



Shenzhen Belling Efficiency Testing Laboratory Co.,Ltd.
www.bellingtest.com

Tel:0755-29351191 Fax:0755-29351120

Address:1 F,No.1 building,Meibaoh industrial park,Dalang street,Longhua district,Shenzhen,China

LumCAT: LL4RRG-41K

Luminaire:

Report No:

Voltage(V): 120.02

Test No:

Current(A): 0.1156

LampCAT:

Power (W): 13.6800

Lamp flux(lm): 905.5

PF: 0.9863

Number of Lamps: 1

Ballast type:

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 905.50

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 66.19

Central intensity(cd): 411.713

Maximum intensity(cd): 429.493

Angle of maximum intensity: C=180.0 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=91.0

[C90/270]Total=90.7

Field angle(10%Imax): [C0/180]Total=143.9

[C90/270]Total=143.8

Maximum s/h(1/2): C0_180=1.26 C90_270=1.01

Maximum s/h(1/4): C0_180=1.34 C90_270=1.12

Up flux rate of lamp(%): 0.31%

Down flux rate of lamp(%): 98.66%

Up flux rate of LUM(%): -0.72%

Down flux rate of LUM(%): 99.69%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 86.293%

Equipment: GMS-3000
Temperature(°C): 25

Date:
Humidity(%): 58%

Operator: Sam

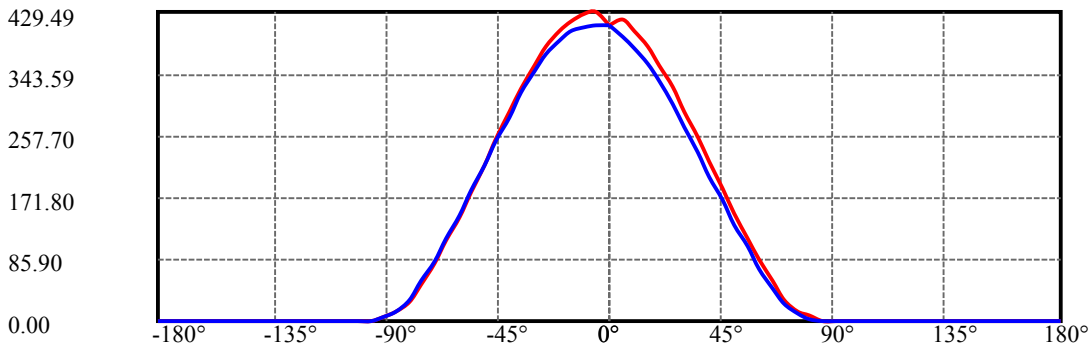
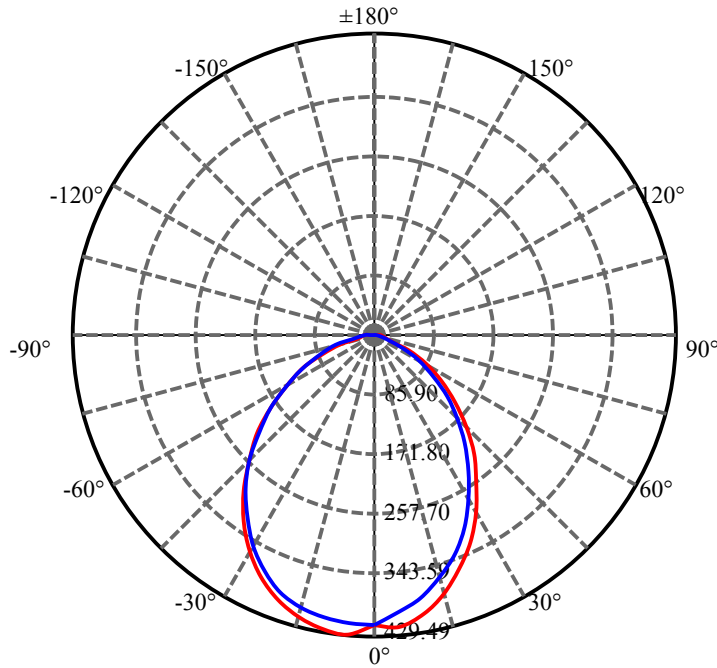
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	411.713	0.000	0	.000%	.000%
5.0	406.910	9.791	9.791	1.081%	1.081%
10.0	398.126	28.839	38.629	3.185%	4.266%
15.0	383.696	46.487	85.116	5.134%	9.400%
20.0	364.099	61.839	146.955	6.829%	16.229%
25.0	339.385	74.119	221.073	8.186%	24.414%
30.0	310.387	82.707	303.78	9.134%	33.548%
35.0	278.515	87.326	391.106	9.644%	43.192%
40.0	245.056	88.069	479.175	9.726%	52.918%
45.0	210.726	85.194	564.369	9.409%	62.327%
