
LumCAT: LED-BL1A-O-18W230 4000K Ra80

Luminaire:

Report No:

Voltage(V): 230.1000

Test No:

Current(A): 0.0940

LampCAT:

Power (W): 18.0100

Lamp flux(lm): -1.0

PF: 0.8290

Number of Lamps: 1

Ballast type:

Length(mm): 0

Width(mm): 0

Phm Type: C

Height(mm): 0

Photometric Results

Lumens(lm): 1494.12

Efficiency(%): 0.00%

Lumens(lm)/Power(W): 82.96

Central intensity(cd): 419.821

Maximum intensity(cd): 430.350

Angle of maximum intensity: C=45.0 γ =0.0

Beam Angle(50%Imax): [C0/180]Total=132.3

[C90/270]Total=99.2

Field angle(10%Imax): [C0/180]Total=202.2

[C90/270]Total=162.8

Maximum s/h(1/2): C0_180=1.36 C90_270=1.14

Maximum s/h(1/4): C0_180=1.94 C90_270=1.27

Up flux rate of lamp(%): 0.00%

Down flux rate of lamp(%): 0.00%

Up flux rate of LUM(%): 9.84%

Down flux rate of LUM(%): 90.16%

CIE Type : Direct lighting

Output flux ratio in π solid angle : 64.982%

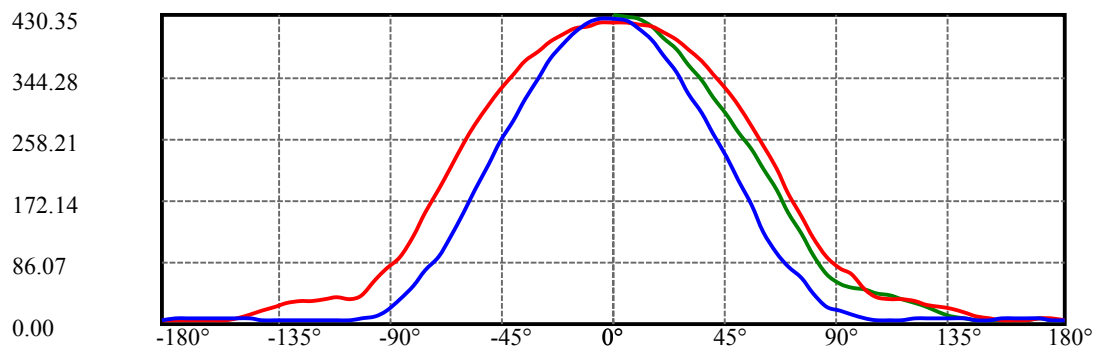
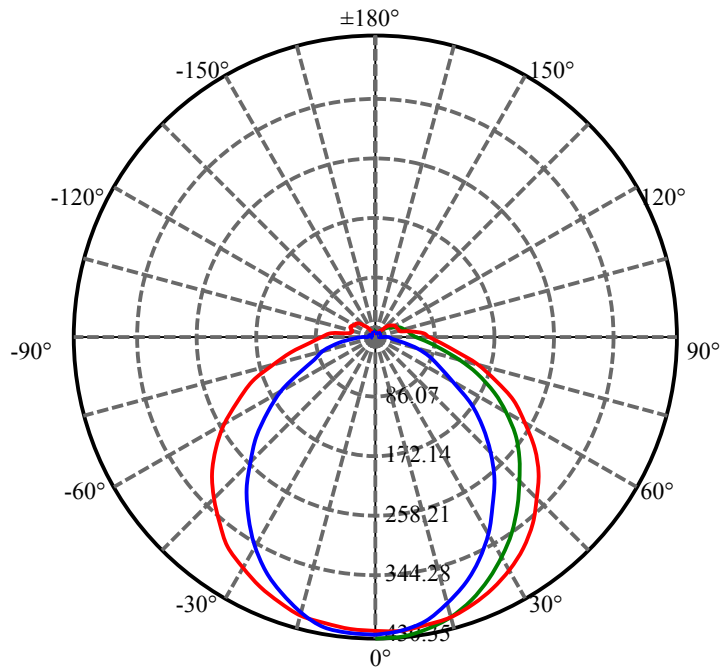
$\gamma(^{\circ})$	Average I(cd)	Zonal F(lm)	Sum F(lm)	Eff Flux(%)	Eff Sum(%)
0.0	424.647	.000	.000	.000%	.000%
5.0	422.965	10.133	10.133	.000%	.000%
10.0	417.505	30.066	40.199	.000%	.000%
15.0	408.072	48.973	89.172	.000%	.000%
20.0	394.423	66.137	155.309	.000%	.000%
25.0	377.800	80.992	236.301	.000%	.000%
30.0	357.959	93.111	329.411	.000%	.000%
35.0	335.778	102.158	431.569	.000%	.000%
40.0	311.989	108.075	539.644	.000%	.000%
45.0	286.835	110.877	650.522	.000%	.000%
50.0	261.072	110.713	761.234	.000%	.000%
55.0	234.650	107.786	869.020	.000%	.000%
60.0	206.108	101.880	970.900	.000%	.000%
65.0	176.591	93.035	1063.935	.000%	.000%
70.0	147.220	81.991	1145.926	.000%	.000%
75.0	119.263	69.654	1215.580	.000%	.000%
80.0	91.184	56.310	1271.890	.000%	.000%
85.0	66.395	42.818	1314.708	.000%	.000%
90.0	52.161	32.462	1347.170	.000%	.000%
95.0	44.410	26.442	1373.611	.000%	.000%
100.0	36.123	21.883	1395.494	.000%	.000%
105.0	31.199	18.013	1413.507	.000%	.000%
110.0	29.371	15.832	1429.339	.000%	.000%
115.0	27.055	14.287	1443.627	.000%	.000%
120.0	24.325	12.491	1456.117	.000%	.000%
125.0	19.670	10.169	1466.287	.000%	.000%
130.0	15.453	7.637	1473.924	.000%	.000%
135.0	12.699	5.689	1479.612	.000%	.000%
140.0	9.677	4.143	1483.755	.000%	.000%
145.0	7.410	2.851	1486.606	.000%	.000%
150.0	6.508	2.049	1488.655	.000%	.000%
155.0	6.167	1.604	1490.259	.000%	.000%
160.0	6.410	1.319	1491.578	.000%	.000%
165.0	6.727	1.083	1492.661	.000%	.000%
170.0	7.020	.815	1493.477	.000%	.000%
175.0	6.679	.490	1493.967	.000%	.000%
180.0	5.996	.152	1494.118	.000%	.000%

