



Shenzhen Belling Efficiency Testing Lab Co., Ltd



Report No.: BL230227011-9A

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-36-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.

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-36-EX39-8CCT-BYP/5SP/480V
Rated Inputs	AC 277-480V, 50/60Hz
Rated Power	36W
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-36-EX39-8CCT-BYP/5SP/480V are the same to the product in the report BL230227005-9A and is authorized by original applicant to use their test data.
- Note: All the data in previous report BL230227005-9A is shared in report.



1.4 Equipment list

Device	Manufacture	Model No.	Serial No.	Calibration due date
Goniophotometric 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 BL230227011-9 dated at 2023-03-24 was recalled and declared as invalid by Shenzhen Belling Efficiency Testing Laboratory Co.,Ltd. Report BL230227011-9A was issued on to replace report BL230227011-9.

Report Number	Report Date	Contents
BL230227011-9	2023-03-24	Original report
BL230227011-9A	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 $25^{\circ}\text{C} \pm 1^{\circ}\text{C}$, 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 $U=20\text{K}$ ($K=2$), 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-36-EX39-8CCT-BYP/5SP/480V, 3000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.05	60	0.127	34.59	0.983

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
4918.96	142.2	3059

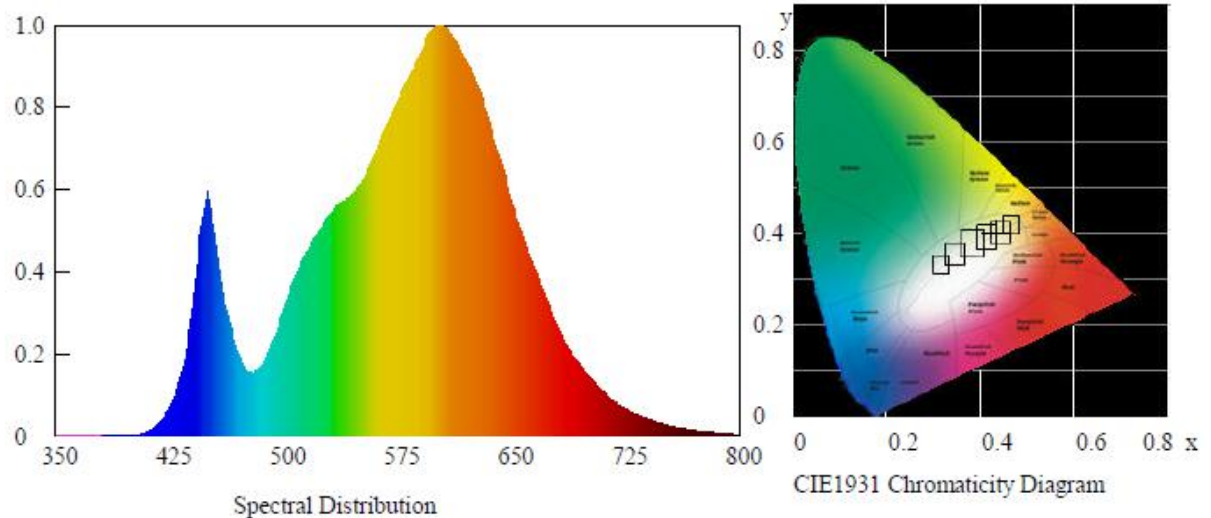
Chromaticity Coordinate

Duv	x	y	u'	v'
-0.00143	0.4308	0.3984	0.2491	0.5182

Color Rendering

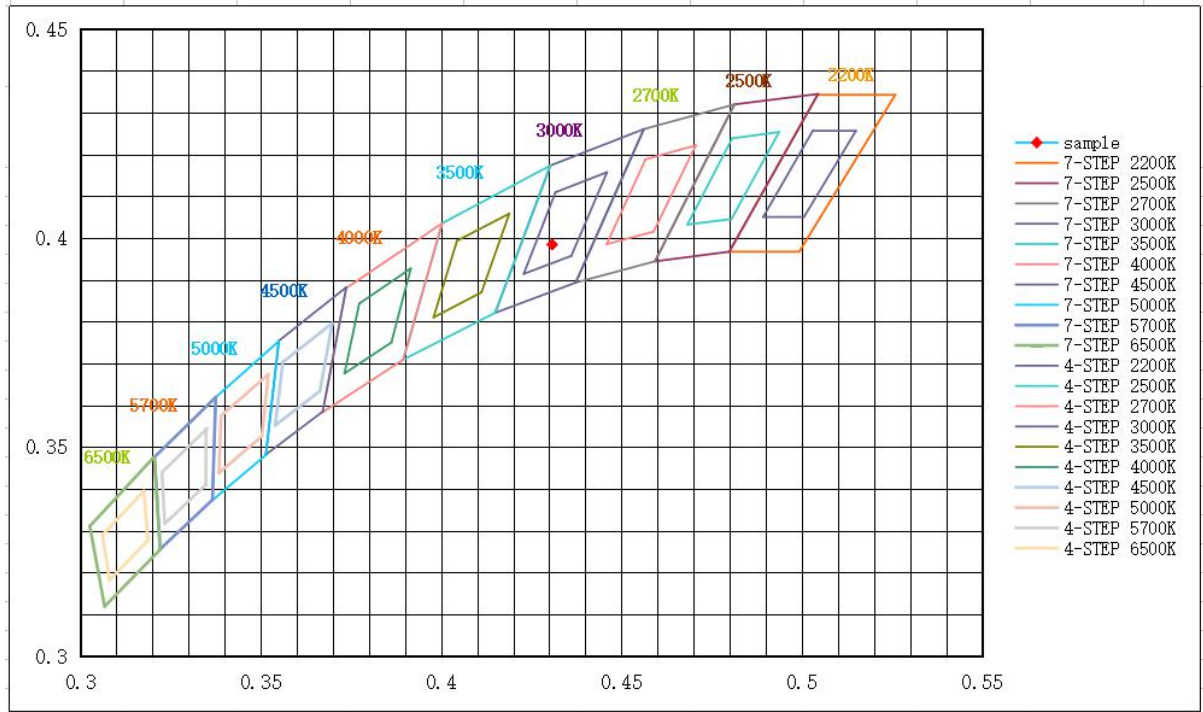
CRI	R9	Rf	Rg	Rcs,h1(%)
83.1	10	84	98	-11

Spectral Distribution





7/4 Step Quadrangle

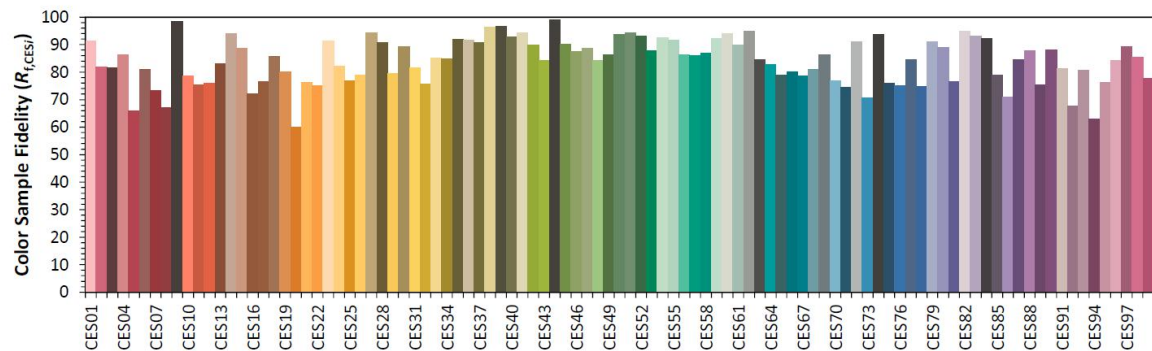
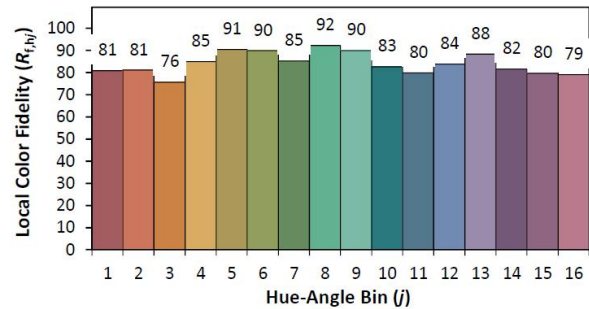
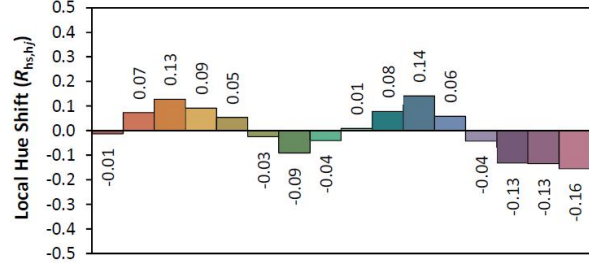
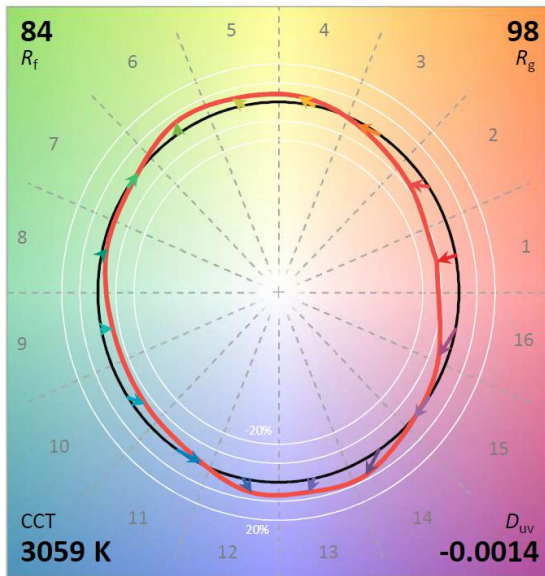
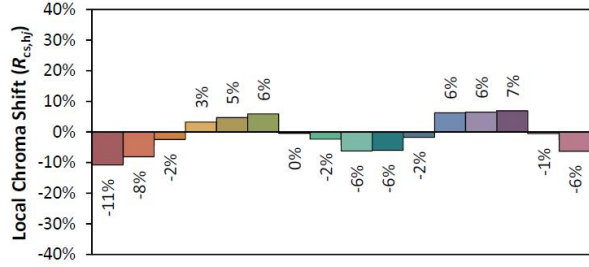
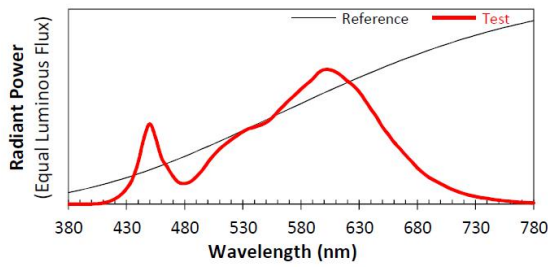




ANSI/IES TM-30-18 Color Rendition Report

Source: BL230227011-9A
Date: 2023-04-11

Manufacturer: RAB LIGHTING,INC
Model: HID-36-EX39-8CCT-BYP/5SP/480V, 3000K at 277V



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

x 0.4308
 y 0.3984
 u' 0.2491
 v' 0.5182

CIE 13.3-1995 (CRI)
 R_a 83
 R_g 10



3.1.2 Model Number: HID-36-EX39-8CCT-BYP/5SP/480V, 3000K at 480V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
480.05	60	0.080	34.93	0.909

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
4797.20	137.3	3061

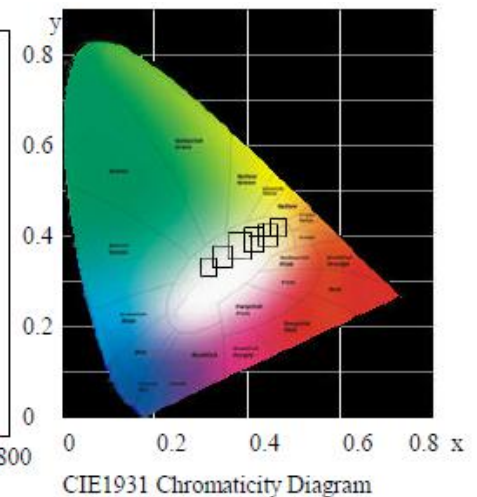
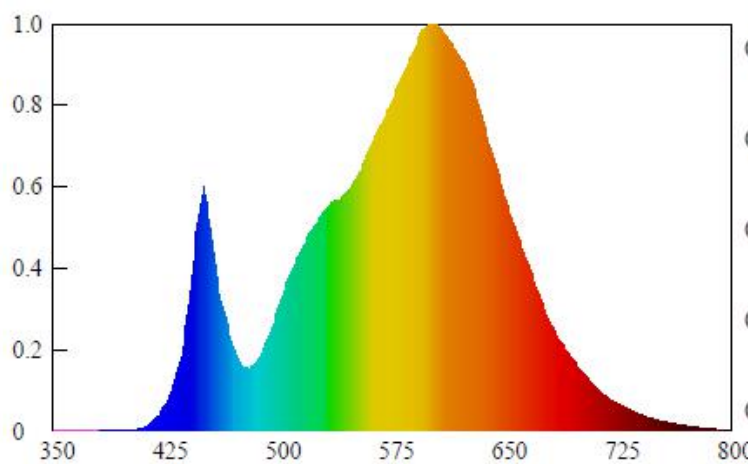
Chromaticity Coordinate

Duv	x	y	u'	v'
-0.00138	0.4308	0.3985	0.2490	0.5182

Color Rendering

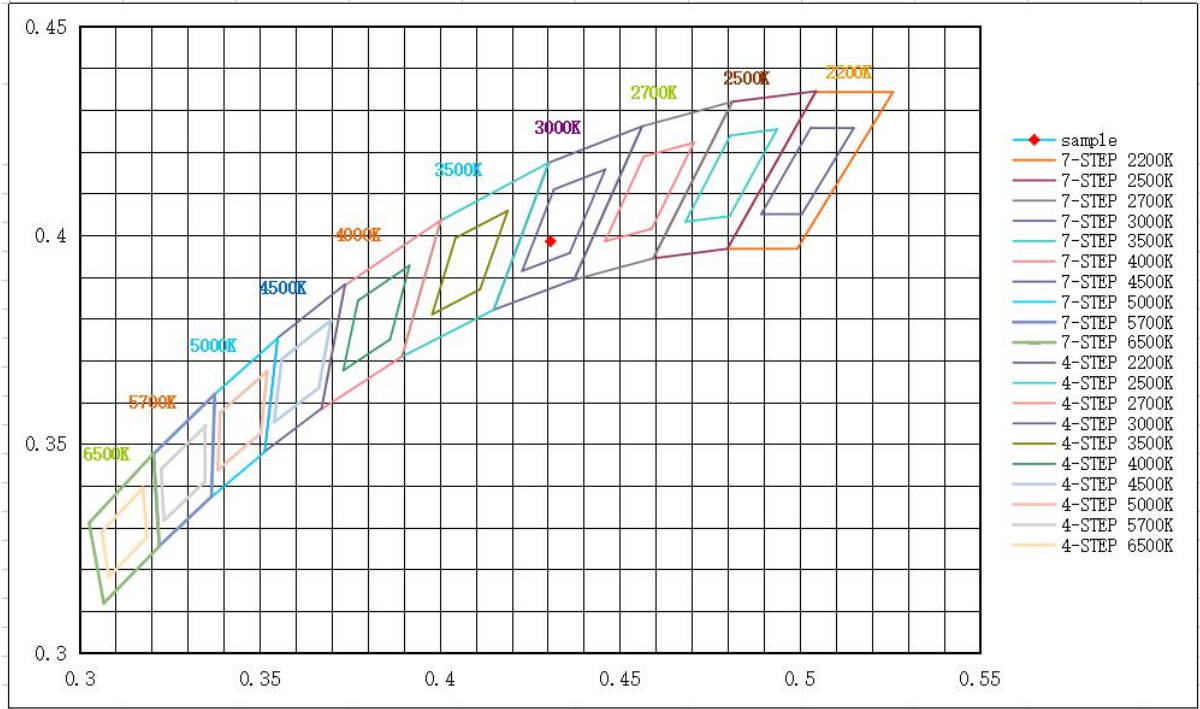
CRI	R9	Rf	Rg	Rcs,h1(%)
83.1	10	84	98	-11

