IESNA LM-79 TEST REPORT Issue 2

Applicant's name .....:	GREEN CREATIVE LTD
Address .....:	Room 1206-07 New Victory House.93-103 Wing Lok Street, Central, Hong Kong
Brand Name.....:	N/A
Report No......:	BTR66.181.19.0019.16-5
Product Name.....:	HID replacement lamp
Model Number .....:	34HID/840/277V/EX39; 34HID/840/277V/E26
Tested by (printed name and signature) .....:	Xia Zeng
Title .....:	**Test Engineer**
Approved by (printed name and signature) .....:	Zack Zhao
Title .....:	**Approved Signatory**
Date of issue .....:	Feb 18, 2020(Revise: Mar 06, 2020)
Testing Laboratory Name .....:	BEST Test Service Shenzhen Co., Ltd.
Address .....:	1st Floor, 1st Building, Weitai Industrial Park, Yingrenshi, Shiyan, Baoan, Shenzhen, China Tel:+86-755-28236006, Email: admin@bestcert.cn
Accrediation .....:	DLC/Lighting Facts/UL/ETL/ELI/CEC/EPA/DOE NVLAP Testing Lab Code: 200770-0
Test specification	
Standard .....:	IESNA LM-79
Test procedure/method .....:	IESNA LM-79 Test Procedure
Non-standard test method .....:	No
Test Report Form No.	BEST_ LM-79
TRF originator.....:	BEST Test Service Shenzhen Co., Ltd. Mr Tseng
Master TRF .....:	BEST_LM-79.doc

Note:

The laboratory has not been responsible for the sampling stage (e.g. the sample has been provided by the customer), the results relate only to the items tested.

Description:	
The date of sampling .....:	Jan 06, 2020
The date of receipt of the test sample / requirement /item(s).....:	Jan 06, 2020
Test date.....:	Feb 17, 2020 to Feb 18, 2020
Description .....:	HID replacement lamp
The condition of the item .....:	N/A
Sampling method.....:	Provided by Applicant
Sample Quantity .....:	1 unit
SKU.....:	N/A
Rating(s) (V; Hz) .....:	AC 120-277 50/60Hz
Nominal Power.....:	34W
Nominal Power Factor .....:	N/A
Nominal Lumen Output.....:	5000lm
Nominal CCT .....:	4000K
Nominal CRI(Ra) .....:	80
Number of hours operated prior to measurement.....:	0H
Total operating time of the product for measurements including stabilization:	3.5H
Ambient temperature .....:	24.7℃
Orientation (burning position) of SSL product during test .....:	Lighting Surface Down or Base Up
Stabilization time.....:	1.5 H
Photometric method .....:	Sphere-spectroradiometer+Goniophotometer
Calibration standard lamp used.....:	DC 24V 100W Omni-Directional Halogen Calibrated by NIM China(Sphere) DC 120V 500W Omni-Directional Halogen Calibrated by NIM China(Goniophotometer)
Correction factors applied.....:	Self absorbing applied
Photometric measurement conditions:	See test method description below

Equipments used .....:	EVERFINE HASS-2000 Sphere System CHROMA 61602 AC Source YOKOGAWA WT 310 Power Meter FLUKE 52II EVERFINE GOR-5000 Goniophotometer CALIFORNIA INSTRUMENT 1501I AC Source YOKOGAWA WT 210 Power Meter FLUKE 233 Temperature Meter
Bandwidth of spectroradiometer .....:	2nm
Statement of uncertainties .....:	3.1%
Deviation .....:	None
Note .....:	These models are all the same except for lamp base. Here we choose 34HID/840/277V/EX39 to be tested and the other to share the test data.

Photometric and Electrical Measurement

Total light output (luminous flux) for the 25°C ±1°C ambient temperature conditions was measured using a ø2.0m 4Π geometry integrating sphere. Temperature was measured at a position inside the sphere. Spectral radiant flux were measured using the photo detector built in the integrating sphere. Each lamp was operated at rated voltage in its designated orientation. Each lamp was in a stable state before measurements are done as below:

Step 1 Take 3 measurements of the lamp light output at 15 minute interval (total time=30mintues.), the pre-burning time is not included in the formal testing time period.
Step 2 Calculate the difference in percentage between the maximum measured value and the minimum measured value with the three consecutive measurements.
Step 3 If the value calculated in Step 2 does not exceed 0.5 percent, the lamp is considered stable.

Luminous flux, chromaticity coordinates, correlated color temperature and color rendering index for each lamp were calculated from the spectral radiant flux measurements taken at 2 nm increment over the range of 380 to 780 nm. The calibration of the sphere photometer-spectrometer system can be traced back to the NIST USA. Lamp efficacy (lumens per watt) for each lamp model was computed based on the luminous flux result revised taking the self-absorbing correction factor into consideration. Electrical measurements including voltage, current, power and power factor were measured using the digital power meter.

The total uncertainty of the light output measurements is estimated, at the 95% confidence level, not to exceed ±3.1% over the wavelength range of 380-780 nm.

Luminious Intensity

An Everfine GOR-5000 Goniophotometer was used to measure the intensity distribution at each angle, Luminous intensity (cd) was measured within each vertical plane at a 5° vertical angle increment (maximum) from 0° to 360°, measurements were repeated in vertical planes about the lamp (polar) axis in an increments of 22.5° from 0° to 180°, and the intensity data were exported to a file in excel format.

Photometric and Electrical Test Data

Input Voltage (V)	Frequency (Hz)	Input Current (A)	ITHD	Input Power (W)	Power Factor	Lumen Output (Lumens)	Efficiency (Lumen/W)
120.01	60.0	0.2830	13.9%	33.61	0.9894	5205.02	154.89
277.07	60.0	0.1310	13.0%	33.41	0.9202	5042.0	150.92
CCT (K)	CRI (Ra)	R9	x CIE1931	y CIE1931	u' CIE1976	v' CIE1976	Duv CIE1976
3859	82.5	5	0.3884	0.3858	0.2267	0.5067	0.0019
3870	82.5	5	0.3878	0.3853	0.2265	0.5064	0.0019

Sphere-Spectroradiometer Method

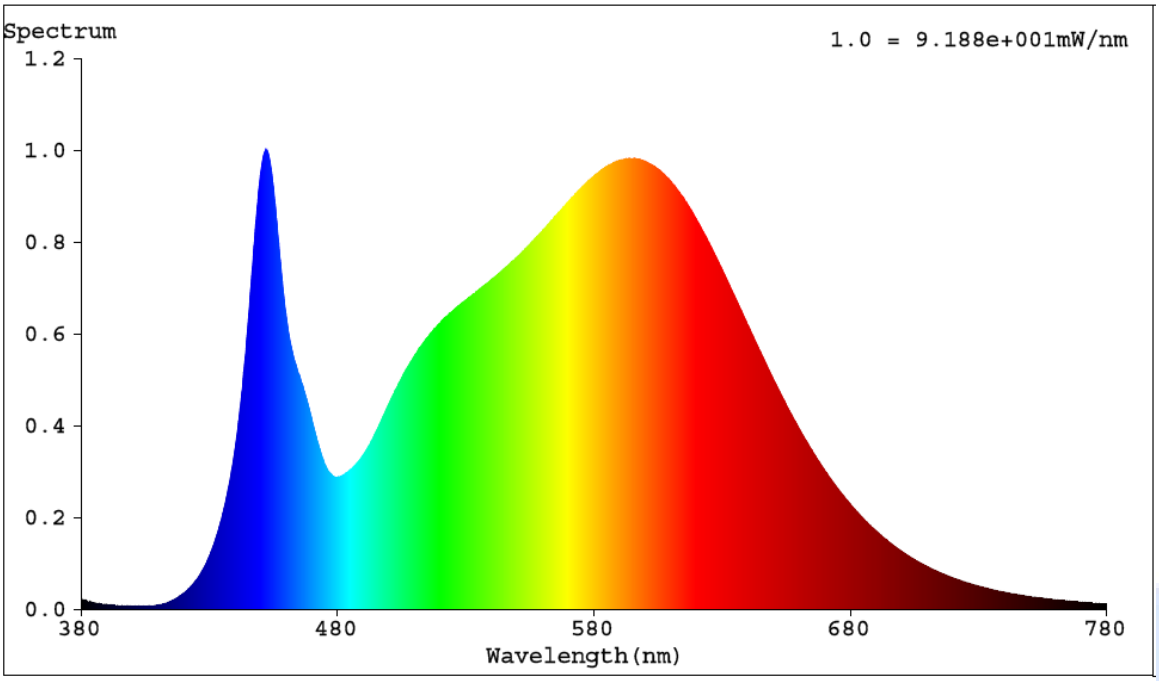
Parameter	Result	
Test Voltage(V)	120.08	277.07
Voltage frequency(Hz)	60	60
Test Current(A)	0.2833	0.1310
Power Factor	0.9865	0.9202
Test Power(W)	33.56	33.41
THD A%	13.9%	13.0%
Luminous Efficacy (lw/W)	154.20	150.92
Total Luminous Flux (lm)	5175.1	5042.0
Color Rendering Index (CRI)	82.5	
R9	5	
Correlated Color Temperature (CCT)(K)	3859	
Chromaticity Chroma x	0.3884	
Chromaticity Chroma y	0.3858	
Duv	0.0019	
Chromaticity Chroma u'	0.2267	
Chromaticity Chroma v'	0.5067	

Special Color Rendering Indices	
R1	80
R2	89
R3	96
R4	81
R5	80
R6	85
R7	85
R8	62
R9	5
R10	75
R11	79
R12	61
R13	83
R14	98

Goniophotometer Method.