ZONAL LUMEN SUMMARY

Zone	Lumens	%Lamp	%Fixt
0-30	329.41	N.A.	22.05%
0-40	539.64	N.A.	36.12%
0-60	970.90	N.A.	64.98%
0-90	1347.17	N.A.	90.16%
0-120	1456.12	N.A.	97.46%
0-180	1494.12	N.A.	100.00%
60-90	478.15	N.A.	32.00%
90-120	141.41	N.A.	9.46%
90-130	159.22	N.A.	10.66%
90-150	173.95	N.A.	11.64%
90-180	179.26	N.A.	12.00%
0-73.54	1195.30	N.A.	80.00%

ZONAL LUMEN SUMMARY

0-10	40.20
10-20	115.11
20-30	174.10
30-40	210.23
40-50	221.59
50-60	209.67
60-70	175.03
70-80	125.96
80-90	75.28
90-100	48.32
100-110	33.85
110-120	26.78
120-130	17.81
130-140	9.83
140-150	4.90
150-160	2.92
160-170	1.90
170-180	0.49



C45(Max): —————

C0/C180: —————

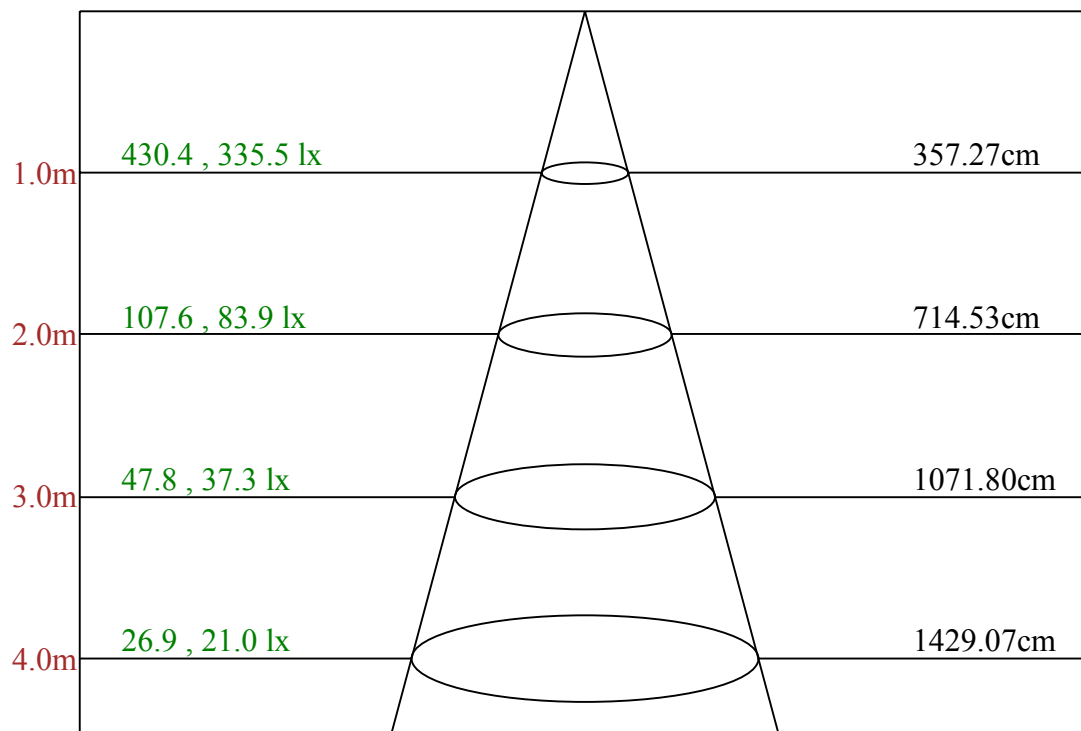
C90/C270: —————

Field angle(10%Imax):C0/180Left:99.3 Right:102.8

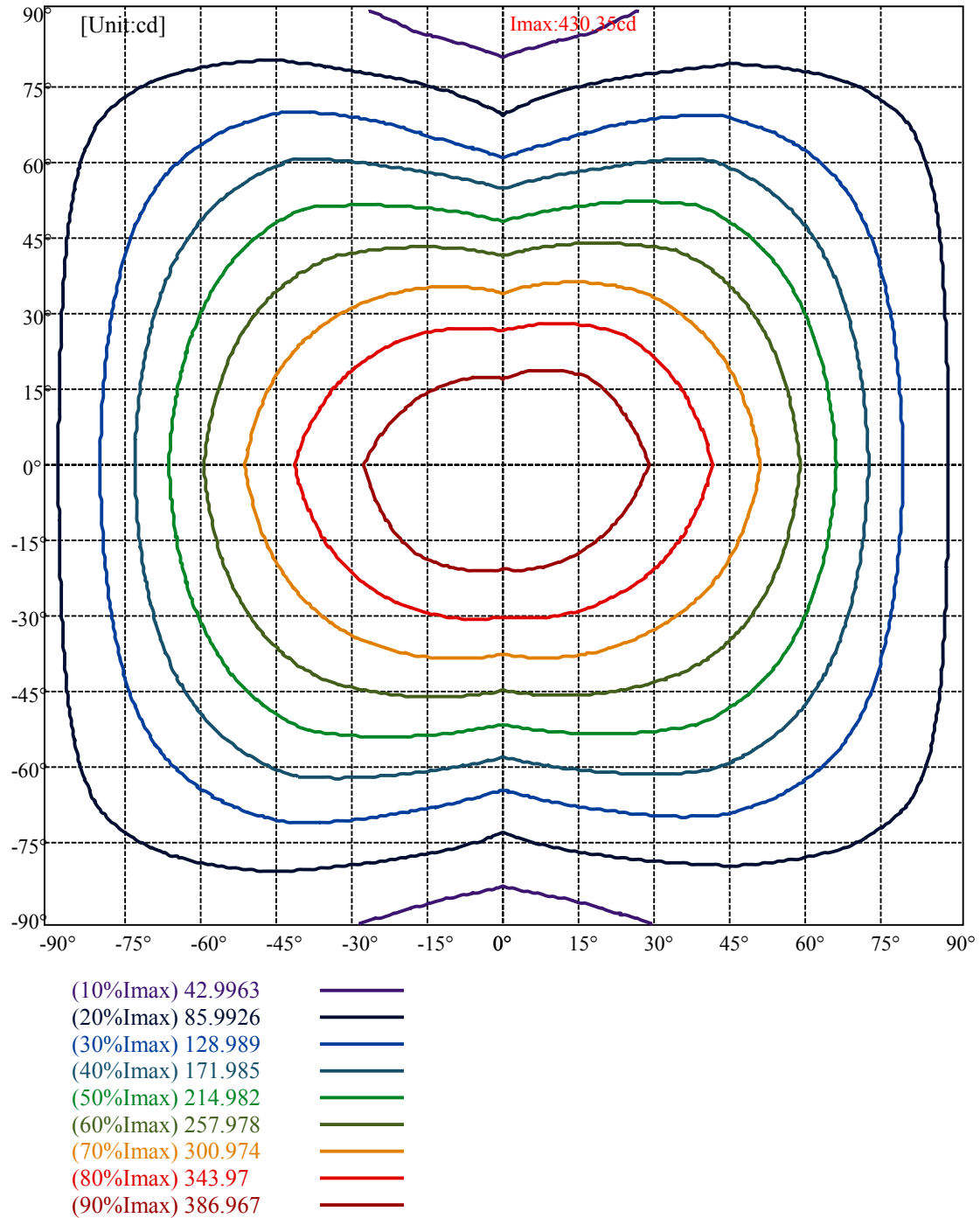
:C90/270Left:82.8 Right:80.0

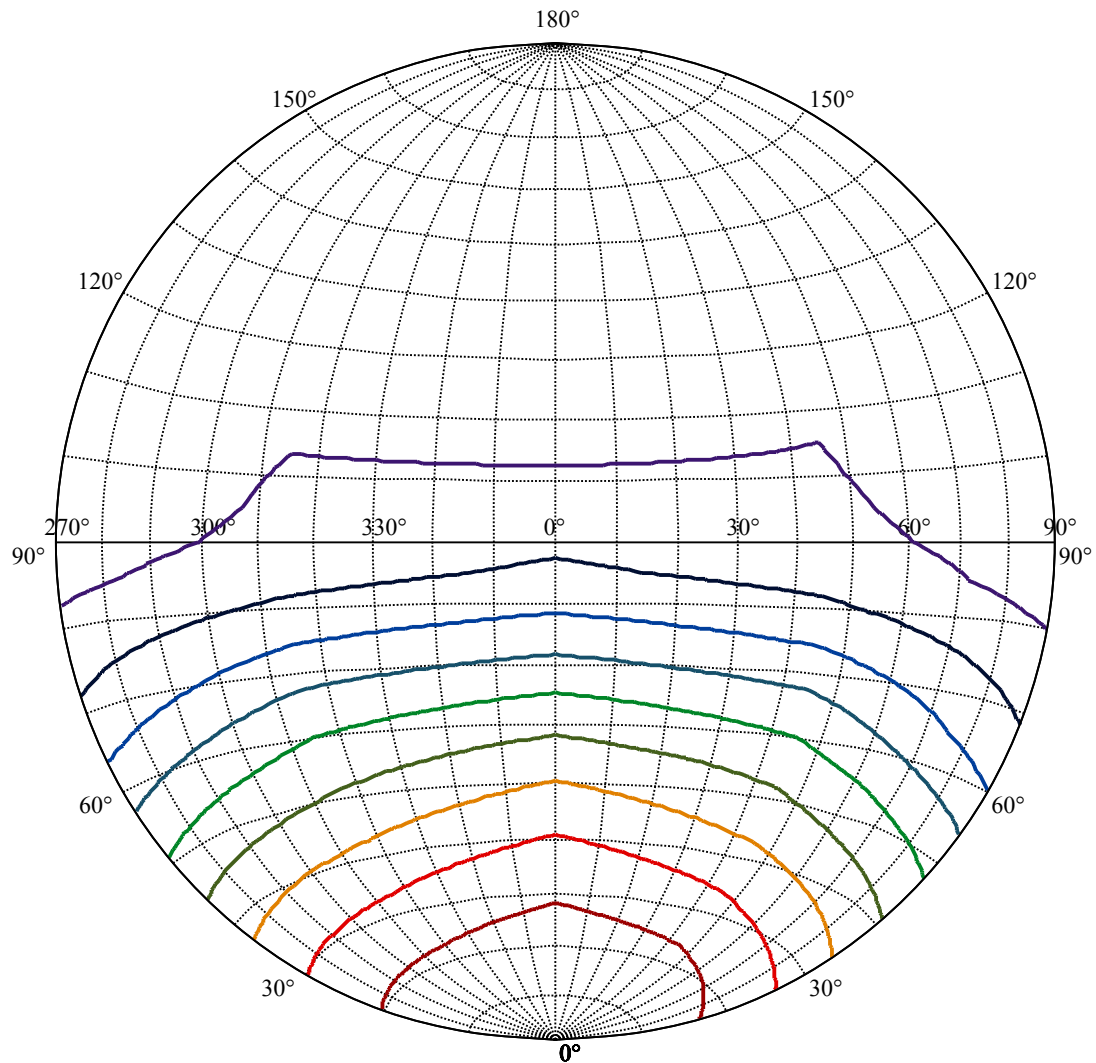
Beam Angle(50%Imax):C0/180Left:66.3 Right:66.1