50.0	176.410	79.087	643.457	8.734%	71.061%
55.0	142.950	70.336	713.792	7.768%	78.828%
60.0	110.789	59.558	773.351	6.577%	85.406%
65.0	80.807	47.480	820.83	5.244%	90.649%
70.0	53.737	34.910	855.74	3.855%	94.504%
75.0	32.956	23.353	879.094	2.579%	97.084%
80.0	17.114	13.856	892.949	1.530%	98.614%
85.0	6.894	6.786	899.735	.749%	99.363%
90.0	3.252	2.925	902.659	.323%	99.686%
95.0	0.467	1.061	903.721	.117%	99.803%
100.0	0.202	0.182	903.902	.020%	99.823%
105.0	0.202	0.108	904.01	.012%	99.835%
110.0	0.202	0.106	904.116	.012%	99.847%
115.0	0.202	0.102	904.218	.011%	99.858%
120.0	0.202	0.098	904.317	.011%	99.869%
125.0	0.303	0.115	904.432	.013%	99.882%
130.0	0.303	0.129	904.561	.014%	99.896%
135.0	0.365	0.134	904.694	.015%	99.911%
140.0	0.403	0.142	904.836	.016%	99.926%
145.0	0.403	0.134	904.971	.015%	99.941%
150.0	0.416	0.121	905.091	.013%	99.955%
155.0	0.466	0.112	905.203	.012%	99.967%
160.0	0.479	0.098	905.302	.011%	99.978%
165.0	0.542	0.084	905.385	.009%	99.987%
170.0	0.542	0.064	905.449	.007%	99.994%
175.0	0.555	0.039	905.489	.004%	99.998%
180.0	0.605	0.014	905.502	.002%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	303.78	33.55%	33.55%
0-40	479.17	52.92%	52.92%
0-60	773.35	85.41%	85.41%
0-90	902.66	99.69%	99.69%
0-120	904.32	99.87%	99.87%
0-180	905.50	100.00%	100.00%
60-90	188.87	20.86%	20.86%
90-120	4.58	0.51%	0.51%
90-130	4.83	0.53%	0.53%
90-150	5.36	0.59%	0.59%
90-180	5.75	0.64%	0.64%
0-55.89	724.40	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	38.63
10-20	108.33
20-30	156.83
30-40	175.39
40-50	164.28
50-60	129.89
60-70	82.39
70-80	37.21
80-90	9.71
90-100	1.24
100-110	0.21
110-120	0.20
120-130	0.24
130-140	0.28
140-150	0.26
150-160	0.21
160-170	0.15
170-180	0.04

