



## 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.....	BTR66.181.19.0019.16-6
Product Name.....	HID replacement lamp
Model Number .....	34HID/850/277V/EX39; 34HID/850/277V/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 .....	1 <sup>st</sup> Floor, 1 <sup>st</sup> Building, Weitai Industrial Park, Yingrenshi, Shiyao, Baoan, Shenzhen, China
Accreditation .....	DLC/Lighting Facts/UL/ETL/ELI/CEC/EPA/DOE NVLAP Testing Lab Code: 200770-0
<b>Test specification</b>	
Standard .....	IESNA LM-79
Test procedure/method .....	IESNA LM-79 Test Procedure
Non-standard test method .....	No
<b>Test Report Form No.</b> 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.

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<b>Description:</b>	
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 .....	5000K
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°C
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/850/277V/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  $\pm$  1°C ambient temperature conditions was measured using a  $\phi$ 2.0m 4 $\pi$  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  $\pm$ 3.1% over the wavelength range of 380-780 nm.

### Luminous 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	0.2794	13.9%	33.18	0.9895	5163.73	155.63
277.06	60.0	0.1288	13.0%	32.63	0.9147	4976.8	152.50
CCT (K)	CRI (Ra)	R9	x CIE1931	y CIE1931	u' CIE1976	v' CIE1976	Duv CIE1976
4902	83.7	10	0.3486	0.3604	0.2104	0.4894	0.0030
4900	83.6	9	0.3487	0.3607	0.2103	0.4895	0.0031

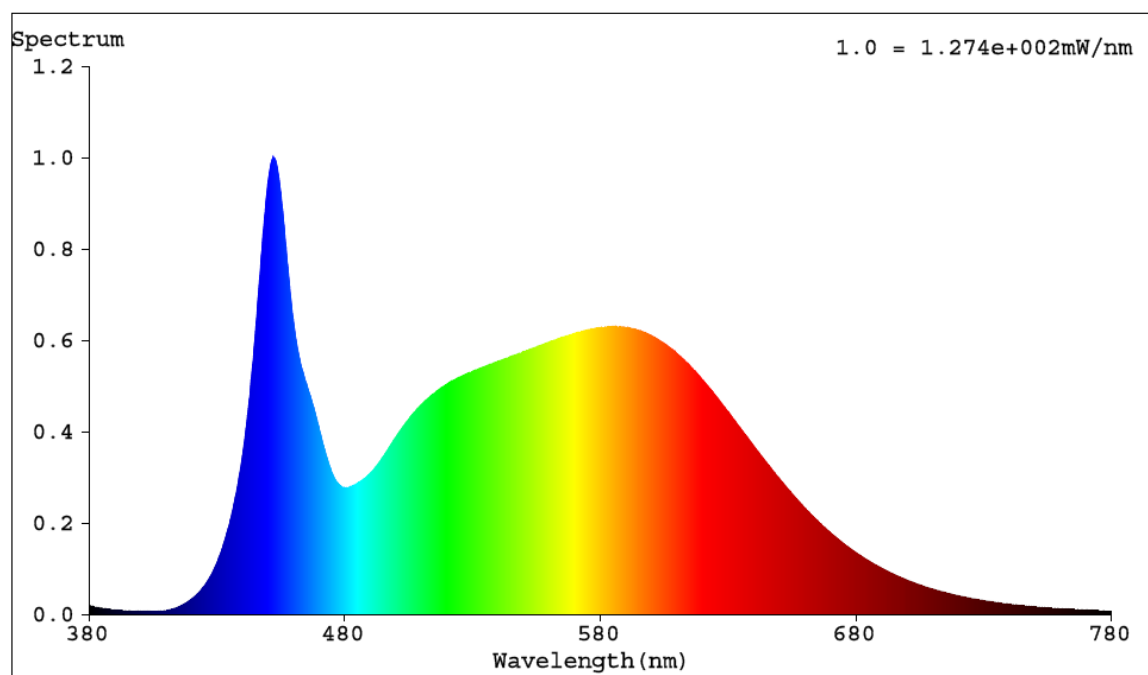
**Sphere-Spectroradiometer Method**

Parameter	Result		Special Color Rendering Indices	
Test Voltage(V)	120.08	277.06	R1	82
Voltage frequency(Hz)	60	60	R2	90
Test Current(A)	0.2800	0.1288	R3	95
Power Factor	0.9863	0.9147	R4	81
Test Power(W)	33.17	32.63	R5	82
THD A%	13.9%	13.0%	R6	85
Luminous Efficacy (lm/W)	154.80	152.50	R7	88
Total Luminous Flux (lm)	5134.8	4976.8	R8	67
Color Rendering Index (CRI)	83.7		R9	10
R9	10		R10	75
Correlated Color Temperature (CCT)(K)	4902		R11	80
Chromaticity Chroma x	0.3486		R12	58
Chromaticity Chroma y	0.3604		R13	84
Duv	0.0030		R14	97
Chromaticity Chroma u'	0.2104			
Chromaticity Chroma v'	0.4894			

**Goniophotometer Method.**

Test Voltage(V)	120.01
Voltage frequency(Hz)	60
Test Current(A)	0.2794
Power factor	0.9895
Power(W)	33.18
Luminous Efficacy(lm/W)	155.63
Total Luminous Flux(lm)	5163.73
Beam Angle(°)	227.1(0°-180°) 224.9(90°-270°)
Center Beam Candle Power(cd)	634.0
Maximum Beam Candle Power(cd)	634.0(At:C=0.0, Gamma=0.0)
Spacing Criteria	1.54(0°-180°) 1.52(90°-270°)
Zonal Lumens in the 0°-60°Zone	36.8%
Zonal Lumens in the 60°-90°Zone	30.7%
Zonal Lumens in the 90°-120°Zone	21.9%
Zonal Lumens in the 120°-180°Zone	10.6%

