1102.60	1031.43	968.35
135.0	1289.15	1266.51	1258.96	1263.27	1208.82	1170.00	1133.33	1064.32	988.30
157.5	1313.41	1289.69	1283.76	1268.12	1223.91	1182.94	1113.38	1034.66	961.88
180.0	1340.91	1323.66	1306.94	1317.19	1278.37	1227.15	1184.01	1096.67	1019.03
202.5	1285.38	1271.90	1249.79	1256.26	1226.61	1170.53	1126.32	1062.16	993.15
225.0	1320.96	1302.09	1284.84	1271.36	1223.91	1166.76	1107.99	1028.19	951.09
247.5	1292.93	1270.82	1252.49	1250.87	1219.06	1164.06	1105.30	1040.06	954.33
270.0	1302.63	1275.13	1259.50	1244.40	1202.88	1148.97	1092.36	1014.18	923.60
292.5	1288.07	1271.36	1245.48	1226.07	1183.47	1123.09	1060.54	978.59	887.47
315.0	1264.35	1242.78	1226.07	1214.21	1181.86	1132.79	1073.48	1002.31	912.27
337.5	1282.68	1264.89	1242.78	1226.07	1180.78	1120.39	1050.84	971.58	876.69
360.0	1290.77	1267.58	1249.25	1224.99	1191.02	1142.50	1065.40	981.29	891.78

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	796.35	689.06	576.37	441.04	305.17	200.03	98.67	35.59	4.85
22.5	813.61	705.77	597.94	458.83	318.65	208.66	112.15	42.59	4.85
45.0	803.36	692.29	574.75	463.68	332.13	227.53	131.02	53.92	6.47
67.5	855.66	758.61	655.63	524.07	375.26	257.72	156.36	66.32	13.48
90.0	865.90	758.07	648.08	518.14	386.04	266.35	161.21	77.64	16.71
112.5	864.29	776.40	661.56	540.25	405.45	284.68	176.85	83.57	23.72
135.0	900.95	802.82	704.15	574.21	418.93	298.70	189.79	84.11	19.41
157.5	872.37	769.39	655.63	540.79	410.85	282.52	176.85	83.57	11.86
180.0	918.74	816.84	700.92	577.99	449.13	315.41	207.04	117.54	25.88
202.5	904.72	804.98	704.15	589.31	438.88	310.56	204.34	104.06	17.79
225.0	849.19	748.37	630.83	522.99	402.22	272.82	175.23	84.11	18.87
247.5	865.37	764.00	654.55	522.99	377.42	258.80	156.90	70.09	21.57
270.0	830.32	720.33	613.57	484.17	351.54	240.47	140.72	60.39	15.64
292.5	793.12	684.20	562.89	448.59	324.04	216.75	122.93	48.53	12.94
315.0	828.70	720.33	604.41	466.92	329.43	217.82	118.08	43.67	7.01
337.5	779.64	671.80	553.19	444.81	314.34	204.88	114.84	44.21	9.17
360.0	796.35	689.06	576.37	441.04	305.17	200.03	98.67	35.59	4.85

C/γ(°)	180.0
0.0	3.24
22.5	1.62
45.0	1.62
67.5	1.62
90.0	1.62
112.5	1.62
135.0	1.62
157.5	1.62
180.0	3.24
202.5	1.62
225.0	1.62
247.5	1.62
270.0	1.62
292.5	1.62
315.0	1.62
337.5	1.62
360.0	3.24

3.2.5 Model Number: HIDFA-100S-EX39-8CCT-BYP/3SP, 5000K at 120V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
120.120	60	0.780	92.880	0.991

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
13498.72	145.34	25.49	55.22