:C90/270Left:51.2 Right:48.0



Max , Ave Beam angle of C45plane121.51





House

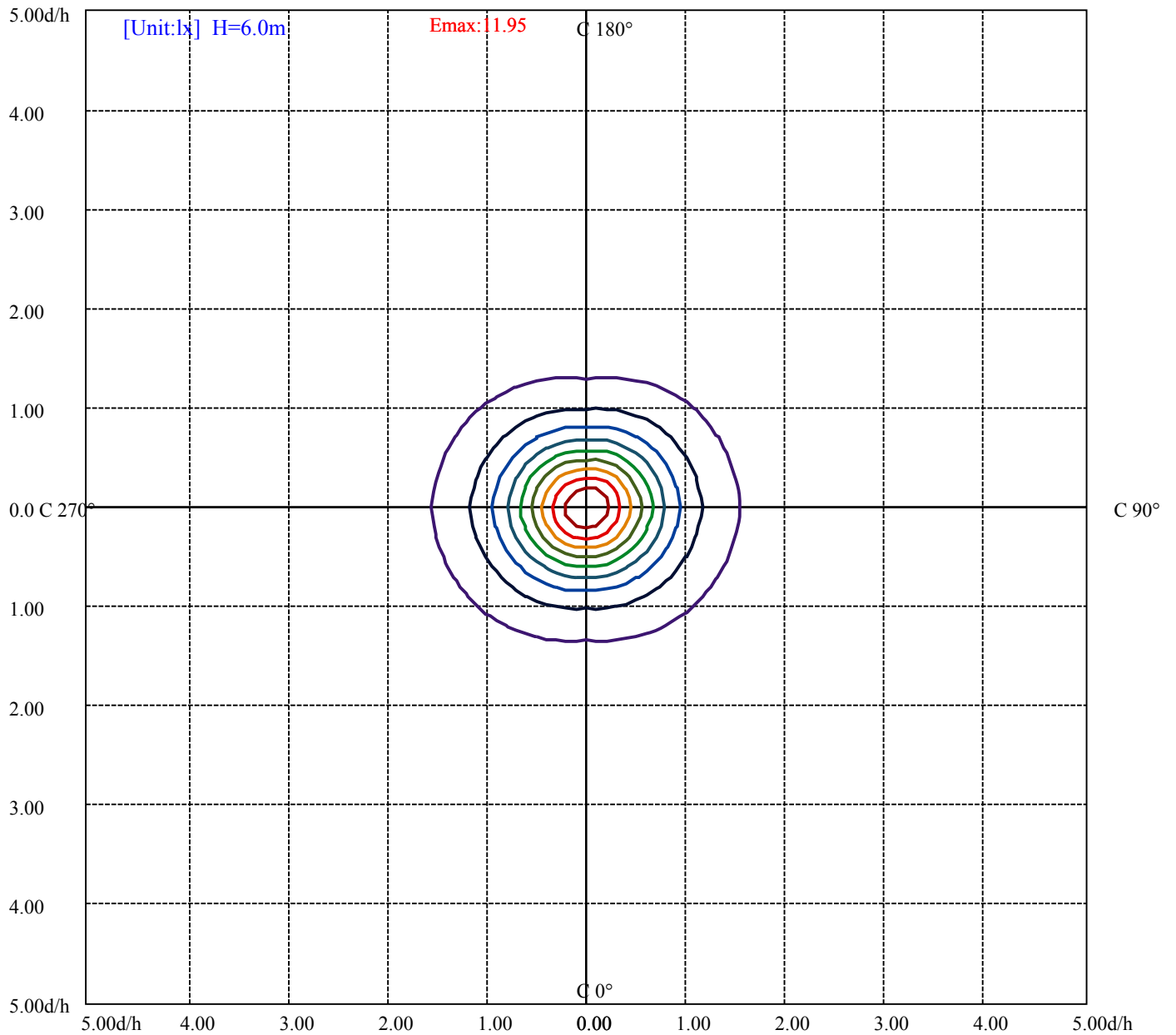
[Unit:cd]

