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-80-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-80-EX39-8CCT-BYP/5SP/480V
Rated Inputs	AC 277-480V, 50/60Hz
Rated Power	80W
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-80-EX39-8CCT-BYP/5SP/480V are the same to the product in the report BL230227008-9 and is authorized by original applicant to use their test data.
- Note: All the data in previous report BL230227008-9 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).

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-80-EX39-8CCT-BYP/5SP/480V, 3000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.07	60	0.283	77.21	0.985

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
10821.58	140.2	3031

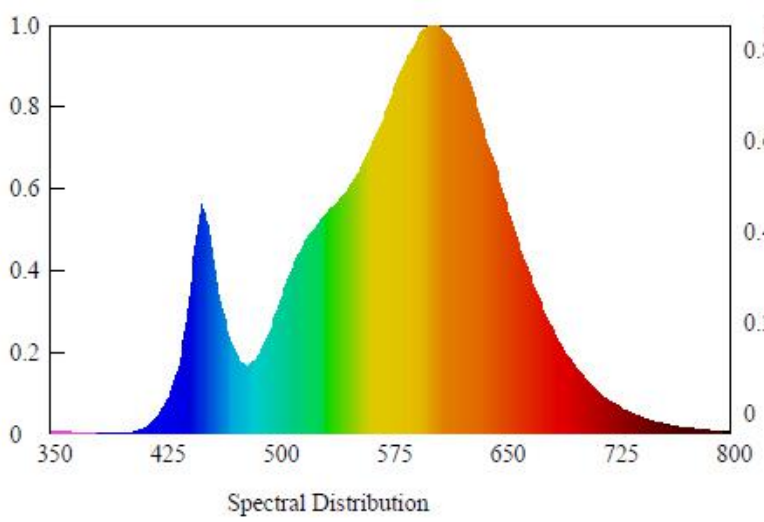
Chromaticity Coordinate

Duv	x	y	u'	v'
-0.00126	0.4330	0.3996	0.2500	0.5190

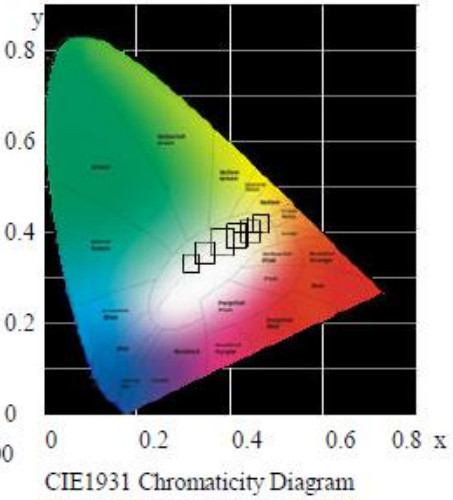
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
83.1	10	84	97	-11

Spectral Distribution

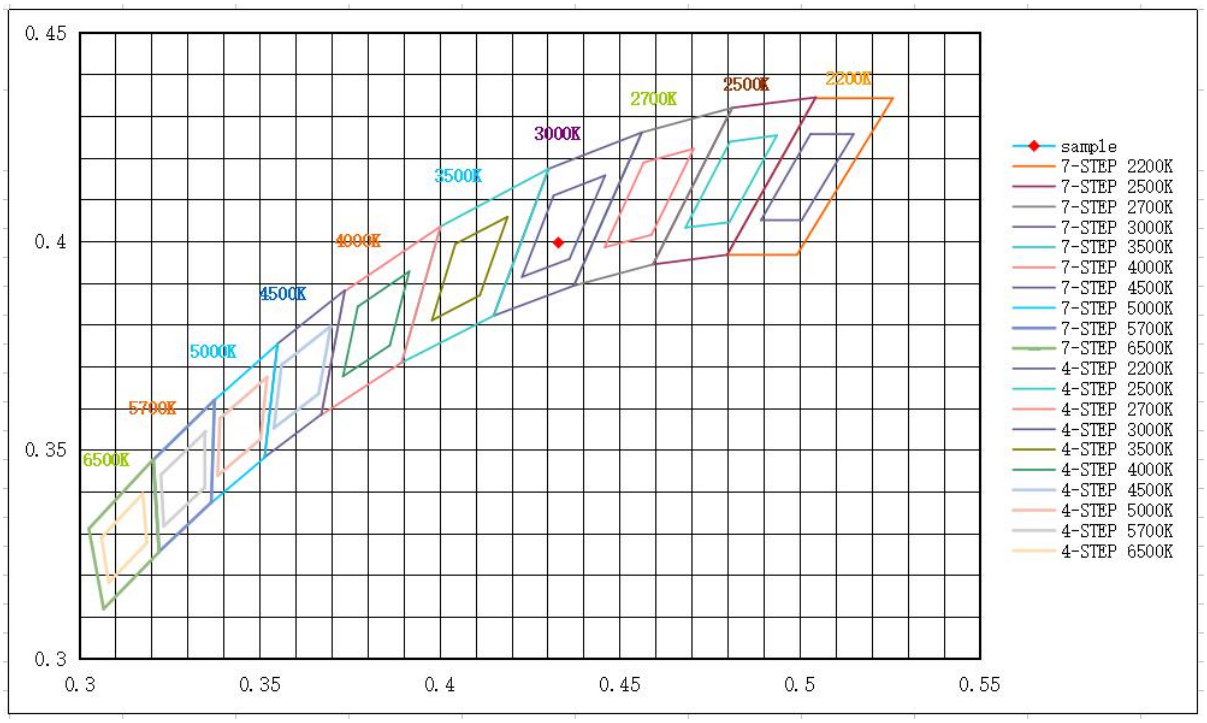


Spectral Distribution



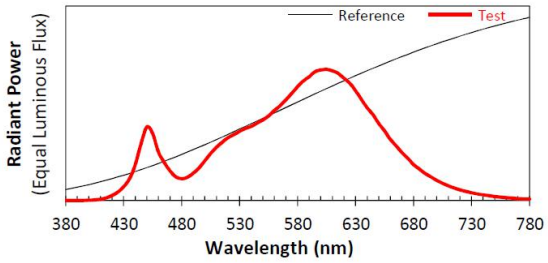
CIE1931 Chromaticity Diagram

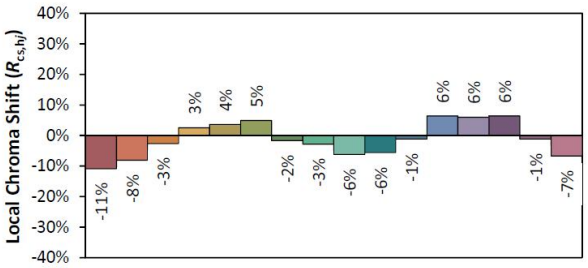
7/4 Step Quadrangle

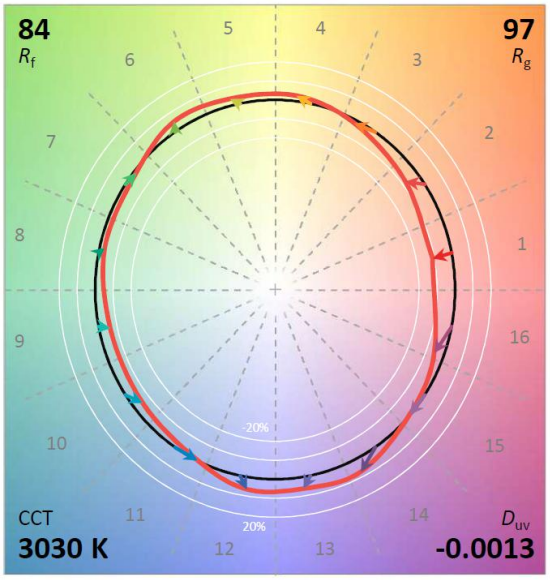


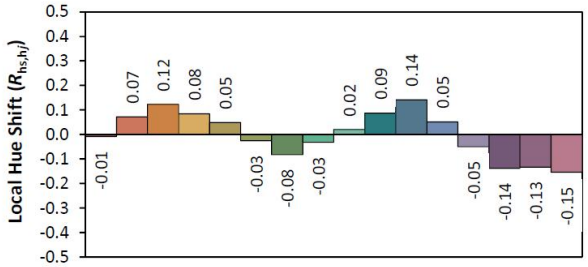
ANSI/IES TM-30-18 Color Rendition Report

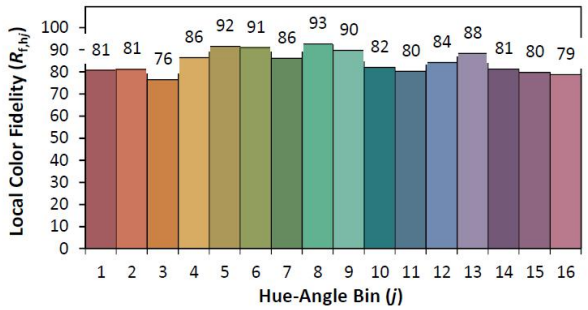
Source:	BL230227014-9	**Manufacturer:**	RAB LIGHTING,INC
Date:	2023-04-11	**Model:**	HID-80-EX39-8CCT-BYP/5SP/480V, 3000K at 277V

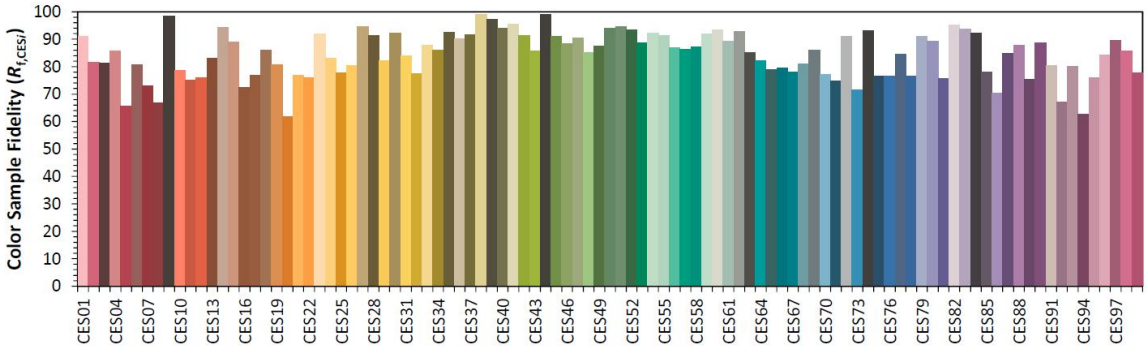












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.4330
y	0.3996
u'	0.2500
v'	0.5190

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-80-EX39-8CCT-BYP/5SP/480V, 3000K at 480V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
480.02	60	0.176	77.82	0.921

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
10823.40	139.1	3029

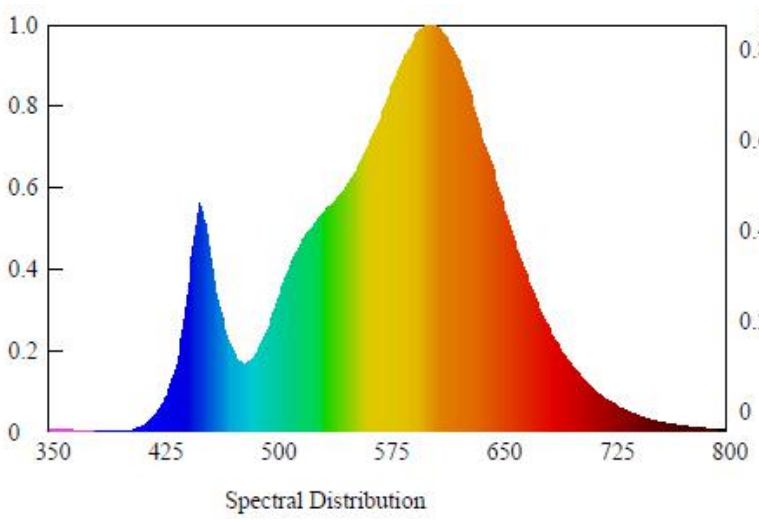
Chromaticity Coordinate

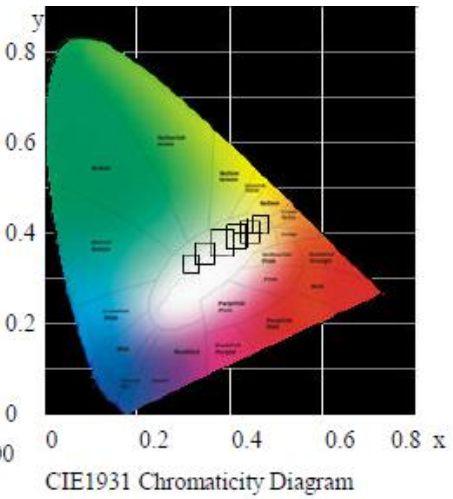
Duv	x	y	u'	v'
-0.00125	0.4331	0.3996	0.2500	0.5191

Color Rendering

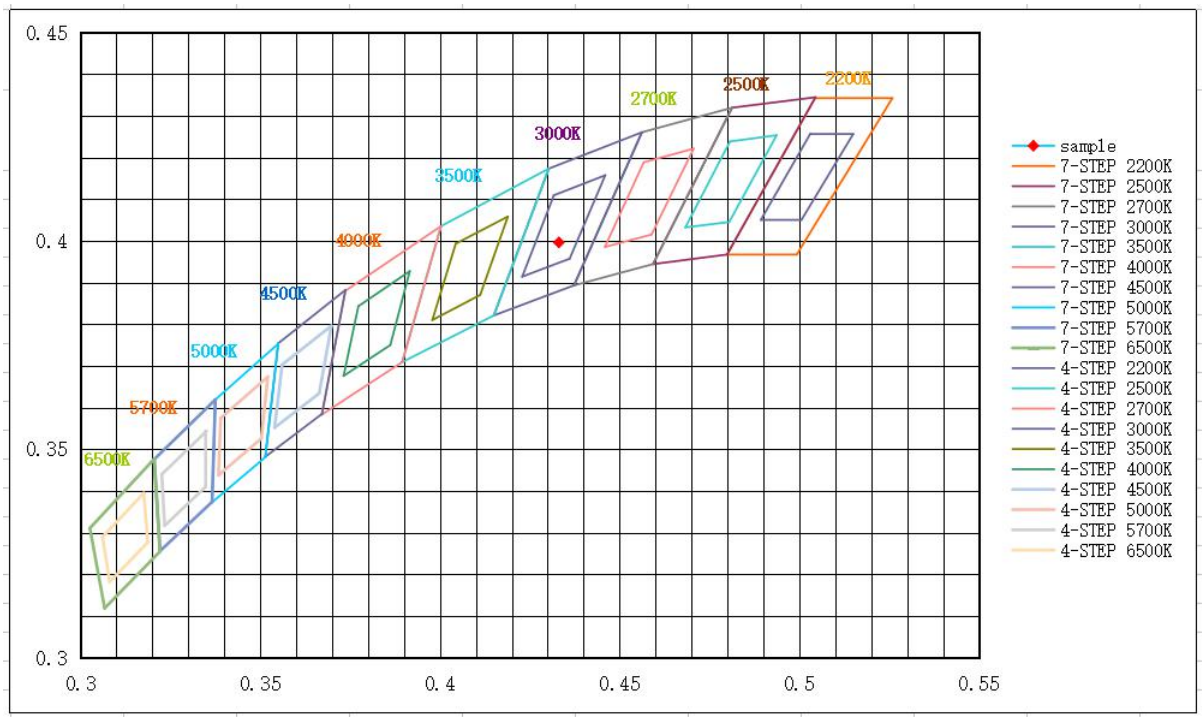
CRI	R9	Rf	Rg	Rcs,h1(%)
83.1	10	84	97	-11

Spectral Distribution



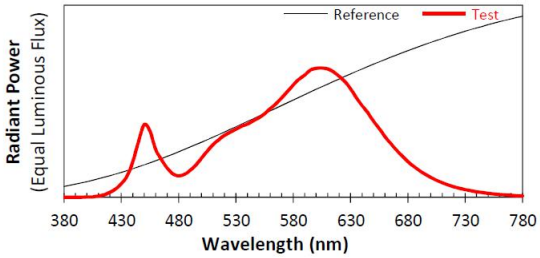


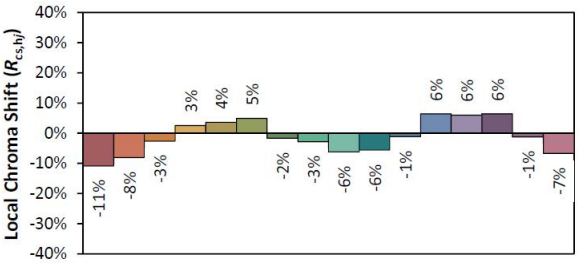
7/4 Step Quadrangle

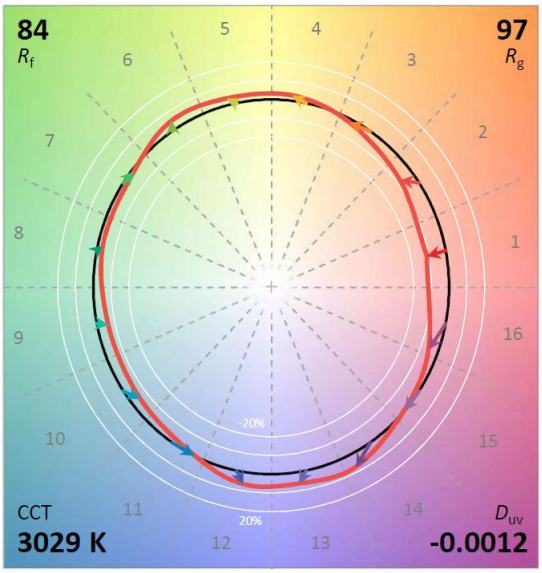


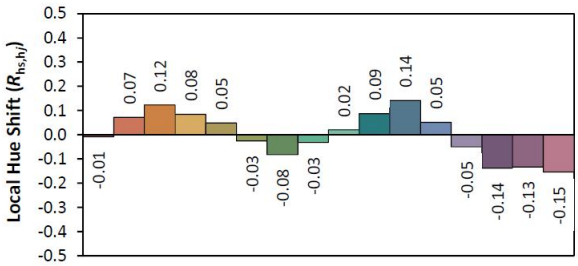
ANSI/IES TM-30-18 Color Rendition Report

