Date of issue	2023-04-11
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:

408 W 14th St New York, NY 10014, USA

For Product:

LED Corn Lamp

Model No.:

HID-54-EX39-8CCT-BYP/5SP/480V

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.

Sam Chen

Jason zhou

Complied by: Sam Chen — **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 used 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	408 W 14th St New York, NY 10014, USA
Brand Name	RAB
Luminaire Type	LED Corn Lamp
Model Number	HID-54-EX39-8CCT-BYP/5SP/480V
Rated Inputs	AC 277-480V, 50/60Hz
Rated Power	54W
Color-Tunable Product	Yes, CCT setting: 3000K, 4000K, 5000K
Date of Receipt Samples	2023-02-27
Date of test	2023-02-28 to 2023-03-15
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 HID-54-EX39-8CCT-BYP/5SP/480V are the same to the product in the report BL230227007-9A and is authorized by original applicant to use their test data.
- Note: All the data in previous report BL230227007-9A is shared in report.

1.4 Equipment list

Device	Manufacture	Model No.	Serial No.	Calibration due date
Goniophotometeric System	SENSING	GMS-3000	N.A	2023-04-08
AC Power Source	ALL POWER	APW-105N	970780	2023-04-10
Total Luminous Flux Standard Lamp	SENSING	110V/100W	S13100188	2023-03-30
Total Luminous Flux Standard Lamp	OSRAM	12V/20W	LSD12201737	2023-03-30
Digital Power Meter	YOKOGAWA	WT310	C2QM02030V	2023-04-10
Thermostatic stabilized photometric sphere	SENSING	SPR-600M	N.A	2023-04-08
Digital Power Meter	YOKOGAWA	WT210	91L929742	2023-04-10
Spectral radiometer	SENSING	SPR-3000	S1101108	2023-04-08
Environment Measurer	XUYAO	HS-1	N/A	2023-03-30
Environment Measurer	XUYAO	HS-1	N/A	2023-03-30
Stop watch	KISLO	K610	N/A	2023-04-14
Digital Anemometer	TECMAN	TD8901	026141	2023-09-07

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).

1.5 Report Revision

Original report BL230227013-9 dated at 2023-03-24 was recalled and declared as invalid by Shenzhen Belling Efficiency Testing Laboratory Co.,Ltd. Report BL230227013-9A was issued on to replace report BL230227013-9.

Report Number	Report Date	Contents
BL230227013-9	2023-03-24	Original report
BL230227013-9A	2023-04-11	Updated the product photos. Updated the applicant information. Updated the model number.

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: HID-54-EX39-8CCT-BYP/5SP/480V, 3000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.01	60	0.191	52.02	0.981

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
7279.53	139.9	3057

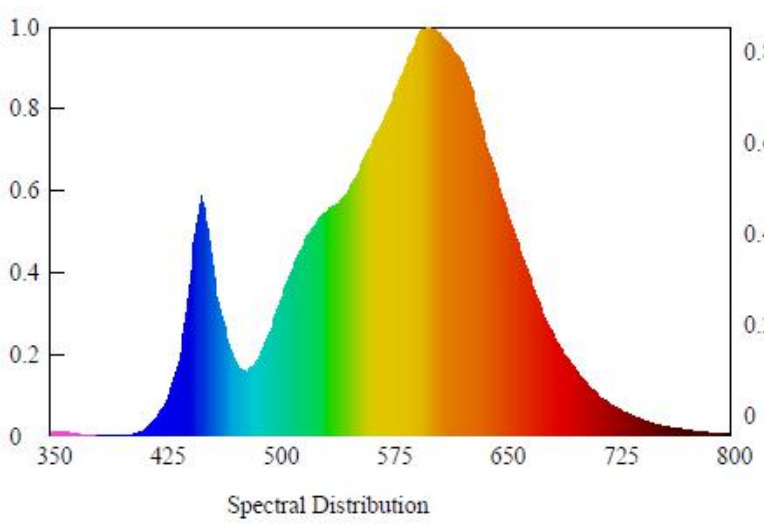
Chromaticity Coordinate

Duv	x	y	u'	v'
-0.0013	0.4311	0.3988	0.2491	0.5184

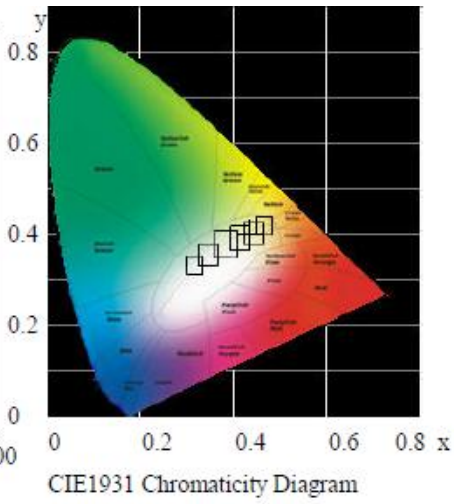
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
83.1	10	84	98	-11

Spectral Distribution

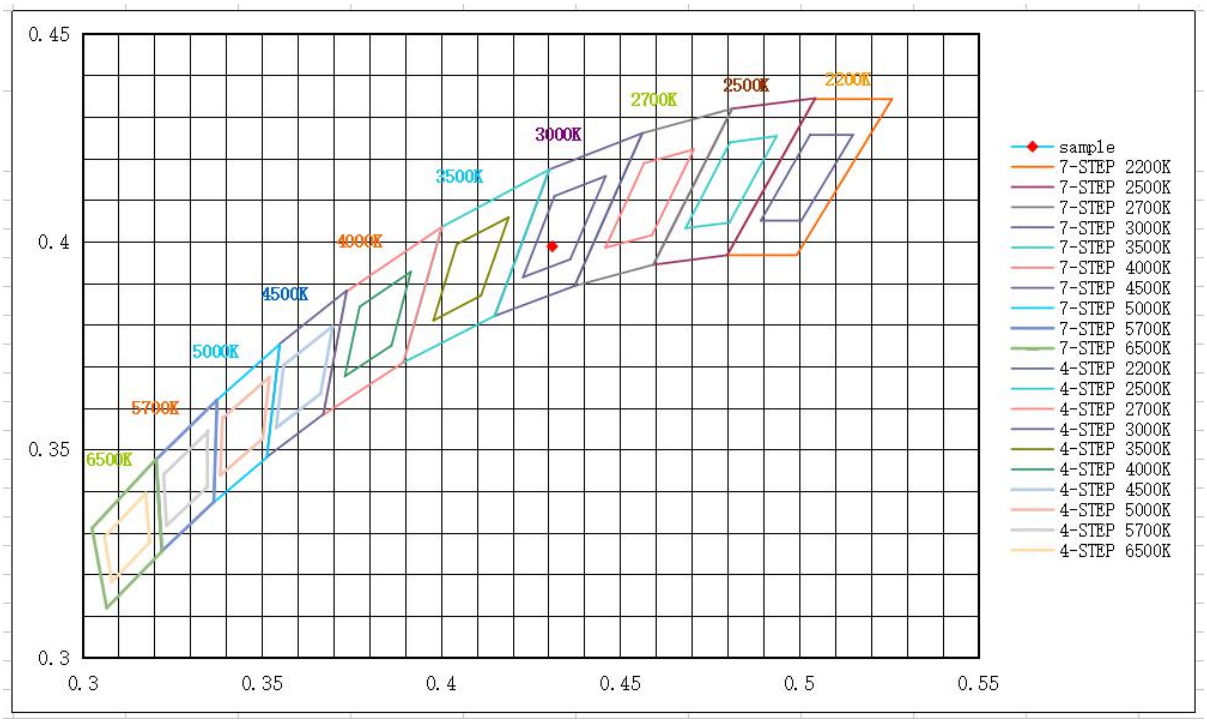


Spectral Distribution



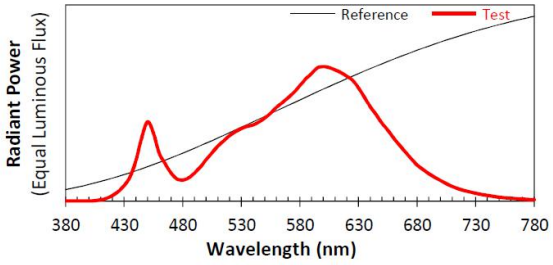
CIE1931 Chromaticity Diagram

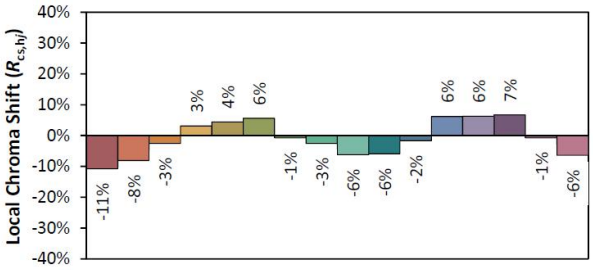
7/4 Step Quadrangle

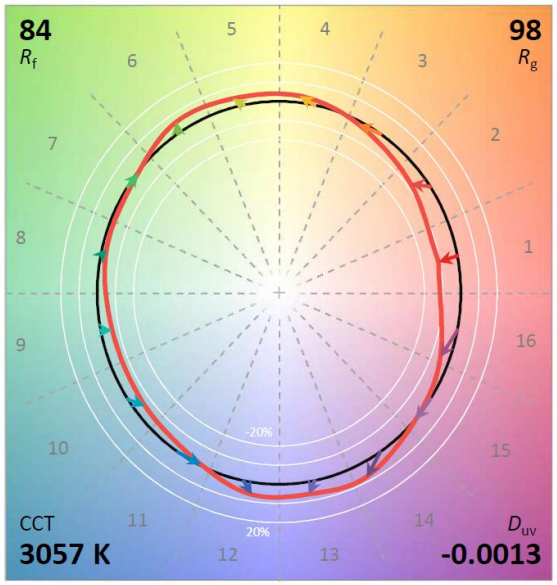


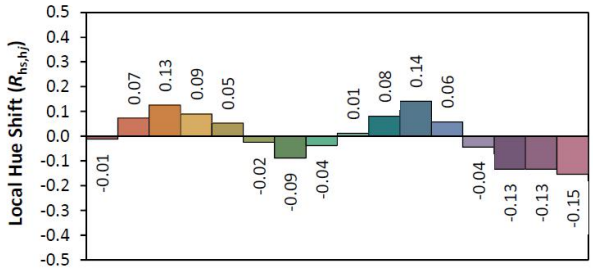
ANSI/IES TM-30-18 Color Rendition Report

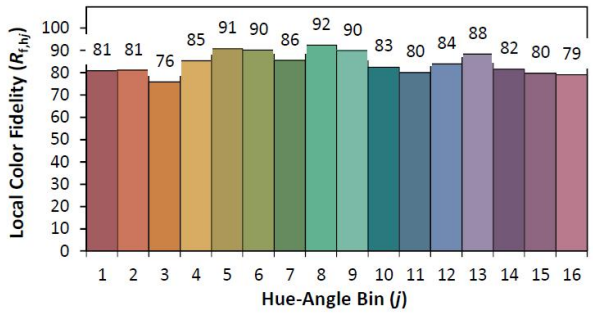
Source:	BL230227013-9A	**Manufacturer:**	RAB LIGHTING,INC
Date:	2023-04-11	**Model:**	HID-54-EX39-8CCT-BYP/5SP/480V, 3000K at 277V

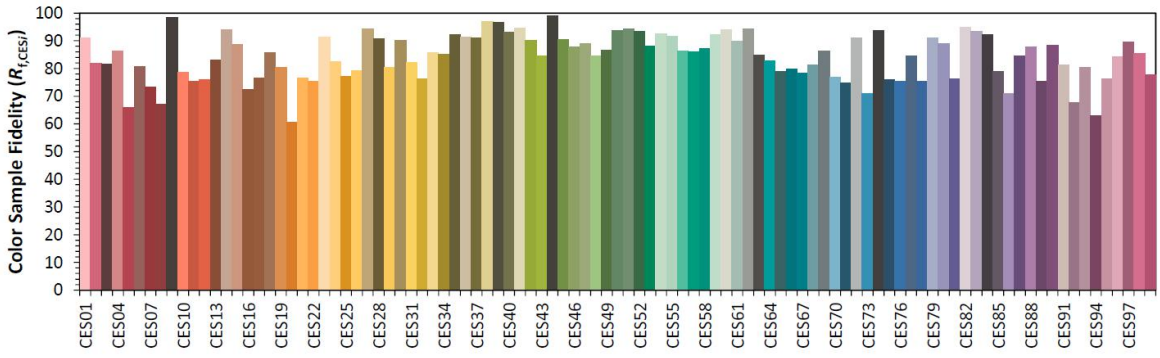












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.4311
y	0.3988
u'	0.2491
v'	0.5184

CIE 13.3-1995 (CRI)

R_a	83
R_9	10

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

3.1.2 Model Number: HID-54-EX39-8CCT-BYP/5SP/480V, 3000K at 480V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
480.15	60	0.120	51.63	0.895

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
7069.10	136.9	3060

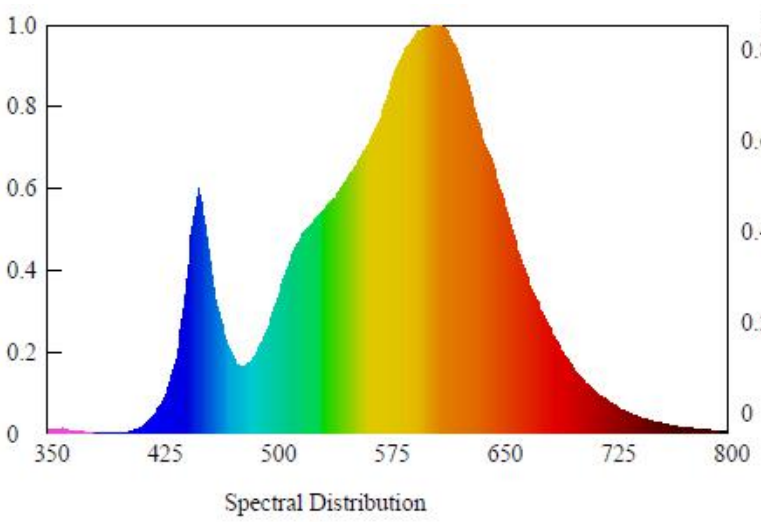
Chromaticity Coordinate

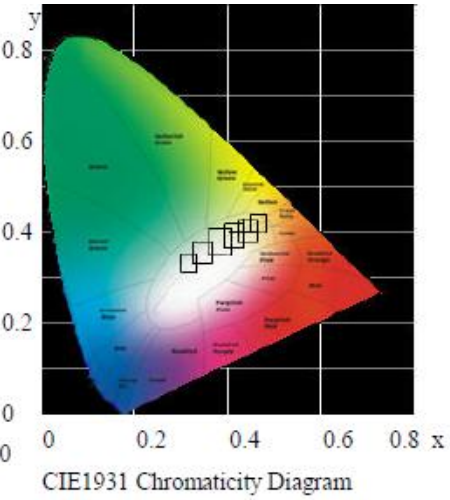
Duv	x	y	u'	v'
-0.00137	0.4308	0.3985	0.249	0.5183

Color Rendering

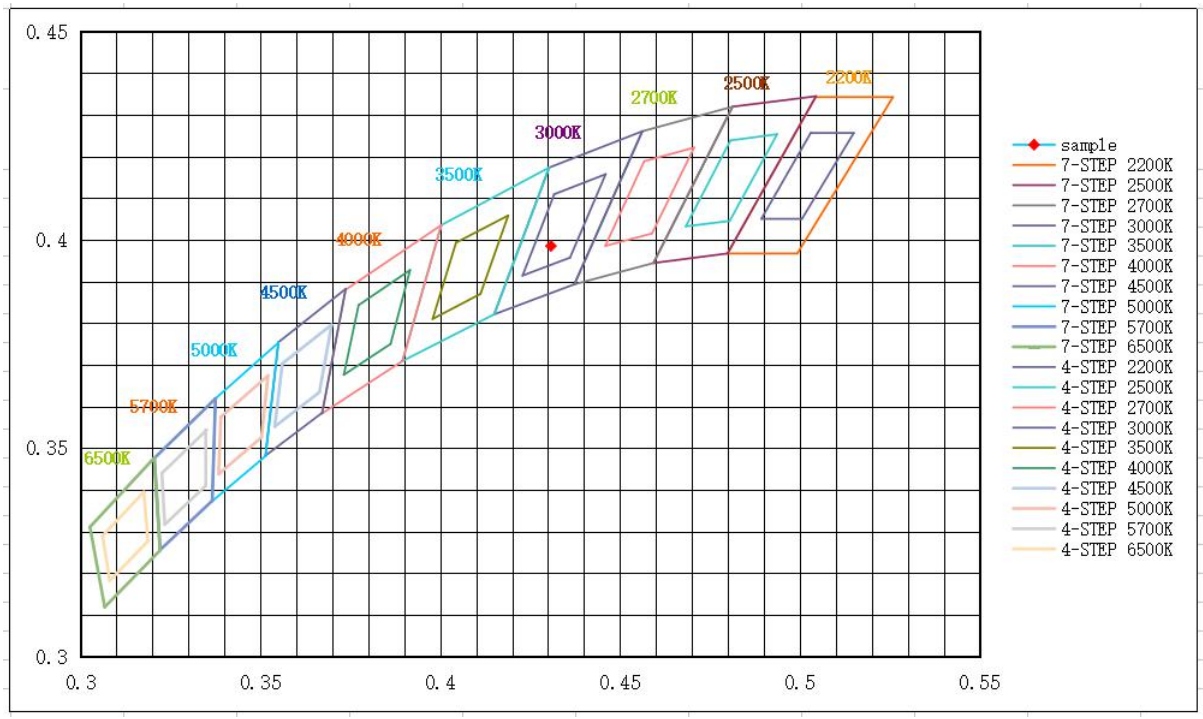
CRI	R9	Rf	Rg	Rcs,h1(%)
83.1	11	84	98	-11