Road

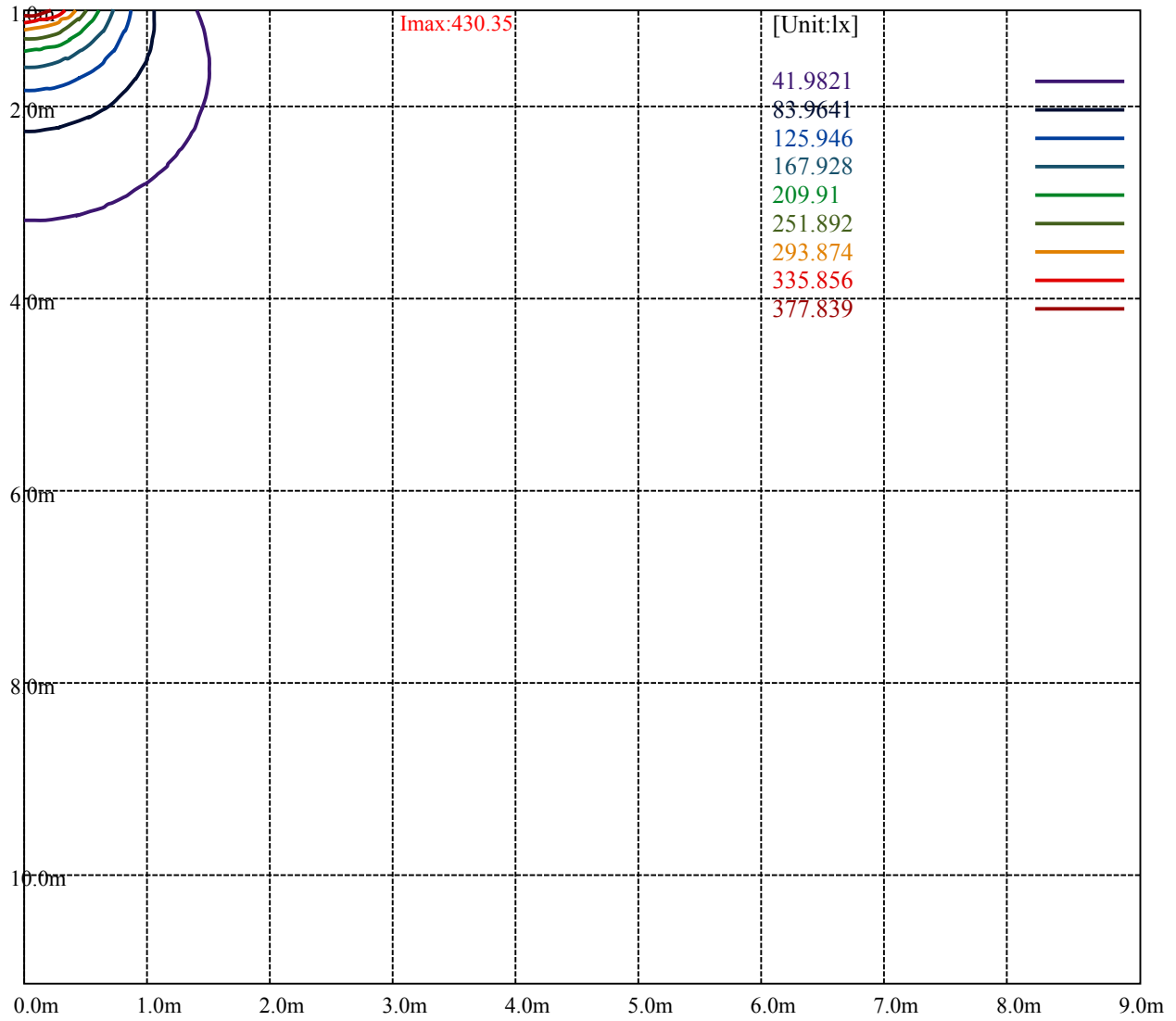
I_{max}:430.35

(10%I_{max}) 43.035
(20%I_{max}) 86.07
(30%I_{max}) 129.105
(40%I_{max}) 172.14
(50%I_{max}) 215.175
(60%I_{max}) 258.21
(70%I_{max}) 301.245
(80%I_{max}) 344.28
(90%I_{max}) 387.315





(10%Emax)	1.195417	
(20%Emax)	2.390833	
