



Shenzhen Belling Efficiency Testing Laboratory Co.,Ltd.  
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LumCAT: LL4RRG-27K

Luminaire:

Report No:

Voltage(V): 120.02

Test No:

Current(A): 0.1172

LampCAT:

Power (W): 13.8850

Lamp flux(lm): 854.5

PF: 0.9868

Number of Lamps: 1

Ballast type:

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

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### Photometric Results

Lumens(lm): 854.52

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 60.85

Central intensity(cd): 389.846

Maximum intensity(cd): 410.923

Angle of maximum intensity: C=180.0  $\gamma$ =5.0

Beam Angle(50%Imax): [C0/180]Total=90.4

[C90/270]Total=90.3

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

[C90/270]Total=143.5

Maximum s/h(1/2): C0\_180=1.28 C90\_270=1.01

Maximum s/h(1/4): C0\_180=1.34 C90\_270=1.12

Up flux rate of lamp(%): 0.29%

Down flux rate of lamp(%): 98.58%

Up flux rate of LUM(%): -0.85%

Down flux rate of LUM(%): 99.71%

CIE Type : Direct lighting

Output flux ratio in  $\pi$  solid angle : 86.485%

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

Date:  
Humidity(%): 58%

Operator: Sam

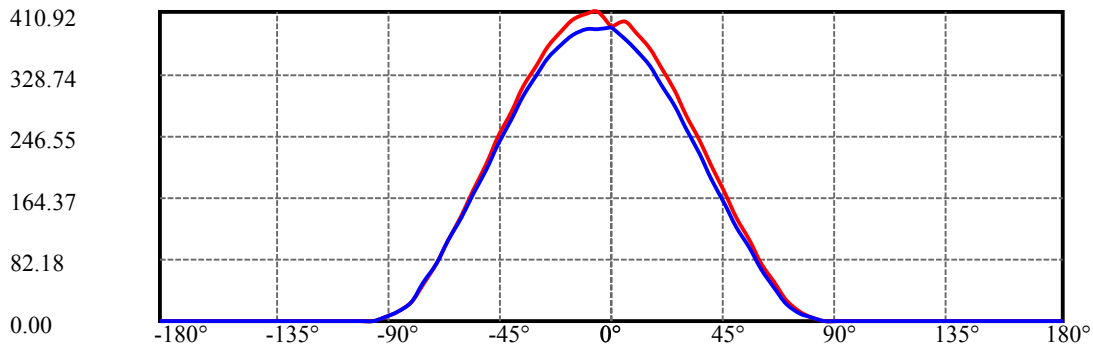
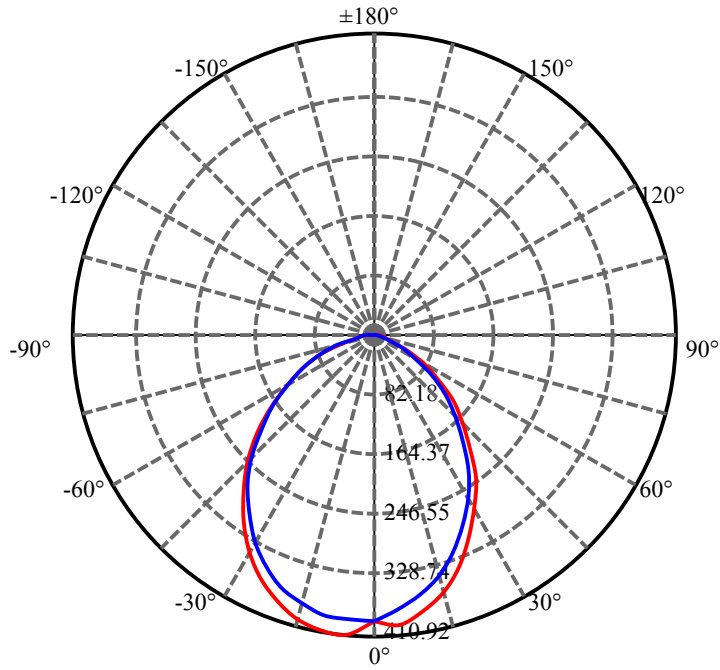
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	389.846	0.000	0	.000%	.000%
5.0	385.958	9.279	9.279	1.086%	1.086%
10.0	377.476	27.354	36.634	3.201%	4.287%