Spectral Distribution





7/4 Step Quadrangle

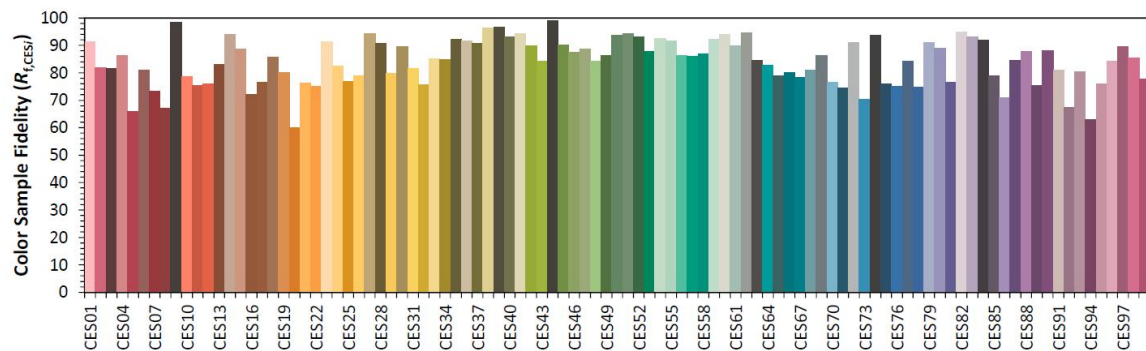
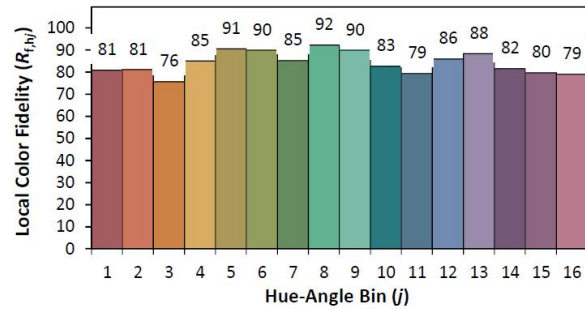
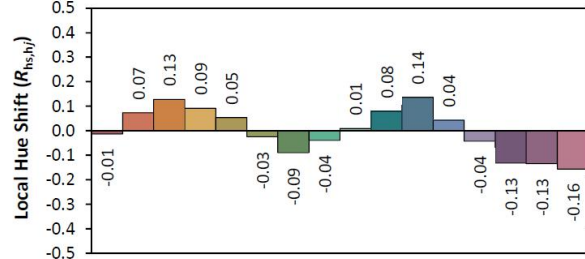
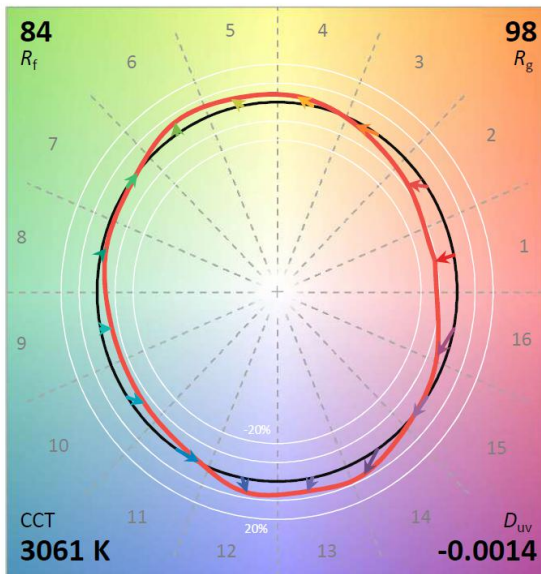
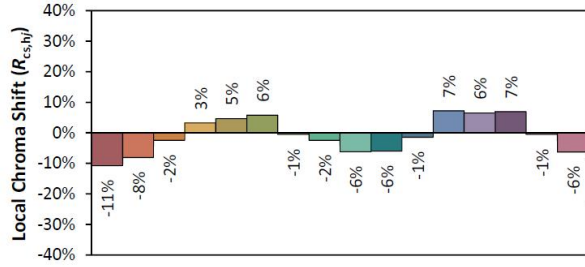
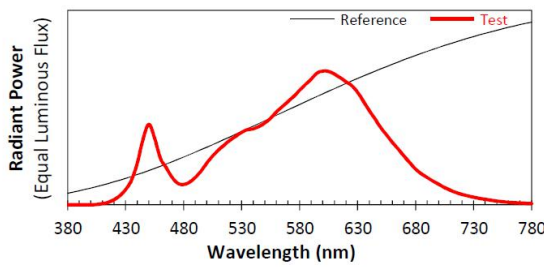




ANSI/IES TM-30-18 Color Rendition Report

Source: BL230227011-9A
Date: 2023-04-11

Manufacturer: RAB LIGHTING, INC
Model: HID-36-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' 0.5182

CIE 13.3-1995 (CRI)
 R_a 83
 R_g 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-36-EX39-8CCT-BYP/5SP/480V, 4000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.11	60	0.124	33.72	0.982

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
5109.82	151.5	4024

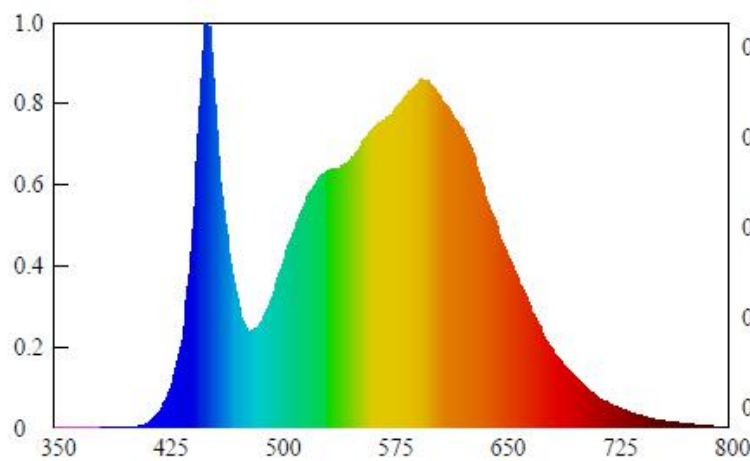
Chromaticity Coordinate

Duv	x	y	u'	v'
-0.00198	0.3780	0.3711	0.2258	0.4987

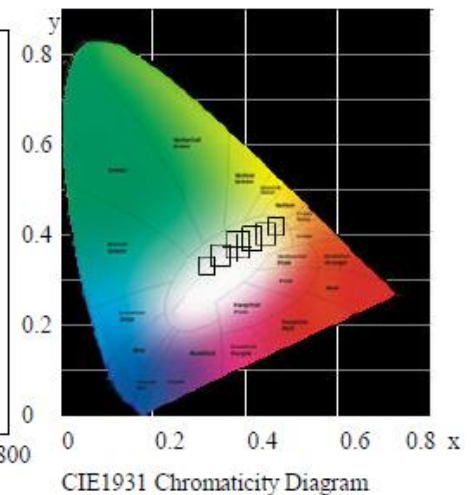
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
84.9	20	84	97	-11

Spectral Distribution



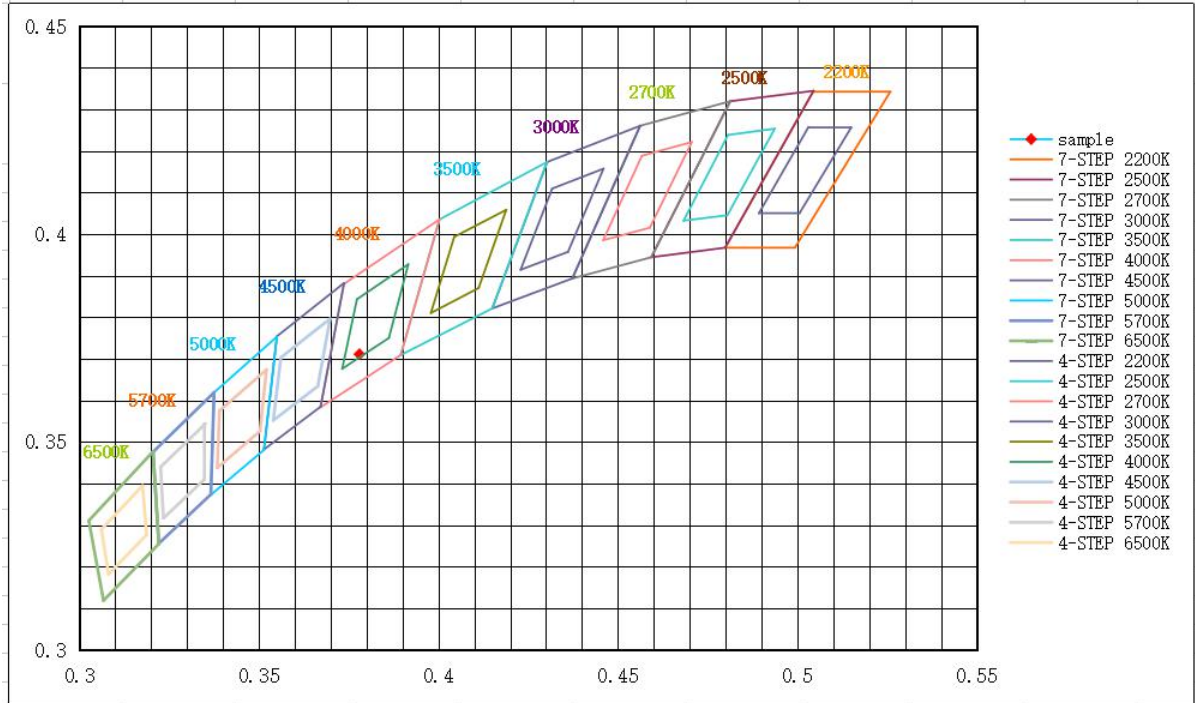
Spectral Distribution



CIE1931 Chromaticity Diagram



7/4 Step Quadrangle

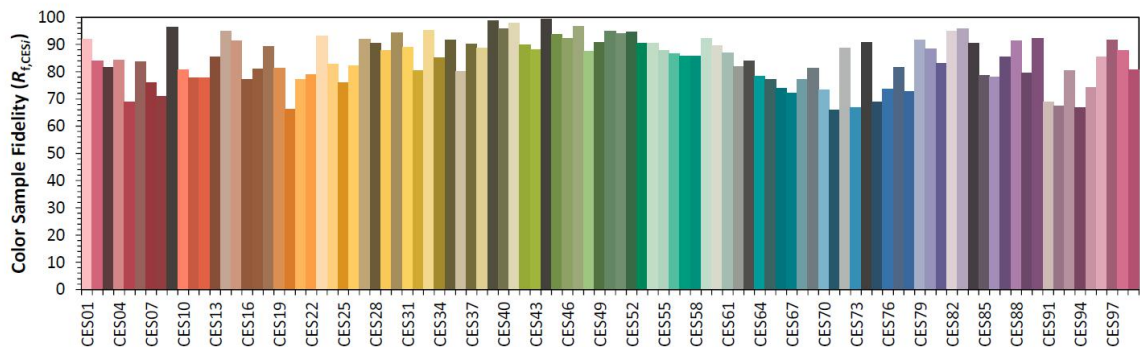
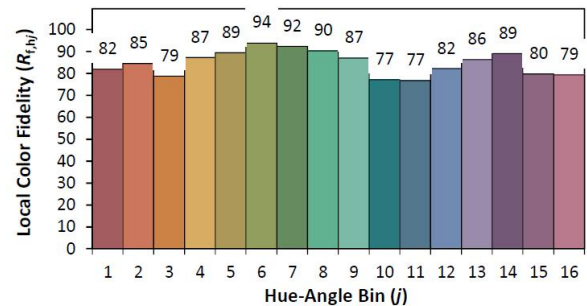
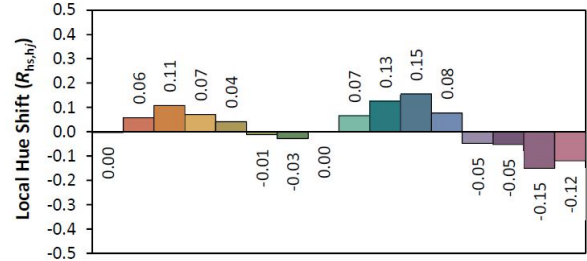
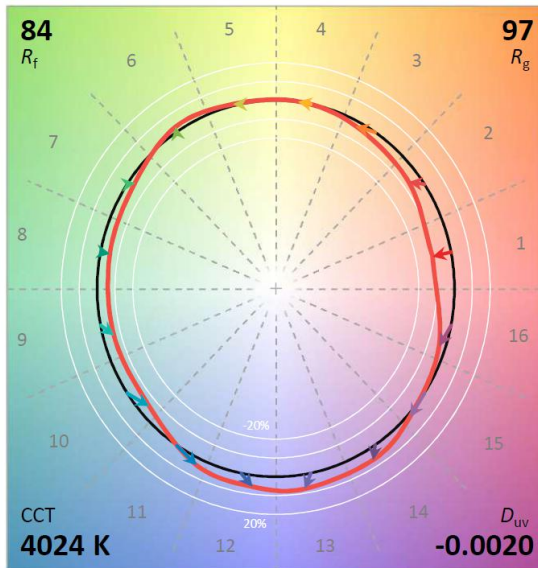
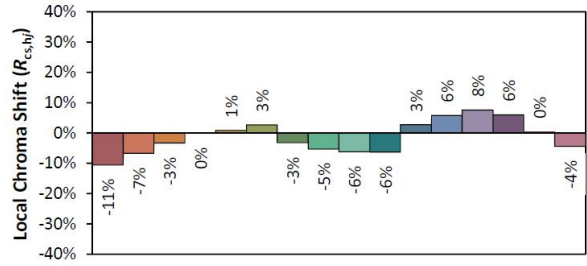
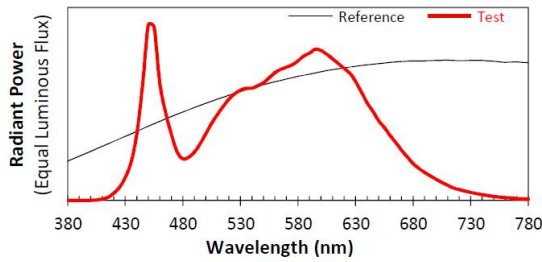




ANSI/IES TM-30-18 Color Rendition Report

Source: BL230227011-9A
Date: 2023-04-11

Manufacturer: RAB LIGHTING, INC
Model: HID-36-EX39-8CCT-BYP/5SP/480V, 4000K at 277V



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

x 0.3780
 y 0.3711
 u' 0.2258
 v' 0.4987

CIE 13.3-1995 (CRI)	
R_a	85
R_g	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-36-EX39-8CCT-BYP/5SP/480V, 4000K at 480V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
480.03	60	0.079	34.11	0.904

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
5011.59	146.9	4030

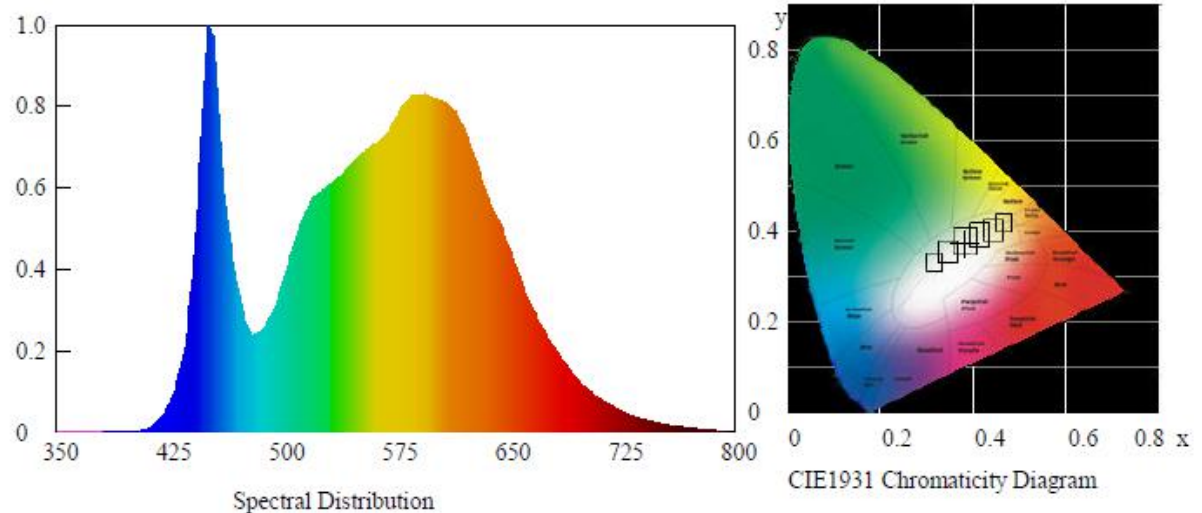
Chromaticity Coordinate

Duv	x	y	u'	v'
-0.00199	0.3778	0.3709	0.2257	0.4986

Color Rendering

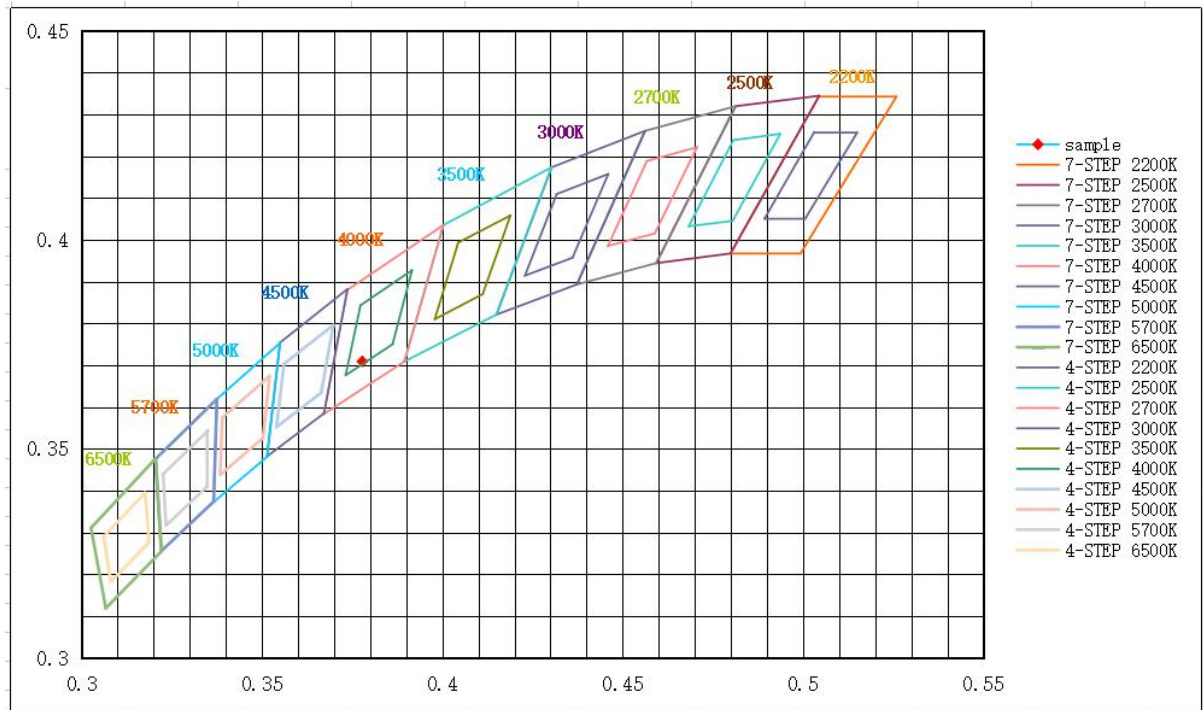
CRI	R9	Rf	Rg	Rcs,h1(%)
84.9	20	84	97	-11