Test Voltage(V)	120.01
Voltage frequency(Hz)	60
Test Current(A)	0.2830
Power factor	0.9894
Power(W)	33.61
Luminous Efficacy(lm/W)	154.89
Total Luminous Flux(lm)	5205.02
Beam Angle(^{o})	227.5(0^o-180^o) 225.6(90^o-270^o)
Center Beam Candle Power(cd)	638.4
Maximum Beam Candle Power(cd)	638.4(At:C=0.0, Gamma=0.0)
Spacing Criteria	1.56(0^o-180^o) 1.52(90^o-270^o)
Zonal Lumens in the 0^o-60^oZone	36.7%
Zonal Lumens in the 60^o-90^oZone	30.8%
Zonal Lumens in the 90^o-120^oZone	21.9%
Zonal Lumens in the 120^o-180^oZone	10.6%

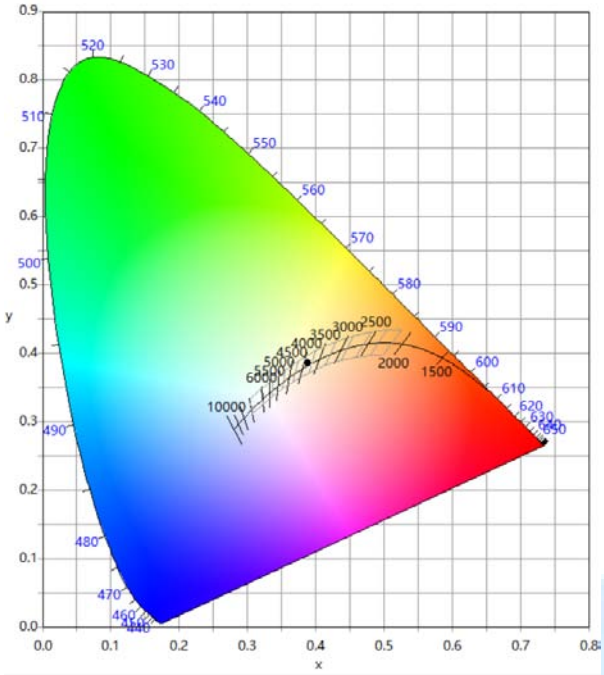
Spectrul Plots



Spectral power distribution- Sphere spectroradiometer Method

Spectral Distribution over Vasible Wavelength							
WL (nm)	Radiant (mWatts)	WL (nm)	Radiant (mWatts)	WL (nm)	Radiant (mWatts)	WL (nm)	Radiant (mWatts)
380	1.8870E+00	485	2.7860E+01	590	8.9820E+01	695	1.3400E+01
385	1.1690E+00	490	3.0800E+01	595	9.0180E+01	700	1.1510E+01
390	8.8340E-01	495	3.5430E+01	600	8.9620E+01	705	9.8470E+00
395	6.6640E-01	500	4.1020E+01	605	8.8080E+01	710	8.4440E+00
400	5.6800E-01	505	4.6200E+01	610	8.5540E+01	715	7.2380E+00
405	5.2360E-01	510	5.0650E+01	615	8.2200E+01	720	6.1970E+00
410	7.7640E-01	515	5.4290E+01	620	7.7930E+01	725	5.3190E+00
415	1.5240E+00	520	5.7230E+01	625	7.3130E+01	730	4.5530E+00
420	3.1430E+00	525	5.9720E+01	630	6.7830E+01	735	3.9020E+00
425	5.8090E+00	530	6.1810E+01	635	6.2360E+01	740	3.3410E+00
430	1.0550E+01	535	6.3880E+01	640	5.6770E+01	745	2.8750E+00
435	1.8650E+01	540	6.5960E+01	645	5.1290E+01	750	2.4670E+00
440	3.2080E+01	545	6.8070E+01	650	4.5890E+01	755	2.1390E+00
445	5.6770E+01	550	7.0430E+01	655	4.0790E+01	760	1.8470E+00
450	8.7330E+01	555	7.3020E+01	660	3.6050E+01	765	1.6020E+00
455	8.4190E+01	560	7.5810E+01	665	3.1700E+01	770	1.3820E+00
460	5.8430E+01	565	7.8680E+01	670	2.7660E+01	775	1.2070E+00
465	4.6800E+01	570	8.1500E+01	675	2.4100E+01	780	1.1130E+00
470	3.7790E+01	575	8.4240E+01	680	2.0900E+01		
475	2.8900E+01	580	8.6630E+01	685	1.8080E+01		
480	2.6430E+01	585	8.8590E+01	690	1.5610E+01		

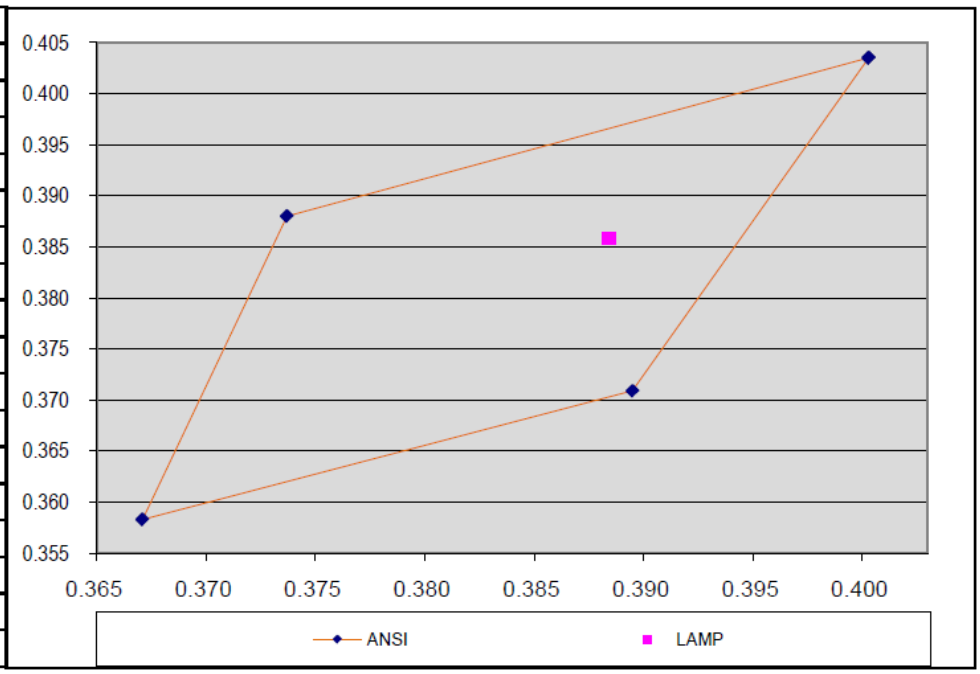
Chromaticity Diagram- Sphere spectroradiometer Method



Tristimulus values(x,y):(0.3884, 0.3858)

7-Step Chromaticity Quadrangles Test Data

	4000K quadrangle	
	x	y
ANSI 78.377-2015	0.4003	0.4035
	0.3737	0.3880
	0.3671	0.3583
	0.3895	0.3709
	0.4003	0.4035
Center		
1	0.3884	0.3858
2		
3		
4		
5		
6		
7		
8		
9		
10		

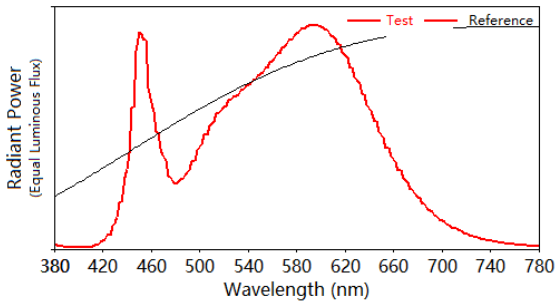


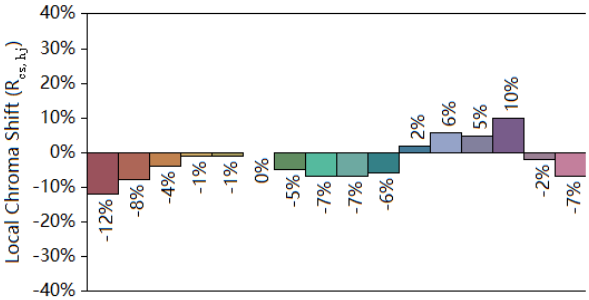
Coler rendition report-Sphere spectroradiometer Method

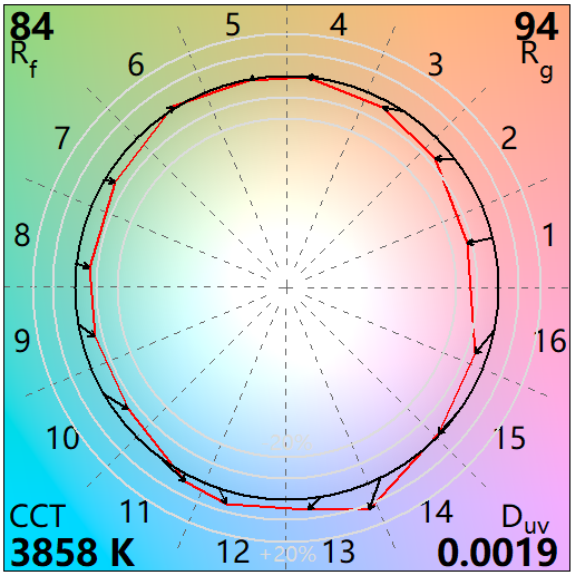
IES TM-30-18 Color Rendition Report

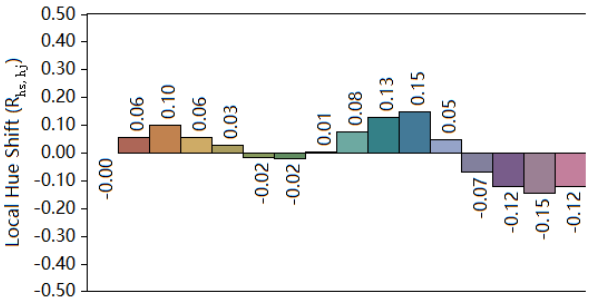
Source: BTR66.181.19.0019.16-5 **Manufacturer:** Green Creative