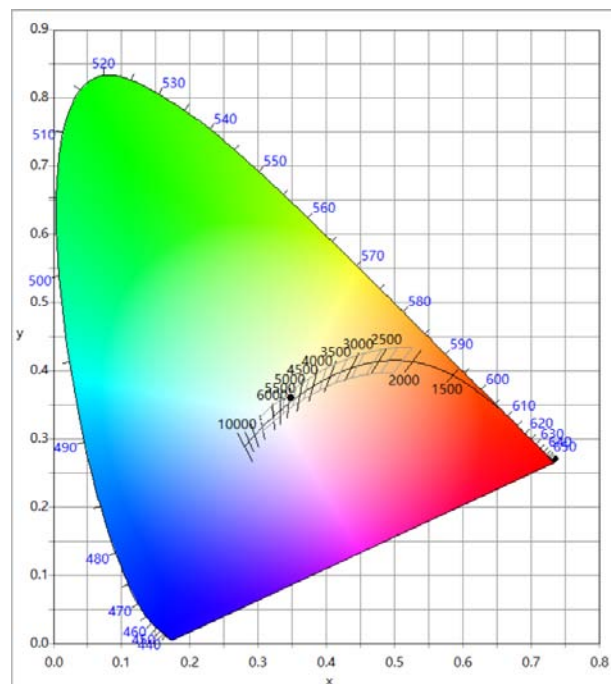
## Spectral Plots



## Spectral power distribution- Sphere spectroradiometer Method

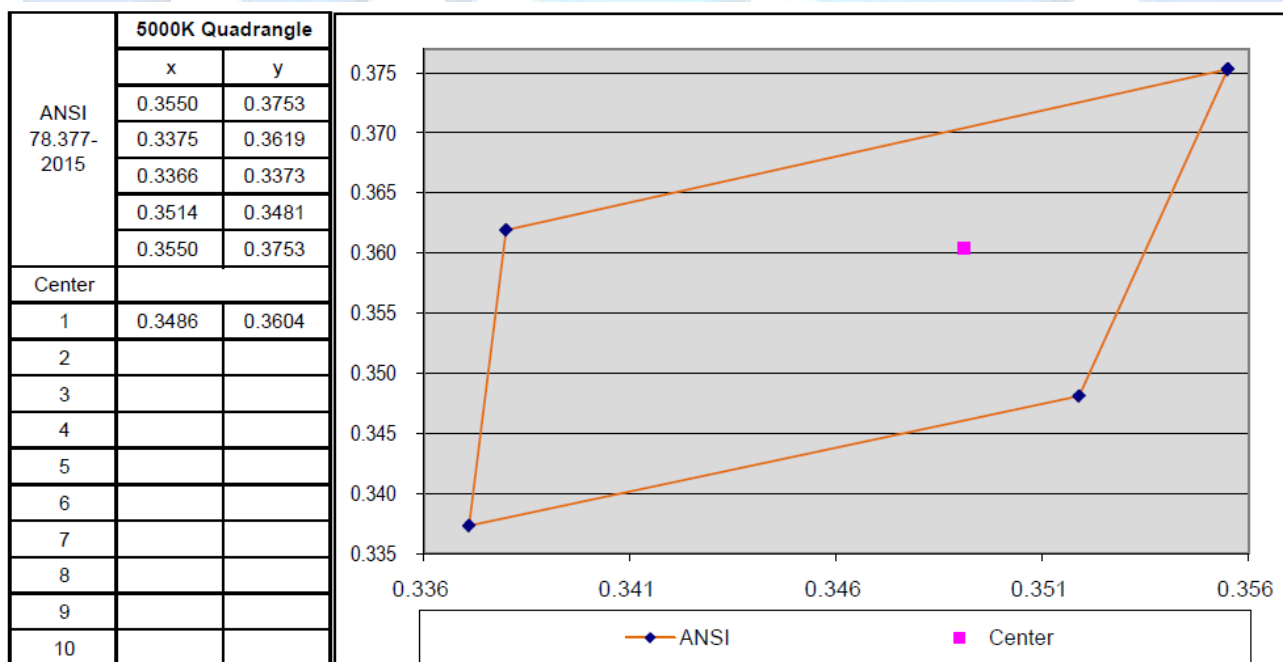
Spectral Distribution over Visible Wavelength							
WL (nm)	Radiant (mWatts)	WL (nm)	Radiant (mWatts)	WL (nm)	Radiant (mWatts)	WL (nm)	Radiant (mWatts)
380	2.3560E+00	485	3.6520E+01	590	7.9980E+01	695	1.1000E+01
385	1.5830E+00	490	3.9230E+01	595	7.9170E+01	700	9.4410E+00
390	1.1590E+00	495	4.3850E+01	600	7.7680E+01	705	8.1000E+00
395	8.7890E-01	500	4.9340E+01	605	7.5450E+01	710	6.9510E+00
400	7.8440E-01	505	5.4290E+01	610	7.2680E+01	715	5.9600E+00
405	7.4200E-01	510	5.8390E+01	615	6.9280E+01	720	5.1090E+00
410	1.0040E+00	515	6.1570E+01	620	6.5330E+01	725	4.3880E+00
415	1.9900E+00	520	6.4150E+01	625	6.0960E+01	730	3.7460E+00
420	4.1350E+00	525	6.6090E+01	630	5.6380E+01	735	3.2190E+00
425	7.7480E+00	530	6.7710E+01	635	5.1630E+01	740	2.7730E+00
430	1.4260E+01	535	6.9140E+01	640	4.6830E+01	745	2.3820E+00
435	2.5560E+01	540	7.0550E+01	645	4.2220E+01	750	2.0490E+00
440	4.4330E+01	545	7.1830E+01	650	3.7770E+01	755	1.7740E+00
445	7.8260E+01	550	7.3220E+01	655	3.3470E+01	760	1.5360E+00
450	1.2060E+02	555	7.4540E+01	660	2.9570E+01	765	1.3440E+00
455	1.1730E+02	560	7.5900E+01	665	2.6010E+01	770	1.1600E+00
460	8.1320E+01	565	7.7220E+01	670	2.2690E+01	775	1.0180E+00
465	6.4180E+01	570	7.8360E+01	675	1.9760E+01	780	9.4180E-01
470	5.1620E+01	575	7.9270E+01	680	1.7140E+01		
475	3.9310E+01	580	7.9870E+01	685	1.4820E+01		
480	3.5330E+01	585	8.0250E+01	690	1.2810E+01		

## Chromaticity Diagram- Sphere spectroradiometer Method



Tristimulus values(x,y):( 0.3486, 0.3604)

## 7-Step Chromaticity Quadrangles Test Data



## Color rendition report-Sphere spectroradiometer Method

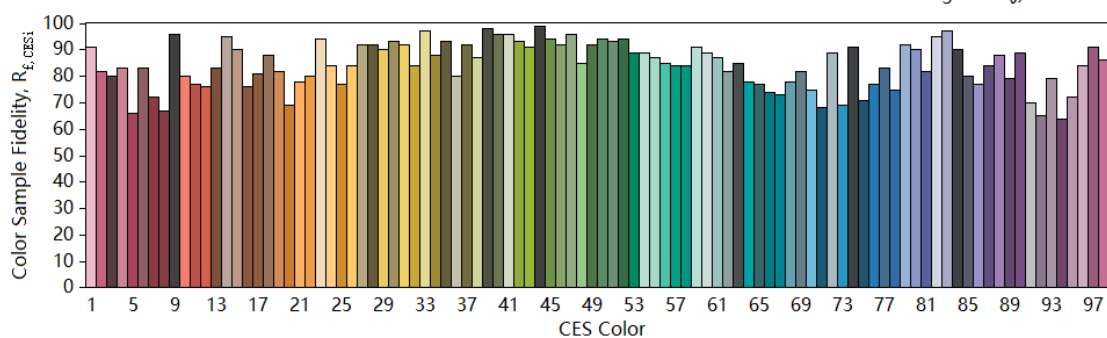
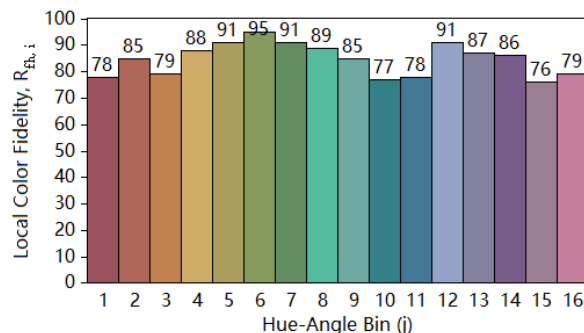
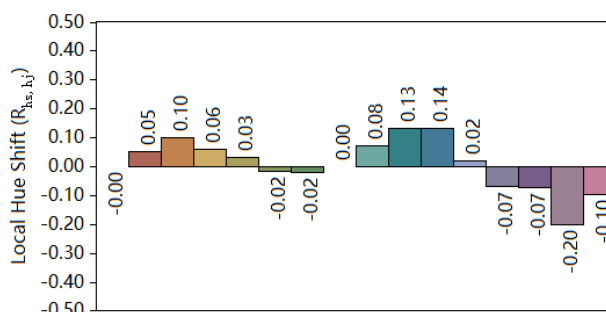
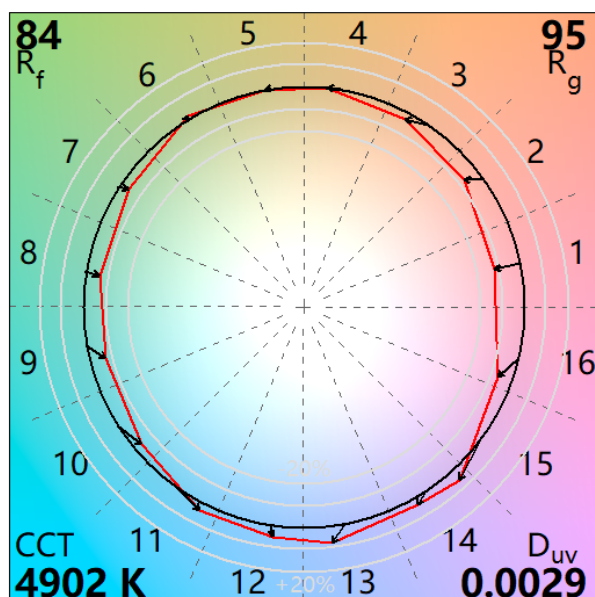
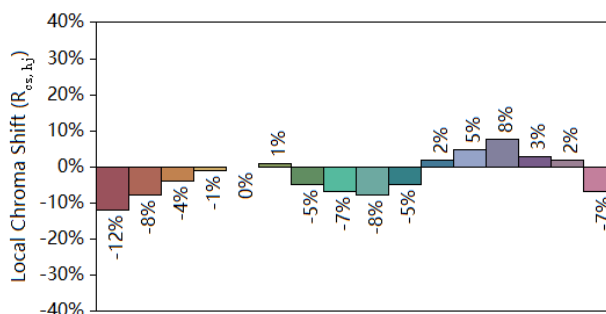
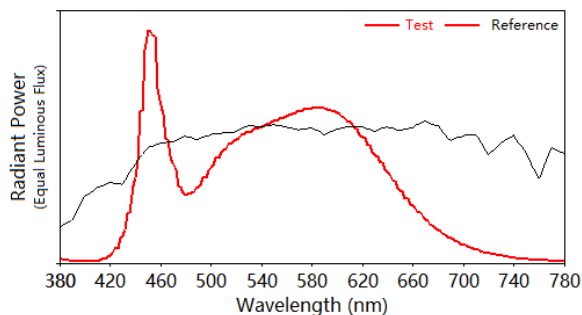
## IES TM-30-18 Color Rendition Report