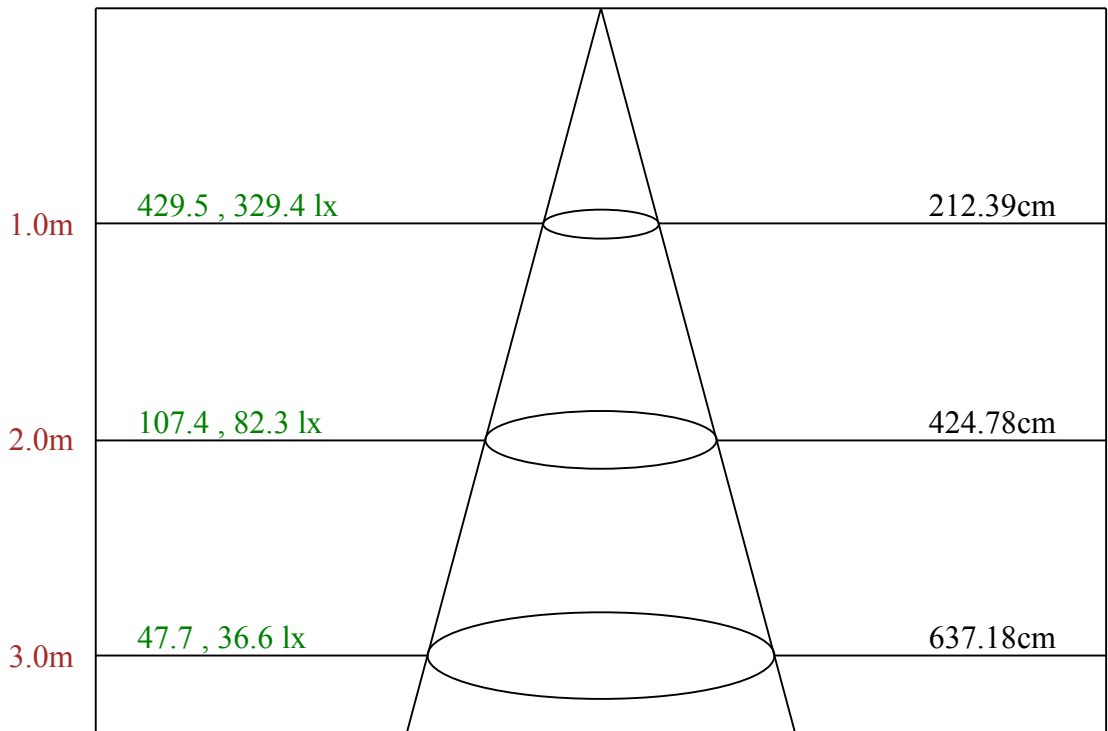


C0/C180: —

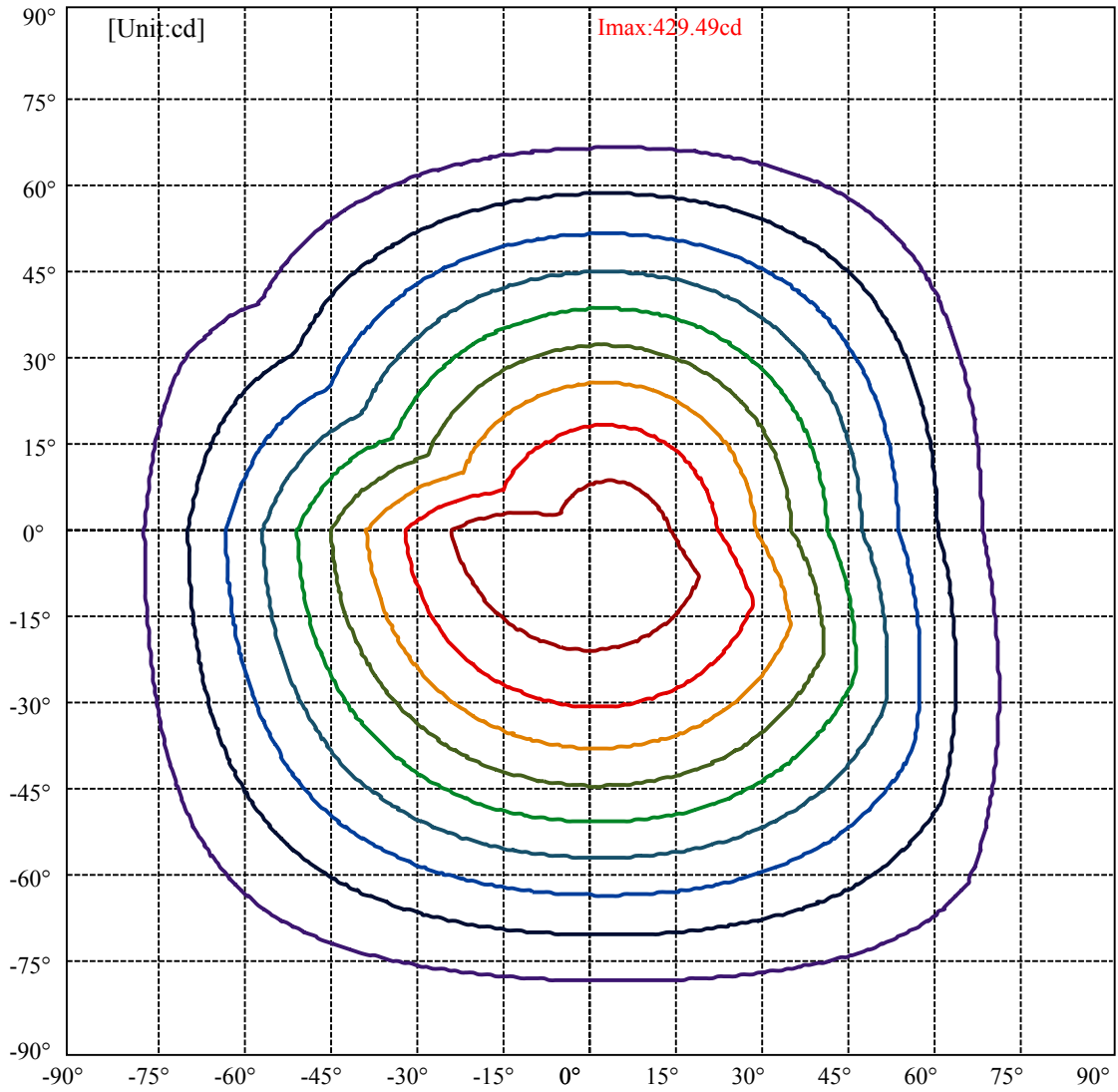
