



Shenzhen Belling Efficiency Testing Laboratory Co.,Ltd.
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Address:1 F,No.1 building,Meibaoh industrial park,Dalang street,Longhua district,Shenzhen,China

LumCAT: LB4R 41K

Luminaire:

Report No:

Voltage(V): 120.1

Test No:

Current(A): 0.0885

LampCAT:

Power (W): 10.4130

Lamp flux(lm): 732.1

PF: 0.9798

Number of Lamps: 1

Ballast type:

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 732.10

Efficiency(%): 100.00%

Lumens(lm)/Power(W): 70.31

Central intensity(cd): 281.313

Maximum intensity(cd): 292.179

Angle of maximum intensity: C=90.0 γ =5.0

Beam Angle(50%Imax): [C0/180]Total=104.8

[C90/270]Total=104.7

Field angle(10%Imax): [C0/180]Total=151.4

[C90/270]Total=151.2

Maximum s/h(1/2): C0_180=1.34 C90_270=1.38

Maximum s/h(1/4): C0_180=1.43 C90_270=1.47

Up flux rate of lamp(%): 0.01%

Down flux rate of lamp(%): 99.99%

Up flux rate of LUM(%): 0.01%

Down flux rate of LUM(%): 99.99%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 82.920%

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

Date:
Humidity(%): 58%

Operator: Sam

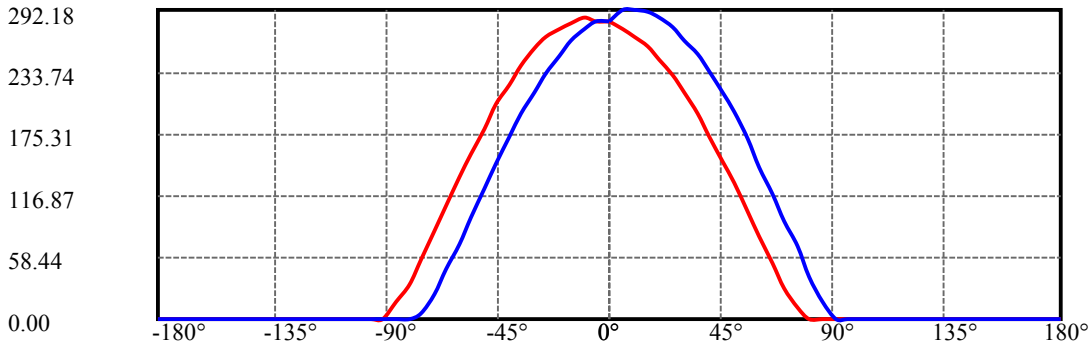
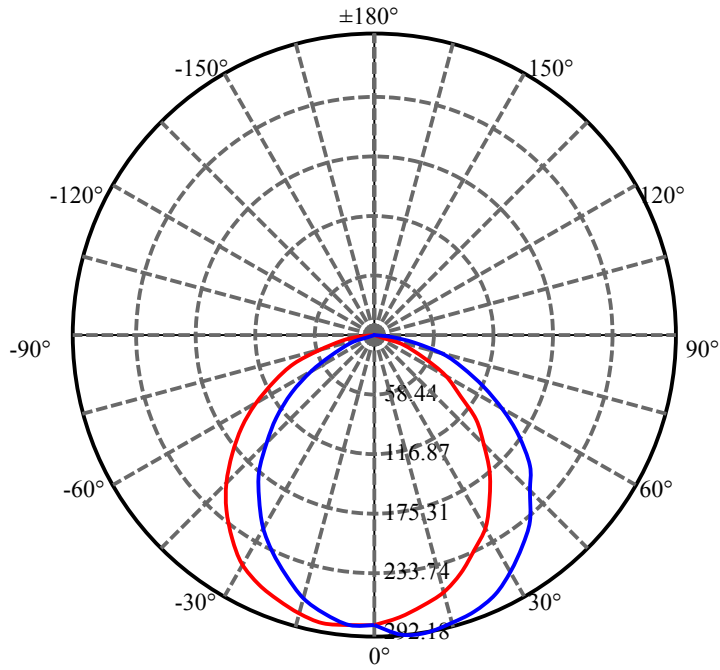
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	281.313	0.000	0	.000%	.000%
5.0	279.820	6.708	6.708	.916%	.916%
10.0	275.918	19.880	26.589	2.716%	3.632%
15.0	269.739	32.368	58.957	4.421%	8.053%
20.0	260.632	43.710	102.667	5.970%	14.024%
25.0	249.087	53.460	156.127	7.302%	21.326%
30.0	235.590	61.336	217.463	8.378%	29.704%
35.0	218.516	66.870	284.333	9.134%	38.838%
40.0	198.678	69.606	353.939	9.508%	48.346%
45.0	177.050	69.569	423.508	9.503%	57.848%
50.0	154.448	66.984	490.492	9.150%	66.998%