Spectral Distribution



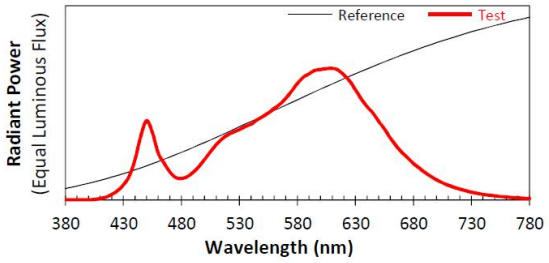


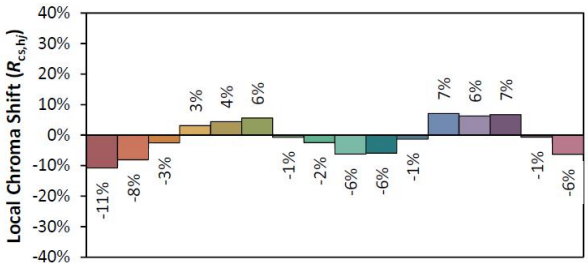
7/4 Step Quadrangle

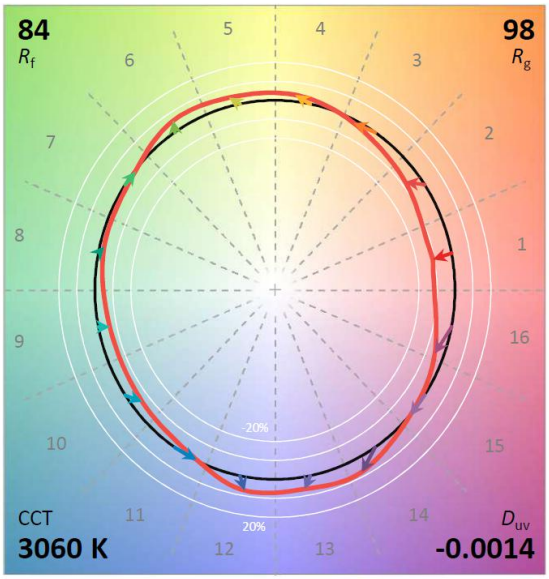


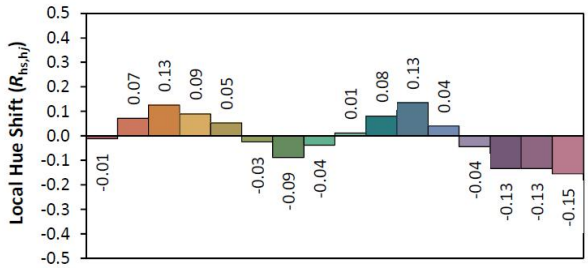
ANSI/IES TM-30-18 Color Rendition Report

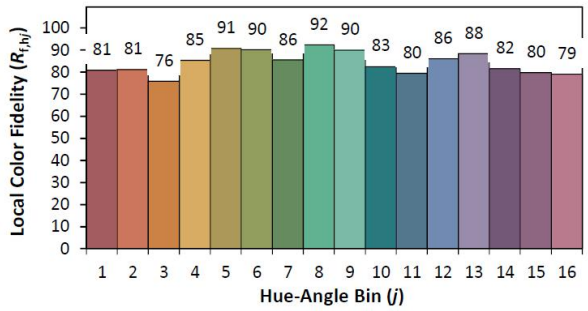
Source:	BL230227013-9A	**Manufacturer:**	RAB LIGHTING,INC
Date:	2023-04-11	**Model:**	HID-54-EX39-8CCT-BYP/5SP/480V, 3000K at 480V

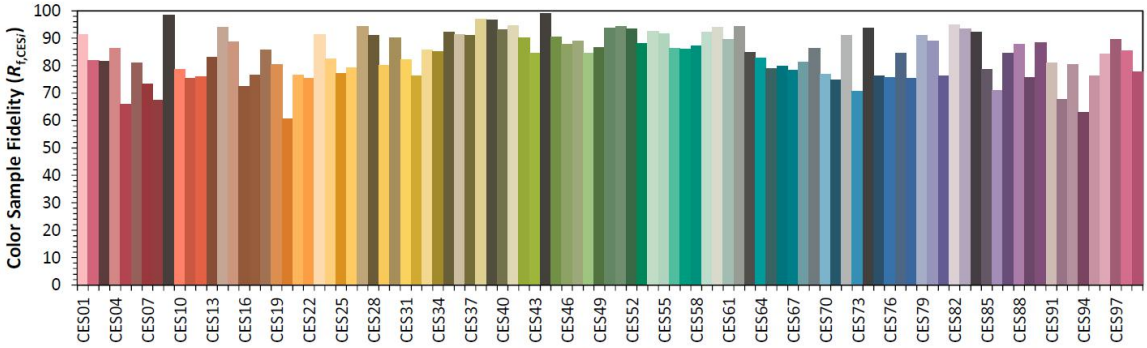












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.4308
y	0.3985
u'	0.2490
v'	0.5183

CIE 13.3-1995 (CRI)

R_a	83
R_9	10

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

3.1.3 Model Number: HID-54-EX39-8CCT-BYP/5SP/480V, 4000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.07	60	0.186	50.57	0.980

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
7643.17	151.1	3961

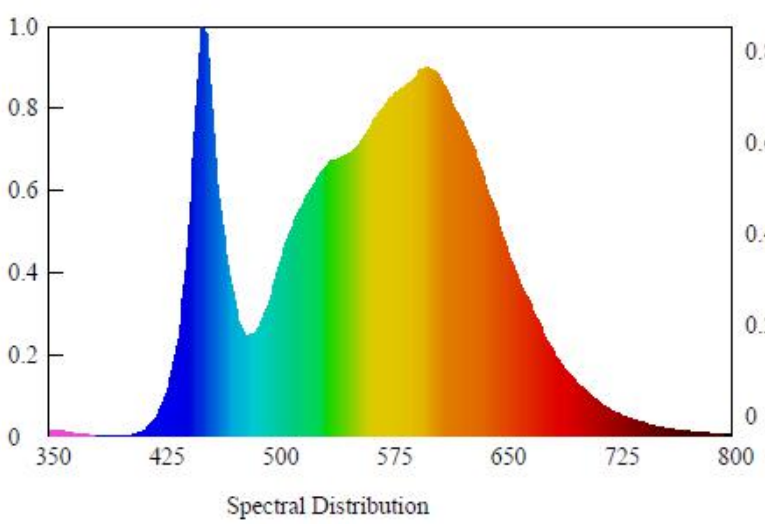
Chromaticity Coordinate

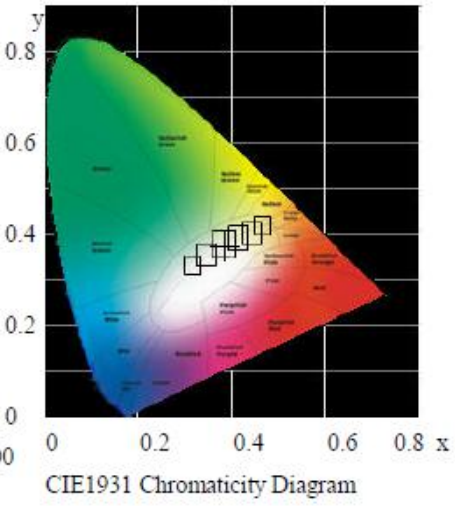
Duv	x	y	u'	v'
-0.00214	0.3806	0.3724	0.2270	0.4997

Color Rendering

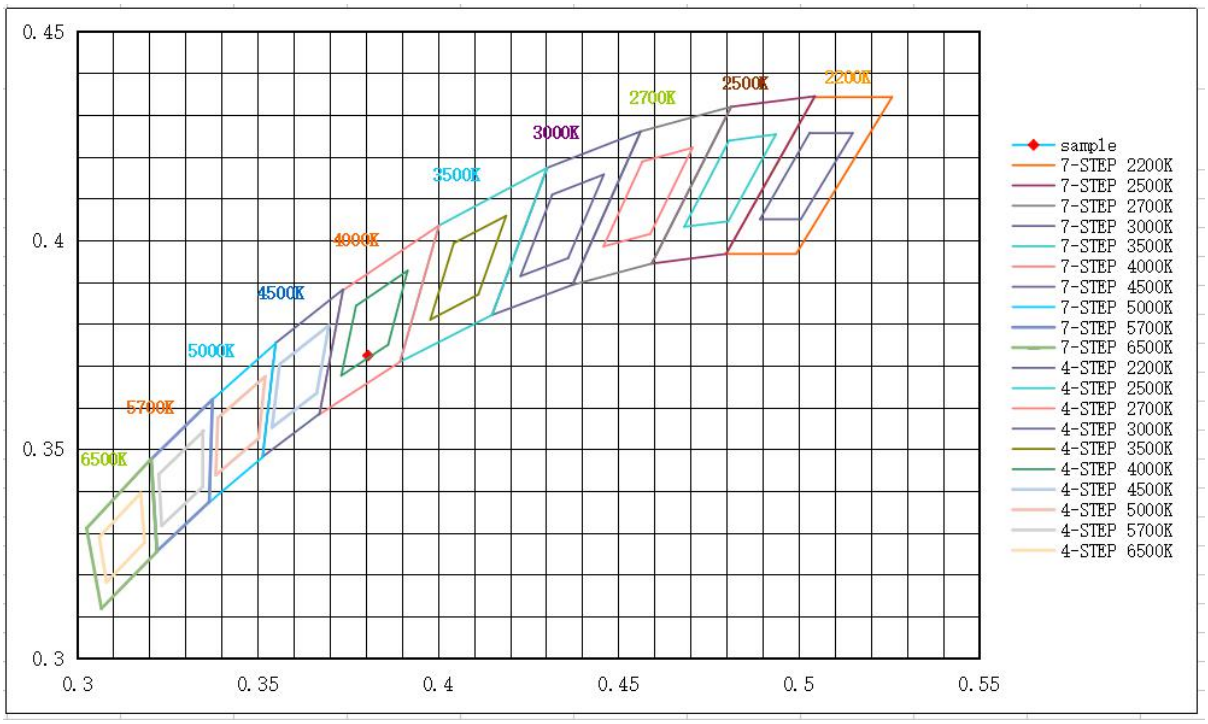
CRI	R9	Rf	Rg	Rcs,h1(%)
84.9	20	85	97	-11

Spectral Distribution



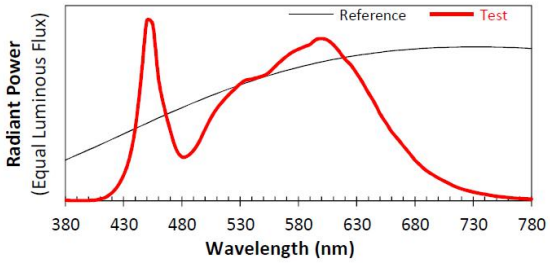


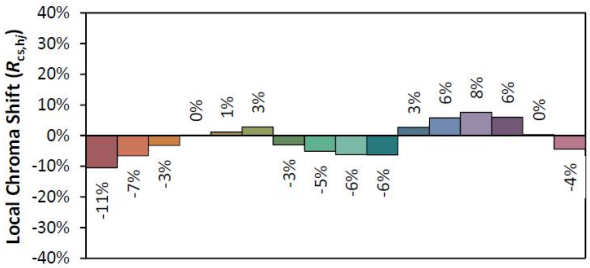
7/4 Step Quadrangle

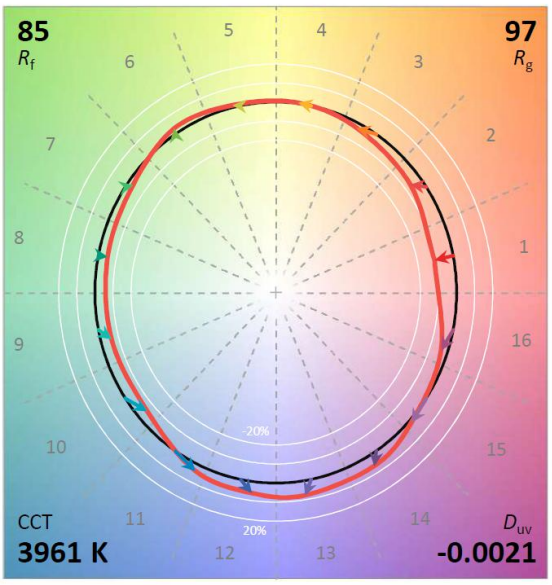


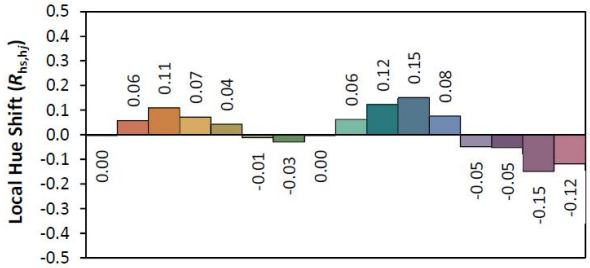
ANSI/IES TM-30-18 Color Rendition Report

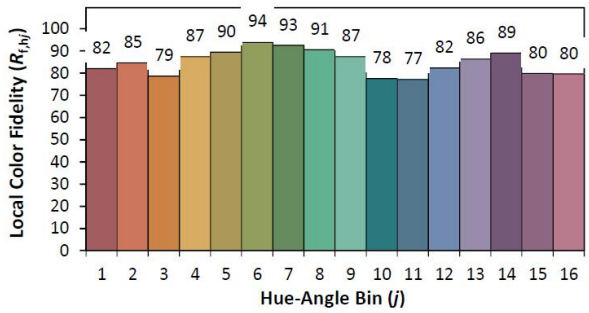
Source:	BL230227013-9A	**Manufacturer:**	RAB LIGHTING,INC
Date:	2023-04-11	**Model:**	HID-54-EX39-8CCT-BYP/5SP/480V, 4000K at 277V

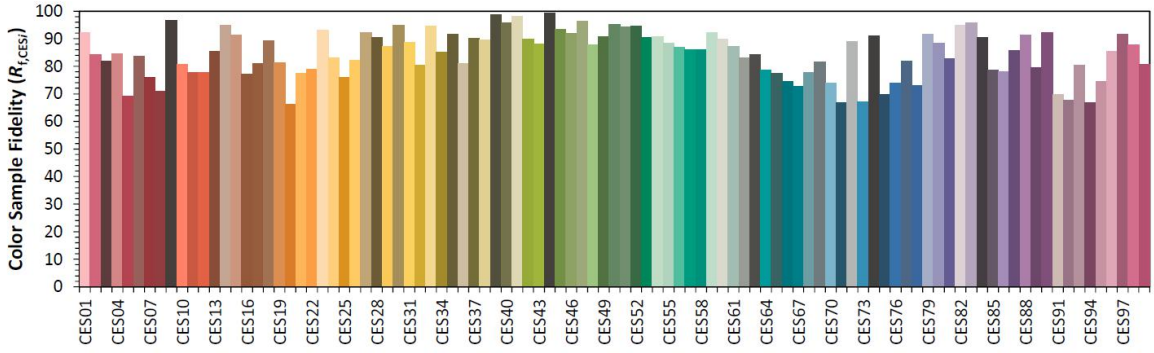












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3806
y	0.3724
u'	0.2270
v'	0.4997

CIE 13.3-1995 (CRI)

R_a	85
R_9	20

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

3.1.4 Model Number: HID-54-EX39-8CCT-BYP/5SP/480V, 4000K at 480V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
479.99	60	0.118	50.49	0.893

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
7427.71	147.1	3970

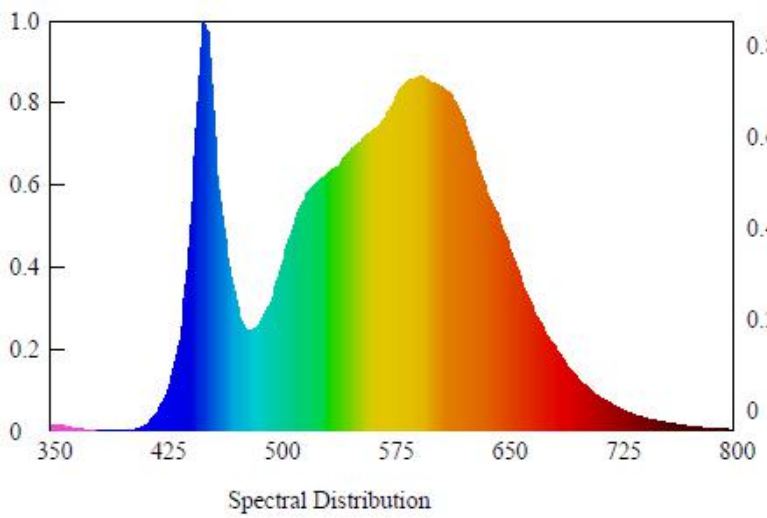
Chromaticity Coordinate

Duv	x	y	u'	v'
-0.00224	0.3802	0.3719	0.2269	0.4994

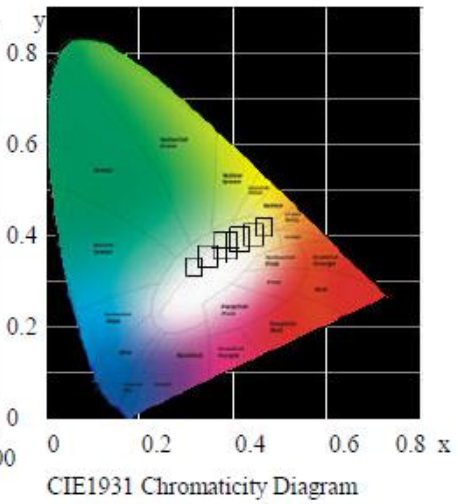
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
84.9	20	85	97	-11