Spectral Distribution





7/4 Step Quadrangle

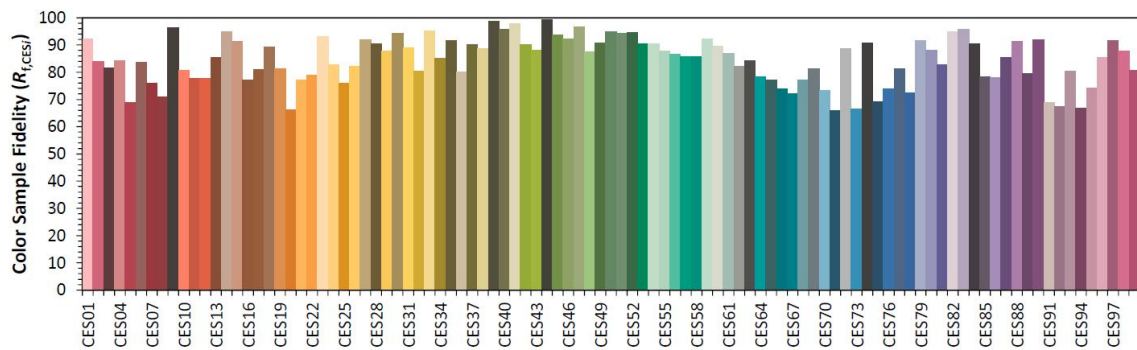
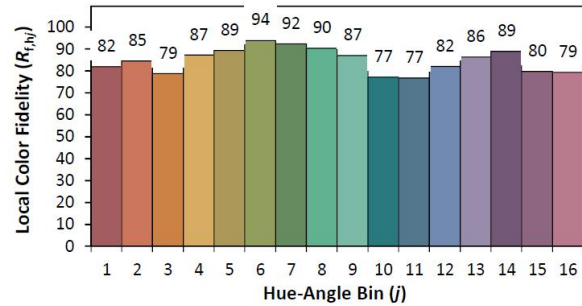
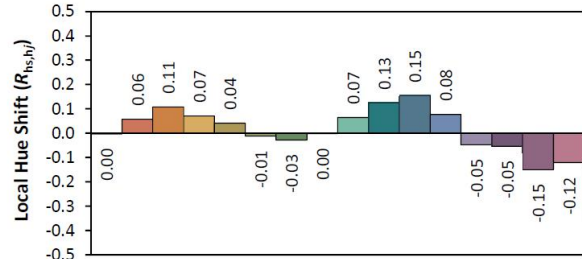
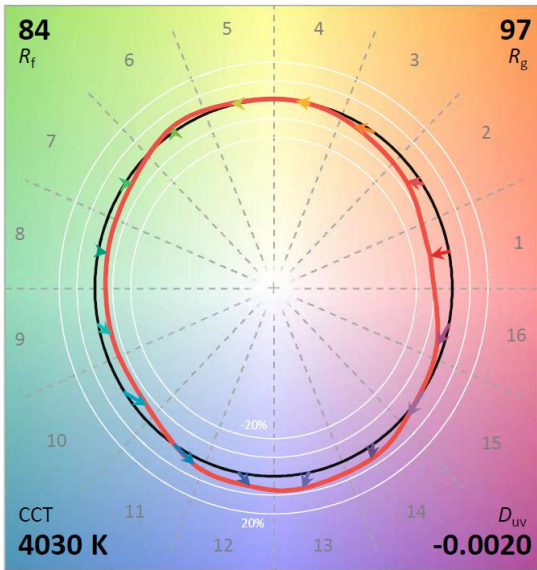
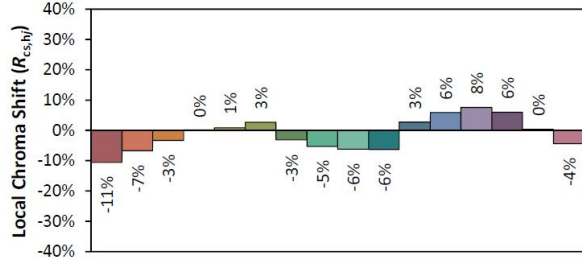
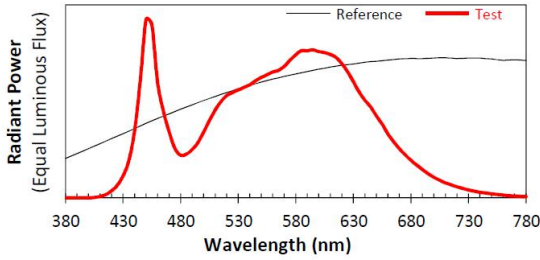




ANSI/IES TM-30-18 Color Rendition Report

Source: BL230227011-9A
Date: 2023-04-11

Manufacturer: RAB LIGHTING, INC
Model: HID-36-EX39-8CCT-BYP/5SP/480V, 4000K at 480V



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

x 0.3778
 y 0.3709
 u' 0.2257
 v' 0.4986

CIE 13.3-1995 (CRI)	
R_a	85
R_g	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-36-EX39-8CCT-BYP/5SP/480V, 5000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.03	60	0.127	34.48	0.983

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
4936.31	143.2	4925

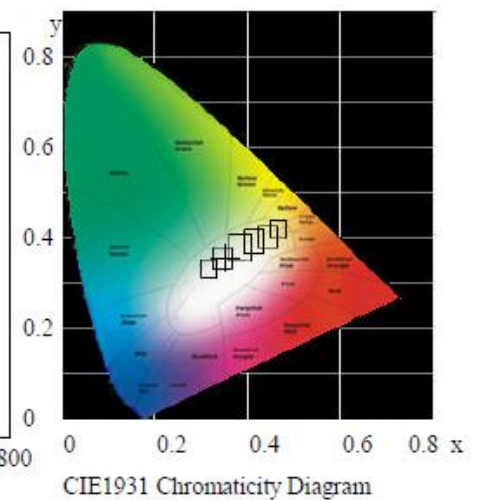
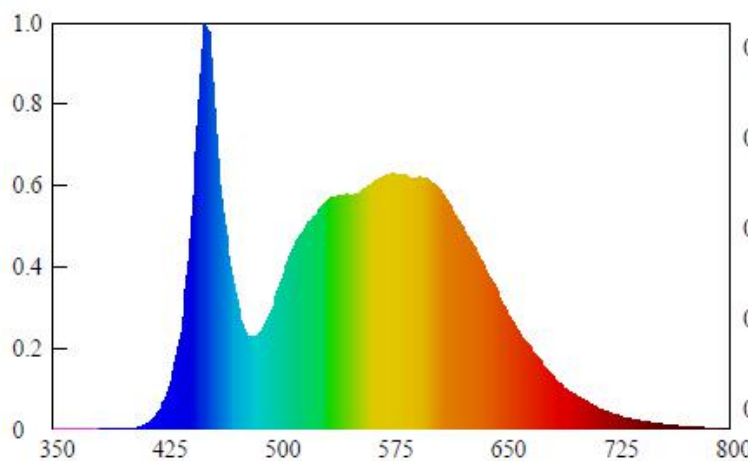
Chromaticity Coordinate

Duv	x	y	u'	v'
+0.0008	0.3474	0.3551	0.2117	0.4867

Color Rendering

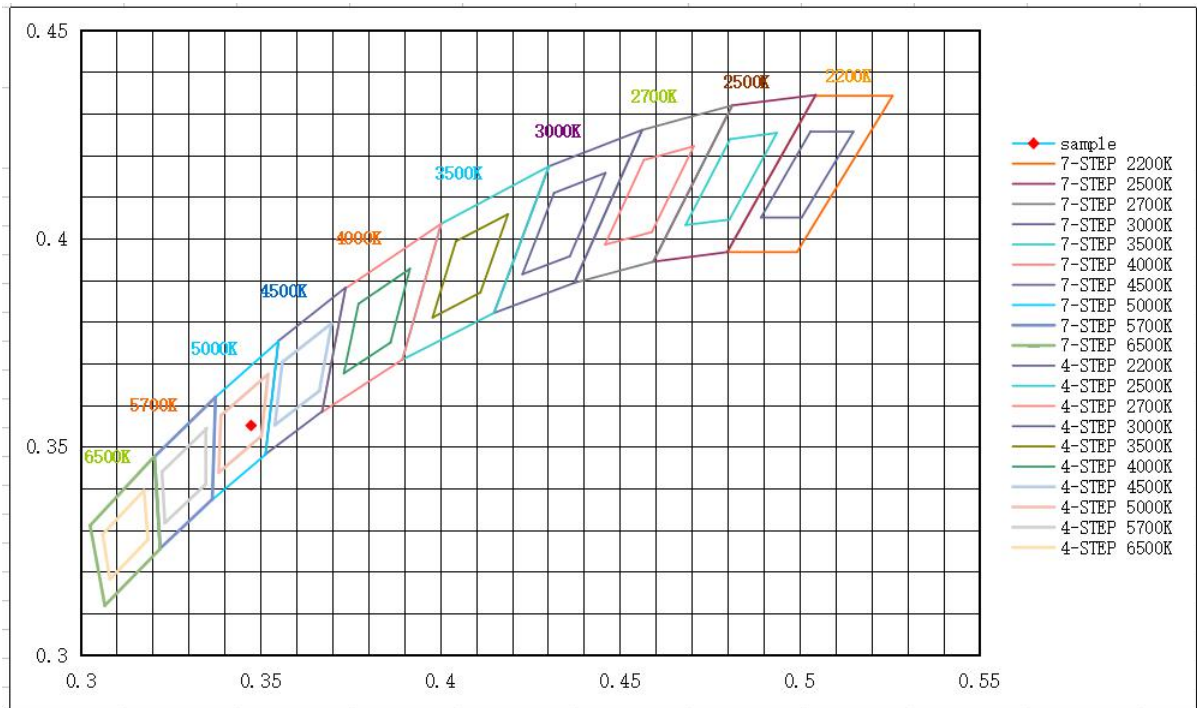
CRI	R9	Rf	Rg	Rcs,h1(%)
83.4	14	83	97	-12

Spectral Distribution





7/4 Step Quadrangle

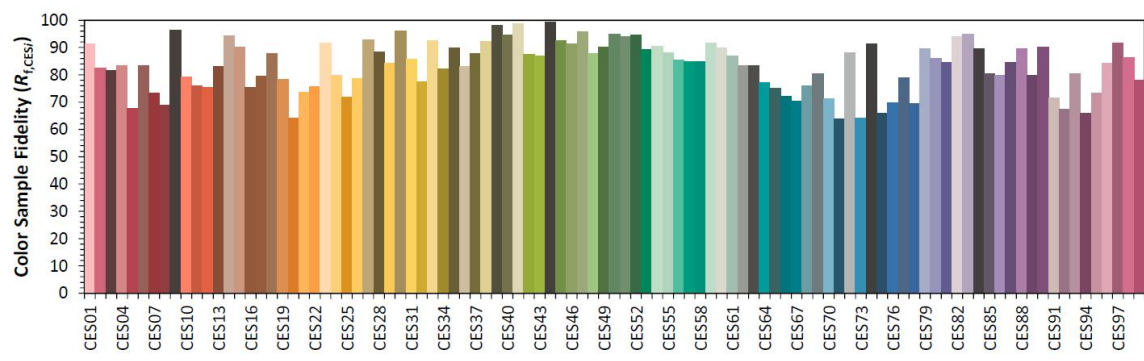
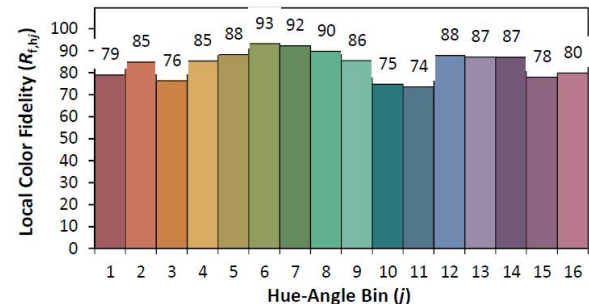
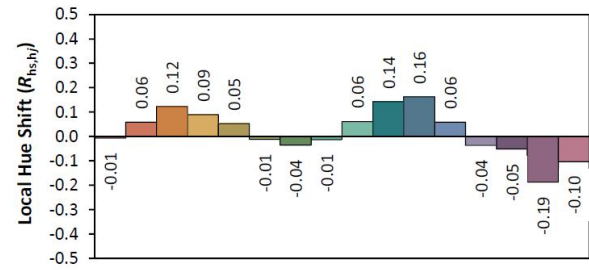
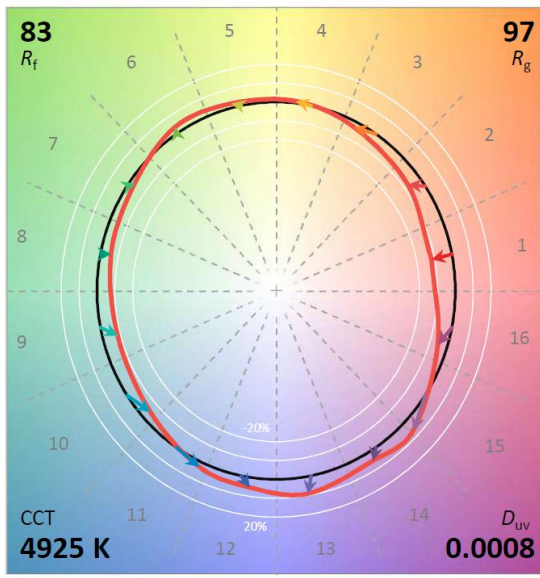
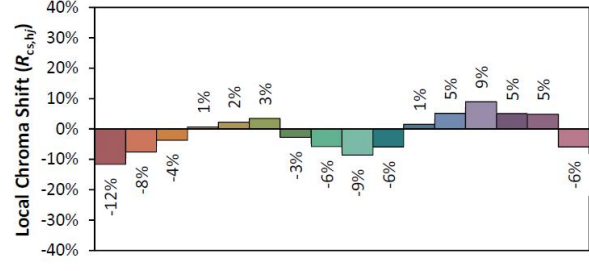
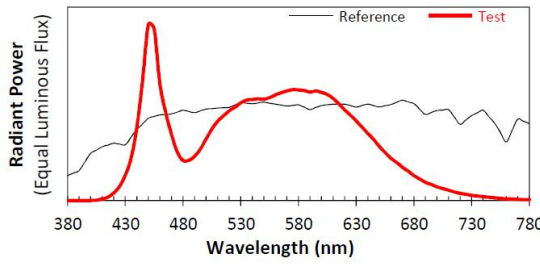




ANSI/IES TM-30-18 Color Rendition Report

Source: BL230227011-9A
Date: 2023-04-11

Manufacturer: RAB LIGHTING, INC
Model: HID-36-EX39-8CCT-BYP/5SP/480V, 5000K at 277V



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

x 0.3474
 y 0.3551
 u' 0.2117
 v' 0.4867

CIE 13.3-1995 (CRI)	
R_a	83
R_g	14

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-36-EX39-8CCT-BYP/5SP/480V, 5000K at 480V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
480.08	60	0.080	34.86	0.908

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
4815.44	138.1	4932

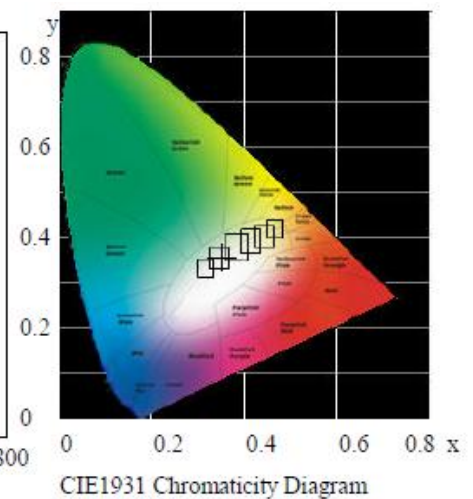
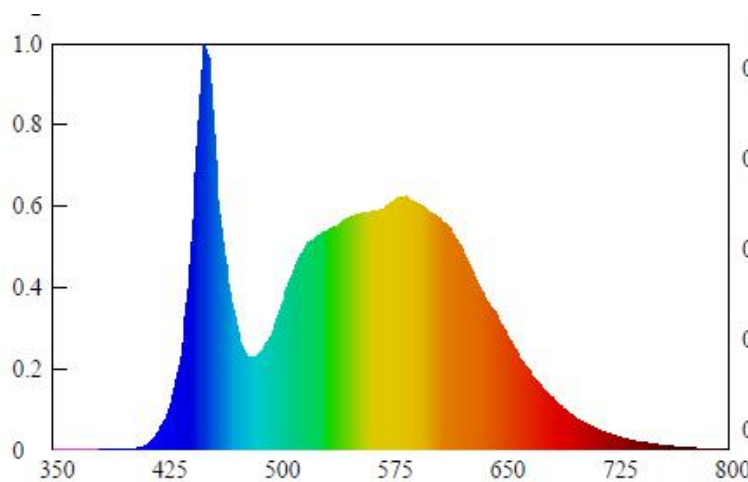
Chromaticity Coordinate