55.0	130.544	61.967	552.459	8.464%	75.462%
60.0	105.664	54.599	607.058	7.458%	82.920%
65.0	80.460	45.247	652.305	6.180%	89.100%
70.0	55.906	34.529	686.833	4.716%	93.817%
75.0	34.116	23.530	710.363	3.214%	97.031%
80.0	16.424	13.523	723.886	1.847%	98.878%
85.0	6.569	6.248	730.134	.853%	99.731%
90.0	0.309	1.883	732.017	.257%	99.988%
95.0	0.000	0.085	732.102	.012%	100.000%
100.0	0.000	0.000	732.102	.000%	100.000%
105.0	0.000	0.000	732.102	.000%	100.000%
110.0	0.000	0.000	732.102	.000%	100.000%
115.0	0.000	0.000	732.102	.000%	100.000%
120.0	0.000	0.000	732.102	.000%	100.000%
125.0	0.000	0.000	732.102	.000%	100.000%
130.0	0.000	0.000	732.102	.000%	100.000%
135.0	0.000	0.000	732.102	.000%	100.000%
140.0	0.000	0.000	732.102	.000%	100.000%
145.0	0.000	0.000	732.102	.000%	100.000%
150.0	0.000	0.000	732.102	.000%	100.000%
155.0	0.000	0.000	732.102	.000%	100.000%
160.0	0.000	0.000	732.102	.000%	100.000%
165.0	0.000	0.000	732.102	.000%	100.000%
170.0	0.000	0.000	732.102	.000%	100.000%
175.0	0.000	0.000	732.102	.000%	100.000%
180.0	0.000	0.000	732.102	.000%	100.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	217.46	29.70%	29.70%
0-40	353.94	48.35%	48.35%
0-60	607.06	82.92%	82.92%
0-90	732.02	99.99%	99.99%
0-120	732.10	100.00%	100.00%
0-180	732.10	100.00%	100.00%
60-90	179.56	24.53%	24.53%
90-120	1.97	0.27%	0.27%
90-130	1.97	0.27%	0.27%
90-150	1.97	0.27%	0.27%
90-180	1.97	0.27%	0.27%
0-58.04	585.68	80.00%	80.00%

ZONAL LUMEN SUMMARY

0-10	26.59
10-20	76.08
20-30	114.80
30-40	136.48
40-50	136.55
50-60	116.57
60-70	79.78
70-80	37.05
80-90	8.13
90-100	0.08
100-110	0.00
110-120	0.00
120-130	0.00
130-140	0.00
140-150	0.00
150-160	0.00
160-170	0.00
170-180	0.00