15.0	363.708	44.086	80.72	5.159%	9.446%
20.0	344.589	58.600	139.32	6.858%	16.304%
25.0	320.799	70.145	209.465	8.209%	24.513%
30.0	293.302	78.216	287.681	9.153%	33.666%
35.0	263.078	82.564	370.245	9.662%	43.328%
40.0	231.105	83.198	453.443	9.736%	53.064%
45.0	198.584	80.401	533.844	9.409%	62.473%
50.0	166.063	74.583	608.427	8.728%	71.201%
55.0	134.286	66.238	674.665	7.752%	78.953%
60.0	104.036	56.018	730.683	6.556%	85.508%
65.0	75.782	44.621	775.304	5.222%	90.730%
70.0	50.596	32.852	808.157	3.845%	94.574%
75.0	30.759	21.973	830.129	2.571%	97.146%
80.0	15.843	12.948	843.077	1.515%	98.661%
85.0	6.264	6.285	849.362	.736%	99.397%
90.0	2.871	2.650	852.012	.310%	99.707%
95.0	0.235	0.895	852.907	.105%	99.811%
100.0	0.209	0.121	853.028	.014%	99.825%
105.0	0.209	0.112	853.14	.013%	99.839%
110.0	0.209	0.109	853.249	.013%	99.851%
115.0	0.209	0.106	853.355	.012%	99.864%
120.0	0.209	0.102	853.457	.012%	99.876%
125.0	0.209	0.097	853.553	.011%	99.887%
130.0	0.300	0.109	853.662	.013%	99.900%
135.0	0.314	0.121	853.784	.014%	99.914%
140.0	0.379	0.127	853.911	.015%	99.929%
145.0	0.418	0.133	854.044	.016%	99.944%
150.0	0.418	0.123	854.167	.014%	99.959%
155.0	0.418	0.106	854.273	.012%	99.971%
160.0	0.418	0.088	854.36	.010%	99.981%
165.0	0.418	0.069	854.429	.008%	99.989%
170.0	0.418	0.050	854.479	.006%	99.995%
175.0	0.431	0.030	854.509	.004%	99.999%
180.0	0.418	0.010	854.519	.001%	100.000%

## ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	287.68	33.67%	33.67%
0-40	453.44	53.06%	53.06%
0-60	730.68	85.51%	85.51%
0-90	852.01	99.71%	99.71%
0-120	853.46	99.88%	99.88%
0-180	854.52	100.00%	100.00%
60-90	177.35	20.75%	20.75%
90-120	4.09	0.48%	0.48%
90-130	4.30	0.50%	0.50%
90-150	4.80	0.56%	0.56%
90-180	5.15	0.60%	0.60%
0-55.80	683.62	80.00%	80.00%

## ZONAL LUMEN SUMMARY

0-10	36.63
10-20	102.69
20-30	148.36
30-40	165.76
40-50	154.98
50-60	122.26
60-70	77.47
70-80	34.92
80-90	8.94
90-100	1.02
100-110	0.22
110-120	0.21
120-130	0.21
130-140	0.25
140-150	0.26
150-160	0.19
160-170	0.12
170-180	0.03



C0/C180: —

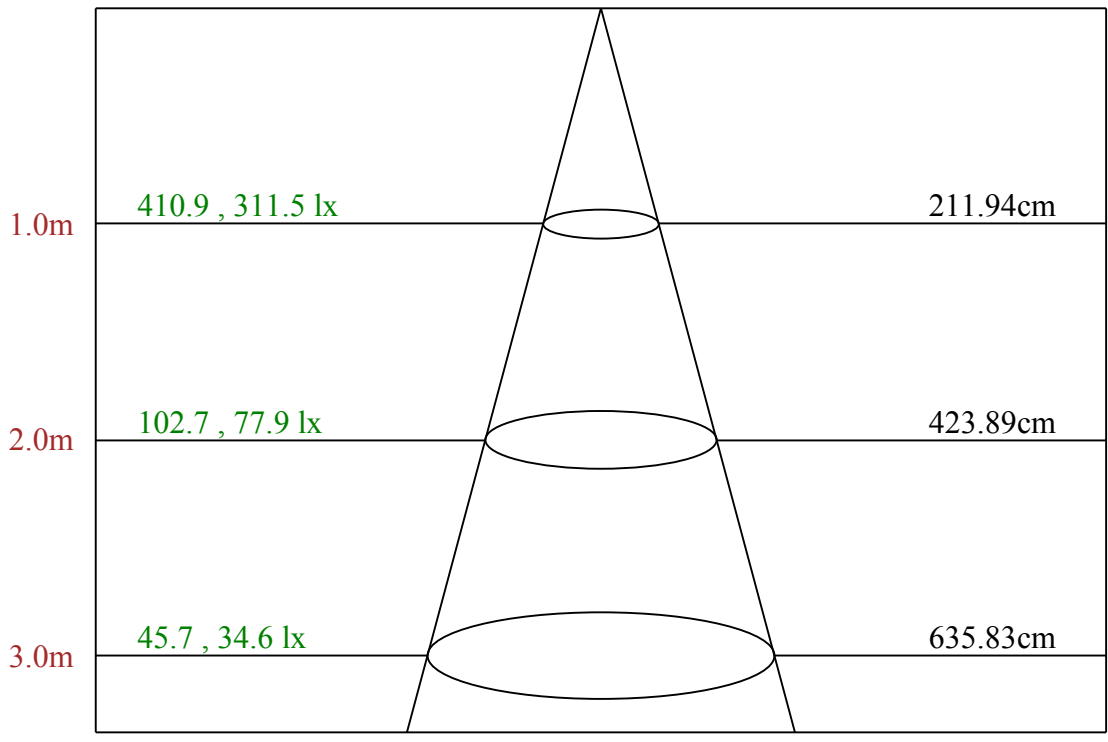
C90/C270: —

Field angle(10%Imax):C0/180Left:71.9 Right:72.0

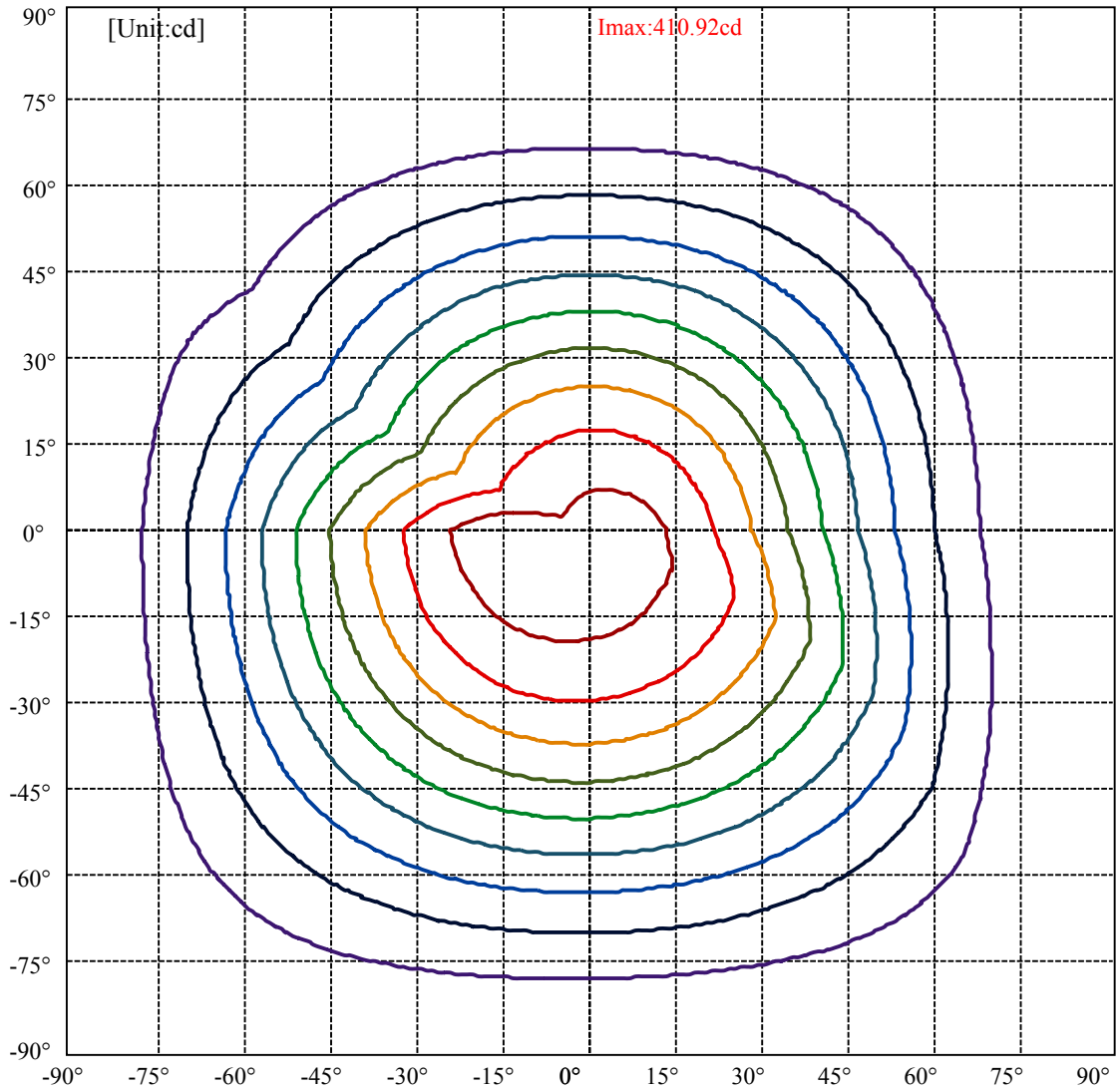