Spectral Distribution

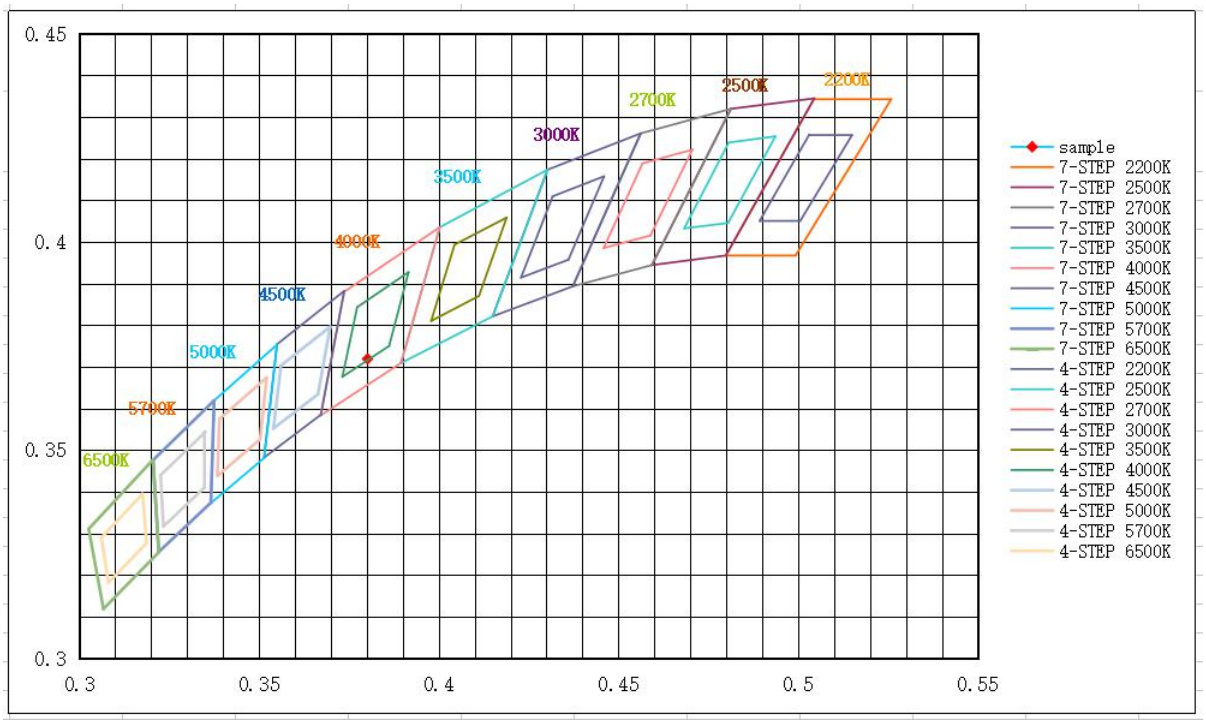


Spectral Distribution



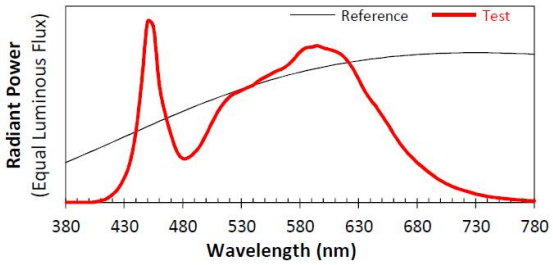
CIE1931 Chromaticity Diagram

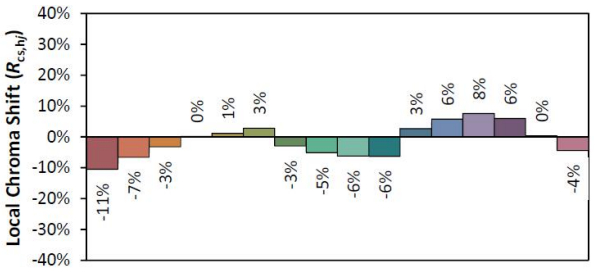
7/4 Step Quadrangle

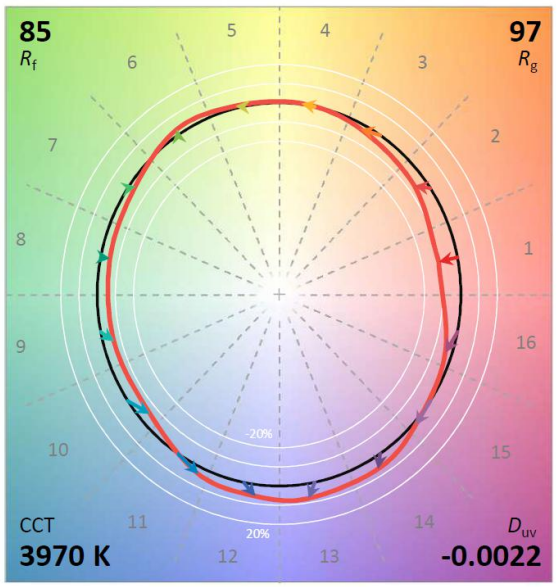


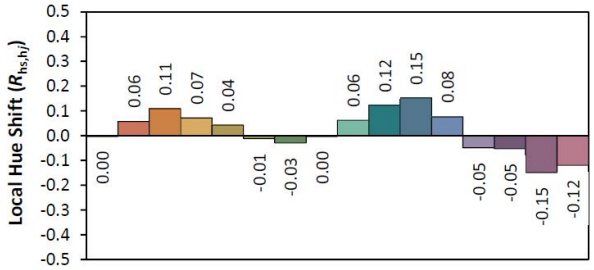
ANSI/IES TM-30-18 Color Rendition Report

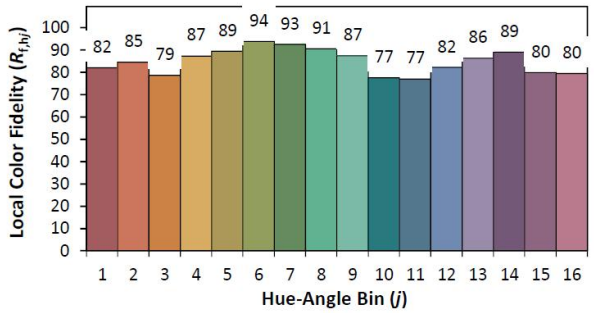
Source:	BL230227013-9A	**Manufacturer:**	RAB LIGHTING,INC
Date:	2023-04-11	**Model:**	HID-54-EX39-8CCT-BYP/5SP/480V, 4000K at 480V

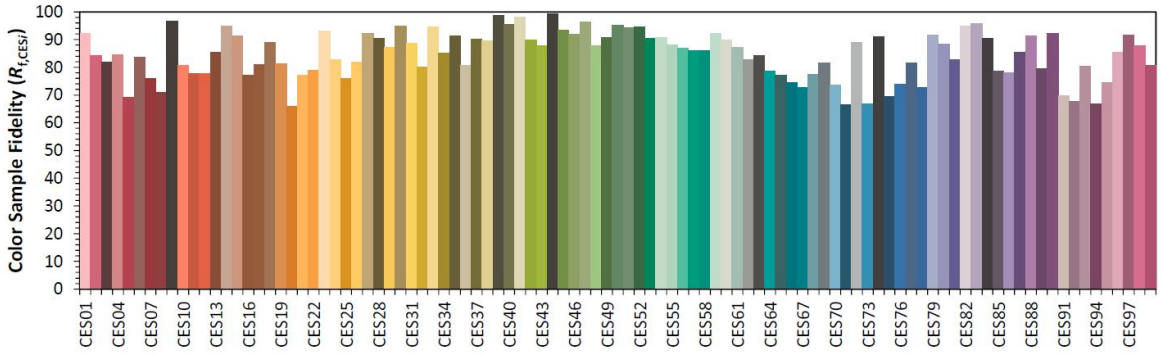












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3802
y	0.3719
u'	0.2269
v'	0.4994

CIE 13.3-1995 (CRI)

R_a	85
R_9	20

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

3.1.5 Model Number: HID-54-EX39-8CCT-BYP/5SP/480V, 5000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.18	60	0.191	51.91	0.981

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
7313.90	140.9	4884

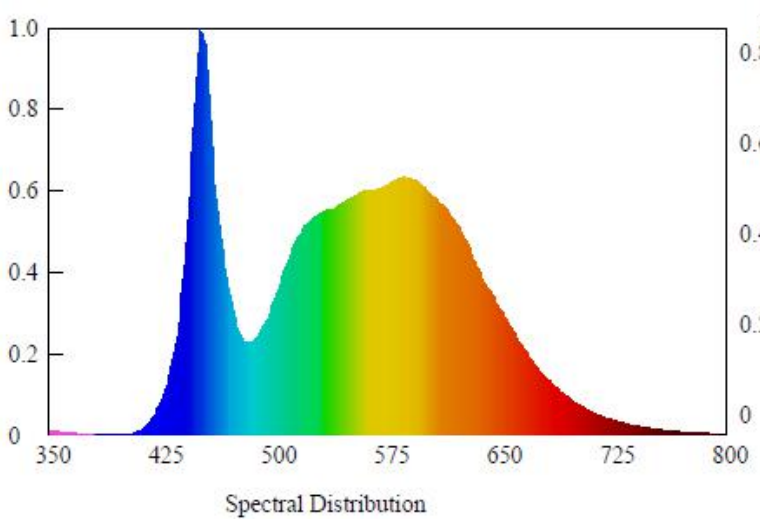
Chromaticity Coordinate

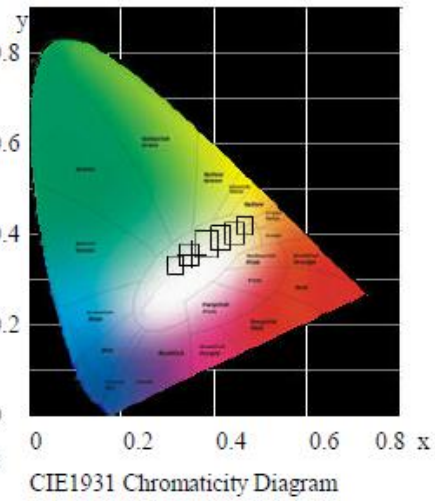
Duv	x	y	u'	v'
+0.00018	0.3485	0.3547	0.2125	0.4867

Color Rendering

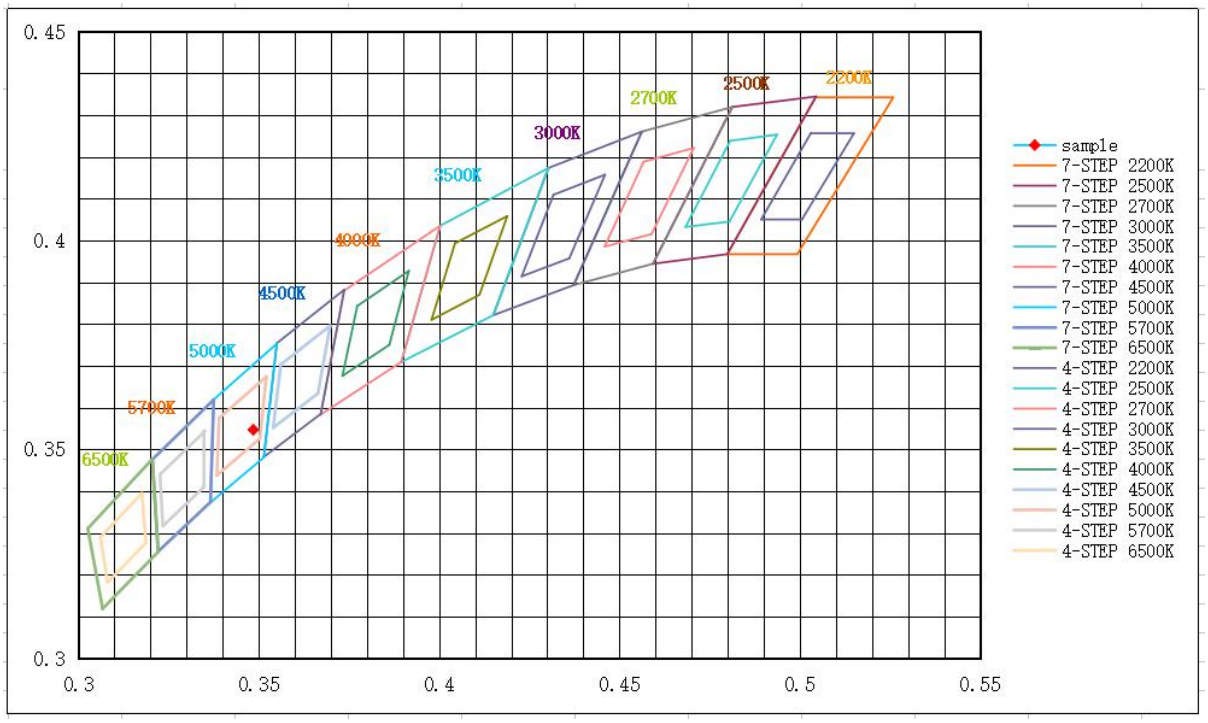
CRI	R9	Rf	Rg	Rcs,h1(%)
83.6	16	83	97	-12

Spectral Distribution



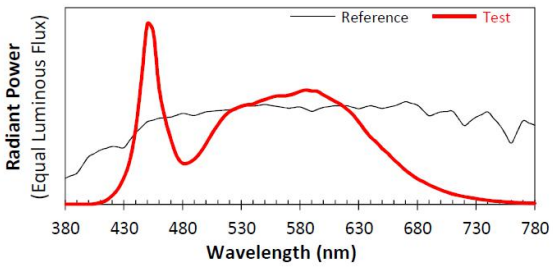


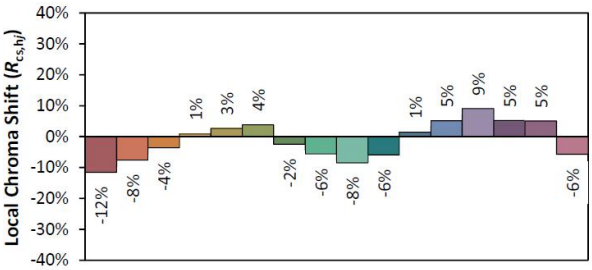
7/4 Step Quadrangle

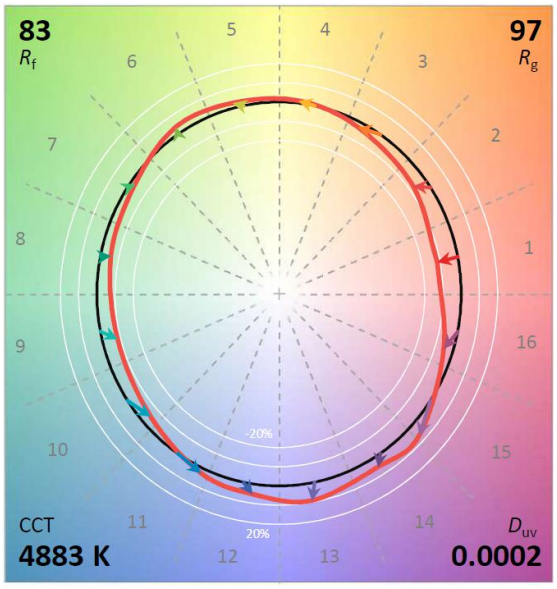


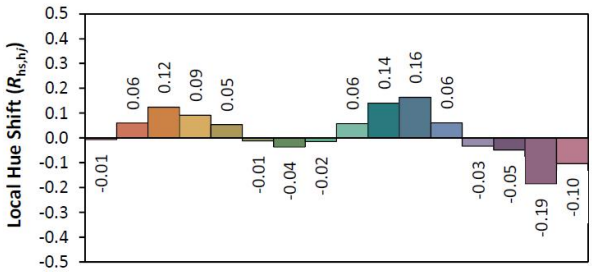
ANSI/IES TM-30-18 Color Rendition Report

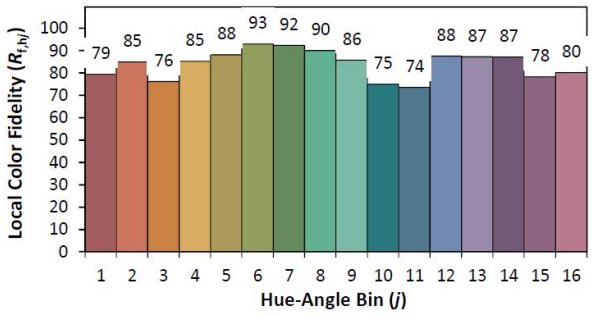
Source:	BL230227013-9A	**Manufacturer:**	RAB LIGHTING,INC
Date:	2023-04-11	**Model:**	HID-54-EX39-8CCT-BYP/5SP/480V, 5000K at 277V

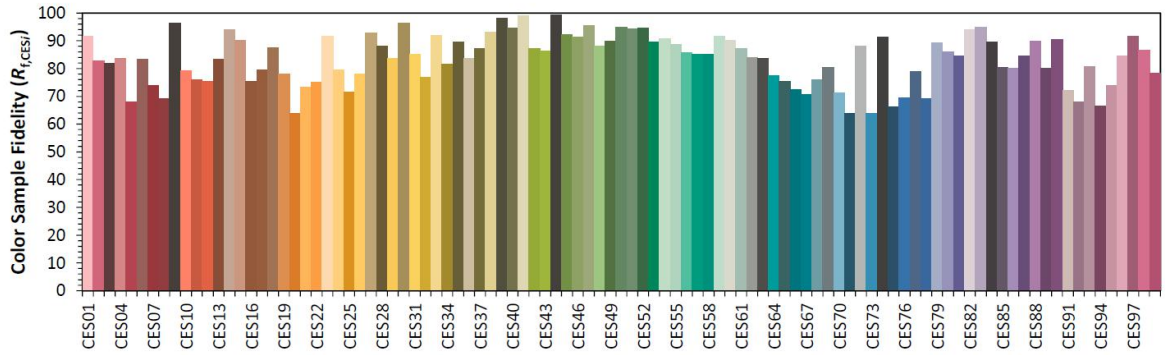












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3485
y	0.3547
u'	0.2125
v'	0.4867