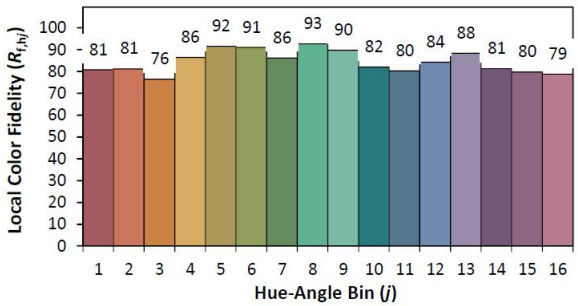
Source:	BL230227014-9	**Manufacturer:**	RAB LIGHTING,INC
Date:	2023-04-11	**Model:**	HID-80-EX39-8CCT-BYP/5SP/480V, 3000K at 480V

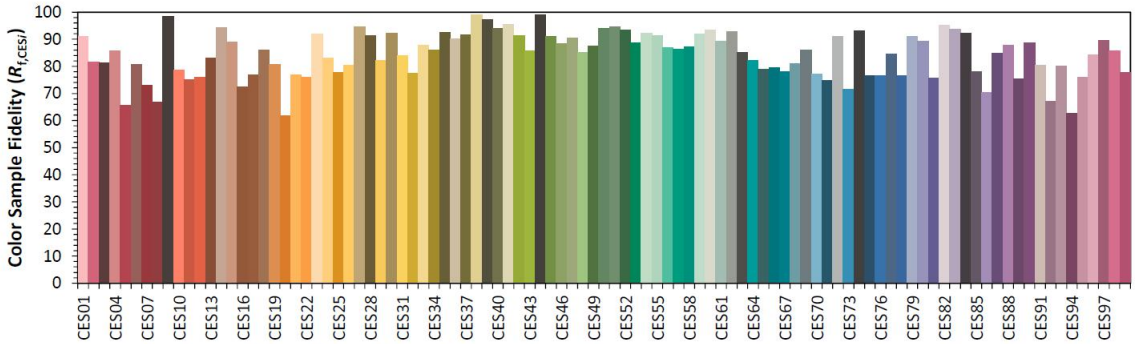












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.4331
y	0.3996
u'	0.2500
v'	0.5190

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-80-EX39-8CCT-BYP/5SP/480V, 4000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.06	60	0.277	75.47	0.984

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
11492.72	152.3	4040

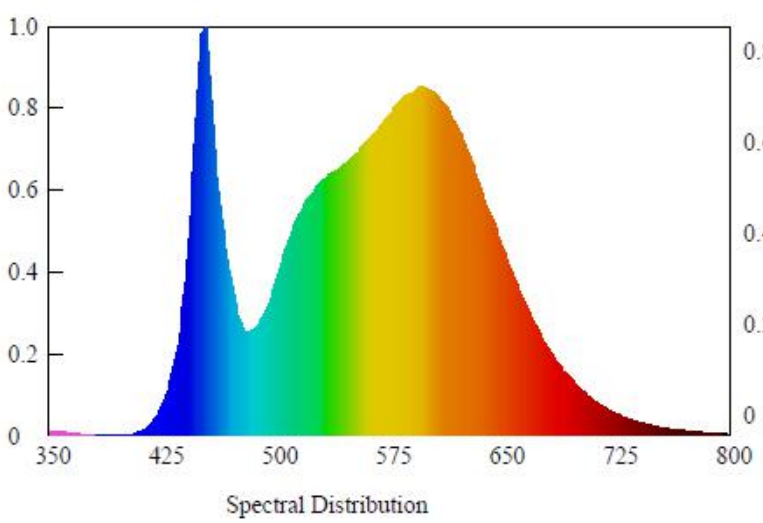
Chromaticity Coordinate

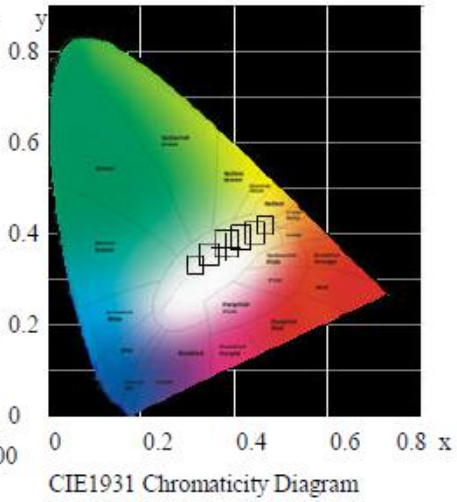
Duv	x	y	u'	v'
-0.00231	0.3772	0.3698	0.2257	0.4980

Color Rendering

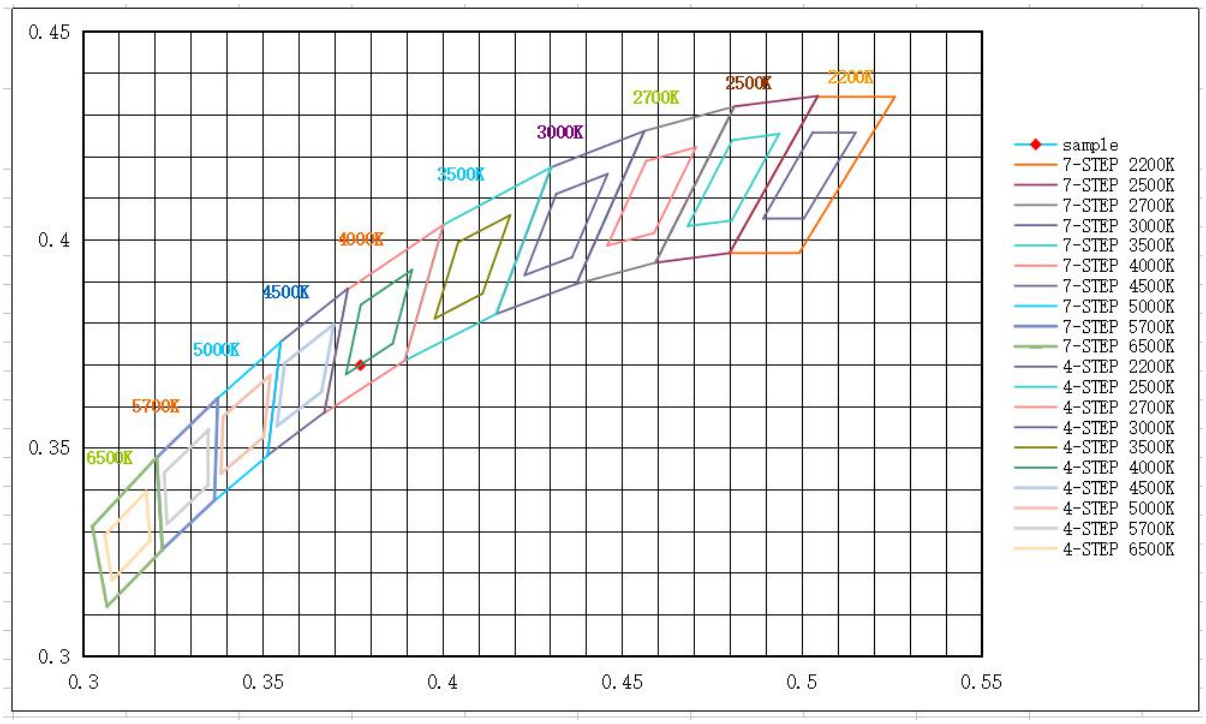
CRI	R9	Rf	Rg	Rcs,h1(%)
85.2	21	85	97	-10

Spectral Distribution



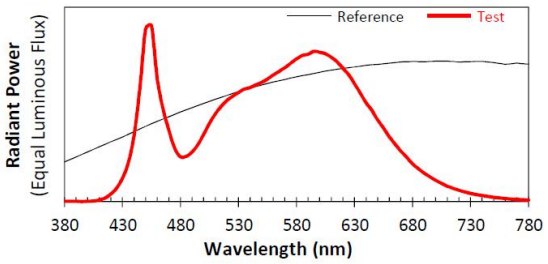


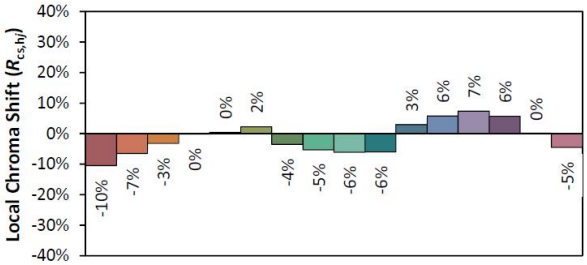
7/4 Step Quadrangle

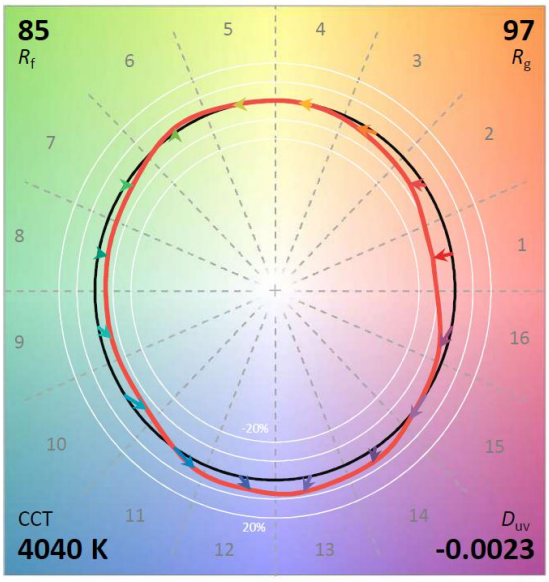


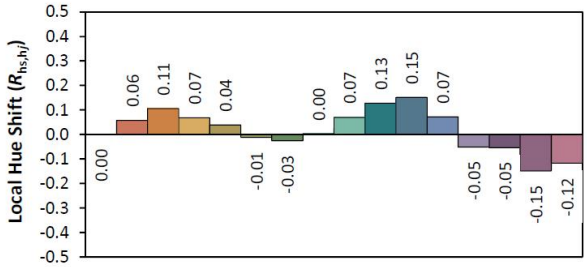
ANSI/IES TM-30-18 Color Rendition Report

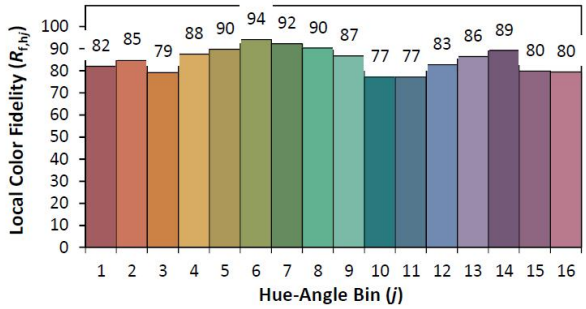
Source:	BL230227014-9	**Manufacturer:**	RAB LIGHTING,INC
Date:	2023-04-11	**Model:**	HID-80-EX39-8CCT-BYP/5SP/480V, 4000K at 277V

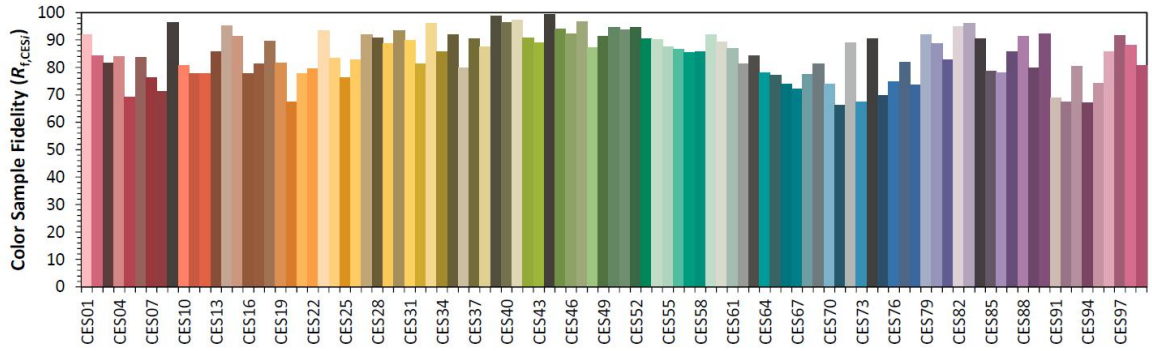












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3772
y	0.3698
u'	0.2257
v'	0.4980

CIE 13.3-1995 (CRI)

R_a	85
R_9	21

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

3.1.4 Model Number: HID-80-EX39-8CCT-BYP/5SP/480V, 4000K at 480V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
480.08	60	0.173	76.21	0.919

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
11506.13	151.0	4041

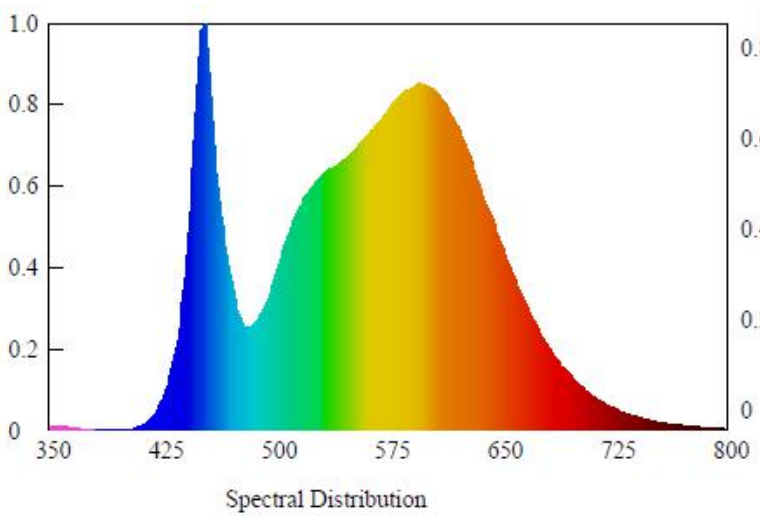
Chromaticity Coordinate

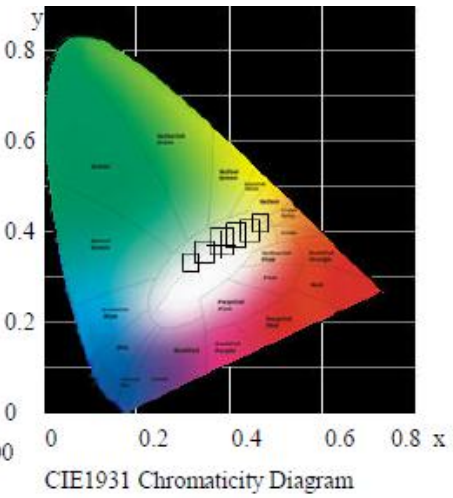
Duv	x	y	u'	v'
-0.00226	0.3772	0.3699	0.2257	0.4980

Color Rendering

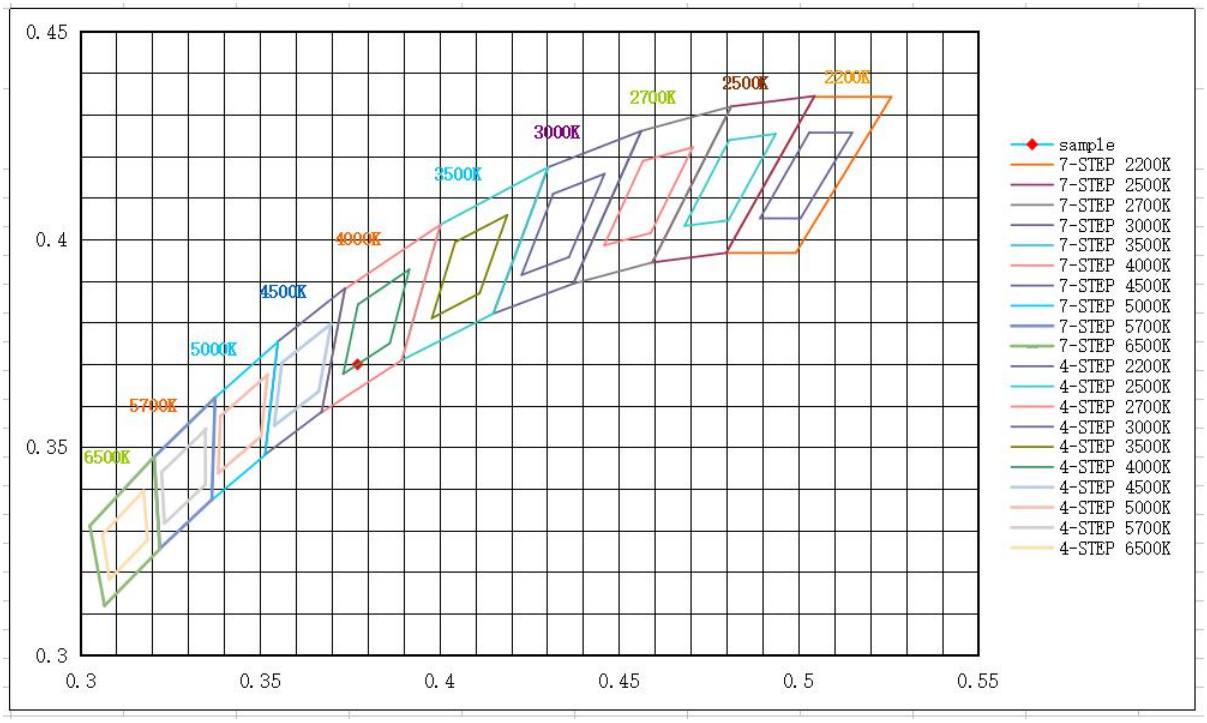
CRI	R9	Rf	Rg	Rcs,h1(%)
85.2	21	85	97	-10