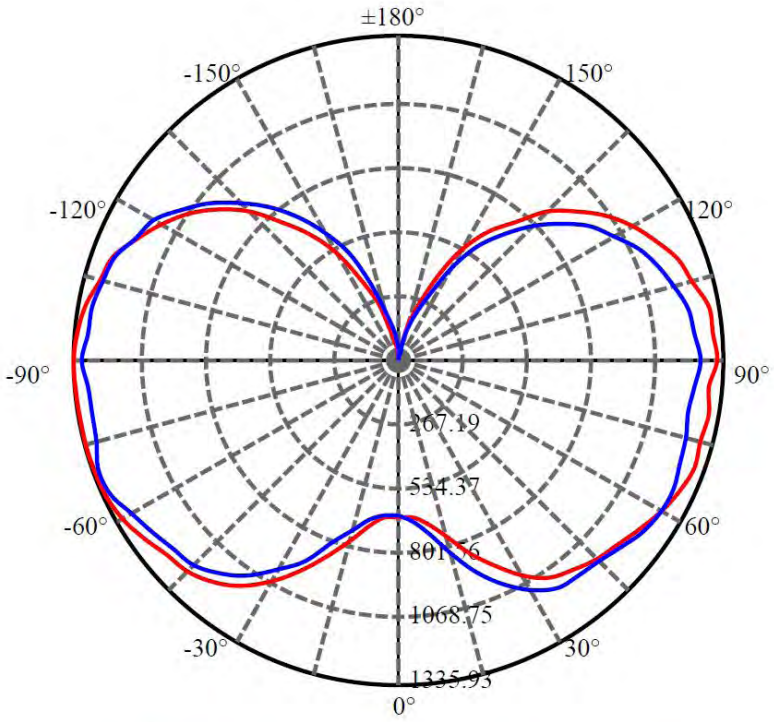
Zonal Flux Diagram

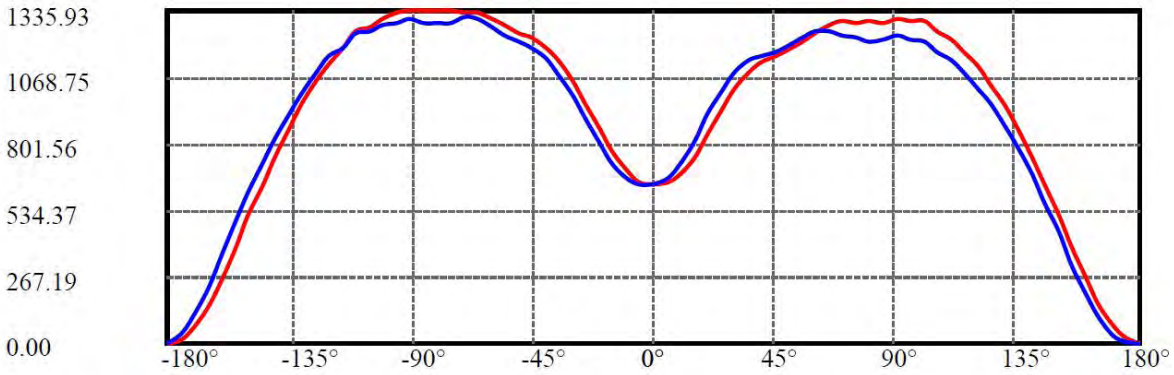
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	644.220	0.000	0	0.00%	0.00%
5.0	653.373	15.514	15.514	0.00%	0.11%
10.0	693.197	48.188	63.701	0.00%	0.47%
15.0	763.940	86.503	150.205	0.00%	1.11%
20.0	854.307	133.483	283.687	0.00%	2.10%
25.0	951.462	189.545	473.232	0.00%	3.51%
30.0	1038.778	252.108	725.34	0.00%	5.37%
35.0	1110.153	316.838	1042.178	0.00%	7.72%
40.0	1155.062	378.532	1420.71	0.00%	10.52%
45.0	1180.402	433.244	1853.955	0.00%	13.73%
50.0	1200.108	481.911	2335.866	0.00%	17.30%
55.0	1228.141	528.873	2864.738	0.00%	21.22%
60.0	1262.386	576.587	3441.325	0.00%	25.49%
65.0	1285.390	620.234	4061.56	0.00%	30.09%
70.0	1282.394	650.872	4712.431	0.00%	34.91%
75.0	1272.583	668.466	5380.897	0.00%	39.86%
80.0	1268.707	680.662	6061.56	0.00%	44.90%
85.0	1274.342	691.773	6753.332	0.00%	50.03%
90.0	1284.153	701.202	7454.534	0.00%	55.22%
95.0	1271.538	700.235	8154.769	0.00%	60.41%
100.0	1259.803	688.125	8842.894	0.00%	65.51%
105.0	1231.659	666.852	9509.746	0.00%	70.45%
110.0	1201.757	636.469	10146.215	0.00%	75.16%
115.0	1152.946	596.629	10742.844	0.00%	79.58%
120.0	1094.872	546.679	11289.523	0.00%	83.63%
125.0	1023.717	489.893	11779.417	0.00%	87.26%
130.0	942.722	427.755	12207.171	0.00%	90.43%
135.0	848.947	362.125	12569.296	0.00%	93.11%
140.0	744.646	295.079	12864.375	0.00%	95.30%
145.0	634.161	229.989	13094.364	0.00%	97.00%
150.0	515.706	169.245	13263.609	0.00%	98.26%
155.0	391.067	114.666	13378.275	0.00%	99.11%
160.0	264.614	68.672	13446.947	0.00%	99.62%
165.0	156.108	34.608	13481.555	0.00%	99.87%
170.0	73.134	13.558	13495.113	0.00%	99.97%
175.0	20.750	3.340	13498.452	0.00%	100.00%
180.0	1.869	0.268	13498.721	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:165.9 Right:166.6