Source: BTR66.181.19.0019.16-6

Manufacturer: Green Creative

Date: Feb 20, 2020

Model: 34HID/850/277V/EX39



Notes: 5000K CCT

x 0.3486  
y 0.3603  
u' 0.2104  
v' 0.4894

CIE 13.3-1995  
(CRI)  
R<sub>a</sub> 84  
R<sub>g</sub> 10

Colors are for visual orientation purposes only.

**Spectral Energy Distribution**

WL(nm)	Spectrum	Spectrum	WL(nm)	Spectrum	Spectrum
380	0.0185	2.3560	585	0.6299	80.2500
385	0.0124	1.5830	590	0.6278	79.9800
390	0.0091	1.1590	595	0.6215	79.1700
395	0.0069	0.8789	600	0.6098	77.6800
400	0.0062	0.7844	605	0.5923	75.4500
405	0.0058	0.7420	610	0.5705	72.6800
410	0.0079	1.0040	615	0.5438	69.2800
415	0.0156	1.9900	620	0.5128	65.3300
420	0.0325	4.1350	625	0.4785	60.9600
425	0.0608	7.7480	630	0.4426	56.3800
430	0.1119	14.2600	635	0.4053	51.6300
435	0.2007	25.5600	640	0.3676	46.8300
440	0.3479	44.3300	645	0.3314	42.2200
445	0.6143	78.2600	650	0.2965	37.7700
450	0.9470	120.6000	655	0.2627	33.4700
455	0.9210	117.3000	660	0.2321	29.5700
460	0.6384	81.3200	665	0.2041	26.0100
465	0.5038	64.1800	670	0.1781	22.6900
470	0.4052	51.6200	675	0.1551	19.7600
475	0.3085	39.3100	680	0.1345	17.1400
480	0.2773	35.3300	685	0.1164	14.8200
485	0.2866	36.5200	690	0.1005	12.8100
490	0.3079	39.2300	695	0.0863	11.0000
495	0.3442	43.8500	700	0.0741	9.4410
500	0.3873	49.3400	705	0.0636	8.1000
505	0.4262	54.2900	710	0.0546	6.9510
510	0.4583	58.3900	715	0.0468	5.9600
515	0.4833	61.5700	720	0.0401	5.1090
520	0.5035	64.1500	725	0.0344	4.3880
525	0.5188	66.0900	730	0.0294	3.7460
530	0.5315	67.7100	735	0.0253	3.2190
535	0.5427	69.1400	740	0.0218	2.7730
540	0.5538	70.5500	745	0.0187	2.3820
545	0.5639	71.8300	750	0.0161	2.0490
550	0.5748	73.2200	755	0.0139	1.7740
555	0.5851	74.5400	760	0.0121	1.5360
560	0.5958	75.9000	765	0.0106	1.3440
565	0.6061	77.2200	770	0.0091	1.1600
570	0.6151	78.3600	775	0.0080	1.0180
575	0.6223	79.2700	780	0.0074	0.9418
580	0.6270	79.8700			



**EUT Photo**

BEST

[illegible]

**Annex**

Please see the next page for the luminous intensity test data

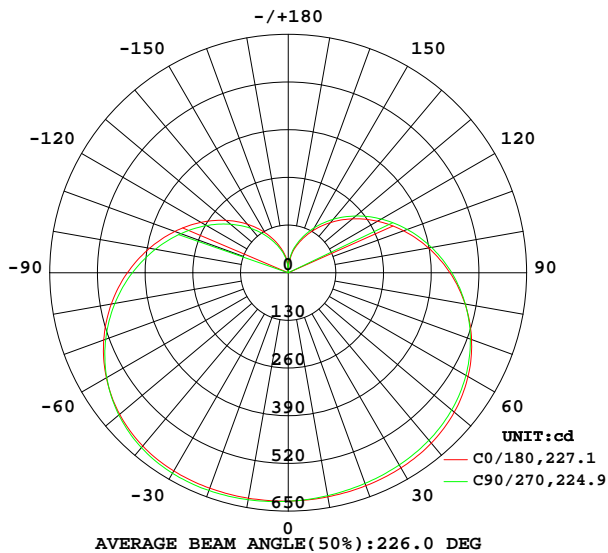
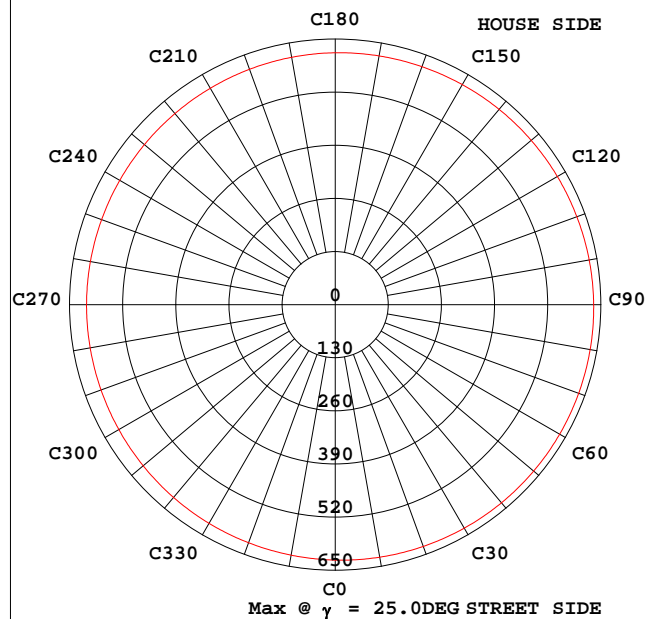
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## STREETLIGHT PHOTOMETRIC TEST REPORT