Spectral Distribution



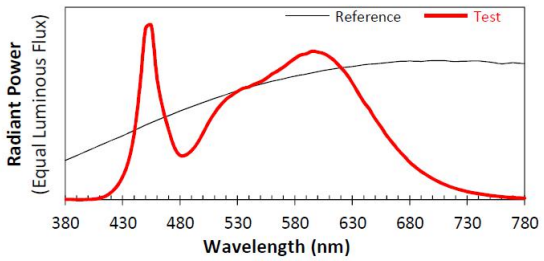


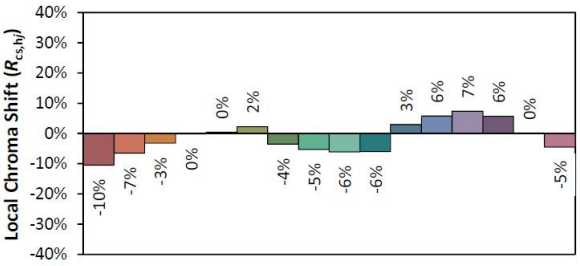
7/4 Step Quadrangle

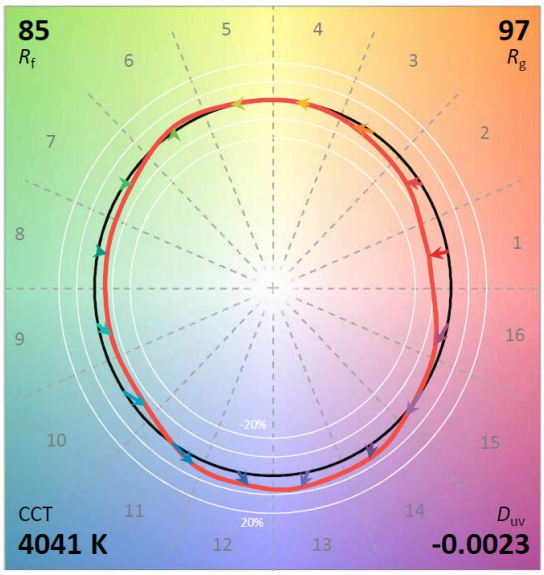


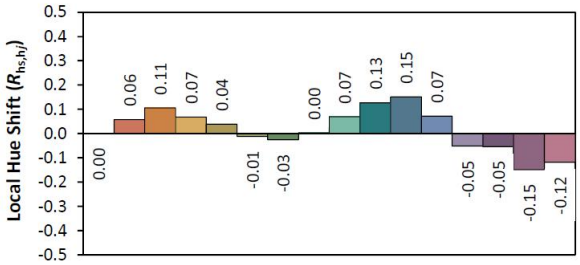
ANSI/IES TM-30-18 Color Rendition Report

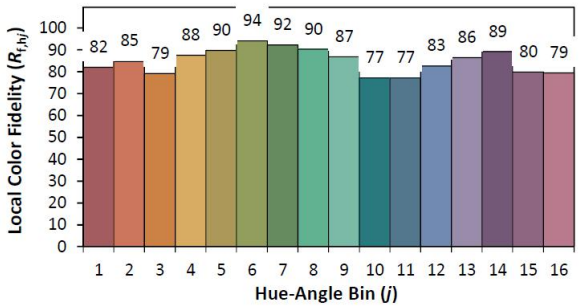
Source:	BL230227014-9	**Manufacturer:**	RAB LIGHTING,INC
Date:	2023-04-11	**Model:**	HID-80-EX39-8CCT-BYP/5SP/480V, 4000K at 480V

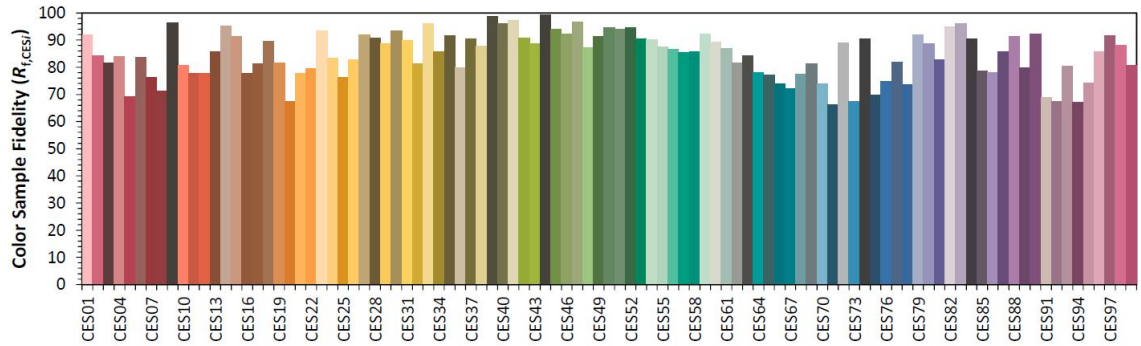












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3772
y	0.3699
u'	0.2257
v'	0.4980

CIE 13.3-1995 (CRI)

R_a	85
R_9	21

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

3.1.5 Model Number: HID-80-EX39-8CCT-BYP/5SP/480V, 5000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.07	60	0.283	77.26	0.985

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
11025.69	142.7	4997

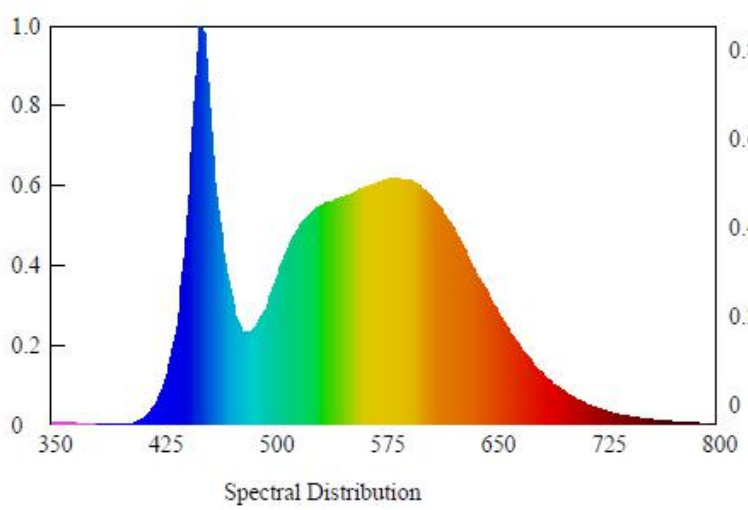
Chromaticity Coordinate

Duv	x	y	u'	v'
+0.00035	0.3453	0.3525	0.2112	0.4851

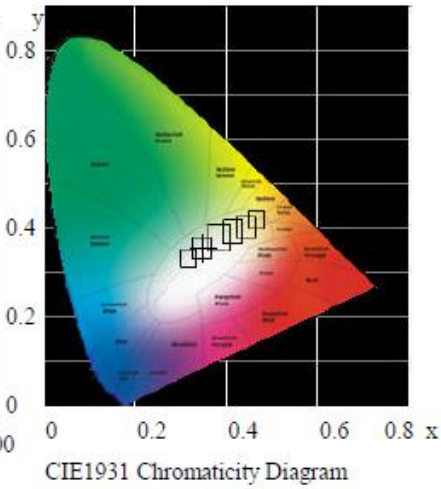
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
83.7	16	84	97	-12

Spectral Distribution

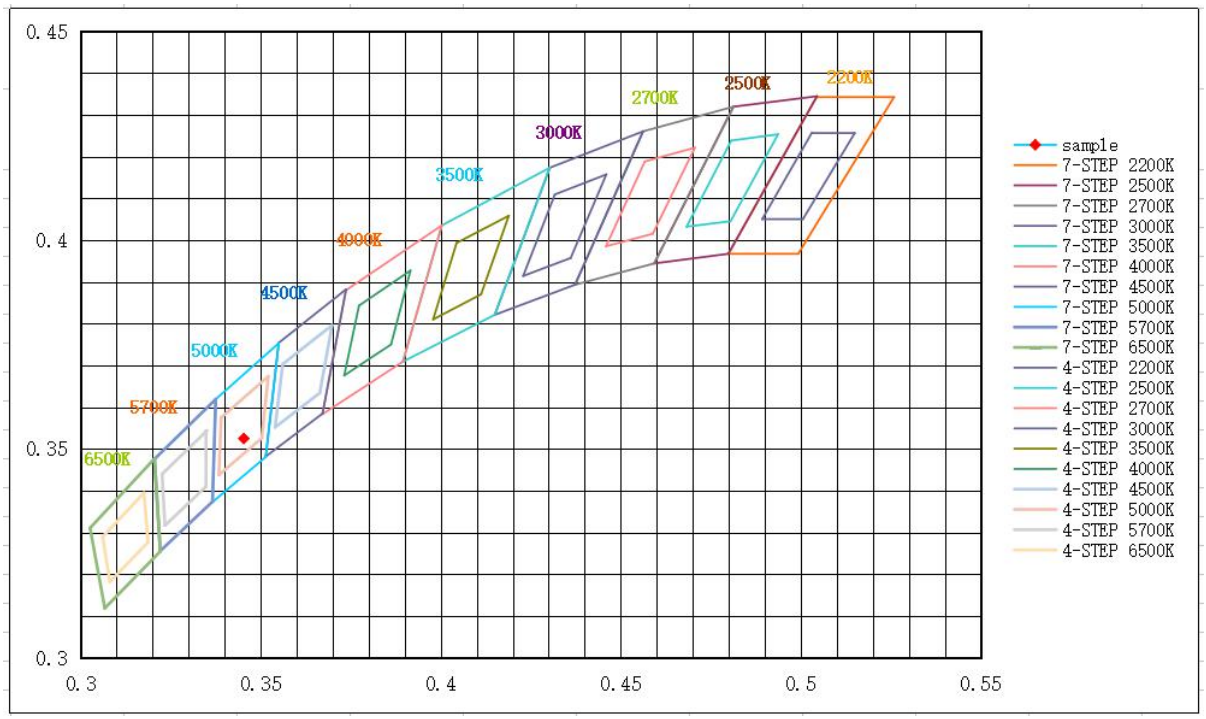


Spectral Distribution



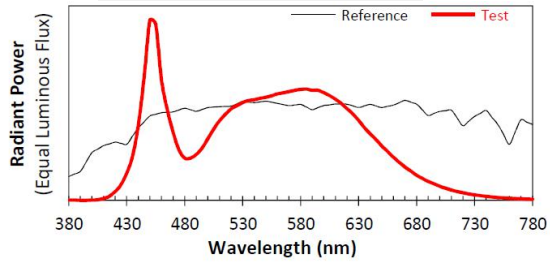
CIE1931 Chromaticity Diagram

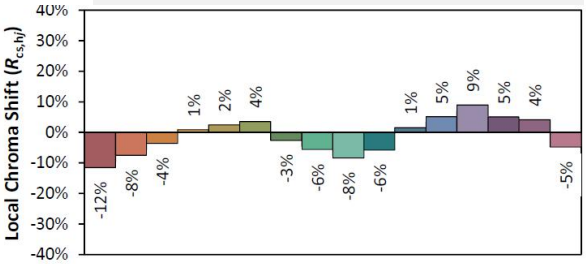
7/4 Step Quadrangle

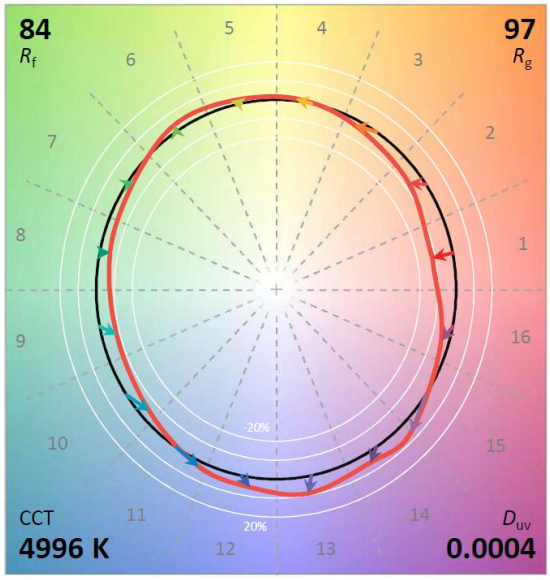


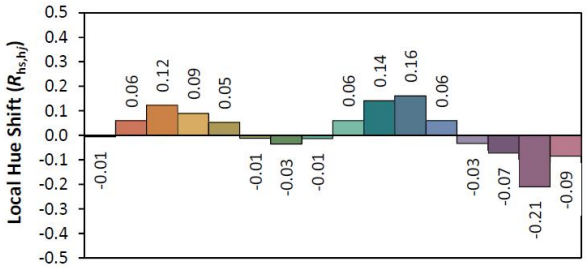
ANSI/IES TM-30-18 Color Rendition Report

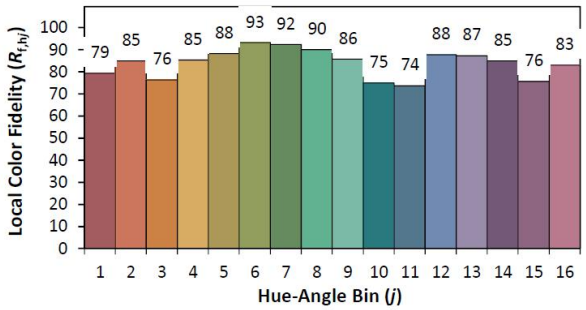
Source:	BL230227014-9	**Manufacturer:**	RAB LIGHTING,INC
Date:	2023-04-11	**Model:**	HID-80-EX39-8CCT-BYP/5SP/480V, 5000K at 277V

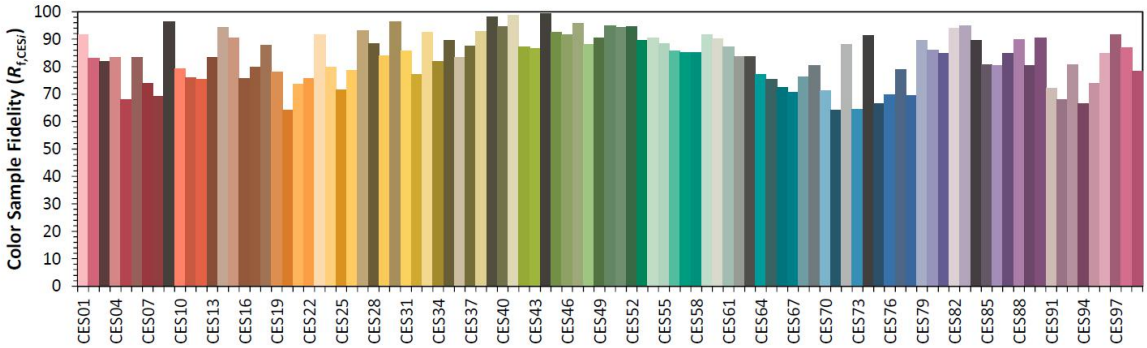












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3453
y	0.3525
u'	0.2112
v'	0.4851

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-80-EX39-8CCT-BYP/5SP/480V, 5000K at 480V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
480.11	60	0.176	77.89	0.922

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	CCT (K)
11042.45	141.8	4996