C90/C270: —

Field angle(10%Imax):C0/180Left:71.5 Right:72.4
:C90/270Left:77.8 Right:66.0

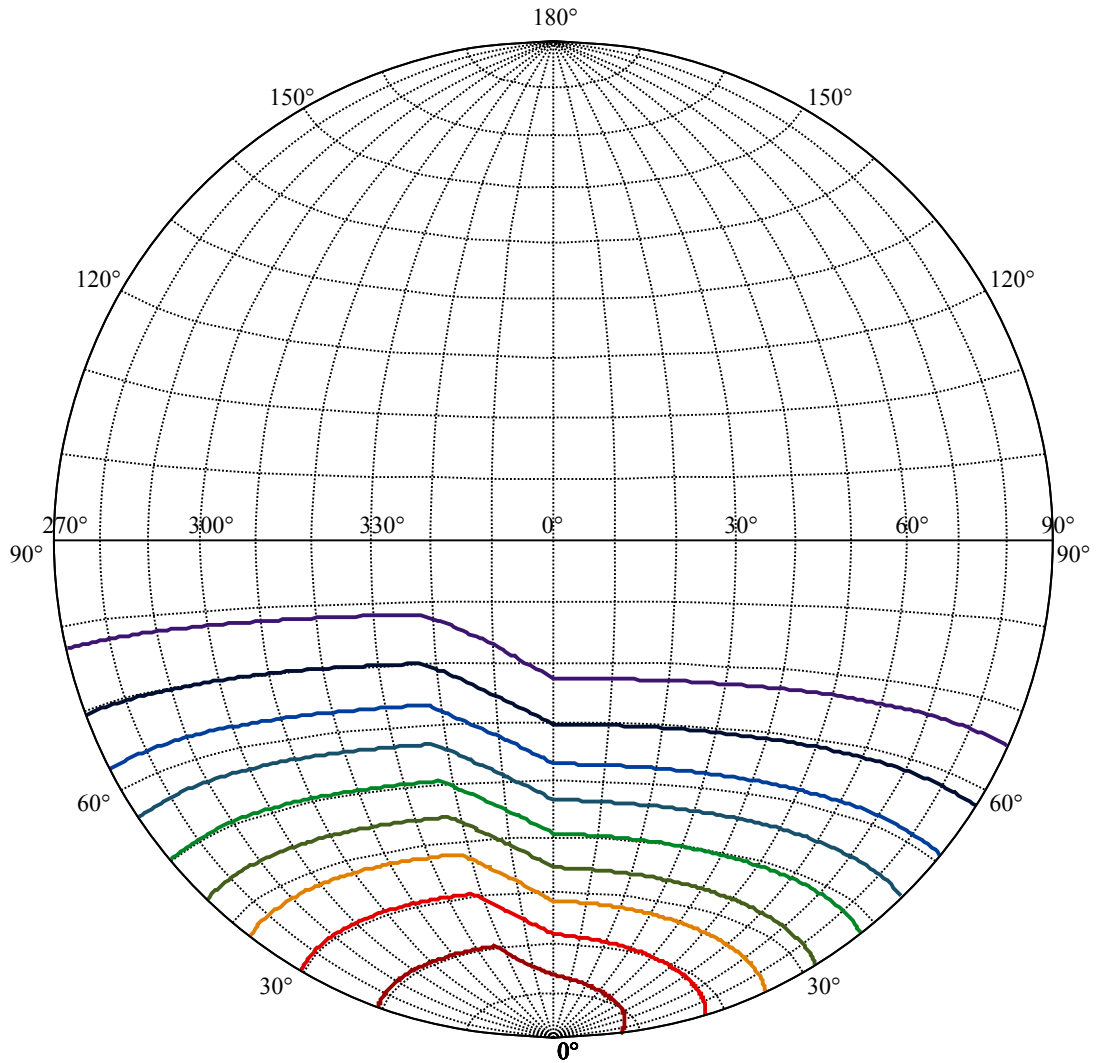
Beam Angle(50%Imax):C0/180Left:45.2 Right:45.8
:C90/270Left:51.4 Right:39.3