C0/C180: —

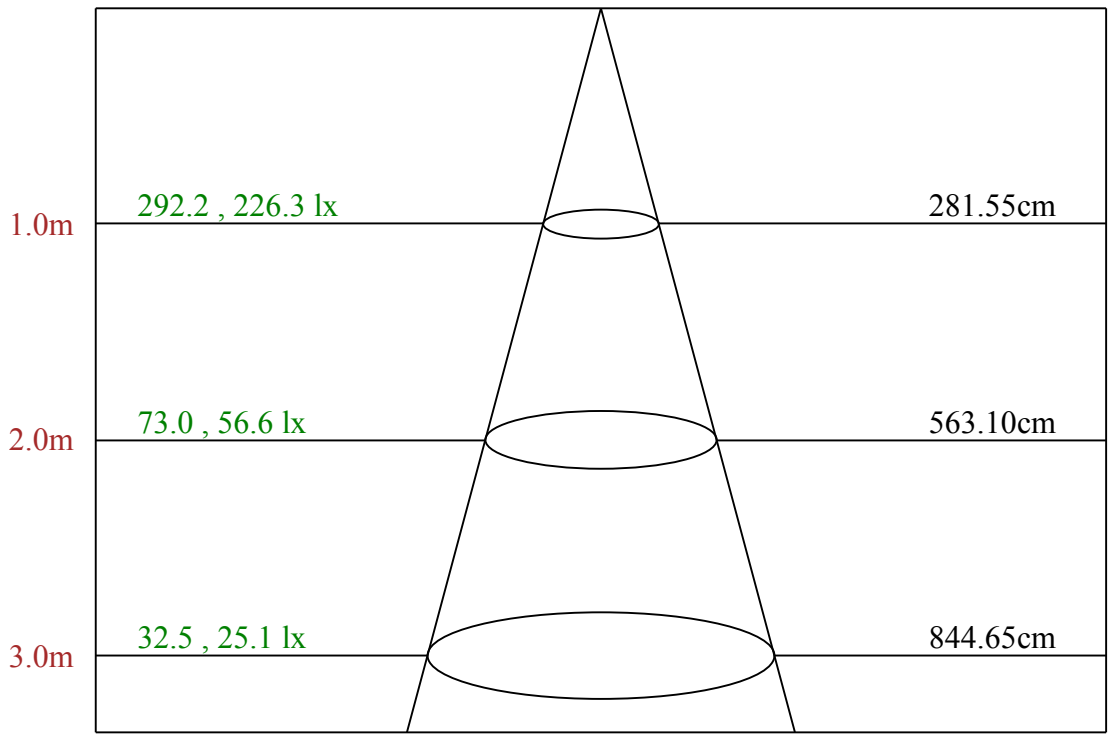
C90/C270: —

Field angle(10%Imax):C0/180Left:71.1 Right:80.3

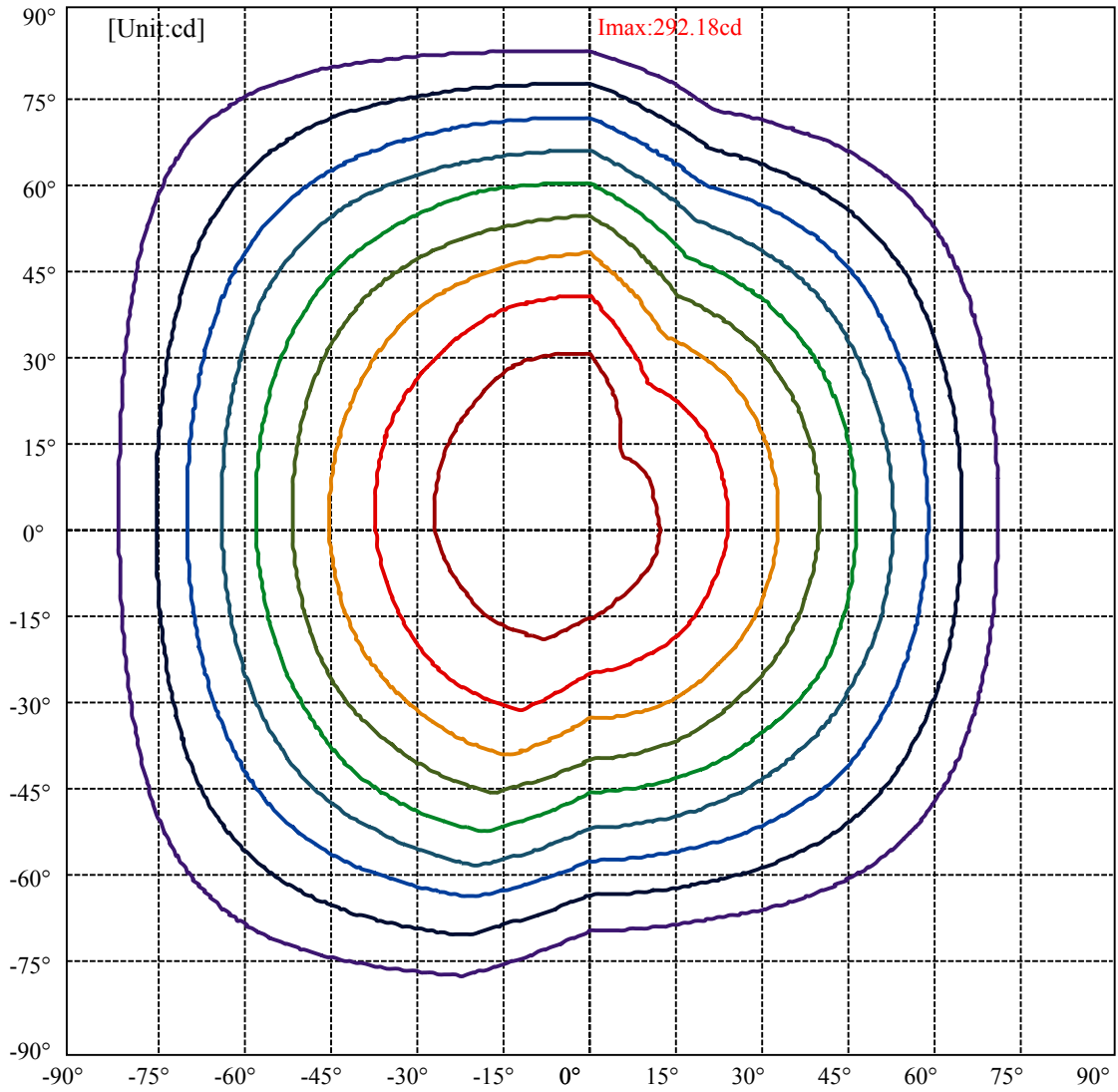
:C90/270Left:78.9 Right:72.3