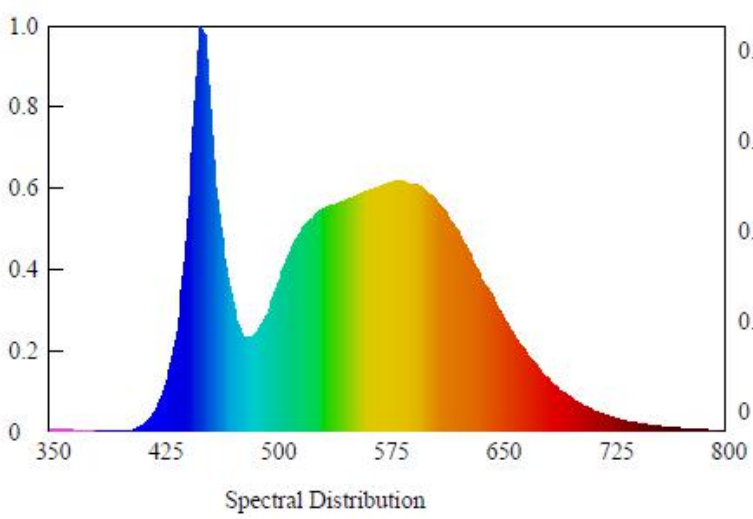
Chromaticity Coordinate

Duv	x	y	u'	v'
+0.00034	0.3453	0.3525	0.2112	0.4851

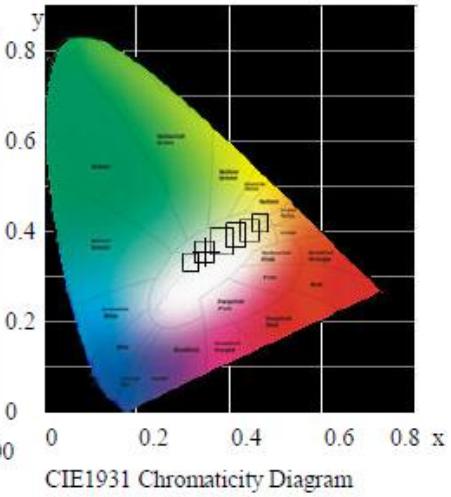
Color Rendering

CRI	R9	Rf	Rg	Rcs,h1(%)
83.7	16	84	97	-12

Spectral Distribution

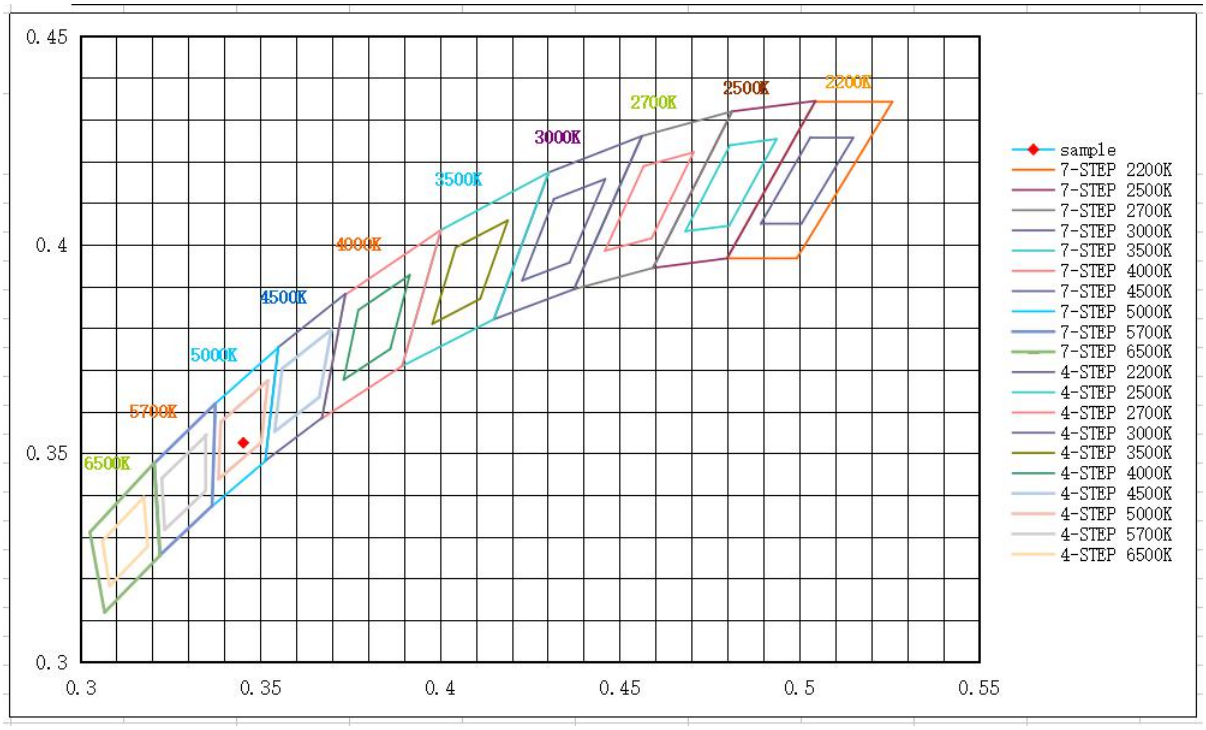


Spectral Distribution



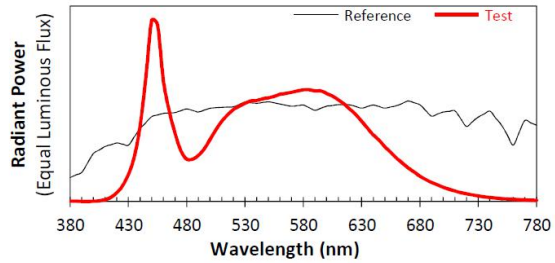
CIE1931 Chromaticity Diagram

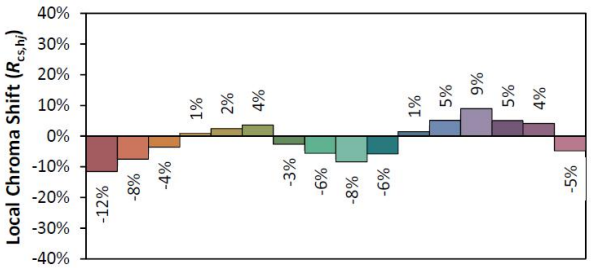
7/4 Step Quadrangle

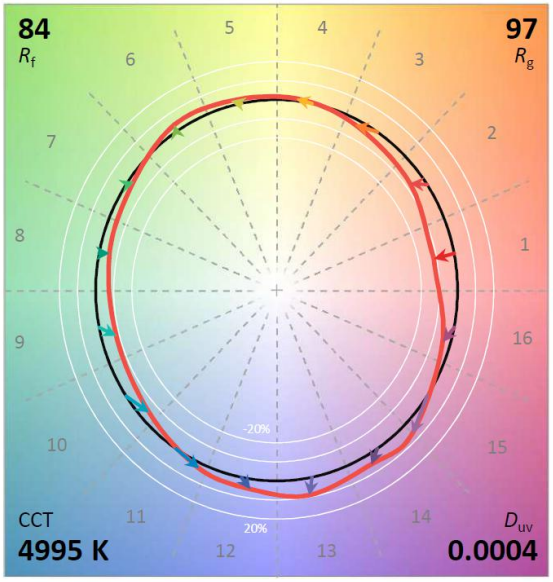


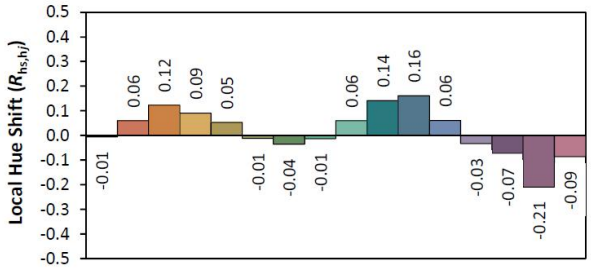
ANSI/IES TM-30-18 Color Rendition Report

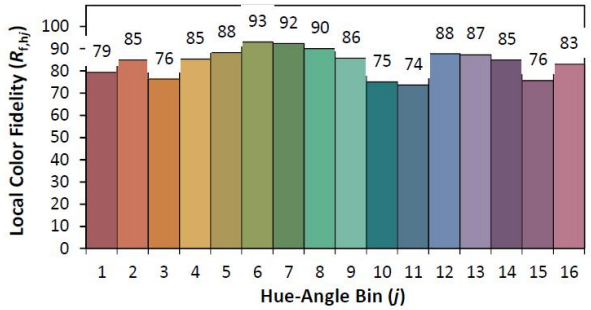
Source:	BL230227014-9	**Manufacturer:**	RAB LIGHTING,INC
Date:	2023-04-11	**Model:**	HID-80-EX39-8CCT-BYP/5SP/480V, 5000K at 480V

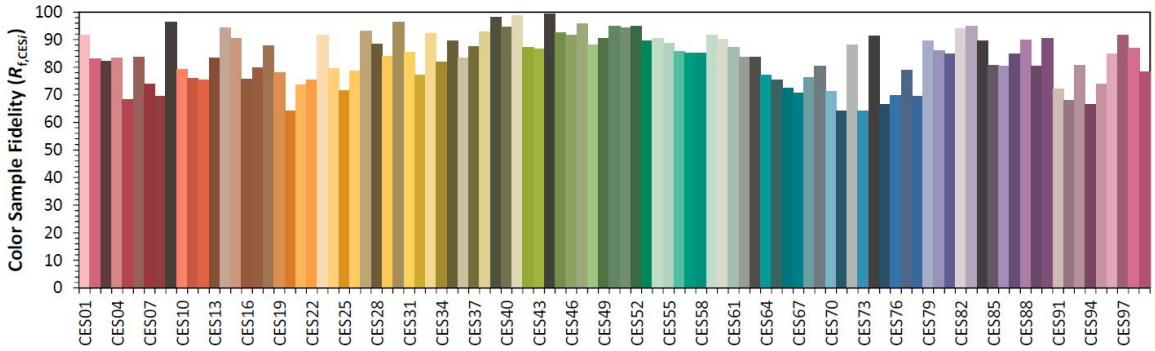












Notes: This is a recommended method for displaying ANSI/IES TM-30-18 information.

x	0.3453
y	0.3525
u'	0.2112
v'	0.4851

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-80-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	0.2830	77.25	0.9838

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
10831.46	140.21	31.81	60.43

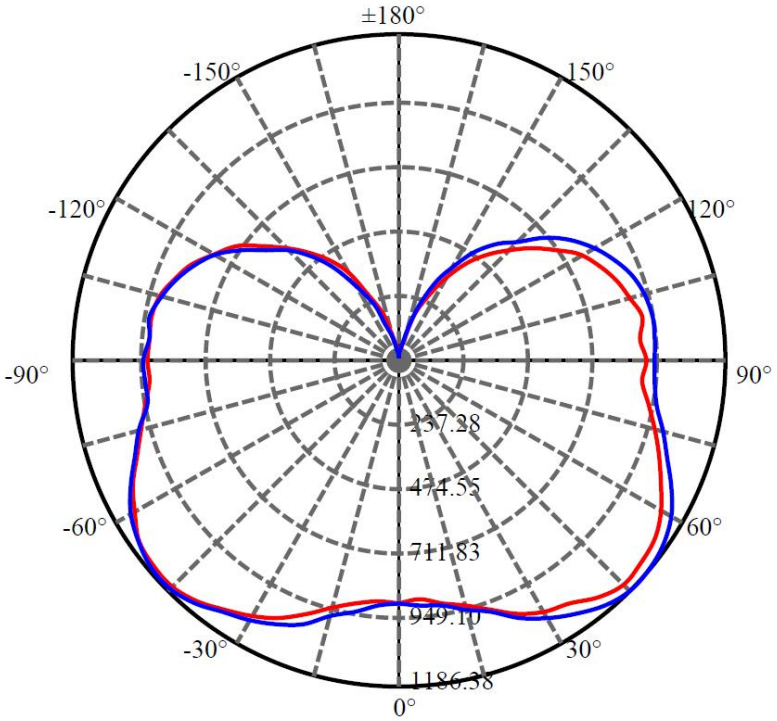
Zonal Flux Diagram

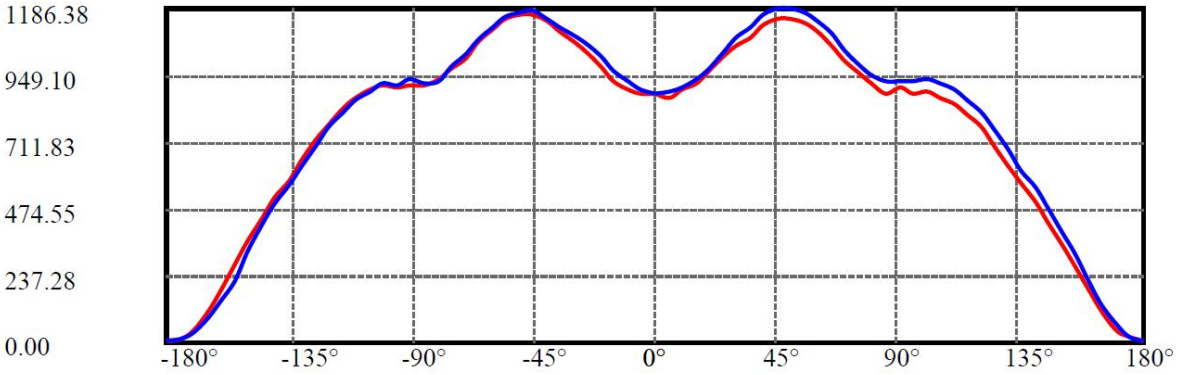
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	883.771	0.000	0	0.00%	0.00%
5.0	882.879	21.120	21.12	0.00%	0.19%
10.0	899.445	63.759	84.879	0.00%	0.78%
15.0	934.323	108.778	193.657	0.00%	1.79%
20.0	978.568	157.649	351.306	0.00%	3.24%
25.0	1028.821	210.538	561.844	0.00%	5.19%
30.0	1068.224	265.383	827.227	0.00%	7.64%
35.0	1101.991	319.579	1146.806	0.00%	10.59%
40.0	1139.396	373.958	1520.765	0.00%	14.04%
45.0	1163.596	426.418	1947.183	0.00%	17.98%
50.0	1164.642	470.455	2417.637	0.00%	22.32%
55.0	1150.907	503.477	2921.115	0.00%	26.97%
60.0	1118.755	524.626	3445.741	0.00%	31.81%
65.0	1073.199	532.868	3978.609	0.00%	36.73%
70.0	1021.147	530.302	4508.911	0.00%	41.63%
75.0	975.803	521.971	5030.881	0.00%	46.45%
80.0	934.905	511.252	5542.134	0.00%	51.17%
85.0	911.313	501.662	6043.795	0.00%	55.80%
90.0	920.390	501.535	6545.33	0.00%	60.43%
95.0	907.741	500.556	7045.886	0.00%	65.05%
100.0	912.848	494.698	7540.584	0.00%	69.62%
105.0	892.472	483.053	8023.637	0.00%	74.08%
110.0	864.143	459.151	8482.788	0.00%	78.32%
115.0	827.823	428.417	8911.204	0.00%	82.27%
120.0	779.952	390.853	9302.057	0.00%	85.88%
125.0	717.830	346.208	9648.266	0.00%	89.08%
130.0	645.785	296.495	9944.761	0.00%	91.81%
135.0	576.969	247.075	10191.836	0.00%	94.09%
140.0	511.129	201.470	10393.306	0.00%	95.95%
145.0	437.324	158.242	10551.549	0.00%	97.42%
150.0	355.647	116.771	10668.319	0.00%	98.49%
155.0	271.826	79.407	10747.726	0.00%	99.23%
160.0	182.355	47.635	10795.362	0.00%	99.67%
165.0	109.715	24.071	10819.432	0.00%	99.89%
170.0	49.142	9.423	10828.856	0.00%	99.98%
175.0	16.605	2.352	10831.208	0.00%	100.00%
180.0	4.807	0.256	10831.464	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:164.5 Right:164.5

:C90/270Left:162.5 Right:166.2

Beam Angle(50%Imax):C0/180Left:134.6 Right:133.7

:C90/270Left:132.6 Right:136.7

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	883.77	872.00	897.62	924.29	968.33	1016.81	1053.86	1083.92	1126.47
22.5	883.77	879.62	896.56	914.98	961.98	1008.97	1046.02	1092.81	1130.92
45.0	883.77	876.24	881.11	920.06	953.30	997.12	1049.41	1080.32	1121.81
67.5	883.77	873.48	884.92	923.87	966.00	1013.00	1057.03	1097.68	1136.42
90.0	883.77	893.17	906.30	937.21	974.47	1031.84	1080.74	1121.39	1167.54
112.5	883.77	894.02	901.85	936.57	977.22	1035.23	1078.84	1110.38	1148.70
135.0	883.77	881.74	893.39	927.89	970.02	1026.76	1067.83	1104.03	1145.52
157.5	883.77	888.73	892.96	933.40	977.64	1027.39	1070.16	1108.90	1151.03
180.0	883.77	882.80	897.62	930.43	982.51	1031.84	1072.06	1102.97	1142.35
202.5	883.77	883.86	897.20	929.16	987.80	1031.20	1063.81	1102.97	1148.06
225.0	883.77	869.67	900.79	940.81	985.48	1038.19	1082.86	1108.26	1133.67
247.5	883.77	876.87	896.35	928.95	977.85	1030.99	1068.67	1104.24	1129.22
270.0	883.77	897.41	926.41	963.25	1019.77	1060.84	1091.54	1117.15	1149.55
292.5	883.77	888.52	915.61	955.84	995.64	1050.26	1078.84	1111.86	1145.10
315.0	883.77	884.49	904.82	948.22	981.24	1039.67	1070.16	1093.66	1129.01
337.5	883.77	883.44	897.62	934.24	977.85	1021.04	1059.78	1091.33	1124.99
360.0	883.77	872.00	897.62	924.29	968.33	1016.81	1053.86	1083.92	1126.47

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1150.18	1146.37	1132.61	1103.61	1054.28	1002.84	960.28	918.58	885.55
22.5	1156.95	1171.35	1157.38	1126.47	1082.01	1029.30	985.48	943.98	912.01
45.0	1142.14	1141.08	1128.16	1098.52	1056.40	1001.35	956.90	919.85	890.00
67.5	1156.32	1158.44	1148.70	1113.77	1068.67	1019.56	979.97	943.77	907.57
90.0	1186.38	1184.69	1170.93	1140.87	1094.50	1036.71	990.13	953.30	930.64
112.5	1168.17	1168.17	1155.68	1126.26	1079.68	1023.37	974.68	943.98	919.21
135.0	1168.39	1167.75	1155.47	1124.99	1085.61	1034.17	987.17	952.87	932.13
157.5	1171.56	1168.17	1155.47	1118.42	1068.04	1015.11	964.09	927.89	904.39
180.0	1161.61	1166.48	1148.70	1112.29	1065.50	1010.88	973.83	934.03	910.11
202.5	1166.48	1158.44	1144.25	1112.92	1065.92	1014.48	965.36	920.06	897.62
225.0	1164.79	1166.90	1144.89	1115.46	1069.73	1023.16	978.70	933.40	912.01
247.5	1161.19	1160.98	1150.18	1116.73	1079.26	1027.39	981.67	935.94	914.56
270.0	1176.64	1173.89	1157.59	1122.24	1073.97	1023.37	977.43	930.43	922.60
292.5	1175.16	1178.34	1167.12	1137.27	1092.81	1035.65	985.90	943.98	932.76
315.0	1160.13	1156.32	1147.64	1112.50	1062.32	1014.06	964.73	921.54	899.31
337.5	1151.45	1166.90	1149.76	1117.79	1072.49	1026.97	986.53	934.88	910.53
360.0	1150.18	1146.37	1132.61	1103.61	1054.28	1002.84	960.28	918.58	885.55