:C90/270Left:169.3 Right:163.6

Beam Angle(50%Imax):C0/180Left:143.4 Right:143.8

:C90/270Left:147.8 Right:141.0

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	642.90	647.74	682.48	745.80	838.59	933.57	1017.12	1087.04	1125.30
22.5	645.10	652.14	699.19	765.15	858.37	945.44	1034.71	1101.55	1137.61
45.0	646.86	660.93	700.95	780.98	859.25	957.76	1041.75	1109.47	1156.08
67.5	642.02	662.69	724.25	809.12	893.99	985.90	1076.05	1136.29	1170.59
90.0	641.14	662.25	722.49	816.16	920.82	1011.84	1089.68	1138.05	1157.40
112.5	643.34	667.09	725.57	813.08	903.67	999.53	1072.97	1133.65	1144.21
135.0	644.66	668.85	730.85	821.44	915.98	1003.93	1092.76	1146.84	1167.51
157.5	647.74	671.04	726.01	816.16	920.38	1023.28	1101.55	1168.83	1204.45
180.0	642.90	651.26	693.91	770.43	859.25	959.51	1052.30	1137.17	1189.94
202.5	645.10	644.66	687.75	754.16	857.93	952.04	1045.70	1123.10	1179.39
225.0	646.86	646.86	668.85	738.76	831.55	936.65	1025.92	1099.35	1164.87
247.5	642.02	643.78	670.17	722.49	804.73	911.58	1008.77	1091.88	1152.56
270.0	641.14	640.26	664.45	718.10	801.21	908.06	993.81	1077.80	1142.01
292.5	643.34	640.70	660.05	712.82	791.97	879.92	973.59	1059.34	1124.42
315.0	644.66	645.54	664.89	718.54	797.69	898.83	992.06	1077.37	1134.97
337.5	647.74	648.18	669.29	719.86	813.52	915.54	1001.73	1074.73	1129.69
360.0	642.90	647.74	682.48	745.80	838.59	933.57	1017.12	1087.04	1125.30