(30%Emax)	3.58625	
(40%Emax)	4.781667	
(50%Emax)	5.977083	
(60%Emax)	7.1725	
(70%Emax)	8.367916	
(80%Emax)	9.563334	
(90%Emax)	10.75875	



Luminance Table

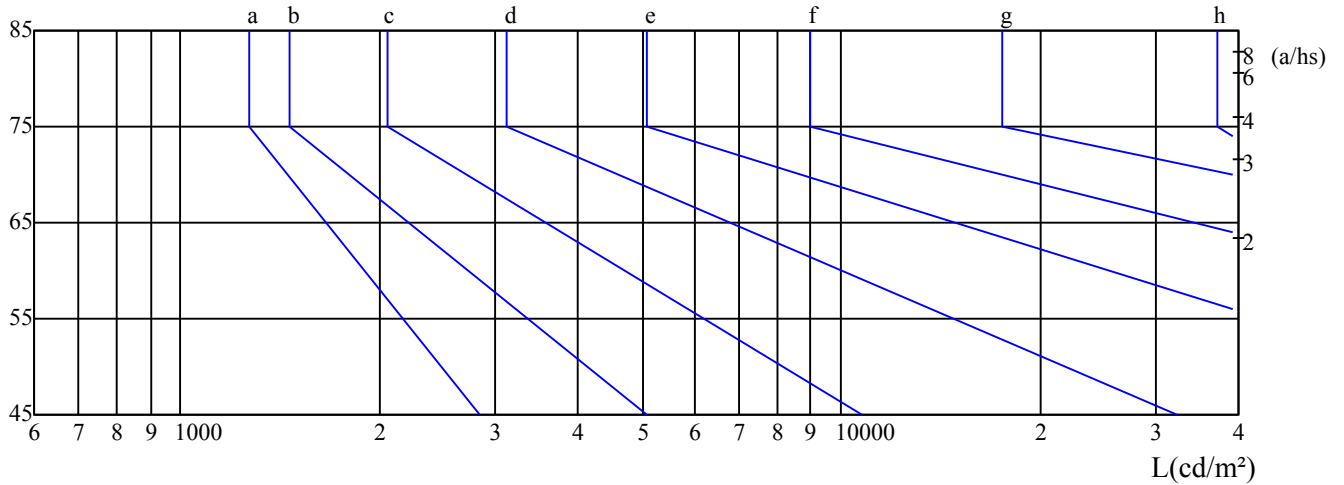
γ	45	50	55	60	65	70	75	80	85
C0	0	0	0	0	0	0	0	0	0
C45	0	0	0	0	0	0	0	0	0
C90	0	0	0	0	0	0	0	0	0