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	902.91	883.01	894.44	871.16	844.69	808.49	763.40	702.64	629.82
22.5	923.87	907.15	917.10	896.14	867.98	831.99	786.90	726.99	650.99
45.0	901.64	886.40	895.08	877.08	848.29	813.36	767.21	708.57	639.34
67.5	916.04	900.16	910.74	888.73	861.84	825.64	777.16	714.50	642.31
90.0	928.53	931.07	932.34	921.12	896.98	864.59	820.35	758.74	688.03
112.5	920.48	916.25	915.61	900.58	876.03	840.88	798.33	741.17	672.79
135.0	934.46	931.49	930.01	916.46	888.94	853.80	804.89	738.63	669.62
157.5	913.07	905.66	903.34	873.06	841.94	811.24	765.73	698.20	623.46
180.0	916.67	908.42	915.61	900.58	869.04	830.51	775.68	720.21	649.50
202.5	906.93	897.83	899.95	880.89	856.13	819.71	768.69	704.55	636.59
225.0	925.14	914.98	917.73	900.58	867.13	827.76	784.78	722.54	650.14
247.5	921.96	912.65	913.29	889.79	866.50	828.39	781.82	719.37	648.87
270.0	932.55	911.17	917.73	890.63	859.09	818.65	768.69	701.16	627.28
292.5	943.77	921.12	928.10	904.82	872.21	837.07	780.97	717.04	641.25
315.0	915.40	893.17	902.28	876.45	849.14	807.43	760.44	697.14	622.62
337.5	922.81	903.34	912.23	891.48	860.36	825.64	774.20	713.86	639.98
360.0	902.91	883.01	894.44	871.16	844.69	808.49	763.40	702.64	629.82

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	567.15	500.68	429.33	347.19	269.71	182.28	109.66	46.79	19.27
22.5	583.24	519.73	449.02	367.30	283.26	192.86	115.59	52.93	17.57
45.0	572.23	507.45	431.66	357.99	274.58	185.03	114.11	50.39	18.21
67.5	577.74	512.74	442.88	363.71	284.32	187.36	109.87	49.54	16.09
90.0	613.94	551.27	480.78	391.86	313.74	215.51	136.13	65.42	21.59
112.5	600.81	533.70	457.28	374.29	288.13	196.25	129.14	62.03	18.42
135.0	595.31	530.74	460.45	376.83	288.13	201.75	122.15	57.16	13.13
157.5	559.95	499.83	420.02	339.36	261.66	170.00	103.31	46.79	15.45
180.0	577.10	514.44	439.71	363.92	278.18	185.24	109.45	47.85	15.45
202.5	568.42	507.66	433.78	352.27	266.32	175.71	105.85	46.58	15.67
225.0	576.47	507.03	431.03	350.58	270.56	179.95	108.60	46.58	14.61
247.5	576.25	510.84	436.11	359.26	271.83	179.31	109.45	47.21	13.13
270.0	561.86	494.75	418.96	326.23	222.08	148.19	89.76	38.32	15.88
292.5	573.93	488.61	411.97	324.12	256.37	168.52	84.26	36.20	15.88
315.0	554.24	490.52	416.00	339.15	248.12	166.82	97.17	44.46	17.36
337.5	572.87	508.09	438.22	356.30	272.25	182.91	110.93	48.06	18.00
360.0	567.15	500.68	429.33	347.19	269.71	182.28	109.66	46.79	19.27

C/γ(°)	180.0
0.0	4.81
22.5	4.81
45.0	4.81
67.5	4.81
90.0	4.81
112.5	4.81
135.0	4.81
157.5	4.81
180.0	4.81
202.5	4.81
225.0	4.81
247.5	4.81
270.0	4.81
292.5	4.81
315.0	4.81
337.5	4.81
360.0	4.81

3.2.2 Model Number: HID-80-EX39-8CCT-BYP/5SP/480V, 3000K at 480V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
480.11	60	0.1760	77.94	0.9211

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
10835.64	139.03	26.70	55.55

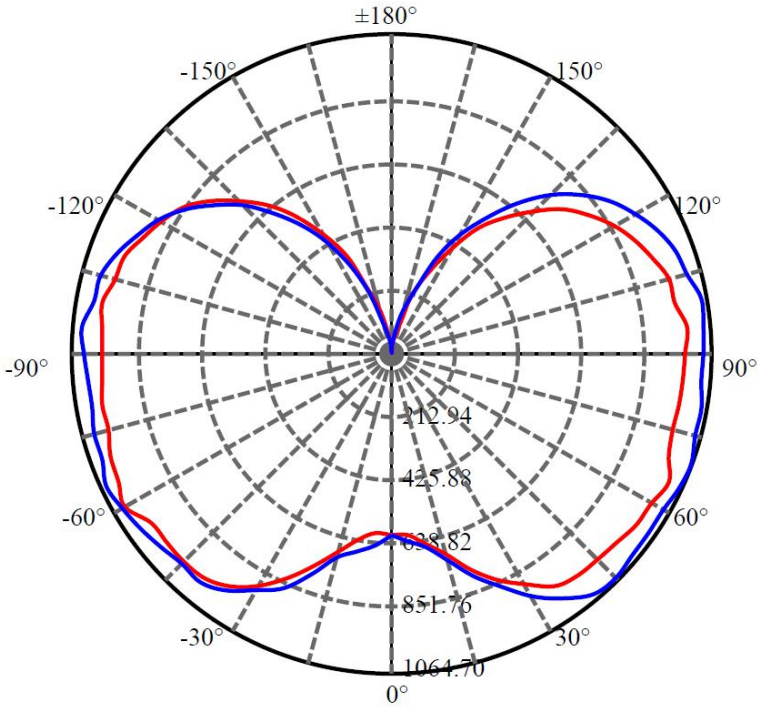
Zonal Flux Diagram

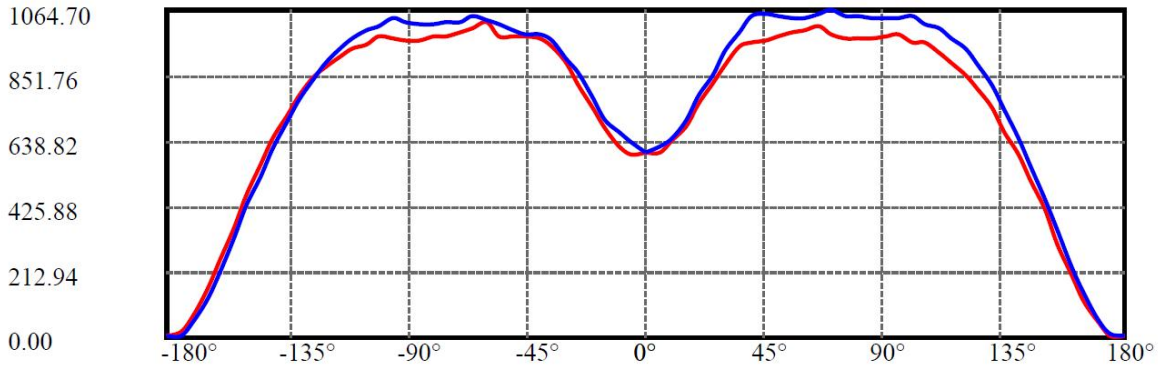
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	602.602	0.000	0	0.00%	0.00%
5.0	607.285	14.464	14.464	0.00%	0.13%
10.0	636.225	44.484	58.948	0.00%	0.54%
15.0	687.060	78.496	137.444	0.00%	1.27%
20.0	756.179	118.943	256.388	0.00%	2.37%
25.0	827.348	166.083	422.47	0.00%	3.90%
30.0	893.697	217.800	640.27	0.00%	5.91%
35.0	946.483	270.979	911.249	0.00%	8.41%
40.0	975.286	320.633	1231.882	0.00%	11.37%
45.0	985.063	362.974	1594.857	0.00%	14.72%
50.0	991.307	399.354	1994.211	0.00%	18.40%
55.0	1002.548	433.530	2427.741	0.00%	22.41%
60.0	1008.577	464.866	2892.607	0.00%	26.70%
65.0	1017.749	492.604	3385.211	0.00%	31.24%
70.0	1005.553	512.313	3897.524	0.00%	35.97%
75.0	986.917	520.799	4418.324	0.00%	40.78%
80.0	984.692	527.548	4945.871	0.00%	45.64%
85.0	982.702	534.588	5480.459	0.00%	50.58%
90.0	985.726	538.971	6019.43	0.00%	55.55%
95.0	991.522	541.386	6560.816	0.00%	60.55%
100.0	982.702	536.444	7097.26	0.00%	65.50%
105.0	968.046	521.966	7619.226	0.00%	70.32%
110.0	945.976	500.295	8119.52	0.00%	74.93%
115.0	915.358	471.302	8590.822	0.00%	79.28%
120.0	876.036	435.491	9026.313	0.00%	83.30%
125.0	829.143	394.147	9420.461	0.00%	86.94%
130.0	766.503	346.947	9767.407	0.00%	90.14%
135.0	694.222	295.161	10062.568	0.00%	92.87%
140.0	616.359	242.665	10305.233	0.00%	95.11%
145.0	528.506	191.012	10496.245	0.00%	96.87%
150.0	433.062	141.598	10637.842	0.00%	98.17%
155.0	329.323	96.480	10734.323	0.00%	99.06%
160.0	221.819	57.805	10792.127	0.00%	99.60%
165.0	134.395	29.357	10821.484	0.00%	99.87%
170.0	57.567	11.387	10832.871	0.00%	99.97%
175.0	13.797	2.553	10835.424	0.00%	100.00%
180.0	3.967	0.212	10835.637	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:147.6 Right:145.0

: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	602.60	604.79	638.82	687.53	763.40	828.97	887.98	945.43	961.98
22.5	602.60	600.10	631.95	675.04	731.24	789.63	865.50	899.53	909.84
45.0	602.60	600.42	627.27	672.85	756.53	838.96	890.79	931.07	960.10
67.5	602.60	591.05	629.45	685.34	748.41	817.10	882.05	923.57	955.42
90.0	602.60	624.15	651.00	707.20	784.32	852.39	929.51	992.26	1041.91
112.5	602.60	617.28	643.19	705.01	774.64	849.58	923.57	990.08	1025.05
135.0	602.60	604.79	635.70	698.46	760.90	838.65	911.08	965.41	1009.12
157.5	602.60	607.91	636.32	685.97	760.90	840.52	904.53	959.48	973.84
180.0	602.60	597.29	623.21	677.85	747.16	823.04	891.73	946.37	973.53
202.5	602.60	599.48	617.28	670.67	739.98	805.55	882.05	928.88	968.85
225.0	602.60	586.68	619.46	661.61	724.68	798.37	873.62	922.95	960.42
247.5	602.60	591.99	610.41	680.97	741.54	805.86	870.81	929.51	960.42
270.0	602.60	637.57	669.11	704.39	777.76	857.07	905.15	963.85	987.89
292.5	602.60	628.52	659.12	700.33	777.76	846.77	914.83	966.66	974.47
315.0	602.60	616.65	646.94	689.71	754.35	825.53	884.54	943.87	980.09
337.5	602.60	607.91	640.38	690.03	755.28	819.60	881.42	934.81	961.67
360.0	602.60	604.79	638.82	687.53	763.40	828.97	887.98	945.43	961.98

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	966.04	976.96	994.45	997.26	1014.12	983.21	969.47	970.72	972.28
22.5	913.58	944.18	957.61	945.74	971.03	970.41	956.05	951.36	955.11
45.0	943.87	991.02	977.28	978.84	1023.49	977.28	962.91	961.98	962.91
67.5	966.04	973.22	986.64	992.58	999.13	976.65	954.48	952.30	957.29
90.0	1053.15	1042.22	1040.35	1040.35	1053.77	1061.89	1047.53	1045.03	1035.98
112.5	1035.98	1037.54	1045.03	1060.33	1053.15	1026.92	1000.07	1001.01	992.89
135.0	1024.74	1030.98	1036.29	1048.47	1064.70	1057.21	1048.78	1041.28	1037.85
157.5	987.89	977.28	1025.98	1009.44	1005.69	1018.49	977.28	976.03	971.97
180.0	978.53	976.03	976.96	1022.55	1004.13	994.14	979.15	976.34	966.04
202.5	979.15	971.34	989.14	1000.07	1006.63	1010.69	996.32	997.88	992.26
225.0	976.96	982.27	995.39	1002.88	1000.38	985.39	965.72	961.67	956.05
247.5	943.24	942.00	995.07	972.28	976.96	994.14	958.23	958.23	953.24
270.0	988.20	998.51	1019.74	1032.85	1047.22	1027.23	1023.17	1015.68	1016.31
292.5	1036.29	1035.66	1002.26	1018.18	1029.11	1005.38	985.71	987.58	988.83
315.0	991.33	999.45	1018.49	1008.50	1029.73	1024.11	1008.19	1010.06	1010.69
337.5	976.03	982.27	980.09	1006.94	1004.75	975.72	957.61	947.93	953.55
360.0	966.04	976.96	994.45	997.26	1014.12	983.21	969.47	970.72	972.28

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	977.90	984.77	958.86	957.29	924.51	893.60	850.82	806.49	744.04
22.5	961.35	970.72	944.81	936.38	913.89	879.55	832.72	776.83	711.57
45.0	967.29	971.97	948.86	947.62	912.33	882.05	841.77	797.75	733.43
67.5	963.23	969.47	943.56	940.12	910.46	879.24	834.90	782.13	716.88
90.0	1039.72	1039.10	1047.53	1020.99	1004.13	971.97	935.75	887.04	820.85
112.5	992.89	998.51	1005.07	979.15	968.22	942.62	907.03	867.37	807.74
135.0	1033.17	1039.72	1044.09	1019.12	998.20	967.60	927.01	873.30	808.05
157.5	974.47	974.47	982.90	959.79	946.68	918.58	889.85	848.64	785.26
180.0	965.41	969.16	976.65	951.36	942.00	914.21	882.36	847.08	789.32
202.5	994.14	996.01	1003.82	982.27	961.04	935.13	899.53	851.76	787.13
225.0	957.92	961.04	969.47	946.05	936.06	905.15	869.56	830.53	773.70
247.5	951.67	953.55	962.91	936.69	925.13	893.29	859.88	816.17	757.16
270.0	1021.93	1036.60	1008.50	1000.69	973.53	938.56	892.98	837.09	772.14
292.5	996.64	1004.75	980.71	981.34	946.05	919.83	874.87	834.59	773.39
315.0	1017.24	1028.17	1002.26	989.77	960.42	917.64	869.56	812.73	749.66
337.5	956.67	966.35	943.24	940.12	912.96	886.73	848.01	796.81	733.74
360.0	977.90	984.77	958.86	957.29	924.51	893.60	850.82	806.49	744.04

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	669.73	595.42	510.49	415.89	304.74	206.70	122.08	51.52	9.06
22.5	638.51	557.33	463.35	375.61	282.88	183.59	105.53	46.21	9.06
45.0	658.49	585.43	500.19	400.28	291.00	196.70	109.91	29.35	8.74
67.5	648.19	569.19	486.77	394.03	293.18	191.71	108.66	40.90	8.74
90.0	743.42	651.00	556.08	451.48	348.14	232.61	142.38	56.51	11.55
112.5	731.55	660.05	569.82	472.72	358.13	246.66	154.55	66.82	12.49
135.0	738.11	652.25	559.83	460.54	360.00	239.17	147.68	70.25	18.11
157.5	714.07	638.82	557.02	465.85	358.75	248.53	157.68	73.06	20.30
180.0	718.75	645.69	562.01	464.91	357.19	248.85	157.05	73.06	21.54
202.5	712.51	632.58	537.66	442.74	348.76	234.17	143.94	69.94	19.36
225.0	702.83	626.33	545.46	453.36	347.82	235.42	154.87	70.25	23.11
247.5	695.02	624.46	544.22	452.73	356.88	247.60	158.30	72.13	20.30
270.0	698.46	615.09	523.92	430.25	325.34	213.25	122.71	49.64	9.68
292.5	699.08	628.52	539.22	434.94	321.91	215.13	127.39	54.02	7.81
315.0	676.29	592.92	503.00	409.33	311.29	203.57	118.02	47.46	9.37
337.5	662.55	586.68	497.07	404.34	303.17	205.45	119.58	49.96	11.55
360.0	669.73	595.42	510.49	415.89	304.74	206.70	122.08	51.52	9.06

C/γ(°)	180.0
0.0	3.97
22.5	3.97
45.0	3.97
67.5	3.97
90.0	3.97
112.5	3.97
135.0	3.97
157.5	3.97
180.0	3.97
202.5	3.97
225.0	3.97
247.5	3.97
270.0	3.97
292.5	3.97
315.0	3.97
337.5	3.97
360.0	3.97

3.2.3 Model Number: HID-80-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	0.2780	75.64	0.9839

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
11562.29	152.86	31.08	59.40