:C90/270Left:77.4 Right:66.1










Beam Angle(50%Imax):C0/180Left:45.4 Right:45.0

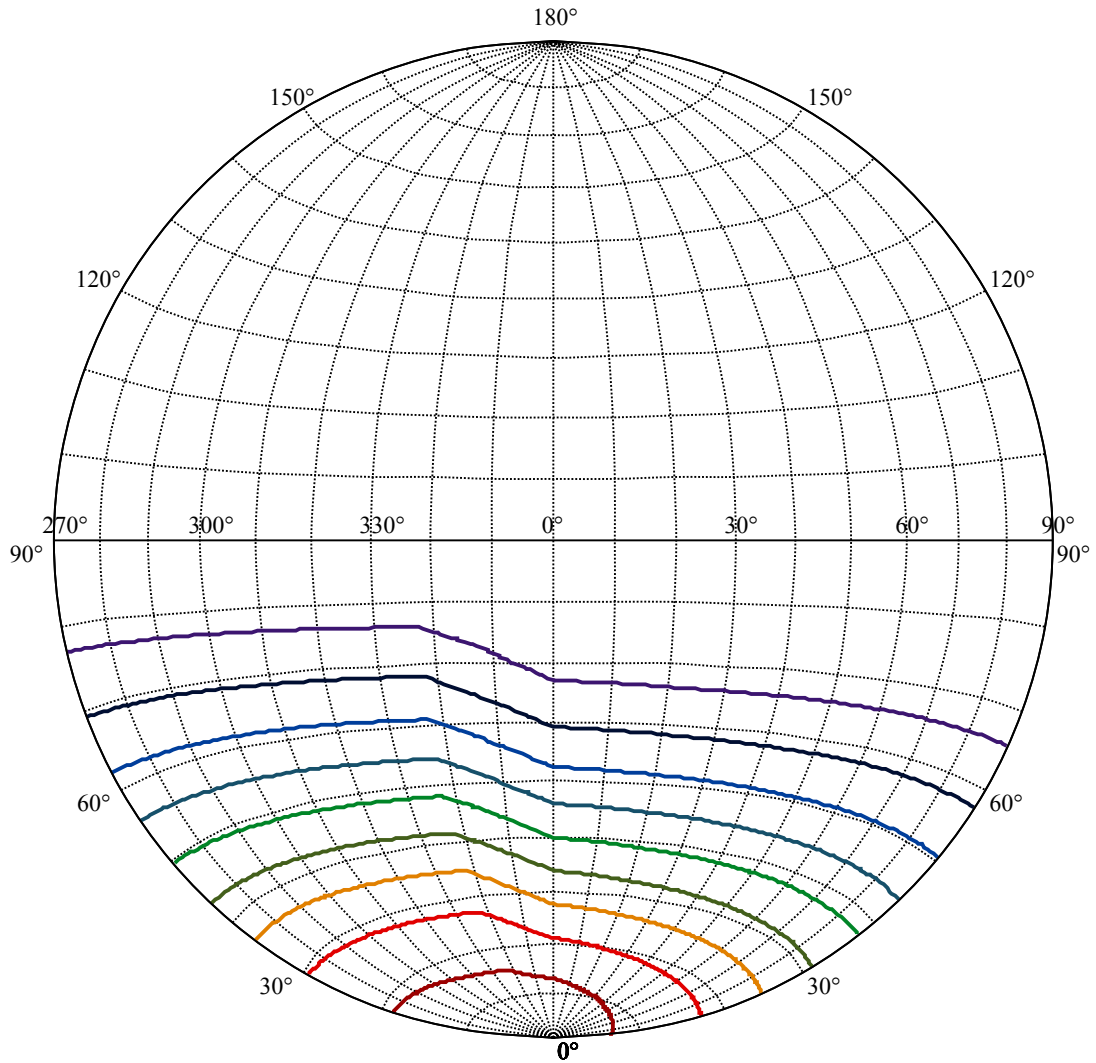
:C90/270Left:51.1 Right:39.2



Max , Ave      Beam angle of C180 plane 92.33



(10%Imax)	41.0923	
(20%Imax)	82.1846	
(30%Imax)	123.277	
(40%Imax)	164.369	
(50%Imax)	205.462	
(60%Imax)	246.554	
(70%Imax)	287.646	
(80%Imax)	328.738	
(90%Imax)	369.831	