Beam Angle(50%Imax):C0/180Left:48.1 Right:56.7

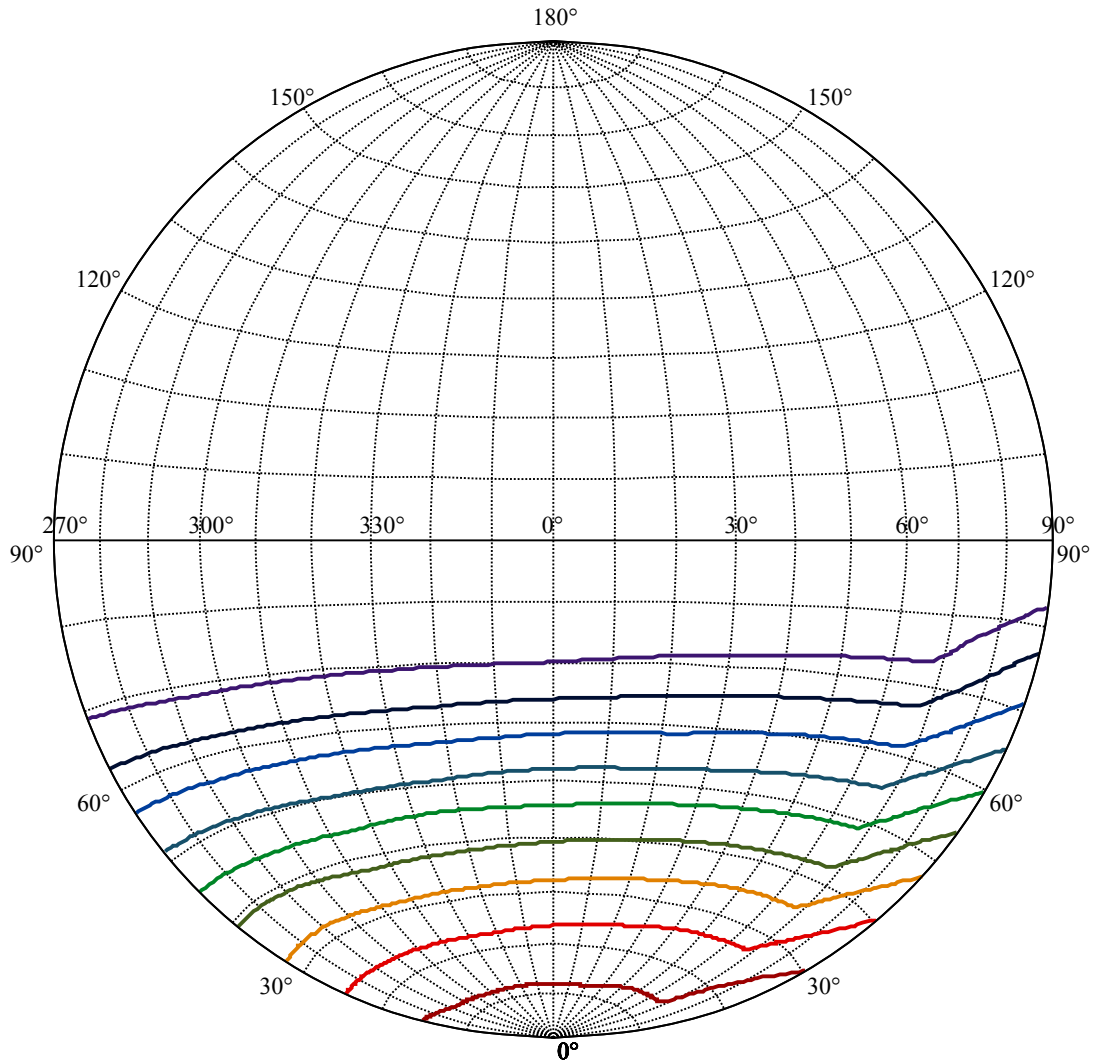
:C90/270Left:55.1 Right:49.6



Max , Ave Beam angle of C90 plane 106.77



(10%Imax) 29.2179	—
(20%Imax) 58.4358	—
(30%Imax) 87.6537	—
(40%Imax) 116.872	—
(50%Imax) 146.089	—
(60%Imax) 175.307	—
(70%Imax) 204.525	—
(80%Imax) 233.743	—
(90%Imax) 262.961	—