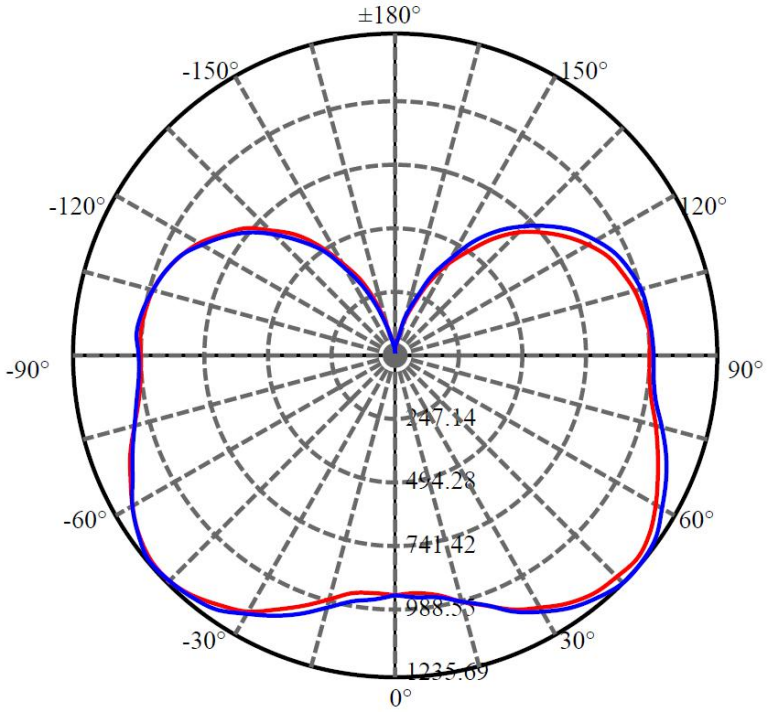
Zonal Flux Diagram

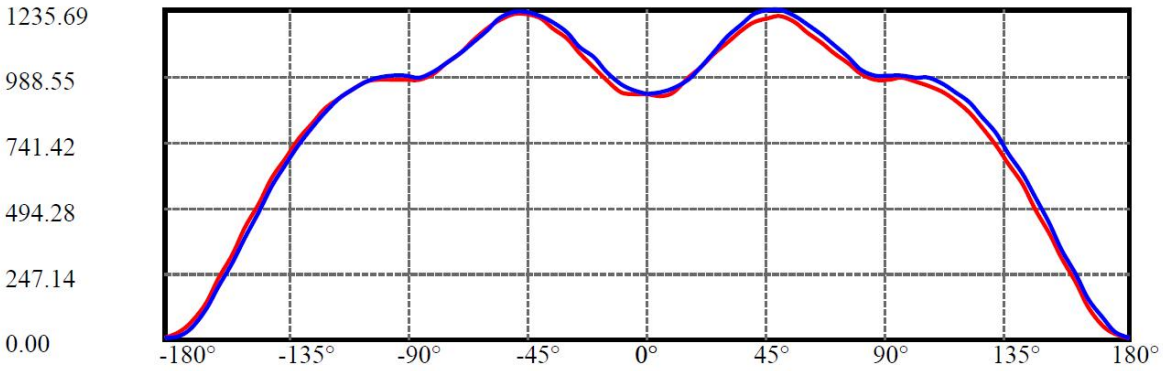
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	918.510	0.000	0	0.00%	0.00%
5.0	921.889	22.001	22.001	0.00%	0.19%
10.0	936.832	66.492	88.494	0.00%	0.77%
15.0	973.215	113.303	201.796	0.00%	1.75%
20.0	1022.989	164.515	366.312	0.00%	3.17%
25.0	1072.462	219.774	586.086	0.00%	5.07%
30.0	1123.723	277.929	864.015	0.00%	7.47%
35.0	1163.395	336.794	1200.809	0.00%	10.39%
40.0	1194.246	393.355	1594.164	0.00%	13.79%
45.0	1213.077	445.735	2039.899	0.00%	17.64%
50.0	1210.167	489.652	2529.551	0.00%	21.88%
55.0	1190.031	521.883	3051.434	0.00%	26.39%
60.0	1157.157	542.546	3593.98	0.00%	31.08%
65.0	1117.733	553.030	4147.01	0.00%	35.87%
70.0	1074.928	555.196	4702.206	0.00%	40.67%
75.0	1033.859	551.203	5253.409	0.00%	45.44%
80.0	997.163	543.445	5796.854	0.00%	50.14%
85.0	978.057	536.715	6333.568	0.00%	54.78%
90.0	973.777	534.427	6867.996	0.00%	59.40%
95.0	978.723	534.610	7402.605	0.00%	64.02%
100.0	970.175	529.562	7932.167	0.00%	68.60%
105.0	956.916	515.636	8447.803	0.00%	73.06%
110.0	931.651	493.641	8941.444	0.00%	77.33%
115.0	897.381	463.123	9404.566	0.00%	81.34%
120.0	854.420	425.866	9830.432	0.00%	85.02%
125.0	799.009	382.185	10212.618	0.00%	88.33%
130.0	734.254	333.382	10546	0.00%	91.21%
135.0	663.379	282.412	10828.412	0.00%	93.65%
140.0	586.161	231.362	11059.775	0.00%	95.65%
145.0	499.717	181.170	11240.945	0.00%	97.22%
150.0	402.258	132.822	11373.767	0.00%	98.37%
155.0	309.445	90.067	11463.834	0.00%	99.15%
160.0	215.889	55.098	11518.932	0.00%	99.63%
165.0	130.267	28.528	11547.46	0.00%	99.87%
170.0	62.876	11.457	11558.917	0.00%	99.97%
175.0	22.303	3.047	11561.964	0.00%	100.00%
180.0	4.680	0.323	11562.286	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:166.4 Right:165.3

:C90/270Left:164.5 Right:167.1

Beam Angle(50%Imax):C0/180Left:139.5 Right:138.2

:C90/270Left:137.6 Right:140.4

Luminous Intensity Distribution Data

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	918.51	915.60	932.51	978.87	1021.67	1074.50	1114.80	1158.02	1192.26
22.5	918.51	917.48	932.72	967.17	1015.20	1056.33	1113.96	1148.21	1184.33
45.0	918.51	913.72	929.17	974.06	1020.21	1072.20	1112.50	1160.52	1188.09
67.5	918.51	913.93	933.14	964.88	1012.90	1056.54	1109.79	1144.45	1179.73
90.0	918.51	931.68	943.79	977.20	1024.18	1082.64	1138.60	1181.82	1217.11
112.5	918.51	933.56	938.36	968.22	1021.46	1068.65	1125.65	1165.12	1197.90
135.0	918.51	926.87	938.36	964.88	1025.64	1082.64	1128.16	1174.72	1212.10
157.5	918.51	919.15	934.81	967.17	1014.78	1066.56	1126.07	1164.49	1195.19
180.0	918.51	918.11	930.63	973.02	1020.21	1075.33	1131.50	1170.13	1207.09
202.5	918.51	916.23	929.80	960.49	1012.69	1063.43	1124.19	1159.48	1182.45
225.0	918.51	911.63	928.75	965.50	1011.44	1070.11	1122.31	1165.95	1195.19
247.5	918.51	916.02	928.13	960.70	1014.57	1061.76	1116.05	1154.89	1176.39
270.0	918.51	937.11	959.03	1002.04	1057.38	1101.02	1149.25	1187.04	1212.31
292.5	918.51	931.47	950.89	986.80	1035.66	1079.93	1125.24	1158.85	1185.79
315.0	918.51	927.29	944.21	981.16	1036.50	1083.27	1123.57	1167.42	1196.02
337.5	918.51	920.40	935.02	979.28	1023.34	1064.48	1117.93	1153.22	1186.00
360.0	918.51	915.60	932.51	978.87	1021.67	1074.50	1114.80	1158.02	1192.26

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1207.51	1209.38	1187.46	1153.63	1115.42	1075.12	1036.08	996.20	976.57
22.5	1197.69	1194.98	1173.26	1149.88	1112.92	1068.03	1022.30	990.56	970.31
45.0	1201.87	1200.61	1179.73	1145.07	1108.32	1068.23	1028.77	989.31	971.35
67.5	1189.76	1181.20	1158.02	1135.68	1098.72	1054.45	1008.73	977.20	954.85
90.0	1235.69	1233.61	1215.65	1182.45	1144.03	1104.77	1061.34	1016.45	992.65
112.5	1222.54	1215.23	1204.79	1175.35	1141.52	1100.18	1054.66	1014.99	993.07
135.0	1226.92	1221.29	1208.34	1172.22	1132.96	1090.37	1046.73	1003.92	982.42
157.5	1220.66	1214.40	1197.69	1165.95	1127.74	1081.18	1035.03	996.82	979.49
180.0	1222.33	1219.62	1198.11	1163.24	1121.90	1076.38	1036.29	996.82	976.78
202.5	1211.68	1204.37	1188.09	1154.47	1115.01	1070.53	1029.81	993.07	976.57
225.0	1215.44	1215.86	1198.53	1161.15	1115.21	1069.28	1034.62	998.29	977.61
247.5	1206.88	1205.21	1186.63	1154.89	1115.42	1070.11	1030.02	994.53	977.41
270.0	1228.80	1228.59	1201.66	1159.27	1113.54	1072.20	1034.20	1003.71	986.17
292.5	1207.30	1203.75	1179.11	1143.82	1105.61	1061.97	1023.13	990.56	979.08
315.0	1211.68	1214.81	1186.63	1149.04	1104.57	1067.40	1031.48	997.24	977.20
337.5	1202.49	1199.78	1176.81	1148.41	1110.83	1068.65	1028.56	994.94	977.41
360.0	1207.51	1209.38	1187.46	1153.63	1115.42	1075.12	1036.08	996.20	976.57

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	972.18	978.87	970.51	954.44	931.47	899.10	851.91	796.37	731.64
22.5	961.54	968.64	960.70	943.37	918.73	879.69	838.97	784.47	714.31
45.0	964.25	971.98	963.00	948.38	924.58	892.21	845.23	793.24	728.51
67.5	946.29	952.98	948.17	929.80	907.66	871.54	829.16	775.70	707.01
90.0	988.05	991.19	986.17	980.75	956.94	927.92	887.83	834.38	772.99
112.5	987.85	988.89	979.08	968.43	942.95	909.13	865.49	809.95	748.98
135.0	978.24	980.95	971.77	968.22	944.00	909.96	870.08	809.53	748.98
157.5	976.99	978.03	966.13	955.69	926.87	893.47	855.26	800.55	736.03
180.0	973.02	978.45	972.60	963.83	937.94	907.04	866.11	810.36	753.15
202.5	973.44	976.99	968.43	955.48	928.34	894.51	853.59	799.71	733.73
225.0	973.44	980.12	972.39	964.46	940.86	911.01	868.41	812.03	752.32
247.5	974.27	978.66	970.10	957.36	933.77	900.57	859.43	803.05	740.83
270.0	987.64	992.44	981.16	963.62	935.23	903.91	854.63	796.79	729.35
292.5	976.15	982.21	972.18	952.77	925.83	885.32	841.47	782.80	710.76
315.0	976.57	982.83	972.60	954.65	930.01	890.33	843.77	790.32	726.22
337.5	970.51	976.36	967.80	949.43	921.24	882.40	839.39	784.89	713.27
360.0	972.18	978.87	970.51	954.44	931.47	899.10	851.91	796.37	731.64

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	663.78	582.35	493.19	395.89	305.06	212.14	126.53	55.33	21.72
22.5	642.90	565.02	484.21	387.12	295.87	206.30	119.64	57.42	17.75
45.0	660.23	578.38	490.90	395.26	301.93	207.97	126.33	58.88	8.35
67.5	640.40	566.06	478.16	383.36	296.08	202.96	116.93	55.12	16.08
90.0	702.20	624.74	535.16	438.28	335.96	242.84	154.51	81.02	28.19
112.5	673.39	600.93	515.53	420.11	330.12	236.78	146.37	77.47	28.40
135.0	680.70	603.44	517.41	418.86	323.85	228.01	141.99	69.32	27.14
157.5	663.78	593.21	507.60	410.30	323.85	228.43	139.27	69.53	25.47
180.0	682.78	602.81	517.00	420.32	320.93	226.97	140.94	72.04	27.77
202.5	656.68	584.02	502.80	405.08	311.12	219.03	135.30	68.70	26.31
225.0	684.04	603.02	514.70	414.89	320.30	222.79	138.02	63.06	26.10
247.5	662.11	590.29	502.80	409.25	316.34	221.12	135.51	68.49	28.40
270.0	660.86	577.55	485.68	386.91	294.20	199.62	114.22	48.44	16.50
292.5	641.86	566.69	478.37	375.84	283.76	191.47	109.62	52.62	19.42
315.0	654.39	573.37	488.81	389.63	296.71	206.09	121.11	53.04	18.58
337.5	643.95	566.69	483.17	385.03	295.04	201.70	117.97	55.54	20.67
360.0	663.78	582.35	493.19	395.89	305.06	212.14	126.53	55.33	21.72

C/γ(°)	180.0
0.0	4.68
22.5	4.68
45.0	4.68
67.5	4.68
90.0	4.68
112.5	4.68
135.0	4.68
157.5	4.68
180.0	4.68
202.5	4.68
225.0	4.68
247.5	4.68
270.0	4.68
292.5	4.68
315.0	4.68
337.5	4.68
360.0	4.68

3.2.4 Model Number: HID-80-EX39-8CCT-BYP/5SP/480V, 4000K at 480V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
480.16	60	0.1730	76.32	0.9188

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
11489.66	150.55	30.18	58.60

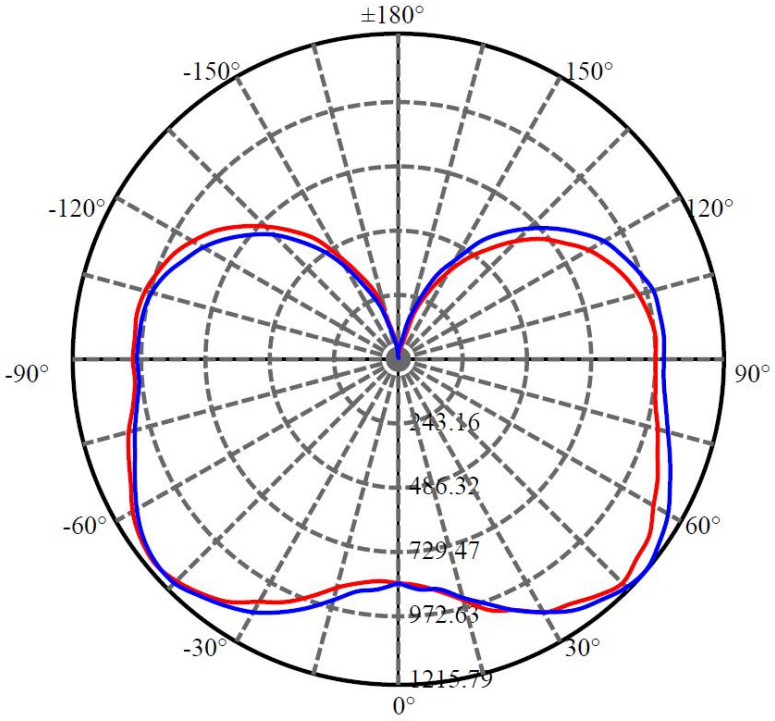
Zonal Flux Diagram

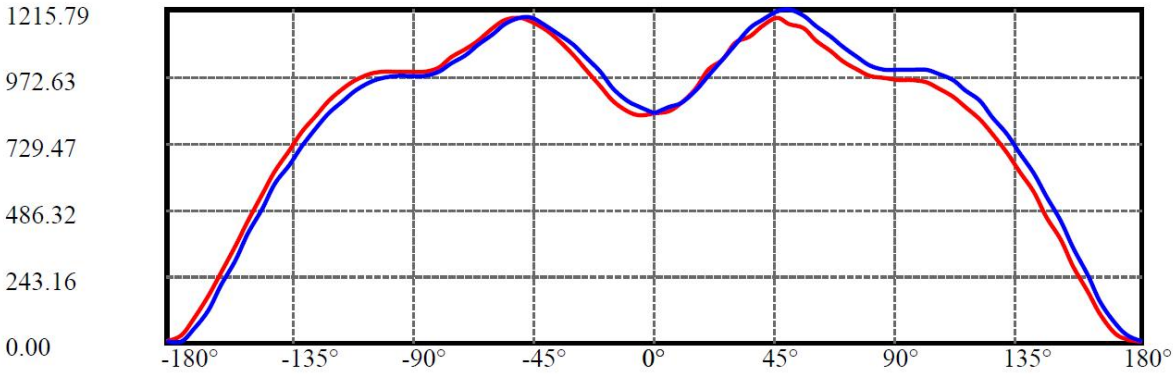
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	839.911	0.000	0	0.00%	0.00%
5.0	844.520	20.137	20.137	0.00%	0.18%
10.0	864.583	61.140	81.277	0.00%	0.71%
15.0	906.716	105.072	186.349	0.00%	1.62%
20.0	964.762	154.236	340.585	0.00%	2.96%
25.0	1018.242	207.981	548.566	0.00%	4.77%
30.0	1071.607	264.472	813.038	0.00%	7.08%
35.0	1117.100	322.302	1135.34	0.00%	9.88%
40.0	1149.425	378.153	1513.493	0.00%	13.17%
45.0	1178.360	431.008	1944.501	0.00%	16.92%
50.0	1185.536	477.660	2422.161	0.00%	21.08%
55.0	1168.885	511.929	2934.09	0.00%	25.54%
60.0	1138.161	533.267	3467.357	0.00%	30.18%
65.0	1097.588	543.515	4010.872	0.00%	34.91%
70.0	1062.996	547.074	4557.946	0.00%	39.67%
75.0	1032.761	547.797	5105.743	0.00%	44.44%
80.0	1002.797	544.659	5650.402	0.00%	49.18%
85.0	988.850	541.178	6191.58	0.00%	53.89%
90.0	988.028	541.285	6732.865	0.00%	58.60%
95.0	988.735	541.253	7274.118	0.00%	63.31%
100.0	983.389	535.874	7809.992	0.00%	67.97%
105.0	969.068	522.423	8332.415	0.00%	72.52%
110.0	943.274	499.855	8832.27	0.00%	76.87%
115.0	907.496	468.627	9300.897	0.00%	80.95%
120.0	862.649	430.326	9731.223	0.00%	84.70%
125.0	806.610	385.844	10117.067	0.00%	88.05%
130.0	741.565	336.625	10453.692	0.00%	90.98%
135.0	671.870	285.605	10739.297	0.00%	93.47%
140.0	596.258	234.804	10974.101	0.00%	95.51%
145.0	508.320	184.290	11158.392	0.00%	97.12%
150.0	414.517	135.894	11294.286	0.00%	98.30%
155.0	320.162	92.974	11387.26	0.00%	99.11%
160.0	224.425	57.117	11444.377	0.00%	99.61%
165.0	137.205	29.803	11474.181	0.00%	99.87%
170.0	65.670	12.034	11486.215	0.00%	99.97%
175.0	21.561	3.120	11489.336	0.00%	100.00%
180.0	5.922	0.329	11489.664	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:168.2 Right:164.2
:C90/270Left:165.2 Right:167.2