House

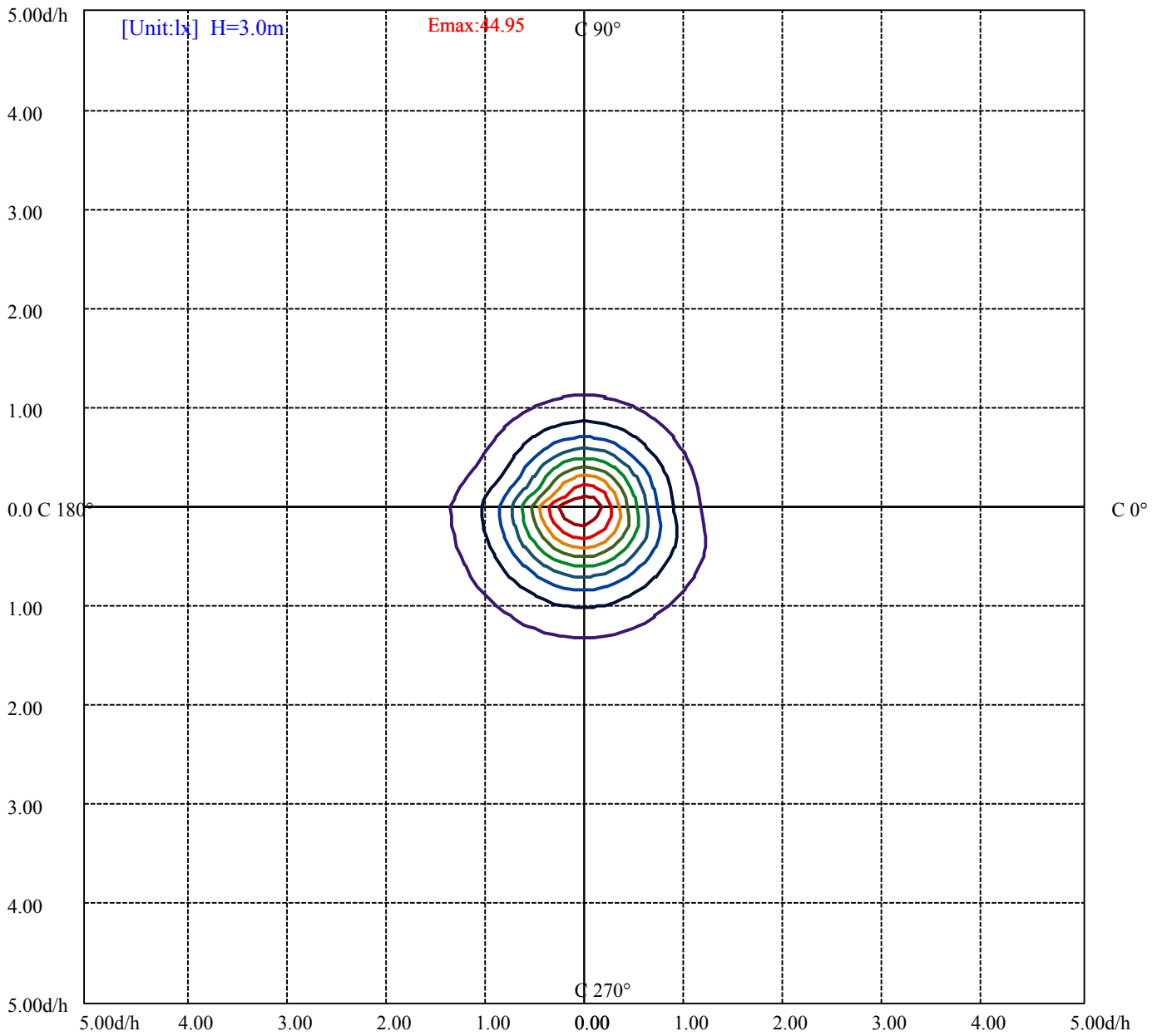
[Unit:cd]