House

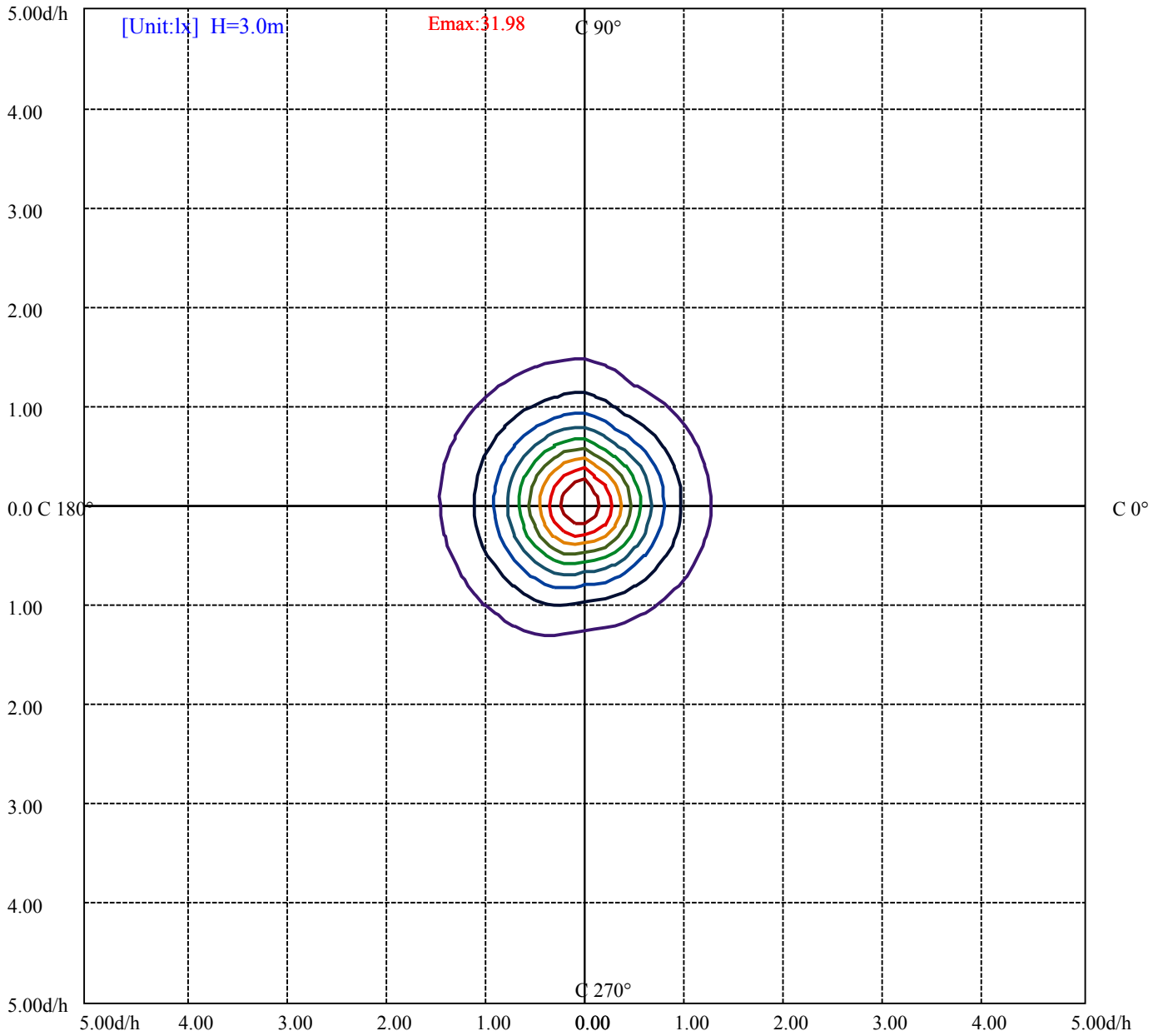
[Unit:cd]