Beam Angle(50%Imax):C0/180Left:142.1 Right:137.1
:C90/270Left:138.0 Right:140.7

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	839.91	844.03	877.98	926.57	993.14	1036.24	1093.65	1118.11	1152.72
22.5	839.91	841.87	872.82	922.58	978.66	1031.91	1081.67	1122.27	1151.72
45.0	839.91	838.54	868.33	920.91	972.83	1029.75	1076.51	1112.45	1141.07
67.5	839.91	837.38	861.84	908.43	961.02	1017.26	1066.69	1107.46	1136.41
90.0	839.91	860.51	875.32	918.58	976.33	1035.24	1087.49	1144.90	1177.68
112.5	839.91	849.86	862.84	900.94	959.19	1014.94	1067.85	1122.77	1161.88
135.0	839.91	845.20	859.34	895.79	953.53	1009.11	1066.02	1118.11	1157.05
157.5	839.91	839.04	850.85	886.13	938.22	993.80	1052.38	1104.63	1145.57
180.0	839.91	834.05	849.52	880.14	938.72	995.96	1048.55	1102.47	1138.91
202.5	839.91	834.71	845.86	877.98	930.73	987.98	1044.72	1098.97	1137.75
225.0	839.91	835.21	844.20	878.48	937.55	991.64	1045.39	1095.64	1130.42
247.5	839.91	834.71	845.03	882.81	942.88	986.15	1059.53	1109.12	1133.92
270.0	839.91	862.00	883.14	931.56	987.64	1041.73	1089.99	1126.93	1153.55
292.5	839.91	855.02	880.48	929.57	979.66	1038.23	1088.32	1128.93	1160.71
315.0	839.91	852.02	877.81	919.91	994.63	1044.89	1087.49	1124.10	1153.89
337.5	839.91	848.19	877.98	927.07	991.47	1037.07	1089.49	1136.75	1157.55
360.0	839.91	844.03	877.98	926.57	993.14	1036.24	1093.65	1118.11	1152.72

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1182.68	1159.38	1144.57	1101.14	1065.52	1030.58	998.96	974.00	966.51
22.5	1173.36	1175.19	1155.88	1120.27	1082.50	1047.72	1021.92	997.96	989.81
45.0	1165.87	1173.69	1143.90	1104.13	1065.52	1032.08	1001.96	977.49	969.01
67.5	1176.02	1168.37	1153.72	1121.94	1085.66	1060.03	1017.43	988.81	988.81
90.0	1207.80	1215.79	1194.32	1158.88	1118.61	1081.83	1045.22	1011.27	993.63
112.5	1191.66	1204.48	1197.15	1168.53	1130.09	1093.15	1063.03	1033.57	1017.43
135.0	1187.34	1200.98	1186.67	1157.05	1118.61	1082.16	1052.21	1017.76	997.79
157.5	1175.85	1189.00	1184.84	1162.54	1124.27	1089.15	1058.04	1029.08	1009.94
180.0	1169.20	1187.00	1176.19	1146.23	1105.63	1071.18	1041.06	1006.45	987.31
202.5	1168.70	1186.50	1181.01	1156.88	1118.11	1082.66	1051.21	1023.26	1001.96
225.0	1161.88	1178.18	1167.87	1139.74	1099.97	1063.86	1032.08	998.96	978.82
247.5	1169.36	1192.33	1170.86	1159.05	1106.29	1071.68	1040.06	1007.28	984.81
270.0	1182.51	1185.51	1164.70	1127.93	1086.82	1049.88	1017.60	987.98	974.83
292.5	1184.01	1188.83	1169.70	1134.42	1093.48	1058.04	1031.08	1000.62	991.97
315.0	1185.34	1187.17	1151.89	1123.27	1070.18	1038.90	1025.42	990.14	979.16
337.5	1172.19	1176.19	1158.88	1128.59	1090.15	1055.04	1026.92	1000.12	989.81
360.0	1182.68	1159.38	1144.57	1101.14	1065.52	1030.58	998.96	974.00	966.51

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	962.68	961.02	950.37	930.23	901.11	862.84	816.91	759.99	693.43
22.5	987.31	986.81	976.99	954.69	928.24	888.63	837.71	778.30	711.24
45.0	966.34	966.18	955.86	936.22	907.10	868.83	822.73	765.65	698.76
67.5	988.64	986.98	977.66	959.19	934.23	891.79	841.04	783.46	717.06
90.0	994.30	996.13	994.13	983.32	958.85	924.91	881.81	825.23	762.49
112.5	1018.26	1018.93	1018.93	1010.28	985.81	954.53	911.59	853.85	790.45
135.0	999.29	1002.95	1002.62	993.97	969.17	935.06	894.12	839.71	775.97
157.5	1013.10	1013.60	1012.61	1004.62	981.49	950.87	908.43	853.52	793.11
180.0	987.48	990.97	990.97	981.15	960.02	926.24	883.64	831.88	768.32
202.5	1001.62	1004.95	1005.28	997.96	974.33	942.55	900.94	846.69	783.96
225.0	978.32	981.32	979.82	971.17	949.04	917.59	878.15	826.89	764.82
247.5	984.81	987.64	981.99	973.17	947.71	914.59	871.66	814.91	750.34
270.0	976.49	972.83	965.18	951.53	919.25	884.30	841.87	785.62	719.06
292.5	988.81	989.81	981.65	960.35	934.89	897.28	846.03	788.95	721.06
315.0	974.50	973.50	962.85	943.21	913.42	871.49	828.39	770.48	701.59
337.5	986.48	986.15	977.33	954.03	927.74	888.46	837.38	780.63	713.40
360.0	962.68	961.02	950.37	930.23	901.11	862.84	816.91	759.99	693.43

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	624.87	550.82	463.79	377.42	282.07	191.70	104.84	38.44	14.48
22.5	638.68	557.64	467.11	377.92	279.74	186.71	107.67	41.77	13.31
45.0	635.19	559.80	469.78	385.41	285.89	192.54	106.34	41.27	15.31
67.5	646.00	563.80	478.93	384.91	290.39	198.36	116.82	51.92	18.64
90.0	691.93	619.71	535.18	441.82	348.96	248.45	154.43	78.05	31.95
112.5	721.22	645.34	556.97	456.13	356.95	253.94	161.09	83.37	29.29
135.0	702.42	632.69	547.66	451.14	360.28	261.93	168.24	87.53	33.12
157.5	725.55	647.67	559.64	459.29	363.11	261.43	168.91	91.03	34.61
180.0	698.76	629.03	543.99	448.81	358.11	260.27	170.07	89.70	29.12
202.5	717.56	640.18	549.49	449.47	356.45	256.44	167.74	89.20	28.62
225.0	695.76	626.53	540.83	444.81	353.12	256.77	167.91	88.70	29.46
247.5	680.12	605.73	515.71	417.52	326.16	230.15	146.27	76.72	24.13
270.0	652.16	577.94	490.08	401.05	304.70	210.84	123.81	56.08	8.32
292.5	647.17	566.96	477.10	379.75	287.56	196.53	111.99	48.93	11.32
315.0	634.19	559.97	472.11	384.24	290.72	199.69	112.66	46.26	9.49
337.5	638.35	556.31	464.78	372.59	278.40	185.05	106.50	41.77	13.81
360.0	624.87	550.82	463.79	377.42	282.07	191.70	104.84	38.44	14.48

C/γ(°)	180.0
0.0	5.92
22.5	5.92
45.0	5.92
67.5	5.92
90.0	5.92
112.5	5.92
135.0	5.92
157.5	5.92
180.0	5.92
202.5	5.92
225.0	5.92
247.5	5.92
270.0	5.92
292.5	5.92
315.0	5.92
337.5	5.92
360.0	5.92

3.2.5 Model Number: HID-80-EX39-8CCT-BYP/5SP/480V, 5000K at 277V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
277.02	60	0.2840	77.35	0.9846

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
11066.41	143.07	30.49	58.63

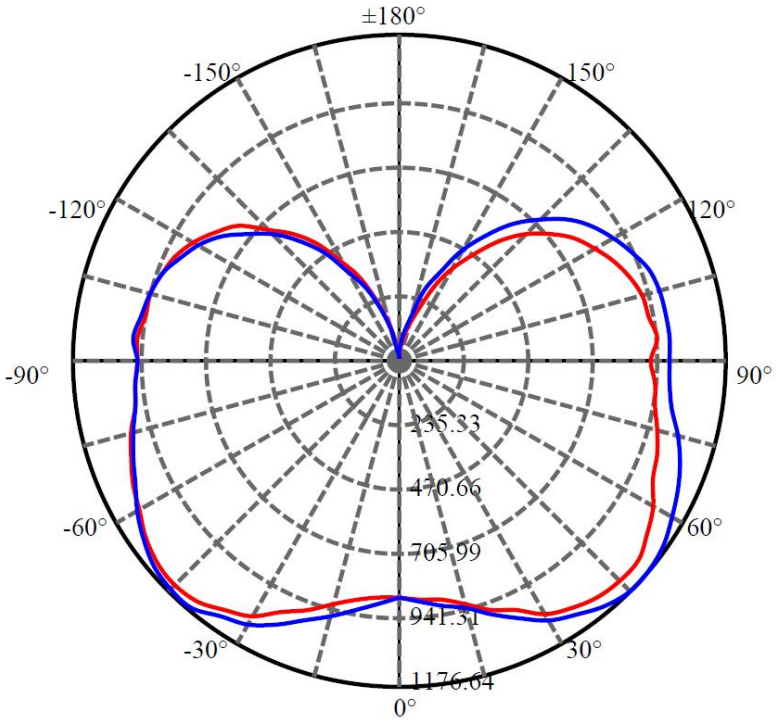
Zonal Flux Diagram

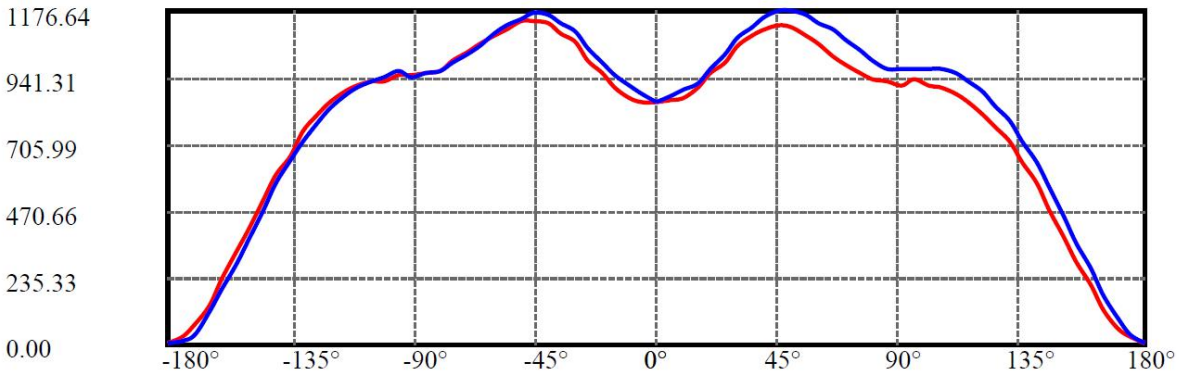
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	857.171	0.000	0	0.00%	0.00%
5.0	860.782	20.538	20.538	0.00%	0.19%
10.0	876.607	62.152	82.69	0.00%	0.75%
15.0	913.086	106.163	188.853	0.00%	1.71%
20.0	960.706	154.427	343.28	0.00%	3.10%
25.0	1006.050	206.276	549.556	0.00%	4.97%
30.0	1060.365	261.507	811.063	0.00%	7.33%
35.0	1099.212	318.013	1129.075	0.00%	10.20%
40.0	1127.329	371.482	1500.557	0.00%	13.56%
45.0	1139.952	419.805	1920.362	0.00%	17.35%
50.0	1132.476	459.177	2379.54	0.00%	21.50%
55.0	1111.332	487.879	2867.418	0.00%	25.91%
60.0	1082.104	507.007	3374.425	0.00%	30.49%
65.0	1050.177	518.361	3892.786	0.00%	35.18%
70.0	1019.414	524.034	4416.82	0.00%	39.91%
75.0	987.142	524.482	4941.302	0.00%	44.65%
80.0	955.241	519.728	5461.029	0.00%	49.35%
85.0	941.031	515.263	5976.292	0.00%	54.00%
90.0	929.295	512.110	6488.402	0.00%	58.63%
95.0	940.475	511.958	7000.359	0.00%	63.26%
100.0	927.985	507.705	7508.065	0.00%	67.85%
105.0	922.216	495.062	8003.127	0.00%	72.32%
110.0	901.985	476.817	8479.944	0.00%	76.63%
115.0	872.400	449.286	8929.229	0.00%	80.69%
120.0	833.631	414.739	9343.969	0.00%	84.44%
125.0	785.430	374.241	9718.21	0.00%	87.82%
130.0	730.122	329.531	10047.742	0.00%	90.79%
135.0	661.610	281.220	10328.961	0.00%	93.34%
140.0	586.707	231.136	10560.097	0.00%	95.42%
145.0	500.332	181.364	10741.462	0.00%	97.06%
150.0	400.938	132.718	10874.18	0.00%	98.26%
155.0	312.208	90.249	10964.429	0.00%	99.08%
160.0	224.616	56.303	11020.732	0.00%	99.59%
165.0	136.905	29.794	11050.527	0.00%	99.86%
170.0	67.480	12.124	11062.651	0.00%	99.97%
175.0	26.542	3.363	11066.014	0.00%	100.00%
180.0	6.376	0.394	11066.408	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:167.0 Right:166.0

:C90/270Left:165.1 Right:168.6

Beam Angle(50%Imax):C0/180Left:141.6 Right:139.9

:C90/270Left:138.7 Right:143.2

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	857.17	863.75	871.58	908.20	959.86	990.34	1055.13	1086.67	1112.29
22.5	857.17	852.53	862.90	901.22	941.02	983.99	1035.01	1075.87	1103.39
45.0	857.17	853.80	868.40	899.52	952.24	989.29	1045.18	1079.89	1104.88
67.5	857.17	847.02	864.17	900.37	941.86	989.29	1039.67	1077.57	1111.44
90.0	857.17	873.48	895.93	920.27	969.81	1021.68	1082.86	1120.75	1158.01
112.5	857.17	870.52	874.76	914.34	964.73	1010.88	1060.84	1108.26	1134.94
135.0	857.17	863.32	876.03	904.82	953.09	1014.69	1063.59	1108.47	1135.15
157.5	857.17	857.18	867.13	901.01	956.47	1001.35	1058.51	1093.87	1124.14
180.0	857.17	854.43	872.21	904.18	957.11	1003.05	1063.59	1099.58	1131.76
202.5	857.17	847.87	867.77	906.09	950.97	1011.73	1062.54	1096.20	1119.06
225.0	857.17	854.22	864.38	903.34	955.84	1003.26	1053.64	1105.09	1129.22
247.5	857.17	853.80	866.29	903.76	963.04	997.12	1062.75	1092.60	1118.64
270.0	857.17	883.22	914.34	951.60	997.12	1046.45	1100.43	1129.86	1164.15
292.5	857.17	868.83	900.16	939.75	982.72	1024.22	1071.85	1118.42	1138.75
315.0	857.17	866.92	888.09	935.30	964.94	1013.84	1057.88	1106.36	1132.82
337.5	857.17	861.63	871.58	915.61	960.49	995.64	1052.37	1087.94	1118.64
360.0	857.17	863.75	871.58	908.20	959.86	990.34	1055.13	1086.67	1112.29

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1122.24	1120.54	1091.75	1058.51	1012.36	985.90	959.01	934.46	925.78
22.5	1118.21	1113.34	1094.29	1062.75	1026.76	995.21	961.55	937.21	928.95
45.0	1117.79	1113.98	1092.60	1059.99	1029.93	1000.93	968.96	937.63	928.53
67.5	1121.81	1118.64	1097.68	1076.51	1044.75	1013.21	983.57	951.18	937.21
90.0	1176.22	1176.64	1158.44	1136.42	1107.42	1073.33	1038.19	1000.29	974.26
112.5	1157.59	1153.57	1141.71	1120.75	1093.66	1059.78	1025.06	981.45	956.90
135.0	1151.03	1146.37	1129.43	1107.84	1080.74	1049.62	1016.60	975.95	951.60
157.5	1137.90	1133.03	1117.58	1089.84	1059.57	1025.49	987.17	948.64	931.70
180.0	1142.98	1137.69	1112.07	1085.82	1062.11	1030.78	998.60	967.69	953.93
202.5	1132.82	1116.94	1100.22	1075.03	1052.16	1029.09	990.77	949.49	932.76
225.0	1138.54	1128.80	1110.38	1081.59	1053.43	1021.68	991.40	957.74	940.81
247.5	1131.97	1119.48	1099.80	1068.89	1041.37	1010.03	971.29	932.97	922.81
270.0	1167.96	1151.03	1127.53	1093.02	1049.20	1019.77	991.62	966.85	955.20
292.5	1152.09	1136.42	1110.38	1074.60	1040.09	1010.03	980.82	958.17	948.85
315.0	1137.69	1127.74	1100.85	1061.69	1020.62	988.23	960.71	943.56	932.13
337.5	1132.40	1125.41	1096.62	1060.42	1028.66	997.54	968.96	940.59	935.09
360.0	1122.24	1120.54	1091.75	1058.51	1012.36	985.90	959.01	934.46	925.78