Test:U:120.01V I:0.2794A P:33.179W PF:0.9895 Freq:60.00Hz Lamp Flux:5163.73x1 lm		
NAME:	TYPE:34HID/850/277V/EX39	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: GREEN CREATIVE LTD	SUR.:	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 155.63 lm/W			
MODEL	34HID/850/277V/EX39	I <sub>max</sub> (cd)	634.0	η street_up(%)	18.3
NOMINAL POWER(W)	34	LOR(%)	100.0	η street_down(%)	38.1
RATED VOLTAGE(V)	120	TOTAL FLUX(lm)	5164	η house_up(%)	14.2
NOMINAL FLUX(lm)	5163.73	MAXIMUM @(C,γ )	68,25.0	η house_down(%)	29.4
LAMPS INSIDE	1	η up(%)	32.5	76 FLASHAREA(m2)	
TEST VOLTAGE(V)	120	η down(%)	67.5	SLI	

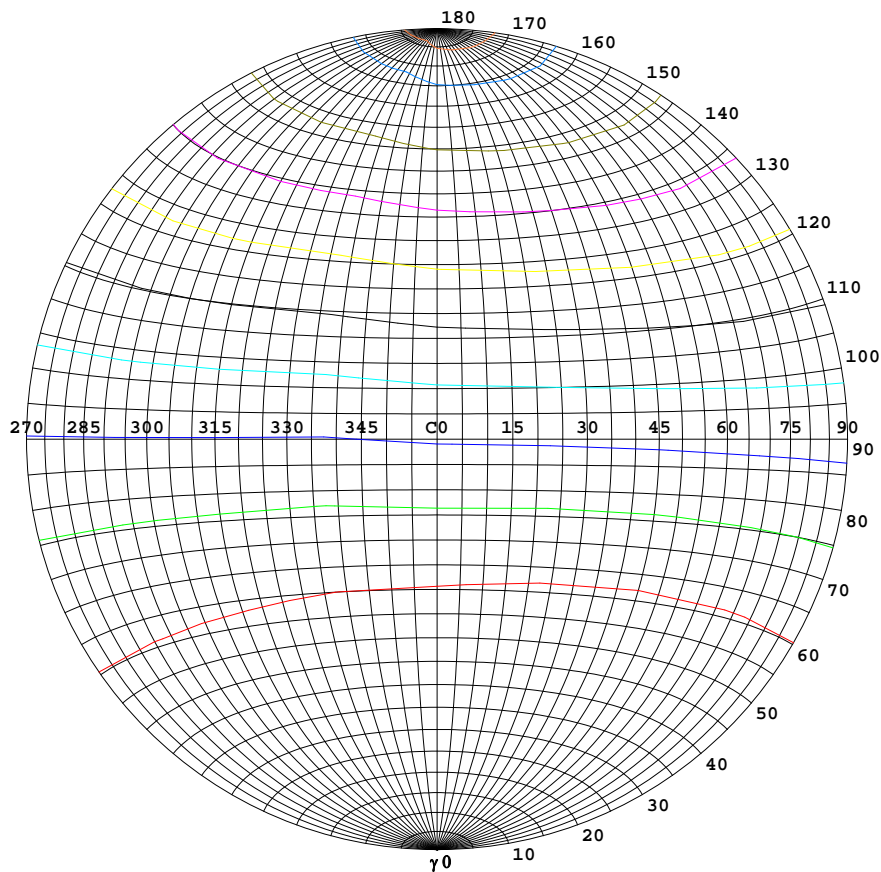
INTENSITY DISTRIBUTION DIAGRAM  
IN C PLANSMAX INTENSITY CONE SURFACE  
DISTRIBUTION DIAGRAM

C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature:24.4DEG  
Operators:Zack  
Test Date:17 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:2.468m [K=1.0000]  
Remarks:

## STREETLIGHT ISOCANDELA DIAGRAM

Test:U:120.01V I:0.2794A P:33.179W PF:0.9895 Freq:60.00Hz Lamp Flux:5163.73x1 lm		
NAME:	TYPE:34HID/850/277V/EX39	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: GREEN CREATIVE LTD	SUR.:	Shielding Angle:



## Classification:

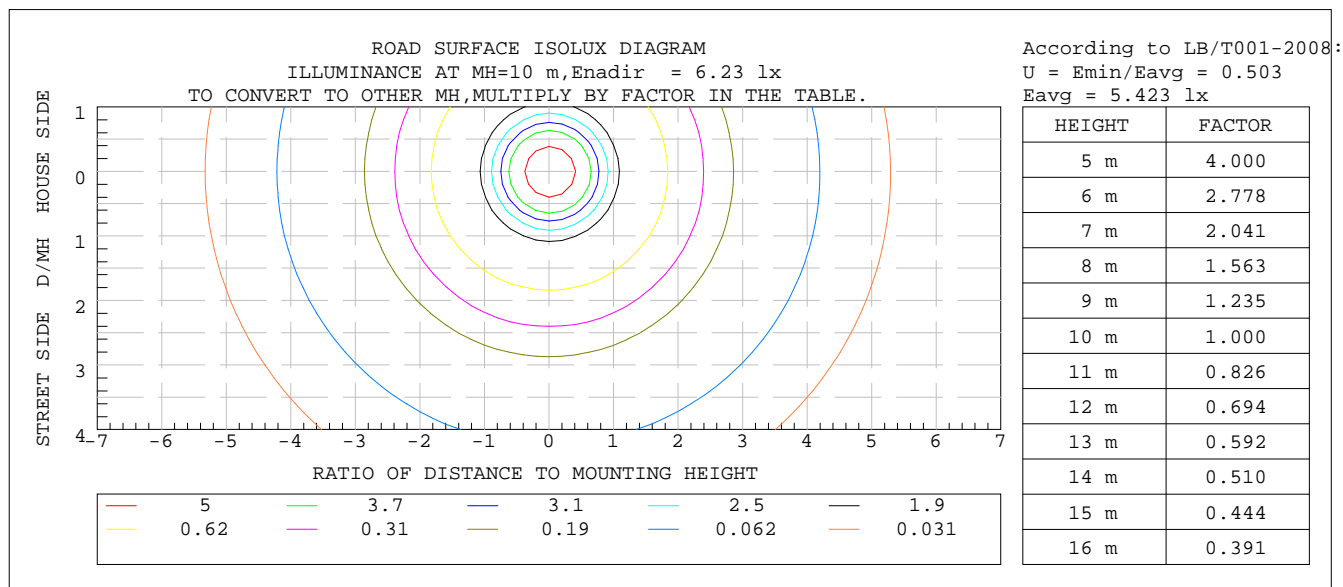
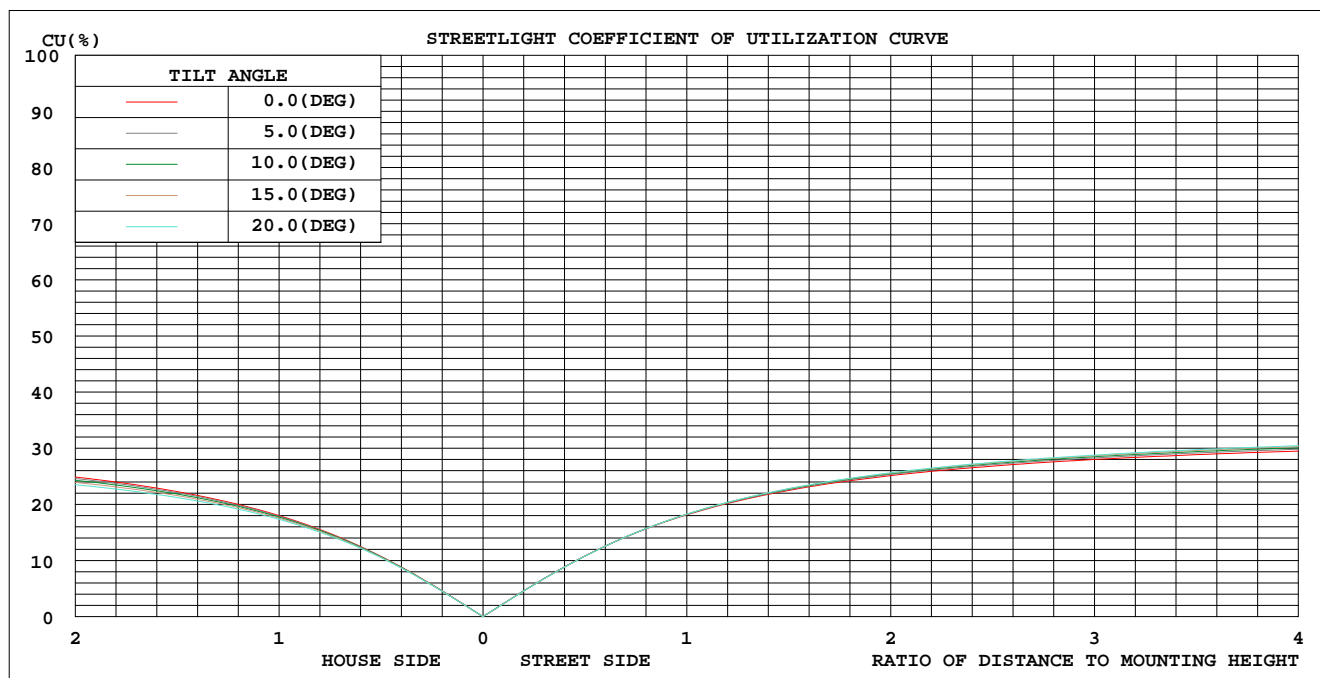
IES:Type VS - Very Short  
 CIE:Broad - Short  
 IES:None cut-off  
 CIE:Non-cut-off  
 Max.At80:95.71cd/klm  
 Max.At90:86.39cd/klm  
 Max.80-90:95.71cd/klm  
 NRB 5101:Limited[9.8%]