Road

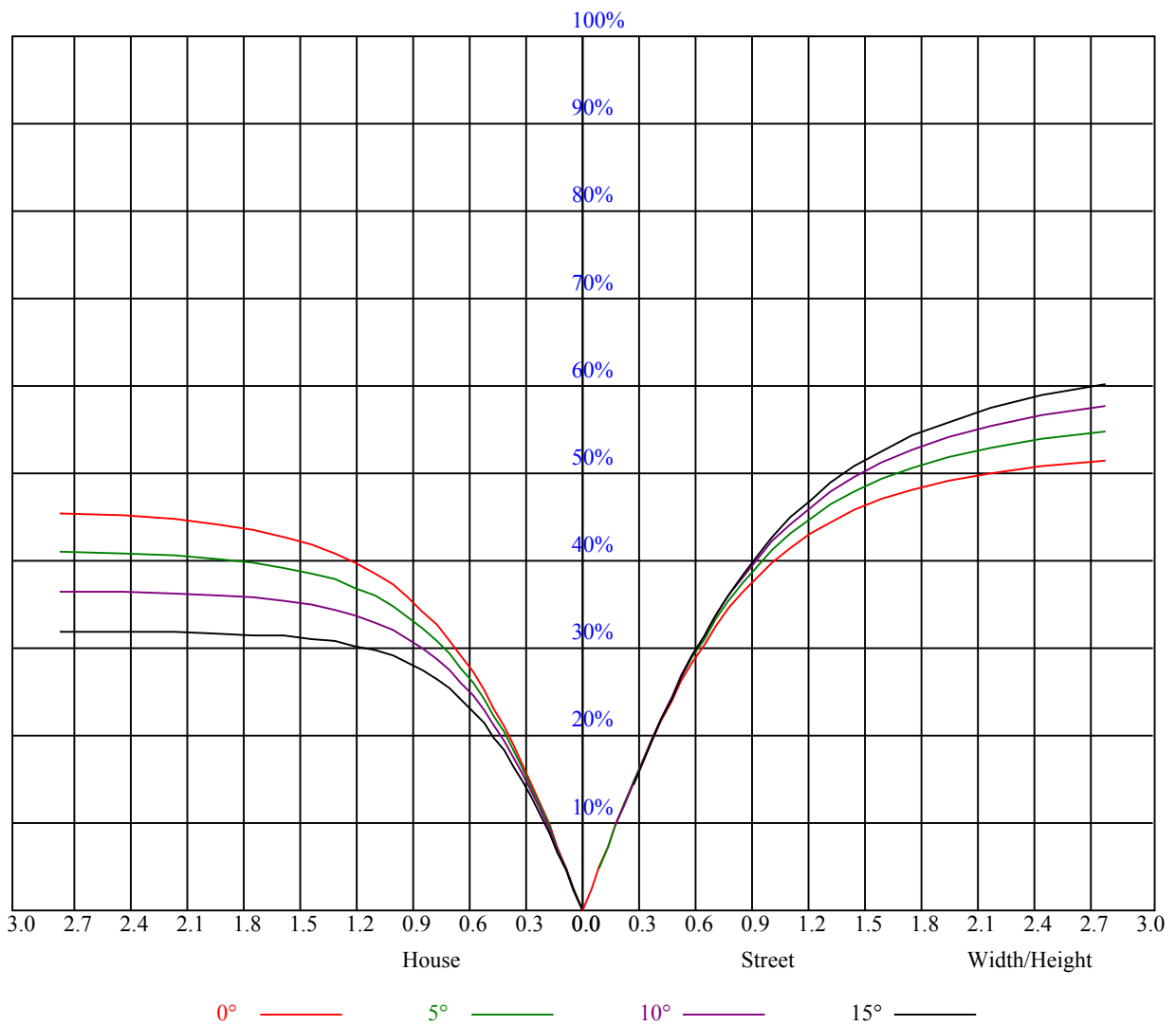
Imax:292.18

- (10%Imax) 29.2179
- (20%Imax) 58.4358
- (30%Imax) 87.6537
- (40%Imax) 116.872
- (50%Imax) 146.089
- (60%Imax) 175.307
- (70%Imax) 204.525
- (80%Imax) 233.743
- (90%Imax) 262.961





(10%Emax) 3.198311	—
(20%Emax) 6.396633	—
(30%Emax) 9.594944	—
(40%Emax) 12.79322	—
(50%Emax) 15.99156	—
(60%Emax) 19.18989	—
(70%Emax) 22.38822	—
(80%Emax) 25.58656	—
(90%Emax) 28.78489	—