L横(65)	L纵(65)	L45(65)	L横(75)	L纵(75)	L45(75)	L横(85)	L纵(85)	L45(85)
0	0	0	0	0	0	0	0	0

Glare Table

Glare	Quality	Service Values Illuminance(lx)							
1.15	A	2000	1000	500	≤ 300				
1.5	B		2000	1000	500	≤ 300			
1.85	C			2000	1000	500	≤ 300		
2.2	D				2000	1000	500	≤ 300	
2.55	E					2000	1000	500	≤ 300
		a	b	c	d	e	f	g	h

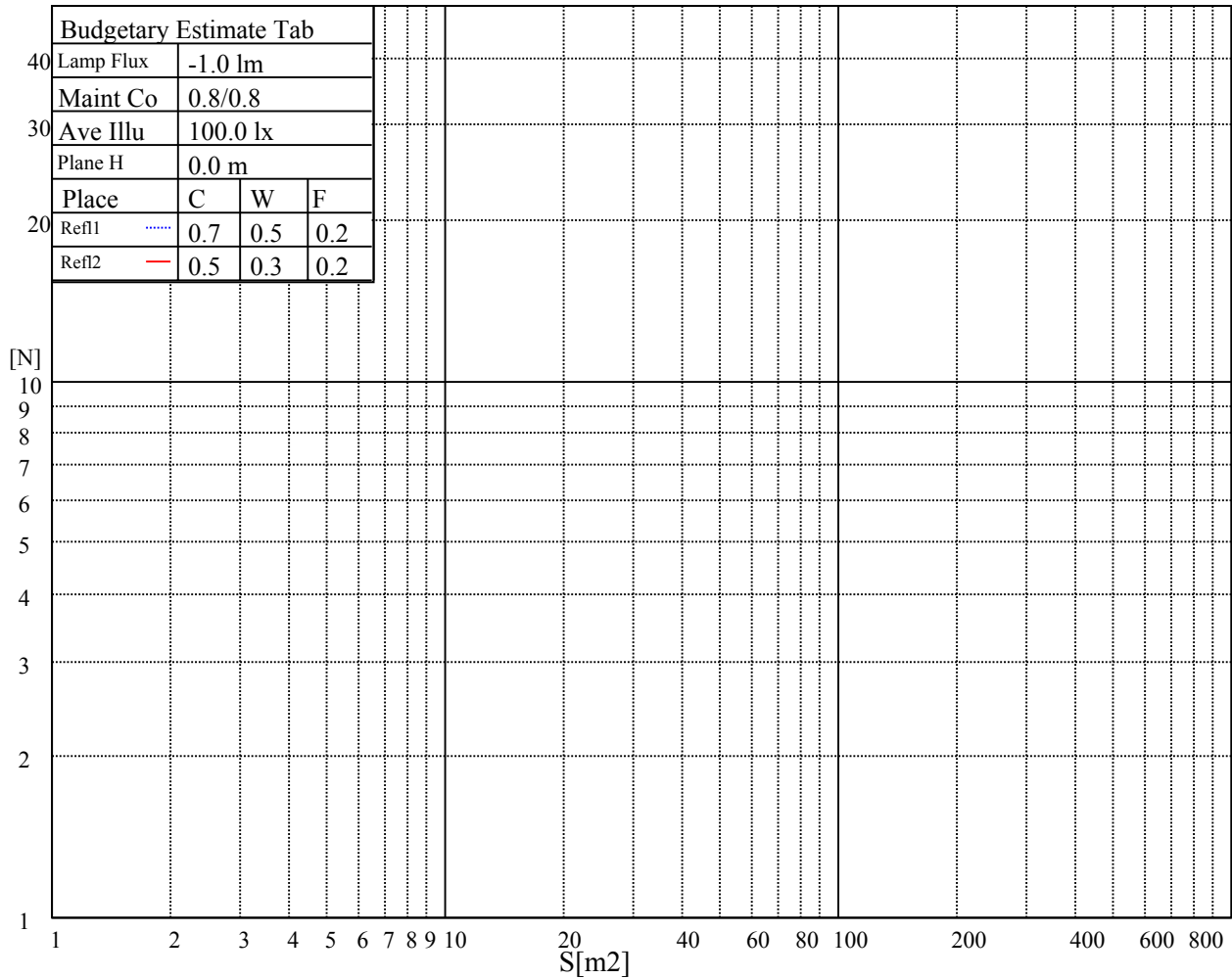
Luminance Limiting Curve

 $\gamma(^{\circ})$ 

C0 ———

C45 ———

C90 ———



RHOCC	80			70			50			30			10			0
RHOW	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR	COEFFICIENTS OF UTILIZATION RHOFC=20 CU															
0	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
1	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
2	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
3	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
4	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
5	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
6	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
7	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
8	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
9	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
10	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