ISOCANDELA DIAGRAM	
UNIT	cd
I <sub>max</sub> =100%	634
90%	571
80%	507
70%	444
60%	380
50%	317
40%	254
30%	190
20%	127
10%	63
5%	32

C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:24.4DEG  
 Operators:Zack  
 Test Date:17 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:2.468m [K=1.0000]  
 Remarks:

### COEFFICIENT OF UTILIZATION CURVE AND ISOLUX DIAGRAM



C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature: 24.4DEG  
 Operators: Zack  
 Test Date: 17 February 2020

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
 Humidity: 60.2%  
 Test Distance: 2.468m [K=1.0000]  
 Remarks:

## ZONAL FLUX DIAGRAM

Test:U:120.01V I:0.2794A P:33.179W PF:0.9895 Freq:60.00Hz Lamp Flux:5163.73x1 lm		
NAME:	TYPE:34HID/850/277V/EX39	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: GREEN CREATIVE LTD	SUR.:	Shielding Angle:

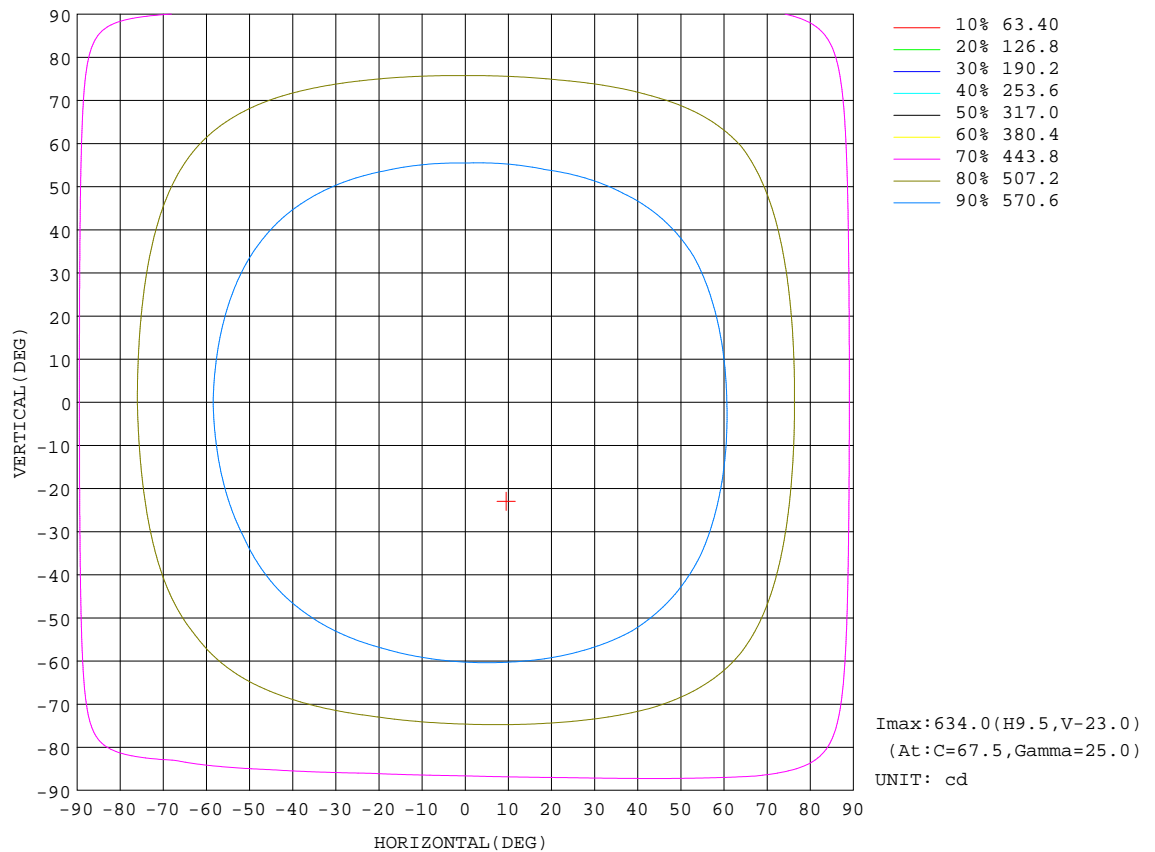
$\gamma$	C0	C45	C90	C135	C180	C225	C270	C315	$\gamma$	$\Phi$ zone	$\Phi$ total	$\Phi$ lamp
10	624.2	628.1	628.4	625.0	620.5	617.6	617.2	620.0	0- 10	59.44	59.44	1.15
20	625.1	632.4	631.8	625.6	617.9	612.4	611.4	616.4	10- 20	176.3	235.8	4.57
30	624.0	632.9	631.2	623.0	614.4	607.3	605.2	612.0	20- 30	287.2	522.9	10.1
40	616.9	626.2	622.6	613.9	606.6	599.2	596.4	604.0	30- 40	386.4	909.4	17.6
50	600.1	607.9	603.1	594.8	591.0	584.8	581.7	588.7	40- 50	466.9	1376	26.7
60	572.7	577.8	571.6	564.9	566.1	562.1	559.2	564.5	50- 60	521.5	1898	36.8
70	535.3	536.8	529.6	525.4	531.7	530.5	528.4	531.7	60- 70	545.7	2443	47.3
80	489.8	487.7	479.7	478.0	489.5	491.2	490.0	491.5	70- 80	539.0	2982	57.8
90	438.7	433.0	425.0	425.8	441.0	445.7	445.9	445.1	80- 90	504.7	3487	67.5
100	384.4	376.0	368.3	370.7	388.7	395.6	396.9	394.8	90-100	448.6	3936	76.2
110	329.3	319.2	312.0	315.5	334.9	343.3	345.7	342.4	100-110	378.3	4314	83.5
120	275.0	264.2	257.5	261.8	281.1	290.5	293.3	289.6	110-120	301.5	4616	89.4
130	222.6	211.9	206.0	210.3	228.9	238.1	241.2	237.5	120-130	225.1	4841	93.7
140	172.8	163.0	158.1	161.8	178.8	187.4	190.4	187.1	130-140	155.0	4996	96.7
150	125.7	117.5	113.6	116.7	131.5	138.2	141.4	139.0	140-150	95.53	5091	98.6
160	83.37	77.26	74.09	76.57	88.88	92.83	96.17	95.07	150-160	49.76	5141	99.6
170	47.21	42.62	39.61	41.18	48.77	54.46	55.55	56.96	160-170	19.48	5161	99.9
180	0	0	0	0	0.0012	0	0	0	170-180	3.138	5164	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:17 February 2020