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	910.11	932.55	914.77	905.66	887.03	852.74	813.36	767.42	714.07
22.5	910.11	930.86	915.19	904.82	886.40	851.68	813.78	767.42	715.98
45.0	912.23	932.55	915.61	907.15	889.79	858.03	820.35	774.83	721.06
67.5	919.00	937.63	922.39	914.56	895.93	861.21	821.83	775.89	723.81
90.0	972.35	974.47	974.26	973.20	954.36	926.62	890.63	843.85	789.02
112.5	953.51	952.03	946.52	943.98	920.69	897.62	864.59	819.71	764.46
135.0	949.27	950.33	939.75	933.82	923.45	902.70	859.30	803.41	758.74
157.5	923.87	920.06	916.04	916.04	884.07	864.17	823.95	772.93	722.33
180.0	947.58	946.73	931.49	929.80	910.32	890.00	855.91	809.34	752.81
202.5	920.27	915.40	902.49	916.46	894.66	868.19	833.68	785.21	717.46
225.0	925.35	936.36	933.61	932.13	911.38	883.22	841.94	789.44	736.51
247.5	915.40	922.81	910.11	908.20	885.13	859.09	822.25	779.49	722.12
270.0	941.23	961.55	945.25	931.28	909.69	875.60	832.41	780.34	715.98
292.5	934.88	955.20	937.00	921.33	901.22	862.69	821.62	770.17	711.11
315.0	917.10	940.38	921.12	909.05	886.40	849.35	807.86	760.65	703.91
337.5	916.46	938.69	922.18	907.99	891.27	855.49	814.63	766.79	712.59
360.0	910.11	932.55	914.77	905.66	887.03	852.74	813.36	767.42	714.07

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	646.33	569.90	477.39	379.16	295.75	211.28	127.66	60.97	28.16
22.5	648.02	571.39	485.43	393.98	303.58	218.69	133.16	64.36	25.19
45.0	652.68	579.22	486.70	396.31	306.76	222.29	135.49	67.11	22.65
67.5	653.53	580.70	493.69	396.94	311.20	223.77	134.85	63.93	20.11
90.0	718.73	641.67	558.26	455.80	357.57	267.38	173.38	96.54	34.72
112.5	701.79	627.28	544.08	440.55	340.21	256.58	161.95	88.28	39.59
135.0	698.62	609.49	534.97	435.68	341.26	248.54	157.30	82.99	34.08
157.5	652.47	582.18	500.89	392.07	310.36	226.95	132.95	69.44	31.33
180.0	663.90	597.42	514.23	407.32	329.62	231.60	141.84	73.04	27.73
202.5	653.95	591.29	505.12	397.79	311.41	225.25	135.28	69.86	27.73
225.0	670.25	595.94	503.43	405.83	322.64	234.36	140.78	71.77	27.52
247.5	657.76	584.51	503.01	404.35	309.72	222.71	134.64	71.77	30.91
270.0	647.39	568.21	476.54	374.93	285.80	198.15	118.77	38.32	18.21
292.5	638.92	564.61	474.21	376.20	288.34	197.52	115.59	53.35	12.49
315.0	635.95	553.60	467.23	370.90	283.26	198.15	118.77	51.87	18.84
337.5	645.48	569.90	480.14	387.20	297.87	210.64	128.08	56.10	25.40
360.0	646.33	569.90	477.39	379.16	295.75	211.28	127.66	60.97	28.16

C/γ(°)	180.0
0.0	6.38
22.5	6.38
45.0	6.38
67.5	6.38
90.0	6.38
112.5	6.38
135.0	6.38
157.5	6.38
180.0	6.38
202.5	6.38
225.0	6.38
247.5	6.38
270.0	6.38
292.5	6.38
315.0	6.38
337.5	6.38
360.0	6.38

3.2.6 Model Number: HID-80-EX39-8CCT-BYP/5SP/480V, 5000K at 480V

Electrical data

Input Voltage(V)	Frequency (Hz)	Input Current (A)	Power (W)	Power Factor
480.00	60	0.1760	77.82	0.9212

Photometric data

Luminous Flux (lm)	Efficacy (lm/W)	Zonal Lumen in 0-60°(%lm)	Zonal Lumen in 0-90°(%lm)
11004.21	141.41	30.47	58.61

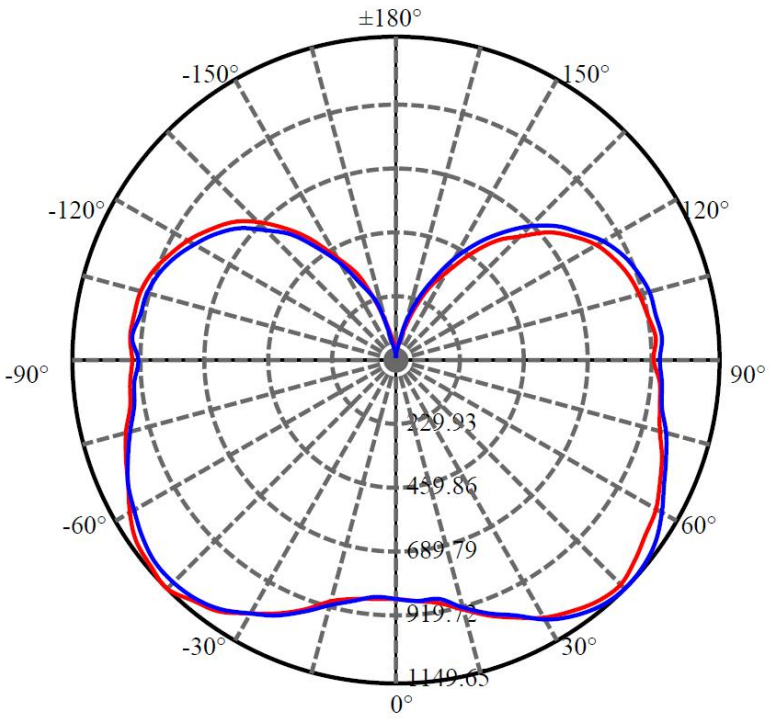
Zonal Flux Diagram

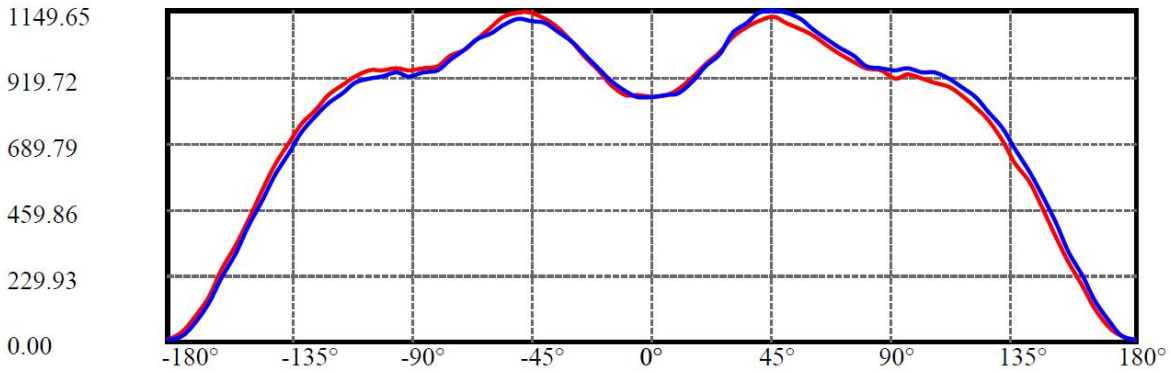
Zonal flux distribution table

γ(°)	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	848.799	0.000	0	0.00%	0.00%
5.0	856.316	20.384	20.384	0.00%	0.19%
10.0	868.723	61.710	82.094	0.00%	0.75%
15.0	904.637	105.195	187.289	0.00%	1.70%
20.0	953.797	153.161	340.45	0.00%	3.09%
25.0	1000.770	204.998	545.448	0.00%	4.96%
30.0	1052.199	259.805	805.253	0.00%	7.32%
35.0	1091.714	315.706	1120.959	0.00%	10.19%
40.0	1118.356	368.733	1489.692	0.00%	13.54%
45.0	1131.363	416.554	1906.246	0.00%	17.32%
50.0	1127.040	456.343	2362.589	0.00%	21.47%
55.0	1105.935	485.523	2848.113	0.00%	25.88%
60.0	1077.906	504.789	3352.901	0.00%	30.47%
65.0	1045.595	516.227	3869.129	0.00%	35.16%
70.0	1013.017	521.254	4390.383	0.00%	39.90%
75.0	980.959	521.193	4911.576	0.00%	44.63%
80.0	949.155	516.445	5428.021	0.00%	49.33%
85.0	935.574	512.126	5940.147	0.00%	53.98%
90.0	923.167	508.938	6449.084	0.00%	58.61%
95.0	935.134	508.817	6957.902	0.00%	63.23%
100.0	923.167	504.945	7462.846	0.00%	67.82%
105.0	917.804	492.593	7955.439	0.00%	72.29%
110.0	897.886	474.592	8430.031	0.00%	76.61%
115.0	868.457	447.249	8877.281	0.00%	80.67%
120.0	828.514	412.537	9289.817	0.00%	84.42%
125.0	782.569	372.397	9662.215	0.00%	87.80%
130.0	727.458	328.330	9990.545	0.00%	90.79%
135.0	658.220	279.996	10270.541	0.00%	93.33%
140.0	584.245	230.052	10500.594	0.00%	95.42%
145.0	497.984	180.562	10681.155	0.00%	97.06%
150.0	399.356	132.139	10813.295	0.00%	98.27%
155.0	310.173	89.791	10903.086	0.00%	99.08%
160.0	222.137	55.829	10958.916	0.00%	99.59%
165.0	135.022	29.435	10988.351	0.00%	99.86%
170.0	68.438	12.069	11000.42	0.00%	99.97%
175.0	26.695	3.403	11003.823	0.00%	100.00%
180.0	6.102	0.392	11004.215	0.00%	100.00%

Luminous Intensity Distribution Diagram

Light Distribution Curve [Unit:cd]





C0/C180:

C90/C270:

Field angle(10%Imax):C0/180Left:167.9 Right:164.8

:C90/270Left:166.6 Right:167.0

Beam Angle(50%Imax):C0/180Left:142.5 Right:138.7

:C90/270Left:140.4 Right:141.3

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	848.80	860.00	875.79	918.48	964.16	1007.49	1059.79	1090.53	1115.07
22.5	848.80	858.29	878.14	921.47	970.14	1019.66	1067.26	1103.55	1120.62
45.0	848.80	862.13	878.57	923.61	969.93	1013.47	1062.57	1096.72	1119.13
67.5	848.80	859.36	882.20	928.52	974.41	1022.65	1075.59	1100.56	1126.60
90.0	848.80	860.00	865.76	906.32	959.89	1000.45	1069.18	1109.31	1140.26
112.5	848.80	851.46	869.82	903.97	947.09	992.77	1049.54	1090.74	1114.43
135.0	848.80	858.50	862.77	890.10	942.82	998.96	1052.96	1099.07	1127.24
157.5	848.80	852.96	863.84	890.74	944.31	991.70	1035.46	1088.39	1110.81
180.0	848.80	854.24	859.36	889.67	945.59	994.26	1043.57	1094.80	1121.26
202.5	848.80	857.01	855.73	887.75	943.46	979.32	1034.39	1075.59	1104.40
225.0	848.80	854.88	867.04	889.67	945.81	995.11	1047.41	1092.66	1120.62
247.5	848.80	852.53	856.80	890.52	938.98	975.48	1038.02	1078.79	1111.87
270.0	848.80	847.19	871.31	903.54	950.29	999.60	1039.73	1080.49	1106.75
292.5	848.80	857.22	866.83	911.01	950.50	1009.20	1053.17	1089.89	1118.49
315.0	848.80	855.09	871.74	909.95	951.36	1008.56	1049.54	1081.99	1113.79
337.5	848.80	860.21	873.87	908.88	962.03	1003.65	1057.02	1094.37	1122.33
360.0	848.80	860.00	875.79	918.48	964.16	1007.49	1059.79	1090.53	1115.07

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	1125.75	1109.74	1083.06	1062.57	1031.40	1003.01	971.63	948.80	940.04
22.5	1120.62	1112.94	1086.04	1067.47	1044.42	1016.89	975.05	943.25	930.87
45.0	1122.97	1107.39	1084.98	1061.07	1023.93	996.18	964.38	939.19	921.47
67.5	1133.64	1118.06	1090.10	1060.64	1036.74	999.60	961.18	935.13	924.25
90.0	1147.09	1143.68	1123.61	1086.90	1051.25	1018.38	992.13	957.33	946.87
112.5	1132.58	1127.45	1106.54	1072.38	1037.80	1005.57	972.92	941.54	933.43
135.0	1149.65	1142.61	1121.90	1084.34	1046.56	1008.99	982.52	953.92	944.74
157.5	1133.00	1134.07	1110.59	1076.01	1040.58	1010.27	978.04	943.25	933.85
180.0	1145.17	1140.26	1127.45	1091.59	1046.77	1017.10	990.85	959.89	946.23
202.5	1124.04	1126.81	1112.73	1084.98	1049.54	1013.26	983.80	947.51	930.01
225.0	1142.61	1145.60	1126.17	1098.85	1064.06	1037.38	1003.44	970.78	949.65
247.5	1137.06	1137.70	1122.97	1098.64	1071.10	1037.59	1010.48	969.71	941.75
270.0	1115.07	1121.05	1101.20	1071.53	1047.62	1012.83	981.24	944.31	933.64
292.5	1128.52	1130.23	1108.88	1087.33	1059.36	1022.22	987.43	953.49	941.32
315.0	1119.56	1112.73	1093.94	1071.10	1043.57	1012.83	976.12	940.68	928.09
337.5	1124.47	1122.33	1094.80	1071.10	1034.82	996.18	964.16	937.70	922.97
360.0	1125.75	1109.74	1083.06	1062.57	1031.40	1003.01	971.63	948.80	940.04

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	917.42	929.80	910.80	896.93	883.48	856.58	816.03	770.35	702.90
22.5	905.04	916.99	908.67	906.32	885.19	847.83	805.57	748.15	682.41
45.0	900.98	928.09	916.14	902.26	881.98	846.98	800.45	753.06	698.42
67.5	910.59	928.30	912.08	897.57	876.65	839.93	796.60	750.28	692.87
90.0	939.40	949.22	937.91	934.92	914.00	886.04	847.41	797.88	743.67
112.5	925.96	934.92	921.05	919.13	897.35	871.31	835.67	790.63	733.42
135.0	936.20	947.51	935.99	935.35	911.01	883.91	846.12	798.74	745.80
157.5	928.30	934.28	923.39	922.11	904.61	881.56	846.76	800.66	749.64
180.0	939.83	948.15	940.90	943.67	919.34	891.38	855.73	809.84	758.61
202.5	927.88	931.51	923.61	922.11	904.18	881.34	848.26	805.14	755.19
225.0	946.02	951.14	948.15	949.44	926.81	900.77	864.48	820.94	769.07
247.5	939.19	938.76	934.92	934.49	915.92	893.30	859.57	814.96	764.16
270.0	918.27	938.55	921.26	914.64	896.71	864.69	826.70	782.30	726.16
292.5	924.25	941.75	922.97	914.86	894.36	861.28	820.51	775.05	716.56
315.0	910.80	921.26	902.26	898.85	885.40	851.89	802.37	761.60	718.27
337.5	900.55	921.90	910.59	892.23	869.18	836.52	784.01	741.53	682.19
360.0	917.42	929.80	910.80	896.93	883.48	856.58	816.03	770.35	702.90

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	617.94	556.90	468.95	363.30	281.54	193.81	112.06	50.59	21.35
22.5	622.64	550.71	447.82	357.53	275.78	185.70	103.95	47.60	18.57
45.0	627.98	550.07	455.93	363.94	277.70	191.68	109.50	50.16	19.21
67.5	620.72	543.88	456.79	366.28	279.41	188.91	108.01	50.59	19.00
90.0	670.03	595.32	510.79	412.18	316.12	231.60	142.59	73.00	24.55
112.5	666.61	596.17	514.42	412.82	320.61	228.82	145.57	75.78	26.68
135.0	678.56	598.73	509.08	414.10	322.95	234.16	148.14	77.70	25.19
157.5	686.25	613.89	532.99	428.61	339.60	245.68	154.54	83.03	34.79
180.0	693.08	616.45	530.43	424.77	336.19	247.82	156.03	84.95	35.43
202.5	693.72	620.08	536.62	441.63	345.79	257.00	163.29	89.44	35.22
225.0	700.12	627.55	543.66	442.91	345.58	258.28	166.71	93.49	37.14
247.5	703.11	629.26	549.64	444.83	350.70	261.91	166.07	91.36	35.43
270.0	655.30	581.23	495.00	398.09	310.15	223.70	138.10	64.25	24.55
292.5	648.04	570.34	486.03	388.48	298.19	213.67	127.00	61.05	24.97
315.0	639.93	563.51	477.92	386.14	292.00	207.90	116.33	52.30	23.91
337.5	607.49	533.84	451.67	344.09	270.44	183.57	102.46	49.73	21.13
360.0	617.94	556.90	468.95	363.30	281.54	193.81	112.06	50.59	21.35

C/γ(°)	180.0
0.0	6.10
22.5	6.10
45.0	6.10
67.5	6.10
90.0	6.10
112.5	6.10
135.0	6.10
157.5	6.10
180.0	6.10
202.5	6.10
225.0	6.10
247.5	6.10
270.0	6.10
292.5	6.10
315.0	6.10
337.5	6.10
360.0	6.10

4 Additional Test

Model Number	CCT(K)	Test Voltage (V)	Frequency (Hz)	Power Factor	THD
HID-80-EX39-8CCT-BYP/5SP/480V	3000	277	60	0.985	7.6%
		480	60	0.921	11.6%
	4000	480	60	0.919	11.9%
	5000	480	60	0.922	10.7%

Photo Document

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