Duv	x	y	u'	v'
+0.00071	0.3472	0.3547	0.2116	0.4865

Color Rendering

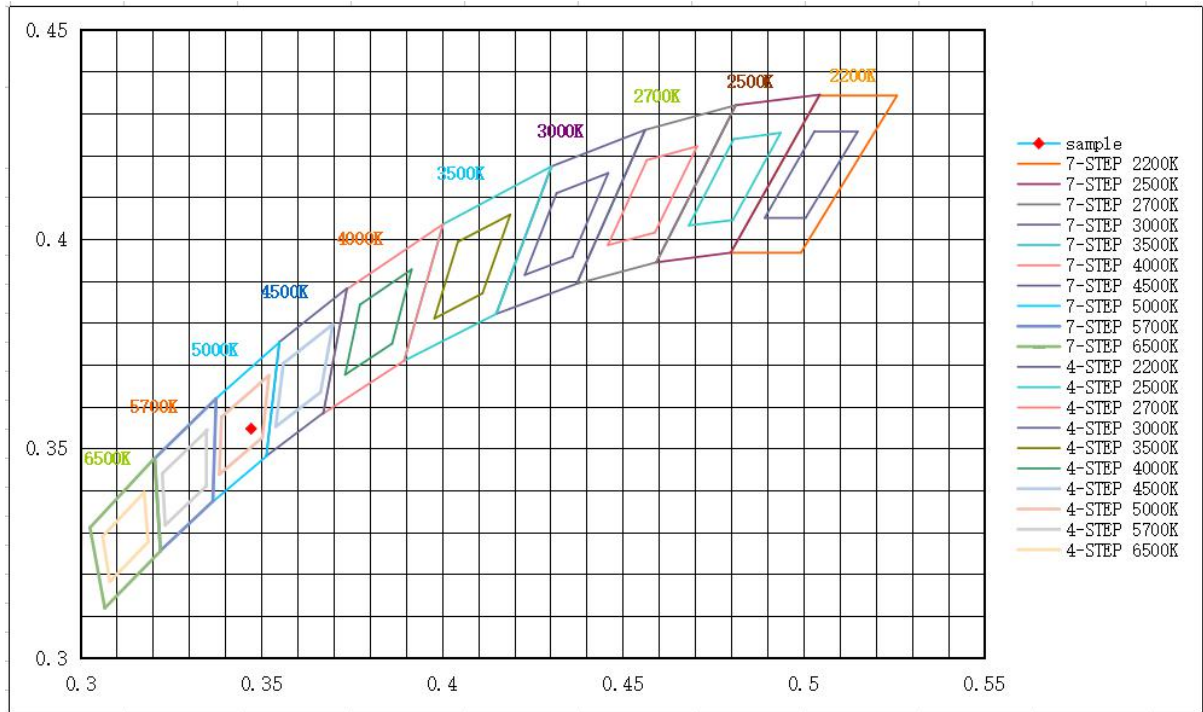
CRI	R9	Rf	Rg	Rcs,h1(%)
83.5	15	83	97	-12

Spectral Distribution





7/4 Step Quadrangle

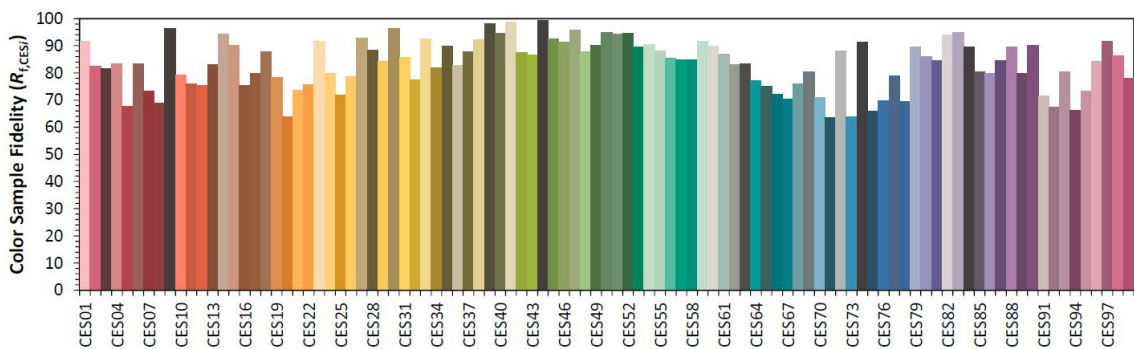
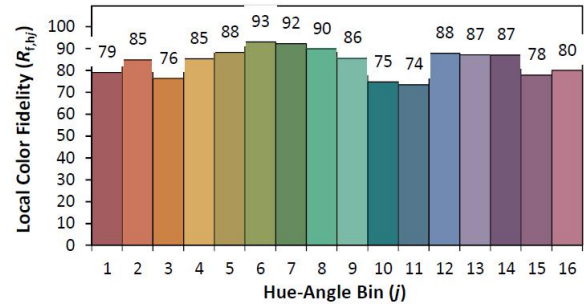
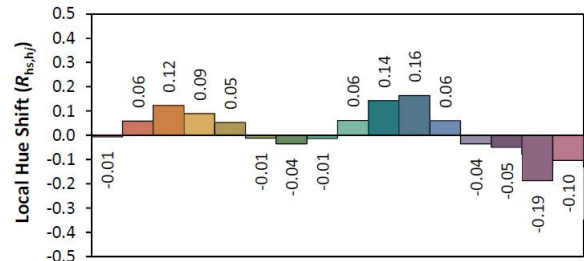
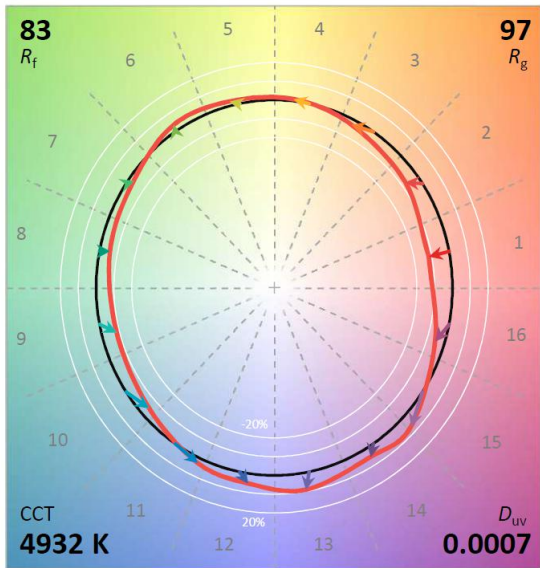
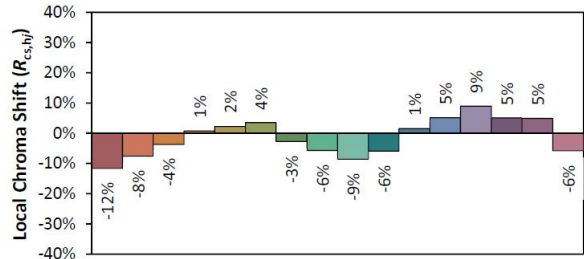
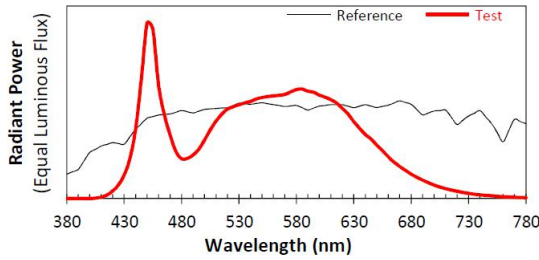




ANSI/IES TM-30-18 Color Rendition Report

Source: BL230227011-9A
Date: 2023-04-11

Manufacturer: RAB LIGHTING, INC
Model: HID-36-EX39-8CCT-BYP/5SP/480V, 5000K at 480V



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

x 0.3472
 y 0.3547
 u' 0.2116
 v' 0.4865

CIE 13.3-1995 (CRI)	
R_a	83
R_g	15

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-36-EX39-8CCT-BYP/5SP/480V, 3000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.00	60	0.1270	34.58	0.9822

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
4902.45	141.77	27.84	57.10



Zonal Flux Diagram

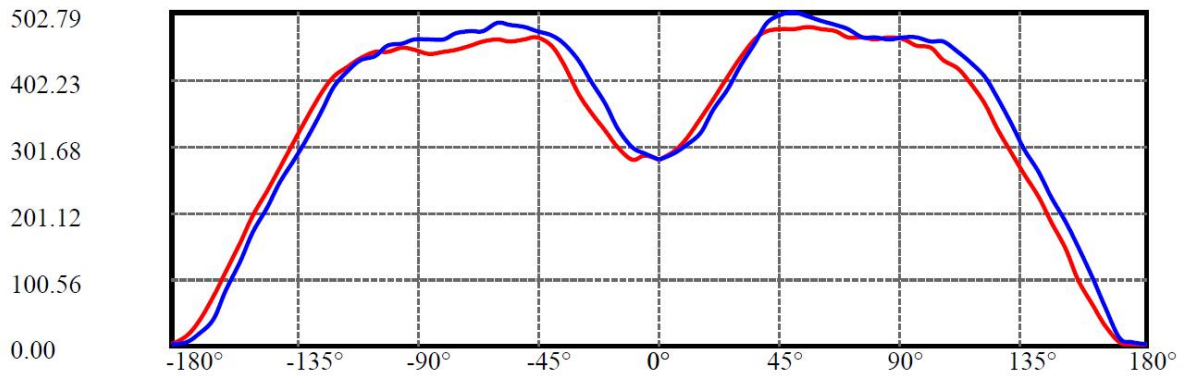
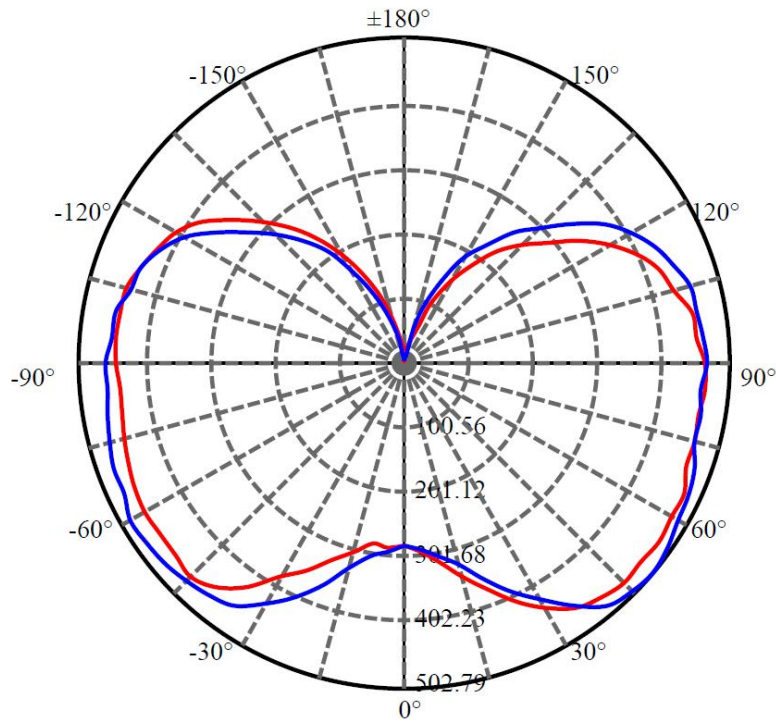
Zonal flux distribution table

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	280.581	0.000	0	0.00%	0.00%
5.0	285.256	6.764	6.764	0.00%	0.14%
10.0	298.461	20.881	27.646	0.00%	0.56%
15.0	320.809	36.735	64.38	0.00%	1.31%
20.0	351.638	55.419	119.799	0.00%	2.44%
25.0	381.620	76.905	196.705	0.00%	4.01%
30.0	414.156	100.706	297.411	0.00%	6.07%
35.0	444.456	126.437	423.848	0.00%	8.65%
40.0	465.230	151.774	575.622	0.00%	11.74%
45.0	473.843	173.877	749.499	0.00%	15.29%
50.0	474.796	191.686	941.185	0.00%	19.20%
55.0	472.533	205.981	1147.166	0.00%	23.40%
60.0	469.715	217.798	1364.964	0.00%	27.84%
65.0	466.368	227.563	1592.527	0.00%	32.48%
70.0	459.143	234.345	1826.873	0.00%	37.26%
75.0	453.903	238.656	2065.528	0.00%	42.13%
80.0	450.688	242.044	2307.572	0.00%	47.07%
85.0	449.987	244.735	2552.307	0.00%	52.06%
90.0	451.905	246.945	2799.252	0.00%	57.10%
95.0	448.135	246.438	3045.69	0.00%	62.13%
100.0	445.224	242.747	3288.437	0.00%	67.08%
105.0	435.300	235.604	3524.04	0.00%	71.88%
110.0	425.681	225.047	3749.087	0.00%	76.47%
115.0	408.612	211.248	3960.335	0.00%	80.78%
120.0	385.815	193.127	4153.462	0.00%	84.72%
125.0	354.522	171.127	4324.589	0.00%	88.21%
130.0	317.871	146.201	4470.79	0.00%	91.20%
135.0	282.054	121.224	4592.013	0.00%	93.67%
140.0	248.102	98.163	4690.176	0.00%	95.67%
145.0	211.584	76.695	4766.871	0.00%	97.23%
150.0	172.365	56.539	4823.41	0.00%	98.39%
155.0	132.658	38.601	4862.011	0.00%	99.18%
160.0	90.238	23.378	4885.389	0.00%	99.65%
165.0	50.623	11.609	4896.998	0.00%	99.89%
170.0	21.633	4.286	4901.284	0.00%	99.98%
175.0	7.489	1.042	4902.326	0.00%	100.00%
180.0	2.491	0.119	4902.445	0.00%	100.00%



Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]



C0/C180: —————

C90/C270: —————

Field angle(10%Imax):C0/180Left:168.7 Right:162.1

:C90/270Left:164.1 Right:165.9

Beam Angle(50%Imax):C0/180Left:144.3 Right:137.7

:C90/270Left:139.3 Right:141.4

**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	280.58	292.57	312.47	342.11	371.96	406.68	435.47	463.21	473.37
22.5	280.58	290.03	313.53	342.11	373.87	404.35	445.85	468.07	478.66
45.0	280.58	285.80	305.91	331.10	364.55	396.10	428.49	448.39	460.24
67.5	280.58	283.47	298.29	319.67	349.94	381.28	414.94	442.04	455.37
90.0	280.58	290.03	303.58	321.58	354.81	388.05	422.98	457.28	487.55
112.5	280.58	282.62	292.79	312.26	338.30	367.30	399.69	426.16	452.62
135.0	280.58	282.41	288.76	308.45	338.09	364.13	395.67	437.59	470.62
157.5	280.58	278.60	288.55	301.46	331.95	358.62	391.86	429.76	466.17
180.0	280.58	286.22	282.41	300.41	325.39	353.54	382.55	423.19	451.77
202.5	280.58	277.33	282.41	301.89	334.49	358.62	382.76	427.64	461.72
225.0	280.58	276.06	290.88	303.58	330.04	353.97	388.05	412.40	440.77
247.5	280.58	277.75	287.49	317.13	350.37	376.41	406.68	442.46	465.75
270.0	280.58	291.09	300.83	329.41	365.19	399.27	430.60	455.80	467.02
292.5	280.58	288.34	304.22	332.59	363.71	395.88	427.64	449.87	457.70
315.0	280.58	291.94	312.26	338.51	366.88	400.75	440.34	467.23	478.24
337.5	280.58	289.82	310.99	330.68	366.67	400.97	432.93	460.24	476.12
360.0	280.58	292.57	312.47	342.11	371.96	406.68	435.47	463.21	473.37
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	478.87	477.81	479.93	476.54	475.91	465.11	465.11	463.21	464.69
22.5	481.84	486.28	476.75	462.99	467.65	453.89	454.31	453.47	453.47
45.0	462.15	462.57	462.99	458.76	458.34	447.33	446.90	445.00	444.79
67.5	458.97	454.95	458.55	454.95	449.23	434.84	440.13	439.92	438.86
90.0	498.77	502.79	495.81	488.82	484.38	477.81	464.26	463.84	460.67
112.5	472.52	477.81	473.79	468.07	463.21	459.61	451.14	445.21	447.33
135.0	482.47	482.05	473.16	467.02	464.26	457.70	445.63	442.46	438.65
157.5	480.99	477.39	477.60	480.57	483.11	481.20	469.34	464.48	465.53
180.0	464.26	461.51	459.39	462.15	457.91	452.62	446.69	443.52	441.40
202.5	476.75	477.39	474.64	467.86	458.12	450.93	442.04	436.53	434.20
225.0	455.80	459.18	457.70	454.31	454.31	452.62	443.73	438.65	440.55
247.5	471.25	474.85	470.40	467.44	464.69	457.28	447.75	445.63	443.73
270.0	475.70	480.99	483.74	487.13	475.70	475.70	470.62	463.63	461.30
292.5	460.24	463.42	462.99	470.83	462.15	460.67	453.89	454.31	453.26
315.0	481.62	480.78	477.60	473.16	470.40	458.34	456.64	451.99	452.41
337.5	479.29	476.97	475.48	474.85	472.52	460.67	464.26	459.18	458.97
360.0	478.87	477.81	479.93	476.54	475.91	465.11	465.11	463.21	464.69
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	463.21	453.47	451.14	431.24	419.17	397.79	366.67	326.87	291.30
22.5	451.77	444.15	444.36	427.22	420.02	401.60	373.66	333.43	296.81
45.0	442.46	435.68	433.57	417.05	402.87	380.64	352.49	320.73	284.11
67.5	438.65	430.39	430.18	416.63	410.49	396.52	374.29	339.99	300.62
90.0	466.17	464.26	458.76	457.70	442.04	426.58	404.78	373.44	333.01
112.5	453.47	454.31	447.96	443.73	432.51	416.84	395.67	369.84	339.15
135.0	443.09	445.21	442.04	441.82	431.03	421.71	408.59	387.20	351.21
157.5	469.77	472.31	465.96	463.84	453.26	439.71	421.92	392.92	356.72
180.0	446.69	448.17	444.15	443.94	433.78	420.23	404.99	382.34	344.65
202.5	439.71	440.55	435.68	433.99	429.12	415.57	402.45	380.64	345.71
225.0	445.00	444.36	440.13	435.68	426.16	411.13	393.13	366.88	332.80
247.5	450.29	446.69	443.94	436.11	430.39	414.73	395.25	363.28	324.33
270.0	461.09	454.53	453.04	438.44	431.87	414.30	388.90	352.91	313.74
292.5	452.20	444.58	442.88	425.10	414.94	393.34	362.22	330.68	294.48
315.0	450.29	443.09	443.31	424.68	420.23	397.79	369.84	327.08	291.09
337.5	456.64	448.39	446.48	427.64	413.03	389.32	358.20	324.12	286.22
360.0	463.21	453.47	451.14	431.24	419.17	397.79	366.67	326.87	291.30