Max , Ave Beam angle of C180 plane 92.62



- (10%I_{max}) 42.9493
- (20%I_{max}) 85.8986
- (30%I_{max}) 128.848
- (40%I_{max}) 171.797
- (50%I_{max}) 214.747
- (60%I_{max}) 257.696
- (70%I_{max}) 300.645
- (80%I_{max}) 343.594
- (90%I_{max}) 386.544



House

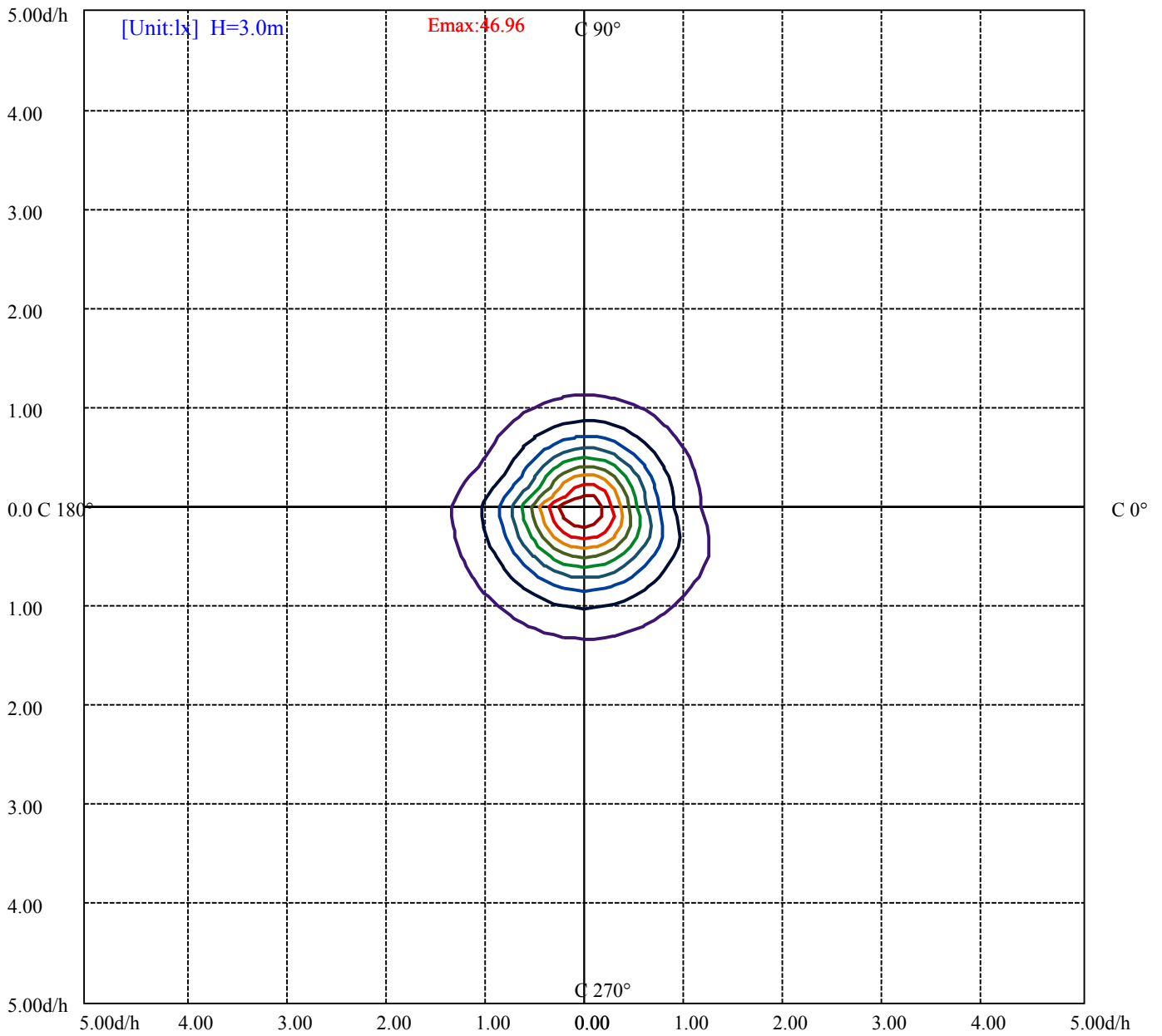
[Unit:cd]