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1152.56	1181.58	1210.17	1244.03	1274.81	1293.28	1288.00	1296.36	1283.60
22.5	1146.84	1155.20	1181.58	1222.04	1248.42	1221.60	1226.00	1224.24	1215.00
45.0	1172.79	1187.74	1207.09	1232.59	1268.21	1254.58	1261.62	1258.54	1257.66
67.5	1186.42	1193.02	1221.60	1251.94	1261.62	1239.63	1229.08	1218.08	1229.96
90.0	1171.03	1196.53	1226.44	1250.18	1251.94	1233.47	1224.68	1207.53	1223.80
112.5	1170.59	1193.90	1217.20	1244.91	1271.73	1272.17	1263.82	1255.02	1273.49
135.0	1171.91	1197.41	1244.03	1272.17	1274.81	1242.71	1234.79	1231.27	1246.23
157.5	1224.24	1242.71	1264.26	1297.68	1313.51	1306.03	1300.31	1285.36	1303.39
180.0	1228.64	1247.11	1275.69	1304.27	1328.46	1327.14	1331.98	1334.17	1335.93
202.5	1204.45	1229.08	1253.26	1299.43	1303.39	1290.64	1266.45	1266.89	1281.84
225.0	1196.10	1216.32	1250.62	1282.72	1315.27	1327.14	1313.51	1324.06	1334.61
247.5	1176.31	1192.58	1224.68	1257.22	1283.16	1282.72	1259.42	1261.18	1262.50
270.0	1187.74	1210.61	1233.47	1267.77	1302.51	1313.51	1290.20	1282.72	1284.48
292.5	1173.67	1198.73	1224.68	1263.38	1279.65	1293.28	1295.04	1286.24	1292.84
315.0	1165.31	1178.51	1203.57	1251.50	1290.20	1297.24	1267.33	1259.42	1258.98
337.5	1157.84	1180.70	1211.93	1256.34	1298.55	1323.18	1309.11	1308.23	1305.15
360.0	1152.56	1181.58	1210.17	1244.03	1274.81	1293.28	1288.00	1296.36	1283.60

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1306.47	1296.80	1294.60	1254.14	1218.08	1167.95	1112.10	1037.79	952.92
22.5	1227.76	1223.80	1219.84	1183.78	1160.04	1113.86	1059.78	999.09	927.41
45.0	1273.93	1265.13	1247.98	1214.56	1177.63	1115.18	1067.69	980.18	903.23
67.5	1239.19	1222.92	1217.64	1180.26	1142.89	1093.64	1023.28	963.03	885.64
90.0	1238.75	1220.72	1209.73	1174.11	1136.29	1090.56	1021.08	958.64	868.05
112.5	1280.97	1262.06	1247.11	1200.49	1163.55	1103.75	1028.55	961.27	855.30
135.0	1253.70	1235.67	1222.04	1193.02	1153.88	1105.51	1032.95	965.23	885.64
157.5	1311.75	1290.20	1276.57	1242.27	1192.58	1146.40	1060.66	981.50	893.99
180.0	1331.98	1325.82	1300.75	1272.61	1250.18	1186.86	1123.54	1052.30	965.67
202.5	1274.37	1262.06	1252.82	1229.52	1219.40	1159.16	1098.47	1044.82	972.27
225.0	1328.46	1320.10	1311.31	1288.00	1258.10	1204.45	1160.92	1079.12	990.74
247.5	1273.05	1262.94	1244.91	1227.76	1204.45	1163.11	1119.58	1050.10	972.27
270.0	1300.75	1284.48	1275.69	1256.78	1244.03	1189.06	1156.08	1085.28	1006.13
292.5	1308.23	1296.80	1285.80	1267.33	1235.67	1207.97	1145.09	1064.61	994.25
315.0	1271.29	1255.46	1250.18	1235.67	1210.61	1175.43	1142.01	1065.93	988.54
337.5	1325.82	1319.66	1299.87	1286.24	1260.74	1224.24	1166.19	1090.56	1021.52
360.0	1306.47	1296.80	1294.60	1254.14	1218.08	1167.95	1112.10	1037.79	952.92