C/ γ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	258.28	224.19	187.36	146.29	100.77	60.97	29.85	6.99	2.33
22.5	263.78	230.76	192.65	147.98	106.49	62.45	31.54	8.26	2.54
45.0	248.96	215.51	180.37	139.09	101.83	65.20	32.39	8.26	3.18
67.5	267.59	237.32	201.54	162.80	124.06	80.24	40.01	14.40	2.75
90.0	296.60	261.88	224.19	187.78	150.10	103.52	58.64	13.97	5.29
112.5	300.19	265.48	222.71	177.83	149.89	113.05	67.32	33.45	7.41
135.0	311.84	279.02	242.61	207.47	166.61	122.58	76.00	39.38	14.82
157.5	319.46	282.84	247.90	211.07	169.15	124.69	81.08	41.71	15.88
180.0	308.03	269.71	234.78	196.46	156.66	112.84	73.88	38.74	15.03
202.5	304.85	275.00	240.07	204.72	164.92	121.94	77.48	39.59	15.03
225.0	297.02	261.88	228.64	191.38	152.43	109.87	64.57	34.08	12.91
247.5	287.07	253.41	219.11	182.49	139.94	94.84	56.74	26.46	10.16
270.0	280.29	246.42	209.37	170.21	128.29	85.10	42.13	17.36	5.08
292.5	258.49	225.46	189.47	147.13	107.33	70.92	32.81	11.64	2.75
315.0	258.70	224.83	185.45	146.50	105.43	58.01	21.38	5.93	2.54
337.5	251.71	215.94	179.10	138.67	98.65	57.58	24.13	5.93	2.12
360.0	258.28	224.19	187.36	146.29	100.77	60.97	29.85	6.99	2.33
C/ γ (°)	180.0								
0.0	2.49								
22.5	2.49								
45.0	2.49								
67.5	2.49								
90.0	2.49								
112.5	2.49								
135.0	2.49								
157.5	2.49								
180.0	2.49								
202.5	2.49								
225.0	2.49								
247.5	2.49								
270.0	2.49								
292.5	2.49								
315.0	2.49								
337.5	2.49								
360.0	2.49								

**3.2.2 Model Number: HID-36-EX39-8CCT-BYP/5SP/480V, 3000K at 480V****Electrical data**

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
480.04	60	0.0800	34.87	0.9083

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
4818.93	138.20	27.74	57.06



Zonal Flux Diagram

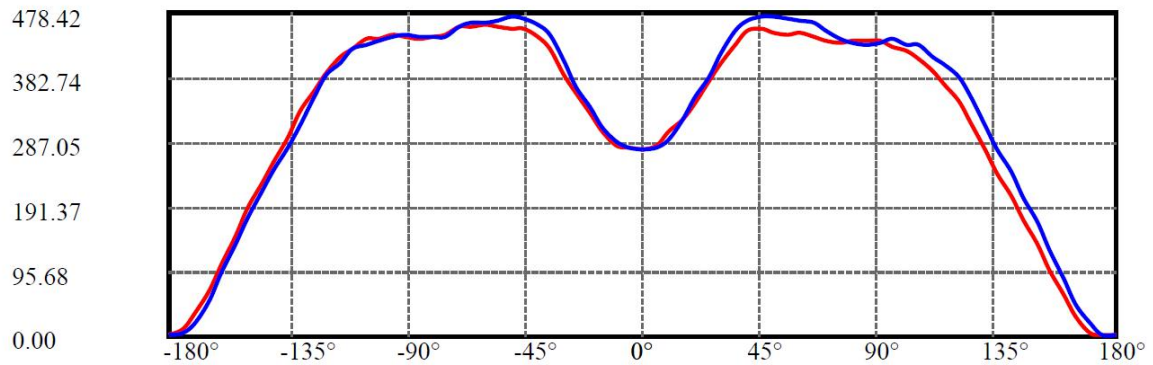
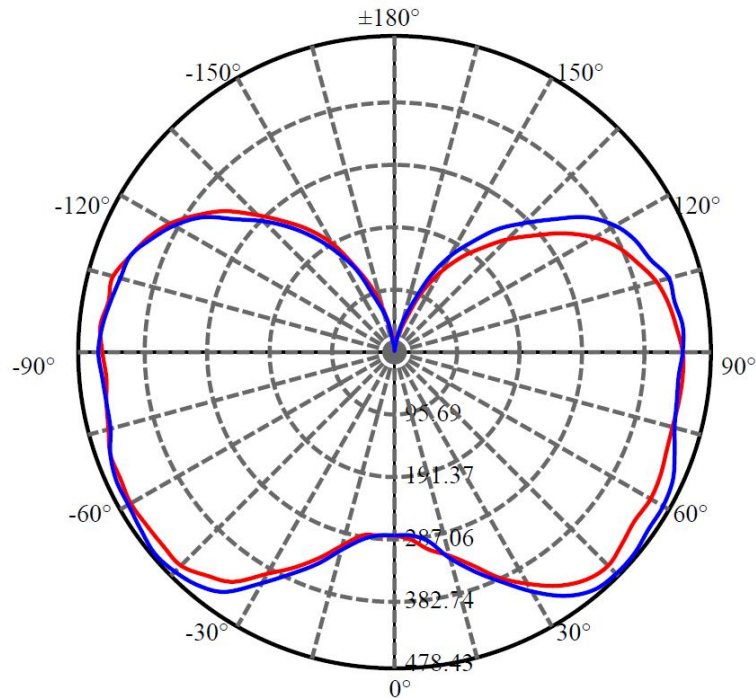
Zonal flux distribution table

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	275.839	0.000	0	0.00%	0.00%
5.0	279.027	6.633	6.633	0.00%	0.14%
10.0	292.619	20.450	27.083	0.00%	0.56%
15.0	313.811	35.973	63.056	0.00%	1.31%
20.0	343.875	54.203	117.258	0.00%	2.43%
25.0	373.411	75.230	192.489	0.00%	3.99%
30.0	405.247	98.540	291.028	0.00%	6.04%
35.0	435.067	123.742	414.77	0.00%	8.61%
40.0	456.111	148.686	563.457	0.00%	11.69%
45.0	464.063	170.378	733.834	0.00%	15.23%
50.0	464.550	187.640	921.474	0.00%	19.12%
55.0	463.008	201.682	1123.156	0.00%	23.31%
60.0	461.858	213.780	1336.936	0.00%	27.74%
65.0	457.788	223.568	1560.504	0.00%	32.38%
70.0	452.987	230.614	1791.118	0.00%	37.17%
75.0	447.171	235.287	2026.405	0.00%	42.05%
80.0	444.872	238.686	2265.09	0.00%	47.00%
85.0	443.385	241.361	2506.451	0.00%	52.01%
90.0	444.196	243.026	2749.478	0.00%	57.06%
95.0	444.521	243.338	2992.815	0.00%	62.11%
100.0	437.299	239.611	3232.427	0.00%	67.08%
105.0	432.308	232.683	3465.109	0.00%	71.91%
110.0	417.594	222.151	3687.26	0.00%	76.52%
115.0	401.879	207.496	3894.756	0.00%	80.82%
120.0	379.321	189.911	4084.668	0.00%	84.76%
125.0	348.744	168.290	4252.958	0.00%	88.26%
130.0	311.891	143.644	4396.602	0.00%	91.24%
135.0	275.863	118.764	4515.366	0.00%	93.70%
140.0	242.174	95.919	4611.284	0.00%	95.69%
145.0	206.714	74.894	4686.178	0.00%	97.25%
150.0	169.564	55.410	4741.588	0.00%	98.40%
155.0	129.249	37.815	4779.403	0.00%	99.18%
160.0	88.150	22.801	4802.204	0.00%	99.65%
165.0	50.296	11.410	4813.614	0.00%	99.89%
170.0	21.287	4.246	4817.86	0.00%	99.98%
175.0	6.005	0.976	4818.836	0.00%	100.00%
180.0	1.947	0.095	4818.931	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:162.3

:C90/270Left:165.8 Right:165.1

Beam Angle(50%Imax):C0/180Left:144.5 Right:136.7

:C90/270Left:141.6 Right:140.9

**Luminous Intensity Distribution Data**

C/ γ (°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	275.84	283.25	301.86	320.03	343.62	376.94	405.29	431.04	450.73
22.5	275.84	286.06	305.10	328.47	360.28	394.90	426.71	449.86	458.95
45.0	275.84	288.44	309.21	333.02	365.47	394.04	428.66	447.27	459.82
67.5	275.84	284.33	302.29	328.69	356.39	390.14	416.97	434.07	445.10
90.0	275.84	278.05	290.60	321.55	354.87	383.43	418.05	450.73	467.82
112.5	275.84	274.38	294.07	312.46	348.16	374.56	408.53	435.80	466.31
135.0	275.84	274.59	288.66	310.73	340.37	365.91	403.12	430.39	459.17
157.5	275.84	274.81	289.09	305.75	341.45	371.53	399.66	438.18	465.88
180.0	275.84	279.57	283.03	302.72	329.34	358.77	386.46	423.46	442.72
202.5	275.84	275.46	283.90	298.61	326.52	355.52	382.13	418.49	451.38
225.0	275.84	275.67	283.03	299.04	329.77	355.74	380.84	419.79	454.84
247.5	275.84	274.59	284.76	302.72	329.99	356.39	387.11	417.84	444.67
270.0	275.84	278.49	287.79	308.35	339.07	368.72	406.37	444.45	461.33
292.5	275.84	278.05	288.66	308.56	337.99	370.23	402.69	430.39	449.00
315.0	275.84	278.49	295.36	316.79	346.86	372.83	406.80	436.23	452.68
337.5	275.84	280.22	294.50	323.49	351.84	384.95	424.55	453.11	467.39
360.0	275.84	283.25	301.86	320.03	343.62	376.94	405.29	431.04	450.73
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	455.06	449.86	444.45	447.70	443.37	436.66	433.85	437.31	436.88
22.5	460.03	458.52	458.73	457.00	449.65	442.29	447.05	444.02	443.80
45.0	469.99	469.55	473.88	466.52	462.41	453.33	453.54	449.43	449.43
67.5	448.56	450.30	450.73	456.57	447.92	443.59	439.04	438.39	437.96
90.0	473.88	472.37	469.34	466.52	462.41	451.38	438.39	434.28	431.47
112.5	476.48	478.43	474.53	475.40	474.53	470.20	461.76	460.68	454.62
135.0	466.96	466.09	467.61	466.52	467.61	462.85	455.71	455.71	452.46
157.5	476.91	476.91	477.99	471.07	461.76	456.35	448.56	445.75	442.07
180.0	455.06	455.92	457.22	459.38	456.79	456.79	446.83	444.02	438.83
202.5	461.33	459.38	460.47	463.50	460.47	452.24	443.37	439.91	438.39
225.0	468.26	476.05	471.50	467.17	463.93	462.20	455.06	449.65	446.62
247.5	461.12	461.98	459.82	453.54	447.05	447.27	441.64	434.28	432.99
270.0	468.69	472.15	467.17	463.93	463.28	457.22	444.24	441.42	442.29
292.5	456.14	459.38	454.41	458.73	461.55	457.87	450.94	452.24	454.84
315.0	455.92	457.87	455.27	457.44	453.33	451.59	451.38	450.94	452.24
337.5	470.64	468.04	465.01	458.73	448.56	445.97	443.37	439.91	439.26
360.0	455.06	449.86	444.45	447.70	443.37	436.66	433.85	437.31	436.88
C/ γ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	435.58	429.09	421.30	409.40	393.39	372.83	347.51	313.97	276.54
22.5	442.94	434.50	429.31	417.41	404.42	385.60	356.17	317.65	281.73
45.0	449.43	443.16	436.66	426.06	410.70	392.95	362.88	322.41	287.36
67.5	436.66	430.82	421.73	410.91	395.33	373.48	347.51	313.76	277.84
90.0	435.15	438.83	430.17	430.39	413.08	401.39	384.52	354.44	312.46
112.5	457.65	460.90	452.03	451.38	429.96	412.00	386.68	357.03	318.52
135.0	453.97	461.12	452.46	450.73	435.15	419.79	400.09	373.05	336.04
157.5	442.72	450.08	442.94	446.40	429.09	419.57	403.99	379.75	337.34
180.0	442.07	446.18	439.48	440.77	426.06	411.78	389.49	363.09	333.23
202.5	436.88	446.40	440.13	441.42	426.71	416.54	402.26	378.89	342.54
225.0	445.32	453.97	446.18	450.30	432.77	422.82	405.50	381.05	340.81
247.5	434.28	442.07	435.37	434.28	419.57	406.59	386.68	363.09	333.88
270.0	446.62	443.80	437.75	429.96	423.68	405.50	385.16	354.65	313.32
292.5	457.44	453.54	444.67	435.58	422.82	406.80	379.54	346.65	311.38
315.0	451.59	444.24	439.48	424.11	412.86	391.87	364.61	330.42	294.72
337.5	438.83	433.63	427.14	417.84	405.94	390.57	366.56	329.99	292.55
360.0	435.58	429.09	421.30	409.40	393.39	372.83	347.51	313.97	276.54



<i>C/γ</i> (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	241.49	206.86	173.32	135.89	97.16	61.24	28.56	5.84	2.38
22.5	248.63	215.52	178.73	141.08	101.92	60.80	29.86	7.14	1.95
45.0	253.39	220.06	181.55	142.81	104.51	63.18	30.51	4.98	2.60
67.5	244.51	210.33	175.70	137.62	97.81	61.24	29.21	6.28	2.38
90.0	276.97	243.43	206.21	169.65	128.10	85.47	47.82	19.91	3.90
112.5	281.30	246.03	210.54	172.68	131.78	90.67	53.45	21.86	6.49
135.0	297.31	263.77	227.85	190.63	152.55	106.25	60.59	28.78	9.74
157.5	304.24	271.13	236.51	200.59	156.88	114.25	69.24	35.92	11.47
180.0	292.98	259.45	226.12	190.42	148.66	106.68	68.38	34.19	12.55
202.5	301.64	266.80	231.75	195.40	154.72	111.44	71.41	37.00	9.74
225.0	304.24	272.43	240.19	202.97	160.56	120.09	75.09	37.65	13.42
247.5	294.93	258.80	223.53	188.25	146.49	105.81	67.95	34.19	7.79
270.0	280.00	247.54	213.57	176.79	136.32	94.34	52.37	19.91	5.41
292.5	274.81	241.27	204.92	167.70	127.67	85.69	45.87	19.04	2.38
315.0	258.80	223.31	186.74	149.74	109.71	73.35	39.17	15.58	1.73
337.5	258.58	228.07	190.20	150.82	113.17	69.89	35.27	12.33	2.16
360.0	241.49	206.86	173.32	135.89	97.16	61.24	28.56	5.84	2.38
<i>C/γ</i> (°)	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								