CIE 13.3-1995 (CRI)

R_a	84
R_9	16

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

3.1.6 Model Number: HID-54-EX39-8CCT-BYP/5SP/480V, 5000K at 480V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
480.07	60	0.120	51.68	0.895

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
7147.64	138.3	4881

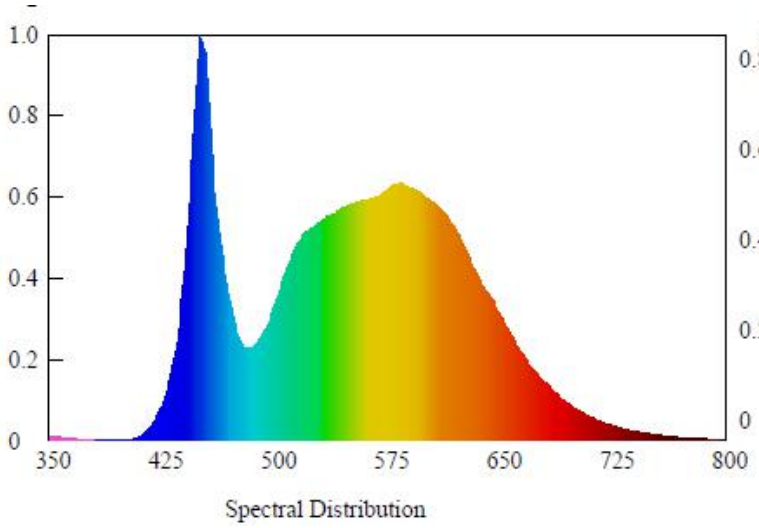
Chromaticity Coordinate

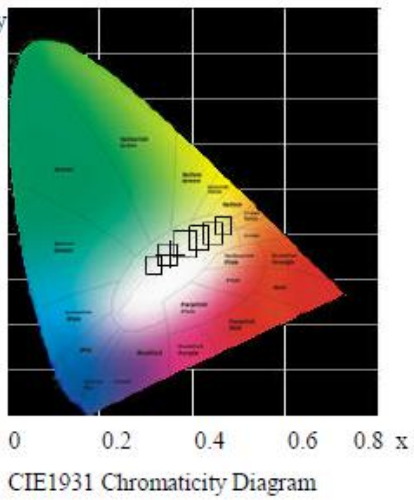
Duv	x	y	u'	v'
+0.00019	0.3486	0.3547	0.2126	0.4867

Color Rendering

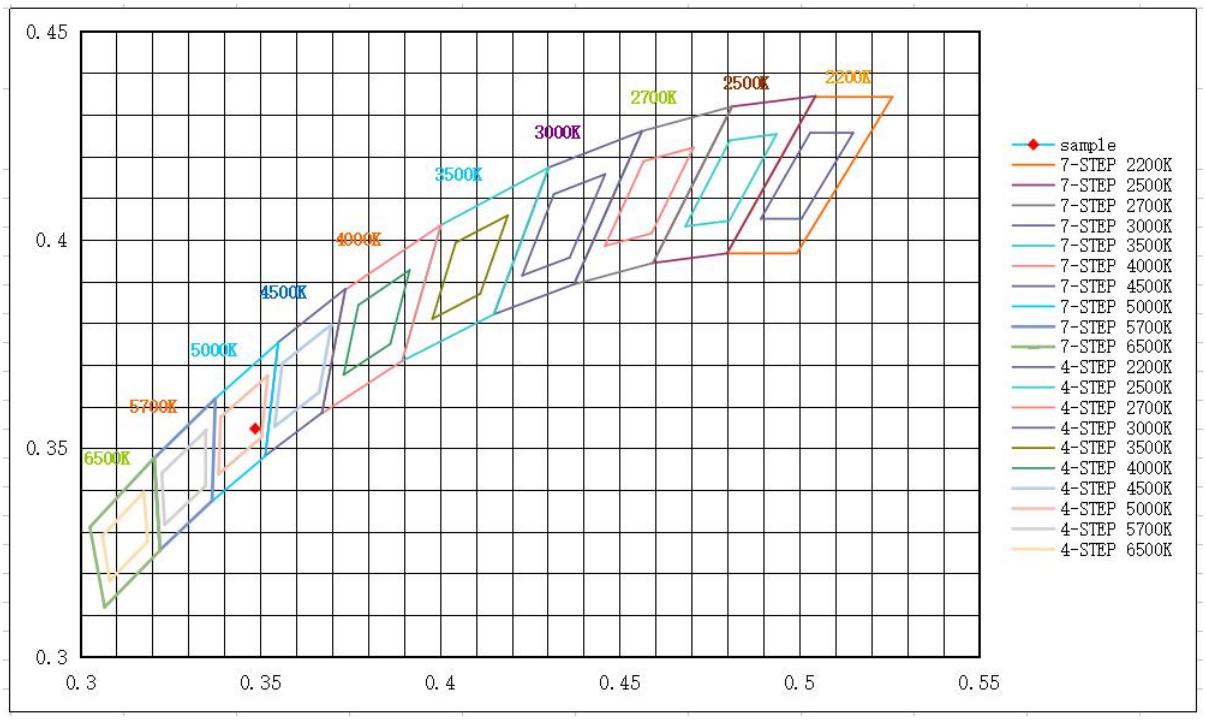
CRI	R9	Rf	Rg	Rcs,h1(%)
83.6	16	83	97	-12

Spectral Distribution



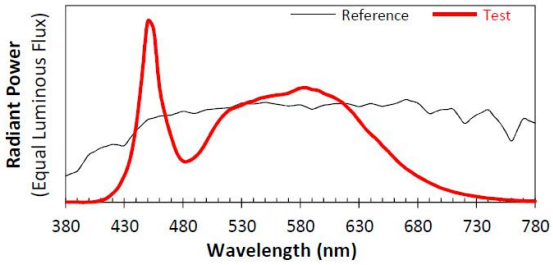


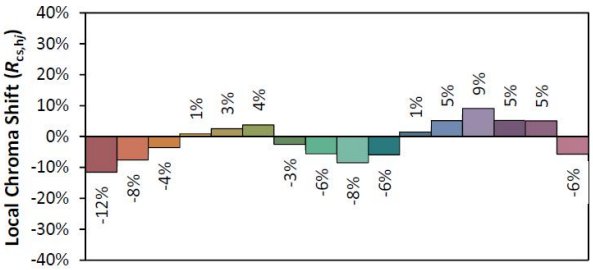
7/4 Step Quadrangle

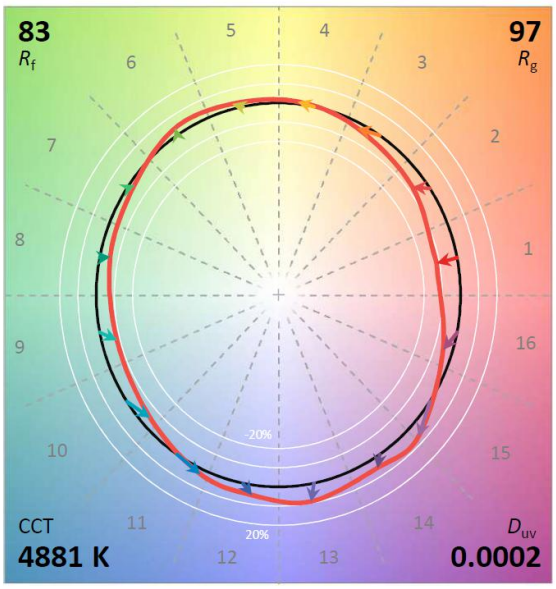


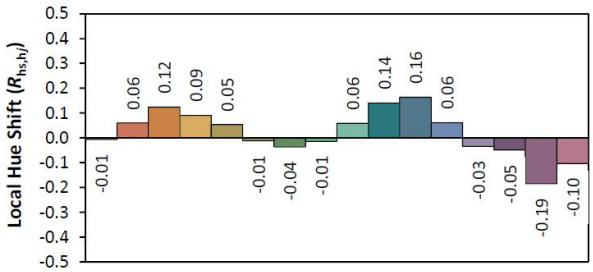
ANSI/IES TM-30-18 Color Rendition Report

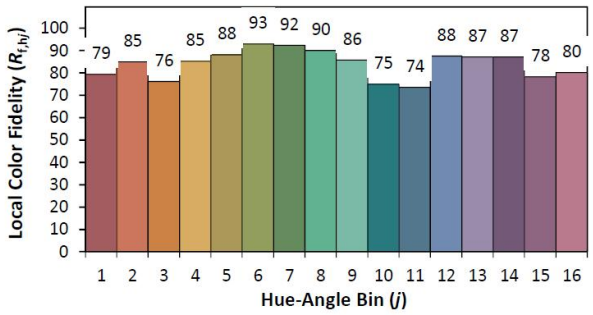
Source:	BL230227013-9A	**Manufacturer:**	RAB LIGHTING,INC
Date:	2023-04-11	**Model:**	HID-54-EX39-8CCT-BYP/5SP/480V, 5000K at 480V

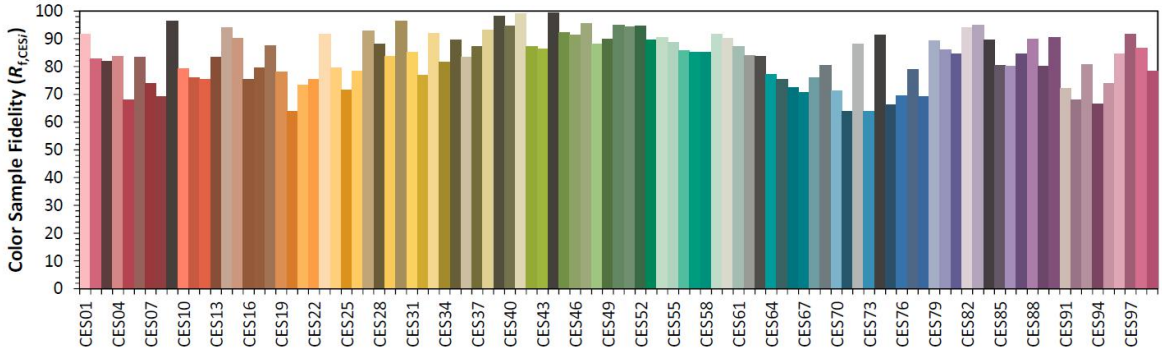












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3486
y	0.3547
u'	0.2126
v'	0.4867

CIE 13.3-1995 (CRI)

R_a	84
R_9	16

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: HID-54-EX39-8CCT-BYP/5SP/480V, 3000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.13	60	0.1900	51.74	0.9801

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
7252.82	140.18	27.35	56.43

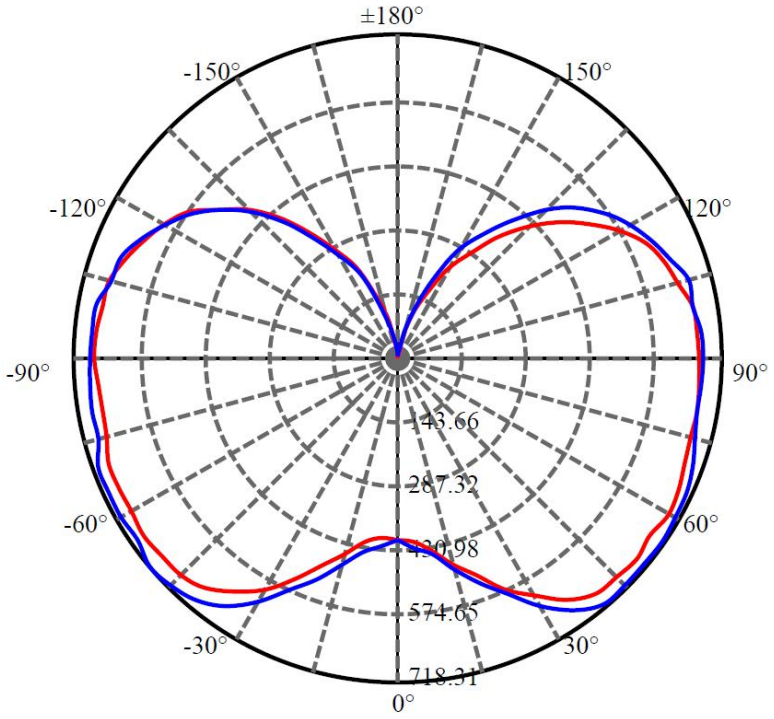
Zonal Flux Diagram

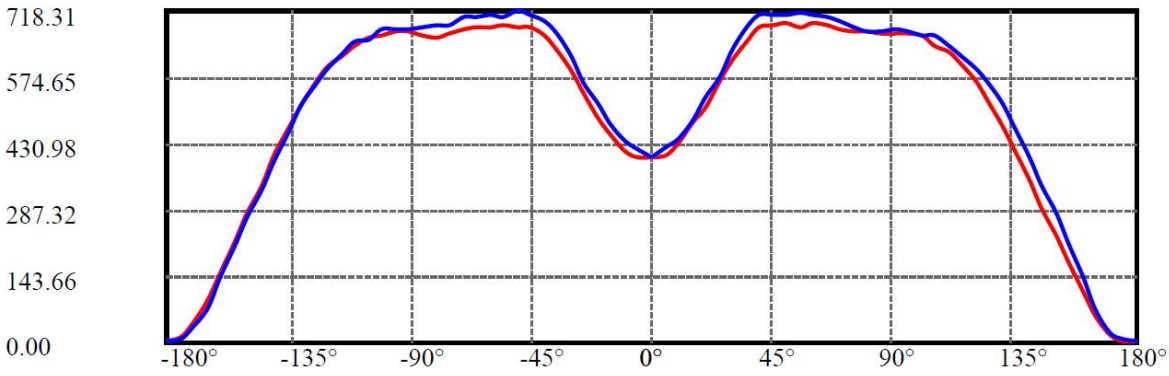
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	401.463	0.000	0	0.00%	0.00%
5.0	406.641	9.661	9.661	0.00%	0.13%
10.0	427.176	29.828	39.489	0.00%	0.54%
15.0	462.636	52.783	92.272	0.00%	1.27%
20.0	505.612	79.797	172.069	0.00%	2.37%
25.0	553.840	111.117	283.186	0.00%	3.90%
30.0	604.622	146.604	429.791	0.00%	5.93%
35.0	649.159	184.628	614.419	0.00%	8.47%
40.0	676.853	221.235	835.654	0.00%	11.52%
45.0	686.062	252.355	1088.008	0.00%	15.00%
50.0	690.177	278.089	1366.097	0.00%	18.84%
55.0	687.610	299.577	1665.674	0.00%	22.97%
60.0	687.795	317.921	1983.595	0.00%	27.35%
65.0	685.427	333.833	2317.428	0.00%	31.95%
70.0	677.289	345.048	2662.476	0.00%	36.71%
75.0	666.095	351.139	3013.615	0.00%	41.55%
80.0	663.753	355.831	3369.446	0.00%	46.46%
85.0	662.391	360.345	3729.791	0.00%	51.43%
90.0	663.807	363.123	4092.914	0.00%	56.43%
95.0	663.105	363.319	4456.233	0.00%	61.44%
100.0	658.739	359.177	4815.41	0.00%	66.39%
105.0	647.797	349.592	5165.002	0.00%	71.21%
110.0	631.972	334.511	5499.513	0.00%	75.83%
115.0	608.777	314.166	5813.678	0.00%	80.16%
120.0	579.271	288.817	6102.495	0.00%	84.14%
125.0	542.302	259.249	6361.744	0.00%	87.71%
130.0	496.734	225.921	6587.665	0.00%	90.83%
135.0	442.842	189.855	6777.52	0.00%	93.45%
140.0	381.382	152.612	6930.131	0.00%	95.55%
145.0	321.060	117.197	7047.329	0.00%	97.17%
150.0	262.392	85.917	7133.246	0.00%	98.35%
155.0	201.607	58.719	7191.965	0.00%	99.16%
160.0	137.726	35.590	7227.555	0.00%	99.65%
165.0	74.678	17.505	7245.06	0.00%	99.89%
170.0	30.353	6.230	7251.291	0.00%	99.98%
175.0	8.442	1.388	7252.678	0.00%	100.00%
180.0	3.201	0.139	7252.818	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:167.4 Right:164.0

:C90/270Left:165.6 Right:164.9

Beam Angle(50%Imax):C0/180Left:144.5 Right:140.4

:C90/270Left:142.8 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	401.46	406.47	430.60	475.91	509.57	564.40	609.70	653.31	680.41
22.5	401.46	410.07	434.41	470.62	512.53	562.71	616.48	659.24	688.25
45.0	401.46	407.10	430.60	470.62	503.22	552.54	606.10	648.45	676.60
67.5	401.46	409.01	428.27	465.96	507.24	551.49	598.48	636.80	662.63
90.0	401.46	421.92	441.61	482.89	529.89	574.35	632.78	682.32	709.20
112.5	401.46	408.59	432.30	473.58	512.96	564.61	614.15	650.56	679.78
135.0	401.46	404.78	431.24	462.15	508.09	555.08	608.86	659.88	684.65
157.5	401.46	397.79	417.48	450.50	504.49	549.37	601.66	645.48	684.22
180.0	401.46	399.91	413.03	451.14	486.92	541.11	589.80	633.84	665.80
202.5	401.46	394.61	414.30	441.61	490.94	534.76	582.39	632.78	664.32
225.0	401.46	395.04	411.34	443.09	481.41	525.02	576.89	615.42	648.66
247.5	401.46	396.31	411.34	444.79	488.61	533.07	582.39	628.76	654.80
270.0	401.46	420.02	437.80	471.46	519.52	563.55	621.14	670.46	696.08
292.5	401.46	414.51	434.20	460.67	503.43	556.57	602.93	644.63	672.37
315.0	401.46	412.40	436.53	468.92	517.40	564.40	617.96	667.08	684.22
337.5	401.46	407.74	429.76	468.29	513.59	568.42	612.24	657.55	677.66
360.0	401.46	406.47	430.60	475.91	509.57	564.40	609.70	653.31	680.41