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
 Humidity:60.2%  
 Test Distance:2.468m [K=1.0000]  
 Remarks:

## ISOCANDELA DIAGRAM

Test:U:120.01V I:0.2794A P:33.179W PF:0.9895 Freq:60.00Hz Lamp Flux:5163.73x1 lm		
NAME:	TYPE:34HID/850/277V/EX39	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: GREEN CREATIVE LTD	SUR.:	Shielding Angle:

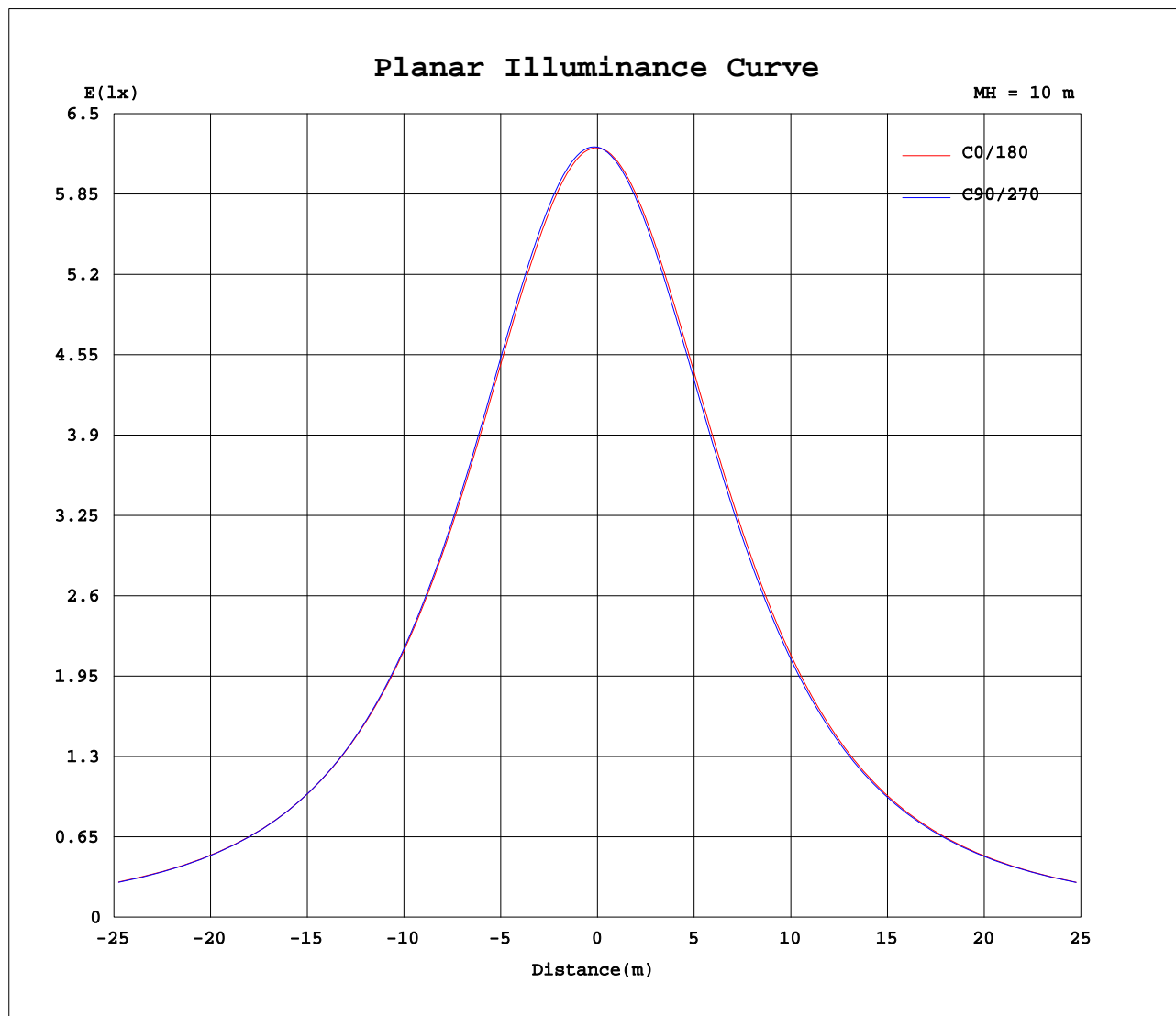


C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:24.4DEG  
 Operators:Zack  
 Test Date:17 February 2020

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
 Humidity:60.2%  
 Test Distance:2.468m [K=1.0000]  
 Remarks:



## Planar Illuminance Curve



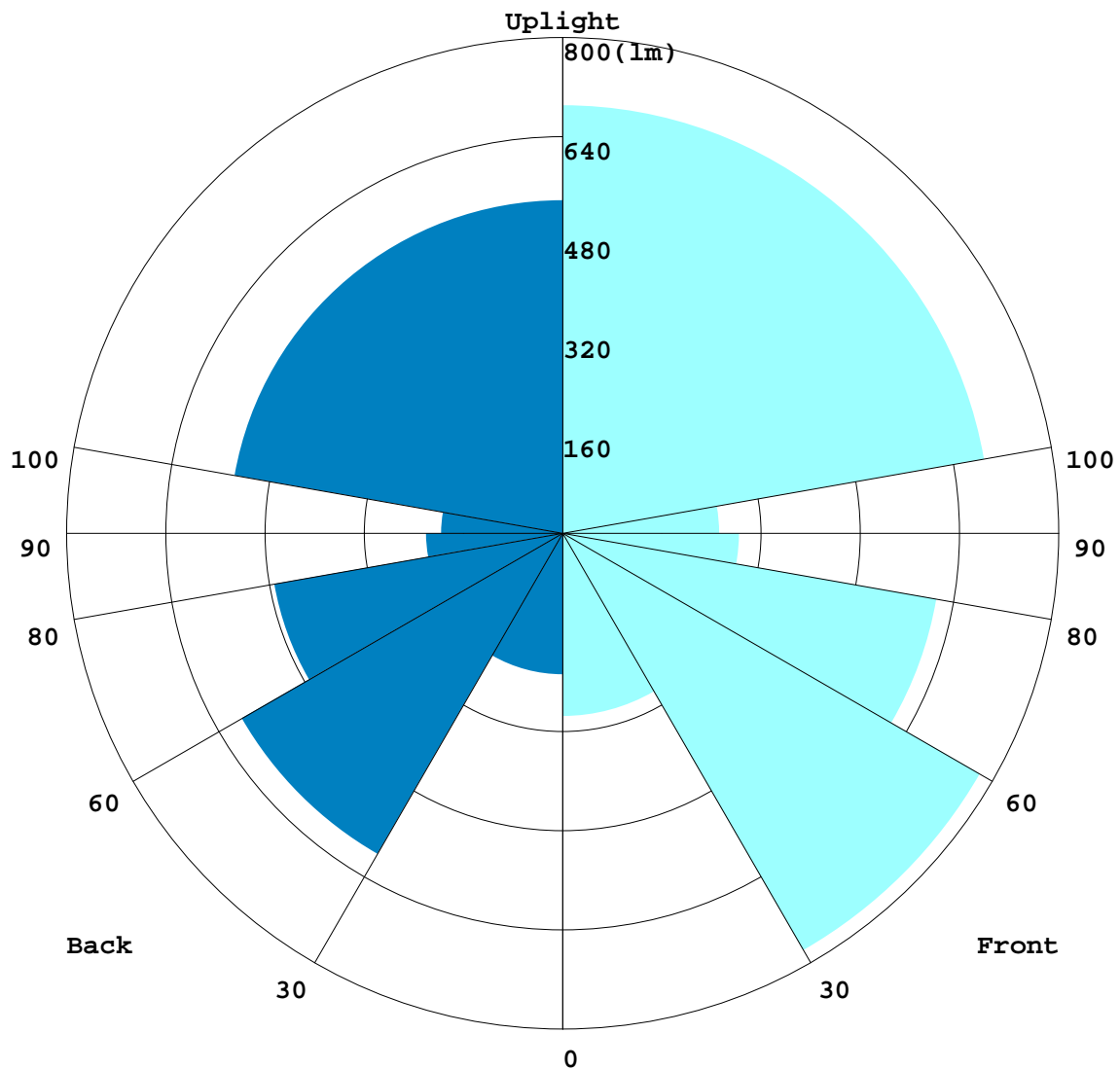
C Range: 0 - 360DEG  
C Interval: 22.5DEG  
Test Speed: HIGH  
Temperature: 24.4DEG  
Operators: Zack  
Test Date: 17 February 2020