**3.2.3 Model Number: HID-36-EX39-8CCT-BYP/5SP/480V, 4000K at 277V****Electrical data**

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.10	60	0.1240	33.78	0.9814

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
5108.77	151.24	26.94	55.99



Zonal Flux Diagram

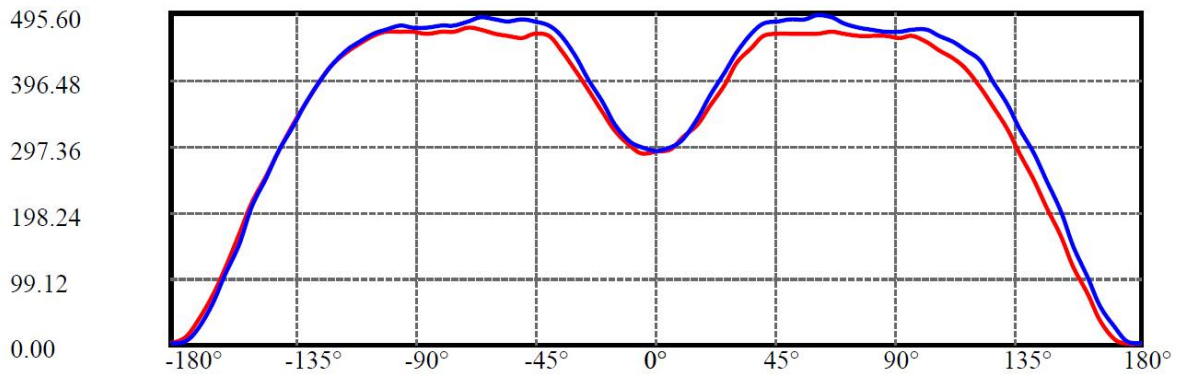
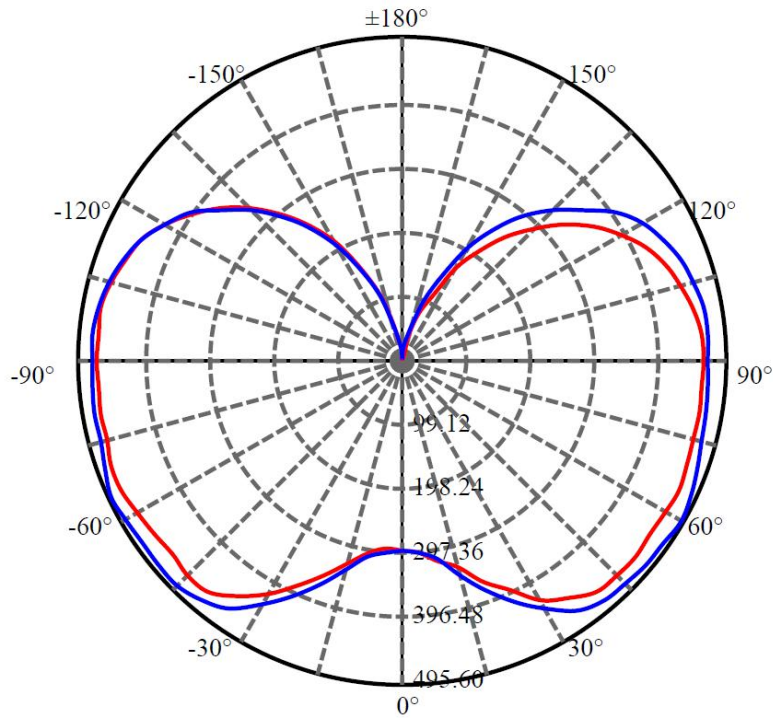
Zonal flux distribution table

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	289.310	0.000	0	0.00%	0.00%
5.0	291.633	6.945	6.945	0.00%	0.14%
10.0	305.341	21.356	28.301	0.00%	0.55%
15.0	327.583	37.545	65.845	0.00%	1.29%
20.0	359.696	56.641	122.487	0.00%	2.40%
25.0	391.345	78.770	201.257	0.00%	3.94%
30.0	423.167	103.077	304.334	0.00%	5.96%
35.0	449.749	128.543	432.877	0.00%	8.47%
40.0	468.670	153.231	586.108	0.00%	11.47%
45.0	472.811	174.323	760.431	0.00%	14.88%
50.0	471.991	190.911	951.342	0.00%	18.62%
55.0	473.406	205.561	1156.903	0.00%	22.65%
60.0	476.675	219.609	1376.512	0.00%	26.94%
65.0	479.361	232.414	1608.925	0.00%	31.49%
70.0	475.854	241.867	1850.792	0.00%	36.23%
75.0	470.310	247.312	2098.104	0.00%	41.07%
80.0	469.067	251.351	2349.455	0.00%	45.99%
85.0	468.180	254.672	2604.128	0.00%	50.97%
90.0	468.233	256.397	2860.525	0.00%	55.99%
95.0	469.543	256.770	3117.295	0.00%	61.02%
100.0	465.587	254.097	3371.392	0.00%	65.99%
105.0	456.907	246.834	3618.226	0.00%	70.82%
110.0	446.467	236.128	3854.354	0.00%	75.45%
115.0	432.429	222.542	4076.896	0.00%	79.80%
120.0	411.510	205.163	4282.059	0.00%	83.82%
125.0	384.769	184.058	4466.116	0.00%	87.42%
130.0	350.725	159.921	4626.037	0.00%	90.55%
135.0	315.900	134.701	4760.739	0.00%	93.19%
140.0	279.103	110.170	4870.908	0.00%	95.34%
145.0	238.589	86.373	4957.281	0.00%	97.03%
150.0	194.356	63.754	5021.035	0.00%	98.28%
155.0	145.254	42.978	5064.013	0.00%	99.12%
160.0	99.606	25.681	5089.695	0.00%	99.63%
165.0	58.059	12.994	5102.689	0.00%	99.88%
170.0	24.240	4.882	5107.571	0.00%	99.98%
175.0	6.510	1.100	5108.671	0.00%	100.00%
180.0	2.192	0.104	5108.775	0.00%	100.00%



Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]



C0/C180: —

C90/C270: —

Field angle(10%Imax):C0/180Left:168.4 Right:163.8
:C90/270Left:166.7 Right:166.4

Beam Angle(50%Imax):C0/180Left:146.9 Right:141.2
:C90/270Left:145.6 Right:145.1

**Luminous Intensity Distribution Data**

$C/\gamma(^{\circ})$	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	289.31	293.63	310.57	327.93	358.41	388.05	421.08	441.82	461.72
22.5	289.31	293.42	313.96	337.45	371.33	403.72	435.26	458.76	467.86
45.0	289.31	294.48	314.59	342.54	376.83	407.32	438.44	458.55	469.34
67.5	289.31	293.00	315.01	335.13	365.40	393.98	424.46	443.73	454.10
90.0	289.31	294.90	308.45	339.57	371.75	407.10	438.01	465.11	479.08
112.5	289.31	292.15	305.28	331.74	364.98	397.79	428.06	449.87	473.79
135.0	289.31	287.28	304.85	325.60	359.68	389.53	424.46	448.39	473.16
157.5	289.31	290.03	301.46	324.33	358.84	393.98	425.10	457.49	480.99
180.0	289.31	287.28	297.65	319.25	349.10	380.22	410.70	440.13	462.36
202.5	289.31	290.03	297.65	314.59	343.38	376.20	404.56	435.68	460.03
225.0	289.31	285.59	295.54	314.38	343.17	374.50	406.47	438.22	468.07
247.5	289.31	286.43	295.33	312.90	345.29	372.81	402.02	430.39	456.43
270.0	289.31	295.11	304.64	329.83	363.28	396.73	429.54	460.67	478.24
292.5	289.31	295.11	303.37	326.45	356.08	389.32	422.56	452.41	470.62
315.0	289.31	294.06	307.60	327.72	360.95	391.86	424.68	450.93	466.80
337.5	289.31	293.63	309.51	331.95	366.67	398.42	435.26	463.84	476.12
360.0	289.31	293.63	310.57	327.93	358.41	388.05	421.08	441.82	461.72
$C/\gamma(^{\circ})$	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	464.48	464.48	463.84	464.05	467.65	464.26	460.88	460.67	460.88
22.5	469.98	468.92	472.31	475.27	476.97	468.07	464.48	463.84	462.57
45.0	473.37	474.85	481.62	484.16	482.68	475.27	470.40	468.92	468.29
67.5	455.16	458.12	462.36	464.90	466.59	461.94	460.67	457.91	457.28
90.0	484.16	485.01	487.13	491.36	488.61	480.78	472.73	471.46	468.07
112.5	481.41	483.32	487.13	491.57	495.60	494.75	487.34	487.55	486.70
135.0	480.78	478.87	477.81	481.41	483.53	485.43	478.02	479.51	478.24
157.5	484.16	480.99	478.45	483.53	485.86	482.26	472.73	469.77	467.65
180.0	465.32	459.39	461.30	465.96	472.31	474.64	467.65	466.38	464.90
202.5	462.15	456.22	456.43	463.42	468.71	466.80	459.82	458.12	458.12
225.0	476.33	473.16	471.04	474.00	480.14	478.87	468.71	466.59	464.69
247.5	467.65	465.11	461.72	460.45	461.51	460.45	456.43	453.26	453.89
270.0	484.38	485.01	484.16	487.76	490.52	483.74	476.97	476.12	474.64
292.5	474.85	477.39	482.47	486.92	493.90	489.46	488.40	488.19	487.97
315.0	465.96	465.75	467.44	471.04	474.85	474.00	472.31	471.89	472.31
337.5	474.85	475.27	479.29	480.99	480.35	472.94	467.44	464.90	464.69
360.0	464.48	464.48	463.84	464.05	467.65	464.26	460.88	460.67	460.88
$C/\gamma(^{\circ})$	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	459.82	460.24	451.99	441.40	429.12	411.55	386.15	357.78	323.06
22.5	462.36	462.78	454.31	444.58	432.51	415.78	391.65	360.11	326.02
45.0	468.71	468.71	461.30	450.93	438.86	421.71	397.15	363.71	332.16
67.5	456.64	456.85	448.39	438.01	426.58	408.16	382.76	353.54	319.46
90.0	468.29	470.40	469.56	460.88	452.41	440.34	424.04	395.46	359.05
112.5	488.61	490.09	489.03	478.24	467.65	452.20	428.91	401.39	363.49
135.0	477.81	480.35	478.66	470.83	459.61	447.12	428.49	404.35	368.57
157.5	466.59	468.92	468.71	462.57	455.37	444.79	429.97	407.53	372.60
180.0	466.80	467.23	468.29	460.45	450.50	437.80	417.69	392.92	360.95
202.5	457.70	460.45	460.88	453.68	445.63	435.47	421.29	397.58	363.92
225.0	465.32	465.75	467.23	460.03	451.99	443.52	425.52	403.51	368.57
247.5	454.95	458.12	457.28	449.66	440.98	430.18	413.24	390.59	360.95
270.0	475.06	476.75	470.40	464.05	453.47	439.71	418.11	394.19	360.11
292.5	486.92	487.97	480.99	470.83	460.45	443.52	418.96	389.74	354.60
315.0	471.67	472.31	464.26	454.74	440.77	423.41	399.06	370.69	337.88
337.5	464.48	465.75	458.12	449.66	437.59	423.62	401.18	373.23	340.21
360.0	459.82	460.24	451.99	441.40	429.12	411.55	386.15	357.78	323.06



C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	286.22	247.27	204.93	163.22	116.65	75.79	38.11	9.32	2.75
22.5	290.24	253.20	211.70	165.13	118.98	78.33	40.01	9.74	2.54
45.0	296.81	258.91	214.88	168.09	121.94	78.33	41.07	7.62	3.81
67.5	283.68	244.52	202.60	159.62	114.32	73.88	37.26	9.10	3.18
90.0	324.12	287.07	246.63	201.33	147.13	100.56	58.01	26.25	5.72
112.5	326.45	288.97	248.96	203.23	151.79	104.37	62.45	24.56	7.83
135.0	333.01	297.23	256.16	211.91	161.95	113.90	66.90	31.12	10.37
157.5	339.78	307.39	268.23	224.19	171.06	121.94	75.79	37.47	12.07
180.0	328.56	290.88	252.98	211.49	164.71	114.53	72.40	35.99	12.91
202.5	330.26	294.90	257.22	214.03	163.65	117.28	75.58	37.05	9.53
225.0	337.45	303.16	265.90	223.13	172.75	125.12	78.75	37.26	13.97
247.5	327.72	288.13	249.60	207.68	162.16	112.63	71.34	36.63	6.99
270.0	325.60	290.46	250.87	204.72	152.21	106.06	62.45	24.13	5.29
292.5	318.19	281.35	239.65	194.34	145.23	98.87	54.41	23.50	2.54
315.0	299.98	262.09	218.90	176.35	128.29	85.32	48.06	20.75	2.12
337.5	306.33	270.13	228.22	181.22	131.26	86.80	46.36	17.36	2.54
360.0	286.22	247.27	204.93	163.22	116.65	75.79	38.11	9.32	2.75
C/γ(°)	180.0								
0.0	2.19								
22.5	2.19								
45.0	2.19								
67.5	2.19								
90.0	2.19								
112.5	2.19								
135.0	2.19								
157.5	2.19								
180.0	2.19								
202.5	2.19								
225.0	2.19								
247.5	2.19								
270.0	2.19								
292.5	2.19								
315.0	2.19								
337.5	2.19								
360.0	2.19								

**3.2.4 Model Number: HID-36-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	0.0780	34.08	0.9003

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
4984.84	146.27	26.95	56.03



Zonal Flux Diagram

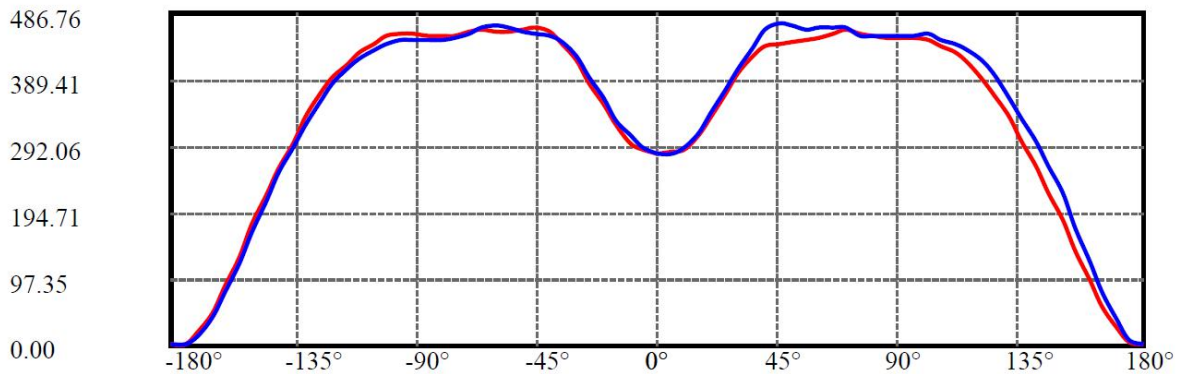
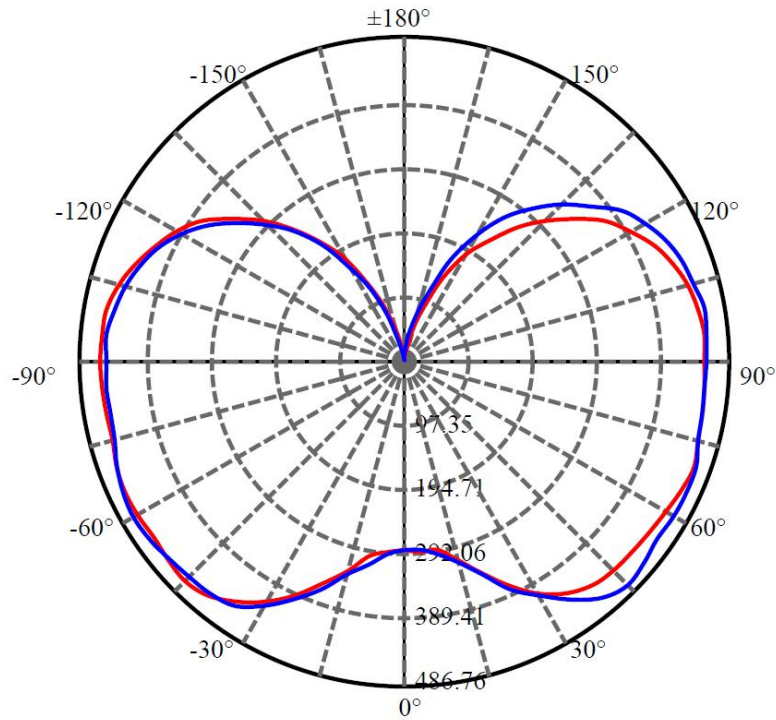
Zonal flux distribution table

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	281.736	0.000	0	0.00%	0.00%
5.0	285.368	6.780	6.78	0.00%	0.14%
10.0	295.817	20.791	27.57	0.00%	0.55%
15.0	319.559	36.504	64.074	0.00%	1.29%
20.0	350.666	55.236	119.31	0.00%	2.39%
25.0	381.813	76.824	196.134	0.00%	3.93%
30.0	413.054	100.591	296.725	0.00%	5.95%
35.0	438.514	125.399	422.124	0.00%	8.47%
40.0	455.965	149.237	571.361	0.00%	11.46%
45.0	461.546	169.885	741.246	0.00%	14.87%
50.0	461.157	186.445	927.692	0.00%	18.61%
55.0	462.525	200.839	1128.531	0.00%	22.64%
60.0	466.187	214.669	1343.2	0.00%	26.95%
65.0	468.534	227.233	1570.432	0.00%	31.50%
70.0	465.355	236.467	1806.899	0.00%	36.25%
75.0	459.534	241.751	2048.65	0.00%	41.10%
80.0	458.165	245.551	2294.201	0.00%	46.02%
85.0	456.703	248.592	2542.793	0.00%	51.01%
90.0	457.521	250.322	2793.114	0.00%	56.03%
95.0	458.259	250.748	3043.862	0.00%	61.06%
100.0	454.383	247.987	3291.849	0.00%	66.04%
105.0	446.173	240.964	3532.813	0.00%	70.87%
110.0	435.563	230.472	3763.284	0.00%	75.49%
115.0	421.224	216.944	3980.228	0.00%	79.85%
120.0	400.808	199.837	4180.066	0.00%	83.86%
125.0	374.878	179.298	4359.363	0.00%	87.45%
130.0	341.478	155.760	4515.123	0.00%	90.58%
135.0	307.004	131.035	4646.158	0.00%	93.21%
140.0	271.122	107.045	4753.203	0.00%	95.35%
145.0	232.088	83.957	4837.159	0.00%	97.04%
150.0	188.989	62.006	4899.166	0.00%	98.28%
155.0	141.785	41.860	4941.026	0.00%	99.12%
160.0	97.224	25.068	4966.093	0.00%	99.62%
165.0	57.103	12.719	4978.812	0.00%	99.88%
170.0	24.373	4.833	4983.645	0.00%	99.98%
175.0	6.264	1.096	4984.741	0.00%	100.00%
180.0	2.033	0.099	4984.84	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:166.9
:C90/270Left:164.3 Right:169.1