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	685.70	690.79	683.80	693.11	687.82	677.87	672.16	672.58	670.89
22.5	693.54	698.62	696.50	684.22	675.33	661.57	657.55	654.37	652.04
45.0	687.61	688.03	688.25	686.98	684.01	674.06	667.08	663.90	660.51
67.5	665.38	661.99	661.78	661.99	651.83	644.00	636.59	635.32	631.09
90.0	711.32	709.42	713.44	709.20	705.18	695.02	682.32	675.33	674.48
112.5	692.27	697.35	700.31	708.15	718.31	707.09	694.38	692.90	692.90
135.0	690.57	692.90	689.73	690.15	688.03	676.39	662.63	663.69	660.30
157.5	696.08	700.52	697.56	694.38	692.27	682.74	667.08	665.80	661.57
180.0	681.05	681.68	685.28	680.84	682.32	679.57	667.71	662.42	664.11
202.5	671.10	681.47	678.08	673.43	673.00	663.26	647.60	646.33	643.36
225.0	659.67	667.50	670.25	672.16	678.30	678.30	663.05	659.03	660.51
247.5	662.42	668.13	668.35	670.46	669.40	656.28	638.50	638.50	641.04
270.0	709.42	716.19	704.76	707.72	706.03	706.24	686.76	687.61	683.80
292.5	691.00	698.41	688.67	693.54	692.48	687.61	682.11	677.45	682.11
315.0	695.23	693.33	685.70	688.46	684.22	678.72	670.46	667.92	663.26
337.5	684.65	696.50	689.30	689.94	678.30	667.92	661.57	656.91	656.28
360.0	685.70	690.79	683.80	693.11	687.82	677.87	672.16	672.58	670.89

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	667.92	668.13	665.17	643.79	629.18	604.41	567.79	521.64	470.62
22.5	650.35	650.14	648.66	627.91	615.84	589.59	557.41	525.66	478.87
45.0	659.24	657.76	654.58	636.59	617.32	593.40	556.78	507.45	460.03
67.5	629.39	629.39	626.85	608.01	594.04	570.12	538.78	502.58	458.34
90.0	677.45	675.12	665.17	665.59	641.67	621.56	592.98	561.44	516.13
112.5	697.56	694.81	685.70	679.78	659.03	637.01	605.47	562.07	511.90
135.0	664.32	663.48	657.55	657.55	637.65	616.27	590.86	558.68	517.82
157.5	668.98	668.13	659.24	660.94	641.88	618.81	592.77	558.90	521.42
180.0	673.00	671.52	664.96	661.15	642.94	621.77	597.42	563.55	514.44
202.5	652.04	651.62	643.58	645.69	628.97	608.01	586.63	558.05	522.06
225.0	665.38	665.59	661.15	655.43	638.28	617.54	589.59	556.35	509.15
247.5	646.54	647.81	639.77	639.13	623.25	604.83	580.49	552.97	508.72
270.0	679.78	678.93	678.72	657.55	650.99	623.89	592.77	556.35	512.32
292.5	677.66	674.91	675.75	654.37	640.40	618.38	585.57	536.24	486.49
315.0	659.24	660.51	661.15	638.50	631.72	602.93	570.96	532.22	484.59
337.5	652.04	651.83	651.83	632.78	618.38	591.92	562.07	522.69	474.85
360.0	667.92	668.13	665.17	643.79	629.18	604.41	567.79	521.64	470.62

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	413.88	351.00	291.73	233.08	171.90	111.57	58.43	18.00	2.96
22.5	415.15	355.66	297.87	240.07	178.89	115.38	60.97	15.03	3.60
45.0	408.59	345.29	286.22	223.35	165.98	113.90	57.37	14.18	4.23
67.5	404.99	346.13	290.03	236.68	179.52	118.55	60.12	19.27	4.23
90.0	463.21	399.69	339.15	279.02	214.24	142.69	69.86	23.50	8.05
112.5	464.05	399.48	327.93	265.05	202.81	136.55	68.17	27.95	6.99
135.0	467.86	404.14	344.02	286.86	222.29	157.93	93.15	45.09	12.70
157.5	469.34	409.01	348.25	288.55	228.00	164.71	102.89	46.58	13.34
180.0	463.42	406.26	339.36	281.78	220.81	152.21	92.73	44.88	15.24
202.5	469.56	402.24	341.48	286.43	225.04	161.11	100.14	48.69	15.24
225.0	457.07	399.69	339.36	281.56	221.23	158.78	96.33	45.52	15.03
247.5	456.22	396.73	336.82	279.45	219.96	156.24	96.11	43.40	13.34
270.0	456.22	392.29	332.16	270.98	210.01	143.96	76.21	34.72	7.41
292.5	432.51	371.54	310.78	251.08	188.63	123.42	51.02	21.17	6.14
315.0	430.18	368.79	311.63	252.14	191.59	122.58	49.75	21.81	3.60
337.5	413.24	354.18	300.19	242.19	184.82	124.06	61.61	15.88	2.96
360.0	413.88	351.00	291.73	233.08	171.90	111.57	58.43	18.00	2.96

C/γ(°)	180.0
0.0	3.20
22.5	3.20
45.0	3.20
67.5	3.20
90.0	3.20
112.5	3.20
135.0	3.20
157.5	3.20
180.0	3.20
202.5	3.20
225.0	3.20
247.5	3.20
270.0	3.20
292.5	3.20
315.0	3.20
337.5	3.20
360.0	3.20

3.2.2 Model Number: HID-54-EX39-8CCT-BYP/5SP/480V, 3000K at 480V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
480.12	60	0.1210	51.87	0.8943

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
7103.76	136.95	26.69	55.70

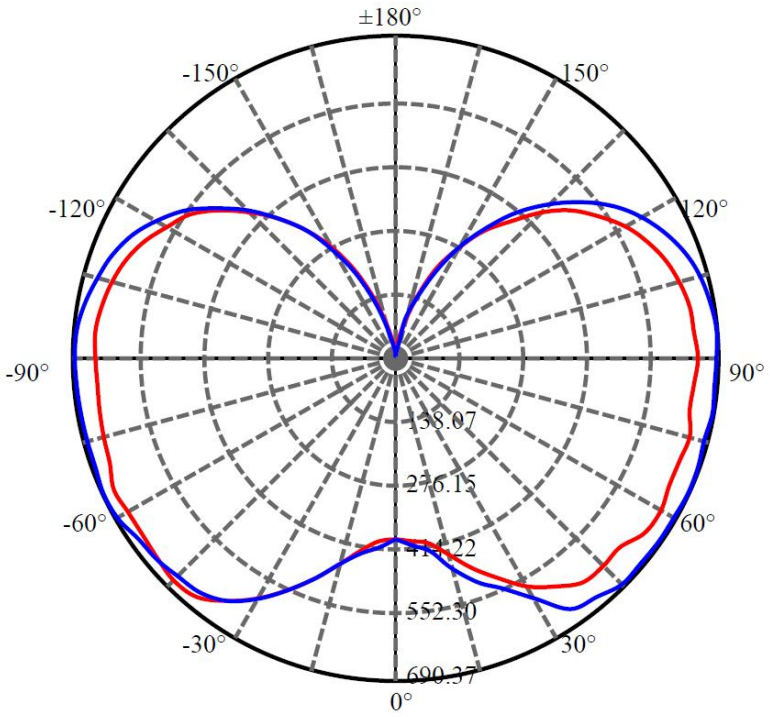
Zonal Flux Diagram

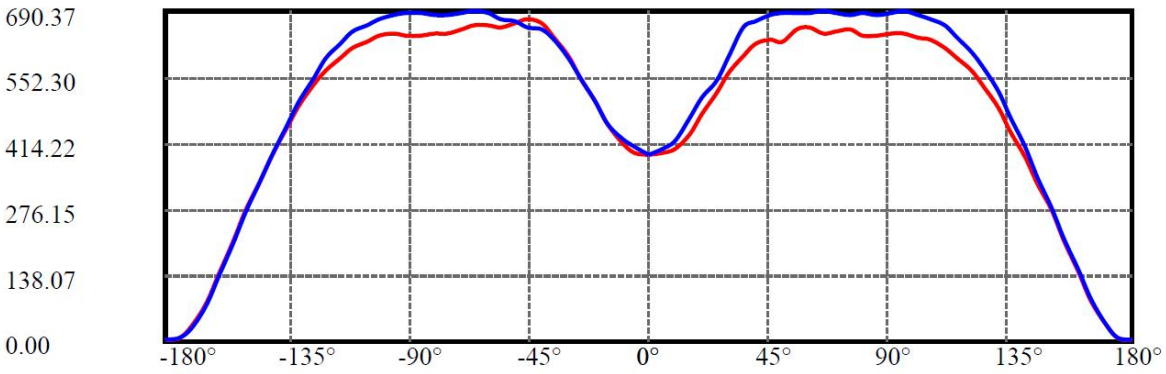
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	389.027	0.000	0	0.00%	0.00%
5.0	394.668	9.369	9.369	0.00%	0.13%
10.0	411.957	28.855	38.224	0.00%	0.54%
15.0	446.136	50.901	89.126	0.00%	1.25%
20.0	491.715	77.292	166.418	0.00%	2.34%
25.0	536.660	107.857	274.275	0.00%	3.86%
30.0	581.884	141.553	415.828	0.00%	5.85%
35.0	621.410	177.194	593.022	0.00%	8.35%
40.0	644.678	211.237	804.259	0.00%	11.32%
45.0	651.747	240.044	1044.302	0.00%	14.70%
50.0	650.230	263.083	1307.386	0.00%	18.40%
55.0	656.312	284.086	1591.471	0.00%	22.40%
60.0	660.774	304.441	1895.912	0.00%	26.69%
65.0	663.557	321.947	2217.859	0.00%	31.22%
70.0	660.789	335.333	2553.192	0.00%	35.94%
75.0	652.792	343.349	2896.541	0.00%	40.77%
80.0	651.216	348.916	3245.458	0.00%	45.69%
85.0	651.261	353.914	3599.372	0.00%	50.67%
90.0	654.515	357.532	3956.904	0.00%	55.70%
95.0	654.118	358.314	4315.218	0.00%	60.75%
100.0	648.772	354.026	4669.244	0.00%	65.73%
105.0	639.730	344.767	5014.011	0.00%	70.58%
110.0	624.576	330.469	5344.48	0.00%	75.23%
115.0	602.693	310.752	5655.233	0.00%	79.61%
120.0	574.875	286.269	5941.502	0.00%	83.64%
125.0	539.590	257.605	6199.107	0.00%	87.27%
130.0	495.220	225.002	6424.109	0.00%	90.43%
135.0	444.914	189.968	6614.077	0.00%	93.11%
140.0	390.073	154.605	6768.682	0.00%	95.28%
145.0	333.892	120.788	6889.47	0.00%	96.98%
150.0	273.308	89.414	6978.884	0.00%	98.24%
155.0	208.850	61.017	7039.901	0.00%	99.10%
160.0	141.212	36.715	7076.616	0.00%	99.62%
165.0	83.130	18.489	7095.105	0.00%	99.88%
170.0	34.666	6.988	7102.093	0.00%	99.98%
175.0	8.335	1.538	7103.631	0.00%	100.00%
180.0	2.730	0.132	7103.763	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:166.6 Right:166.9

:C90/270Left:165.9 Right:167.1

Beam Angle(50%Imax):C0/180Left:144.8 Right:144.7

:C90/270Left:143.9 Right:144.8

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	389.03	392.78	402.44	430.95	476.90	519.78	562.67	594.71	623.46
22.5	389.03	389.25	404.33	428.60	471.25	513.42	556.07	589.29	608.14
45.0	389.03	389.48	405.27	430.48	477.84	532.98	573.98	611.21	616.86
67.5	389.03	389.48	409.98	437.55	482.32	522.61	580.10	627.70	644.19
90.0	389.03	402.21	420.35	465.35	511.77	545.00	594.24	654.32	667.75
112.5	389.03	400.32	419.41	455.46	502.58	549.00	599.66	640.89	667.52
135.0	389.03	398.91	417.52	458.05	504.00	549.00	597.07	636.18	664.93
157.5	389.03	395.85	417.52	457.34	502.11	546.64	598.01	637.36	662.34
180.0	389.03	393.73	414.93	453.57	501.64	547.59	596.13	634.77	664.46
202.5	389.03	392.55	408.57	462.29	509.18	551.36	572.09	627.93	670.35
225.0	389.03	387.36	405.27	443.44	490.10	536.28	586.46	627.23	653.38
247.5	389.03	384.54	404.09	438.97	484.91	533.21	581.05	598.25	617.57
270.0	389.03	408.10	426.24	456.40	499.76	549.94	592.83	631.23	653.15
292.5	389.03	400.09	419.64	450.04	498.11	544.52	590.00	631.00	647.73
315.0	389.03	396.32	410.22	436.84	479.96	523.55	566.44	606.26	628.88
337.5	389.03	393.73	405.51	432.84	475.02	521.67	563.37	594.24	624.16
360.0	389.03	392.78	402.44	430.95	476.90	519.78	562.67	594.71	623.46

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	629.58	626.29	651.03	654.56	643.72	645.61	651.73	639.72	640.19
22.5	610.50	614.50	621.81	628.64	638.30	639.95	636.65	634.53	634.30
45.0	618.04	626.52	649.85	653.62	641.36	644.43	634.53	634.77	634.30
67.5	657.15	641.60	644.66	662.34	665.63	677.18	641.13	643.72	645.61
90.0	683.78	685.19	684.72	686.84	690.37	687.78	683.07	685.90	683.54
112.5	668.46	662.81	663.51	665.40	668.93	662.57	651.26	649.61	649.14
135.0	675.06	649.61	677.18	668.93	667.75	665.63	662.57	663.04	672.70
157.5	659.74	650.55	651.73	660.21	660.92	648.67	637.36	635.00	633.83
180.0	671.29	663.51	657.86	661.16	662.34	651.97	645.13	641.60	639.01
202.5	666.58	678.12	676.47	676.47	675.06	676.71	673.88	670.58	670.11
225.0	655.74	654.09	653.85	658.33	663.28	651.26	641.36	639.95	636.89
247.5	650.08	650.32	654.09	643.25	666.11	660.69	654.56	656.21	656.21
270.0	658.09	667.05	673.17	686.37	689.43	684.01	681.19	681.42	684.48
292.5	654.56	658.33	662.34	671.29	676.94	666.11	657.15	655.97	657.39
315.0	639.72	645.61	647.26	652.91	656.92	659.04	655.50	652.20	648.43
337.5	629.58	629.58	631.47	642.07	649.85	651.03	637.60	635.24	634.06
360.0	629.58	626.29	651.03	654.56	643.72	645.61	651.73	639.72	640.19

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	644.43	641.60	636.42	629.82	614.03	593.53	566.20	531.80	489.15
22.5	637.60	635.00	627.93	618.04	605.08	585.05	556.78	515.54	471.95
45.0	637.36	634.53	626.29	622.04	605.79	584.58	557.01	526.38	484.68
67.5	657.15	653.15	646.08	633.83	618.51	594.00	562.43	520.02	477.37
90.0	685.19	688.49	682.60	672.70	658.33	634.06	606.02	569.97	522.61
112.5	649.38	651.50	648.43	639.48	623.93	605.08	578.93	550.41	505.41
135.0	674.12	673.88	670.11	658.33	640.42	616.39	586.94	551.12	503.76
157.5	637.36	639.01	634.06	626.29	612.38	592.12	567.62	536.04	490.10
180.0	640.19	642.54	637.12	627.46	611.44	591.65	565.73	535.81	494.10
202.5	673.17	674.12	670.35	657.15	637.60	613.33	582.93	548.29	501.17
225.0	640.19	642.07	638.54	631.00	617.57	598.48	574.92	543.82	497.40
247.5	660.69	664.46	661.86	653.85	638.54	618.98	592.83	558.66	514.13
270.0	684.01	682.36	674.59	661.63	647.96	620.87	590.94	548.29	501.88
292.5	658.33	655.97	650.32	644.90	630.76	607.67	578.93	547.12	505.18
315.0	655.50	652.91	647.02	637.60	621.10	596.36	566.20	524.26	480.43
337.5	637.60	634.30	628.64	621.57	609.79	590.94	563.61	525.91	484.20
360.0	644.43	641.60	636.42	629.82	614.03	593.53	566.20	531.80	489.15

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	439.44	387.36	331.99	274.03	211.59	144.20	85.53	37.23	8.01
22.5	425.77	373.23	318.33	257.54	197.92	133.60	77.99	36.99	10.13
45.0	434.02	384.54	330.58	270.02	202.87	137.37	81.05	28.28	7.30
67.5	426.24	373.70	319.27	259.89	197.45	130.06	73.04	27.10	6.83
90.0	467.24	405.27	343.07	279.92	215.60	148.21	90.24	39.59	9.43
112.5	455.22	404.33	350.61	289.82	221.49	149.39	90.24	39.35	8.48
135.0	454.28	397.97	337.65	274.50	209.00	141.61	81.05	35.34	5.42
157.5	442.97	387.36	330.81	272.38	208.53	141.61	81.05	33.93	6.83
180.0	444.15	390.90	333.41	275.91	210.65	141.61	82.94	32.52	8.95
202.5	450.75	392.08	333.64	269.79	206.17	136.43	79.17	24.74	8.48
225.0	446.51	393.25	339.06	279.92	213.24	144.67	86.47	35.34	7.78
247.5	464.41	405.51	349.90	289.34	220.31	150.56	90.48	41.23	10.37
270.0	448.15	389.48	332.46	270.50	204.99	135.72	78.46	28.75	8.95
292.5	450.04	395.14	342.12	279.21	213.24	144.67	85.53	36.99	6.83
315.0	433.55	377.47	321.39	260.36	201.46	137.60	81.53	37.23	9.43
337.5	435.90	383.59	327.99	269.79	207.11	142.08	85.30	40.06	10.13
360.0	439.44	387.36	331.99	274.03	211.59	144.20	85.53	37.23	8.01