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	862.77	748.44	641.58	518.01	393.57	263.84	160.07	75.20	21.55
22.5	829.79	736.13	629.27	514.50	384.77	250.65	146.87	62.44	15.39
45.0	804.29	693.91	587.93	461.73	347.40	231.74	132.80	51.01	10.11
67.5	786.70	680.72	570.34	459.09	330.69	208.44	108.18	40.46	6.60
90.0	784.50	678.52	567.71	444.14	313.10	201.84	104.22	33.86	6.16
112.5	753.72	644.22	528.13	407.64	294.63	178.10	78.27	24.63	3.52
135.0	792.85	686.44	572.98	456.01	312.22	197.44	94.10	29.90	4.40
157.5	795.93	679.84	560.23	441.50	318.81	197.88	98.50	31.22	4.40
180.0	864.53	748.88	630.59	511.42	378.18	249.77	148.63	64.64	15.39
202.5	880.36	784.50	677.20	562.43	430.07	281.87	175.02	82.23	20.23
225.0	889.60	785.38	674.12	541.76	424.35	301.22	180.29	90.15	19.35
247.5	883.88	787.58	682.48	565.95	446.34	317.49	202.72	106.86	29.46
270.0	919.50	823.19	719.42	606.40	486.79	344.76	221.19	117.41	40.02
292.5	895.75	797.69	682.48	559.35	436.22	331.12	210.64	116.09	44.41
315.0	917.30	820.56	717.22	602.01	486.79	342.12	220.75	121.37	46.17
337.5	921.70	818.36	704.90	599.37	473.16	335.52	215.47	122.69	44.85
360.0	862.77	748.44	641.58	518.01	393.57	263.84	160.07	75.20	21.55

C/γ(°)	180.0
0.0	2.20
22.5	1.76
45.0	1.76
67.5	1.76
90.0	1.76
112.5	1.76
135.0	1.76
157.5	2.20
180.0	2.20
202.5	1.76
225.0	1.76
247.5	1.76
270.0	1.76
292.5	1.76
315.0	1.76
337.5	2.20
360.0	2.20

3.2.6 Model Number: HIDFA-100S-EX39-8CCT-BYP/3SP, 5000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.140	60	0.375	93.150	0.895

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
13190.51	141.61	25.99	55.73