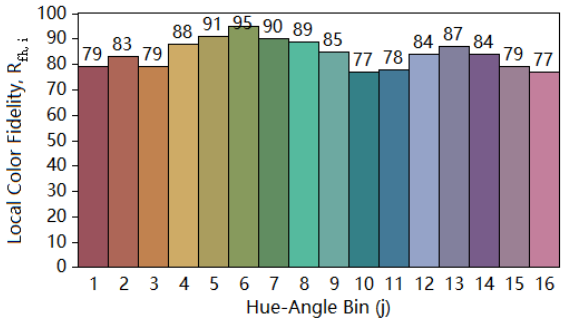
Date: Feb 20, 2020 **Model:** 34HID/840/277V/EX39

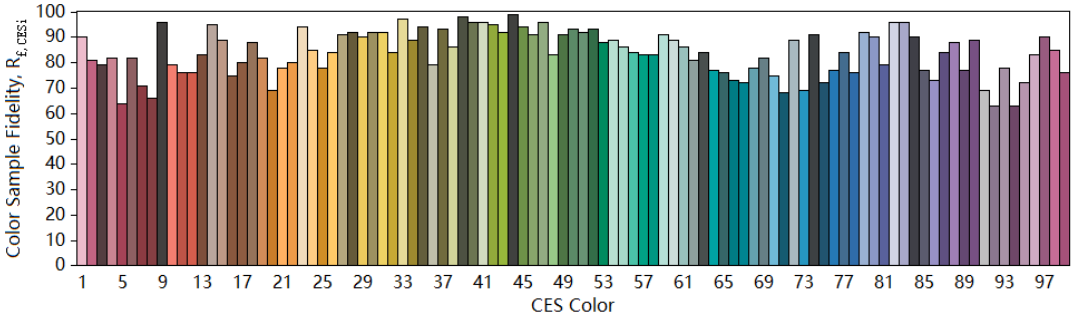












Notes: 4000K CCT

x	0.3884
y	0.3857
u'	0.2268
v'	0.5066

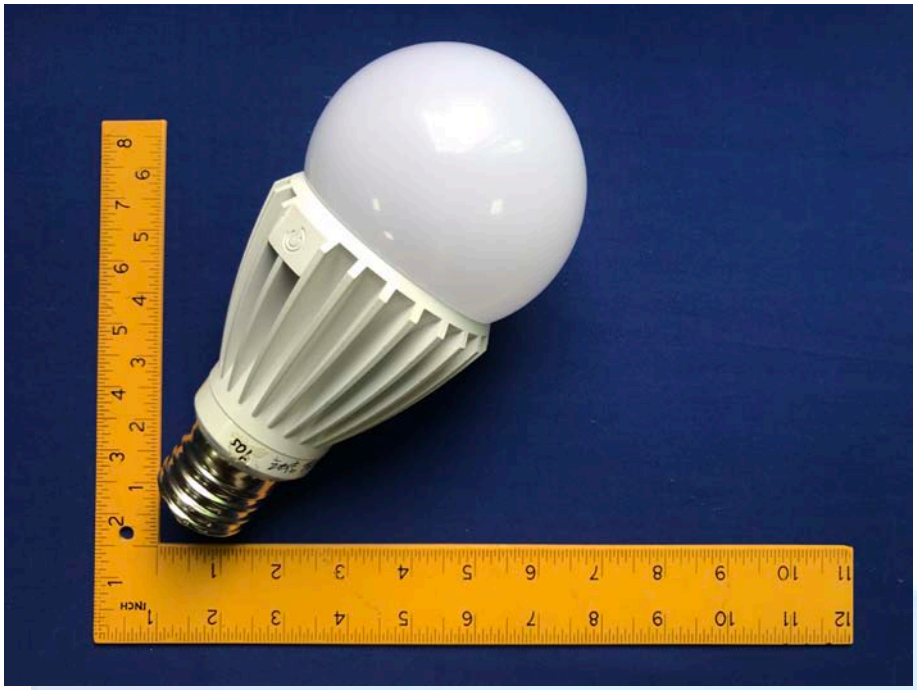
CIE 13.3-1995
(CRI)
R_a 82
R_9 5

Colors are for visual orientation purposes only.

Spectral Energy Distribution

WL(nm)	Spectrum	Spectrum	WL(nm)	Spectrum	Spectrum
380	0.0205	1.8870	585	0.9643	88.5900
385	0.0127	1.1690	590	0.9776	89.8200
390	0.0096	0.8834	595	0.9816	90.1800
395	0.0073	0.6664	600	0.9754	89.6200
400	0.0062	0.5680	605	0.9587	88.0800
405	0.0057	0.5236	610	0.9310	85.5400
410	0.0085	0.7764	615	0.8947	82.2000
415	0.0166	1.5240	620	0.8482	77.9300
420	0.0342	3.1430	625	0.7959	73.1300
425	0.0632	5.8090	630	0.7383	67.8300
430	0.1148	10.5500	635	0.6788	62.3600
435	0.2030	18.6500	640	0.6178	56.7700
440	0.3492	32.0800	645	0.5582	51.2900
445	0.6179	56.7700	650	0.4995	45.8900
450	0.9505	87.3300	655	0.4440	40.7900
455	0.9163	84.1900	660	0.3924	36.0500
460	0.6360	58.4300	665	0.3450	31.7000
465	0.5093	46.8000	670	0.3011	27.6600
470	0.4113	37.7900	675	0.2623	24.1000
475	0.3146	28.9000	680	0.2275	20.9000
480	0.2877	26.4300	685	0.1968	18.0800
485	0.3032	27.8600	690	0.1700	15.6100
490	0.3353	30.8000	695	0.1458	13.4000
495	0.3856	35.4300	700	0.1253	11.5100
500	0.4465	41.0200	705	0.1072	9.8470
505	0.5029	46.2000	710	0.0919	8.4440
510	0.5513	50.6500	715	0.0788	7.2380
515	0.5909	54.2900	720	0.0675	6.1970
520	0.6229	57.2300	725	0.0579	5.3190
525	0.6500	59.7200	730	0.0496	4.5530
530	0.6728	61.8100	735	0.0425	3.9020
535	0.6953	63.8800	740	0.0364	3.3410
540	0.7179	65.9600	745	0.0313	2.8750
545	0.7408	68.0700	750	0.0269	2.4670
550	0.7666	70.4300	755	0.0233	2.1390
555	0.7948	73.0200	760	0.0201	1.8470
560	0.8252	75.8100	765	0.0174	1.6020
565	0.8563	78.6800	770	0.0150	1.3820
570	0.8871	81.5000	775	0.0131	1.2070
575	0.9169	84.2400	780	0.0121	1.1130
580	0.9429	86.6300			

EUT Photo



Revision Summary

Date	Version	Description of Change
2020-3-6	Issue 2	Add the alternative model 34HID/840/277V/E26 according to the client.

Annex

Please see the next page for the luminious intensity test data

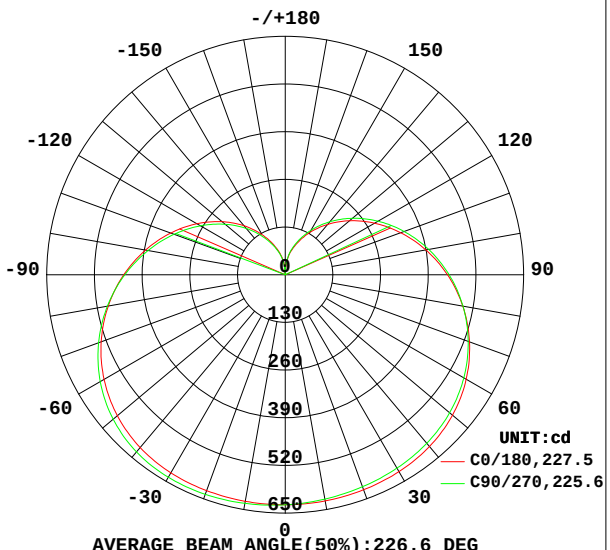
----------END----------

STREETLIGHT PHOTOMETRIC TEST REPORT

Test:U:120.01V I:0.2830A P:33.605W PF:0.9894 Freq:60.00Hz Lamp Flux:5205.02x1 lm		
NAME:	TYPE:34HID/840/277V/EX39	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: GREEN CREATIVE LTD	SUR.:	Shielding Angle:

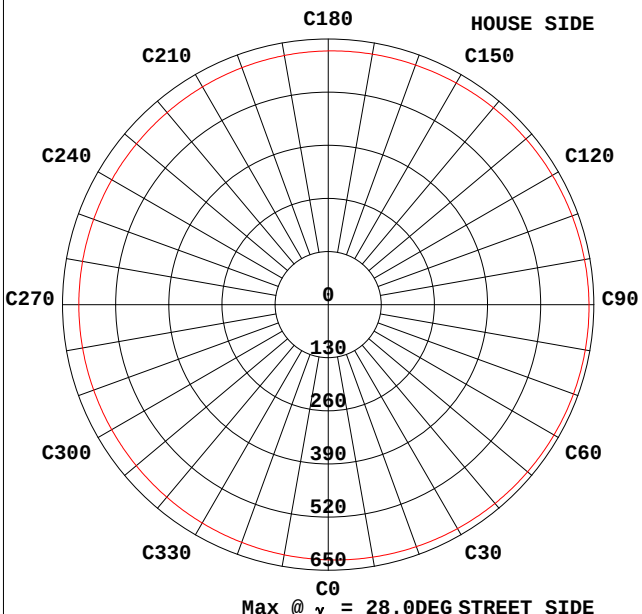
DATA OF LAMP		PHOTOMETRIC DATA		Eff: 154.89 lm/W	
MODEL	34HID/840/277V/EX39	Imax(cd)	638.4	η street_up(%)	18.3
NOMINAL POWER(W)	34	LOR(%)	100.0	η street_down(%)	38.0
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	5205	η house_up(%)	14.2
NOMINAL FLUX(lm)	5205.02	MAXIMUM @(C,γ)	68,28.0	η house_down(%)	29.4
LAMPS INSIDE	1	η up(%)	32.5	76 FLASHAREA(m2)	
TEST VOLTAGE(V)	120	η down(%)	67.5	SLI	