Beam Angle(50%Imax):C0/180Left:143.3 Right:143.9
:C90/270Left:142.1 Right:148.3

**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	281.74	285.66	287.38	308.41	336.74	368.29	399.63	422.81	438.90
22.5	281.74	283.95	287.17	306.27	331.81	366.36	395.34	422.38	439.76
45.0	281.74	283.73	284.38	305.84	333.95	365.93	397.27	426.67	450.28
67.5	281.74	284.16	288.45	309.27	336.53	364.86	395.34	420.02	442.77
90.0	281.74	282.23	291.67	311.85	341.46	375.38	404.99	435.25	462.51
112.5	281.74	280.73	292.10	312.71	343.83	372.37	404.99	432.04	457.36
135.0	281.74	283.73	297.47	321.72	353.05	381.81	413.79	439.55	462.51
157.5	281.74	285.45	300.69	324.94	358.21	391.90	425.60	453.71	469.81
180.0	281.74	286.52	297.47	323.65	352.84	385.25	416.15	440.41	458.22
202.5	281.74	287.38	300.69	334.38	367.43	399.84	433.11	458.22	470.45
225.0	281.74	286.52	306.05	334.17	368.94	401.99	433.97	456.29	465.95
247.5	281.74	286.74	301.12	327.94	361.64	391.90	420.66	442.98	456.07
270.0	281.74	290.38	307.55	330.73	364.00	394.26	423.24	445.34	452.21
292.5	281.74	287.59	299.83	323.65	358.63	387.18	417.66	441.48	458.43
315.0	281.74	285.88	298.11	319.14	350.69	379.24	410.14	433.97	452.21
337.5	281.74	285.23	292.96	318.29	350.91	382.46	417.01	445.13	458.00
360.0	281.74	285.66	287.38	308.41	336.74	368.29	399.63	422.81	438.90
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	442.34	444.05	446.42	450.49	458.00	461.44	455.64	453.28	450.71
22.5	447.70	449.21	451.14	458.22	462.30	460.37	455.86	452.42	448.78
45.0	457.79	463.59	462.51	466.38	471.31	471.10	463.16	462.08	459.08
67.5	454.14	453.07	451.35	450.49	451.35	453.93	448.78	447.06	445.56
90.0	472.81	467.88	462.94	465.30	466.80	464.23	454.57	454.36	452.21
112.5	461.22	456.72	457.36	463.16	471.31	473.24	470.02	469.81	471.10
135.0	463.59	458.86	461.01	464.23	468.09	468.09	462.08	462.30	462.73
157.5	473.03	470.02	468.52	471.96	469.38	460.79	453.50	453.50	451.35
180.0	466.59	461.44	459.72	460.79	462.30	459.94	453.93	453.28	453.93
202.5	472.17	469.59	470.24	473.46	473.03	464.23	456.50	455.43	454.79
225.0	472.38	470.67	474.96	479.90	476.46	466.38	459.94	458.86	458.22
247.5	458.22	456.93	459.29	466.38	468.95	462.73	457.36	456.07	453.93
270.0	456.50	460.37	466.16	467.23	464.66	457.15	450.49	447.70	447.06
292.5	464.87	471.53	477.96	482.26	486.76	482.26	478.61	475.39	473.46
315.0	458.86	460.58	463.16	466.16	471.74	470.88	467.66	468.09	465.73
337.5	462.51	464.01	467.66	472.60	474.10	468.95	464.44	461.01	458.65
360.0	442.34	444.05	446.42	450.49	458.00	461.44	455.64	453.28	450.71
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	450.92	452.00	446.42	439.12	430.10	414.44	391.26	365.72	334.17
22.5	450.28	451.35	446.20	440.84	432.04	421.30	403.06	379.67	347.26
45.0	460.58	460.58	456.50	450.06	441.26	426.88	406.07	379.88	347.47
67.5	447.70	448.56	442.55	436.97	427.53	413.58	393.19	367.22	336.74
90.0	452.85	453.93	455.43	448.78	441.48	431.82	417.01	395.76	363.57
112.5	471.10	473.03	470.88	462.73	450.92	437.62	418.73	394.48	358.21
135.0	462.94	463.37	463.16	453.07	441.05	427.10	406.50	380.96	345.54
157.5	451.57	452.85	452.21	443.63	433.75	420.66	403.28	379.02	346.62
180.0	455.86	455.43	452.21	441.69	429.67	411.86	392.76	369.37	334.38
202.5	456.93	455.21	454.14	443.84	432.68	418.94	399.84	370.44	334.38
225.0	459.29	459.51	457.15	446.84	436.97	421.95	400.49	371.30	337.39
247.5	455.21	456.93	452.42	443.20	429.89	412.93	392.55	368.29	334.17
270.0	446.84	447.49	439.98	432.04	421.30	406.07	384.82	355.84	323.65
292.5	473.67	474.53	466.59	456.93	441.48	421.09	394.26	364.64	330.09
315.0	466.38	467.45	459.51	450.06	440.19	425.17	402.20	374.09	340.61
337.5	458.22	459.94	454.79	448.99	438.69	428.17	406.92	381.38	349.41
360.0	450.92	452.00	446.42	439.12	430.10	414.44	391.26	365.72	334.17



C/ γ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	299.61	263.13	225.14	185.01	139.51	97.22	57.95	28.55	6.44
22.5	312.92	278.15	241.88	198.96	150.45	105.38	65.25	31.12	7.51
45.0	314.42	279.22	241.88	199.17	151.74	106.24	63.31	29.19	9.01
67.5	304.34	267.63	228.14	186.94	144.23	97.87	57.95	17.81	7.30
90.0	332.45	299.61	263.77	222.56	172.13	122.76	78.77	39.92	10.30
112.5	323.01	288.24	252.18	209.47	162.90	113.97	71.04	34.55	7.73
135.0	309.27	272.36	230.29	187.58	142.30	97.44	59.88	29.83	7.73
157.5	313.56	280.51	242.09	196.81	146.16	101.09	57.73	25.97	4.94
180.0	296.82	259.05	219.99	178.57	130.71	87.57	49.36	19.75	2.79
202.5	299.18	262.70	222.56	176.63	128.77	86.71	47.86	9.01	4.72
225.0	304.12	268.06	228.57	182.21	135.43	90.57	50.65	16.10	4.94
247.5	297.25	258.19	219.13	177.49	128.99	86.06	48.08	18.89	5.37
270.0	289.96	254.33	211.62	165.47	121.48	78.34	42.07	15.45	3.65
292.5	292.53	253.68	211.40	167.41	121.91	83.27	46.57	19.96	3.65
315.0	306.48	270.21	232.01	189.51	142.51	96.80	54.94	24.47	6.22
337.5	316.14	282.87	242.74	200.03	149.38	104.31	62.24	29.40	7.94
360.0	299.61	263.13	225.14	185.01	139.51	97.22	57.95	28.55	6.44
C/ γ (°)	180.0								
0.0	2.03								
22.5	2.03								
45.0	2.03								
67.5	2.03								
90.0	2.03								
112.5	2.03								
135.0	2.03								
157.5	2.03								
180.0	2.03								
202.5	2.03								
225.0	2.03								
247.5	2.03								
270.0	2.03								
292.5	2.03								
315.0	2.03								
337.5	2.03								
360.0	2.03								

**3.2.5 Model Number: HID-36-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	0.1270	34.51	0.9826

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
4952.45	143.51	26.42	55.34



Zonal Flux Diagram

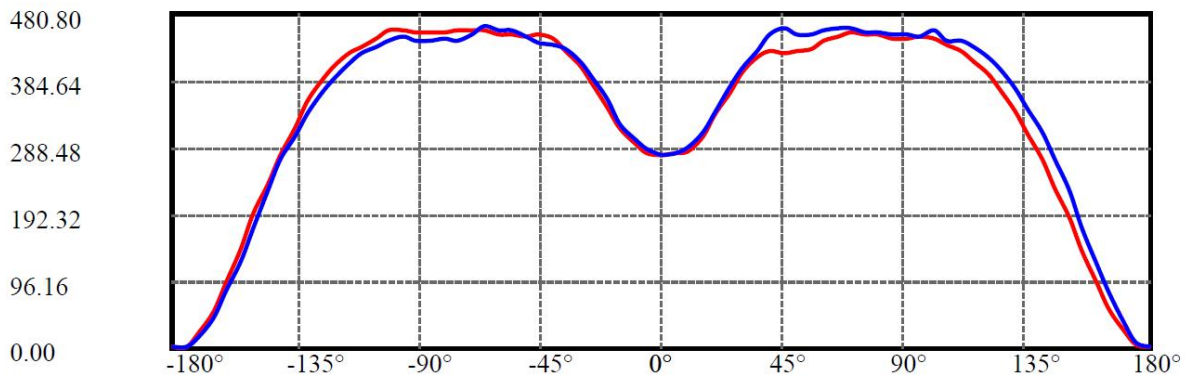
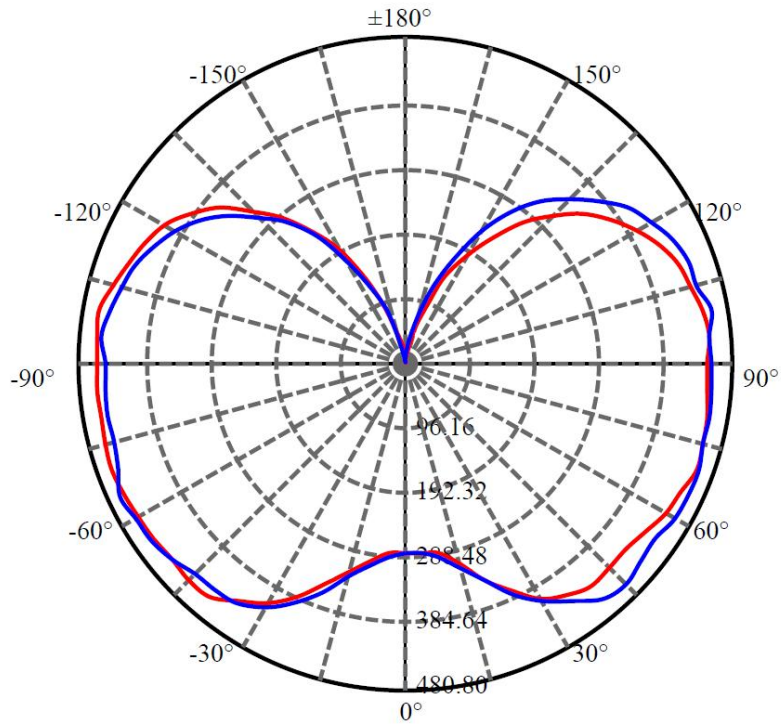
Zonal flux distribution table

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	278.820	0.000	0	0.00%	0.00%
5.0	281.336	6.697	6.697	0.00%	0.14%
10.0	291.992	20.510	27.206	0.00%	0.55%
15.0	314.168	35.957	63.163	0.00%	1.28%
20.0	345.379	54.356	117.519	0.00%	2.37%
25.0	378.130	75.883	193.402	0.00%	3.91%
30.0	406.438	99.288	292.69	0.00%	5.91%
35.0	428.561	122.959	415.649	0.00%	8.39%
40.0	442.836	145.386	561.035	0.00%	11.33%
45.0	445.848	164.547	725.582	0.00%	14.65%
50.0	444.375	179.883	905.465	0.00%	18.28%
55.0	448.319	194.102	1099.566	0.00%	22.20%
60.0	455.653	208.951	1308.517	0.00%	26.42%
65.0	461.055	222.853	1531.37	0.00%	30.92%
70.0	458.854	232.927	1764.297	0.00%	35.62%
75.0	455.113	238.896	2003.193	0.00%	40.45%
80.0	454.923	243.500	2246.693	0.00%	45.37%
85.0	452.708	246.625	2493.319	0.00%	50.35%
90.0	451.223	247.504	2740.822	0.00%	55.34%
95.0	453.249	247.651	2988.474	0.00%	60.34%
100.0	452.574	246.134	3234.607	0.00%	65.31%
105.0	442.093	239.388	3473.995	0.00%	70.15%
110.0	434.557	229.142	3703.137	0.00%	74.77%
115.0	422.483	217.008	3920.145	0.00%	79.16%
120.0	404.372	201.010	4121.155	0.00%	83.21%
125.0	382.412	181.863	4303.018	0.00%	86.89%
130.0	353.253	159.958	4462.976	0.00%	90.12%
135.0	319.894	136.019	4598.996	0.00%	92.86%
140.0	284.334	111.878	4710.873	0.00%	95.12%
145.0	243.074	87.994	4798.867	0.00%	96.90%
150.0	197.317	64.851	4863.718	0.00%	98.21%
155.0	145.753	43.416	4907.134	0.00%	99.08%
160.0	100.198	25.796	4932.93	0.00%	99.61%
165.0	60.114	13.212	4946.141	0.00%	99.87%
170.0	25.364	5.070	4951.212	0.00%	99.97%
175.0	6.469	1.139	4952.351	0.00%	100.00%
180.0	2.034	0.102	4952.452	0.00%	100.00%



Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]



C0/C180: —

C90/C270: —

Field angle(10%Imax):C0/180Left:166.5 Right:166.9

:C90/270Left:164.9 Right:168.9

Beam Angle(50%Imax):C0/180Left:145.8 Right:145.0

:C90/270Left:144.4 Right:149.5

**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	278.82	280.49	282.65	303.39	337.97	367.35	398.04	416.62	426.13
22.5	278.82	281.78	286.10	307.28	332.78	367.35	393.28	412.08	422.02
45.0	278.82	282.00	282.43	305.77	334.94	366.06	395.23	420.51	438.23
67.5	278.82	278.32	285.24	299.72	333.00	359.79	387.67	414.25	429.37
90.0	278.82	279.40	289.35	310.74	339.69	376.00	403.66	426.78	451.63
112.5	278.82	278.32	291.29	310.09	340.13	373.19	404.09	426.13	450.55
135.0	278.82	281.13	291.07	316.79	346.18	379.02	408.19	431.32	451.20
157.5	278.82	281.13	297.12	318.73	350.50	387.88	418.35	440.39	456.81
180.0	278.82	280.27	295.40	317.65	347.04	377.94	406.25	426.99	446.01
202.5	278.82	279.19	294.10	325.86	357.41	391.99	420.30	441.04	454.01
225.0	278.82	281.78	298.42	324.78	355.90	396.09	422.46	444.07	454.44
247.5	278.82	283.29	298.42	318.73	353.52	382.91	408.63	430.24	443.85
270.0	278.82	286.10	301.88	322.84	357.41	388.31	412.08	429.80	434.56
292.5	278.82	285.67	293.45	316.36	349.85	379.45	409.06	429.37	441.69
315.0	278.82	282.86	293.02	314.63	344.45	374.92	401.71	427.64	439.74
337.5	278.82	279.62	291.94	313.33	345.31	381.83	414.03	439.74	445.15
360.0	278.82	280.49	282.65	303.39	337.97	367.35	398.04	416.62	426.13
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	425.48	425.70	430.24	442.12	447.31	455.09	452.28	451.63	446.23
22.5	427.43	426.99	429.16	441.26	449.25	451.41	450.12	446.87	441.90
45.0	440.39	441.47	446.87	459.41	465.46	461.14	460.49	458.33	454.44
67.5	436.72	435.21	432.40	442.12	439.74	446.23	441.26	441.69	438.01
90.0	459.62	451.41	450.12	456.38	459.19	458.98	452.93	452.49	452.06
112.5	455.30	452.06	452.71	458.76	463.95	472.59	469.78	468.70	471.51
135.0	447.52	442.55	442.77	449.04	458.11	463.73	457.03	458.98	458.54
157.5	458.33	449.25	451.63	462.43	465.24	456.17	452.71	453.57	451.41
180.0	451.84	446.87	450.55	451.63	457.03	458.33	456.60	453.57	454.22
202.5	457.46	456.17	456.81	463.95	467.62	461.35	450.55	453.36	450.98
225.0	457.03	453.79	458.11	468.92	468.05	458.54	453.57	456.81	454.65
247.5	441.90	437.37	444.50	450.76	457.46	454.01	451.63	451.20	449.90
270.0	439.53	447.74	455.73	456.60	464.16	450.12	443.42	445.58	442.55
292.5	446.01	454.87	467.19	469.78	480.80	475.40	472.81	470.43	470.00
315.0	444.07	443.63	450.12	455.30	461.78	459.84	458.54	458.98	455.09
337.5	444.93	444.93	454.22	462.00	471.72	458.76	458.11	456.60	451.84
360.0	425.48	425.70	430.24	442.12	447.31	455.09	452.28	451.63	446.23
C/ γ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	444.07	448.60	443.63	435.42	427.21	412.52	393.50	370.59	341.42
22.5	440.82	444.28	440.61	434.77	423.97	414.89	396.96	376.65	349.42
45.0	451.41	454.44	451.20	443.85	435.21	423.97	404.95	382.91	353.74
67.5	436.50	441.26	436.29	430.45	421.16	409.27	392.20	368.87	341.85
90.0	450.76	448.39	455.95	442.34	441.90	433.04	417.92	399.55	373.40
112.5	467.40	465.46	471.29	455.52	450.33	438.88	419.65	397.39	366.92
135.0	458.54	457.25	460.92	446.44	439.10	428.72	411.87	390.04	358.28
157.5	449.25	449.25	455.09	439.96	438.23	425.70	409.71	388.53	363.03
180.0	454.44	455.73	456.81	444.71	433.91	422.67	407.55	385.94	355.04
202.5	451.20	450.12	454.44	439.53	435.64	423.75	406.03	381.83	350.28
225.0	453.57	452.49	457.25	441.04	438.01	423.32	405.39	382.26	351.80
247.5	449.04	450.76	451.20	440.61	429.80	418.57	402.58	381.18	350.28
270.0	441.69	447.52	440.61	432.40	423.75	409.06	388.96	366.49	338.83
292.5	468.27	473.24	464.16	456.60	443.20	426.99	402.58	378.16	346.18
315.0	453.57	458.98	453.79	446.66	439.31	424.62	406.68	382.26	353.09
337.5	449.04	454.22	447.96	443.20	432.18	423.75	403.44	385.94	358.49
360.0	444.07	448.60	443.63	435.42	427.21	412.52	393.50	370.59	341.42