C/γ(°)	180.0
0.0	2.73
22.5	2.73
45.0	2.73
67.5	2.73
90.0	2.73
112.5	2.73
135.0	2.73
157.5	2.73
180.0	2.73
202.5	2.73
225.0	2.73
247.5	2.73
270.0	2.73
292.5	2.73
315.0	2.73
337.5	2.73
360.0	2.73

3.2.3 Model Number: HID-54-EX39-8CCT-BYP/5SP/480V, 4000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.17	60	0.1870	50.66	0.9796

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
7628.89	150.59	27.01	55.98

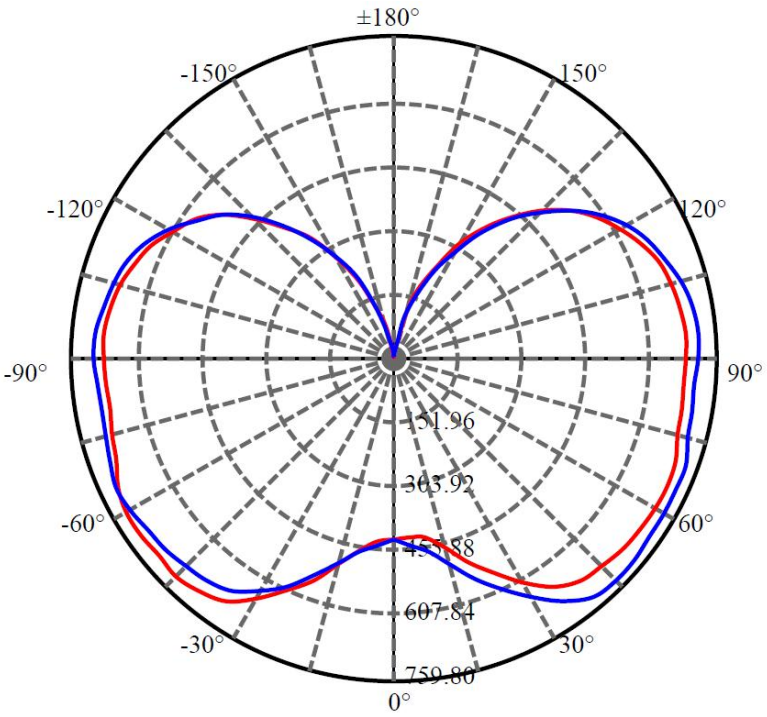
Zonal Flux Diagram

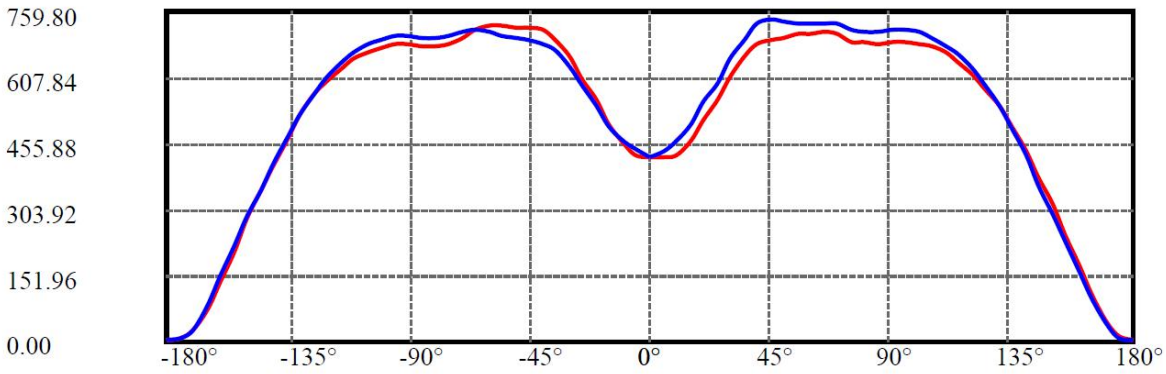
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	424.115	0.000	0	0.00%	0.00%
5.0	428.393	10.191	10.191	0.00%	0.13%
10.0	445.991	31.279	41.471	0.00%	0.54%
15.0	482.827	55.097	96.568	0.00%	1.27%
20.0	532.776	83.700	180.268	0.00%	2.36%
25.0	581.851	116.904	297.172	0.00%	3.90%
30.0	630.847	153.468	450.64	0.00%	5.91%
35.0	672.208	191.884	642.524	0.00%	8.42%
40.0	697.864	228.586	871.11	0.00%	11.42%
45.0	708.449	260.390	1131.5	0.00%	14.83%
50.0	711.876	286.998	1418.498	0.00%	18.59%
55.0	715.144	310.282	1728.779	0.00%	22.66%
60.0	719.537	331.623	2060.402	0.00%	27.01%
65.0	720.000	349.954	2410.356	0.00%	31.60%
70.0	710.791	362.286	2772.642	0.00%	36.34%
75.0	697.652	368.145	3140.786	0.00%	41.17%
80.0	694.239	372.431	3513.218	0.00%	46.05%
85.0	692.916	376.923	3890.141	0.00%	50.99%
90.0	697.494	380.705	4270.846	0.00%	55.98%
95.0	697.441	381.944	4652.79	0.00%	60.99%
100.0	690.706	377.193	5029.982	0.00%	65.93%
105.0	681.245	367.096	5397.078	0.00%	70.75%
110.0	665.288	351.962	5749.04	0.00%	75.36%
115.0	641.644	330.924	6079.964	0.00%	79.70%
120.0	612.813	304.961	6384.925	0.00%	83.69%
125.0	576.095	274.813	6659.737	0.00%	87.30%
130.0	530.513	240.614	6900.351	0.00%	90.45%
135.0	477.799	203.744	7104.095	0.00%	93.12%
140.0	418.575	165.971	7270.066	0.00%	95.30%
145.0	356.732	129.354	7399.421	0.00%	96.99%
150.0	291.805	95.502	7494.922	0.00%	98.24%
155.0	222.843	65.129	7560.051	0.00%	99.10%
160.0	151.883	39.302	7599.353	0.00%	99.61%
165.0	90.966	20.014	7619.368	0.00%	99.88%
170.0	38.159	7.660	7627.027	0.00%	99.98%
175.0	9.685	1.712	7628.739	0.00%	100.00%
180.0	2.814	0.149	7628.888	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:165.5 Right:167.9

:C90/270Left:166.0 Right:167.3

Beam Angle(50%Imax):C0/180Left:143.8 Right:146.2

:C90/270Left:143.4 Right:144.1

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	424.12	422.98	428.27	460.88	510.84	555.08	608.43	653.95	684.43
22.5	424.12	422.35	423.83	457.07	499.83	540.05	588.75	625.16	654.16
45.0	424.12	416.00	432.72	465.53	513.59	559.53	607.16	655.22	678.08
67.5	424.12	418.75	441.19	473.16	520.15	568.85	613.73	655.22	679.78
90.0	424.12	440.13	461.30	501.10	550.00	595.73	650.99	694.38	731.43
112.5	424.12	440.13	459.18	503.22	553.60	604.41	657.76	700.74	727.62
135.0	424.12	436.11	459.18	500.89	551.27	606.32	655.22	697.35	723.39
157.5	424.12	434.41	461.30	504.28	560.80	611.82	663.69	702.22	723.60
180.0	424.12	430.82	458.34	500.04	555.08	605.47	656.07	694.81	715.34
202.5	424.12	427.22	450.72	492.42	546.19	598.91	642.94	684.01	707.93
225.0	424.12	422.56	439.28	481.84	535.18	590.02	638.71	670.89	693.75
247.5	424.12	415.57	433.36	475.48	528.41	573.08	620.08	660.30	681.89
270.0	424.12	441.40	463.63	493.90	540.48	591.29	633.20	669.62	684.86
292.5	424.12	429.97	452.20	482.89	531.16	581.55	630.24	673.64	694.38
315.0	424.12	431.45	440.55	470.83	519.94	569.48	618.17	664.53	698.20
337.5	424.12	424.46	430.82	461.72	507.87	558.05	608.43	653.31	686.98
360.0	424.12	422.98	428.27	460.88	510.84	555.08	608.43	653.95	684.43

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	693.33	699.47	705.82	709.20	710.47	706.88	691.00	687.82	684.22
22.5	669.19	676.60	678.30	683.80	693.96	693.75	682.95	679.78	677.66
45.0	690.36	697.56	701.58	706.03	705.60	699.89	686.34	684.22	682.32
67.5	694.38	697.56	700.10	706.03	704.76	691.42	676.81	675.12	673.21
90.0	741.17	738.00	731.01	732.28	733.76	733.76	716.83	712.59	710.26
112.5	735.03	733.97	734.82	736.51	734.18	717.67	698.20	693.96	692.48
135.0	734.61	739.69	747.31	758.53	759.80	744.56	731.64	727.20	726.99
157.5	734.18	735.67	742.65	750.70	746.46	730.16	720.64	717.25	719.15
180.0	722.12	720.85	725.29	725.29	717.25	697.35	685.28	679.78	679.57
202.5	717.67	720.21	721.91	726.78	729.53	720.21	711.74	708.36	710.69
225.0	703.91	698.41	699.04	700.31	696.29	680.20	667.29	667.29	666.23
247.5	689.94	695.02	703.28	705.18	702.43	692.27	675.33	671.73	669.40
270.0	692.27	698.41	704.55	713.01	718.73	710.26	701.79	698.83	700.74
292.5	699.68	703.91	706.88	707.30	707.51	699.47	683.80	681.26	677.24
315.0	714.07	722.54	725.50	732.70	740.54	741.59	731.01	725.93	724.02
337.5	703.28	712.17	714.28	718.94	718.73	713.23	701.79	696.71	692.48
360.0	693.33	699.47	705.82	709.20	710.47	706.88	691.00	687.82	684.22

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	689.09	689.30	684.01	677.45	664.75	642.31	613.94	579.85	540.90
22.5	683.16	682.95	677.66	670.67	659.24	638.28	609.49	568.42	521.42
45.0	686.98	683.80	677.45	668.77	654.37	632.57	602.72	565.46	522.27
67.5	680.41	677.45	671.31	662.42	647.81	624.52	594.46	559.32	514.65
90.0	715.98	717.88	711.74	699.68	681.05	658.61	629.39	592.13	541.32
112.5	696.29	697.56	692.48	684.43	668.56	645.90	619.23	584.93	540.69
135.0	729.53	729.95	721.27	709.20	691.63	666.86	638.50	600.81	548.52
157.5	722.12	724.45	715.34	704.33	684.01	656.49	627.28	586.63	536.03
180.0	682.95	683.16	676.81	666.44	650.56	628.33	600.18	569.69	524.81
202.5	713.65	714.50	705.82	691.42	669.40	643.15	610.76	570.54	521.21
225.0	668.77	673.00	664.53	655.01	639.13	618.17	595.52	562.07	518.04
247.5	674.27	677.03	672.58	663.26	648.66	628.12	599.97	566.30	522.91
270.0	704.33	702.43	694.60	683.59	667.71	643.79	610.97	569.06	524.39
292.5	684.22	680.20	675.12	669.40	655.43	635.11	609.92	576.04	536.67
315.0	730.59	728.68	722.12	713.65	696.71	663.05	629.39	589.38	540.69
337.5	697.56	696.71	688.46	680.20	665.59	641.04	613.30	576.89	533.70
360.0	689.09	689.30	684.01	677.45	664.75	642.31	613.94	579.85	540.90

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	493.48	437.38	377.89	314.17	247.06	173.81	108.82	45.52	13.13
22.5	471.89	414.94	353.33	286.65	223.35	155.18	97.60	49.33	14.18
45.0	471.04	413.03	355.45	293.00	224.41	155.18	96.96	37.68	8.68
67.5	461.09	405.41	346.35	283.26	214.67	143.75	82.56	34.08	7.83
90.0	488.82	429.12	357.57	292.57	229.06	159.84	100.98	42.13	11.43
112.5	487.97	427.00	363.49	300.62	226.10	153.27	90.19	39.17	9.74
135.0	488.19	423.83	359.47	291.09	217.21	143.75	81.29	33.45	4.87
157.5	479.08	416.42	348.25	276.70	208.10	136.34	75.79	30.70	5.08
180.0	468.50	407.10	348.25	282.20	205.78	136.97	77.70	26.04	7.20
202.5	467.44	404.14	339.36	276.27	206.41	135.70	77.06	20.11	8.05
225.0	465.11	406.26	348.04	283.26	212.13	143.32	81.72	32.60	6.35
247.5	471.67	412.40	353.97	294.06	226.52	156.03	94.42	43.61	11.86
270.0	469.77	410.49	351.21	287.28	219.54	148.83	85.10	29.64	9.95
292.5	487.97	430.18	371.75	302.95	234.57	156.87	96.75	44.46	8.89
315.0	489.24	431.87	366.88	299.77	233.08	166.19	102.89	49.12	13.34
337.5	483.53	427.64	366.46	305.06	237.53	165.13	105.64	52.93	14.40
360.0	493.48	437.38	377.89	314.17	247.06	173.81	108.82	45.52	13.13

C/γ(°)	180.0
0.0	2.81
22.5	2.81
45.0	2.81
67.5	2.81
90.0	2.81
112.5	2.81
135.0	2.81
157.5	2.81
180.0	2.81
202.5	2.81
225.0	2.81
247.5	2.81
270.0	2.81
292.5	2.81
315.0	2.81
337.5	2.81
360.0	2.81

3.2.4 Model Number: HID-54-EX39-8CCT-BYP/5SP/480V, 4000K at 480V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
480.12	60	0.1180	50.59	0.8900

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
7457.47	147.41	26.93	55.89

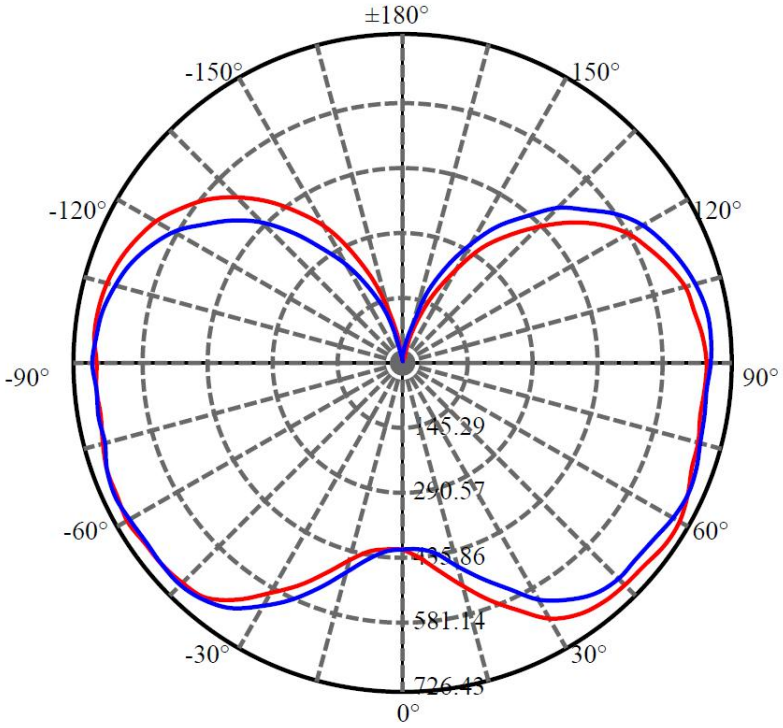
Zonal Flux Diagram

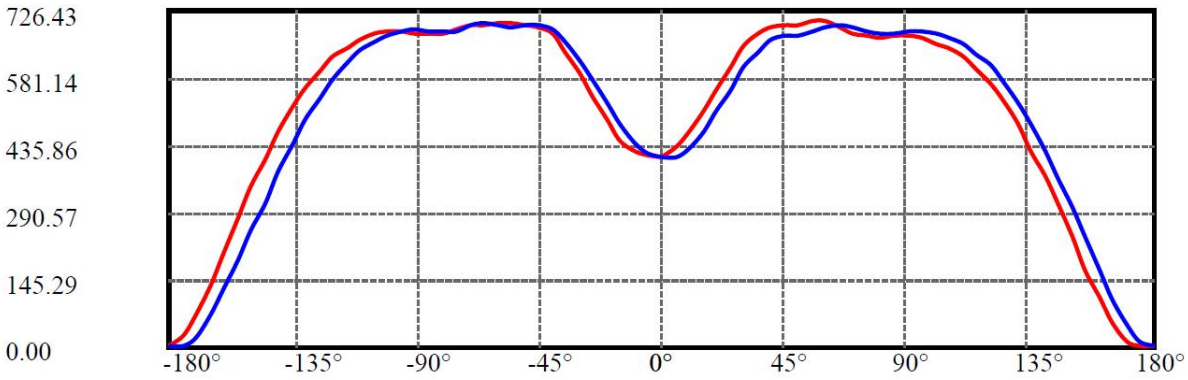
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	412.823	0.000	0	0.00%	0.00%
5.0	419.544	9.951	9.951	0.00%	0.13%
10.0	440.374	30.762	40.713	0.00%	0.55%
15.0	476.039	54.361	95.074	0.00%	1.27%
20.0	520.165	82.101	177.175	0.00%	2.38%
25.0	569.106	114.244	291.419	0.00%	3.91%
30.0	615.078	149.859	441.279	0.00%	5.92%
35.0	652.885	186.716	627.995	0.00%	8.42%
40.0	678.596	222.148	850.143	0.00%	11.40%
45.0	688.780	253.181	1103.324	0.00%	14.79%
50.0	692.916	279.192	1382.516	0.00%	18.54%
55.0	697.256	302.270	1684.785	0.00%	22.59%
60.0	700.795	323.156	2007.941	0.00%	26.93%
65.0	700.117	340.565	2348.505	0.00%	31.49%
70.0	692.469	352.612	2701.117	0.00%	36.22%
75.0	683.573	359.675	3060.793	0.00%	41.04%
80.0	680.074	364.874	3425.667	0.00%	45.94%
85.0	679.993	369.563	3795.23	0.00%	50.89%
90.0	682.583	373.084	4168.314	0.00%	55.89%
95.0	681.620	373.530	4541.843	0.00%	60.90%
100.0	675.776	368.837	4910.68	0.00%	65.85%
105.0	666.486	359.152	5269.832	0.00%	70.67%
110.0	651.203	344.423	5614.255	0.00%	75.28%
115.0	628.516	324.033	5938.288	0.00%	79.63%
120.0	600.337	298.737	6237.025	0.00%	83.63%
125.0	564.550	269.260	6506.285	0.00%	87.25%
130.0	519.542	235.718	6742.003	0.00%	90.41%
135.0	468.200	199.588	6941.59	0.00%	93.08%
140.0	410.906	162.774	7104.364	0.00%	95.27%
145.0	350.099	126.968	7231.332	0.00%	96.97%
150.0	286.960	93.811	7325.143	0.00%	98.23%
155.0	218.383	63.952	7389.095	0.00%	99.08%
160.0	150.539	38.693	7427.788	0.00%	99.60%
165.0	89.976	19.822	7447.61	0.00%	99.87%
170.0	40.764	7.755	7455.365	0.00%	99.97%
175.0	12.869	1.919	7457.284	0.00%	100.00%
180.0	2.885	0.188	7457.472	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:170.3 Right:163.3