Road

Imax:410.92

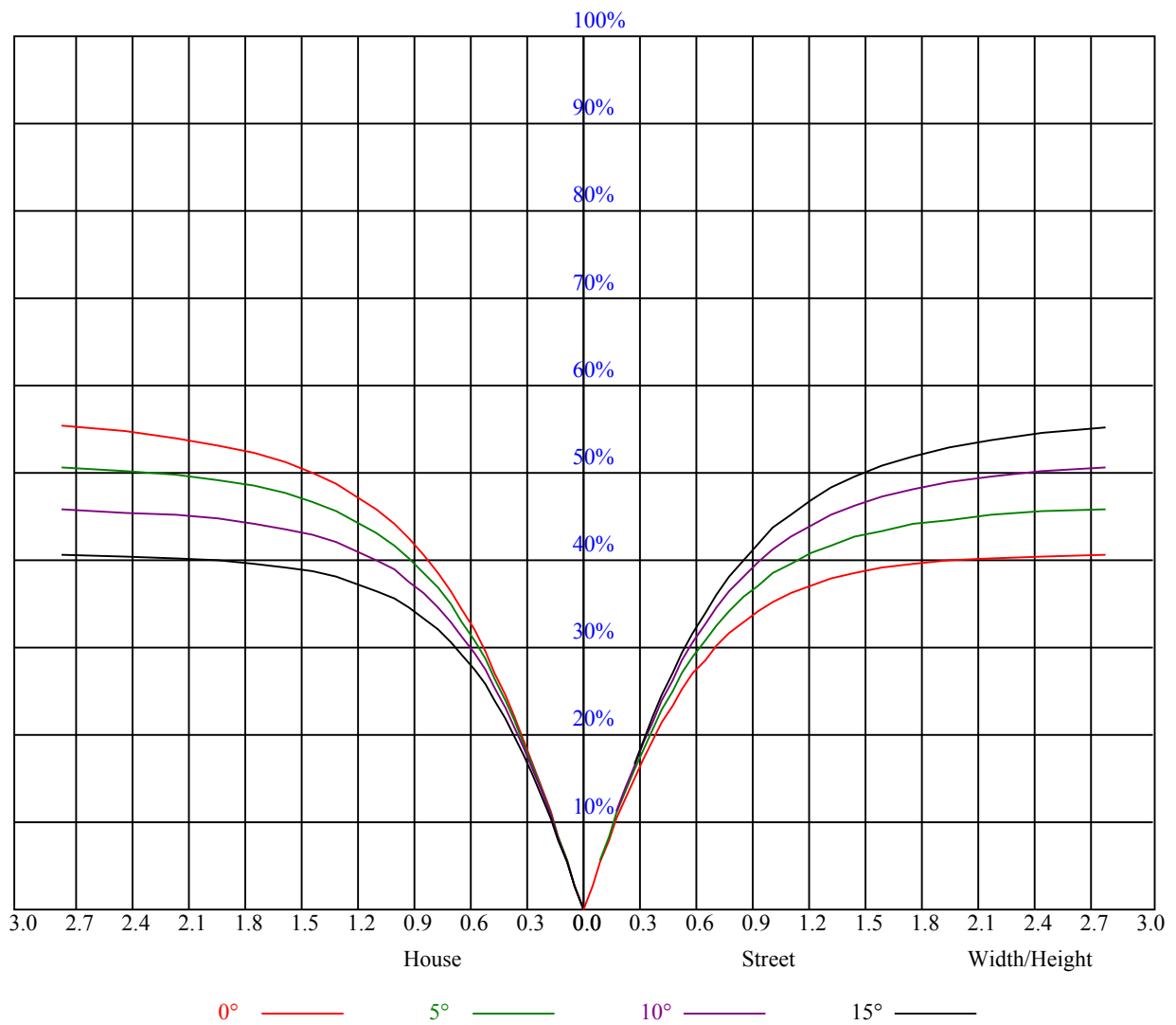
- (10%Imax) 41.0923
- (20%Imax) 82.1846
- (30%Imax) 123.277
- (40%Imax) 164.369
- (50%Imax) 205.462
- (60%Imax) 246.554
- (70%Imax) 287.646
- (80%Imax) 328.738
- (90%Imax) 369.831





- (10%Emax) 4.495211
- (20%Emax) 8.990434
- (30%Emax) 13.48567
- (40%Emax) 17.98089
- (50%Emax) 22.47611
- (60%Emax) 26.97133
- (70%Emax) 31.46656
- (80%Emax) 35.96178
- (90%Emax) 40.45689