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	281.31	273.97	266.16	258.36	245.35	229.74	214.13	193.31	172.50
22.5	281.31	273.97	266.16	258.36	247.95	232.34	216.73	198.52	177.70
45.0	281.31	273.97	268.76	260.96	247.95	237.54	219.33	203.72	182.90
67.5	281.31	276.57	271.37	260.96	253.15	240.14	224.53	206.32	185.51
90.0	281.31	292.18	292.18	289.58	284.37	276.57	263.56	250.55	234.94
112.5	281.31	286.98	289.58	284.37	281.77	273.97	266.16	250.55	234.94
135.0	281.31	284.37	284.37	281.77	276.57	271.37	260.96	247.95	229.74
157.5	281.31	284.37	284.37	281.77	276.57	268.76	258.36	245.35	227.13
180.0	281.31	281.77	284.37	279.17	273.97	266.16	255.75	240.14	221.93
202.5	281.31	279.17	276.57	276.57	271.37	260.96	250.55	234.94	216.73
225.0	281.31	279.17	279.17	273.97	266.16	258.36	245.35	232.34	211.52
247.5	281.31	279.17	276.57	271.37	263.56	253.15	242.75	227.13	208.92
270.0	281.31	281.77	273.97	263.56	247.95	232.34	214.13	193.31	172.50
292.5	281.31	279.17	268.76	258.36	245.35	229.74	214.13	193.31	169.90
315.0	281.31	276.57	266.16	258.36	245.35	227.13	211.52	188.11	164.69
337.5	281.31	273.97	266.16	258.36	242.75	227.13	211.52	190.71	167.29
360.0	281.31	273.97	266.16	258.36	245.35	229.74	214.13	193.31	172.50
C/ γ (°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	149.08	128.27	102.25	78.83	52.82	29.40	11.19	0.00	0.00
22.5	154.29	130.87	104.85	81.44	58.02	34.60	16.39	0.00	0.00
45.0	159.49	136.07	112.66	89.24	63.22	39.81	18.99	3.38	0.00
67.5	164.69	141.28	117.86	94.44	68.43	45.01	21.60	5.98	0.00
90.0	214.13	195.91	169.90	143.88	117.86	91.84	68.43	39.81	16.39
112.5	211.52	193.31	167.29	146.48	117.86	91.84	68.43	39.81	18.99
135.0	211.52	190.71	167.29	141.28	117.86	89.24	65.83	39.81	18.99
157.5	206.32	185.51	164.69	138.67	115.26	86.64	60.62	37.21	16.39
180.0	203.72	180.30	156.89	133.47	107.45	84.04	55.42	32.00	16.39
202.5	198.52	175.10	149.08	125.67	99.65	73.63	50.21	24.20	11.19
225.0	190.71	167.29	146.48	117.86	91.84	68.43	42.41	21.60	3.38
247.5	185.51	164.69	141.28	115.26	86.64	63.22	39.81	18.99	3.38
270.0	146.48	123.06	97.05	71.03	47.61	24.20	5.98	0.00	0.00
292.5	143.88	120.46	94.44	71.03	45.01	21.60	5.98	0.00	0.00
315.0	143.88	117.86	97.05	71.03	47.61	24.20	5.98	0.00	0.00
337.5	149.08	120.46	99.65	71.03	50.21	26.80	8.59	0.00	0.00
360.0	149.08	128.27	102.25	78.83	52.82	29.40	11.19	0.00	0.00
C/ γ (°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.0	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.5	3.38	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.0	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
247.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
270.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
292.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
337.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
360.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

LB4R 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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
45.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
67.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
112.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
135.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
157.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
180.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
202.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
225.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
247.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
270.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
292.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
315.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
337.5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
360.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

C/γ(°)	180.0
0.0	0.00
22.5	0.00
45.0	0.00
67.5	0.00
90.0	0.00
112.5	0.00
135.0	0.00
157.5	0.00
180.0	0.00
202.5	0.00
225.0	0.00
247.5	0.00
270.0	0.00
292.5	0.00
315.0	0.00
337.5	0.00
360.0	0.00