C/ γ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	309.01	270.98	229.27	188.43	141.11	95.30	57.48	26.58	6.92
22.5	318.52	284.59	244.18	199.45	146.08	102.21	62.88	29.17	6.70
45.0	321.97	288.05	248.94	200.96	148.45	104.37	64.83	25.93	8.21
67.5	310.09	272.92	231.65	189.30	143.70	96.16	57.70	18.80	6.70
90.0	342.50	311.39	272.92	227.76	173.52	122.52	80.17	37.38	9.51
112.5	334.94	301.23	263.63	220.20	168.77	116.91	73.04	35.66	7.78
135.0	322.84	285.89	242.02	198.16	150.40	102.43	64.61	30.69	7.56
157.5	333.21	299.93	260.17	212.63	154.29	107.18	64.61	28.74	6.70
180.0	316.14	278.76	235.97	193.18	141.97	95.94	55.10	23.55	3.67
202.5	315.71	278.97	239.00	190.38	137.87	93.78	55.54	15.78	5.83
225.0	320.25	286.75	247.42	197.29	143.92	98.97	58.99	20.31	6.05
247.5	313.11	272.27	229.92	188.86	137.43	92.49	52.51	22.26	6.48
270.0	305.12	270.33	226.89	174.39	125.76	84.92	45.38	17.07	3.67
292.5	308.79	269.25	224.30	177.41	125.98	86.65	49.49	20.96	4.32
315.0	320.25	284.59	239.21	194.70	144.13	99.19	55.97	24.42	5.62
337.5	325.86	293.45	253.69	203.99	148.67	104.16	63.53	28.52	7.78
360.0	309.01	270.98	229.27	188.43	141.11	95.30	57.48	26.58	6.92
C/ γ (°)	180.0								
0.0	2.03								
22.5	2.03								
45.0	2.03								
67.5	2.03								
90.0	2.03								
112.5	2.03								
135.0	2.03								
157.5	2.03								
180.0	2.03								
202.5	2.03								
225.0	2.03								
247.5	2.03								
270.0	2.03								
292.5	2.03								
315.0	2.03								
337.5	2.03								
360.0	2.03								

**3.2.6 Model Number: HID-36-EX39-8CCT-BYP/5SP/480V, 5000K at 480V****Electrical data**

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
480.16	60	0.0800	34.90	0.9081

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
4859.82	139.25	26.41	55.31



Zonal Flux Diagram

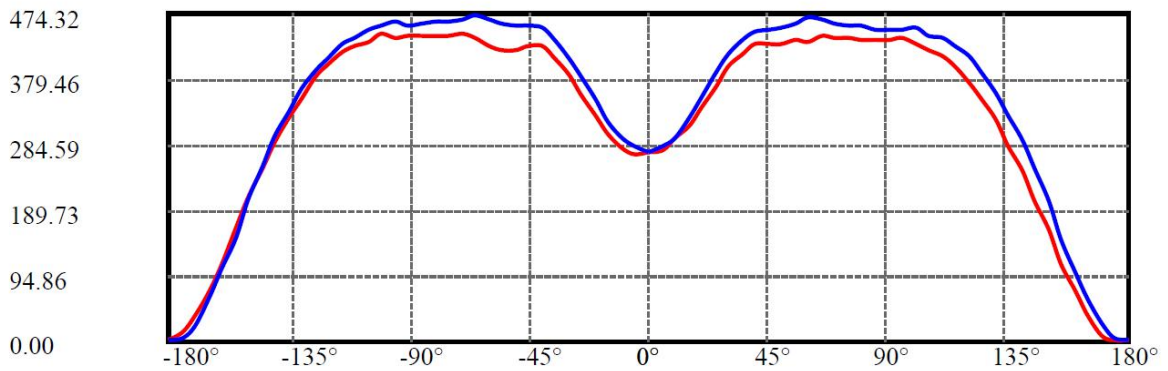
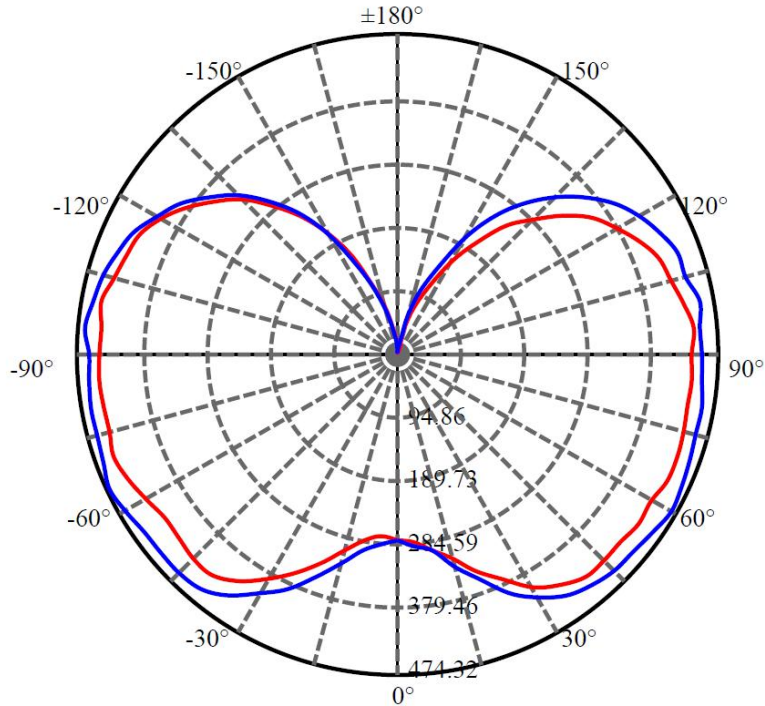
Zonal flux distribution table

$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	273.906	0.000	0	0.00%	0.00%
5.0	275.782	6.571	6.571	0.00%	0.14%
10.0	288.700	20.193	26.765	0.00%	0.55%
15.0	309.133	35.463	62.228	0.00%	1.28%
20.0	339.370	53.446	115.673	0.00%	2.38%
25.0	369.882	74.387	190.061	0.00%	3.91%
30.0	397.924	97.167	287.227	0.00%	5.91%
35.0	420.106	120.461	407.688	0.00%	8.39%
40.0	435.586	142.766	550.454	0.00%	11.33%
45.0	437.149	161.594	712.048	0.00%	14.65%
50.0	435.874	176.407	888.455	0.00%	18.28%
55.0	439.541	190.344	1078.799	0.00%	22.20%
60.0	445.218	204.509	1283.309	0.00%	26.41%
65.0	452.445	218.223	1501.532	0.00%	30.90%
70.0	450.158	228.545	1730.077	0.00%	35.60%
75.0	445.940	234.226	1964.303	0.00%	40.42%
80.0	445.270	238.463	2202.766	0.00%	45.33%
85.0	444.758	241.842	2444.608	0.00%	50.30%
90.0	443.825	243.301	2687.908	0.00%	55.31%
95.0	445.533	243.513	2931.421	0.00%	60.32%
100.0	444.061	241.724	3173.145	0.00%	65.29%
105.0	434.061	234.961	3408.107	0.00%	70.13%
110.0	427.070	225.086	3633.192	0.00%	74.76%
115.0	415.139	213.253	3846.445	0.00%	79.15%
120.0	397.228	197.488	4043.933	0.00%	83.21%
125.0	375.323	178.573	4222.506	0.00%	86.89%
130.0	346.650	156.981	4379.487	0.00%	90.12%
135.0	314.679	133.631	4513.118	0.00%	92.87%
140.0	279.133	109.949	4623.067	0.00%	95.13%
145.0	238.187	86.311	4709.378	0.00%	96.90%
150.0	193.259	63.533	4772.911	0.00%	98.21%
155.0	142.720	42.518	4815.43	0.00%	99.09%
160.0	98.266	25.275	4840.705	0.00%	99.61%
165.0	58.673	12.934	4853.639	0.00%	99.87%
170.0	24.823	4.953	4858.592	0.00%	99.97%
175.0	6.583	1.123	4859.715	0.00%	100.00%
180.0	1.818	0.100	4859.815	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:164.1

:C90/270Left:167.1 Right:167.0

Beam Angle(50%Imax):C0/180Left:148.5 Right:142.8

:C90/270Left:147.0 Right:146.7

**Luminous Intensity Distribution Data**

$C/\gamma(^{\circ})$	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	273.91	278.37	293.72	311.38	339.97	367.73	397.58	415.03	431.22
22.5	273.91	276.06	295.19	316.43	350.70	380.55	407.46	425.34	430.38
45.0	273.91	273.96	292.88	318.95	351.33	380.76	406.20	424.50	432.06
67.5	273.91	272.27	294.98	312.64	339.55	362.47	391.49	408.10	416.72
90.0	273.91	284.05	295.82	325.47	353.43	389.80	416.72	436.27	447.41
112.5	273.91	280.05	290.78	314.96	344.81	380.55	404.52	424.07	441.74
135.0	273.91	274.17	289.94	306.33	341.03	370.88	400.95	421.34	442.37
157.5	273.91	272.48	282.16	305.70	336.40	371.30	402.63	426.18	448.88
180.0	273.91	269.75	279.84	300.03	327.15	357.22	385.39	410.41	427.65
202.5	273.91	273.96	281.95	296.03	320.00	351.12	379.50	405.15	423.65
225.0	273.91	267.44	274.17	292.46	318.32	348.17	378.87	405.57	431.22
247.5	273.91	265.97	274.59	289.73	321.47	346.70	371.30	396.74	418.40
270.0	273.91	283.21	294.14	318.11	349.65	382.87	409.57	434.80	452.88
292.5	273.91	284.05	289.94	311.80	339.13	371.30	400.53	428.70	443.63
315.0	273.91	279.21	292.67	310.12	345.65	375.72	403.47	426.18	438.16
337.5	273.91	277.53	296.45	316.01	351.33	380.97	410.62	433.33	443.00
360.0	273.91	278.37	293.72	311.38	339.97	367.73	397.58	415.03	431.22
$C/\gamma(^{\circ})$	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	430.80	431.01	436.27	433.33	440.68	439.42	437.74	435.85	435.85
22.5	434.17	434.17	439.00	443.00	450.99	439.63	433.12	433.75	432.06
45.0	431.43	432.70	440.47	447.41	450.36	441.74	436.69	436.69	435.64
67.5	416.09	417.98	425.34	425.13	432.06	427.23	427.86	424.50	423.65
90.0	451.41	453.93	459.82	467.18	464.86	460.24	455.61	456.03	451.62
112.5	449.73	452.25	460.24	466.97	474.11	474.32	468.65	468.44	469.70
135.0	450.15	447.62	446.57	452.25	456.87	462.34	456.87	458.56	458.56
157.5	447.20	441.95	438.37	451.62	460.66	459.82	449.30	445.94	446.99
180.0	426.81	420.71	421.13	428.49	439.63	445.52	441.74	442.16	441.74
202.5	422.81	416.09	416.51	427.02	437.11	440.89	434.80	432.06	433.96
225.0	434.80	428.28	426.81	435.22	445.94	447.83	439.00	438.58	436.69
247.5	425.34	422.60	419.45	421.34	428.91	428.07	424.92	424.28	427.23
270.0	455.40	455.82	458.98	465.70	471.17	464.02	461.29	461.50	458.98
292.5	444.05	446.57	456.87	457.92	470.54	466.97	469.28	470.33	469.70
315.0	433.75	432.27	438.58	445.52	453.51	455.19	453.09	453.09	452.88
337.5	440.47	440.05	448.25	455.40	461.71	449.30	445.10	442.58	440.89
360.0	430.80	431.01	436.27	433.33	440.68	439.42	437.74	435.85	435.85
$C/\gamma(^{\circ})$	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	434.80	438.58	431.01	420.29	411.04	396.53	374.04	350.49	320.63
22.5	432.70	438.37	427.86	420.29	409.36	394.43	374.25	349.65	320.21
45.0	435.85	440.47	431.01	422.60	413.14	397.37	376.98	351.96	325.05
67.5	422.60	426.60	419.45	409.99	399.90	386.23	364.57	341.45	312.85
90.0	450.15	450.36	454.56	440.89	439.00	428.28	413.14	389.17	360.37
112.5	468.86	467.39	471.80	458.35	453.72	439.42	420.08	396.11	362.26
135.0	456.66	455.82	459.61	448.67	442.16	433.33	418.40	397.37	365.63
157.5	443.42	441.95	448.67	436.27	436.27	426.18	413.35	394.22	370.04
180.0	441.74	439.42	444.68	433.33	427.65	419.03	402.00	381.60	351.75
202.5	432.70	431.01	436.90	425.55	423.23	415.03	402.84	382.87	355.74
225.0	436.90	434.59	440.05	428.49	427.65	419.45	404.10	385.18	359.11
247.5	426.81	425.97	430.17	419.45	413.77	406.83	394.22	374.88	346.49
270.0	457.50	462.76	456.66	451.83	439.63	429.33	409.15	390.86	363.94
292.5	467.60	472.64	466.12	457.29	448.67	433.12	412.51	387.49	357.22
315.0	452.04	456.24	447.83	440.68	427.02	410.62	389.17	366.05	335.98
337.5	440.89	446.36	438.58	431.01	420.92	407.04	386.86	365.84	339.13
360.0	434.80	438.58	431.01	420.29	411.04	396.53	374.04	350.49	320.63



C/ γ (°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	283.84	247.25	203.31	161.68	112.06	74.43	38.27	9.04	2.31
22.5	286.78	251.67	209.20	161.05	115.01	76.32	39.74	9.25	2.73
45.0	291.83	255.24	211.51	163.15	117.11	77.37	39.74	8.20	3.57
67.5	277.32	239.90	198.06	156.85	109.54	72.75	36.79	10.09	2.73
90.0	328.20	291.20	251.67	203.73	146.76	100.71	60.55	27.75	5.05
112.5	327.15	291.20	251.88	203.94	151.17	104.92	64.76	26.91	8.20
135.0	334.72	300.24	259.87	214.25	162.73	114.17	69.38	32.38	10.93
157.5	338.08	307.81	269.33	225.18	169.04	120.89	78.42	38.48	12.83
180.0	325.26	289.30	251.46	210.04	164.63	113.33	72.96	37.21	13.67
202.5	327.99	293.09	256.72	213.40	161.68	115.64	76.32	37.21	10.09
225.0	331.99	298.56	262.18	220.55	168.83	120.89	79.26	38.69	14.51
247.5	320.00	282.58	244.52	202.05	158.32	108.91	70.85	36.79	7.99
270.0	331.99	296.87	254.40	207.52	149.28	105.34	63.71	23.34	5.05
292.5	321.47	285.31	240.11	194.27	143.18	97.56	54.46	23.76	1.89
315.0	300.87	263.44	217.61	175.98	126.99	83.89	47.94	21.03	1.47
337.5	307.39	272.48	229.17	178.50	127.20	85.15	45.62	17.03	2.31
360.0	283.84	247.25	203.31	161.68	112.06	74.43	38.27	9.04	2.31
C/ γ (°)	180.0								
0.0	1.82								
22.5	1.82								
45.0	1.82								
67.5	1.82								
90.0	1.82								
112.5	1.82								
135.0	1.82								
157.5	1.82								
180.0	1.82								
202.5	1.82								
225.0	1.82								
247.5	1.82								
270.0	1.82								
292.5	1.82								
315.0	1.82								
337.5	1.82								
360.0	1.82								



4 Additional Test

Model Number	CCT(K)	Test Voltage (V)	Frequency (Hz)	Power Factor	THD
HID-36-EX39-8CCT-B YP/5SP/480V	3000	277	60	0.983	11.1%
		480	60	0.909	16.4%
	4000	480	60	0.904	15.7%
	5000	480	60	0.908	16.1%



Photo Document



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