Road

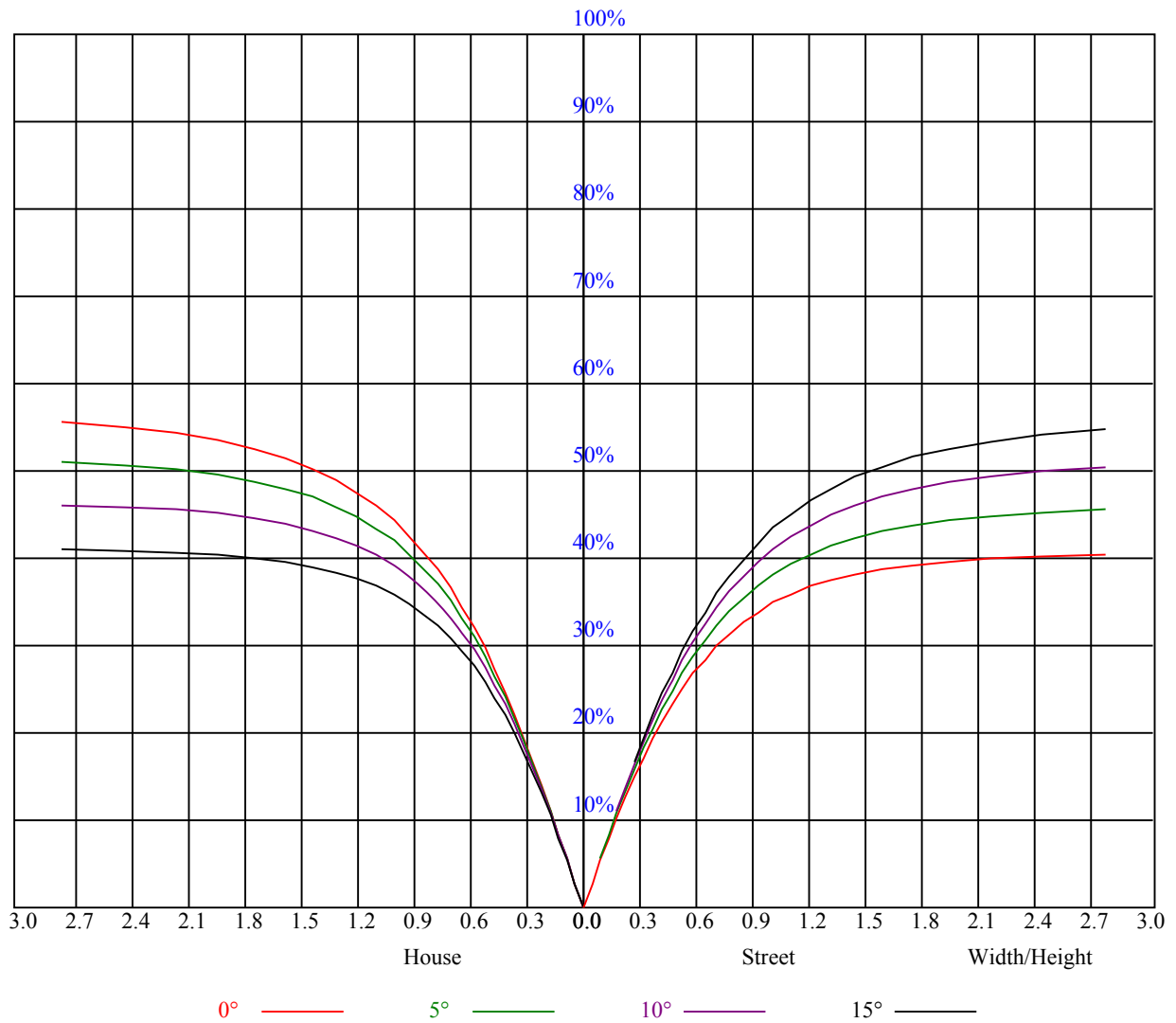
Imax:429.49

- (10%Imax) 42.9493
- (20%Imax) 85.8986
- (30%Imax) 128.848
- (40%Imax) 171.797
- (50%Imax) 214.747
- (60%Imax) 257.696
- (70%Imax) 300.645
- (80%Imax) 343.594
- (90%Imax) 386.544





(10%Emax) 4.696078	—
(20%Emax) 9.392167	—
(30%Emax) 14.08822	—
(40%Emax) 18.78433	—
(50%Emax) 23.48045	—
(60%Emax) 28.17656	—
(70%Emax) 32.87255	—
(80%Emax) 37.56867	—
(90%Emax) 42.26478	—



LL4RRG-41K

Intensity data(cd)