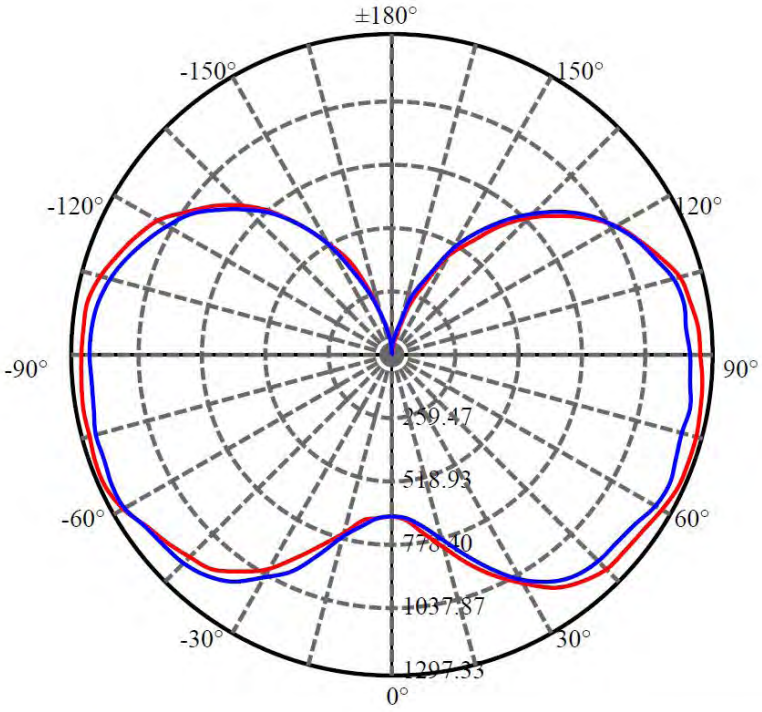
Zonal Flux Diagram

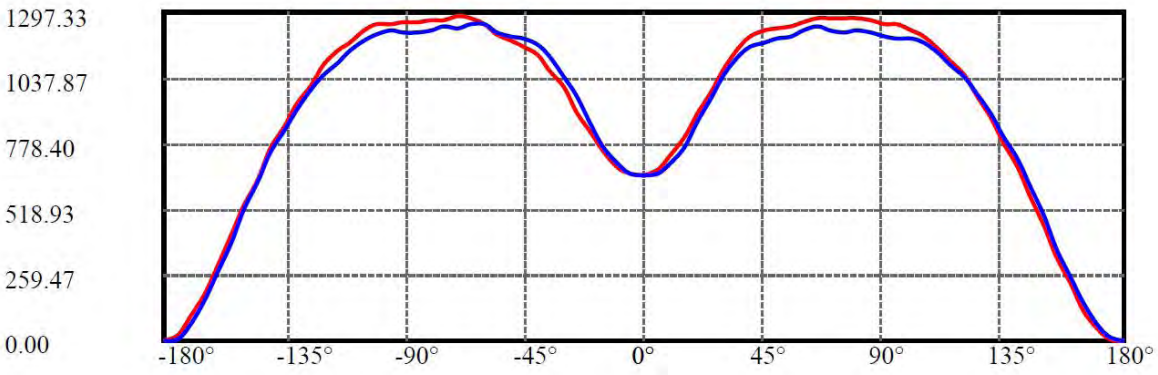
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	653.288	0.000	0	0.00%	0.00%
5.0	663.627	15.739	15.739	0.00%	0.12%
10.0	700.438	48.726	64.465	0.00%	0.49%
15.0	767.561	86.872	151.338	0.00%	1.15%
20.0	856.750	133.509	284.846	0.00%	2.16%
25.0	952.558	189.250	474.096	0.00%	3.59%
30.0	1036.716	251.161	725.257	0.00%	5.50%
35.0	1111.573	315.635	1040.892	0.00%	7.89%
40.0	1161.268	378.409	1419.301	0.00%	10.76%
45.0	1184.687	433.626	1852.927	0.00%	14.05%
50.0	1200.351	481.231	2334.159	0.00%	17.70%
55.0	1218.541	525.384	2859.542	0.00%	21.68%
60.0	1243.115	568.657	3428.199	0.00%	25.99%
65.0	1262.108	608.925	4037.123	0.00%	30.61%
70.0	1253.473	637.019	4674.142	0.00%	35.44%
75.0	1248.950	654.070	5328.212	0.00%	40.39%
80.0	1249.342	668.353	5996.565	0.00%	45.46%
85.0	1240.237	676.428	6672.993	0.00%	50.59%
90.0	1234.030	677.503	7350.496	0.00%	55.73%
95.0	1228.332	674.292	8024.788	0.00%	60.84%
100.0	1223.182	666.356	8691.144	0.00%	65.89%
105.0	1198.393	648.295	9339.438	0.00%	70.80%
110.0	1153.847	615.181	9954.619	0.00%	75.47%
115.0	1109.438	573.559	10528.178	0.00%	79.82%
120.0	1056.551	527.130	11055.308	0.00%	83.81%
125.0	984.651	472.397	11527.706	0.00%	87.39%
130.0	904.997	411.539	11939.244	0.00%	90.51%
135.0	816.982	348.705	12287.949	0.00%	93.16%
140.0	720.273	285.418	12573.367	0.00%	95.32%
145.0	614.812	223.486	12796.853	0.00%	97.02%
150.0	499.600	164.775	12961.628	0.00%	98.26%
155.0	375.106	111.348	13072.976	0.00%	99.11%
160.0	256.663	66.773	13139.749	0.00%	99.62%
165.0	154.648	34.229	13173.979	0.00%	99.87%
170.0	66.026	13.299	13187.277	0.00%	99.98%
175.0	15.997	3.011	13190.289	0.00%	100.00%
180.0	1.958	0.222	13190.51	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:164.7