:C90/270Left:165.2 Right:168.1

Beam Angle(50%Imax):C0/180Left:149.4 Right:141.4

:C90/270Left:142.1 Right:146.3

Luminous Intensity Distribution Data

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	412.82	431.56	463.67	509.24	554.58	603.84	649.40	678.91	689.11
22.5	412.82	430.47	459.33	503.16	545.25	596.46	635.95	668.06	685.63
45.0	412.82	426.14	452.17	494.05	540.91	591.03	627.70	654.17	670.66
67.5	412.82	418.76	443.49	486.89	529.20	577.58	619.24	654.61	666.98
90.0	412.82	411.16	429.82	465.62	507.93	553.72	603.62	636.38	663.72
112.5	412.82	409.65	426.35	457.81	502.29	553.06	602.10	646.15	680.43
135.0	412.82	413.55	424.83	451.96	494.70	545.04	594.51	638.77	679.34
157.5	412.82	412.03	420.71	444.14	486.67	539.18	591.25	639.42	678.04
180.0	412.82	413.55	422.23	448.05	492.75	541.78	590.17	636.38	675.44
202.5	412.82	414.20	424.40	448.48	488.84	532.02	582.14	620.54	651.79
225.0	412.82	414.64	431.13	456.95	502.08	548.94	597.11	644.84	679.99
247.5	412.82	415.94	430.91	463.45	509.45	559.57	607.96	651.14	682.38
270.0	412.82	417.46	443.93	481.25	527.24	578.45	618.37	659.60	684.77
292.5	412.82	426.14	452.61	492.75	538.96	588.65	636.82	671.97	690.19
315.0	412.82	427.00	458.25	500.12	542.43	592.12	635.30	669.58	687.59
337.5	412.82	430.47	462.15	512.71	559.36	604.27	649.62	675.65	691.49
360.0	412.82	431.56	463.67	509.24	554.58	603.84	649.40	678.91	689.11

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	694.53	695.18	704.08	702.99	692.14	678.47	673.27	668.71	671.10
22.5	691.06	694.31	698.22	701.91	702.99	693.66	692.14	690.84	695.40
45.0	674.57	673.48	678.69	678.04	670.45	658.30	652.22	650.05	653.52
67.5	672.62	680.43	687.37	693.45	690.84	676.31	667.19	664.15	665.89
90.0	671.10	673.27	679.78	689.11	695.18	688.67	679.78	677.17	674.79
112.5	686.07	687.15	688.02	689.32	688.89	682.38	666.54	664.81	660.68
135.0	700.61	708.63	708.85	711.02	717.96	722.09	712.97	707.12	706.25
157.5	697.13	705.16	709.28	713.41	715.14	712.32	703.21	699.09	696.92
180.0	690.19	694.53	697.57	699.09	696.27	695.83	684.12	676.96	676.09
202.5	670.23	678.69	678.26	680.86	690.19	694.75	686.29	679.56	678.04
225.0	690.84	698.44	701.69	702.56	699.96	695.83	682.38	677.39	672.83
247.5	694.96	698.87	700.39	705.38	703.86	693.45	677.17	675.44	670.66
270.0	695.83	693.66	689.76	693.23	699.52	694.53	682.38	680.64	679.78
292.5	693.45	696.92	702.99	706.90	702.56	686.07	678.26	672.18	673.48
315.0	698.22	704.73	716.44	726.43	723.82	709.94	703.86	702.34	705.38
337.5	699.09	703.21	714.71	719.05	712.11	696.92	695.40	694.75	699.09
360.0	694.53	695.18	704.08	702.99	692.14	678.47	673.27	668.71	671.10

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	671.75	665.89	654.61	645.28	626.40	599.50	570.42	533.75	482.98
22.5	696.48	689.32	678.47	662.64	640.72	613.17	575.20	528.33	480.38
45.0	656.13	649.40	639.64	629.44	612.51	588.65	560.88	524.42	478.64
67.5	667.84	663.94	655.91	646.36	628.14	601.23	570.86	534.62	487.76
90.0	679.99	682.81	678.91	668.71	653.74	630.52	607.09	574.54	528.98
112.5	663.07	668.28	665.24	660.47	649.40	632.48	612.73	586.48	547.64
135.0	707.98	713.84	712.32	705.60	692.36	672.18	642.46	604.92	561.74
157.5	699.96	704.51	703.21	696.27	685.42	667.84	644.19	615.12	573.46
180.0	675.87	680.64	680.43	675.44	662.85	645.93	625.10	595.59	559.57
202.5	681.30	686.50	684.33	677.61	667.41	650.92	629.22	594.51	551.11
225.0	677.17	680.86	678.47	672.40	660.68	643.11	617.94	589.08	545.69
247.5	676.09	678.47	676.31	666.98	655.69	635.73	609.48	581.05	540.48
270.0	685.42	679.56	670.23	657.21	640.94	614.03	579.10	535.49	490.14
292.5	677.39	670.66	662.85	652.65	634.86	609.26	579.10	540.48	492.53
315.0	706.68	700.17	690.41	678.69	658.51	632.48	596.68	553.28	501.42
337.5	698.22	691.06	681.08	668.06	649.62	619.24	584.96	541.13	490.14
360.0	671.75	665.89	654.61	645.28	626.40	599.50	570.42	533.75	482.98

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	423.75	368.85	309.19	240.84	168.81	106.97	52.29	13.67	2.82
22.5	423.53	360.61	297.04	235.85	167.72	106.53	52.72	9.98	3.91
45.0	424.40	370.16	312.44	248.22	175.75	117.60	60.54	16.06	3.69
67.5	433.51	377.32	323.51	261.24	193.76	124.54	70.52	24.74	5.86
90.0	482.33	423.97	366.03	303.55	238.24	165.77	102.85	49.90	14.54
112.5	502.29	445.88	385.78	325.89	257.33	182.91	117.17	60.97	20.18
135.0	514.66	457.16	394.67	332.84	264.71	193.97	124.76	67.05	22.78
157.5	525.07	467.58	406.39	341.52	269.48	195.93	127.15	68.56	26.69
180.0	518.78	463.89	404.87	345.42	280.11	203.09	136.04	72.69	29.29
202.5	502.29	447.18	382.09	321.12	254.51	185.08	120.20	69.43	26.91
225.0	498.17	440.67	380.79	319.60	252.99	185.95	120.64	62.27	23.22
247.5	492.31	436.77	376.45	317.21	247.35	174.01	108.49	54.46	13.02
270.0	439.15	376.88	311.36	251.26	189.20	125.63	72.25	23.87	4.77
292.5	437.42	382.09	321.99	255.38	183.78	119.55	64.88	23.87	3.26
315.0	440.46	380.14	317.65	249.09	179.22	111.74	55.55	19.09	2.39
337.5	433.08	375.36	311.36	242.36	171.19	109.35	53.59	15.62	2.60
360.0	423.75	368.85	309.19	240.84	168.81	106.97	52.29	13.67	2.82

C/γ(°)	180.0
0.0	2.89
22.5	2.89
45.0	2.89
67.5	2.89
90.0	2.89
112.5	2.89
135.0	2.89
157.5	2.89
180.0	2.89
202.5	2.89
225.0	2.89
247.5	2.89
270.0	2.89
292.5	2.89
315.0	2.89
337.5	2.89
360.0	2.89

3.2.5 Model Number: HID-54-EX39-8CCT-BYP/5SP/480V, 5000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.11	60	0.1900	51.74	0.9811

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
7297.04	141.03	26.70	55.56

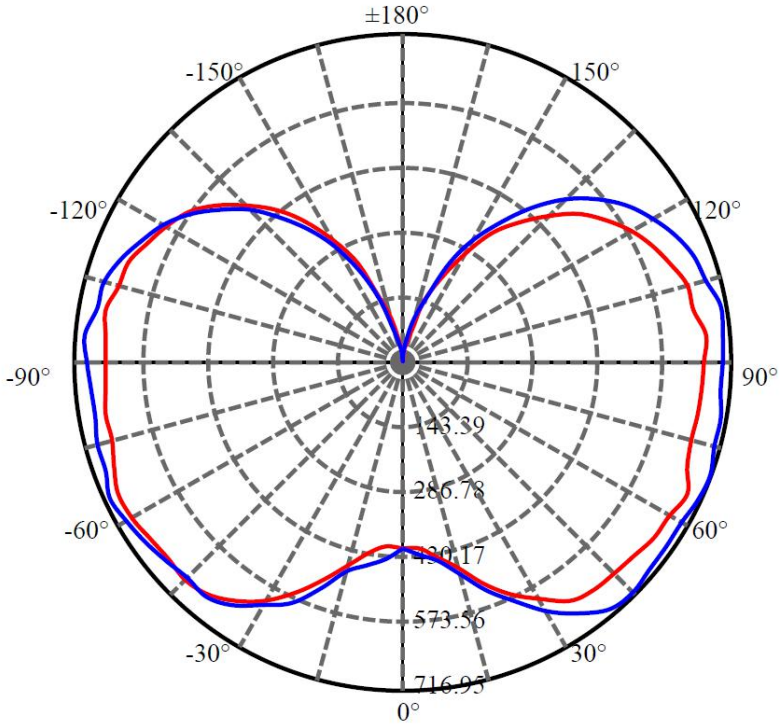
Zonal Flux Diagram

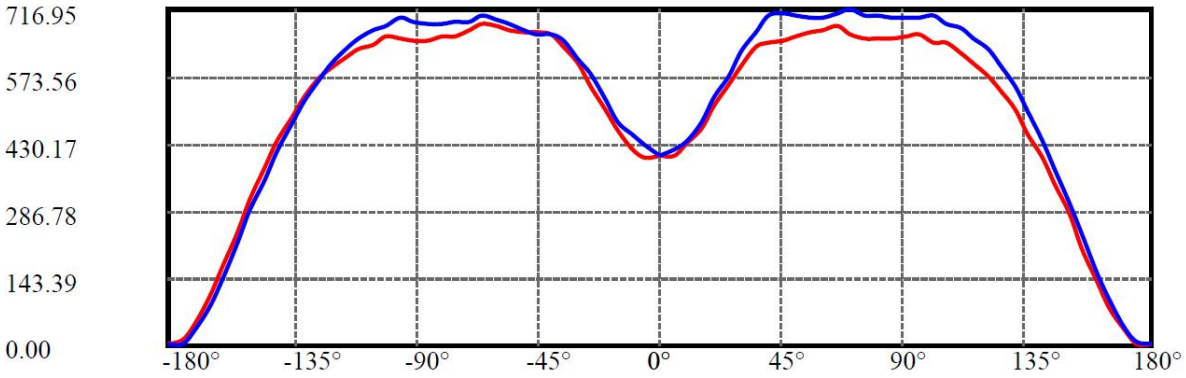
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	405.783	0.000	0	0.00%	0.00%
5.0	408.936	9.740	9.74	0.00%	0.13%
10.0	428.424	29.955	39.695	0.00%	0.54%
15.0	461.867	52.811	92.506	0.00%	1.27%
20.0	508.279	79.954	172.46	0.00%	2.36%
25.0	556.335	111.658	284.118	0.00%	3.89%
30.0	600.224	146.363	430.482	0.00%	5.90%
35.0	636.558	182.125	612.607	0.00%	8.40%
40.0	657.925	215.975	828.581	0.00%	11.36%
45.0	664.771	244.908	1073.489	0.00%	14.71%
50.0	667.268	269.158	1342.647	0.00%	18.40%
55.0	675.363	291.933	1634.58	0.00%	22.40%
60.0	681.131	313.550	1948.129	0.00%	26.70%
65.0	685.993	332.351	2280.48	0.00%	31.25%
70.0	675.941	344.850	2625.33	0.00%	35.98%
75.0	664.574	350.389	2975.719	0.00%	40.78%
80.0	663.076	355.242	3330.961	0.00%	45.65%
85.0	661.736	359.983	3690.944	0.00%	50.58%
90.0	663.772	362.934	4053.879	0.00%	55.56%
95.0	667.675	364.561	4418.44	0.00%	60.55%
100.0	661.736	361.233	4779.672	0.00%	65.50%
105.0	651.867	351.483	5131.156	0.00%	70.32%
110.0	637.005	336.890	5468.046	0.00%	74.94%
115.0	616.387	317.367	5785.413	0.00%	79.28%
120.0	589.909	293.253	6078.666	0.00%	83.30%
125.0	558.332	265.413	6344.079	0.00%	86.94%
130.0	516.151	233.628	6577.707	0.00%	90.14%
135.0	467.478	198.756	6776.463	0.00%	92.87%
140.0	415.047	163.407	6939.87	0.00%	95.11%
145.0	355.888	128.625	7068.495	0.00%	96.87%
150.0	291.617	95.350	7163.844	0.00%	98.17%
155.0	221.761	64.968	7228.813	0.00%	99.07%
160.0	149.370	38.925	7267.737	0.00%	99.60%
165.0	90.499	19.769	7287.506	0.00%	99.87%
170.0	38.765	7.668	7295.174	0.00%	99.97%
175.0	9.290	1.719	7296.893	0.00%	100.00%
180.0	2.671	0.143	7297.036	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:168.3 Right:166.4

:C90/270Left:166.1 Right:167.1

Beam Angle(50%Imax):C0/180Left:147.8 Right:145.1

:C90/270Left:144.6 Right:146.2

Luminous Intensity Distribution Data

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	405.78	407.25	430.17	462.97	514.06	558.21	597.95	636.64	647.78
22.5	405.78	404.10	425.55	454.56	492.41	542.24	574.40	605.73	623.18
45.0	405.78	404.31	422.39	453.09	509.44	550.22	591.43	626.97	638.11
67.5	405.78	398.00	423.86	461.50	503.97	550.22	593.96	621.92	643.37
90.0	405.78	420.29	438.37	476.22	528.15	573.98	625.91	668.17	701.60
112.5	405.78	415.66	433.12	474.74	521.63	572.09	621.92	666.70	690.25
135.0	405.78	407.25	428.07	470.33	512.38	564.73	613.51	650.09	679.53
157.5	405.78	409.36	428.49	461.92	512.38	565.99	609.09	646.10	666.28
180.0	405.78	402.21	419.66	456.45	503.13	554.22	600.47	637.27	663.97
202.5	405.78	403.68	415.66	451.62	498.29	542.45	593.96	625.49	652.41
225.0	405.78	395.06	417.14	445.52	487.99	537.61	588.28	621.50	646.73
247.5	405.78	398.63	411.04	445.94	484.63	534.25	577.98	613.30	634.11
270.0	405.78	429.33	450.57	474.32	523.73	577.14	609.52	649.04	665.23
292.5	405.78	423.23	443.84	471.59	523.73	570.20	616.03	650.93	666.70
315.0	405.78	415.24	435.64	464.44	507.96	555.90	595.64	635.59	659.98
337.5	405.78	409.36	431.22	464.65	508.60	551.91	593.54	629.49	647.57
360.0	405.78	407.25	430.17	462.97	514.06	558.21	597.95	636.64	647.78

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	650.51	657.87	669.65	671.54	682.89	662.08	652.83	653.67	654.72
22.5	623.60	631.59	640.63	645.26	653.88	653.46	643.79	640.63	643.16
45.0	648.20	654.72	660.19	667.54	674.48	658.08	648.41	647.78	648.41
67.5	650.51	655.35	664.39	668.39	672.80	657.66	642.73	641.26	644.63
90.0	709.17	701.82	700.55	700.55	709.59	715.06	705.39	703.71	697.61
112.5	697.61	698.66	703.71	714.01	709.17	691.51	673.43	674.06	668.60
135.0	690.04	694.25	697.82	706.02	716.95	711.91	706.23	701.18	698.87
157.5	671.54	670.70	682.47	690.25	685.63	673.22	658.08	657.24	654.51
180.0	669.44	669.86	672.59	682.26	684.57	671.54	659.34	657.45	650.51
202.5	659.34	654.09	666.07	673.43	677.85	680.58	670.91	671.96	668.17
225.0	657.87	661.45	670.28	675.32	673.64	663.55	650.30	647.57	643.79
247.5	641.47	642.73	655.35	665.23	666.28	661.03	645.26	645.26	641.89
270.0	665.44	672.38	686.68	695.51	705.18	691.72	688.99	683.94	684.36
292.5	676.80	676.37	685.42	685.63	692.98	677.01	663.76	665.02	665.86
315.0	667.54	673.01	677.43	679.11	693.41	689.62	678.90	680.16	680.58
337.5	657.24	661.45	672.59	678.06	676.58	657.03	644.84	638.32	642.10
360.0	650.51	657.87	669.65	671.54	682.89	662.08	652.83	653.67	654.72