LL4RRG-27K

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	389.85	397.98	382.74	361.86	336.17	305.90	273.11	240.12	205.46
22.5	389.85	388.58	373.34	351.83	326.36	296.08	264.55	230.94	197.11
45.0	389.85	381.90	366.24	346.82	320.30	291.28	259.33	225.92	192.52
67.5	389.85	377.52	362.27	342.44	316.55	287.73	255.99	223.00	190.85
90.0	389.85	374.59	359.98	339.72	314.87	285.64	254.53	223.00	189.18
112.5	389.85	372.50	357.05	337.43	312.37	285.02	253.90	222.17	189.80
135.0	389.85	370.62	356.64	337.43	313.62	285.64	255.16	223.42	192.31
157.5	389.85	370.62	356.64	338.68	314.46	286.48	256.20	225.92	193.56
180.0	389.85	410.92	409.04	400.07	385.87	365.40	340.35	310.49	278.33
202.5	389.85	402.36	400.69	393.59	379.60	360.60	337.01	308.19	275.83
225.0	389.85	396.52	394.64	387.12	375.01	356.43	332.62	304.85	273.32
247.5	389.85	391.92	390.46	382.74	370.21	352.67	329.49	300.88	271.03
270.0	389.85	388.37	386.70	379.19	366.66	348.91	325.73	297.96	267.48
292.5	389.85	385.66	383.57	376.68	363.53	345.15	321.35	295.04	263.93
315.0	389.85	383.15	380.44	372.71	359.98	341.39	318.22	290.24	260.59
337.5	389.85	382.11	379.19	371.04	357.89	338.47	315.29	287.10	256.41
360.0	389.85	397.98	382.74	361.86	336.17	305.90	273.11	240.12	205.46
C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	171.43	138.44	106.70	77.68	50.32	27.35	13.16	6.06	0.21
22.5	164.75	132.80	101.69	72.66	46.15	25.06	11.90	5.22	0.21
45.0	160.78	129.04	98.56	69.95	44.89	23.80	11.28	4.59	0.21
67.5	158.48	126.74	96.68	69.53	44.06	23.39	10.44	4.18	0.21
90.0	156.60	126.33	96.47	67.65	43.43	22.76	10.65	3.97	0.21
112.5	158.48	127.16	97.09	69.32	44.89	24.01	11.07	4.39	0.21
135.0	159.94	128.62	98.56	71.41	46.15	24.85	11.69	5.43	0.21
157.5	161.61	130.08	101.06	73.08	47.40	25.89	12.53	5.85	0.21
180.0	243.88	208.59	173.72	139.48	107.95	77.47	49.70	26.73	12.32
202.5	242.00	208.59	174.14	140.52	108.16	79.14	51.78	27.98	13.16
225.0	240.12	206.30	172.26	140.11	108.37	78.72	52.41	28.61	13.16
247.5	238.04	204.63	171.01	139.27	108.16	78.72	52.41	28.19	12.53
270.0	235.74	202.33	169.13	136.97	106.28	77.68	50.74	26.73	12.11
292.5	231.77	198.78	166.83	135.10	104.40	76.21	49.28	26.31	11.90
315.0	228.22	195.65	164.12	132.59	102.10	73.29	47.40	25.27	11.90
337.5	225.51	192.93	160.57	129.25	99.81	71.20	45.73	24.01	11.48
360.0	171.43	138.44	106.70	77.68	50.32	27.35	13.16	6.06	0.21
C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.42
22.5	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.42
45.0	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.42
67.5	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.42
90.0	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.42
112.5	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.42
135.0	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.42
157.5	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
180.0	5.43	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
202.5	6.06	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
225.0	6.06	0.42	0.21	0.21	0.21	0.21	0.21	0.21	0.21
247.5	5.43	0.42	0.21	0.21	0.21	0.21	0.21	0.21	0.21
270.0	5.43	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
292.5	5.22	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
315.0	5.64	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
337.5	5.01	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
360.0	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.42

LL4RRG-27K

Intensity data(cd)

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
22.5	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.63
45.0	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
67.5	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
90.0	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
112.5	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
135.0	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
157.5	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
180.0	0.21	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
202.5	0.21	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
225.0	0.21	0.21	0.42	0.42	0.42	0.42	0.42	0.42	0.42
247.5	0.21	0.21	0.42	0.42	0.42	0.42	0.42	0.42	0.42
270.0	0.21	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
292.5	0.21	0.21	0.42	0.42	0.42	0.42	0.42	0.42	0.42
315.0	0.21	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
337.5	0.21	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
360.0	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
C/γ(°)	180.0								
0.0	0.42								
22.5	0.42								
45.0	0.42								
67.5	0.42								
90.0	0.42								
112.5	0.42								
135.0	0.42								
157.5	0.42								
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337.5	0.42								
360.0	0.42								