INTENSITY DISTRIBUTION DIAGRAM
IN C PLANS



AVERAGE BEAM ANGLE(50%):226.6 DEG

MAX INTENSITY CONE SURFACE
DISTRIBUTION DIAGRAM



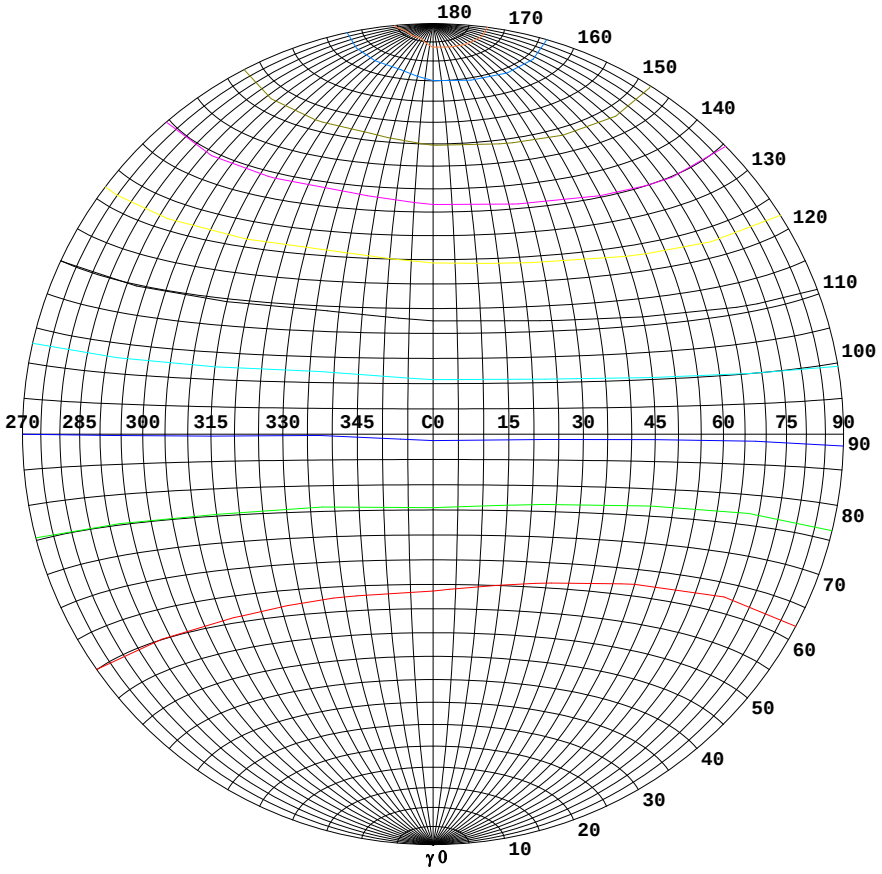
Max @ γ = 28.0DEG STREET SIDE

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.4DEG
Operators:Zack
Test Date:18 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Humidity:60.2%
Test Distance:2.436m [K=1.0132]
Remarks:

STREETLIGHT ISOCANDELA DIAGRAM

Test:U:120.01V I:0.2830A P:33.605W PF:0.9894 Freq:60.00Hz Lamp Flux:5205.02x1 lm		
NAME:	TYPE:34HID/840/277V/EX39	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: GREEN CREATIVE LTD	SUR.:	Shielding Angle:



Classification:

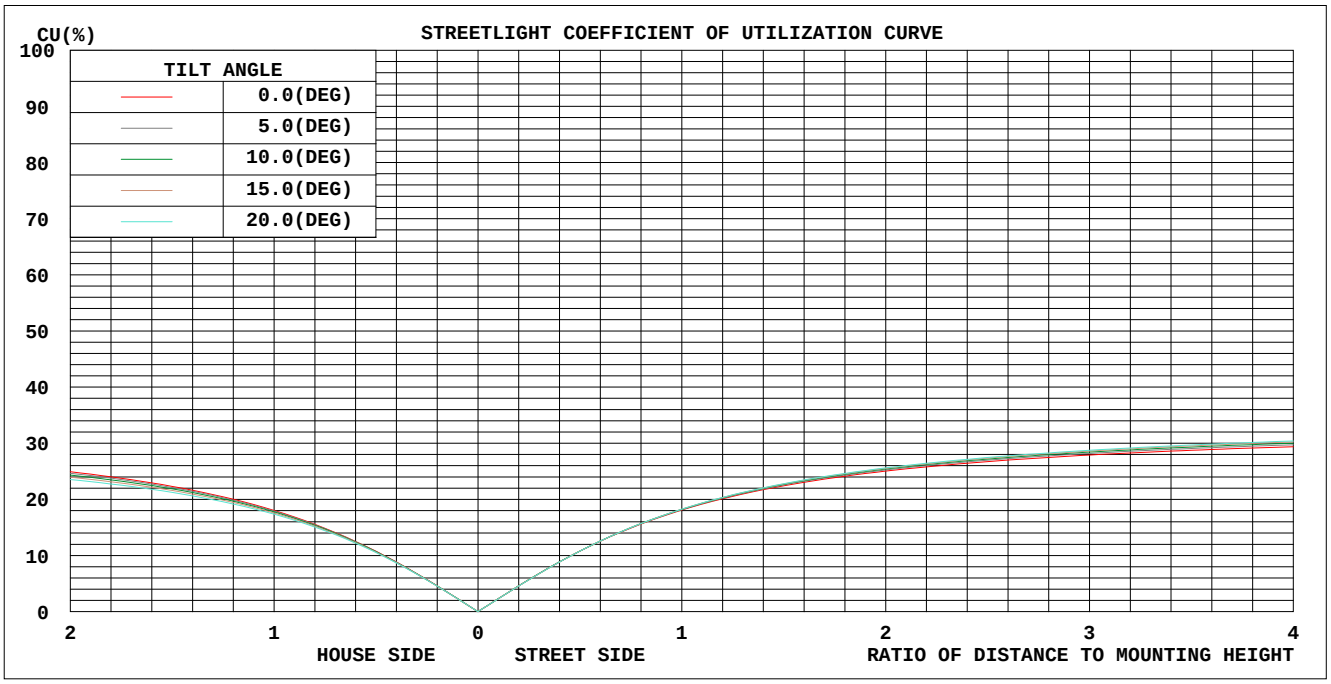
IES:Type VS - Very Short
CIE:Broad - Short
IES:None cut-off
CIE:Non-cut-off
Max.At80:95.05cd/klm
Max.At90:85.89cd/klm
Max.80-90:95.05cd/klm
NRB 5101:Limited[9.8%]

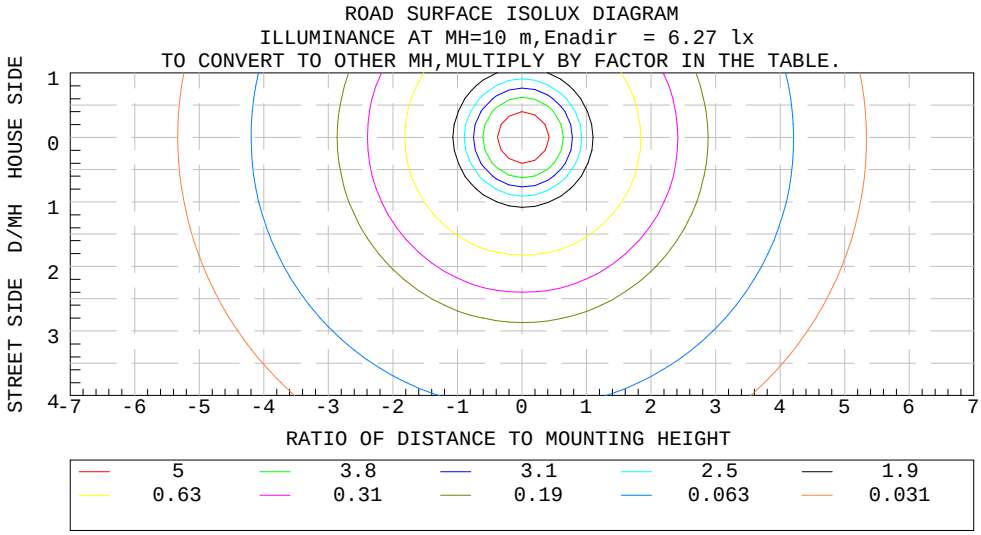
ISOCANDELA DIAGRAM	
UNIT	cd
Imax=100%	638
90%	575
80%	511
70%	447
60%	383
50%	319
40%	255
30%	192
20%	128
10%	64
5%	32

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.4DEG
Operators:Zack
Test Date:18 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Humidity:60.2%
Test Distance:2.436m [K=1.0132]
Remarks:

COEFFICIENT OF UTILIZATION CURVE AND ISOLUX DIAGRAM





According to LB/T001-2008:
U = Emin/Eavg = 0.504
Eavg = 5.467 lx

HEIGHT	FACTOR
5 m	4.000
6 m	2.778
7 m	2.041
8 m	1.563
9 m	1.235
10 m	1.000
11 m	0.826
12 m	0.694
13 m	0.592
14 m	0.510
15 m	0.444
16 m	0.391

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.4DEG
Operators:Zack
Test Date:18 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Humidity:60.2%
Test Distance:2.436m [K=1.0132]
Remarks:

ZONAL FLUX DIAGRAM

Test:U:120.01V I:0.2830A P:33.605W PF:0.9894 Freq:60.00Hz Lamp Flux:5205.02x1 lm		
NAME:	TYPE:34HID/840/277V/EX39	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: GREEN CREATIVE LTD	SUR.:	Shielding Angle:

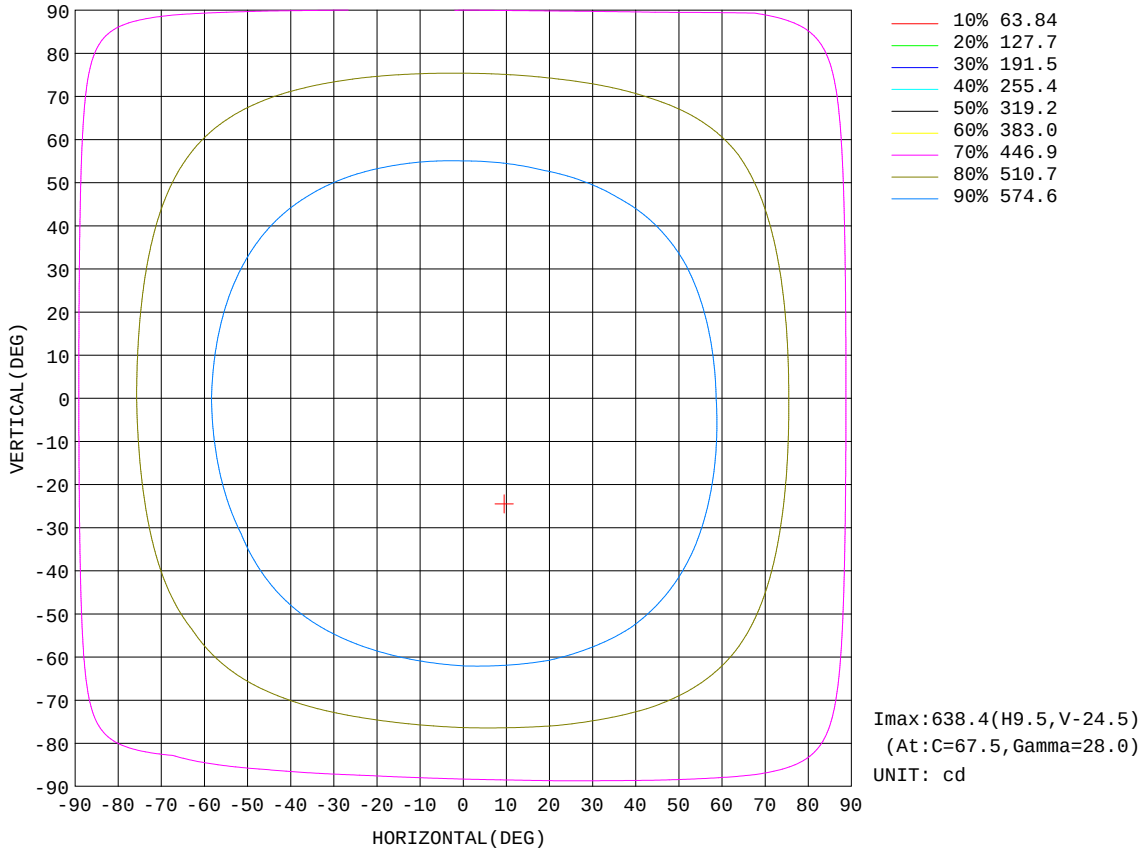
γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lamp
10	627.3	631.7	632.9	630.2	626.2	622.5	621.3	622.8	0- 10	59.85	59.85	1.15
20	626.5	635.0	637.0	631.5	623.8	617.6	615.1	618.2	10- 20	177.5	237.4	4.56
30	623.6	635.5	637.6	629.4	619.9	611.9	608.9	612.8	20- 30	288.9	526.3	10.1
40	615.2	628.9	630.8	620.7	611.6	603.6	600.2	603.9	30- 40	388.7	915.0	17.6
50	597.6	611.4	612.6	602.0	595.5	588.7	585.0	588.2	40- 50	469.7	1385	26.6
60	570.5	582.5	582.5	572.4	569.7	565.2	562.2	563.9	50- 60	524.7	1909	36.7
70	534.0	542.9	541.4	532.7	534.6	532.8	530.9	531.2	60- 70	549.4	2459	47.2
80	489.9	494.7	492.2	485.0	491.5	492.2	492.0	491.1	70- 80	543.1	3002	57.7
90	440.3	441.5	437.5	432.4	442.4	446.2	446.9	445.1	80- 90	509.1	3511	67.5
100	387.3	385.0	380.3	376.8	389.6	395.6	397.4	395.0	90-100	452.9	3964	76.2
110	332.7	328.2	322.7	321.0	335.3	342.7	345.3	342.6	100-110	382.2	4346	83.5
120	278.4	272.3	267.3	266.7	281.6	289.4	292.3	289.7	110-120	304.8	4651	89.4
130	225.4	218.6	214.3	214.8	229.2	237.1	239.9	237.1	120-130	227.6	4879	93.7
140	174.4	168.0	164.7	165.8	179.4	186.5	188.8	186.2	130-140	156.7	5035	96.7
150	126.2	120.7	118.7	120.6	132.5	138.2	140.0	137.5	140-150	96.54	5132	98.6
160	83.09	78.92	78.38	80.09	89.87	93.67	95.01	93.15	150-160	50.29	5182	99.6
170	45.43	42.51	42.09	44.58	50.96	55.31	54.94	54.86	160-170	19.71	5202	99.9
180	0	0	0	0	0	0	0	0	170-180	3.188	5205	100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.4DEG
Operators:Zack
Test Date:18 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Humidity:60.2%
Test Distance:2.436m [K=1.0132]
Remarks:

ISOCANDELA DIAGRAM

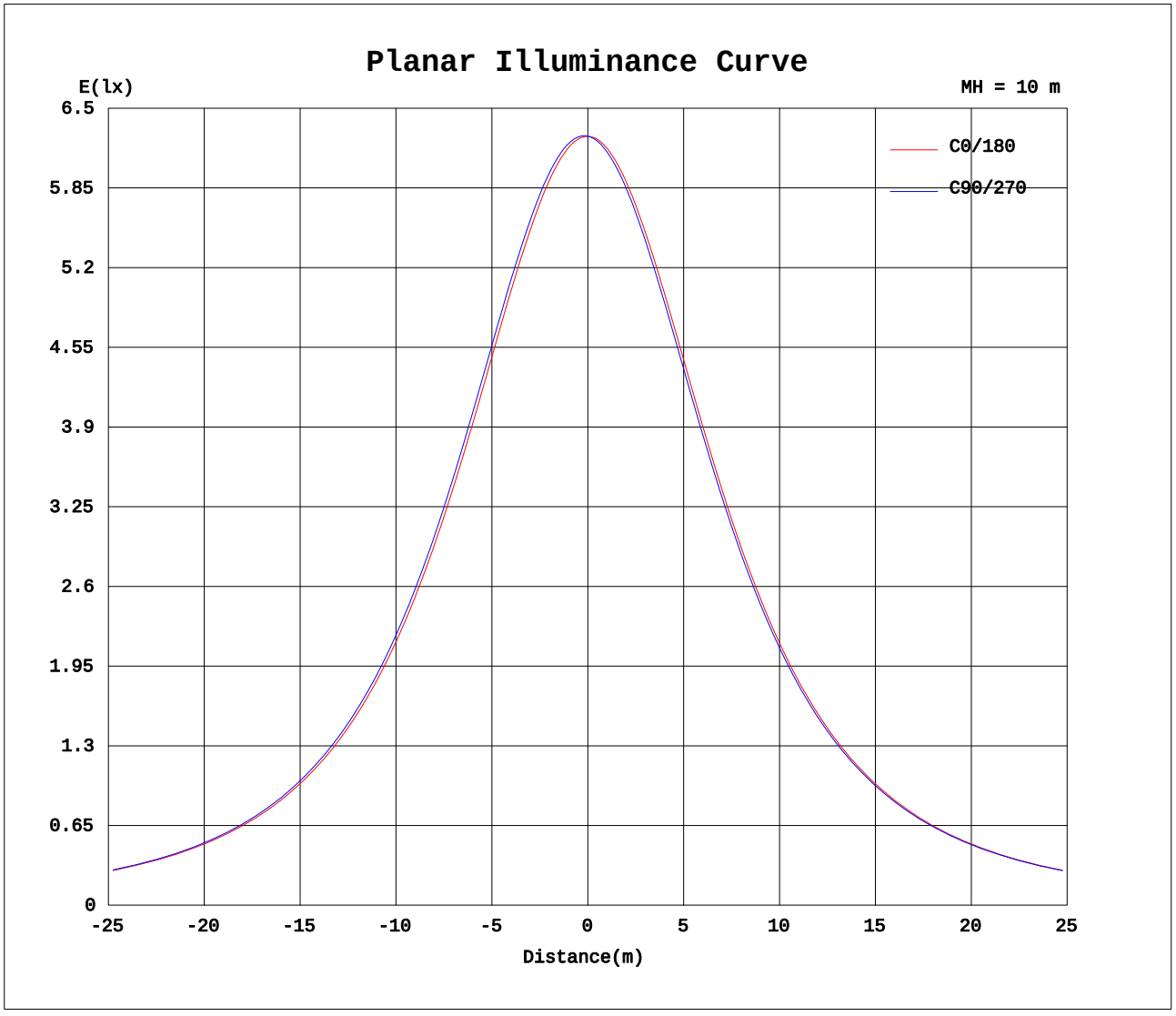
Test:U:120.01V I:0.2830A P:33.605W PF:0.9894 Freq:60.00Hz Lamp Flux:5205.02x1 lm		
NAME:	TYPE:34HID/840/277V/EX39	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: GREEN CREATIVE LTD	SUR.:	Shielding Angle:



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.4DEG
Operators:Zack
Test Date:18 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Humidity:60.2%
Test Distance:2.436m [K=1.0132]
Remarks:

Planar Illuminance Curve



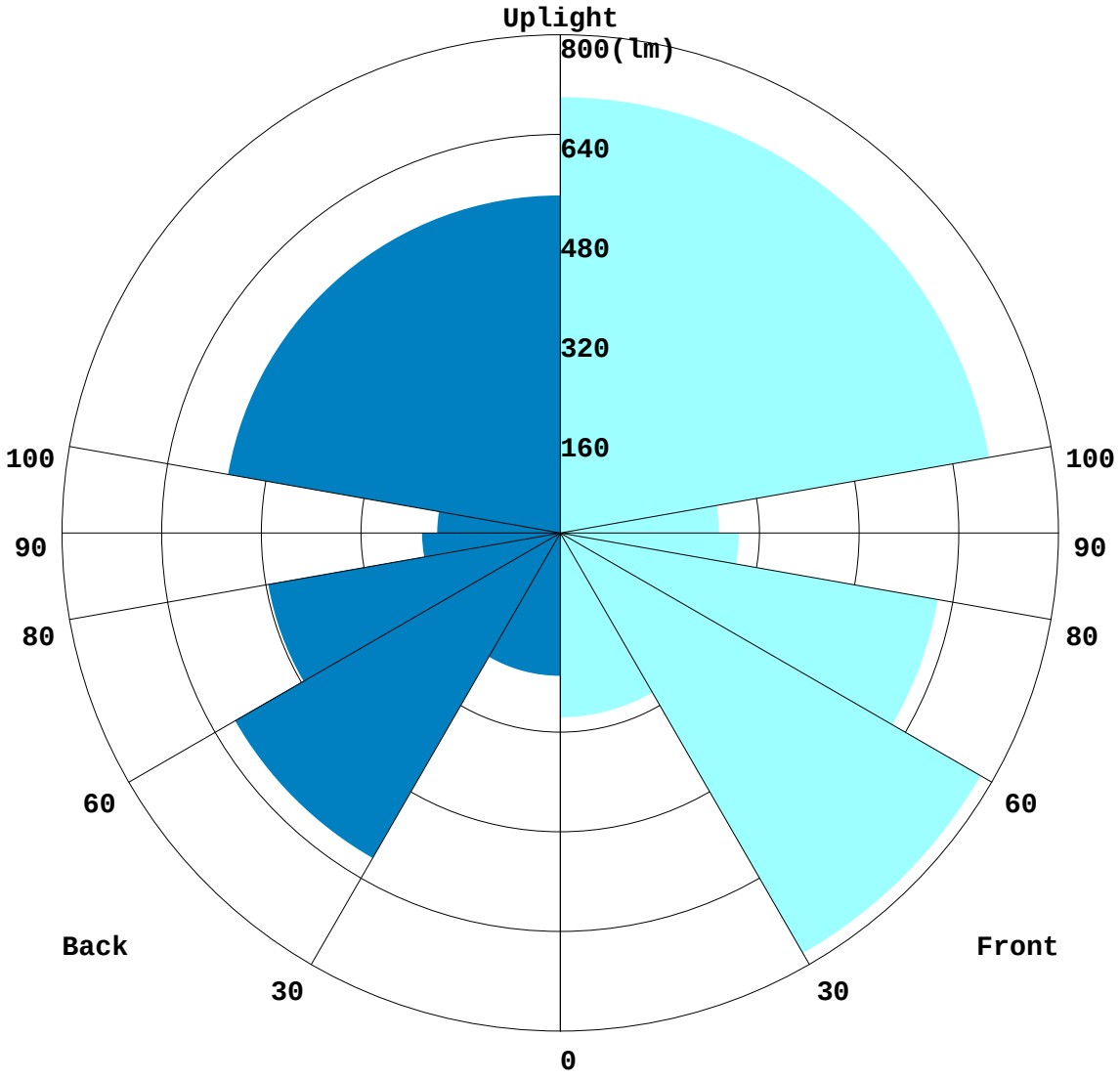
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.4DEG
Operators:Zack
Test Date:18 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Humidity:60.2%
Test Distance:2.436m [K=1.0132]
Remarks:

LCS REPORT

Test:U:120.01V I:0.2830A P:33.605W PF:0.9894 Freq:60.00Hz Lamp Flux:5205.02x1 lm		
NAME:	TYPE:34HID/840/277V/EX39	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: GREEN CREATIVE LTD	SUR.:	Shielding Angle:

LUMINAIRE CLASSIFICATION SYSTEM(LCS) GRAPH



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.4DEG
Operators:Zack
Test Date:18 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Humidity:60.2%
Test Distance:2.436m [K=1.0132]
Remarks:

BUG REPORT

Test:U:120.01V I:0.2830A P:33.605W PF:0.9894 Freq:60.00Hz Lamp Flux:5205.02x1 lm		
NAME:	TYPE:34HID/840/277V/EX39	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: GREEN CREATIVE LTD	SUR.:	Shielding Angle:

IESNA Luminaire Flux Distribution Table:

Zone	Lumens	Luminaire %
FL - Front-Low(0-30)	296.44	5.7
FM - Front-Medium(30-60)	780.11	15.0
FH - Front-High(60-80)	616.21	11.8
FVH - Front-Very High(80-90)	287.15	5.5
Total Forward Light	2934.8	56.4
BL - Back-Low(0-30)	229.82	4.4
BM - Back-Medium(30-60)	603.01	11.6
BH - Back-High(60-80)	476.33	9.2
BVH - Back-Very High(80-90)	221.9	4.3
Total Back Light	2270.2	43.6
UL - Uplight-Low(90-100)	452.94	8.7
UH - Uplight-High(100-180)	1241.1	23.8
Total Up Light	1694.1	32.5

BUG(Back,Up,Glare) Rating	B1-U4-G3

Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	1531.1	739.11	2270.2
Street Side	1979.9	954.94	2934.8

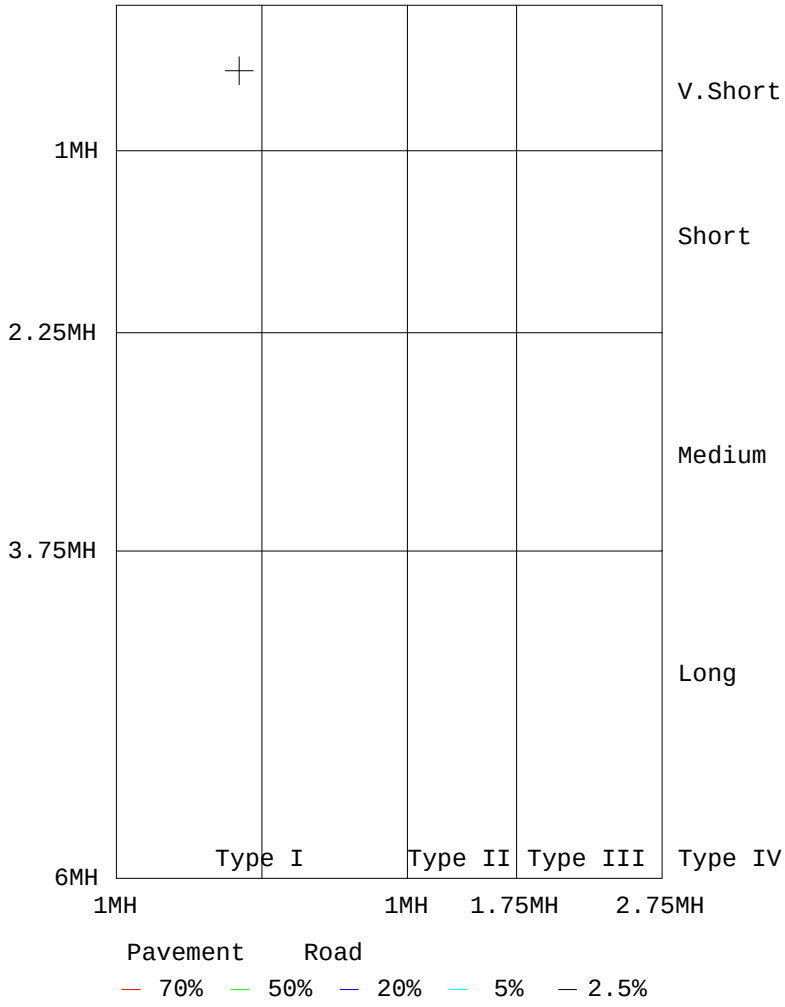
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.4DEG
Operators:Zack
Test Date:18 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Humidity:60.2%
Test Distance:2.436m [K=1.0132]
Remarks:

ROAD ISOCANDELA REPORT

Test:U:120.01V I:0.2830A P:33.605W PF:0.9894 Freq:60.00Hz Lamp Flux:5205.02x1 lm		
NAME:	TYPE:34HID/840/277V/EX39	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: GREEN CREATIVE LTD	SUR.:	Shielding Angle:

ROAD SURFACE ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.4DEG
Operators:Zack
Test Date:18 February 2020

γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Humidity:60.2%
Test Distance:2.436m [K=1.0132]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.01V I:0.2830A P:33.605W PF:0.9894 Freq:60.00Hz Lamp Flux:5205.02x1 lm		
NAME:	TYPE:34HID/840/277V/EX39	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: GREEN CREATIVE LTD	SUR.:	Shielding Angle:

Table--1 UNIT: cd

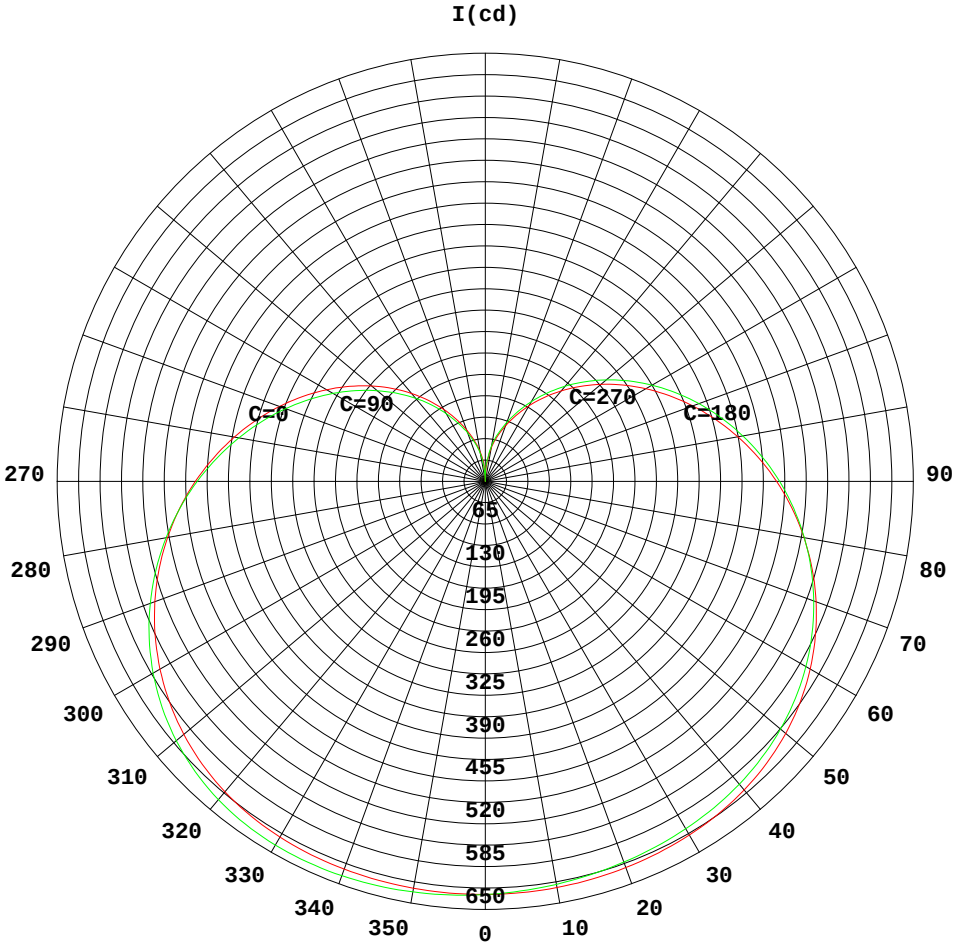
γ (DEG) \ C(DEG)	0	22.5	45	67.5	90	112.5	135	157.5	180	202.5	225	247.5	270	292.5	315	337.5			
0	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627	627			
5	627	629	630	630	630	629	629	627	627	626	625	624	624	624	625	626			
10	627	630	632	633	633	632	630	628	626	624	623	622	621	621	623	625			
15	627	631	634	635	635	633	631	628	625	622	620	618	618	619	621	623			
20	627	631	635	637	637	635	631	627	624	620	618	616	615	616	618	622			
25	626	631	636	638	638	635	631	626	622	618	615	613	612	613	616	620			
30	624	630	635	638	638	634	629	624	620	615	612	610	609	610	613	618			
35	620	628	633	636	635	631	626	620	617	612	608	606	605	606	609	614			
40	615	623	629	632	631	626	621	615	612	607	604	601	600	601	604	609			
45	608	615	622	625	623	618	613	607	605	600	597	595	593	594	597	603			
50	598	605	611	614	613	608	602	596	595	592	589	586	585	585	588	593			
55	585	593	598	601	599	594	589	583	584	581	578	576	575	575	577	582			
60	570	577	582	585	582	577	572	568	570	567	565	564	562	562	564	568			
65	553	559	564	565	563	558	554	550	553	551	550	549	547	547	548	552			
70	534	539	543	544	541	537	533	530	535	534	533	532	531	530	531	534			
75	513	517	520	520	518	513	510	508	514	514	514	513	512	512	512	514			
80	490	493	495	495	492	488	485	484	492	492	492	493	492	491	491	493			
85	466	468	469	468	465	461	459	459	467	469	470	471	470	469	469	470			
90	440	442	441	440	438	434	432	432	442	445	446	447	447	446	445	446			
95	414	414	413	412	409	406	405	406	416	419	421	423	422	421	420	420			
100	387	387	385	383	380	377	377	378	390	393	396	397	397	396	395	394			
105	360	359	356	354	351	349	349	351	362	366	369	371	372	371	369	368			
110	333	331	328	325	323	321	321	323	335	339	343	345	345	344	343	341			
115	306	303	300	297	295	293	294	296	308	313	316	318	319	318	316	314			
120	278	276	272	270	267	266	267	269	282	286	289	292	292	292	290	288			
125	252	249	245	243	240	239	240	243	255	260	263	265	266	265	263	261			
130	225	222	219	216	214	214	215	218	229	234	237	239	240	239	237	234			
135	200	196	193	191	189	189	190	193	204	208	212	213	214	213	211	209			
140	174	171	168	166	165	164	166	169	179	183	187	188	189	188	186	183			
145	150	147	144	142	141	141	143	146	155	159	162	163	164	163	161	159			
150	126	124	121	119	119	119	121	123	133	135	138	139	140	139	137	135			
155	104	102	99.0	97.9	97.4	98.0	99.6	102	110	112	115	116	117	116	114	112			
160	83.1	80.9	78.9	78.1	78.4	78.6	80.1	82.5	89.9	90.7	93.7	94.6	95.0	94.5	93.2	91.1			
165	63.9	61.6	60.2	59.8	60.1	60.9	62.4	64.2	70.9	71.3	73.6	74.7	74.9	74.5	73.3	71.7			
170	45.4	44.1	42.5	42.0	42.1	43.5	44.6	45.5	51.0	51.6	55.3	56.4	54.9	55.9	54.9	53.4			
175	25.9	24.1	22.8	20.4	17.1	21.1	24.4	24.4	26.7	26.6	26.7	21.8	30.1	34.5	35.3	34.6			
180	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			

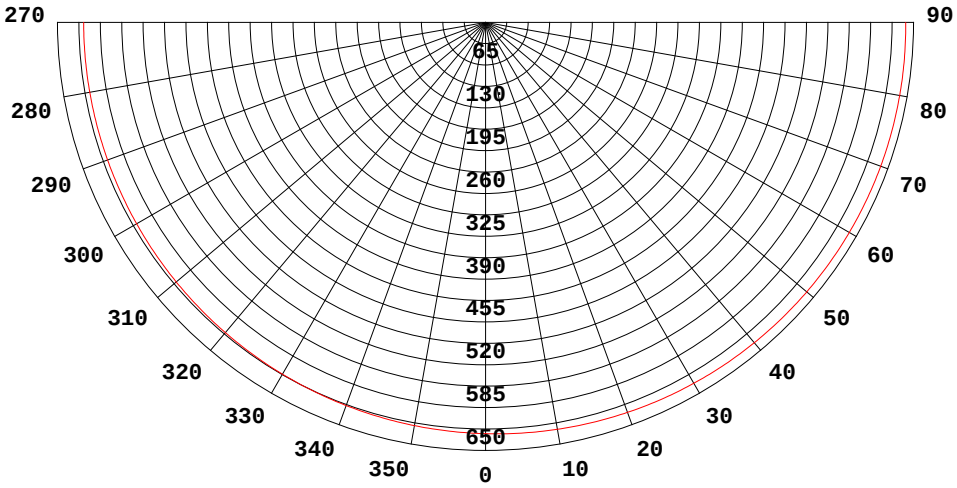
C Range: 0 - 360DEG
C Interval: 22.5DEG
Test Speed: HIGH
Temperature:24.4DEG
Operators:Zack
Test Date:18 February 2020

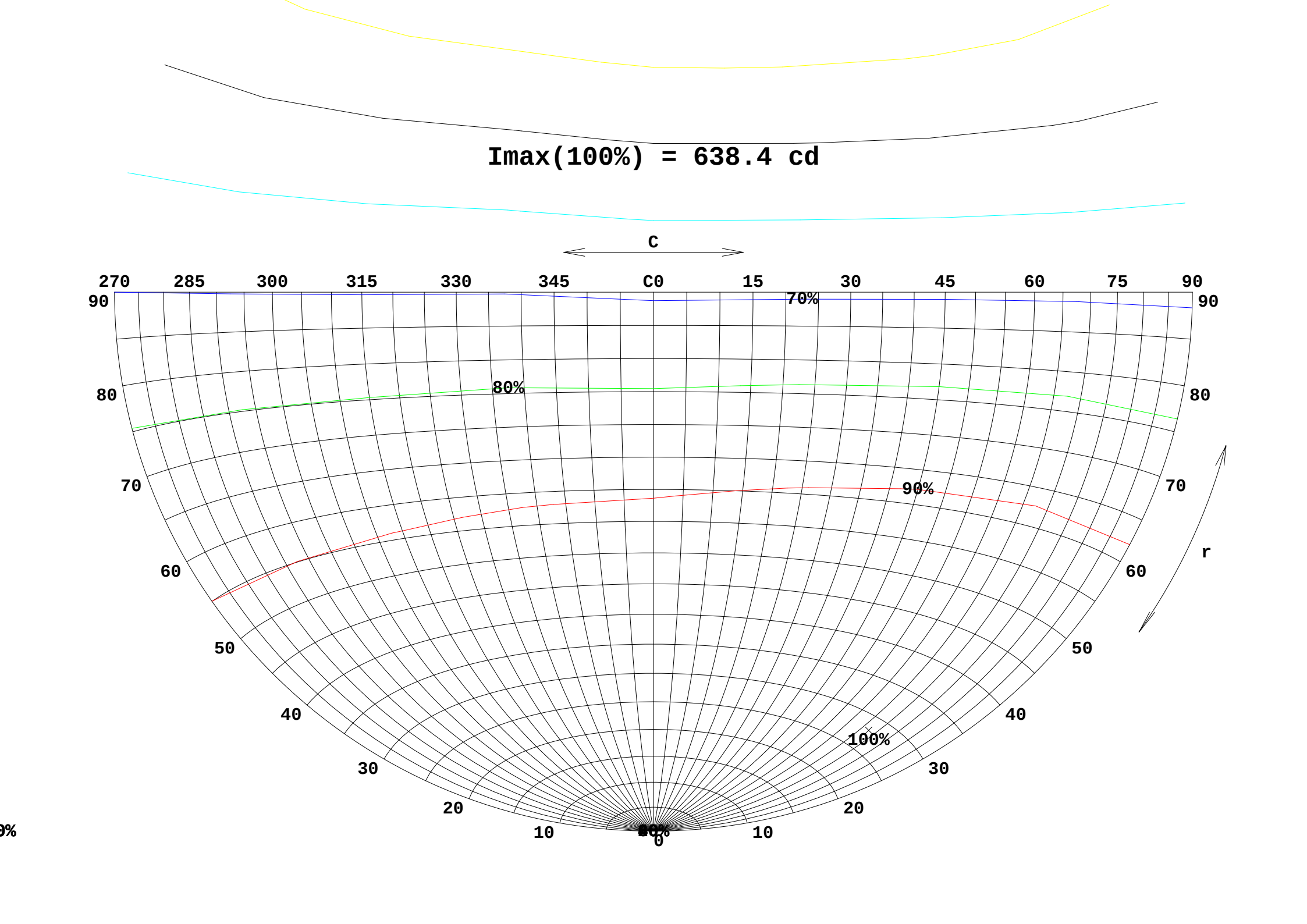
γ Range: 0 - 180DEG
γ Interval: 1.0DEG
Test System:EVERFINE GO-R5000_V2 SYSTEM V2.0.366
Humidity:60.2%
Test Distance:2.436m [K=1.0132]
Remarks:

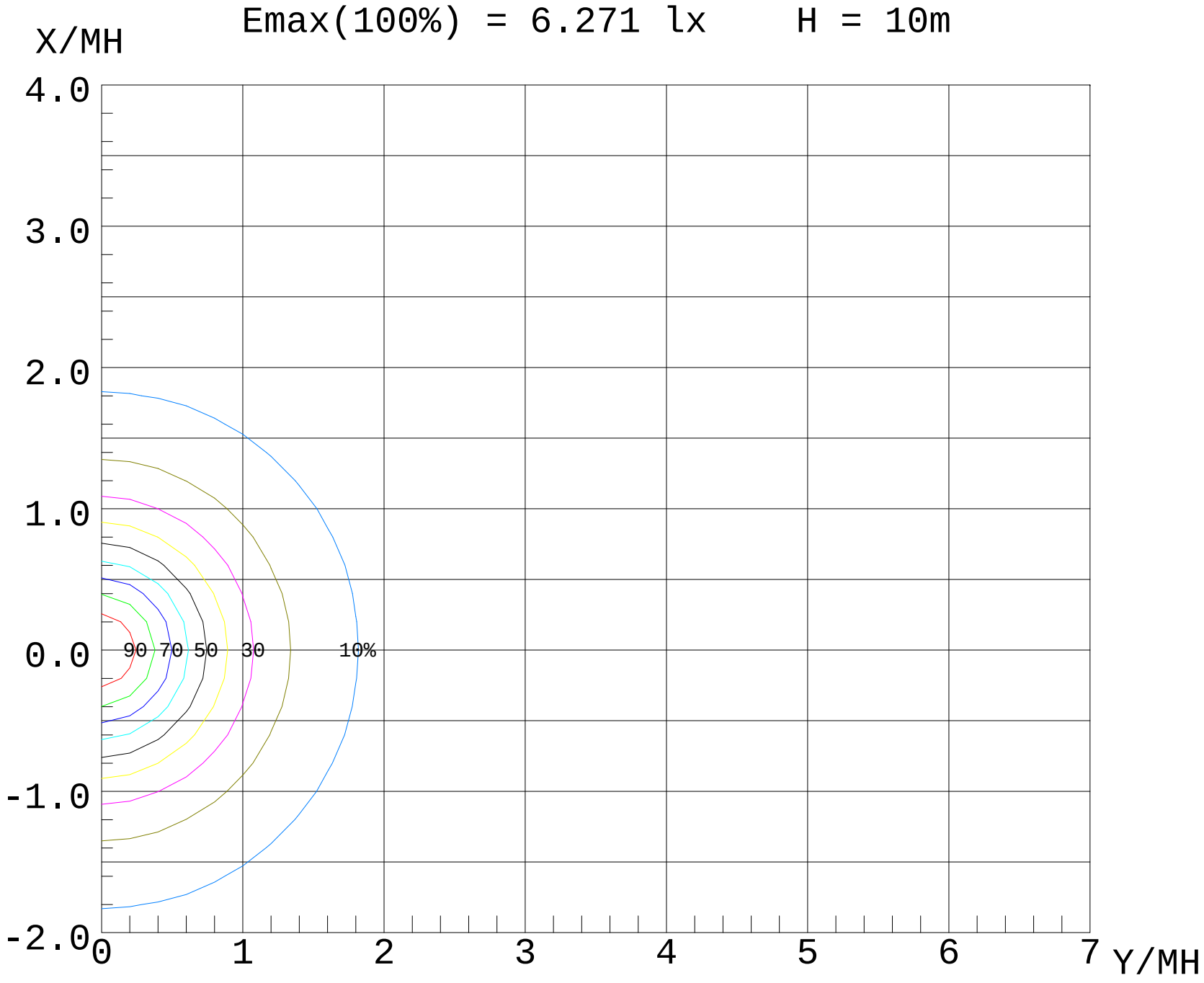
FLUX DATA:

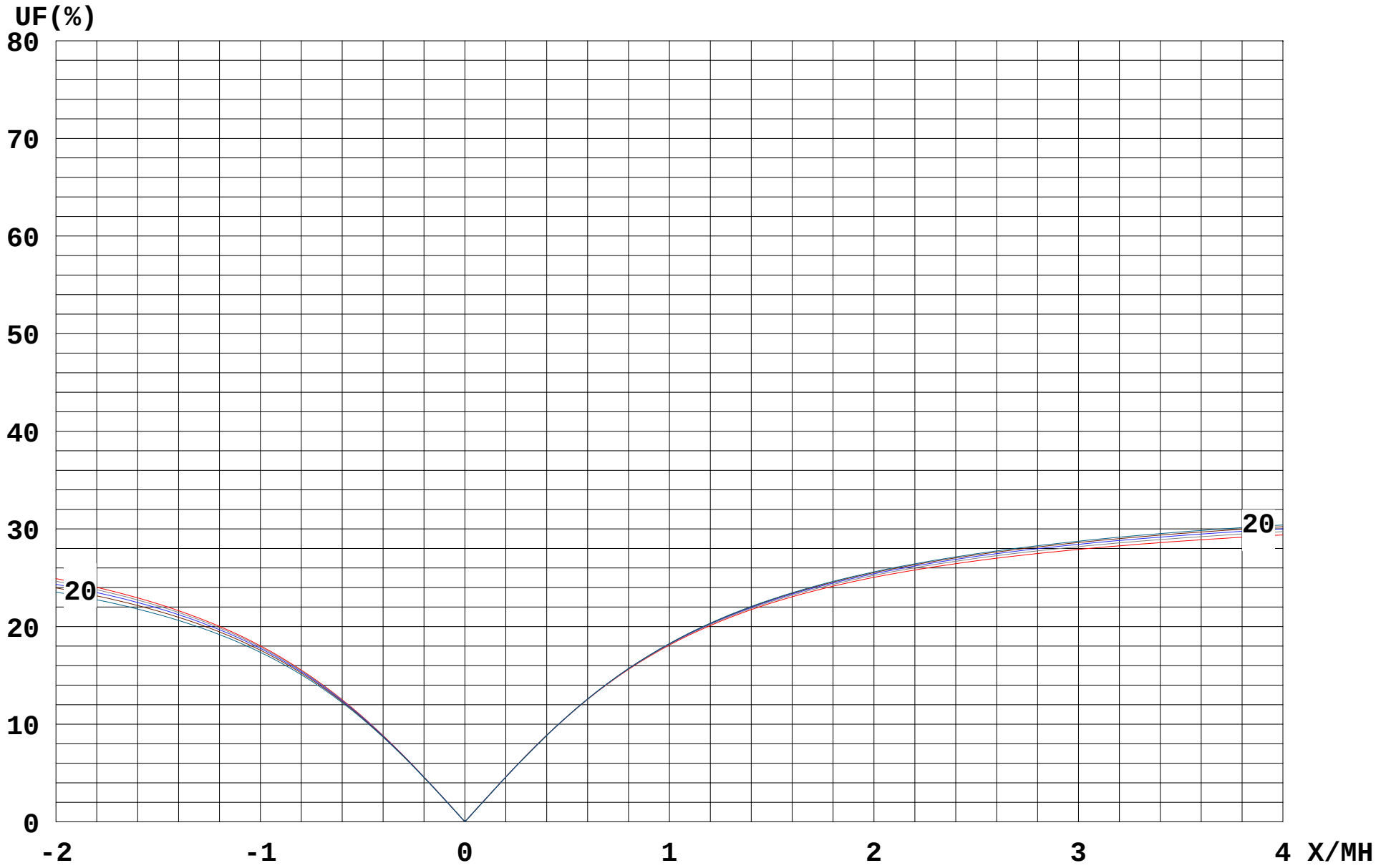
LOR:	**100.0 %**
STREET DOWN:	**1980 lm**
STREET UP:	**954.9 lm**
HOUSE DOWN:	**1531 lm**
HOUSE UP:	**739.1 lm**






Imax(100%) = 638.4 cd
C
270
285
300
315
330
345
C0
15
30
45
60
75
90
90
80
70
60
50
40
30
20
10
0
70%
80%
90%
100%
r


Emax(100%) = 6.271 lx
H = 10m
X/MH
Y/MH
4.0
3.0
2.0
1.0
0.0
-1.0
-2.0
0
1
2
3
4
5
6
7
90
70
50
30
10%


UF(%)
80
70
60
50
40
30
20
10
0
-2
-1
0
1
2
3
4 X/MH
20
20