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Intensity data(cd) Page: 13 Total:13

C/γ(°)	0.0	5.0	10.0	15.0	20.0	25.0	30.0	35.0	40.0
0.0	419.82	419.82	418.26	414.17	405.78	395.64	383.55	366.78	348.26
45.0	430.35	428.79	423.72	413.58	399.54	382.38	362.10	339.87	315.69
90.0	425.87	421.19	410.66	394.67	374.39	351.18	321.74	293.66	264.02
135.0	422.55	419.43	411.24	400.91	387.06	370.29	351.18	328.76	305.94
180.0	419.82	418.46	415.34	410.66	403.05	392.33	380.43	365.81	347.28
225.0	430.35	428.99	423.33	413.97	400.52	383.75	362.30	340.46	317.06
270.0	425.87	425.09	419.43	407.34	389.01	367.56	342.99	313.55	284.30
315.0	422.55	421.97	418.07	409.29	396.03	379.26	359.37	337.34	313.35
360.0	419.82	419.82	418.26	414.17	405.78	395.64	383.55	366.78	348.26

C/γ(°)	45.0	50.0	55.0	60.0	65.0	70.0	75.0	80.0	85.0
0.0	327.00	303.41	276.31	247.64	217.22	182.71	150.34	119.34	93.60
45.0	290.54	266.95	243.94	216.05	188.36	155.80	124.80	95.16	70.59
90.0	232.63	199.87	166.13	129.48	98.86	80.92	63.37	42.70	24.96
135.0	282.55	261.29	237.89	214.30	187.58	158.33	128.31	98.67	72.93
180.0	326.81	303.60	278.06	250.18	217.81	186.22	154.04	122.46	93.21
225.0	293.27	268.51	246.28	221.32	193.43	163.21	132.01	101.40	72.93
270.0	253.30	220.93	187.58	153.85	121.09	93.60	75.27	53.82	33.54
315.0	288.59	264.02	241.01	216.05	188.36	156.97	125.97	95.94	69.42
360.0	327.00	303.41	276.31	247.64	217.22	182.71	150.34	119.34	93.60

C/γ(°)	90.0	95.0	100.0	105.0	110.0	115.0	120.0	125.0	130.0
0.0	77.41	69.03	48.94	36.66	33.73	34.12	32.95	27.88	23.59
45.0	56.35	50.70	46.80	43.09	39.00	33.93	29.05	23.20	15.60
90.0	19.11	12.09	7.02	4.48	4.87	5.85	9.16	8.97	8.77
135.0	56.35	49.14	45.63	42.31	38.22	34.51	30.22	23.01	16.18
180.0	76.24	62.20	38.80	33.93	38.02	35.68	33.34	33.15	28.08
225.0	56.74	50.50	46.99	43.09	39.19	34.90	27.69	18.33	13.65
270.0	19.69	11.89	8.77	4.48	4.48	4.48	5.07	5.46	6.04
315.0	55.38	49.72	46.02	41.53	37.44	32.95	27.10	17.35	11.70
360.0	77.41	69.03	48.94	36.66	33.73	34.12	32.95	27.88	23.59

C/γ(°)	135.0	140.0	145.0	150.0	155.0	160.0	165.0	170.0	175.0
0.0	20.28	15.60	10.92	6.82	5.65	5.85	6.24	6.82	6.82
45.0	11.11	7.60	5.46	5.85	6.04	6.24	6.63	7.02	6.24
90.0	8.38	7.99	6.63	6.63	6.82	6.82	6.82	6.82	6.24
135.0	12.09	8.19	5.65	5.85	6.04	6.24	6.43	6.43	6.43
180.0	23.40	18.33	13.06	8.38	5.85	6.04	6.24	6.63	6.63
225.0	10.72	7.21	5.46	5.85	5.85	6.24	6.82	7.21	7.02
270.0	6.24	6.63	6.82	7.02	7.21	7.60	7.80	7.80	7.21
315.0	9.36	5.85	5.26	5.65	5.85	6.24	6.82	7.41	6.82
360.0	20.28	15.60	10.92	6.82	5.65	5.85	6.24	6.82	6.82

C/γ(°)	180.0
0.0	5.85
45.0	6.04
90.0	6.04
135.0	6.04
180.0	5.85
225.0	6.04
270.0	6.04
315.0	6.04
360.0	5.85