:C90/270Left:167.0 Right:166.6

Beam Angle(50%Imax):C0/180Left:145.0 Right:141.9

:C90/270Left:145.3 Right:144.3

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	651.33	673.26	733.41	807.04	895.38	982.48	1069.26	1153.22	1197.39
22.5	653.84	668.87	719.63	797.01	901.96	996.58	1073.33	1149.15	1191.76
45.0	662.30	670.75	712.11	793.88	874.71	967.44	1048.27	1125.96	1172.96
67.5	652.58	664.49	709.92	781.66	866.25	959.92	1048.58	1118.13	1168.88
90.0	651.64	661.36	702.40	769.44	861.55	959.92	1047.02	1118.13	1160.43
112.5	654.46	662.61	695.19	759.41	849.33	937.68	1019.45	1092.44	1147.27
135.0	653.21	660.42	691.74	767.56	862.80	953.97	1044.20	1112.81	1161.68
157.5	646.94	660.73	691.43	764.43	849.02	941.44	1018.19	1086.18	1123.14
180.0	651.33	661.36	682.35	745.63	818.00	903.22	1000.96	1066.13	1131.60
202.5	653.84	662.30	688.30	745.32	823.95	927.34	1021.33	1094.64	1156.04
225.0	662.30	658.54	688.30	751.27	827.71	924.83	1010.05	1084.61	1148.52
247.5	652.58	660.73	699.26	755.66	843.38	957.10	1044.51	1123.46	1180.48
270.0	651.64	661.04	700.83	761.61	858.10	964.62	1039.18	1120.33	1167.01
292.5	654.46	665.11	698.32	759.10	854.66	942.69	1016.94	1101.21	1141.63
315.0	653.21	666.37	697.38	765.99	867.19	963.05	1042.94	1115.00	1158.55
337.5	646.94	660.10	696.44	755.97	854.03	958.67	1043.26	1123.77	1172.96
360.0	651.33	673.26	733.41	807.04	895.38	982.48	1069.26	1153.22	1197.39

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1223.08	1230.29	1242.19	1260.99	1272.27	1271.64	1274.78	1271.02	1261.62
22.5	1209.93	1213.69	1226.22	1232.80	1237.18	1230.92	1236.56	1233.42	1226.84
45.0	1187.68	1207.42	1224.02	1252.85	1268.20	1259.43	1265.38	1259.74	1252.85
67.5	1187.37	1203.03	1220.26	1241.57	1256.92	1239.06	1246.27	1248.46	1243.13
90.0	1179.22	1188.94	1198.02	1226.53	1239.06	1223.40	1213.37	1225.28	1213.06
112.5	1169.82	1190.50	1214.00	1236.87	1267.88	1262.25	1251.91	1262.25	1255.98
135.0	1191.76	1208.99	1232.48	1266.32	1290.13	1259.11	1244.70	1254.73	1250.03
157.5	1156.98	1168.26	1203.97	1222.77	1238.44	1224.02	1211.49	1224.65	1216.51
180.0	1159.80	1182.67	1206.79	1248.15	1271.96	1279.16	1264.44	1266.94	1259.74
202.5	1185.18	1191.76	1208.67	1228.41	1274.78	1258.80	1245.01	1248.15	1230.92
225.0	1175.15	1196.45	1220.26	1237.81	1268.20	1269.45	1267.88	1271.96	1258.80
247.5	1204.29	1227.78	1243.45	1266.94	1297.33	1282.61	1279.48	1273.84	1262.25
270.0	1193.01	1202.41	1216.82	1246.27	1250.34	1236.56	1242.51	1228.72	1218.70
292.5	1163.25	1191.76	1213.69	1247.21	1279.48	1274.15	1271.64	1270.08	1260.37
315.0	1171.70	1194.57	1206.79	1243.76	1239.69	1241.57	1238.44	1226.53	1221.52
337.5	1196.77	1207.11	1219.01	1230.60	1241.88	1243.45	1229.35	1223.71	1211.49
360.0	1223.08	1230.29	1242.19	1260.99	1272.27	1271.64	1274.78	1271.02	1261.62