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	658.50	663.13	645.68	644.63	622.55	601.74	572.93	543.08	501.03
22.5	647.36	653.67	636.22	630.54	615.40	592.27	560.74	523.10	479.16
45.0	651.36	654.51	638.95	638.11	614.35	593.96	566.83	537.19	493.88
67.5	648.62	652.83	635.38	633.06	613.09	592.06	562.21	526.68	482.73
90.0	700.13	699.71	705.39	687.52	676.16	654.51	630.12	597.32	552.75
112.5	668.60	672.38	676.80	659.34	651.99	634.75	610.78	584.08	543.92
135.0	695.72	700.13	703.08	686.26	672.17	651.57	624.23	588.07	544.13
157.5	656.19	656.19	661.87	646.31	637.48	618.56	599.21	571.46	528.78
180.0	650.09	652.62	657.66	640.63	634.32	615.61	594.17	570.41	531.51
202.5	669.44	670.70	675.95	661.45	647.15	629.70	605.73	573.56	530.04
225.0	645.05	647.15	652.83	637.06	630.33	609.52	585.55	559.27	521.00
247.5	640.84	642.10	648.41	630.75	622.97	601.53	579.03	549.59	509.86
270.0	688.15	698.03	679.11	673.85	655.56	632.01	601.32	563.68	519.95
292.5	671.12	676.58	660.40	660.82	637.06	619.40	589.12	562.00	520.79
315.0	684.99	692.35	674.90	666.49	646.73	617.93	585.55	547.28	504.81
337.5	644.21	650.72	635.17	633.06	614.77	597.11	571.04	536.56	494.09
360.0	658.50	663.13	645.68	644.63	622.55	601.74	572.93	543.08	501.03

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	450.99	400.95	343.76	280.05	205.20	139.19	82.21	34.69	6.10
22.5	429.96	375.30	312.01	252.93	190.49	123.63	71.06	31.12	6.10
45.0	443.42	394.22	336.82	269.54	195.95	132.46	74.01	19.76	5.89
67.5	436.48	383.29	327.78	265.34	197.43	129.09	73.17	27.54	5.89
90.0	500.61	438.37	374.46	304.02	234.43	156.64	95.87	38.06	7.78
112.5	492.62	444.47	383.71	318.32	241.16	166.10	104.07	44.99	8.41
135.0	497.03	439.21	376.98	310.12	242.42	161.05	99.45	47.31	12.19
157.5	480.84	430.17	375.09	313.69	241.58	167.36	106.18	49.20	13.67
180.0	484.00	434.80	378.45	313.06	240.53	167.57	105.76	49.20	14.51
202.5	479.79	425.97	362.05	298.13	234.85	157.69	96.93	47.10	13.04
225.0	473.27	421.76	367.31	305.28	234.22	158.53	104.28	47.31	15.56
247.5	468.02	420.50	366.47	304.86	240.32	166.73	106.60	48.57	13.67
270.0	470.33	414.19	352.80	289.73	219.08	143.60	82.63	33.43	6.52
292.5	470.75	423.23	363.10	292.88	216.77	144.86	85.78	36.37	5.26
315.0	455.40	399.27	338.71	275.64	209.62	137.08	79.47	31.96	6.31
337.5	446.15	395.06	334.72	272.27	204.15	138.34	80.53	33.64	7.78
360.0	450.99	400.95	343.76	280.05	205.20	139.19	82.21	34.69	6.10

C/γ(°)	180.0
0.0	2.67
22.5	2.67
45.0	2.67
67.5	2.67
90.0	2.67
112.5	2.67
135.0	2.67
157.5	2.67
180.0	2.67
202.5	2.67
225.0	2.67
247.5	2.67
270.0	2.67
292.5	2.67
315.0	2.67
337.5	2.67
360.0	2.67

3.2.6 Model Number: HID-54-EX39-8CCT-BYP/5SP/480V, 5000K at 480V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
480.13	60	0.1210	51.82	0.8944

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
7165.33	138.27	26.63	55.50

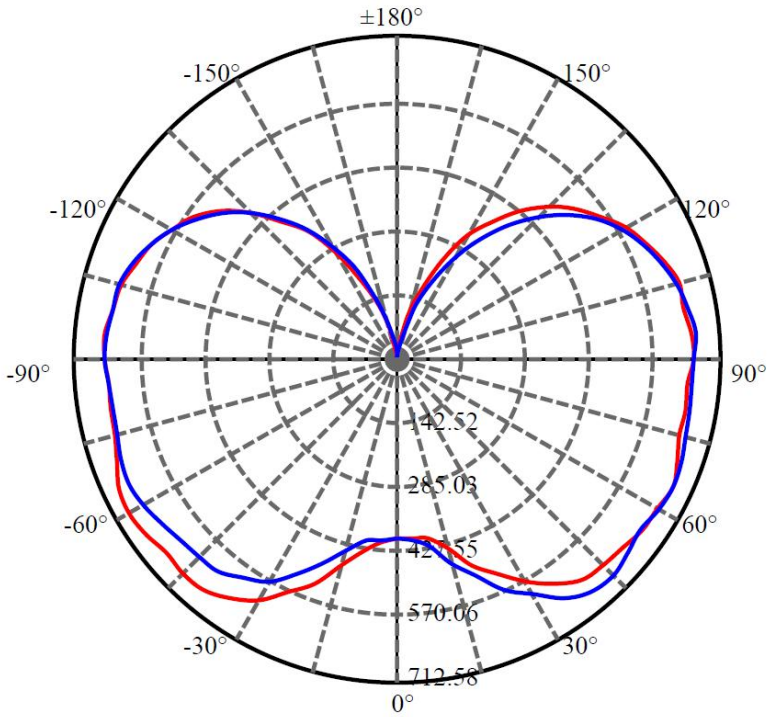
Zonal Flux Diagram

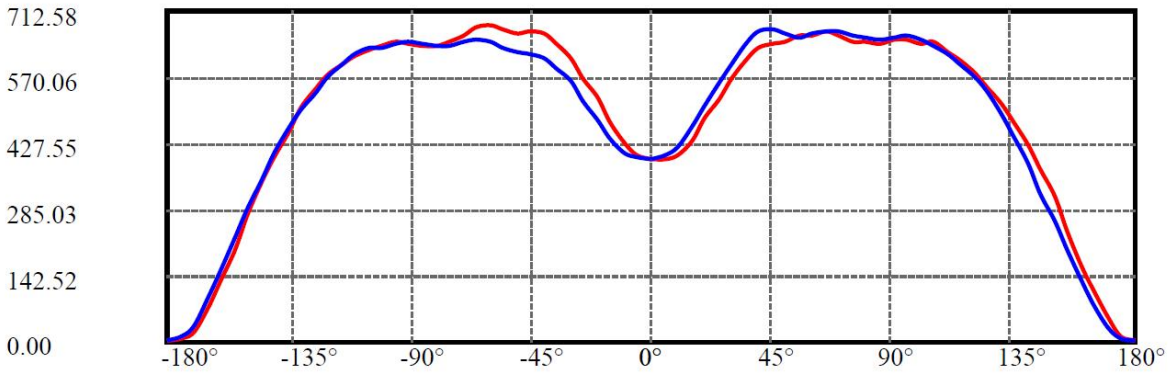
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	394.736	0.000	0	0.00%	0.00%
5.0	398.259	9.480	9.48	0.00%	0.13%
10.0	415.066	29.095	38.575	0.00%	0.54%
15.0	450.413	51.340	89.915	0.00%	1.25%
20.0	497.653	78.134	168.049	0.00%	2.35%
25.0	542.721	109.116	277.165	0.00%	3.87%
30.0	585.933	142.832	419.997	0.00%	5.86%
35.0	621.636	177.823	597.82	0.00%	8.34%
40.0	644.109	211.180	809	0.00%	11.29%
45.0	652.642	240.104	1049.104	0.00%	14.64%
50.0	655.605	264.350	1313.454	0.00%	18.33%
55.0	662.622	286.626	1600.081	0.00%	22.33%
60.0	670.186	308.075	1908.155	0.00%	26.63%
65.0	673.231	326.587	2234.743	0.00%	31.19%
70.0	664.875	338.817	2573.56	0.00%	35.92%
75.0	652.737	344.403	2917.962	0.00%	40.72%
80.0	649.870	348.542	3266.504	0.00%	45.59%
85.0	649.543	353.082	3619.585	0.00%	50.52%
90.0	655.809	357.416	3977.001	0.00%	55.50%
95.0	656.574	359.341	4336.342	0.00%	60.52%
100.0	647.126	354.247	4690.588	0.00%	65.46%
105.0	642.866	345.166	5035.754	0.00%	70.28%
110.0	626.729	331.852	5367.606	0.00%	74.91%
115.0	606.276	312.205	5679.811	0.00%	79.27%
120.0	580.595	288.531	5968.341	0.00%	83.29%
125.0	547.254	260.699	6229.041	0.00%	86.93%
130.0	506.213	229.059	6458.099	0.00%	90.13%
135.0	459.779	195.193	6653.292	0.00%	92.85%
140.0	407.229	160.534	6813.826	0.00%	95.09%
145.0	349.640	126.278	6940.104	0.00%	96.86%
150.0	286.441	93.667	7033.771	0.00%	98.16%
155.0	218.107	63.851	7097.622	0.00%	99.06%
160.0	148.395	38.439	7136.061	0.00%	99.59%
165.0	90.274	19.670	7155.731	0.00%	99.87%
170.0	38.966	7.666	7163.397	0.00%	99.97%
175.0	10.540	1.771	7165.168	0.00%	100.00%
180.0	2.698	0.158	7165.327	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:165.8 Right:168.6

:C90/270Left:167.4 Right:166.4

Beam Angle(50%Imax):C0/180Left:145.1 Right:147.5

:C90/270Left:146.1 Right:143.8

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	394.74	394.52	400.85	434.28	480.59	520.34	568.40	606.41	633.50
22.5	394.74	395.83	407.63	434.06	480.15	516.85	559.23	595.05	612.09
45.0	394.74	396.05	413.30	446.51	500.25	540.44	586.75	621.70	639.18
67.5	394.74	399.54	427.29	461.15	510.08	557.48	589.59	624.76	642.02
90.0	394.74	401.73	420.95	463.55	508.55	558.57	598.33	643.33	667.14
112.5	394.74	404.79	429.69	464.86	524.93	567.53	612.97	647.48	666.05
135.0	394.74	406.75	434.06	474.47	529.96	575.61	617.55	657.97	678.94
157.5	394.74	405.66	433.18	472.50	525.37	575.18	612.97	648.36	666.49
180.0	394.74	403.26	429.47	472.07	525.59	568.18	610.56	643.33	663.87
202.5	394.74	399.32	418.55	460.71	508.55	559.88	599.64	634.81	650.10
225.0	394.74	393.21	417.67	451.97	495.00	544.59	595.93	629.13	652.51
247.5	394.74	392.12	408.28	440.17	483.65	534.11	577.80	611.00	637.00
270.0	394.74	399.98	405.00	437.55	479.49	518.60	563.82	590.03	612.53
292.5	394.74	393.64	402.82	440.39	471.85	520.56	564.69	598.11	626.51
315.0	394.74	390.80	398.45	428.16	469.88	512.04	557.70	599.20	630.66
337.5	394.74	394.96	393.86	424.23	468.57	513.57	559.01	595.49	627.17
360.0	394.74	394.52	400.85	434.28	480.59	520.34	568.40	606.41	633.50

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	640.71	646.17	659.50	660.59	669.98	659.28	645.08	644.86	643.55
22.5	617.77	626.07	633.28	640.49	654.69	651.20	643.55	642.24	642.68
45.0	645.95	651.63	662.12	666.71	674.79	667.14	651.85	652.72	651.41
67.5	650.54	650.98	659.93	668.02	662.12	659.06	645.08	639.84	643.33
90.0	671.73	664.96	656.44	662.99	670.42	666.49	658.62	655.13	651.20
112.5	674.57	671.07	680.90	686.37	677.63	664.08	647.04	639.40	640.27
135.0	692.92	693.57	701.88	712.58	711.92	696.85	688.33	682.43	684.40
157.5	682.43	683.31	693.57	701.66	697.94	683.31	674.79	670.42	671.51
180.0	668.45	665.61	674.57	682.43	678.28	658.84	644.42	639.40	636.78
202.5	661.68	667.14	671.51	682.87	685.71	682.87	671.73	669.33	670.86
225.0	651.63	650.98	652.72	657.53	656.66	645.08	628.48	628.69	626.51
247.5	642.24	649.45	661.90	670.86	671.95	658.40	639.62	639.40	635.90
270.0	617.77	623.67	633.94	646.83	651.85	648.14	639.18	635.90	640.05
292.5	631.10	636.12	643.55	640.27	652.07	643.11	628.04	629.35	625.20
315.0	648.57	655.56	659.50	669.76	680.69	684.18	677.63	668.23	668.89
337.5	644.20	653.38	656.66	673.04	675.01	669.98	660.37	660.59	660.15
360.0	640.71	646.17	659.50	660.59	669.98	659.28	645.08	644.86	643.55

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	651.41	649.88	641.15	644.42	626.07	604.23	580.64	548.96	512.04
22.5	652.94	648.79	637.87	640.27	628.69	609.25	580.42	540.00	498.28
45.0	657.09	649.01	640.27	640.27	617.99	594.40	564.69	530.17	489.32
67.5	648.36	641.15	632.85	628.91	609.69	589.81	559.01	523.18	481.90
90.0	654.69	659.71	649.23	638.09	619.96	597.89	572.55	538.48	492.60
112.5	647.92	651.41	639.18	631.10	615.15	595.93	570.59	537.82	494.57
135.0	687.24	688.99	674.79	664.08	647.48	623.67	594.62	560.10	514.88
157.5	676.97	682.43	671.51	658.40	641.37	617.12	589.59	556.61	508.99
180.0	642.68	647.48	637.00	628.48	613.40	597.89	573.21	546.12	505.05
202.5	676.97	681.34	670.64	659.28	641.58	617.34	588.72	552.24	507.67
225.0	628.91	638.09	631.97	622.80	609.91	593.74	575.39	547.00	506.58
247.5	637.87	647.26	640.05	634.16	620.18	607.72	584.57	554.64	514.88
270.0	646.61	643.77	634.59	634.16	618.43	597.89	572.77	536.07	498.50
292.5	635.25	631.97	625.20	628.91	614.28	594.40	573.65	541.75	507.89
315.0	678.72	676.97	668.02	671.07	654.25	632.19	604.01	569.50	529.52
337.5	669.33	666.92	659.71	661.46	649.23	626.95	605.10	573.43	536.73
360.0	651.41	649.88	641.15	644.42	626.07	604.23	580.64	548.96	512.04

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	472.94	426.41	369.83	312.60	240.95	165.80	108.57	51.77	13.33
22.5	455.47	401.73	344.06	281.58	220.20	150.51	95.03	45.87	12.89
45.0	442.36	391.68	336.19	272.62	209.49	143.30	82.79	31.89	7.65
67.5	436.02	383.16	325.49	265.63	190.92	125.61	71.00	25.12	5.24
90.0	443.45	384.47	320.03	261.26	199.23	134.35	81.26	29.71	9.18
112.5	443.89	393.64	338.16	268.69	195.73	129.98	74.27	28.40	5.90
135.0	455.90	400.85	339.91	271.53	196.82	128.89	68.81	26.65	4.15
157.5	455.03	401.07	339.03	267.60	194.42	126.70	69.47	26.87	4.37
180.0	453.28	399.32	343.18	274.15	199.23	133.25	77.33	22.94	8.08
202.5	458.74	402.38	339.03	278.52	213.42	140.24	84.98	28.84	9.61
225.0	464.64	413.09	358.69	297.53	224.78	149.86	95.46	43.47	9.61
247.5	473.60	422.70	367.21	308.01	244.23	172.79	109.22	56.14	17.26
270.0	458.52	405.00	348.86	289.23	227.62	155.75	96.55	36.26	14.64
292.5	472.94	427.50	372.89	313.91	245.97	169.73	112.06	56.14	12.89
315.0	481.90	427.50	372.24	306.70	240.95	171.92	109.22	57.02	17.48
337.5	487.80	435.15	379.45	313.47	245.75	175.63	108.35	56.36	16.38
360.0	472.94	426.41	369.83	312.60	240.95	165.80	108.57	51.77	13.33

C/γ(°)	180.0
0.0	2.70
22.5	2.70
45.0	2.70
67.5	2.70
90.0	2.70
112.5	2.70
135.0	2.70
157.5	2.70
180.0	2.70
202.5	2.70
225.0	2.70
247.5	2.70
270.0	2.70
292.5	2.70
315.0	2.70
337.5	2.70
360.0	2.70

4 Additional Test

Model Number	CCT(K)	Test Voltage (V)	Frequency (Hz)	Power Factor	THD
HID-54-EX39-8CCT-BYP/5SP/480V	3000	277	60	0.981	5.8%
		480	60	0.895	7.9%
	4000	480	60	0.893	8.3%
	5000	480	60	0.895	7.7%

Photo Document

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