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	411.71	417.60	402.27	381.50	355.90	324.84	289.96	255.08	220.19
22.5	411.71	410.74	394.81	374.85	349.24	318.99	285.72	251.45	216.16
45.0	411.71	402.68	388.96	368.60	342.79	312.54	280.28	245.80	210.71
67.5	411.71	398.84	383.92	362.95	337.95	307.90	274.63	240.15	206.68
90.0	411.71	395.42	379.49	358.11	332.50	302.06	269.19	235.72	201.24
112.5	411.71	392.80	375.45	352.87	327.26	297.62	264.75	230.68	196.20
135.0	411.71	390.17	373.64	351.66	325.45	295.00	262.13	227.65	194.58
157.5	411.71	389.17	372.63	351.06	324.24	293.79	260.52	227.45	193.17
180.0	411.71	429.49	426.07	416.79	402.07	381.30	354.28	322.42	289.96
202.5	411.71	421.83	418.61	409.53	394.41	374.24	347.83	316.78	282.90
225.0	411.71	416.19	413.97	405.50	390.78	370.21	345.21	314.76	281.49
247.5	411.71	412.96	410.94	402.68	389.37	369.81	344.00	314.36	282.30
270.0	411.71	410.54	409.13	402.07	388.76	370.61	346.01	316.78	283.91
292.5	411.71	408.72	408.12	401.47	388.76	370.41	347.43	318.79	286.53
315.0	411.71	407.11	406.31	400.26	388.16	370.61	347.43	319.60	287.94
337.5	411.71	406.31	405.70	399.25	387.96	370.21	346.82	318.79	286.93
360.0	411.71	417.60	402.27	381.50	355.90	324.84	289.96	255.08	220.19
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	184.30	149.01	115.34	84.29	54.85	30.25	14.32	7.06	0.40
22.5	180.87	146.19	113.93	82.67	54.04	29.84	14.32	6.86	0.40
45.0	177.04	142.96	110.50	79.85	52.63	29.04	13.51	6.25	0.20
67.5	172.20	138.73	106.67	76.42	49.60	26.21	12.30	4.84	0.20
90.0	167.36	134.29	102.84	72.79	45.77	22.79	10.89	3.83	0.20
112.5	163.53	130.66	99.21	69.36	43.55	21.78	10.08	3.43	0.20
135.0	159.90	128.04	96.79	68.15	41.74	20.97	10.28	3.63	0.20
157.5	159.70	127.03	96.79	67.35	41.34	20.16	10.49	3.63	0.20
180.0	253.26	216.36	179.86	145.38	112.52	79.04	50.41	25.81	12.50
202.5	248.22	212.33	176.44	141.75	109.49	77.63	48.80	26.21	12.10
225.0	246.20	210.71	176.64	143.16	109.29	78.84	50.01	26.01	12.50
247.5	247.61	213.74	178.45	143.97	111.31	81.06	52.63	28.03	12.50
270.0	250.64	215.35	180.27	145.99	113.93	82.87	55.45	29.84	13.31
292.5	252.45	218.58	183.29	150.02	116.95	85.29	56.66	32.26	14.52
315.0	254.07	218.98	185.31	150.83	117.56	87.11	58.27	32.87	15.53
337.5	254.27	219.59	184.90	150.63	118.36	86.91	58.88	33.27	15.33
360.0	184.30	149.01	115.34	84.29	54.85	30.25	14.32	7.06	0.40
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.40	0.40
22.5	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.40	0.40
45.0	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.40	0.40
67.5	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.40	0.40
90.0	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.40	0.40
112.5	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.40	0.40
135.0	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.40	0.40
157.5	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.40	0.40
180.0	5.24	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
202.5	5.24	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
225.0	5.65	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
247.5	5.65	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
270.0	6.05	0.61	0.20	0.20	0.20	0.20	0.20	0.20	0.20
292.5	6.86	1.21	0.20	0.20	0.20	0.20	0.20	0.20	0.20
315.0	7.86	1.61	0.20	0.20	0.20	0.20	0.20	0.20	0.20
337.5	7.86	1.61	0.20	0.20	0.20	0.20	0.20	0.20	0.20
360.0	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.40	0.40

LL4RRG-41K

Intensity data(cd)

Appendix Page: 11 Total:11

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.40	0.40	0.40	0.40	0.40	0.61	0.61	0.61	0.61
22.5	0.40	0.40	0.40	0.61	0.61	0.61	0.61	0.61	0.61
45.0	0.40	0.40	0.40	0.40	0.61	0.40	0.61	0.61	0.61
67.5	0.40	0.40	0.40	0.40	0.40	0.61	0.61	0.61	0.61
90.0	0.40	0.40	0.40	0.40	0.61	0.61	0.61	0.61	0.61
112.5	0.40	0.40	0.40	0.40	0.40	0.40	0.61	0.61	0.61
135.0	0.40	0.40	0.40	0.40	0.61	0.40	0.61	0.61	0.61
157.5	0.40	0.40	0.40	0.40	0.61	0.61	0.40	0.61	0.61
180.0	0.40	0.40	0.40	0.40	0.40	0.40	0.61	0.61	0.61
202.5	0.40	0.40	0.40	0.40	0.40	0.40	0.61	0.61	0.61
225.0	0.40	0.40	0.40	0.40	0.40	0.61	0.61	0.61	0.61
247.5	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.61
270.0	0.20	0.40	0.40	0.40	0.40	0.40	0.61	0.40	0.40
292.5	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
315.0	0.20	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
337.5	0.20	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
360.0	0.40	0.40	0.40	0.40	0.40	0.61	0.61	0.61	0.61

C/γ(°)	180.0
0.0	0.61
22.5	0.61
45.0	0.61
67.5	0.61
90.0	0.61
112.5	0.61
135.0	0.61
157.5	0.61
180.0	0.61
202.5	0.61
225.0	0.61
247.5	0.61
270.0	0.61
292.5	0.61
315.0	0.61
337.5	0.61
360.0	0.61