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	1249.40	1245.33	1227.78	1202.09	1152.91	1103.41	1047.02	963.05	877.53
22.5	1212.12	1204.91	1196.77	1181.10	1135.68	1082.42	1035.11	974.33	892.88
45.0	1248.15	1231.54	1223.71	1197.08	1151.65	1096.52	1033.23	956.47	864.05
67.5	1233.42	1222.14	1215.25	1189.88	1143.82	1095.89	1037.30	965.87	884.73
90.0	1203.03	1193.32	1195.83	1179.54	1132.86	1091.82	1042.94	974.33	894.13
112.5	1245.64	1242.51	1238.12	1208.36	1165.13	1115.94	1047.96	972.45	897.58
135.0	1235.62	1227.78	1231.54	1210.87	1164.81	1125.65	1082.42	1007.23	923.58
157.5	1207.11	1199.59	1206.48	1179.85	1135.05	1096.20	1040.12	974.65	901.65
180.0	1254.73	1249.09	1250.03	1221.52	1175.46	1141.63	1084.30	1005.97	932.66
202.5	1229.35	1225.28	1224.02	1199.90	1157.61	1125.65	1093.70	1027.28	953.65
225.0	1256.29	1252.85	1245.64	1221.20	1174.52	1143.20	1083.98	1006.60	932.98
247.5	1265.38	1260.37	1255.35	1233.11	1186.74	1143.51	1095.26	1022.89	936.74
270.0	1220.58	1222.14	1211.49	1182.67	1145.70	1093.70	1047.33	987.80	910.73
292.5	1255.04	1252.85	1243.76	1212.75	1168.57	1120.95	1067.69	979.34	891.94
315.0	1216.82	1213.69	1203.35	1182.36	1136.93	1082.73	1032.60	967.44	888.80
337.5	1211.81	1209.93	1201.78	1172.02	1134.11	1091.82	1033.86	968.69	896.32
360.0	1249.40	1245.33	1227.78	1202.09	1152.91	1103.41	1047.02	963.05	877.53

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	785.42	682.97	569.56	453.96	328.33	222.75	121.56	46.68	9.09
22.5	800.77	704.28	600.89	478.08	342.74	231.21	131.90	50.75	8.15
45.0	780.09	677.02	570.81	457.72	342.11	228.08	135.03	56.39	12.53
67.5	795.44	703.34	601.83	487.48	365.61	249.69	142.86	61.72	14.72
90.0	805.47	715.24	610.29	494.06	365.92	253.14	153.51	63.28	13.47
112.5	810.17	714.30	602.46	491.87	379.08	253.45	152.89	57.33	16.60
135.0	840.56	749.39	644.44	525.07	386.60	271.00	164.48	61.72	12.53
157.5	817.37	724.01	622.82	511.60	381.90	262.22	159.78	62.03	15.04
180.0	849.64	754.09	639.74	529.46	417.93	289.48	183.59	97.12	27.57
202.5	860.61	760.35	664.80	552.64	418.56	293.24	189.54	94.30	28.82
225.0	841.50	740.62	633.79	520.69	403.52	278.20	172.62	80.52	26.32
247.5	841.81	739.99	635.98	511.29	388.48	265.04	164.79	72.37	15.66
270.0	830.85	739.99	631.91	518.18	383.47	264.10	162.28	67.04	5.33
292.5	799.52	693.31	590.55	474.32	363.73	242.49	146.93	59.53	16.92
315.0	806.72	713.99	609.04	491.87	370.00	253.45	147.87	61.09	16.92
337.5	805.78	711.48	608.10	495.31	363.73	249.07	144.74	64.54	16.29
360.0	785.42	682.97	569.56	453.96	328.33	222.75	121.56	46.68	9.09

C/γ(°)	180.0
0.0	2.51
22.5	2.19
45.0	2.19
67.5	1.57
90.0	1.88
112.5	1.88
135.0	1.57
157.5	1.88
180.0	2.51
202.5	2.19
225.0	2.19
247.5	1.57
270.0	1.88
292.5	1.88
315.0	1.57
337.5	1.88
360.0	2.51

4 Additional Test

Model Number	Test Voltage (V)	Frequency(Hz)	Power Factor	THD
HIDFA-100S-EX39-8CCT-BYP/3SP	120	60	0.991	10.7%
	277	60	0.926	12.6%

Photo Document

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