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
Humidity: 60.2%  
Test Distance: 2.468m [K=1.0000]  
Remarks:

## LCS REPORT

Test:U:120.01V I:0.2794A P:33.179W PF:0.9895 Freq:60.00Hz Lamp Flux:5163.73x1 lm		
NAME:	TYPE:34HID/850/277V/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:17 February 2020

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
 Humidity:60.2%  
 Test Distance:2.468m [K=1.0000]  
 Remarks:

## BUG REPORT

Test:U:120.01V I:0.2794A P:33.179W PF:0.9895 Freq:60.00Hz Lamp Flux:5163.73x1 lm		
NAME:	TYPE:34HID/850/277V/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)	295.1	5.7
FM - Front-Medium(30-60)	777.16	15.1
FH - Front-High(60-80)	612.43	11.9
FVH - Front-Very High(80-90)	284.54	5.5
Total Forward Light	2912.4	56.4

BL - Back-Low(0-30)	227.84	4.4
BM - Back-Medium(30-60)	597.67	11.6
BH - Back-High(60-80)	472.29	9.1
BVH - Back-Very High(80-90)	220.19	4.3
Total Back Light	2251.4	43.6

UL - Uplight-Low(90-100)	448.64	8.7
UH - Uplight-High(100-180)	1227.9	23.8
Total Up Light	1676.5	32.5

BUG(Back,Up,Glare) Rating	B1-U4-G3
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Zone	Downward Lumens	Upward Lumens	Total Lumens
House Side	1518	733.37	2251.4
Street Side	1969.2	943.13	2912.4

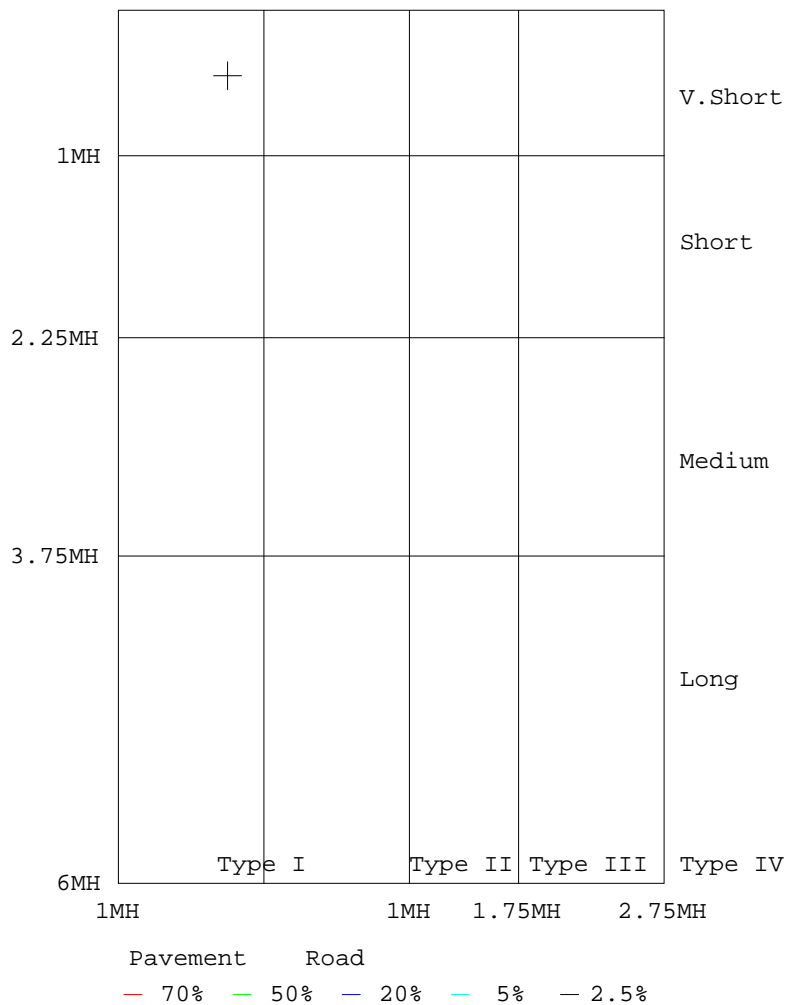
C Range: 0 - 360DEG  
 C Interval: 22.5DEG  
 Test Speed: HIGH  
 Temperature:24.4DEG  
 Operators:Zack  
 Test Date:17 February 2020

γ Range: 0 - 180DEG  
 γ Interval: 1.0DEG  
 Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
 Humidity:60.2%  
 Test Distance:2.468m [K=1.0000]  
 Remarks:

## ROAD ISOCANDELA REPORT

Test:U:120.01V I:0.2794A P:33.179W PF:0.9895 Freq:60.00Hz Lamp Flux:5163.73x1 lm		
NAME:	TYPE:34HID/850/277V/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: 17 February 2020

$\gamma$  Range: 0 - 180DEG  
 $\gamma$  Interval: 1.0DEG  
 Test System: EVERFINE GO-R5000\_V2 SYSTEM V2.0.366  
 Humidity: 60.2%  
 Test Distance: 2.468m [K=1.0000]  
 Remarks:

## LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:120.01V I:0.2794A P:33.179W PF:0.9895 Freq:60.00Hz Lamp Flux:5163.73x1 lm		
NAME:	TYPE:34HID/850/277V/EX39	WEIGHT:
SPEC.:	DIM.:	SERIAL No.:
MFR.: GREEN CREATIVE LTD	SUR.:	Shielding Angle:

Table--1

UNIT: cd

C(DEC) γ (DEC)	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	623	623	623	623	623	623	623	622	623	623	623	623	623	623	623	622			
5	623	625	626	626	626	625	624	623	621	621	620	620	620	620	621	622			
10	624	626	628	629	628	627	625	622	620	619	618	617	617	618	620	622			
15	625	628	630	631	630	628	626	622	619	617	615	614	614	616	618	621			
20	625	629	632	633	632	629	626	621	618	615	612	612	611	613	616	620			
25	625	630	633	634	632	629	625	620	617	613	610	609	609	610	615	619			
30	624	630	633	633	631	627	623	618	614	610	607	606	605	607	612	618			
35	622	628	631	631	628	624	620	615	611	607	604	602	601	603	609	615			
40	617	623	626	625	623	618	614	609	607	603	599	597	596	599	604	611			
45	610	616	619	617	614	610	606	601	600	596	593	591	590	592	597	604			
50	600	606	608	606	603	598	595	591	591	588	585	583	582	584	589	596			
55	588	593	594	592	589	584	581	579	580	577	575	572	572	573	578	584			
60	573	577	578	575	572	567	565	563	566	564	562	560	559	561	565	571			
65	555	559	559	556	552	548	546	546	550	549	547	546	545	546	549	554			
70	535	538	537	533	530	526	525	526	532	531	531	529	528	529	532	536			
75	513	515	513	509	505	503	503	504	511	512	512	511	510	510	512	516			
80	490	490	488	483	480	477	478	481	489	491	491	490	490	490	491	494			
85	465	464	461	456	453	451	452	456	466	468	469	469	469	468	469	471			
90	439	437	433	428	425	424	426	430	441	444	446	446	446	445	445	446			
95	412	409	404	400	397	396	398	403	415	419	421	422	422	421	420	420			
100	384	381	376	371	368	368	371	376	389	393	396	397	397	396	395	394			
105	357	352	347	343	340	340	343	349	362	366	370	371	371	370	369	367			
110	329	324	319	315	312	312	315	321	335	340	343	345	346	344	342	340			
115	302	297	291	287	285	285	289	294	308	313	317	319	320	318	316	313			
120	275	270	264	260	258	258	262	268	281	287	290	293	293	292	290	287			
125	249	243	238	233	231	232	236	241	255	260	264	266	267	266	263	260			
130	223	217	212	208	206	207	210	216	229	234	238	240	241	240	237	234			
135	197	192	187	183	182	182	186	191	204	208	213	215	216	214	212	209			
140	173	167	163	160	158	159	162	167	179	183	187	190	190	189	187	184			
145	149	144	140	137	135	136	139	143	155	159	162	165	165	165	162	160			
150	126	121	117	115	114	114	117	121	132	135	138	140	141	141	139	136			
155	104	99.9	96.6	94.1	93.0	93.7	95.9	99.3	109	111	115	117	118	118	116	114			
160	83.4	80.0	77.3	75.2	74.1	74.8	76.6	79.4	88.9	89.8	92.8	94.9	96.2	96.1	95.1	93.0			
165	64.3	61.9	59.5	57.8	57.1	57.4	59.0	61.2	69.6	70.3	72.8	74.7	75.9	76.0	75.2	73.6			
170	47.2	44.7	42.6	41.0	39.6	40.8	41.2	42.0	48.8	49.1	54.5	56.1	55.6	57.6	57.0	55.3			
175	30.3	27.9	24.9	23.0	18.8	15.4	19.2	20.0	23.0	22.5	19.7	18.6	34.0	36.4	38.4	37.2			
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:17 February 2020

γ Range: 0 - 180DEG

γ Interval: 1.0DEG

Test System:EVERFINE GO-R5000\_V2 SYSTEM V2.0.366

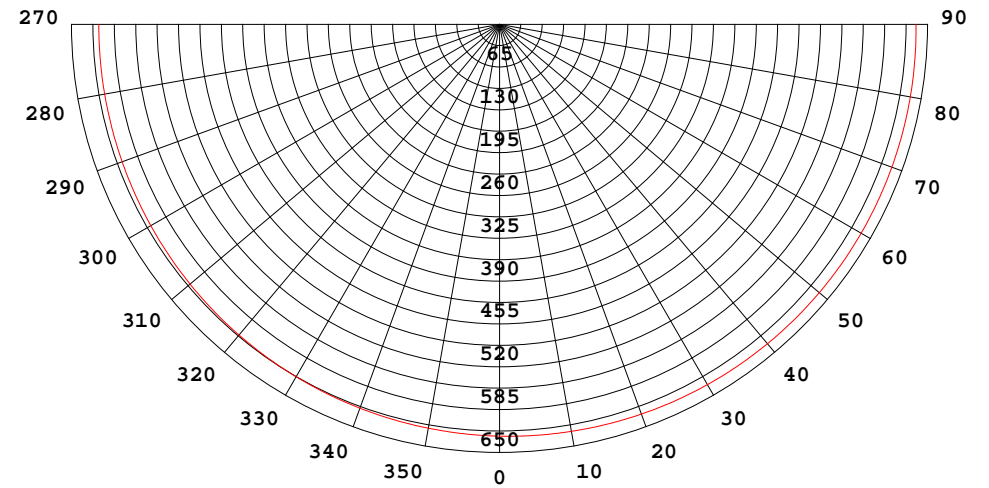
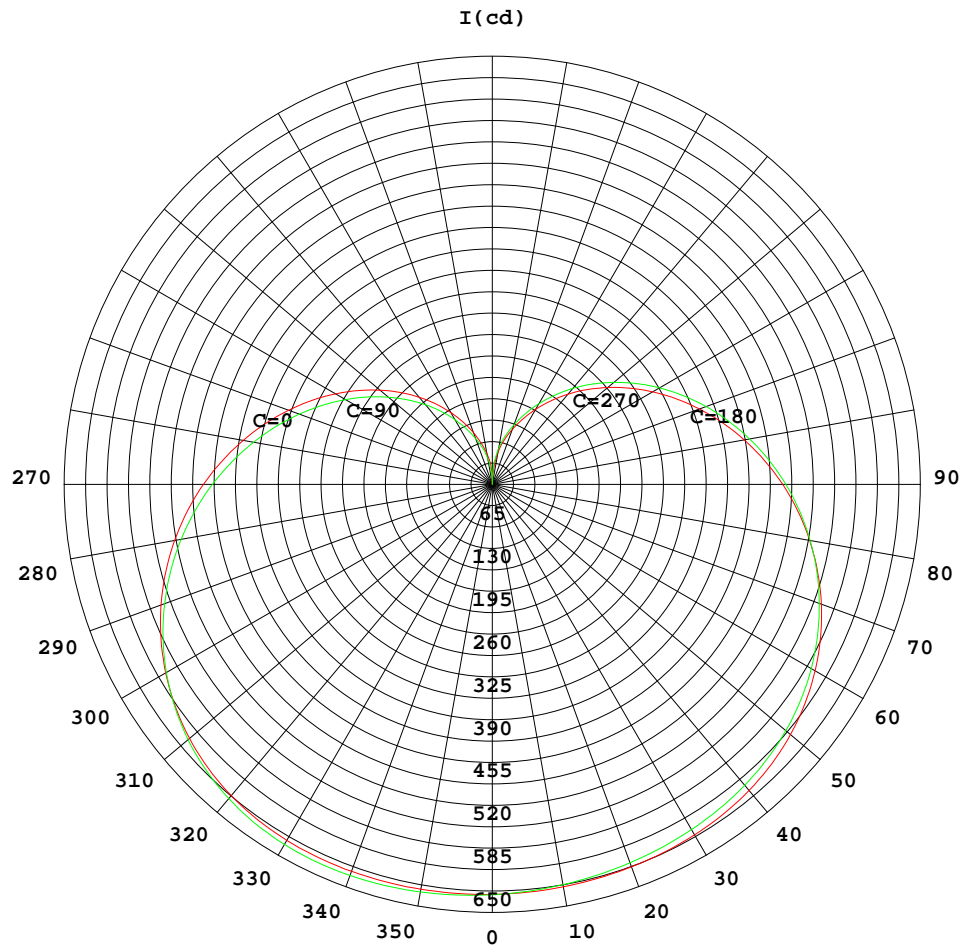
Humidity:60.2%

Test Distance:2.468m [K=1.0000]

Remarks:

FLUX DATA:

LOR:	100.0 %
STREET DOWN:	1969 lm
STREET UP:	943.1 lm
HOUSE DOWN:	1518 lm
HOUSE UP:	733.4 lm



$I_{\max}(100\%) = 634.0 \text{ cd}$

